

**STATE OF FLORIDA  
DEPARTMENT OF TRANSPORTATION**

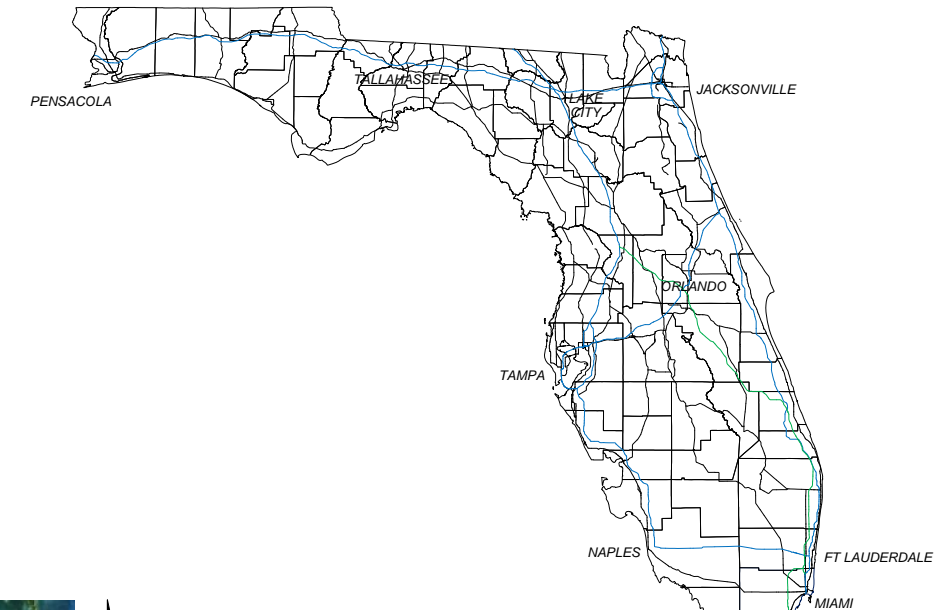
**CONTRACT PLANS**

FINANCIAL PROJECT ID 424401-2-93-01  
DADE & MONROE COUNTY  
KEYS ITS MICROWAVE UPGRADE

**INTELLIGENT TRANSPORTATION SYSTEMS PLANS**

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LOCATION OF PROJECT

NOTE: THE SCALE OF THESE PLANS MAY HAVE CHANGED DUE TO REPRODUCTION.


**KEYS ITS MICROWAVE UPGRADE**

GOVERNING STANDARDS AND SPECIFICATIONS:  
FLORIDA DEPARTMENT OF TRANSPORTATION,  
DESIGN STANDARDS LATEST PUBLICATION,  
AND STANDARD SPECIFICATIONS FOR ROAD AND  
BRIDGE CONSTRUCTION LATEST PUBLICATION,  
AS AMENDED BY THESE PLANS AND CONTRACT  
DOCUMENTS.

ENGINEER OF RECORD: TERRY POSEY, P.E.

P.E. NO.: 36151

FDOT PROJECT MANAGER: RANDY PIERCE

CONTRACT PLANS RECORD						 FLORIDA DEPARTMENT OF TRANSPORTATION 605 SUWANNEE ST. MS 90 TALLAHASSEE, FL 32399-0450 PH.(850)-410-5600 FAX.(850)-410-5501	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			KEYS MICROWAVE KEY SHEET	SHEET NO.
DATE	REV.	DESCRIPTION	DATE	REV.	DESCRIPTION		SITE NAME	COUNTY	FINANCIAL PROJECT ID		IT-1
						PROJECT-WIDE	MONROE, MIAMI-DADE	424401-2-93-01			

**GENERAL NOTES:**

1. THE VENDOR SHALL BE RESPONSIBLE FOR VERIFYING ALL CONDITIONS AND MEASUREMENTS RELATING TO THE WORK IN THE FIELD PRIOR TO PROCEEDING WITH INSTALLATION, REMOVAL, AND DISPOSAL ACTIVITIES. THE VENDOR SHALL COORDINATE ANY MODIFICATIONS REQUIRED WITH FDOT.
2. THE VENDOR IS RESPONSIBLE FOR ALL EQUIPMENT, MATERIALS, AND SERVICES REQUIRED TO COMPLETE THIS PROJECT. THE VENDOR IS RESPONSIBLE FOR VERIFYING THE COMPLETENESS OF MATERIALS REQUIRED AND SUITABILITY OF DEVICES TO MEET THESE PLANS. THE VENDOR SHALL PROVIDE AND INSTALL, WITHOUT CLAIM, ANY ADDITIONAL EQUIPMENT AND SERVICES REQUIRED FOR OPERATION PER THESE PLANS.
3. THE VENDOR SHALL BE RESPONSIBLE FOR DETERMINING LOCAL FACILITIES FOR DELIVERING, STORING, AND LEGALLY DISPOSING OF POST-INSTALLATION MATERIALS.
4. THE VENDOR SHALL PROTECT AND PRESERVE ALL EXISTING UTILITIES, EXCLUDING THOSE REQUIRING UPGRADES OR RELOCATION IN THESE PLANS, LOCATED WITHIN THE INSTALLATION LIMITS OF THE PROJECT.
5. THE VENDOR SHALL SUBMIT FOR FDOT APPROVAL, ADMINISTRATIVE AND PROCEDURAL REQUIREMENTS FOR PERFORMANCE OF THE WORK, INCLUDING:
  - A.) CARRIER ETHERNET DATA TRANSPORT NETWORK DESIGN
  - B.) PRODUCT DATA FOR EACH ELEMENT OF INSTALLATION OR SYSTEM. PRODUCT DATA SHALL INCLUDE PRINTED INFORMATION SUCH AS MANUFACTURER'S INSTALLATION INSTRUCTIONS AND PERFORMANCE SPECIFICATIONS.
  - C.) VENDOR'S FACTORY ACCEPTANCE TEST PLAN
  - D.) DETAILED INSTALLATION DESIGN PLANS. THE VENDOR SHALL NOT BEGIN INSTALLATION WORK UNTIL ALL DESIGN SUBMITTALS ARE APPROVED IN WRITING BY THE FDOT PROJECT MANAGER.
  - E.) DETAILED ANTENNA SYSTEM MOUNTING DESIGN
  - F.) DETAILED CABLE MANAGEMENT DESIGN PLAN
  - G.) INSTALLATION PLAN AND SCHEDULE
  - H.) CUT-OVER PLAN
  - I.) SPECIAL REPORTS, AS REQUESTED BY FDOT
6. THE VENDOR MUST COORDINATE ALL SITE WORK WITH FDOT. THE CONTACT PERSON IS RANDY PIERCE, 850-410-5608.
7. ALL TOWER AND ANTENNA INSTALLATION WORK SHALL BE DONE BY TOWER CLIMBERS CERTIFIED BY COMTRAIN, OR APPROVED EQUIVALENT.
8. THE VENDOR SHALL COORDINATE EACH ELEMENT ON THE SCHEDULE WITH OTHER INSTALLATION ACTIVITIES AND SHOW EACH ACTIVITY IN PROPER SEQUENCE.
9. THE VENDOR SHALL FIELD LOCATE ALL BURIED GROUNDING, CONDUITS, STRUCTURES, AND UTILITIES IN AND AROUND THE WORK AREA PRIOR TO COMMENCING ANY EXCAVATIONS. ALL DIGGING AND EXCAVATING INSIDE AND AROUND THE SITE COMPOUND SHALL BE PERFORMED IN A MANNER CONSISTENT WITH GOOD ENGINEERING PRACTICES. THE USE OF HEAVY EXCAVATING MACHINERY IS NOT PERMITTED.
10. THE FDOT'S EXISTING RADIO SYSTEM CARRIES LIVE CRITICAL TRAFFIC. THE CUT-OVER PROCEDURE SHALL BE PERFORMED EFFICIENTLY TO MINIMIZE CRITICAL TRAFFIC INTERRUPTION.
11. THE FDOT SHALL BE NOTIFIED 72 HOURS IN ADVANCE OF ANY SCHEDULED INTERRUPTIONS DURING CUT-OVER FOR SAFETY PRECAUTIONS. IN ADDITION TO THE 72 HOUR ADVANCE NOTIFICATION FOR SCHEDULED INTERRUPTIONS, THE VENDOR SHALL NOTIFY FDOT AT LEAST TWO HOURS IN ADVANCE OF ALL NECESSARY COMMUNICATIONS DISRUPTIONS AND SUCH PLANNED OUTAGES WITH THE ANTICIPATED OUTAGE TIME.
12. THE VENDOR SHALL RESTRICT PERSONNEL, THE USE OF EQUIPMENT, AND THE STORAGE OF MATERIALS TO AREAS WITHIN THE LIMITS OF INSTALLATION. ANY OFF-SITE STORAGE AREA IS THE RESPONSIBILITY OF THE VENDOR.
13. THE VENDOR SHALL PROVIDE SECURITY FOR HIS/HER EQUIPMENT AND SHALL CONDUCT HIS/HER OPERATIONS SO AS TO AVOID INTERFERENCE WITH FDOT'S NORMAL OPERATIONS.
14. ALL EXISTING DRIVEWAYS, EASEMENTS, AND GROUNDS SHALL BE PROTECTED OR RESTORED TO INITIAL CONDITION IF DAMAGED OR DISTURBED AS A RESULT OF INSTALLATION.
15. THE VENDOR SHALL PROVIDE AND MAINTAIN IN A NEAT AND SANITARY CONDITION SUCH ACCOMMODATIONS FOR THE USE OF HIS/HER EMPLOYEES AS MAY BE NECESSARY TO COMPLY WITH REGULATIONS OF THE COUNTY OR THE DEPARTMENT OF HEALTH AND REHABILITATIVE SERVICES. NO NUISANCE WILL BE PERMITTED.
16. THE VENDOR SHALL BE RESPONSIBLE FOR REMOVING AND LEGALLY DISPOSING OF TRASH IN A TIMELY MANNER.
17. ALL EQUIPMENT AND SERVICES FURNISHED BY THE VENDOR AS PART OF THIS PROJECT SHALL BE WARRANTED TO BE FREE FROM DEFECTS IN MATERIAL AND WORKMANSHIP. IN THE EVENT ANY SUCH DEFECTS IN EQUIPMENT OR SERVICES BECOME EVIDENT WITHIN THE WARRANTY PERIOD, THE VENDOR SHALL CORRECT THE DEFECT BY REPAIRING OR REPLACING THE DEFECTIVE COMPONENT OR EQUIPMENT AT NO COST TO FDOT DURING THE WARRANTY PERIOD. THE WARRANTY PERIOD SHALL BE A MINIMUM OF 12 MONTHS FROM DATE OF FINAL ACCEPTANCE. CLAIMS UNDER ANY OF THE WARRANTIES HEREIN ARE VALID IF MADE WITHIN 30 DAYS AFTER TERMINATION OF THE WARRANTY PERIOD.

**GENERAL NOTES (CONTINUED):**

18. THE VENDOR SHALL SUBMIT (2) SETS OF AS-BUILT DRAWINGS DEPICTING THE LOCATION OF THE COMPONENTS ON ANTENNA SUPPORT STRUCTURES, AND WITHIN OUTDOOR CABINETS AND BUILDINGS. AS-BUILT DRAWINGS DEPICTING ANY FIELD CHANGES TO THE FACILITIES SHALL ALSO BE SUBMITTED. AS-BUILT DOCUMENTATION SHALL BE SUBMITTED IN ELECTRONIC FORMAT, AS WELL AS PRINTED. ALL ITS FACILITY MANAGEMENT ATTRIBUTE FORMS SHALL BE COMPLETED IN ACCORDANCE WITH THIS TECHNICAL SPECIFICATION. SEE EXHIBIT A SECTION 16.
19. THE VENDOR SHALL BE RESPONSIBLE FOR ALL RADIO POWER/DATA CABLES, AND RESPECTIVE HARDWARE AND CONDUITS. ANY BENDS, KINKS, OR DEFORMATION WILL RENDER THE CABLES UNUSABLE. SPLICING OF THE CABLES IS NOT PERMITTED. ANY CABLES DAMAGED BY THE VENDOR SHALL BE REPLACED WITH NEW FULL-LENGTH CABLES, WITHOUT CLAIM, AND AT THE VENDOR'S COST.

**APPLICABLE PUBLICATIONS AND STANDARDS**

1. ANSI/TIA-222-G-2, STRUCTURAL STANDARD FOR ANTENNA SUPPORTING STRUCTURES AND ANTENNAS, STRUCTURE CLASSIFICATION-III.
2. APPLICABLE MANUFACTURER'S INSTRUCTIONS AND STANDARD PRACTICES.
3. APPLICABLE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (O.S.H.A.) PRACTICES.
4. ASTM A123: STANDARD SPECIFICATION FOR: ZINC (HOT GALVANIZED) COATINGS ON PRODUCTS FABRICATED FROM ROLLED, PRESSED, AND FORGED STEEL SHAPES, PLATES, BARS, AND STRIP.
5. ASTM A153: STANDARD SPECIFICATION FOR: ZINC COATING (HOT-DIP) ON IRON AND STEEL HARDWARE.
6. EIA-81: MEASURING GROUND RESISTANCE AND POTENTIAL GRADIENTS IN THE EARTH.
7. FLORIDA BUILDING CODE, 2014 EDITION.
8. FDOT 2015 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE DESIGN.
9. FDOT 2015 DESIGN STANDARDS.
10. IEEE 837: STANDARD FOR QUALIFYING PERMANENT CONNECTIONS USED IN SUBSTATION GROUNDING.
11. NATIONAL ELECTRICAL CODE (NEC) (NFPA 70), 2014 EDITION.
12. NEC ARTICLE 250: GROUNDING AND BONDING.
13. NIST: NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY.
14. UL 467: STANDARDS FOR GROUNDING AND BONDING EQUIPMENT.
15. NATIONAL FIRE PROTECTION ASSOCIATION (NFPA 780)

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FLORIDA DEPARTMENT OF TRANSPORTATION  
 605 SUWANNEE ST. MS 90  
 TALLAHASSEE, FL 32399-0450  
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**STATE OF FLORIDA  
 DEPARTMENT OF TRANSPORTATION**

SITE NAME	COUNTY	FINANCIAL PROJECT ID
PROJECT-WIDE	MONROE, MIAMI-DADE	424401-2-93-01

**KEYS MICROWAVE  
 GENERAL NOTES**

SHEET NO.  
 IT-2

**GENERAL INSTALLATION NOTES:**

1. THE VENDOR SHALL SUBMIT A DETAILED INSTALLATION PLAN FOR EACH SITE TO BE APPROVED BY THE FDOT. THE PLANS SHALL INCLUDE A SCHEDULE OF EVENTS DETAILING EACH PHASE OF INSTALLATION, INCLUDING A PROJECTED TIMELINE.
2. THE VENDOR SHALL PROVIDE AND INSTALL ALL RADIO EQUIPMENT, SWITCHING EQUIPMENT, SURGE PROTECTION, AND ASSOCIATED MOUNTING HARDWARE.  
ALL EQUIPMENT AND COMPONENT PARTS FURNISHED SHALL BE NEW, MEET OR EXCEED THE MINIMUM REQUIREMENTS STATED HEREIN, AND PERFORM TO MANUFACTURER'S SPECIFICATIONS. NO PART OR ATTACHMENT SHALL BE SUBSTITUTED OR APPLIED CONTRARY TO THE MANUFACTURER'S RECOMMENDATIONS AND STANDARD PRACTICES.
3. THE VENDOR SHALL BE RESPONSIBLE FOR REMOVING AND LEGALLY DISPOSING OF THE TRASH GENERATED FROM THE INSTALLATION, INCLUDING LUNCH BAGS AND DRINKS, DAILY. THE VENDOR SHALL NOT ALLOW TRASH TO BLOW AROUND OR AWAY FROM ANY CONSTRUCTION SITE.
4. THE VENDOR SHALL PROVIDE AND INSTALL ALL ANTENNAS, RADIO POWER/DATA CABLES, CONDUIT, ASSOCIATED MOUNTING AND INSTALLATION HARDWARE, AND ALL OTHER POLE/TOWER APPURTENANCES.
5. THE VENDOR SHALL TEST ANTENNA SYSTEMS AND ALIGN ANTENNAS.
6. THE RADIO POWER/DATA CABLES SHALL BE INSTALLED IN SUCH A MANNER THAT DOES NOT VIOLATE THE MANUFACTURER'S MAXIMUM TWIST, MINIMUM E-BEND RADIUS, AND MINIMUM H-BEND RADIUS SPECIFICATIONS.
7. THE VENDOR IS RESPONSIBLE FOR VERIFYING CORRECT SIZE, GENDER, AND SUITABILITY OF ALL RADIO POWER/DATA CABLE CONNECTORS AND SURGE PROTECTIVE DEVICES (SPD). THE VENDOR SHALL SUBMIT A DETAILED LIST OF CONNECTORS AND SPDS TO THE FDOT PROJECT MANAGER FOR REVIEW AND APPROVAL.
8. ALL RADIO POWER/DATA CABLES SHALL BE MARKED WITH COLORED TAPE AT THE TOP AND BOTTOM (NEAR THE ANTENNA AND NEAR THE CABINET GROUND BUS). THE COLORED TAPE SHALL BE APPLIED IN RINGS (BANDS) AROUND THE RADIO POWER/DATA CABLES FOR EASY IDENTIFICATION. DUE TO HARSH ENVIRONMENTAL CONDITIONS, ALL RADIO POWER/DATA CABLES MUST BE INSTALLED IN APPROPRIATELY SIZED RIGID METALLIC CONDUIT AND BE MOUNTED AND SECURED TO THE ANTENNA SUPPORT STRUCTURE WITH APPROPRIATELY SIZED STAINLESS STEEL BOLT-ON HANGERS AND HARDWARE.

**POLE AND DMS FACILITIES INSTALLATION NOTES:**

1. THE VENDOR SHALL REMOVE THE DECOMMISSIONED EQUIPMENT AND PLACE INTO THE FDOT WAREHOUSE.
2. THE VENDOR SHALL PROVIDE AND INSTALL ALL NEW EQUIPMENT ONTO THE POLE AND INTO THE EXISTING EQUIPMENT CABINET AT EACH SITE.
3. THE VENDOR SHALL PROVIDE AND INSTALL THE LIGHTNING PROTECTION AND GROUNDING SYSTEM PER THESE PLANS.
4. THE VENDOR SHALL PROVIDE AND INSTALL SURGE PROTECTIVE DEVICES FOR THE RADIO POWER/DATA CABLE. THE SURGE PROTECTIVE DEVICES SHALL BE INSTALLED AND GROUNDED AND MOUNTED TO THE GROUND BUS INSIDE THE EQUIPMENT CABINET.
5. ALL RADIO POWER/DATA CABLES SHALL BE EQUIPPED WITH SPDS PER THESE SPECIFICATIONS. ALL SPDS SHALL BE CONNECTED DIRECTLY TO THE GROUND BUS UPON ENTERING THE EQUIPMENT CABINET

**TOWER FACILITIES INSTALLATION NOTES:**

1. AT THE TEA TABLE FILL SITE, THE VENDOR SHALL REMOVE THE DECOMMISSIONED EQUIPMENT AND PLACE INTO THE FDOT WAREHOUSE.
2. THE VENDOR SHALL PROVIDE AND INSTALL THE LIGHTNING PROTECTION AND GROUNDING SYSTEM PER THESE PLANS.
3. ALL RADIO POWER/DATA CABLES SHALL BE CONTAINED IN APPROPRIATELY SIZED RIGID METALLIC CONDUIT AND BE MOUNTED AND SECURED TO THE TOWER, VERTICAL TRANSMISSION LINE LADDER, AND HORIZONTAL TRANSMISSION LINE BRIDGE WITH APPROPRIATELY SIZED STAINLESS STEEL BOLT-ON HANGERS AND HARDWARE. THE HANGERS SHALL BE SPACED WITH A MAXIMUM SEPARATION OF 36 IN. ON CENTER.
4. ALL TRANSMISSION LINES SHALL BE EQUIPPED WITH SPDS PER THESE SPECIFICATIONS. ALL SPDS SHALL BE CONNECTED DIRECTLY TO THE BULKHEAD UPON ENTERING THE COMMUNICATIONS SHELTER.

**CONTRACT PLANS RECORD**

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605 SUWANNEE ST. MS 90  
TALLAHASSEE, FL 32399-0450  
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**STATE OF FLORIDA  
DEPARTMENT OF TRANSPORTATION**

SITE NAME	COUNTY	FINANCIAL PROJECT ID
PROJECT-WIDE	MONROE, MIAMI-DADE	424401-2-93-01

**KEYS MICROWAVE  
INSTALLATION  
NOTES**

SHEET NO.

IT-3



**CUT-OVER REQUIREMENTS:**

**1. GENERAL**

- 1.1 THE VENDOR SHALL SUBMIT A DETAILED COMMUNICATION CUT-OVER PLAN FOR APPROVAL BY FDOT. THE PLAN SHALL INCLUDE A DETAILED ORDER OF INSTALLATIONS, CONFIGURATIONS, REMOVALS, AND TESTING.
- 1.2 THE VENDOR SHALL PROVIDE AND INSTALL ANTENNAS, RADIO POWER/DATA CABLES, MOUNTING APPARATUS, AND INSTALLATION HARDWARE FOR ALL RADIO SYSTEMS. THE VENDOR SHALL BE RESPONSIBLE FOR FURNISHING ALL OF THE NECESSARY EQUIPMENT, HARDWARE, LABOR, AND INSTALLATION PROCEDURES TO EFFECT PROPER INSTALLATION OF THE RADIO ANTENNA SYSTEMS.
- 1.3 ALL OF THE FDOT RADIO SYSTEMS ARE IN SERVICE AND CARRYING CRITICAL COMMUNICATIONS TRAFFIC. ANY DOWNTIME OF THE EXISTING SYSTEM MUST BE COORDINATED WITH THE FDOT PRIOR TO THE DOWNTIME OCCURRENCE. ALL WORK CLASSIFIED AS CAUSING LESS THAN FIVE MINUTES OF DOWNTIME REQUIRES A MINIMUM OF TWO DAYS PRIOR NOTICE. ALL WORK CLASSIFIED AS CAUSING FIVE MINUTES OR MORE DOWNTIME REQUIRES A MINIMUM OF TEN DAYS PRIOR NOTICE AND MUST BE COORDINATED WITH THE FDOT PRIOR TO OCCURRENCE.

**2. CUT-OVER**

THE FIRST PORTION OF THE CUT-OVER PLAN INVOLVES THE OPTICAL PORTION OF THE NETWORK BETWEEN THE DISTRICT 6 RTMC IN MIAMI, TO THE CAMERA POLE LOCATED AT THE BOTTOM OF THE HOMESTEAD EXTENSION OF FLORIDA'S TURNPIKE (HEFT).

ANTICIPATED STEPS OF OPTICAL SEGMENT OF THE CUT-OVER PLAN:

- 1. OTDR BETWEEN DISTRICT 6 RTMC AND CORAL REEF SITES
- 2. OTDR BETWEEN CORAL REEF AND HEFT SITES
- 3. FDOT PERFORMS ANY REPAIRS TO FIBER OPTIC CABLE, IF NECESSARY
- 4. VENDOR RE-TESTS FIBER OPTIC CABLE, IF NECESSARY
- 5. VENDOR INSTALLS, PROVISIONS SERVICES, AND TEST OTN EQUIPMENT AT THE DISTRICT 6 RTMC, CORAL REEF, AND HEFT SITES.
- 6. VENDOR ENSURES THAT THE CIRCUIT IS READY TO BE PRIMARY TRANSPORT OF THE KEYS ITS SYSTEM TRAFFIC, ONCE THE HEFT TO FLORIDA CITY HUB MICROWAVE LINK IS ESTABLISHED.

EACH SIDE OF A MICROWAVE HOP WILL BE WORKED ON SIMULTANEOUSLY. TWO CREWS WILL BE EMPLOYED TO INSTALL AND ALIGN ODU RADIOS/ANTENNAS AND OTHER EQUIPMENT; SO THAT EACH LINK IS CUT-OVER AS WHOLE, AND DOWNTIME IS MINIMIZED THROUGHOUT THE PROJECT. DURING THE CUT-OVER, THE NEWLY INSTALLED EQUIPMENT IS CONFIGURED IN A MANNER TO TRANSPORT TRAFFIC FROM THE LEGACY SYSTEM BEING REPLACED TO THE DISTRICT 6 RTMC.

THE FDOT ANTICIPATES THAT THE SYSTEM WILL BE INSTALLED AND CUT-OVER IN THE FOLLOWING ORDER:


- |   |   |
|---|---|
| 1. DISTRICT 6 RTMC TO HEFT OTN INSTALLATION | 31. SITE L TO SITE M MW LINK INSTALLATION   |
| 2. HEFT TO SITE A MW LINK INSTALLATION      | 32. SITE N TO SITE N1 MW LINK INSTALLATION  |
| 3. SITE A TO SITE A1 MW LINK INSTALLATION   | 33. SITE N TO SITE N2 MW LINK INSTALLATION  |
| 4. SITE A TO SITE A2 MW LINK INSTALLATION   | 34. SITE M TO SITE N MW LINK INSTALLATION   |
| 5. SITE A TO SITE B MW LINK INSTALLATION    | 35. SITE O TO SITE O1 MW LINK INSTALLATION  |
| 6. SITE A TO SITE C MW LINK INSTALLATION    | 36. SITE O TO SITE O2 MW LINK INSTALLATION  |
| 7. SITE C TO SITE C1 MW LINK INSTALLATION   | 37. SITE N TO SITE O MW LINK INSTALLATION   |
| 8. SITE B TO SITE C MW LINK INSTALLATION    | 38. SITE P TO SITE P1 MW LINK INSTALLATION  |
| 9. SITE B TO SITE G MW LINK INSTALLATION    | 39. SITE O TO SITE P MW LINK INSTALLATION   |
| 10. SITE C TO SITE D MW LINK INSTALLATION   | 40. SITE P TO SITE Q MW LINK INSTALLATION   |
| 11. SITE G TO SITE G1 MW LINK INSTALLATION  | 41. SITE Q TO SITE Q1 MW LINK INSTALLATION  |
| 12. SITE G TO SITE G2 MW LINK INSTALLATION  | 42. SITE R TO SITE R1 MW LINK INSTALLATION  |
| 13. SITE D TO SITE G MW LINK INSTALLATION   | 43. SITE Q TO SITE R MW LINK INSTALLATION   |
| 14. SITE G TO SITE H MW LINK INSTALLATION   | 44. SITE S TO SITE S1 MW LINK INSTALLATION  |
| 15. SITE E TO SITE E1 MW LINK INSTALLATION  | 45. SITE R TO SITE S MW LINK INSTALLATION   |
| 16. SITE E TO SITE E2 MW LINK INSTALLATION  | 46. SITE S TO SITE 1 MW LINK INSTALLATION   |
| 17. SITE D TO SITE E MW LINK INSTALLATION   | 47. SITE T TO SITE T1 MW LINK INSTALLATION  |
| 18. SITE F TO SITE F1 MW LINK INSTALLATION  | 48. SITE S TO SITE T MW LINK INSTALLATION   |
| 19. SITE F TO SITE F2 MW LINK INSTALLATION  | 49. SITE T TO SITE U MW LINK INSTALLATION   |
| 20. SITE F TO SITE H MW LINK INSTALLATION   | 50. SITE U TO SITE 2 MW LINK INSTALLATION   |
| 21. SITE E TO SITE F MW LINK INSTALLATION   | 51. SITE V TO SITE V1 MW LINK INSTALLATION  |
| 22. SITE F TO SITE I MW LINK INSTALLATION   | 52. SITE U TO SITE V MW LINK INSTALLATION   |
| 23. SITE I TO SITE I1 MW LINK INSTALLATION  | 53. SITE W TO SITE W1 MW LINK INSTALLATION  |
| 24. SITE I TO SITE J MW LINK INSTALLATION   | 54. SITE W2 TO SITE W3 MW LINK INSTALLATION   |
| 25. SITE K TO SITE K1 MW LINK INSTALLATION  | 55. SITE W TO SITE W2 MW LINK INSTALLATION  |
| 26. SITE K TO SITE K2 MW LINK INSTALLATION  | 56. SITE V TO SITE W MW LINK INSTALLATION   |
| 27. SITE J TO SITE K MW LINK INSTALLATION   | 57. MIGRATE METRO ETHERNET SERVICES TO NEW CARRIER ETHERNET SWITCHES AT DISTRICT 6 RTMC, SITES A, M, AND W. |
| 28. SITE K TO SITE L MW LINK INSTALLATION   |   |
| 29. SITE M TO SITE M1 MW LINK INSTALLATION  |   |
| 30. SITE M TO SITE M2 MW LINK INSTALLATION  |   |

**INSPECTION NOTES:**

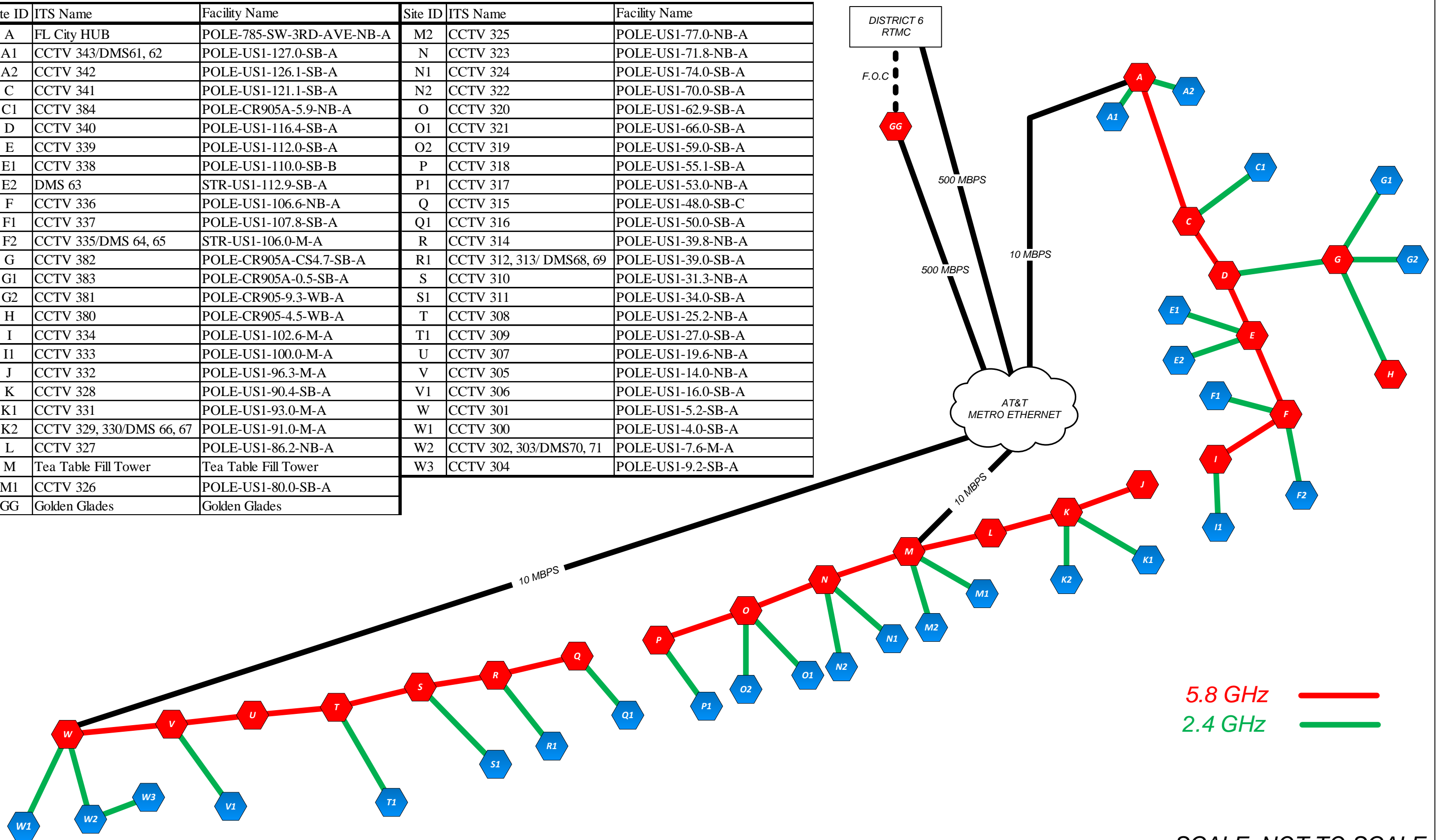
- 1. THE INSPECTION SHALL BE PERFORMED BY THE VENDOR AND WITNESSED BY FDOT. THE VENDOR SHALL NOTIFY FDOT AT LEAST 10 DAYS PRIOR TO COMPLETION OF INSTALLATION. THE VENDOR AND FDOT SHALL VERIFY JOINTLY THAT ALL INSTALLATION WORK IS CORRECTLY INSTALLED AND FUNCTIONAL.
- 2. THE VENDOR SHALL NOTIFY FDOT AT LEAST TWO DAYS PRIOR TO COMPLETION OF GROUNDING INSTALLATION FOR INSPECTION. BELOW GRADE GROUNDING INSTALLATIONS AND GROUND CONNECTIONS SHALL NOT BE BACKFILLED UNTIL INSPECTED AND APPROVED BY THE FDOT.  
  
GROUNDING SHALL BE INSPECTED FOR PROPER CONNECTION TYPES, TIGHTNESS, WORKMANSHIP, AND CONFORMANCE WITH THE APPROVED DESIGN. ANY EXOTHERMIC BONDS THAT ARE DEEMED UNSATISFACTORY SHALL BE REPAIRED BY THE VENDOR WITH NEW BONDS, WITHOUT CLAIM.
- 3. THE SITE SHALL BE INSPECTED TO BE FREE OF DEBRIS AND THAT EXCAVATIONS ARE BACKFILLED AND COMPOUND RESTORED.

**PERFORMANCE TESTING NOTES:**

- 1. FOLLOWING THE COMPLETION OF INSPECTIONS, THE INSTALLED KEYS ITS MICROWAVE SYSTEM SHALL BE SUBJECTED TO A MINIMUM OF 20 DAY PERFORMANCE. A PERFORMANCE PERIOD OF 20 CONSECURIVE CALENDAR DAYS OF SUCCESSFUL OPERATION SHALL CONSTITUTE A SUCCESSFUL PERFORMANCE PERIOD. ANY FAILURE SHALL CAUSE A RESTART OF A SUBSEQUENT 20 DAY PERFORMANCE PERIOD, AFTER THE CAUSE OF THE FAILURE IS IDENTIFIED AND CORRECTED.
- 2. FOR THE PURPOSE OF THE SUCCESSFUL PERFORMANCE PERIOD, FAILURE OF SYSTEM OPERATION IS DEFINED AS THE FAILURE TO TRANSPORT ITS TRAFFIC DATA FROM A FIELD DEVICE (CCTV, ETC.) AND DELIVERED TO THE REGIONAL TRAFFIC MANAGEMENT APPLICATION, OR ANY FAILURE OF THE SYSTEM'S GLOBAL DEVICE MANAGEMENT OR NETWORK SURVEILLANCE FUNCTIONS.
- 3. THE PERFORMANCE VERIFICATION SHALL BE ACCOMPLISHED AND WITNESSED BY THE FDOT PROJECT MANAGER OR DESIGNATED PERSONNEL. UPON ACCEPTANCE OF THE CRITERIA OF THE TEST BY THE FDOT PROJECT MANAGER, THE 20 DAYPERFORMANCE PERIOD SHALL BEGIN. THIS REQUIREMENT SHALL BE ACCOMPLISHED DURING A PERIOD OF TIME NOT TO EXCEED 45 CONSECUTIVE CALENDAR DAYS AFTER EQUIPMENT INSTALLATION, INSPECTION, AND TESTING. IF A SUCCESSFUL PERFORMANCE PERIOD CANNOT BE ACCOMPLISHED WITHIN 45 CONSECUTIVE CALENDAR DAYS AFTER THE EQUIPMENT INSPECTION AND TESTING, THE FDOT RESERVES THE RIGHT TO DEEM THE VENDOR IN DEFAULT AND ENFORCE THE PROVISIONS SET FORTH IN THE CONTRACT.

CONTRACT PLANS RECORD						 FLORIDA DEPARTMENT OF TRANSPORTATION 605 SUWANNEE ST. MS 90 TALLAHASSEE, FL 32399-0450 PH.(850)-410-5600 FAX.(850)-410-5501	STATE OF FLORIDA			KEYS MICROWAVE CUT-OVER & INSPECTION NOTES	SHEET NO.
DATE	REV.	DESCRIPTION	DATE	REV.	DESCRIPTION		DEPARTMENT OF TRANSPORTATION				
							SITE NAME	COUNTY	FINANCIAL PROJECT ID		
						PROJECT-WIDE	MONROE, MIAMI-DADE	424401-2-93-01	IT-4		

Site ID	ITS Name	Facility Name	Site ID	ITS Name	Facility Name
A	FL City HUB	POLE-785-SW-3RD-AVE-NB-A	M2	CCTV 325	POLE-US1-77.0-NB-A
A1	CCTV 343/DMS61, 62	POLE-US1-127.0-SB-A	N	CCTV 323	POLE-US1-71.8-NB-A
A2	CCTV 342	POLE-US1-126.1-SB-A	N1	CCTV 324	POLE-US1-74.0-SB-A
C	CCTV 341	POLE-US1-121.1-SB-A	N2	CCTV 322	POLE-US1-70.0-SB-A
C1	CCTV 384	POLE-CR905A-5.9-NB-A	O	CCTV 320	POLE-US1-62.9-SB-A
D	CCTV 340	POLE-US1-116.4-SB-A	O1	CCTV 321	POLE-US1-66.0-SB-A
E	CCTV 339	POLE-US1-112.0-SB-A	O2	CCTV 319	POLE-US1-59.0-SB-A
E1	CCTV 338	POLE-US1-110.0-SB-B	P	CCTV 318	POLE-US1-55.1-SB-A
E2	DMS 63	STR-US1-112.9-SB-A	P1	CCTV 317	POLE-US1-53.0-NB-A
F	CCTV 336	POLE-US1-106.6-NB-A	Q	CCTV 315	POLE-US1-48.0-SB-C
F1	CCTV 337	POLE-US1-107.8-SB-A	Q1	CCTV 316	POLE-US1-50.0-SB-A
F2	CCTV 335/DMS 64, 65	STR-US1-106.0-M-A	R	CCTV 314	POLE-US1-39.8-NB-A
G	CCTV 382	POLE-CR905A-CS4.7-SB-A	R1	CCTV 312, 313/ DMS68, 69	POLE-US1-39.0-SB-A
G1	CCTV 383	POLE-CR905A-0.5-SB-A	S	CCTV 310	POLE-US1-31.3-NB-A
G2	CCTV 381	POLE-CR905-9.3-WB-A	S1	CCTV 311	POLE-US1-34.0-SB-A
H	CCTV 380	POLE-CR905-4.5-WB-A	T	CCTV 308	POLE-US1-25.2-NB-A
I	CCTV 334	POLE-US1-102.6-M-A	T1	CCTV 309	POLE-US1-27.0-SB-A
I1	CCTV 333	POLE-US1-100.0-M-A	U	CCTV 307	POLE-US1-19.6-NB-A
J	CCTV 332	POLE-US1-96.3-M-A	V	CCTV 305	POLE-US1-14.0-NB-A
K	CCTV 328	POLE-US1-90.4-SB-A	V1	CCTV 306	POLE-US1-16.0-SB-A
K1	CCTV 331	POLE-US1-93.0-M-A	W	CCTV 301	POLE-US1-5.2-SB-A
K2	CCTV 329, 330/DMS 66, 67	POLE-US1-91.0-M-A	W1	CCTV 300	POLE-US1-4.0-SB-A
L	CCTV 327	POLE-US1-86.2-NB-A	W2	CCTV 302, 303/DMS70, 71	POLE-US1-7.6-M-A
M	Tea Table Fill Tower	Tea Table Fill Tower	W3	CCTV 304	POLE-US1-9.2-SB-A
M1	CCTV 326	POLE-US1-80.0-SB-A			
GG	Golden Glades	Golden Glades			



5.8 GHz ———  
2.4 GHz ———

SCALE: NOT TO SCALE

CONTRACT PLANS RECORD					
DATE	REV.	DESCRIPTION	DATE	REV.	DESCRIPTION

**FDOT** FLORIDA DEPARTMENT OF TRANSPORTATION  
605 SUWANNEE ST. MS 90  
TALLAHASSEE, FL 32399-0450  
PH.(850)-410-5600  
FAX.(850)-410-5501

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
SITE NAME	COUNTY	FINANCIAL PROJECT ID
PROJECT-WIDE	MONROE, MIAMI-DADE	424401-2-93-01

KEYS MICROWAVE  
EXISTING SYSTEM  
CONFIGURATION

SHEET NO.  
IT-5

T:\Public\ITS\Telecommunications\Keys Microwave System\Plans Package\Keys\MW\_PlansPackage\_20160328.vsd

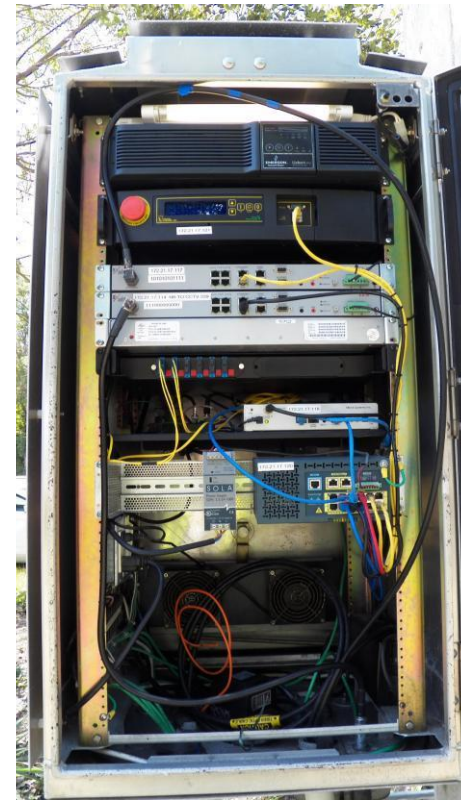




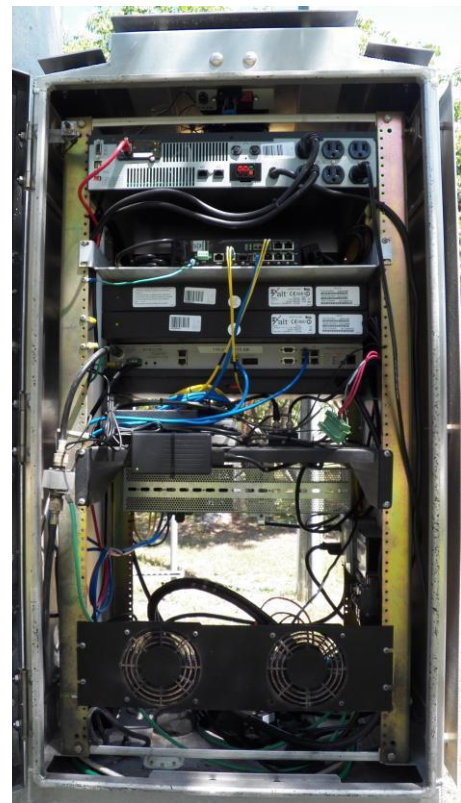
TYPICAL POLE EXAMPLE



TYPICAL DMS EXAMPLE



TYPICAL CABINET – FRONT VIEW



TYPICAL CABINET – REAR VIEW



FLORIDA CITY HUB – ITS RACK

CONTRACT PLANS RECORD					
DATE	REV.	DESCRIPTION	DATE	REV.	DESCRIPTION



FLORIDA DEPARTMENT OF TRANSPORTATION  
 605 SUWANNEE ST. MS 90  
 TALLAHASSEE, FL 32399-0450  
 PH. (850)-410-5600  
 FAX. (850)-410-5501

STATE OF FLORIDA  
 DEPARTMENT OF TRANSPORTATION

SITE NAME	COUNTY	FINANCIAL PROJECT ID
PROJECT-WIDE	MONROE, MIAMI-DADE	424401-2-93-01

KEYS MICROWAVE  
 EXISTING SYSTEM  
 PHOTOGRAPHS

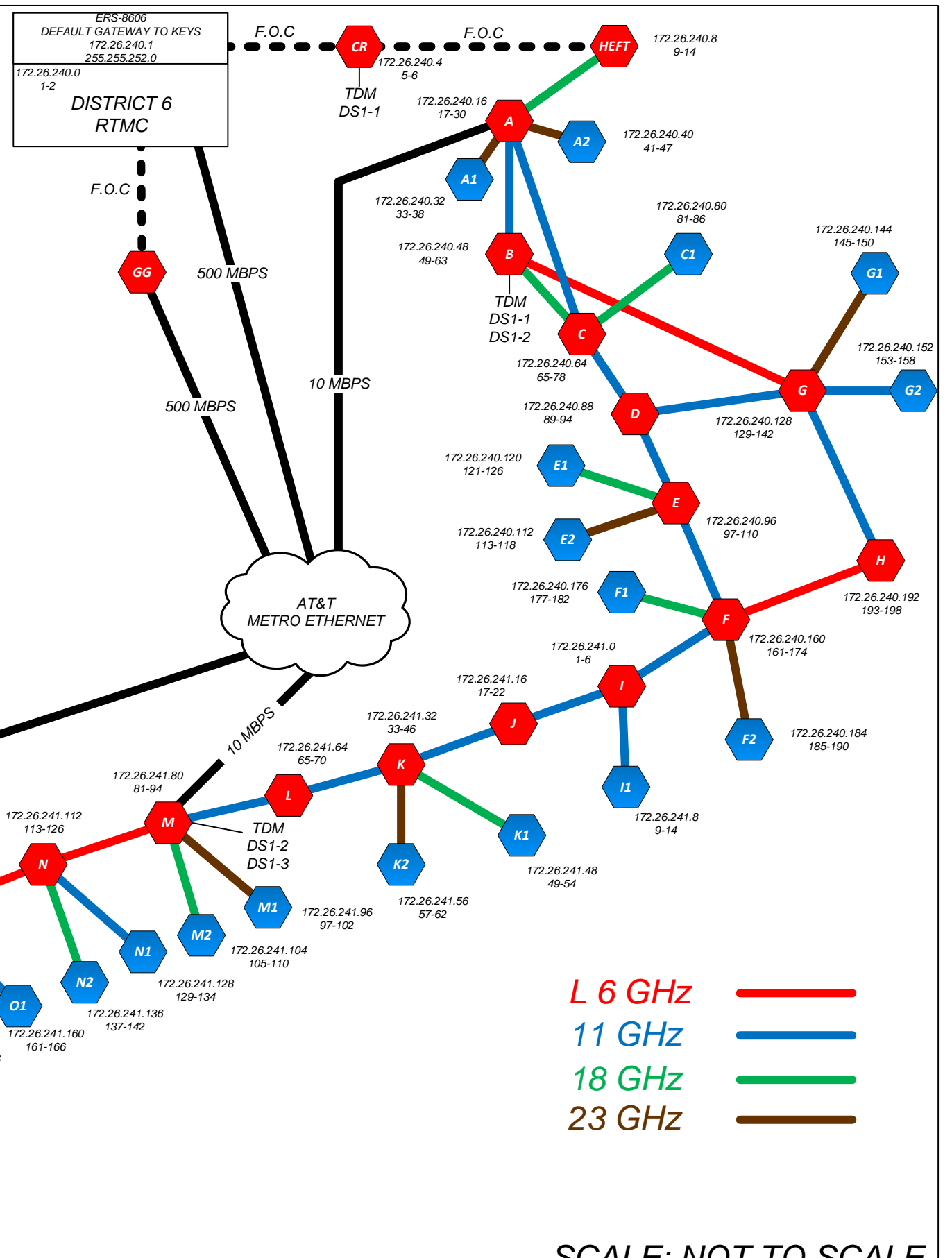
SHEET NO.

IT-6

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Site ID	ITS Name	Facility Name	Site ID	ITS Name	Facility Name
HEFT	HEFT Terminus	HEFT Terminus	M2	CCTV 325	POLE-US1-77.0-NB-A
A	FL City HUB	POLE-785-SW-3RD-AVE-NB-A	N	CCTV 323	POLE-US1-71.8-NB-A
A1	CCTV 343/DMS61, 62	POLE-US1-127.0-SB-A	N1	CCTV 324	POLE-US1-74.0-SB-A
A2	CCTV 342	POLE-US1-126.1-SB-A	N2	CCTV 322	POLE-US1-70.0-SB-A
B	Everglades Academy	Everglades Academy	O	CCTV 320	POLE-US1-62.9-SB-A
C	CCTV 341	POLE-US1-121.1-SB-A	O1	CCTV 321	POLE-US1-66.0-SB-A
C1	CCTV 384	POLE-CR905A-5.9-NB-A	O2	CCTV 319	POLE-US1-59.0-SB-A
D	CCTV 340	POLE-US1-116.4-SB-A	P	CCTV 318	POLE-US1-55.1-SB-A
E	CCTV 339	POLE-US1-112.0-SB-A	P1	CCTV 317	POLE-US1-53.0-NB-A
E1	CCTV 338	POLE-US1-110.0-SB-B	Q	CCTV 315	POLE-US1-48.0-SB-C
E2	DMS 63	STR-US1-112.9-SB-A	Q1	CCTV 316	POLE-US1-50.0-SB-A
F	CCTV 336	POLE-US1-106.6-NB-A	R	CCTV 314	POLE-US1-39.8-NB-A
F1	CCTV 337	POLE-US1-107.8-SB-A	R1	CCTV 312, 313/ DMS68, 69	POLE-US1-39.0-SB-A
F2	CCTV 335/DMS 64, 65	STR-US1-106.0-M-A	S	CCTV 310	POLE-US1-31.3-NB-A
G	CCTV 382	POLE-CR905A-CS4.7-SB-A	S1	CCTV 311	POLE-US1-34.0-SB-A
G1	CCTV 383	POLE-CR905A-0.5-SB-A	T	CCTV 308	POLE-US1-25.2-NB-A
G2	CCTV 381	POLE-CR905-9.3-WB-A	T1	CCTV 309	POLE-US1-27.0-SB-A
H	CCTV 380	POLE-CR905-4.5-WB-A	U	CCTV 307	POLE-US1-19.6-NB-A
I	CCTV 334	POLE-US1-102.6-M-A	V	CCTV 305	POLE-US1-14.0-NB-A
I1	CCTV 333	POLE-US1-100.0-M-A	V1	CCTV 306	POLE-US1-16.0-SB-A
J	CCTV 332	POLE-US1-96.3-M-A	W	CCTV 301	POLE-US1-5.2-SB-A
K	CCTV 328	POLE-US1-90.4-SB-A	W1	CCTV 300	POLE-US1-4.0-SB-A
K1	CCTV 331	POLE-US1-93.0-M-A	W2	CCTV 302, 303/DMS70, 71	POLE-US1-7.6-M-A
K2	CCTV 329, 330/DMS 66, 67	POLE-US1-91.0-M-A	W3	CCTV 304	POLE-US1-9.2-SB-A
L	CCTV 327	POLE-US1-86.2-NB-A	CR	Coral Reef	Coral Reef
M	Tea Table Fill Tower	Tea Table Fill Tower	GG	Golden Glades	Golden Glades
M1	CCTV 326	POLE-US1-80.0-SB-A			
1	Big Pine Key	Big Pine Key			
2	Sugarloaf Key	Sugarloaf Key			



CONTRACT PLANS RECORD					
DATE	REV.	DESCRIPTION	DATE	REV.	DESCRIPTION

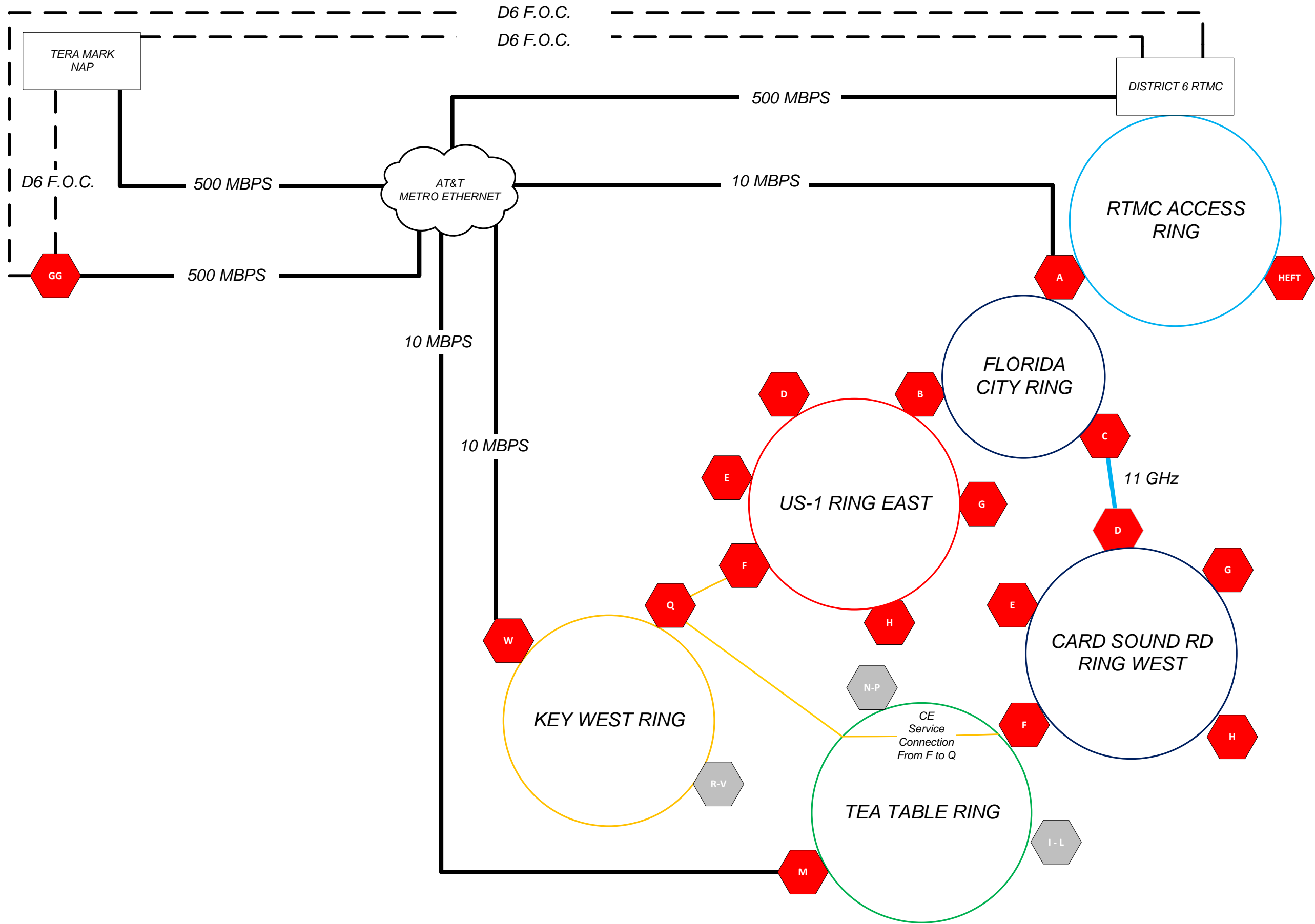
**FDOT** FLORIDA DEPARTMENT OF TRANSPORTATION  
605 SUWANNEE ST. MS 90  
TALLAHASSEE, FL 32399-0450  
PH.(850)-410-5600  
FAX.(850)-410-5501

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
SITE NAME	COUNTY	FINANCIAL PROJECT ID
PROJECT-WIDE	MONROE, MIAMI-DADE	424401-2-93-01

**KEYS MICROWAVE  
PROPOSED SYSTEM  
DESIGN OVERVIEW**

SHEET NO.  
IT-7

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CONTRACT PLANS RECORD					
DATE	REV.	DESCRIPTION	DATE	REV.	DESCRIPTION

**FDOT** FLORIDA DEPARTMENT OF TRANSPORTATION  
 605 SUWANNEE ST. MS 90  
 TALLAHASSEE, FL 32399-0450  
 PH. (850)-410-5600  
 FAX. (850)-410-5501

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
SITE NAME	COUNTY	FINANCIAL PROJECT ID
PROJECT-WIDE	MONROE, MIAMI-DADE	424401-2-93-01

**KEYS ITS  
CARRIER ETHERNET  
ARCHITECTURE**

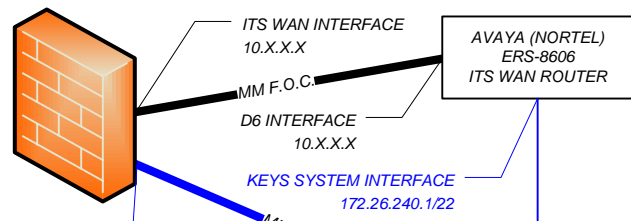
SHEET NO. IT-8

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DISTRICT 6 RTMC  
FIREWALL/ROUTER



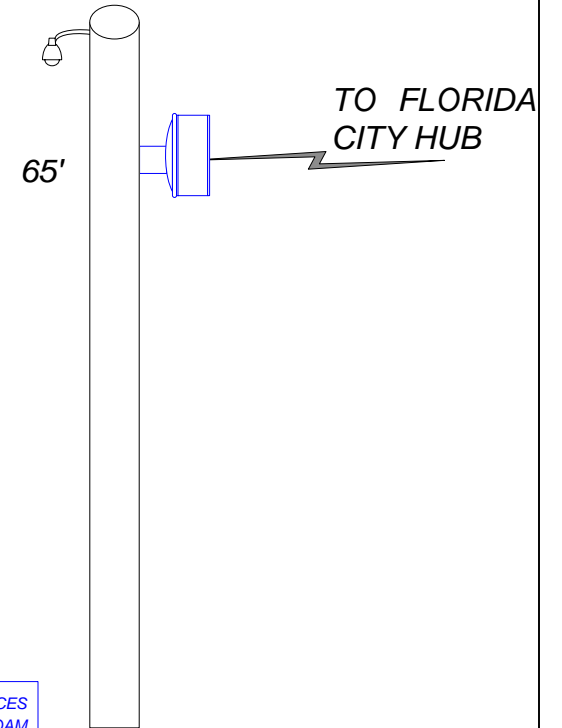
PHOTONIC SERVICE SWITCH OTN WITH CARRIER ETHERNET 172.26.240.2/22 (MGMT)

KEYS SYSTEM INTERFACE (E-TREE SERVICE ROOT) 10.X.X.1  
D 6 INTERFACE (E-TREE SERVICE ROOT) 10.X.X.2

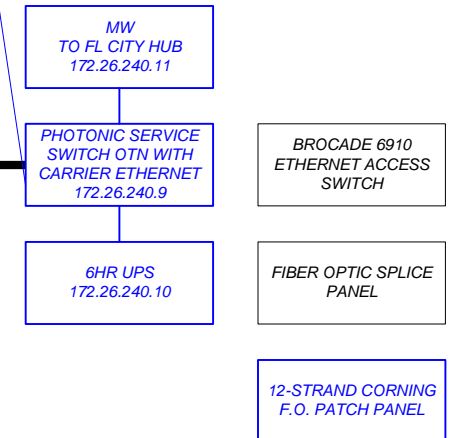
CARRIER ETHERNET SERVICES  
CENTRAL OFFICE: OAM & LEGACY OAM  
DISTRICT 6: ITS FIELD DEVICES  
DISTRICT 6: FLASHING BEACONS ON CARD SOUND RD  
DISTRICT 6: TRAFFIC DETECTORS (NORTHERN END)  
DISTRICT 6: VDM SIGNS  
FTE: ITS BACKUP  
TOLLS: CARD SOUND RD BRIDGE TOLLING  
FCC: REMOTE LISTENING STATION - TEA TABLE

LEGEND:

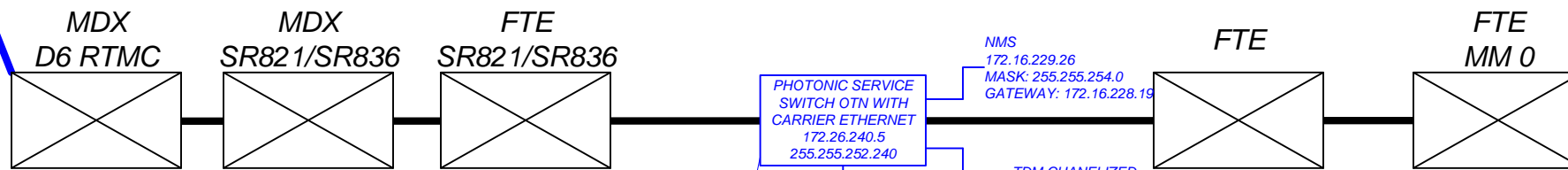
— TO BE INSTALLED



OUTDOOR CABINET



EQUIPMENT SHELTER - HVAC



12 MILES  
17dB LOSS

-48VDC BATTERY 172.26.240.6

16 MILES  
17dB LOSS

CARRIER ETHERNET SERVICES  
CENTRAL OFFICE: OAM & LEGACY OAM  
CENTRAL OFFICE: T1 CIRCUIT EMULATION - SYNC-E/IEEE 1588 V2  
CENTRAL OFFICE: SARNET

CARRIER ETHERNET SERVICES  
CENTRAL OFFICE: OAM  
CENTRAL OFFICE: T1 CIRCUIT EMULATION - SYNC-E/IEEE 1588 V2  
DISTRICT 6: ITS FIELD DEVICES  
DISTRICT 6: TRAFFIC DETECTORS (NORTHERN END)  
FTE: ITS BACKUP

HEFT CCTV NOTES:

THE VENDOR SHALL INSTALL A NEW 12-STRAND CORNING FIBER OPTIC PATCH PANEL. THE VENDOR SHALL BE RESPONSIBLE FOR THE LATERAL SPLICING OF 4 ITS FDOT-CO STRANDS IN THE PATCH PANEL. THE FLORIDA TURNPIKE ENTERPRISE (FTE) SHALL BE RESPONSIBLE FOR THE LATERAL SPLICING OF 4 FTE STRANDS AT THE MAINLINE.

CONTRACT PLANS RECORD

DATE	REV.	DESCRIPTION	DATE	REV.	DESCRIPTION



FLORIDA DEPARTMENT OF TRANSPORTATION  
605 SUWANNEE ST. MS 90  
TALLAHASSEE, FL 32399-0450  
PH.(850)-410-5600  
FAX.(850)-410-5501

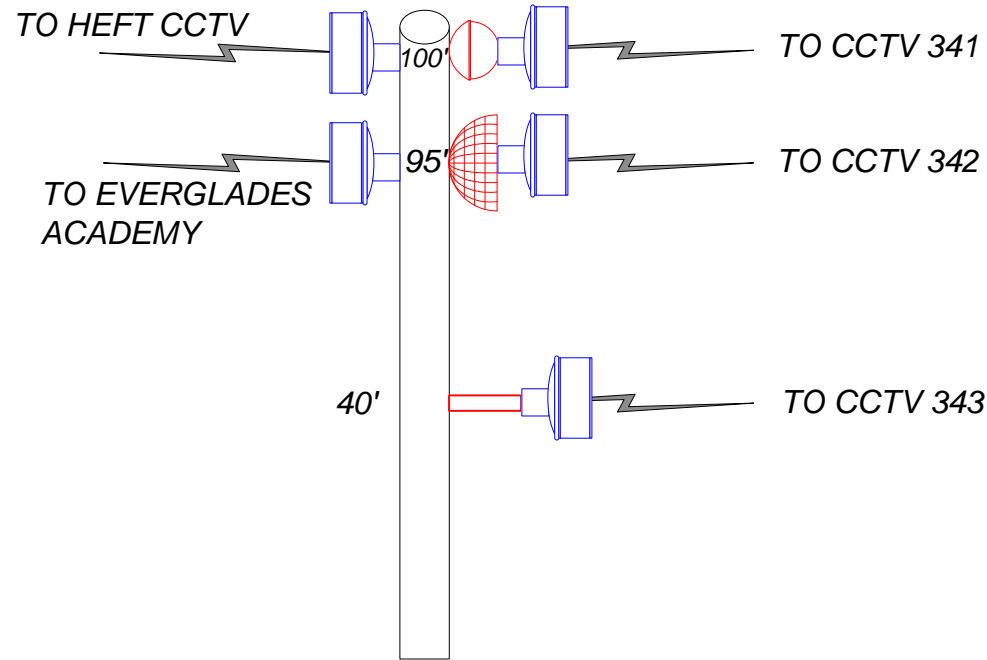
STATE OF FLORIDA  
DEPARTMENT OF TRANSPORTATION

SITE NAME	COUNTY	FINANCIAL PROJECT ID
PROJECT-WIDE	MONROE, MIAMI-DADE	424401-2-93-01

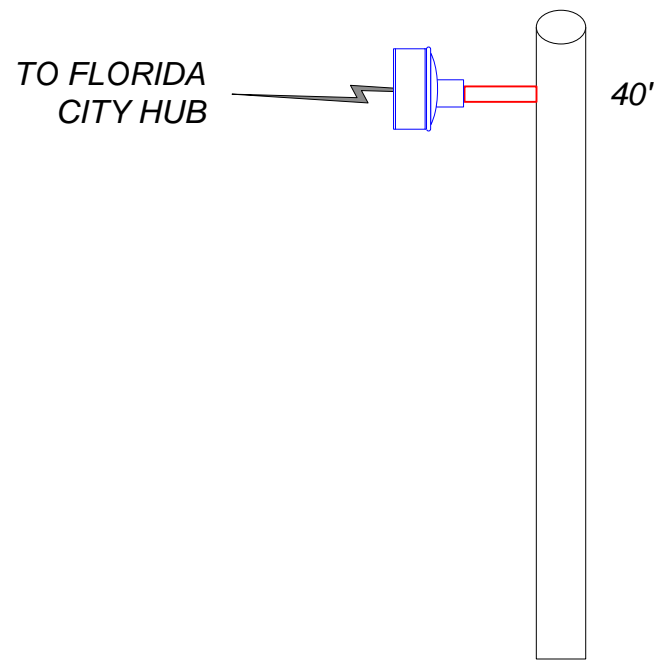
KEYS MICROWAVE  
STATION EQUIPMENT  
CONFIGURATIONS

SHEET NO.  
IT-9

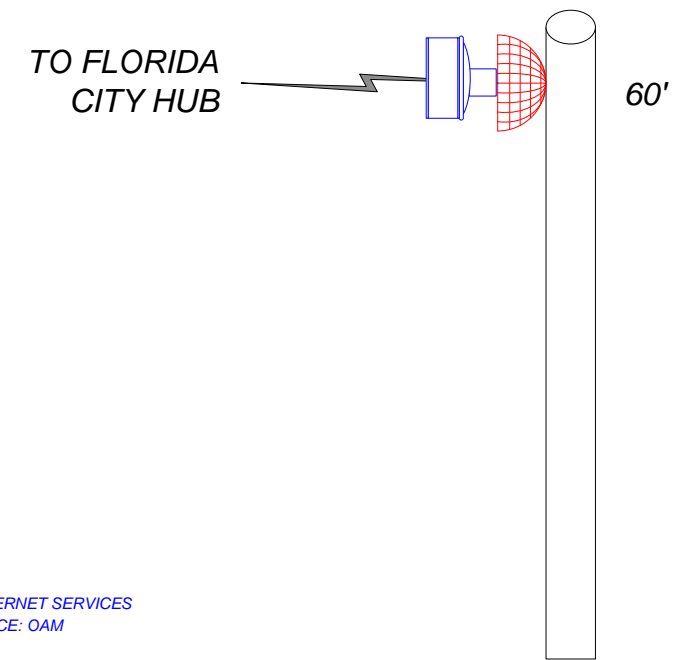
**A FLORIDA CITY HUB**



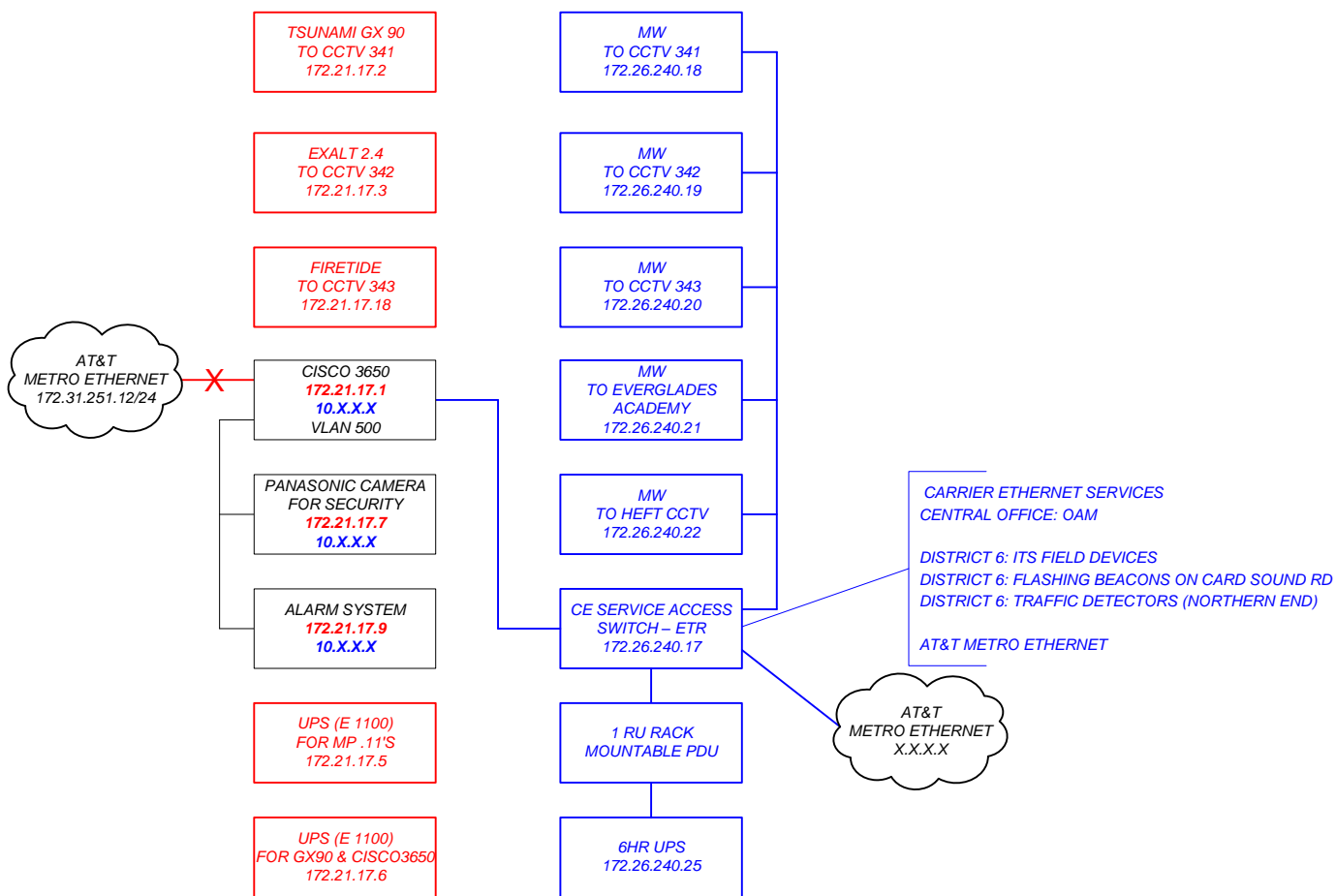
**A1 CCTV 343**



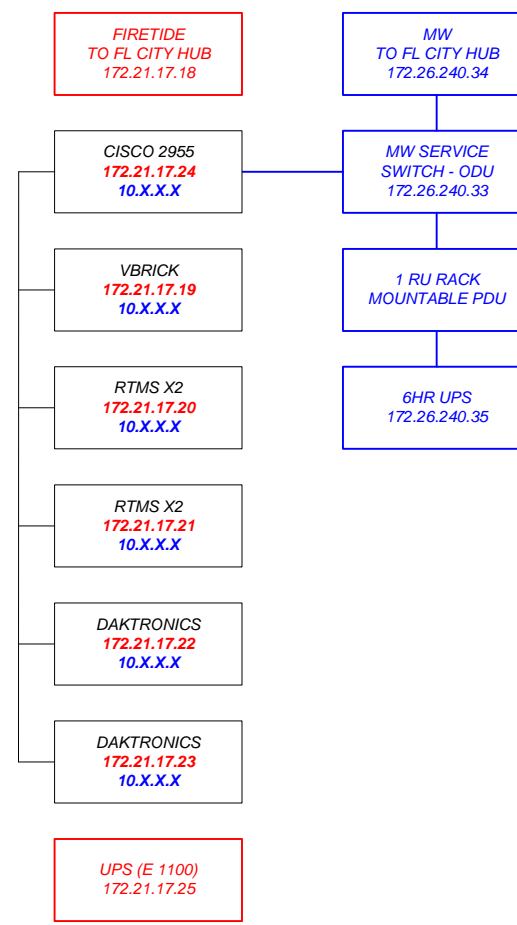
**A2 CCTV 342**



**EQUIPMENT SHELTER - HVAC**

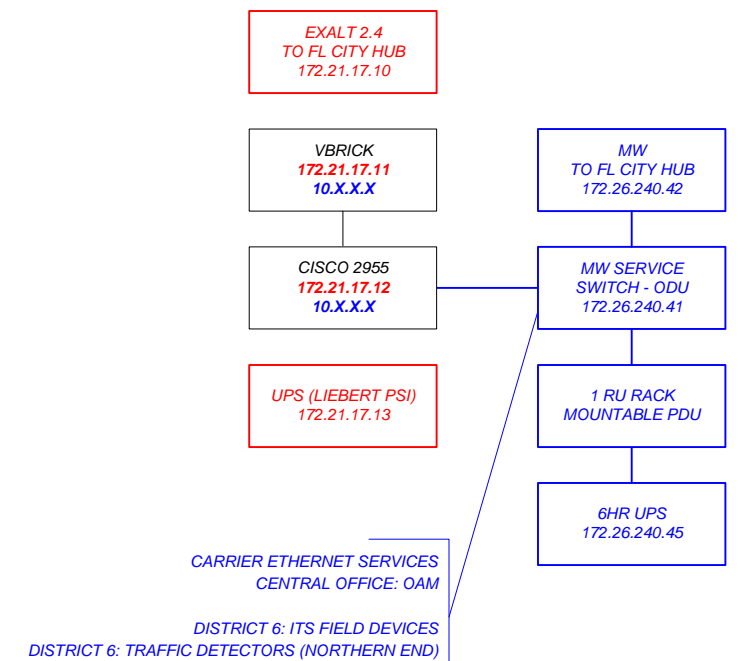


**OUTDOOR CABINET**



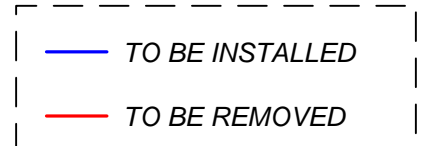
CARRIER ETHERNET SERVICES  
CENTRAL OFFICE: OAM  
DISTRICT 6: ITS FIELD DEVICES  
DISTRICT 6: TRAFFIC DETECTORS (NORTHERN END)  
DISTRICT 6: VDM SIGNS

**OUTDOOR CABINET**



CARRIER ETHERNET SERVICES  
CENTRAL OFFICE: OAM  
DISTRICT 6: ITS FIELD DEVICES  
DISTRICT 6: TRAFFIC DETECTORS (NORTHERN END)

**LEGEND:**



CONTRACT PLANS RECORD					
DATE	REV.	DESCRIPTION	DATE	REV.	DESCRIPTION



FLORIDA DEPARTMENT OF TRANSPORTATION  
605 SUWANNEE ST. MS 90  
TALLAHASSEE, FL 32399-0450  
PH.(850)-410-5600  
FAX.(850)-410-5501

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
SITE NAME	COUNTY	FINANCIAL PROJECT ID
PROJECT-WIDE	MONROE, MIAMI-DADE	424401-2-93-01

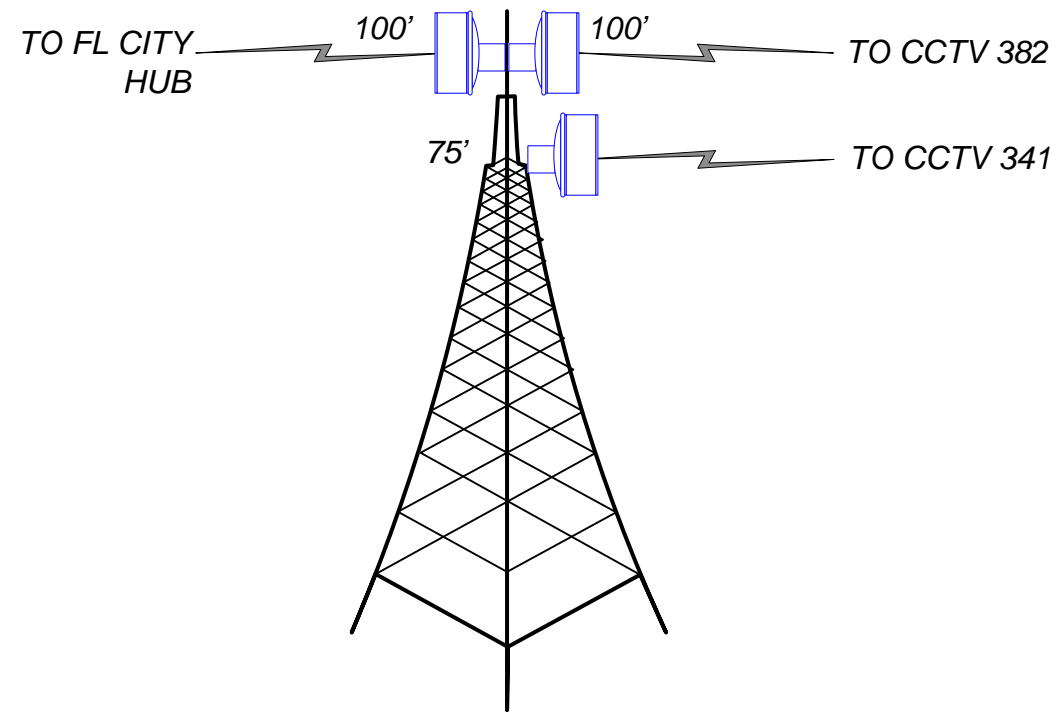
KEYS MICROWAVE  
STATION EQUIPMENT  
CONFIGURATIONS

SHEET NO.  
IT-10

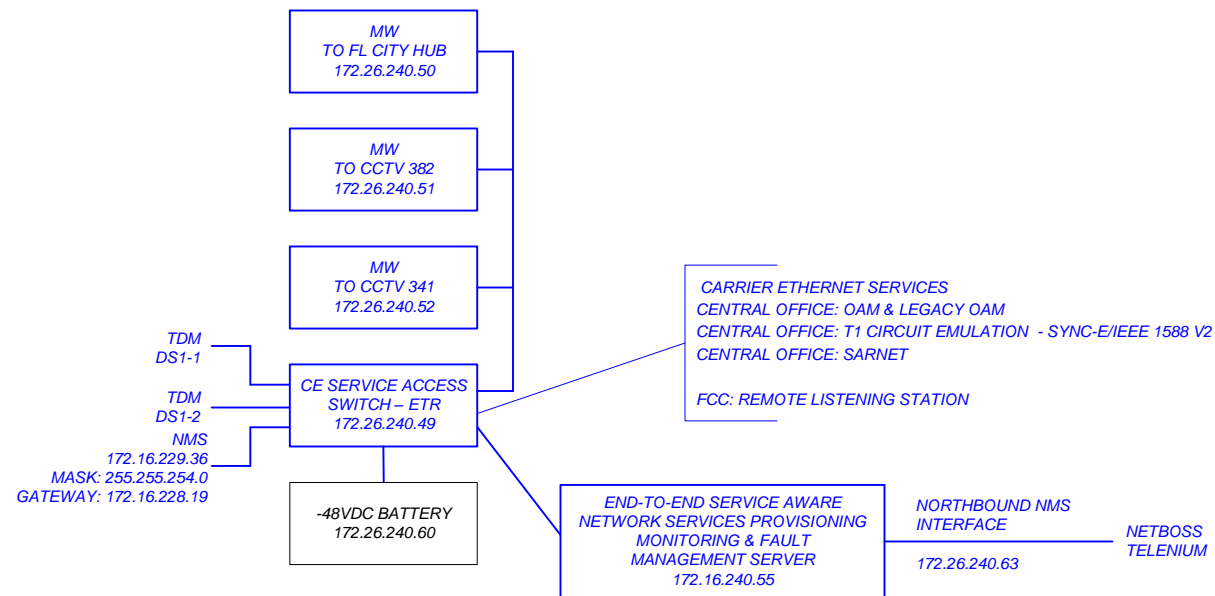
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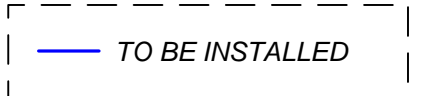
**B** EVERGLADES ACADEMY



EQUIPMENT SHELTER - HVAC



**LEGEND:**



CONTRACT PLANS RECORD					
DATE	REV.	DESCRIPTION	DATE	REV.	DESCRIPTION

**FDOT** FLORIDA DEPARTMENT OF TRANSPORTATION  
 605 SUWANNEE ST. MS 90  
 TALLAHASSEE, FL 32399-0450  
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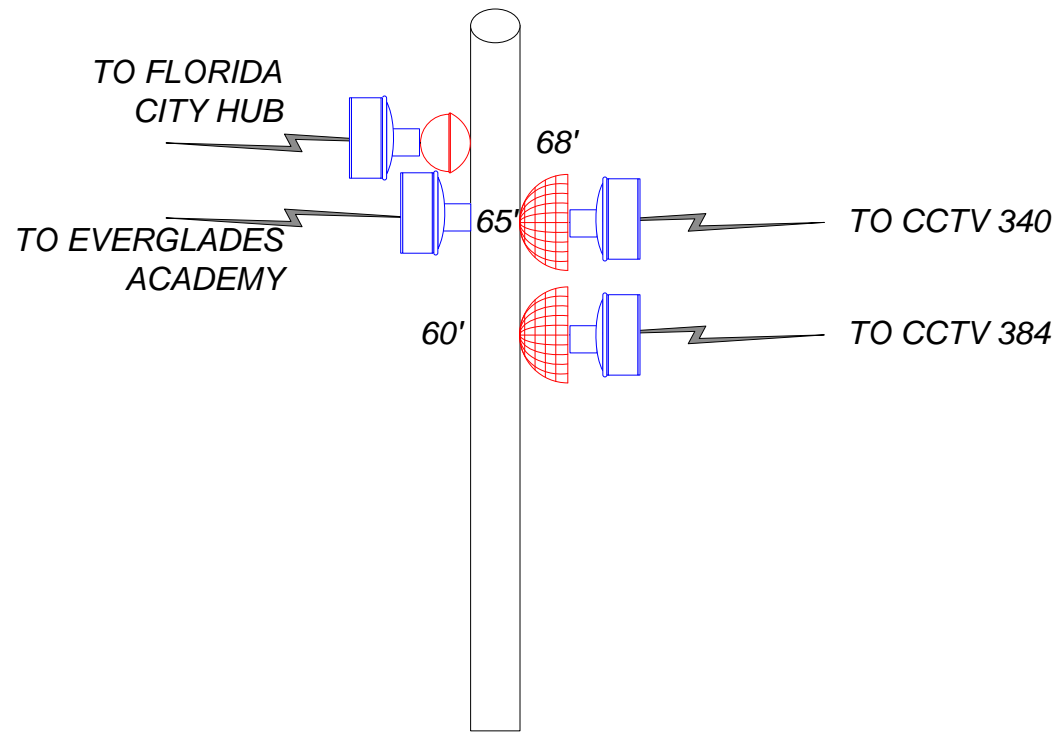
STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
SITE NAME	COUNTY	FINANCIAL PROJECT ID
PROJECT-WIDE	MONROE, MIAMI-DADE	424401-2-93-01

*KEYS MICROWAVE  
STATION EQUIPMENT  
CONFIGURATIONS*

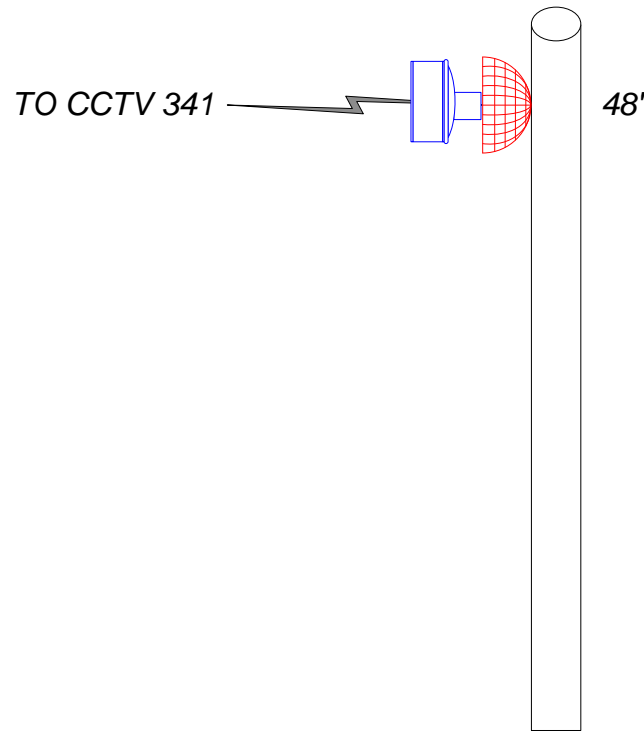
SHEET NO.  
IT-11

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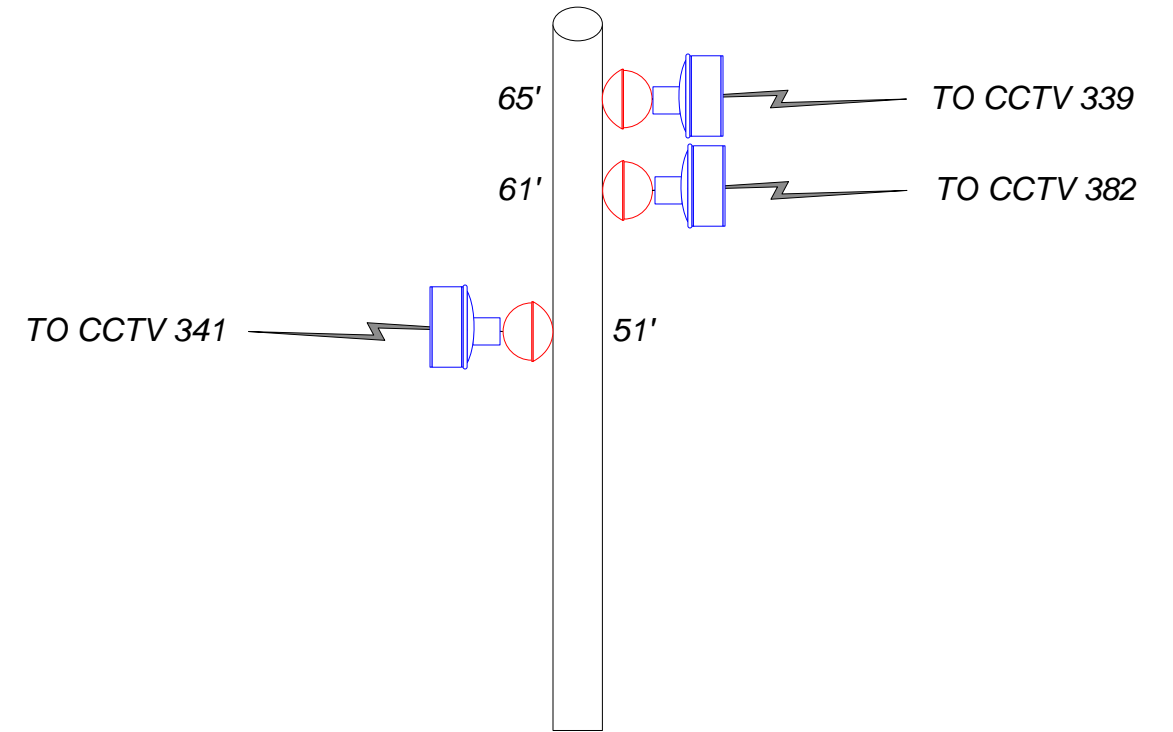
**C** **CCTV 341**



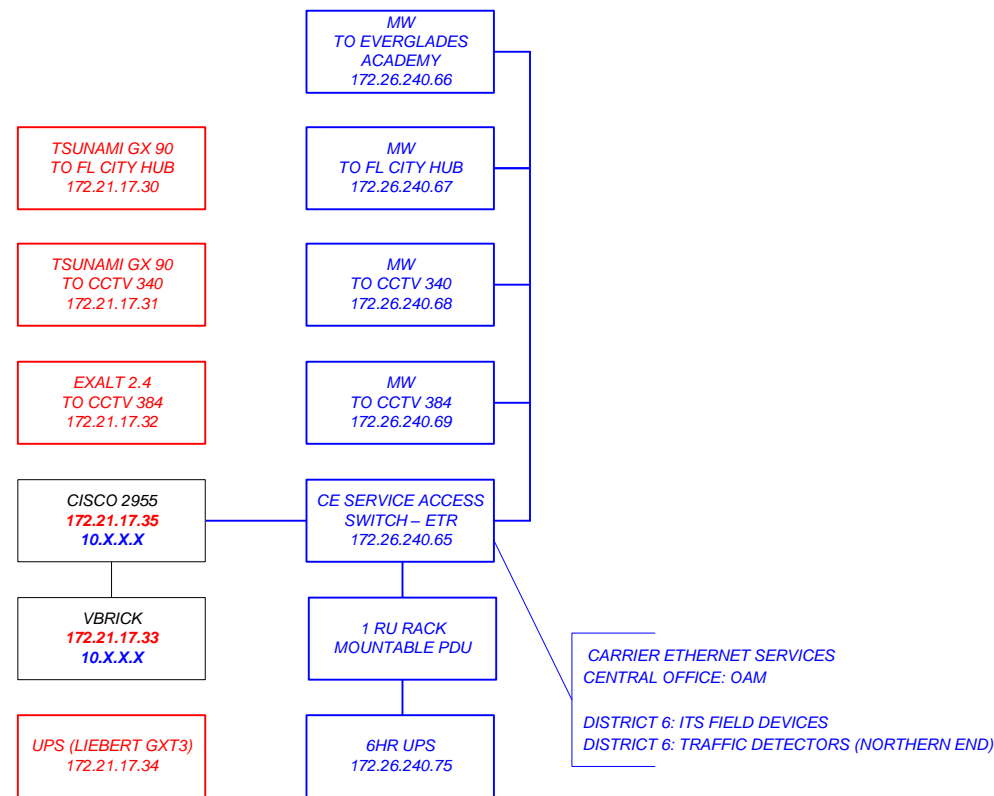
**C1** **CCTV 384**



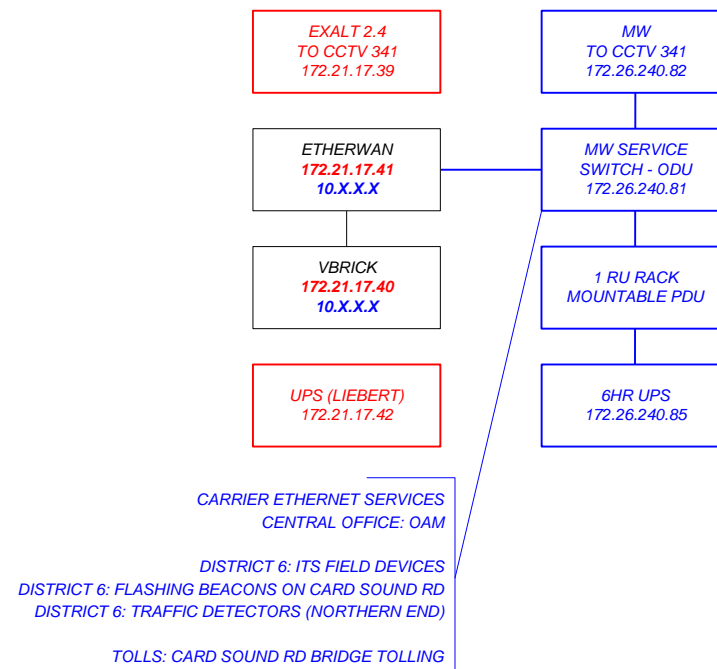
**D** **CCTV 340 - D**



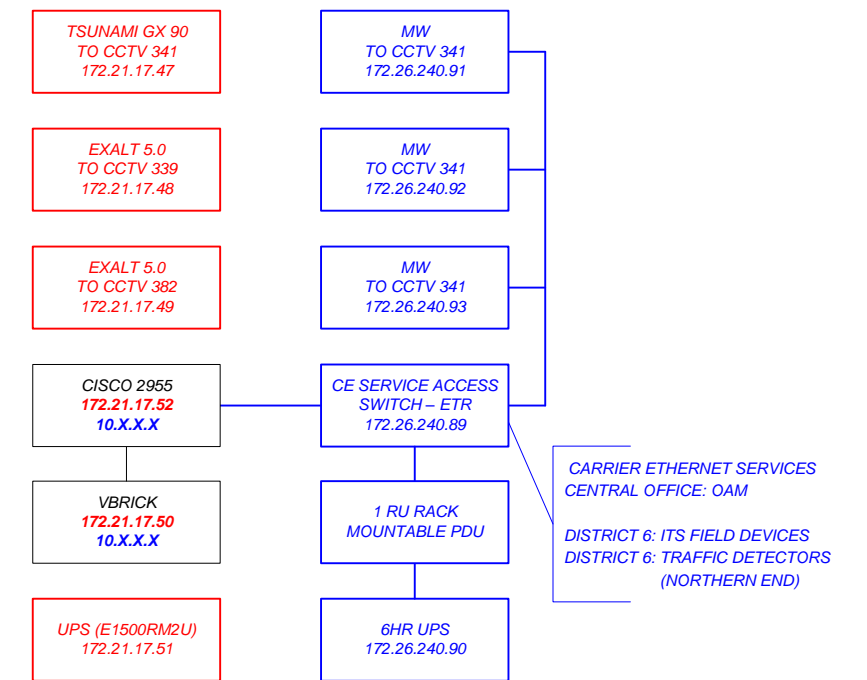
**OUTDOOR CABINET**



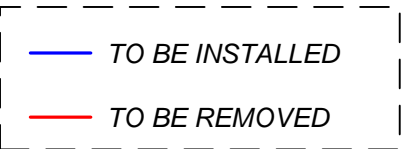
**OUTDOOR CABINET**



**OUTDOOR CABINET**



**LEGEND:**



CONTRACT PLANS RECORD					
DATE	REV.	DESCRIPTION	DATE	REV.	DESCRIPTION

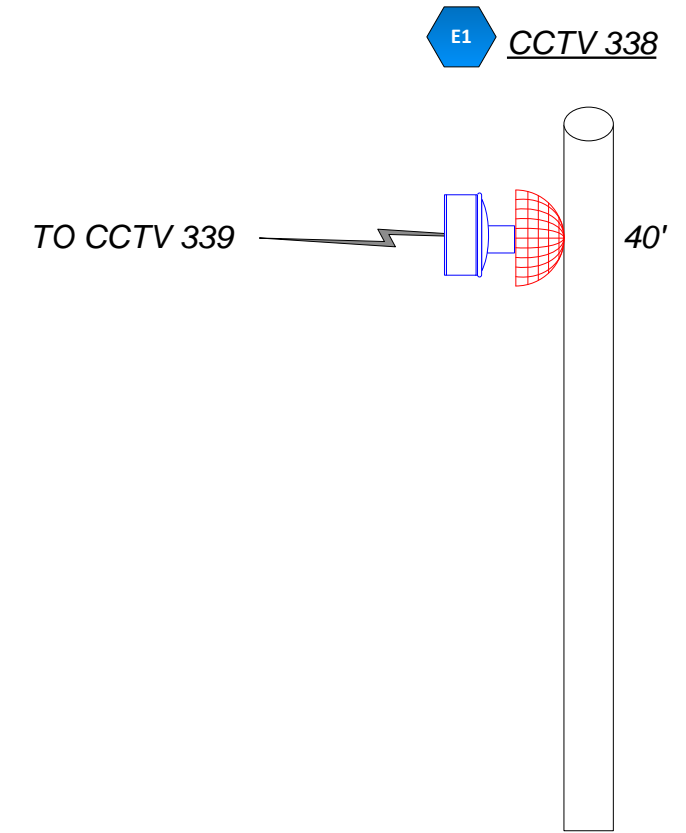
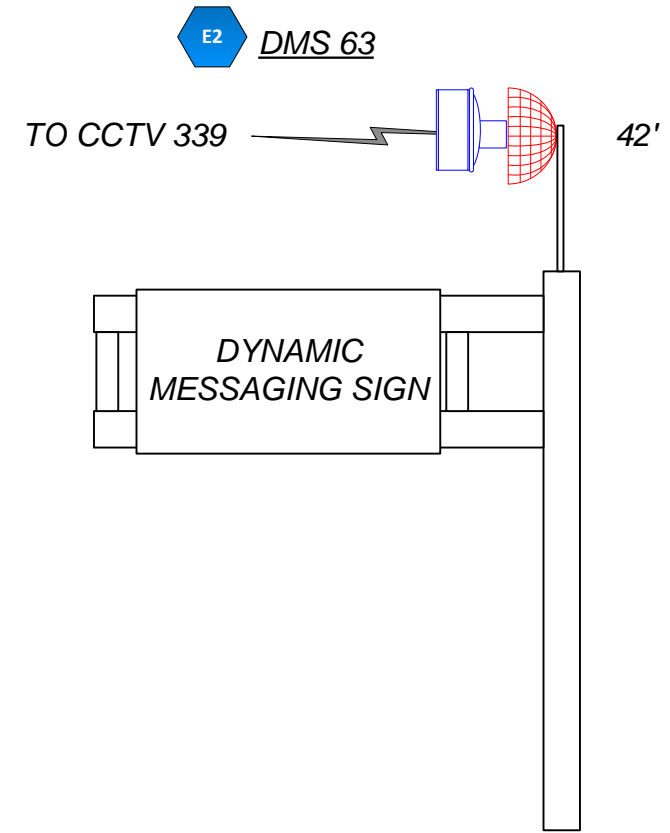
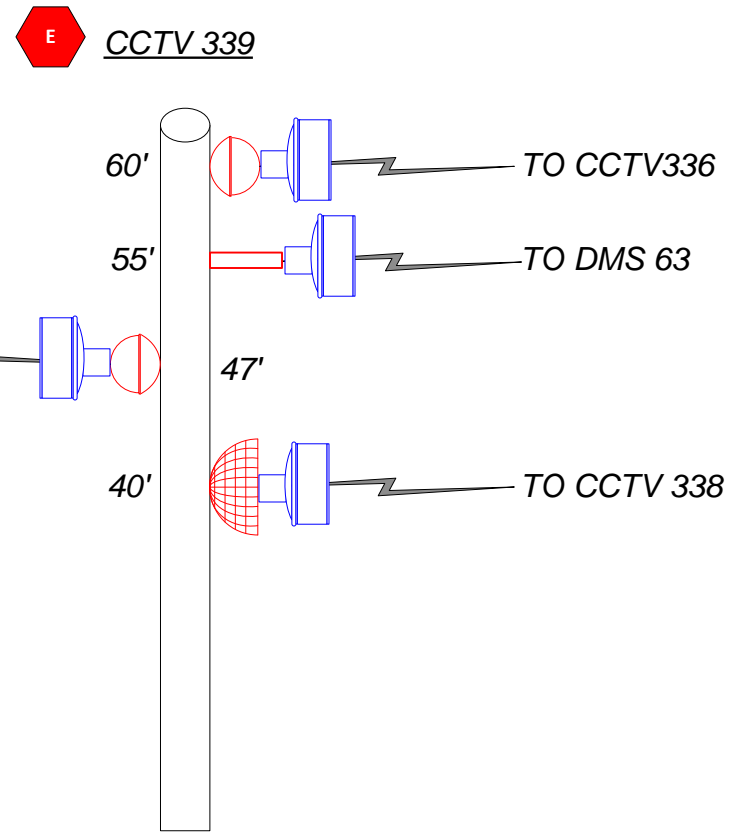
**FDOT** FLORIDA DEPARTMENT OF TRANSPORTATION  
 605 SUWANNEE ST. MS 90  
 TALLAHASSEE, FL 32399-0450  
 PH.(850)-410-5600  
 FAX.(850)-410-5501

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
SITE NAME	COUNTY	FINANCIAL PROJECT ID
PROJECT-WIDE	MONROE, MIAMI-DADE	424401-2-93-01

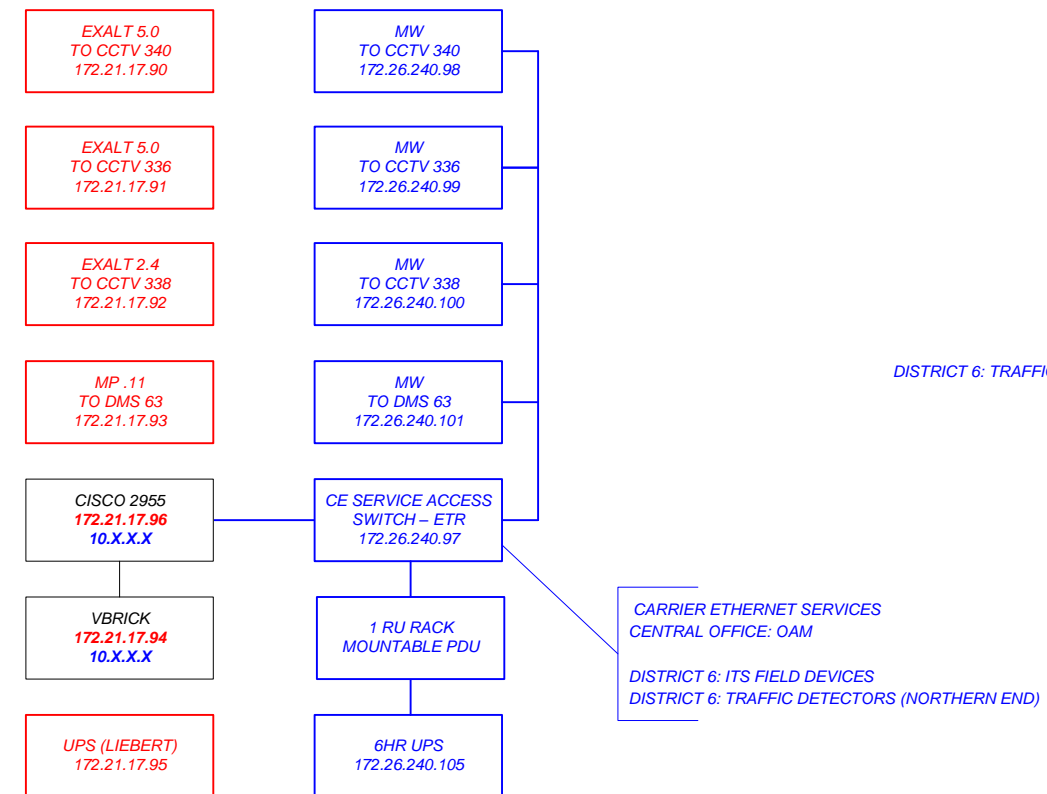
KEYS MICROWAVE STATION EQUIPMENT CONFIGURATIONS	SHEET NO.
	MW-12

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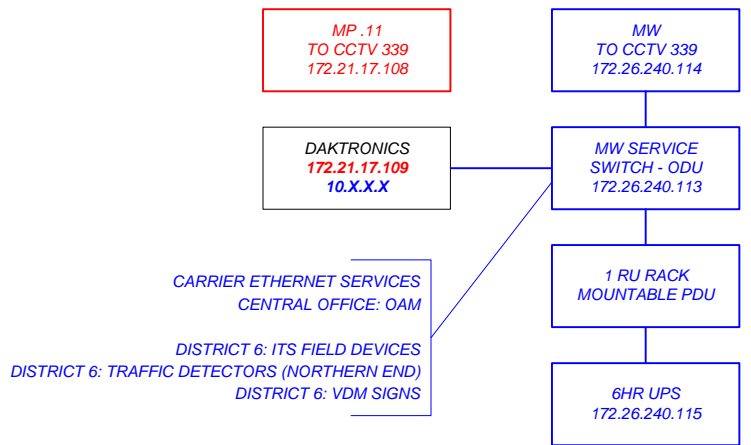




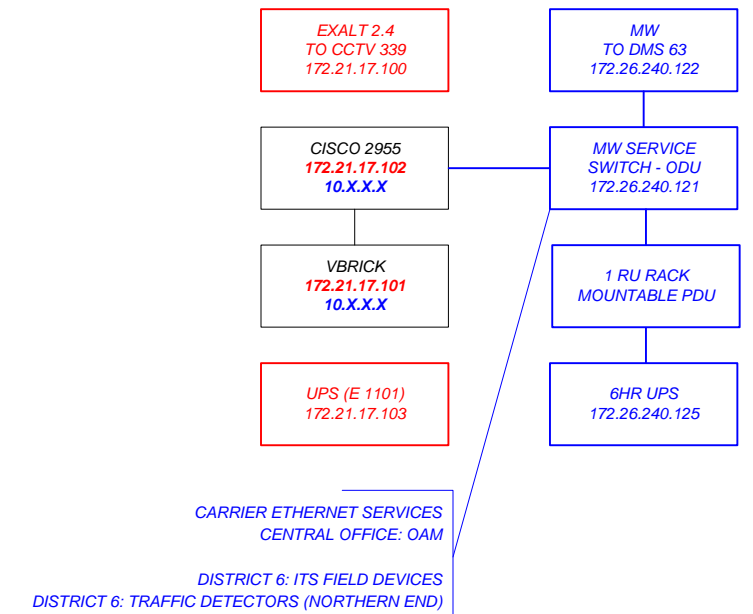
**OUTDOOR CABINET**



**OUTDOOR CABINET**



**OUTDOOR CABINET**



**LEGEND:**

— TO BE INSTALLED

— TO BE REMOVED

CONTRACT PLANS RECORD					
DATE	REV.	DESCRIPTION	DATE	REV.	DESCRIPTION

FLORIDA DEPARTMENT OF TRANSPORTATION  
 605 SUWANNEE ST. MS 90  
 TALLAHASSEE, FL 32399-0450  
 PH.(850)-410-5600  
 FAX.(850)-410-5501

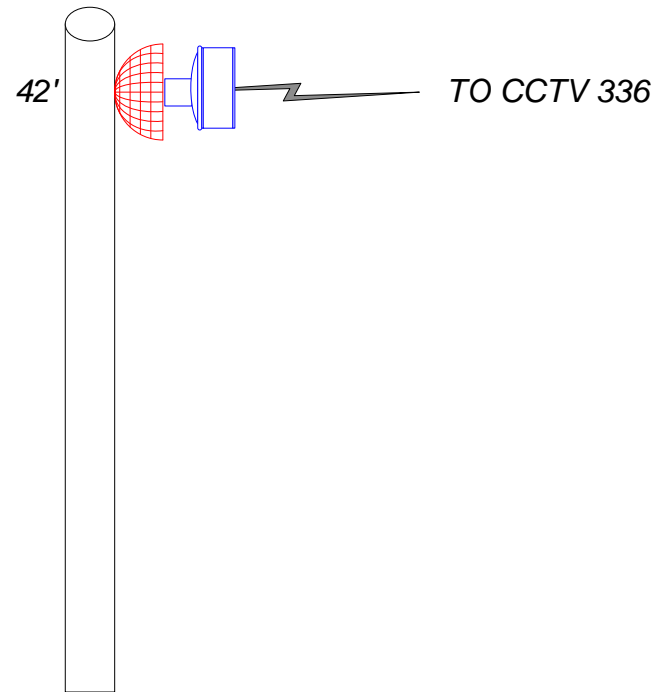
STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
SITE NAME	COUNTY	FINANCIAL PROJECT ID
PROJECT-WIDE	MONROE, MIAMI-DADE	424401-2-93-01

KEYS MICROWAVE  
STATION EQUIPMENT  
CONFIGURATIONS

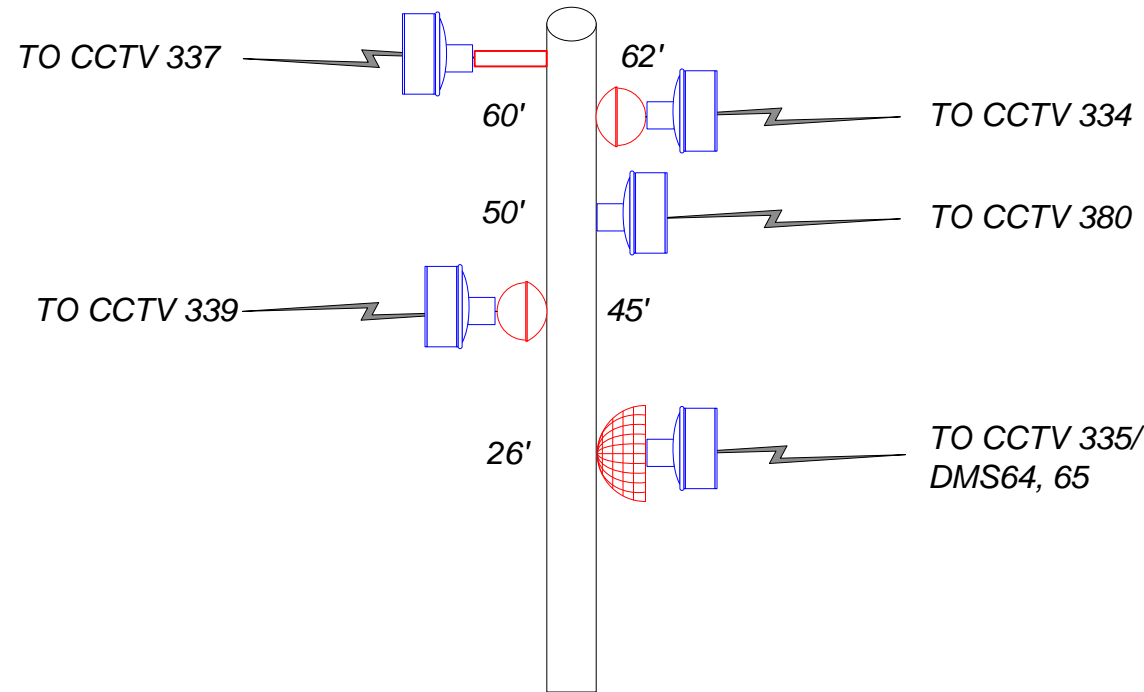
SHEET NO.  
IT-13

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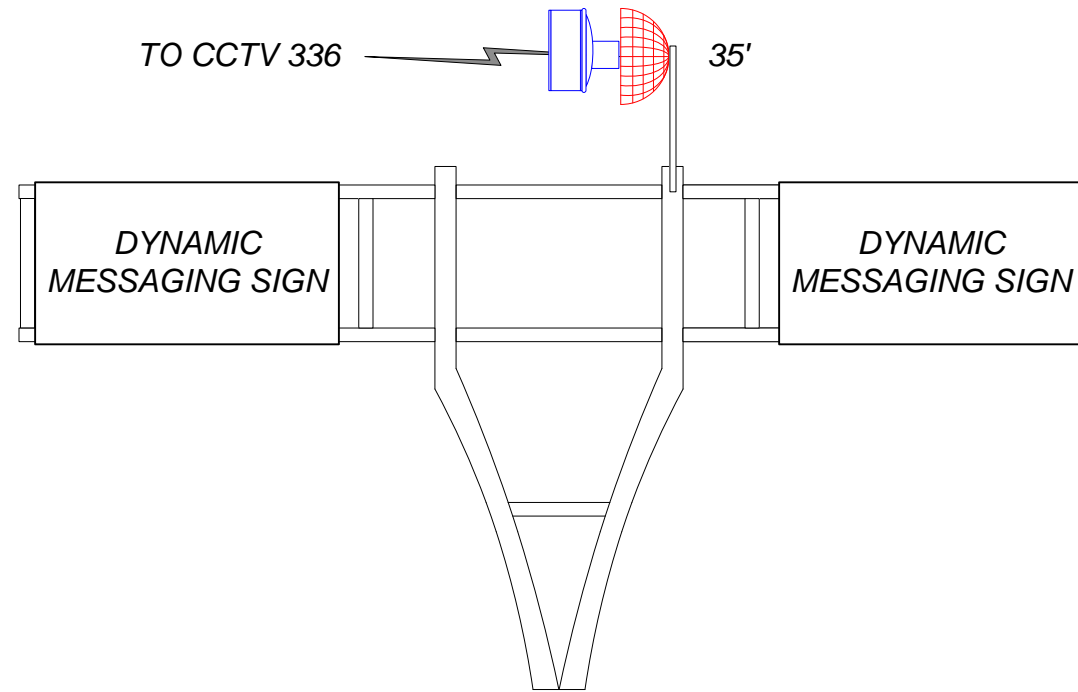
**F1** CCTV 337



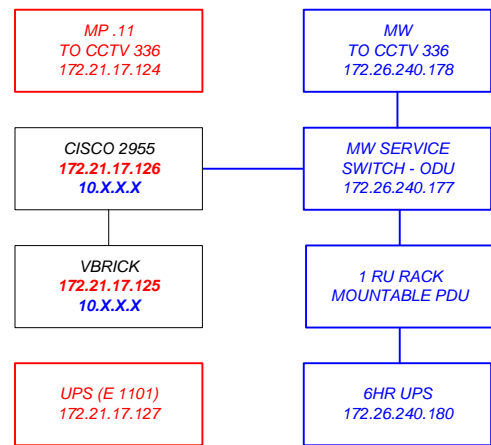
**F** CCTV 336



**F2** CCTV 335/DM S64. 65



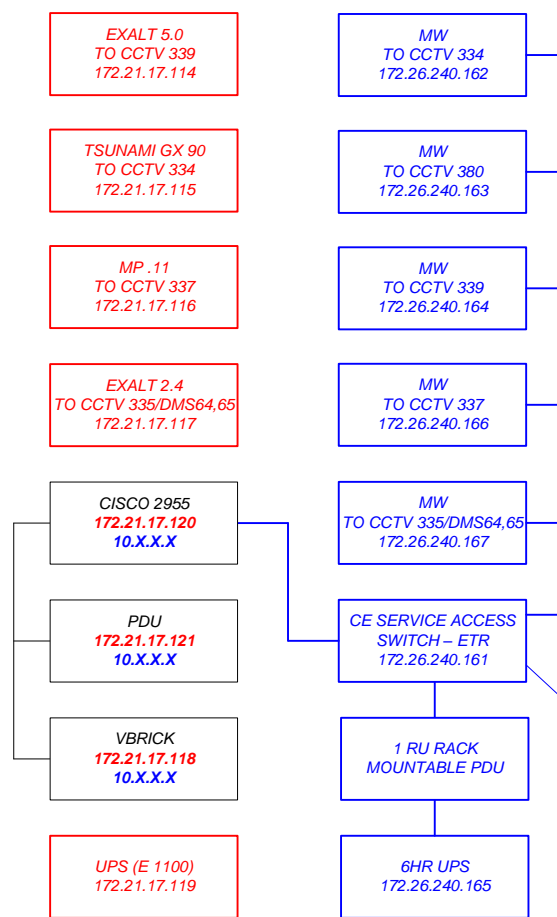
**OUTDOOR CABINET**



CARRIER ETHERNET SERVICES  
CENTRAL OFFICE: OAM

DISTRICT 6: ITS FIELD DEVICES  
DISTRICT 6: TRAFFIC DETECTORS (NORTHERN END)

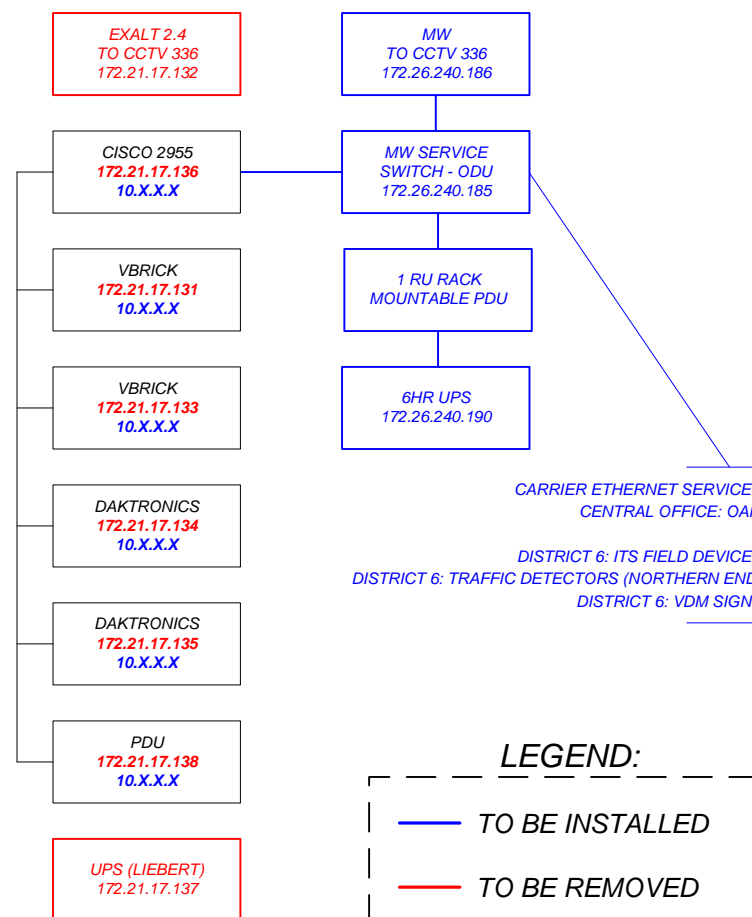
**OUTDOOR CABINET**



CARRIER ETHERNET SERVICES  
CENTRAL OFFICE: OAM

DISTRICT 6: ITS FIELD DEVICES  
DISTRICT 6: TRAFFIC DETECTORS (NORTHERN END)  
DISTRICT 6: VDM SIGNS

**OUTDOOR CABINET**



CARRIER ETHERNET SERVICES  
CENTRAL OFFICE: OAM

DISTRICT 6: ITS FIELD DEVICES  
DISTRICT 6: TRAFFIC DETECTORS (NORTHERN END)  
DISTRICT 6: VDM SIGNS

**LEGEND:**

- TO BE INSTALLED
- TO BE REMOVED

**CONTRACT PLANS RECORD**

DATE	REV.	DESCRIPTION	DATE	REV.	DESCRIPTION



FLORIDA DEPARTMENT OF TRANSPORTATION  
605 SUWANNEE ST. MS 90  
TALLAHASSEE, FL 32399-0450  
PH.(850)-410-5600  
FAX.(850)-410-5501

**STATE OF FLORIDA  
DEPARTMENT OF TRANSPORTATION**

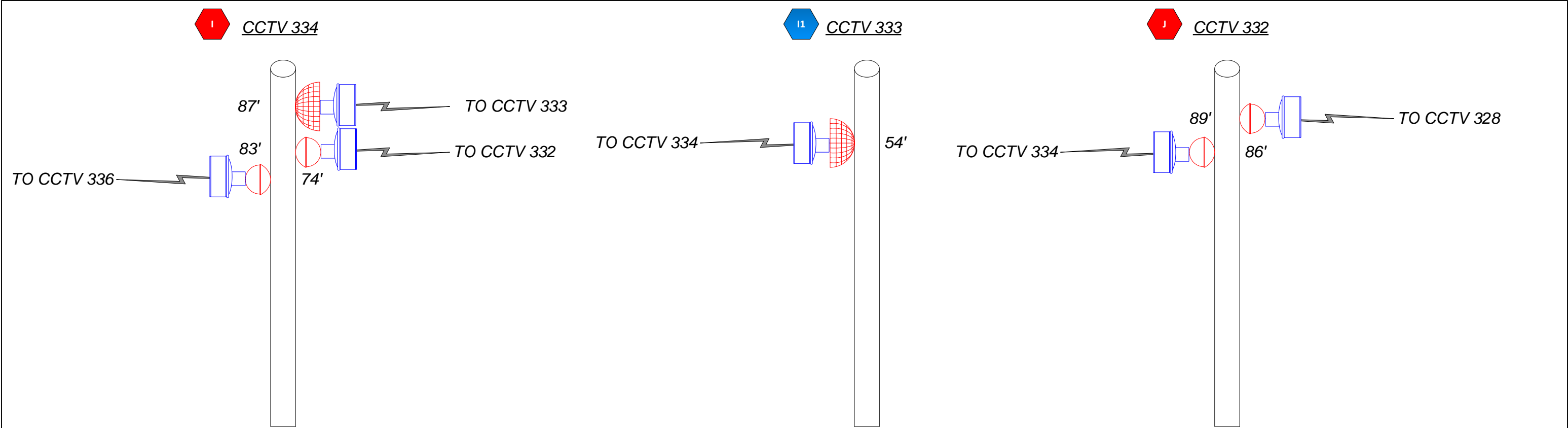
SITE NAME	COUNTY	FINANCIAL PROJECT ID
PROJECT-WIDE	MONROE, MIAMI-DADE	424401-2-93-01

**KEYS MICROWAVE  
STATION EQUIPMENT  
CONFIGURATIONS**

SHEET NO.  
IT-14

T:\Public\ITS\Telecommunications\Keys Microwave System\Plans Package\KeysMW\_PlansPackage\_20160328.vsd

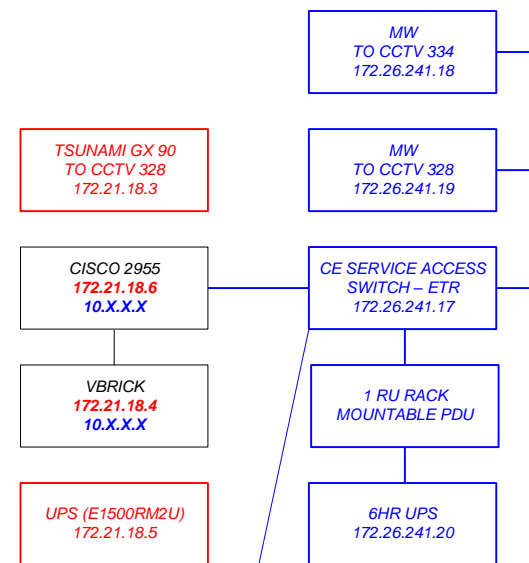
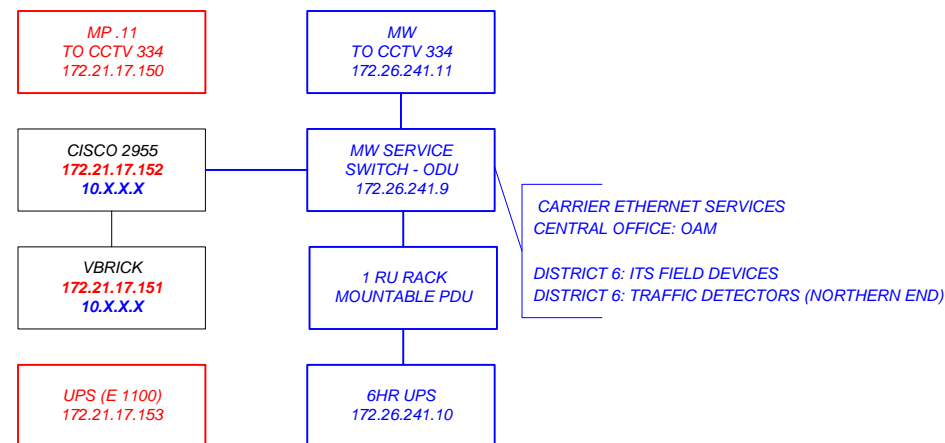
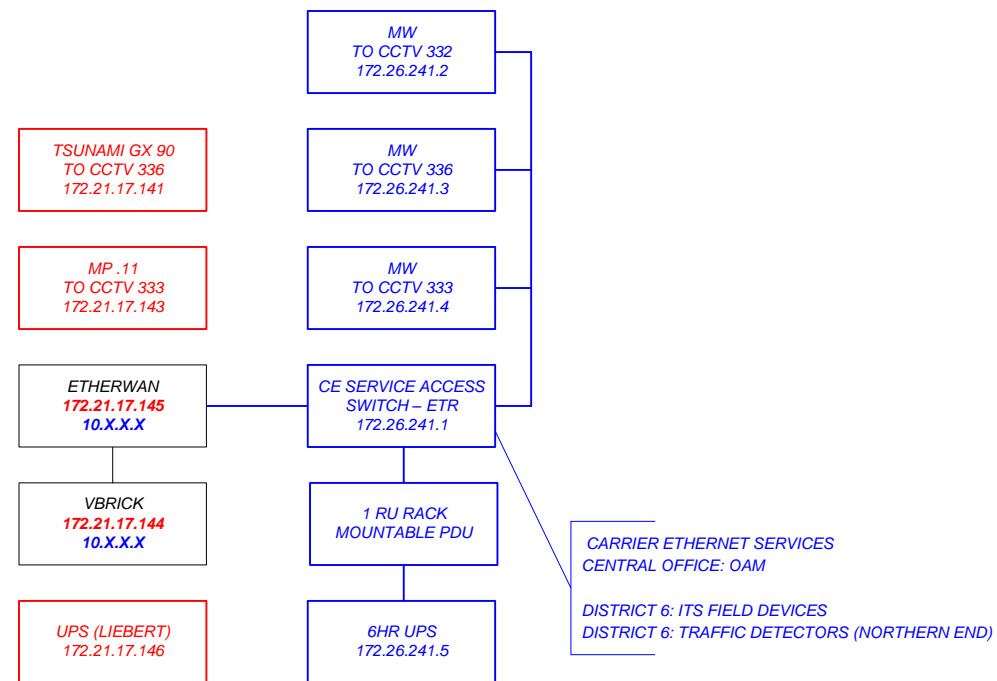




**OUTDOOR CABINET**

**OUTDOOR CABINET**

**OUTDOOR CABINET**



CARRIER ETHERNET SERVICES  
CENTRAL OFFICE: OAM  
DISTRICT 6: ITS FIELD DEVICES  
DISTRICT 6: TRAFFIC DETECTORS (NORTHERN END)

CARRIER ETHERNET SERVICES  
CENTRAL OFFICE: OAM  
DISTRICT 6: ITS FIELD DEVICES  
DISTRICT 6: TRAFFIC DETECTORS (NORTHERN END)

CARRIER ETHERNET SERVICES  
CENTRAL OFFICE: OAM  
DISTRICT 6: ITS FIELD DEVICES  
DISTRICT 6: TRAFFIC DETECTORS (NORTHERN END)  
DISTRICT 6: VDM SIGNS

**LEGEND:**

— TO BE INSTALLED

— TO BE REMOVED

CONTRACT PLANS RECORD					
DATE	REV.	DESCRIPTION	DATE	REV.	DESCRIPTION

**FDOT** FLORIDA DEPARTMENT OF TRANSPORTATION  
605 SUWANNEE ST. MS 90  
TALLAHASSEE, FL 32399-0450  
PH.(850)-410-5600  
FAX.(850)-410-5501

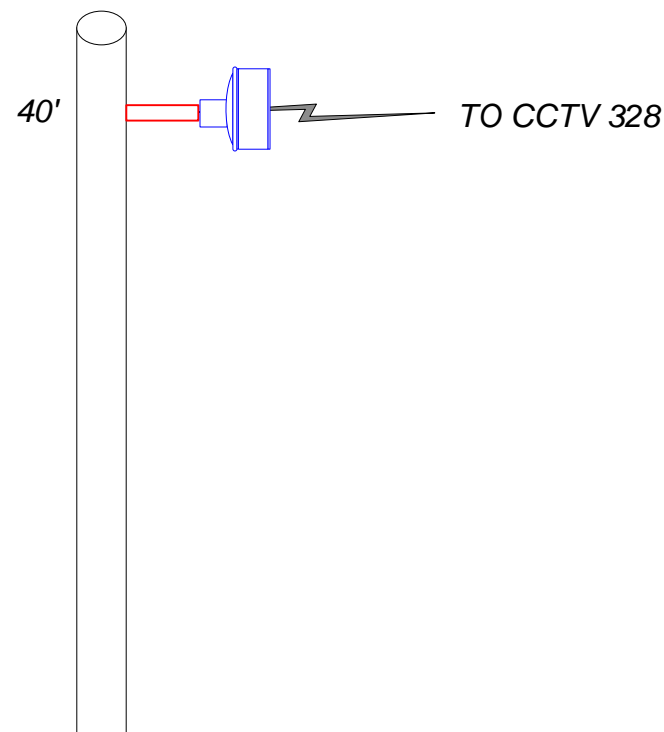
STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
SITE NAME	COUNTY	FINANCIAL PROJECT ID
PROJECT-WIDE	MONROE, MIAMI-DADE	424401-2-93-01

KEYS MICROWAVE  
STATION EQUIPMENT  
CONFIGURATIONS

SHEET NO.  
IT-15

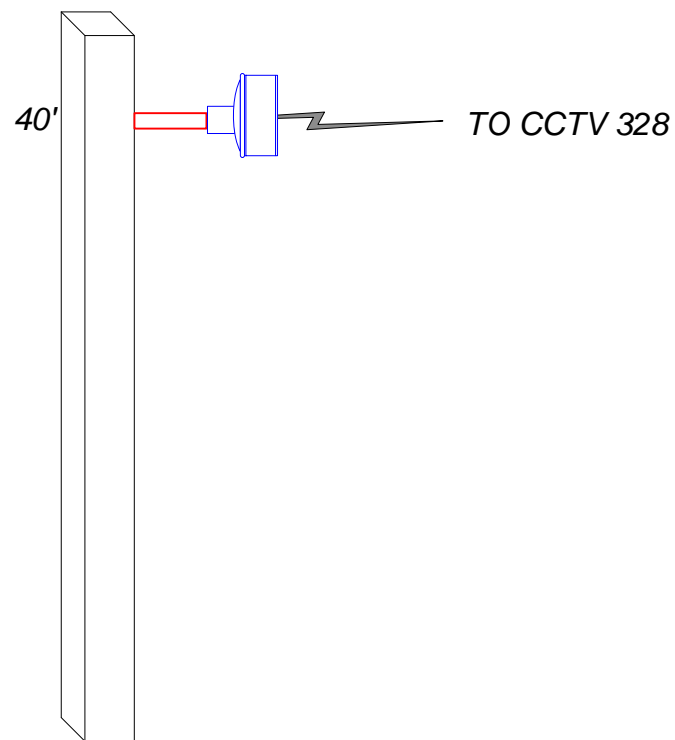
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**K1** CCTV 331



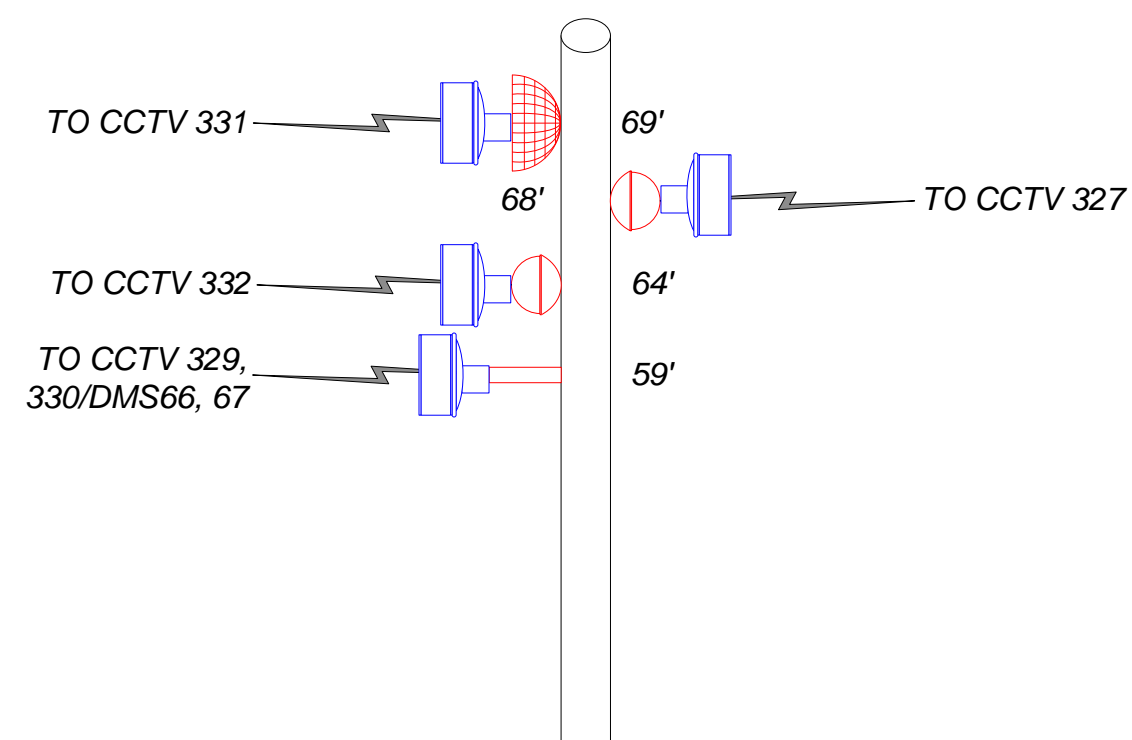
OUTDOOR CABINET

**K2** CCTV 329, 330/DMS 66, 67

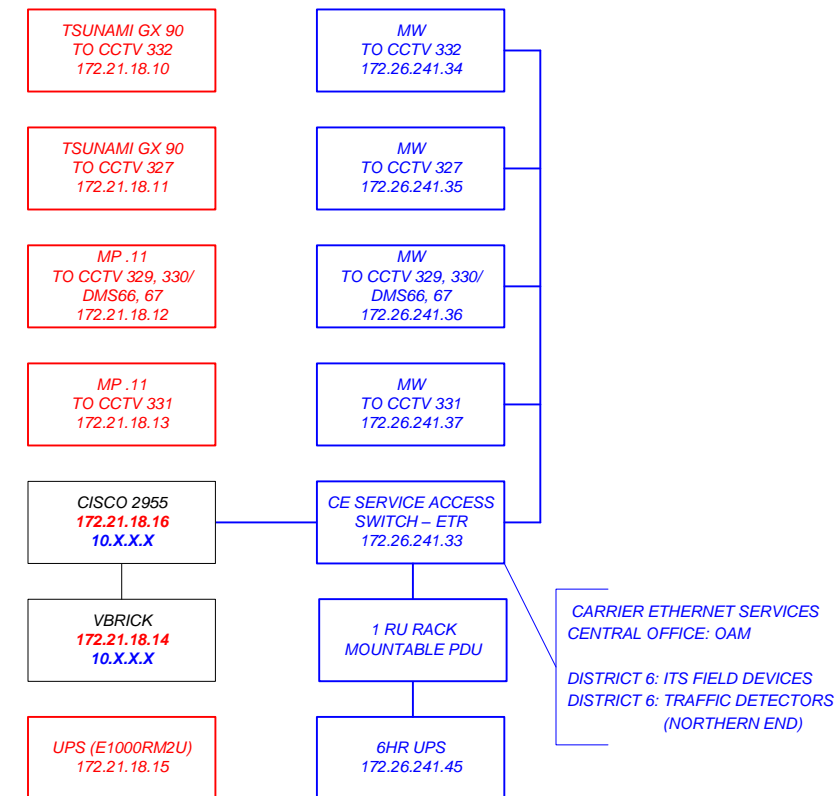
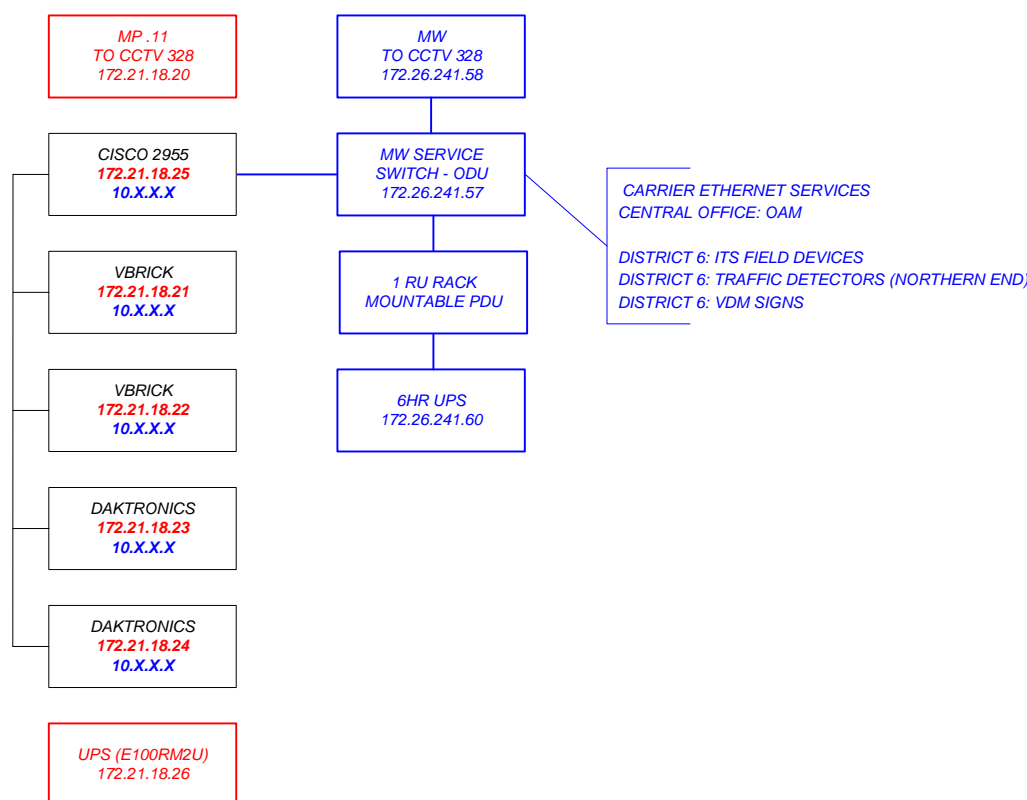
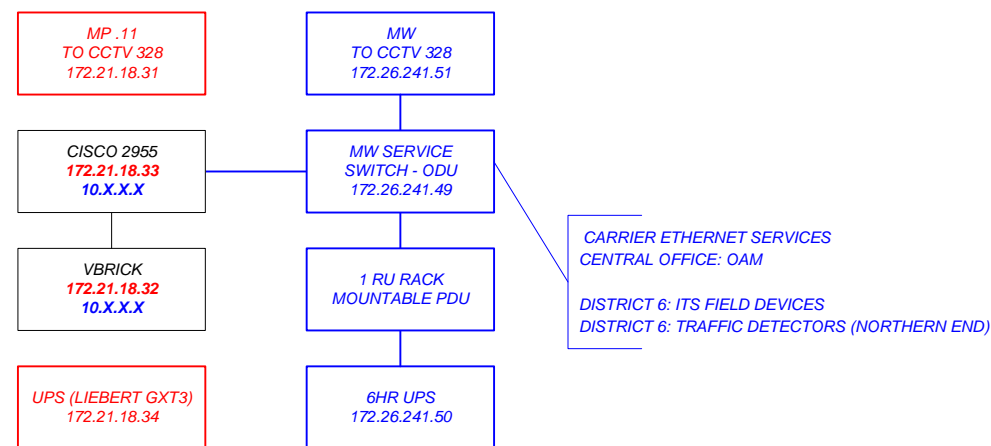


OUTDOOR CABINET

**K** CCTV 328



OUTDOOR CABINET



**LEGEND:**

- TO BE INSTALLED
- TO BE REMOVED

**CONTRACT PLANS RECORD**

DATE	REV.	DESCRIPTION	DATE	REV.	DESCRIPTION



FLORIDA DEPARTMENT OF TRANSPORTATION  
 605 SUWANNEE ST. MS 90  
 TALLAHASSEE, FL 32399-0450  
 PH.(850)-410-5600  
 FAX.(850)-410-5501

**STATE OF FLORIDA  
 DEPARTMENT OF TRANSPORTATION**

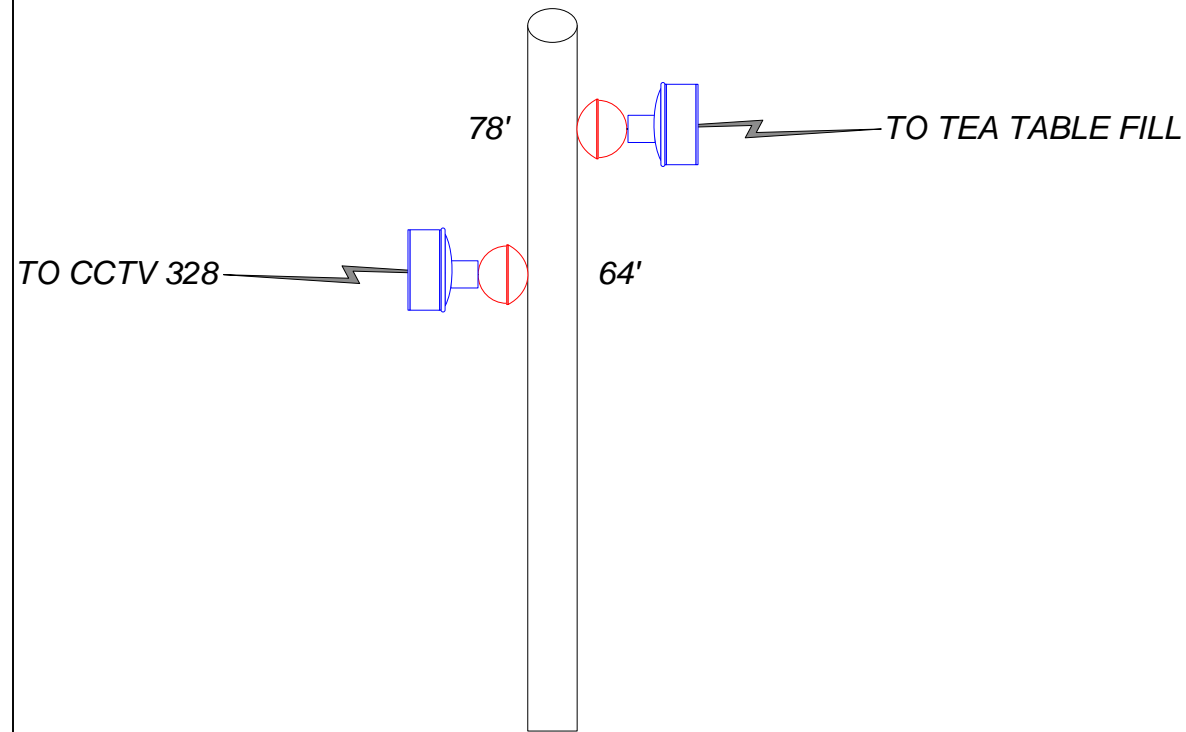
SITE NAME	COUNTY	FINANCIAL PROJECT ID
PROJECT-WIDE	MONROE, MIAMI-DADE	424401-2-93-01

**KEYS MICROWAVE  
 STATION EQUIPMENT  
 CONFIGURATIONS**

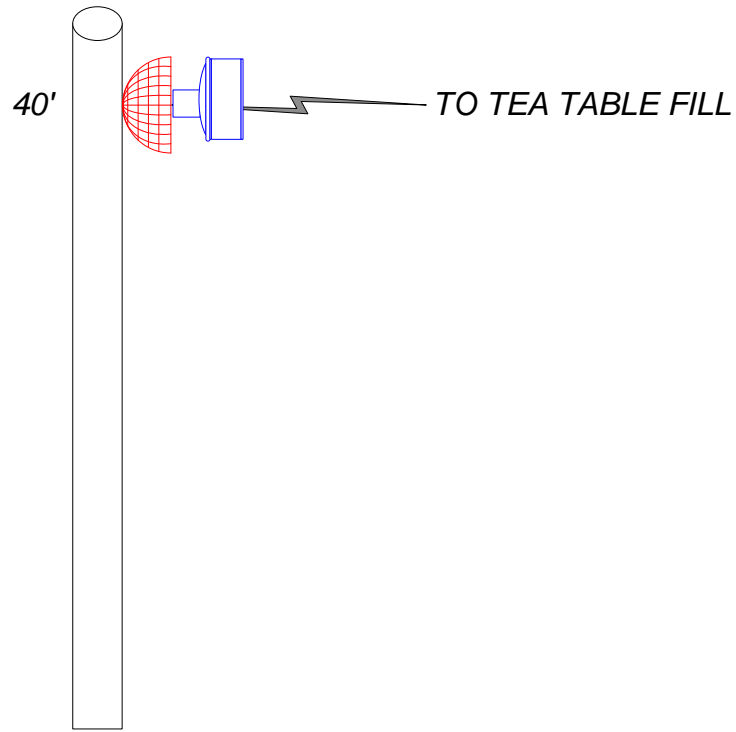
SHEET NO.  
 IT-16

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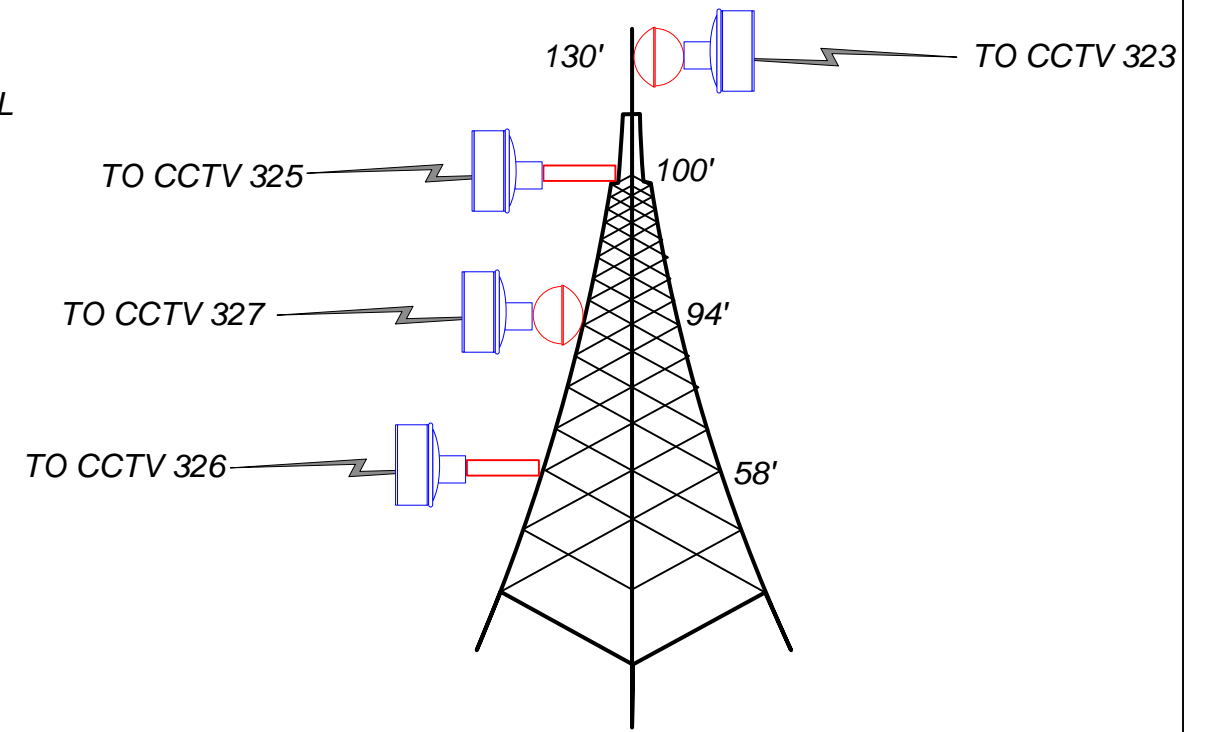
**L** CCTV 327



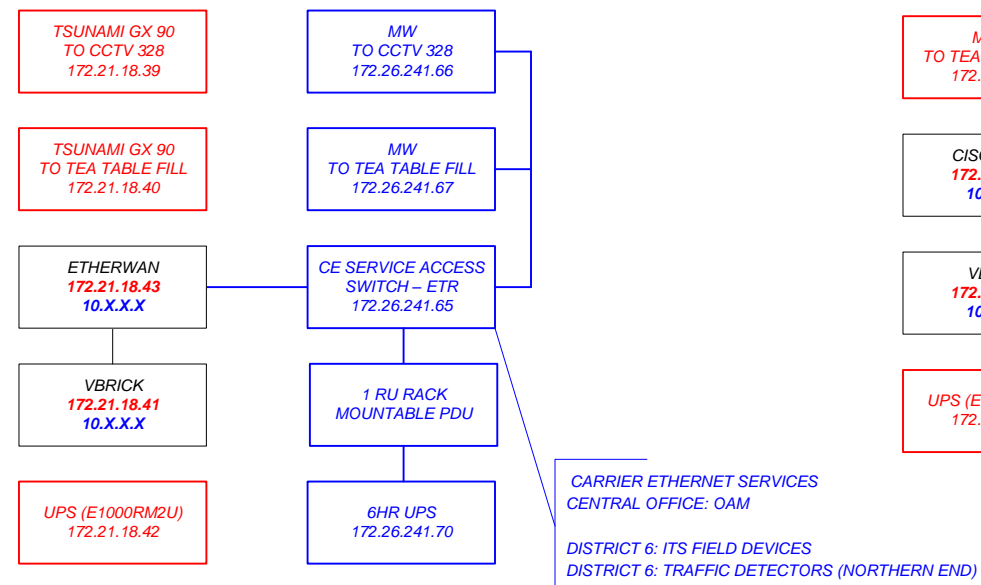
**M1** CCTV 326



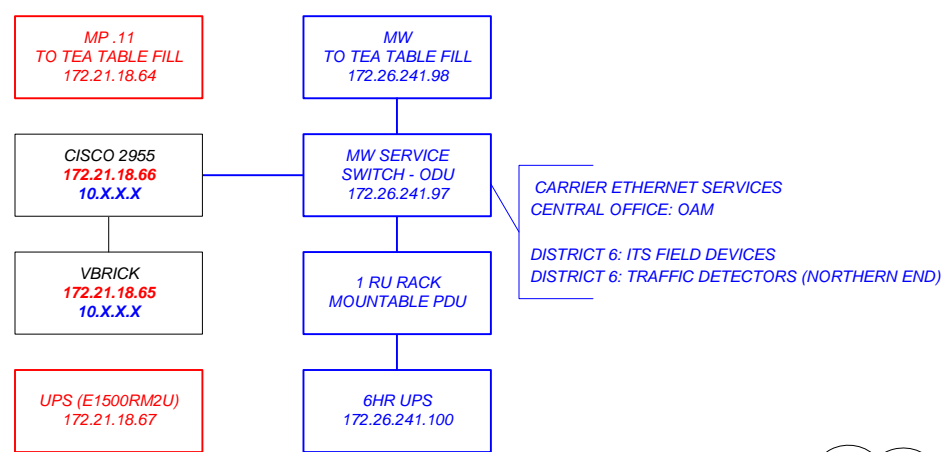
**M** TEA TABLE FILL



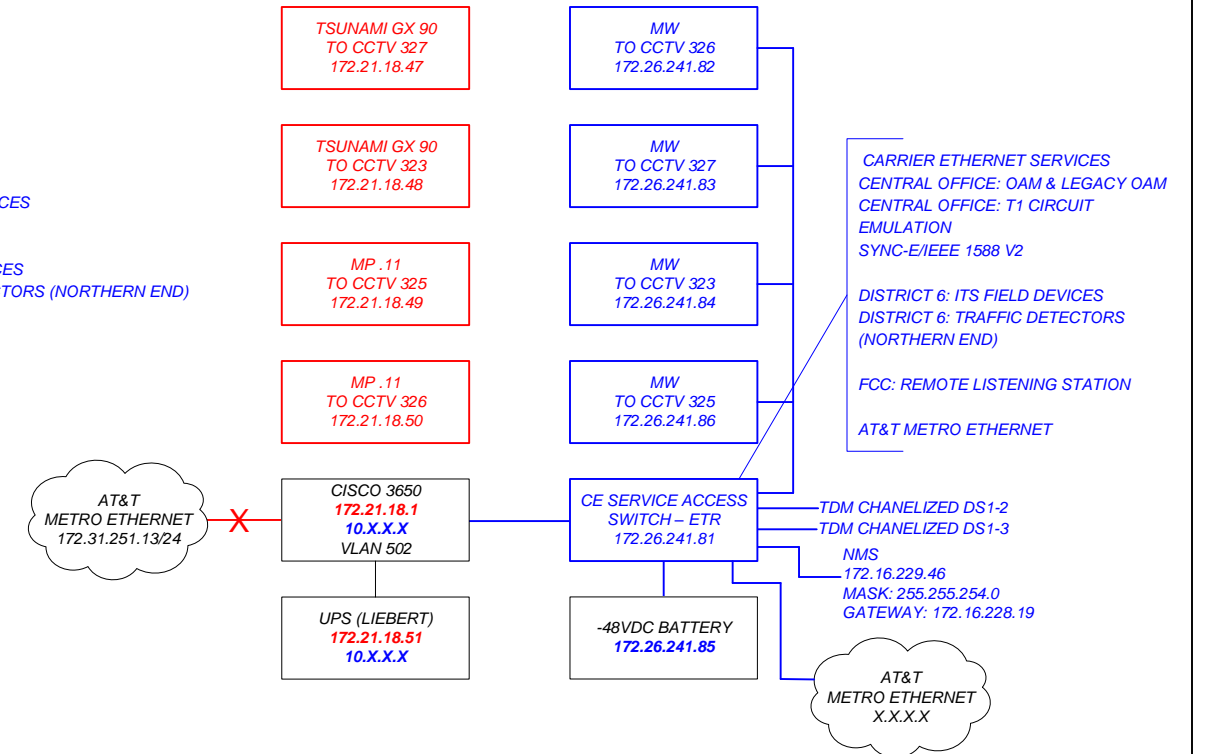
OUTDOOR CABINET



OUTDOOR CABINET



EQUIPMENT SHELTER - HVAC



**LEGEND:**

- TO BE INSTALLED
- TO BE REMOVED

CONTRACT PLANS RECORD

DATE	REV.	DESCRIPTION	DATE	REV.	DESCRIPTION



FLORIDA DEPARTMENT OF TRANSPORTATION  
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 TALLAHASSEE, FL 32399-0450  
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 FAX.(850)-410-5501

**STATE OF FLORIDA**  
**DEPARTMENT OF TRANSPORTATION**

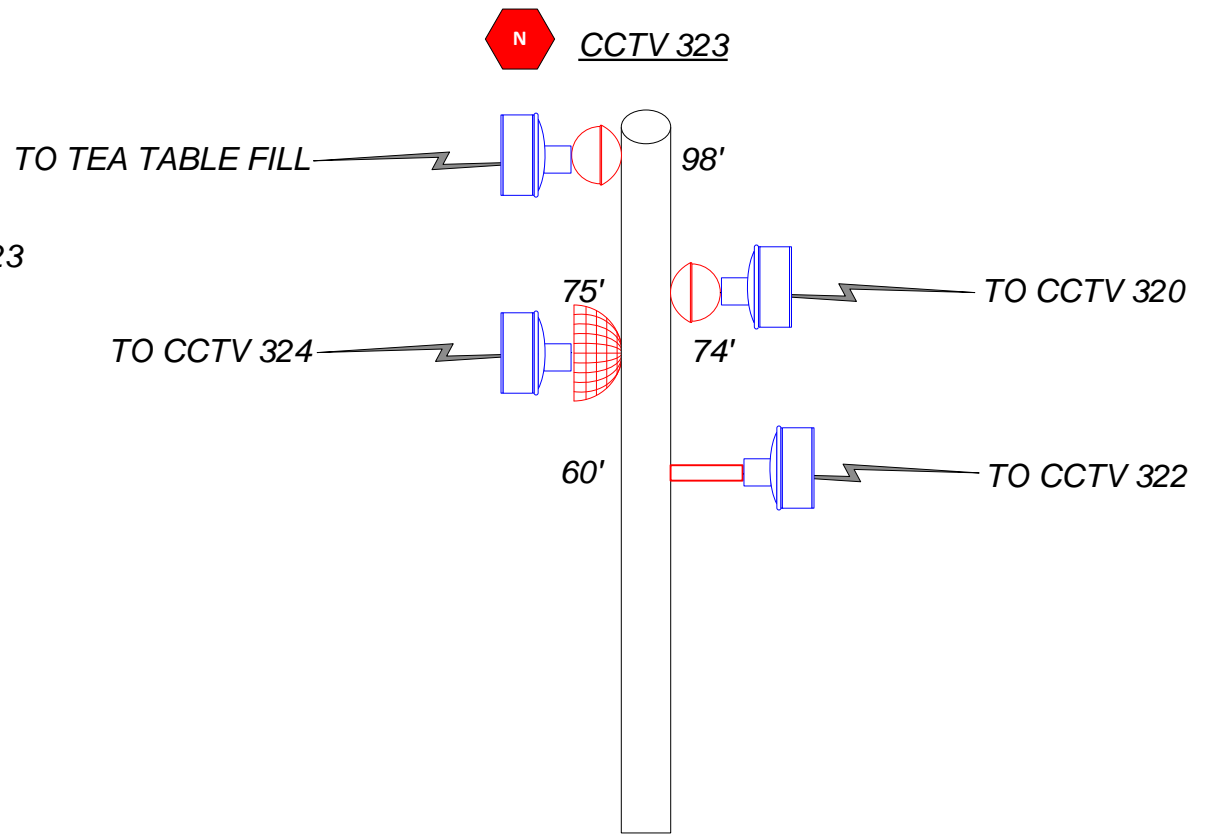
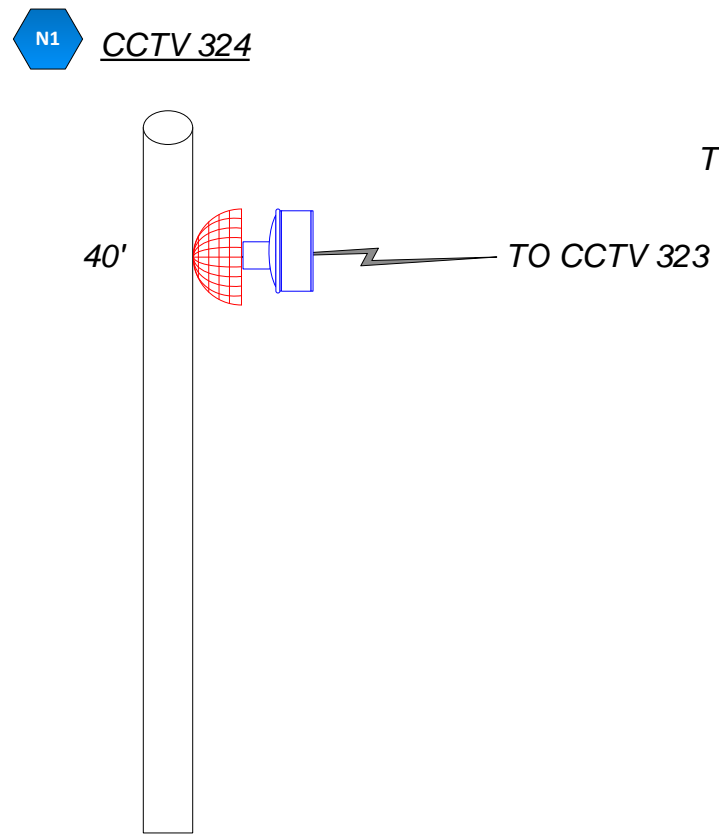
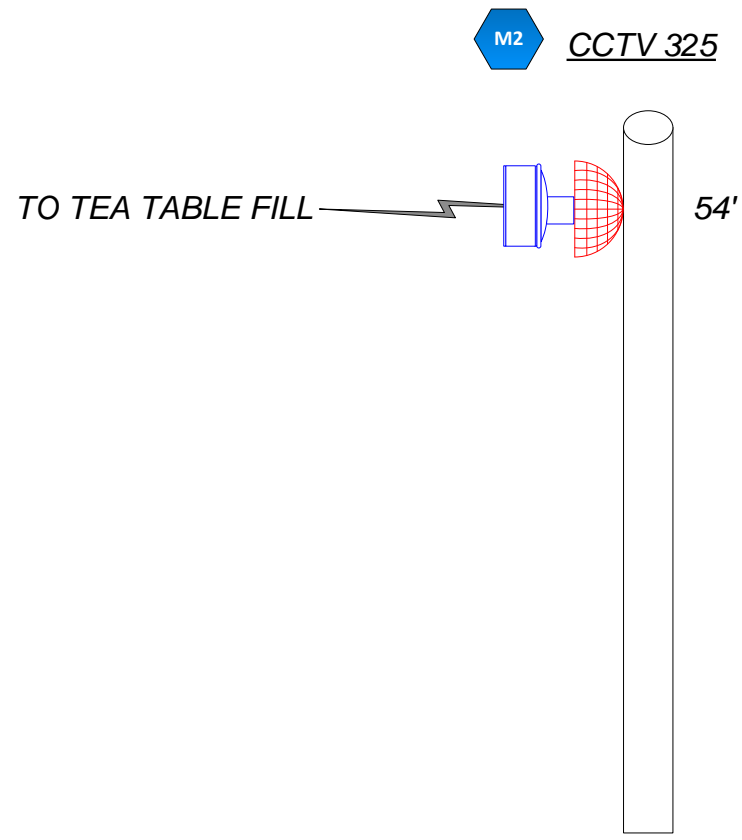
SITE NAME	COUNTY	FINANCIAL PROJECT ID
PROJECT-WIDE	MONROE, MIAMI-DADE	424401-2-93-01

**KEYS MICROWAVE**  
**STATION EQUIPMENT**  
**CONFIGURATIONS**

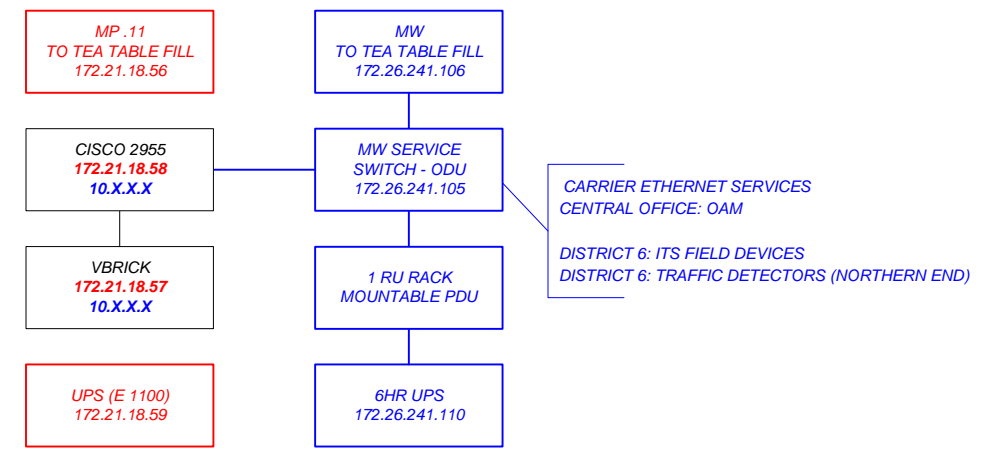
SHEET NO.  
 IT-17

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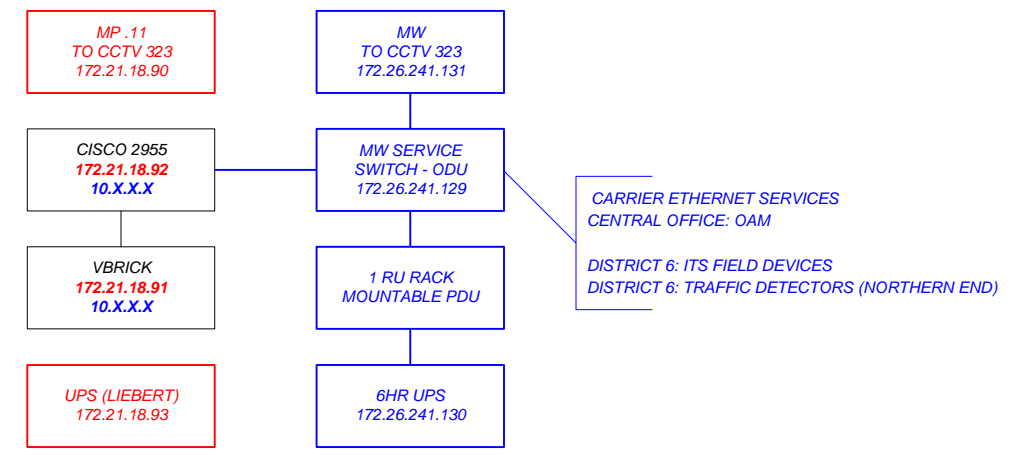




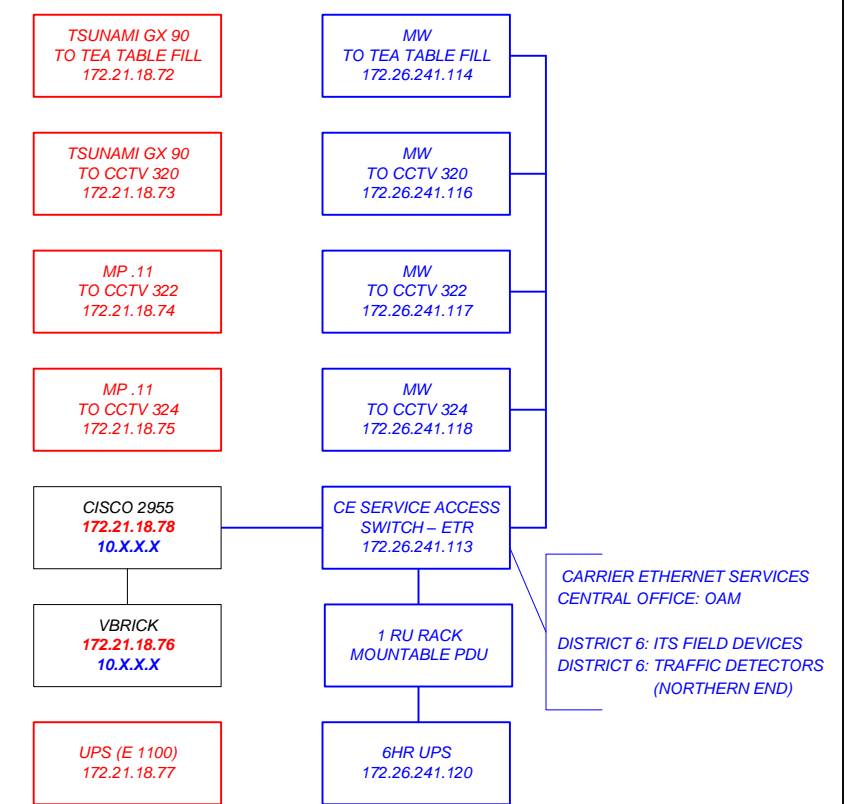
**OUTDOOR CABINET**



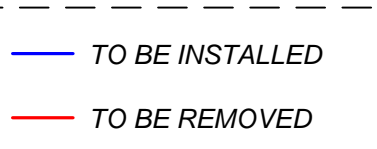
**OUTDOOR CABINET**



**OUTDOOR CABINET**



**LEGEND:**



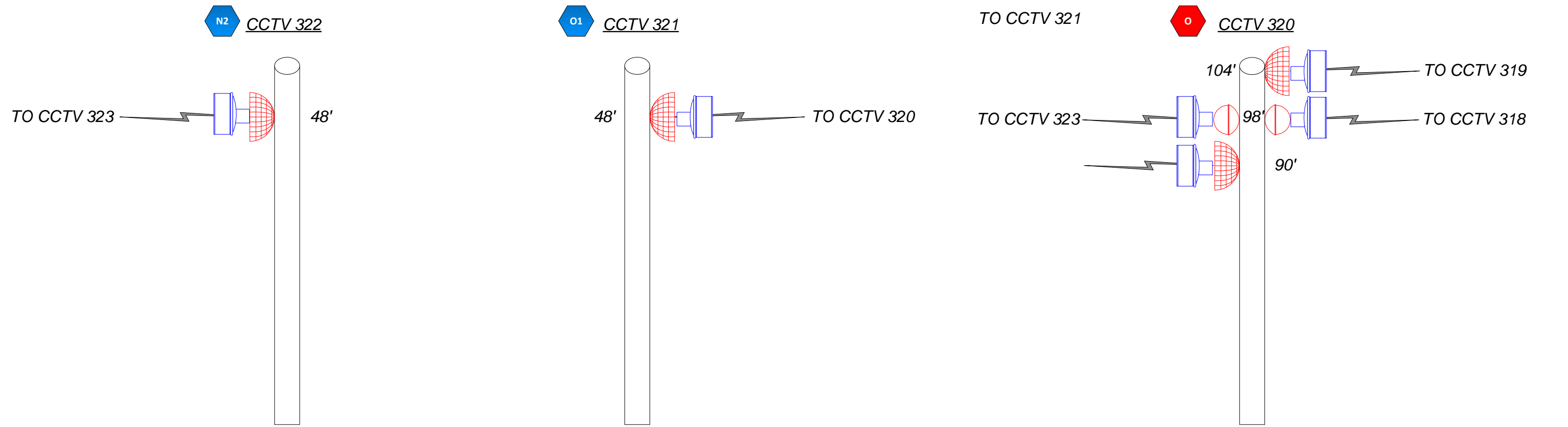
CONTRACT PLANS RECORD					
DATE	REV.	DESCRIPTION	DATE	REV.	DESCRIPTION

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
SITE NAME	COUNTY	FINANCIAL PROJECT ID
PROJECT-WIDE	MONROE, MIAMI-DADE	424401-2-93-01

**KEYS MICROWAVE  
STATION EQUIPMENT  
CONFIGURATIONS**

SHEET NO. IT-18

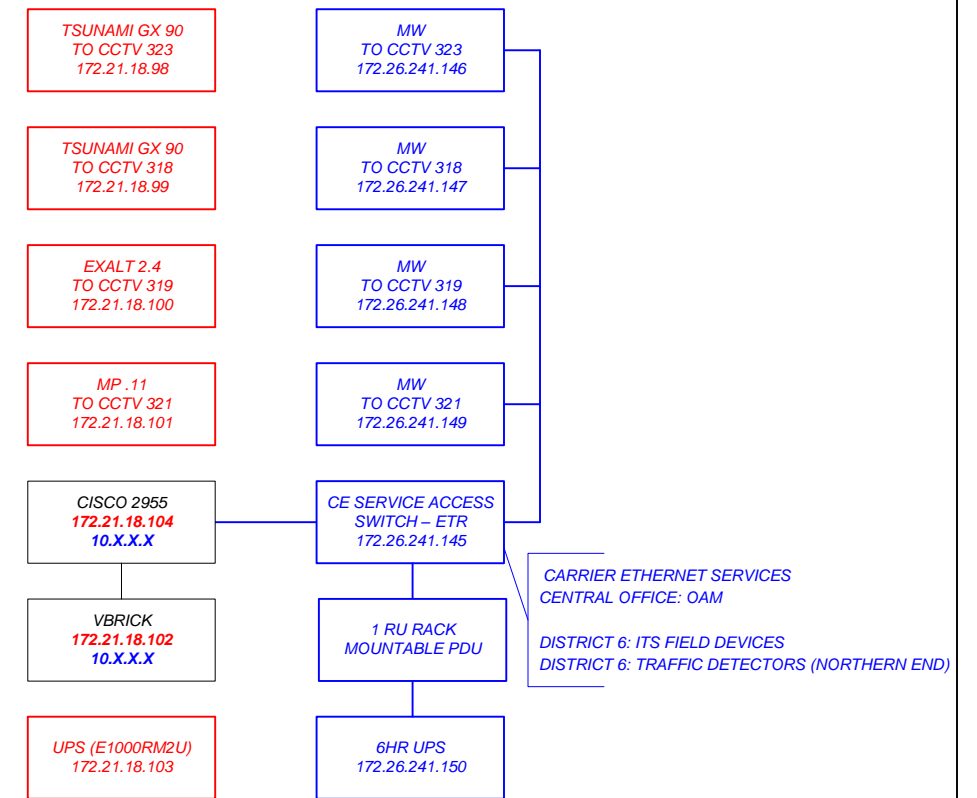
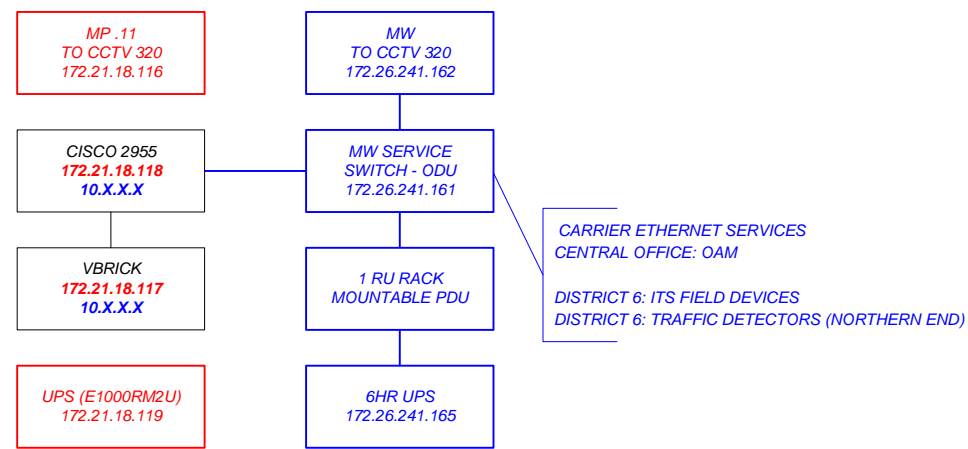
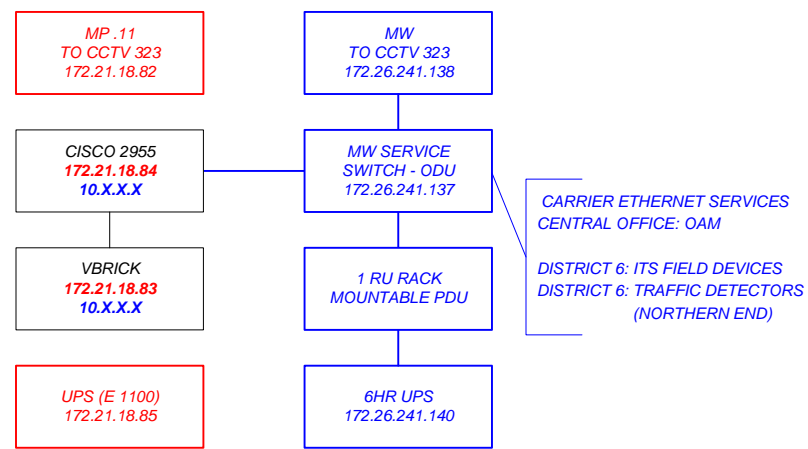
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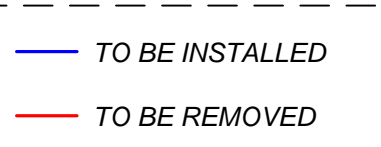
**OUTDOOR CABINET**

**OUTDOOR CABINET**

**OUTDOOR CABINET**



**LEGEND:**



CONTRACT PLANS RECORD					
DATE	REV.	DESCRIPTION	DATE	REV.	DESCRIPTION

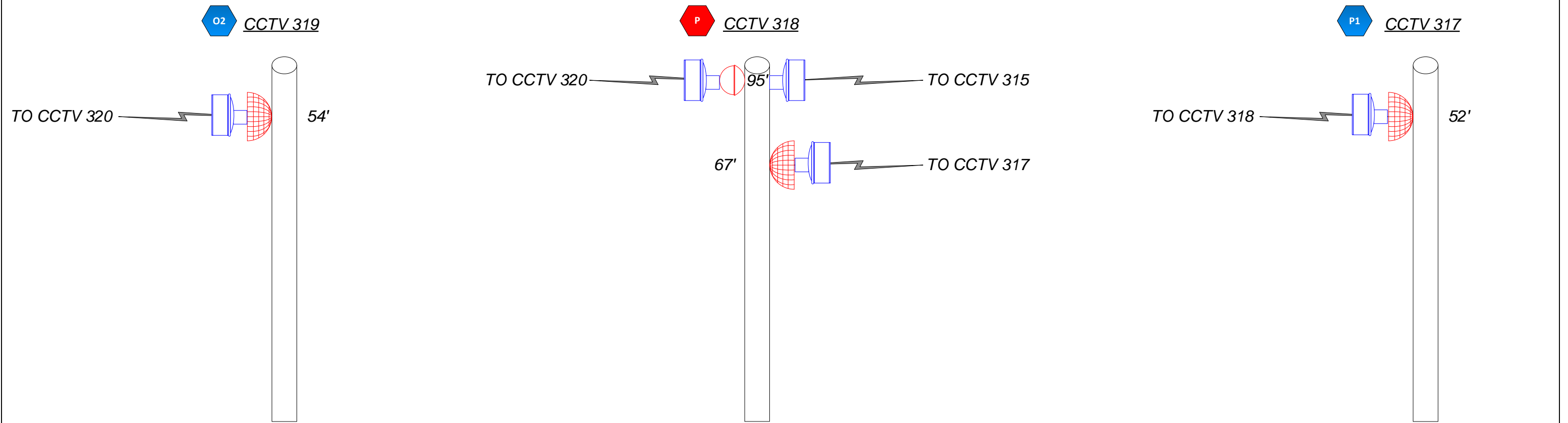
**FDOT**  
 FLORIDA DEPARTMENT OF TRANSPORTATION  
 605 SUWANNEE ST. MS 90  
 TALLAHASSEE, FL 32399-0450  
 PH.(850)-410-5600  
 FAX.(850)-410-5501

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
SITE NAME	COUNTY	FINANCIAL PROJECT ID
PROJECT-WIDE	MONROE, MIAMI-DADE	424401-2-93-01

**KEYS MICROWAVE  
STATION EQUIPMENT  
CONFIGURATIONS**

SHEET NO.  
IT-19

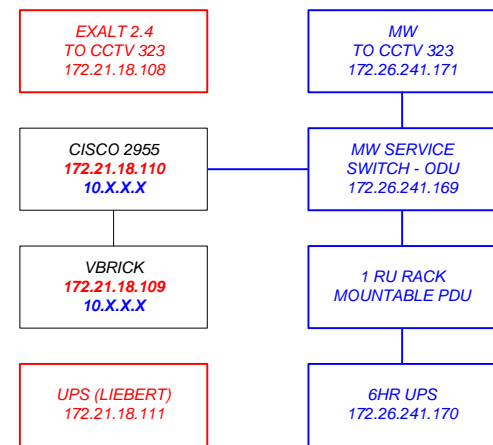
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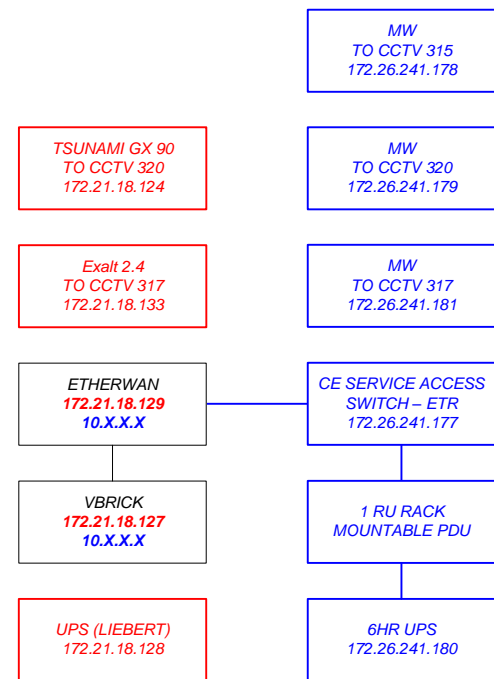
**OUTDOOR CABINET**

**OUTDOOR CABINET**

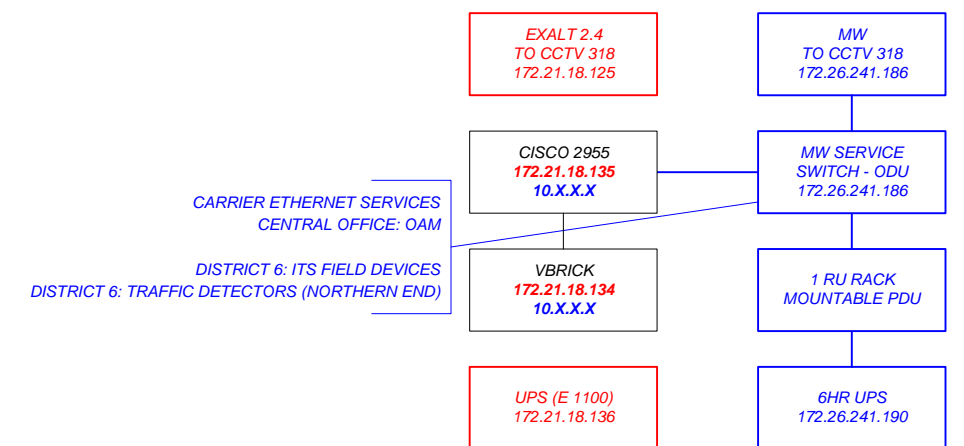
**OUTDOOR CABINET**



CARRIER ETHERNET SERVICES  
CENTRAL OFFICE: OAM  
DISTRICT 6: ITS FIELD DEVICES  
DISTRICT 6: TRAFFIC DETECTORS (NORTHERN END)

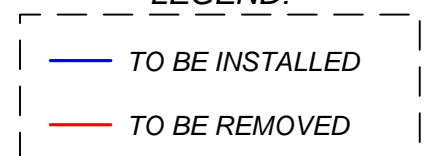


CARRIER ETHERNET SERVICES  
CENTRAL OFFICE: OAM  
DISTRICT 6: ITS FIELD DEVICES  
DISTRICT 6: TRAFFIC DETECTORS (NORTHERN END)



CARRIER ETHERNET SERVICES  
CENTRAL OFFICE: OAM  
DISTRICT 6: ITS FIELD DEVICES  
DISTRICT 6: TRAFFIC DETECTORS (NORTHERN END)

**LEGEND:**



CONTRACT PLANS RECORD					
DATE	REV.	DESCRIPTION	DATE	REV.	DESCRIPTION

**FDOT**  
 FLORIDA DEPARTMENT OF TRANSPORTATION  
 605 SUWANNEE ST. MS 90  
 TALLAHASSEE, FL 32399-0450  
 PH.(850)-410-5600  
 FAX.(850)-410-5501

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
SITE NAME	COUNTY	FINANCIAL PROJECT ID
PROJECT-WIDE	MONROE, MIAMI-DADE	424401-2-93-01

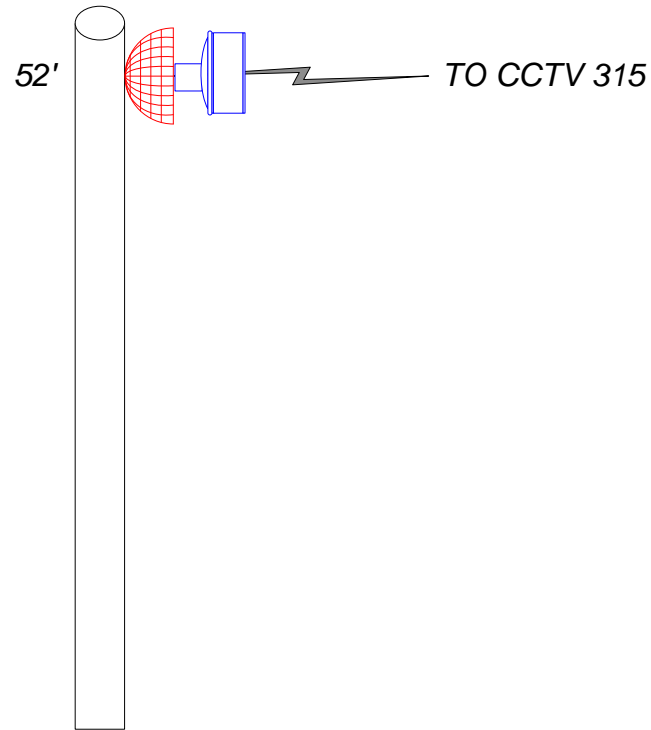
**KEYS MICROWAVE  
STATION EQUIPMENT  
CONFIGURATIONS**

SHEET NO.  
IT-20

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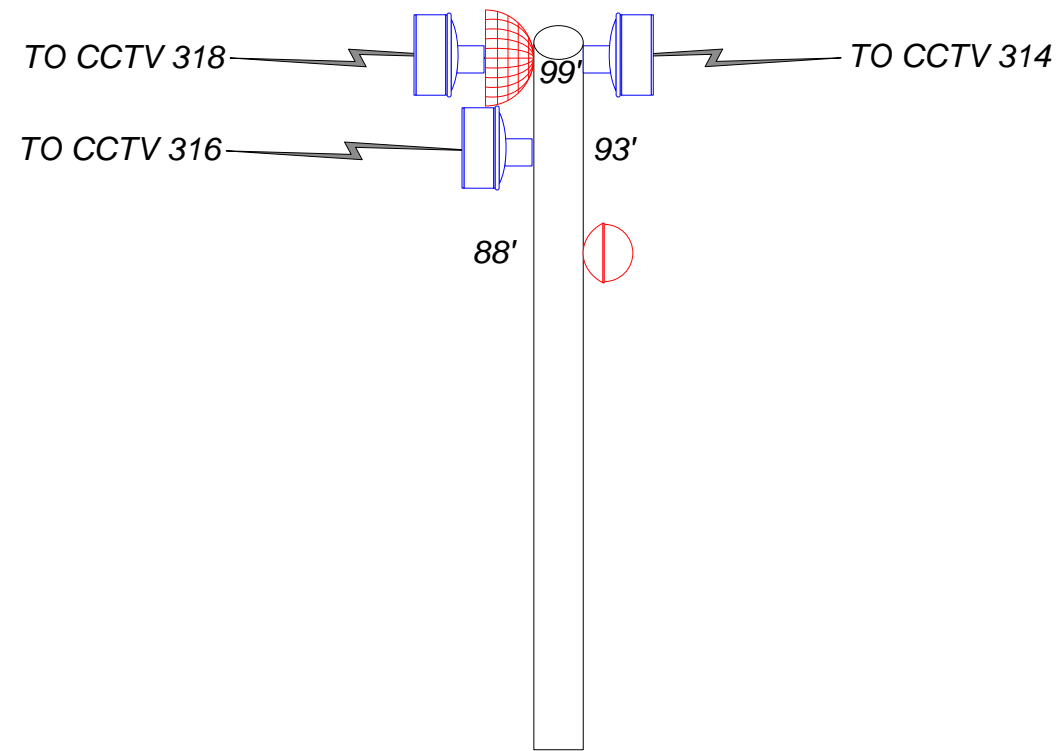


**Q1** CCTV 316



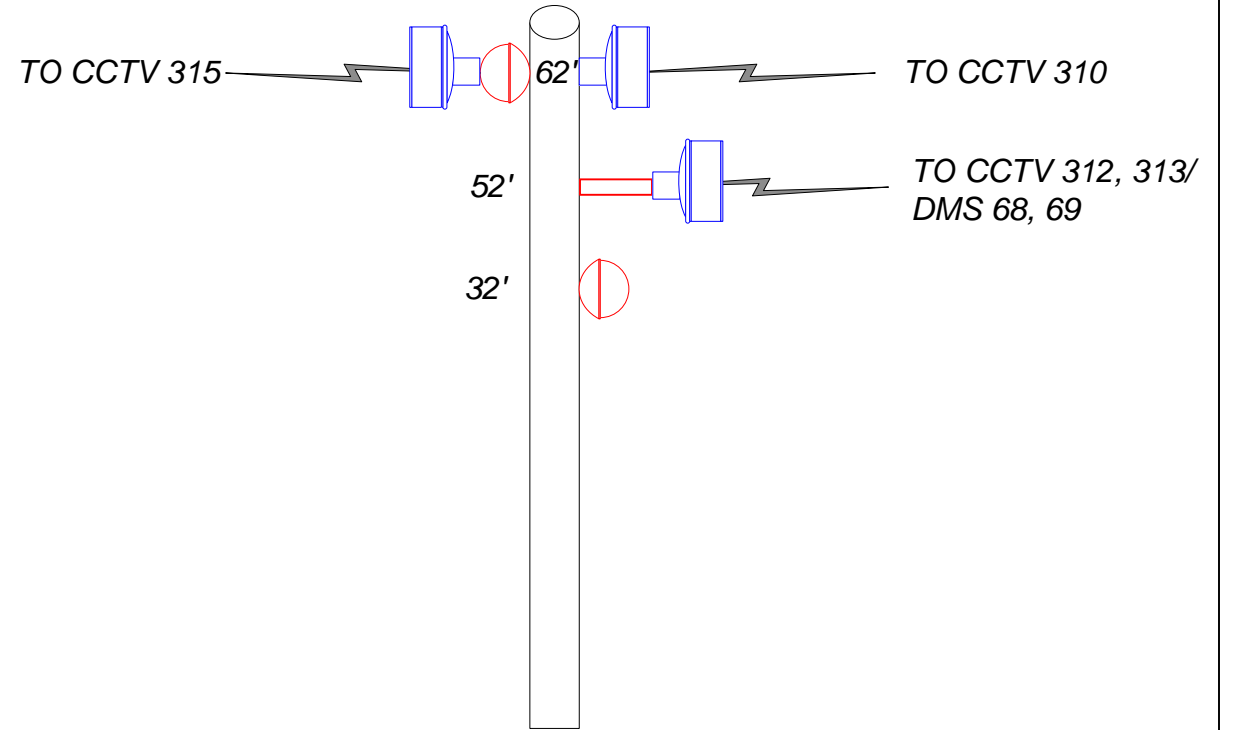
OUTDOOR CABINET

**Q** CCTV 315

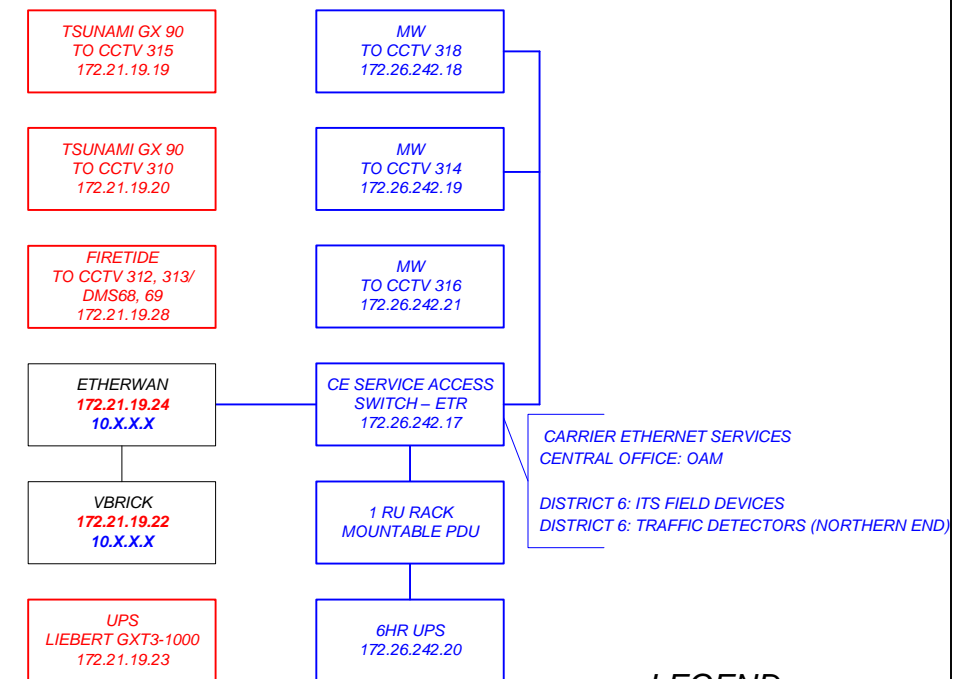
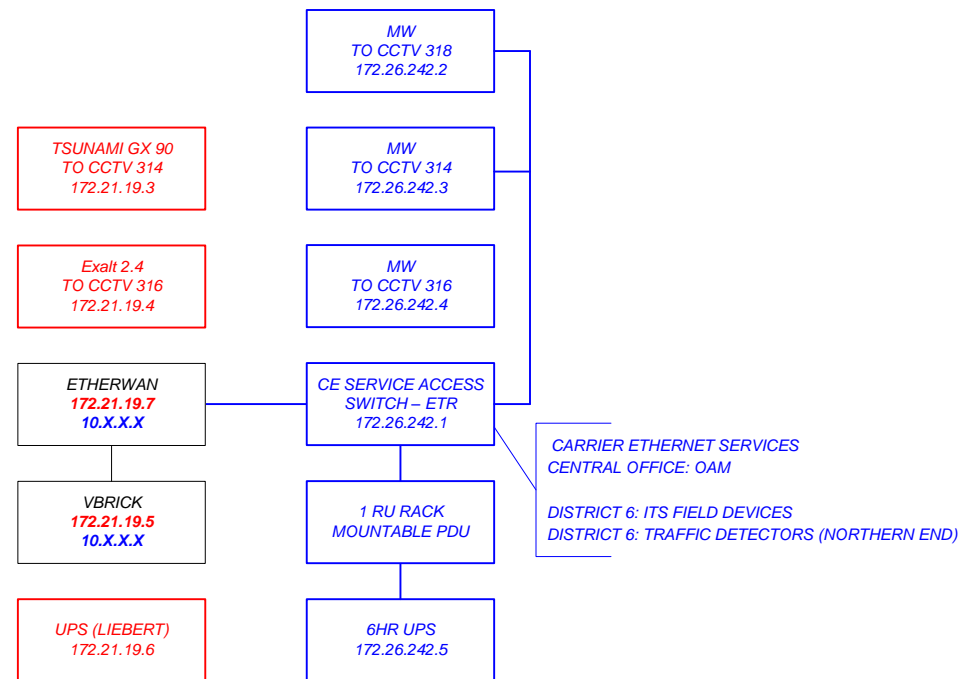
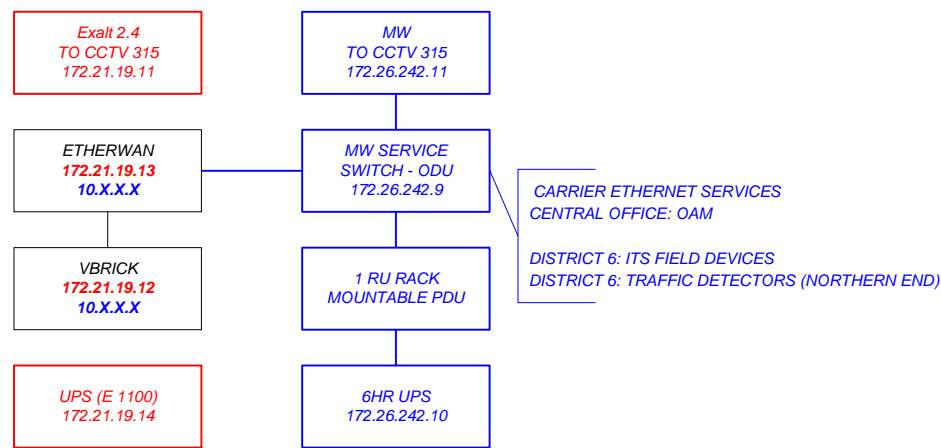


OUTDOOR CABINET

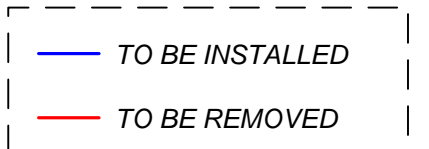
**R** CCTV 314



OUTDOOR CABINET



**LEGEND:**



CONTRACT PLANS RECORD					
DATE	REV.	DESCRIPTION	DATE	REV.	DESCRIPTION

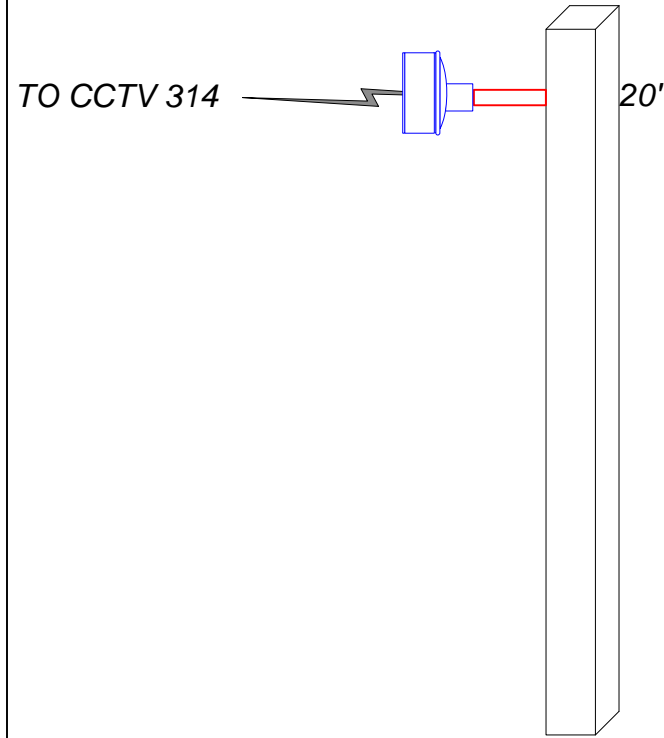
**FDOT** FLORIDA DEPARTMENT OF TRANSPORTATION  
 605 SUWANNEE ST. MS 90  
 TALLAHASSEE, FL 32399-0450  
 PH.(850)-410-5600  
 FAX.(850)-410-5501

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
SITE NAME	COUNTY	FINANCIAL PROJECT ID
PROJECT-WIDE	MONROE, MIAMI-DADE	424401-2-93-01

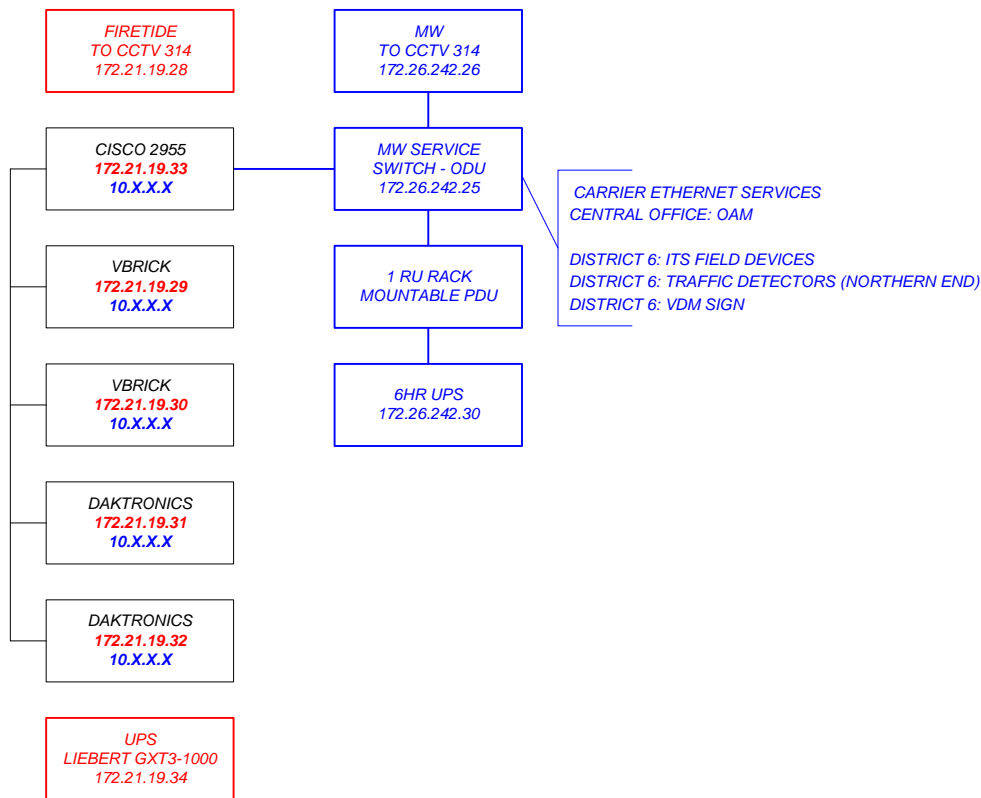
KEYS MICROWAVE STATION EQUIPMENT CONFIGURATIONS	SHEET NO.
	IT-21

T:\Public\ITS\Telecommunications\Keys Microwave System\Plans Package\KeysMW\_PlansPackage\_20160328.vsd

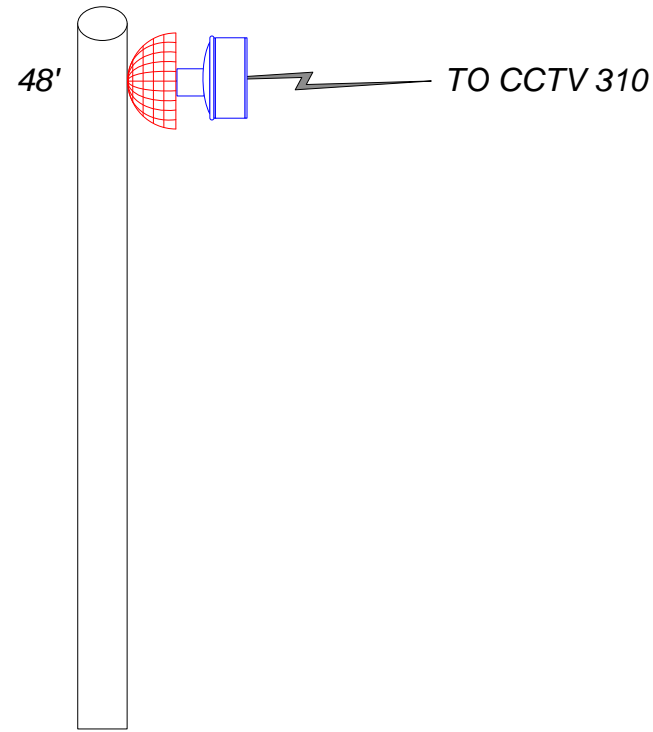
**R1** CCTV 312, 313/DM S68, 69



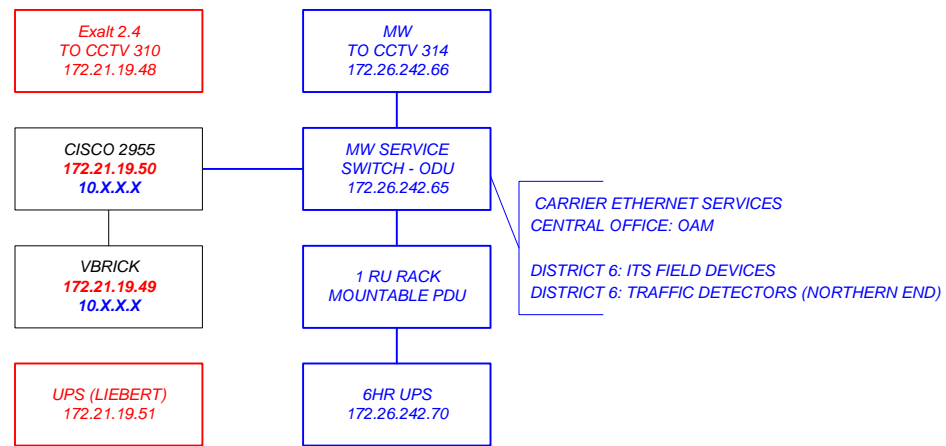
**OUTDOOR CABINET**



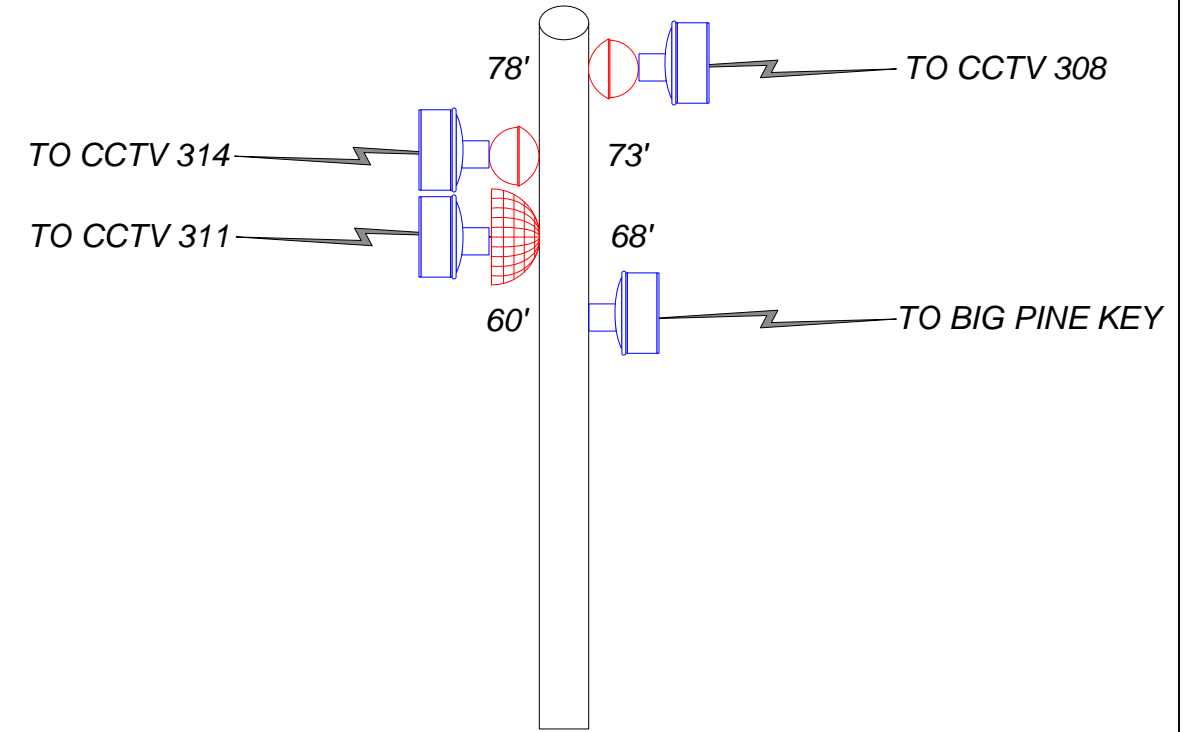
**S1** CCTV 311



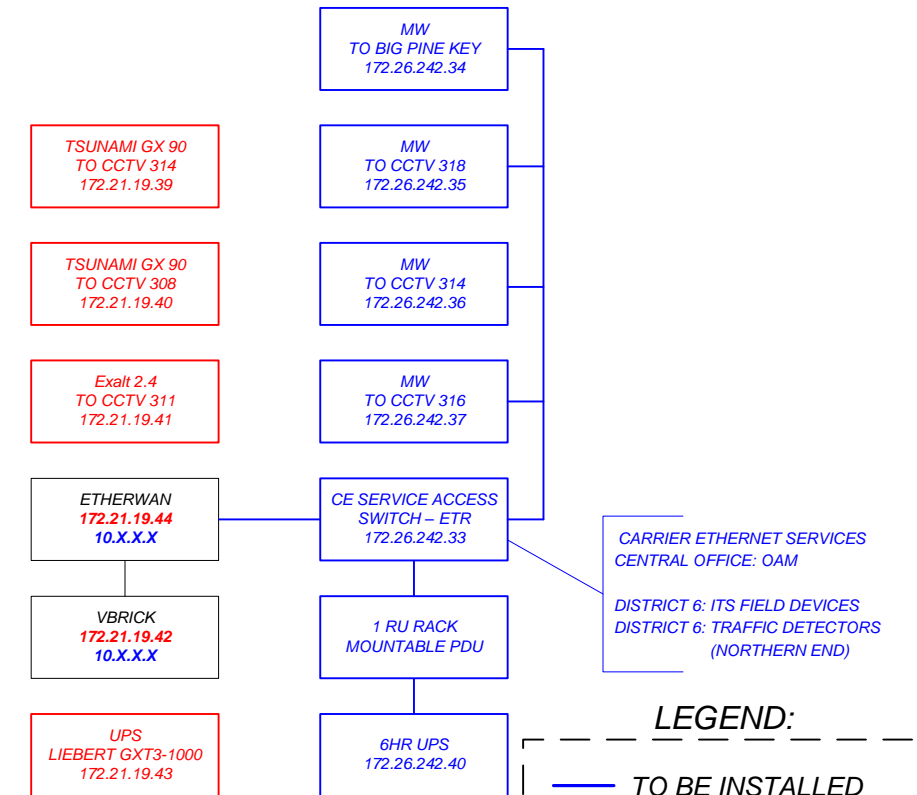
**OUTDOOR CABINET**



**S** CCTV 310



**OUTDOOR CABINET**



**LEGEND:**

— TO BE INSTALLED

— TO BE REMOVED

CONTRACT PLANS RECORD					
DATE	REV.	DESCRIPTION	DATE	REV.	DESCRIPTION

**FLORIDA DEPARTMENT OF TRANSPORTATION**  
 605 SUWANNEE ST. MS 90  
 TALLAHASSEE, FL 32399-0450  
 PH.(850)-410-5600  
 FAX.(850)-410-5501

**STATE OF FLORIDA**  
**DEPARTMENT OF TRANSPORTATION**

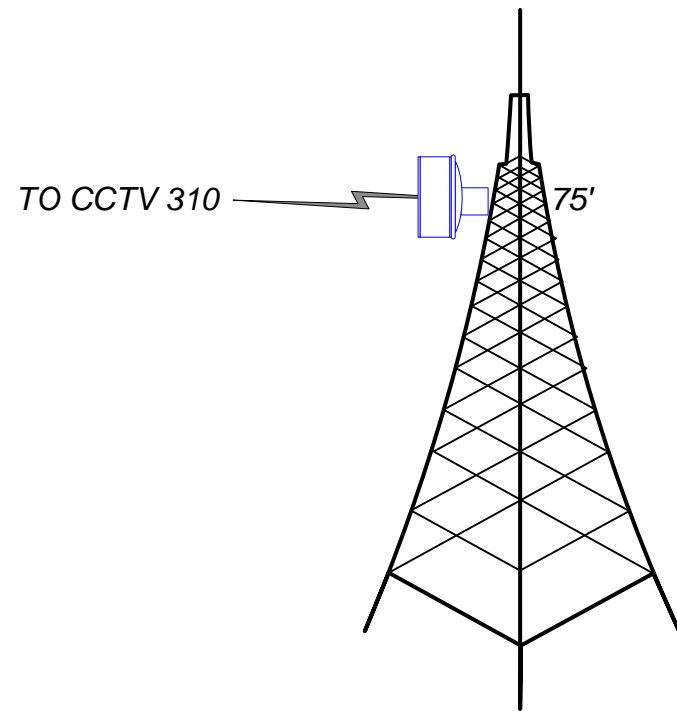
SITE NAME	COUNTY	FINANCIAL PROJECT ID
PROJECT-WIDE	MONROE, MIAMI-DADE	424401-2-93-01

**KEYS MICROWAVE**  
**STATION EQUIPMENT**  
**CONFIGURATIONS**

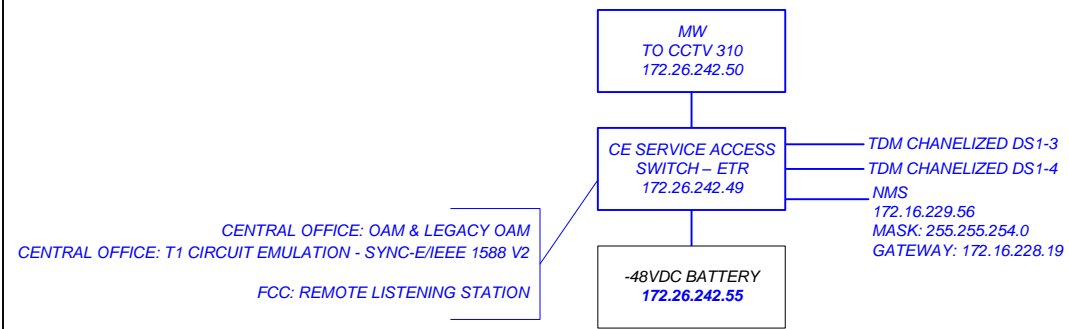
SHEET NO.  
IT-22

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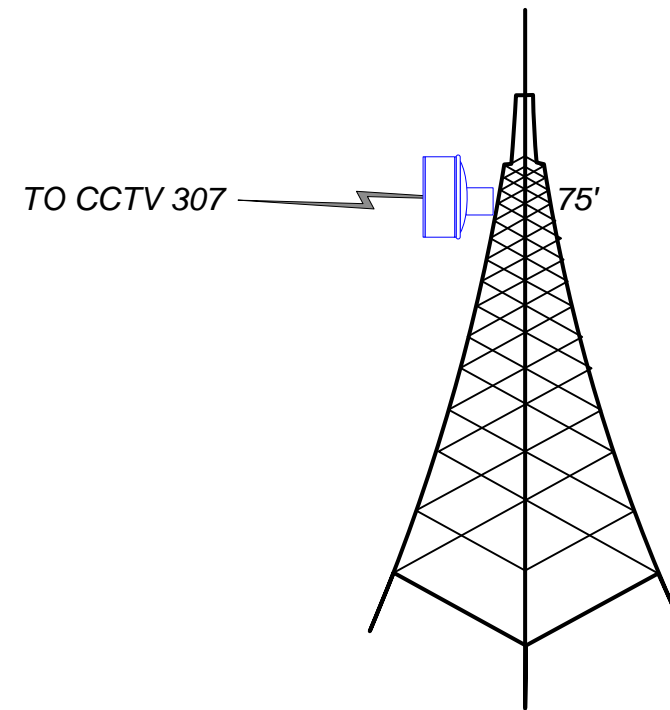
**1** BIG PINE KEY



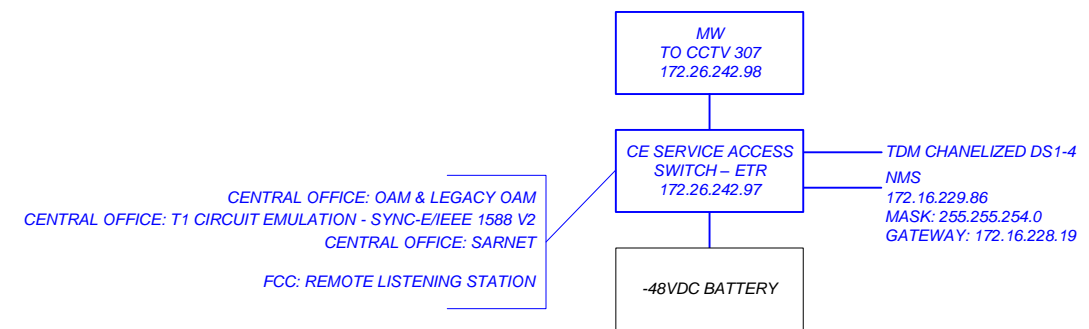
EQUIPMENT SHELTER - HVAC



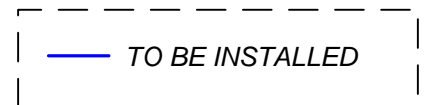
**2** SUGARLOAF KEY



EQUIPMENT SHELTER - HVAC



**LEGEND:**



CONTRACT PLANS RECORD					
DATE	REV.	DESCRIPTION	DATE	REV.	DESCRIPTION



FLORIDA DEPARTMENT OF TRANSPORTATION  
 605 SUWANNEE ST. MS 90  
 TALLAHASSEE, FL 32399-0450  
 PH. (850)-410-5600  
 FAX. (850)-410-5501

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
SITE NAME	COUNTY	FINANCIAL PROJECT ID
PROJECT-WIDE	MONROE, MIAMI-DADE	424401-2-93-01

*KEYS MICROWAVE  
 STATION EQUIPMENT  
 CONFIGURATIONS*

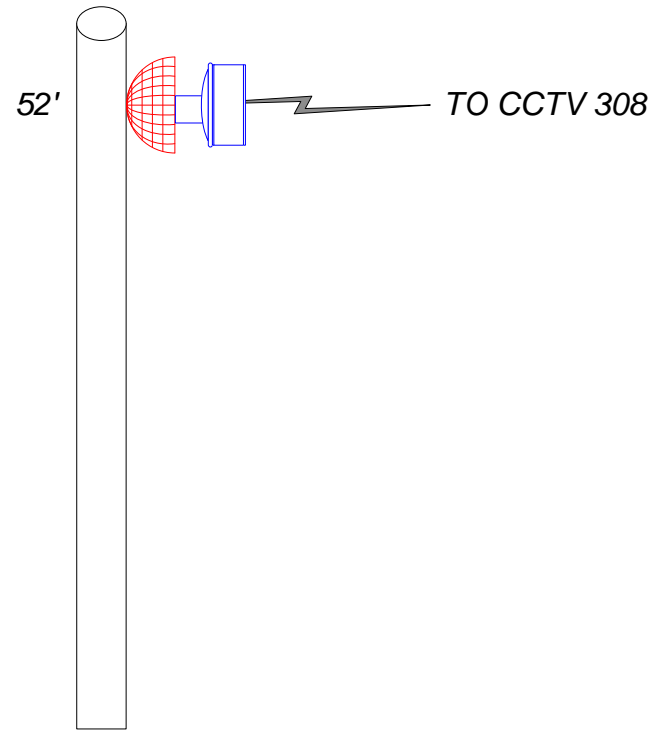
SHEET NO.

IT-23

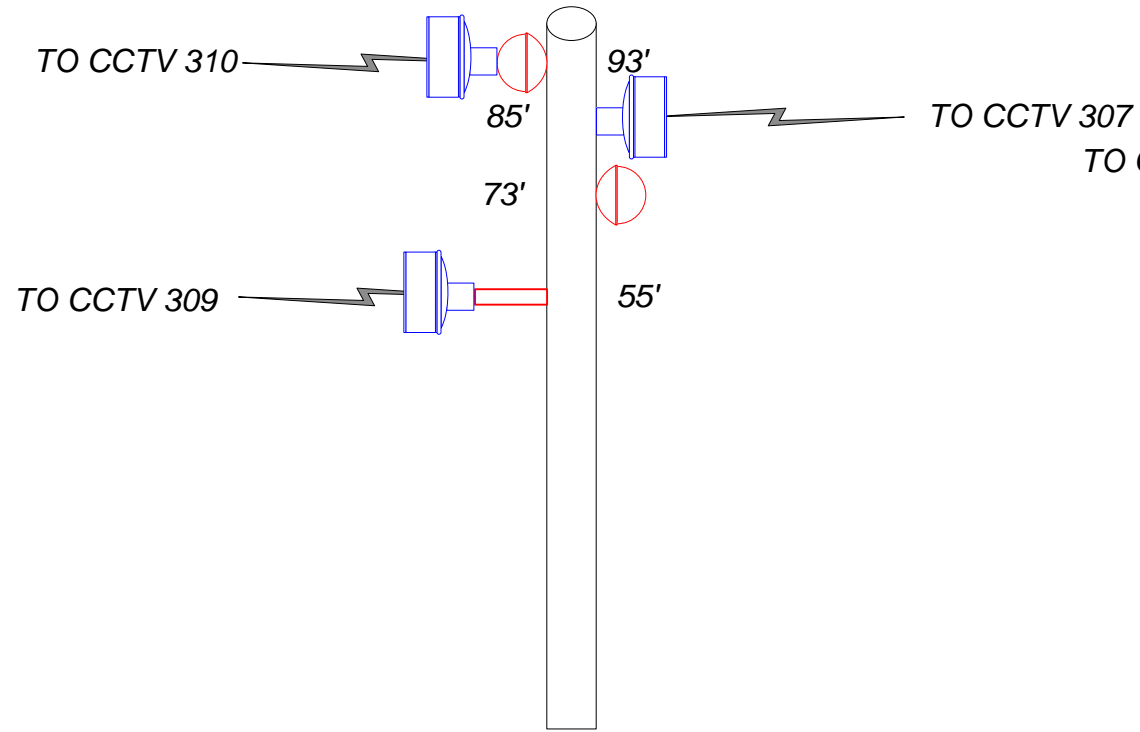
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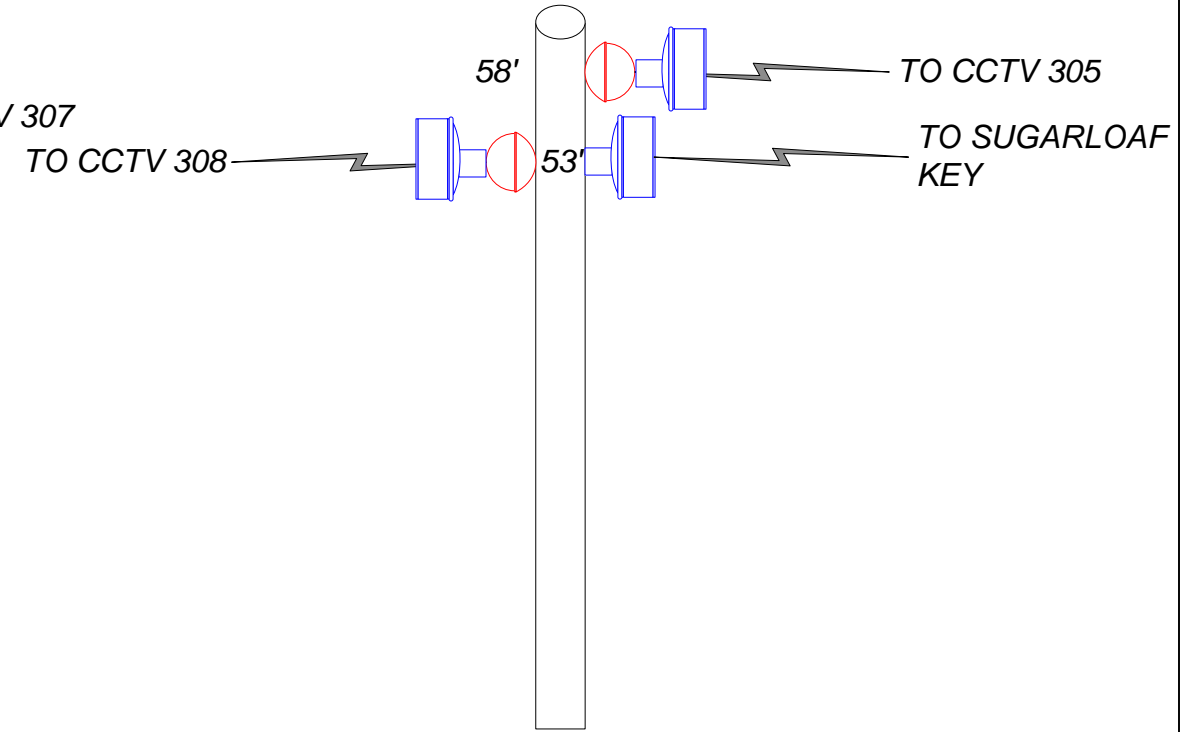
**T1** CCTV 309



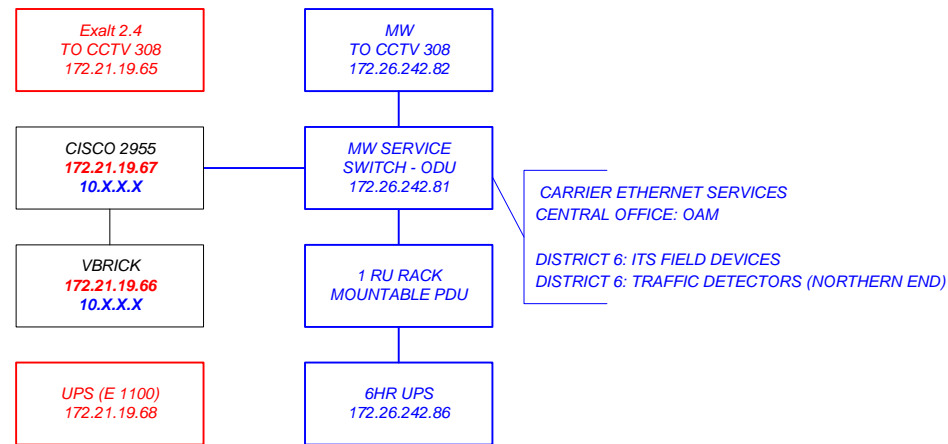
**T** CCTV 308



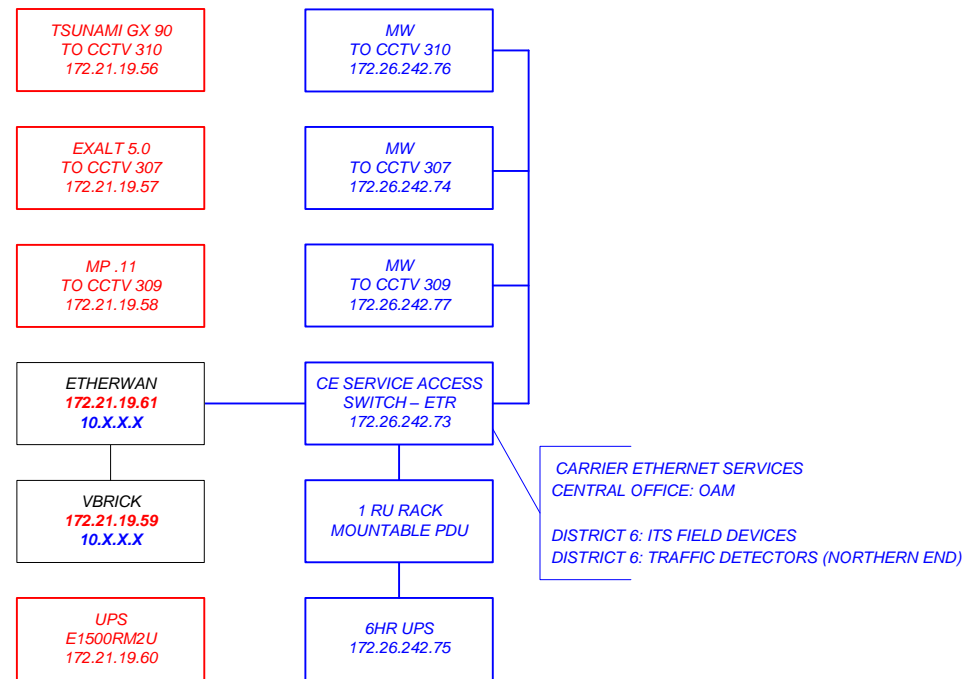
**U** CCTV 307



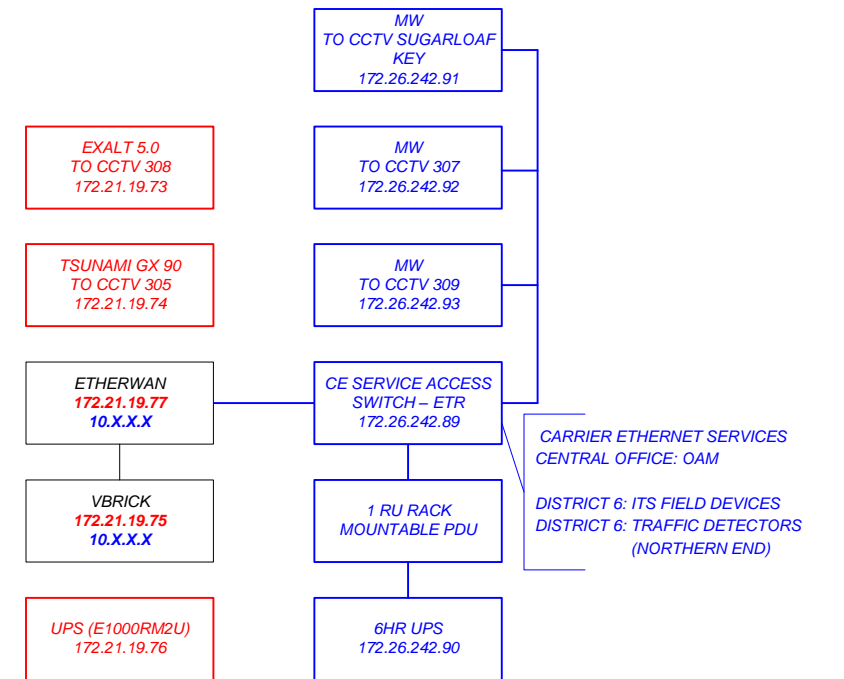
**OUTDOOR CABINET**



**OUTDOOR CABINET**



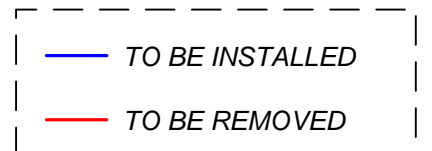
**OUTDOOR CABINET**



CARRIER ETHERNET SERVICES  
CENTRAL OFFICE: OAM  
DISTRICT 6: ITS FIELD DEVICES  
DISTRICT 6: TRAFFIC DETECTORS (NORTHERN END)

CARRIER ETHERNET SERVICES  
CENTRAL OFFICE: OAM  
DISTRICT 6: ITS FIELD DEVICES  
DISTRICT 6: TRAFFIC DETECTORS (NORTHERN END)

**LEGEND:**



**CONTRACT PLANS RECORD**

DATE	REV.	DESCRIPTION	DATE	REV.	DESCRIPTION



FLORIDA DEPARTMENT OF TRANSPORTATION  
605 SUWANNEE ST. MS 90  
TALLAHASSEE, FL 32399-0450  
PH.(850)-410-5600  
FAX.(850)-410-5501

**STATE OF FLORIDA  
DEPARTMENT OF TRANSPORTATION**

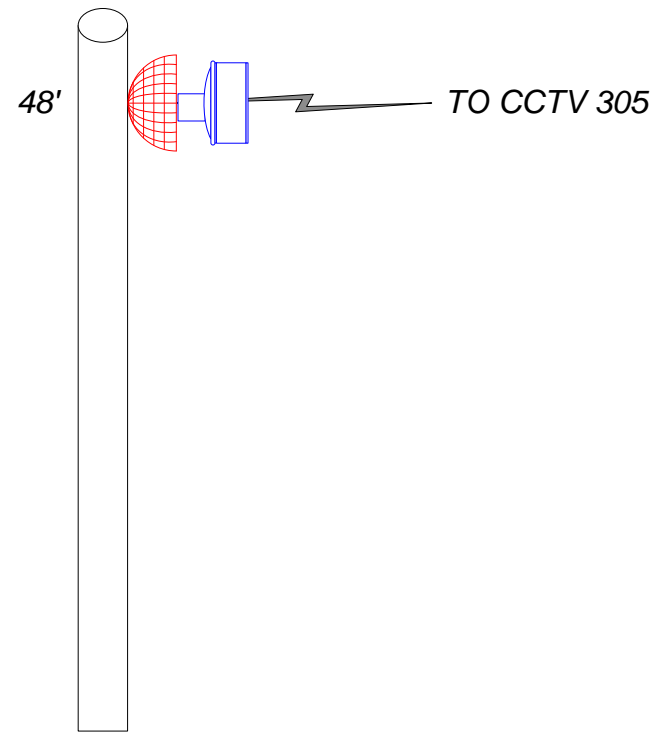
SITE NAME	COUNTY	FINANCIAL PROJECT ID
PROJECT-WIDE	MONROE, MIAMI-DADE	424401-2-93-01

**KEYS MICROWAVE  
STATION EQUIPMENT  
CONFIGURATIONS**

SHEET NO.  
IT-24

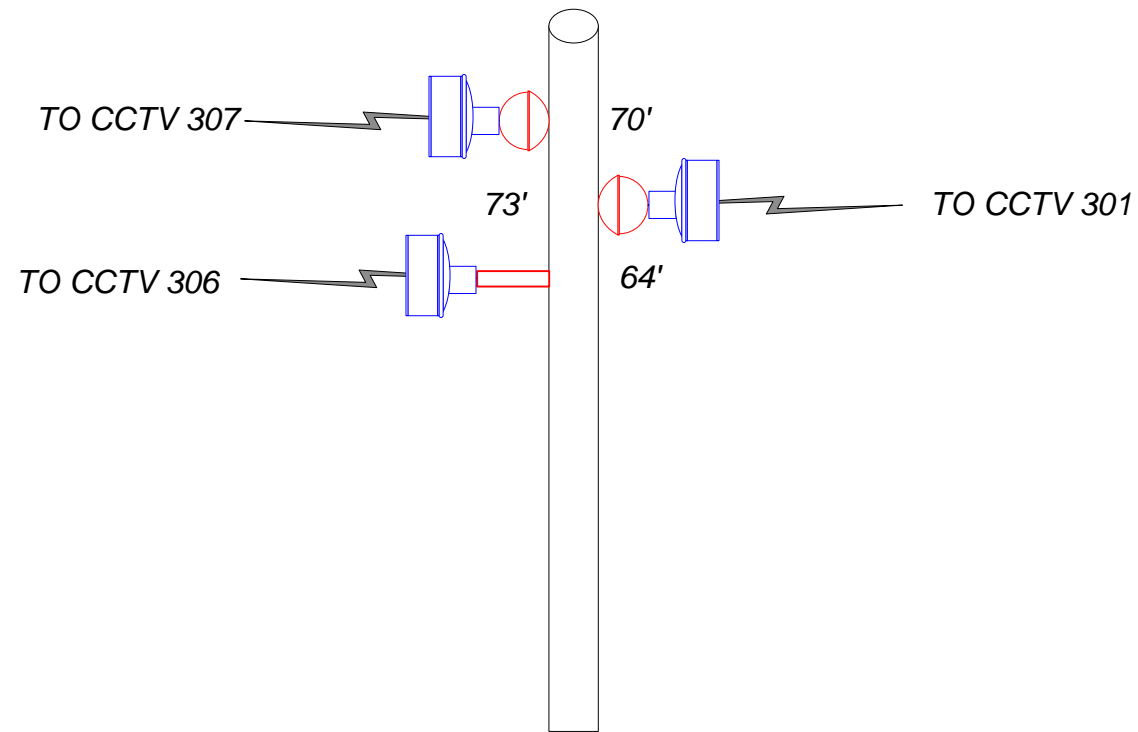
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**V1** CCTV 306



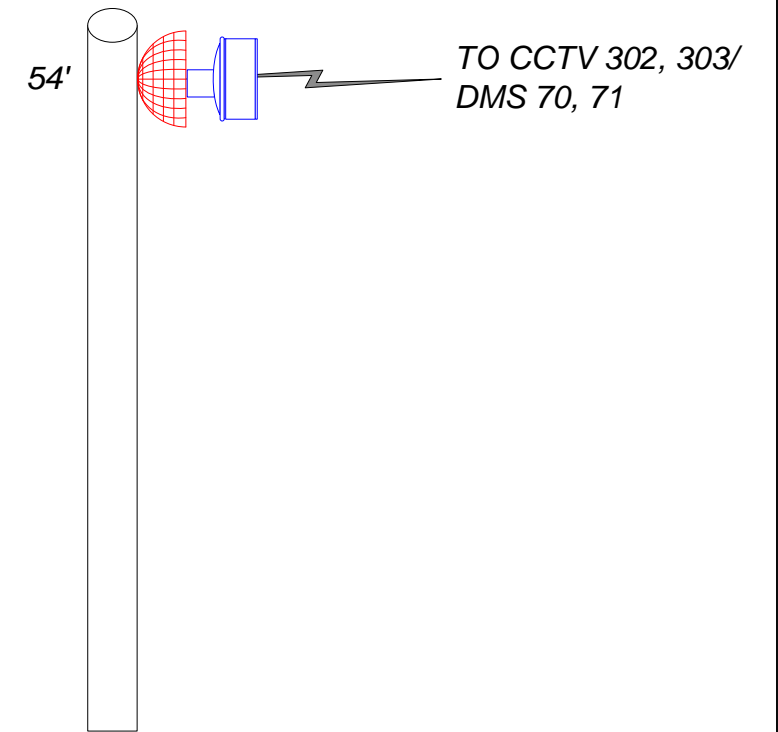
OUTDOOR CABINET

**V** CCTV 305

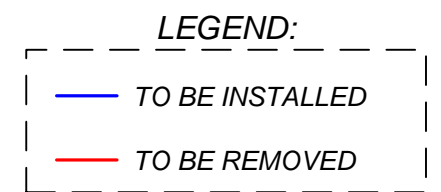
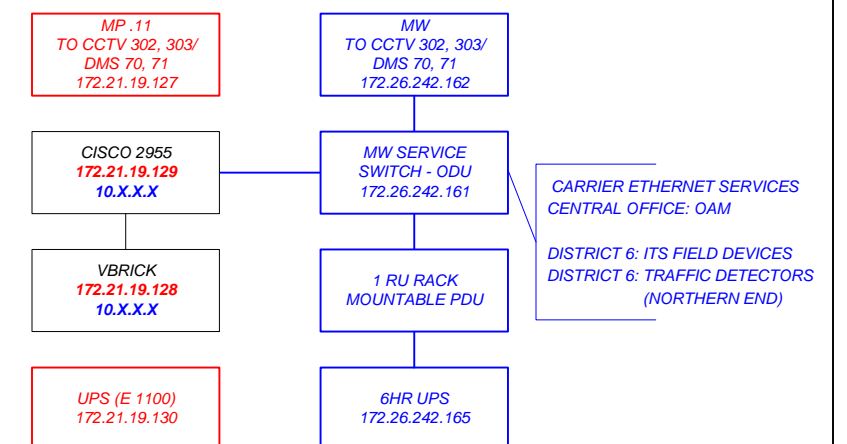
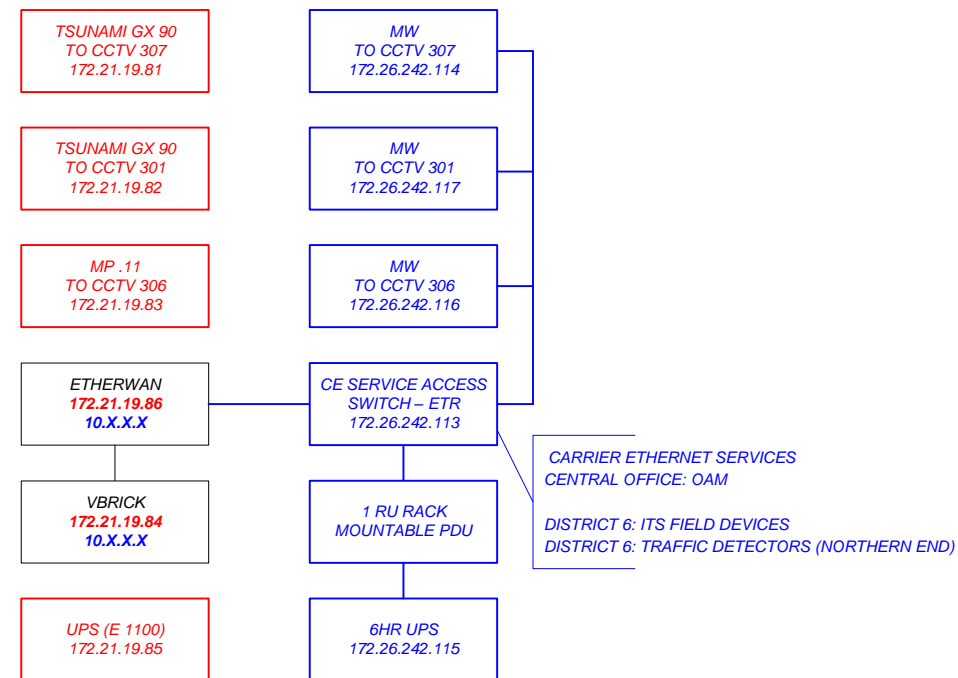
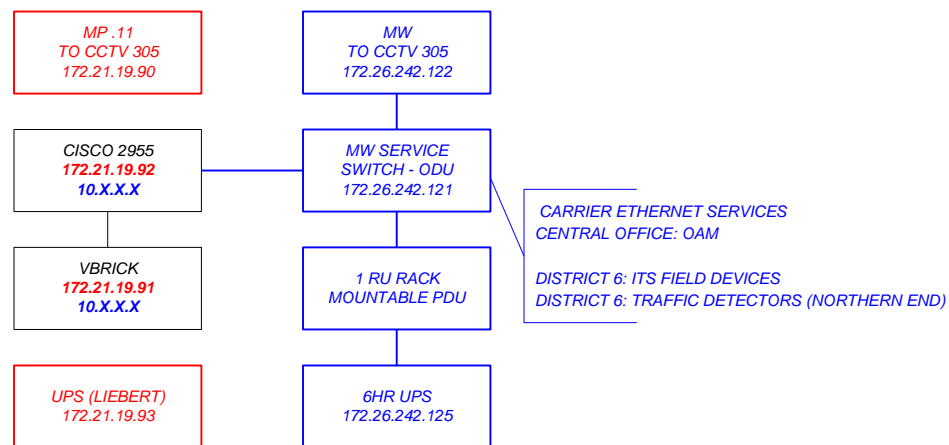


OUTDOOR CABINET

**W3** CCTV 304



OUTDOOR CABINET



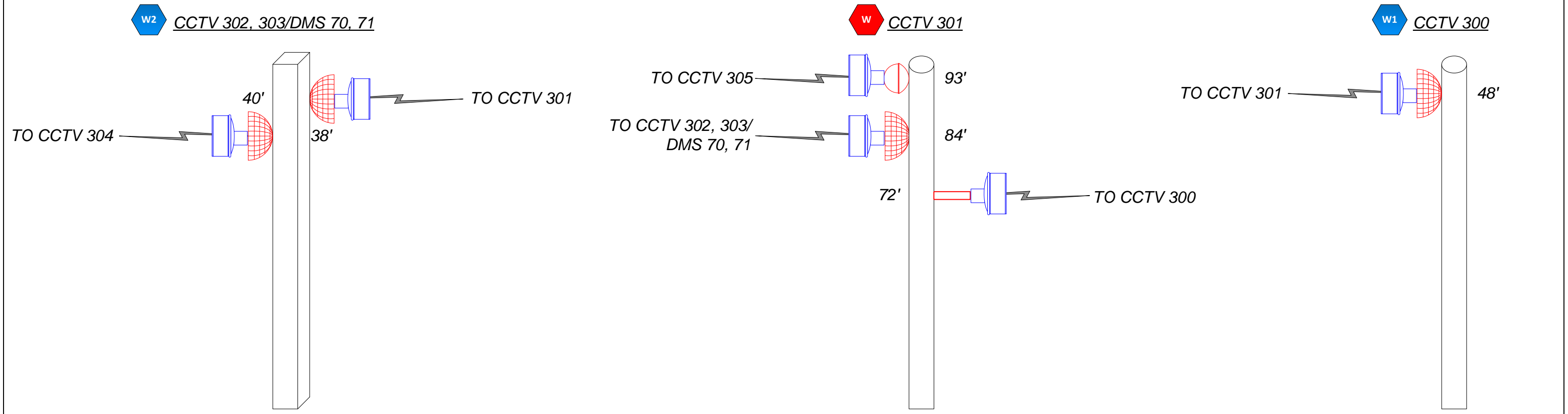
CONTRACT PLANS RECORD					
DATE	REV.	DESCRIPTION	DATE	REV.	DESCRIPTION

**FDOT** FLORIDA DEPARTMENT OF TRANSPORTATION  
605 SUWANNEE ST. MS 90  
TALLAHASSEE, FL 32399-0450  
PH.(850)-410-5600  
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STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
SITE NAME	COUNTY	FINANCIAL PROJECT ID
PROJECT-WIDE	MONROE, MIAMI-DADE	424401-2-93-01

KEYS MICROWAVE STATION EQUIPMENT CONFIGURATIONS	SHEET NO.
	IT-25

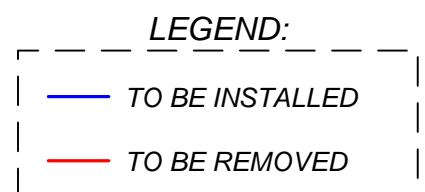
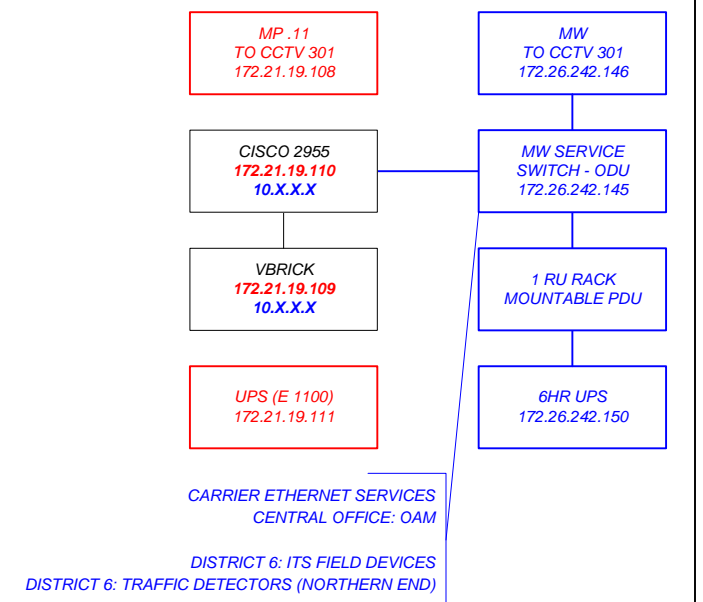
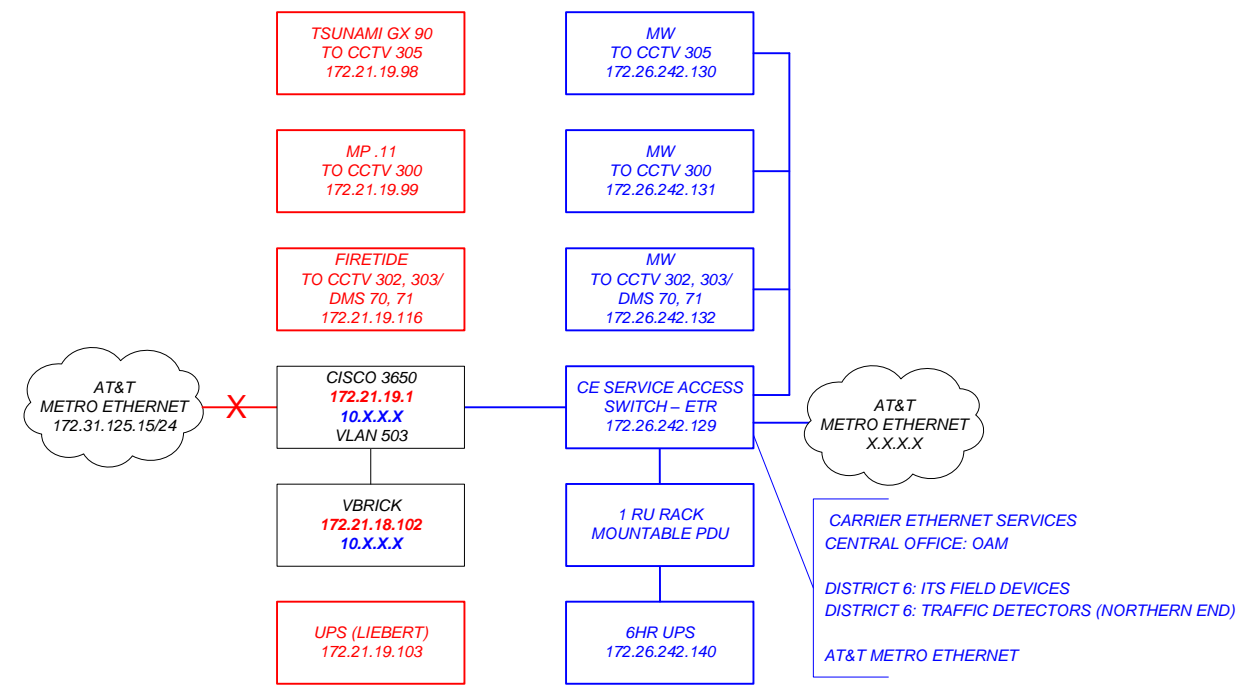
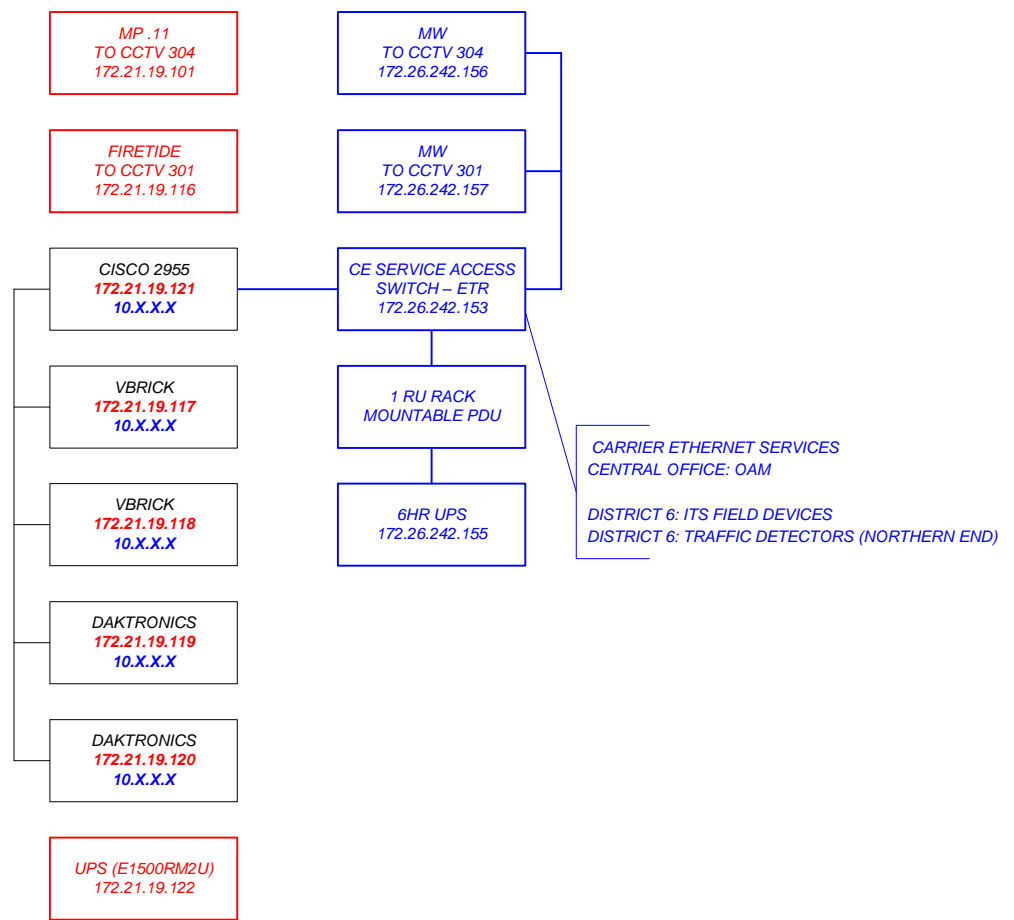
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**OUTDOOR CABINET**

**OUTDOOR CABINET**

**OUTDOOR CABINET**



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DATE	REV.	DESCRIPTION	DATE	REV.	DESCRIPTION

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 605 SUWANNEE ST. MS 90  
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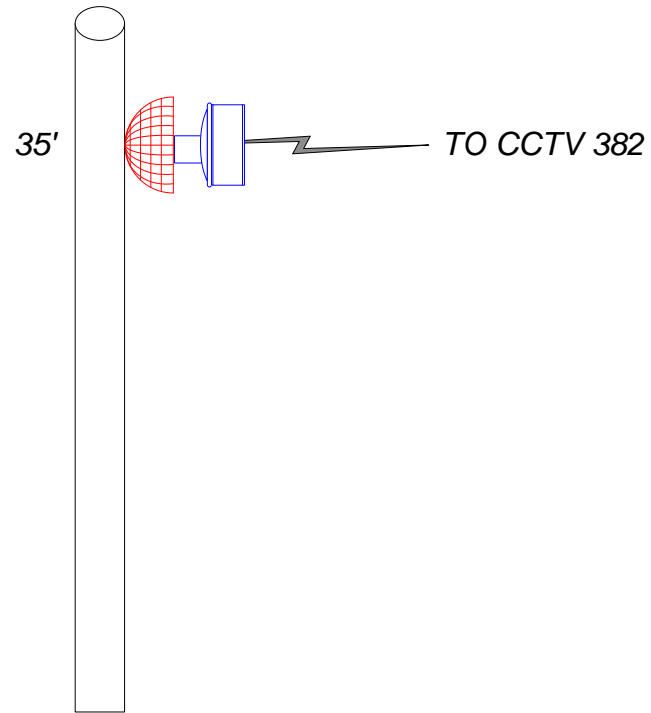
STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
SITE NAME	COUNTY	FINANCIAL PROJECT ID
PROJECT-WIDE	MONROE, MIAMI-DADE	424401-2-93-01

**KEYS MICROWAVE  
STATION EQUIPMENT  
CONFIGURATIONS**

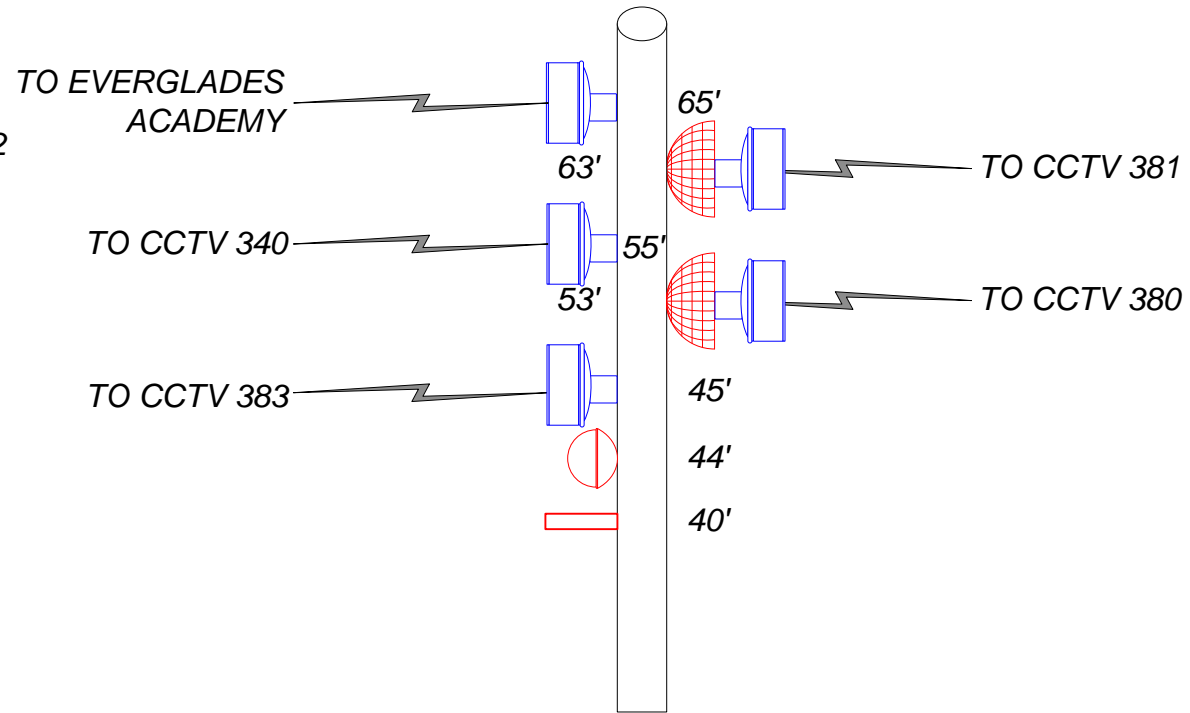
SHEET NO.  
IT-26

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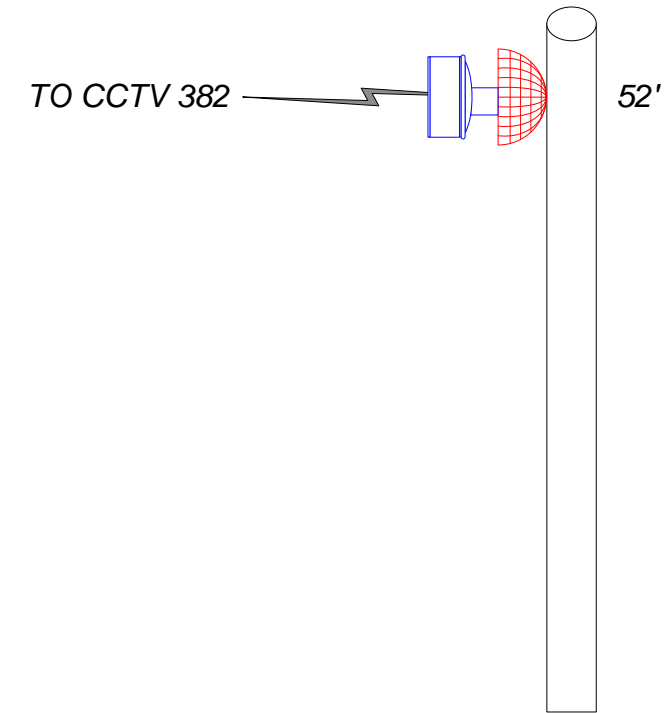
**G1** **CCTV 383**



**G** **CCTV 382**



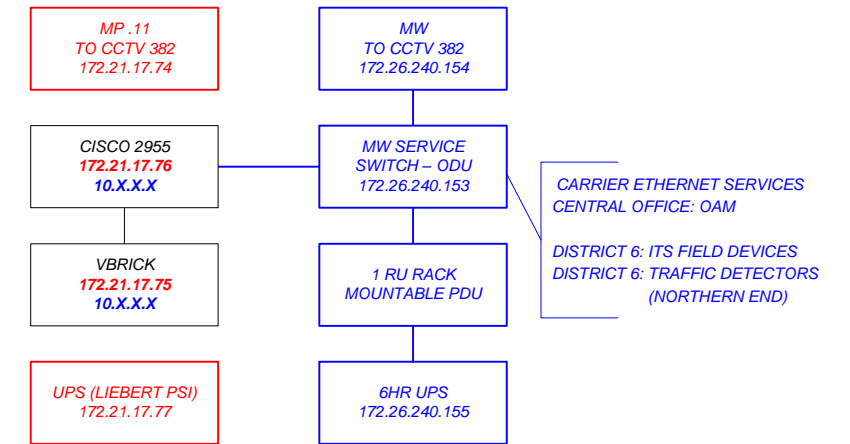
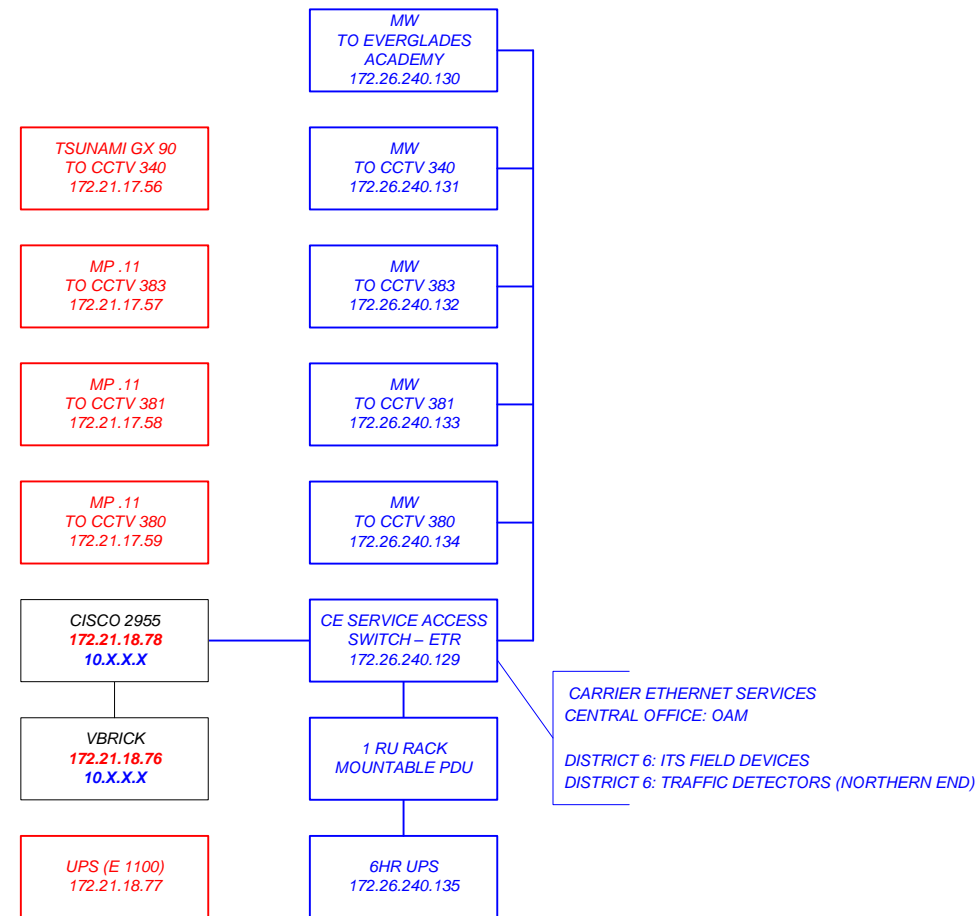
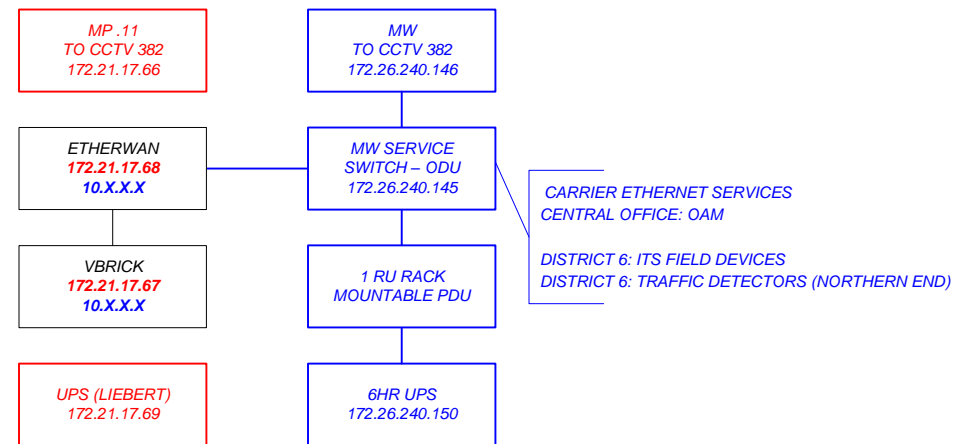
**G2** **CCTV 381**



**OUTDOOR CABINET**

**OUTDOOR CABINET**

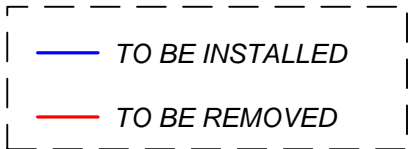
**OUTDOOR CABINET**



CARRIER ETHERNET SERVICES  
CENTRAL OFFICE: OAM  
DISTRICT 6: ITS FIELD DEVICES  
DISTRICT 6: TRAFFIC DETECTORS (NORTHERN END)

CARRIER ETHERNET SERVICES  
CENTRAL OFFICE: OAM  
DISTRICT 6: ITS FIELD DEVICES  
DISTRICT 6: TRAFFIC DETECTORS (NORTHERN END)

**LEGEND:**



CONTRACT PLANS RECORD					
DATE	REV.	DESCRIPTION	DATE	REV.	DESCRIPTION

**FDOT**  
 FLORIDA DEPARTMENT OF TRANSPORTATION  
 605 SUWANNEE ST. MS 90  
 TALLAHASSEE, FL 32399-0450  
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STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
SITE NAME	COUNTY	FINANCIAL PROJECT ID
PROJECT-WIDE	MONROE, MIAMI-DADE	424401-2-93-01

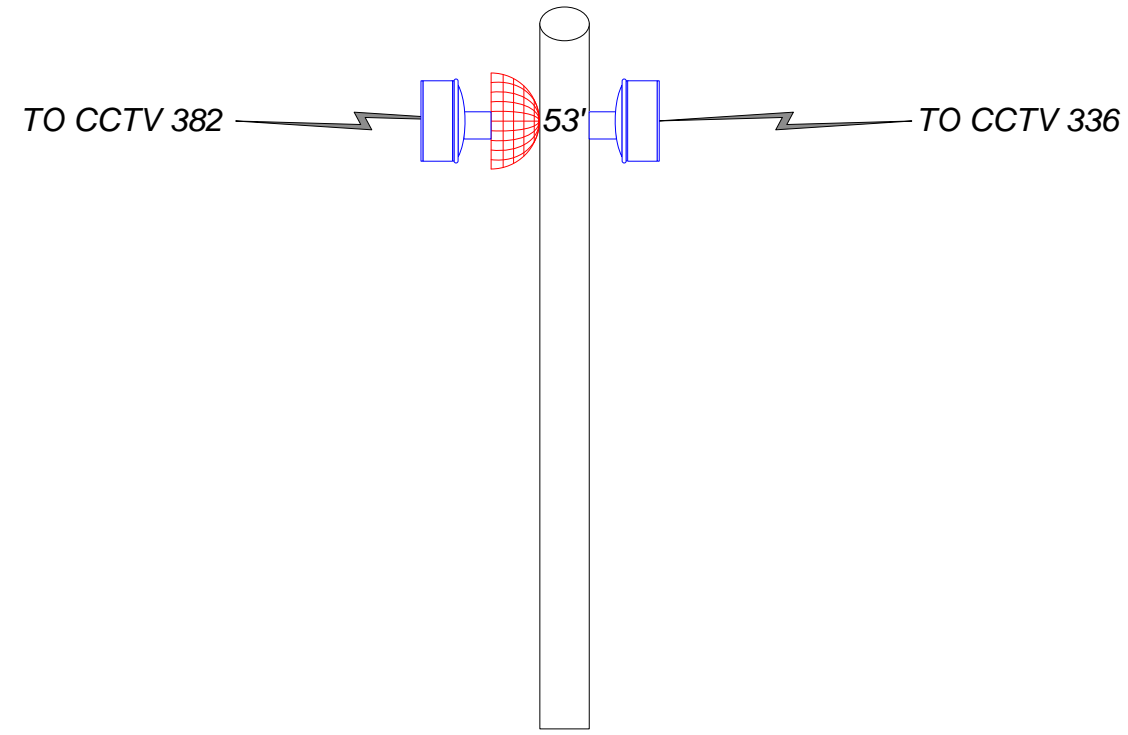
**KEYS MICROWAVE  
STATION EQUIPMENT  
CONFIGURATIONS**

SHEET NO.  
IT-27

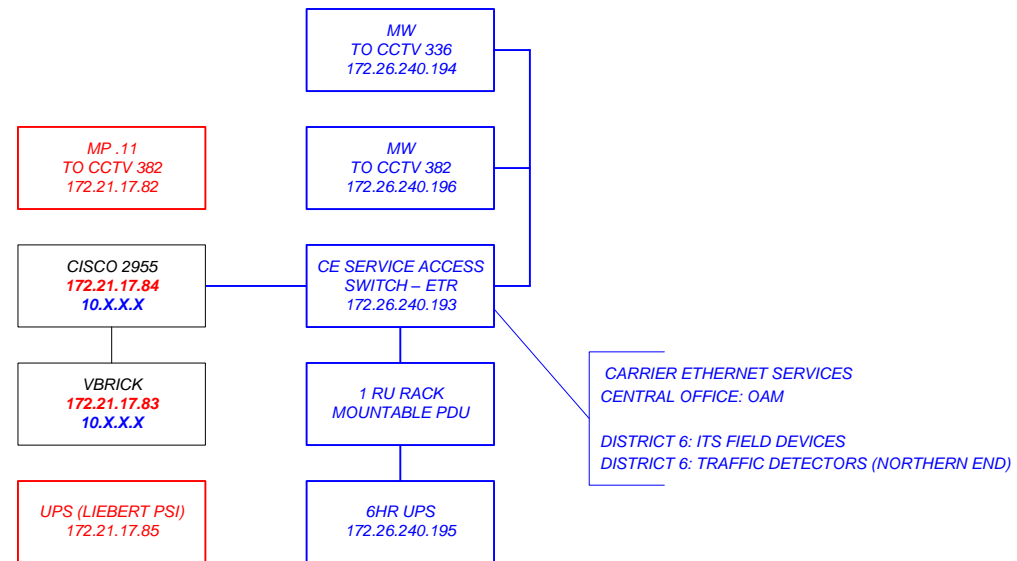
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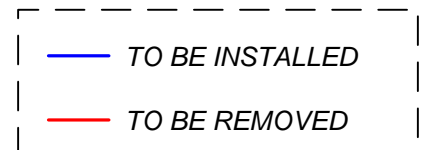
**H** CCTV 380



OUTDOOR CABINET



**LEGEND:**



**CONTRACT PLANS RECORD**

DATE	REV.	DESCRIPTION	DATE	REV.	DESCRIPTION



FLORIDA DEPARTMENT OF TRANSPORTATION  
 605 SUWANNEE ST. MS 90  
 TALLAHASSEE, FL 32399-0450  
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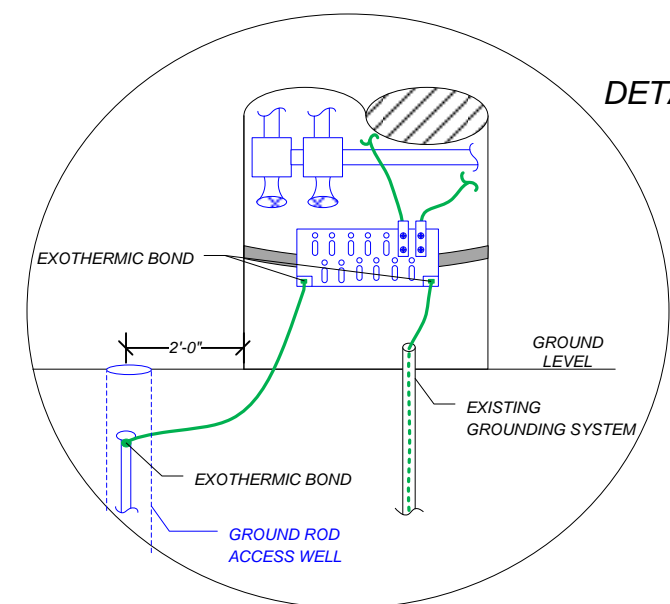
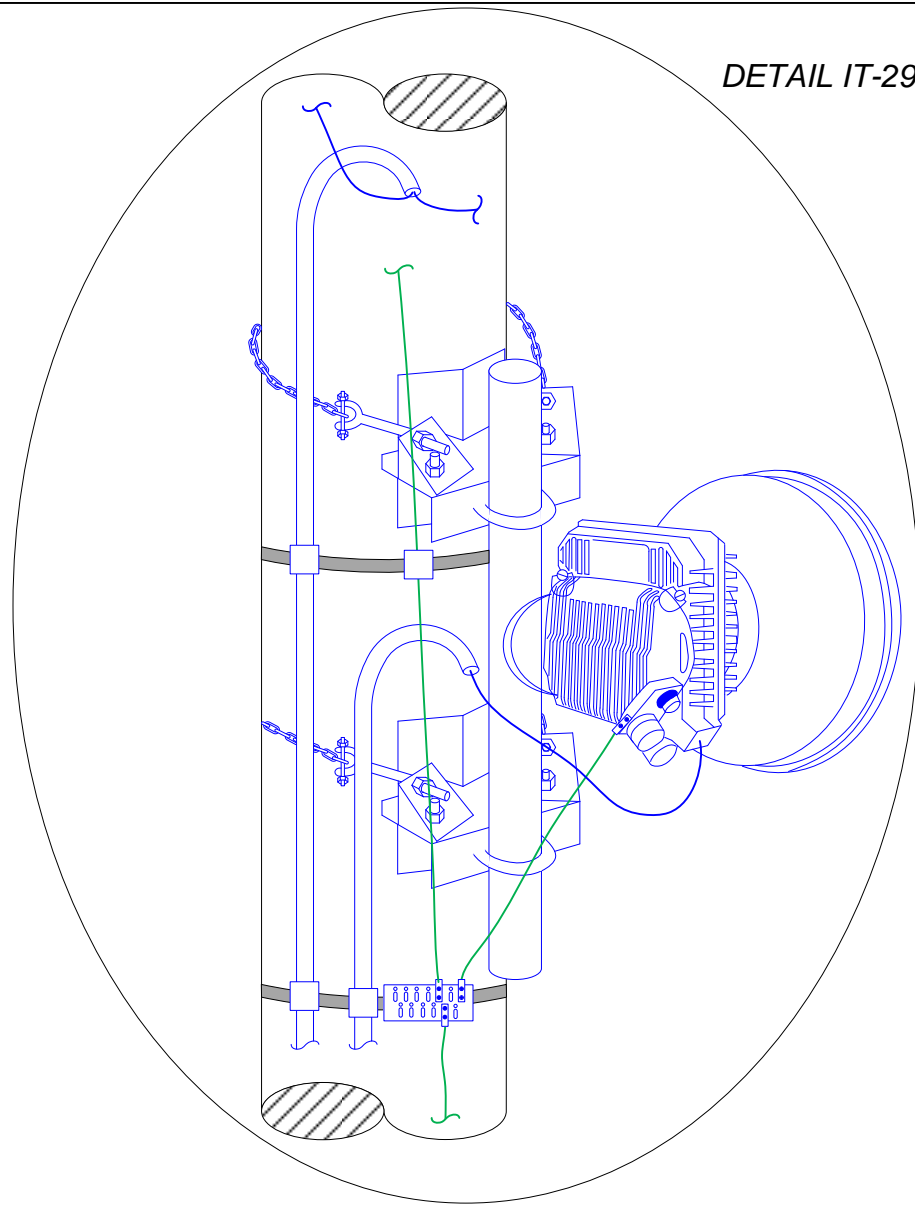
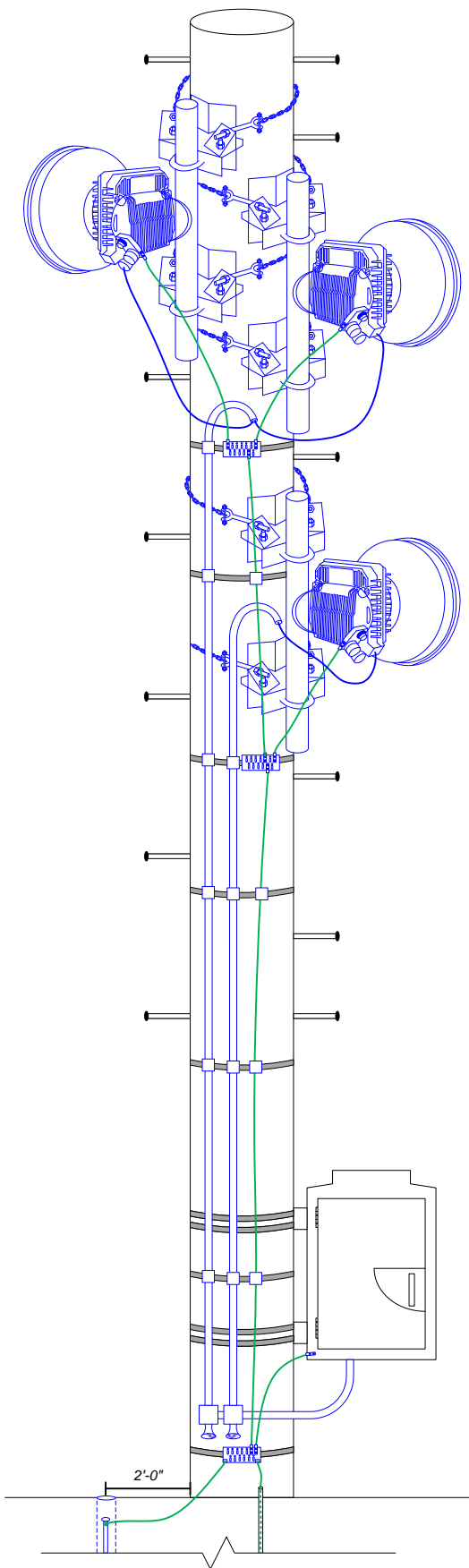
**STATE OF FLORIDA  
 DEPARTMENT OF TRANSPORTATION**

SITE NAME	COUNTY	FINANCIAL PROJECT ID
PROJECT-WIDE	MONROE, MIAMI-DADE	424401-2-93-01

**KEYS MICROWAVE  
 STATION EQUIPMENT  
 CONFIGURATIONS**

SHEET NO.

IT-28



DETAIL IT-29B

DETAIL IT-29A

**APPURTENANCE INSTALLATION NOTES:**

1. THE VENDOR SHALL REMOVE THE DECOMMISSIONED ANTENNAS, TRANSMISSION LINES, APPURTENANCES, AND ALL ASSOCIATED HARDWARE.
2. THE VENDOR SHALL PROVIDE AND INSTALL CHAIN MOUNTS OR APPROVED EQUIVALENT FOR EACH ANTENNA ON THE POLE.  
THE VENDOR SHALL SUBMIT A COMPLETE LIST OF PROPOSED MICROWAVE DISH MOUNTING HARDWARE TO THE FDOT PROJECT MANAGER FOR REVIEW AND APPROVAL.
3. THE APPROPRIATELY SIZED RIGID METALLIC CONDUIT CONTAINING THE RADIO POWER/DATA CABLES SHALL HOOK DOWNWARDS AND BE SEALED TO PROTECT FROM ENVIRONMENTAL ELEMENTS. ALL CONDUITS SHALL BE EQUIPPED WITH A BREATHER/ASPIRATOR AT THE BOTTOM END OF EACH VERTICAL CONDUIT RUN TO PROVIDE CONDENSATION/WATER DRAINAGE. NO SNAP-IN HANGERS WILL BE PERMITTED.
4. THE VENDOR SHALL PROVIDE ADEQUATE STRAIN RELIEF TO THE RIGID METALLIC CONDUIT AND NEWLY INSTALLED GROUND CONDUCTORS. NO SNAP-IN HANGERS WILL BE PERMITTED.

**GROUNDING NOTES:**

1. THE VENDOR SHALL SUBMIT A COMPLETE LIST OF PROPOSED GROUNDING HARDWARE TO THE FDOT PROJECT MANAGER FOR REVIEW AND APPROVAL.
2. THE VENDOR SHALL REMOVE AND PROPERLY DISPOSE OF ALL EXISTING ABOVE GROUND CONDUCTORS AND BUS BARS.
3. THE VENDOR SHALL CLEAN AND PREPARE ALL GROUND CONDUCTORS AND SURFACES PRIOR TO PERFORMING EXOTHERMIC BONDS. ALL NON-CONDUCTING SURFACE COATINGS SHALL BE REMOVED BEFORE EACH CONNECTION IS MADE.
4. THE VENDOR SHALL PROVIDE AND INSTALL NEW INSULATED GROUND BUS BARS BELOW THE ANTENNAS AND AT THE BASE OF EACH POLE.
5. THE VENDOR SHALL PROVIDE AND INSTALL AN 8-FOOT LONG, COPPER-CLAD STEEL GROUND ROD WITH A MINIMUM DIAMETER OF 5/8 INCHES. THE GROUND ROD SHALL BE PLACED WITHIN A GROUND ROD ACCESS WELL.
6. ALL GROUND CONDUCTORS SHALL BE GREEN UV JACKETED #2 AWG STRANDED.
7. ALL ABOVE GROUND BUS BAR AND RADIO CONNECTIONS SHALL BE TWO-HOLE LUG CONNECTORS, AND ATTACHED WITH STAINLESS STEEL HARDWARE. SEE DETAIL IT-29A AND IT-29B.
8. ALL BELOW GROUND GROUNDING CONNECTIONS TO THE POLE BASE GROUND BUS BAR SHALL BE EXOTHERMIC BOND CONNECTIONS. SEE DETAIL IT-29A.
9. THE VENDOR SHALL EXOTHERMICALLY BOND THE EXISTING GROUNDING SYSTEM CONDUCTOR TO THE TOWER BASE GROUND BUS BAR.
10. ALL EXOTHERMIC BONDS SHALL BE ONESHOT UNLESS PRE-APPROVED IN WRITING BY THE FDOT PROJECT MANAGER.
11. #2 AWG TINNED SOLID COPPER WIRE IS REQUIRED FOR BELOW GROUND INSTALLATIONS OF GROUND WIRE.
12. THE VENDOR SHALL NOT BACKFILL OPENINGS WHERE UNDERGROUND EXOTHERMIC BONDS ARE MADE UNTIL FDOT HAS INSPECTED AND APPROVED THE GROUNDING SYSTEM INSTALLATION WORK.
13. GROUND CONDUCTORS SHALL BE DOWNWARD COURSING AND VERTICAL, AS MUCH AS POSSIBLE, AND BE AS SHORT AND STRAIGHT AS PRACTICAL. SHARP BENDS AND MULTIPLE BENDS IN CONDUCTORS SHALL BE AVOIDED IN ALL CASES. THE MINIMUM BEND RADIUS SHALL BE 8 INCHES PER NFPA 780.
14. ALL RADIO POWER/DATA CABLES SHALL BE EQUIPPED WITH SURGE PROTECTIVE DEVICES (SPD) PER THESE SPECIFICATIONS. ALL SPDs SHALL BE CONNECTED DIRECTLY TO THE GROUND BUS UPON ENTERING THE EQUIPMENT CABINETS AND TELECOMMUNICATIONS SHELTERS.

**LEGEND:**

- TO BE INSTALLED
- GROUND CONDUCTOR

CONTRACT PLANS RECORD					
DATE	REV.	DESCRIPTION	DATE	REV.	DESCRIPTION

**FDOT**  
 FLORIDA DEPARTMENT OF TRANSPORTATION  
 605 SUWANNEE ST. MS 90  
 TALLAHASSEE, FL 32399-0450  
 PH. (850)-410-5600  
 FAX. (850)-410-5501

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
SITE NAME	COUNTY	FINANCIAL PROJECT ID
PROJECT-WIDE	MONROE, MIAMI-DADE	424401-2-93-01

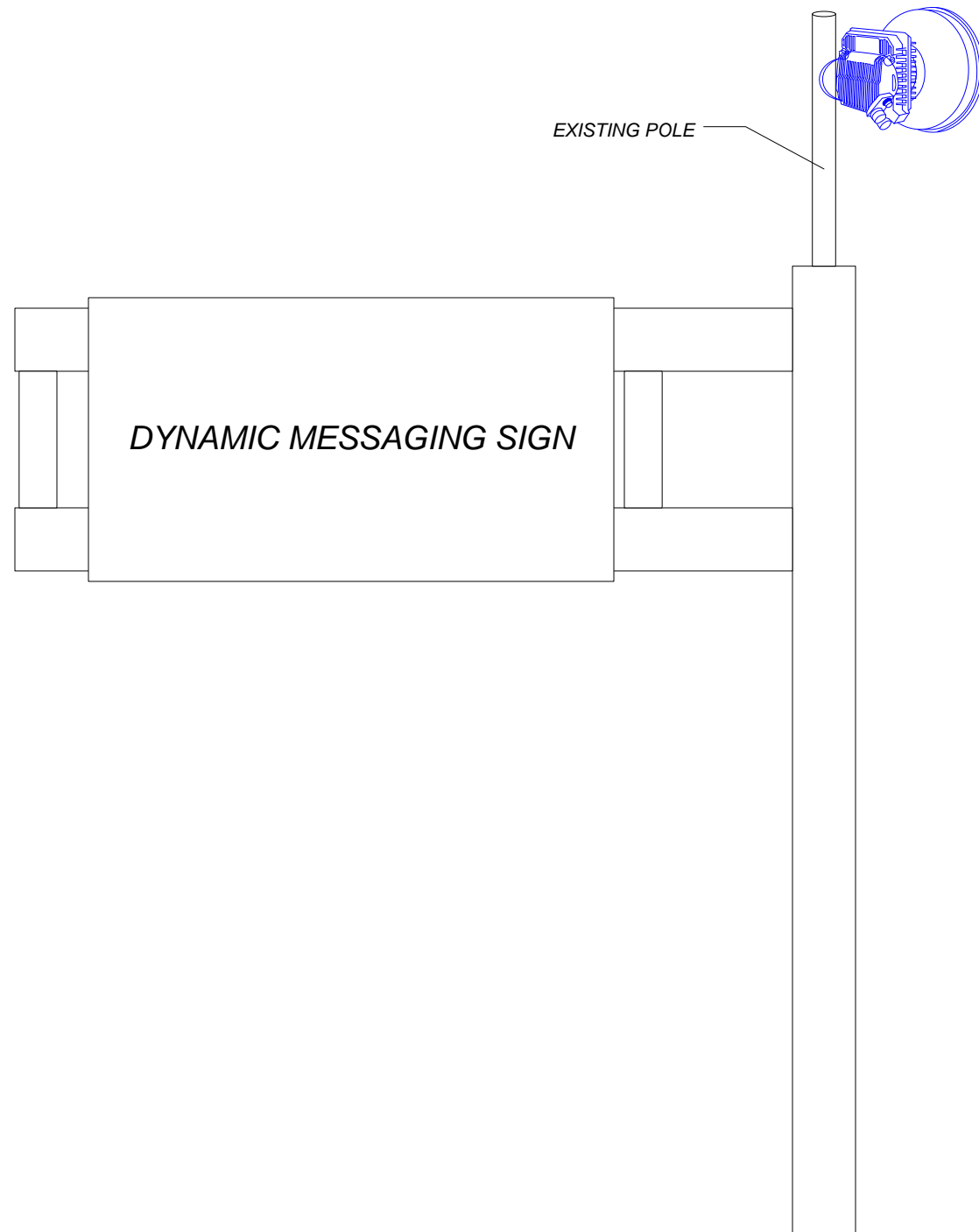
**KEYS MICROWAVE  
POLE MOUNTING &  
GROUNDING**

SHEET NO.  
IT-29

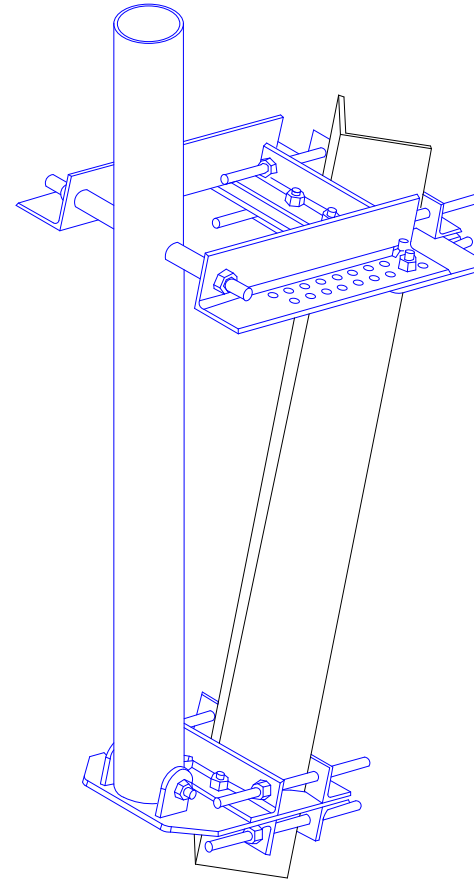
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**APPURTENANCE INSTALLATION NOTES:**

1. THE VENDOR MAY USE THE EXISTING POLE ON THE DMS SIGNS TO MOUNT THE ANTENNAS ON IF THE VENDOR DETERMINES THE POLE CAN SUPPORT THE ANTENNA. IF NOT, THE VENDOR SHALL REMOVE AND REPLACE THE POLE WITH ONE OF APPROPRIATE STRENGTH.
2. THE VENDOR SHALL USE A SLOPE PIPE MOUNT OR APPROVED EQUIVALENT FOR THE INSTALLATIONS ON TOWERS.



**TYPICAL DMS MOUNTING EXAMPLE**



**TOWER MOUNT EXAMPLE**

**LEGEND:**



CONTRACT PLANS RECORD					
DATE	REV.	DESCRIPTION	DATE	REV.	DESCRIPTION



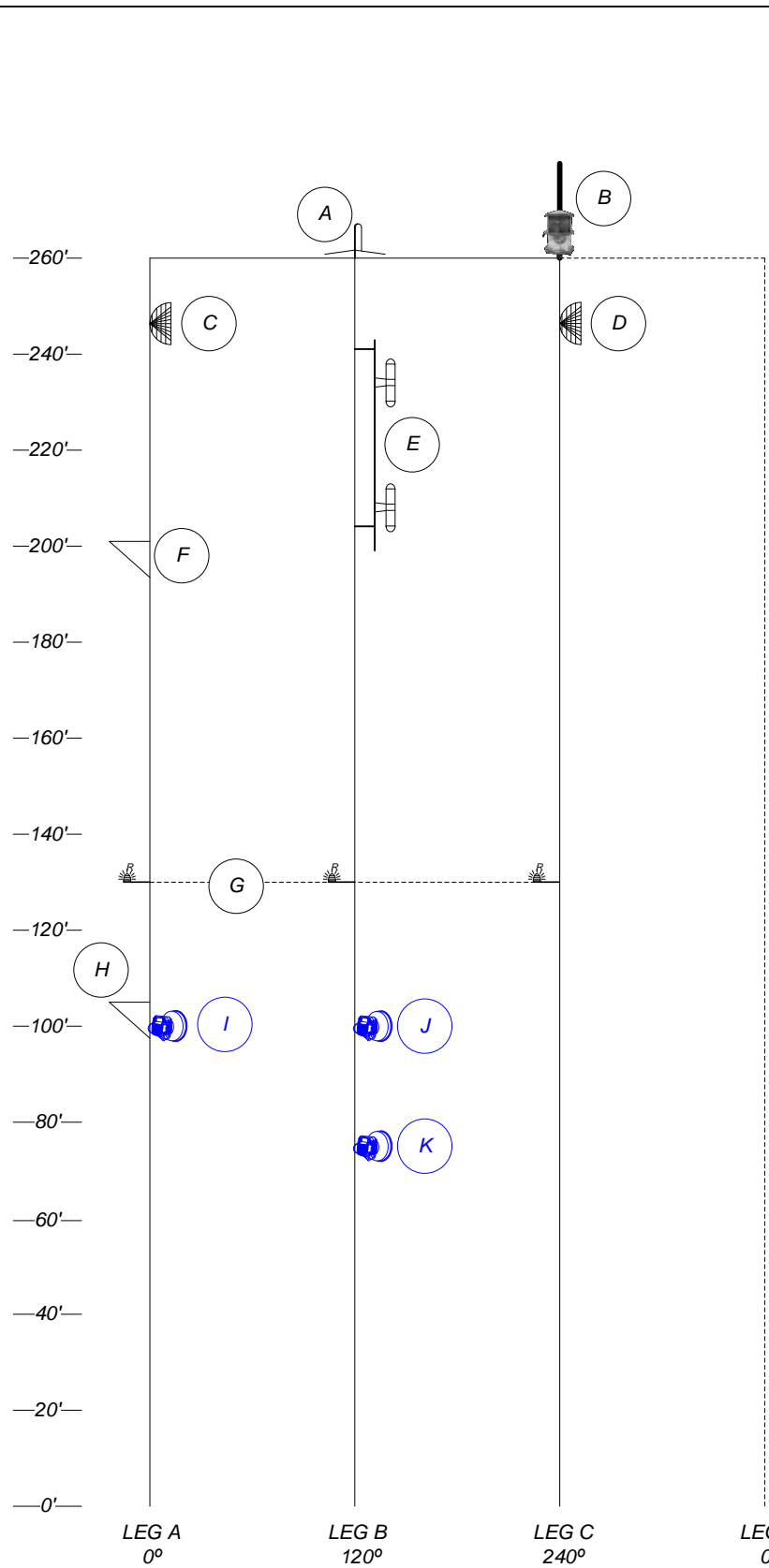
FLORIDA DEPARTMENT OF TRANSPORTATION  
 605 SUWANNEE ST. MS 90  
 TALLAHASSEE, FL 32399-0450  
 PH.(850)-410-5600  
 FAX.(850)-410-5501

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
SITE NAME	COUNTY	FINANCIAL PROJECT ID
PROJECT-WIDE	MONROE, MIAMI-DADE	424401-2-93-01

**KEYS MICROWAVE  
 DMS & TOWER  
 MOUNTING**

SHEET NO.

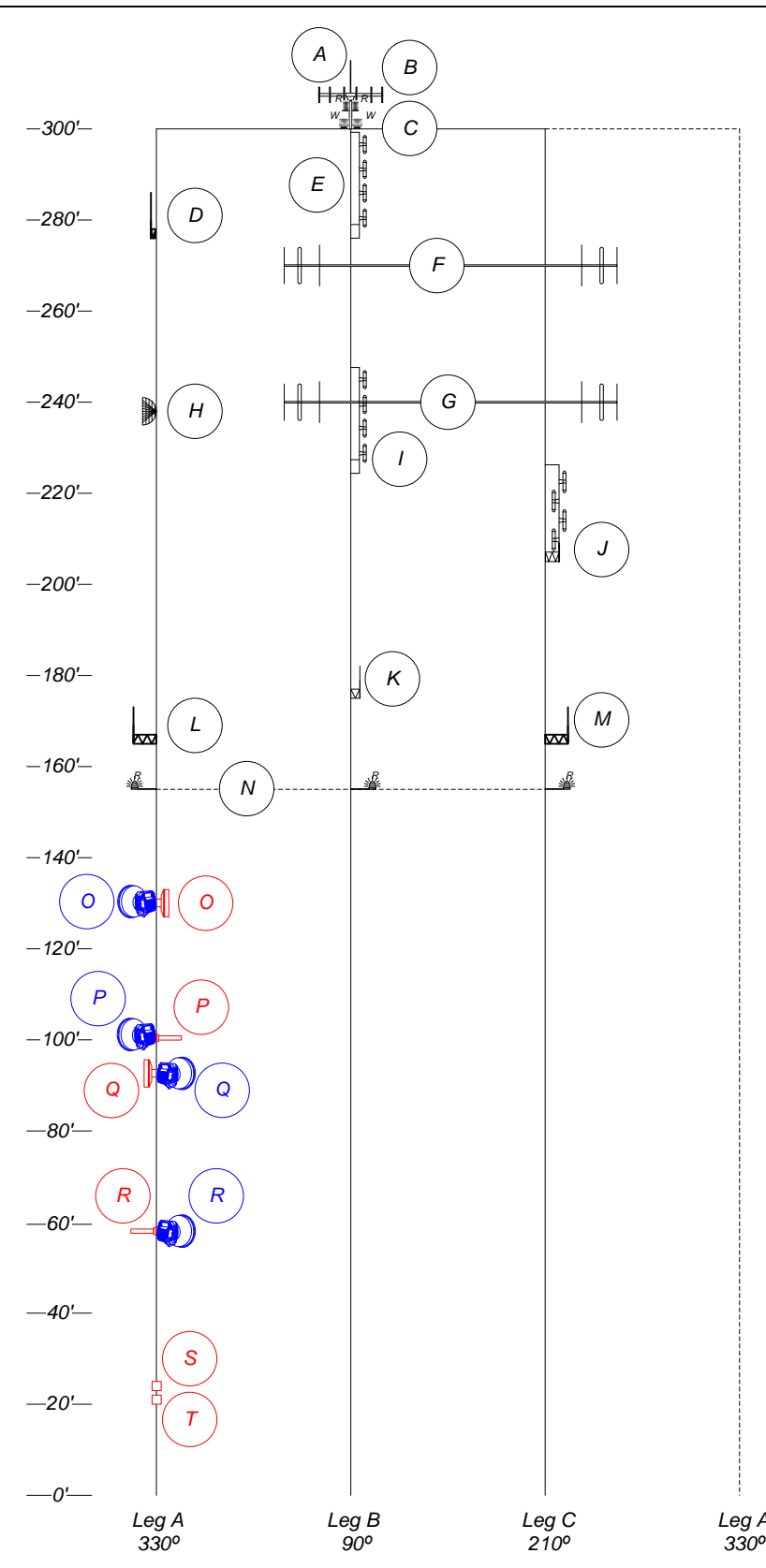
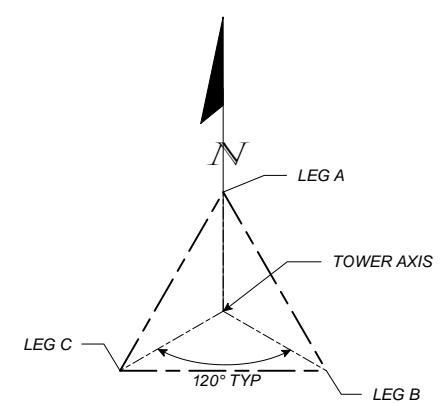
IT-30



**EVERGLADES ACADEMY - PROPOSED TOWER LOADING DIAGRAM**

ID	MODEL	LEG/FACE	MTG. HGT.	TX LINE	AZIM.	NOTES
A	DB201	B	260' (BASE)	7/8"	-	-
B	RED/WHITE BEACON	C	260' (BASE)	-	-	-
C	6 FT GRID DISH	A	245' (C.L.)	7/8"	18.38°	-
D	6 FT GRID DISH	C	245' (C.L.)	7/8"	199.3°	-
E	DB212-2	B	234', 208' (C.L.)	7/8"	165°	-
F	REST PLATFORM	A	201' (BASE)	-	-	-
G	SIDE MARKER	A, B, C	130' (C.L.)	-	-	-
H	REST PLATFORM	A	105' (BASE)	-	-	-
I	MICROWAVE DISH	A	100' (C.L.)	CAT5 POE	2.8°	1
J	MICROWAVE DISH	B	100' (C.L.)	CAT5 POE	130.4°	1
K	MICROWAVE DISH	B	75' (C.L.)	CAT5 POE	132.2°	1

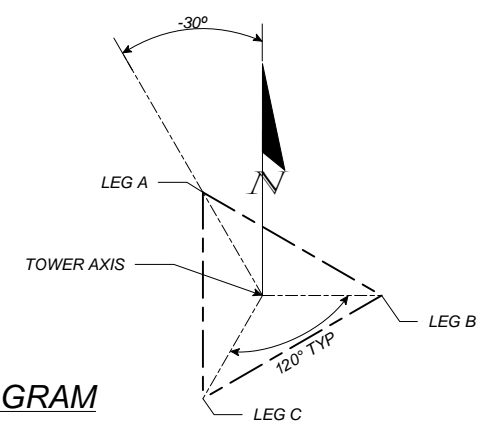
NOTES:  
 1. INSTALL ALL ANTENNAS, CONDUITS, AND ASSOCIATED MOUNTING AND GROUNDING HARDWARE PER THESE PLANS.



**TEA TABLE FILL - PROPOSED TOWER LOADING DIAGRAM**

ID	MODEL	LEG/FACE	MTG. HGT.	TX LINE	AZIM.	NOTES
A	ADD090(S)	B	305' (BASE)	-	-	-
B	(2) RED BEACON	B	304' (BASE)	-	-	-
C	(2) WHITE BEACON	B	300' (BASE)	-	-	-
D	SRL3352	A	276' (BASE)	-	-	-
E	DB224E	B	276' (BASE)	-	-	-
F	295-70HDLB-2	B, C	270' (C.L.)	-	-	-
G	295-70HDLB-2	B, C	240' (C.L.)	-	-	-
H	P-9A72G	A	328' (C.L.)	-	-	-
I	DB224E	B	236' (BASE)	-	-	-
J	DB224	C	205' (BASE)	7/8"	-	-
K	D2214	B	175' (BASE)	-	210°	-
L	BMR8-H	A	165' (BASE)	1-1/4"	-	-
M	BMR8-H	C	165' (BASE)	7/8"	-	-
N	SIDE MARKERS	A,B,C	155' (C.L.)	-	-	-
O	MICROWAVE DISH	A	130' (C.L.)	CAT5 POE	236.8°	2
P	MICROWAVE DISH	B	100' (C.L.)	CAT5 POE	239.8°	2
Q	MICROWAVE DISH	B	95' (C.L.)	CAT5 POE	51.9°	2
R	MICROWAVE DISH	A	58' (C.L.)	CAT5 POE	56.6°	2
S	GX90 (ODU)	A	24' (C.L.)	5/8"	-	1
T	GX90 (ODU)	A	21' (C.L.)	5/8"	-	1

NOTES:  
 1. THE VENDOR SHALL REMOVE THE ANTENNAS, TRANSMISSION LINES, MOUNTING HARDWARE, AND ALL ASSOCIATED EQUIPMENT.  
 2. INSTALL ALL ANTENNAS, CONDUITS, AND ASSOCIATED MOUNTING AND GROUNDING HARDWARE PER THESE PLANS.



CONTRACT PLANS RECORD					
DATE	REV.	DESCRIPTION	DATE	REV.	DESCRIPTION

**FLORIDA DEPARTMENT OF TRANSPORTATION**  
 605 SUWANNEE ST. MS 90  
 TALLAHASSEE, FL 32399-0450  
 PH.(850)-410-5600  
 FAX.(850)-410-5501

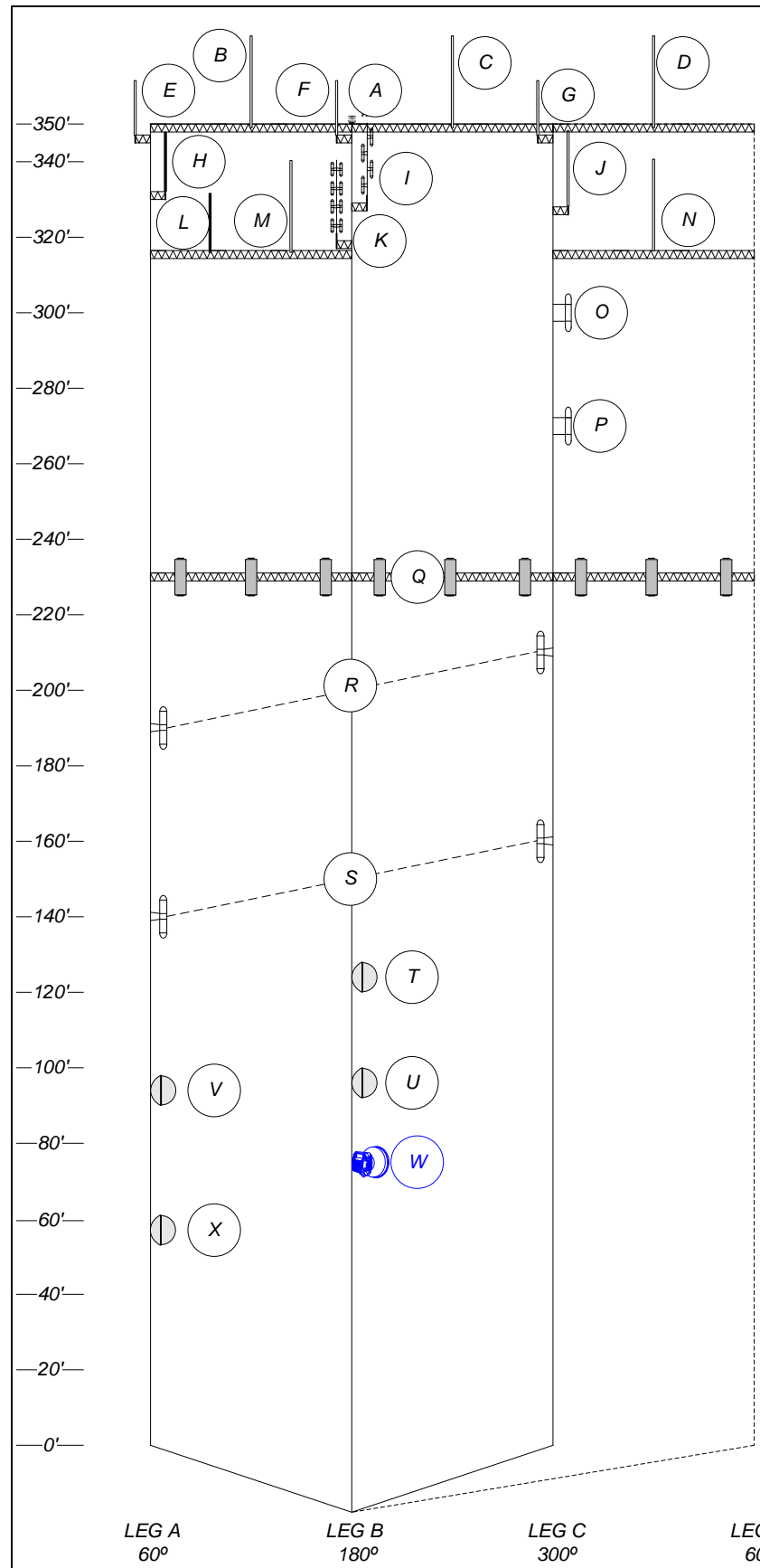
STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
SITE NAME	COUNTY	FINANCIAL PROJECT ID
PROJECT-WIDE	MONROE, MIAMI-DADE	424401-2-93-01

**KEYS MICROWAVE EVERGLADES ACADEMY & TEA TABLE TOWER LOADING**

SHEET NO. IT-31

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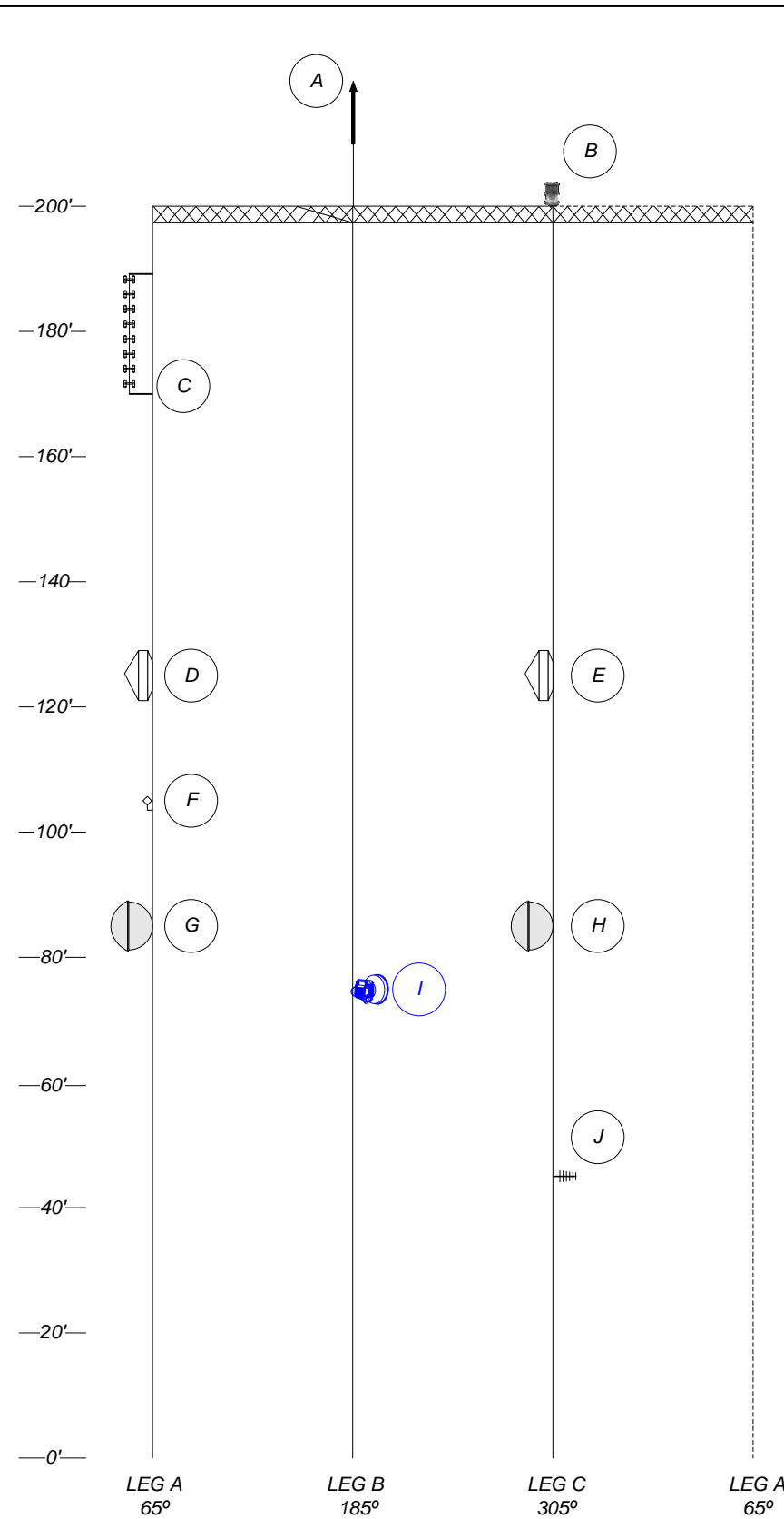
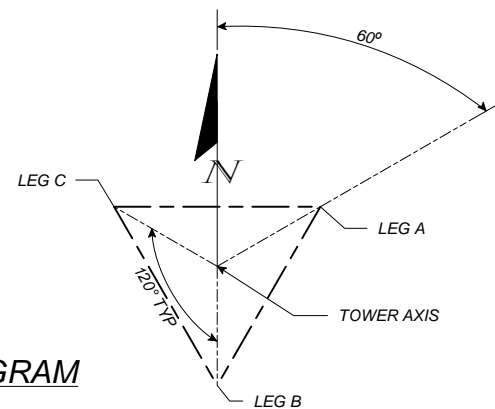


**BIG PINE KEY - PROPOSED TOWER LOADING DIAGRAM**

ID	MODEL	LEG/FACE	MTG. HGT.	TX LINE	AZIM.	NOTES
A	WHITE STROBE	B	350' (BASE)	-	-	-
B	JTF TX3: DB812	AB	349' (BASE)	1-5/8"	120°	-
C	JTF TX1: DB812	BC	349' (BASE)	1-5/8"	240°	-
D	JTF TX2: DB812	AC	349' (BASE)	1-5/8"	0°	-
E	M/A-COM TX1: DB810K-XT	A	347' (BASE)	1-5/8"	60°	-
F	M/A-COM TX1: DB810K-XT	B	347' (BASE)	1-5/8"	180°	-
G	M/A-COM TX1: DB810K-XT	C	347' (BASE)	1-5/8"	300°	-
H	ITN9: A08410M-24TO	A	330' (BASE)	1-5/8"	100°	-
I	ITN9: RFS 340-1	B	329' (BASE)	1-5/8"	210°	-
J	ITN9: RFS 455-7	C	328' (BASE)	1-5/8"	310°	-
K	DB304	B	319' (BASE)	1-5/8"	200°	-
L	M/A-COM RX: A08410M-24TO	AB	316' (BASE)	7/8"	10°	-
M	JTF RX: DB812	AB	316' (BASE)	7/8"	10°	-
N	JTF RX: DB812	AC	316' (BASE)	7/8"	10°	-
O	FDOT 47MHZ RX: COMPROD 531-70	C	300' (C.L.)	7/8"	270°	-
P	FDOT 47MHZ TX: COMPROD 531-70	C	270' (C.L.)	7/8"	270°	-
Q	CELLULAR ANTENNAS	A,B,C	230' (C.L.)	-	-	-
R	FDOT: DB212-2	210', 190' (C.L.)	C, A	7/8"	300°, 90°	-
S	FDOT: DB212-2	160', 140' (C.L.)	C, A	7/8"	300°, 90°	-
T	JTF: HP8	142' (C.L.)	B	EW65	264.5°	-
U	JTF: HP8	96' (C.L.)	B	EW65	264.5°	-
V	JTF: HP8	94' (C.L.)	A	EW65	81.4°	-
W	MICROWAVE DISH	75' (C.L.)	B	CAT5 POE	110.7°	1
X	JTF: HP8	57' (C.L.)	A	EW65	81.4°	-

**NOTES:**

1. INSTALL ALL ANTENNAS, CONDUITS, AND ASSOCIATED MOUNTING AND GROUNDING HARDWARE PER THESE PLANS.

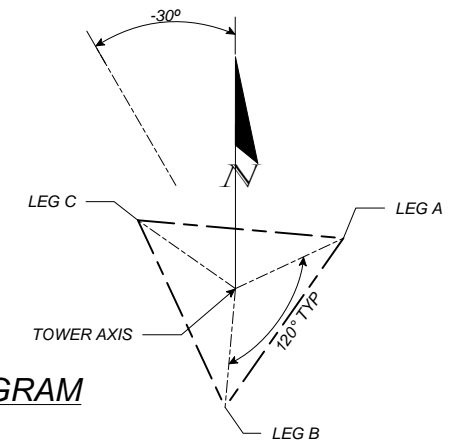


**SUGARLOAF KEY - PROPOSED TOWER LOADING DIAGRAM**

ID	MODEL	LEG/FACE	MTG. HGT.	TX LINE	AZIM.	NOTES
A	AIR TERMINAL	B	200' (BASE)	-	-	-
B	RED/WHITE BEACON	C	200' (BASE)	-	-	-
C	DB420	A	175' (BASE)	7/8"	65	-
D	PA8-65	A	130' (C.L.)	WE-65	84.9	-
E	PA8-65	C	130' (C.L.)	WE-65	250.5	-
F	1 FT DISH	C	130' (C.L.)	7/8"	90	-
G	PA8-65	A	110' (C.L.)	EW-65	84.9	-
H	PA8-65	C	90' (C.L.)	EW-65	250.5	-
I	MICROWAVE DISH	B	75' (C.L.)	CAT5 POE	162.2	1
J	800 MHZ YAGI	C	50' (C.L.)	7/8"	60	-

**NOTES:**

1. INSTALL ALL ANTENNAS, CONDUITS, AND ASSOCIATED MOUNTING AND GROUNDING HARDWARE PER THESE PLANS.



CONTRACT PLANS RECORD					
DATE	REV.	DESCRIPTION	DATE	REV.	DESCRIPTION

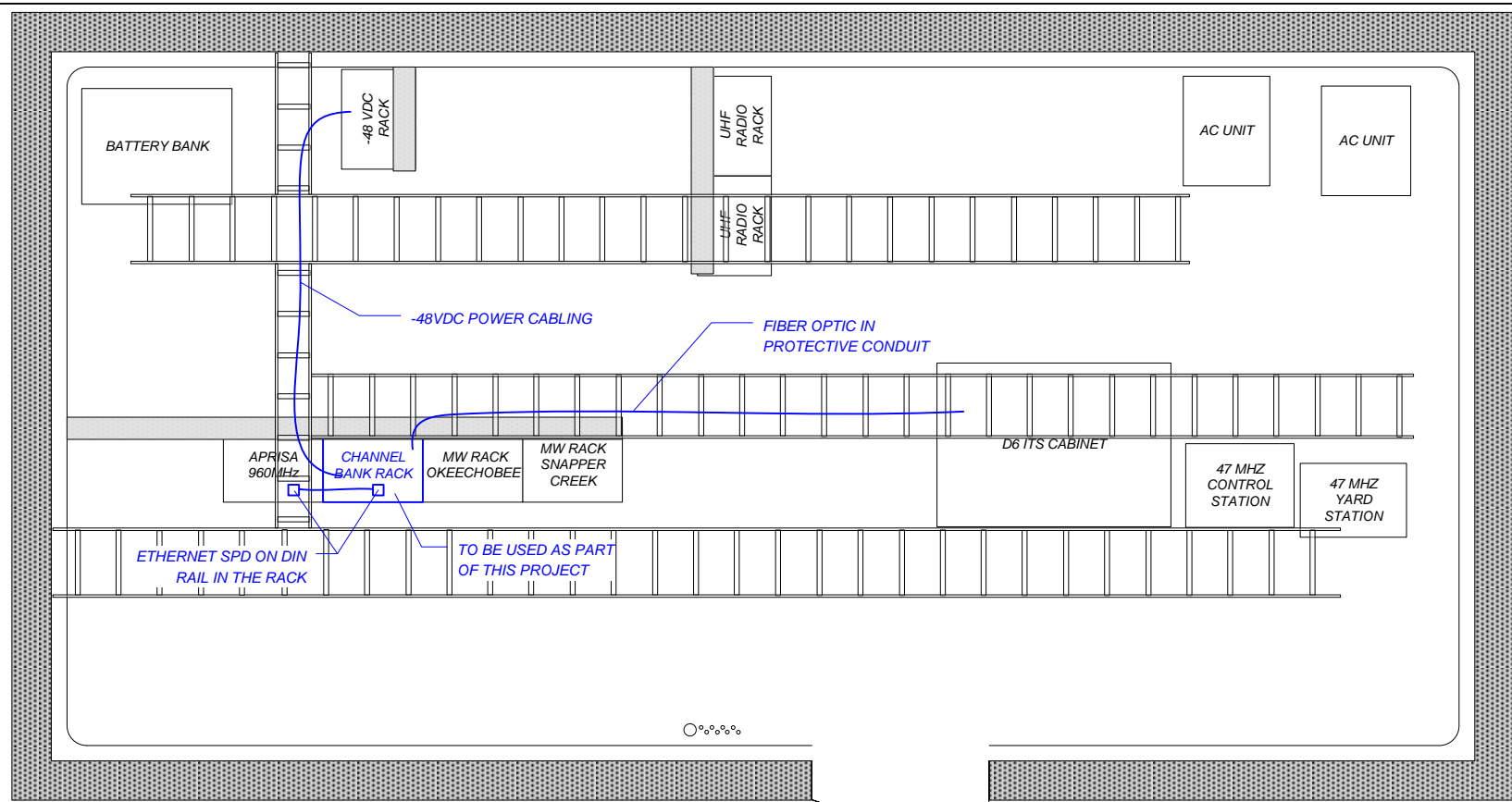
**FDOT** FLORIDA DEPARTMENT OF TRANSPORTATION  
 605 SUWANNEE ST. MS 90  
 TALLAHASSEE, FL 32399-0450  
 PH. (850)-410-5600  
 FAX. (850)-410-5501

**STATE OF FLORIDA**  
**DEPARTMENT OF TRANSPORTATION**

SITE NAME	COUNTY	FINANCIAL PROJECT ID
PROJECT-WIDE	MONROE, MIAMI-DADE	424401-2-93-01

**KEYS MICROWAVE**  
**BIG PINE KEY & SUGARLOAF**  
**KEY TOWER LOADING**

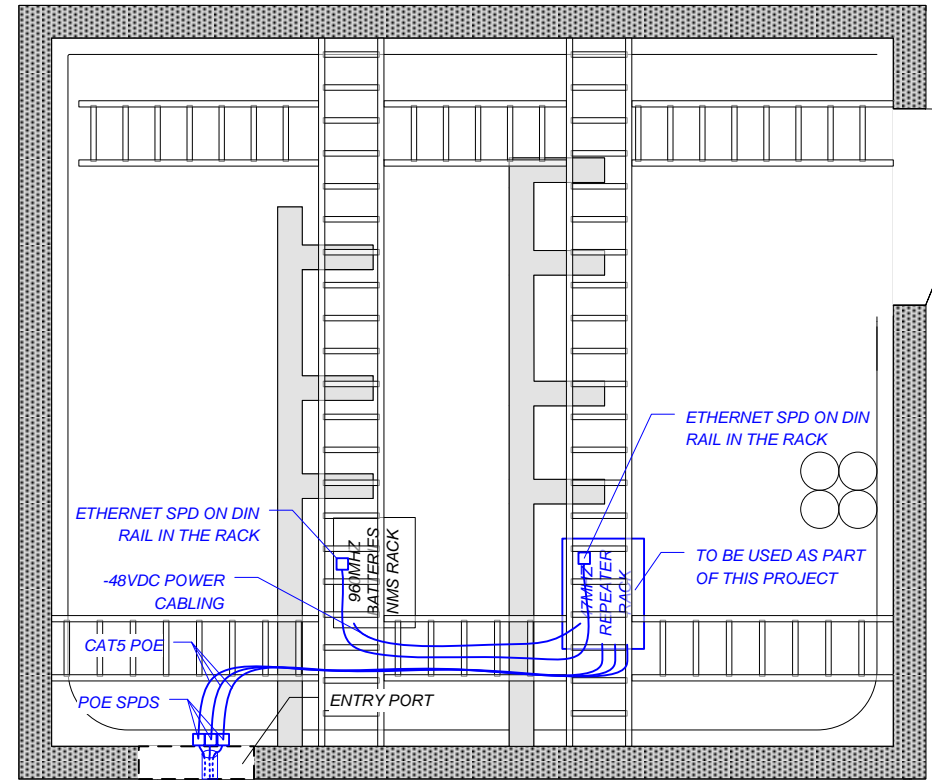
SHEET NO.  
IT-32



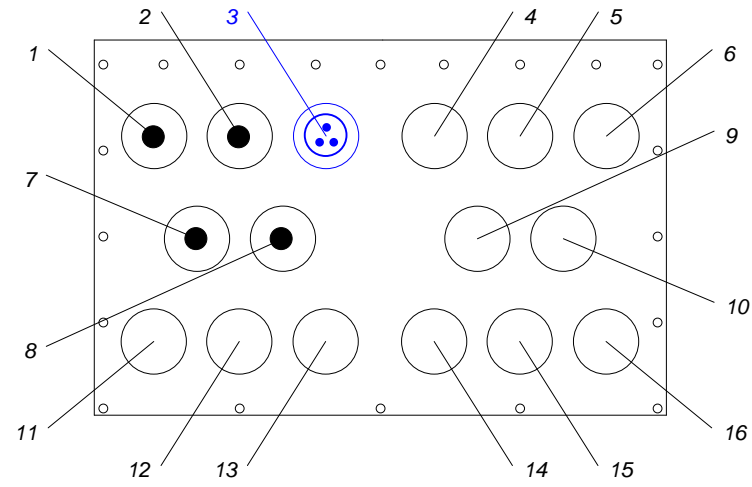
**CORAL REEF INTERCHANGE – SHELTER FLOOR PLAN**

**CORAL REEF NOTES:**

1. THE APPROXIMATE LOCATION OF THE EQUIPMENT IS FOR DIAGRAMMATICAL PURPOSES ONLY. THE VENDOR IS RESPONSIBLE FOR DETERMINING THE BEST LOCATIONS FOR EQUIPMENT AND ALL ASSOCIATED CONDUITS AND MOUNTING AND GROUNDING HARDWARE. THE VENDOR SHALL SUBMIT DETAILED PLANS FOR APPROVAL BY THE FDOT.
2. THE VENDOR SHALL INSTALL THE F.O. OTN WITH CARRIER ETHERNET EQUIPMENT IN THE CHANNEL BANK RACK.
3. THE VENDOR SHALL POWER THE NEW EQUIPMENT FROM THE -48VDC RACK. THE VENDOR SHALL ROUTE THE -48VDC CABLES ALONG THE EXISTING CABLE TRAY TO THE CHANNEL BANK RACK. THE CABLES SHALL BE SECURED TO THE CABLE TRAY AND GOOD CABLE MANAGEMENT PRACTICES SHALL BE USED.
4. THE VENDOR SHALL ROUTE THE FIBER OPTIC IN PROTECTIVE CONDUIT TO THE DISTRICT 6 ITS CABINET. THE PROTECTIVE CONDUIT SHALL BE SECURED TO THE CABLE TRAY AND GOOD CABLE MANAGEMENT PRACTICES SHALL BE USED.



**EVERGLADES ACADEMY – SHELTER FLOOR PLAN**

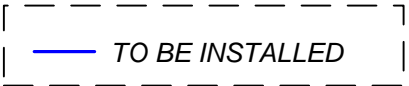


**EVERGLADES ACADEMY – PROPOSED EXTERIOR ENTRY PORT DETAIL**

**EQUIPMENT SHELTER NOTES:**

1. THE APPROXIMATE LOCATION OF THE EQUIPMENT IS FOR DIAGRAMMATICAL PURPOSES ONLY. THE VENDOR IS RESPONSIBLE FOR DETERMINING THE BEST LOCATIONS FOR EQUIPMENT AND ALL ASSOCIATED CONDUITS AND MOUNTING AND GROUNDING HARDWARE. THE VENDOR SHALL SUBMIT DETAILED PLANS FOR APPROVAL BY THE FDOT.
2. THE VENDOR SHALL INSTALL THE EQUIPMENT IN THE INDICATED RACKS FOR EACH SITE.
3. THE VENDOR SHALL POWER THE NEW EQUIPMENT FROM THE -48VDC OR BATTERIES RACK. THE VENDOR SHALL ROUTE THE -48VDC CABLES ALONG THE EXISTING CABLE TRAY TO THE INDICATED RACKS. THE CABLES SHALL BE SECURED TO THE CABLE TRAY AND GOOD CABLE MANAGEMENT PRACTICES SHALL BE USED.
4. DIRECTLY UPON ENTERING THE EQUIPMENT SHELTER, THE CAT5 POE CABLES SHALL CONNECT TO SPDS THAT ARE GROUNDED AT THE ENTRY PORT.
5. THE VENDOR SHALL INSTALL AND APPROPRIATELY SIZED ENTRY PORT BOOT TO SEAL THE PORT FROM WATER AND DEBRIS INTRUSION.
6. THE VENDOR SHALL INSTALL ETHERNET SPDS MOUNTED ON DIN RAIL IN THE SPECIFIED RACKS.

**LEGEND:**



CONTRACT PLANS RECORD					
DATE	REV.	DESCRIPTION	DATE	REV.	DESCRIPTION

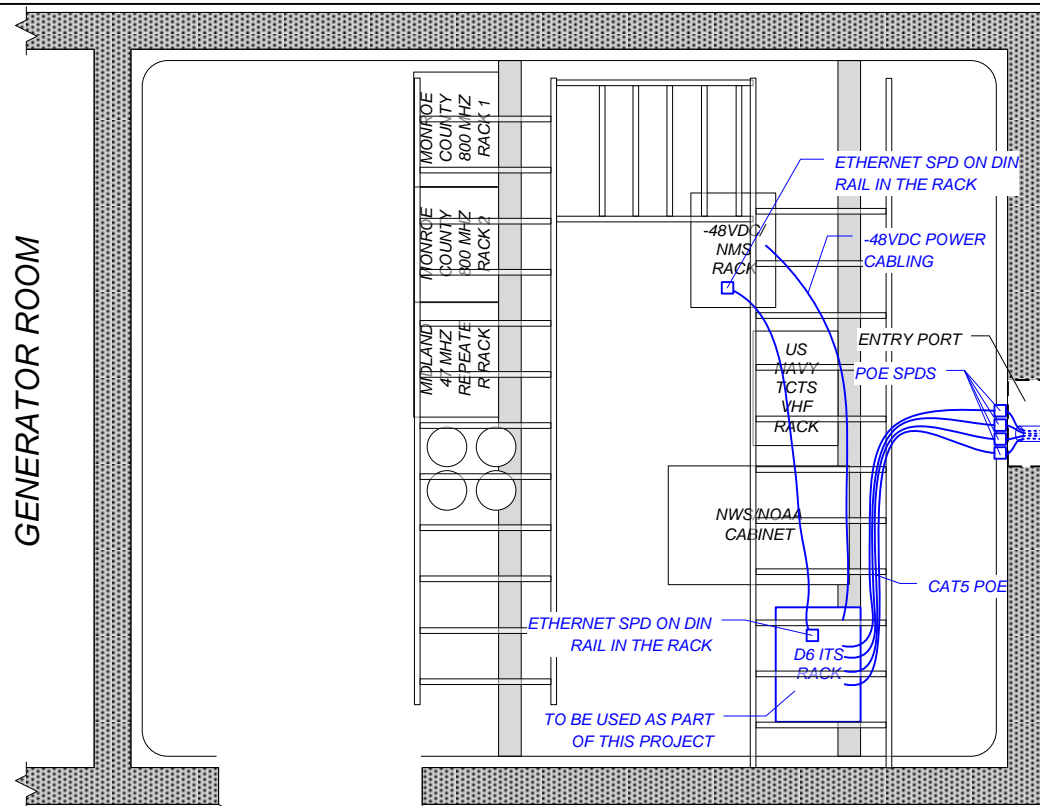
**FDOT** FLORIDA DEPARTMENT OF TRANSPORTATION  
 605 SUWANNEE ST. MS 90  
 TALLAHASSEE, FL 32399-0450  
 PH. (850)-410-5600  
 FAX. (850)-410-5501

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
SITE NAME	COUNTY	FINANCIAL PROJECT ID
PROJECT-WIDE	MONROE, MIAMI-DADE	424401-2-93-01

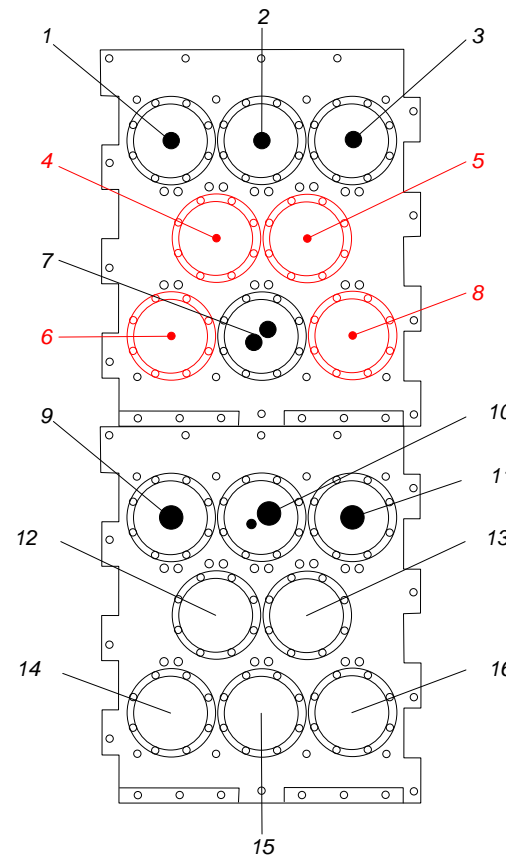
KEYS MICROWAVE CORAL REEF & EVERGLADES ACADEMY SHELTER PLANS		SHEET NO.
		IT-33

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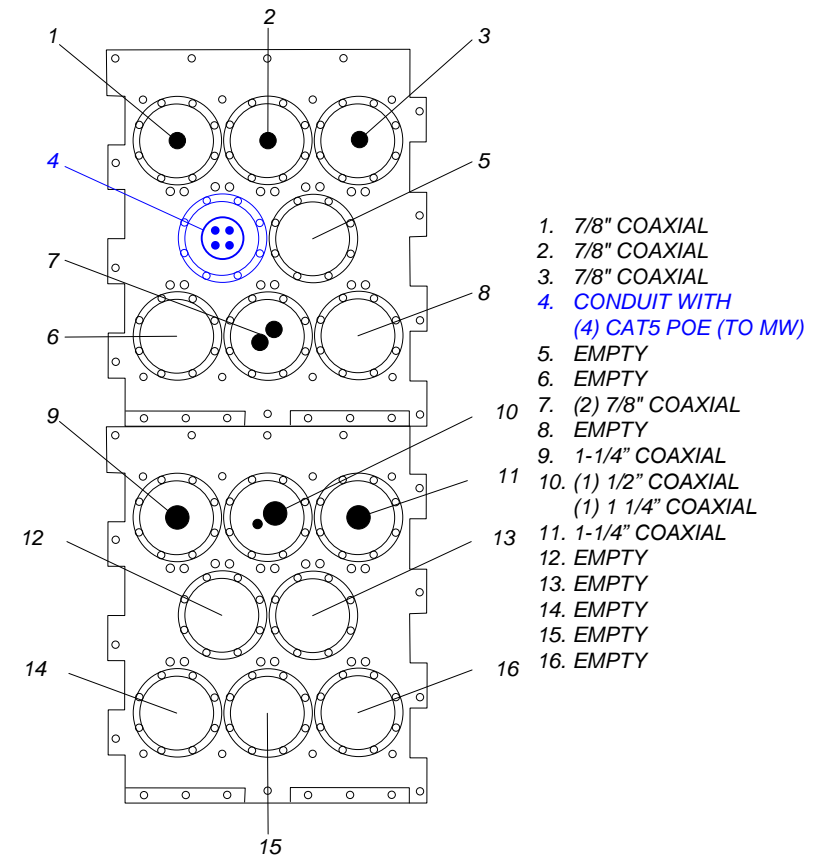
GENERATOR ROOM



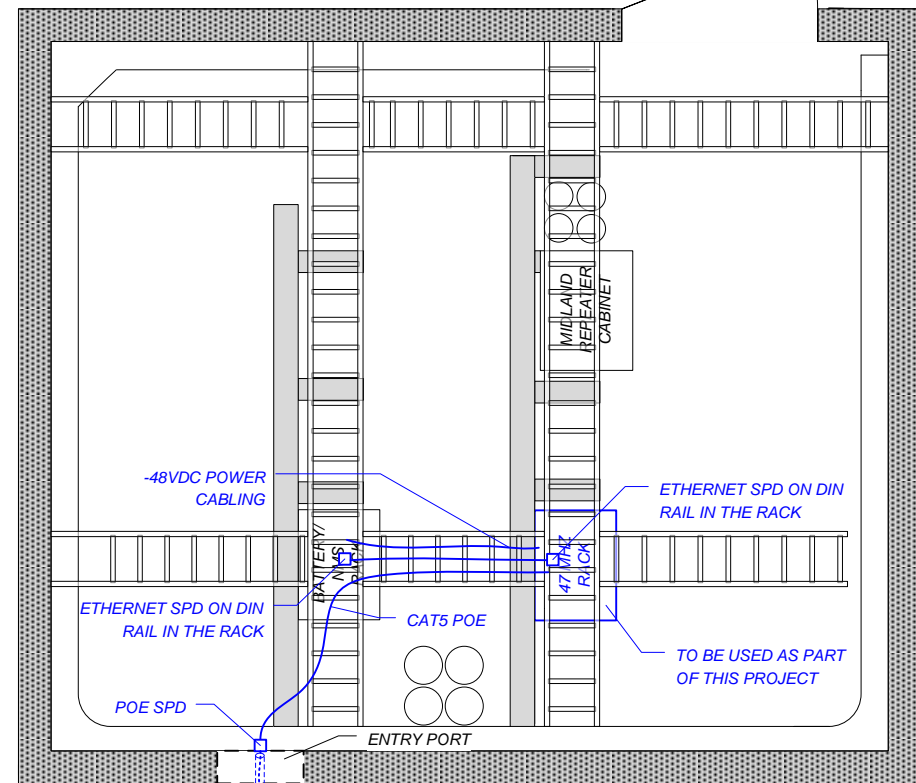
TEA TABLE FILL - SHELTER FLOOR PLAN



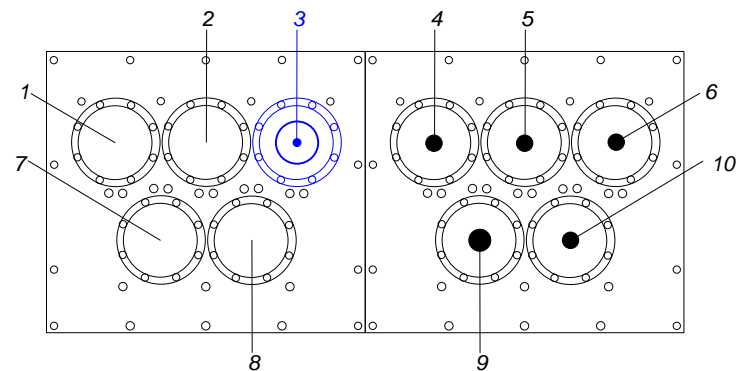
TEA TABLE FILL - EXISTING EXTERIOR ENTRY PORT DETAIL



TEA TABLE FILL - PROPOSED EXTERIOR ENTRY PORT DETAIL



BIG PINE KEY - SHELTER FLOOR PLAN



BIG PINE KEY - PROPOSED EXTERIOR ENTRY PORT DETAIL

**LEGEND:**

— TO BE INSTALLED

— TO BE REMOVED

CONTRACT PLANS RECORD					
DATE	REV.	DESCRIPTION	DATE	REV.	DESCRIPTION

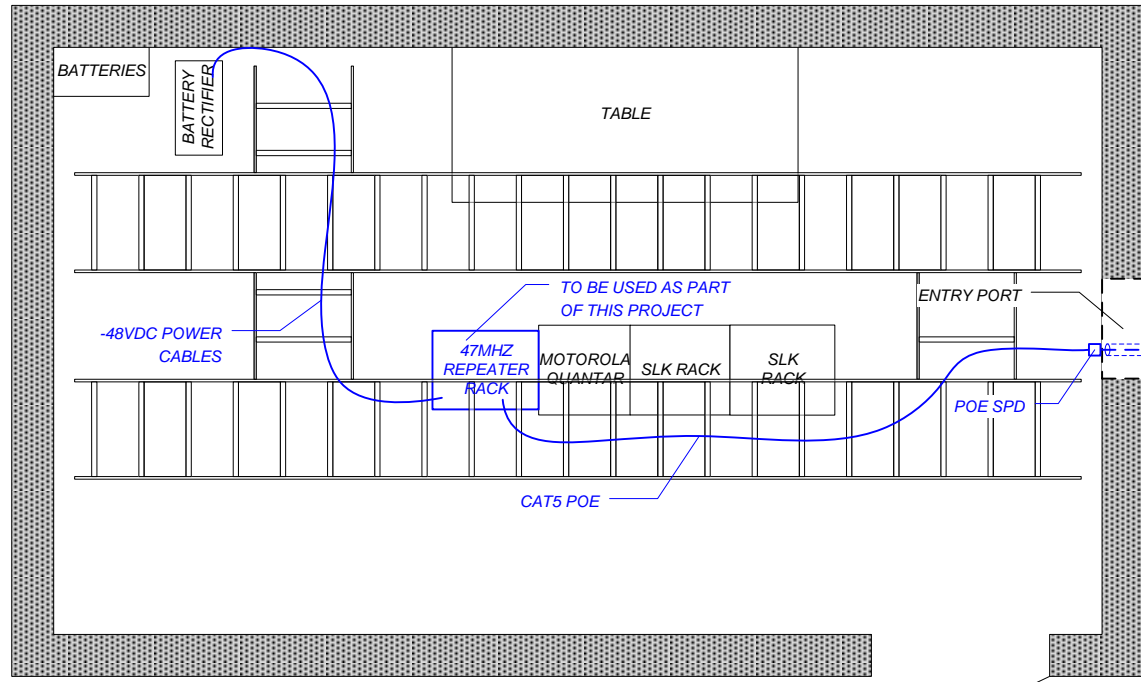
**FDOT** FLORIDA DEPARTMENT OF TRANSPORTATION  
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STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
SITE NAME	COUNTY	FINANCIAL PROJECT ID
PROJECT-WIDE	MONROE, MIAMI-DADE	424401-2-93-01

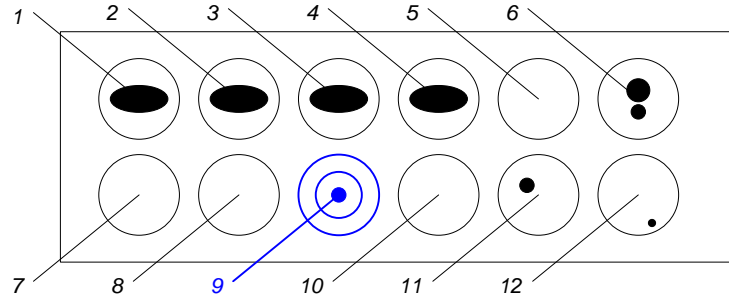
KEYS MICROWAVE  
 TEA TABLE & BIG PINE KEY  
 SHELTER PLANS

SHEET NO.  
 IT-34

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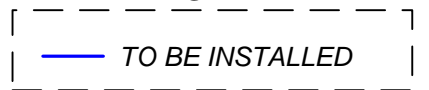
**SUGARLOAF KEY - SHELTER FLOOR PLAN**



**SUGARLOAF KEY - EXTERIOR ENTRY PORT DETAIL**

- |  |  |
|--|--|
| 1. WE-65   | 7. EMPTY   |
| 2. WE-65   | 8. EMPTY   |
| 3. EW-65   | 9. CONDUIT WITH CAT5 POE (TO MW)                                 |
| 4. EW-65   | 10. EMPTY  |
| 5. EMPTY   | 11. 3/8" COAXIAL CABLE<br>(UHF YEO1 PATROL ANDREW HELIX LDF6-50) |
| 6. (1) 7/8" COAXIAL CABLE<br>(1) 3/8" COAXIAL CABLE (DISCONNECTED) | 12. CAT5 (TO TOWER LIGHT PHOTOCELL)                              |

**LEGEND:**



CONTRACT PLANS RECORD					
DATE	REV.	DESCRIPTION	DATE	REV.	DESCRIPTION

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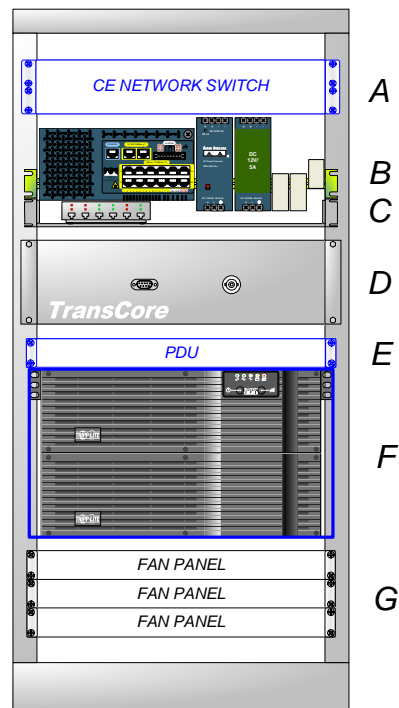
STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
SITE NAME	COUNTY	FINANCIAL PROJECT ID
PROJECT-WIDE	MONROE, MIAMI-DADE	424401-2-93-01

**KEYS MICROWAVE  
 SUGARLOAF KEY  
 SHELTER PLANS**

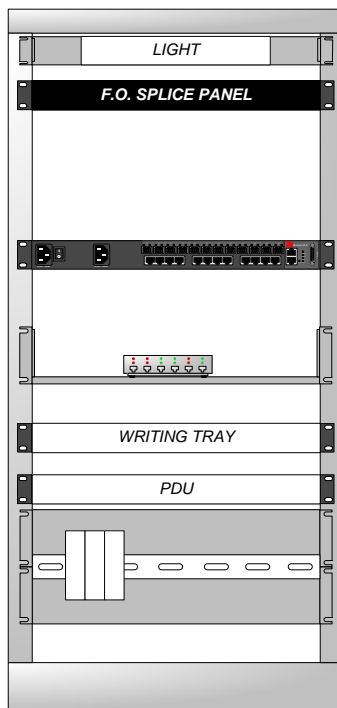
SHEET NO.  
 IT-35

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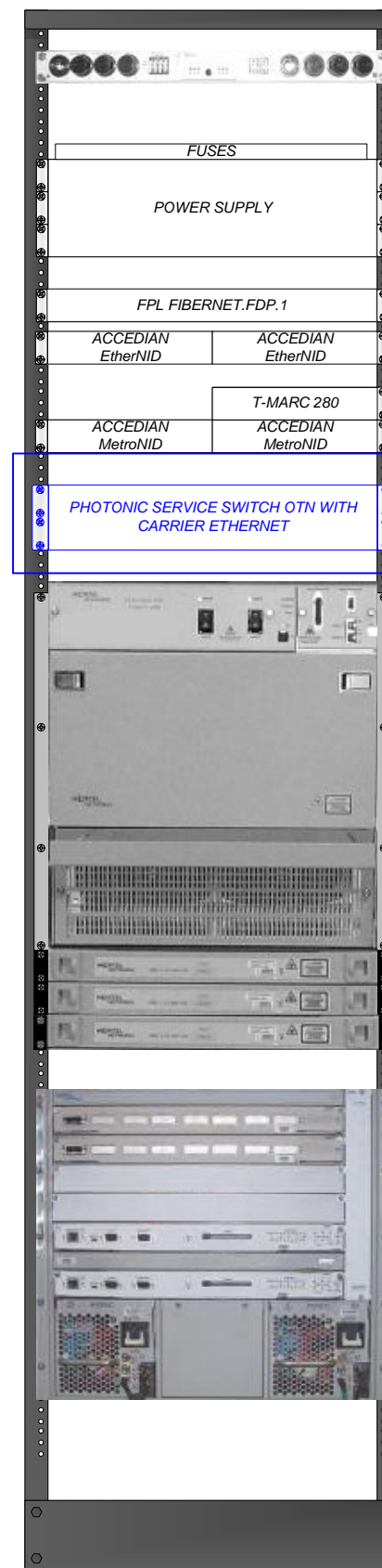




**TYPICAL PROPOSED ITS OUTDOOR CABINET**



**HEFT EXISTING ITS OUTDOOR CABINET**



**DISTRICT 6 RTMC – PROPOSED RACK**

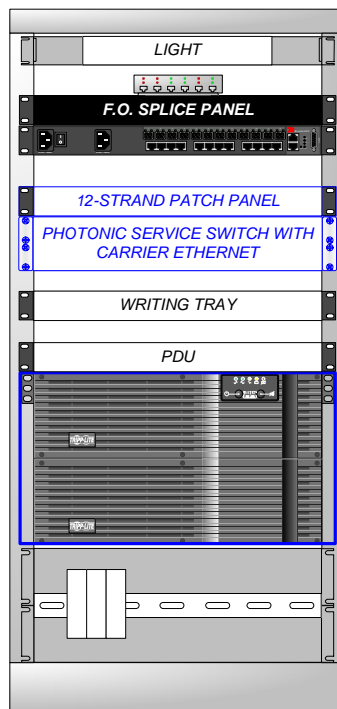
**OUTDOOR CABINET NOTES:**

THE EXISTING FAN PANEL REMAINS AND IS MOVED TO THE BOTTOM OF THE CABINET, IN THE REAR. ALL SHELVLING TO BE REPLACED WITH A 1RU HIGH BY 15 INCHES DEEP VENTILATED EQUIPMENT SHELF, AND MOUNTED CORRECTLY AS TO NOT WASTE CABINET SPACE. IF A WRITING SHELF EXISTS IN A CABINET, CARE SHOULD BE EXERCISED TO PRESERVE THE WRITING SHELF.

THE GRAPHIC TO THE LEFT IS A DEPICTION OF A STANDARD CABINET PROFILE FOLLOWING THE REFRESH OF MICROWAVE AND NETWORK EQUIPMENT IN THIS PROJECT'S SCOPE OF WORK.

**EQUIPMENT NOTES:**

- A. CARRIER ETHERNET NETWORK SWITCH
- B. DISTRICT ITS FIELD EQUIPMENT SWITCH – DIN-RAIL MOUNTED WITH POWER SUPPLY AND SURGE PROTECTION DEVICES; AN OPTIONAL 12VDC POWER SUPPLY MAY ALSO BE PRESENT, WHICH POWERS ADDITIONAL WEATHER MONITORING EQUIPMENT AT THE SITE.
- C. VBRICK SYSTEMS VIDEO CODEC UNIT ON NEW VENTILATED EQUIPMENT SHELF
- D. TRANSSCORE AUXILIARY EQUIPMENT SHELF W/ RS-232 AND BNC CONNECTORS – REQUIRED FOR SERVICING CAMERA EQUIPMENT
- E. 1 RACK UNIT POWER DISTRIBUTION UNIT 120 VAC (PDU)
- F. UNINTERRUPTABLE POWER SUPPLY – INSTALLED AT THE LOCATION INDICATED, ABOVE FAN PANEL – SIZE NOT TO SCALE, ONLY APPROXIMATION.
- G. 3 RU FAN PANEL – MOVED (IF NECESSARY) TO BOTTOM REAR OF CABINET



**HEFT PROPOSED ITS OUTDOOR CABINET**

**LEGEND:**

— TO BE INSTALLED

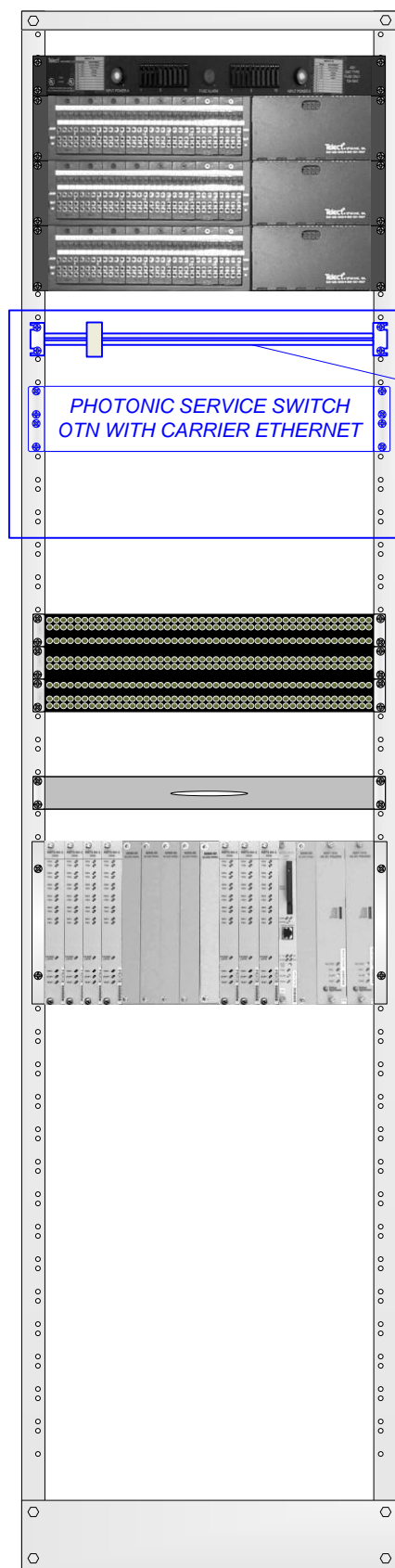
CONTRACT PLANS RECORD					
DATE	REV.	DESCRIPTION	DATE	REV.	DESCRIPTION

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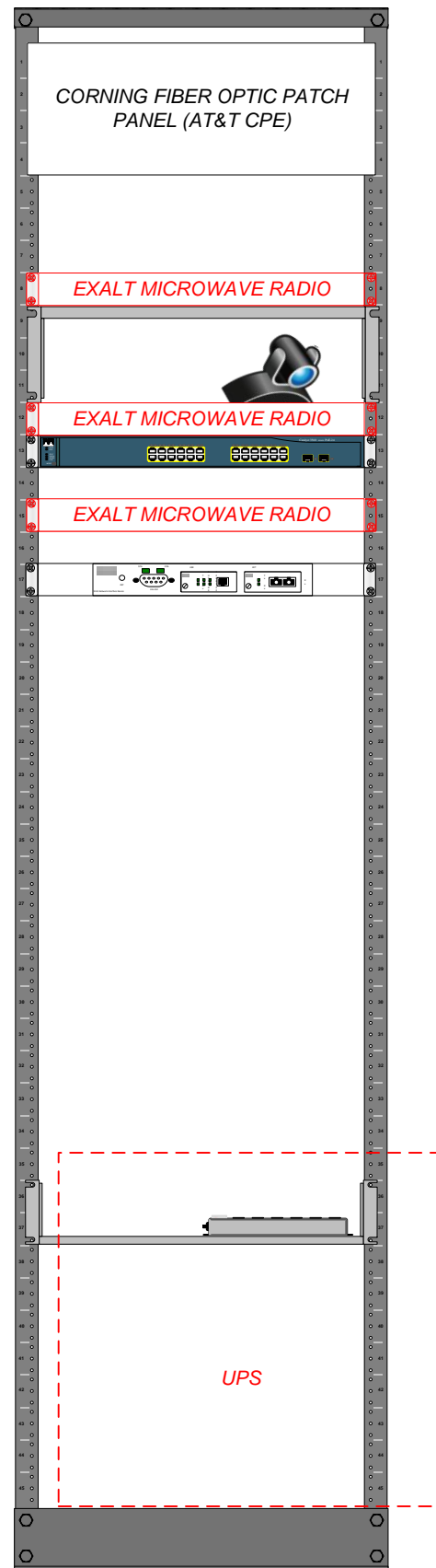
STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
SITE NAME	COUNTY	FINANCIAL PROJECT ID
PROJECT-WIDE	MONROE, MIAMI-DADE	424401-2-93-01

KEYS MICROWAVE TYPICAL PROPOSED CABINET, HEFT CCTV CABINET & D6 RTMC PROPOSED RACK	SHEET NO.
	IT-36

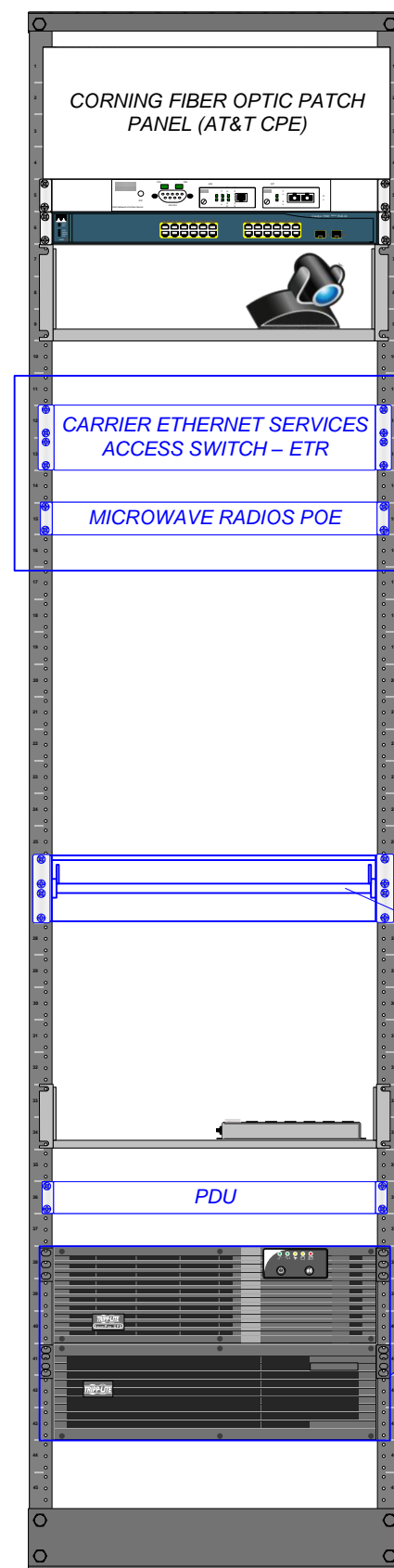
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**CORAL REEF – PROPOSED CHANNEL BANK RACK**



**FLORIDA CITY HUB – EXISTING ITS RACK**



**FLORIDA CITY HUB – PROPOSED ITS RACK**

ETHERNET SPD AND DIN RAIL  
PROPOSED SPACE FOR KEYS MICROWAVE EQUIPMENT

CARRIER ETHERNET SERVICES ACCESS SWITCH – ETR  
MICROWAVE RADIOS POE

PROPOSED SPACE FOR KEYS MICROWAVE EQUIPMENT

LAPTOP WORK SHELF

PDU

NEW UPS

**LEGEND:**

- TO BE INSTALLED
- - - TO BE REMOVED

CONTRACT PLANS RECORD					
DATE	REV.	DESCRIPTION	DATE	REV.	DESCRIPTION

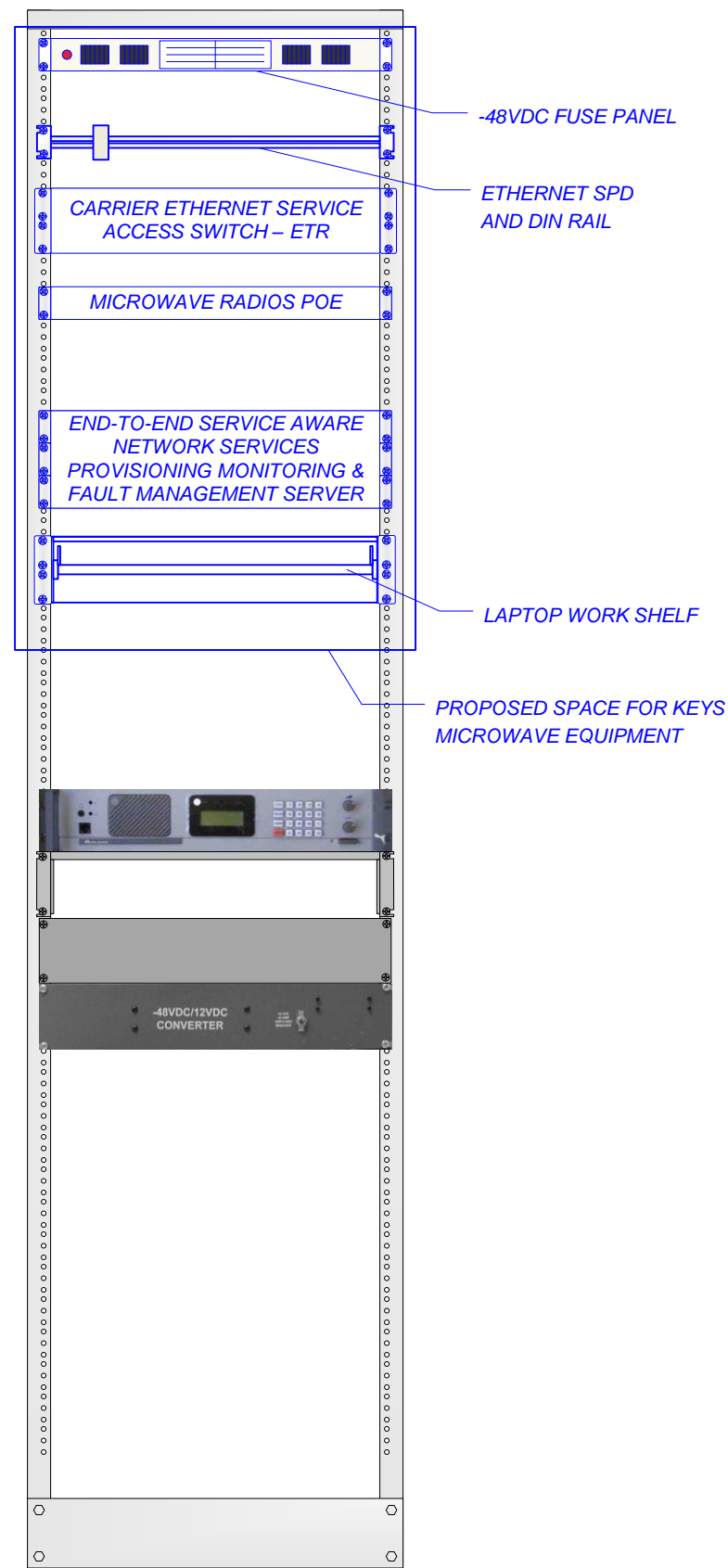


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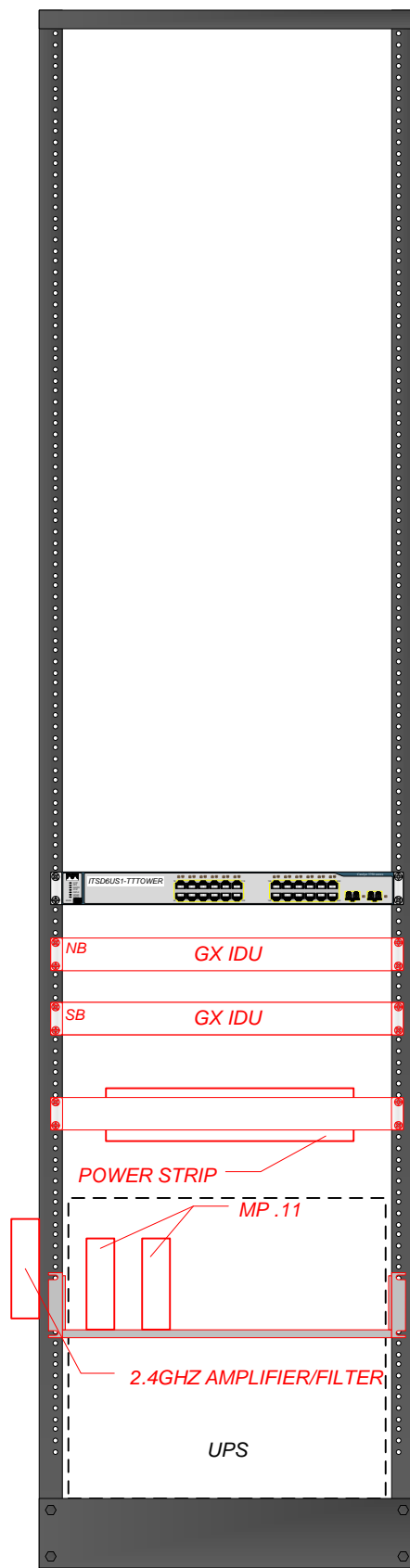
STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
SITE NAME	COUNTY	FINANCIAL PROJECT ID
PROJECT-WIDE	MONROE, MIAMI-DADE	424401-2-93-01

KEYS MICROWAVE  
CORAL REEF & FLORIDA CITY  
HUB PROPOSED RACKS

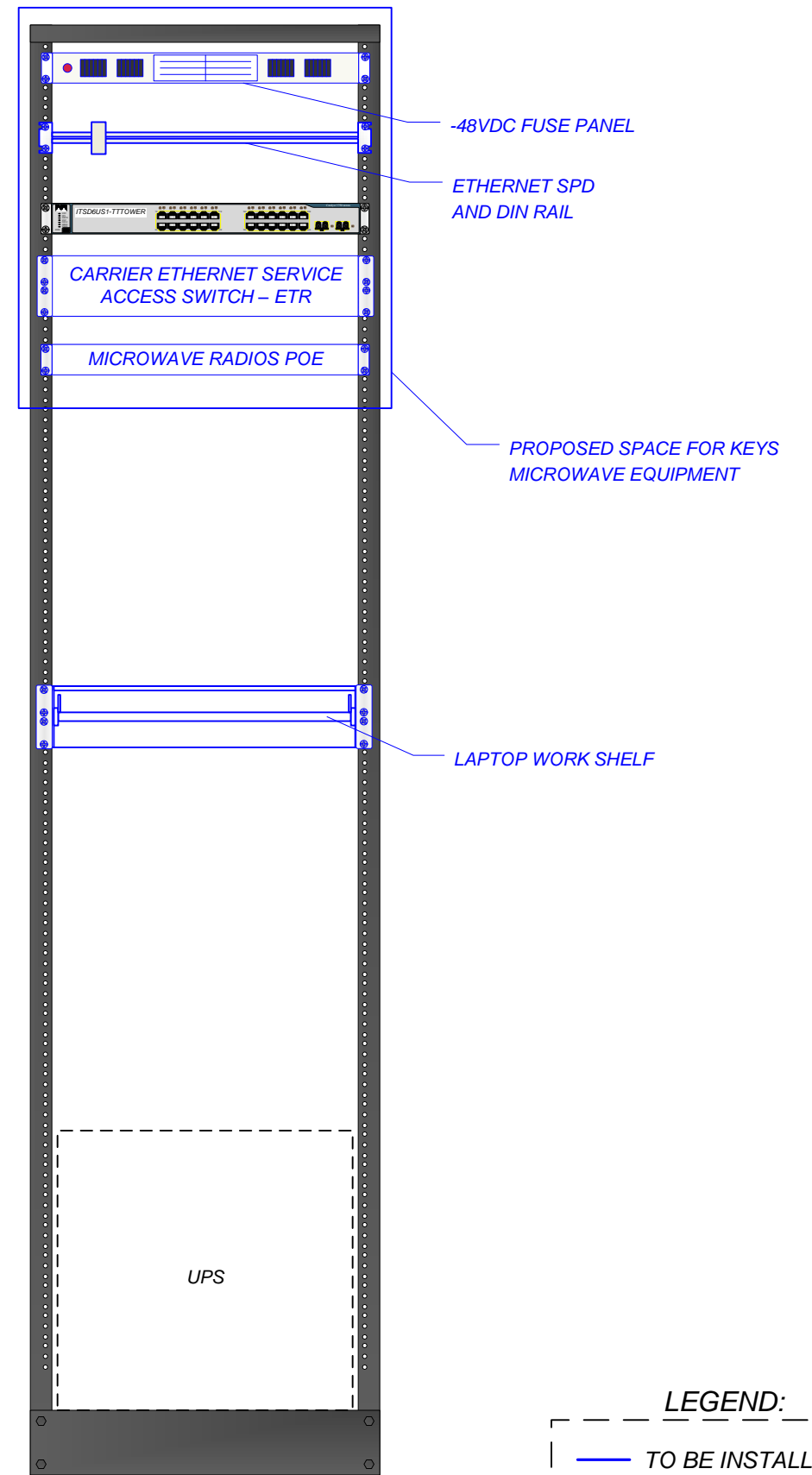
SHEET NO.  
IT-37



**EVERGLADES ACADEMY – PROPOSED  
47MHZ RACK**



**TEA TABLE FILL – EXISTING D6 ITS RACK**



**TEA TABLE FILL – PROPOSED D6 ITS RACK**

**LEGEND:**

- TO BE INSTALLED
- TO BE REMOVED

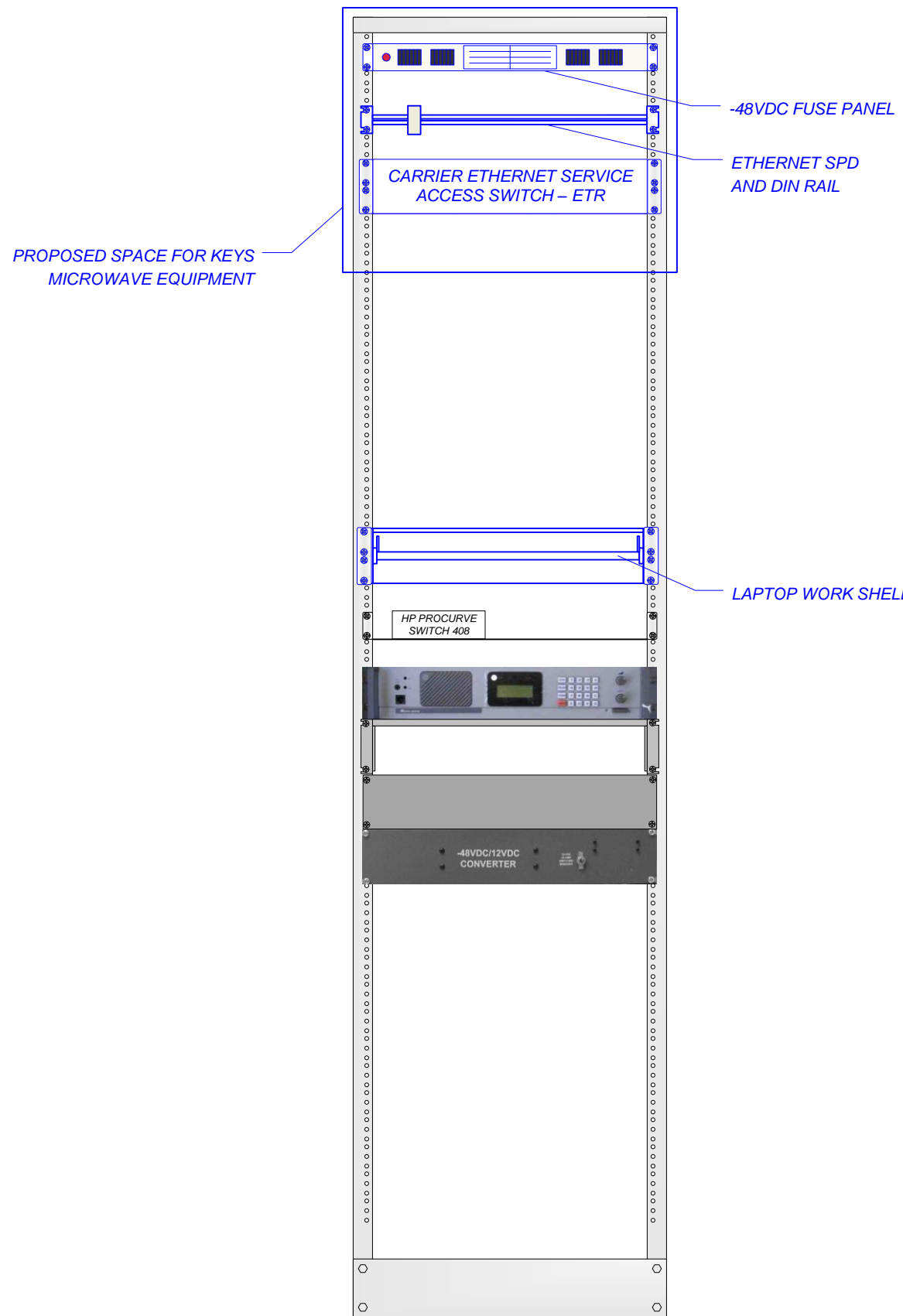
CONTRACT PLANS RECORD					
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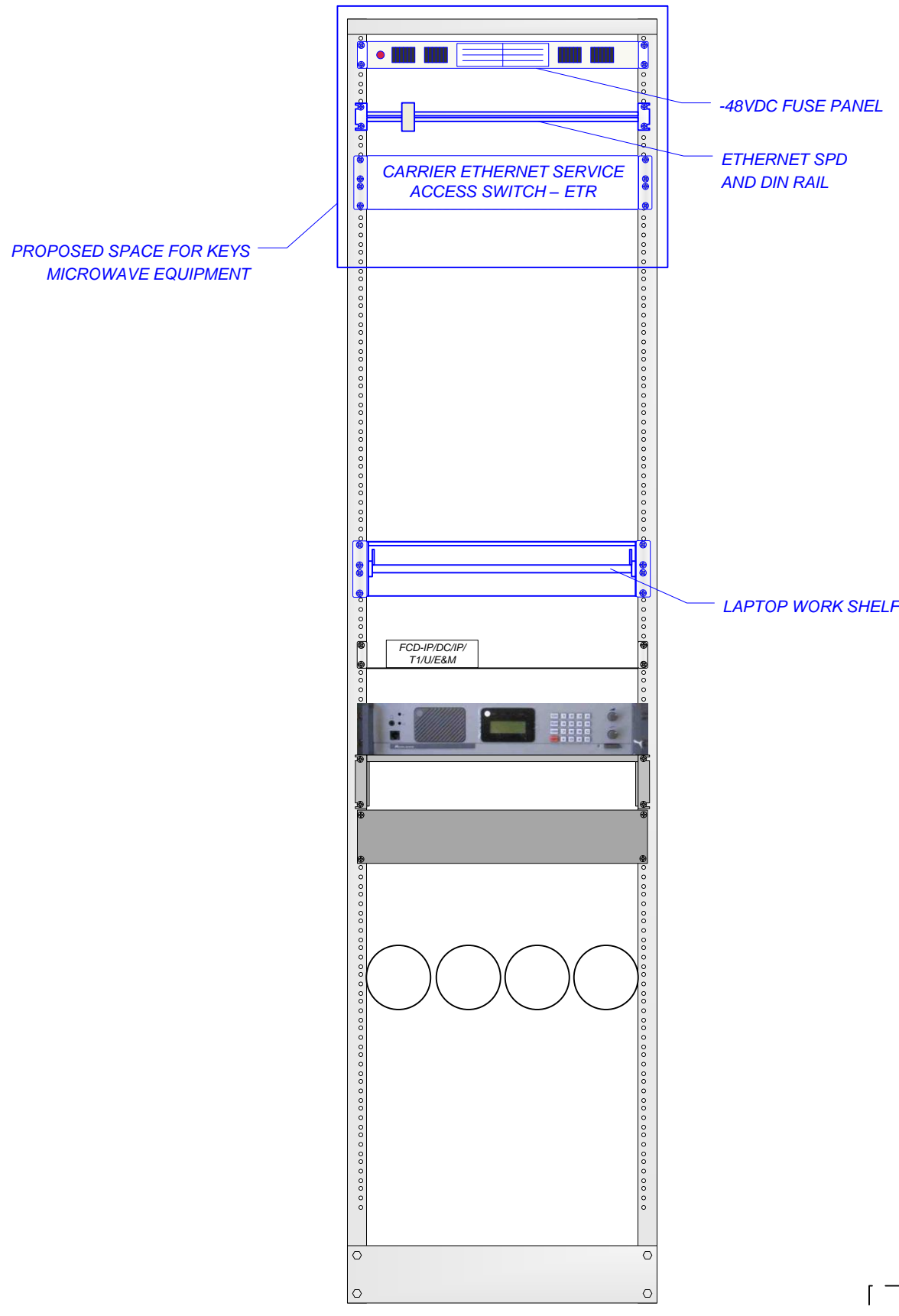
STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
SITE NAME	COUNTY	FINANCIAL PROJECT ID
PROJECT-WIDE	MONROE, MIAMI-DADE	424401-2-93-01

KEYS MICROWAVE EVERGLADES ACADEMY & TEA TABLE PROPOSED RACKS		SHEET NO.
		IT-38

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**BIG PINE KEY – PROPOSED 47MHZ RACK**



**SUGARLOAF KEY – PROPOSED 47MHZ REPEATER RACK**

**LEGEND:**  
 - - - - -  
 ——— TO BE INSTALLED

CONTRACT PLANS RECORD					
DATE	REV.	DESCRIPTION	DATE	REV.	DESCRIPTION

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STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
SITE NAME	COUNTY	FINANCIAL PROJECT ID
PROJECT-WIDE	MONROE, MIAMI-DADE	424401-2-93-01

KEYS MICROWAVE BIG PINE KEY & SUGARLOAF KEY PROPOSED RACKS		SHEET NO.
		IT-39

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Site ID	ITS Name	Facility Name	Latitude	Longitude	Coordinate Site ID	Antenna Diameter (ft.)	Antenna Gain (dBi)	Antenna Height (ft.)	Path Length (mi.)	Azimuth (Degrees From North)	Frequency Band (GHz)	Required Polarization (V/H)	Minimum One-Way Data Rate (Mbps) at 99.999% Annual Rain Reliability
HEFT	HEFT Terminus	HEFT Terminus	25:27:13.7N	080:28:29.8W	A	2	38.6	65	1.0	188	18	-	390
HEFT	HEFT Terminus	HEFT Terminus	25:27:13.7N	080:28:29.8W	CR	-	-	-	13.5	-	-	-	F.O.
A	FL City HUB	POLE-785-SW-3RD-AVE-NB-A	25:26:22.8N	080:28:37.7W	HEFT	2	38.6	100	1.0	8	18	-	390
A	FL City HUB	POLE-785-SW-3RD-AVE-NB-A	25:26:22.8N	080:28:37.7W	A1	1	35.1	40	0.1	110.7	23	-	100
A	FL City HUB	POLE-785-SW-3RD-AVE-NB-A	25:26:22.8N	080:28:37.7W	A2	1	35.1	95	1.0	170.4	23	-	100
A	FL City HUB	POLE-785-SW-3RD-AVE-NB-A	25:26:22.8N	080:28:37.7W	B	2.5	37.4	95	4.6	182.8	11	-	190
A	FL City HUB	POLE-785-SW-3RD-AVE-NB-A	25:26:22.8N	080:28:37.7W	C	4	41	100	6.0	169.1	11	-	190
A1	CCTV 343/DMS61, 62	POLE-US1-127.0-SB-A	25:26:20.4N	080:28:30.6W	A	1	35.1	40	0.1	290.7	23	-	190
A2	CCTV 342	POLE-US1-126.1-SB-A	25:25:31.7N	080:28:28.1W	A	1	35.1	60	1.0	350.4	23	-	180
B	Everglades Academy	Everglades Academy	25:22:20.9N	080:28:50.6W	A	2.5	37.4	100	4.6	2.8	11	-	190
B	Everglades Academy	Everglades Academy	25:22:20.9N	080:28:50.6W	C	3	38.5	75	1.8	132.2	18	-	100
B	Everglades Academy	Everglades Academy	25:22:20.9N	080:28:50.6W	G	6	38.9	100	8.8	130.4	6	-	190
C	CCTV 341	POLE-US1-121.1-SB-A	25:21:16.8N	080:27:32.8W	A	4	41	68	6.0	349.1	11	-	190
C	CCTV 341	POLE-US1-121.1-SB-A	25:21:16.8N	080:27:32.8W	B	3	38.5	65	1.8	312.2	18	-	100
C	CCTV 341	POLE-US1-121.1-SB-A	25:21:16.8N	080:27:32.8W	C1	2	38.6	60	2.1	71.5	18	-	100
C	CCTV 341	POLE-US1-121.1-SB-A	25:21:16.8N	080:27:32.8W	D	2.5	37.4	65	4.7	168.9	11	-	190
C1	CCTV 384	POLE-CR905A-5.9-NB-A	25:21:50.8N	080:25:40.6W	C	2	38.6	48	2.1	251.6	18	-	100
D	CCTV 340	POLE-US1-116.4-SB-A	25:17:16.2N	080:26:40.8W	C	2.5	37.4	51	4.7	348.9	11	-	190
D	CCTV 340	POLE-US1-116.4-SB-A	25:17:16.2N	080:26:40.8W	E	2.5	37.4	65	4.4	168.9	11	-	190
D	CCTV 340	POLE-US1-116.4-SB-A	25:17:16.2N	080:26:40.8W	G	2.5	37.4	61	4.5	88.8	11	-	190
E	CCTV 339	POLE-US1-112.0-SB-A	25:13:28.2N	080:25:51.6W	D	2.5	37.4	47	4.4	348.9	11	-	190
E	CCTV 339	POLE-US1-112.0-SB-A	25:13:28.2N	080:25:51.6W	E1	2	38.6	40	2.0	154.9	18	-	100
E	CCTV 339	POLE-US1-112.0-SB-A	25:13:28.2N	080:25:51.6W	E2	1	35.3	55	0.9	348.7	23	-	100
E	CCTV 339	POLE-US1-112.0-SB-A	25:13:28.2N	080:25:51.6W	F	2.5	37.4	60	5.1	135.4	11	-	190
E1	CCTV 338	POLE-US1-110.0-SB-B	25:11:53.2N	080:25:02.6W	E	2	38.6	40	2.0	334.9	18	-	100
E2	DMS 63	STR-US1-112.9-SB-A	25:14:13.8N	080:26:01.7W	E	1	35.3	42	0.9	168.7	23	-	100
F	CCTV 336	POLE-US1-106.6-NB-A	25:10:18.1N	080:22:26.0W	E	2.5	37.4	45	5.1	315.5	11	-	190
F	CCTV 336	POLE-US1-106.6-NB-A	25:10:18.1N	080:22:26.0W	F1	2	38.6	62	1.8	311.9	18	-	100
F	CCTV 336	POLE-US1-106.6-NB-A	25:10:18.1N	080:22:26.0W	F2	1	35.1	26	0.5	215.4	23	-	100
F	CCTV 336	POLE-US1-106.6-NB-A	25:10:18.1N	080:22:26.0W	H	6	38.9	50	4.3	35.5	6	-	190
F	CCTV 336	POLE-US1-106.6-NB-A	25:10:18.1N	080:22:26.0W	I	2.5	37.4	60	3.9	217.3	11	-	190
F1	CCTV 337	POLE-US1-107.8-SB-A	25:11:20.8N	080:23:42.9W	F	2	38.6	42	1.8	132	18	-	100
F2	CCTV 335/DMS 64, 65	STR-US1-106.0-M-A	25:09:57.8N	080:22:41.8W	F	1	35.1	35	0.5	35.4	23	-	100
G	CCTV 382	POLE-CR905A-CS4.7-SB-A	25:17:21.1N	080:22:23.8W	B	6	38.9	65	8.8	310.5	6	-	190
G	CCTV 382	POLE-CR905A-CS4.7-SB-A	25:17:21.1N	080:22:23.8W	D	2.5	37.4	55	4.5	268.8	11	-	190
G	CCTV 382	POLE-CR905A-CS4.7-SB-A	25:17:21.1N	080:22:23.8W	G1	1	35.1	45	1.0	306.5	23	-	100
G	CCTV 382	POLE-CR905A-CS4.7-SB-A	25:17:21.1N	080:22:23.8W	G2	2.5	37.4	63	4.3	92.8	11	-	100
G	CCTV 382	POLE-CR905A-CS4.7-SB-A	25:17:21.1N	080:22:23.8W	H	2.5	37.4	53	5.2	151.8	11	-	190
G1	CCTV 383	POLE-CR905A-0.5-SB-A	25:17:51.7N	080:23:09.4W	G	1	35.1	35	1.0	126.5	23	-	100

CONTRACT PLANS RECORD					
DATE	REV.	DESCRIPTION	DATE	REV.	DESCRIPTION



FLORIDA DEPARTMENT OF TRANSPORTATION  
605 SUWANNEE ST. MS 90  
TALLAHASSEE, FL 32399-0450  
PH.(850)-410-5600  
FAX.(850)-410-5501

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
SITE NAME	COUNTY	FINANCIAL PROJECT ID
PROJECT-WIDE	MONROE, MIAMI-DADE	424401-2-93-01

*KEYS MICROWAVE  
SITE LOCATION LIST*

SHEET NO.  
IT-40

Site ID	ITS Name	Facility Name	Latitude	Longitude	Coordinate Site ID	Antenna Diameter (ft.)	Antenna Gain (dBi)	Antenna Height (ft.)	Path Length (mi.)	Azimuth (Degrees From North)	Frequency Band (GHz)	Required Polarization (V/H)	Minimum One-Way Data Rate (Mbps) at 99.999% Annual Rain Reliability
G2	CCTV 381	POLE-CR905-9.3-WB-A	25:17:09.9N	080:18:15.6W	G	2.5	37.4	52	4.3	272.9	11	-	100
H	CCTV 380	POLE-CR905-4.5-WB-A	25:13:21.1N	080:20:02.5W	F	6	38.9	53	4.3	215.5	6	-	190
H	CCTV 380	POLE-CR905-4.5-WB-A	25:13:21.1N	080:20:02.5W	G	2.5	37.4	53	5.2	331.8	11	-	190
I	CCTV 334	POLE-US1-102.6-M-A	25:07:37.2N	080:24:40.8W	F	2.5	37.4	74	3.9	37.3	11	-	190
I	CCTV 334	POLE-US1-102.6-M-A	25:07:37.2N	080:24:40.8W	II	2.5	37.4	87	2.6	218.6	11	-	100
I	CCTV 334	POLE-US1-102.6-M-A	25:07:37.2N	080:24:40.8W	J	4	41	83	6.1	221.6	11	-	190
II	CCTV 333	POLE-US1-100.0-M-A	25:05:52.1N	080:26:12.9W	I	2.5	37.4	54	2.6	38.6	11	-	100
J	CCTV 332	POLE-US1-96.3-M-A	25:03:37.1N	080:28:35.1W	I	4	41	86	6.1	41.6	11	-	190
J	CCTV 332	POLE-US1-96.3-M-A	25:03:37.1N	080:28:35.1W	K	2.5	37.4	89	5.5	222.9	11	-	190
K	CCTV 328	POLE-US1-90.4-SB-A	25:00:06.6N	080:32:09.3W	J	2.5	37.4	64	5.5	42.8	11	-	190
K	CCTV 328	POLE-US1-90.4-SB-A	25:00:06.6N	080:32:09.3W	K1	2	34.5	69	2.1	48.5	18	-	100
K	CCTV 328	POLE-US1-90.4-SB-A	25:00:06.6N	080:32:09.3W	K2	1	35.1	59	0.9	87.5	23	-	100
K	CCTV 328	POLE-US1-90.4-SB-A	25:00:06.6N	080:32:09.3W	L	2.5	37.4	68	4.2	221	11	-	190
K1	CCTV 331	POLE-US1-93.0-M-A	25:01:19.7N	080:30:38.6W	K	2	34.5	40	2.1	228.5	18	-	100
K2	CCTV 329, 330/DMS 66, 67	POLE-US1-91.0-M-A	25:00:08.8N	080:31:15.4W	K	1	35.1	40	0.9	267.5	23	-	100
L	CCTV 327	POLE-US1-86.2-NB-A	24:57:19.1N	080:34:49.0W	K	2.5	37.4	64	4.2	41	11	-	190
L	CCTV 327	POLE-US1-86.2-NB-A	24:57:19.1N	080:34:49.0W	M	4	41	78	6.7	231.9	11	-	190
M	Tea Table Fill Tower	Tea Table Fill Tower	24:53:44.3N	080:39:49.4W	L	4	41	95	6.7	51.9	11	-	190
M	Tea Table Fill Tower	Tea Table Fill Tower	24:53:44.3N	080:39:49.4W	M1	1	35.3	58	0.6	56.6	23	-	100
M	Tea Table Fill Tower	Tea Table Fill Tower	24:53:44.3N	080:39:49.4W	M2	2	34.9	100	2.4	239.8	18	-	100
M	Tea Table Fill Tower	Tea Table Fill Tower	24:53:44.3N	080:39:49.4W	N	6	38.9	130	7.5	236.8	6	-	190
M1	CCTV 326	POLE-US1-80.0-SB-A	24:54:01.8N	080:39:20.4W	M	1	35.3	40	0.6	236.6	23	-	100
M2	CCTV 325	POLE-US1-77.0-NB-A	24:52:40.0N	080:41:50.5W	M	2	37.4	54	2.4	59.8	18	-	100
N	CCTV 323	POLE-US1-71.8-NB-A	24:50:09.7N	080:45:48.4W	M	6	38.9	98	7.5	56.7	6	-	190
N	CCTV 323	POLE-US1-71.8-NB-A	24:50:09.7N	080:45:48.4W	N1	2.5	37.4	74	2.3	51.6	11	-	100
N	CCTV 323	POLE-US1-71.8-NB-A	24:50:09.7N	080:45:48.4W	N2	2	38.6	60	1.8	278.5	18	-	100
N	CCTV 323	POLE-US1-71.8-NB-A	24:50:09.7N	080:45:48.4W	O	6	38.9	75	8.4	248	6	-	190
N1	CCTV 324	POLE-US1-74.0-SB-A	24:51:23.0N	080:44:06.9W	N	2.5	37.4	40	2.3	231.6	11	-	100
N2	CCTV 322	POLE-US1-70.0-SB-A	24:50:23.7N	080:47:32.1W	N	2	38.6	48	1.8	98.4	18	-	100
O	CCTV 320	POLE-US1-62.9-SB-A	24:47:24.5N	080:53:14.5W	N	6	38.5	98	8.4	67.9	6	-	190
O	CCTV 320	POLE-US1-62.9-SB-A	24:47:24.5N	080:53:14.5W	O1	2.5	37.4	90	3.0	68.8	11	-	100
O	CCTV 320	POLE-US1-62.9-SB-A	24:47:24.5N	080:53:14.5W	O2	2.5	37.4	104	3.9	246.3	11	-	100
O	CCTV 320	POLE-US1-62.9-SB-A	24:47:24.5N	080:53:14.5W	P	6	38.9	98	7.9	244.1	6	-	190
O1	CCTV 321	POLE-US1-66.0-SB-A	24:48:20.9N	080:50:35.3W	O	2.5	37.4	48	3.0	248.8	11	-	100
O2	CCTV 319	POLE-US1-59.0-SB-A	24:46:01.6N	080:56:41.7W	O	2.5	37.4	54	3.9	66.3	11	-	100
P	CCTV 318	POLE-US1-55.1-SB-A	24:44:24.1N	081:00:01.0W	O	6	38.9	95	7.9	64	6	-	190
P	CCTV 318	POLE-US1-55.1-SB-A	24:44:24.1N	081:00:01.0W	P1	2	38.6	67	2.1	250.5	18	-	100
P	CCTV 318	POLE-US1-55.1-SB-A	24:44:24.1N	081:00:01.0W	Q	4	41	95	7.0	252.2	11	-	190
P1	CCTV 317	POLE-US1-53.0-NB-A	24:43:47.3N	081:01:54.5W	P	2	38.6	52	2.1	70.5	18	-	100

CONTRACT PLANS RECORD					
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605 SUWANNEE ST. MS 90  
TALLAHASSEE, FL 32399-0450  
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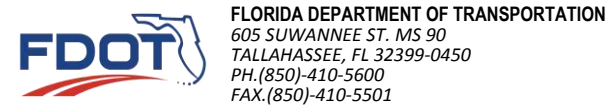
STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
SITE NAME	COUNTY	FINANCIAL PROJECT ID
PROJECT-WIDE	MONROE, MIAMI-DADE	424401-2-93-01

*KEYS MICROWAVE  
SITE LOCATION LIST*

SHEET NO.  
IT-41

Site ID	ITS Name	Facility Name	Latitude	Longitude	Coordinate Site ID	Antenna Diameter (ft.)	Antenna Gain (dBi)	Antenna Height (ft.)	Path Length (mi.)	Azimuth (Degrees From North)	Frequency Band (GHz)	Required Polarization (V/H)	Minimum One-Way Data Rate (Mbps) at 99.999% Annual Rain Reliability
Q	CCTV 315	POLE-US1-48.0-SB-C	24:42:31.7N	081:06:23.3W	P	4	41	99	7.0	72.1	11	-	190
Q	CCTV 315	POLE-US1-48.0-SB-C	24:42:31.7N	081:06:23.3W	Q1	2	38.6	93	1.9	74.9	18	-	100
Q	CCTV 315	POLE-US1-48.0-SB-C	24:42:31.7N	081:06:23.3W	R	6	38.9	99	8.1	256.3	6	-	190
Q1	CCTV 316	POLE-US1-50.0-SB-A	24:42:57.9N	081:04:36.9W	Q	2	38.6	52	1.9	254.9	18	-	100
R	CCTV 314	POLE-US1-39.8-NB-A	24:40:51.5N	081:13:52.8W	Q	6	38.9	62	8.1	76.3	6	-	190
R	CCTV 314	POLE-US1-39.8-NB-A	24:40:51.5N	081:13:52.8W	R1	1	35.3	52	0.5	238.5	23	-	100
R	CCTV 314	POLE-US1-39.8-NB-A	24:40:51.5N	081:13:52.8W	S	6	43.4	62	7.1	263.3	11	-	190
R1	CCTV 312, 313/ DMS68, 69	POLE-US1-39.0-SB-A	24:40:39.0N	081:14:15.0W	R	1	35.3	20	0.5	58.5	23	-	100
S	CCTV 310	POLE-US1-31.3-NB-A	24:40:08.3N	081:20:36.0W	R	6	43.4	73	7.1	83.3	11	-	190
S	CCTV 310	POLE-US1-31.3-NB-A	24:40:08.3N	081:20:36.0W	S1	2.5	37.4	68	2.3	125.8	11	-	100
S	CCTV 310	POLE-US1-31.3-NB-A	24:40:08.3N	081:20:36.0W	T	4	41	78	6.1	264.8	11	-	190
S	CCTV 310	POLE-US1-31.3-NB-A	24:40:08.3N	081:20:36.0W	I	2	38.6	60	1.2	290.7	18	-	180
S1	CCTV 311	POLE-US1-34.0-SB-A	24:38:58.8N	081:18:50.6W	S	2.5	37.4	48	2.3	305.8	11	-	100
T	CCTV 308	POLE-US1-25.2-NB-A	24:39:39.6N	081:26:22.0W	S	4	41	93	6.1	84.8	11	-	190
T	CCTV 308	POLE-US1-25.2-NB-A	24:39:39.6N	081:26:22.0W	T1	2	38.6	55	1.7	89.8	18	-	100
T	CCTV 308	POLE-US1-25.2-NB-A	24:39:39.6N	081:26:22.0W	U	4	40.8	85	5.5	268.3	11	-	190
T1	CCTV 309	POLE-US1-27.0-SB-A	24:39:39.9N	081:24:44.7W	T	2	38.6	52	1.7	269.9	18	-	100
U	CCTV 307	POLE-US1-19.6-NB-A	24:39:31.3N	081:31:35.5W	T	4	40.8	53	5.5	88.3	11	-	190
U	CCTV 307	POLE-US1-19.6-NB-A	24:39:31.3N	081:31:35.5W	V	2.5	37.4	58	5.6	242.6	11	-	190
U	CCTV 307	POLE-US1-19.6-NB-A	24:39:31.3N	081:31:35.5W	2	2	40.2	53	0.2	342.2	23	-	180
V	CCTV 305	POLE-US1-14.0-NB-A	24:37:15.4N	081:36:21.6W	U	2.5	37.4	70	5.6	62.5	11	-	190
V	CCTV 305	POLE-US1-14.0-NB-A	24:37:15.4N	081:36:21.6W	V1	2	38.6	64	2.0	55.8	18	-	100
V	CCTV 305	POLE-US1-14.0-NB-A	24:37:15.4N	081:36:21.6W	W	6	38.9	73	8.6	248.5	6	-	190
V1	CCTV 306	POLE-US1-16.0-SB-A	24:38:14.1N	081:34:47.1W	V	2	38.6	48	2.0	235.8	18	-	100
W	CCTV 301	POLE-US1-5.2-SB-A	24:34:31.2N	081:43:57.9W	V	6	38.9	93	8.6	68.5	6	-	190
W	CCTV 301	POLE-US1-5.2-SB-A	24:34:31.2N	081:43:57.9W	W1	1	34.2	72	1.3	253.7	18	-	100
W	CCTV 301	POLE-US1-5.2-SB-A	24:34:31.2N	081:43:57.9W	W2	2.5	37.4	84	2.3	72.2	11	-	100
W1	CCTV 300	POLE-US1-4.0-SB-A	24:34:12.7N	081:45:07.2W	W	1	34.2	48	1.3	73.7	18	-	100
W2	CCTV 302, 303/DMS70, 71	POLE-US1-7.6-M-A	24:35:07.9N	081:41:53.1W	W	2.5	37.4	40	2.3	252.2	11	-	100
W2	CCTV 302, 303/DMS70, 71	POLE-US1-7.6-M-A	24:35:07.9N	081:41:53.1W	W3	2	34.9	38	1.6	78.4	18	-	100
W3	CCTV 304	POLE-US1-9.2-SB-A	24:35:23.9N	081:40:25.7W	W2	2	34.9	54	1.6	254.8	18	-	100
1	Big Pine Key	Big Pine Key	24:40:30.0N	081:21:39.0W	S	2	38.6	75	1.2	110.7	18	-	180
2	Sugarloaf Key	Sugarloaf Key	23:39:41.5N	081:31:38.3W	U	2	40.2	75	0.2	162.2	23	-	180
CR	Coral Reef	Coral Reef	25:37:53.8N	080:23:7.5W	HEFT	-	-	-	13.5	-	-	-	F.O.
CR	Coral Reef	Coral Reef	25:37:53.8N	080:23:7.5W	RTMC	-	-	-	10.3	-	-	-	F.O.
RTMC	District 6 RTMC	District 6 RTMC	25:46:48.8N	080:22:35.7W	CR	-	-	-	10.3	-	-	-	F.O.
RTMC	District 6 RTMC	District 6 RTMC	25:46:48.8N	080:22:35.7W	GG	-	-	-	14.5	-	-	-	F.O.
GG	Golden Glades	Golden Glades	25:55:38.2N	080:12:38.6W	RTMC	-	-	-	14.5	-	-	-	F.O.

CONTRACT PLANS RECORD					
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STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
SITE NAME	COUNTY	FINANCIAL PROJECT ID
PROJECT-WIDE	MONROE, MIAMI-DADE	424401-2-93-01

**KEYS MICROWAVE  
SITE LOCATION LIST**

SHEET NO.  
IT-42

Site ID	ITS Name	Facility Name	Photonic Service Switch OTN CE - ETR	Carrier Ethernet Service Access Switch - ETR	Microwave Service Switch - ODU	End-to-End Service Aware Network Services Provisioning Monitoring & Fault Management Server	6GHz MW Radio	11GHz MW Radio	18GHz MW Radio	23GHz MW Radio	UPS - 6hr	PDU	Long-haul S/XFP Module	DS1/T1 Interface Module
HEFT	HEFT Terminus	HEFT Terminus	1						1		1		1	
A	FL City HUB	POLE-785-SW-3RD-AVE-NB-A		1				2	1	2	1	1		
A1	CCTV 343/DMS61, 62	POLE-US1-127.0-SB-A			1					1	1	1		
A2	CCTV 342	POLE-US1-126.1-SB-A			1					1	1	1		
B	Everglades Academy	Everglades Academy		1		1	1	1	1					1
C	CCTV 341	POLE-US1-121.1-SB-A		1				2	2		1	1		
C1	CCTV 384	POLE-CR905A-5.9-NB-A			1				1		1	1		
D	CCTV 340	POLE-US1-116.4-SB-A		1				3			1	1		
E	CCTV 339	POLE-US1-112.0-SB-A		1				2	1	1	1	1		
E1	CCTV 338	POLE-US1-110.0-SB-B			1				1		1	1		
E2	DMS 63	STR-US1-112.9-SB-A			1					1	1	1		
F	CCTV 336	POLE-US1-106.6-NB-A		1			1	2	1	1	1	1		
F1	CCTV 337	POLE-US1-107.8-SB-A			1				1		1	1		
F2	CCTV 335/DMS 64, 65	STR-US1-106.0-M-A			1					1	1	1		
G	CCTV 382	POLE-CR905A-CS4.7-SB-A		1			1	3		1	1	1		
G1	CCTV 383	POLE-CR905A-0.5-SB-A			1					1	1	1		
G2	CCTV 381	POLE-CR905-9.3-WB-A			1			1			1	1		
H	CCTV 380	POLE-CR905-4.5-WB-A		1			1	1			1	1		
I	CCTV 334	POLE-US1-102.6-M-A		1				3			1	1		
I1	CCTV 333	POLE-US1-100.0-M-A			1			1			1	1		
J	CCTV 332	POLE-US1-96.3-M-A		1				2			1	1		
K	CCTV 328	POLE-US1-90.4-SB-A		1				2	1	1	1	1		
K1	CCTV 331	POLE-US1-93.0-M-A			1				1		1	1		
K2	CCTV 329, 330/DMS 66, 67	POLE-US1-91.0-M-A			1					1	1	1		
L	CCTV 327	POLE-US1-86.2-NB-A		1				2			1	1		
M	Tea Table Fill Tower	Tea Table Fill Tower		1			1	1	1	1				1
M1	CCTV 326	POLE-US1-80.0-SB-A			1					1	1	1		
M2	CCTV 325	POLE-US1-77.0-NB-A			1				1		1	1		
N	CCTV 323	POLE-US1-71.8-NB-A		1			2	1	1		1	1		

CONTRACT PLANS RECORD					
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STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION		
SITE NAME	COUNTY	FINANCIAL PROJECT ID
PROJECT-WIDE	MONROE, MIAMI-DADE	424401-2-93-01

**KEYS MICROWAVE  
MAJOR EQUIPMENT  
LIST**

SHEET NO.  
IT-43

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Site ID	ITS Name	Facility Name	Photonic Service Switch OTN CE - ETR	Carrier Ethernet Service Access Switch - ETR	Microwave Service Switch - ODU	End-to-End Service Aware Network Services Provisioning Monitoring & Fault Management Server	6GHz MW Radio	11GHz MW Radio	18GHz MW Radio	23GHz MW Radio	UPS - 6hr	PDU	Long-haul S/XFP Module	DS1/T1 Interface Module
N1	CCTV 324	POLE-US1-74.0-SB-A			1			1			1	1		
N2	CCTV 322	POLE-US1-70.0-SB-A			1				1		1	1		
O	CCTV 320	POLE-US1-62.9-SB-A		1			2	2			1	1		
O1	CCTV 321	POLE-US1-66.0-SB-A			1			1			1	1		
O2	CCTV 319	POLE-US1-59.0-SB-A			1			1			1	1		
P	CCTV 318	POLE-US1-55.1-SB-A		1			1	1	1		1	1		
P1	CCTV 317	POLE-US1-53.0-NB-A			1				1		1	1		
Q	CCTV 315	POLE-US1-48.0-SB-C		1			1	1	1		1	1		
Q1	CCTV 316	POLE-US1-50.0-SB-A			1				1		1	1		
R	CCTV 314	POLE-US1-39.8-NB-A		1			1	1		1	1	1		
R1	CCTV 312, 313/ DMS68, 69	POLE-US1-39.0-SB-A			1					1	1	1		
S	CCTV 310	POLE-US1-31.3-NB-A		1				3	1		1	1		
S1	CCTV 311	POLE-US1-34.0-SB-A			1			1			1	1		
T	CCTV 308	POLE-US1-25.2-NB-A		1				2	1		1	1		
T1	CCTV 309	POLE-US1-27.0-SB-A			1				1		1	1		
U	CCTV 307	POLE-US1-19.6-NB-A		1				2		1	1	1		
V	CCTV 305	POLE-US1-14.0-NB-A		1			1	1	1		1	1		
V1	CCTV 306	POLE-US1-16.0-SB-A			1				1		1	1		
W	CCTV 301	POLE-US1-5.2-SB-A		1			1	1	1		1	1		
W1	CCTV 300	POLE-US1-4.0-SB-A			1				1		1	1		
W2	CCTV 302, 303/DMS70, 71	POLE-US1-7.6-M-A		1				1	1		1	1		
W3	CCTV 304	POLE-US1-9.2-SB-A			1				1		1	1		
1	Big Pine Key	Big Pine Key		1					1					1
2	Sugarloaf Key	Sugarloaf Key		1						1				1
RTMC	District 6 RTMC	District 6 RTMC	1										1	
CR	Coral Reef	Coral Reef	1										2	1
<b>Sub-Total:</b>			<b>3</b>	<b>26</b>	<b>26</b>	<b>1</b>	<b>14</b>	<b>48</b>	<b>30</b>	<b>18</b>	<b>49</b>	<b>48</b>	<b>4</b>	<b>5</b>
<b>SPARES:</b>			<b>1</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>
<b>EQUIPMENT TOTAL:</b>			<b>4</b>	<b>28</b>	<b>28</b>	<b>2</b>	<b>15</b>	<b>49</b>	<b>31</b>	<b>19</b>	<b>49</b>	<b>48</b>	<b>5</b>	<b>6</b>

CONTRACT PLANS RECORD					
DATE	REV.	DESCRIPTION	DATE	REV.	DESCRIPTION



FLORIDA DEPARTMENT OF TRANSPORTATION  
605 SUWANNEE ST. MS 90  
TALLAHASSEE, FL 32399-0450  
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