CONSTRUCTION SAFETY NOTES:

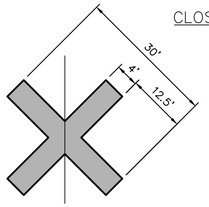
1. ALL CONSTRUCTION FOR THIS PROJECT SHALL CONFORM TO THE GUIDELINES SET FORTH IN FEDERAL AVIATION ADMINISTRATION (FAA) AC150/5370-2G "OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION", AND THESE PLANS AND SPECIFICATIONS.
2. CONSTRUCTION ACTIVITIES ARE NOT PERMITTED WITHIN THE RUNWAY SAFETY AREA (RSA) OF ANY RUNWAY THAT IS OPEN FOR AIRCRAFT OPERATIONS. (SEE SECTION 2.22, AC 150/5370-2G, CHAPTER 2)
3. CONSTRUCTION ACTIVITIES ARE NOT PERMITTED WITHIN TAXIWWAY OBJECT FREE AREA (TOFA) OF AN ACTIVE TAXIWAY. (SEE SECTION 2.22, AC No. 150/5370-2G, CHAPTER 2)
4. NO CONSTRUCTION TRAFFIC SHALL ENTER OR CROSS ANY ACTIVE AIRPORT OPERATIONAL AREA EXCEPT UPON AUTHORIZATION BY THE OWNER. THIS SPECIFICALLY INCLUDES THE RUNWAY PROTECTION ZONES AND THE RUNWAY AND TAXIWAY CONSTRUCTION SAFETY LIMITS IDENTIFIED IN CONSTRUCTION NOTES 2 AND 3 ABOVE.
5. NO CONSTRUCTION TRAFFIC SHALL ENTER OR CROSS ANY LOCALIZER OR GLIDE SLOPE CRITICAL AREA EXCEPT UPON AUTHORIZATION BY THE OWNER.
6. IN ORDER FOR THE CONTRACTOR TO OPERATE WITHIN THE AIR OPERATIONS AREA, APPROPRIATE NOTICE TO AIR MISSIONS (NOTAMS) MUST BE ISSUED BY THE OWNER THROUGH THE FAA FLIGHT SERVICE STATION. THESE NOTICES PROVIDE INFORMATION ON CLOSED, LIMITED, OR HAZARDOUS CONDITIONS TO AIRMEN AND USERS OF THE AIRPORT. A 72-HOUR NOTICE IS REQUIRED FOR ISSUANCE OF THE NOTAM. ALL CONSTRUCTION OPERATIONS MUST BE CLOSELY COORDINATED WITH THE OWNER FOR NOTAM ISSUANCE.
7. AIRCRAFT OPERATIONS SHALL AT ALL TIMES HAVE PRIORITY OVER ALL VEHICLES, EQUIPMENT AND PERSONNEL. THE CONTRACTOR SHALL EMPLOY STRICT MEASURES TO PREVENT ANY CONFLICT BETWEEN ITS PERSONNEL AND AIRCRAFT ON ANY ACTIVE AIRFIELD PAVEMENT. THE CONTRACTOR SHALL REMAIN CLEAR OF ACTIVE RUNWAYS AND TAXIWAYS.
8. ALL CONTRACTOR VEHICLES, INCLUDING HAULING VEHICLES, THAT ARE AUTHORIZED TO OPERATE WITHIN THE SECURITY FENCE ON THE AIRPORT WITHIN THE DESIGNATED LIMITS OF CONSTRUCTION OR HAUL ROUTES AS DEFINED HEREIN, SHALL DISPLAY IN FULL VIEW ABOVE THE VEHICLE A 3'x3' OR LARGER ORANGE AND WHITE CHECKERBOARD FLAG, EACH CHECKERBOARD COLOR BEING 1' SQUARE. WHEN OPERATING DURING PERIODS OF DARKNESS OR LIMITED VISIBILITY, CONTRACTOR'S VEHICLES SHALL BE EQUIPPED WITH ROTATING OR FLASHING AMBER LIGHTS. DURING SUCH PERIODS, HAULING VEHICLES NOT SO EQUIPPED SHALL BE ESCORTED BY A VEHICLE SO EQUIPPED.
9. CONTRACTOR SHALL CONTROL THE ON-AIRPORT MOVEMENT AND ACTIVITIES OF ITS EMPLOYEES AND SUBCONTRACTORS.
10. OPEN-FLAME WELDING OR TORCH-CUTTING OPERATIONS ARE PROHIBITED UNLESS ADEQUATE FIRE AND SAFETY PRECAUTIONS ARE PROVIDED AND HAVE BEEN APPROVED BY THE OWNER.
11. OPEN TRENCHES, EXCAVATIONS AND STOCKPILED MATERIALS AT THE CONSTRUCTION SITE SHALL BE PROMINENTLY MARKED WITH ORANGE FLAGS AND LIGHTED WITH FLASHING AMBER LIGHT UNITS (ACCEPTABLE TO THE OWNER) DURING HOURS OF RESTRICTED VISIBILITY OR DARKNESS.
12. STOCKPILED MATERIAL SHALL BE CONSTRAINED IN A MANNER TO PREVENT MOVEMENT AS A RESULT OF AIRCRAFT, WIND, AND/OR OTHER REASON.
13. ANY DAMAGE TO THE EXISTING AIRPORT LIGHTING SYSTEM CAUSED BY CONSTRUCTION OPERATIONS SHALL BE IMMEDIATELY NOTED TO THE OWNER AND REPAIRED BY THE CONTRACTOR AT ITS OWN EXPENSE.
14. CONTRACTOR GENERATED DEBRIS, WASTE AND LOOSE MATERIAL IS CAPABLE OF CAUSING DAMAGE TO AIRCRAFT LANDING GEAR, PROPELLERS AND ROTORS, OR OF BEING INGESTED BY JET ENGINES AND SHALL NOT BE LEFT ON ACTIVE AIRCRAFT MOVEMENT AREAS. MATERIAL DROPPING WITHIN THESE AREAS SHALL BE REMOVED IMMEDIATELY AND CONTINUOUSLY DURING WORKING HOURS.
15. CONTRACTOR SHALL BE RESPONSIBLE FOR INFORMING ALL PERSONS UNDER ITS CONTROL THAT UNAUTHORIZED CONSTRUCTION PERSONNEL FOUND IN RESTRICTED AREAS OF THE AIRPORT SHOWN ON THE SAFETY PLAN ARE SUBJECT TO ARREST FOR A PUNISHABLE FEDERAL OFFENSE AND WILL PROMPTLY AND PERMANENTLY BE REMOVED FROM THE JOB.
16. CONTRACTOR ACCESS GATES SHALL BE CONTROLLED BY A CONTRACTOR SUPPLIED GATE GUARD OR REMAIN LOCKED AT ALL TIMES. APPROVED GATE GUARD SHALL CONTROL ACCESS TO ALLOW ONLY AUTHORIZED CONSTRUCTION TRAFFIC TO ENTER THE SITE.
17. AIRPORT STAFF SHALL CONTROL AND ESCORT ALL CONSTRUCTION TRAFFIC ENTERING THE SECURED AREA OF THE AIRPORT TO PREVENT CONFLICTS WITH AIRCRAFT OPERATIONS. NO PRIVATE VEHICLES WILL BE ALLOWED ON THE AIRPORT.
18. SPECIAL ACCESS REQUIREMENTS AND OPERATING LIMITATIONS ARE REQUIRED INSIDE THE SECURITY FENCE. THE CONTRACTOR WILL CONFINE PERSONNEL, EQUIPMENT AND MATERIALS OUTSIDE OF ACTIVE AREAS OF THE AIRPORT.
19. CONTRACTOR SHALL PROVIDE AND MAINTAIN TEMPORARY LIGHTED BARRICADES EVERY 30 FEET ON BOTH SIDES OF HAUL ROAD TO CLEARLY MARK THE DESIGNATED ACCESS ROUTES TO AFFECTED AREAS OF AIRPORT PROPERTY. CONTRACTOR SHALL CONTROL ACCESS TO THE WORKING AREA BY CONSTRUCTION VEHICLES AS DELINEATED ON THIS PLAN.
20. THE CONTRACTOR SHALL HAVE ACCESS TO THE SECURED AREA OF THE AIRPORT ONLY AT THE LOCATION DESIGNATED ON THE PLANS OR APPROVED BY THE OWNER. ALL OTHER ACCESS SHALL BE BY SPECIAL REQUEST AND SUBJECT TO APPROVAL BY THE OWNER. THE CONTRACTOR SHALL PROVIDE FLAGMEN TO COORDINATE AND CONTROL CONSTRUCTION TRAFFIC WHEN OPERATING ACROSS ANY ACTIVE AREAS OF THE AIRPORT.
21. THE CONTRACTOR SHALL PROVIDE, INSTALL AND MAINTAIN FLASHING LIGHTS AND BARRICADES ALONG PAVEMENT EDGES WHEREVER OPEN EXCAVATIONS OR IRREGULAR GRADES ARE LEFT WITHIN THE SAFETY AREA OF AN ACTIVE PAVEMENT OR WHERE TEMPORARY PAVEMENT CLOSURES OR AIRCRAFT LIMITATIONS ARE REQUIRED. BARRICADES SHALL BE PLACED IN A CONTINUOUS LINE OR AS NOTED ALONG THE AFFECTED PAVEMENT EDGE OR ACROSS THE PAVEMENT OF A CLOSED TAXIWAY. THE CONTRACTOR SHALL DAILY MAINTAIN THE LIGHTS AND BARRICADES IN AN OPERABLE CONDITION FOR THE DURATION OF THE PROJECT. THE CONTRACTOR SHALL FURNISH THE OWNER A CONTACT NUMBER FOR 24-HOUR MAINTENANCE OF LIGHTS AND BARRICADES.
22. THE CONTRACTOR SHALL PERFORM CONSTRUCTION OPERATIONS AS NECESSARY TO PREVENT ATTRACTION TO BIRDS CAUSED BY PONDED WATER AND GRASS SEED.
23. REFER TO THE GENERAL NOTES FOR REQUIREMENTS PERTAINING TO STORAGE OF CONSTRUCTION EQUIPMENT AND MATERIALS WHEN NOT IN USE.
24. THE CONTRACTOR SHALL COMPLY WITH ALL SECURITY REQUIREMENTS SPECIFIED HEREIN OR MANDATED BY FAA OR TSA. THE CONTRACTOR SHALL DESIGNATE IN WRITING TO THE OWNER THE NAME OF ITS "CONTRACTOR SECURITY OFFICER". THE CONTRACTOR SECURITY OFFICER SHALL REPRESENT THE CONTRACTOR ON THE SECURITY REQUIREMENTS OF THE CONTRACT.
25. THE CONTRACTOR'S SECURITY OFFICER SHALL BE RESPONSIBLE FOR BRIEFING ALL CONTRACTOR PERSONNEL ON THESE REQUIREMENTS. CONTRACTOR EMPLOYEES WHO REQUIRE ACCESS TO THE SECURE AREA OF THE AIRPORT SHALL ATTEND THE OWNER'S SECURITY TRAINING SESSION AND SHALL BE BRIEFED ON THESE REQUIREMENTS PRIOR TO WORKING IN THE CONSTRUCTION AREAS.
26. ALL CONTRACTOR PERSONNEL WHO REQUIRE ACCESS TO THE SECURE AREA OF THE AIRPORT SHALL HAVE OWNER ISSUED IDENTIFICATION BADGES DISPLAYED AT ALL TIMES WHEN WORKING INSIDE THE AIRCRAFT OPERATIONS AREA. THE AIRPORT ID PROGRAM IS UNDER CONSTANT REVIEW BY THE FAA AND AIRPORT STAFF. ALL CONTEMPORARY REQUIREMENTS WILL GOVERN. THE CONTRACTOR SHALL ASSIGN THE CONTRACTOR SECURITY OFFICER DESCRIBED ABOVE AS THE SINGLE POINT CONTACT FOR ALL IDENTIFICATION BADGING REQUIREMENTS. PERSONNEL, SUCH AS TRUCKERS, WHO ARE NOT BAGGED, MAY BE PERMITTED TO ACCESS THE SECURE AREA UNDER THE DIRECT ESCORT OF AIRPORT STAFF OR BAGGED CONTRACTOR PERSONNEL WITH ESCORT AUTHORITY.
27. THE CONTRACTOR SHALL ACQUAINT ITS SUPERVISORS AND EMPLOYEES WITH THE AIRPORT ACTIVITIES AND OPERATIONS THAT ARE INHERENT AT THIS AIRPORT AND SHALL CONDUCT ITS CONSTRUCTION ACTIVITIES TO CONFORM TO ALL ROUTINE AND EMERGENCY AIR TRAFFIC REQUIREMENTS AND TO THE GUIDELINES ON SAFETY.
28. ITEMS FOR CONTROL OF SAFETY DURING CONSTRUCTION SUCH AS VEHICLE LIGHTING, ETC. SHALL BE PAID FOR IN ACCORDANCE WITH SPECIFICATION S-102 AND SHALL BE CONSIDERED AS A SUBSIDIARY OBLIGATION FOR THE CONTRACTOR COVERED UNDER THESE ITEMS.
29. SEE PHASING PLANS FOR BARRICADE LOCATIONS.

(8) LOW LEVEL AIRFIELD BARRICADE DETAIL & NOTES
N.T.S.

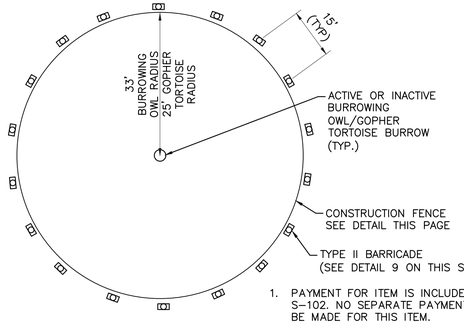
1. BARRICADES SHALL BE PLACED AS SHOWN ON THE PHASING PLANS TO DELINEATE THE CONTRACTOR'S WORK AREAS. EXACT BARRICADE LOCATION AND QUANTITY TO BE COORDINATED WITH AIRPORT.
2. BARRICADE SECTIONS CAN BE WHITE OR ORANGE WITH WHITE AND ORANGE RETRO-REFLECTIVE MARKING OR STICKERS. BARRICADES WILL BE LIGHTED AND FLAGGED.
3. ALL BARRICADES SHALL BE CHECKED VISUALLY FOR SIGNS OF WEAR AND TEAR ON A WEEKLY BASIS AND SHALL BE REPAIRED OR REPLACED WHEN DEEMED APPROPRIATE BY THE RPR OR OWNER. THE CONDITIONS OF LIGHTING UNITS SHALL BE CHECKED DAILY. ALL LIGHT FIXTURES SHALL BE VERIFIED OPERATING BY THE CONTRACTOR ON A DAILY BASIS BEFORE THE CONTRACTOR CEASES OPERATION FOR THE DAY. THE AREAS AROUND ALL BARRICADES SHALL BE CLEANED AS DIRECTED IN THE GENERAL NOTES AND THE SAFETY NOTES.
4. BARRICADES ALONG ACTIVE APRON OR TAXIWAY PAVEMENT SHALL BE PLACED APPROXIMATELY 4 FEET FROM THE EDGE OF THE FULL STRENGTH PAVEMENT. BARRICADES SHALL BE PLACED IN A CONTINUOUS LINE.
5. ALTERNATE FORMS OF BARRICADES MAY BE PROPOSED BY THE CONTRACTOR WHICH MEET THESE FUNCTIONAL REQUIREMENTS. APPROVALS OF ANY SUCH SUBSTITUTION (IF GRANTED) SHALL BE BY THE OWNER AT NO ADDITIONAL COST TO THE OWNER.
6. THE FINAL LOCATION FOR THE BARRICADES SHALL BE ESTABLISHED IN THE FIELD AS DIRECTED BY THE RPR.
7. THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN, RELOCATE AND REMOVE ALL BARRICADES. ALL WORK SHALL BE INCIDENTAL TO S-102.
8. THE CONTRACTOR SHALL MAINTAIN THE LIGHTS AND THE BARRICADES IN OPERABLE CONDITION AT ALL TIMES. THE CONTRACTOR SHALL HAVE REPLACEMENT LIGHTS AND BATTERIES ON SITE AND SHALL REPLACE LIGHTS AND/OR BATTERIES WITHIN ONE HOUR OF NOTIFICATION BY THE RPR OR OWNER. CONTRACTOR SHALL FURNISH THE OWNER WITH THE NAME AND TELEPHONE NUMBER FOR AN ON-CALL REPRESENTATIVE 24 HOURS PER DAY, SEVEN DAYS PER WEEK TO REPLACE BATTERIES AND INOPERATIVE LIGHTS AND MAINTAIN THE BARRICADES.
9. FLASHING LIGHTS SHALL BE PLACED AT THE ENDS AND AT CORNERS OF EACH LINE OF BARRICADES, ALL OTHER LIGHTS ON BARRICADES SHALL BE STEADY-BURN.

CLOSED TAXIWAY MARKER NOTES:

1. TEMPORARY CLOSED TAXIWAY MARKER SHALL BE CONSTRUCTED OF AN EASILY REMOVABLE MATERIAL, SUCH AS PLYWOOD OR FABRIC, AND HELD IN PLACE WITH SAND BAGS PAINTED YELLOW. TEMPORARY CLOSED TAXIWAY MARKER SHALL BE YELLOW IN COLOR.
2. THE CONTRACTOR SHALL PLACE TEMPORARY CLOSED TAXIWAY MARKER ON THE CENTERLINE OF THE FACILITY TO BE CLOSED AS SHOWN ON PLANS OR AS DIRECTED BY THE OWNER.
3. NO PAYMENT WILL BE MADE FOR RELOCATIONS OF TEMPORARY CLOSED TAXIWAY MARKER.
4. PAYMENT FOR ITEM IS INCLUDED IN S-102. NO SEPARATE PAYMENT SHALL BE MADE FOR THIS ITEM.

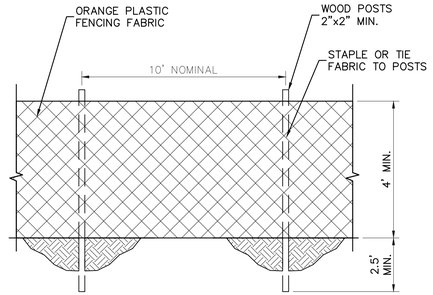


(1) TEMPORARY TAXIWAY CLOSURE MARKER
N.T.S.

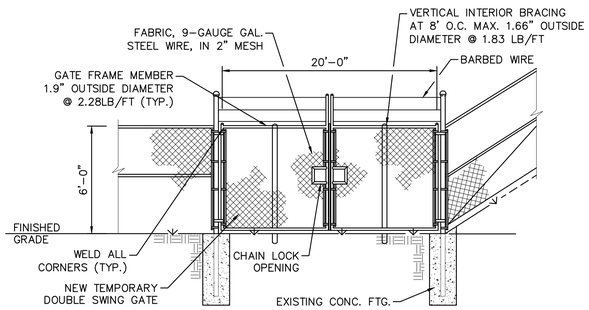


1. PAYMENT FOR ITEM IS INCLUDED IN S-102. NO SEPARATE PAYMENT SHALL BE MADE FOR THIS ITEM.

(2) BURROWING OWL AND GOPHER TORTOISE FENCING PROTECTION DETAIL
N.T.S.



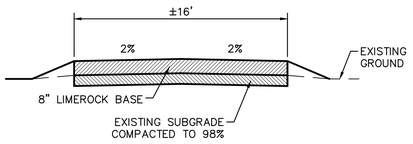
(3) CONSTRUCTION FENCE DETAIL
N.T.S.



(5) TEMPORARY SECURITY DOUBLE SWING GATE
N.T.S.

NOTES:

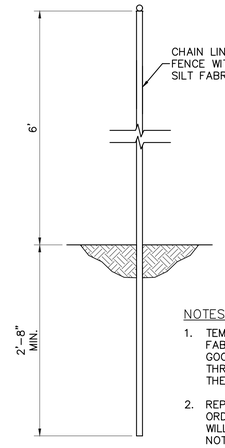
1. TEMPORARY GATES ARE TO BE REMOVED AFTER CONSTRUCTION IS COMPLETE. COST OF GATES ARE TO BE INCLUDED IN MOBILIZATION PAY ITEM, C-105. EXACT LOCATION OF GATES TO BE COORDINATED WITH OWNER.
2. TEMPORARY GATE DETAIL SHOW MAX WIDTH, AND LIKELY HEIGHT. CONTRACTOR TO MEASURE ALL ACTUAL DIMENSIONS IN FIELD PRIOR TO FABRICATION.



(6) TEMPORARY ACCESS ROAD SECTION
N.T.S.

ACCESS ROAD NOTES:

1. THE EXACT LIMITS AND LOCATION OF THE ACCESS ROAD WILL BE COORDINATED WITH FXE OPERATIONS STAFF AND SHALL BE APPROVED IN THE FIELD BY THE ENGINEER.
2. THE ACCESS ROAD SHALL BE 8" THICK.
3. AFTER COMPLETION OF CONSTRUCTION, THE ACCESS ROAD SHALL BE RETURNED TO ITS ORIGINAL CONDITION OR BETTER. THE CONTRACTOR WILL SOD LIMITS.
4. ROAD TO BE PAID FOR AS INCIDENTAL TO MOBILIZATION (C-105).



NOTES:

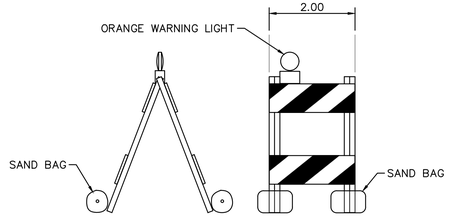
1. TEMPORARY FENCE AND SILT FABRIC MUST BE MAINTAINED IN GOOD WORKING ORDER THROUGHOUT THE DURATION OF THE CONSTRUCTION.
2. REPAIRS, AS REQUIRED OR AS ORDERED BY THE AIRPORT STAFF, WILL BE MADE WITHIN 24 HRS OF NOTICE.

(7) TEMPORARY SECURITY FENCE DETAIL
N.T.S.

NOTES:

1. THE CONTRACTOR SHALL PROVIDE FULLY FUNCTIONING PORTABLE LIGHTED RUNWAY CLOSURE MARKERS FOR THE PROJECT.
2. THE FUEL AND MAINTENANCE COSTS ASSOCIATED WITH USING THE PORTABLE LIGHTED RUNWAY CLOSURE MARKERS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR THROUGHOUT THE CONSTRUCTION. THIS INCLUDES REPLACING THE ENGINE AND/OR GENERATOR. ANY REPAIRS REQUIRED TO THE PORTABLE LIGHTED RUNWAY CLOSURE MARKERS SHALL BE AT THE CONTRACTOR'S EXPENSE, WITH NO ADDITIONAL COMPENSATION.
3. THE CONTRACTOR SHALL CLEAN, REPAIR AND REPLACE ANY DAMAGED PARTS ON THE PORTABLE LIGHTED RUNWAY CLOSURE MARKERS.

(4) CONTRACTOR-FURNISHED PORTABLE LIGHTED RUNWAY CLOSURE MARKER
N.T.S.



(9) TYPE II BARRICADE DETAIL
N.T.S.

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BID SET

ENGINEER: THOMAS F. O'DONNELL
REG. No: 62478
DATE:
TEL: 561-840-0825
FAX:

DRAWN BY: ADC | DATE: 08/28/2025 | DESIGNED BY: KAS | SCALE: AS NOTED | CHECKED BY: TFO | FIELD BOOK:

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
SAFETY NOTES AND DETAILS

SHEET NO. C06 | OF
TOTAL: 37
CAD FILE: 12884-C05-SAFE
DRAWING FILE NO.

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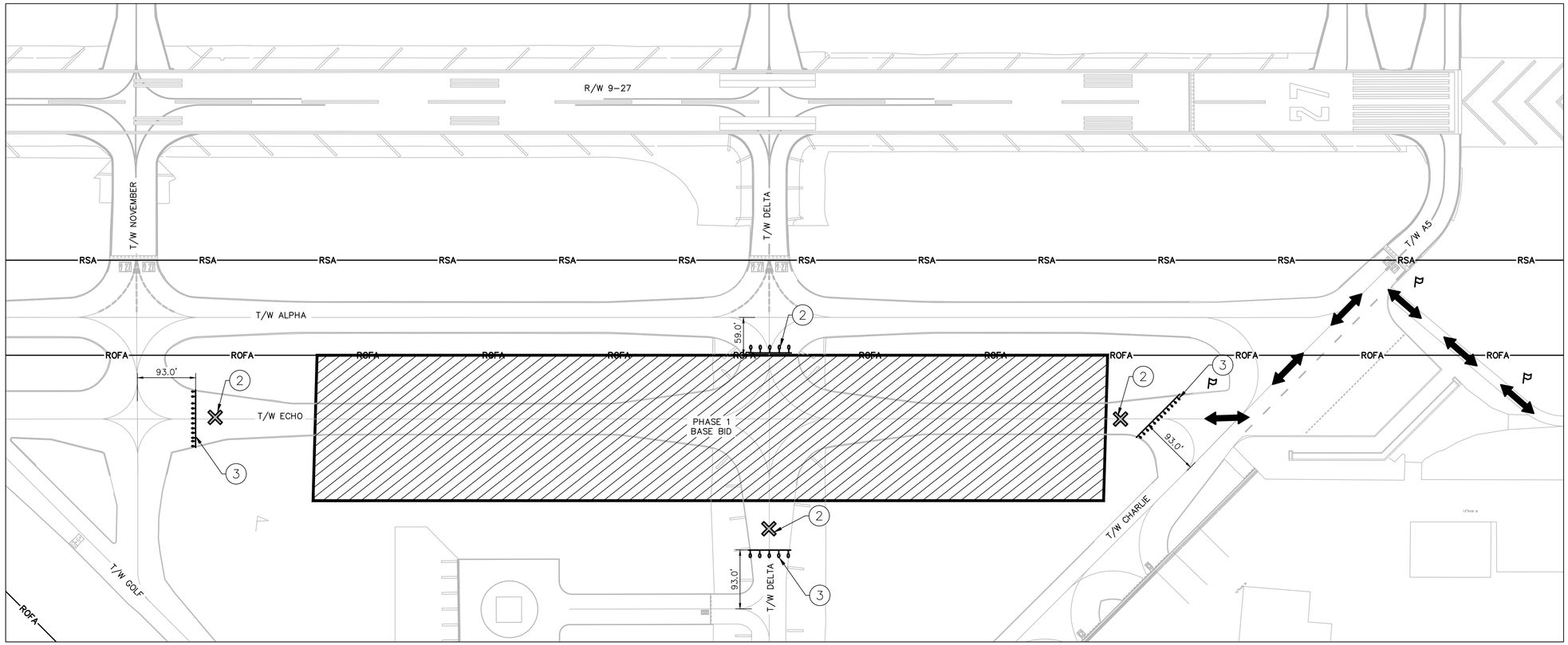

LEGEND

- PHASE 1 WORK LIMITS
- LOW LEVEL AIRFIELD BARRICADES SEE DETAIL 8 SHEET C06.
- TEMP. TAXIWAY CLOSURE MARKER SEE DETAIL 1 SHEET C06.
- TEMP. LIGHTED RUNWAY CLOSURE MARKER SEE DETAIL 4 SHEET C06.
- RSA — RUNWAY SAFETY AREA
- ROFA — RUNWAY OBJECT FREE AREA
- HAUL ROUTE
- FLAG MAN
- (1) LOCATION OF LIGHTED RUNWAY CLOSURE "X"
- (2) LOCATION OF TAXIWAY CLOSURE "X"
- (3) LOW LEVEL AIRFIELD BARRICADE AS REQUIRED TO CLOSE TAXIWAY. IN PLACE FOR DURATION OF SPECIFIED PHASE.

PHASE M (MOBILIZATION)

PRIMARY ITEMS OF WORK*

1. SUBMIT AND COMPLETE THE REVIEW PROCESS FOR ALL SHOP DRAWINGS AND SUBMITTALS.
2. INSTALL ANY SIGNAGE AS REQUIRED
3. PREPARE EXISTING STAGING AREA.
4. INSTALL FABRIC TO EXISTING STAGING AREA FENCING AND IMPLEMENT OTHER SECURITY MEASURES.
5. PERFORM PRE-CONSTRUCTION SURVEY VERIFICATION
6. INSTALL STORMWATER POLLUTION PREVENTION (SWPP) MEASURES
7. PERFORM CONTRACTOR'S QUALITY CONTROL WORKSHOP
8. PROCURE AND RECEIVE ALL ELECTRICAL ITEMS AND COMPONENTS. INVENTORIED, STAGED, AND STORED ON SITE.
9. PERFORM PRE-CONSTRUCTION MEETING.

OPERATIONS

ALL WORK, WITH THE EXCEPTION OF THE PRE-CONSTRUCTION SURVEY VERIFICATION AND INSTALLATION OF SWPP MEASURES, WILL BE PERFORMED OUTSIDE OF THE AIRPORT SAFETY AREAS AND PROTECTED SURFACES. ALL AIRPORT INFRASTRUCTURE TO REMAIN OPEN. WORK WILL BE PERFORMED 8.5 HOURS PER DAY, MONDAY THROUGH FRIDAY, 7:00 AM TO 4:30 PM.

FOR THE PRE-CONSTRUCTION SURVEY VERIFICATION AND INSTALLATION OF SWPP MEASURES, THE CONTRACTOR IS TO COORDINATE WITH AIRPORT STAFF REGARDING ACCESS AND CLOSURE OF AIRPORT INFRASTRUCTURE. ALL CLOSURES WILL BE "ROLLING" AND CONTROLLED BY AIRPORT OPERATIONS STAFF. CONTRACTOR TO COORDINATE CLOSELY WITH AIRPORT OPERATIONS STAFF DURING CLOSURES. WORK TIMES ARE REFERENCED FROM START OF SHIFT.

LIMITS OF WORK

WITH THE EXCEPTION OF THE PRE-CONSTRUCTION SURVEY VERIFICATION AND INSTALLATION OF SWPP MEASURES, THE LIMITS OF THIS WORK AREA WILL CONSIST OF THE EXISTING ACCESS POINT AND THE CONTRACTOR'S STAGING AREA. FOR THE PRE-CONSTRUCTION SURVEY VERIFICATION, THE LIMITS OF WORK WILL BE WITHIN THE AIRPORT'S SAFETY AREAS INCLUDING THE RUNWAY 9-27 SAFETY AREA. FOR THE INSTALLATION OF SWPP MEASURES THE LIMITS OF WORK WILL BE THE INFIELD AREA SOUTH OF TAXIWAY ECHO, EAST OF TAXIWAY DELTA AND WEST OF TAXILANE CHARLIE.

WORK SEQUENCING

WORK IN THIS AREA WILL BE PERFORMED SEQUENTIALLY AFTER NTP.

PHASE 1 BASE BID

PRIMARY ITEMS OF WORK*

1. INSTALL BARRICADES AND TAXIWAY CLOSURE MARKINGS.
2. PERFORM P-101 FULL DEPTH PAVEMENT DEMOLITION.
3. P-101 MILL EXISTING ASPHALT.
4. PERFORM ELECTRICAL DEMOLITION AND INSTALLATION WORK.
5. COMPACT IN SITU SUBGRADE, INSTALL P-154 SUBBASE AND P-211 LIMEROCK.
6. PAVE P-401 ASPHALT (INCLUDING CONTROL STRIP).
7. INSTALL P-154 STABILIZED SHOULDERS.
8. APPLY P-620 TEMPORARY PAINT MARKING.
9. INSTALL T-904 SODDING AND S-906 HYDROSEED.
10. CLEAN-UP AND REMOVAL OF BARRICADES, CLOSURE MARKINGS, AND SWPPP MEASURES.

*THIS LIST IS NOT EXHAUSTIVE NOR SEQUENTIAL; IT IS THE CONTRACTOR'S RESPONSIBILITY TO FAMILIARIZE THEMSELVES WITH THE PROJECT AND CONTRACT DOCUMENTS TO PERFORM ALL REQUIRED WORK IN ITS APPROPRIATE SEQUENCE.

OPERATIONS

CONSTRUCTION IN THE WORK AREA SHOWN WILL REQUIRE THE CLOSURE OF A PORTION OF TAXIWAY ECHO BETWEEN TAXIWAY NOVEMBER AND TAXILANE CHARLIE INCLUDING ITS INTERSECTION WITH TAXIWAY DELTA. TAXIWAY ALPHA, RUNWAY 9-27 AND RUNWAY 13-31 WILL REMAIN OPEN. WORK WILL BE PERFORMED FROM 7:00 AM TO 4:30 PM MONDAY THROUGH FRIDAY. WORK TIMES ARE REFERENCED FROM START OF SHIFT.

CONTRACTOR TO COORDINATE BARRICADE AND TAXIWAY CLOSURE MARKING PLACEMENT WITH AIRPORT STAFF AND RESIDENT PROJECT REPRESENTATIVE. BARRICADE LOCATIONS ARE SCHEMATIC AND MAY BE ADJUSTED IN THE FIELD AS NECESSARY FOR THE COMPLETION OF THE WORK.

LIMITS OF WORK

THE HORIZONTAL LIMITS OF THIS PHASE ARE ON TAXIWAY ECHO BETWEEN 725' WEST OF TAXIWAY DELTA CENTERLINE AND 525' EAST OF THE TAXIWAY DELTA CENTERLINE, VERTICAL LIMITS ARE GENERALLY BETWEEN 59' NORTH OF THE TAXIWAY ECHO CENTERLINE AND 110' SOUTH OF THE TAXIWAY ECHO CENTERLINE.

WORK SEQUENCING

WORK IN THIS AREA WILL BE PERFORMED SEQUENTIALLY AFTER THE COMPLETION OF THE MOBILIZATION PHASE AFTER CONSTRUCTION NTP IS PROVIDED.

0 150' 300'

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BID SET

ENGINEER: THOMAS F. O'DONNELL
REG. No: 62478
DATE:
TEL: 561-840-0825
FAX:

DRAWN BY: ADC | DATE: 08/28/2025
DESIGNED BY: KAS | SCALE: AS NOTED
CHECKED BY: TFO | FIELD BOOK:

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

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PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
PHASE 1 PLAN

SHEET NO. C07 OF
TOTAL: 37
CAD FILE: 12884-C07-PHAS1
DRAWING FILE NO.

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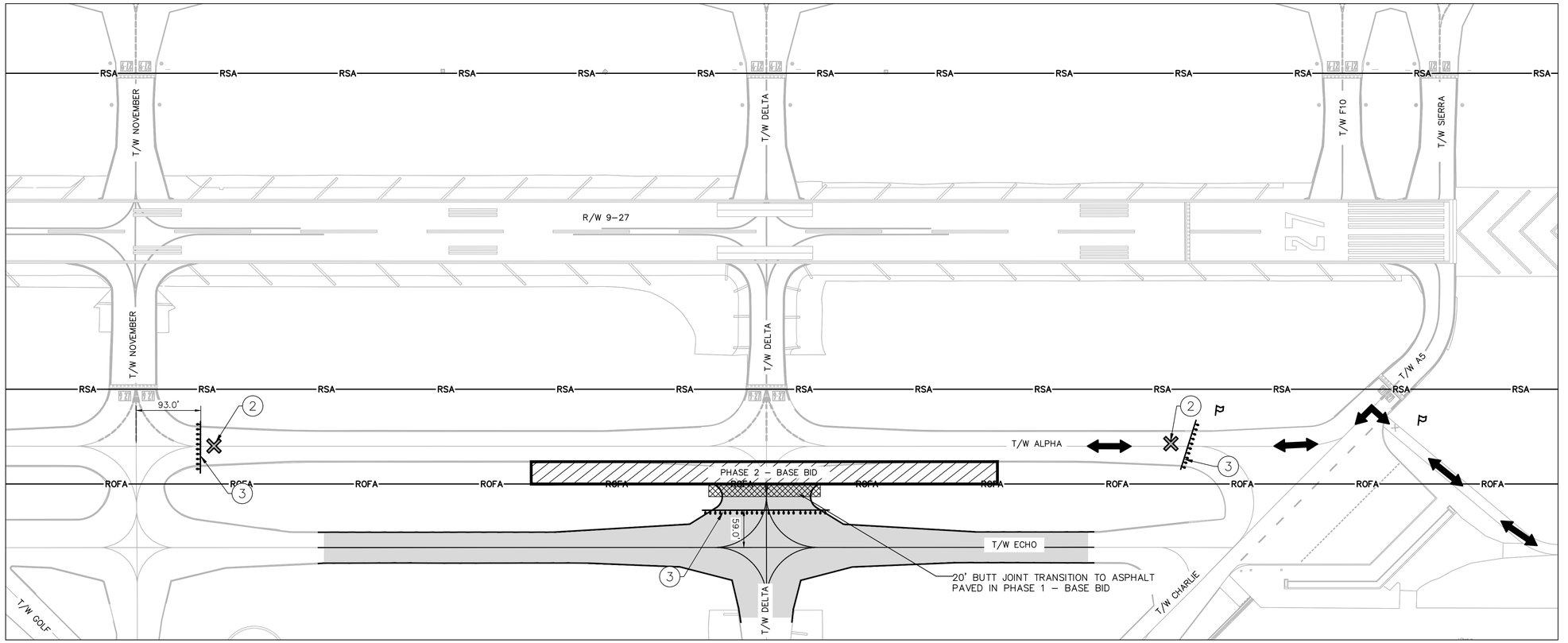

PHASE 2 – BASE BID ONLY

LEGEND

- LIMITS OF PAVEMENT
- PHASE 2 – BASE BID WORK LIMITS
- LOW LEVEL AIRFIELD BARRICADES SEE DETAIL 8 SHEET C06.
- TEMP. TAXIWAY CLOSURE MARKER SEE DETAIL 1 SHEET C06.
- TEMP. LIGHTED RUNWAY CLOSURE MARKER SEE DETAIL 4 SHEET C06.
- RSA — RUNWAY SAFETY AREA
- ROFA — RUNWAY OBJECT FREE AREA
- HAUL ROUTE
- (1) LOCATION OF LIGHTED RUNWAY CLOSURE "X"
- (2) LOCATION OF TAXIWAY CLOSURE "X"
- (3) LOW LEVEL AIRFIELD BARRICADE AS REQUIRED TO CLOSE TAXIWAY. IN PLACE FOR DURATION OF SPECIFIED PHASE.

PRIMARY ITEMS OF WORK*

1. INSTALL BARRICADES AND TAXIWAY CLOSURE MARKINGS.
2. PERFORM CLEARING AND GRUBBING AND EXCAVATION.
3. PERFORM ELECTRICAL DEMOLITION AND INSTALLATION WORK.
4. COMPACT IN SITU SUBGRADE, INSTALL P-154 SUBBASE AND P-211 LIMEROCK.
5. MILL BITUMINOUS ASPHALT.
6. PAVE (P-401 AND P-403) ASPHALT.
7. INSTALL P-154 STABILIZED SHOULDERS.
8. APPLY P-620 TEMPORARY PAINT MARKING.
9. INSTALL T-904 SODDING AND S-906 HYDROSEED.

*THIS LIST IS NOT EXHAUSTIVE NOR SEQUENTIAL; IT IS THE CONTRACTOR'S RESPONSIBILITY TO FAMILIARIZE THEMSELVES WITH THE PROJECT AND CONTRACT DOCUMENTS TO PERFORM ALL REQUIRED WORK IN ITS APPROPRIATE SEQUENCE.

OPERATIONS

CONSTRUCTION IN THE WORK AREA SHOWN WILL REQUIRE THE CLOSURE OF TAXIWAY ALPHA BETWEEN TAXIWAY NOVEMBER AND TAXILANE CHARLIE. TAXIWAY DELTA WILL BE CLOSED BETWEEN THE RUNWAY 9-27 RSA AND TAXIWAY ECHO. RUNWAY 9-27, RUNWAY 13-31 AND TAXIWAY ECHO WILL REMAIN OPEN. WORK WILL BE PERFORMED FROM 7:00 AM TO 4:30 PM MONDAY THROUGH FRIDAY. WORK TIMES ARE REFERENCED FROM START OF SHIFT.

CONTRACTOR TO COORDINATE BARRICADE AND TAXIWAY CLOSURE MARKING PLACEMENT WITH AIRPORT STAFF AND RESIDENT PROJECT REPRESENTATIVE. BARRICADE LOCATIONS ARE SCHEMATIC AND MAY BE ADJUSTED IN THE FIELD AS NECESSARY FOR THE COMPLETION OF THE WORK.

LIMITS OF WORK

THE LIMITS OF THIS PHASE ARE ON TAXIWAY ALPHA APPROXIMATELY 370' EAST AND WEST OF THE TAXIWAY DELTA CENTERLINE. THE VERTICAL LIMITS ARE GENERALLY 90' NORTH OF THE TAXIWAY ECHO CENTERLINE AND SOUTH OF THE SOUTHERN EDGE OF TAXIWAY ALPHA

WORK SEQUENCING

WORK IN THIS AREA WILL BE PERFORMED SEQUENTIALLY AFTER THE COMPLETION OF PHASE 1 IF ONLY THE BASE BID IS AWARDED.

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BID SET

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PHONE: 954-535-5100 FAX: 954-739-2247
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QUANTUM Electrical Engineering, Inc.
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WEST PALM BEACH, FL 33411
561-210-9224
LICENSE NO. CA30805

ENGINEER: THOMAS F. O'DONNELL
REG. No: 62478
DATE:
TEL: 561-640-0825
FAX:

DRAWN BY: ADC | DATE: 08/28/2025
DESIGNED BY: KAS | SCALE: AS NOTED
CHECKED BY: TFO | FIELD BOOK:

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
PHASE 2A PLAN

SHEET NO. C08 OF
TOTAL: 37
CAD FILE: 12884-C08-PHAS2
DRAWING FILE NO.

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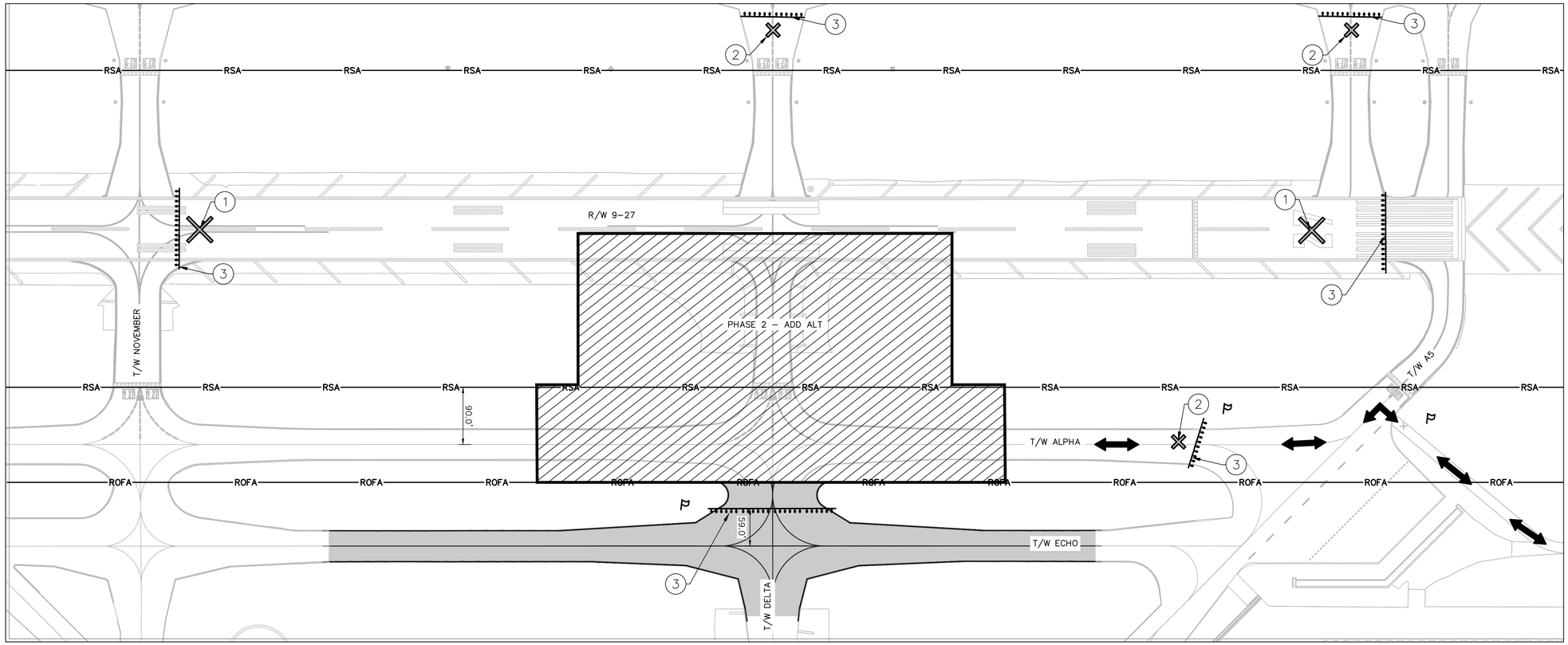

PHASE 2 – IF ADD ALT AWARDED

LEGEND

- LIMITS OF PAVEMENT
- PHASE 2 – ADD ALT WORK LIMITS
- LOW LEVEL AIRFIELD BARRICADES SEE DETAIL 8 SHEET C06.
- TEMP. TAXIWAY CLOSURE MARKER SEE DETAIL 1 SHEET C06.
- TEMP. LIGHTED RUNWAY CLOSURE MARKER SEE DETAIL 4 SHEET C06.
- RSA — RUNWAY SAFETY AREA
- ROFA — RUNWAY OBJECT FREE AREA
- HAUL ROUTE
- (1) LOCATION OF LIGHTED RUNWAY CLOSURE "X"
- (2) LOCATION OF TAXIWAY CLOSURE "X"
- (3) LOW LEVEL AIRFIELD BARRICADE AS REQUIRED TO CLOSE TAXIWAY. IN PLACE FOR DURATION OF SPECIFIED PHASE.

PRIMARY ITEMS OF WORK*

1. INSTALL BARRICADES AND TAXIWAY CLOSURE MARKINGS.
2. PERFORM CLEARING AND GRUBBING AND EXCAVATION.
3. PERFORM ELECTRICAL DEMOLITION AND INSTALLATION WORK.
4. COMPACT IN SITU SUBGRADE, INSTALL P-154 SUBBASE AND P-211 LIMEROCK.
5. MILL BITUMINOUS ASPHALT.
6. PAVE (P-401 AND P-403) ASPHALT.
7. INSTALL P-154 STABILIZED SHOULDERS.
8. APPLY P-620 TEMPORARY PAINT MARKING.
9. INSTALL T-904 SODDING AND S-906 HYDROSEED.

*THIS LIST IS NOT EXHAUSTIVE NOR SEQUENTIAL; IT IS THE CONTRACTOR'S RESPONSIBILITY TO FAMILIARIZE THEMSELVES WITH THE PROJECT AND CONTRACT DOCUMENTS TO PERFORM ALL REQUIRED WORK IN ITS APPROPRIATE SEQUENCE.

OPERATIONS

CONSTRUCTION IN THE WORK AREA SHOWN WILL REQUIRE THE CLOSURE OF RUNWAY 9-27, TAXIWAY DELTA NORTH OF TAXIWAY ECHO, AND TAXIWAY ALPHA BETWEEN TAXIWAY NOVEMBER AND TAXIWAY CHARLIE. RUNWAY 13-31, AND TAXIWAY ECHO WILL REMAIN OPEN. WORK WILL BE PERFORMED FROM 10PM TO 6AM NIGHTLY 7 DAYS A WEEK. ALL CLOSED AREAS ARE TO BE REOPENED EACH DAY BY 6AM. WORK TIMES ARE REFERENCED FROM START OF SHIFT. NIGHT WORK SCHEDULE SHALL BE COORDINATED WITH THE AIRPORT AND ENGINEER AND MAY BE ADJUSTED BASED ON THE PROGRESS OF CONSTRUCTION ACTIVITIES. WORK IS EXPECTED TO BE A COMBINATION OF DAYTIME AND NIGHTTIME OPERATIONS.

CONTRACTOR TO COORDINATE BARRICADE AND TAXIWAY CLOSURE MARKING PLACEMENT AND THE INSTALLATION OF TEMPORARY LIMEROCK TRANSITION WEDGES WITH AIRPORT STAFF AND RESIDENT PROJECT REPRESENTATIVE. BARRICADE LOCATIONS ARE SCHEMATIC AND MAY BE ADJUSTED IN THE FIELD AS NECESSARY FOR THE COMPLETION OF THE WORK. UPON THE COMPLETION OF EACH SHIFT, THE CONTRACTOR WILL REMOVE BARRICADES AND TAXIWAY CLOSURE MARKINGS FROM TAXIWAY DELTA, AND THE LIGHTED X'S FROM RUNWAY 9-27.

LIMITS OF WORK

THE LIMITS OF THIS PHASE INCLUDE TAXIWAY DELTA BETWEEN TAXIWAY ALPHA AND THE SOUTH EDGE OF RUNWAY 9-27. HORIZONTALLY, THE LIMITS ARE APPROXIMATELY 260' EAST AND WEST OF THE TAXIWAY DELTA CENTERLINE ON RUNWAY 9-27, APPROXIMATELY 120' EAST END WEST OF THE TAXIWAY DELTA CENTERLINE ON TAXIWAY DELTA AND APPROXIMATELY 370' EAST AND WEST OF THE TAXIWAY DELTA CENTERLINE ON TAXIWAY ALPHA 36' NORTH OF THE RUNWAY 9-27 ROFA.

WORK SEQUENCING

WORK IN THIS AREA WILL BE PERFORMED SEQUENTIALLY AFTER THE COMPLETION OF THE PHASE 1 IF THE ADD ALT IS AWARDED.

ENGINEER: THOMAS F. O'DONNELL
REG. No: 62478
DATE:
TEL: 561-640-0825
FAX:

DRAWN BY:	DATE:
ADC	08/28/2025
DESIGNED BY:	SCALE:
KAS	AS NOTED
CHECKED BY:	
TFO	
FIELD BOOK:	

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
PHASE 2B PLAN

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SHEET NO.	OF
C09	
TOTAL:	37
CAD FILE:	
12884-C09-PHAS1-ADDALT	
DRAWING FILE NO.	

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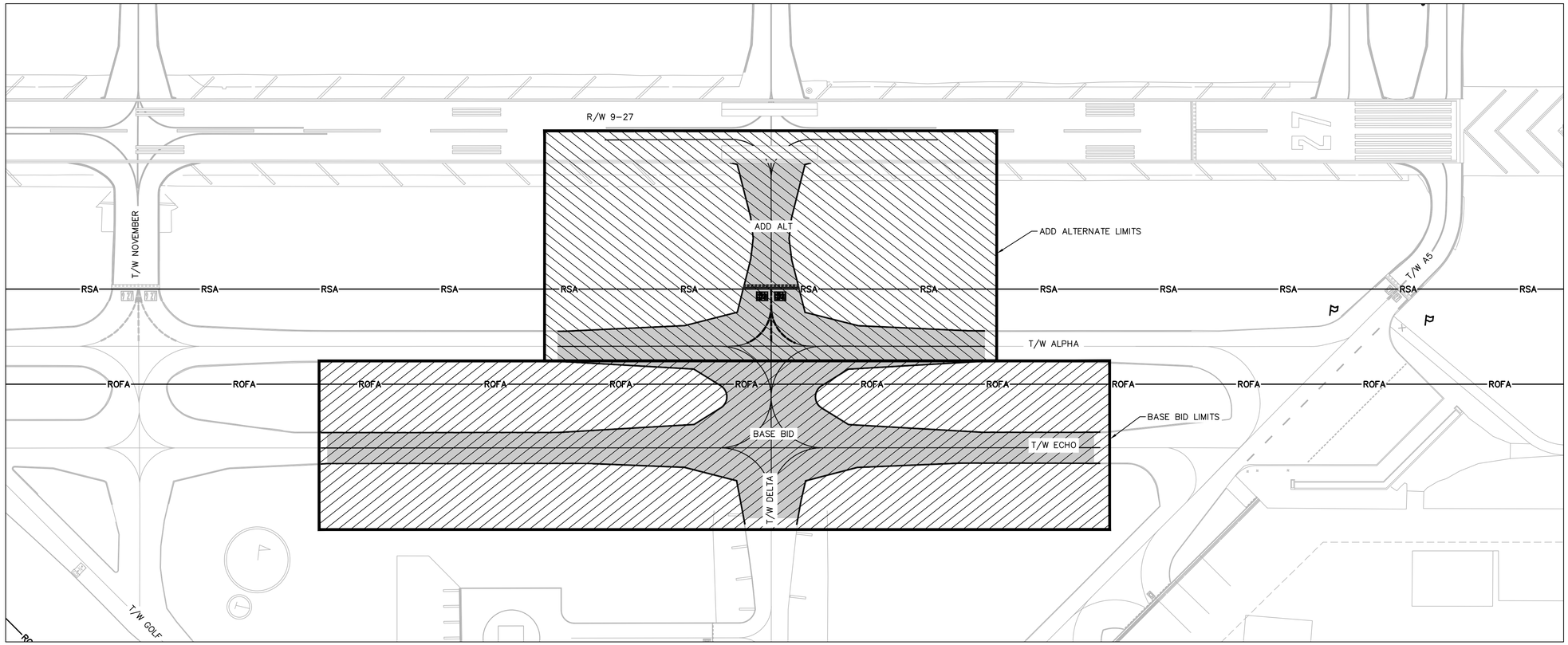

PHASE 3

LEGEND

- LIMITS OF PAVEMENT
- BASE BID
- ADD ALT
- LOW LEVEL AIRFIELD BARRICADES SEE DETAIL 8 SHEET C06.
- TEMP. TAXIWAY CLOSURE MARKER SEE DETAIL 1 SHEET C06.
- TEMP. LIGHTED RUNWAY CLOSURE MARKER SEE DETAIL 4 SHEET C06.
- RSA — RUNWAY SAFETY AREA
- ROFA — RUNWAY OBJECT FREE AREA
- HAUL ROUTE
- (1) LOCATION OF LIGHTED RUNWAY CLOSURE "X"
- (2) LOCATION OF TAXIWAY CLOSURE "X"
- (3) LOW LEVEL AIRFIELD BARRICADE AS REQUIRED TO CLOSE TAXIWAY. IN PLACE FOR DURATION OF SPECIFIED PHASE.

PRIMARY ITEMS OF WORK*

1. PERFORM PUNCHLIST WORK.
2. INSTALL P-620 PERMANENT PAVEMENT MARKINGS.

*THIS LIST IS NOT EXHAUSTIVE NOR SEQUENTIAL; IT IS THE CONTRACTOR'S RESPONSIBILITY TO FAMILIARIZE THEMSELVES WITH THE PROJECT AND CONTRACT DOCUMENTS TO PERFORM ALL REQUIRED WORK IN ITS APPROPRIATE SEQUENCE.

OPERATIONS

CONSTRUCTION IN THE PHASE SHOWN WILL BE CONDUCTED ON ROLLING CLOSURES AND PULLBACK WORK. CONTRACTOR TO COORDINATE WITH AIRPORT OPERATION STAFF AND RPR FOR LIMITS.

LIMITS OF WORK

THE LIMITS OF THIS PHASE ARE THE FULL LIMITS OF THE BASE BID PORTION OF THE PROJECT IF ONLY THE BASE BID IS AWARDED AND THE FULL LIMITS OF THE BASE BID AND ADD ALTERNATE PORTION OF THE PROJECT IF THE ADD ALTERNATE IS ALSO AWARDED. THE WORK IS TO BE PERFORMED ON A PULL BACK BASIS WITH ROLLING CLOSURES.

WORK SEQUENCING

WORK IN THIS AREA WILL BE PERFORMED SEQUENTIALLY AFTER THE COMPLETION OF PHASE 2 BASE BID (OR PHASE 2 ADD ALT IF AWARDED). PERMANENT PAINT MARKING INSTALLATIONS WILL BE PERFORMED SEQUENTIALLY AFTER THE 30 DAY ASPHALT CURING PERIOD.

0 150' 300'

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BID SET

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561-210-9224
LICENSE NO. CA30805

ENGINEER: THOMAS F. O'DONNELL
REG. No: 62478
DATE:
TEL: 561-640-0825
FAX:

DRAWN BY: ADC | DATE: 08/28/2025
DESIGNED BY: KAS | SCALE: AS NOTED
CHECKED BY: TFO | FIELD BOOK:

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
PHASE 3 PLAN

SHEET NO. C10 OF
TOTAL: 37
CAD FILE: 12884-C10-PHAS2-ADDALT
DRAWING FILE NO.

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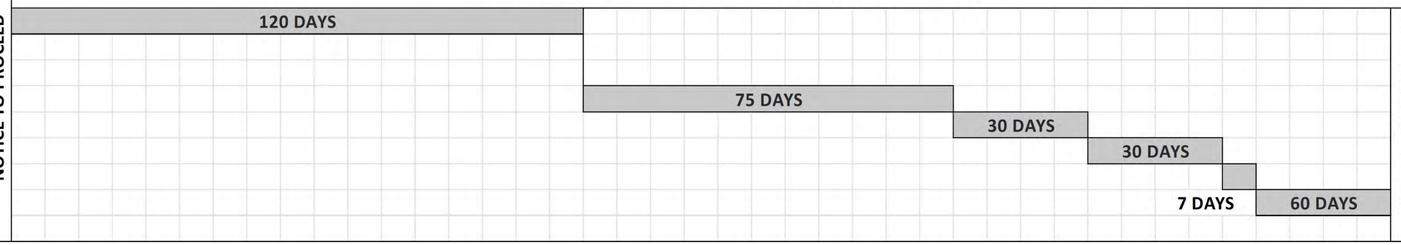
CITY OF FORT LAUDERDALE TAXIWAY E REHABILITATION PROJECT	DURATION
PHASE 0 - MOBILIZATION	120 DAYS
CONSTRUCTION	**142 DAYS**
PHASE 1	75 DAYS
PHASE 2	30 DAYS
30 DAY CURE PERIOD	30 DAYS
PHASE 3	7 DAYS
FINAL COMPLETION	60 DAYS
TOTAL CONTRACT DURATION	**322 DAYS**

NOTICE TO PROCEED

TOTAL BASE BID CONTRACT DURATION IS 322 CALENDAR DAYS



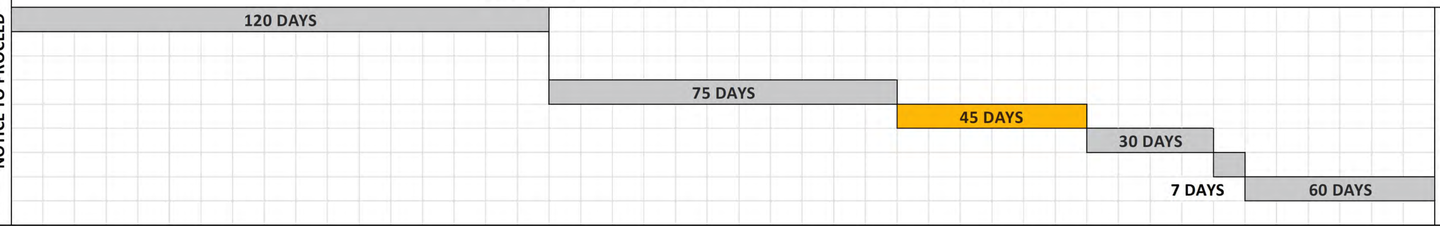
BASE BID - SUBSTANTIAL COMPLETION

PHASING SCHEDULE - BASE BID ONLY

CITY OF FORT LAUDERDALE TAXIWAY E REHABILITATION PROJECT	DURATION
PHASE 0 - MOBILIZATION	120 DAYS
CONSTRUCTION	**157 DAYS**
PHASE 1	75 DAYS
PHASE 2	45 DAYS
30 DAY CURE PERIOD	30 DAYS
PHASE 3	7 DAYS
FINAL COMPLETION	60 DAYS
TOTAL CONTRACT DURATION	**337 DAYS**

NOTICE TO PROCEED

TOTAL BASE BID + ADD ALT CONTRACT DURATION IS 337 CALENDAR DAYS



ADD ALT - SUBSTANTIAL COMPLETION

PHASING SCHEDULE - BASE BID + ADD ALT

LEGEND

WORK WILL REQUIRE NIGHTLY CLOSURES

NOTES:

1. THE SCHEDULE FOR THIS PROJECT IS INTENDED TO START AND RUN CONCURRENTLY WITH THE TAXIWAY B AND Q REALIGNMENT PROJECT (FDOT FIN PROJ NO. 445972-1)
2. TOTAL CONTRACT TIME AND FINAL ACCEPTANCE WILL BE CONCURRENT WITH THE THE TAXIWAY B AND Q REALIGNMENT PROJECT (FDOT FIN PROJ NO. 445972-1)

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LICENSE NO. CA30805

BID SET

ENGINEER: THOMAS F. O'DONNELL
REG. No: 62478
DATE:
TEL: 561-640-0825
FAX:

DRAWN BY: ADC | DATE: 08/28/2025
DESIGNED BY: KAS | SCALE: AS NOTED
CHECKED BY: TFO | FIELD BOOK:

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PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
PHASING SCHEDULE

SHEET NO. C11 OF
TOTAL: 37
CAD FILE: 12884-C12-PHAS
DRAWING FILE NO.

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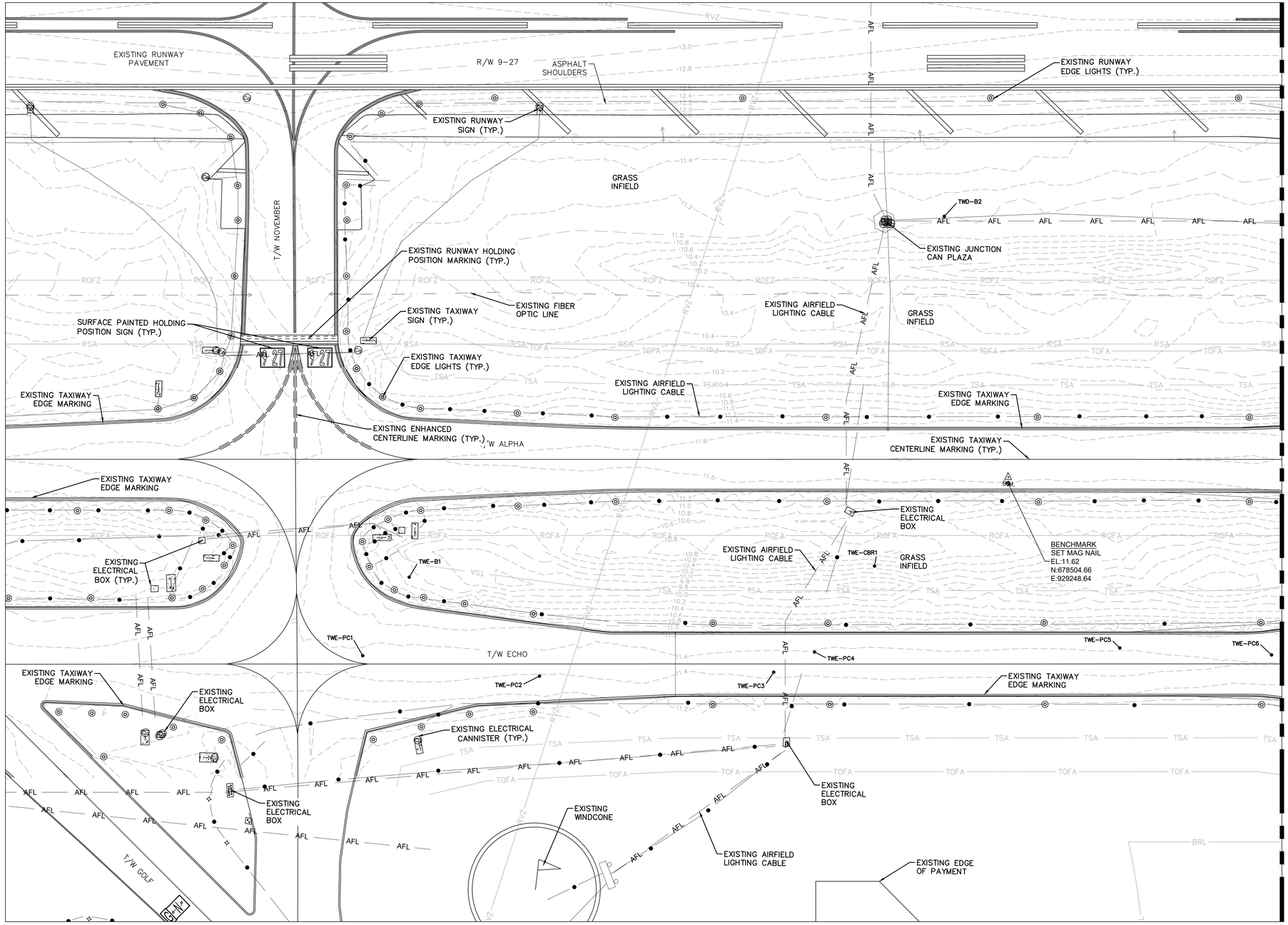

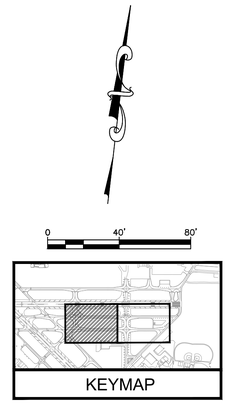

NOTES

1. UNDERGROUND UTILITY LOCATIONS ARE APPROXIMATE. CONTRACTOR TO OBTAIN UNDERGROUND UTILITY LOCATION AS REQUIRED BY LAW. SEE GENERAL NOTES SHEET C01. ALL FACILITIES ARE TO REMAIN EXCEPT WHERE OTHERWISE SHOWN. TAKE CARE DURING CONSTRUCTION TO AVOID DAMAGE TO EXISTING ABOVE GROUND AND UNDERGROUND FACILITIES.
2. EXISTING ELECTRICAL CONDITIONS ARE BASED ON HISTORICAL RECORDS PREVIOUSLY PROVIDED BY CITY OF FORT LAUDERDALE. SURVEY PREPARED BY BROWN & PHILLIPS, ON 01/28/2025.
3. THE HORIZONTAL COORDINATES SHOWN HEREON ARE BASED ON THE FLORIDA STATE PLANE COORDINATE SYSTEM (EAST ZONE), NORTH AMERICAN DATUM 1983/1990 ADJUSTMENT (NAD 83/90).
4. THE ELEVATIONS SHOWN HEREON ARE IN NORTH AMERICAN VERTICAL DATUM OF 1988 AND ARE REFERENCED TO FORT LAUDERDALE EXECUTIVE AIRPORT BENCHMARK "11127", ELEVATION = 11.65'.
5. PAVEMENT CORES PROVIDED IN GEOTECHNICAL REPORT PREPARED BY TSFGEO DATED 01/28/2025.
6. SOME EXISTING MARKINGS HAVE BEEN INTENTIONALLY OMITTED FOR CLARITY.

LEGEND (SYMBOL)

- EXISTING CONTOUR (11.00)
- AIRPORT SIGN ON CONCRETE PAD
- TAXIWAY AND RUNWAY LIGHTS
- CANNISTER
- B.M. BENCHMARK
- AFL EXISTING AIRFIELD LIGHTING CABLE
- EXISTING FIBER OPTIC LINE
- EXISTING ELECTRICAL BOX
- TWE-PCXX CORE LOCATIONS

LEGEND (LINE TYPE)

- RSA RUNWAY SAFETY AREA
- ROFA RUNWAY OBJECT FREE AREA
- RPZ RUNWAY PROTECTION ZONE
- ROFZ RUNWAY OBJECT FREE ZONE
- RVZ RUNWAY VISIBILITY ZONE
- TSA TAXIWAY SAFETY AREA
- TOFA TAXIWAY OBJECT FREE AREA
- BRL BUILDING RESTRICTION LINE

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LICENSE NO. CA30805

BID SET

ENGINEER: THOMAS F. O'DONNELL
REG. No: 62478
DATE:
TEL: 561-840-0825
FAX:

DRAWN BY: ADC | DATE: 08/28/2025
DESIGNED BY: KAS | SCALE: AS NOTED
CHECKED BY: TFO | FIELD BOOK:

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS				
NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
EXISTING CONDITIONS

SHEET NO. C12 OF
TOTAL: 37
CAD FILE: 12884-MULTI-EXST
DRAWING FILE NO.

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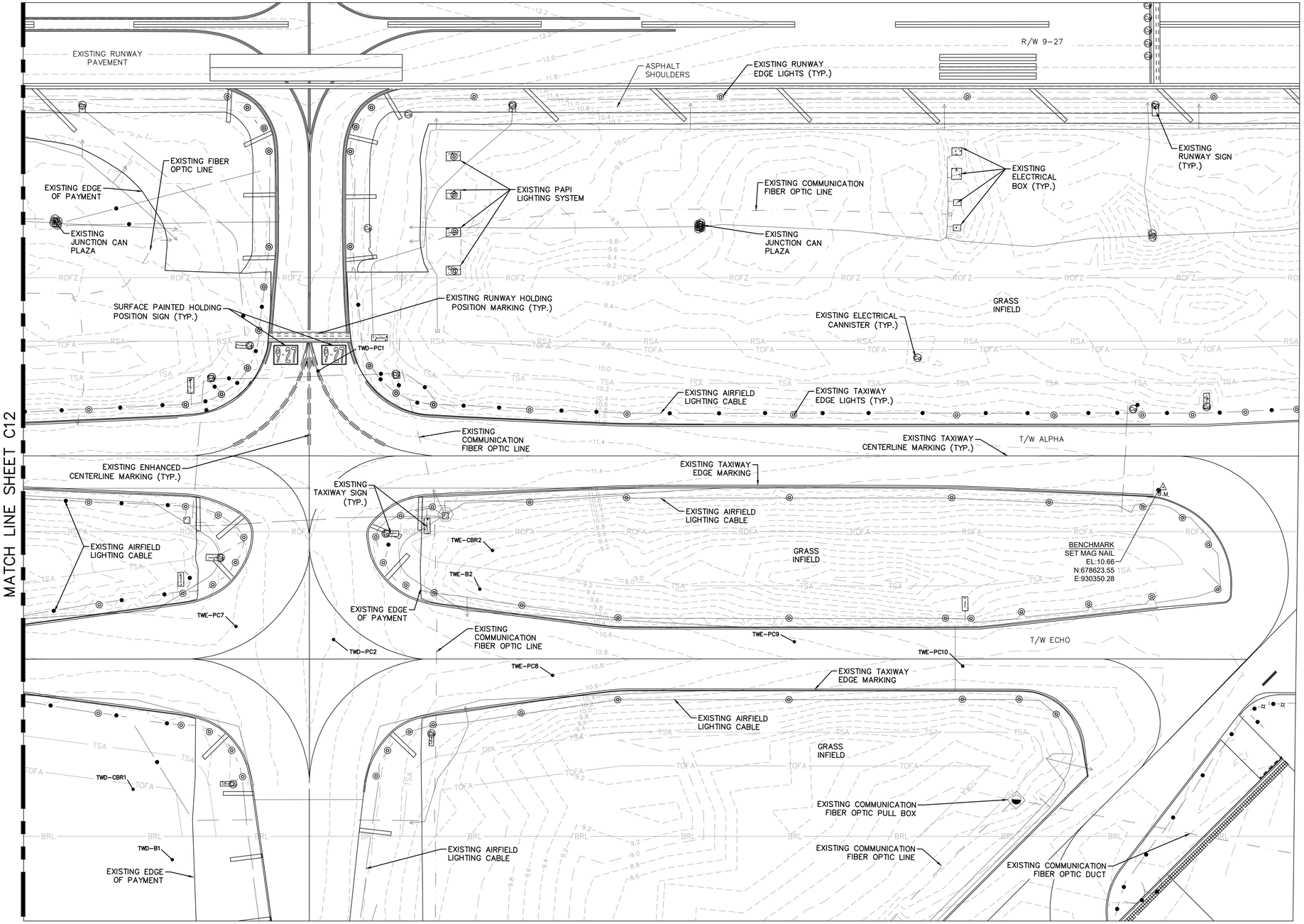

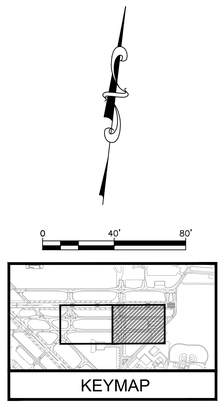

NOTES

1. UNDERGROUND UTILITY LOCATIONS ARE APPROXIMATE. CONTRACTOR TO OBTAIN UNDERGROUND UTILITY LOCATION AS REQUIRED BY LAW. SEE GENERAL NOTES SHEET C01. ALL FACILITIES ARE TO REMAIN EXCEPT WHERE OTHERWISE SHOWN. TAKE CARE DURING CONSTRUCTION TO AVOID DAMAGE TO EXISTING ABOVE GROUND AND UNDERGROUND FACILITIES.
2. EXISTING ELECTRICAL CONDITIONS ARE BASED ON HISTORICAL RECORDS PREVIOUSLY PROVIDED BY CITY OF FORT LAUDERDALE. SURVEY PREPARED BY BROWN & PHILLIPS, ON 01/28/2025.
3. THE HORIZONTAL COORDINATES SHOWN HEREON ARE BASED ON THE FLORIDA STATE PLANE COORDINATE SYSTEM (EAST ZONE), NORTH AMERICAN DATUM 1983/1990 ADJUSTMENT (NAD 83/90).
4. THE ELEVATIONS SHOWN HEREON ARE IN NORTH AMERICAN VERTICAL DATUM OF 1988 AND ARE REFERENCED TO FORT LAUDERDALE EXECUTIVE AIRPORT BENCHMARK "11127", ELEVATION = 11.65'.
5. PAVEMENT CORES PROVIDED IN GEOTECHNICAL REPORT PREPARED BY TSFGEO DATED 01/28/2025.
6. SOME EXISTING MARKINGS HAVE BEEN INTENTIONALLY OMITTED FOR CLARITY.

LEGEND (SYMBOL)

- EXISTING CONTOUR (11.00)
- AIRPORT SIGN ON CONCRETE PAD
- TAXIWAY AND RUNWAY LIGHTS
- CANNISTER (Ca)
- BENCHMARK (B.M.)
- AFL — EXISTING AIRFIELD LIGHTING CABLE
- EXISTING FIBER OPTIC LINE
- EXISTING ELECTRICAL BOX
- TWE-PCXX CORE LOCATIONS

LEGEND (LINE TYPE)

- RSA — RUNWAY SAFETY AREA
- ROFA — RUNWAY OBJECT FREE AREA
- RPZ — RUNWAY PROTECTION ZONE
- ROFZ — RUNWAY OBJECT FREE ZONE
- RVZ — RUNWAY VISIBILITY ZONE
- TSA — TAXIWAY SAFETY AREA
- TOFA — TAXIWAY OBJECT FREE AREA
- BRL — BUILDING RESTRICTION LINE

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DESIGNED BY: KAS | SCALE: AS NOTED
CHECKED BY: TFO | FIELD BOOK:

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DESCRIPTION	DATE	BY	CHK'D

PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
EXISTING CONDITIONS

SHEET NO. C13 OF
TOTAL: 37
CAD FILE: 12884-MULTI-EXST
DRAWING FILE NO.

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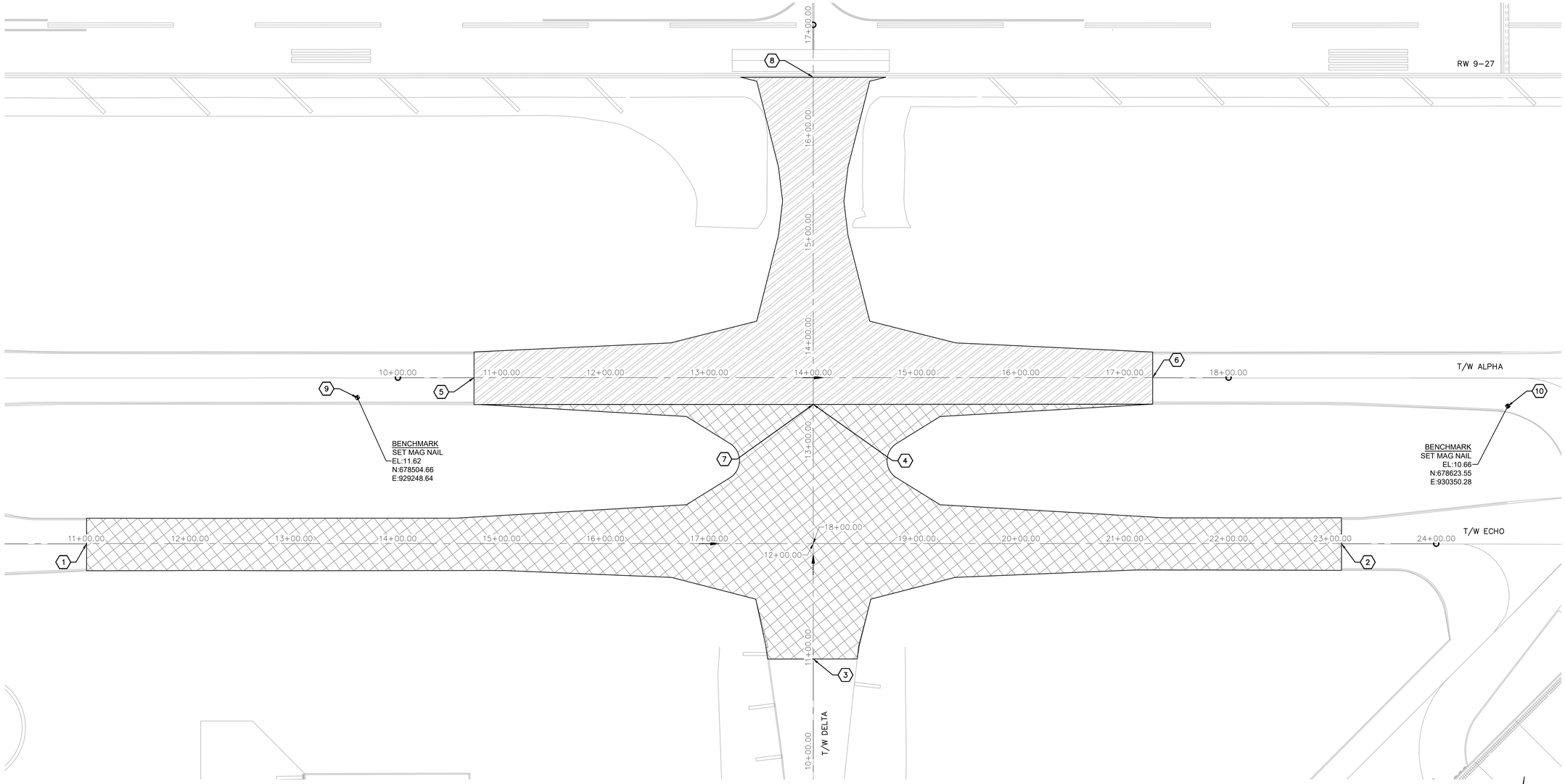


Point Table				
Point #	Raw Description	Elevation	Northing	Easting
1	T/W CL ECHO BEGIN CONSTRUCTION	11.480	678334.9250	929005.7632
2	T/W CL ECHO END CONSTRUCTION	10.024	678473.5249	930206.4052
3	T/W CL DELTA BEGIN CONSTRUCTION	11.553	678304.7392	929713.7316
4	T/W CL DELTA END CONSTRUCTION	11.806	678548.5023	929685.5920
5	T/W CL ALPHA BEGIN CONSTRUCTION – ADD ALT	11.793	678536.6569	929358.0676
6	T/W CL ALPHA END CONSTRUCTION – ADD ALT	12.233	678611.6281	930007.3883
7	T/W CL DELTA BEGIN CONSTRUCTION – ADD ALT	11.806	678548.5023	929685.5920
8	T/W CL DELTA END CONSTRUCTION – ADD ALT	12.234	678861.7296	929649.4336
9	BENCHMARK	11.620	678504.6620	929248.6450
10	BENCHMARK	10.660	678623.5174	930350.2678

LEGEND

(1) CONTROL POINT NUMBER

PROJECT PAVEMENT LIMITS – ADD ALT

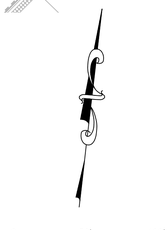
PROJECT PAVEMENT LIMITS – BASE BID

NOTE:

1. EXISTING ELECTRICAL CONDITIONS ARE BASED ON AS–BUILTS PROVIDED BY CITY OF FORT LAUDERDALE ON 11/02/18. SURVEY PREPARED BY BROWN & PHILLIPS, INC. ON 01/28/2025.
2. THE HORIZONTAL COORDINATES SHOWN HEREON ARE BASED ON THE STATE PLANE COORDINATES:
   2.1. COORDINATES SHOWN ARE GRID
   2.2. DATUM – NAD 83, 1990 ADJUSTMENT
   2.3. ZONE – FLORIDA EAST
   2.4. LINEAR UNIT – US SURVEY FOOT
   2.5. COORDINATE SYSTEM 1983/1990 STATE PLANE
   2.6. TRANSVERSE MERCATOR PROJECTION
   2.7. ALL DISTANCES ARE GROUND, UNLESS NOTED OTHERWISE.
3. THE ELEVATIONS SHOWN HEREON ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988 (N.A.V.D. 88) ESTABLISHED FROM CITY OF FORT LAUDERDALE BENCHMARKS: "11127" FOUND MAG NAIL AND DISK, ELEVATION = 11.65'.
4. THIS SHEET IS FOR REFERENCE ONLY. CONTRACTOR IS TO REFER TO TOPOGRAPHIC SURVEY PREPARED BY BROWN & PHILLIPS, INC. ON 01/28/2025 FOR ELEVATIONS AND UTILITIES WITHIN PROJECT AREA.
5. PRIOR TO ANY DEMOLITION OR CONSTRUCTION, THE CONTRACTOR SHALL VERIFY THE ACCURACY OF ALL CONTROL POINTS. ANY DISCREPANCIES WILL BE IMMEDIATELY REPORTED TO THE RPR AND ENGINEER.

DATUM:

VERTICAL ELEVATIONS ARE REFERENCED TO THE NAVD OF 1988
HORIZONTAL LOCATIONS ARE REFERENCED TO THE NAD OF 83/90



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561-210-9224
LICENSE NO. CA30805

ENGINEER: THOMAS F. O'DONNELL
REG. No: 62478
DATE:
TEL: 561-640-0825
FAX:

DRAWN BY: ADC | DATE: 08/28/2025
DESIGNED BY: KAS | SCALE: AS NOTED
CHECKED BY: TFO | FIELD BOOK:

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
PROJECT LAYOUT - SURVEY CONTROL

SHEET NO. C14 OF
TOTAL: 37
CAD FILE: 12884–MULTI–LOUT
DRAWING FILE NO.

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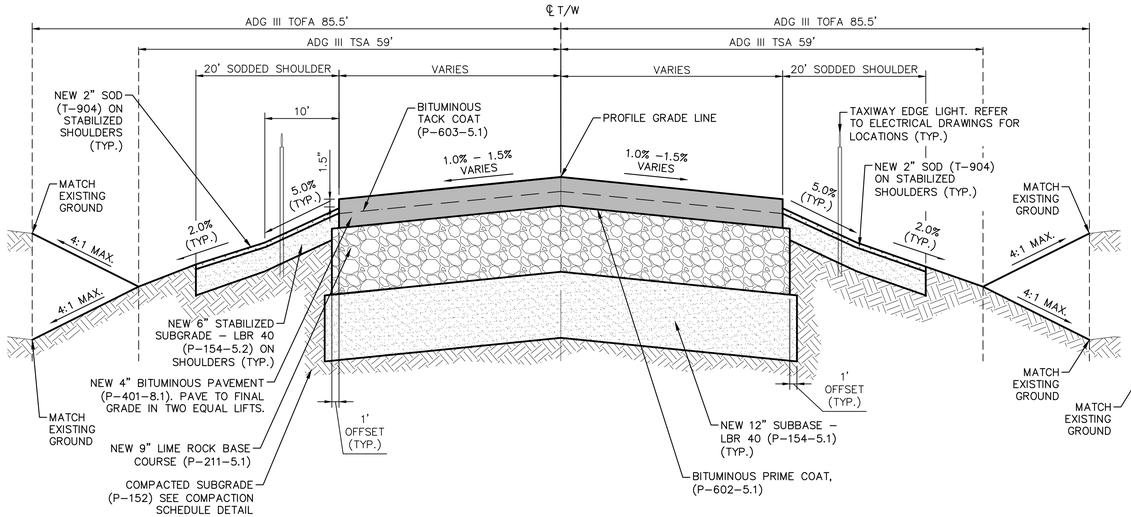
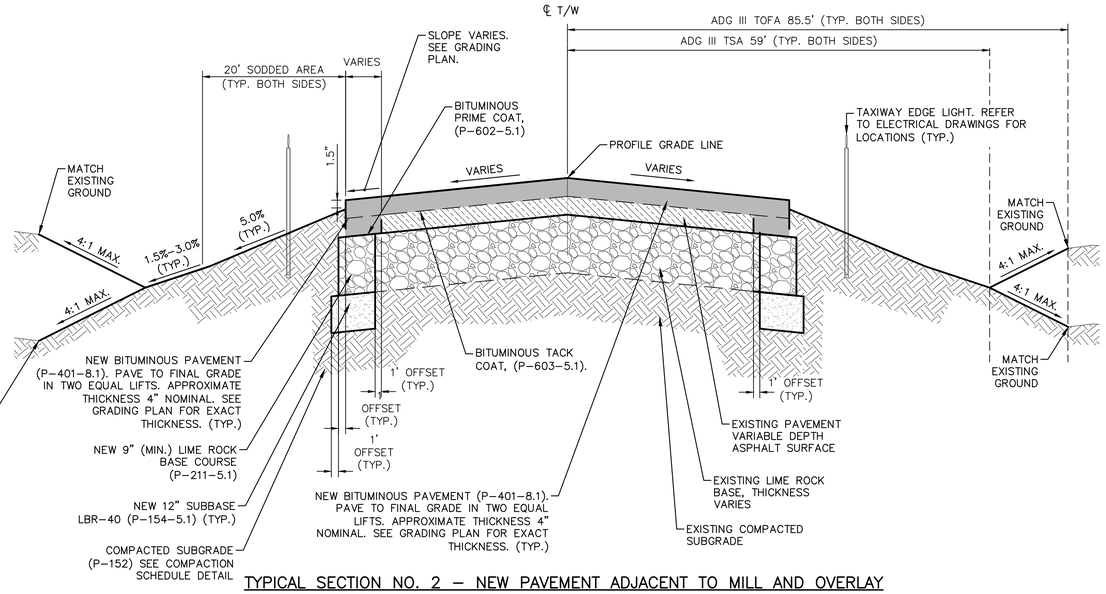


TYPICAL SECTION NO. 1 – FULL DEPTH TAXIWAY CONSTRUCTION

N.T.S.



TYPICAL SECTION NO. 2 – NEW PAVEMENT ADJACENT TO MILL AND OVERLAY

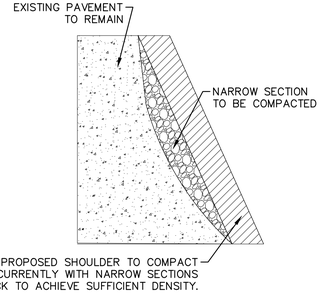
N.T.S.

TYPICAL SECTION NO. 3 – 2" MILL AND 2" OVERLAY

N.T.S.

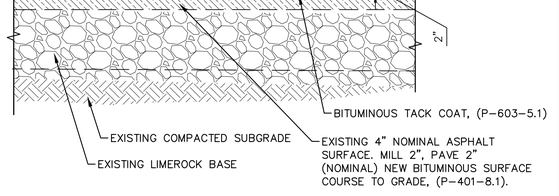
TYPICAL SECTION NO. 4 – 2" MILL AND 2" OVERLAY WITH VARIABLE DEPTH LEVELING COURSE

N.T.S.



TYPICAL SECTION NO. 5 – NARROW COMPACTION SECTIONS

N.T.S.



DETAIL 1 – BUTT JOINT OVERLAY TRANSITION TO EXISTING (MILL 2", PAVE 2")

N.T.S.

FILL SECTION

CUT SECTION

COMPACTION SCHEDULE NOTES:

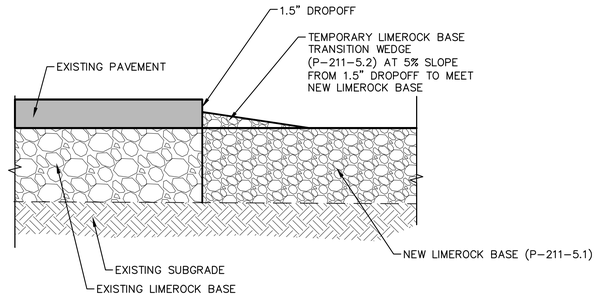
THE SUBGRADE IN CUT AREAS SHALL HAVE NATURAL DENSITIES SHOWN, SHALL BE COMPACTED FROM THE SURFACE TO ACHIEVE THE REQUIRED DENSITIES, OR SHALL BE REMOVED AND REPLACED IN WHICH CASE THE MINIMUM DENSITIES FOR FILLS APPLY. SEE SPECIFICATION P-152 FOR OVER EXCAVATION REQUIREMENTS.

NON-COHESIVE SOILS, FOR THE PURPOSE OF DETERMINING COMPACTION, ARE THOSE WITH A P.I. < 3.

UNDER AREAS THAT WILL NOT BE PAVED, ROLLING OPERATIONS SHALL BE CONTINUED UNTIL THE EMBANKMENT IS COMPACTED TO NOT LESS THAT 95% OF MAXIMUM DENSITY FOR NON COHESIVE SOILS AND 90% OF MAXIMUM DENSITY FOR COHESIVE SOILS PER ITEM P-152.

COMPACTION SCHEDULE

N.T.S.



DETAIL 2 – TEMPORARY LIMEROCK BASE TRANSITION WEDGE

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BID SET

ENGINEER: THOMAS F. O'DONNELL
REG. No: 62478
DATE:
TEL: 561-640-0825
FAX:

DRAWN BY:	DATE:	SCALE:	
ADC	08/28/2025	AS NOTED	
DESIGNED BY:		CHECKED BY:	FIELD BOOK:
KAS		TFO	

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PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
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REVISIONS				
NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
TYPICAL SECTIONS

SHEET NO. C15 OF

TOTAL: 37

CAD FILE: 12884-MULTI-TSEC

DRAWING FILE NO.

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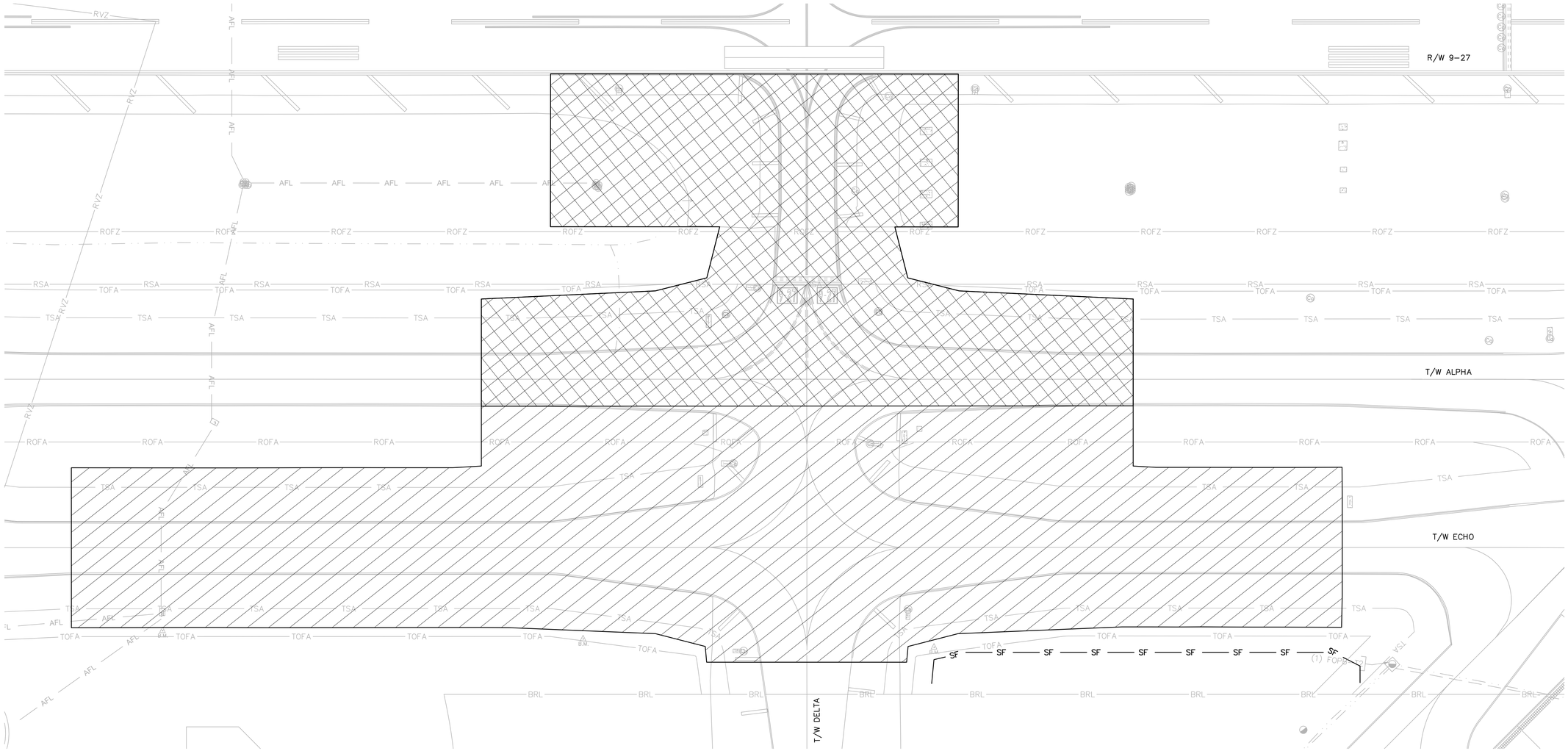
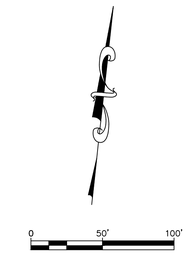


LEGEND

—— SF ——	PROPOSED SILT FENCE
—— RSA ——	RUNWAY SAFETY AREA
—— ROFZ ——	RUNWAY OBJECT FREE ZONE
—— ROFA ——	RUNWAY OBJECT FREE AREA
—— TSA ——	TAXIWAY SAFETY AREA
—— TOFA ——	TAXIWAY OBJECT FREE AREA
	APPROXIMATE LIMITS OF WORK – BASE BID
	APPROXIMATE LIMITS OF WORK – ADD ALT

NOTES:

1. SEE SHEET C17 FOR EROSION CONTROL DETAILS.
2. REFER TO SHEETS C07 TO C08 FOR BASE BID PHASING PLANS.
3. REFER TO SHEETS C09 TO C10 FOR ADD ALT PHASING PLANS.
4. ALL EROSION AND SEDIMENTATION CONTROL DEVICES SHALL BE IN PLACE PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITIES. LOCATION AND AMOUNT OF THESE DEVICES IS UP TO THE DISCRETION OF THE AIRPORT. EXACT LIMITS AND LOCATION OF EROSION AND SEDIMENTATION CONTROL DEVICES TO BE COORDINATED WITH FXE OPERATIONS.
5. CONTRACTOR SHALL INSTALL AND MAINTAIN NECESSARY SYSTEMS THROUGHOUT THE DURATION OF THE CONTRACT AND PROVIDE ADDITIONAL BEST MANAGEMENT PRACTICES (BMP'S) AS REQUIRED TO MEET REGULATORY CRITERIA AT NO ADDITIONAL COST TO OWNER.
6. CONTRACTOR WILL SUBMIT A PLAN FOR DUST CONTROL PRIOR TO ANY LAND DISTURBING ACTIVITIES PER ITEM C–102. THE PLAN MUST INCLUDE BUT NOT BE LIMITED TO, PROVIDING WATER TRUCK ON A 24 HR. BASIS CAPABLE OF BEING ON SITE WITHIN 30 MINUTES TO WATER DISTURBED AND UNPROTECTED SURFACES.
7. SWEEPER TRUCK AND VACUUM TRUCK SHALL FOLLOW ALL WORKING VEHICLES TO PREVENT FOREIGN OBJECT DEBRIS (FOD) ON OPEN TAXIWAYS.
8. AFTER COMPLETION OF THE PROJECT AND PRIOR TO DEMOBILIZATION FROM THE SITE, THE CONTRACTOR WILL REMOVE ALL SEDIMENT BUILDUP FROM DRAINAGE SWALES.



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ENGINEER: THOMAS F. O'DONNELL
REG. No: 62478
DATE:
TEL: 561–840–0825
FAX:

DRAWN BY:	DATE:
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DESIGNED BY:	SCALE:
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FIELD BOOK:	

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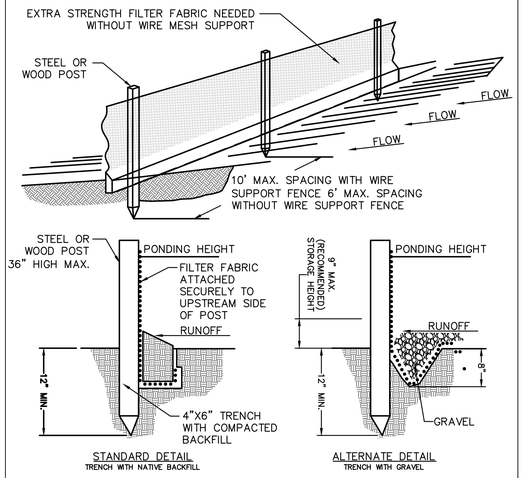
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
EROSION CONTROL PLAN

SHEET NO.	OF
C16	
TOTAL:	37
CAD FILE: 12884–MULTI–EROS	
DRAWING FILE NO.	

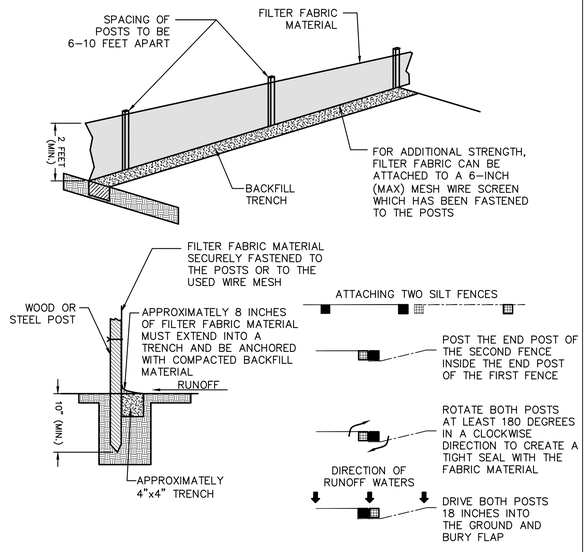


NOTES:

1. INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY.
2. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.
3. SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.

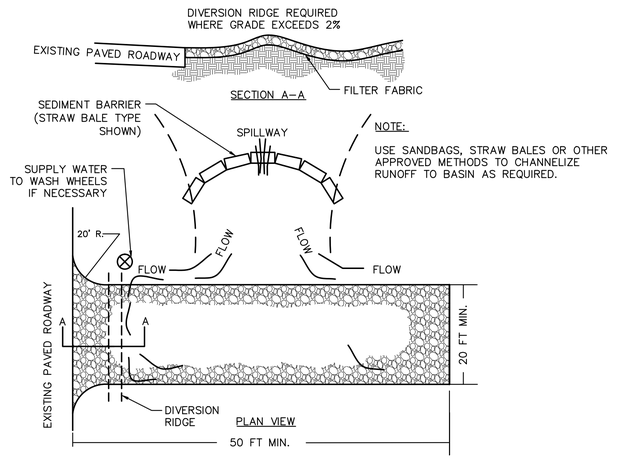
SILT FENCE DETAIL

N.T.S.



SILT FENCE INSTALLATION DETAIL

N.T.S.



NOTES:

1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

STABILIZED CONSTRUCTION ENTRANCE

N.T.S.

BEST MANAGEMENT PRACTICE SEQUENCE:

1. INSTALL SILT FENCE.
2. BEGIN CLEARING AND GRUBBING THE SITE.
3. BEGIN DEMOLITION AND GRADING THE SITE.
4. START CONSTRUCTION OF THE FACILITIES.
5. TEMPORARILY SEED, THROUGHOUT CONSTRUCTION, DENUDED AREAS THAT WILL BE INACTIVE FOR 7 DAYS OR MORE.
6. PERMANENTLY STABILIZE AREAS TO BE VEGETATED AS THEY ARE BROUGHT TO FINAL GRADE.
7. AT CONSTRUCTION COMPLETION CONTRACTOR IS TO ENSURE THAT ALL SEDIMENT BUILD UP IS REMOVED FROM ALL DRAINAGE SWALES, SEWERS, AND STRUCTURES.

GENERAL NOTES:

1. LOCATE SILT FENCE AS SHOWN OR AT THE LIMITS OF GRADING SUBJECT TO THE APPROVAL OF THE ENGINEER.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CORRECTION OF ANY EROSION OR WATER QUALITY PROBLEMS THAT RESULT FROM THE CONSTRUCTION ACTIVITIES.
3. THE CONTRACTOR MAY BE DIRECTED TO REMOVE PORTIONS OF SILT FENCE AT DIFFERENT TIMES DURING THE PROJECT FOR SAFE AIRCRAFT OPERATIONS AND REPLACE THE FENCE SUBSEQUENTLY. ALL COST FOR REMOVAL AND REPLACEMENT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
4. THE CONTRACTOR SHALL PROVIDE A WATER TRUCK WHICH SHALL BE ON SITE AT ALL TIMES. THE TRUCK SHALL BE USED TO PROVIDE DUST CONTROL IN THE WORK AREA AS WELL AS CONTRACTOR STAGING AREAS AND HAUL ROUTES.
5. THIS WORK IS INCIDENTAL TO THE TEMPORARY AIR AND WATER POLLUTION, SOIL EROSION, AND SILTATION CONTROL PAY ITEM C-102-5.1.

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ENGINEER: THOMAS F. O'DONNELL
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DRAWN BY: ADC | DATE: 08/28/2025
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100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
EROSION CONTROL DETAILS

SHEET NO. C17 OF
TOTAL: 37
CAD FILE: 12884-MULTI-EROS-DETL
DRAWING FILE NO.

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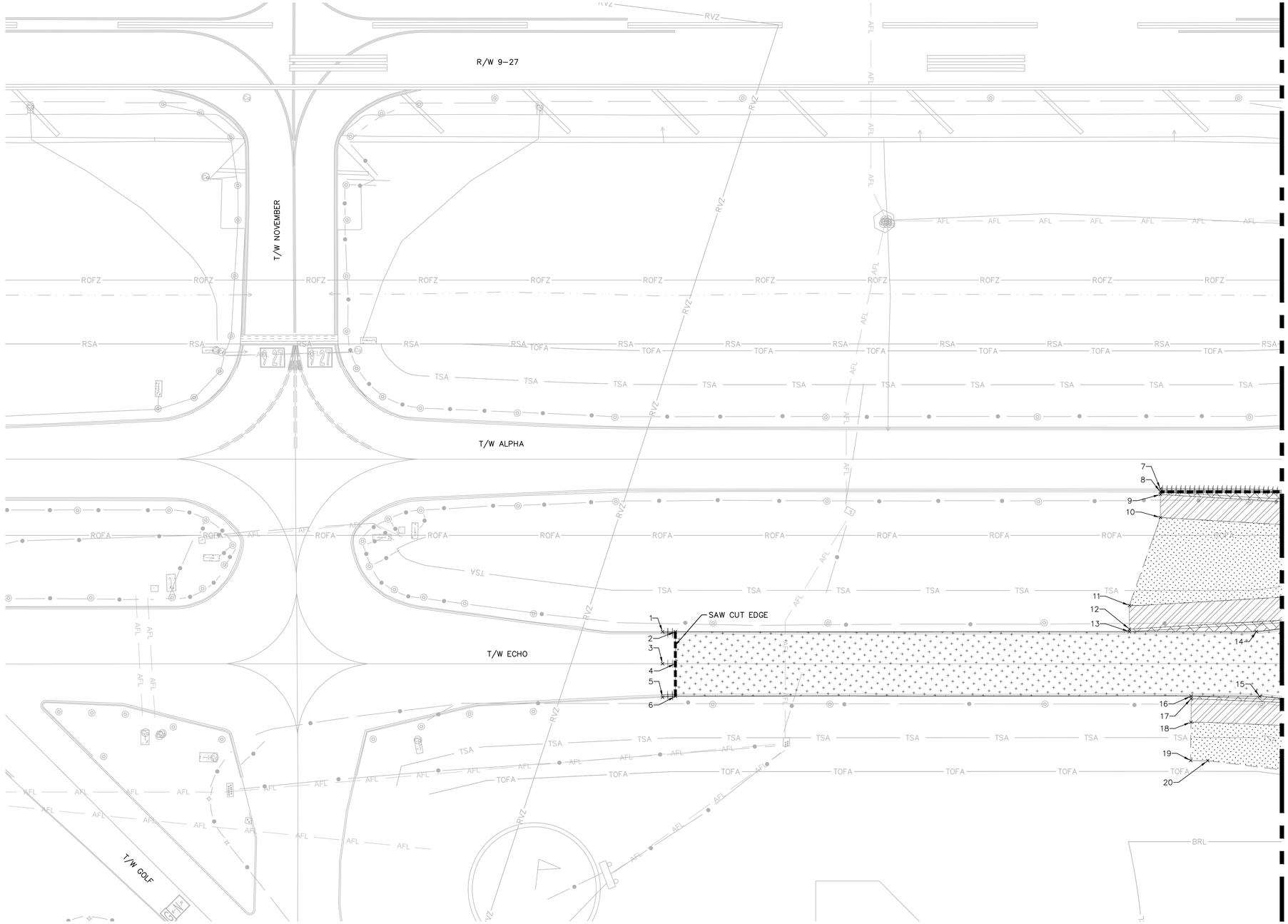

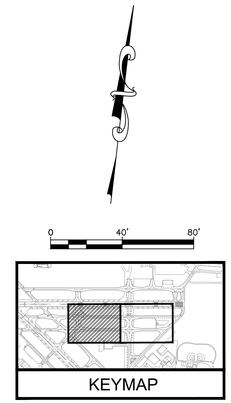

NOTES

1. UNDERGROUND UTILITY LOCATIONS ARE APPROXIMATE. CONTRACTOR TO OBTAIN UNDERGROUND UTILITY LOCATION AS REQUIRED BY LAW. SEE GENERAL NOTES SHEET C01. ALL FACILITIES ARE TO REMAIN EXCEPT WHERE OTHERWISE SHOWN. DURING CONSTRUCTION CONTRACTOR IS TO AVOID DAMAGE TO EXISTING ABOVE GROUND AND UNDERGROUND FACILITIES. CONTRACTOR SHALL UTILIZE SOFT DIGS (P-152-4.3) IN AREAS WHERE UNDERGROUND FACILITIES ARE LOCATED.
2. EXPOSED SUBGRADE AND BASE MATERIAL TO BE KEPT MOIST AND COMPACTED TO MINIMIZE FOD FROM JET BLAST AND SHALL BE TREATED WITH A DUST STABILIZER WHEN REQUESTED BY THE RPR OR OWNER. ALL DUST CONTROL RELATED COSTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
3. CONTRACTOR WILL PROTECT ALL EXISTING CONCRETE OR ASPHALT PAVEMENT TO REMAIN IN PLACE DURING MILLING AND FULL DEPTH PAVEMENT REMOVAL. ALL CONCRETE OR ASPHALT PAVEMENT DAMAGED DURING MILLING AND REMOVAL SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE BY A METHOD SATISFACTORY TO THE RPR AND OWNER
4. CONTRACTOR SHALL USE A METHOD OF MARKING REMOVAL THAT DOES NOT DAMAGE THE EXISTING PAVEMENT AND JOINT SEALS. ANY DAMAGE CAUSED TO THE EXISTING PAVEMENT AND JOINT SEALS SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
5. CONTRACTOR SHALL PROTECT ALL MARKINGS TO REMAIN. ANY MARKINGS THAT ARE DAMAGED OR INADVERTENTLY REMOVED SHALL BE FULLY REMOVED AND REPAINTED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
6. CONTRACTOR SHALL PROTECT ALL LIGHTS, FAA FACILITIES, NAVAIDS AND CABLES AT ALL TIMES DURING CONSTRUCTION. HAND DIG AROUND FAA CABLES.
7. EXISTING RAW WATER MAIN AND FIBER OPTIC LINE (+/- 30" BELOW GROUND LEVEL) TO BE PROTECTED THROUGH DURATION OF WORK. CONTRACTOR TO PERFORM UTILITY SOFT DIG TO CONFIRM DEPTH AND LOCATION OF ALL UTILITIES IN THE WORK AREAS. CONTRACTOR TO PRESENT RESULTS OF THE UTILITY SOFT DIG TO THE ENGINEER.
8. REFER TO THE ELECTRICAL PLAN SHEETS FOR THE SCOPE OF WORK FOR ANY LIGHTING, SIGNAGE, OR OTHER ELECTRICAL COMPONENTS. PRIOR TO STARTING THE MILLING OPERATION, THE CONTRACTOR WILL REMOVE ALL LIGHT FIXTURES AND PROTECT EXISTING BASE CANS. SEE ELECTRICAL SHEETS FOR SCOPE AND DETAILS.
9. CONTRACTOR TO MILL AROUND EXISTING SIGN PAD.
10. REFER TO DEMOLITION LOCATION COORDINATES SHEET C21 FOR DEMOLITION POINT COORDINATES.

LEGEND (WORK)

- BITUMINOUS PAVEMENT MILLING (MAX 2" NOMINAL). SEE DEMO DETAIL 2, SHEET C21 (P-101-5.2).
- CLEARING, GRUBBING (P-151) AND REGRADING (P-152).
- FULL DEPTH ASPHALT PAVEMENT REMOVAL (P-101-5.1). REFER TO DEMO DETAIL 1, SHEET C21.
- FULL DEPTH EXCAVATION (P-152-4.1) FOR NEW FULL DEPTH CONSTRUCTION REFER TO TYPICAL SECTION DETAIL NO. 1, SEE SHEET C15 FOR THICKNESS.
- FULL DEPTH EXCAVATION (P-152-4.1) FOR NEW STABILIZED SHOULDER. REFER TO TYPICAL SECTION NO. 1, SEE SHEET C15 THICKNESS.
- BUTT JOINT OVERLAY TRANSITION TO EXISTING. SEE DETAIL 1 SHEET C15.
- SAWCUT EXISTING PAVEMENT (P-101).
- REMOVE EXISTING PAVEMENT MARKING (P-620-5.6).

LEGEND (LINE TYPE)

- RSA — RUNWAY SAFETY AREA
- ROFA — RUNWAY OBJECT FREE AREA
- RPZ — RUNWAY PROTECTION ZONE
- ROFZ — RUNWAY OBJECT FREE ZONE
- RVZ — RUNWAY VISIBILITY ZONE
- TSA — TAXIWAY SAFETY AREA
- TOFA — TAXIWAY OBJECT FREE AREA
- BRL — BUILDING RESTRICTION LINE

LEGEND (SYMBOL)

- AFL — AIRFIELD LIGHTING CABLE
- COMMUNICATION FIBER OPTIC LINE
- AIRPORT SIGN ON CONCRETE PAD
- CATCH BASIN
- TAXIWAY AND RUNWAY LIGHTS
- CANNISTER
- B.M. — BENCHMARK

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PHONE: 954-535-5100 FAX: 954-739-2247
WWW.KIMLEY-HORN.COM REGISTRY No. 35106

QUANTUM Electrical Engineering, Inc.
2751 VISTA PARKWAY SUITE E-9
WEST PALM BEACH, FL 33411
561-210-9234
LICENSE NO. CA30805

ENGINEER: THOMAS F. O'DONNELL
REG. No: 62478
DATE:
TEL: 561-840-0825
FAX:

DRAWN BY: ADC | DATE: 08/28/2025
DESIGNED BY: KAS | SCALE: AS NOTED
CHECKED BY: TFO | FIELD BOOK:

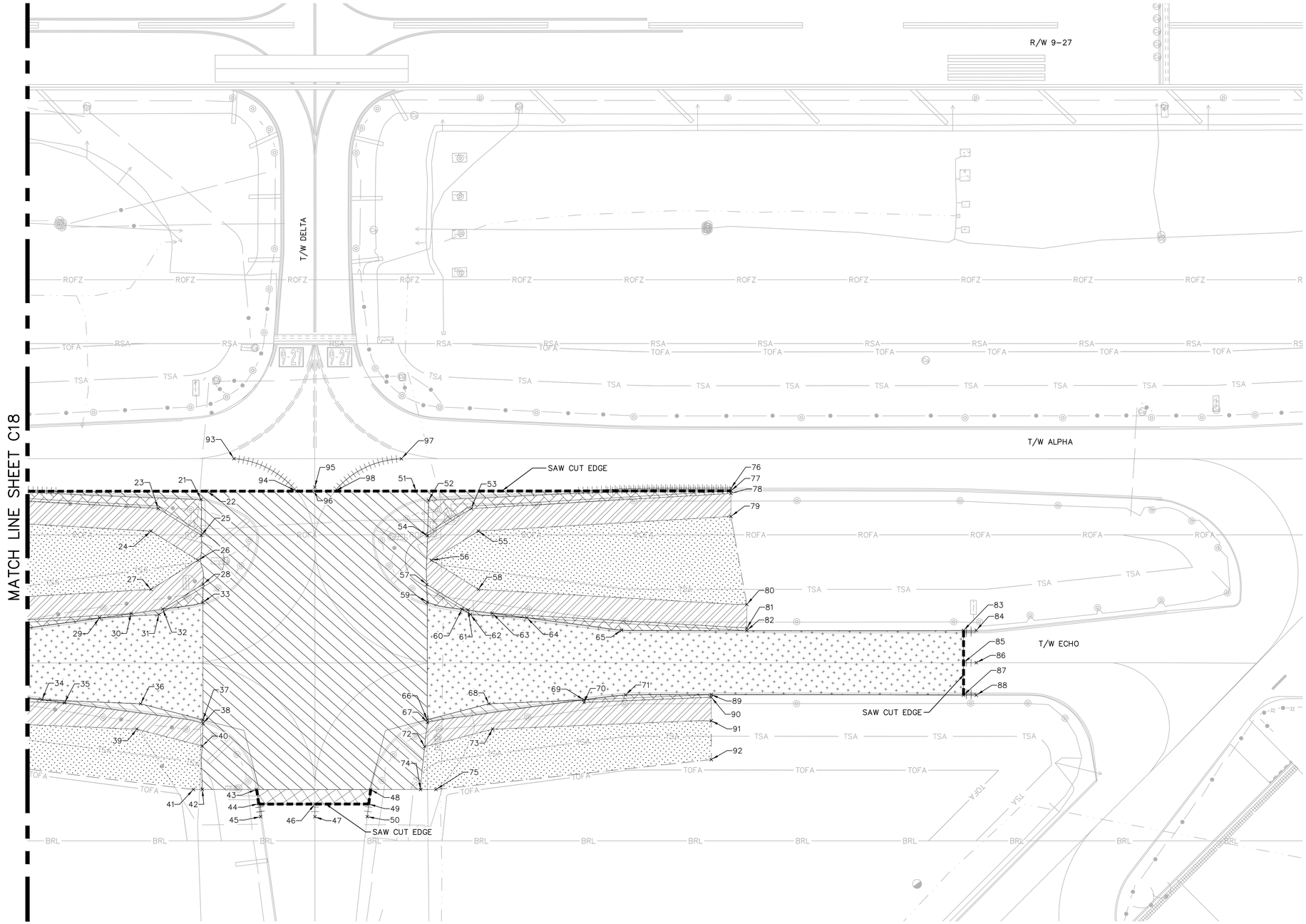
CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

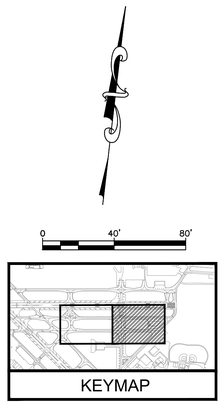
REVISIONS				
NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
DEMOLITION PLAN

SHEET NO. C18 | OF
TOTAL: 37
CAD FILE: 12884-MULTI-DEMO
DRAWING FILE NO.

K:\FTL_AVIATION\044693107 - FXE TW E REHAB DESIGN PHASE\CAD\PLANSHEETS\12884-MULTI-DEMO.DWG





NOTES

1. UNDERGROUND UTILITY LOCATIONS ARE APPROXIMATE. CONTRACTOR TO OBTAIN UNDERGROUND UTILITY LOCATION AS REQUIRED BY LAW. SEE GENERAL NOTES SHEET C01. ALL FACILITIES ARE TO REMAIN EXCEPT WHERE OTHERWISE SHOWN. DURING CONSTRUCTION CONTRACTOR IS TO AVOID DAMAGE TO EXISTING ABOVE GROUND AND UNDERGROUND FACILITIES. CONTRACTOR SHALL UTILIZE SOFT DIGS (P-152-4.3) IN AREAS WHERE UNDERGROUND FACILITIES ARE LOCATED.
2. EXPOSED SUBGRADE AND BASE MATERIAL TO BE KEPT MOIST AND COMPACTED TO MINIMIZE FOD FROM JET BLAST AND SHALL BE TREATED WITH A DUST STABILIZER WHEN REQUESTED BY THE RPR OR OWNER. ALL DUST CONTROL RELATED COSTS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
3. CONTRACTOR WILL PROTECT ALL EXISTING CONCRETE OR ASPHALT PAVEMENT TO REMAIN IN PLACE DURING MILLING AND FULL DEPTH PAVEMENT REMOVAL. ALL CONCRETE OR ASPHALT PAVEMENT DAMAGED DURING MILLING AND REMOVAL SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE BY A METHOD SATISFACTORY TO THE RPR AND OWNER
4. CONTRACTOR SHALL USE A METHOD OF MARKING REMOVAL THAT DOES NOT DAMAGE THE EXISTING PAVEMENT AND JOINT SEALS. ANY DAMAGE CAUSED TO THE EXISTING PAVEMENT AND JOINT SEALS SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
5. CONTRACTOR SHALL PROTECT ALL MARKINGS TO REMAIN. ANY MARKINGS THAT ARE DAMAGED OR INADVERTENTLY REMOVED SHALL BE FULLY REMOVED AND REPAINTED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
6. CONTRACTOR SHALL PROTECT ALL LIGHTS, FAA FACILITIES, NAVAIDS AND CABLES AT ALL TIMES DURING CONSTRUCTION. HAND DIG AROUND FAA CABLES.
7. EXISTING RAW WATER MAIN AND FIBER OPTIC LINE (+/- 30" BELOW GROUND LEVEL) TO BE PROTECTED THROUGH DURATION OF WORK. CONTRACTOR TO PERFORM UTILITY SOFT DIG TO CONFIRM DEPTH AND LOCATION OF ALL UTILITIES IN THE WORK AREAS. CONTRACTOR TO PRESENT RESULTS OF THE UTILITY SOFT DIG TO THE ENGINEER.
8. REFER TO THE ELECTRICAL PLAN SHEETS FOR THE SCOPE OF WORK FOR ANY LIGHTING, SIGNAGE, OR OTHER ELECTRICAL COMPONENTS. PRIOR TO STARTING THE MILLING OPERATION, THE CONTRACTOR WILL REMOVE ALL LIGHT FIXTURES AND PROTECT EXISTING BASE CANS. SEE ELECTRICAL SHEETS FOR SCOPE AND DETAILS.
9. CONTRACTOR TO MILL AROUND EXISTING SIGN PAD.
10. REFER TO DEMOLITION LOCATION COORDINATES SHEET C21 FOR DEMOLITION POINT COORDINATES.

LEGEND (WORK)

- BITUMINOUS PAVEMENT MILLING (MAX 2" NOMINAL). SEE DEMO DETAIL 2, SHEET C21 (P-101-5.2).
- CLEARING, GRUBBING (P-151) AND REGRADING (P-152).
- FULL DEPTH ASPHALT PAVEMENT REMOVAL (P-101-5.1). REFER TO DEMO DETAIL 1, SHEET C21.
- FULL DEPTH EXCAVATION (P-152-4.1) FOR NEW FULL DEPTH CONSTRUCTION REFER TO TYPICAL SECTION DETAIL NO. 1, SEE SHEET C15 FOR THICKNESS.
- FULL DEPTH EXCAVATION (P-152-4.1) FOR NEW STABILIZED SHOULDER. REFER TO TYPICAL SECTION NO. 1, SEE SHEET C15 THICKNESS.
- BUTT JOINT OVERLAY TRANSITION TO EXISTING. SEE DETAIL 1 SHEET C15.
- SAWCUT EXISTING PAVEMENT (P-101).
- REMOVE EXISTING PAVEMENT MARKING (P-620-5.6).

LEGEND (LINE TYPE)

- RSA — RUNWAY SAFETY AREA
- ROFA — RUNWAY OBJECT FREE AREA
- RPZ — RUNWAY PROTECTION ZONE
- ROFZ — RUNWAY OBJECT FREE ZONE
- RVZ — RUNWAY VISIBILITY ZONE
- TSA — TAXIWAY SAFETY AREA
- TOFA — TAXIWAY OBJECT FREE AREA
- BRL — BUILDING RESTRICTION LINE

LEGEND (SYMBOL)

- AFL — AIRFIELD LIGHTING CABLE
- COMMUNICATION FIBER OPTIC LINE
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REG. No: 62478
DATE:
TEL: 561-640-0825
FAX:

DRAWN BY:	DATE:
ADC	08/28/2025
DESIGNED BY:	SCALE:
KAS	AS NOTED
CHECKED BY:	
TFO	
FIELD BOOK:	

REVISIONS

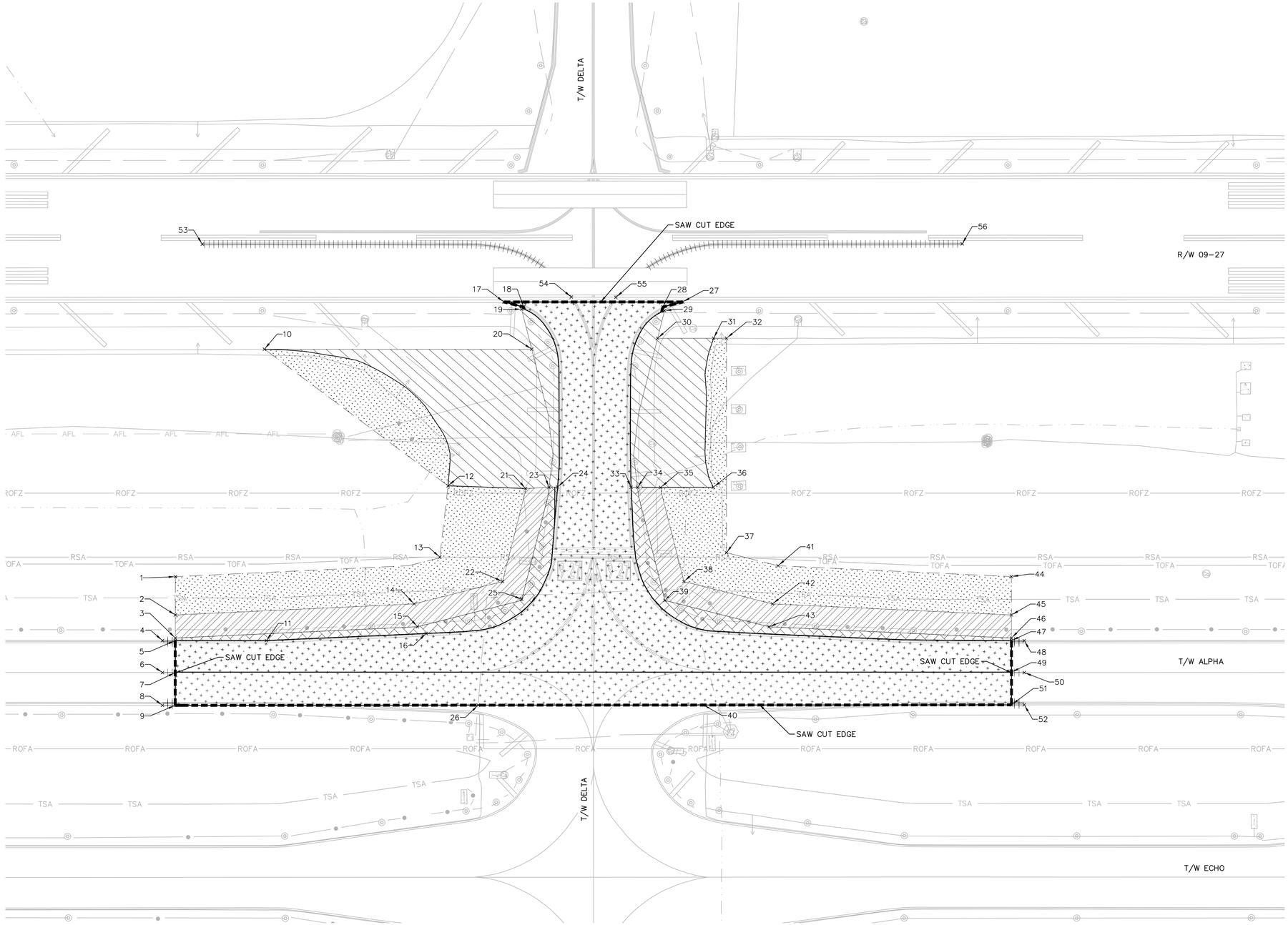
NO.	DESCRIPTION	DATE	BY	CHK'D

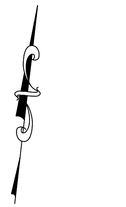
CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
DEMOLITION PLAN

SHEET NO.	OF
C19	
TOTAL:	37
CAD FILE: 12884-MULTI-DEMO	
DRAWING FILE NO.	

K:\FTL_AVIATION\044693107 - FXE TW E REHAB DESIGN PHASE\CAD\PLANSHEETS\12884-MULTI-DEMO.DWG





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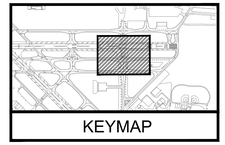

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REG. No: 62478
DATE:
TEL: 561-840-0825
FAX:

DRAWN BY:	DESIGNED BY:	CHECKED BY:
ADC	KAS	TFO

DATE: 08/28/2025
SCALE: AS NOTED
FIELD BOOK:

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS				
NO.	DATE	BY	CK'D	DESCRIPTION

PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
DEMOLITION PLAN - ADD ALT

SHEET NO. C20 OF

TOTAL: 37

CAD FILE: 12884-DEMO-ADDALT

DRAWING FILE NO.

K:\FTL_AVIATION\044693107 - FXE TW E REHAB DESIGN PHASE\CAD\PLANSHEETS\12884-DEMO-ADDALT.DWG

Point Table		
Point #	Northing	Easting
1	678358.11	928992.96
2	678359.27	929002.95
3	678333.21	928995.84
4	678334.37	929005.83
5	678307.18	928998.84
6	678308.96	929008.76
7	678513.96	929367.53
8	678511.64	929367.80
9	678509.66	929368.03
10	678491.73	929370.09
11	678420.47	929353.88
12	678402.09	929355.98
13	678400.10	929356.21
14	678411.58	929455.07
15	678361.42	929463.52
16	678355.46	929410.09
17	678353.47	929410.31
18	678335.20	929412.28
19	678305.25	929415.52
20	678306.70	929428.77
21	678531.90	929597.84
22	678538.78	929601.75
23	678520.85	929565.19
24	678502.62	929561.66
25	678503.86	929601.28

Point Table		
Point #	Northing	Easting
26	678484.16	929600.88
27	678457.24	929566.89
28	678466.01	929607.14
29	678430.37	929529.34
30	678436.64	929553.57
31	678438.42	929575.33
32	678442.95	929577.81
33	678451.74	929608.51
34	678361.51	929491.93
35	678361.09	929509.67
36	678367.22	929569.12
37	678360.32	929619.11
38	678357.51	929619.47
39	678347.12	929568.49
40	678339.88	929620.99
41	678305.18	929617.93
42	678305.98	929624.86
43	678310.83	929666.81
44	678299.93	929670.07
45	678289.99	929672.67
46	678304.76	929713.89
47	678294.83	929715.03
48	678321.09	929756.02
49	678309.64	929755.83
50	678299.64	929755.83

Point Table		
Point #	Northing	Easting
51	678557.67	929764.55
52	678551.58	929775.12
53	678549.01	929809.13
54	678523.97	929777.51
55	678532.06	929816.72
56	678505.15	929782.73
57	678485.94	929781.26
58	678486.69	929821.96
59	678472.11	929783.26
60	678469.77	929810.93
61	678469.74	929815.71
62	678466.43	929818.03
63	678469.39	929834.87
64	678469.01	929862.17
65	678467.81	929937.13
66	678380.63	929793.80
67	678378.45	929794.27
68	678398.53	929840.38
69	678410.12	929914.05
70	678408.15	929914.37
71	678417.70	929946.10
72	678359.36	929794.20
73	678379.10	929845.58
74	678325.59	929794.84
75	678326.98	929806.83

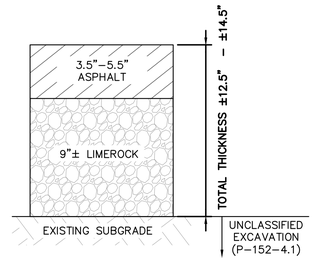
Point Table		
Point #	Northing	Easting
76	678588.24	930009.58
77	678586.13	930009.82
78	678584.14	930010.06
79	678566.23	930012.13
80	678499.11	930032.37
81	678480.73	930034.50
82	678478.74	930034.73
83	678498.34	930203.52
84	678499.56	930213.44
85	678473.20	930206.42
86	678474.35	930216.35
87	678447.96	930209.33
88	678449.07	930219.27
89	678425.65	930012.78
90	678423.66	930013.01
91	678405.29	930015.16
92	678375.06	930018.70
93	678566.58	929619.76
94	678546.87	929671.48
95	678551.67	929685.32
96	678548.52	929685.68
97	678581.56	929750.18
98	678550.34	929701.37

POINT TABLE – BASE BID

Point Table		
Point #	Northing	Easting
1	678610.84	929349.60
2	678581.07	929353.00
3	678563.16	929355.04
4	678560.05	929345.27
5	678561.19	929355.20
6	678535.15	929348.14
7	678536.30	929358.08
8	678509.71	929351.08
9	678510.86	929361.01
10	678795.56	929398.35
11	678569.35	929425.99
12	678705.88	929553.17
13	678649.78	929553.17
14	678611.10	929537.42
15	678593.62	929542.10
16	678589.18	929549.41
17	678853.71	929579.96
18	678851.59	929595.83
19	678849.76	929594.38
20	678819.52	929605.86
21	678710.73	929613.67
22	678636.41	929604.10
23	678713.73	929631.68
24	678714.73	929638.32
25	678624.41	929620.58
26	678538.17	929596.30
27	678869.75	929718.90
28	678864.17	929703.95

Point Table		
Point #	Northing	Easting
29	678861.41	929705.60
30	678839.28	929702.64
31	678844.30	929746.18
32	678845.46	929756.10
33	678721.14	929695.39
34	678721.66	929700.44
35	678723.69	929718.46
36	678728.52	929759.31
37	678678.86	929775.34
38	678652.66	929744.91
39	678636.24	929731.89
40	678558.45	929771.26
41	678673.35	929816.58
42	678643.21	929815.61
43	678625.13	929815.03
44	678685.84	929998.74
45	678656.00	930002.21
46	678638.11	930004.33
47	678636.12	930004.57
48	678637.17	930014.51
49	678611.61	930007.39
50	678612.40	930017.36
51	678586.18	930010.32
52	678587.34	930020.25
53	678871.60	929340.68
54	678863.60	929631.92
55	678867.34	929666.55
56	678939.93	929930.68

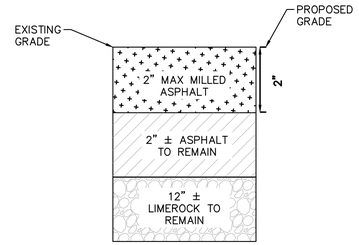
POINT TABLE – ADD ALT



DEMO DETAIL 1 – FULL DEPTH ASPHALT PAVEMENT REMOVAL (P–101–5.1)
EXISTING TAXIWAY DELTA (T/W D)

NOTE:

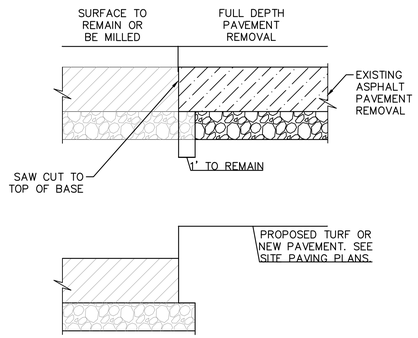
FULL DEPTH REMOVAL TO INCLUDE ALL ASPHALT AND LIMEROCK UP TO TOP OF EXISTING SUBGRADE.



DEMO DETAIL 2 – VARIABLE DEPTH ASPHALT MILLING (P–101–5.2)

NOTE:

CONTRACTOR SHALL ENSURE THAT THE JOINT BETWEEN THE MILLED AREA AND PAVEMENT TO REMAIN IS VERTICALLY SAWCUT BEFORE PAVING.



DEMO DETAIL 3 – FULL DEPTH ASPHALT PAVEMENT REMOVAL ADJACENT TO ASPHALT PAVEMENT TO REMAIN (P–101–5.1)

ENGINEER: THOMAS F. O'DONNELL
REG. No: 62478
DATE:
TEL: 561-640-0825
FAX:

DRAWN BY: ADC | DATE: 08/28/2025
DESIGNED BY: KAS | SCALE: AS NOTED
CHECKED BY: TFO | FIELD BOOK:

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100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
DEMOLITION COORDINATES AND DETAILS

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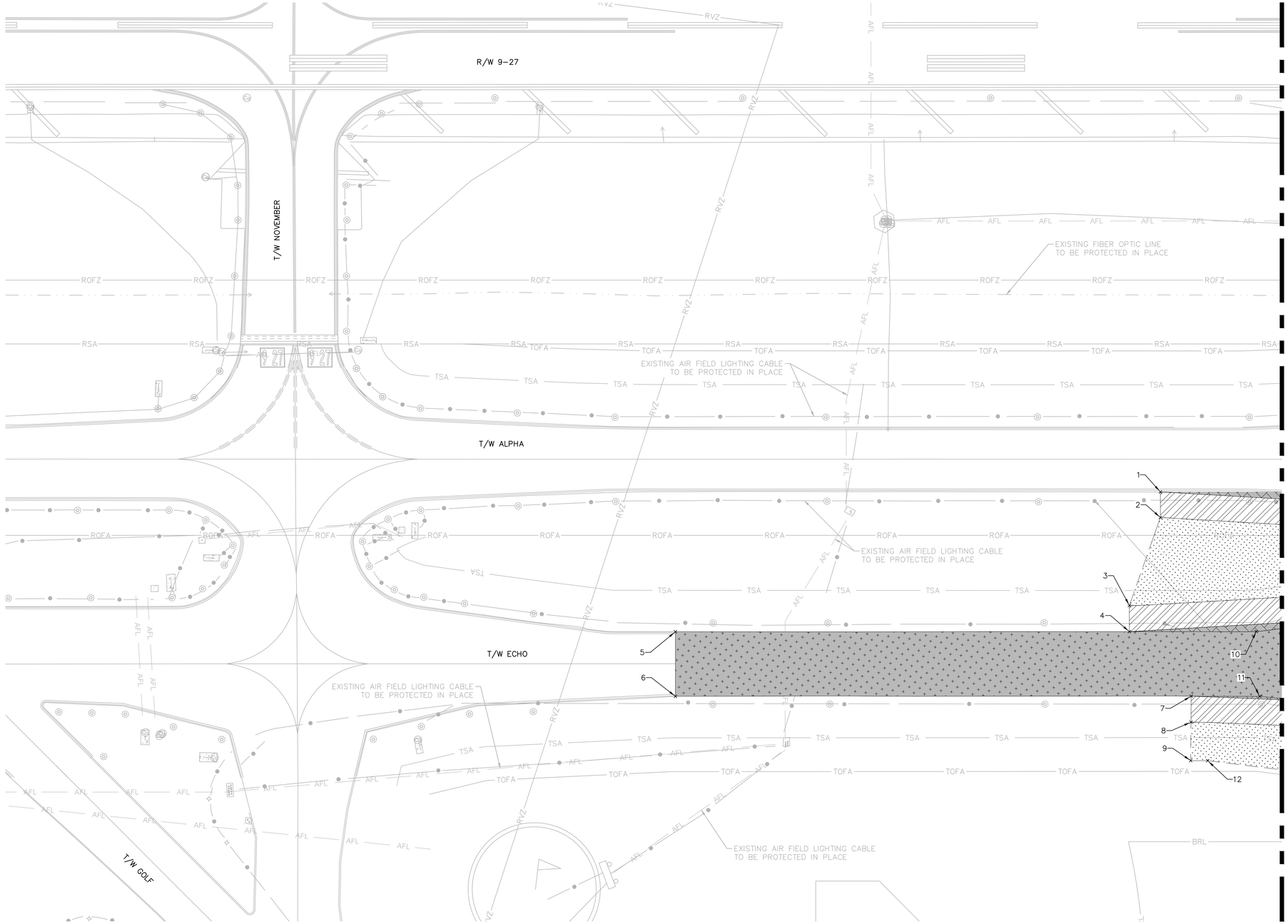
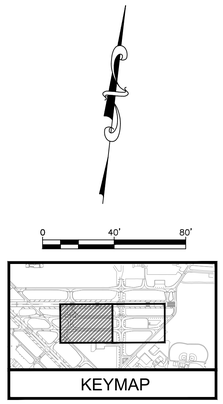
LICENSE NO. CA30005

BID SET

SHEET NO. C21 | OF
TOTAL: 37
CAD FILE: 12884–MULTI–DEMO
DRAWING FILE NO.

K:\FTL_AVIATION\044693107 – FXE TW E REHAB DESIGN PHASE\CAD\PLANSHEETS\12884–MULTI–DEMO.DWG





NOTES

1. UNDERGROUND UTILITY LOCATIONS ARE APPROXIMATE, CONTRACTOR TO OBTAIN UNDERGROUND UTILITY LOCATION AS REQUIRED BY LAW. SEE GENERAL NOTES SHEET C01. ALL FACILITIES ARE TO REMAIN EXCEPT WHERE OTHERWISE SHOWN. DURING CONSTRUCTION CONTRACTOR IS TO AVOID DAMAGE TO EXISTING ABOVE GROUND AND UNDERGROUND FACILITIES.
2. WHERE NARROW SHOULDER AREAS ADJACENT TO EXISTING PAVEMENT ARE IMPACTED BY CONSTRUCTION, COMPACT SHOULDER MATERIAL CONCURRENTLY WITH ADJACENT NARROW SECTIONS TO ACHIEVE SUFFICIENT DENSITY. EXISTING PAVEMENT TO REMAIN UNLESS OTHERWISE NOTED.
3. REFER TO SHEETS C15 FOR "TYPICAL SECTIONS".
4. REFER TO SHEETS C18–C19 FOR DEMOLITION REQUIREMENTS.
5. REFER TO SHEETS C26–C27 FOR GRADING PLANS.
6. CONTRACTOR WILL PROTECT ALL TAXIWAY EDGE LIGHTS TO REMAIN AS PER ELECTRICAL SHEETS DURING CONSTRUCTION.
7. REFER TO THE ELECTRICAL PLAN SHEETS FOR TAXIWAY EDGE LIGHTS, SIGNS AND OTHER ELECTRICAL ITEMS TO BE RELOCATED.
8. CONTRACTOR TO PAVE AROUND EXISTING SIGNS AND SIGN PADS WHICH ARE SCHEDULED TO REMAIN.
9. REFER TO GEOMETRY LOCATION COORDINATES SHEET C25 FOR GEOMETRY POINT COORDINATES.

LEGEND (WORK)

- CONSTRUCT NEW FULL DEPTH TAXIWAY PAVEMENT SECTION TO GRADE. SEE TYPICAL SECTION SHEET C15.
- CONSTRUCT TAXIWAY OVERLAY.
- CONSTRUCT STABILIZED IN 1, 2" NOMINAL LIFT SHOULDER. WITH SOD 20' ADJACENT TO PAVEMENT EDGE. SEE TYPICAL SECTION SHEET C15.
- BUTT JOINT OVERLAY TRANSITION TO EXISTING. SEE DETAIL 1 SHEET C15.
- HYDROSEED (S-906-5.1)
- PROPOSED PAVEMENT (P-401-8.1)

LEGEND (SYMBOL)

- AFL — AIRFIELD LIGHTING CABLE
- COMMUNICATION FIBER OPTIC LINE
- AIRPORT SIGN ON CONCRETE PAD
- CATCH BASIN
- TAXIWAY AND RUNWAY LIGHTS
- CANNISTER
- B.M. — BENCHMARK

LEGEND (LINE TYPE)

- RSA — RUNWAY SAFETY AREA
- ROFA — RUNWAY OBJECT FREE AREA
- RPZ — RUNWAY PROTECTION ZONE
- ROFZ — RUNWAY OBJECT FREE ZONE
- RVZ — RUNWAY VISIBILITY ZONE
- TSA — TAXIWAY SAFETY AREA
- TOFA — TAXIWAY OBJECT FREE AREA
- BRL — BUILDING RESTRICTION LINE

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811 Know what's below. Call before you dig.
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CALL 48 HOURS BEFORE DIGGING FAA FACILITIES 954-356-7212

BID SET

Kimley»Horn
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8201 PETERS ROAD, SUITE 2200, PLANTATION, FL 33324
PHONE: 954-535-5100 FAX: 954-739-2247
WWW.KIMLEY-HORN.COM REGISTRY No. 35106

QUANTUM Electrical Engineering, Inc.
2751 VISTA PARKWAY SUITE I-9
WEST PALM BEACH, FL 33411
561-210-9234
LICENSE NO. CA30805

ENGINEER: THOMAS F. O'DONNELL
REG. No: 62478
DATE:
TEL: 561-640-0825
FAX:

DRAWN BY: ADC | DESIGNED BY: KAS | CHECKED BY: TFO
DATE: 08/28/2025 | SCALE: AS NOTED
FIELD BOOK:

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

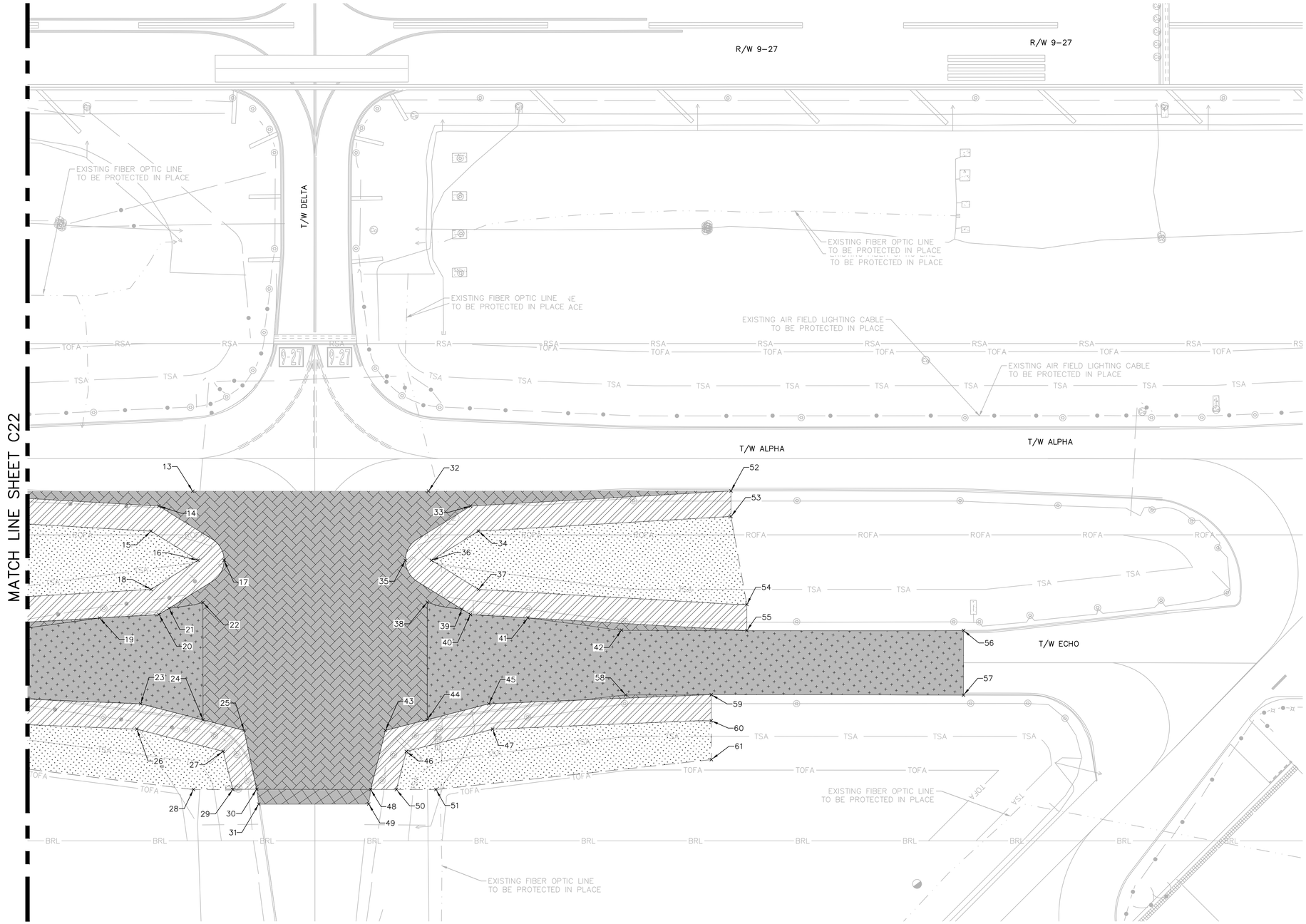
REVISIONS

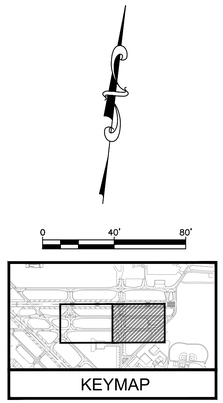
NO.	DESCRIPTION	DATE	BY	CHK'D

PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
PAVEMENT GEOMETRY PLAN

SHEET NO. C22 OF
TOTAL: 37
CAD FILE: 12884-MULTI-GEOM
DRAWING FILE NO.

K:\FTL_AVIATION\044693107 - FXE TW E REHAB DESIGN PHASE\CAD\PLANSHEETS\12884-MULTI-GEOM.DWG





NOTES

1. UNDERGROUND UTILITY LOCATIONS ARE APPROXIMATE, CONTRACTOR TO OBTAIN UNDERGROUND UTILITY LOCATION AS REQUIRED BY LAW. SEE GENERAL NOTES SHEET C01. ALL FACILITIES ARE TO REMAIN EXCEPT WHERE OTHERWISE SHOWN. DURING CONSTRUCTION CONTRACTOR IS TO AVOID DAMAGE TO EXISTING ABOVE GROUND AND UNDERGROUND FACILITIES.
2. WHERE NARROW SHOULDER AREAS ADJACENT TO EXISTING PAVEMENT ARE IMPACTED BY CONSTRUCTION, COMPACT SHOULDER MATERIAL CONCURRENTLY WITH ADJACENT NARROW SECTIONS TO ACHIEVE SUFFICIENT DENSITY. EXISTING PAVEMENT TO REMAIN UNLESS OTHERWISE NOTED.
3. REFER TO SHEETS C15 FOR "TYPICAL SECTIONS".
4. REFER TO SHEETS C18–C19 FOR DEMOLITION REQUIREMENTS.
5. REFER TO SHEETS C26–C27 FOR GRADING PLANS.
6. CONTRACTOR WILL PROTECT ALL TAXIWAY EDGE LIGHTS TO REMAIN AS PER ELECTRICAL SHEETS DURING CONSTRUCTION.
7. REFER TO THE ELECTRICAL PLAN SHEETS FOR TAXIWAY EDGE LIGHTS, SIGNS AND OTHER ELECTRICAL ITEMS TO BE RELOCATED.
8. CONTRACTOR TO PAVE AROUND EXISTING SIGNS AND SIGN PADS WHICH ARE SCHEDULED TO REMAIN.
9. REFER TO GEOMETRY LOCATION COORDINATES SHEET C25 FOR GEOMETRY POINT COORDINATES.

LEGEND (WORK)

- CONSTRUCT NEW FULL DEPTH TAXIWAY PAVEMENT SECTION TO GRADE. SEE TYPICAL SECTION SHEET C15.
- CONSTRUCT TAXIWAY OVERLAY.
- CONSTRUCT STABILIZED IN 1, 2" NOMINAL LIFT SHOULDER. WITH SOD 20' ADJACENT TO PAVEMENT EDGE. SEE TYPICAL SECTION SHEET C15.
- BUTT JOINT OVERLAY TRANSITION TO EXISTING. SEE DETAIL 1 SHEET C15.
- HYDROSEED (S-906-5.1)
- PROPOSED PAVEMENT (P-401-8.1)

LEGEND (SYMBOL)

- AFL — AIRFIELD LIGHTING CABLE
- COMMUNICATION FIBER OPTIC LINE
- AIRPORT SIGN ON CONCRETE PAD
- CATCH BASIN
- TAXIWAY AND RUNWAY LIGHTS
- CANNISTER
- B.M. — BENCHMARK

LEGEND (LINE TYPE)

- RSA — RUNWAY SAFETY AREA
- ROFA — RUNWAY OBJECT FREE AREA
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WEST PALM BEACH, FL 33411
561-210-9234
LICENSE NO. CA30805

BID SET

ENGINEER: THOMAS F. O'DONNELL
REG. No: 62478
DATE:
TEL: 561-640-0825
FAX:

DRAWN BY:	DESIGNED BY:	CHECKED BY:	FIELD BOOK:
ADC	KAS	TFO	

DATE: 08/28/2025
SCALE: AS NOTED

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS				
NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
PAVEMENT GEOMETRY PLAN

SHEET NO. C23 OF
TOTAL: 37
CAD FILE: 12884-MULTI-GEOM
DRAWING FILE NO.

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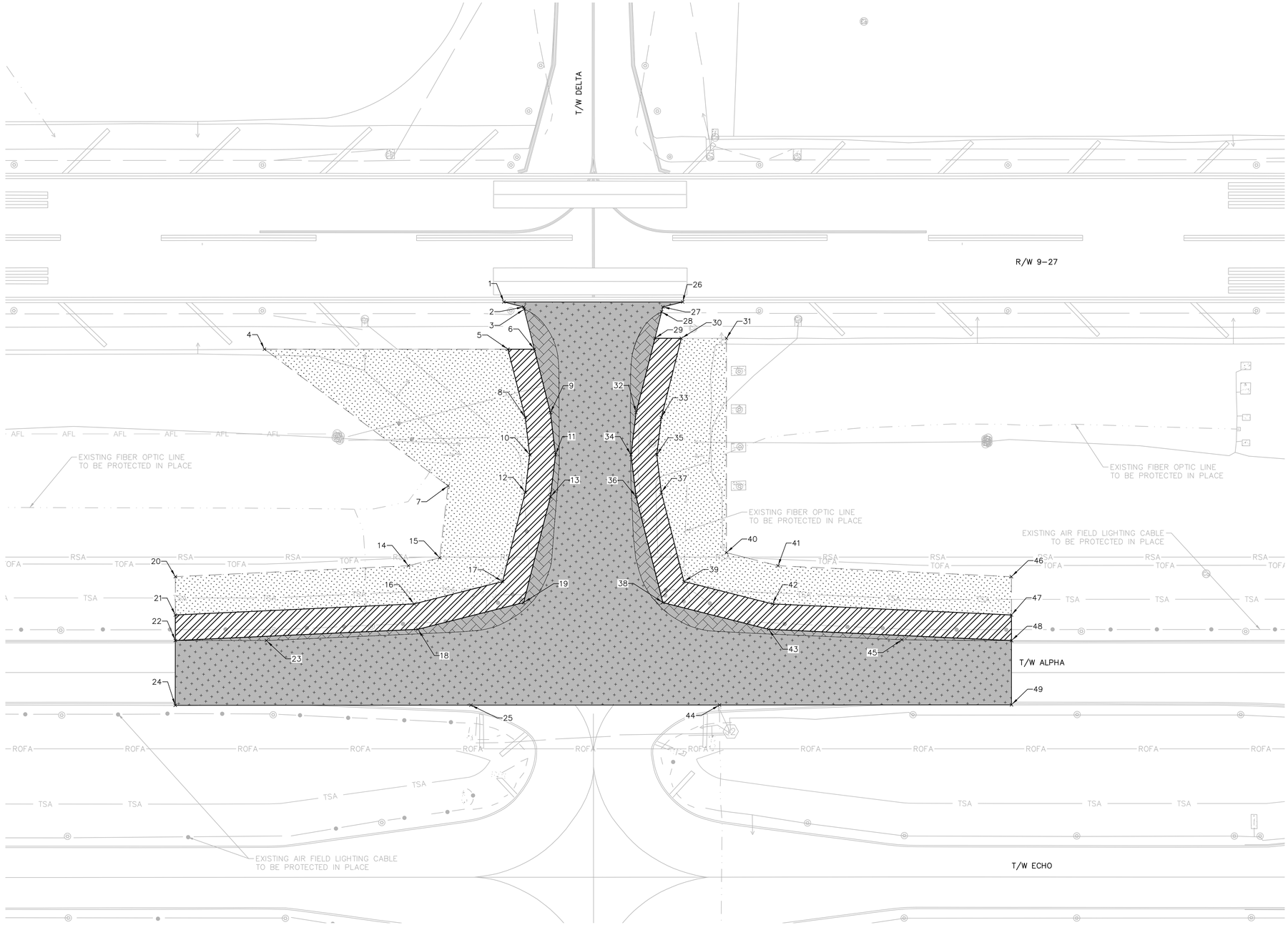

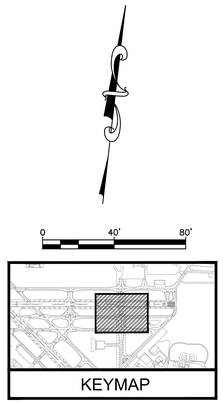

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3. REFER TO SHEET C15 FOR "TYPICAL SECTIONS".
4. REFER TO SHEET C20 FOR DEMOLITION REQUIREMENTS.
5. REFER TO SHEET C28 FOR GRADING PLANS.
6. CONTRACTOR WILL PROTECT ALL TAXIWAY EDGE LIGHTS TO REMAIN AS PER ELECTRICAL SHEETS DURING CONSTRUCTION.
7. REFER TO THE ELECTRICAL PLAN SHEETS FOR TAXIWAY EDGE LIGHTS, SIGNS AND OTHER ELECTRICAL ITEMS TO BE RELOCATED.
8. CONTRACTOR TO PAVE AROUND EXISTING SIGNS AND SIGN PADS WHICH ARE SCHEDULED TO REMAIN.
9. REFER TO GEOMETRY LOCATION COORDINATES SHEET C25 FOR GEOMETRY POINT COORDINATES.

LEGEND (WORK)

- CONSTRUCT NEW FULL DEPTH TAXIWAY PAVEMENT SECTION TO GRADE. SEE TYPICAL SECTION SHEET C15.
- CONSTRUCT TAXIWAY OVERLAY.
- CONSTRUCT STABILIZED IN 1, 2" NOMINAL LIFT SHOULDER. WITH SOD 20' ADJACENT TO PAVEMENT EDGE. SEE TYPICAL SECTION SHEET C15.
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- PROPOSED PAVEMENT (P-401-8.1)

LEGEND (SYMBOL)

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- AIRPORT SIGN ON CONCRETE PAD
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WEST PALM BEACH, FL 33411
561-210-9234
LICENSE NO. CA30805

BID SET

ENGINEER: THOMAS F. O'DONNELL
REG. No: 62478
DATE:
TEL: 561-640-0825
FAX:

DRAWN BY:	DESIGNED BY:	CHECKED BY:
ADC	KAS	TFO

DATE: 08/28/2025
SCALE: AS NOTED
FIELD BOOK:

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS				
NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
PAVEMENT GEOMETRY PLAN - ADD ALT

SHEET NO. C24 OF
TOTAL: 37
CAD FILE: 12884-MULTI-GEOM - ADDALT
DRAWING FILE NO.

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CAM #26-0689
Exhibit 1B
Page 19 of 175

Point Table		
Point #	Northing	Easting
1	678511.64	929367.80
2	678491.73	929370.09
3	678420.46	929353.89
4	678400.10	929356.21
5	678359.27	929002.95
6	678308.96	929008.76
7	678355.46	929410.09
8	678335.20	929412.28
9	678305.25	929415.52
10	678411.57	929454.95
11	678361.42	929463.52
12	678306.70	929428.77
13	678537.49	929590.58
14	678522.87	929565.58
15	678502.62	929561.66
16	678484.16	929600.88
17	678486.50	929621.20
18	678457.24	929566.89
19	678430.37	929529.34
20	678438.42	929575.33
21	678444.19	929582.63

Point Table		
Point #	Northing	Easting
22	678451.74	929608.51
23	678367.22	929569.12
24	678360.32	929619.11
25	678355.77	929652.11
26	678347.12	929568.49
27	678337.58	929637.65
28	678305.18	929617.93
29	678308.73	929648.70
30	678311.09	929667.27
31	678299.67	929670.14
32	678558.80	929774.29
33	678550.89	929808.28
34	678532.06	929816.72
35	678502.80	929762.42
36	678505.15	929782.73
37	678486.69	929821.96
38	678472.11	929783.26
39	678469.77	929810.93
40	678466.43	929818.03
41	678468.99	929863.12
42	678467.81	929937.13

Point Table		
Point #	Northing	Easting
43	678368.48	929762.19
44	678380.63	929793.80
45	678398.53	929840.38
46	678354.03	929780.35
47	678379.10	929845.58
48	678321.13	929755.99
49	678309.63	929755.79
50	678323.43	929776.03
51	678326.98	929806.83
52	678586.13	930009.83
53	678566.23	930012.13
54	678499.11	930032.37
55	678478.74	930034.73
56	678498.34	930203.52
57	678447.96	930209.33
58	678417.70	929946.10
59	678425.65	930012.78
60	678405.29	930015.14
61	678375.06	930018.70

POINT TABLE – BASE BID

Point Table		
Point #	Northing	Easting
1	678853.71	929579.96
2	678851.59	929595.83
3	678849.95	929596.45
4	678795.56	929398.35
5	678817.39	929587.42
6	678819.76	929607.91
7	678705.88	929553.17
8	678765.95	929606.94
9	678771.85	929626.09
10	678737.31	929613.82
11	678739.62	929633.83
12	678707.86	929613.65
13	678706.47	929633.64
14	678640.22	929529.60
15	678649.16	929553.17
16	678611.10	929537.42
17	678636.41	929604.10
18	678591.68	929542.62
19	678621.94	929622.34
20	678610.84	929349.60
21	678581.07	929353.00
22	678561.23	929355.26
23	678569.35	929425.99
24	678510.86	929361.01
25	678537.49	929590.60

Point Table		
Point #	Northing	Easting
26	678869.75	929718.90
27	678864.07	929703.94
28	678860.13	929703.41
29	678839.04	929700.59
30	678841.41	929721.09
31	678845.45	929756.11
32	678779.53	929692.64
33	678778.15	929712.63
34	678746.39	929692.45
35	678748.70	929712.46
36	678714.15	929700.18
37	678720.06	929719.34
38	678634.42	929730.45
39	678652.66	929744.91
40	678678.86	929775.34
41	678673.35	929816.58
42	678643.21	929815.61
43	678623.12	929814.96
44	678559.89	929783.63
45	678626.97	929919.42
46	678685.77	929998.75
47	678656.00	930002.21
48	678636.12	930004.57
49	678586.22	930010.32

POINT TABLE – ADD ALT

ENGINEER: THOMAS F. O'DONNELL
REG. No: 62478
DATE:
TEL: 561-640-0825
FAX:

DRAWN BY: ADC | DATE: 08/28/2025
DESIGNED BY: KAS | SCALE: AS NOTED
CHECKED BY: TFO
FIELD BOOK:

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
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100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
PAVEMENT GEOMETRY COORDINATES
COORDINATES

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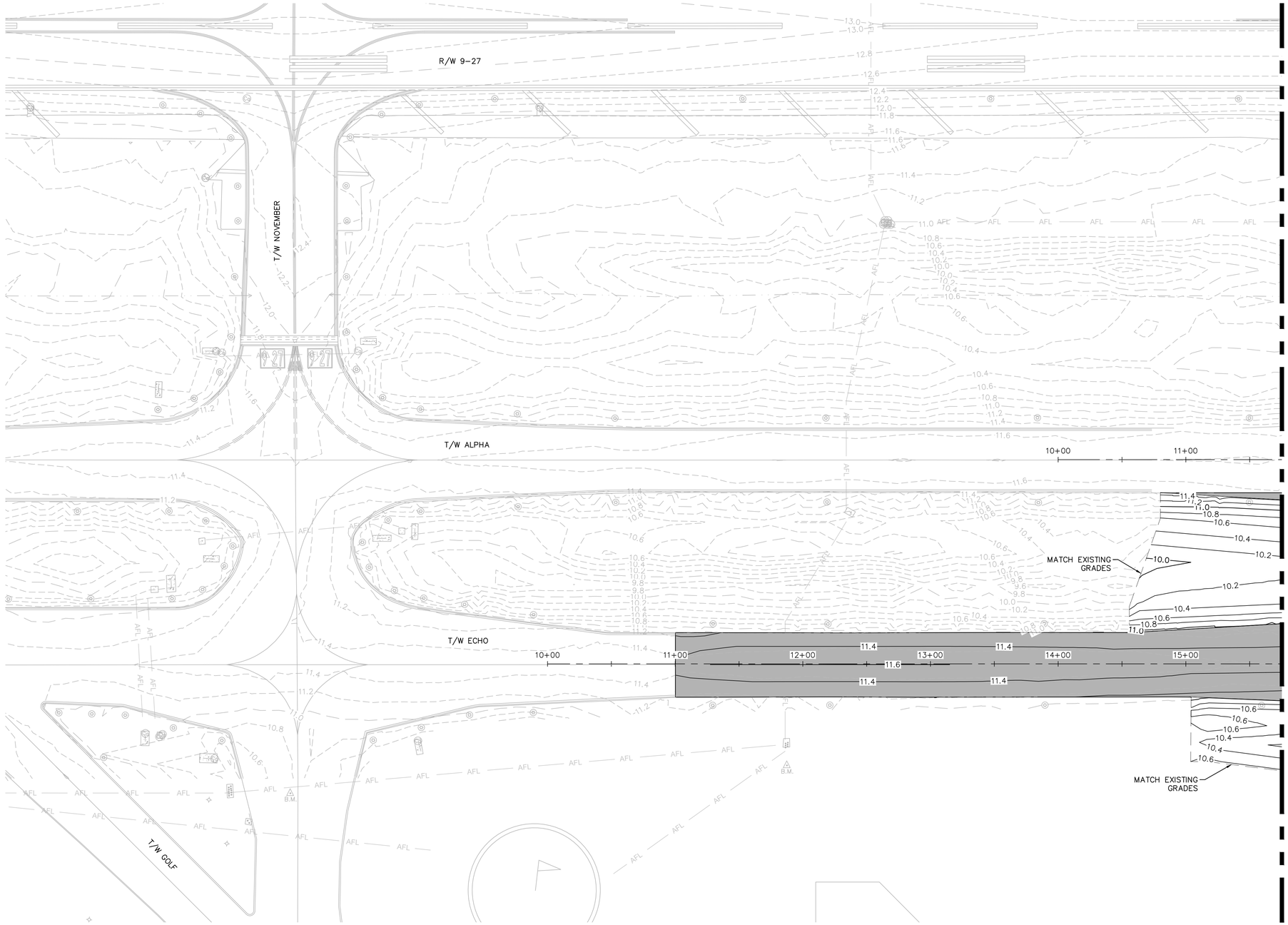
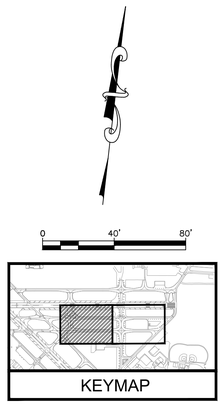
QUANTUM Electrical Engineering, Inc.
2159 VISTA PARKWAY SUITE I-9
WEST PALM BEACH, FL 33411
561-210-9224
LICENSE NO. CA30805

BID SET

SHEET NO. C25 | OF
TOTAL: 37
CAD FILE: 12884-MULTI-GEOM
DRAWING FILE NO.

K:\FTL_AVIATION\044693107 - FXE TW E REHAB DESIGN PHASE\CAD\PLANSHEETS\12884-MULTI-GEOM.DWG





NOTES

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2. CONTRACTOR SHALL GRADE AROUND ALL EXISTING STRUCTURES TO REMAIN, INCLUDING BUT NOT LIMITED TO TAXIWAY AND RUNWAY SIGNAGE, WIND SOCKS, DRAINAGE INLETS AND ELECTRICAL MANHOLES.
3. REFER TO SHEET C15 FOR "TYPICAL SECTIONS."
4. REFER TO SHEETS C18– C19 FOR DEMOLITION REQUIREMENTS.
5. REFER TO SHEETS C22 – C23 FOR PAVING REQUIREMENTS.
6. CONTRACTOR WILL PROTECT ALL TAXIWAY EDGE LIGHTS DURING CONSTRUCTION.
7. REFER TO THE ELECTRICAL PLAN SHEETS FOR THE SCOPE OF WORK FOR ANY LIGHTING, SIGNAGE, OR OTHER ELECTRICAL COMPONENTS.
8. REFER TO SHEET E504 FOR SIGN GRADING AND FILL DETAIL.

LEGEND

- B.M. — BENCHMARK
- ELECTRIC HAND HOLE
- TAXIWAY SIGN
- TAXIWAY EDGE LIGHT
- COMMUNICATION VAULT
- CONCRETE PAD
- EXISTING FIBER PULL BOX
- EXISTING FIBER COMM CABINET
- UM — UTILITY BOX
- 11.00' — EXISTING CONTOUR
- 13.00' — PROPOSED CONTOUR

!!WARNING !!

THERE ARE A NUMBER OF AIRPORT UTILITIES, PUBLIC UTILITIES, FAA LIGHTING, COMMUNICATIONS, UNDERGROUND CABLES AND PIPES TRANSVERSING THE AIRFIELD PROPERTY AREAS. THE ENGINEER HAS MADE EVERY ATTEMPT TO SHOW THE APPROXIMATE LOCATIONS OF ALL ITEMS. HOWEVER, THE ENGINEER IS NOT RESPONSIBLE FOR SHOWING OR LOCATING EVERY ITEM CURRENTLY IN PLACE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE EVERY ITEM LOCATED, FLAGGED, AND IDENTIFIED PRIOR TO START UP OF CONSTRUCTION. ANY DAMAGE DONE TO ANY OF THE EXISTING ITEMS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL REPAIR THE DAMAGES, CAUSED BY HIS ACTIONS, WITH NO ADDITIONAL COMPENSATION.

THE ELEVATIONS SHOWN HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
TO CONVERT THE ELEVATIONS HEREON TO NATIONAL GEODETIC VERTICAL DATUM (NGVD29) ADD 1.585 FEET.

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QUANTUM Electrical Engineering, Inc.
2759 VISTA PARKWAY SUITE I-9
WEST PALM BEACH, FL 33411
561-210-9224
LICENSE NO. CA30805

BID SET

ENGINEER: THOMAS F. O'DONNELL
REG. No: 62478
DATE:
TEL: 561-840-0825
FAX:

DRAWN BY: ADC | DATE: 08/28/2025
DESIGNED BY: KAS | SCALE: AS NOTED
CHECKED BY: TFO | FIELD BOOK:

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
GRADING PLAN

SHEET NO. C26 OF
TOTAL: 37
CAD FILE: 12884-MULTI-GRAD
DRAWING FILE NO.

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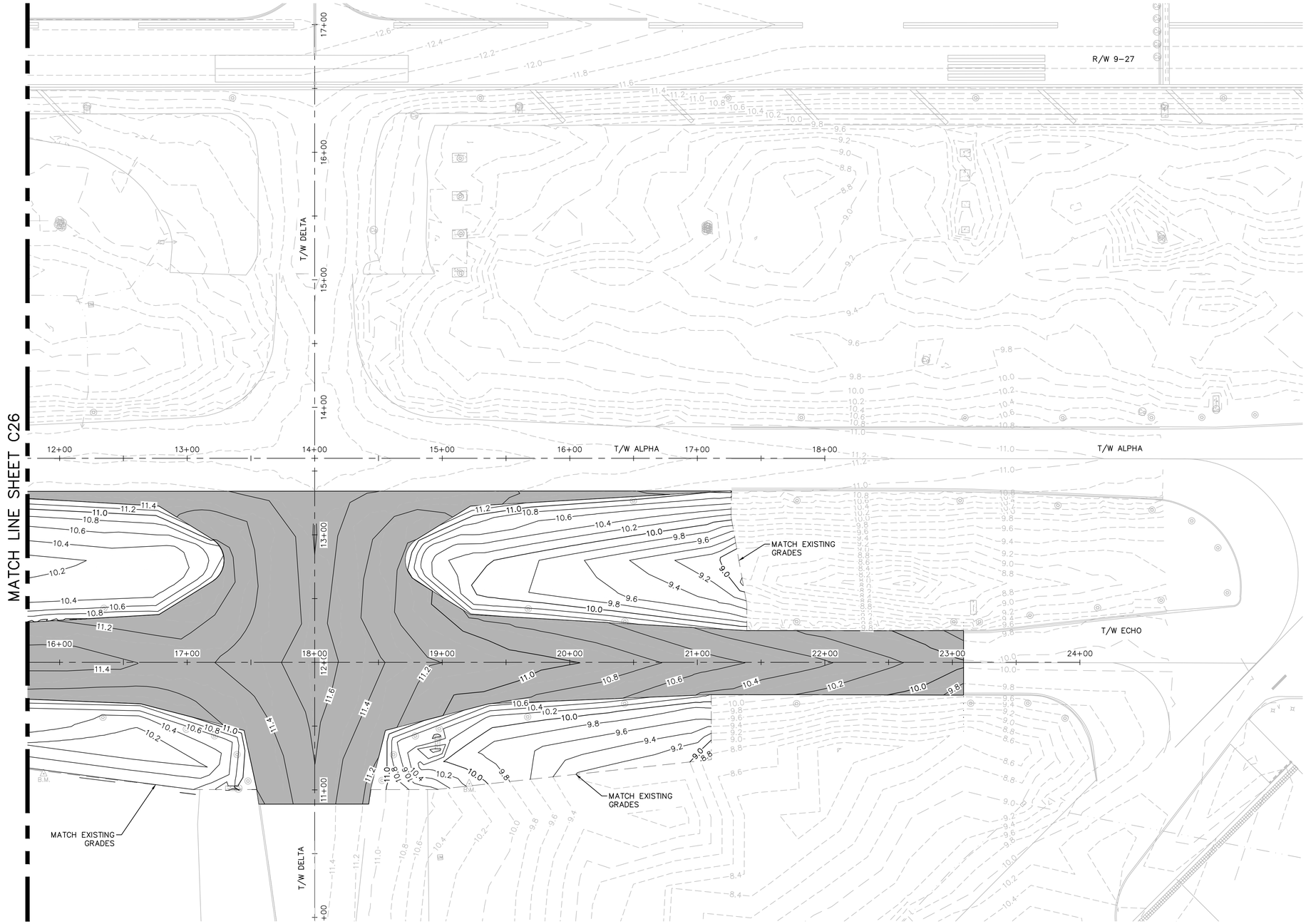

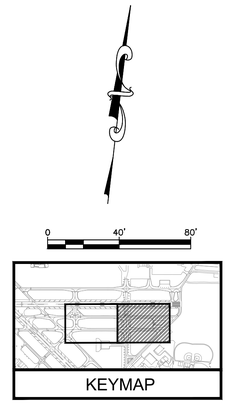

NOTES

1. UNDERGROUND UTILITY LOCATIONS ARE APPROXIMATE. CONTRACTOR TO OBTAIN UNDERGROUND UTILITY LOCATION AS REQUIRED BY LAW. SEE GENERAL NOTES SHEET C01. ALL FACILITIES ARE TO REMAIN EXCEPT WHERE OTHERWISE SHOWN. DURING CONSTRUCTION CONTRACTOR IS TO AVOID DAMAGE TO EXISTING ABOVE GROUND AND UNDERGROUND FACILITIES.
2. CONTRACTOR SHALL GRADE AROUND ALL EXISTING STRUCTURES TO REMAIN, INCLUDING BUT NOT LIMITED TO TAXIWAY AND RUNWAY SIGNAGE, WIND SOCKS, DRAINAGE INLETS AND ELECTRICAL MANHOLES.
3. REFER TO SHEET C15 FOR "TYPICAL SECTIONS."
4. REFER TO SHEETS C18– C19 FOR DEMOLITION REQUIREMENTS.
5. REFER TO SHEETS C22 – C23 FOR PAVING REQUIREMENTS.
6. CONTRACTOR WILL PROTECT ALL TAXIWAY EDGE LIGHTS DURING CONSTRUCTION.
7. REFER TO THE ELECTRICAL PLAN SHEETS FOR THE SCOPE OF WORK FOR ANY LIGHTING, SIGNAGE, OR OTHER ELECTRICAL COMPONENTS.
8. REFER TO SHEET E504 FOR SIGN GRADING AND FILL DETAIL.

LEGEND

- BENCHMARK
- ELECTRIC HAND HOLE
- TAXIWAY SIGN
- TAXIWAY EDGE LIGHT
- COMMUNICATION VAULT
- CONCRETE PAD
- EXISTING FIBER PULL BOX
- EXISTING FIBER COMM CABINET
- UTILITY BOX
- EXISTING CONTOUR
- PROPOSED CONTOUR

!!WARNING !!

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PHONE: 954-535-5100 FAX: 954-739-2247
WWW.KIMLEY-HORN.COM REGISTRY No. 35106

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561-210-9234
LICENSE NO. CA30805

BID SET

ENGINEER: THOMAS F. O'DONNELL
REG. No: 62478
DATE:
TEL: 561-840-0825
FAX:

DRAWN BY:	DATE:
ADC	08/28/2025
DESIGNED BY:	SCALE:
KAS	AS NOTED
CHECKED BY:	
TFO	
FIELD BOOK:	

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DESCRIPTION	DATE	BY	CH'D

PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
GRADING PLAN

SHEET NO.	OF
C27	

TOTAL: 37
CAD FILE: 12884-MULTI-GRAD
DRAWING FILE NO.

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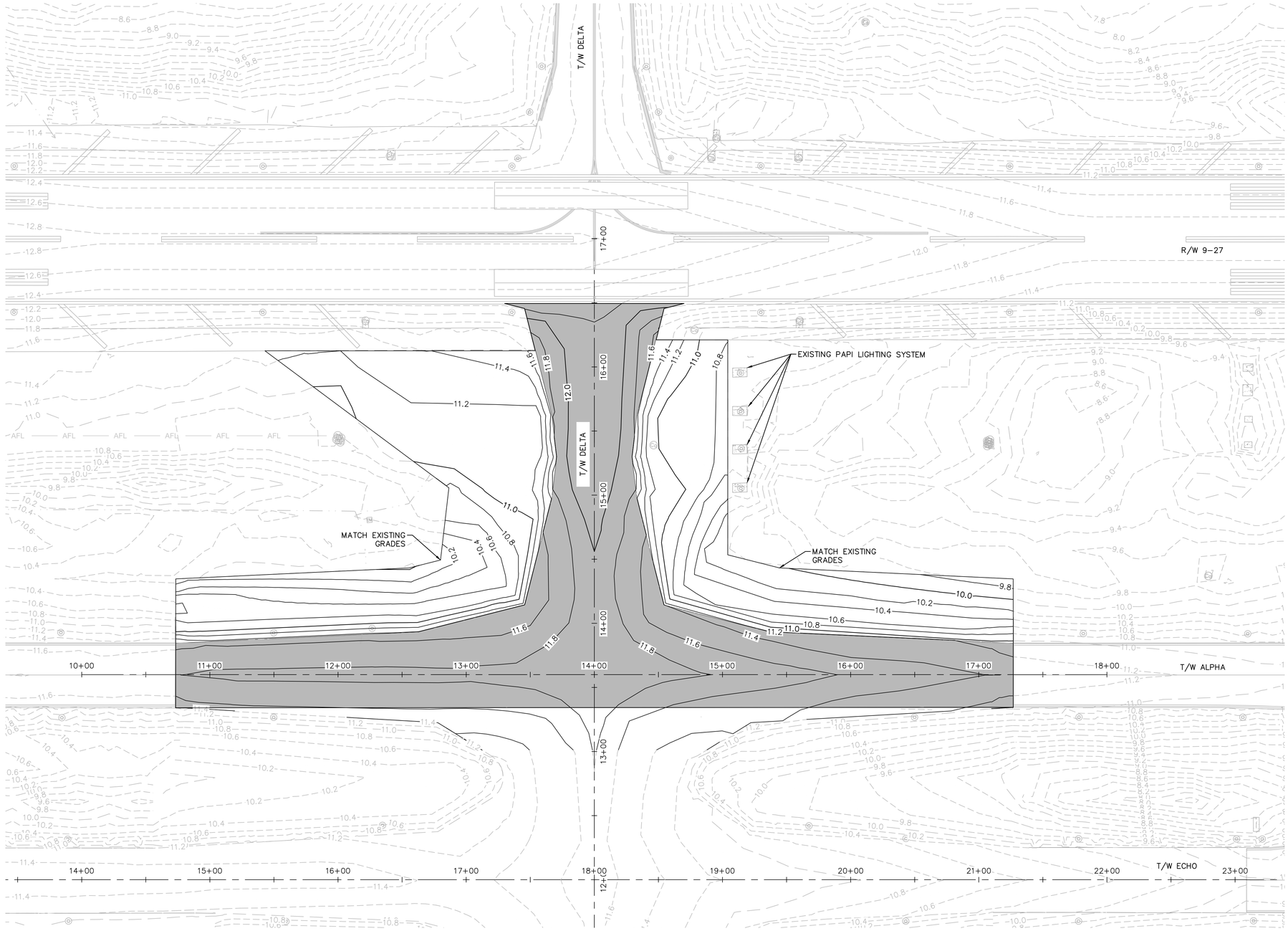

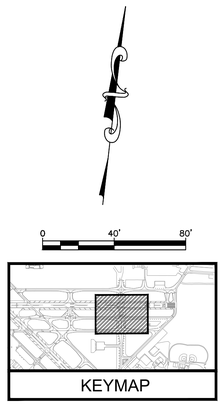

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4. REFER TO SHEET C20 FOR DEMOLITION REQUIREMENTS.
5. REFER TO SHEET C24 FOR PAVING REQUIREMENTS.
6. CONTRACTOR WILL PROTECT ALL TAXIWAY EDGE LIGHTS DURING CONSTRUCTION.
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LEGEND

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- ELECTRIC HAND HOLE
- TAXIWAY SIGN
- TAXIWAY EDGE LIGHT
- COMMUNICATION VAULT
- CONCRETE PAD
- EXISTING FIBER PULL BOX
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LICENSE NO. CA30805

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REG. No: 62478
DATE:
TEL: 561-840-0825
FAX:

DRAWN BY:	DATE:
ADC	08/28/2025
DESIGNED BY:	SCALE:
KAS	AS NOTED
CHECKED BY:	FIELD BOOK:
TFO	

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PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS				
NO.	DATE	BY	CK'D	DESCRIPTION

PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
GRADING PLAN - ADD ALT

SHEET NO.	OF
C28	
TOTAL:	37
CAD FILE: 12884-GRAD-ADDALT	
DRAWING FILE NO.	

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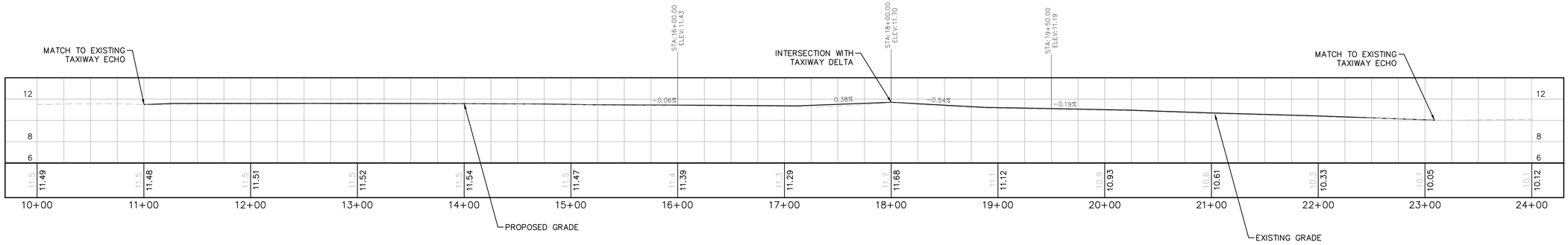
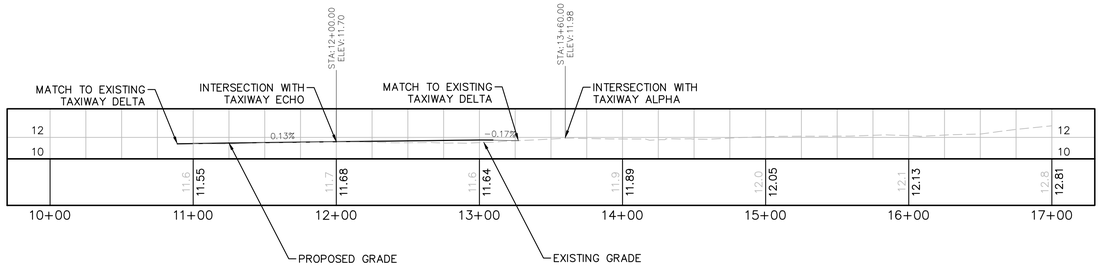
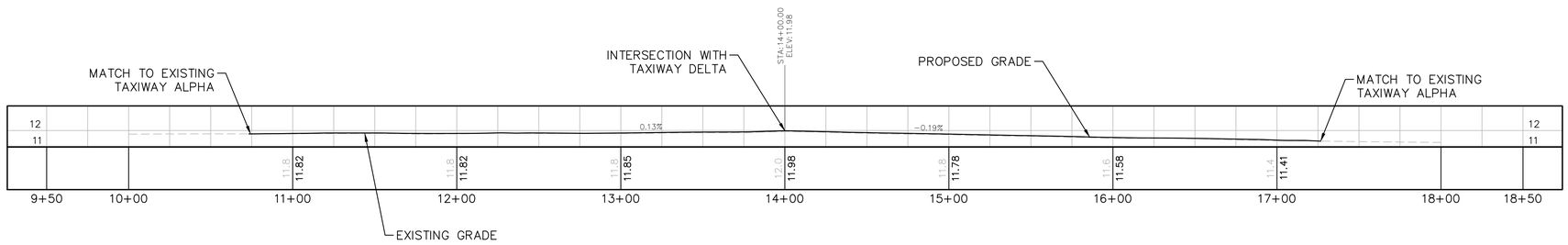


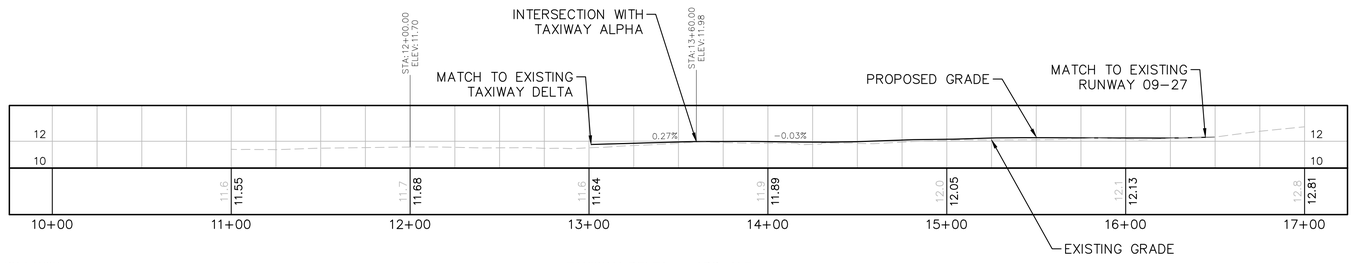
TAXIWAY ECHO – BASE BID



TAXIWAY DELTA – BASE BID



TAXIWAY ALPHA – ADD ALT



TAXIWAY DELTA – ADD ALT

NOTES:

1. REFERENCE SHEETS C24 – C26 FOR GEOMETRY LAYOUT.
2. UNDERGROUND UTILITY LOCATIONS ARE APPROXIMATE. CONTRACTOR TO OBTAIN UNDERGROUND UTILITY LOCATION AS REQUIRED BY LAW. SEE GENERAL NOTES SHEET C01. ALL FACILITIES ARE TO REMAIN EXCEPT WHERE OTHERWISE SHOWN. DURING CONSTRUCTION CONTRACTOR IS TO AVOID DAMAGE TO EXISTING ABOVE GROUND AND UNDERGROUND FACILITIES.

ENGINEER: THOMAS F. O'DONNELL
REG. No: 62478
DATE:
TEL: 561-640-0825
FAX:

DRAWN BY: ADC | DATE: 08/28/2025
DESIGNED BY: KAS | SCALE: AS NOTED
CHECKED BY: TFO | FIELD BOOK:

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
TAXIWAY PROFILES

BID SET

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QUANTUM Electrical Engineering, Inc.
2755 VISTA PARKWAY SUITE I-9
WEST PALM BEACH, FL 33411
561-210-9224
LICENSE NO. CA30005

SHEET NO. C29 | OF
TOTAL: 37
CAD FILE: 12884-MULTI-PROF-TW
DRAWING FILE NO.

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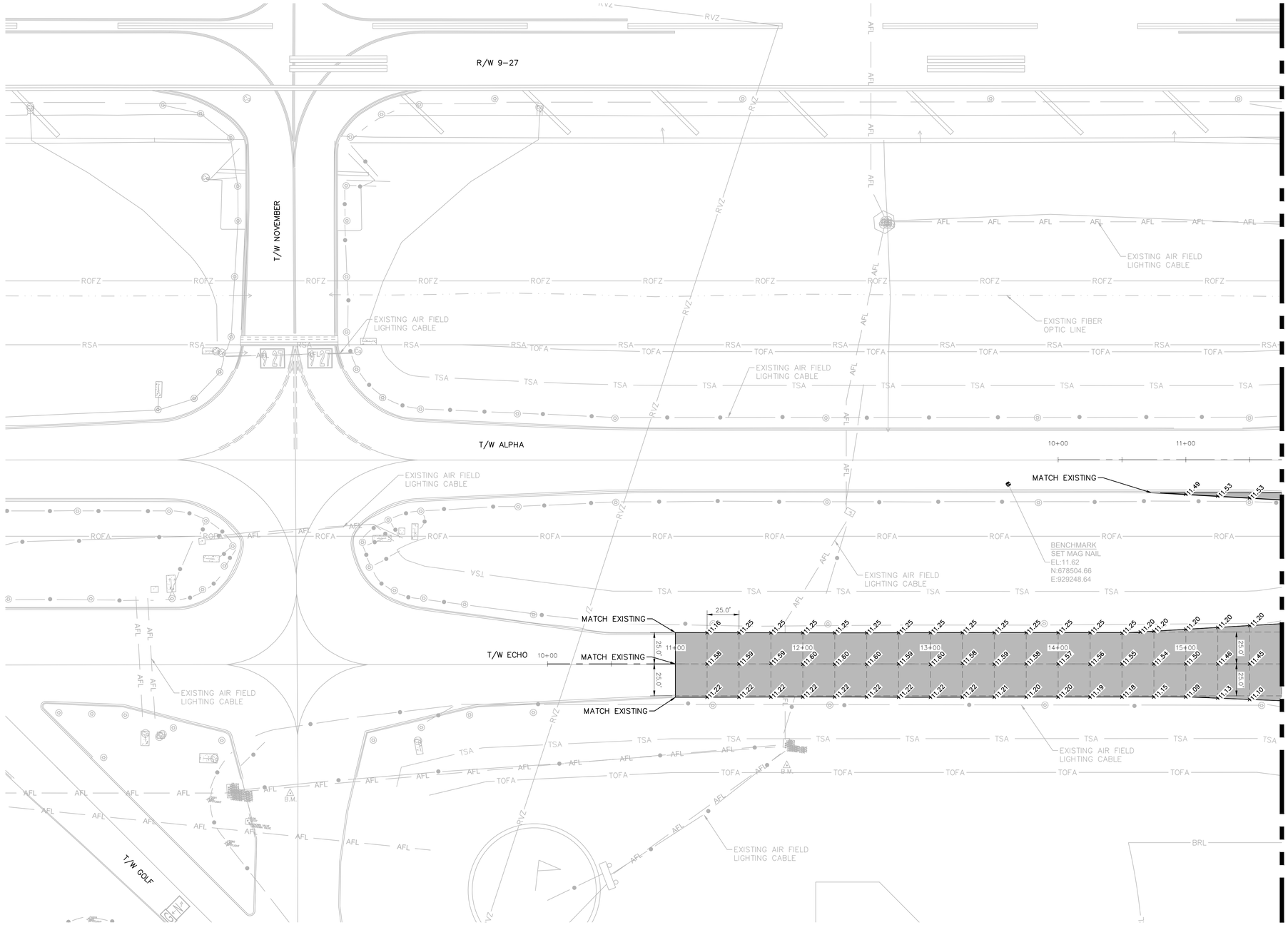

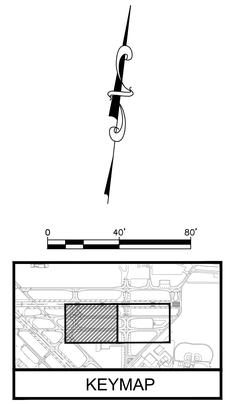

NOTES

1. REFER TO SHEET C24 FOR GEOMETRY PLAN.
2. REFER TO SHEET C28 FOR GRADING PLAN.
3. REFER TO SHEET C20 FOR DEMOLITION REQUIREMENTS.
4. SEE "TYPICAL SECTIONS" SHEET C15.
5. CONTRACTOR SHALL GRADE AROUND ALL EXISTING STRUCTURES TO REMAIN, INCLUDING BUT NOT LIMITED TO TAXIWAY AND RUNWAY SIGNAGE.
6. GRID IS 25' (VERTICAL) X 25' (HORIZANTAL) UNLESS OTHERWISE NOTED.

LEGEND

	CONSTRUCT NEW PAVEMENT SECTION TO GRADE
x11.6	SPOT ELEVATION
RSA	RUNWAY SAFETY AREA
ROFA	RUNWAY OBJECT FREE AREA
RPZ	RUNWAY PROTECTION ZONE
ROFZ	RUNWAY OBJECT FREE ZONE
RVZ	RUNWAY VISIBILITY ZONE
TSA	TAXIWAY SAFETY AREA
TOFA	TAXIWAY OBJECT FREE AREA
BRL	BUILDING RESTRICTION LINE

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FIELD BOOK:

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PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
SPOT ELEVATION PLAN

SHEET NO. C30 OF
TOTAL: 37
CAD FILE: 12884-MULTI-ELEV
DRAWING FILE NO.

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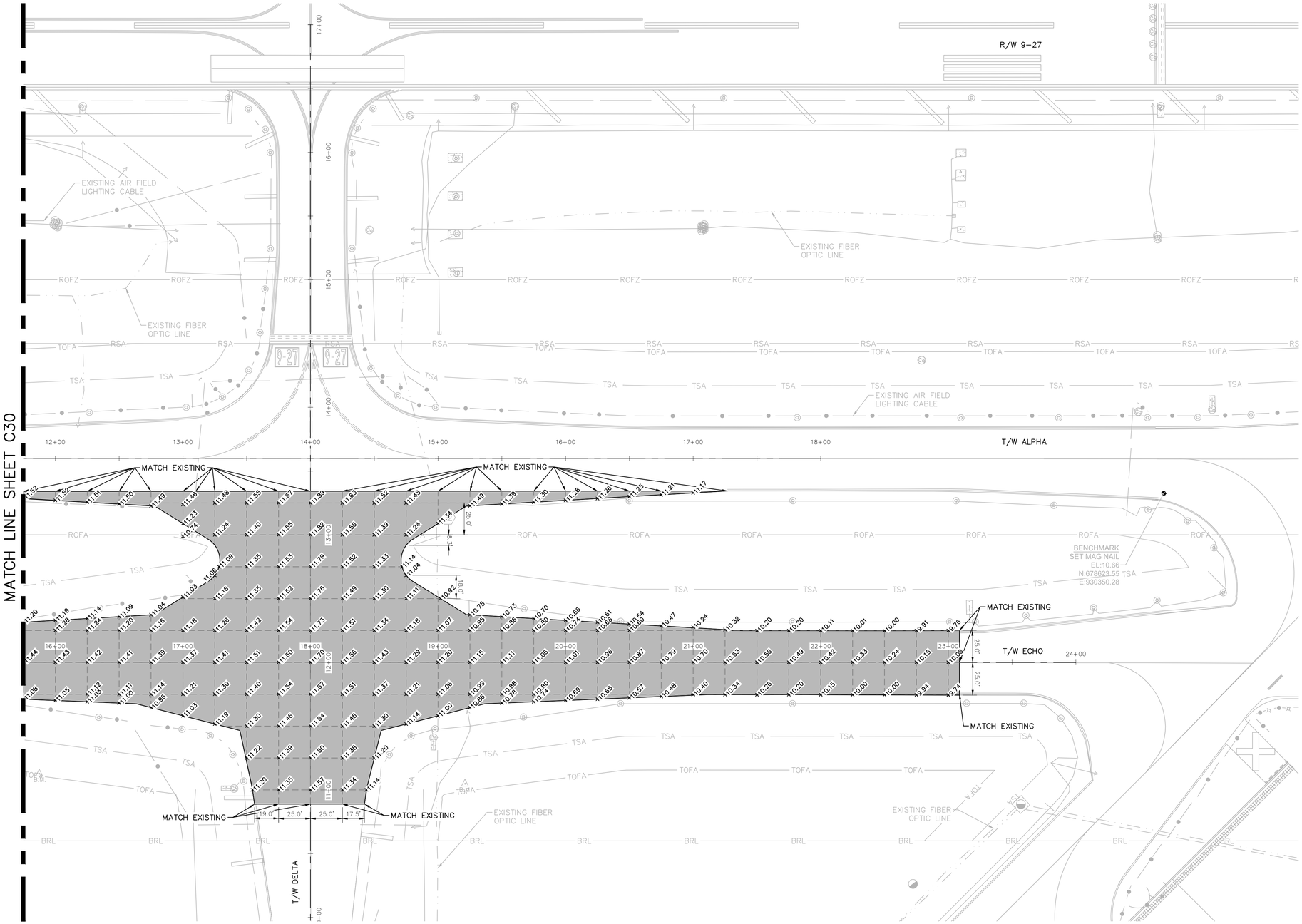

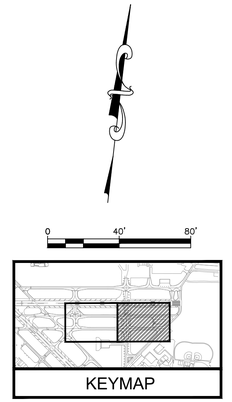

NOTES

1. REFER TO SHEET C24 FOR GEOMETRY PLAN.
2. REFER TO SHEET C28 FOR GRADING PLAN.
3. REFER TO SHEET C20 FOR DEMOLITION REQUIREMENTS.
4. SEE "TYPICAL SECTIONS" SHEET C15.
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LEGEND

- CONSTRUCT NEW PAVEMENT SECTION TO GRADE
- +11.6 — SPOT ELEVATION
- RSA — RUNWAY SAFETY AREA
- ROFA — RUNWAY OBJECT FREE AREA
- RPZ — RUNWAY PROTECTION ZONE
- ROFZ — RUNWAY OBJECT FREE ZONE
- RVZ — RUNWAY VISIBILITY ZONE
- TSA — TAXIWAY SAFETY AREA
- TOFA — TAXIWAY OBJECT FREE AREA
- BRL — BUILDING RESTRICTION LINE

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REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
SPOT ELEVATION PLAN

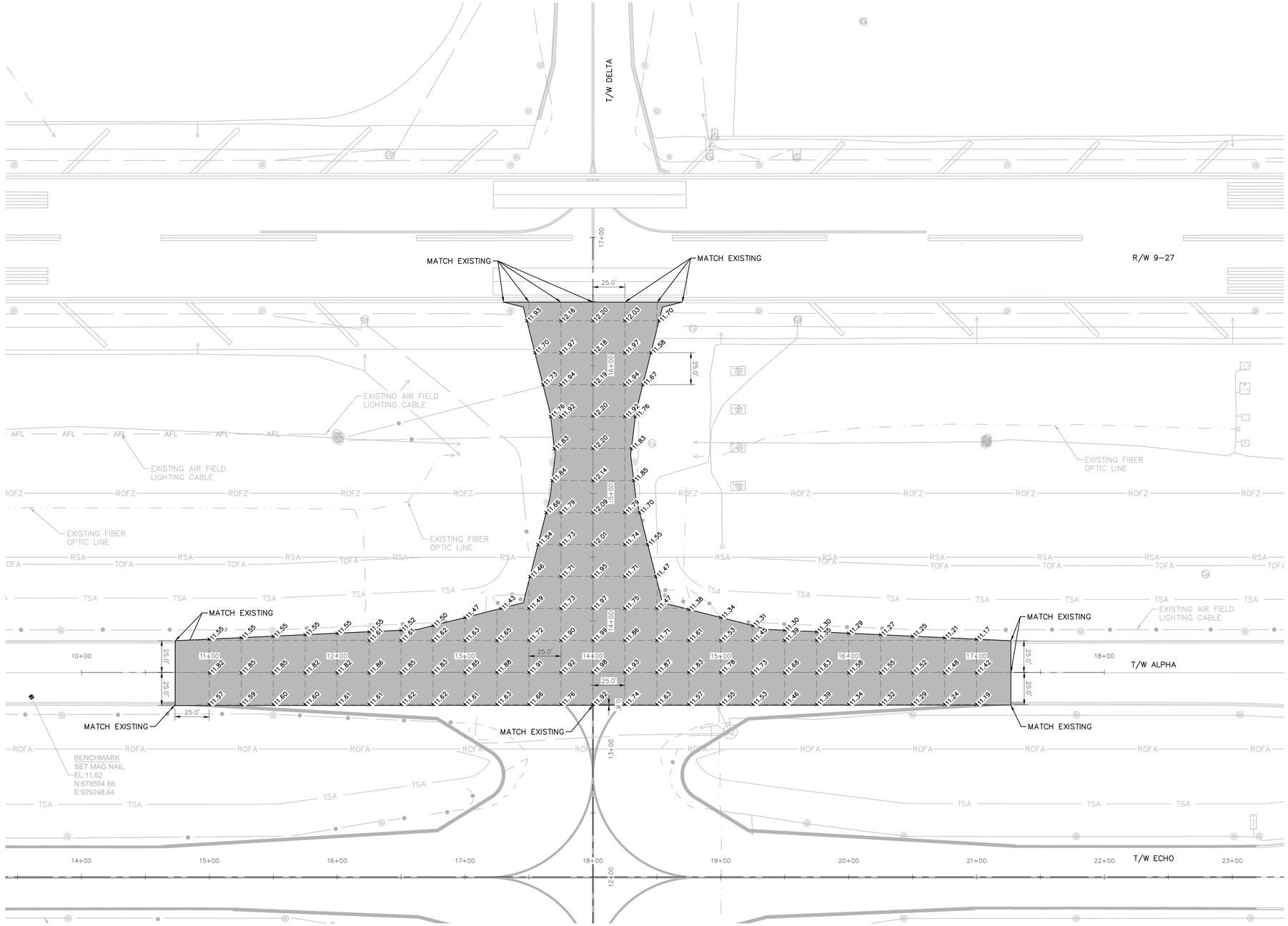
SHEET NO.	OF
C31	

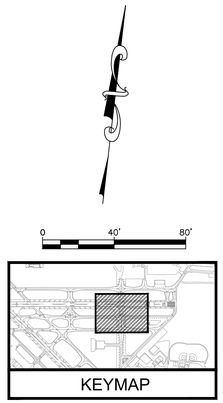
TOTAL: 37

CAD FILE: 12884-MULTI-ELEV

DRAWING FILE NO.

K:\FTL_AVIATION\044693107 - FXE TW E REHAB DESIGN PHASE\CAD\PLANSHEETS\12884-MULTI-ELEV.DWG





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LEGEND

- CONSTRUCT NEW PAVEMENT SECTION TO GRADE
- +11.6 — SPOT ELEVATION
- RSA — RUNWAY SAFETY AREA
- ROFA — RUNWAY OBJECT FREE AREA
- RPZ — RUNWAY PROTECTION ZONE
- ROFZ — RUNWAY OBJECT FREE ZONE
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PHONE: 954-535-5100 FAX: 954-739-2247
WWW.KIMLEY-HORN.COM REGISTRY No. 35106

QUANTUM Electrical Engineering, Inc.
2751 VISTA PARKWAY SUITE I-9
WEST PALM BEACH, FL 33411
561-210-9234
LICENSE NO. CA30805

BID SET

ENGINEER: THOMAS F. O'DONNELL
REG. No: 62478
DATE:
TEL: 561-640-0825
FAX:

DRAWN BY: ADC | DESIGNED BY: KAS | CHECKED BY: TFO
DATE: 08/28/2025 | SCALE: AS NOTED
FIELD BOOK:

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS				
NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
SPOT ELEVATION PLAN - ADD ALT

SHEET NO. C32 OF
TOTAL: 37
CAD FILE: 12884-MULTI-ELEV
DRAWING FILE NO.

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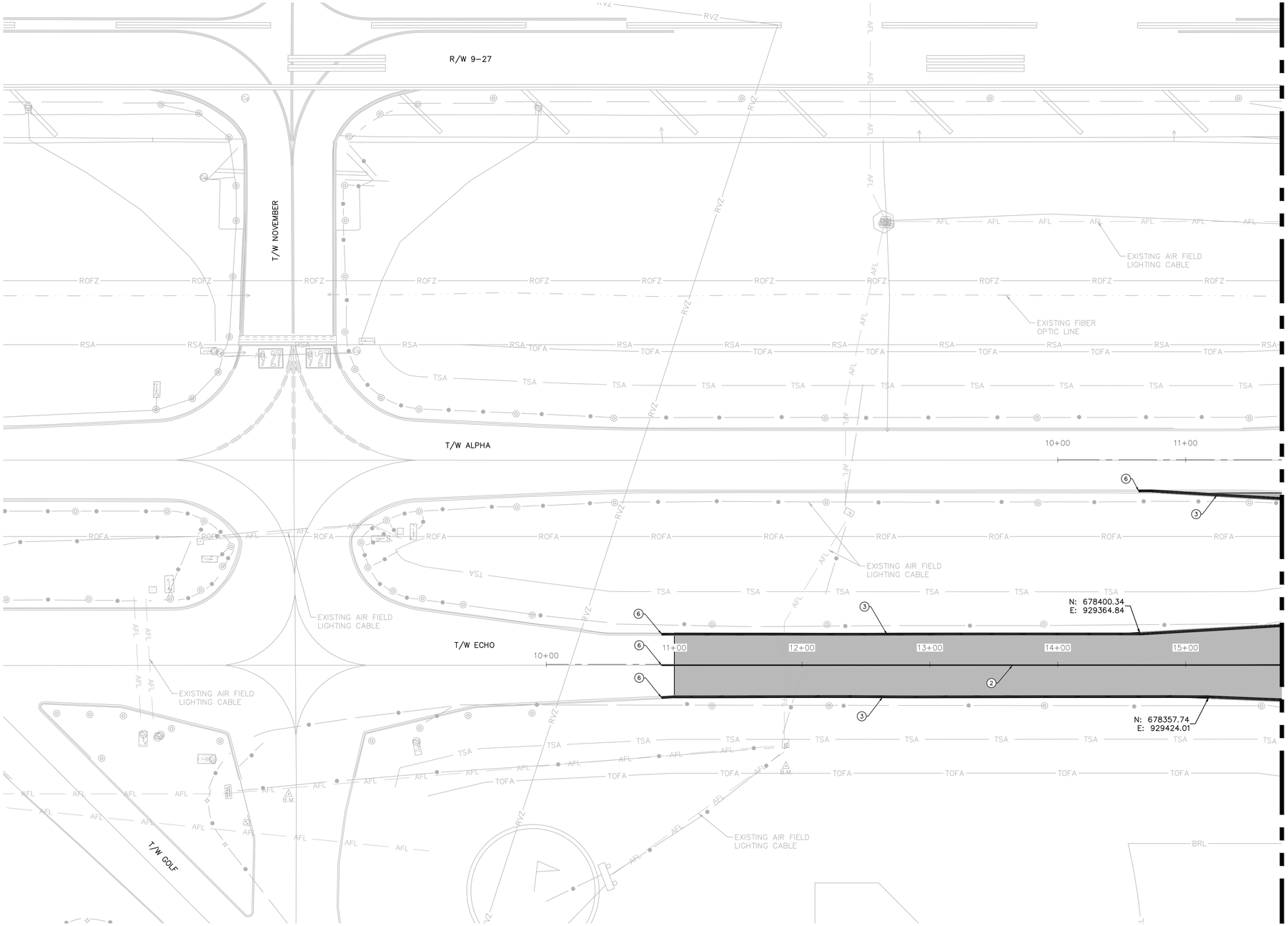

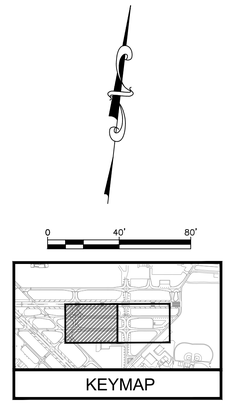

NOTES

1. FOR SURVEY REFERENCE POINT LOCATION, SEE SHEET C36.

LEGEND

	LIMITS OF NEW PAVEMENT
(1)	ENHANCED TAXIWAY CENTERLINE MARKING. SEE DETAIL, SHEET C36
(2)	TAXIWAY CENTERLINE MARKING (6"). SEE DETAIL, SHEET C36
(3)	TAXIWAY EDGE MARKING, CONTINUOUS. SEE DETAIL, SHEET C36
(4)	RUNWAY HOLDING POSITION MARKING. SEE DETAIL, SHEET C36
(5)	SURFACE PAINTED HOLDING POSITION SIGN. SEE DETAIL, SHEET C36
(6)	MATCH EXISTING STRIPING

LEGEND (LINE TYPE)

RSA	RUNWAY SAFETY AREA
ROFA	RUNWAY OBJECT FREE AREA
RPZ	RUNWAY PROTECTION ZONE
ROFZ	RUNWAY OBJECT FREE ZONE
RVZ	RUNWAY VISIBILITY ZONE
TSA	TAXIWAY SAFETY AREA
TOFA	TAXIWAY OBJECT FREE AREA
BRL	BUILDING RESTRICTION LINE

ENGINEER: THOMAS F. O'DONNELL
REG. No: 62478
DATE:
TEL: 561-840-0825
FAX:

DRAWN BY: ADC | DATE: 08/28/2025
DESIGNED BY: KAS | SCALE: AS NOTED
CHECKED BY: TFO | FIELD BOOK:

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PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
PAVEMENT MARKING PLAN

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BID SET

SHEET NO. C33 | OF
TOTAL: 37
CAD FILE: 12884-MULTI-MARK
DRAWING FILE NO.

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561-210-9224
LICENSE NO. CA30805

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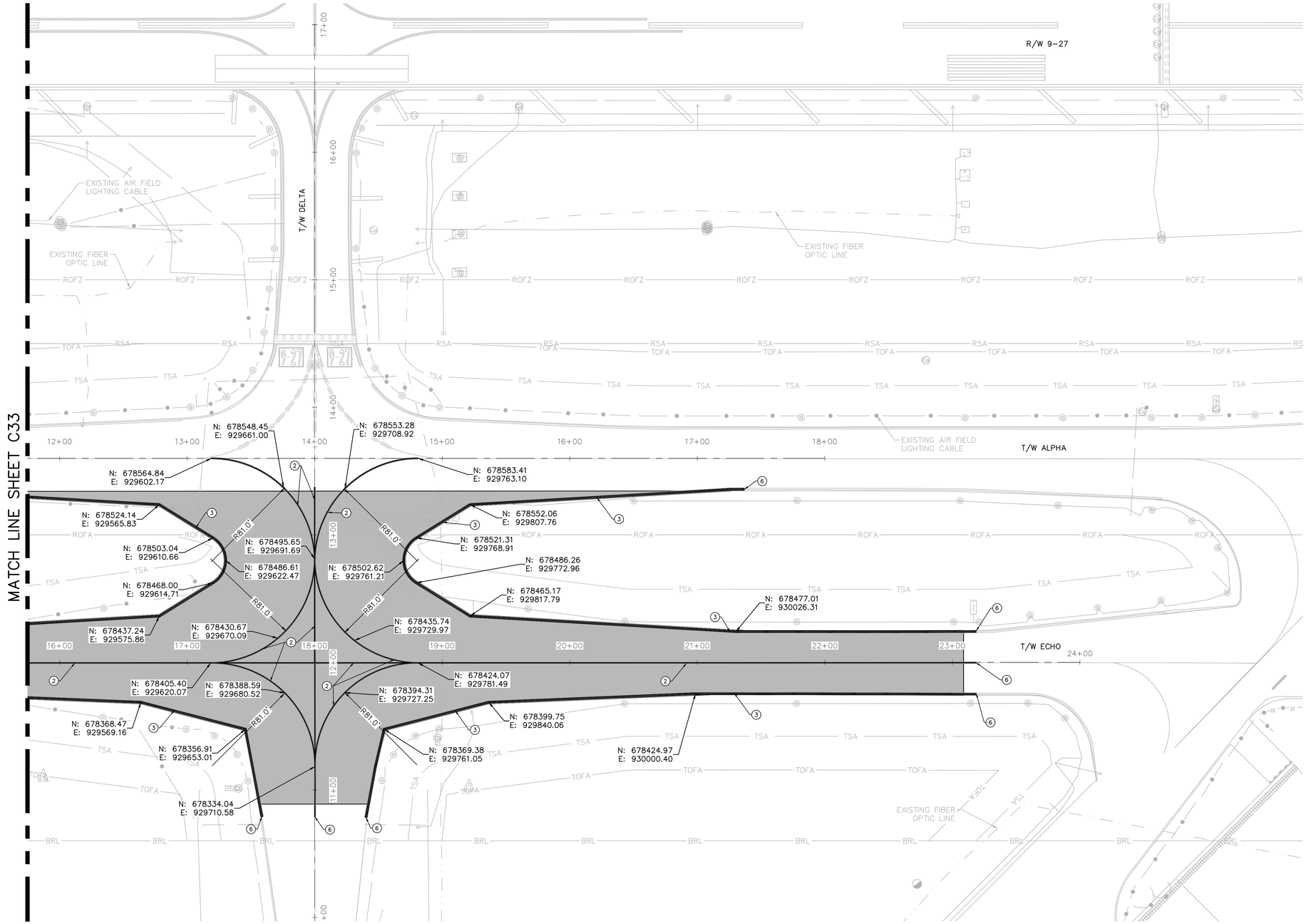

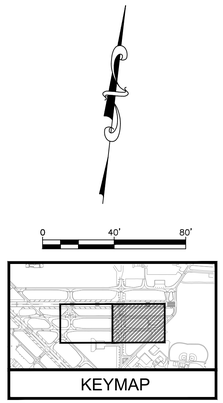

NOTES

1. FOR SURVEY REFERENCE POINT LOCATION, SEE SHEET C36.

LEGEND

- LIMITS OF NEW PAVEMENT
- (1) ENHANCED TAXIWAY CENTERLINE MARKING. SEE DETAIL, SHEET C36
- (2) TAXIWAY CENTERLINE MARKING (6"). SEE DETAIL, SHEET C36
- (3) TAXIWAY EDGE MARKING, CONTINUOUS. SEE DETAIL, SHEET C36
- (4) RUNWAY HOLDING POSITION MARKING. SEE DETAIL, SHEET C36
- (5) SURFACE PAINTED HOLDING POSITION SIGN. SEE DETAIL, SHEET C36
- (6) MATCH EXISTING STRIPING

LEGEND (LINE TYPE)

- RSA — RUNWAY SAFETY AREA
- ROFA — RUNWAY OBJECT FREE AREA
- RPZ — RUNWAY PROTECTION ZONE
- ROFZ — RUNWAY OBJECT FREE ZONE
- RVZ — RUNWAY VISIBILITY ZONE
- TSA — TAXIWAY SAFETY AREA
- TOFA — TAXIWAY OBJECT FREE AREA
- BRL — BUILDING RESTRICTION LINE

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ENGINEER: THOMAS F. O'DONNELL
REG. No: 62478
DATE:
TEL: 561-640-0825
FAX:

DRAWN BY: ADC | DATE: 08/28/2025
DESIGNED BY: KAS | SCALE: AS NOTED
CHECKED BY: TFO | FIELD BOOK:

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
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PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
PAVEMENT MARKING PLAN

SHEET NO. C34 | OF
TOTAL: 37
CAD FILE: 12884-MULTI-MARK
DRAWING FILE NO.

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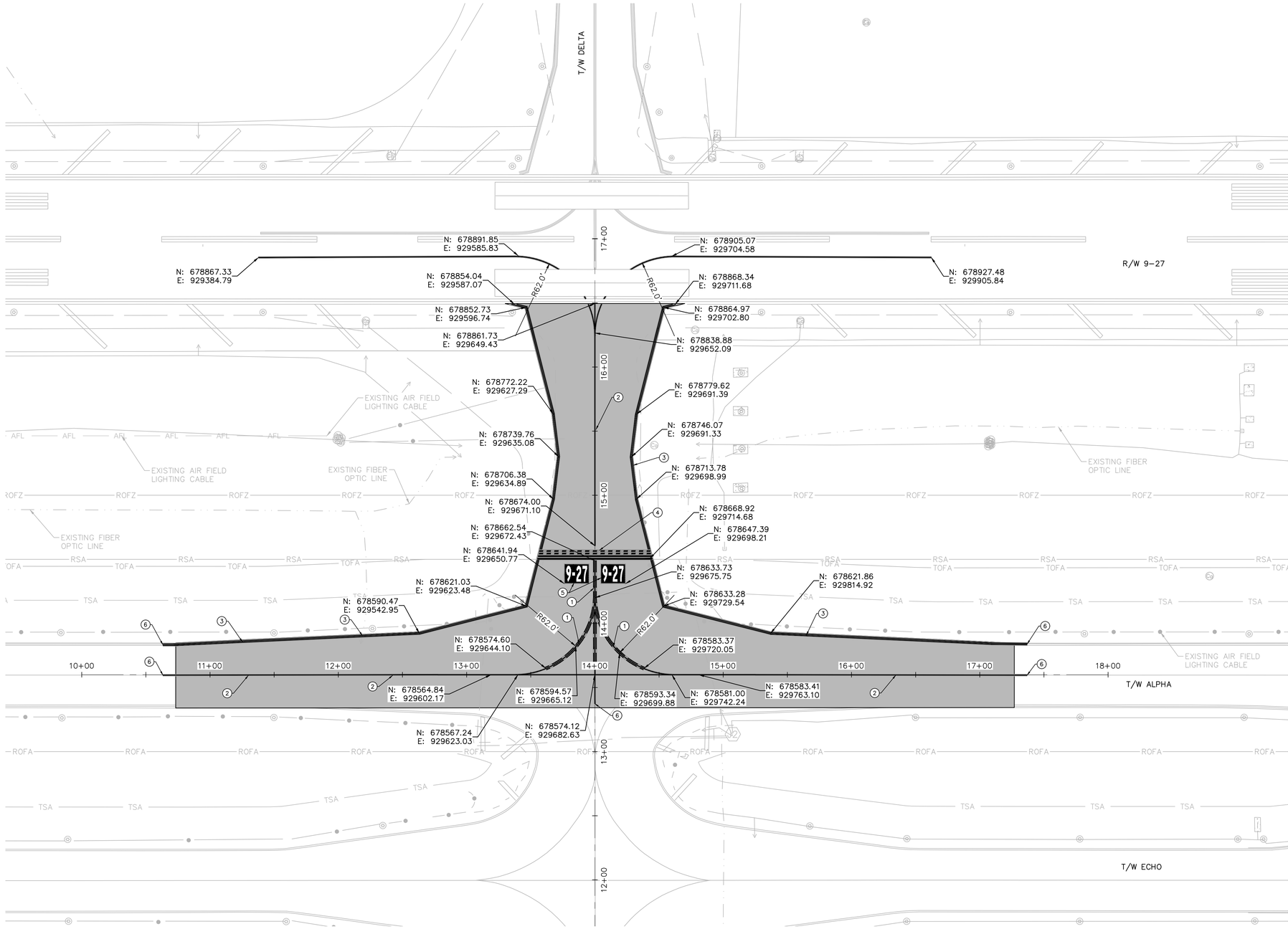

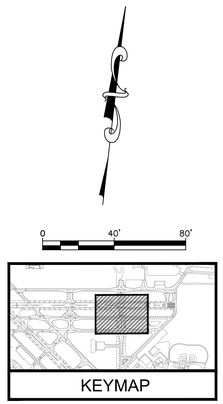

NOTES

1. FOR SURVEY REFERENCE POINT LOCATION, SEE SHEET C36.

LEGEND

	LIMITS OF NEW PAVEMENT
1	ENHANCED TAXIWAY CENTERLINE MARKING. SEE DETAIL, SHEET C36
2	TAXIWAY CENTERLINE MARKING (6"). SEE DETAIL, SHEET C36
3	TAXIWAY EDGE MARKING, CONTINUOUS. SEE DETAIL, SHEET C36
4	RUNWAY HOLDING POSITION MARKING. SEE DETAIL, SHEET C36
5	SURFACE PAINTED HOLDING POSITION SIGN. SEE DETAIL, SHEET C36
6	MATCH EXISTING STRIPING

LEGEND (LINE TYPE)

RSA	RUNWAY SAFETY AREA
ROFA	RUNWAY OBJECT FREE AREA
RPZ	RUNWAY PROTECTION ZONE
ROFZ	RUNWAY OBJECT FREE ZONE
RVZ	RUNWAY VISIBILITY ZONE
TSA	TAXIWAY SAFETY AREA
TOFA	TAXIWAY OBJECT FREE AREA
BRL	BUILDING RESTRICTION LINE

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LICENSE NO. CA30805

BID SET

ENGINEER: THOMAS F. O'DONNELL
REG. No: 62478
DATE:
TEL: 561-640-0825
FAX:

DRAWN BY: ADC | DATE: 08/28/2025
DESIGNED BY: KAS | SCALE: AS NOTED
CHECKED BY: TFO | FIELD BOOK:

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
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PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
PAVEMENT MARKING PLAN - ADD ALT

SHEET NO. C35 | OF
TOTAL: 37
CAD FILE: 12884–MARK–ADDALT
DRAWING FILE NO.

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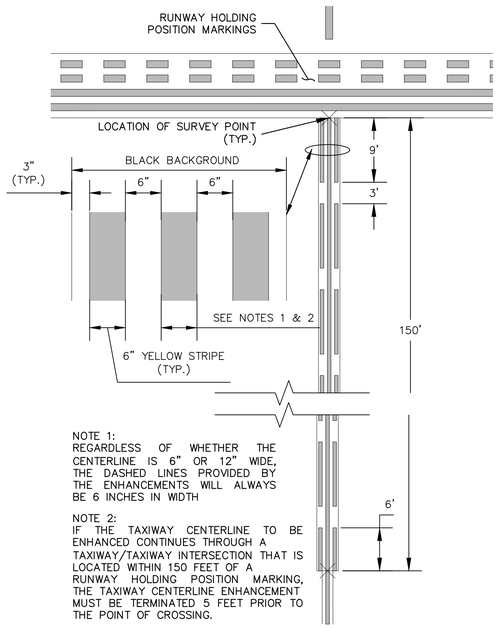
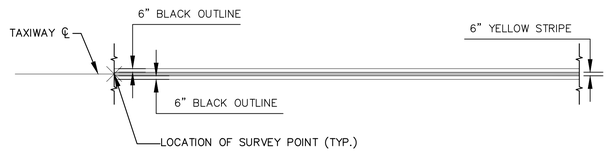
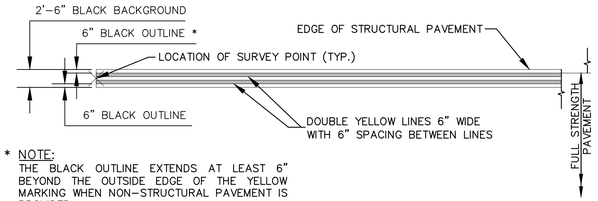


① ENHANCED TAXIWAY CENTERLINE MARKING
N.T.S.



② TAXIWAY CENTERLINE MARKINGS
N.T.S.

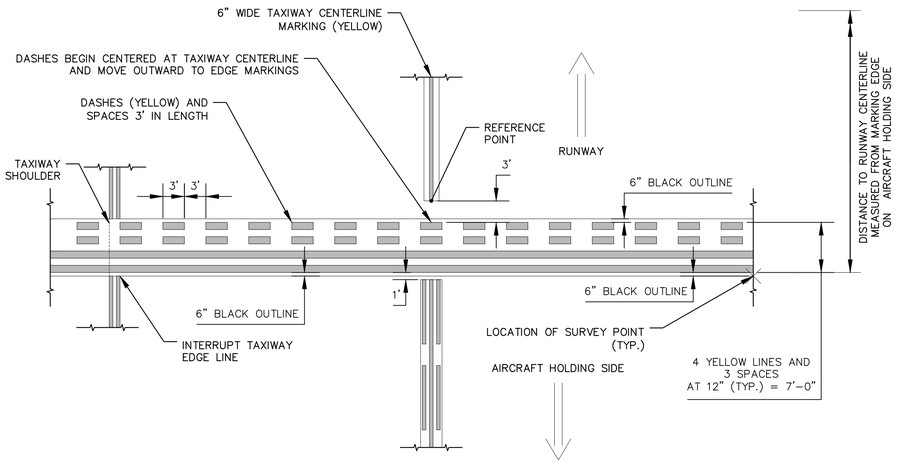


* NOTE:
THE BLACK OUTLINE EXTENDS AT LEAST 6" BEYOND THE OUTSIDE EDGE OF THE YELLOW MARKING WHEN NON–STRUCTURAL PAVEMENT IS PROVIDED.

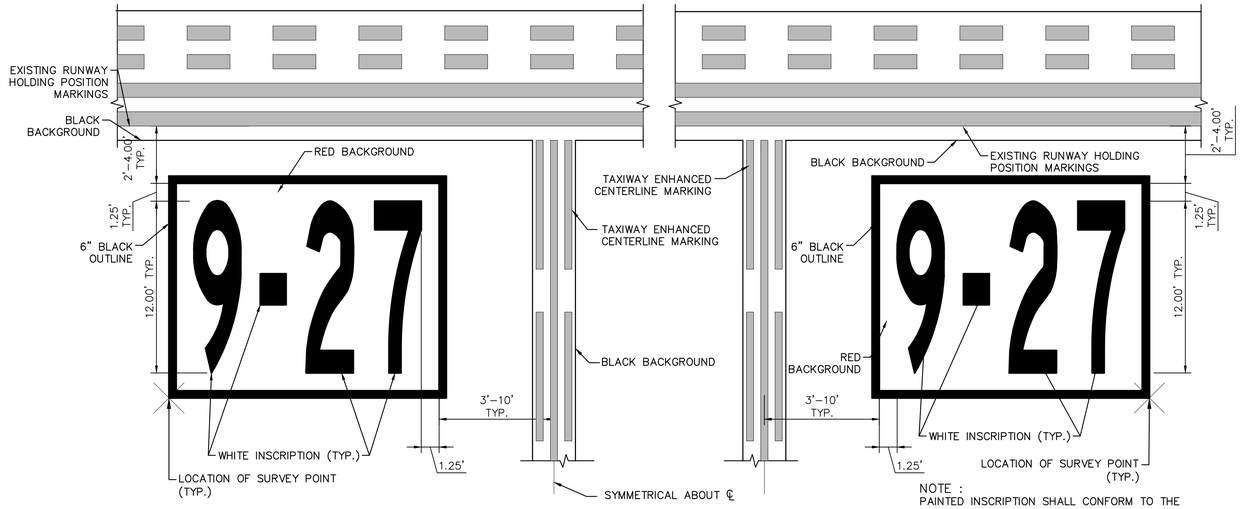
③ TAXIWAY EDGE MARKINGS, CONTINUOUS
N.T.S.

NOTES:

1. REFLECTORIZED (GLASS BEADS) PAINT SHALL BE USED FOR ALL PERMANENT PAVEMENT MARKINGS EXCEPT BLACK OUTLINE. SEE SPECIFICATION P–620 FOR GLASS BEAD TYPE AND APPLICATION RATE FOR EACH PAINT COLOR.
2. SEE PAVEMENT GEOMETRY PLANS, SHEETS C22 THROUGH C24 FOR HORIZONTAL LAYOUT.
3. PAVEMENT MARKING DETAILS SHALL CONFORM TO THE LATEST EDITION OF THE FEDERAL AVIATION ADMINISTRATION ADVISORY CIRCULAR 150/5340–1M; IF A CONFLICT OCCURS BETWEEN THESE PLANS AND THE CIRCULAR THE ADVISORY CIRCULAR WILL TAKE PRECEDENCE.
4. ALL TAXIWAY MARKINGS ARE YELLOW.
5. MEASURED QUANTITY PAID TO THE CONTRACTOR SHALL BE MEASUREMENT OF FINAL VISIBLE PAINT MARKINGS ACCORDING TO SPECIFICATION P–620.



④ RUNWAY HOLDING POSITION MARKINGS
N.T.S.



NOTE :
PAINTED INSCRIPTION SHALL CONFORM TO THE LATEST EDITION OF THE FAA AC NO 150/5340–1L.

⑤ SURFACE PAINTED HOLDING POSITION SIGN LOCATION DETAIL
N.T.S.

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561-210-9224
LICENSE NO. CA30005

BID SET

DRAWN BY: ADC | DESIGNED BY: KAS | CHECKED BY: TFO | DATE: 08/28/2025 | SCALE: AS NOTED | FIELD BOOK:

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
PAVEMENT MARKING DETAILS

SHEET NO. C36 | OF
TOTAL: 37
CAD FILE: 12884–MULTI–MARK–DETL
DRAWING FILE NO.

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GENERAL NOTES

1. THE ELECTRICAL CONTRACTOR SHALL COMPLETE ALL ITEMS ON THE FOLLOWING ELECTRICAL SHEETS:

1.1. CONTRACTOR SHALL DEMOLISH THE EXISTING AIRFIELD LIGHTING AND GUIDANCE SIGNAGE SYSTEMS, COMPLETE, AS SHOWN ON PLANS.

1.2. CONTRACTOR SHALL PROVIDE AND INSTALL AIRFIELD LIGHTING AND GUIDANCE SIGNAGE SYSTEMS, COMPLETE IN PLACE, AS SHOWN ON PLANS.

2. THE CONTRACTOR SHALL PROVIDE ALL MATERIALS AND LABOR TO INSTALL THE ELECTRICAL SYSTEMS AS INDICATED ON THE DRAWINGS. ITEMS NOT SHOWN BUT OBVIOUSLY NECESSARY FOR COMPLETION OF THE WORK SHALL BE INCLUDED.

3. THE INSTALLATION SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE, LOCAL CODES, CITY CODES, ALL LATEST FEDERAL AVIATION ADMINISTRATION STANDARDS AND ADVISORIES, AND ALL CITY OF FORT LAUDERDALE FLORIDA BUILDING CODES.

4. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS, INSPECTIONS, AND APPROVALS.

5. THE CONTRACTOR SHALL COORDINATE THEIR WORK WITH THE ENGINEER, RESIDENT PROJECT REPRESENTATIVE (RPR), CITY OF FORT LAUDERDALE AND FAA.

6. THE CONTRACTOR SHALL, BEFORE SUBMITTING THEIR BID, VISIT THE SITE OF THE PROJECT AND BECOME FAMILIAR WITH THE EXISTING CONDITIONS. NO ALLOWANCE WILL BE MADE FOR EXISTING CONDITIONS OR FAILURE OF THE CONTRACTOR TO OBSERVE THEM.

7. IT IS THE CONTRACTORS RESPONSIBILITY TO COORDINATE BEFORE BIDDING WITH ALL LOCAL UTILITIES INCLUDING THE POWER, TELEPHONE, FEDERAL AVIATION ADMINISTRATION, FUEL PIPE LINES, WATER AND SEWER MAINS AND TO MEET ALL OF THEIR INSTALLATION REQUIREMENTS. ALL LABOR, EQUIPMENT AND MATERIALS NECESSARY TO MEET THESE REQUIREMENTS IS TO BE INCLUDED IN THE BID. THE CONTRACTOR SHALL OBTAIN, DELIVER AND INSTALL ALL CONDUITS, PULLBOXES AND EQUIPMENT REQUIRED BY THE UTILITIES TO THEIR SPECIFICATIONS.

8. FXE REPRESENTATIVES ARE AS FOLLOWS:
8.1. CITY OF FORT LAUDERDALE PROJECT MANAGER – KHANT MYAT, P.E. – 954–828–5061

9. GROUNDING SHALL BE INSTALLED IN ACCORDANCE WITH SPEC SECTION L–108. THE COUNTEROISE GROUNDING SYSTEM SHALL NOT EXCEED 25 OHMS. THE EARTH SHALL BE DRY FOR 48 HOURS PRIOR TO TESTING. GROUNDING AND BONDING SHALL NOT BE PAINTED.

10. AN EQUIPMENT GROUND WIRE SIZED PER NEC SHALL BE PULLED IN ALL AIRFIELD VAULT ELECTRICAL CONDUITS, POWER AND CONTROL, WHETHER OR NOT INDICATED ON DRAWINGS.

11. ALL EQUIPMENT SHALL BE NEW AND UNUSED, U.L. LISTED AND FAA APPROVED.

12. SHOP DRAWINGS SHALL BE SUBMITTED FOR THE FOLLOWING EQUIPMENT: LIGHTING ASSEMBLIES, BASE CANS, GUIDANCE SIGNS, SPLICE KITS, CONDUITS, CABLES, TRANSFORMERS, GROUNDING AND OTHERS AS REQUESTED.

13. THE CONTRACTOR IS RESPONSIBLE TO TEST ALL SYSTEMS AND REPAIR OR REPLACE ALL DEFECTIVE WORK TO THE SATISFACTION OF THE ENGINEER AND CITY OF FORT LAUDERDALE.

14. ALL EQUIPMENT FURNISHED AND INSTALLED BY THE CONTRACTOR SHALL BE GUARANTEED AGAINST DEFECTS IN MATERIALS AND WORKMANSHIP FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE OF ENTIRE PROJECT.

15. COORDINATE ALL ELECTRICAL EQUIPMENT, LOCATIONS, AND POWER REQUIREMENTS AND VERIFY ALL OBSTRUCTIONS WITH ALL SUBCONTRACTORS AND EQUIPMENT SUPPLIERS PRIOR TO ANY INSTALLATION.

16. THE DRAWINGS ARE NOT INTENDED TO SHOW THE EXACT LOCATION OF CONDUIT RUNS. THESE ARE TO BE COORDINATED WITH OTHER TRADES SO THAT CONFLICTS ARE AVOIDED PRIOR TO INSTALLATIONS.

17. AIRFIELD CONDUCTORS SHALL BE FAA APPROVED 5KV L–824 CABLE. GROUND CONDUCTORS SHALL BE 600V, XHHW. COUNTERPOISE SHALL BE BARE #6 SOLID COPPER UNLESS OTHERWISE INDICATED.

18. SCHEDULE 40 PVC SHALL BE USED UNDERGROUND. ALL ABOVE GROUND CONDUITS SHALL BE RIGID GALVANIZED STEEL. MINIMUM CONDUIT SIZE SHALL BE 3/4".

19. FLEXIBLE CONDUITS SHALL BE USED TO TERMINATE ALL MOTORS AND OTHER VIBRATING EQUIPMENT AND SHALL BE BETWEEN 18" AND 3' IN LENGTH.

20. TYPEWRITTEN PANEL SCHEDULES SHALL BE INSTALLED IN EACH PANELBOARD AND TERMINAL BLOCK SCHEDULES IN EACH CONTROL CABINET.

21. ALL REFERENCES TO A MANUFACTURER ARE GIVEN ON AN "FAA APPROVED EQUAL" BASIS.

22. ALL SPARE CONDUITS SHALL HAVE PULL STRINGS AND BE CAPPED WITH A PVC CAP.

23. ALL CIRCUITS SHALL BE IDENTIFIED IN PULL BOXES, LIGHTING FIXTURES, MANHOLES, BASE CANS, JUNCTION CANS, AND PANELBOARDS. IDENTIFICATIONS SHALL MATCH PANEL SCHEDULE.

24. EXPOSED RUNS OF CONDUITS SHALL BE INSTALLED WITH RUNS PARALLEL OR PERPENDICULAR TO WALL, STRUCTURAL MEMBERS OR INTERSECTIONS OF VERTICAL PLANES AND CEILINGS, WITH RIGHT ANGLE TURNS CONSISTING OF SYMMETRICAL BENDS OR PULL BOXES AS INDICATED ON THE DRAWINGS. BENDS AND OFFSETS SHALL BE AVOIDED WHERE POSSIBLE.

25. ALL CONDUITS PENETRATING RATED FIRE WALLS OR RATED FIRE FLOORS SHALL BE U.L. APPROVED DEVICES TO MAINTAIN THE FIRE RATING OF THE FLOOR OR WALL PENETRATED.

26. BALANCE ALL LOADS AT END OF PROJECT WITH ALL LIGHTS ON.

GENERAL INSTALLATION NOTES:

1. INFORMATION PROVIDED ON THE DRAWINGS FOR EXISTING UTILITIES, CABLES, DUCTS, MANHOLES, FIXTURES, ETC. ARE APPROXIMATE AND ARE NOT INTENDED TO PROVIDE EXACT LOCATIONS, TYPE OF COMPONENT OR MANNER OF CONSTRUCTION AND SHOULD NOT BE SCALED FROM DRAWINGS. THE LOCATION OF MANHOLES, PULL BOXES, JUNCTION BOXES, ETC. ALONG WITH THE ROUTE(S) (AND IDENTIFICATION) FOR CIRCUITS SHOWN ON THE DRAWINGS SHALL BE FIELD VERIFIED PRIOR TO CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY AND SATISFY HIMSELF/HERSELF AS TO THE LOCATION OF ALL UNDERGROUND FACILITIES WITHIN THE AREA OF CONSTRUCTION. THE CONTRACTOR SHALL REQUEST TO THE RESIDENT PROJECT REPRESENTATIVE IN WRITING FOR ALL RECORD DRAWINGS OF THE AREA IN CONSTRUCTION. THE CONTRACTOR SHALL REVIEW ALL RECORD DRAWINGS AND BECOME FAMILIAR WITH EXISTING CONDITIONS PRIOR TO ANY CONSTRUCTION. ALL EXISTING UTILITIES, CABLES, EQUIPMENT, DEVICES DAMAGED IN THE COURSE OF THIS CONTRACT SHALL BE IMMEDIATELY REPAIRED AT THE EXPENSE OF THE CONTRACTOR TO THE SATISFACTION OF THE OWNER. WHERE ANY ITEM IS FOUND TO BE LOCATED DIFFERENTLY THAN IS SHOWN ON THE DRAWINGS, THE ACTUAL LOCATION SHALL BE IMMEDIATELY MEASURED AND RECORDED ON THE RECORD DRAWING.

2. VARIOUS DIRECT BURIED FAA CABLES PASS THROUGH THE WORK AREA. THESE CABLES SERVE FAA FACILITIES (NAVAIDS) WHICH ARE CRITICAL FOR SAFE AIRPORT OPERATION. IT IS OF THE UTMOST IMPORTANCE THAT DAMAGE TO THESE CABLES BE PREVENTED. CABLE LOCATIONS SHOWN ON THE DRAWINGS ARE BASED ON THE BEST INFORMATION AVAILABLE, BUT ARE NOT INTENDED TO BE PRECISE. THE CONTRACTOR IS SPECIFICALLY WARNED AGAINST SCALING FAA CABLE LOCATIONS FROM THE APPROXIMATE DATA SHOWN ON DRAWINGS. THE CONTRACTOR SHALL KEEP THE RESIDENT PROJECT REPRESENTATIVE INFORMED OF HIS EXCAVATION SCHEDULE AND OPERATIONS AT LEAST FIVE WORKING DAYS IN ADVANCE. THE CONTRACTOR SHALL NOTIFY THE FAA AND OTHER UTILITY COMPANIES AND REQUEST THAT THE CABLES AND UTILITIES BE STAKED IN THE FIELD. EVEN AFTER THE CABLES AND UTILITIES ARE STAKED, THE CONTRACTOR SHALL USE ELECTRONIC DETECTION DEVICES AND CAREFUL HAND EXCAVATION TO LOCATE CABLES AND UTILITIES. AFTER CABLES AND UTILITIES ARE LOCATED, CONTRACTOR SHALL SPECIFY EXACT LOCATIONS (STATIONING, OFFSET, ELEVATION, AND TYPE OF CABLE AND UTILITIES) AND SHALL BE ACCURATELY MEASURED AND RECORDED ON THE RECORD DRAWING. COPIES OF THIS MEASUREMENT AND RECORDING OF THE DATA SHALL BE CONSIDERED AN IMPORTANT PART OF THE CONTRACT REQUIREMENTS. WHEN ENCASING EXISTING FAA CABLES IN DUCT OR OTHERWISE EXCAVATING IN THEIR VICINITY, CONTRACTOR SHALL USE EXTREME CAUTION TO AVOID DAMAGING CABLES AND UTILITIES. ANY DAMAGE, EVEN IF APPEARING TO BE SUPERFICIAL, SHALL BE IMMEDIATELY REPORTED TO THE RESIDENT PROJECT REPRESENTATIVE.

3. CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING UTILITY COMPANIES AND FAA TO IDENTIFY AND LOCATE ANY UNDERGROUND UTILITIES AND/OR CABLE WITHIN THE PROJECT LIMITS. THE CONTRACTOR SHALL ASSIST UTILITY COMPANIES IN EFFORTS TO FIELD VERIFY UNDERGROUND UTILITIES. THE CONTRACTOR SHALL REVIEW ALL AIRFIELD UTILITIES WITH AIRFIELD MAINTENANCE BEFORE BEGINNING WORK.

4. TEMPORARY WIRING SHALL BE REQUIRED TO MAINTAIN THE TAXIWAY EDGE LIGHTING SYSTEM AND RUNWAY EDGE LIGHT SYSTEMS INCLUDING LIGHTED SIGNS AND HOLD BARS. EDGE LIGHTING, SIGNS AND HOLD BARS TEMPORARY TAKEN OUT OF SERVICE SHALL BE RETURNED TO OPERATING CONDITION AT THE END OF EACH WORK PERIOD. CONTRACTOR SHALL PROVIDE TEMPORARY CABLES DURING CONSTRUCTION FOR TEMPORARY LIGHTS. TAXIWAY/RUNWAY EDGE LIGHTS SHALL REMAIN IN OPERATING CONDITION FOR ALL TAXIWAYS WHICH ARE OR COULD BE OPENED TO TRAFFIC AT THE END OF THE WORK PERIOD. OTHER LIGHTING SYSTEMS WITHIN THE WORK AREA, WHICH WILL BE TAKEN OUT OF SERVICE WHEN REQUIRED BY CONSTRUCTION SHALL BE RESTORED AT THE EARLIEST POSSIBLE DATE. IT IS NOT PERMISSIBLE TO ALLOW PORTIONS OF EXISTING SYSTEMS EXTENDING BEYOND THE WORK AREA TO BE AFFECTED. TEMPORARY WIRING SHALL BE PROVIDED TO MAINTAIN CONTINUITY OF TAXIWAY EDGE LIGHTS, SIGNAGE AND RUNWAY EDGE LIGHTS, ETC. EXTENDING BEYOND THE WORK AREA.

5. TEMPORARY CABLE SHALL BE INSTALLED IN CONDUIT AND ANCHORED AT FREQUENT INTERVALS TO PREVENT MOVING. IF TEMPORARY CABLES MUST BE INSTALLED IN AREAS SUBJECT TO VEHICULAR TRAFFIC, CABLES SHALL BE INSTALLED IN RIGID GALVANIZED STEEL CONDUIT ANCHORED AT FREQUENT INTERVALS TO PREVENT MOVING. ALL TEMPORARY CABLES SHALL BE CLEARLY LABELED AND MARKED SO AS TO BE VISIBLE FROM A DISTANCE. SOME JUMPERS MAY BE OF SIGNIFICANT LENGTH, SEE PHASING DRAWINGS FOR ADDITIONAL INFORMATION.

6. PRIOR TO WORKING ON ANY CIRCUIT, THE CONTRACTOR SHALL PROVIDE TO THE ELECTRICAL MAINTENANCE DEPARTMENT A WRITTEN LOCKOUT PROCEDURE FOR APPROVAL. THE ELECTRICAL MAINTENANCE DEPARTMENT SHALL REVIEW AND STATE FINAL LOCKOUT RULES. CONTRACTOR SHALL NOT RELY UPON DEACTIVATION OF THE CIRCUITS BY THE TOWER OR BY OTHERS. CONTRACTOR SHALL NOTIFY ELECTRICAL MAINTENANCE 48 HOURS PRIOR TO LOCKOUT/TAGOUT.

7. THERE SHALL BE NO SPLICES OF CONDUCTORS BETWEEN LIGHTS OR IN CONDUITS OR DUCTS. SPLICES SHALL BE PERMITTED IN MANHOLES, JUNCTION BOXES, LIGHT BASES, AND OTHER APPROVED LOCATIONS USING L–823 CONNECTORS.

8. CONTRACTOR SHALL IDENTIFY ALL CABLES IN AFFECTED MANHOLES AND BASE CANS. CONTRACTOR SHALL USE A MINIMUM OF OF 1–STAINLESS STEEL TAG PER CABLE AND 1–TAG ON EACH SIDE OF A L–823 CONNECTOR.WHEN CONTRACTOR IS WORKING WITH EXISTING CONDUITS, HE/SHE SHALL REMOVE ALL ABANDONED CABLES WITHIN PROJECT LIMITS AND IDENTIFY ALL ACTIVE CIRCUITS ON RECORD DRAWINGS.

9. CONTRACTOR SHALL BE RESPONSIBLE FOR IDENTIFYING ALL CABLE ROUTING AND CIRCUIT DESIGNATIONS ON THE RECORD DRAWINGS.

10. CONTRACTOR SHALL PROVIDE AND INSTALL CONCRETE DUCT/CABLE MARKERS AS PER FAA SPECIFICATIONS. CONTRACTOR SHALL MARK THE LOCATION OF ALL NEW DUCT BANKS WITH CONCRETE DUCT MARKERS IN UNPAVED AREAS SPACED NOT MORE THAN 200' APART AND WITH PAINTED MARKINGS AT THE EDGE OF PAVED AREAS.

11. CONTRACTOR SHALL PROVIDE ALL CONNECTOR KITS, TESTING, STAINLESS TAGS, AND ALL INCIDENTALS THAT WILL ALLOW FOR QUALITY ASSURANCE OF SUCCESSFULLY DISCONNECTING AND RECONNECTING CIRCUITS.

12. COLOR CODE ALL PHASE WIRING BY THE USE OF COLORED WIRE INSULATION AND/OR COLORED TAPE. WHERE TAPE IS USED, THE WIRE INSULATION SHALL BE BLACK. BLACK, RED AND BLUE SHALL BE USED FOR THREE–PHASE, 120/208V SYSTEMS. NEUTRAL CONDUCTORS, SIZE NO. 6 AWG OR SMALLER, SHALL BE IDENTIFIED BY A CONTINUOUS WHITE OR NATURAL GRAY OUTER FINISH ALONG ITS ENTIRE LENGTH. NEUTRAL CONDUCTORS LARGER THAN NO. 6 AWG SHALL BE IDENTIFIED EITHER BE CONTINUOUS WHITE OR NATURAL GRAY OUTER FINISH ALONG ITS ENTIRE LENGTH OR BY THE USE OF WHITE TAPE AT ITS TERMINATIONS AND INSIDE ACCESSIBLE WIREWAYS.

13. ALL IDENTIFICATION OF CONTROL PANEL INSTALLATIONS, CONSTANT CURRENT REGULATORS, BREAKER LABELS, ETC. SHALL BE PERFORMED BY THE CONTRACTOR. THE CONTRACTOR SHALL RECORD ALL CALLOUT CHANGES ON THE "RECORD" DRAWINGS FOR THIS PROJECT.

14. NAMEPLATES SHALL BE PROVIDED FOR ALL ELECTRICAL EQUPMENT TO IDENTIFY FUNCTION, CIRCUIT, VOLTAGE, AND PHASE. WHERE EQUIPMENT CONTAINS FUSES, INCLUDE THE FUSE RATINGS.

15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL CABLES AND UTILITIES, THEIR DEPTHS, ETC. INCLUDING THE USE OF SOFT DIG, GROUND PENETRATING RADAR OR OTHER MEANS AVAILABLE TO ACCURATELY LOCATE ALL CABLES AND UTILITIES AND TO SURVEY AND STAKE THOSE CABLES AND UTILITIES ON RECORD DRAWINGS PRIOR TO CONSTRUCTION.

16. ALL EXISTING CONDUCTORS SHALL BE TESTED FOR INSULATION RESISTANCE PRIOR TO WORKING ON CIRCUIT, USING A 1000V MEGOHMMETER AND SHALL BE RETURNED TO SERVICE WITH MATCHING OR BETTER INSULATION RESISTANCE READINGS. ALL PROPOSED CONDUCTORS SHALL BE TESTED FOR INSULATION RESISTANCE PRIOR TO CONNECTING TO EXISTING CIRCUIT, USING A 1000V MEGOHMMETER. CIRCUITS OR NEW PORTIONS OF CIRCUITS SHALL BE AS COMPLETE AS POSSIBLE FOR TESTING. ALL TESTING SHALL BE WITNESSED BY THE RESIDENT PROJECT REPRESENTATIVE AND REPORT TURNED OVER TO OWNER.

17. CONNECTION OF CONDUCTORS MUST BE MADE BY USING CRIMP CONNECTORS AND CRIMPING TOOL APPROVED BY THE CONNECTOR/LUG MANUFACTURER. THE TOOL MUST PRODUCE A COMPLETE CRIMP BEFORE IT CAN BE REMOVED. THE CRIMPING TOOL USED MUST BE LISTED BY THE L–823 KIT MANUFACTURER. MAKE THE NUMBER AND TYPE OF CRIMPS PER KIT MANUFACTURER'S INSTRUCTIONS. ELECTRICIANS THAT WILL BE MAKING CONNECTOR KIT TERMINATIONS SHALL BE TRAINED AND CERTIFIED BY THE CONNECTOR KIT MANUFACTURER.

18. THE OWNER SHALL HAVE THE RIGHT TO SALVAGE MATERIALS THAT ARE TO BE REMOVED IN THE DEMOLITION PLANS. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER PRIOR TO DEMOLITION AND DELIVER SALVAGE MATERIAL TO THE AIRPORT ELECTRICAL MAINTENANCE.

19. CONTRACTOR SHALL INSTALL NEW CARBON STEEL COATED BOLTS COLORED ORANGE IN ALL EXISTING LIGHT BASE CANS, SIGN CANS, JUNCTION CANS, JUNCTION CAN PLAZAS AND ETC., THAT THE CONTRACTOR UTILIZES TO INSTALL CABLE. ADDITIONALLY, THE CONTRACTOR SHALL DRILL AND TAP OUT ANY DAMAGED AND/OR MISSING BOLTS AT THESE LOCATIONS AND INSTALL NEW STAINLESS STEEL (SS) ID TAGS AS REQUIRED. COST SHALL BE INCIDENTAL TO THE LINE ITEMS FOR INSTALLATION/INTERCEPTION.

20. ALL BOLTS FOR LIGHT FIXTURES, SIGNS AND JUNCTION CANS SHALL BE FLUOROPOLYMER METALLIC–CERAMIC COATED SAE J429 GRADE 5 CARBON STEEL BOLTS PER FAA ENGINEERING BRIEF 84A AND MEET FAA REQUIREMENTS. BOLT COATING PREFERENCE SHALL BE ORANGE. THE BASE CAN COVER MOUNTING BOLTS SHALL EXTEND THRU THE BASE CAN MOUNTING FLANGE INTO THE BASE CAN A MINIMUM OF 0.75 INCH BEYOND MACHINED THREAD SYSTEM. THE BOLTS SHALL HAVE ENOUGH THREAD LENGTH SO THEY DO NOT SHOULDER OUT BEFORE THE COVER IS SECURELY TIGHTENED.

21. CONTRACTOR TO USE LOCTITE LB8023 MARINE GRADE ANTI–SEIZE OR APPROVED EQUAL ON COUPLINGS AND ANY APPLICATION WHERE ANTI–SEIZE IS REQUIRED. ANTI–SEIZE SHALL NOT BE USED WITH COATED CARBON STEEL BOLTS.

22. UPON A COMPLETION OF THE INSTALLATION AND PRIOR TO A SUBSTANTIAL COMPLETION INSPECTION THE CONTRACTOR SHALL CLEAN AND VACUUM ALL JUNCTION/ BASE CANS, NEW AND EXISTING,THAT WERE INSTALLED/ AFFECTED IN THE PROJECT. CANS SHALL BE LEFT FREE OF ALL TRASH, DIRT AND DEBRIS.

23. ALL COSTS ASSOCIATED WITH THE CIRCUIT IDENTIFICATION AS SHOWN IN THE DRAWINGS, INCLUDING BUT NOT LIMITED TO STAINLESS STEEL CIRCUIT TAGS, COLORED TAPE/HEAT SHRINK, CONCRETE DUCT MARKERS, JUNCTION CAN PLAZA IDENTIFICATION AND FIXTURE MARKER TAGS SHALL BE INCLUSIVE TO THE PAY ITEM FOR THE ITEM BEING INSTALLED NO SEPARATE PAYMENT WILL BE MADE.

24. AFTER LEVELING, THE CONTRACTOR SHALL ADJUST THE ASYMMETRIC LENS OF EACH OPTICAL SYSTEM SO THAT THE TWO CONCENTRATED BEAMS OF LIGHT SHINE UP AND DOWN THE RUNWAY OR TAXIWAY AND ARE "TOED IN" SYMMETRICALLY TOWARD THE CENTERLINE OF RUNWAY OR TAXIWAY. FINAL ADJUSTMENT OF ASYMMETRIC LENSES SHALL BE MADE AT NIGHT AND SHALL BE TO THE SATISFACTION OF THE RPR.

25. THE FINISHED PAVEMENT SURFACE SHALL BE PROTECTED FROM FOREIGN SUBSTANCES WHICH COULD CAUSE STAINING, I.E., OIL, P–605, JOINT SEALING FILLER ETC. THE CONTRACTOR SHALL IMMEDIATELY CLEAN ALL SPILLS AND CORRECT/CLEAN ANY STAINED SURFACES AT THE CONTRACTOR'S EXPENSE.

26. SODDING OF DISTURBED AREAS SHALL BE AS SPECIFIED IN SPECIFICATION T–904 SODDING. COST OF SODDING SHALL BE INCLUSIVE TO THE ELECTRICAL PAY ITEM INSTALLED.

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Professional Engineer
License No. 73735
AMY CHAMPAGNE-BAKER

DRAWN BY: RJC | DATE: 08/28/2025
DESIGNED BY: ALC | SCALE: AS NOTED
CHECKED BY: JWK
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PUBLIC WORKS DEPARTMENT
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REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
ELECTRICAL GENERAL NOTES

BID SET

SHEET NO. E001 | OF
TOTAL: ##
CAD FILE: 12884–E001–NOTE
DRAWING FILE NO.

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ELECTRICAL LEGEND

SYMBOL	DESCRIPTION
	NEW L-861T(L), LED, MITL, ELEVATED T/W EDGE LIGHT MOUNTED ON A NEW L-867 BASE CAN INSTALLED IN EARTH/ROCK WITH PROPERLY SIZED L-830 TRANSFORMER AND L-823 CONNECTORS.
EP	NEW L-861T(L), LED, MITL, ELEVATED T/W EDGE LIGHT MOUNTED ON A NEW TELESCOPIC L-867 BASE CAN INSTALLED IN EXISTING PAVEMENT WITH PROPERLY SIZED L-830 TRANSFORMER AND L-823 CONNECTORS.
	NEW DIRECT BURIED SCHEDULE 40 PVC CONDUIT INSTALLED IN EARTH, COUNTERPOISE SHALL BE INSTALLED ABOVE CONDUIT PER DETAIL. SEE PLANS FOR AMOUNT/SIZE AND LOCATION OF CONDUITS.
	NEW CONCRETE ENCASED SCHEDULE 40 PVC CONDUIT INSTALLED IN NEW FULL STRENGTH PAVEMENT, COUNTERPOISE SHALL BE INSTALLED ABOVE CONDUIT PER DETAIL. SEE PLANS FOR AMOUNT/SIZE AND LOCATION OF CONDUITS.
	NEW CONCRETE ENCASED SCHEDULE 40 PVC CONDUIT INSTALLED IN EXISTING FULL STRENGTH PAVEMENT, COUNTERPOISE SHALL BE INSTALLED ABOVE CONDUIT PER DETAIL. SEE PLANS FOR AMOUNT/SIZE AND LOCATION OF CONDUITS. CONTRACTOR SHALL REPAIR PAVEMENT ACCORDINGLY.
#	NEW L-858(L), LED, SIZE 1 AIRFIELD GUIDANCE SIGN ON NEW CONCRETE BASE INSTALLED IN EARTH. REFER TO LIGHTED SIGN SCHEDULES FOR ADDITIONAL INFORMATION. # = SIGN NUMBER
#	NEW L-867 16" DIA X 24" DEEP BOTTOMLESS JUNCTION CAN PLAZA INSTALLED IN EARTH. SEE JUNCTION CAN SCHEDULE FOR NUMBER OF CAN PER PLAZA AND CIRCUIT FOUND IN EACH CAN. SYMBOL SHOW IS TYPICAL OF A 6 CAN JUNCTION CAN PLAZA.
	NEW 3/4" X 20' MIN. GROUND ROD, EXOTHERMICALLY WELDED AND CONNECTED TO COUNTERPOISE SYSTEM AT A MAX OF 500' SPACING
2-X 1C #-1W2"	2-X - 2 INDICATES NUMBER OF CONDUCTORS, X INDICATES CIRCUIT ID 1C - 1 INDICATES NUMBER OF #6 SOLID COUNTERPOISE 1W2" - 1 INDICATES NUMBER OF CONDUITS, 2 INDICATES CONDUIT SIZE #= QUANTITY OF CONDUITS
2-X 1W2"	2-X - 2 INDICATES NUMBER OF CONDUCTORS, X INDICATES CIRCUIT ID 1W2" - 1 INDICATES NUMBER OF EXISTING CONDUITS, 2 INDICATES EXISTING CONDUIT SIZE
	DEMOLISH OR MODIFY ITEM, SEE NOTES FOR INFORMATION
# Yx # Yx	SEE DEMOLITION AND INSTALLATION NOTES # = INDICATES THE NOTE NUMBER Yx = INDICATES THE QUANTITY OF NOTES PER LOCATION
	EXISTING ELEVATED TAXIWAY EDGE LIGHT
	EXISTING RUNWAY EDGE LIGHT
	EXISTING INPAVEMENT FLUSH MOUNTED RUNWAY GUARD LIGHT
	EXISTING ELEVATED RUNWAY GUARD LIGHT
#	EXISTING AIRFIELD GUIDANCE SIGN # = SIGN NUMBER
M	EXISTING FAA MALS THRESHOLD LIGHT
B	EXISTING JUNCTION CAN
	EXISTING WINDCONE
	EXISTING L-867 JUNCTION CAN PLAZA.
	EXISTING CONDUIT SYSTEM
AFL	EXISTING AIRFIELD LIGHTING DUCTBANK
FAA	EXISTING FAA CABLE/CONDUIT
FPL	EXISTING FPL CABLE/CONDUIT
FOC	EXISTING COMMUNICATIONS CONDUIT/DUCTBANK
TSA	TAXIWAY SAFETY AREA
RSA	RUNWAY SAFETY AREA
TOFA	TAXIWAY OBJECT FREE AREA

NOTE: SYMBOL SIZES ARE NOT SHOWN TO SCALE FOR CLARITY ON THE PLAN SHEETS.

DEMOLITION NOTES

1. CONTRACTOR SHALL DISCONNECT, REMOVE AND DISPOSE OF THE EXISTING ELEVATED EDGE LIGHT, CONDUCTORS, TRANSFORMER AND BASE CAN. BACKFILL AND RESTORE SOD/PAVEMENT ACCORDINGLY. PROVIDE, MAINTAIN AND INSTALL TEMPORARY CONDUITS AND CONDUCTOR SYSTEMS TO MAINTAIN CIRCUITS BEYOND WORK AREA IN OPERATIONAL CONDITION AT ALL TIMES DURING CONSTRUCTION. THE LINE ITEM COST SHALL INCLUDE DEWATERING EXISTING CONDUITS, DUCTBANKS, BASE CANS AND MANHOLE.

2. CONTRACTOR SHALL DISCONNECT THE EXISTING AIRFIELD GUIDANCE SIGN FROM THE LIGHTING CIRCUIT, AND PULL BACK THE EXISTING CONDUCTORS TO THE EXISTING LIGHT FIXTURE/JUNCTION CAN/MANHOLE AND RECONNECT THE EXISTING CONDUCTORS TO REMOVE THE SIGN FROM THE CIRCUIT. REMOVE AND DISPOSE OF THE EXISTING CONCRETE BASE, TRANSFORMER, CONDUITS, CABLES AND SIGN. BACKFILL AND RESTORE SOD ACCORDINGLY. PROVIDE, MAINTAIN AND INSTALL TEMPORARY CONDUITS AND CONDUCTOR SYSTEMS TO MAINTAIN CIRCUITS BEYOND WORK AREA IN OPERATIONAL CONDITION AT ALL TIMES DURING CONSTRUCTION. SEE THE PHASING PLANS FOR SEQUENCING OF WORK. THE LINE ITEM COST SHALL INCLUDE DEWATERING OF EXISTING CONDUITS, DUCTBANKS, BASE CANS AND MANHOLES.

3. CONTRACTOR SHALL DISCONNECT, REMOVE AND DISPOSE OF THE EXISTING 2 CAN JUNCTION CAN PLAZA AND CONDUCTORS. CONTRACTOR SHALL BACKFILL AND RESTORE SOD ACCORDINGLY. PROVIDE, MAINTAIN AND INSTALL TEMPORARY CONDUITS AND CONDUCTOR SYSTEMS TO MAINTAIN CIRCUITS BEYOND WORK AREA IN OPERATIONAL CONDITION AT ALL TIMES DURING CONSTRUCTION. THE LINE ITEM COST SHALL INCLUDE DEWATERING EXISTING CONDUITS, DUCTBANKS, BASE CANS AND MANHOLE.

INSTALLATION NOTES:

1. CONTRACTOR SHALL HAND EXCAVATE, LOCATE AND INTERCEPT EXISTING CONDUIT SYSTEM AND EXTEND TO NEW LIGHT BASE/JUNCTION CAN/SIGN. CLEAN OUT AND DEWATER THE EXISTING CONDUIT SYSTEM. CONTRACTOR SHALL INCLUDE DEWATERING IN THE LINE ITEM COST FOR THE INTERCEPTION OF THE CONDUIT SYSTEM.

2. CONTRACTOR SHALL HAND EXCAVATE, CORE DRILL THE EXISTING JUNCTION CAN/BASE CAN AND PROVIDE AND INSTALL NEW CONDUIT AND CONDUCTOR SYSTEM, COMPLETE. SEAL, PATCH AND REPAIR JUNCTION CAN/BASE CAN, BACKFILL AND SOD ACCORDINGLY AND MAKE ALL NECESSARY CONNECTIONS FOR A COMPLETE WORKING SYSTEM IN PLACE.

3. CONTRACTOR SHALL IDENTIFY AND INTERCEPT THE EXISTING CIRCUIT CONDUCTORS IN THE EXISTING BASE CAN/MANHOLE/JUNCTION CAN AND PROVIDE AND INSTALL NEW SPLICE KITS AND EXTEND THE NEW CIRCUIT CONDUCTORS ACCORDINGLY. MAKE ALL NECESSARY CONNECTIONS FOR A COMPLETE WORKING SYSTEM IN PLACE.

JUNCTION CAN IDENTIFICATION WITH CIRCUIT ID

JCP ID	1	2	3
JCP-49	EE	D	
JCP-50	EE	D	
JCP-51	EE	D	A
JCP-52	EE	D	A
JCP-53	D	A	
JCP-54	D	A	

SP = SPARE CODUIT

CIRCUIT ID:	TYPE OF CABLE	CABLE JACKET COLOR	CABLE TAPE COLOR
9E = RUNWAY 9-27 EAST CIRCUIT	#8, L-824, 5KV CABLE	BLACK	RED/BLACK
A = TAXIWAY ALPHA CIRCUIT	#8, L-824, 5KV CABLE	BLACK	RED
EE = TAXIWAY ECHO EAST CIRCUIT	#8, L-824, 5KV CABLE	BLACK	PINK/RED
D = TAXIWAY DELTA CIRCUIT	#8, L-824, 5KV CABLE	BLACK	BLACK

NOTE: PROVIDE AND INSTALL COLORED PHASE TAPE (3M ELECTRICAL VINYL) ON CABLES LOCATED IN EACH BASE CAN/ JUNCTION CAN/ MANHOLE. COLOR SHALL BE AS NOTED IN THE SCHEDULE ABOVE (CABLE ID COLOR). PROVIDE 1/2" WIDE TAPE WITH A MINIMUM OF 4 LAPS. THERE SHALL BE A MINIMUM OF ONE COLORED ID TAPE PER CABLE WHEN NO CONNECTOR KITS ARE PRESENT. WHEN CONNECTOR KITS ARE PRESENT, THERE SHALL BE ONE COLORED ID TAPE ON EACH CABLE END.

State of Florida
Professional Engineer
License No. 73735
AMY CHAMPAGNE-BAKER

DRAWN BY: RJC
DESIGNED BY: ALC
CHECKED BY: JWK
DATE: 08/28/2025
SCALE: AS NOTED
FIELD BOOK:

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REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
ELECTRICAL LEGEND AND NOTES

BID SET

SHEET NO. E002 OF
TOTAL: ##
CAD FILE: 12884-E002-LEGD
DRAWING FILE NO.

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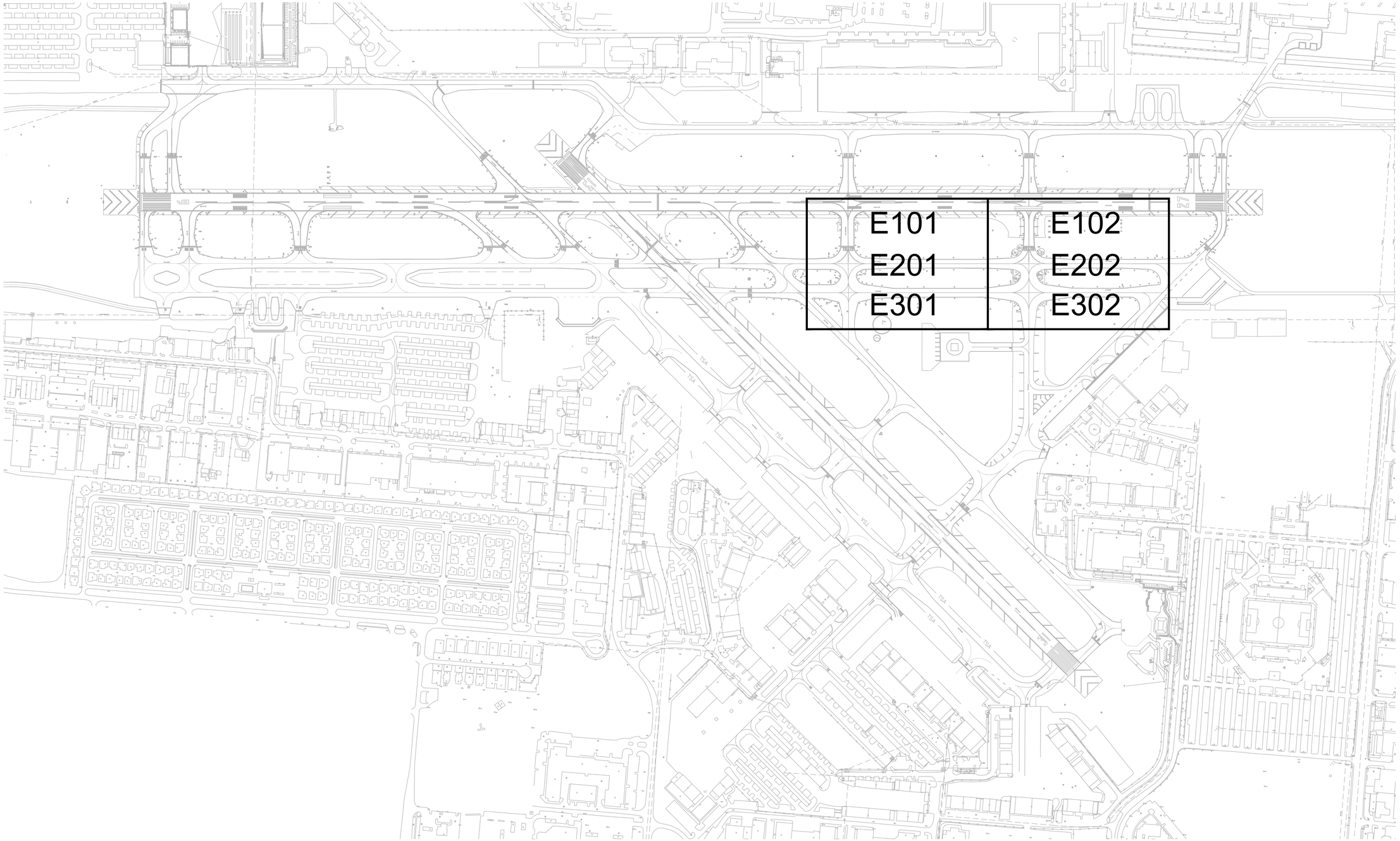

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RJC	08/28/2025
DESIGNED BY:	SCALE:
ALC	AS NOTED
CHECKED BY:	
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PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
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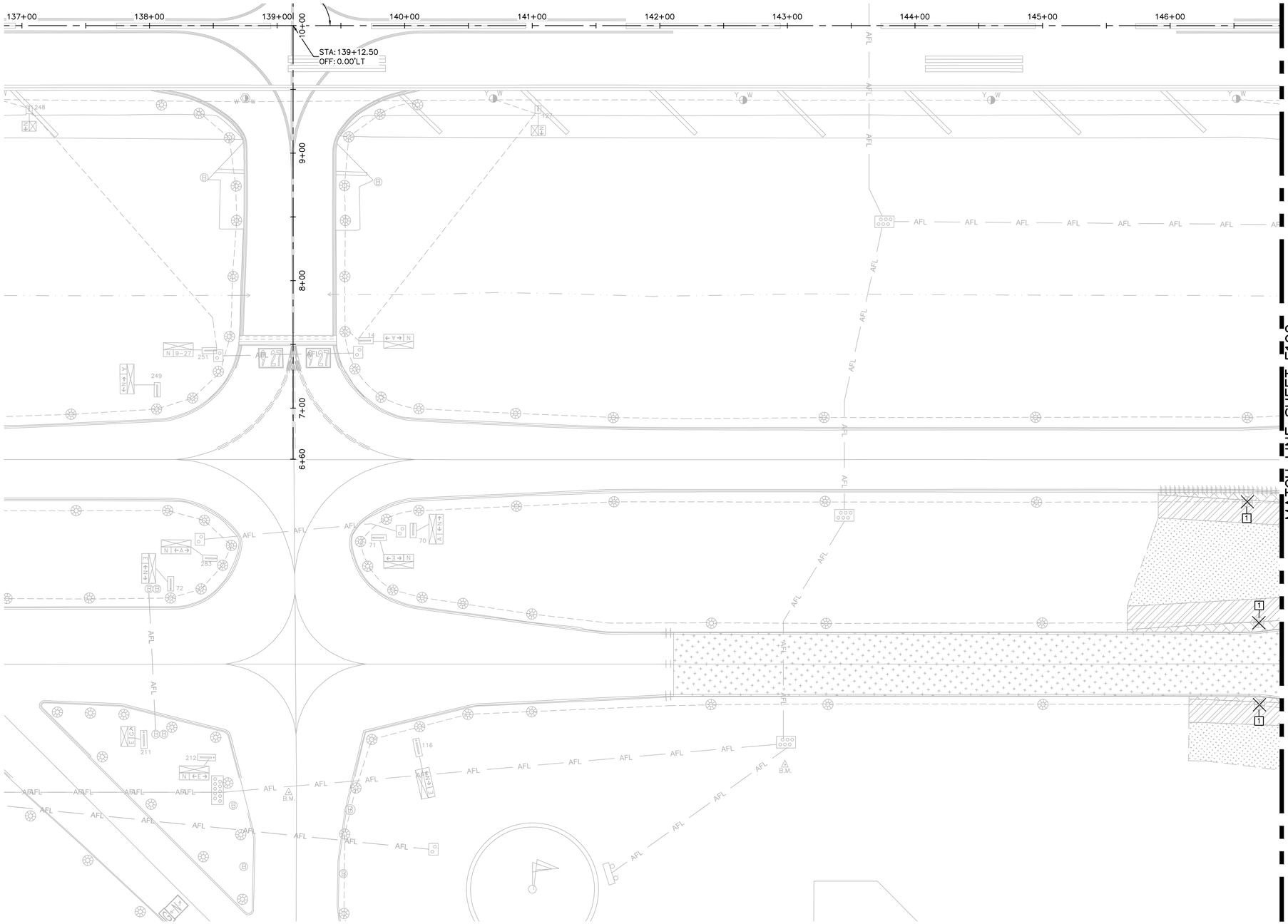
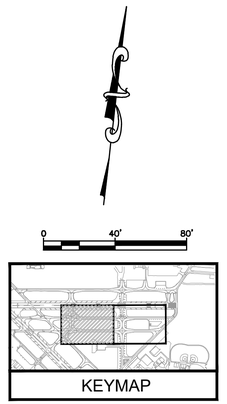
REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
ELECTRICAL KEY MAP

SHEET NO.	OF
E003	
TOTAL:	##
CAD FILE: 12884-E003-KMAP	
DRAWING FILE NO.	





NOTES

1. SEE SHEET E002 FOR DEMOLITION NOTES AND LEGEND.

LEGEND (WORK)

- MILLING
- CLEARING, GRUBBING AND REGARDING
- FULL DEPTH ASPHALT PAVEMENT REMOVAL
- FULL DEPTH EXCAVATION FOR NEW FULL DEPTH CONSTRUCTION
- FULL DEPTH EXCAVATION FOR NEW STABILIZED SHOULDER
- OVERLAY TRANSITION TO EXISTING

WARNING!!! WARNING!!! WARNING!!!
THERE ARE A NUMBER OF AIRPORT, PUBLIC UTILITIES, AND FAA LIGHTING, COMMUNICATIONS, UNDERGROUND CABLES AND PIPES TRAVERSING THE AIRFIELD PAVEMENTS AREAS. THE ENGINEER HAS MADE EVERY ATTEMPT TO SHOW THE APPROXIMATE LOCATION OF ALL ITEMS. HOWEVER, THE ENGINEER IS NOT RESPONSIBLE FOR SHOWING OR LOCATING EVERY ITEM CURRENTLY IN PLACE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE EVERY ITEM LOCATED, FLAGGED, AND IDENTIFIED PRIOR TO STARTUP OF CONSTRUCTION. ANY DAMAGE DONE TO ANY OF THE EXISTING ITEMS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL REPAIR ANY ITEM DAMAGED, CAUSED BY THEIR ACTIONS, WITH NO ADDITIONAL COMPENSATION.

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DESIGNED BY:	CHECKED BY:	FIELD BOOK:
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REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
ELECTRICAL DEMOLITION PLAN

SHEET NO.	OF
E101	
TOTAL:	##

CAD FILE: 12884-MULTI-ELEC1
DRAWING FILE NO.

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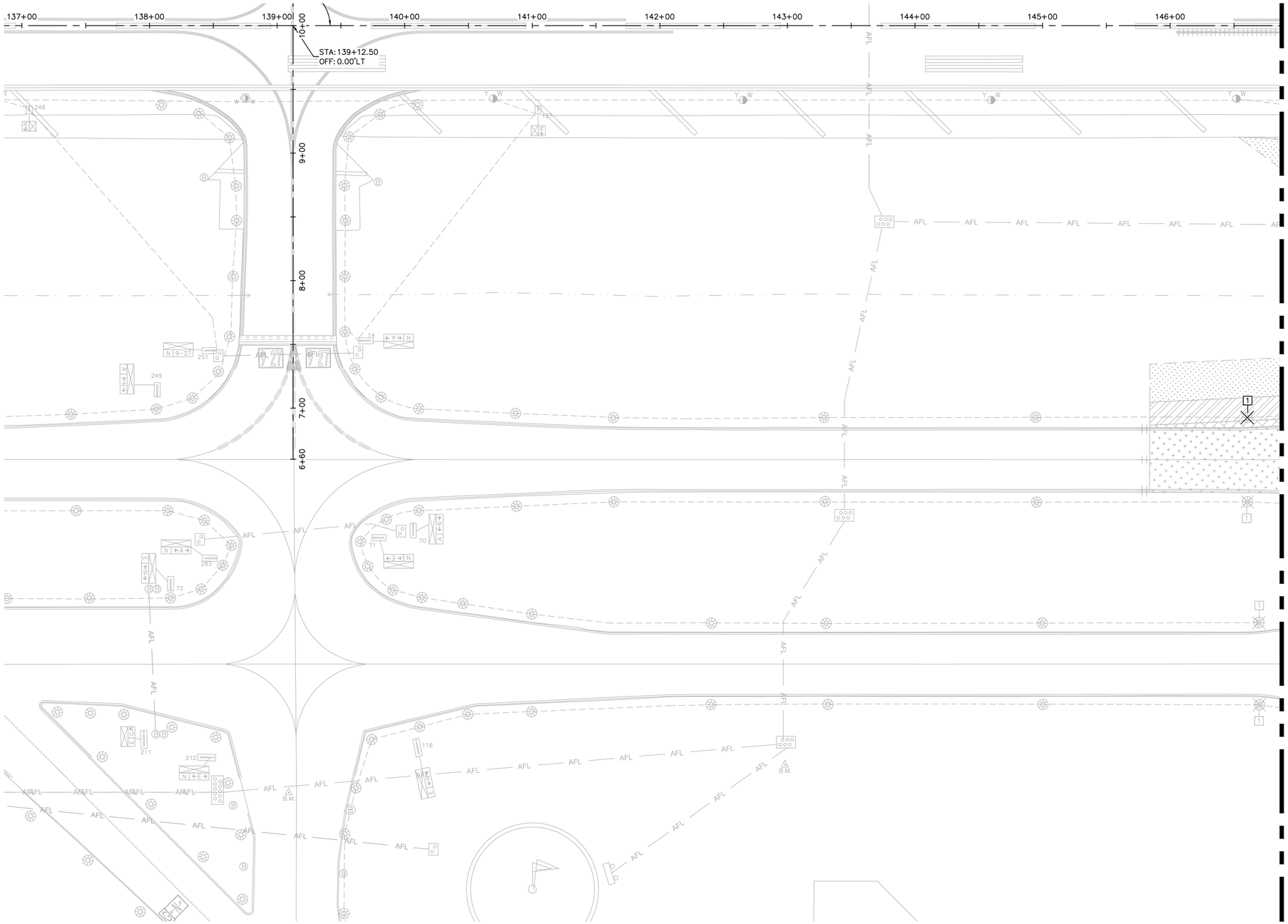

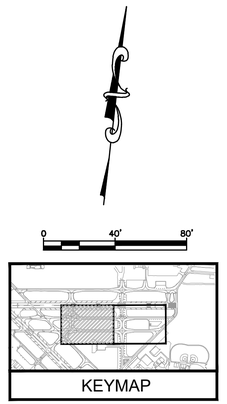

NOTES

1. SEE SHEET E002 FOR DEMOLITION NOTES AND LEGEND.
2. BASE BID SCOPE OF WORK HAS BEEN SHADED FOR CLARITY

LEGEND (WORK)

- MILLING
- CLEARING, GRUBBING AND REGARDING
- FULL DEPTH ASPHALT PAVEMENT REMOVAL
- FULL DEPTH EXCAVATION FOR NEW FULL DEPTH CONSTRUCTION
- FULL DEPTH EXCAVATION FOR NEW STABILIZED SHOULDER
- OVERLAY TRANSITION TO EXISTING

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561-210-9224
LICENSE NO. CA30805

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Professional Engineer
License No. 73735
AMY CHAMPAGNE-BAKER

DRAWN BY:	DATE:	SCALE:
RJC	08/28/2025	AS NOTED
DESIGNED BY:	CHECKED BY:	FIELD BOOK:
ALC	JWK	

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
ELECTRICAL DEMOLITION PLAN - ADD ALT

SHEET NO.	OF
E101A	
TOTAL:	##
CAD FILE: 12884-MULTI-ELEC1 - ADDALT	
DRAWING FILE NO.	

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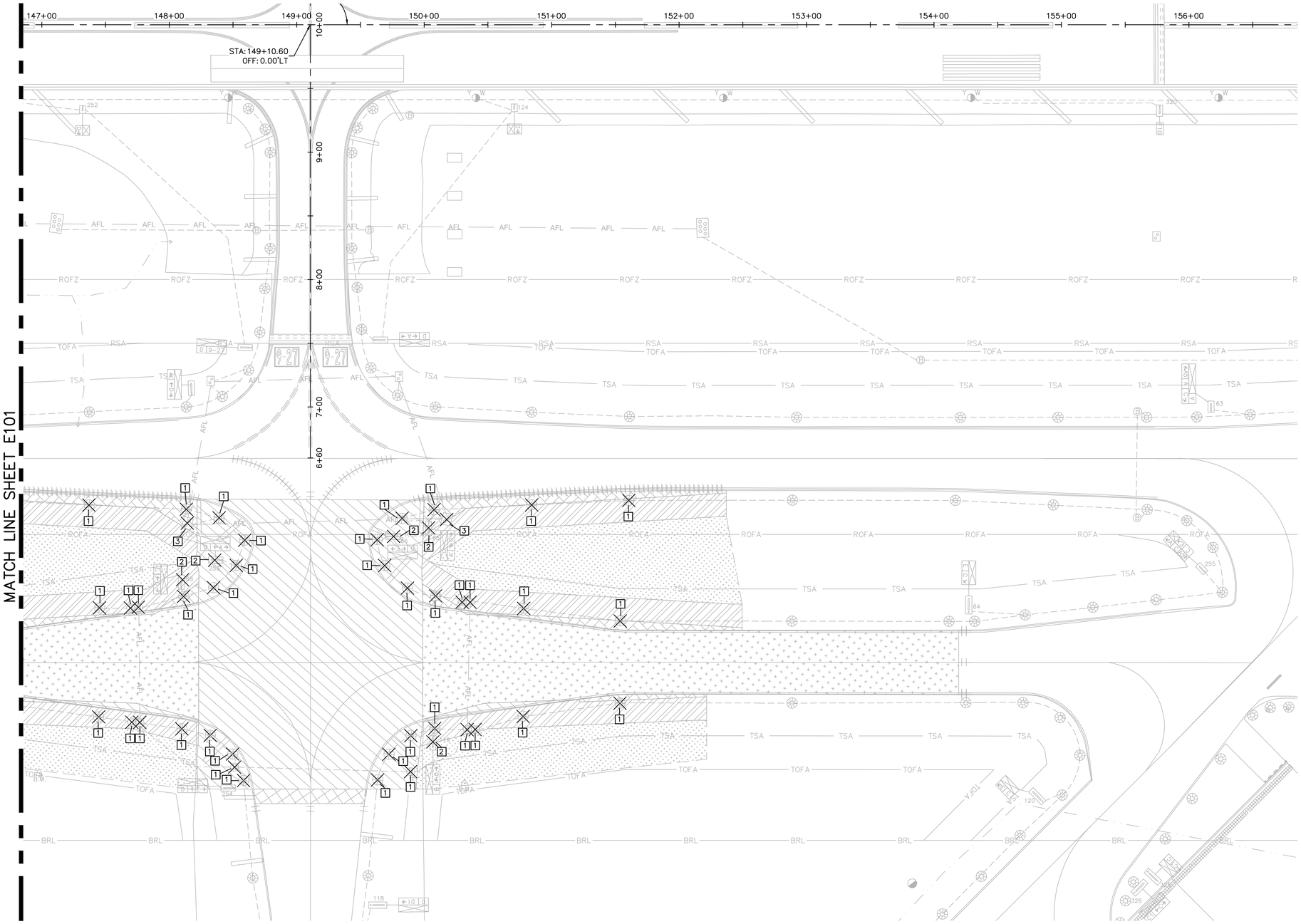

NOTES

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- MILLING
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- FULL DEPTH ASPHALT PAVEMENT REMOVAL
- FULL DEPTH EXCAVATION FOR NEW FULL DEPTH CONSTRUCTION
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DESIGNED BY:	CHECKED BY:	FIELD BOOK:
ALC	JWK	

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NO.	DATE	BY	CHK'D	DESCRIPTION

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PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
ELECTRICAL DEMOLITION PLAN

SHEET NO.	OF
E102	
TOTAL:	##

CAD FILE: 12884-MULTI-ELEC1
DRAWING FILE NO.

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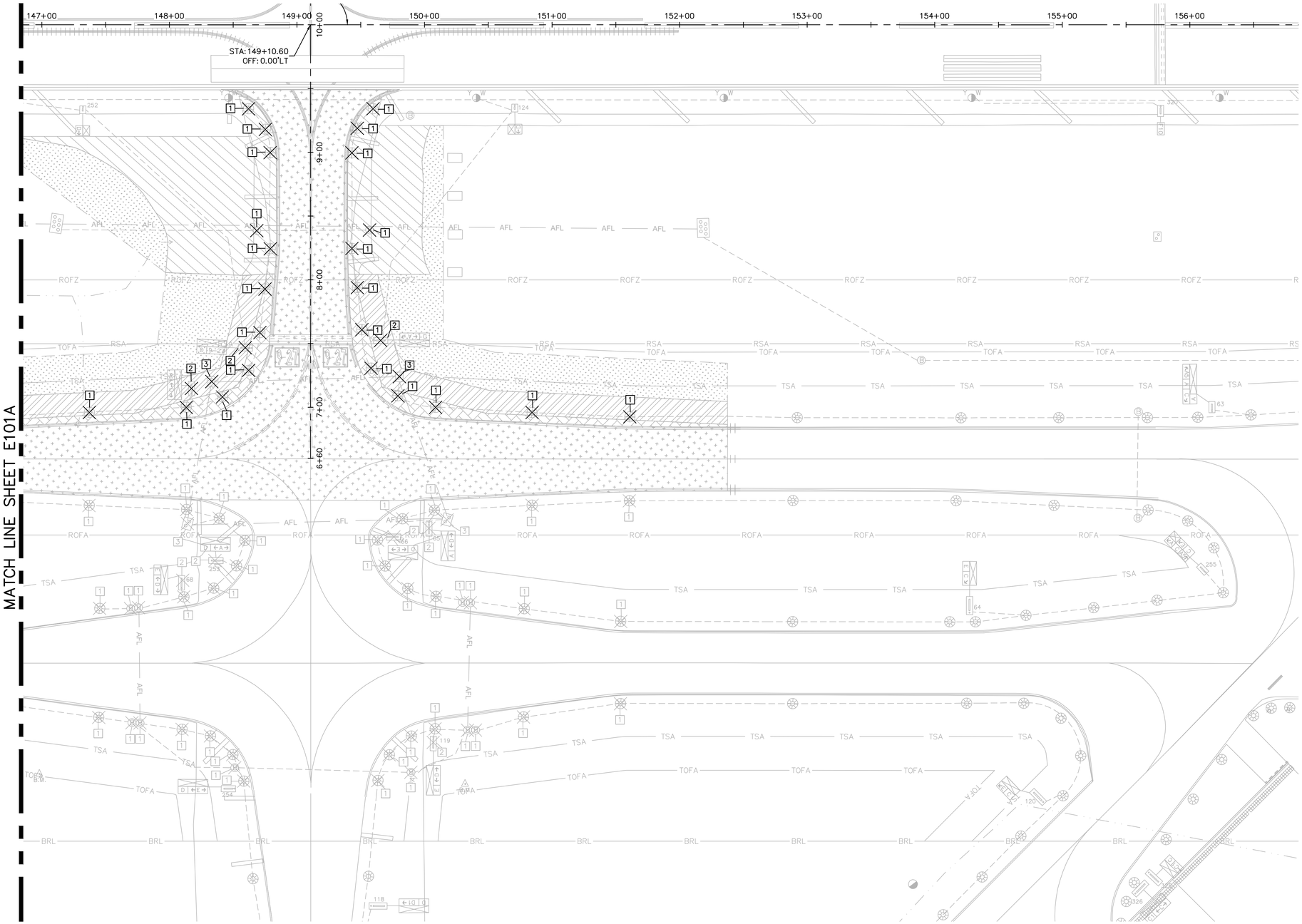

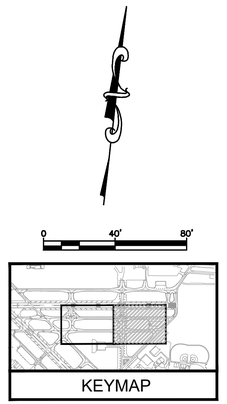

NOTES

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2. BASE BID SCOPE OF WORK HAS BEEN SHADED FOR CLARITY

LEGEND (WORK)

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AMY CHAMPAGNE-BAKER

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FIELD BOOK:		

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PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
ELECTRICAL DEMOLITION PLAN - ADD ALT

SHEET NO.	OF
E102A	
TOTAL:	##

CAD FILE: 12884-MULTI-ELEC1 - ADDALT

DRAWING FILE NO.

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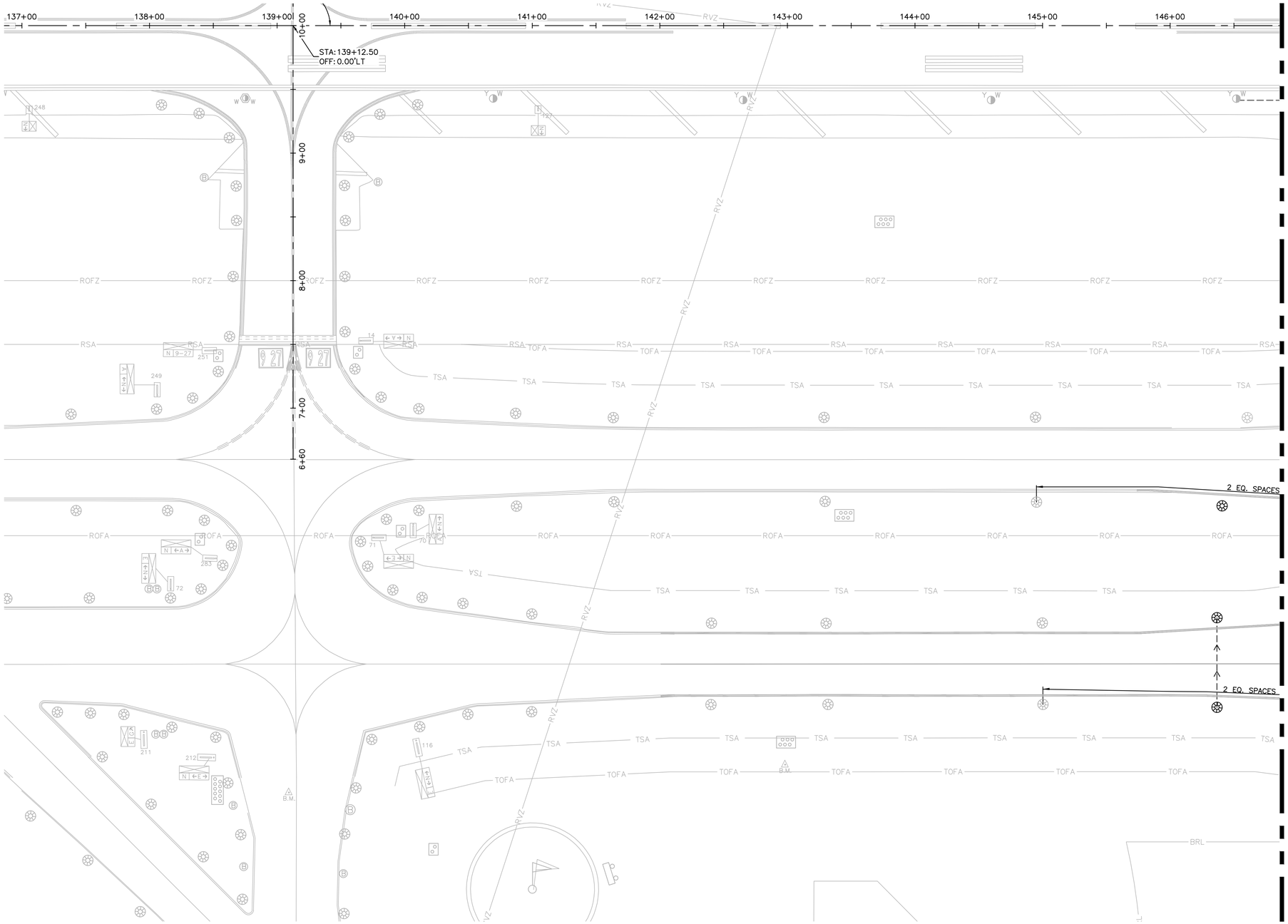

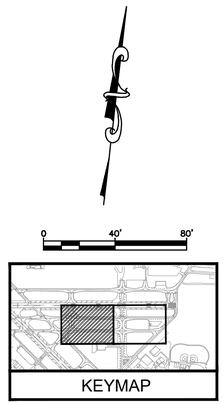

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1. REFER TO TYPICAL TAXIWAY EDGE LIGHT CONFIGURATION DETAIL FOR LAYOUT AND INSTALLATION INFORMATION OF NEW EDGE LIGHTS AND BASE CANS. STANDARD OFFSET SHALL BE 8' FORM EDGE OF PAVEMENT/OUTER EDGE OF STRIPE.
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PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
ELECTRICAL LIGHT AND SIGN LAYOUT

SHEET NO. E201 OF
TOTAL: ##
CAD FILE: 12884-MULTI-ELEC2
DRAWING FILE NO.

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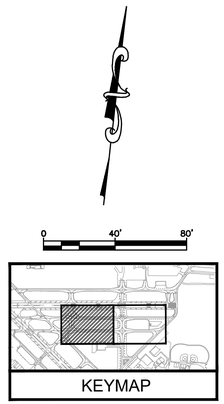

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FIELD BOOK:		

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REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
ELECTRICAL LIGHT AND SIGN LAYOUT - ADD ALT

SHEET NO.	OF
E201A	
TOTAL:	##
CAD FILE: 12884-MULTI-ELEC2 - ADDALT	
DRAWING FILE NO.	

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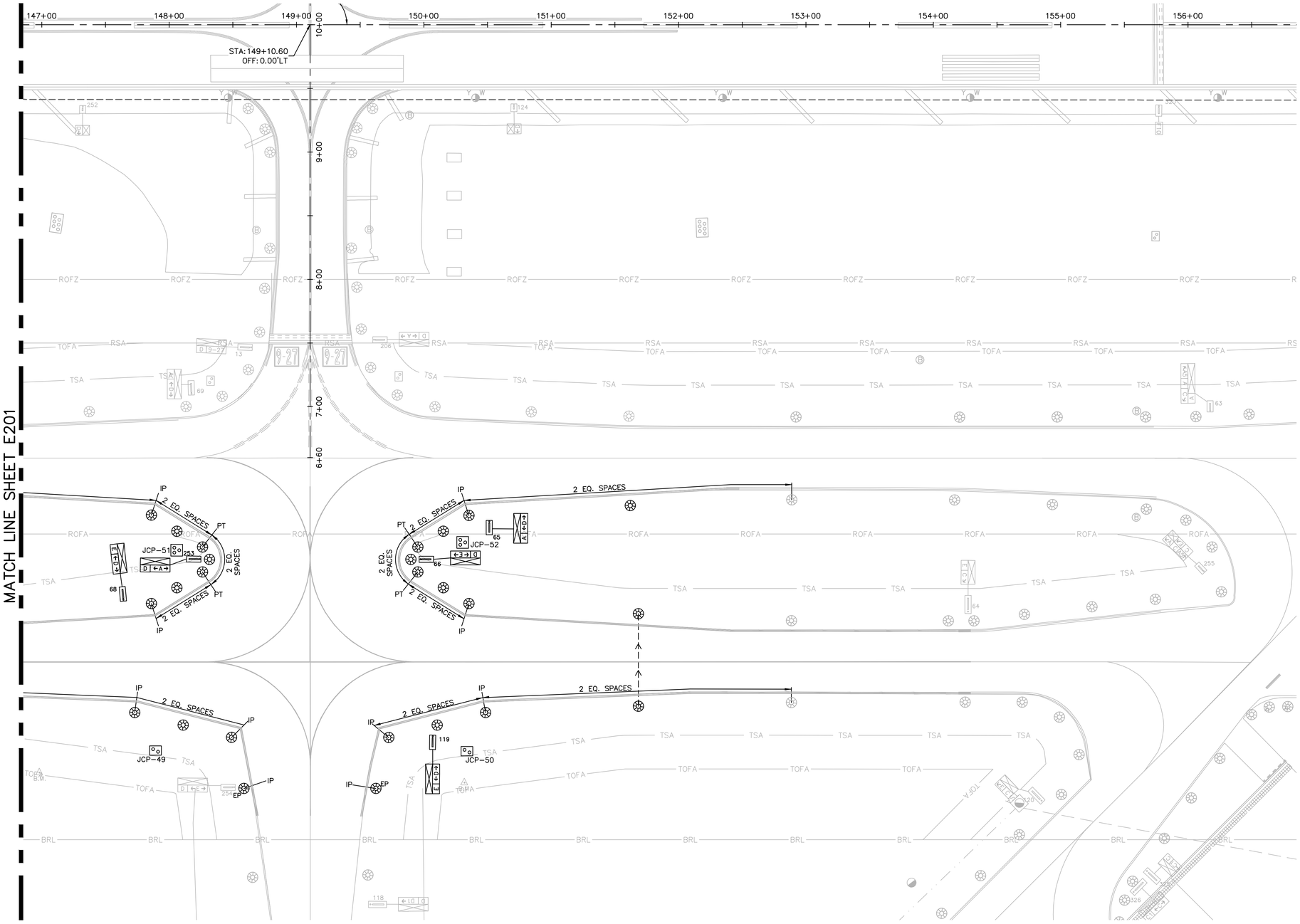

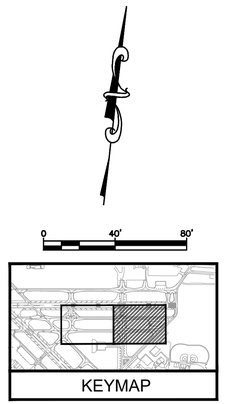

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LICENSE NO. AA26005

BID SET

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AMY CHAMPAGNE-BAKER

DRAWN BY:	DATE:
RJC	08/28/2025
DESIGNED BY:	SCALE:
ALC	AS NOTED
CHECKED BY:	
JWK	
FIELD BOOK:	

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
ELECTRICAL LIGHT AND SIGN LAYOUT

SHEET NO.	OF
E202	
TOTAL:	##
CAD FILE: 12884-MULTI-ELEC2	
DRAWING FILE NO.	

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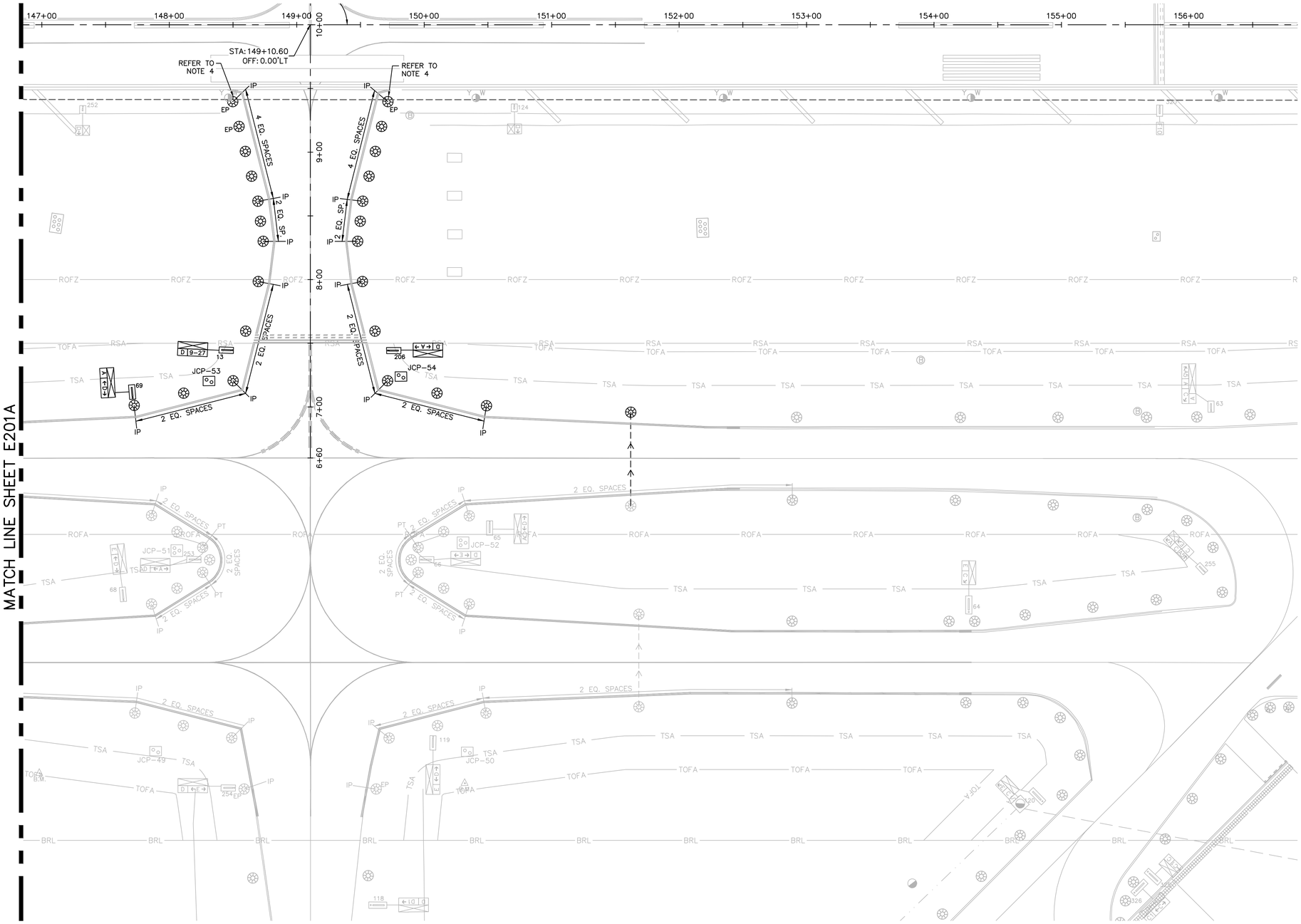

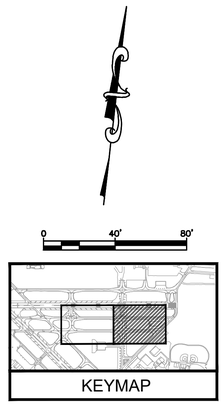

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ALC	JWK	
FIELD BOOK:		

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REVISIONS			
NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
ELECTRICAL LIGHT AND SIGN LAYOUT - ADD ALT

SHEET NO. E202A OF
TOTAL: ##
CAD FILE: 12884-MULTI-ELEC2 - ADDALT
DRAWING FILE NO.

CAM #26-0689
Exhibit 1B
Page 42 of 175

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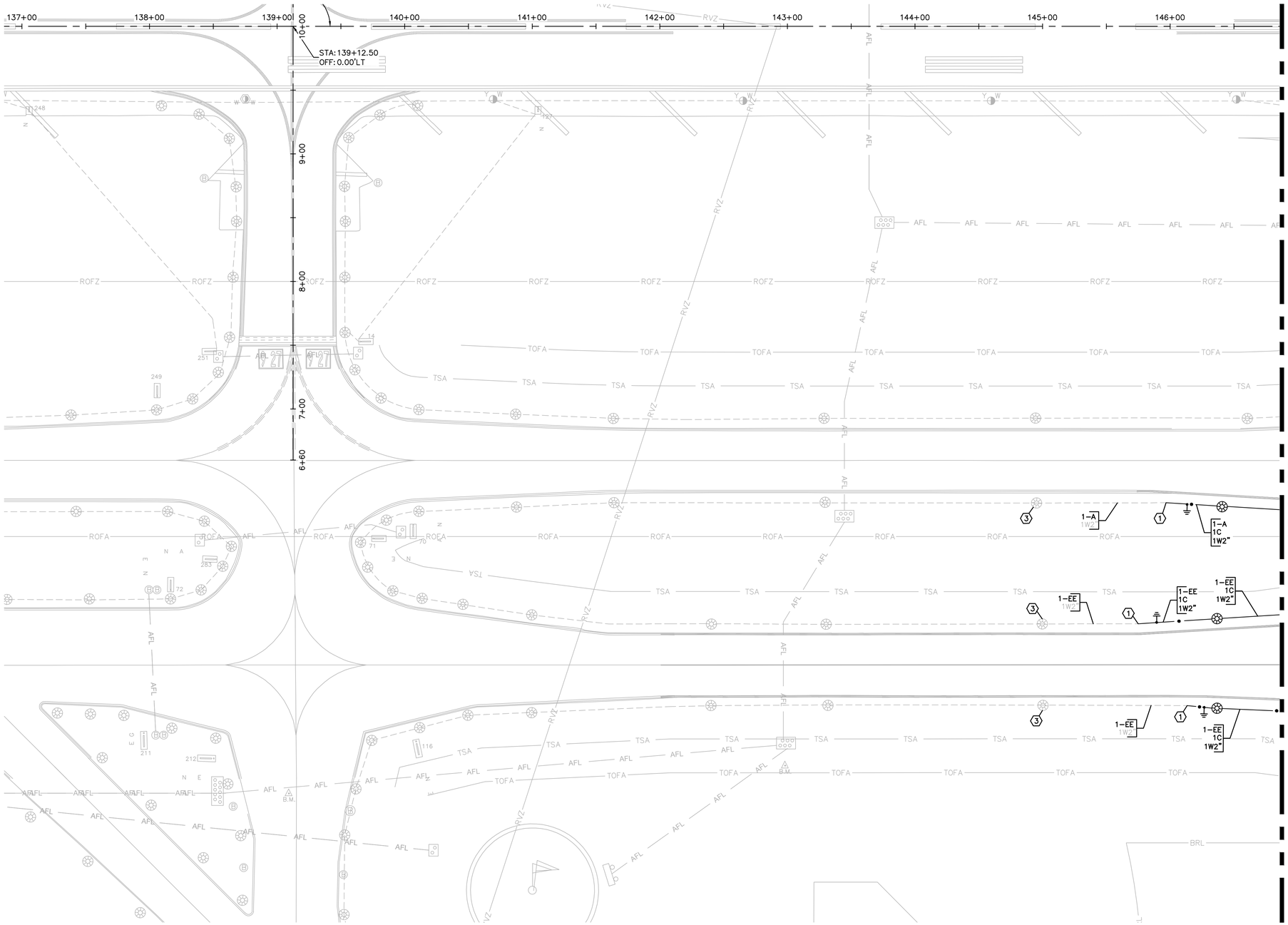

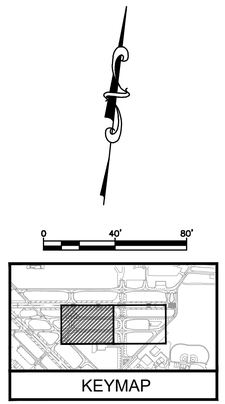

NOTES

1. SEE SHEET E002 FOR INSTALLATION NOTES AND LEGEND.

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LICENSE NO. CA30805

BID SET

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License No. 73735
AMY CHAMPAGNE-BAKER

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ALC	JWK	
FIELD BOOK:		

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
ELECTRICAL CIRCUITRY PLAN

SHEET NO.	OF
E301	
TOTAL:	##
CAD FILE: 12884-MULTI-ELEC3	
DRAWING FILE NO.	

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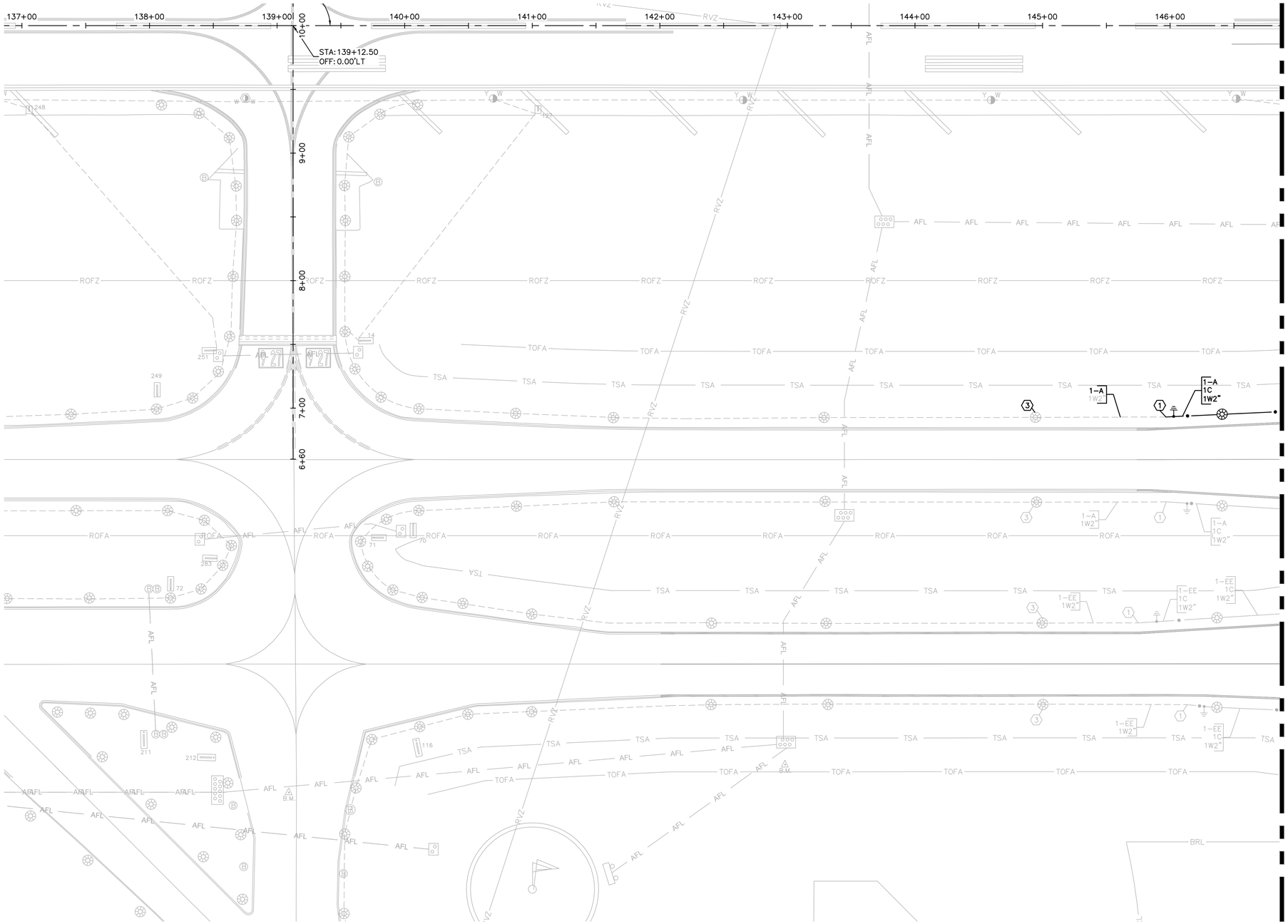

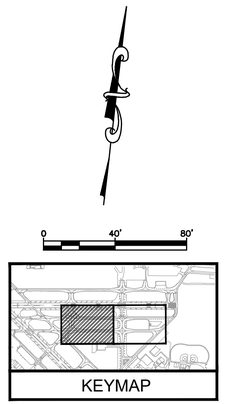

NOTES

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NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
ELECTRICAL CIRCUITRY PLAN - ADD ALT

SHEET NO.	OF
E301A	
TOTAL:	##

CAD FILE: 12884-MULTI-ELEC3 - ADDALT
DRAWING FILE NO.

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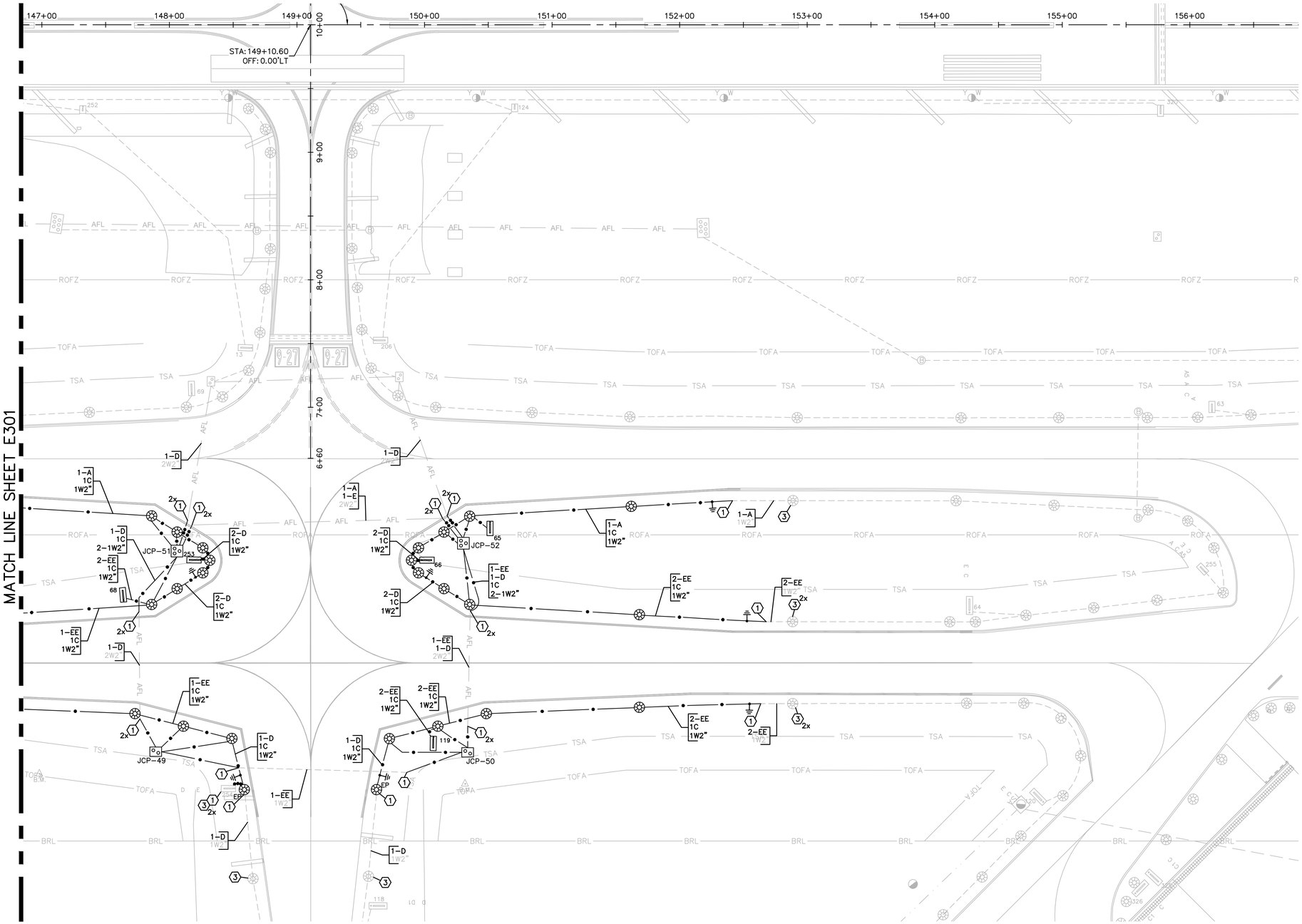

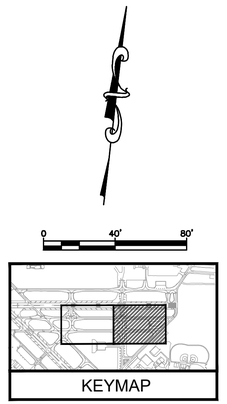

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PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
ELECTRICAL CIRCUITRY PLAN

SHEET NO.	OF
E302	
TOTAL:	##
CAD FILE: 12884-MULTI-ELEC3	
DRAWING FILE NO.	

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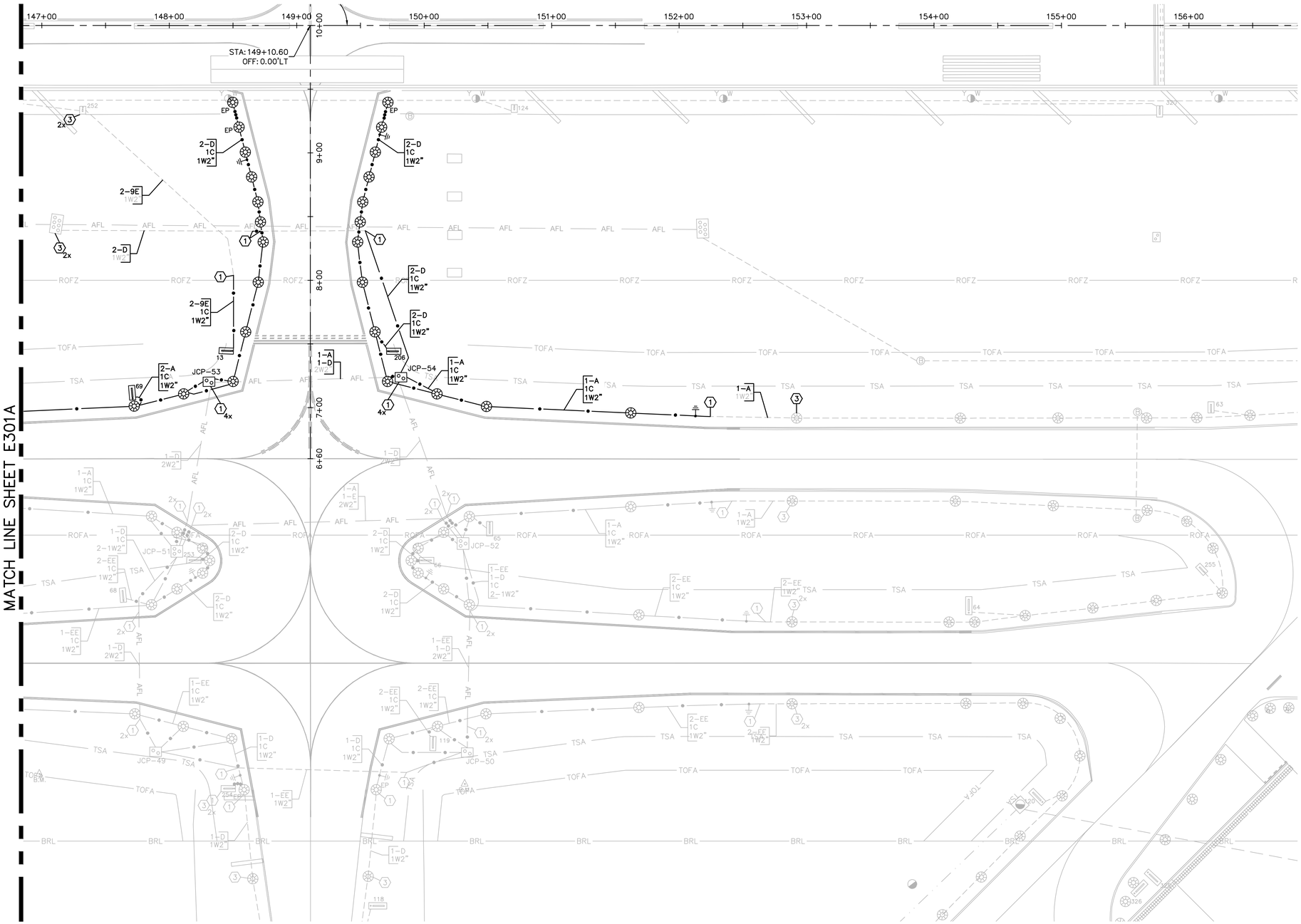

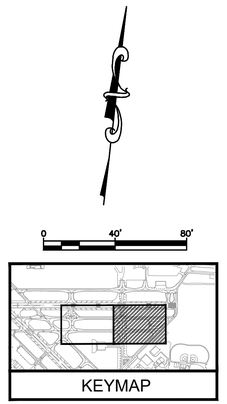

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PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
ELECTRICAL CIRCUITRY PLAN - ADD ALT

SHEET NO.	OF
E302A	
TOTAL:	##
CAD FILE: 12884-MULTI-ELEC3 - ADDALT	
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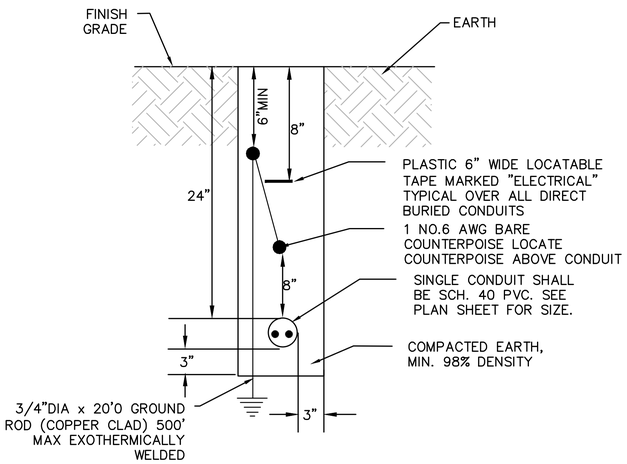
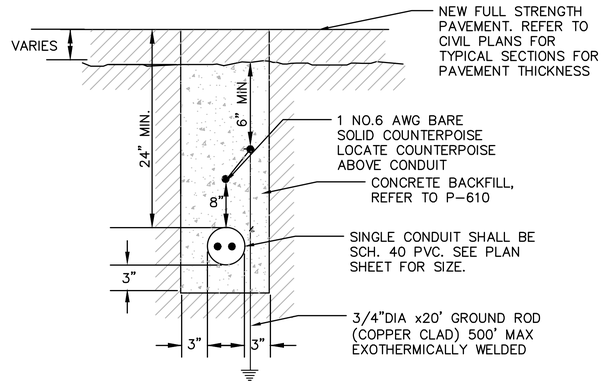


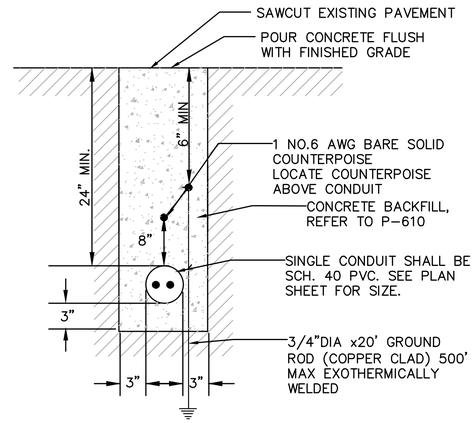
TYPICAL CONDUIT INSTALLATIONS IN EARTH

NOT TO SCALE



TYPICAL CONDUIT INSTALLED IN NEW FULL STRENGTH PAVEMENT

NOT TO SCALE



TYPICAL CONDUIT INSTALLED IN EXISTING FULL STRENGTH PAVEMENT

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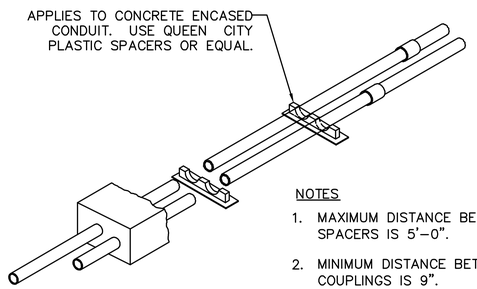
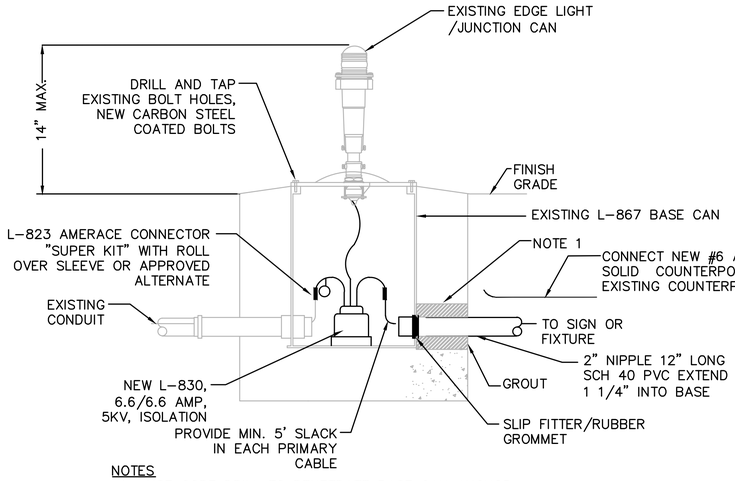


NOTES

1. MAXIMUM DISTANCE BETWEEN SPACERS IS 5'-0".
2. MINIMUM DISTANCE BETWEEN COUPLINGS IS 9".

HORIZONTAL STAGGERING OF SPACERS AND JOINTS

NOT TO SCALE



NOTES

1. USE CORE DRILL TO PENETRATE BASE CAN ANCHOR.
2. USE HOLE SAW TO CUT HOLE IN BASE CAN. REPAIR DAMAGED GALVANIZED SURFACES. PROTECT EXISTING CABLES, TRANSFORMERS, ETC. FROM DAMAGE.
3. TERMINATE CONDUIT IN BASE CAN UTILIZING AN ENDBELL AND SLIP FITTER/RUBBER GROMMET.
4. FOR EDGE LIGHTS LOCATED IN SHOULDER PAVEMENT BACKFILL CONDUIT TRENCH WITH P-610.
5. PROVIDE AND INSTALL TRANSFORMER AND CONNECTOR KITS.

EXTENDING DUCT/CONDUIT FROM EXISTING L-867 BASE CAN

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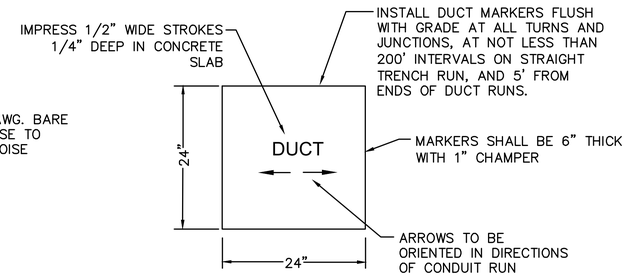

DUCT MARKERS

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PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
ELECTRICAL DETAILS

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E501	
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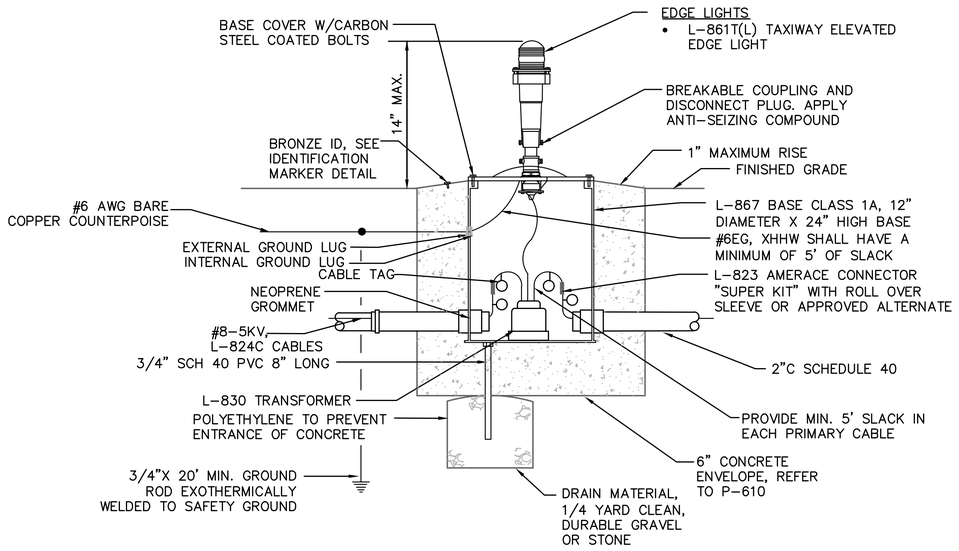
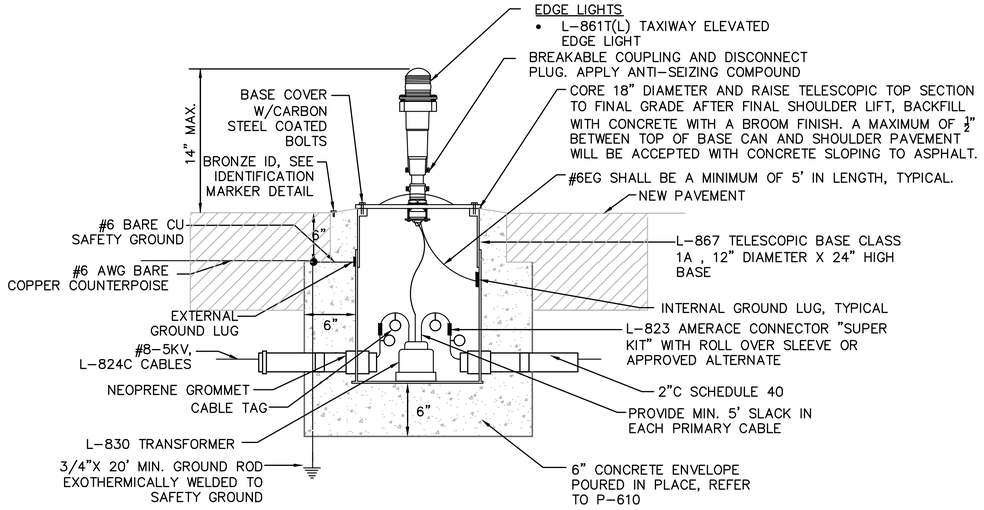


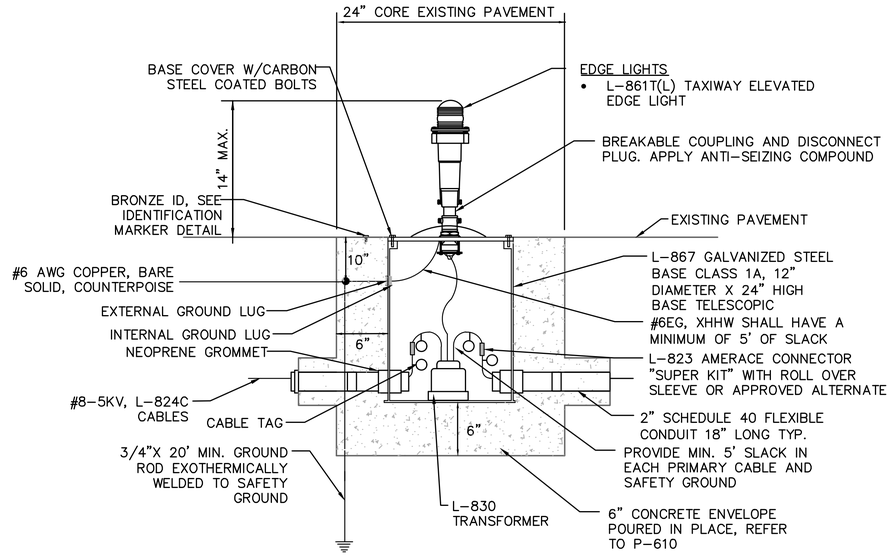
NEW ELEVATED TAXIWAY BASE MOUNTED LIGHT ON NEW BASE CAN IN EARTH

NOT TO SCALE



NEW ELEVATED TAXIWAY MOUNTED LIGHT ON NEW BASE CAN IN NEW PAVEMENT

NOT TO SCALE



NEW ELEVATED TAXIWAY MOUNTED LIGHT ON NEW BASE CAN IN EXISTING PAVEMENT

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PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
ELECTRICAL DETAILS

BID SET

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E502	
TOTAL:	##
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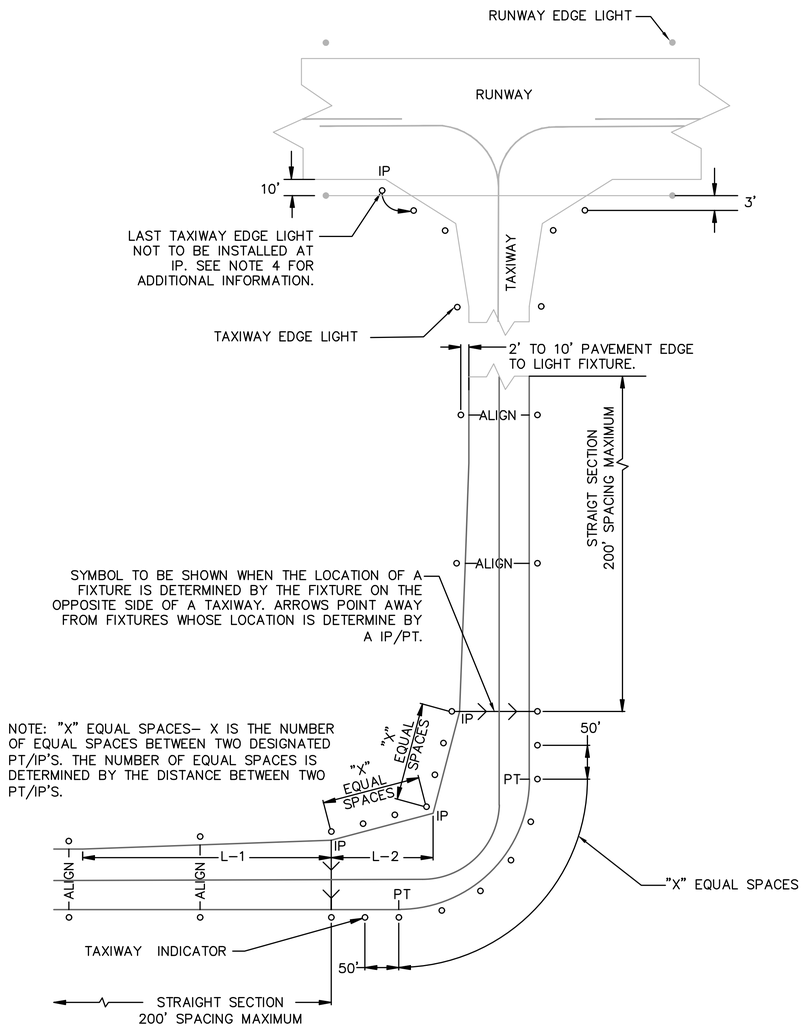
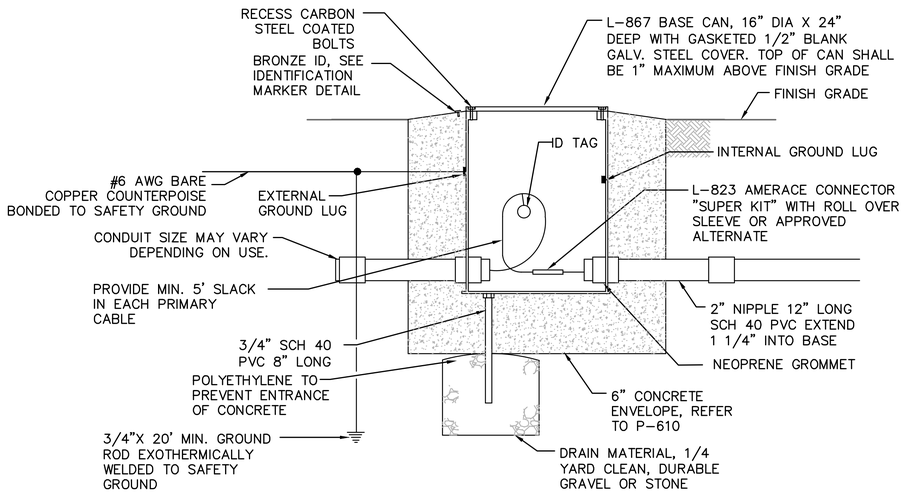


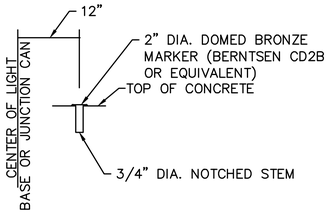
TYPICAL TAXIWAY EDGE LIGHTING CONFIGURATION
NOT TO SCALE

EDGE LIGHT CONFIGURATION NOTES:

1. EDGE LIGHTS INSTALLED IN NEW SHOULDER/FULL STRENGTH PAVEMENT OR EARTH SHALL BE INSTALLED AT 8' FROM OUTSIDE EDGE OF TAXIWAY/RUNWAY EDGE STRIPE TO CENTER OF LIGHT FIXTURE.
2. EDGE LIGHTS INSTALLED IN THE EXISTING FULL STRENGTH/SHOULDER PAVEMENT OR EARTH SHALL MATCH THE EXISTING LIGHT OFFSET FROM OUTSIDE EDGE OF TAXIWAY/RUNWAY EDGE STRIPE, NOT TO EXCEED 10' TO CENTER OF LIGHT FIXTURE. SHOULD NEW OFFSET DIFFER FROM EXISTING OFFSET, CONTRACTOR SHALL COORDINATE AND VERIFY OFFSETS WITH ENGINEER/OWNER PRIOR TO INSTALLATION.
3. ALL EDGE LIGHTS SHALL BE INSTALLED PER FAA AC150/5340-30, LATEST EDITION. LIGHTS INSTALLED ON OPPOSITE SIDES OF RUNWAYS AND STRAIGHT SECTIONS OF TAXIWAYS ARE ALIGNED SUCH THAT OPPOSING LIGHTS ARE IN A LINE PERPENDICULAR WITH THE CENTERLINE.
4. THE LAST TAXIWAY EDGE LIGHT AT A RUNWAY/TAXIWAY EDGE INTERSECTION MUST BE PLACED AT AN ADDITIONAL 3 FEET FROM THE RUNWAY EDGE LIGHT OFFSET LINE. THE OFFSET IS NECESSARY TO MINIMIZE ANY POTENTIAL CONFLICT WITH RUNWAY EDGE LIGHTS.



L-867 JUNCTION CAN DETAIL
NOT TO SCALE



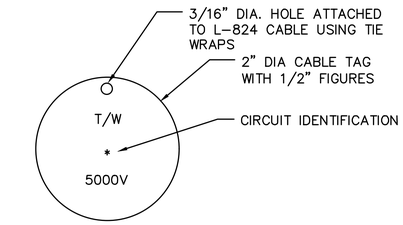
IDENTIFICATION MARKER
NOT TO SCALE

NOTES FOR IDENTIFICATION MARKER:

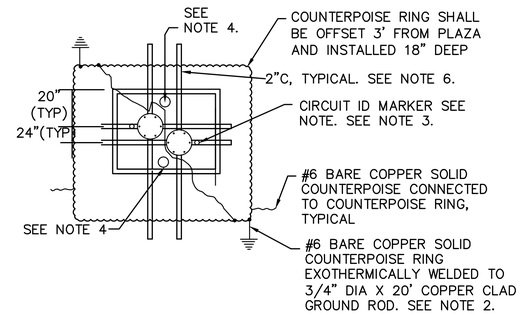
1. IDENTIFICATION SHALL BE STAMPED USING 1/2" FIGURES AND LETTERS UNIFORMLY SPACED ON THE BRONZE MARKER.
2. IDENTIFICATION MARKERS SHALL BE UNIFORMLY INSTALLED INSET TO THE CONCRETE ENVELOPE SURROUNDING BASE CAN.

NOTES:

1. NUMBER AND ORIENTATION OF CONDUITS VARY. SEE PLAN SHEETS FOR DETAILS.
2. INSTALL GROUND RODS AT ALL JUNCTION CAN PLAZAS AS SHOWN. TWO GROUND RODS PER PLAZA LOCATED AT OPPOSITE CORNERS SHALL BE PROVIDED.
3. CONTRACTOR SHALL PROVIDE A 2" DIA DOMED BRONZE MARKER AT EACH JUNCTION CAN AS SHOWN. MARKER SHALL BE STAMPED WITH CIRCUIT IDENTIFICATION AS COORDINATED WITH AIRPORT AND ENGINEER. IF CAN IS LEFT EMPTY INSTALL A BLANK MARKER FOR FUTURE USE.
4. CONTRACTOR SHALL PROVIDE A 2" DIA DOMED BRONZE MARKER STAMPED WITH THE PLAZA IDENTIFICATION NUMBER AS SHOWN ON THE DRAWINGS.
5. EACH CAN SHALL HAVE A MINIMUM OF FOUR OPENINGS, LOCATIONS OF OPENINGS CAN BE AT 0, 45, 90, 135, 180, 225, 270 AND 315 DEGREES THAT EXTEND 3 FEET BEYOND PLAZA EDGE. LOCATIONS WILL VARY DEPENDING ON SIZE OF JUNCTION CAN PLAZA. CONDUIT OPENINGS AT 45, 135, 225 AND 315 DEGREES WILL HAVE A 3" OFFSET FROM THE REMAINING THREE OPENINGS. CONTRACTOR SHALL COORDINATE OPENINGS PRIOR TO INSTALLATION. CANS SHALL NOT BE CONNECTED TOGETHER INSIDE JUNCTION PLAZA. ALL CONDUITS EXITING THE CANS SHALL BE DEDICATED. CONDUITS WHICH ARE NOT USED IN THIS PROJECT SHALL BE CAPPED.
6. CONDUITS WHICH ARE NOT USED IN THIS PROJECT SHALL BE CAPPED 3' OUTSIDE OF PLAZA CONCRETE.
7. CONTRACTOR SHALL COORDINATE THE ORIENTATION OF THE PLAZA WITH THE ENGINEER AND OAR PRIOR INSTALLATION.
8. SEE DETAIL FOR CONNECTION TO JUNCTION CANS.



STAINLESS STEEL CABLE ID TAG DETAIL
NOT TO SCALE



2 JUNCTION CAN PLAZA
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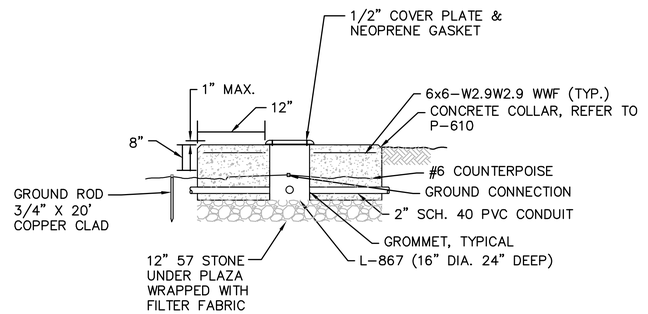

JUNCTION CAN PLAZA ELEVATION
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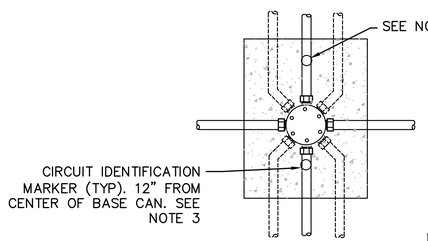

PLAN VIEW
NOT TO SCALE

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State of Florida
Professional Engineer
License No. 73735
AMY CHAMPAGNE-BAKER

DRAWN BY:	DATE:
RJC	08/28/2025
DESIGNED BY:	SCALE:
ALC	AS NOTED
CHECKED BY:	
JWK	
FIELD BOOK:	

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
ELECTRICAL DETAILS

SHEET NO.	OF
E503	
TOTAL:	##
CAD FILE: 12884-E503-DETL	
DRAWING FILE NO.	

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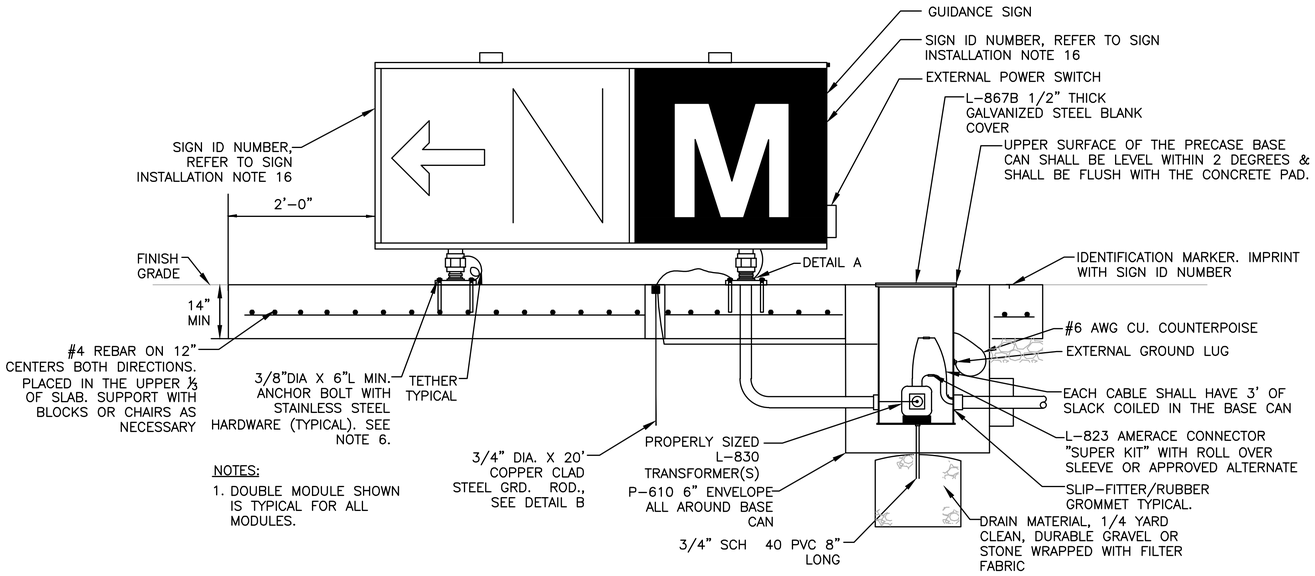
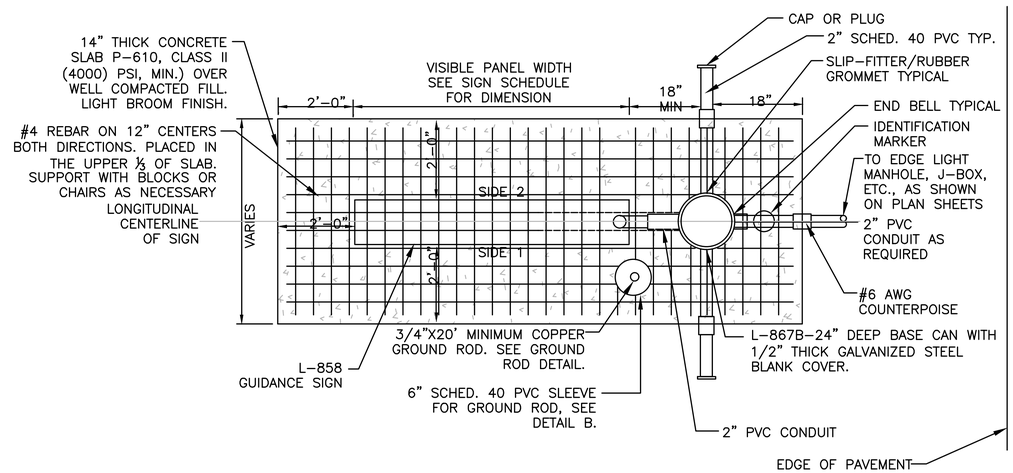


L-858 GUIDANCE SIGN AND CONCRETE BASE DETAIL

NOT TO SCALE

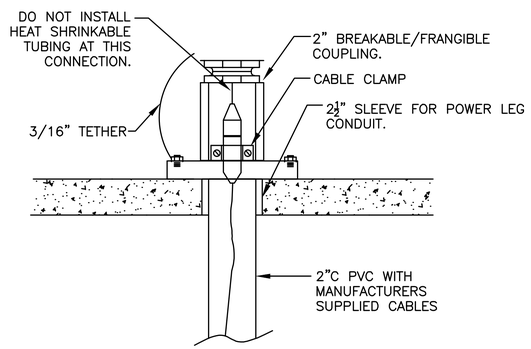


L-858 GUIDANCE SIGN PLAN VIEW

NOT TO SCALE

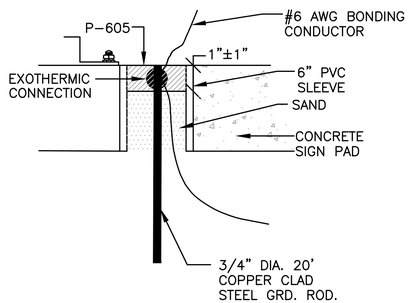
SIGN INSTALLATION NOTES

1. ALL MATERIALS, SIGN BASE DETAILS, ETC. SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
2. THE CONCRETE SHALL COMPLY WITH P-610 SPECIFICATION, CLASS II.
3. P-610 CONCRETE STEEL REINFORCEMENT SHALL BE TYPE ASTM A615 GRADE 60. ALL REINFORCEMENTS SHALL HAVE A 2" MINIMUM CONCRETE COVER. REINFORCEMENT MAY BE ADJUSTED TO MISS INTERFERENCES.
4. REFER TO LIGHTING LAYOUT PLANS FOR LOCATION AND ORIENTATION OF SIGN AND PRECAST BASE.
5. THE ORIENTATION, INSTALLATION AND DEPTH OF THE 2" CONDUIT FOR SIGN CIRCUITS SHALL BE COORDINATED WITH THE PLANS.
6. METHODS OF SIGN INSTALLATION INCLUDING BOLT PATTERNS, ANCHOR METHODS AND ATTACHMENT DETAILS SHALL BE IN ACCORDANCE WITH THE MANUFACTURER RECOMMENDATIONS.
7. ALL SIGNS SHALL BE INSTALLED WITH TETHERS ON A MINIMUM OF 2 LEGS PER SIGN. TETHERS SHALL BE 3/16" STAINLESS STEEL AIRCRAFT CABLE WITH A FORMED EYE ON BOTH ENDS. THE TETHER SHALL OF SUFFICIENT LENGTH TO HAVE 2" LACK (MIN.) WHEN ATTACHED BETWEEN SIGN AND THE FIXTURE PLATE.
8. SIDE VIEW, PLAN VIEW, GRADE AND FILL DETAILS AND DETAILS A AND B ARE TYPICAL FOR SIGNS.
9. ALL CONDUIT SHALL BE 2" SCHEDULE 40 PVC UNLESS NOTED OTHERWISE.
10. THE CONTRACTOR SHALL VERIFY THAT THE 6" SLEEVE IS LARGE ENOUGH TO ACCOMMODATE THE EXOTHERMIC CONNECTION. THE TOP OF THE GROUND ROD SHALL BE FLUSH WITH THE TOP OF THE SLAB. THE GROUND ROD SHALL NOT BE DRIVEN AFTER THE GROUNDING CONNECTION HAS BEEN MADE.
11. SIGN LOCATIONS INDICATED ON THE PLANS ARE 10' MIN TO 20' MAX PERPENDICULAR DISTANCE FROM THE TAXIWAY/RUNWAY EDGE STRIPE TO THE NEAREST SIDE OF SIGN. SIGNS SHALL BE STAKED IN THE FIELD, ORIENTATION AND LOCATION SHALL BE APPROVED BY RPR PRIOR TO INSTALLATION.
12. THE SIGN TETHER AND BONDING CONDUCTOR SHALL NOT BE ATTACHED AT THE SAME ANCHOR BOLT. AN APPROVED MECHANICAL OR COMPRESSION LUG SHALL BE USED TO CONNECT THE BONDING CONDUCTOR TO THE SIGN FLANGE AND SIGN. THE TETHERS AND BONDING CONDUCTORS SHALL BE OF SUFFICIENT LENGTH TO ALLOW THE FRANGIBLE COUPLING TO OPERATE WITHOUT RESTRICTIONS AND TO ALLOW THE CABLE TO UNPLUG IF THE SIGN FALLS OVER.
13. STRUCTURAL FILL FOR SIGN CONCRETE BASE SHALL BE FREE-DRAINING, AS APPROVED BY THE ENGINEER SHALL BE PLACED IN HORIZONTAL LIFTS NOT TO EXCEED 4" IN LOOSE DEPTH AND COMPACT TO 95% MAXIMUM DENSITY AT 0 TO 2% ABOVE OPTIMUM MOISTURE AS DETERMINED BY ASTM D698 PAYMENT FOR EMBANKMENT MATERIALS AND PLACEMENT SHALL BE INCIDENTAL TO SIGN BID ITEM. SLOPE SHALL NOT EXCEED 1:20 WITHOUT PERMISSION OF THE ENGINEER.
14. ALL AREAS FOR THE LEG FLANGE PLATES SHALL BE IN THE SAME PLANE.
15. MINIMUM BURIAL DEPTH OF 2" SCHEDULE 40 PVC CONDUIT IS 24".
16. PROVIDE 3-M SCOTCH-LITE OR APPROVED EQUIVALENT 3-INCH-HIGH, DIE CUT LABELS FOR EACH SIGN, LABELS SHALL BE REFLECTIVE FILM, WITH PRESSURE-SENSITIVE ADHESIVE BACKING, SUITABLE FOR EXTERIOR APPLICATIONS. LABELS SHALL BE UV RESISTANT. LABELS SHALL BE WHITE FOR INSTALLATION ON BLACK SURFACE, BLACK FOR INSTALLATION ON OTHER SURFACES. TEXT SHALL BE: NUMBER AND LETTER STYLE; HELVETICA MEDIUM, UPPER CASE, 3 INCHES IN HEIGHT.
17. THE CONTRACTOR SHALL PLACE SOD ALONG THE PERIMETER OF EACH SIGN BASE. SEED AND MULCH SHALL BE USED TO RESTORE ALL REMAINING DISTURBED AREAS. PAYMENT SHALL BE INCLUDED IN PRICE FOR SIGNS.



DETAIL "A"

NOT TO SCALE



DETAIL "B"

NOT TO SCALE

BID SET

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State of Florida
Professional Engineer
License No. 73735
AMY CHAMPAGNE-BAKER

DRAWN BY: RJC | DATE: 08/28/2025
DESIGNED BY: ALC | SCALE: AS NOTED
CHECKED BY: JWK | FIELD BOOK:

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

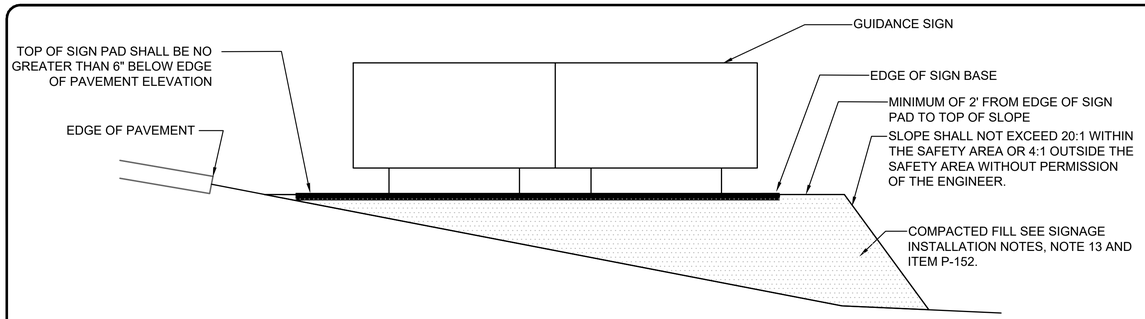
REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
ELECTRICAL DETAILS

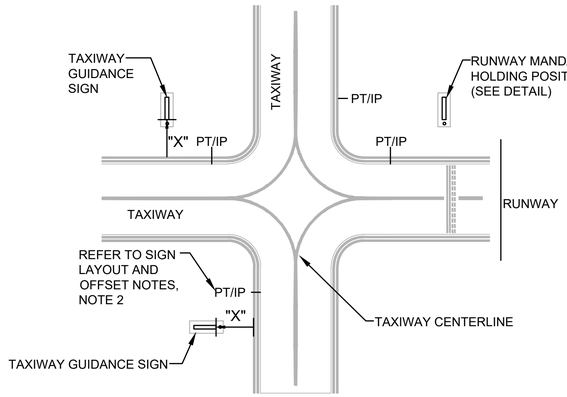
SHEET NO. E504 | OF
TOTAL: ##
CAD FILE: 12884-E504-DETL
DRAWING FILE NO.

C:\USERS\ACHAM\QEE DROPBOX\QUANTUM PROJECTS\KHA KIMLEY HORN\KHA2403 FXE TAXIWAY B AND Q\DWG\12706-E003-KMAP.DWG



GRADING AND FILL DETAIL

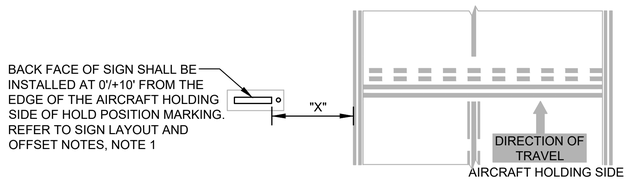
NOT TO SCALE



GUIDANCE SIGN TYPICAL OFFSET AND POSITIONS

EXAMPLE OF A PERPENDICULAR TAXIWAY CONNECTOR LESS THAN 150' WIDE
NOT TO SCALE

"X" = OFFSET DISTANCE FROM DEFINED PAVEMENT EDGE (OUTSIDE EDGE OF OUTBOARD STRIPE) TO THE NEAREST EDGE OF THE GUIDANCE SIGN FRAME. SIZE 1 SIGNS = 10'-20'



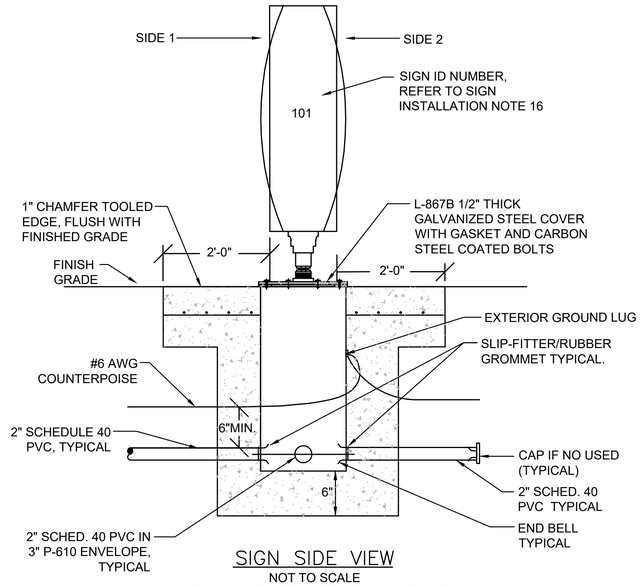
RUNWAY MANDATORY HOLDING POSITION SIGN LAYOUT DETAIL

EXAMPLE OF A PERPENDICULAR TAXIWAY CONNECTOR LESS THAN 150' WIDE
NOT TO SCALE

"X" = OFFSET DISTANCE FROM DEFINED PAVEMENT EDGE (OUTSIDE EDGE OF OUTBOARD STRIPE) TO THE NEAREST EDGE OF THE GUIDANCE SIGN FRAME. SIZE 1 SIGNS = 10'-20'

SIGN LAYOUT AND OFFSET NOTES:

1. RUNWAY MANDATORY HOLDING POSITION SIGNS AND ILS POSITION SIGNS ARE LOCATED IN-LINE WITH THE FIRST STRIPE CLOSEST TO THE TAXIWAY CENTERLINE OF THE HOLDING POSITION MARKINGS WITH A TOLERANCE OF +10FT FARTHER AWAY FROM HOLD POSITION MARKING, SEE FAA AC150/5340-18, LATEST EDITION.
2. RUNWAY EXIT SIGNS AND TAXIWAY GUIDANCE SIGNS SHALL BE TYPICALLY LOCATED 15' PRIOR TO THE POINT OF TANGENCY (PT)/INTERSECTION POINT (IP). SEE GEOMETRY PLANS FOR PT/IP LOCATIONS. ALL SIGNS SHALL BE STAKED IN THE FIELD AND THE FINAL LOCATION APPROVED BY RPR PRIOR TO INSTALLATION.
3. ALL SIZE 1 SIGNS SHALL BE INSTALLED AT 15' FROM THE DEFINED EDGE OF PAVEMENT TO THE NEAREST EDGE OF THE GUIDANCE SIGN FRAME. IF A SIGN CANNOT BE INSTALLED AT ITS STANDARD LOCATION DUE TO AN OBSTRUCTION, A TOLERANCE OF 10 TO 20 FEET FROM THE DEFINED EDGE OF PAVEMENT TO THE NEAREST EDGE OF THE GUIDANCE SIGN FRAME IS ALLOWED AS STATED IN FAA AC150/5340-18 LATEST EDITION.



SIGN SIDE VIEW

NOT TO SCALE
NOTE: SEE SEE SIGNAGE INSTALLATION NOTES

SIGN LEGEND NOTES:

L = TAXI LOCATION SIGN, BLACK BACKGROUND WITH YELLOW LETTERING AND A YELLOW BORDER.

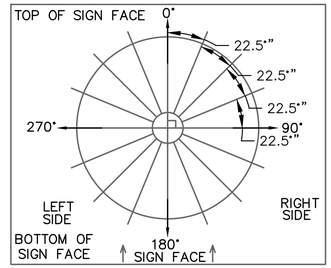
D = RUNWAY DISTANCE TO GO SIGN, BLACK BACKGROUND WITH WHITE LETTERING.

Y = TAXIWAY DIRECTIONAL SIGN, YELLOW BACKGROUND WITH BLACK LETTERING.

R = MANDATORY HOLD SIGN, RED BACKGROUND WITH WHITE LETTERING OUTLINED IN BLACK.

I = INFORMATIONAL SIGN WITH YELLOW BACKGROUND WITH BLACK LETTERING

ARROW ROTATION ANGLE DATA AS VIEWED LOOKING AT SIGN FACE



NEW LIGHTED SIGN PANEL SCHEDULE

SIGN NO.	NO. OF CHARACTERS	SIZE	STYLE	LAMP	COLOR SIDE 1 LEGEND		COLOR SIDE 2 LEGEND	CIRCUIT	SHEET NO.	REMARKS
13	5	1	2	LED	L	R	B	9E	E202	ADD ALTERNATE
					D	**9-27**				
65	4	1	2	LED	L	Y	B	A	E202	
					A	**←D→**				
66	4	1	2	LED	L	Y	B	D	E202	
					D	**←E→**				
68	4	1	2	LED	L	Y	B	EE	E202	
					E	**←D→**				
69	4	1	2	LED	L	Y	B	A	E202	ADD ALTERNATE
					A	**←D→**				
119	4	1	2	LED	L	Y	B	EE	E202	
					E	**←D→**				
206	4	1	2	LED	L	Y	B	D	E202	ADD ALTERNATE
					D	**←A→**				
253	4	1	2	LED	L	Y	B	D	E202	
					D	**←A→**				

SIGN PANEL NOTES:

1. ARROWS INDICATE DIRECTION OF TAXIWAYS.
2. IT IS THE RESPONSIBILITY OF CONTRACTOR TO ENSURE THAT THE DIRECTIONAL ARROWS ON ANGLED TAXIWAYS (NOT 90°) MATCHES CENTERLINE OF REFERENCED TAXIWAY TO THE NEAREST 22.5°: SEE ROSE COMPASS FOR GUIDANCE.
3. CONTRACTOR SHALL PROVIDE ALL SIGN LEGENDS AND BLANK PANELS REQUIRED BY THE SIGN PANEL SCHEDULE, MANUFACTURER AND FAA AC150/5340-18, LATEST EDITION.
4. CONTRACTOR SHALL PROVIDE MESSAGE DIVIDERS ON NEW AND EXISTING SIGNS TO BE REPANELED PER AC150/5340-18, LATEST EDITION. MESSAGE DIVIDERS SHALL BE INCLUSIVE TO THE LINE ITEMS FOR SIGNAGE.
5. SIGNS SHALL BE PAID BY CHARACTER, UNLESS OTHERWISE INDICATED. ONE CHARACTER SHALL BE DEFINED AS 1 LETTER, NUMERAL OR SPECIAL CHARACTER/PUNCTUATION REGARDLESS OF TEXT OR BACKGROUND COLOR CHANGES. SIGNS SHALL BE PAID FOR BY THE SIGN SIDE THAT HAS THE GREATEST NUMBER OF CHARACTERS AND SHALL NOT ACCOUNT FOR MESSAGE DIVIDERS OR CHANGE OF BACKGROUND COLOR. PANELS FOR BOTH SIDES OF SIGN SHALL BE INCLUSIVE TO THE LINE ITEM.

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CHECKED BY:	
JWK	
FIELD BOOK:	

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS				
NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
ELECTRICAL DETAILS

SHEET NO.	OF
E505	
TOTAL:	##
CAD FILE: 12884–E505–DETL	
DRAWING FILE NO.	

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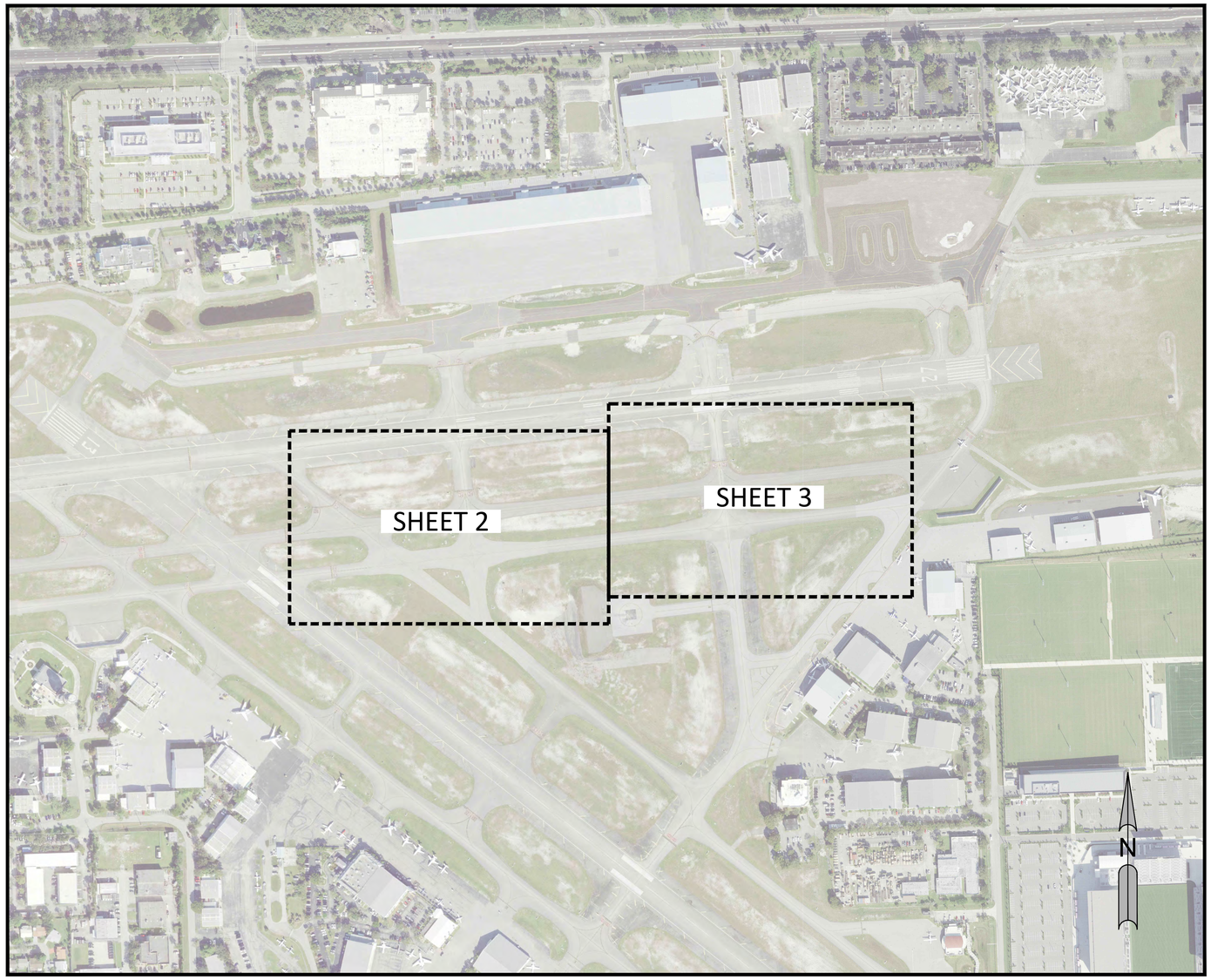
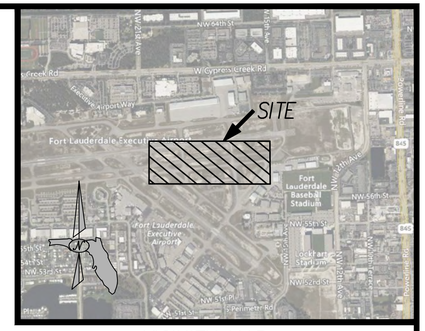
LEGEND	
BENCHMARK	
BACKFLOW PREVENTER	
BLUE TAXIWAY LIGHT	
BOLLARD	
BORING	
CANISTER	
CATCH BASIN	
CLEANOUT	
CONCRETE LIGHT POLE	
ELECTRIC BOX	
ELECTRIC PANEL	
GATE POST	
KEYPAD	
LIGHT	
MANHOLE DRAINAGE	
METAL LIGHT POLE	
METAL POST	
SENSOR	
SEWER VALVE	
SIGN	
TRAFFIC SIGNAL BOX	
TRANSFORMER	
U.G. CABLE MARKER	
WATER METER	
WATER VALVE	
FENCE-CHAINLINK	
EDGE OF WATER	
TOE OF SLOPE	
TOP OF BANK	
U/G LOCATES-RED PAINT	
U/G LOCATES-UNKNOWN	
ASPHALT	
BUILDING	
CONCRETE	
STAIRS	





VICINITY MAP
NOT TO SCALE

SURVEY REPORT:

1. THIS IS A SPECIFIC PURPOSE SURVEY, PREPARED IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF THE STANDARDS OF PRACTICE SET FORTH IN RULE 5J-17.051 THROUGH 5J-17.053, FLORIDA ADMINISTRATIVE CODE.
   THE FIELD WORK WAS COMPLETED ON DECEMBER 12, 2024

   THIS IS NOT A BOUNDARY SURVEY.

2. THE SURVEY WAS BASED ON AIRPORT PACS & SACS CONTROL & DIRECTION FROM THE CLIENT.

3. THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE COMMITMENT.

   NO SEARCH OF THE PUBLIC RECORDS HAS BEEN PERFORMED BY BROWN & PHILLIPS, INC.

   THERE MAY BE ADDITIONAL EASEMENTS AND/OR RESTRICTIONS NOT SHOWN ON THIS SURVEY THAT MAY BE FOUND IN THE PUBLIC RECORDS OF BROWARD COUNTY.

4. THIS SURVEY WAS PREPARED FOR THE SPECIFIC PURPOSE OF SHOWING THE EXISTING CONDITIONS.

5. THE CONTRACTED PURPOSE OF THIS SURVEY IS FOR DESIGN OF RUNWAY IMPROVEMENTS. THIS SURVEY IS NOT VALID FOR ANY OTHER USE.

6. ADDITIONS OR DELETIONS TO SURVEY MAPS OR REPORTS BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE SIGNING PARTY OR PARTIES.

7. THIS SURVEY WAS PREPARED FOR THE PARTIES LISTED BELOW AND IS NOT ASSIGNABLE:
   -KIMLEY-HORN
   -CITY OF FORT LAUDERDALE

   THE USE OF THE DATA SHOWN HEREON BY ANY OTHER PARTY IS PROHIBITED.

8. THIS MAP IS INTENDED TO BE DISPLAYED AT A SCALE OF 1"=40', ON A 24"x 36" SHEET.

9. SOME TOPOGRAPHIC FEATURES MAY BE EXAGGERATED IN SCALE FOR CLARITY. THE CENTER OF THE SYMBOL OF SUCH FEATURES IS THE CORRECT LOCATION.

10. NO UNDERGROUND INSTALLATIONS OR IMPROVEMENTS HAVE BEEN LOCATED AS PART OF THIS SURVEY.

11. ELEVATIONS SHOWN HEREON ARE IN NORTH AMERICAN VERTICAL DATUM OF 1988, AND ARE REFERENCED TO FORT LAUDERDALE EXECUTIVE AIRPORT BENCHMARK "11127" FOUND MAG NAIL AND DISK, ELEVATION=11.65'.

12. +10.0 DENOTES SPOT ELEVATION, REFERENCED TO NORTH AMERICAN VERTICAL DATUM OF 1988.

13. FLOOD ZONE INFORMATION OBTAINED FROM FEMA'S NATIONAL FLOOD HAZARD WEBSITE: "https://hazards-fema.maps.arcgis.com/apps/webappviewer/index.html?id=8b0adb51996444d4879338b5529aa9cd"; CURRENT FLOOD ZONE: "AH"

14. STATE PLANE COORDINATES
    A. COORDINATES SHOWN ARE GRID
    B. DATUM - NAD 83, 1990 ADJUSTMENT
    C. ZONE - FLORIDA EAST
    D. LINEAR UNIT - US SURVEY FOOT
    E. COORDINATE SYSTEM 1983/1990 STATE PLANE
    F. TRANSVERSE MERCATOR PROJECTION
    G. ALL DISTANCES ARE GROUND, UNLESS NOTED OTHERWISE

14. THE UNDERLYING 2024 BROWARD COUNTY AERIAL PHOTO IS SHOWN FOR INFORMATION ONLY AND IS NOT A PART OF THE SURVEY.

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REPRODUCTIONS OF THIS SURVEY ARE NOT VALID WITHOUT THE ORIGINAL SIGNATURE AND STAMP, OR A DIGITALLY VERIFIED ELECTRONIC SIGNATURE AND SEAL, OF A FLORIDA LICENSED SURVEYOR AND MAPPER EMPLOYED BY BROWN & PHILLIPS, INC.

ABBREVIATIONS:
PG. - PAGE
R/W - RIGHT-OF-WAY
℄ - CENTERLINE
U/G - UNDERGROUND
IR - IRON ROD
IR/C - IRON ROD WITH CAP AS NOTED
IP - IRON PIPE
C.M. - 4"x4" CONCRETE MONUMENT
N/D - NAIL & DISK
NTT - NAIL & TIN TAB
PK - PARKER KALON NAIL
PRM - PERMANENT REFERENCE MONUMENT
NAD - NORTH AMERICAN DATUM
LB - LICENSED BUSINESS
WM - WATER MAIN
TOW - TOP OF WALL
EL. - ELEVATION
INV - INVERT
BTM - BOTTOM

BROWN & PHILLIPS, INC.
PROFESSIONAL SURVEYING SERVICES
CERTIFICATE OF AUTHORIZATION # LB 6473
1860 OLD OKEECHOBEE ROAD, SUITE 509, WEST PALM BEACH, FLORIDA 33409 561-615-3988

DATE	REVISIONS	#

SKETCH OF SPECIFIC PURPOSE SURVEY

FORT LAUDERDALE EXECUTIVE AIRPORT TAXIWAY ECHO REHABILITATION PROJECT

DRAWN: PL
CHECKED: JP
F.B. #24-1
PAGE: 9-11

PROJ. #24-118
SCALE: NA
DATE: JAN 2025
SHEET 1 of 3

JOHN E. PHILLIPS III
PROFESSIONAL LAND SURVEYOR
STATE OF FLORIDA No. 4826
DATE: _____

BROWN & PHILLIPS, INC.
PROFESSIONAL SURVEYING SERVICES
CERTIFICATE OF AUTHORIZATION # LB 6473
1860 OLD OKEECHOBEE ROAD, SUITE 509, WEST PALM BEACH, FLORIDA 33409 561-615-3988

DATE	REVISIONS	#

SKETCH OF
SPECIFIC PURPOSE
SURVEY

FORT LAUDERDALE
EXECUTIVE AIRPORT
TAXIWAY ECHO
REHABILITATION PROJECT

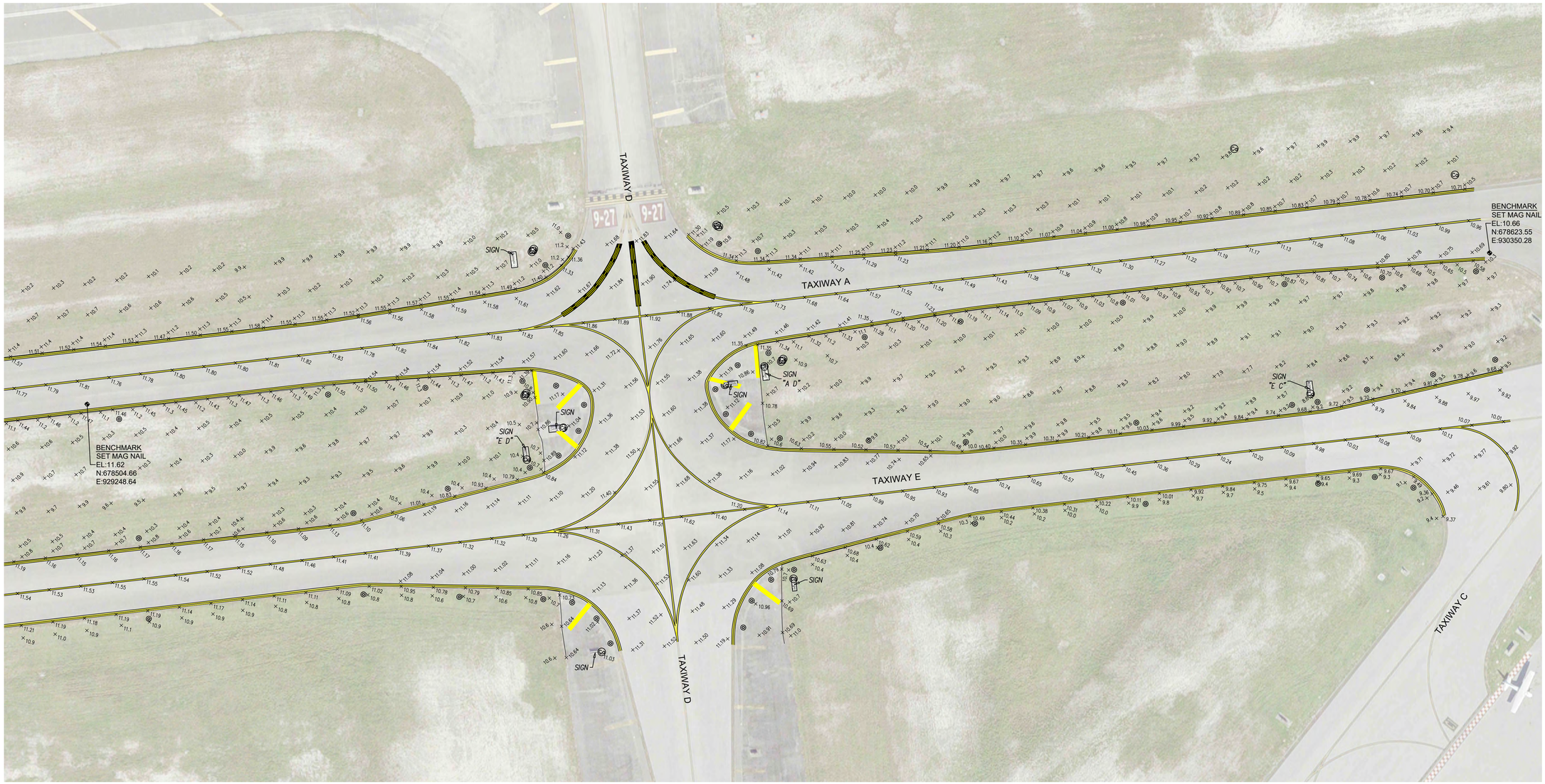
DRAWN: PL
CHECKED: JP
F.B. #24-1
PAGE: 9-11

PROJ. #24-118
SCALE: 1"=40'
DATE: JAN 2025
SHEET 2 of 3

N

0 10 20 40

SCALE: 1" = 40'



BROWN & PHILLIPS, INC.
PROFESSIONAL SURVEYING SERVICES
CERTIFICATE OF AUTHORIZATION # LB 6473
1860 OLD OKEECHOBEE ROAD, SUITE 509, WEST PALM BEACH, FLORIDA 33409 561-615-3988

DATE	REVISIONS	#

SKETCH OF
SPECIFIC PURPOSE
SURVEY

FORT LAUDERDALE
EXECUTIVE AIRPORT
TAXIWAY ECHO
REHABILITATION PROJECT

DRAWN: PL
CHECKED: JP
F.B. #24-1
PAGE: 9-11

PROJ. #24-118
SCALE: 1"=40'
DATE: JAN 2025
SHEET 3 of 3

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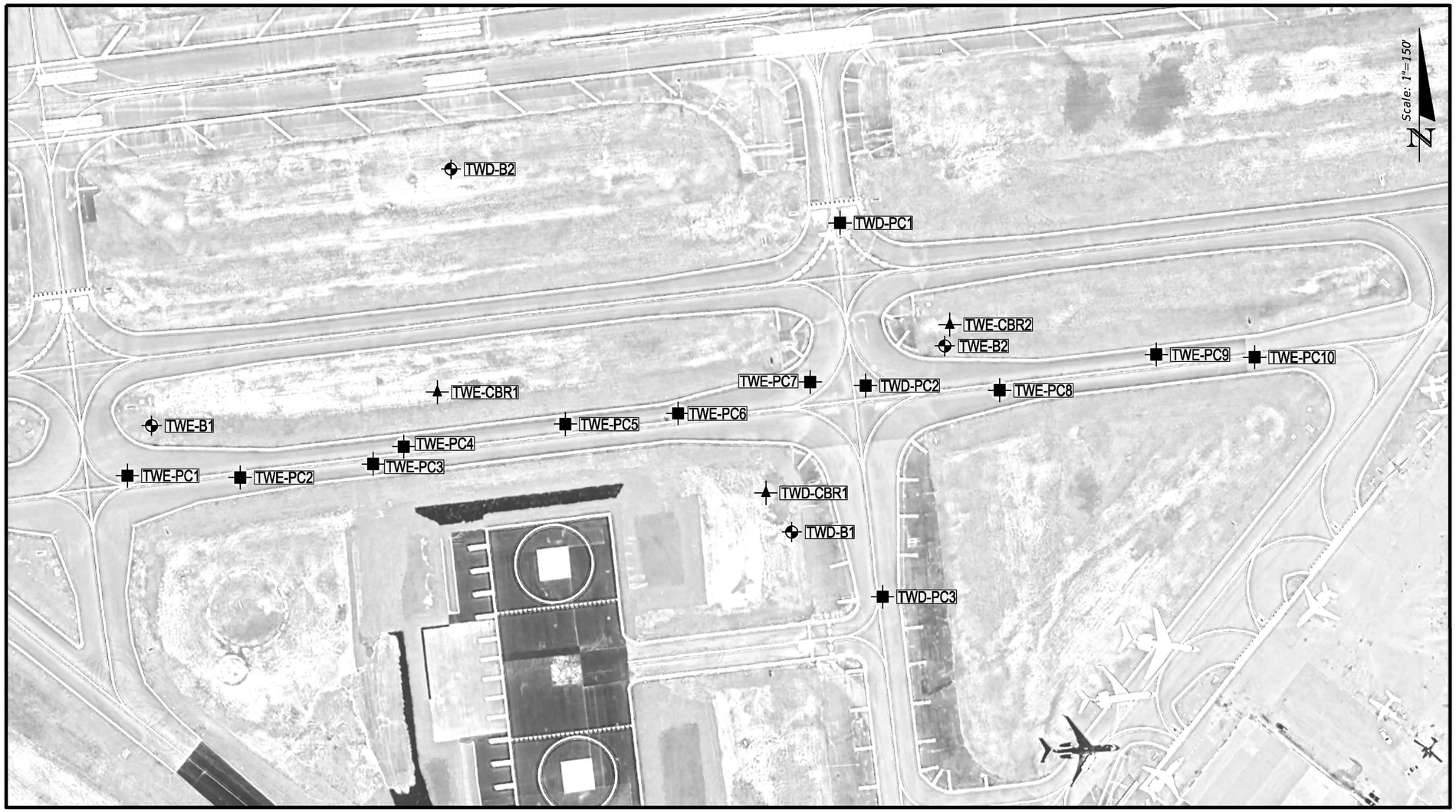
0 10 20 40
SCALE: 1" = 40'



- Approximate Location of Standard Penetration Test (SPT) Boring
- Approximate Location of Pavement Core
- Approximate Location of California Bearing Ratio (CBR) Sample

DRAWN BY:	APPROVED BY:	ENGINEER OF RECORDS		SCALE:	PROJECT NUMBER:		SHEET NO.
JO	RV	RAMAKUMAR VEDULA, P.E. FLORIDA LICENSE NO.: 54873	TIERRA SOUTH FLORIDA 2765 VISTA PARKWAY, STE-10 WEST PALM BEACH, FL 33411	NTS	7111-24-278	BORING LOCATION PLAN FXE TAXIWAY E REHABILITATION DESIGN PHASE SERVICES FORT LAUDERDALE, FLORIDA	1
CHECKED BY: EJ	DATE: 1/18/2025						

1/18/2025 11:08:13 AM joliva
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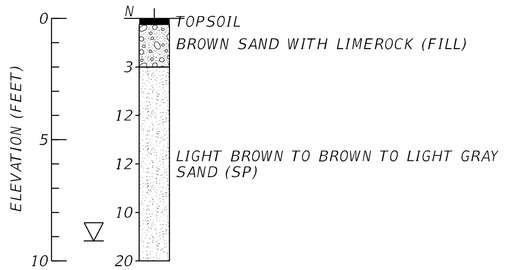
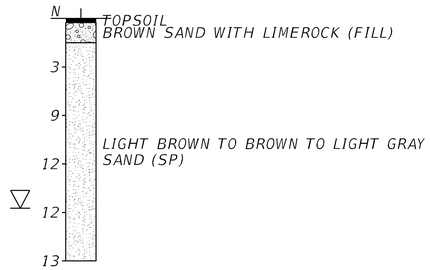
Bore # TWE-B1
Date 12/16/2024
Driller Y.PINO
Hammer Auto
Rig B-57
Latitude 26.197597
Longitude -80.168592



Boring Terminated at Depth of 10ft

Bore # TWE-B2
Date 12/16/2024
Driller Y.PINO
Hammer Auto
Rig B-57
Latitude 26.197889
Longitude -80.165456



Boring Terminated at Depth of 10ft

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Driller Y.PINO
Hammer Auto
Rig B-57
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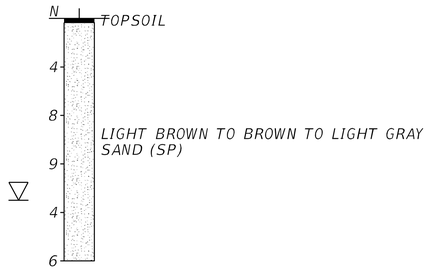
Longitude -80.166092



Boring Terminated at Depth of 10ft

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Driller Y.PINO
Hammer Auto
Rig B-57
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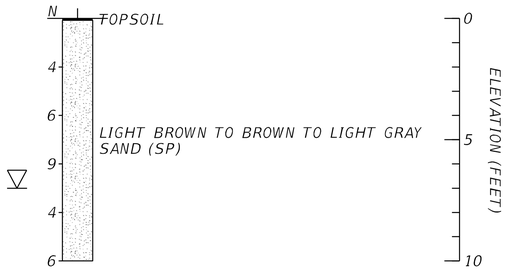
Longitude -80.175692



Boring Terminated at Depth of 10ft

LEGEND

- Asphalt / Topsoil
- Sand
- Gravelly Sand
- ▽ Encountered Groundwater Table
- (SP) Unified Soil Classification System (ASTM D 2488)
- N Indicate SPT Value (12" Penetration-140 lb Hammer)

NOTES

1. STRATA BOUNDARIES ARE APPROXIMATE AND MAY VARY BETWEEN OR AWAY FROM BORING LOCATIONS.
2. BORING LOCATIONS WERE MARKED IN THE FIELD USING A HANDHELD GPSMap GARMIN 78s. ACTUAL LOCATIONS AND THEIR COORDINATES ARE APPROXIMATE.
3. DEPTH SHOWN ARE IN FEET FROM EXISTING GROUND SURFACE
4. SPT N-VALUES SHOWN ABOVE WERE OBTAINED USING AUTOMATIC HAMMERS. GENERALLY DESIGN CORRELATIONS AND PROGRAMS USE SAFETY HAMMERS N-VALUES. HENCE, THE ABOVE N-VALUES NEED TO BE MULTIPLIED BY 1.24 TO OBTAIN EQUIVALENT SAFETY HAMMER N-VALUES FOR DESIGN PURPOSE.
5. CAVING SOILS MAY BE ENCOUNTERED DURING EXCAVATION AND FLUID LEVEL MAY BE DIFFICULT TO MAINTAIN.

DRAWN BY: JO	APPROVED BY: RV	ENGINEER OF RECORDS	TIERRA SOUTH FLORIDA	SCALE:	PROJECT NUMBER:	SOIL PROFILES	SHEET NO.
CHECKED BY: EJ	DATE: 1/18/2025	RAMAKUMAR VEDULA, P.E. FLORIDA LICENSE NO.: 54873	2765 VISTA PARKWAY, STE-10 WEST PALM BEACH, FL 33411	NTS	7111-24-278	FXE TAXIWAY E REHABILITATION DESIGN PHASE SERVICES FORT LAUDERDALE, FLORIDA	2

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CONSTRUCTION SAFETY AND PHASING PLAN

Fort Lauderdale Executive Airport (FXE)

TAXIWAY E REHABILITATION PROJECT

June 30th, 2025

100% Submittal

Prepared For:

City of Fort Lauderdale

Prepared By:

Kimley-Horn and Associates, Inc.
8201 Peters Road, Suite 2200
Plantation, FL 33324

Thomas F. O'Donnell, P.E.
FL P.E. No. 62478
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GENERAL INFORMATION AND SCOPE OF WORK

This project is for improvements to address the pavement condition and geometry along Taxiway Echo, Taxiway Alpha, and Taxiway Delta at the Fort Lauderdale Executive Airport (FXE), located in Fort Lauderdale, Florida. The work outlined in this Construction Safety and Phasing Plan (CSPP) consists of the rehabilitation of Taxiway Alpha, Delta, and Echo by milling and overlaying asphalt pavement as well as conducting a full-depth pavement reconstruction on a portion of Taxiway Echo. There will also be geometric updates to the intersections between Taxiway Alpha and Echo and Taxiway Delta to comply with updated FAA standards. This project consists of the following:

- Base Bid:
  - The milling and overlaying of approximately 7,320 square yards (SY) of Asphalt Pavement on Taxiway Echo.
  - The full depth asphalt pavement removal of approximately 5,550 square yards (SY) of Asphalt Pavement and its underlying Limerock layer at the Taxiway Echo intersection with Taxiway Delta and the south edges of Taxiway Alpha.
  - The full depth construction of approximately 6,380 square yards (SY) of new Taxiway consisting of a section of Subbase, Limerock and Asphalt at the Taxiway Echo intersection with Taxiway Delta and the south edges of Taxiway Alpha.
  - The construction of approximately 3,240 square yards (SY) of stabilized shoulders throughout the project area adjacent to the impacted pavement at the Taxiway Echo intersection with Taxiway Delta and the south edges of Taxiway Alpha.

- Add Alternate:
  - The milling and overlaying of approximately 6,860 square yards (SY) of Asphalt Pavement on Taxiway Alpha and Taxiway Delta intersection including the Taxiway Delta connector.
  - The full depth asphalt pavement removal of approximately 2,490 square yards (SY) of Asphalt Pavement and its underlying Limerock layer at the Taxiway Delta connector.
  - The full depth construction of approximately 1,100 square yards (SY) of new Taxiway consisting of a section of Subbase, Limerock and Asphalt at the Taxiway Delta runway connector and the north edges of Taxiway Alpha.
  - The construction of approximately 1,610 square yards (SY) of stabilized shoulders throughout the project area adjacent to the impacted pavement at the Taxiway Alpha intersection with Taxiway Delta and the Taxiway Delta connector.

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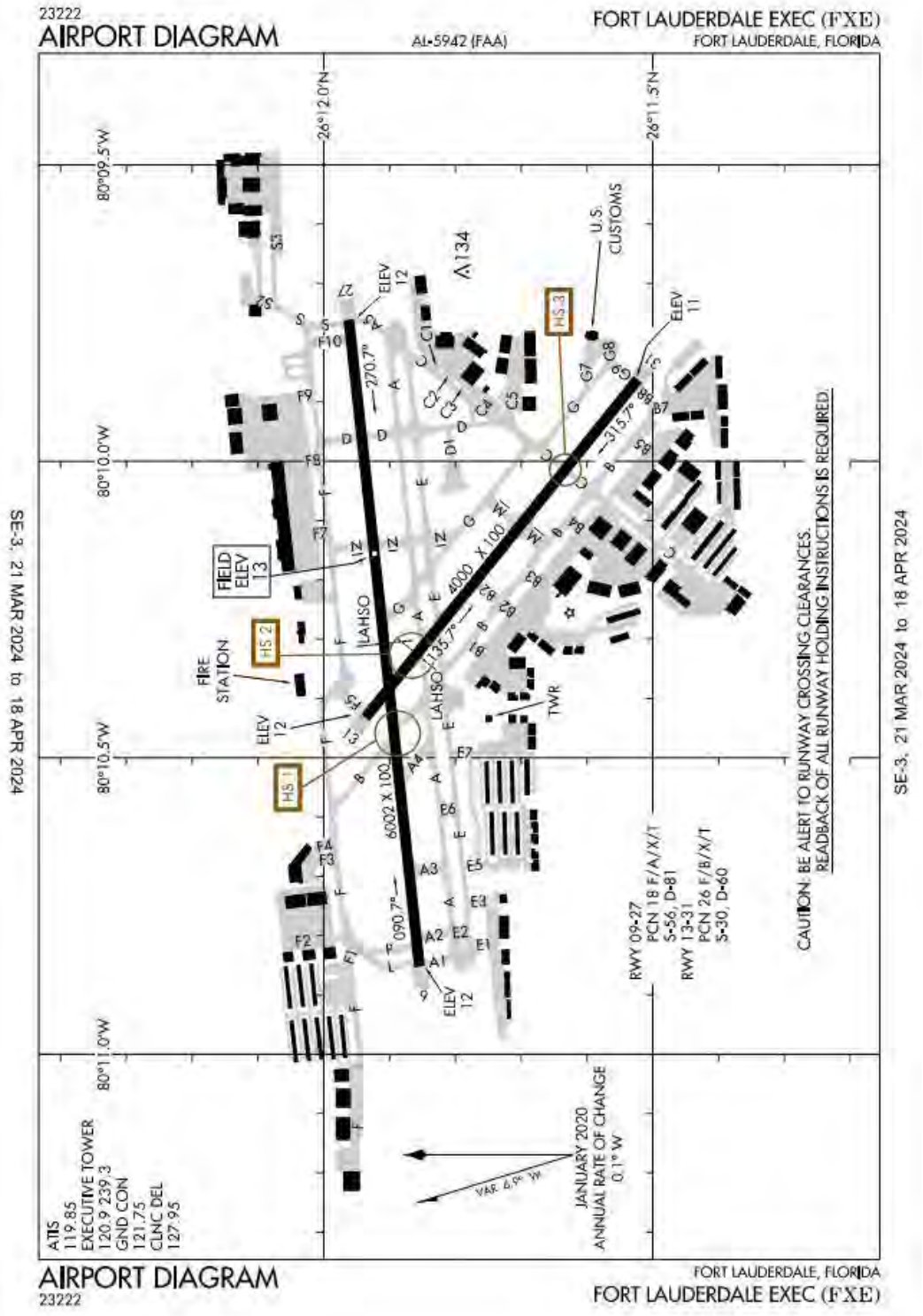

Figure 1: FAA Airport Diagram for FXE

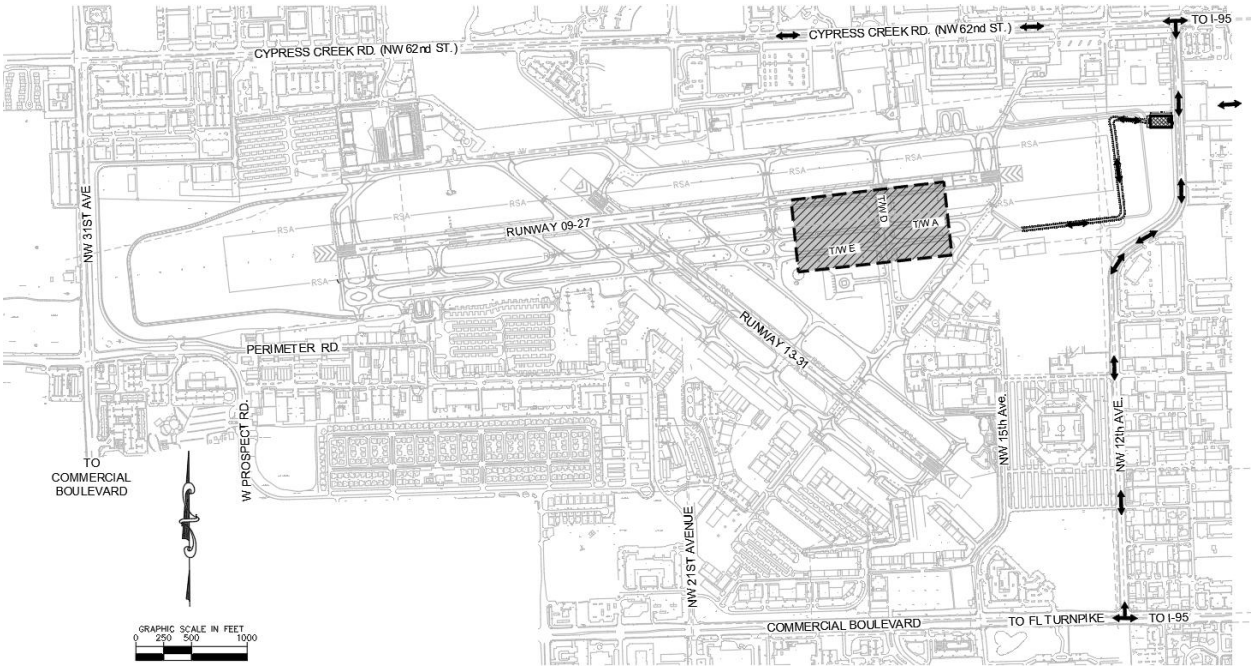

Figure 2: Limits of Work (HATCHED)

CONSTRUCTION PHASING AND SAFETY PLAN REQUIREMENTS

1. Coordination

a. Pre-Construction Meeting – Prior to the Commencement of Construction the Contractor will attend a pre-construction meeting at Fort Lauderdale Executive Airport (FXE) Administration Building. This facility is located at 6000 NW 21st Ave, Fort Lauderdale, Florida. It is anticipated that the following attendees will be present at this meeting: FXE's Assistant Director, FXE's Airport Engineer, FXE's Airport Operations staff, a representative from the Air Traffic Control Tower (ATCT) staff, FXE's consultants, and the resident project representative. This meeting will be held during the Mobilization Phase at a date prior to commencement of construction activities. The intent of the meeting is for all parties to be well coordinated during the Administrative and Construction Phases of the project.

The agenda for this meeting will likely address the following:

- Project scope
- Responsibilities of all parties
- Contacts and personnel (including the identification of the Contractor's Security and Safety Officer (CSSO)
- Correspondence requirements
- Safety during construction and compliance with the FAA AC 150/5370-2G "Operational Safety on Airports during Construction" (latest edition), the CSPP, SPCD, and other City requirements; including the responsibility for marking and lighting of closed and hazardous areas
- Submittal requirements

- The Contractor's schedule including the scheduling of work and the need to perform certain items at various times during the project
- Invoicing procedures
- Procedures for submitting requests for information (RFI)
- Procedures for Change Orders.
- Work required prior to the Commencement of Construction
- Construction NTP date
- Contractor access and haul routes
- Security and badging requirements
- Any other items the parties deem necessary

b. Contractor Progress Meetings – Weekly construction progress meetings will be held with the Contractor, airport personnel, ATCT personnel, consultant, and other affected parties to coordinate work activities. All meetings will be held in person at the Airport's Administration Building. The meeting's agenda items will likely include, but not be limited to, current project status, upcoming project three-week look a-head schedule, construction issues, RFIs Contractor coordination and NOTAM's, change orders, and clean-up/foreign object debris (FOD) control. The Consultant will provide meeting minutes, which will be provided to all attendees within one week.

c. Scope or Schedule Changes – Any changes to the work scope or the construction schedule will be reviewed by the proper airport personnel and consultant to determine if such modifications are warranted and to judge their potential impact on the project. Once reviewed, the Construction Safety and Phasing Plan (CSPP) will be revised to include such changes if necessary.

d. FAA ATO Coordination – The scope of work of this project will require coordination with the Federal Aviation Administration (FAA) Air Traffic Organization (ATO). The FAA ATO must be coordinated with to schedule airfield shutdowns and restarts, changes to navigational aids (NAVAIDS), and grading changes in NAVAID critical areas. During the design phase, the City's consultant has started coordinating with FXE's Air Traffic Control Tower (ATCT) staff alerting them to the general scope of work, schedule, and timing of the project. The ATCT manager has started assembling a Runway Safety Action Team (RSAT) and is starting the early phases of preparing to perform Safety Risk Management (SRM) for this project. Upon the successful completion of the bid process, the selected Contractor will be required to participate in all SRM programs and continue to coordinate with the FAA ATO through the life of the project.

2. Phasing

a. Phase Elements – Access routes to the construction site and Phasing for the construction is included in Appendix C. A summary of phasing is provided as follows:

- **BASE BID:**

  - **Mobilization** – During the mobilization phase, the Contractor is to prepare the existing staging area, site access, obtain security badges, and establish temporary utilities as needed. The Safety Plan Compliance Document (SPCD), shop drawings, mix designs, quality control program, safety plan, and long lead items shall be submitted in this phase as applicable.

  - **Phase 1 –** This phase will consist of installing barricades and taxiway closure markings as shown in the plans in Appendix C to close a portion of Taxiway Echo including its intersection with Taxiway Delta. The proposed work in this phase consists of full depth demolition of existing asphalt pavement and limerock base at the intersection between Taxiway Echo and Delta. There will then be earthwork construction of 12" P-154 subbase and 9" P-211 limerock. Existing asphalt on Taxiway Echo East and West of the intersection with Taxiway Delta will be milled approximately 2" and the entire phase will be paved with P-401 asphalt (2" in milled areas, 4" in full depth area, paving to be concurrent). There will be 20' wide P-154 stabilized shoulders adjacent to updated pavement geometry and ancillary electrical work in support of the geometry updates at the intersection. Temporary paint markings will be applied upon the completion of the paving operations.

  - **Phase 2A –** This phase will consist of installing barricades and taxiway closure markings X's nightly as shown in the plans in Appendix C to close a portion of Taxiway Alpha including its intersection with Taxiway Delta. The proposed work in this phase consists of full depth demolition of existing paved shoulders and full depth excavation in existing infield areas, specifically, the infields on the southern portion of Taxiway Alpha. There will then be the installation of 12" P-154 subbase and 9" P-211 limerock for the revised southern fillet geometry on Taxiway Alpha. During this work, demolition and installation of electrical work will be performed. A 20' butt joint transition for the 2nd lift will be installed at the transition to the previously paved Phase 1. Temporary paint markings will be applied upon the completion of the paving operations. There will be 20' wide P-154 stabilized shoulders adjacent to updated pavement geometry.

  - **Phase 3** – This phase will consist of rolling closures throughout the project limits to conduct permanent final pavement markings, completion of punchlist items. This phase is to sequentially follow the completion of Phase 2A and a 30 day asphalt cure period.

- **BASE BID + ADD ALTERNATE:**
  - **Mobilization** – During the mobilization phase, the Contractor is to prepare the existing staging area, site access, obtain security badges, and establish temporary utilities as needed. The Safety Plan Compliance Document (SPCD), shop drawings, mix designs, quality control program, safety plan, and long lead items shall be submitted in this phase as applicable.

- **Phase 1 –** This phase will consist of installing barricades and taxiway closure markings as shown in the plans in Appendix C to close a portion of Taxiway Echo including its intersection with Taxiway Delta. The proposed work in this phase consists of full depth demolition of existing asphalt pavement and limerock base at the intersection between Taxiway Echo and Delta. There will then be earthwork construction of 12" P-154 subbase and 9" P-211 limerock. Existing asphalt on Taxiway Echo East and West of the intersection with Taxiway Delta will be milled approximately 2" and the entire phase will be paved with P-401 asphalt (2" in milled areas, 4" in full depth area, paving to be concurrent). There will be 20' wide P-154 stabilized shoulders adjacent to updated pavement geometry and ancillary electrical work in support of the geometry updates at the intersection. Temporary paint markings will be applied upon the completion of the paving operations.

- **Phase 2A –** This phase will consist of installing barricades and taxiway closure markings X's nightly as shown in the plans in Appendix C to close a portion of Taxiway Alpha including its intersection with Taxiway Delta to the south of the RSA. The proposed work in this phase consists of full depth demolition of existing paved shoulders and full depth excavation in existing infield areas. There will then be the installation of 12" P-154 subbase and 9" P-211 limerock for the revised intersection geometry. During this work, demolition and installation of electrical work will be performed. Existing asphalt on Taxiway Alpha and the intersection will be milled and overlaid with 2" of P-401 asphalt (4" in full depth areas). A 20' butt joint transition for the 2nd lift will be installed at the transition to the previously paved Phase 1. Temporary paint markings will be applied upon the completion of the paving operations. There will be 20' wide P-154 stabilized shoulders adjacent to updated pavement geometry.

- **Phase 2B -** This phase will consist of installing barricades, taxiway closure markings and lighted X's nightly as shown in the plans in Appendix C to close the portion of Taxiway Delta north of the RSA and Runway 9-27 nightly. The proposed work in this phase consists of full depth demolition and excavation of existing pavement and infield adjacent to TW Delta to update geometry with 12" P-154 subbase and 9" P-211 limerock. There will then be the milling of existing asphalt on Taxiway Delta and the contractor will pave P-401 asphalt, 2" in milled areas, 4" in full depth area. Temporary paint markings will be applied upon the completion of the paving operations. There will be 20' wide P-154 stabilized shoulders adjacent to updated pavement geometry and ancillary electrical work in support of the geometry updates at the intersection.

- **Phase 3** – This phase will consist of rolling closures throughout the project limits to conduct permanent final pavement markings, completion of punchlist items. This phase is to sequentially follow the completion of Phase 2A and 2B and a 30 day asphalt cure period

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b. Construction Safety Drawings – Construction safety drawings, notes, and details with airspace protective surfaces are shown in Appendix A. The scope of this project will require the closure of one of the airport's runways. As such, airfield lighted Xs are required to shut down the runway infrastructure. Low level airfield barricades will also be required for the delineation of work areas. The Contractor is required to maintain these items throughout the entirety of the project. Appendix A provides information regarding protected imaginary airfield surfaces.

3. Areas and Operations Affected by Construction Activity

a. Identification of Affected Areas:

- **Closing, or partial closing, of runways, taxiways and aprons:** The Scope of Work for this project will require the full closure, 24 hours per day, of Taxiway Echo between Taxiway November and Taxilane Charlie during Phase 1. Taxiway Alpha at its intersection with Taxiway Delta will be fully closed, nightly from 10 PM to 6 AM during Phase 2A to be reopened each morning at 6 AM. Taxiway Delta within the Runway 9-27 RSA and Runway 9-27 will be closed nightly from 10 PM to 6 AM during Phase 2B to be reopened each morning at 6 AM. The project limits will have rolling closures throughout Phase 3 that will be coordinated with airport staff. See Appendix C for limits of closures to taxiways and Runway 9-27. Contractor to continuously coordinate with airport staff to ensure NOTAMS are issued for all closures.
- **Closing access routes used by airport airline support vehicles:** FXE is a general aviation airport. Accordingly, airport airline support vehicles are not anticipated to be impacted during construction. However, Contractor will maintain access to routes used by airport and stakeholder vehicles.
- **Interruption of utilities:** The interruption of utilities is not anticipated within the project's Scope of Work. However, if required the Contractor is to coordinate shut-off procedures for utilities services as necessary. Contractor to protect all existing utilities within active project limits.
- **Approach/ departure surfaces affected by heights and objects:** While the part of the construction will require runway closures there will always be instances where one or both of the runways are active. During this time, the Contractor is to maintain all active runway approach/ departure surfaces unobstructed at all times. Contractor to comply with all requirements of 14 CFR Part 77, *Safe, Efficient Use, and Preservation of the Navigable Airspace* and notify the FAA accordingly. See Appendix C for protected Part 77 surfaces.

b. Mitigation of Effects:

- **Temporary changes to runway and/or taxi operations:** See Appendix C for Aircraft Movement during temporary changes to runway and taxiway operations.
- **Maintenance of essential utilities:** It shall be the responsibility of the Contractor to contact Operations for all utilities that are located within the project limits. The Contractor shall locate all utilities within the project limits and protect them from damage, whether shown on the Contract Drawings or

not. Prior to performing any site work, the Contractor will supply to the Owner's Representative a comprehensive checklist of utility facility owner's contacts including telephone number, contact name, date contacted, and date utility was flagged at site. No construction activities at the project site for any work areas will proceed without the Owner's Representatives written approval of the comprehensive utility locate checklist. Additionally, prior to any work proceeding at the project site(s), the Contractor will flag or paint the location of all utilities (water, sewer, FAA cables, power, telephone fuel, gas, and all others) in the field that are located within the proximity of the work limits of this project in order to locate any possible conflicts. The Contractor will provide written approval that flagged locations of utilities have been completed to the Owner's Representative prior to proceeding with construction activities.

It is possible that direct buried FAA and other airport/utility cables may pass through the work area. Some of these cables serve FAA facilities (such as NAVAIDs) and other airport facilities which are critical for the safe operation of the airport. It is of the utmost importance that damage to these cables be prevented. Cable locations shown on the plans are based upon the best information available but are not precise. Scaling dimensional data from the Contract Drawings is specifically prohibited. Dimensional data necessary for the construction of the project has been provided on the Contract Drawings. The Contractor will keep the Owner's Representative informed of their excavation plans at least fourteen (14) working days in advance. The Contractor will notify the FAA and request that existing cables be staked in the field. The Contractor is responsible to coordinate with all other utility owners. The Contractor will maintain all cable locations marked in the field. Even after the cables are staked, the Contractor will use electronic detection devices and carefully hand excavate to locate cables. After cables are located, Contractor will specify exact location (stationing, offset, elevation and type of cable) and shall accurately measure and record their location data on the As-Built drawings. Copies of this measurement and recording of the data shall be considered an important part of the contract requirements. When encasing existing FAA cables in split duct or otherwise excavating in their vicinity, Contractor will hand dig and use extreme caution to avoid damaging cables. All damage, even if superficial, will be reported to the Owner's Representative. In many cases superficial cable nicks may be inexpensively repaired, but if not repaired will lead to failure of the cable. The Owners' Representative will make the determination if the repair or replacement of the damaged utility is necessary. Replacement shall be at the Owner's sole discretion. All repair methods must be acceptable to the FAA and document as such by the Owner's Representative. All repairs will be made at the Contractor's expense. See the electrical related requirements of this contract for additional utility protection requirements.

- **Temporary changes to air traffic control procedures:** The Scope of Work for this project will require the closure of Taxiway Echo between Taxiway November and Taxilane Charlie during Phase 1 from 7:30am to 4:00pm daily. Taxiway Alpha at its intersection with Taxiway Delta will be closed, daily from 7:30am to 4:00pm during Phase 2A. Taxiway Delta within the Runway 9-27 RSA and Runway 9-27 will be closed nightly from 10 PM to 6 AM during Phase

2B to be reopened each morning at 6 AM. The project limits will have rolling closures throughout Phase 3 that will be coordinated with airport staff. See Appendix C for limits of closures to taxiways and Runway 9-27. Contractor to continuously coordinate with airport staff to ensure NOTAMS are issued for all closures.

4. Protection of Navigation Aids (NAVAIDs)

There are no anticipated impacts to NAVAIDs for this project. Contractor to protect in place any FAA infrastructure or NAVAIDs if necessary. Any potential conflicts or impacts to NAVAIDs are to be brought to the attention of the airport and engineer/design team.

5. Contractor Access

a. Location of Stockpiled Construction Materials – The Contractor will not be permitted to stockpile materials or construction equipment within the Air Operations Area (AOA). Millings, demolished concrete, and other demolished project elements will be removed from the site and taken to the Contractor's staging area for disposal off-site (See Appendix B). Airport staff and the design Team will submit FAA form 7460-1 *Notice of Proposed Construction or Alteration* for anticipated equipment and stockpiled material which penetrates Part 77 notification criteria. These objects may also require lighting and marking, by the Contractor, during periods of low visibility and/or darkness. Contractor must also verify that materials are stabilized and stored at location so as not to be a hazard to aircraft operations and to prevent attraction of wildlife and foreign object damage. The Contractor is to provide appropriate erosion and sedimentation measures to protect stockpiles in accordance with the Contract Documents.

b. Vehicle and Pedestrian Operations – Vehicle and pedestrian access routes for airport construction projects must be controlled to prevent inadvertent or unauthorized entry of persons, vehicles, or animals onto the AOA.

(1) Construction site parking. Vehicle parking for Contractor personnel will be provided by the Contractor in their staging area or offsite at their own employee parking. It is the Contractor's responsibility to shuttle employees to and from the parking area and job site.

(2) Construction equipment parking. While in the AOA, the Contractor must park and service all construction equipment/vehicles in an area designated by the Owner's Representative and Airfield Operations, outside all object free areas, and never in the safety area of an active runway/taxiway or an object free area of an active runway/taxiway. Contractor should park all construction vehicles outside the object free area of an active runway or an active taxiway when not in use by construction personnel. Equipment/vehicles parking areas must not obstruct clear line of sight buy the ATCT to any runways, taxiways, taxilanes, or aprons under air traffic control nor obstruct any runway visual aids, signs, or navigation aids. The FAA must also study those areas to determine effects on airport design criteria surfaces established by 145 CFR Part 77, Safe, Efficient Use, and Preservation of Navigable Airspace (Part 77), and on NAVAIDs and Instrument Approach Procedures (IAP),

(3) **Access and haul roads.** Project access is limited to approved entrances as shown on Appendix C. All hauling operations are to be performed via approved roads. Hauling routes to the site shall be clearly marked by the Contractor. Contractor to always give right of way to airport vehicles. Construction traffic on haul roads will not interfere with NAVAIDs or approach surfaces of operational runways

(4) **Marking and lighting vehicles.** Construction vehicles will be marked and lighted in accordance with AC 150/5210-5, *Painting, Marking, and Lighting of Vehicles Used on an Airport* (latest edition).

(5) **Description of proper vehicle operations.** Contractor's employees shall take Airport required training classes to properly prepare themselves to drive in authorized areas of the airport under normal, lost communications, and emergency conditions.

(6) **Required escorts.** No vehicles or equipment will be allowed on the active airfield without escort from employees with whom have previously attended and passed escort training provided by airport staff.

(7) **Training requirements for vehicle drivers.** Prior to operating vehicles on the airfield, Contractor's personnel will be required to take movement area training classes.

(8) **Situational awareness.** Vehicle drivers must confirm by personal observation that no aircraft is approaching their position (either in the air or on the ground) when given clearance to cross a runway, taxiway, or any other area open to airport operations. In addition, it is the responsibility of the escort vehicle driver to verify the movement/position of all escorted vehicles at any given time.

(9) **Two-way radio communication procedures.**

a. General. All communication with the ATCT or other elements of the airport shall be the Contractor's responsibility. The Contractor's key staff must monitor radio communication at all times. The Contractor will be required to understand the airports procedures for two-way radio communication.

The Contractor must ensure that personnel, engaged in activities involving unescorted operation on aircraft movement areas, observe the proper procedures for communications, including using appropriate radio frequencies. When operating vehicles on or near open runways or taxiways, construction personnel must understand the critical importance of maintaining radio contact, as directed by the airport operator, with:

(i) Airport operations
(ii) ATCT
(iii) Common Traffic Advisory Frequency (CTAF), which may include UNICOM, MULTICOM.
(iv) Automatic Terminal Information Service (ATIS). This frequency is useful for monitoring conditions on the airport. Local air traffic will broadcast information regarding construction related runway closures and "shortened" runways on the ATIS frequency.

b. Areas requiring two-way radio communication with the ATCT. Vehicular traffic crossing active movement areas must be controlled either by two-

way radio with the ATCT, escort, flagman, signal light, or other means appropriate for the particular airport.

c. Frequency to be used. Frequency 121.75 will be used to communicate and monitor ground ATCT.

d. Proper radio usage. Proper radio usage will include reading back all instructions from ATCT.

e. Proper phraseology. Proper radio phraseology will include the use of the International Phonetic Alphabet.

f. Light gun signals. Even though radio communication is maintained, escort vehicle drivers must also familiarize themselves with ATCT light gun signals in the event of radio failure. See the FAA safety placard "Ground Vehicle Guide to Airport Signs and Markings." This safety placard may be downloaded through the Runway Safety Program Web site at http://www.faa.gov/airports/ runway safety/publications/ (See "Signs & Markings Vehicle Dashboard Sticker".) or obtained from the FAA Airports Regional Office.

(10) Maintenance of secured area of the airport, including:

a. Fencing and gates. The Contractor must take care to maintain security during construction when access points are created in the security fencing to permit the passage of construction vehicles or personnel. Temporary gates should be equipped so they can be securely closed and locked to prevent access by animals and unauthorized people. Procedures should be in place to ensure that only authorized persons and vehicles have access to the AOA and to prohibit "piggybacking" behind another person or vehicle. Contractor will be responsible for maintaining the security fencing and gates during construction. A guard will be stationed at this gate to prevent any unauthorized access.

b. Badging requirements. Prior to proceeding with construction activities all of the Contractor's supervisory staff must obtain security badges from the airport. These badges are to be worn at all times while on the airside. Badged employees who are escorting non-badged employees must always maintain control of their staff. Any person not wearing a badge and unescorted will be asked to show his badge or leave the site.

6. Wildlife Management

a. Trash – Contractor will be required to remove any waste/food material that may attract wildlife as well as avoid construction activities that will create wildlife hazards at the Airport during construction. The Contractor will emphasize to his employees the need for daily foreign object debris (FOD) checks on or near active airfield pavements. FOD checks will be conducted daily at the end of each construction shift.

b. Standing Water – Contractor will be required to avoid any activities that may cause standing water at the construction site and attract wildlife. Maintain existing drainage during all construction activities.

c. Tall Grass and Seeds – Sodding on the project will comply with standard FAA Sodding Technical Specification, Item T-904, Sodding. All efforts will be made by the Contractor to reduce the attraction of birds during the sodding operation.

Contractor is also responsible for maintaining and controlling vegetation within the Limits of Work. Periodic mowing of existing grass may be required. Seeding will not be permitted on the project.

d. Poorly Maintained Fencing and Gates – Contractor will be responsible for maintaining and replacing any damaged portion of the security fencing and gates during construction.

e. Disruption of Existing Wildlife Habitat – Contractor shall make every effort to minimize disruption to the existing wildlife. If the Contractor should come into contact with wildlife habitat at the site, he shall immediately cease operations and inform the Airport. There is high likelihood of encountering gopher tortoises or burrowing owls at this airport. Both species are protected, if the presence of nests or burrows or other applicable wildlife signs are discovered within the limits of work for this project, coordination with necessary environmental agencies will be required.

7. Foreign Object Debris (FOD) Management

Waste and loose materials, commonly referred to as FOD, are capable of causing damage to aircraft landing gears, propellers, and jet engines. The Contractor must not leave or place FOD on or near active aircraft movement areas. Materials capable of creating FOD must be continuously removed during the construction project.

Contractor will be required to conduct periodic FOD walks and maintain a vacuum sweeper on site to remove any FOD from the work and adjacent area. Prior to leaving the work area, the Contractor will be required to inspect the site to determine if the site is clear of FOD. If the area is not clear, the Contractor must take corrective action.

8. Hazardous Materials (HAZMAT) Management

Contractors operating construction vehicles and equipment on the airport must be prepared to expeditiously contain and clean-up spills resulting from fuel or hydraulic fluid leaks. The Contractor will be required to provide a spill prevention and clean-up plan in case of a fuel or hydraulic fluid leak on the Airport prior to being allowed on the work site. Transport and handling of other hazardous materials on an airport also requires special procedures. See AC 150/5320-15A, *Management of Airport Industrial Waste.*

9. Notification of Construction Activities

The Contractor's Safety Plan Compliance Document (SPCD) must detail procedures for the immediate notification of airport users and the FAA of any conditions adversely affecting the operational safety of the airport. It must address the notification actions described below, as applicable:

a. Maintenance List of Responsible Representatives/Points of Contact – Contractor will be required to submit a contact list of all involved parties to include cell/phone numbers for contact after hours.

b. Notices to Airmen (NOTAM) – Airport staff will issue, maintain and cancel NOTAM's issued as part of the construction activities and coordinate said

NOTAM's with tenants. Airport operator will also be responsible for providing information to the FAA Flight Service Station (FSS). The airport will be the only entity that can close or open a runway.

c. Emergency Notification Procedures – Emergency contact information for medical, firefighting, and police must be determined by the Contractor. Contractor to submit this information with the Contractor's Safety Plan Compliance Document (SPCD).

d. Coordination with Aircraft Rescue and Fire Fighting (ARFF) Personnel – Coordination with ARFF personnel, mutual aid providers, and other emergency services must be maintained for the duration of this project. If construction activities require the deactivation of water lines/hydrants, blocking of emergency access routes, or use of hazardous materials, Contractor must contact ARFF personnel (et al) prior to engaging in this work. Contractor to coordinate with the Fort Lauderdale Fire Rescue ARFF team (City of Fort Lauderdale Fire-Rescue Station No. 53.)

e. Notification to the FAA:

- **Part 77.** Any person proposing construction or alteration of objects that affect navigable airspace, as defined in Part 77, must provide notice to the FAA. This includes but is not limited to construction equipment, stockpiled material, proposed parking areas for this equipment (i.e. cranes, graders, other equipment) on airports, etc. FAA Form 7460-1, *Notice of Proposed Construction or Alteration*, is to be used for this purpose and submitted to the FAA Orlando District Office by airport staff and the engineering/design team prior to the award of the construction contract. All alterations during the construction of the project shall be resubmitted by the Contractor for the airport staff and engineering/ design team approval.
- **Navigational Aids (NAVAID).**
  Impacts to NAVAIDs are not anticipated for this project. In the event that an unforeseen impact occurs, refer to the information below. For emergency (short-notice) notification about impacts to both airport owned and FAA owned NAVAIDs, contact: 866-432-2622.

  (1) Airport Owned/FAA Maintained. If construction operations require a shutdown of 24 hours or greater in duration, or more than 4 hours daily on consecutive days, of a NAVAID owned by the airport but maintained by the FAA, provide a 45-day minimum notice to FAA ATO/Technical Operations prior to facility shutdown, using Strategic Event Coordination (SEC) Form 6000.26 contained within FAA Order 6000.15, *General Maintenance Handbook for National Airspace System (NAS) Facilities*.

  (2) FAA Owned.
  1. The airport operator must notify the appropriate FAA ATO Service Area Planning and Requirements (P&R) Group a minimum of 45 days prior to implementing an event that causes impacts to NAVAIDs, using SEC Form 6000.26.

2. Coordinate work for an FAA owned NAVAID shutdown with the local FAA ATO/Technical Operations office, including any necessary reimbursable agreements and flight checks. Detail procedures that address unanticipated utility outages and cable cuts that could impact FAA NAVAIDs. Refer to active Service Level Agreement with ATO for specifics.

10. Inspection Requirements

a. Daily (or more frequent) inspections – Inspections should be conducted at least daily, but more frequently, if necessary, to ensure conformance with the CSPP. See Appendix D - Construction Project Daily Inspection Checklist sample.

b. Interim inspections – Inspections should be conducted of all areas to be opened to aircraft traffic to ensure the proper condition of the area and absence of FOD. The Contractor should conduct an inspection of the work area with airport staff and the engineer/design team. The Contractor should ensure that all construction materials have been secured, all pavement surfaces have been swept clean, all transition ramps have been properly constructed, and that surfaces have been appropriately marked for aircraft to operate safely. Only if all items on the list meet with the airport operator's approval should the area be reopened to aircraft operations. The Contractor shall be required to retain a suitable workforce and the necessary equipment at the work area for any last-minute cleanup that may be requested by the airport operator prior to opening the area.

c. Final inspections – A final inspection will be held with the Contractor, airport staff, the engineer/design team, RPR prior to formal acceptance of the project.

11. Underground Utilities

The Contractor will be required to coordinate with local utility locating services, FAA ATO, FAA Technical Operations, and the airport to locate and protect any underground services (including but not limited to utilities, cables, wires, pipelines, etc.) prior to beginning any excavations onsite. Once locations have been established, the Contractor shall make all necessary arrangements to ensure that the facilities remain in a safe and operable condition during construction. Note that "One Call" services will not locate utilities on airfields.

Should an existing utility be taken out of service due to construction activities, Contractor will be responsible for its immediate repair at their expense.

12. Penalties

Penalties will be in accordance with the Contract Documents. Contractor personnel entering a movement area without authorization shall be levied a fine and a Notice to Appear in Court as well as removal from the job site. Personnel found to be on the jobsite without an airport issued identification badge will be immediately removed from job site. If a security access gate is found to be left unstaffed and unlocked or should a guard under the employment of the Contractor allow access to the work site without verifying the proper identification, the Contractor shall be fined for each occurrence.

The Contractor shall be responsible for payment of any fines assessed to the Fort Lauderdale Executive Airport (FXE) or City of Fort Lauderdale due to the Contractor's violation of FAA or TSA operating safety/ security requirements while working on the airport.

13. Special Conditions

Any security breach and/or Vehicle/Pedestrian Deviation (VPD) by the Contractor or their personnel will cause the airport to suspend work until such matters are resolved to the airport's satisfaction and corrective measures have been taken by the Contractor. All construction activity will be suspended in the event of an incident involving an aircraft in distress or airfield accident.

14. Runway and Taxiway Visual Aids, Marking, Lighting, Signs, and Visual NAVAIDs

a. General – Contractor will ensure that construction operations will not obscure or damage existing markings, lighting, signage, and visual NAVAIDs. These objects must be kept clearly visible to pilots, not misleading, confusing, or deceptive. In addition, all new lighting and signage will be secured in place to prevent movement by prop wash, jet blast, wing vortices, and other wind currents. Items used to secure these objects must be constructed of materials that will minimize damage to an aircraft in the event of inadvertent contact and colored like the object which they are protecting.

b. Markings – All airfield markings will follow A/C 150-5340-1M. Runways that will be temporarily closed to airport operations during construction will be marked with yellow lighted "X" placed on the runway designation numbers (see Appendix C). Taxiway closure will be designated by low-level, lighted barricades placed at the entrance to the closed taxiway from the runway (see Appendix C). These barricades will be maintained by the contractor.

c. Lighting and Visual NAVAIDs – All lighting will conform to AC 150/5340-30 and AC 150/5345-50. Light fixtures will be removed from the closed taxiway and lighting circuits will be disconnected.

d. Signs – The Contractor shall be required to provide, maintain, and install temporary signage systems for all existing systems that are removed or deactivated during construction that are required to be in operation at the end of each workday.

15. Marking and Signs for Access Routes

Airfield pavement markings will conform to AC 150/5340-18F as indicated on the plans and specifications. Signs that will be installed adjacent to active taxiways/runways shall have frangible couplings meeting the criteria of AC 150/5220-23A. All Contractor signage shall meet the requirements of the Manual of Uniform Traffic Control Devices (MUTCD), latest edition.

16. Hazard Marking and Lighting

a. Purpose – To prevent pilots from entering construction areas that are closed to aircraft as well as prevent construction personnel from entering areas that are open to aircraft operations by use of warning indicators for both pilots and Contractor personnel.

b. Equipment
- Runway lighted X's will be used to close the Runway during phases that require Runway closures and serve as a visual indicator to pilots that the Runway is closed.
- Low-level airfield barricades equipped with flashing red-lights and flags will be used to close the work area to aircraft. The barricades shall be spaced no greater than 20' center-to-center and their specific location is to be coordinated with the RPR and FXE Operations. Sandbags will be used to hold the barricades in place against prop wash/jet blast.

The Contractor will be responsible for maintaining lights, barricades, and fence in working order throughout the project and shall have replacement flags, lights, batteries, and fencing on-site as well as a designated employee that will be on call 24-hours per day to maintain the barricades and/ or fence.

17. Work zone lighting for nighttime construction

The Contractor will be required to provide sufficient artificial lighting, in accordance with the Technical Specifications, during nighttime operations (or other similar times of poor visibility) to perform their work and for the work to be reviewed by the proper airport personnel and consultant. During nighttime paving operations, the Contractor must comply with the requirements of FAA Standard Technical Specification P-401-4.16. Contractor to maintain artificial lighting system in good working order and ensure that at no time does the system interfere with airport operations. Light heads are to be aimed down and away from air traffic and air traffic control. Contractor to provide shielding as necessary. When not in operation, light pole booms are to be lowered, and the lighting powerhouse is to be moved to a location where it will not obstruct air operations.

18. Protection of Runway and Taxiway Safety Areas, Object Free Areas, Obstacle Free Zones, and Approach/Departure Surfaces

The Contractor is required to discuss proposed methods of identifying, demarcating, and protecting airport surfaces including:

a. Runway Safety Area (RSA) – The project will require work within the RSA of Runway 9-27. As such, the Runway will be closed during these operations and proper notices issued via NOTAM's.

b. Runway Object Free Area (ROFA) – All construction equipment will be removed from the ROFA at the end of the workday. In addition, no materials will be allowed to be stockpiled within the ROFA.

c. Taxiway Safety Area (TSA) – The project will require work within Taxiway Safety Areas (TSA). As such, the Taxiways will be closed during these operations and proper notices issued via NOTAM's.

d. Taxiway Object Free Area (TOFA) – All construction equipment will be removed from the TOFA at the end of the workday. In addition, no materials will be allowed to be stockpiled within the TOFA.

e. Obstacle Free Zone (OFZ) – The project will require work within the ROFZ of Runway 9-27. As such, the Runway will be closed during these operations and proper notices issued via NOTAM's.

f. Runway approach/ departure surfaces – The project will require access to and from the work site that will be within the approach/departure surfaces of Runway 9-27. Airport operations will coordinate movement within these areas with ATCT personnel and issue the proper NOTAM's.

19. Other Limitations on Construction

a. Prohibitions – The following prohibitions will be in place during construction: No use of tall equipment such as cranes will be allowed unless a 7460-1 has been filed with the FAA; no open flame welding or torches will be allowed; no blasting on Airport property; and no use of flare pots within AOA.

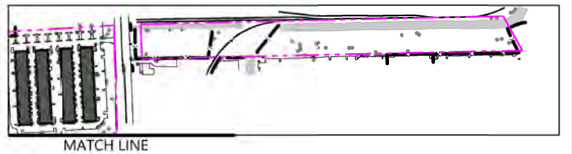
b. Restrictions – Contractor will not be allowed access to any areas outside of the work site without escort by Airport staff. In addition, the Contractor will submit a Hurricane Preparedness Plan detailing how the Contractor will secure the work area equipment and materials to prevent damage to the work and prevent materials and equipment from becoming a hazard to persons and property on the airfield.

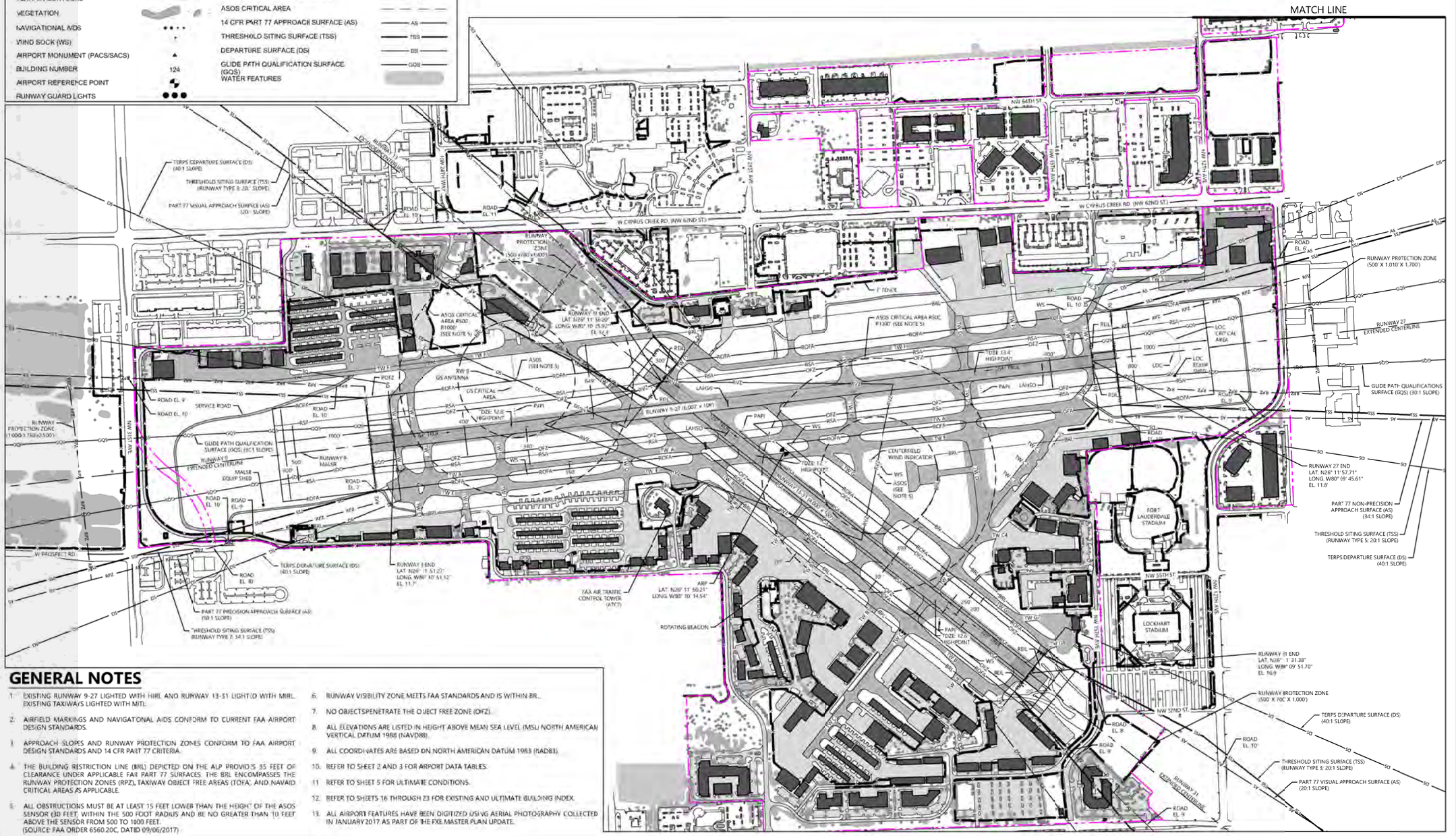
APPENDIX A

Airspace Protection Plan, Safety Notes and Details

LEGEND

FEATURE	EXISTING	FEATURE	EXISTING
AIRPORT PROPERTY LINE		ILS LOCALIZER CRITICAL AREA	
AIRFIELD PAVEMENT		ILS GLIDE SLOPE CRITICAL AREA	
ON-AIRPORT BUILDINGS		RUNWAY SAFETY AREA (RSA)	RSA
		RUNWAY OBJECT FREE AREA (ROFA)	ROFA
OFF-AIRPORT BUILDINGS		RUNWAY OBJECT FREE ZONE (OFZ)	OFZ
BUILDINGS TO BE DEMOLISHED	N/A	APPROACH RUNWAY PROTECTION ZONE (RPZ)	RPZ
OBJECT/PAVEMENT TO BE DEMOLISHED	N/A	DEPARTURE RUNWAY PROTECTION ZONE (RPZ)	N/A
ROADS & PARKING		RUNWAY VISIBILITY ZONE (RVZ)	RVZ
ADA/SECURITY/OTHER FENCING		PRECISION OBJECT FREE ZONE (POFZ)	
TERRAIN CONTOURS		BUILDING RESTRICTION LINE (BRL)	BRL
VEGETATION		ASOS CRITICAL AREA	
NAVIGATIONAL AIDS		14 CFR PART 77 APPROACH SURFACE (AS)	AS
WIND SOCK (WS)		THRESHOLD SITING SURFACE (TSS)	TSS
AIRPORT MONUMENT (PACS/SACS)		DEPARTURE SURFACE (DS)	DS
BUILDING NUMBER	124	GLIDE PATH QUALIFICATION SURFACE (GQS)	GQS
AIRPORT REFERENCE POINT		WATER FEATURES	
RUNWAY GUARD LIGHTS			





GENERAL NOTES

1. EXISTING RUNWAY 9-27 LIGHTED WITH HIRL AND RUNWAY 13-31 LIGHTED WITH MIRL. EXISTING TAXIWAYS LIGHTED WITH MITL.
2. AIRFIELD MARKINGS AND NAVIGATIONAL AIDS CONFORM TO CURRENT FAA AIRPORT DESIGN STANDARDS.
3. APPROACH SLOPES AND RUNWAY PROTECTION ZONES CONFORM TO FAA AIRPORT DESIGN STANDARDS AND 14 CFR PART 77 CRITERIA.
4. THE BUILDING RESTRICTION LINE (BRL) DEPICTED ON THE ALP PROVIDES 35 FEET OF CLEARANCE UNDER APPLICABLE FAR PART 77 SURFACES. THE BRL ENCOMPASSES THE RUNWAY PROTECTION ZONES (RPZ), TAXIWAY OBJECT FREE AREAS (TOFA), AND NAVAID CRITICAL AREAS AS APPLICABLE.
5. ALL OBSTRUCTIONS MUST BE AT LEAST 15 FEET LOWER THAN THE HEIGHT OF THE ASOS SENSOR (30 FEET WITHIN THE 500 FOOT RADIUS AND BE NO GREATER THAN 10 FEET ABOVE THE SENSOR FROM 500 TO 1800 FEET. (SOURCE: FAA ORDER 6560.20C, DATED 09/06/2017)
6. RUNWAY VISIBILITY ZONE MEETS FAA STANDARDS AND IS WITHIN BR...
7. NO OBJECTS PENETRATE THE OJECT FREE ZONE (OFZ).
8. ALL ELEVATIONS ARE LISTED IN HEIGHT ABOVE MEAN SEA LEVEL (MSL) NORTH AMERICAN VERTICAL DATUM 1988 (NAVD88).
9. ALL COORDINATES ARE BASED ON NORTH AMERICAN DATUM 1983 (NAD83).
10. REFER TO SHEET 2 AND 3 FOR AIRPORT DATA TABLES.
11. REFER TO SHEET 5 FOR ULTIMATE CONDITIONS.
12. REFER TO SHEETS 16 THROUGH 23 FOR EXISTING AND ULTIMATE BUILDING INDEX.
13. ALL AIRPORT FEATURES HAVE BEEN DIGITIZED USING AERIAL PHOTOGRAPHY COLLECTED IN JANUARY 2017 AS PART OF THE FXE MASTER PLAN UPDATE.

FXE
FORT LAUDERDALE EXECUTIVE AIRPORT

N
MAGNETIC HEADING DECLINATION = 9° 47' W (MAY 2019)
(TRUE NORTH)
0 200 400 800
GRAPHICAL SCALE IN FEET

RICONDO
RICONDO & ASSOCIATES, INC
2000 EAST ATLANTIC BLVD., SUITE 300
POMPANO BEACH, FL 33062
PHONE: (954) 788-3500

NO.	REVISIONS	DATE

EXISTING AIRPORT LAYOUT PLAN

DRAWN BY: JA
CHECKED BY: SC

PREPARED BY:
RICONDO & ASSOCIATES, INC.

PREPARED FOR:
CITY OF FORT LAUDERDALE

DATE:
AUGUST 2019

SHEET 4 OF 26

CONSTRUCTION SAFETY NOTES:

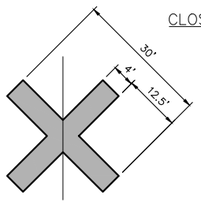
1. ALL CONSTRUCTION FOR THIS PROJECT SHALL CONFORM TO THE GUIDELINES SET FORTH IN FEDERAL AVIATION ADMINISTRATION (FAA) AC150/5370-2G "OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION", AND THESE PLANS AND SPECIFICATIONS.
2. CONSTRUCTION ACTIVITIES ARE NOT PERMITTED WITHIN THE RUNWAY SAFETY AREA (RSA) OF ANY RUNWAY THAT IS OPEN FOR AIRCRAFT OPERATIONS. (SEE SECTION 2.22, AC 150/5370-2G, CHAPTER 2)
3. CONSTRUCTION ACTIVITIES ARE NOT PERMITTED WITHIN TAXIWAY OBJECT FREE AREA (TOFA) OF AN ACTIVE TAXIWAY. (SEE SECTION 2.22, AC No. 150/5370-2G, CHAPTER 2)
4. NO CONSTRUCTION TRAFFIC SHALL ENTER OR CROSS ANY ACTIVE AIRPORT OPERATIONAL AREA EXCEPT UPON AUTHORIZATION BY THE OWNER. THIS SPECIFICALLY INCLUDES THE RUNWAY PROTECTION ZONES AND THE RUNWAY AND TAXIWAY CONSTRUCTION SAFETY LIMITS IDENTIFIED IN CONSTRUCTION NOTES 2 AND 3 ABOVE.
5. NO CONSTRUCTION TRAFFIC SHALL ENTER OR CROSS ANY LOCALIZER OR GLIDE SLOPE CRITICAL AREA EXCEPT UPON AUTHORIZATION BY THE OWNER.
6. IN ORDER FOR THE CONTRACTOR TO OPERATE WITHIN THE AIR OPERATIONS AREA, APPROPRIATE NOTICE TO AIR MISSIONS (NOTAMS) MUST BE ISSUED BY THE OWNER THROUGH THE FAA FLIGHT SERVICE STATION. THESE NOTICES PROVIDE INFORMATION ON CLOSED, LIMITED, OR HAZARDOUS CONDITIONS TO AIRMEN AND USERS OF THE AIRPORT. A 72-HOUR NOTICE IS REQUIRED FOR ISSUANCE OF THE NOTAM. ALL CONSTRUCTION OPERATIONS MUST BE CLOSELY COORDINATED WITH THE OWNER FOR NOTAM ISSUANCE.
7. AIRCRAFT OPERATIONS SHALL AT ALL TIMES HAVE PRIORITY OVER ALL VEHICLES, EQUIPMENT AND PERSONNEL. THE CONTRACTOR SHALL EMPLOY STRICT MEASURES TO PREVENT ANY CONFLICT BETWEEN ITS PERSONNEL AND AIRCRAFT ON ANY ACTIVE AIRFIELD PAVEMENT. THE CONTRACTOR SHALL REMAIN CLEAR OF ACTIVE RUNWAYS AND TAXIWAYS.
8. ALL CONTRACTOR VEHICLES, INCLUDING HAULING VEHICLES, THAT ARE AUTHORIZED TO OPERATE WITHIN THE SECURITY FENCE ON THE AIRPORT WITHIN THE DESIGNATED LIMITS OF CONSTRUCTION OR HAUL ROUTES AS DEFINED HEREIN, SHALL DISPLAY IN FULL VIEW ABOVE THE VEHICLE A 3'x3' OR LARGER ORANGE AND WHITE CHECKERBOARD FLAG, EACH CHECKERBOARD COLOR BEING 1' SQUARE. WHEN OPERATING DURING PERIODS OF DARKNESS OR LIMITED VISIBILITY, CONTRACTOR'S VEHICLES SHALL BE EQUIPPED WITH ROTATING OR FLASHING AMBER LIGHTS. DURING SUCH PERIODS, HAULING VEHICLES NOT SO EQUIPPED SHALL BE ESCORTED BY A VEHICLE SO EQUIPPED.
9. CONTRACTOR SHALL CONTROL THE ON-AIRPORT MOVEMENT AND ACTIVITIES OF ITS EMPLOYEES AND SUBCONTRACTORS.
10. OPEN-FLAME WELDING OR TORCH-CUTTING OPERATIONS ARE PROHIBITED UNLESS ADEQUATE FIRE AND SAFETY PRECAUTIONS ARE PROVIDED AND HAVE BEEN APPROVED BY THE OWNER.
11. OPEN TRENCHES, EXCAVATIONS AND STOCKPILED MATERIALS AT THE CONSTRUCTION SITE SHALL BE PROMINENTLY MARKED WITH ORANGE FLAGS AND LIGHTED WITH FLASHING AMBER LIGHT UNITS (ACCEPTABLE TO THE OWNER) DURING HOURS OF RESTRICTED VISIBILITY OR DARKNESS.
12. STOCKPILED MATERIAL SHALL BE CONSTRAINED IN A MANNER TO PREVENT MOVEMENT AS A RESULT OF AIRCRAFT, WIND, AND/OR OTHER REASON.
13. ANY DAMAGE TO THE EXISTING AIRPORT LIGHTING SYSTEM CAUSED BY CONSTRUCTION OPERATIONS SHALL BE IMMEDIATELY NOTED TO THE OWNER AND REPAIRED BY THE CONTRACTOR AT ITS OWN EXPENSE.
14. CONTRACTOR GENERATED DEBRIS, WASTE AND LOOSE MATERIAL IS CAPABLE OF CAUSING DAMAGE TO AIRCRAFT LANDING GEAR, PROPELLERS AND ROTORS, OR OF BEING INGESTED BY JET ENGINES AND SHALL NOT BE LEFT ON ACTIVE AIRCRAFT MOVEMENT AREAS. MATERIAL DROPPING WITHIN THESE AREAS SHALL BE REMOVED IMMEDIATELY AND CONTINUOUSLY DURING WORKING HOURS.
15. CONTRACTOR SHALL BE RESPONSIBLE FOR INFORMING ALL PERSONS UNDER ITS CONTROL THAT UNAUTHORIZED CONSTRUCTION PERSONNEL FOUND IN RESTRICTED AREAS OF THE AIRPORT SHOWN ON THE SAFETY PLAN ARE SUBJECT TO ARREST FOR A PUNISHABLE FEDERAL OFFENSE AND WILL PROMPTLY AND PERMANENTLY BE REMOVED FROM THE JOB.
16. CONTRACTOR ACCESS GATES SHALL BE CONTROLLED BY A CONTRACTOR SUPPLIED GATE GUARD OR REMAIN LOCKED AT ALL TIMES. APPROVED GATE GUARD SHALL CONTROL ACCESS TO ALLOW ONLY AUTHORIZED CONSTRUCTION TRAFFIC TO ENTER THE SITE.
17. AIRPORT STAFF SHALL CONTROL AND ESCORT ALL CONSTRUCTION TRAFFIC ENTERING THE SECURED AREA OF THE AIRPORT TO PREVENT CONFLICTS WITH AIRCRAFT OPERATIONS. NO PRIVATE VEHICLES WILL BE ALLOWED ON THE AIRPORT.
18. SPECIAL ACCESS REQUIREMENTS AND OPERATING LIMITATIONS ARE REQUIRED INSIDE THE SECURITY FENCE. THE CONTRACTOR WILL CONFINE PERSONNEL, EQUIPMENT AND MATERIALS OUTSIDE OF ACTIVE AREAS OF THE AIRPORT.
19. CONTRACTOR SHALL PROVIDE AND MAINTAIN TEMPORARY LIGHTED BARRICADES EVERY 30 FEET ON BOTH SIDES OF HAUL ROAD TO CLEARLY MARK THE DESIGNATED ACCESS ROUTES TO AFFECTED AREAS OF AIRPORT PROPERTY. CONTRACTOR SHALL CONTROL ACCESS TO THE WORKING AREA BY CONSTRUCTION VEHICLES AS DELINEATED ON THIS PLAN.
20. THE CONTRACTOR SHALL HAVE ACCESS TO THE SECURED AREA OF THE AIRPORT ONLY AT THE LOCATION DESIGNATED ON THE PLANS OR APPROVED BY THE OWNER. ALL OTHER ACCESS SHALL BE BY SPECIAL REQUEST AND SUBJECT TO APPROVAL BY THE OWNER. THE CONTRACTOR SHALL PROVIDE FLAGMEN TO COORDINATE AND CONTROL CONSTRUCTION TRAFFIC WHEN OPERATING ACROSS ANY ACTIVE AREAS OF THE AIRPORT.
21. THE CONTRACTOR SHALL PROVIDE, INSTALL AND MAINTAIN FLASHING LIGHTS AND BARRICADES ALONG PAVEMENT EDGES WHEREVER OPEN EXCAVATIONS OR IRREGULAR GRADES ARE LEFT WITHIN THE SAFETY AREA OF AN ACTIVE PAVEMENT OR WHERE TEMPORARY PAVEMENT CLOSURES OR AIRCRAFT LIMITATIONS ARE REQUIRED. BARRICADES SHALL BE PLACED IN A CONTINUOUS LINE OR AS NOTED ALONG THE AFFECTED PAVEMENT EDGE OR ACROSS THE PAVEMENT OF A CLOSED TAXIWAY. THE CONTRACTOR SHALL DAILY MAINTAIN THE LIGHTS AND BARRICADES IN AN OPERABLE CONDITION FOR THE DURATION OF THE PROJECT. THE CONTRACTOR SHALL FURNISH THE OWNER A CONTACT NUMBER FOR 24-HOUR MAINTENANCE OF LIGHTS AND BARRICADES.
22. THE CONTRACTOR SHALL PERFORM CONSTRUCTION OPERATIONS AS NECESSARY TO PREVENT ATTRACTION TO BIRDS CAUSED BY PONDED WATER AND GRASS SEED.
23. REFER TO THE GENERAL NOTES FOR REQUIREMENTS PERTAINING TO STORAGE OF CONSTRUCTION EQUIPMENT AND MATERIALS WHEN NOT IN USE.
24. THE CONTRACTOR SHALL COMPLY WITH ALL SECURITY REQUIREMENTS SPECIFIED HEREIN OR MANDATED BY FAA OR TSA. THE CONTRACTOR SHALL DESIGNATE IN WRITING TO THE OWNER THE NAME OF ITS "CONTRACTOR SECURITY OFFICER". THE CONTRACTOR SECURITY OFFICER SHALL REPRESENT THE CONTRACTOR ON THE SECURITY REQUIREMENTS OF THE CONTRACT.
25. THE CONTRACTOR'S SECURITY OFFICER SHALL BE RESPONSIBLE FOR BRIEFING ALL CONTRACTOR PERSONNEL ON THESE REQUIREMENTS. CONTRACTOR EMPLOYEES WHO REQUIRE ACCESS TO THE SECURE AREA OF THE AIRPORT SHALL ATTEND THE OWNER'S SECURITY TRAINING SESSION AND SHALL BE BRIEFED ON THESE REQUIREMENTS PRIOR TO WORKING IN THE CONSTRUCTION AREAS.
26. ALL CONTRACTOR PERSONNEL WHO REQUIRE ACCESS TO THE SECURE AREA OF THE AIRPORT SHALL HAVE OWNER ISSUED IDENTIFICATION BADGES DISPLAYED AT ALL TIMES WHEN WORKING INSIDE THE AIRCRAFT OPERATIONS AREA. THE AIRPORT ID PROGRAM IS UNDER CONSTANT REVIEW BY THE FAA AND AIRPORT STAFF. ALL CONTEMPORARY REQUIREMENTS WILL GOVERN. THE CONTRACTOR SHALL ASSIGN THE CONTRACTOR SECURITY OFFICER DESCRIBED ABOVE AS THE SINGLE POINT CONTACT FOR ALL IDENTIFICATION BADGING REQUIREMENTS. PERSONNEL, SUCH AS TRUCKERS, WHO ARE NOT BAGGED, MAY BE PERMITTED TO ACCESS THE SECURE AREA UNDER THE DIRECT ESCORT OF AIRPORT STAFF OR BAGGED CONTRACTOR PERSONNEL WITH ESCORT AUTHORITY.
27. THE CONTRACTOR SHALL ACQUAINT ITS SUPERVISORS AND EMPLOYEES WITH THE AIRPORT ACTIVITIES AND OPERATIONS THAT ARE INHERENT AT THIS AIRPORT AND SHALL CONDUCT ITS CONSTRUCTION ACTIVITIES TO CONFORM TO ALL ROUTINE AND EMERGENCY AIR TRAFFIC REQUIREMENTS AND TO THE GUIDELINES ON SAFETY.
28. ITEMS FOR CONTROL OF SAFETY DURING CONSTRUCTION SUCH AS VEHICLE LIGHTING, ETC. SHALL BE PAID FOR IN ACCORDANCE WITH SPECIFICATION S-102 AND SHALL BE CONSIDERED AS A SUBSIDIARY OBLIGATION FOR THE CONTRACTOR COVERED UNDER THESE ITEMS.
29. SEE PHASING PLANS FOR BARRICADE LOCATIONS.

(8) LOW LEVEL AIRFIELD BARRICADE DETAIL & NOTES
N.T.S.

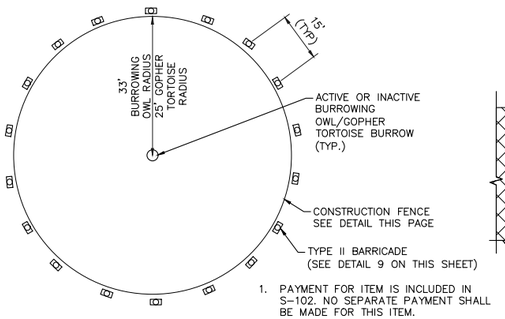
1. BARRICADES SHALL BE PLACED AS SHOWN ON THE PHASING PLANS TO DELINEATE THE CONTRACTOR'S WORK AREAS. EXACT BARRICADE LOCATION AND QUANTITY TO BE COORDINATED WITH AIRPORT.
2. BARRICADE SECTIONS CAN BE WHITE OR ORANGE WITH WHITE AND ORANGE RETRO-REFLECTIVE MARKING OR STICKERS. BARRICADES WILL BE LIGHTED AND FLAGGED.
3. ALL BARRICADES SHALL BE CHECKED VISUALLY FOR SIGNS OF WEAR AND TEAR ON A WEEKLY BASIS AND SHALL BE REPAIRED OR REPLACED WHEN DEEMED APPROPRIATE BY THE RPR OR OWNER. THE CONDITIONS OF LIGHTING UNITS SHALL BE CHECKED DAILY. ALL LIGHT FIXTURES SHALL BE VERIFIED OPERATING BY THE CONTRACTOR ON A DAILY BASIS BEFORE THE CONTRACTOR CEASES OPERATION FOR THE DAY. THE AREAS AROUND ALL BARRICADES SHALL BE CLEANED AS DIRECTED IN THE GENERAL NOTES AND THE SAFETY NOTES.
4. BARRICADES ALONG ACTIVE APRON OR TAXIWAY PAVEMENT SHALL BE PLACED APPROXIMATELY 4 FEET FROM THE EDGE OF THE FULL STRENGTH PAVEMENT. BARRICADES SHALL BE PLACED IN A CONTINUOUS LINE.
5. ALTERNATE FORMS OF BARRICADES MAY BE PROPOSED BY THE CONTRACTOR WHICH MEET THESE FUNCTIONAL REQUIREMENTS. APPROVALS OF ANY SUCH SUBSTITUTION (IF GRANTED) SHALL BE BY THE OWNER AT NO ADDITIONAL COST TO THE OWNER.
6. THE FINAL LOCATION FOR THE BARRICADES SHALL BE ESTABLISHED IN THE FIELD AS DIRECTED BY THE RPR.
7. THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN, RELOCATE AND REMOVE ALL BARRICADES. ALL WORK SHALL BE INCIDENTAL TO S-102.
8. THE CONTRACTOR SHALL MAINTAIN THE LIGHTS AND THE BARRICADES IN OPERABLE CONDITION AT ALL TIMES. THE CONTRACTOR SHALL HAVE REPLACEMENT LIGHTS AND BATTERIES ON SITE AND SHALL REPLACE LIGHTS AND/OR BATTERIES WITHIN ONE HOUR OF NOTIFICATION BY THE RPR OR OWNER. CONTRACTOR SHALL FURNISH THE OWNER WITH THE NAME AND TELEPHONE NUMBER FOR AN ON-CALL REPRESENTATIVE 24 HOURS PER DAY, SEVEN DAYS PER WEEK TO REPLACE BATTERIES AND INOPERATIVE LIGHTS AND MAINTAIN THE BARRICADES.
9. FLASHING LIGHTS SHALL BE PLACED AT THE ENDS AND AT CORNERS OF EACH LINE OF BARRICADES, ALL OTHER LIGHTS ON BARRICADES SHALL BE STEADY-BURN.

CLOSED TAXIWAY MARKER NOTES:

1. TEMPORARY CLOSED TAXIWAY MARKER SHALL BE CONSTRUCTED OF AN EASILY REMOVABLE MATERIAL, SUCH AS PLYWOOD OR FABRIC, AND HELD IN PLACE WITH SAND BAGS PAINTED YELLOW. TEMPORARY CLOSED TAXIWAY MARKER SHALL BE YELLOW IN COLOR.
2. THE CONTRACTOR SHALL PLACE TEMPORARY CLOSED TAXIWAY MARKER ON THE CENTERLINE OF THE FACILITY TO BE CLOSED AS SHOWN ON PLANS OR AS DIRECTED BY THE OWNER.
3. NO PAYMENT WILL BE MADE FOR RELOCATIONS OF TEMPORARY CLOSED TAXIWAY MARKER.
4. PAYMENT FOR ITEM IS INCLUDED IN S-102. NO SEPARATE PAYMENT SHALL BE MADE FOR THIS ITEM.

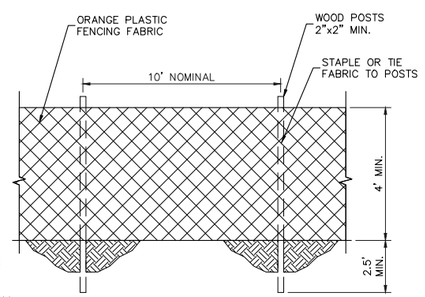


(1) TEMPORARY TAXIWAY CLOSURE MARKER
N.T.S.



1. PAYMENT FOR ITEM IS INCLUDED IN S-102. NO SEPARATE PAYMENT SHALL BE MADE FOR THIS ITEM.

(2) BURROWING OWL AND GOPHER TORTOISE FENCING PROTECTION DETAIL
N.T.S.

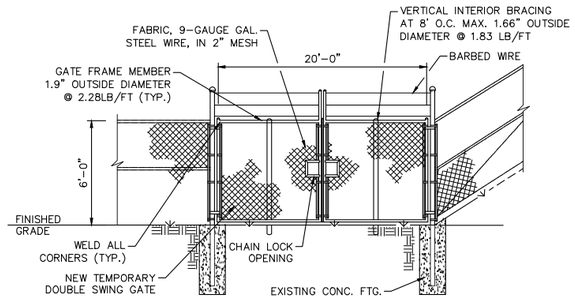


(3) CONSTRUCTION FENCE DETAIL
N.T.S.

NOTES:

1. THE CONTRACTOR SHALL PROVIDE FULLY FUNCTIONING PORTABLE LIGHTED RUNWAY CLOSURE MARKERS FOR THE PROJECT.
2. THE FUEL AND MAINTENANCE COSTS ASSOCIATED WITH USING THE PORTABLE LIGHTED RUNWAY CLOSURE MARKERS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR THROUGHOUT THE CONSTRUCTION. THIS INCLUDES REPLACING THE ENGINE AND/OR GENERATOR. ANY REPAIRS REQUIRED TO THE PORTABLE LIGHTED RUNWAY CLOSURE MARKERS SHALL BE AT THE CONTRACTOR'S EXPENSE, WITH NO ADDITIONAL COMPENSATION.
3. THE CONTRACTOR SHALL CLEAN, REPAIR AND REPLACE ANY DAMAGED PARTS ON THE PORTABLE LIGHTED RUNWAY CLOSURE MARKERS.

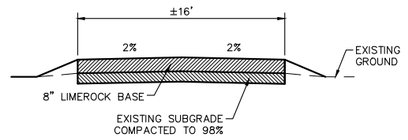
(4) CONTRACTOR-FURNISHED PORTABLE LIGHTED RUNWAY CLOSURE MARKER
N.T.S.



(5) TEMPORARY SECURITY DOUBLE SWING GATE
N.T.S.

NOTES:

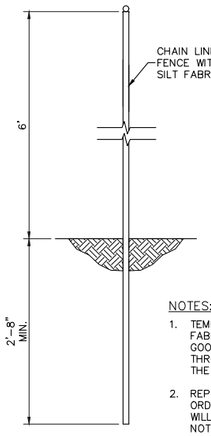
1. TEMPORARY GATES ARE TO BE REMOVED AFTER CONSTRUCTION IS COMPLETE. COST OF GATES ARE TO BE INCLUDED IN MOBILIZATION PAY ITEM, C-105. EXACT LOCATION OF GATES TO BE COORDINATED WITH OWNER.
2. TEMPORARY GATE DETAIL SHOW MAX WIDTH, AND LIKELY HEIGHT. CONTRACTOR TO MEASURE ALL ACTUAL DIMENSIONS IN FIELD PRIOR TO FABRICATION.



(6) TEMPORARY ACCESS ROAD SECTION
N.T.S.

ACCESS ROAD NOTES:

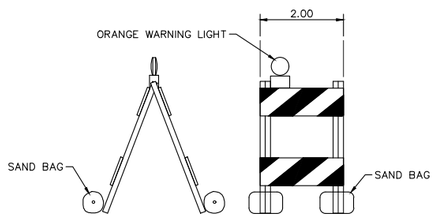
1. THE EXACT LIMITS AND LOCATION OF THE ACCESS ROAD WILL BE COORDINATED WITH FXE OPERATIONS STAFF AND SHALL BE APPROVED IN THE FIELD BY THE ENGINEER.
2. THE ACCESS ROAD SHALL BE 8" THICK.
3. AFTER COMPLETION OF CONSTRUCTION, THE ACCESS ROAD SHALL BE RETURNED TO ITS ORIGINAL CONDITION OR BETTER. THE CONTRACTOR WILL SOD LIMITS.
4. ROAD TO BE PAID FOR AS INCIDENTAL TO MOBILIZATION (C-105).



NOTES:

1. TEMPORARY FENCE AND SILT FABRIC MUST BE MAINTAINED IN GOOD WORKING ORDER THROUGHOUT THE DURATION OF THE CONSTRUCTION.
2. REPAIRS, AS REQUIRED OR AS ORDERED BY THE AIRPORT STAFF, WILL BE MADE WITHIN 24 HRS OF NOTICE.

(7) TEMPORARY SECURITY FENCE DETAIL
N.T.S.



(9) TYPE II BARRICADE DETAIL
N.T.S.

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CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DESCRIPTION	DATE	BY	CHK'D

100% SUBMITTAL

PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
SAFETY NOTES AND DETAILS

SHEET NO. C06 | OF
TOTAL: 37
CAD FILE: 12884-C05-SAFE
DRAWING FILE NO.

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APPENDIX B

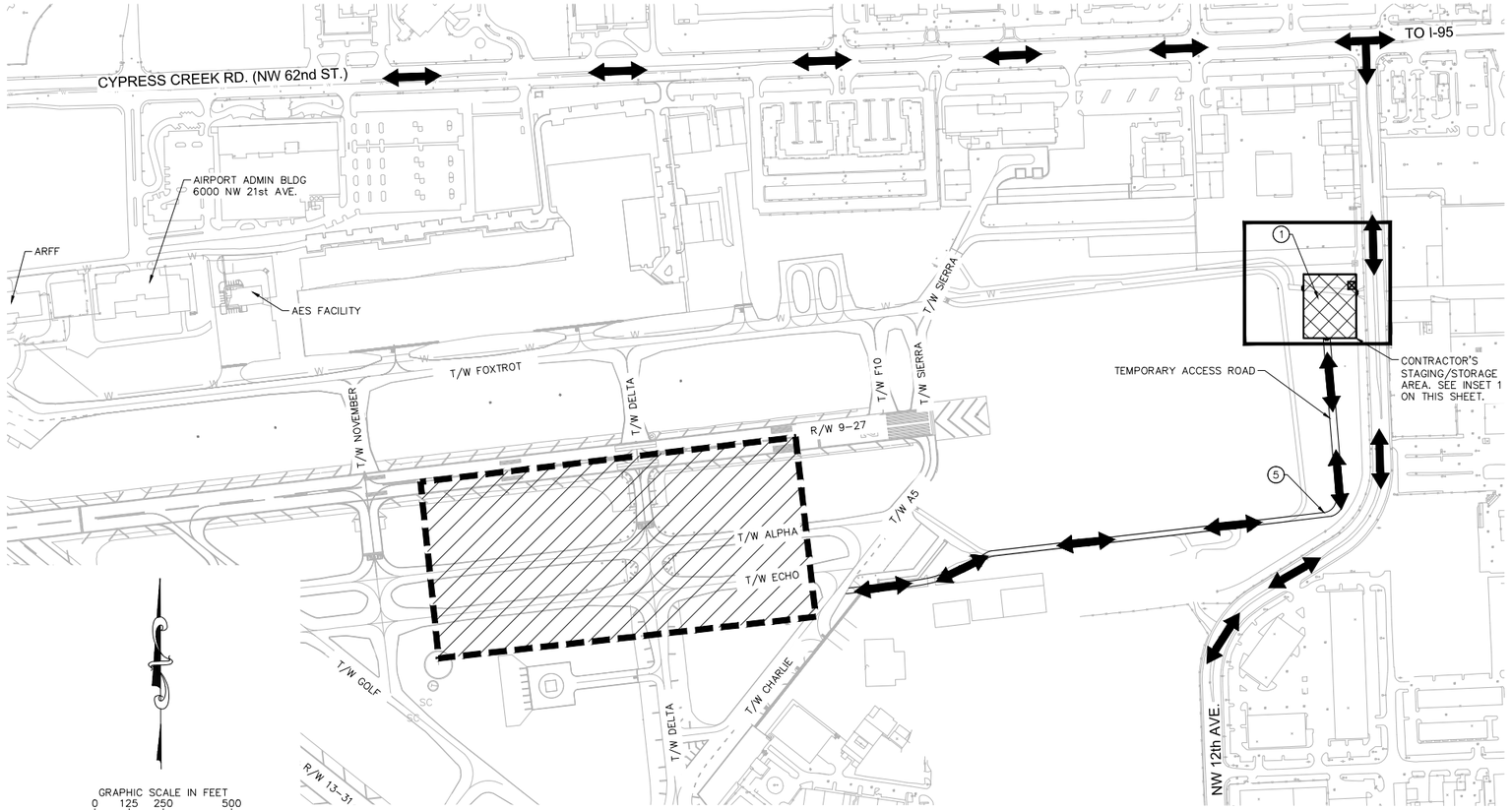
Access and Staging Plan

LEGEND

- ACCESS / HAUL ROUTE
- CONTRACTOR'S STAGING AND STORAGE AREA. MAXIMUM EQUIPMENT HEIGHT = 20'
- PROJECT WORK AREA
- TEMPORARY SECURITY FENCE. SEE DETAIL 7 SHEET C05.
- RSA — RUNWAY SAFETY AREA

1. EXISTING CONTRACTOR'S STAGING AND STORAGE AREA. CONTRACTOR TO INSTALL FENCE FABRIC ON EXISTING SECURITY FENCE AND ACCESS GATE ON SOUTH SIDE OF STAGING AREA. EMPLOYEE VEHICLES SHALL NOT GO BEYOND CONTRACTOR'S FENCED STAGING AREA.
2. EXISTING CONTRACTOR'S ACCESS GATE.
3. PROPOSED CONTRACTOR'S ACCESS GATE.
4. CONTRACTOR'S SECURITY GUARD SHACK LOCATION (OPTIONAL).
5. APPROXIMATE LOCATION OF NEW TEMPORARY ACCESS ROAD. SEE DETAIL 6 SHEET C05 FOR SECTION DETAILS. LOCATION TO BE FIELD ADJUSTED TO AVOID EXISTING OWL/GOPHER TORTOISE BURROWS AND AS DIRECTED BY OWNER. REMOVE AND SOD WHEN CONSTRUCTION IS COMPLETE.

[S] CONTRACTOR TRAFFIC SIGN

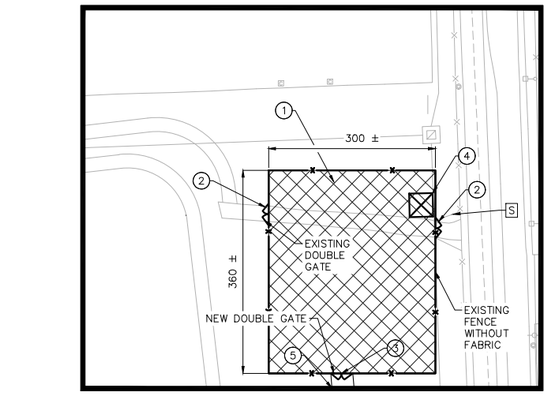


CONTRACTOR STAGING AREA NOTES:

1. THERE IS AN EXISTING STAGING AREA WITH A STABILIZED SURFACE AND FENCING IN THE GENERAL LOCATION AND LIMITS SHOWN ON THIS SHEET. THE EXISTING STAGING AREA FENCING WILL NEED NEW SILT FABRIC TO BE INSTALLED FOR THIS PROJECT DURING THE MOBILIZATION PHASE. THE CONTRACTOR SHOULD ALSO INSTALL AN ACCESS GATE ON THE SOUTH SIDE OF THE STAGING AREA AS PART OF THIS WORK. THIS IS INCIDENTAL TO THE C-105 MOBILIZATION PAY ITEM. ANY AND ALL REQUIRED UTILITIES FOR THE CONTRACTOR'S OPERATIONS SHALL BE ARRANGED FOR AND PAID FOR BY THE CONTRACTOR DIRECTLY WITH THE APPROPRIATE UTILITY AGENCIES. UTILITY ARRANGEMENTS SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER. THE CONTRACTOR SHALL USE THE STORAGE AND STAGING AREA SHOWN ON THE PLANS FOR ITS FIELD OFFICE, SHOP, MATERIAL AND EQUIPMENT STORAGE AND OTHER PROJECT RELATED ACTIVITIES INCLUDING EMPLOYEE PARKING. AT THE COMPLETION OF THE PROJECT, THE STAGING AREA AND ITS FENCING WILL BE RETURNED TO EXISTING CONDITION OR BETTER AT NO ADDITIONAL COST TO THE OWNER. THIS WORK IS INCIDENTAL TO THE C-105 MOBILIZATION PAY ITEM.

ACCESS AND HAUL ROAD NOTES:

1. HAUL ROADS TO BE USED UNDER THIS PROJECT SHALL BE THOSE INDICATED ON THE DRAWINGS OR OTHERWISE SPECIFICALLY AUTHORIZED BY THE OWNER. IN GENERAL, THE CONTRACTOR SHALL CONFINE EQUIPMENT AND HAULING TO THE AREAS UNDER CONSTRUCTION. NO DEBRIS SHALL BE ALLOWED ON THE ROADWAYS OR AIRPORT PAVED SURFACES. ACTIVE TAXIWAYS SHALL BE KEPT FREE OF DEBRIS AT ALL TIMES. CONTRACTOR SHALL MAINTAIN VACUUM SWEEPERS ON SITE FOR THAT USE. OTHER PAVEMENTS SHALL BE CLEANED BY THE CONTRACTOR DAILY, AND AS REQUIRED, USING VACUUM SWEEPERS TO KEEP ALL ACCESS AND CONSTRUCTION AREAS CLEAR OF SOILS, CLODS OR OTHER DEBRIS.
2. THE ACCESS POINTS TO THE PROJECT SITE ARE SHOWN ON THE PLANS.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING ALL AIRPORT SERVICE ROADS TO THEIR PRECONSTRUCTION CONDITION WHERE SUCH ROADS ARE USED BY THE CONTRACTOR FOR HAULING OPERATIONS.
4. THE CONTRACTOR SHALL RESTORE ALL TURFED AND PAVED AREAS USED FOR HAUL ROADS TO THEIR ORIGINAL CONDITION, INCLUDING THE ESTABLISHMENT OF TURF. ALL COSTS FOR CONSTRUCTING, REMOVING AND RESTORING OF HAUL ROADS REQUIRED FOR THE COMPLETION OF THE WORK SHALL BE BORNE BY THE CONTRACTOR.
5. THE CONTRACTOR SHALL NOT PERMIT ANY UNAUTHORIZED CONSTRUCTION PERSONNEL OR TRAFFIC ON THE SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TRAFFIC CONTROL TO AND FROM THE VARIOUS CONSTRUCTION AREAS ON THE SITE. THE CONTRACTOR IS RESPONSIBLE FOR THE IMMEDIATE CLEAN-UP OF ANY DEBRIS DEPOSITED AT THE PROJECT SITE AND ALONG ANY ROAD AS A RESULT OF HIS/HER CONSTRUCTION TRAFFIC. DIRECTIONAL SIGNAGE AT THE ACCESS GATE AND ALONG THE DELIVERY ROUTE TO THE STORAGE AREA OR WORK SITE SHALL BE APPROVED BY THE OWNER.
   ALL CONTRACTOR'S MATERIAL ORDERS FOR DELIVERY TO THE SITE SHALL BE DIRECTED TO THE ACCESS POINTS IDENTIFIED.
6. ON EXISTING AIRPORT PAVEMENTS TO REMAIN, ONLY RUBBER TIRE VEHICLES SHALL BE PERMITTED.
7. THE CONTRACTOR, THROUGH THE CONTRACTOR SECURITY OFFICER, SHALL ESTABLISH AND MAINTAIN A LIST OF CONTRACTOR AND SUBCONTRACTOR VEHICLES AUTHORIZED TO OPERATE ON THE SITE. VEHICLE PERMITS SHALL BE ASSIGNED IN ACCORDANCE WITH AIRPORT SECURITY PROCEDURES.
8. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE OFF-SITE ROUTES (STATE HIGHWAYS, COUNTY ROADS OR CITY STREETS) WITH THE APPROPRIATE OWNER WHO HAS JURISDICTION OVER THE AFFECTED ROUTE.
9. ALL CONTRACTOR VEHICLES AND TRAFFIC SHALL REMAIN WITHIN THE DESIGNATED CONSTRUCTION AREAS, STAGING AREAS OR HAUL ROUTES.
10. ALL CONTRACTOR VEHICLES SHALL DISPLAY IN FULL VIEW LOGOS CONSPICUOUSLY PLACED ON EACH SIDE OF THE VEHICLE WITH 4" MINIMUM LETTER HEIGHT . ALL VEHICLES OPERATING IN THE ACTIVE AOA DURING HOURS OF LOW VISIBILITY OR DARKNESS SHALL BE EQUIPPED WITH A FLASHING AMBER (YELLOW) DOME-TYPE LIGHT MOUNTED ON TOP OF THE VEHICLE AND OF SUCH INTENSITY TO CONFORM TO AIRPORT CODES FOR MAINTENANCE AND EMERGENCY VEHICLES.
11. NO CONTRACTOR VEHICLES ARE TO CROSS ACTIVE RUNWAYS, NAVAID CRITICAL AREAS, TAXIWAYS AND APPROACH CLEAR ZONES UNLESS THE ESCORT IS UNDER THE DIRECT CONTROL OF THE AIRPORT GROUND CONTROLLER. CONTRACTOR VEHICLES TO HAVE A WORKING STROBE LIGHT ON AT ALL TIMES. IT SHALL BE UNDERSTOOD BY THE CONTRACTOR THAT AIRPORT TRAFFIC ON RUNWAYS, TAXIWAYS AND APRONS SHALL HAVE PRIORITY OVER CONTRACTOR'S TRAFFIC.
12. CONTRACTOR SHALL PROVIDE PROFESSIONALLY PAINTED SIGNS TO DIRECT MATERIAL SUPPLIERS AND EMPLOYEES TO THE CONSTRUCTION SITE. SIGN AT ENTRANCE GATE SHALL BE PROFESSIONALLY PAINTED 4' X 8' AND READ "CONSTRUCTION VEHICLES ONLY – NO VENDORS ALLOWED."
13. CONTRACTOR ACCESS GATES SHALL BE GUARDED OR LOCKED. CONTRACTOR SHALL PROVIDE GATE GUARDS.
14. CONTRACTOR SHALL OBTAIN AT HIS OWN EXPENSE ANY PERMITS, INCLUDING BUT NOT LIMITED TO DRIVEWAY PERMITS, FOR USE OF ACCESS GATE.
15. ACCESS GATE LOCATION DIFFERENT FROM EXISTING IS SUBJECT TO APPROVAL BY OWNER. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH RELOCATION OF EXISTING ACCESS GATE.
16. UPON COMPLETION OF CONSTRUCTION, CONTRACTOR SHALL REMOVE TEMPORARY ACCESS GATES AND RESTORE FENCE, SWALES, SOD ETC. TO ORIGINAL CONDITION.
17. COVER EXISTING UTILITIES IN AREAS OF TRUCK TRAFFIC WITH MINIMUM 12" OF LIMEROCK, INCLUDE IN PAY ITEM FOR MOBILIZATION, C-105.
18. DISPOSAL OF MILLING WILL BE ON SITE FOR USE TO CONSTRUCT SERVICE ROADS, FOR DISPOSAL IN AREAS SHOWN ON PLANS, AND IN OTHER ON AIRPORT SITES AS DIRECTED BY OWNER. ROUTING OF VEHICLES FOR DISPOSAL OF MILLING WILL BE AS APPROVED BY OWNER AND ATCT AND MAY REQUIRE RADIO CONTACT WITH ATCT DURING HAULING OPERATIONS.
    THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAULING THE MILLINGS NOT USED ON THE AIRPORT OFFSITE AT NO COST TO THE OWNER.



INSET 1 - CONTRACTOR'S STAGING / STORAGE AREA

GRAPHIC SCALE IN FEET
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Kimley»Horn — QUANTUM Electrical Engineering, Inc.

ENGINEER: THOMAS F. O'DONNELL
REG. No: 62476
DATE:
TEL: 561-840-0825
FAX:

DRAWN BY: ADC | DESIGNED BY: KAS | CHECKED BY: TFO
DATE: 06/30/2025 | SCALE: AS NOTED
FIELD BOOK:

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

NO.	DESCRIPTION	DATE	BY	CHK'D
REVISIONS				

100% SUBMITTAL

PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
ACCESS AND STAGING AREA

SHEET NO. C05 | OF
TOTAL: 37
CAD FILE: 12884-C04-STAG
DRAWING FILE NO.

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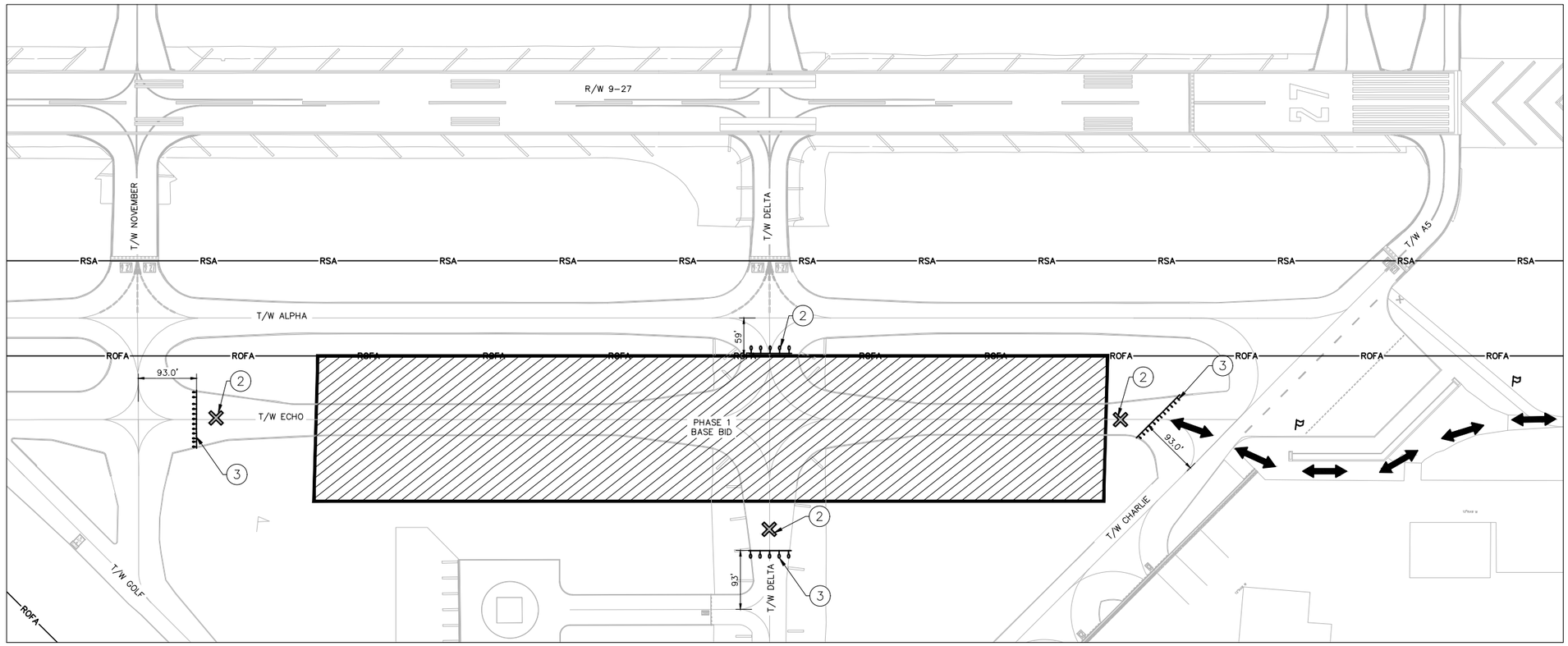
APPENDIX C

Phasing Plans



LEGEND

- PHASE 1 WORK LIMITS
- LOW LEVEL AIRFIELD BARRICADES SEE DETAIL 8 SHEET C06.
- TEMP. TAXIWAY CLOSURE MARKER SEE DETAIL 1 SHEET C06.
- TEMP. LIGHTED RUNWAY CLOSURE MARKER SEE DETAIL 4 SHEET C06.
- RSA — RUNWAY SAFETY AREA
- ROFA — RUNWAY OBJECT FREE AREA
- HAUL ROUTE
- FLAG MAN
- (1) LOCATION OF LIGHTED RUNWAY CLOSURE "X"
- (2) LOCATION OF TAXIWAY CLOSURE "X"
- (3) LOW LEVEL AIRFIELD BARRICADE AS REQUIRED TO CLOSE TAXIWAY. IN PLACE FOR DURATION OF SPECIFIED PHASE.

PHASE M (MOBILIZATION)

PRIMARY ITEMS OF WORK*

1. SUBMIT AND COMPLETE THE REVIEW PROCESS FOR ALL SHOP DRAWINGS AND SUBMITTALS.
2. INSTALL ANY SIGNAGE AS REQUIRED
3. PREPARE EXISTING STAGING AREA.
4. INSTALL FABRIC TO EXISTING STAGING AREA FENCING AND IMPLEMENT OTHER SECURITY MEASURES.
5. PERFORM PRE-CONSTRUCTION SURVEY VERIFICATION
6. INSTALL STORMWATER POLLUTION PREVENTION (SWPP) MEASURES
7. PERFORM CONTRACTOR'S QUALITY CONTROL WORKSHOP
8. PROCURE AND RECEIVE ALL ELECTRICAL ITEMS AND COMPONENTS. INVENTORIED, STAGED, AND STORED ON SITE.
9. PERFORM PRE-CONSTRUCTION MEETING.

OPERATIONS

ALL WORK, WITH THE EXCEPTION OF THE PRE-CONSTRUCTION SURVEY VERIFICATION AND INSTALLATION OF SWPP MEASURES, WILL BE PERFORMED OUTSIDE OF THE AIRPORT SAFETY AREAS AND PROTECTED SURFACES. ALL AIRPORT INFRASTRUCTURE TO REMAIN OPEN. WORK WILL BE PERFORMED 8.5 HOURS PER DAY, MONDAY THROUGH FRIDAY, 7:30 AM TO 4:00 PM.

FOR THE PRE-CONSTRUCTION SURVEY VERIFICATION AND INSTALLATION OF SWPP MEASURES, THE CONTRACTOR IS TO COORDINATE WITH AIRPORT STAFF REGARDING ACCESS AND CLOSURE OF AIRPORT INFRASTRUCTURE. ALL CLOSURES WILL BE "ROLLING" AND CONTROLLED BY AIRPORT OPERATIONS STAFF. CONTRACTOR TO COORDINATE CLOSELY WITH AIRPORT OPERATIONS STAFF DURING CLOSURES. WORK TIMES ARE REFERENCED FROM START OF SHIFT.

LIMITS OF WORK

WITH THE EXCEPTION OF THE PRE-CONSTRUCTION SURVEY VERIFICATION AND INSTALLATION OF SWPP MEASURES, THE LIMITS OF THIS WORK AREA WILL CONSIST OF THE EXISTING ACCESS POINT AND THE CONTRACTOR'S STAGING AREA. FOR THE PRE-CONSTRUCTION SURVEY VERIFICATION, THE LIMITS OF WORK WILL BE WITHIN THE AIRPORT'S SAFETY AREAS INCLUDING THE RUNWAY 9-27 SAFETY AREA. FOR THE INSTALLATION OF SWPP MEASURES THE LIMITS OF WORK WILL BE THE INFIELD AREA SOUTH OF TAXIWAY ECHO, EAST OF TAXIWAY DELTA AND WEST OF TAXILANE CHARLIE.

WORK SEQUENCING

WORK IN THIS AREA WILL BE PERFORMED SEQUENTIALLY AFTER NTP.

PHASE 1 BASE BID

PRIMARY ITEMS OF WORK*

1. INSTALL BARRICADES AND TAXIWAY CLOSURE MARKINGS.
2. PERFORM P-101 FULL DEPTH PAVEMENT DEMOLITION.
3. P-101 MILL EXISTING ASPHALT.
4. PERFORM ELECTRICAL DEMOLITION AND INSTALLATION WORK.
5. COMPACT IN SITU SUBGRADE, INSTALL P-154 SUBBASE AND P-211 LIMEROCK.
6. PAVE P-401 ASPHALT (INCLUDING CONTROL STRIP).
7. INSTALL P-154 STABILIZED SHOULDERS.
8. APPLY P-620 TEMPORARY PAINT MARKING.
9. INSTALL T-904 SODDING AND S-906 HYDROSEED.
10. CLEAN-UP AND REMOVAL OF BARRICADES, CLOSURE MARKINGS, AND SWPPP MEASURES.

*THIS LIST IS NOT EXHAUSTIVE NOR SEQUENTIAL; IT IS THE CONTRACTOR'S RESPONSIBILITY TO FAMILIARIZE THEMSELVES WITH THE PROJECT AND CONTRACT DOCUMENTS TO PERFORM ALL REQUIRED WORK IN ITS APPROPRIATE SEQUENCE.

OPERATIONS

CONSTRUCTION IN THE WORK AREA SHOWN WILL REQUIRE THE CLOSURE OF A PORTION OF TAXIWAY ECHO BETWEEN TAXIWAY NOVEMBER AND TAXILANE CHARLIE INCLUDING ITS INTERSECTION WITH TAXIWAY DELTA. TAXIWAY ALPHA, RUNWAY 9-27 AND RUNWAY 13-31 WILL REMAIN OPEN. WORK WILL BE PERFORMED FROM 7:30 AM TO 4:30 PM MONDAY THROUGH FRIDAY. WORK TIMES ARE REFERENCED FROM START OF SHIFT.

CONTRACTOR TO COORDINATE BARRICADE AND TAXIWAY CLOSURE MARKING PLACEMENT WITH AIRPORT STAFF AND RESIDENT PROJECT REPRESENTATIVE. BARRICADE LOCATIONS ARE SCHEMATIC AND MAY BE ADJUSTED IN THE FIELD AS NECESSARY FOR THE COMPLETION OF THE WORK.

LIMITS OF WORK

THE HORIZONTAL LIMITS OF THIS PHASE ARE ON TAXIWAY ECHO BETWEEN 725' WEST OF TAXIWAY DELTA CENTERLINE AND 525' EAST OF THE TAXIWAY DELTA CENTERLINE, VERTICAL LIMITS ARE GENERALLY BETWEEN 59' NORTH OF THE TAXIWAY ECHO CENTERLINE AND 110' SOUTH OF THE TAXIWAY ECHO CENTERLINE.

WORK SEQUENCING

WORK IN THIS AREA WILL BE PERFORMED SEQUENTIALLY AFTER THE COMPLETION OF THE MOBILIZATION PHASE AFTER CONSTRUCTION NTP IS PROVIDED.

0 150' 300'

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ENGINEER: THOMAS F. O'DONNELL
REG. No: 62476
DATE:
TEL: 561-840-0825
FAX:

DRAWN BY: ADC | DESIGNED BY: KAS | CHECKED BY: TFO | DATE: 06/30/2025 | SCALE: AS NOTED | FIELD BOOK:

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

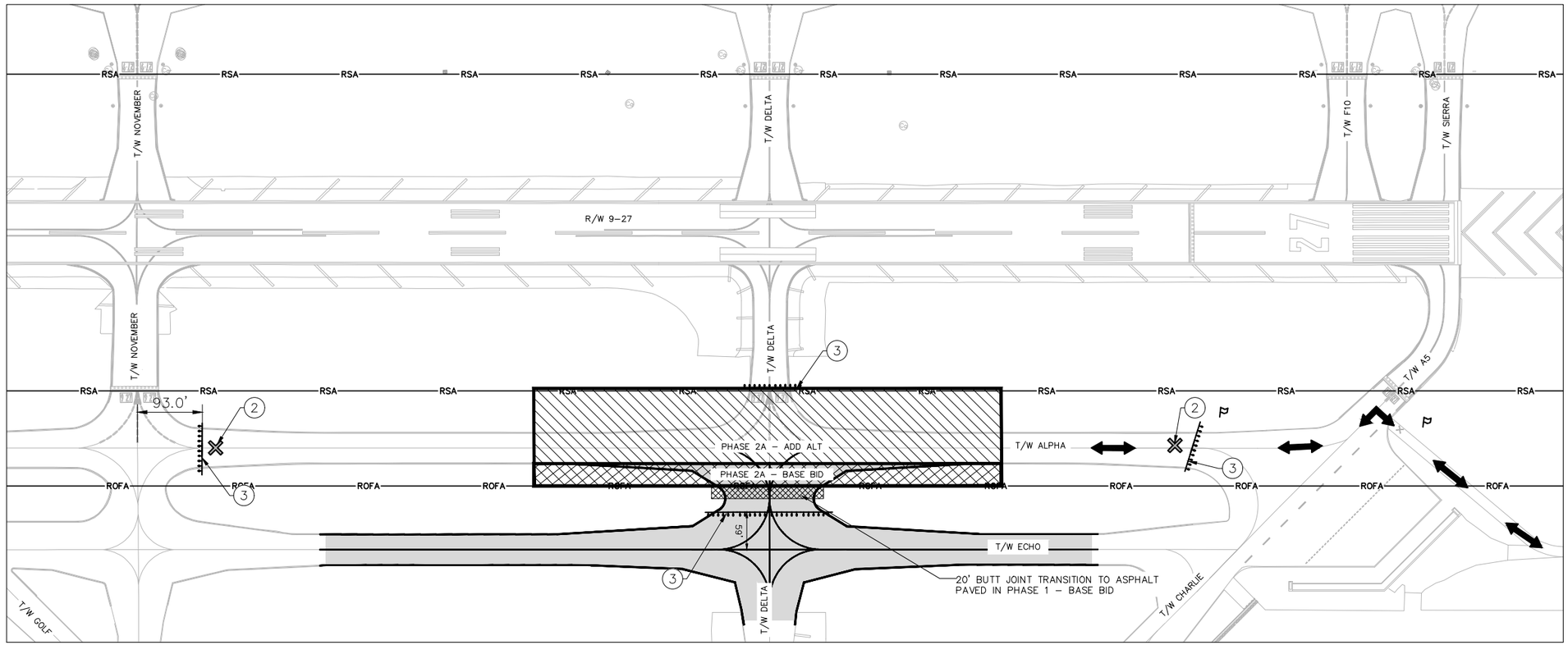
NO.	DESCRIPTION	DATE	BY	CHK'D

PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
PHASE 1 PLAN

100% SUBMITTAL

SHEET NO. C07 | OF
TOTAL: 37
CAD FILE: 12884-C07-PHAS1
DRAWING FILE NO.

K:\FTL_AVIATION\044693107 - FXE TW E REHAB DESIGN PHASE\CAD\PLANSHEETS\12884-C07-PHAS1.DWG



PHASE 2A – BASE BID ONLY

LEGEND

- LIMITS OF PAVEMENT
- PHASE 2A – BASE BID WORK LIMITS
- PHASE 2A – ADD ALT WORK LIMITS
- LOW LEVEL AIRFIELD BARRICADES SEE DETAIL 8 SHEET C06.
- TEMP. TAXIWAY CLOSURE MARKER SEE DETAIL 1 SHEET C06.
- TEMP. LIGHTED RUNWAY CLOSURE MARKER SEE DETAIL 4 SHEET C06.
- RSA — RUNWAY SAFETY AREA
- ROFA — RUNWAY OBJECT FREE AREA
- HAUL ROUTE
- (1) LOCATION OF LIGHTED RUNWAY CLOSURE "X"
- (2) LOCATION OF TAXIWAY CLOSURE "X"
- (3) LOW LEVEL AIRFIELD BARRICADE AS REQUIRED TO CLOSE TAXIWAY. IN PLACE FOR DURATION OF SPECIFIED PHASE.

PRIMARY ITEMS OF WORK*

1. INSTALL BARRICADES AND TAXIWAY CLOSURE MARKINGS.
2. PERFORM CLEARING AND GRUBBING AND EXCAVATION.
3. PERFORM ELECTRICAL DEMOLITION AND INSTALLATION WORK.
4. COMPACT IN SITU SUBGRADE, INSTALL P-154 SUBBASE AND P-211 LIMEROCK.
5. MILL BITUMINOUS ASPHALT.
6. PAVE (P-401 AND P-403) ASPHALT.
7. INSTALL P-154 STABILIZED SHOULDERS.
8. APPLY P-620 TEMPORARY PAINT MARKING.
9. INSTALL T-904 SODDING AND S-906 HYDROSEED.

*THIS LIST IS NOT EXHAUSTIVE NOR SEQUENTIAL; IT IS THE CONTRACTOR'S RESPONSIBILITY TO FAMILIARIZE THEMSELVES WITH THE PROJECT AND CONTRACT DOCUMENTS TO PERFORM ALL REQUIRED WORK IN ITS APPROPRIATE SEQUENCE.

OPERATIONS

CONSTRUCTION IN THE WORK AREA SHOWN WILL REQUIRE THE CLOSURE OF TAXIWAY ALPHA BETWEEN TAXIWAY NOVEMBER AND TAXILANE CHARLIE. TAXIWAY DELTA WILL BE CLOSED BETWEEN THE RUNWAY 9-27 RSA AND TAXIWAY ECHO. RUNWAY 9-27, RUNWAY 13-31 AND TAXIWAY ECHO WILL REMAIN OPEN. WORK WILL BE PERFORMED FROM 7:30 AM TO 4:30 PM MONDAY THROUGH FRIDAY. WORK TIMES ARE REFERENCED FROM START OF SHIFT.

CONTRACTOR TO COORDINATE BARRICADE AND TAXIWAY CLOSURE MARKING PLACEMENT WITH AIRPORT STAFF AND RESIDENT PROJECT REPRESENTATIVE. BARRICADE LOCATIONS ARE SCHEMATIC AND MAY BE ADJUSTED IN THE FIELD AS NECESSARY FOR THE COMPLETION OF THE WORK.

LIMITS OF WORK

THE LIMITS OF THIS PHASE ARE ON TAXIWAY ALPHA APPROXIMATELY 370' EAST AND WEST OF THE TAXIWAY DELTA CENTERLINE. THE VERTICAL LIMITS ARE GENERALLY 90' NORTH OF THE TAXIWAY ECHO CENTERLINE AND SOUTH OF THE SOUTHERN EDGE OF TAXIWAY ALPHA

WORK SEQUENCING

WORK IN THIS AREA WILL BE PERFORMED SEQUENTIALLY AFTER THE COMPLETION OF PHASE 1 IF ONLY THE BASE BID IS AWARDED.

PHASE 2A – IF ADD ALT AWARDED

PRIMARY ITEMS OF WORK*

1. INSTALL BARRICADES AND TAXIWAY CLOSURE MARKINGS.
2. PERFORM CLEARING AND GRUBBING AND EXCAVATION.
3. PERFORM ELECTRICAL DEMOLITION AND INSTALLATION WORK.
4. COMPACT IN SITU SUBGRADE, INSTALL P-154 SUBBASE AND P-211 LIMEROCK.
5. MILL BITUMINOUS ASPHALT.
6. PAVE (P-401 AND P-403) ASPHALT.
7. INSTALL P-154 STABILIZED SHOULDERS.
8. APPLY P-620 TEMPORARY PAINT MARKING.
9. INSTALL T-904 SODDING AND S-906 HYDROSEED.

*THIS LIST IS NOT EXHAUSTIVE NOR SEQUENTIAL; IT IS THE CONTRACTOR'S RESPONSIBILITY TO FAMILIARIZE THEMSELVES WITH THE PROJECT AND CONTRACT DOCUMENTS TO PERFORM ALL REQUIRED WORK IN ITS APPROPRIATE SEQUENCE.

OPERATIONS

CONSTRUCTION IN THE WORK AREA SHOWN WILL REQUIRE THE CLOSURE OF TAXIWAY ALPHA BETWEEN TAXIWAY NOVEMBER AND TAXILANE CHARLIE. TAXIWAY DELTA WILL BE CLOSED BETWEEN THE RUNWAY 9-27 RSA AND TAXIWAY ECHO. RUNWAY 9-27, RUNWAY 13-31 AND TAXIWAY ECHO WILL REMAIN OPEN. WORK WILL BE PERFORMED FROM 7:30 AM TO 4:30 PM MONDAY THROUGH FRIDAY. WORK TIMES ARE REFERENCED FROM START OF SHIFT.

CONTRACTOR TO COORDINATE BARRICADE AND TAXIWAY CLOSURE MARKING PLACEMENT WITH AIRPORT STAFF AND RESIDENT PROJECT REPRESENTATIVE. BARRICADE LOCATIONS ARE SCHEMATIC AND MAY BE ADJUSTED IN THE FIELD AS NECESSARY FOR THE COMPLETION OF THE WORK.

LIMITS OF WORK

THE LIMITS OF THIS PHASE INCLUDE THE FULL BASE BID PHASE 2A LIMITS.
THE LIMITS ARE GENERALLY ON TAXIWAY DELTA BETWEEN THE RUNWAY 09-27 RSA AND 90' NORTH OF THE TAXIWAY ECHO CENTERLINE VERTICALLY. HORIZONTALLY, THE LIMITS ARE APPROXIMATELY 370' EAST AND WEST OF THE TAXIWAY DELTA CENTERLINE ON TAXIWAY ALPHA.

WORK SEQUENCING

WORK IN THIS AREA WILL BE PERFORMED SEQUENTIALLY AFTER PHASE 1 IF THE ADD ALT IS AWARDED.

0 150' 300'

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PHONE: 954-535-3100 FAX: 954-739-2267
WWW.KIMLEY-HORN.COM REGISTRY No. 35106
QUANTUM Electrical Engineering, Inc.
2797 VISTA PARKWAY SUITE 1-9
WEST PALM BEACH, FL 33411
561-266-9224
LICENSE NO. C.A.0001

ENGINEER:
THOMAS F. O'DONNELL
REG. No: 62476
DATE:
TEL: 561-840-0825
FAX:

DRAWN BY: ADC | DESIGNED BY: KAS | CHECKED BY: TFO
DATE: 06/30/2025 | SCALE: AS NOTED
FIELD BOOK:

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

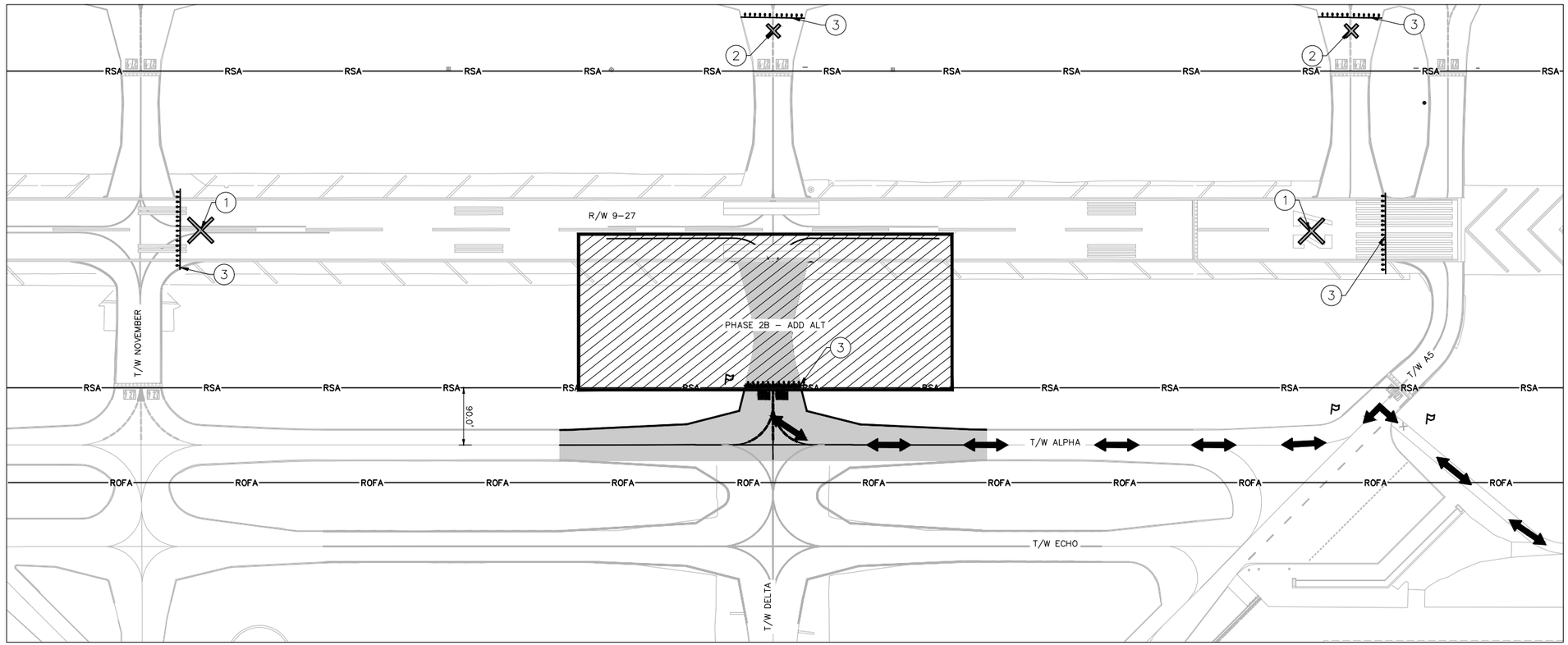
NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
PHASE 2A PLAN

100% SUBMITTAL

SHEET NO. C08 | OF
TOTAL: 37
CAD FILE: 12884-C08-PHAS2
DRAWING FILE NO.

K:\FTL_AVIATION\044693107 - FXE TW E REHAB DESIGN PHASE\CAD\PLANSHEETS\12884-C08-PHAS2.DWG



PHASE 2B – IF ADD ALT AWARDED

LEGEND

- LIMITS OF PAVEMENT
- PHASE 2B – ADD ALT WORK LIMITS
- LOW LEVEL AIRFIELD BARRICADES SEE DETAIL 8 SHEET C06.
- TEMP. TAXIWAY CLOSURE MARKER SEE DETAIL 1 SHEET C06.
- TEMP. LIGHTED RUNWAY CLOSURE MARKER SEE DETAIL 4 SHEET C06.
- RSA — RUNWAY SAFETY AREA
- ROFA — RUNWAY OBJECT FREE AREA
- HAUL ROUTE
- (1) LOCATION OF LIGHTED RUNWAY CLOSURE "X"
- (2) LOCATION OF TAXIWAY CLOSURE "X"
- (3) LOW LEVEL AIRFIELD BARRICADE AS REQUIRED TO CLOSE TAXIWAY. IN PLACE FOR DURATION OF SPECIFIED PHASE.

PRIMARY ITEMS OF WORK*

1. INSTALL BARRICADES AND TAXIWAY CLOSURE MARKINGS.
2. PERFORM CLEARING AND GRUBBING AND EXCAVATION.
3. PERFORM ELECTRICAL DEMOLITION AND INSTALLATION WORK.
4. COMPACT IN SITU SUBGRADE, INSTALL P-154 SUBBASE AND P-211 LIMEROCK.
5. MILL BITUMINOUS ASPHALT.
6. PAVE (P-401 AND P-403) ASPHALT.
7. INSTALL P-154 STABILIZED SHOULDERS.
8. APPLY P-620 TEMPORARY PAINT MARKING.
9. INSTALL T-904 SODDING AND S-906 HYDROSEED.

*THIS LIST IS NOT EXHAUSTIVE NOR SEQUENTIAL; IT IS THE CONTRACTOR'S RESPONSIBILITY TO FAMILIARIZE THEMSELVES WITH THE PROJECT AND CONTRACT DOCUMENTS TO PERFORM ALL REQUIRED WORK IN ITS APPROPRIATE SEQUENCE.

OPERATIONS

CONSTRUCTION IN THE WORK AREA SHOWN WILL REQUIRE THE CLOSURE OF RUNWAY 9-27, AND TAXIWAY DELTA NORTH OF THE RW 9-27 RSA. RUNWAY 13-31, TAXIWAY ALPHA, AND TAXIWAY ECHO WILL REMAIN OPEN. WORK WILL BE PERFORMED FROM 10PM TO 6AM NIGHTLY 7 DAYS A WEEK. ALL CLOSED AREAS ARE TO BE REOPENED EACH DAY BY 6AM. WORK TIMES ARE REFERENCED FROM START OF SHIFT.

CONTRACTOR TO COORDINATE BARRICADE AND TAXIWAY CLOSURE MARKING PLACEMENT AND THE INSTALLATION OF TEMPORARY LIMEROCK TRANSITION WEDGES WITH AIRPORT STAFF AND RESIDENT PROJECT REPRESENTATIVE. BARRICADE LOCATIONS ARE SCHEMATIC AND MAY BE ADJUSTED IN THE FIELD AS NECESSARY FOR THE COMPLETION OF THE WORK. UPON THE COMPLETION OF EACH SHIFT, THE CONTRACTOR WILL REMOVE BARRICADES AND TAXIWAY CLOSURE MARKINGS FROM TAXIWAY DELTA, AND THE LIGHTED X'S FROM RUNWAY 9-27.

LIMITS OF WORK

THE LIMITS OF THIS PHASE INCLUDE TAXIWAY DELTA BETWEEN THE RUNWAY 9-27 RSA AND THE SOUTH EDGE OF RUNWAY 9-27. HORIZONTALLY, THE LIMITS ARE APPROXIMATELY 260' EAST AND WEST OF THE TAXIWAY DELTA CENTERLINE ON RUNWAY 9-27 AND APPROXIMATELY 120' EAST END WEST OF THE TAXIWAY DELTA CENTERLINE ON TAXIWAY DELTA NORTH OF THE RUNWAY 9-27 RSA.

WORK SEQUENCING

WORK IN THIS AREA WILL BE PERFORMED SEQUENTIALLY AFTER THE COMPLETION OF THE PHASE 1 AND 2A (ADD ALT) IF THE ADD ALT IS AWARDED.

0 150' 300'

ENGINEER: THOMAS F. O'DONNELL
REG. No: 62476
DATE:
TEL: 561-840-0825
FAX:

DRAWN BY: ADC | DESIGNED BY: KAS | CHECKED BY: TFO
DATE: 06/30/2025 | SCALE: AS NOTED
FIELD BOOK:

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

100% SUBMITTAL

PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
PHASE 2B PLAN

SHEET NO. C09 OF
TOTAL: 37
CAD FILE: 12884-C09-PHAS1-ADDALT
DRAWING FILE NO.

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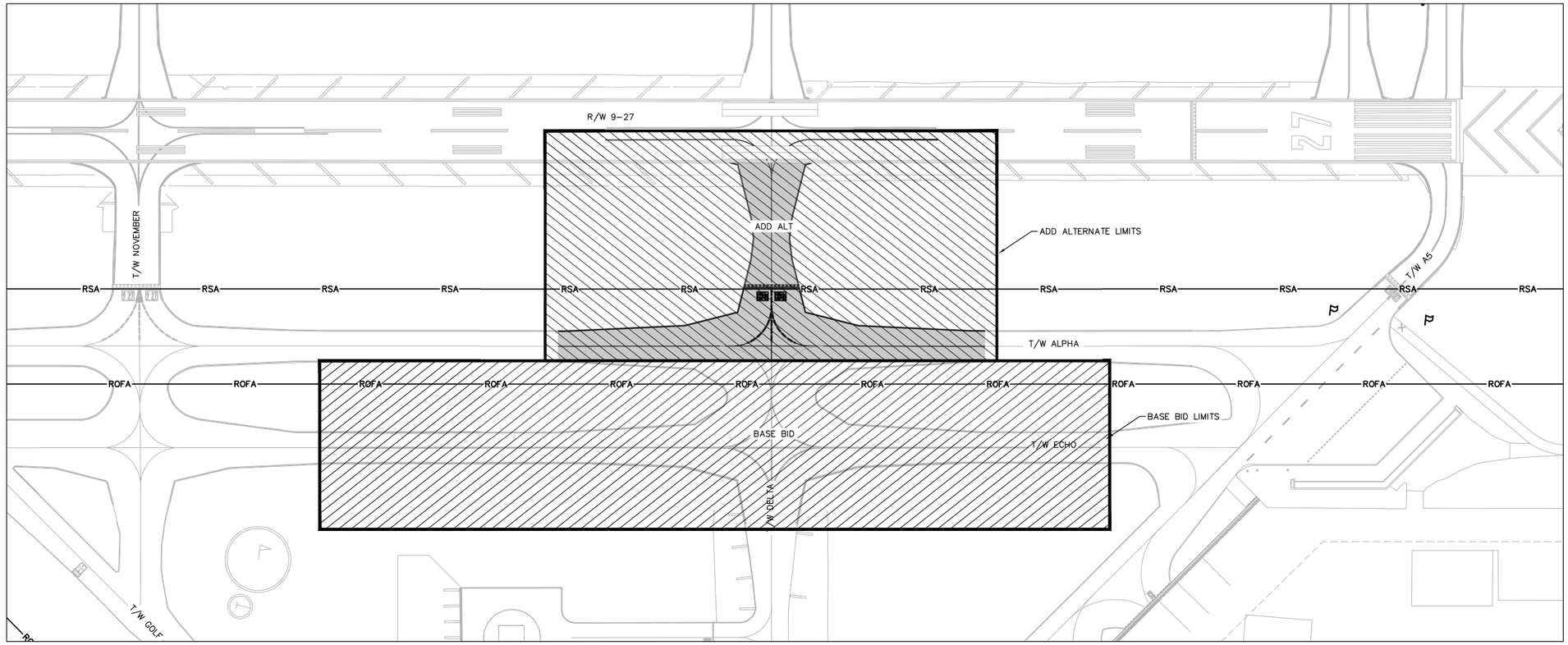

PHASE 3

LEGEND

- LIMITS OF PAVEMENT
- BASE BID
- ADD ALT
- LOW LEVEL AIRFIELD BARRICADES SEE DETAIL 8 SHEET C06.
- TEMP. TAXIWAY CLOSURE MARKER SEE DETAIL 1 SHEET C06.
- TEMP. LIGHTED RUNWAY CLOSURE MARKER SEE DETAIL 4 SHEET C06.
- RSA — RUNWAY SAFETY AREA
- ROFA — RUNWAY OBJECT FREE AREA
- HAUL ROUTE
- (1) LOCATION OF LIGHTED RUNWAY CLOSURE "X"
- (2) LOCATION OF TAXIWAY CLOSURE "X"
- (3) LOW LEVEL AIRFIELD BARRICADE AS REQUIRED TO CLOSE TAXIWAY. IN PLACE FOR DURATION OF SPECIFIED PHASE.

PRIMARY ITEMS OF WORK*

1. PERFORM PUNCHLIST WORK.
2. INSTALL P-620 PERMANENT PAVEMENT MARKINGS.

*THIS LIST IS NOT EXHAUSTIVE NOR SEQUENTIAL; IT IS THE CONTRACTOR'S RESPONSIBILITY TO FAMILIARIZE THEMSELVES WITH THE PROJECT AND CONTRACT DOCUMENTS TO PERFORM ALL REQUIRED WORK IN ITS APPROPRIATE SEQUENCE.

OPERATIONS

CONSTRUCTION IN THE PHASE SHOWN WILL BE CONDUCTED ON ROLLING CLOSURES AND PULLBACK WORK. CONTRACTOR TO COORDINATE WITH AIRPORT OPERATION STAFF AND RPR FOR LIMITS.

LIMITS OF WORK

THE LIMITS OF THIS PHASE ARE THE FULL LIMITS OF THE BASE BID PORTION OF THE PROJECT IF ONLY THE BASE BID IS AWARDED AND THE FULL LIMITS OF THE BASE BID AND ADD ALTERNATE PORTION OF THE PROJECT IF THE ADD ALTERNATE IS ALSO AWARDED. THE WORK IS TO BE PERFORMED ON A PULL BACK BASIS WITH ROLLING CLOSURES.

WORK SEQUENCING

WORK IN THIS AREA WILL BE PERFORMED SEQUENTIALLY AFTER THE COMPLETION OF PHASE 2A (AND PHASE 2B IF ADD ALT IS AWARDED). PERMANENT PAINT MARKING INSTALLATIONS WILL BE PERFORMED SEQUENTIALLY AFTER THE 30 DAY ASPHALT CURING PERIOD.

0 150' 300'

ENGINEER: THOMAS F. O'DONNELL
REG. No: 62476
DATE:
TEL: 561-840-0825
FAX:

DRAWN BY: ADC | DESIGNED BY: KAS | CHECKED BY: TFO
DATE: 06/30/2025 | SCALE: AS NOTED
FIELD BOOK:

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION

PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
PHASE 3 PLAN

SHEET NO. C10 OF
TOTAL: 37
CAD FILE: 12884-C10-PHAS2-ADDALT
EXISTING FILE NO.

100% SUBMITTAL

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APPENDIX D

Construction Daily Safety Inspection Checklist

AIRPORT DAILY SAFETY SELF-INSPECTION CHECKLIST

DATE: _____ **DAY**: _____ √ **Satisfactory**
X Unsatisfactory

Day Inspector/Time: _____ **Night Inspector/Time:** _____

FACILITIES	CONDITIONS	D	N	REMARKS	RESOLVED BY (Date/Initials)
§139.305 Paved areas	Pavement lips over 3"				
	Hole – 5" diam. 3" deep				
	Cracks/spalling/heaves				
	FOD: gravel/debris/sand				
	Rubber deposits				
	Ponding/edge dams				
	Drainage				
	Vegetative growth				
	Surface variations				
§139.307 Unpaved areas	Slope from edge				
	Full strength compaction				
	Holes, depressions				
	FOD, loose aggregate				
§139.309 Safety areas	Ruts/humps/erosion				
	Drainage/construction				
	Support equipment/aircraft				
	Frangible bases, grading				
	Unauthorized objects				
	Wildlife damage/evidence				
	Construction equipment/material				
§139.311 Marking	Clearly visible/standard				
	Runway markings Correct? Color?				
	Taxiway markings Correct? Color?				
	Holding position markings				
	Glass beads				
	Movement/non-movement area separation markings				

FACILITIES	CONDITIONS	D	N	REMARKS	RESOLVED BY (Date/Initials)
§139.311 Signs	Standard/meet sign plan location/position				
	Obscured/operable				
	Damaged/retroreflective				
	Faded, color				
	Tethers intact				
§139.311 Lighting	Obscured/dirty/operable				
	Consistent intensity				
	Damaged/missing				
	Faulty aim/adjustment				
	Runway lighting x				
	Precision runway lighting				
	Taxiway lighting				
	Pilot control lighting				
	Appropriate shielding				
139.313 Snow & ice control	Surface conditions				
	Snowbank clearances				
	Lights & signs obscured				
	NAVAIDs free and clear				
	Emergency ARFF access				
	Braking conditions				
§139.315; .317; .319 Aircraft rescue and fire fighting	Equipment/crew availability				
	Communications/alarms				
	Response routes affected				
§139.321 Handling and storing of hazardous substances and materials (Fueling Operations)	Fencing/gates/signs				
	Fuel marking/labeling				
	Fire extinguishers				
	Frayed wires				
	Fuel leaks/vegetation				
	Abraded hoses				
	Condition of mobile fuelers				
§139.331 Obstructions	Obstruction lights operable				
	Cranes/trees				
	Vegetation				

FACILITIES	CONDITIONS	D	N	REMARKS	RESOLVED BY (Date/Initials)
§139.333 Protection of NAVAIDs	Rotating beacon operable				
	Wind indicators: Number? Lighted at night?				
	RENLs/VGSI systems				
	Electronic components operational				
§139.335 Public protection	Fencing/gates/signs				
	Jet blast problems				
§139.337 Wildlife hazard management	Wildlife present/location				
	Complying with WHMP				
	Dead birds/other evidence				
§139.341 Identifying, marking, and lighting construction and other unserviceable areas	Barricades/lights				
	Equipment parking				
	Material stockpiles				
	Confusing signs/markings				
	Index capability				

Comments/Remarks: _____

Airfield map on reverse

AIRPORT DAILY SAFETY SELF-INSPECTION CHECKLIST

DATE:_____**DAY**:_____ ✔ Satisfactory ✕ Unsatisfactory

Day Inspector/Time: _____**Night Inspector/Time:** _____

FACILITIES	CONDITIONS	D	N	REMARKS	RESOLVED BY (Initial & date)
Pavement Areas	Pavement lip over 3"				
	Hole - 5" diam. 3" deep				
	Cracks/spalling/heaves				
	FOD: gravel/debris/sand				
	Ponding/edge dams				
Safety Areas	Ruts/humps/erosion				
	Drainage/construction				
	Support equipment/aircraft				
	Frangible bases				
	Unauthorized objects				
Markings	Clearly visible/standard				
	Runway markings				
	Taxiway markings				
	Holding position markings				
	SPHPS/ETCL markings				
	Glass beads				
Signs	Standard/IAW Sign Plan				
	Obscured/inoperable				
	Damaged/retroreflective				
Lighting	Obscured/dirty/inoperable				
	Damaged/missing/aiming				
	Lighting systems inoperable				
	IAW FAA standards				
	Pilot Control Lighting				
NAVAIDS	Rotating beacon inoperable				
	Wind indicators				
	VASI/PAPI/REIL systems				
	FAA ILS system/ALS/VGSI				
Obstructions	Obstruction lights operable				
	New cranes not reported				
Snow & Ice	Surface conditions				
	Snowbank clearance				
	Signs obscured				
	NAVAID interference				
	NOTAMs current				
Public Protection	Fencing/gates/signs				
	Jet blast problems				
Wildlife Hazards	Wildlife present/location				
	Complying with WHMP				

Airfield Map/Airport Diagram on Reverse

PROCUREMENT CONTRACTS (NON-AIP)

REQUIRED FEDERAL PROVISIONS:

A. GENERAL CIVIL RIGHTS PROVISIONS

In all its activities within the scope of its airport program, the Contractor agrees to comply with pertinent statutes, Executive Orders, and such rules as identified in Title VI List of Pertinent Nondiscrimination Acts and Authorities to ensure that no person shall, on the grounds of race, color, national origin (including limited English proficiency), creed, sex (including sexual orientation and gender identity), age, or disability be excluded from participating in any activity conducted with or benefiting from Federal assistance.

This provision is in addition to that required by Title VI of the Civil Rights Act of 1964.

The above provision binds the Contractor and subcontractors from the bid solicitation period through the completion of the contract.

B. CIVIL RIGHTS – TITLE VI ASSURANCE

1. Title VI Solicitation Notice

Title VI Solicitation Notice:

The **City of Fort Lauderdale,** in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 USC §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders or offerors that it will affirmatively ensure that for any contract entered into pursuant to this advertisement, [select businesses, or disadvantaged business enterprises or airport concession disadvantaged business enterprises] will be afforded full and fair opportunity to submit bids in response to this invitation and no businesses will be discriminated against on the grounds of race, color, national origin (including limited English proficiency), creed, sex (including sexual orientation and gender identity), age, or disability in consideration for an award.

2. Title VI List of Pertinent Nondiscrimination Acts and Authorities

Insert this list in every contract or agreement, unless the Sponsor has determined and the FAA concurs, that the contract or agreement is not subject to the Nondiscrimination Acts and Authorities. This list can be omitted if the FAA has determined that the contractor or company is already subject to nondiscrimination requirements, which is a rare occurrence.

Title VI List of Pertinent Nondiscrimination Acts and Authorities

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

- Title VI of the Civil Rights Act of 1964 (42 USC § 2000d *et seq*., 78 stat. 252) (prohibits discrimination on the basis of race, color, national origin);
- 49 CFR part 21 (Non-discrimination in Federally-Assisted programs of the Department of Transportation—Effectuation of Title VI of the Civil Rights Act of 1964);
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 USC § 4601) (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Section 504 of the Rehabilitation Act of 1973 (29 USC § 794 *et seq*.), as amended (prohibits discrimination on the basis of disability); and 49 CFR part 27 (Nondiscrimination on the Basis of Disability in Programs or Activities Receiving Federal Financial Assistance);
- The Age Discrimination Act of 1975, as amended (42 USC § 6101 *et seq*.) (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982 (49 USC § 47123), as amended (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987 (PL 100-259) (broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, the Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act of 1990 (42 USC § 12101, et seq) (prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities) as implemented by U.S. Department of Transportation regulations at 49 CFR parts 37 and 38;
- The Federal Aviation Administration's Nondiscrimination statute (49 USC § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (ensures nondiscrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations);
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to

ensure that LEP persons have meaningful access to your programs [70 Fed. Reg. 74087 (2005)];
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 USC § 1681, et seq).

3. Compliance with Nondiscrimination Requirements:

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

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

2. **Nondiscrimination:** The Contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, national origin (including limited English proficiency), creed, sex (including sexual orientation and gender identity), age, or disability in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The Contractor will not participate directly or indirectly in the discrimination prohibited by the Nondiscrimination Acts and Authorities, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR part 21.

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

4. **Information and Reports:** The Contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Sponsor or the Federal Aviation Administration to be pertinent to ascertain compliance with such Nondiscrimination Acts and Authorities and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the Contractor will so certify to the Sponsor or the Federal Aviation Administration, as appropriate, and will set forth what efforts it has made to obtain the information.

5. **Sanctions for Noncompliance:** In the event of a Contractor's noncompliance with the non-discrimination provisions of this contract, the Sponsor will impose

such contract sanctions as it or the Federal Aviation Administration may determine to be appropriate, including, but not limited to:

a. Withholding payments to the Contractor under the contract until the Contractor complies; and/or
b. Cancelling, terminating, or suspending a contract, in whole or in part.

6. **Incorporation of Provisions:** The Contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations, and directives issued pursuant thereto. The Contractor will take action with respect to any subcontract or procurement as the Sponsor or the Federal Aviation Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the Contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the Contractor may request the Sponsor to enter into any litigation to protect the interests of the Sponsor. In addition, the Contractor may request the United States to enter into the litigation to protect the interests of the United States.

4. Clause for Construction/Use/Access to Real Property Acquired Under the Activity, Facility or Program

The following clauses will be included in deeds, licenses, permits, or similar instruments/agreements entered into by City of Fort Lauderdale pursuant to the provisions of the Airport Improvement Program grant assurances.

A. The (grantee, licensee, permittee, etc., as appropriate) for himself/herself, his/her heirs, personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree (in the case of deeds and leases add, “as a covenant running with the land”) that (1) no person on the ground of race, color, or national origin, will be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities, (2) that in the construction of any improvements on, over, or under such land, and the furnishing of services thereon, no person on the ground of race, color, or national origin, will be excluded from participation in, denied the benefits of, or otherwise be subjected to discrimination, (3) that the (grantee, licensee, lessee, permittee, etc.) will use the premises in compliance with all other requirements imposed by or pursuant to the Title VI List of Pertinent Nondiscrimination Acts and Authorities.
B. With respect to (licenses, leases, permits, etc.), in the event of breach of any of the above Non-discrimination covenants, City of Fort Lauderdale will have the right to terminate the (license, permit, etc., as appropriate) and to enter or re-enter and repossess said land and the facilities thereon, and hold the same as if said (license, permit, etc., as appropriate) had never been made or issued.*

C. With respect to deeds, in the event of breach of any of the above Non-discrimination covenants, City of Fort Lauderdale will there upon revert to and vest in and become the absolute property of City of Fort Lauderdale and its assigns.*

(*Reverter clause and related language to be used only when it is determined that such a clause is necessary to make clear the purpose of Title VI.)

C. OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970

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

D. CERTIFICATION REGARDING DOMESTIC PREFERENCES FOR PROCUREMENTS

The Bidder or Offeror certifies by signing and submitting this bid or proposal that, to the greatest extent practicable, the Bidder or Offeror has provided a preference for the purchase, acquisition, or use of goods, products, or materials produced in the United States (including, but not limited to, iron, aluminum, steel, cement, and other manufactured products) in compliance with 2 CFR § 200.322.

AFFIDAVIT OF COMPLIANCE WITH FOREIGN ENTITY LAWS
(Florida Statute- §287.138, 692.201, 692.202, 692.203, and 692.204)

The undersigned, on behalf of the entity listed below ("Entity"), hereby attests under penalty of perjury as follows:

1. Entity is not owned by the government of a foreign country of concern as defined in Section 287.138, Florida Statutes. (Source:§ 287.138(2)(a), Florida Statutes)
2. The government of a foreign country of concern does not have a controlling interest in Entity. (Source:§ 287.138(2)(b), Florida Statutes)
3. Entity is not organized under the laws of, and does not have a principal place of business in, a foreign country of concern. (Source: § 287.138(2)(c), Florida Statutes)
4. Entity is not owned or controlled by the government of a foreign country of concern, as defined in Section 692.201, Florida Statutes. (Source:§ 288.007(2), Florida Statutes)
5. Entity is not a partnership, association, corporation, organization, or other combination of persons organized under the laws of or having its principal place of business in a foreign country of concern, as defined in Section 692.201, Florida Statutes, or a subsidiary of such entity. (Source: § 288.007(2), Florida Statutes)
6. Entity is not a foreign principal, as defined in Section 692.201, Florida Statutes. (Source: § 692.202(5)(a)(I), Florida Statutes)
7. Entity is in compliance with all applicable requirements of Sections 692.202, 692.203, and 692.204, Florida Statutes.
8. ***(Only applicable if purchasing real property)*** Entity is not a foreign principal prohibited from purchasing the subject real property. Entity is either (a) not a person or entity described in Section 692.204(1)(a), Florida Statutes, or (b) authorized under Section 692.204(2), Florida Statutes, to purchase the subject property. Entity is in compliance with the requirements of Section 692.204, Florida Statutes. (Source:§§ 692.203(6)(a), 692.204(6)(a), Florida Statutes)

The undersigned is authorized to execute this affidavit on behalf of Entity.

Name: _____ Title:_____ Entity: _____

Signature: _____ Date: _____

NOTARY PUBLIC ACKNOWEDGEMENT SECTION

STATE OF _____

COUTY OF _____

The foregoing instrument was acknowledged before me, by means of □ physical presence or □ online notarization, this ____ day of _____20 __, by _____, as

_____ for _____, who is

personally known to me or who has produced _____as identification.

Notary Public Signature: _____ (Notary Seal)

Print Name:_____ My commission expires:_____

QUESTIONNAIRE SHEET

PLEASE PRINT OR TYPE:

Firm Name:

President

Business Address:

Telephone:

Fax:

E-Mail Address:

What was the last project of this nature which you completed? Include the year, description, and contract value.

The following are named as three corporations and representatives of those corporations for which you have performed work similar to that required by this contract, and which the City may contact as your references (include addresses, telephone numbers and e-mail addresses). Include the project name, year, description, and contract value.

How many years has your organization been in business?

Have you ever failed to complete work awarded to you; if so, where and why?

The name of the qualifying agent for the firm and his position is:

Certificate of Competency Number of Qualifying Agent:

Effective Date: Expiration Date:

Licensed in:

Engineering Contractor's License # (County/State)

Expiration Date:

NOTE: To be considered for award of this contract, the bidder must submit a financial statement upon request.

NOTE: Contractor must have proper licensing and shall provide copy of same with his proposal.

QUESTIONNAIRE SHEET

1. Have you personally inspected the proposed work and have you a complete plan for its performance?

2. Will you sublet any part of this work? If so, list the portions or specialties of the work that you will.

a)

b)

c)

d)

e)

f)

g)

3. What equipment do you own that is available for the work?

4. What equipment will you purchase for the proposed work?

5. What equipment will you rent for the proposed work?

CONSTRUCTION BID CERTIFICATION

Please Note: It is the sole responsibility of the bidder to ensure that his bid is submitted electronically through www.BidSync.com prior to the bid opening date and time listed. Paper bid submittals will not be accepted. All fields below must be completed. If the field does not apply to you, please note N/A in that field.

If you are a foreign corporation, you may be required to obtain a certificate of authority from the Department of State, in accordance with Florida Statute §607.1501 (visit http://www.dos.state.fl.us/).

Company: (Legal Registration)

Address:

City: State: Zip:

Telephone No.: FAX No.: Email:

Check box if your firm qualifies for MBE / SBE / WBE: ☐

If a corporation, state the name of the President, Secretary and Resident Agent. If a partnership, state the names of all partners. If a trade name, state the names of the individuals who do business under the trade name.

Name	**Title**	**Name**	**Title**
Name	**Title**	**Name**	**Title**

ADDENDUM ACKNOWLEDGEMENT - Bidder acknowledges that the following addenda have been received and are included in the proposal:

Addendum No.	Date Issued	Addendum No.	Date Issued	Addendum No.	Date Issued

---

VARIANCES: If you take exception or have variances to any term, condition, specification, or requirement in this bid you must specify such variance in the space provided below or reference in the space provided below all variances contained on other pages within your bid. Additional pages may be attached if necessary. No variances will be deemed to be part of the bid submitted unless such is listed and contained in the space provided below. The City does not, by virtue of submitting a variance, necessarily accept any variances. If no statement is contained in the below space, it is hereby implied that your response is in full compliance with this competitive solicitation. If you do not have variances, simply mark N/A. **You must also click the "Take Exception" button.**

The below signatory affirms that he has or will obtain all required permits and licenses from the appropriate agencies, and that his firm is authorized to do business in the State of Florida. The below signatory agrees to furnish all labor, tools, material, equipment and supplies, and to sustain all the expense incurred in doing the work set forth in strict accordance with the bid plans and contract documents at the unit prices indicated if awarded a contract. The below signatory has not divulged to, discussed, or compared this bid with other bidders, and has not colluded with any other bidder or parties to this bid whatsoever. Furthermore, the undersigned guarantees the truth and accuracy of all statements and answers contained in this bid. The below signatory also hereby agrees, by virtue of submitting or attempting to submit a bid, that in no event shall the City's liability for bidder's direct, indirect, incidental, consequential, special or exemplary damages, expenses, or lost profits arising out of this competitive solicitation process, including but not limited to public advertisement, bid conferences, site visits, evaluations, oral presentations, or award proceedings exceed the amount of Five Hundred Dollars ($500.00). This limitation shall not apply to claims arising under any provision of indemnification or the City's protest ordinance contained in this competitive solicitation.

Submitted by:

Name (printed)

Signature

Date

Title

CONTRACT PAYMENT METHOD

The City of Fort Lauderdale has implemented a Procurement Card (P-Card) program which changes how payments are remitted to its vendors. The City has transitioned from traditional paper checks to credit card payments via MasterCard or Visa as part of this program.

This allows you as a vendor of the City of Fort Lauderdale to receive your payments fast and safely. No more waiting for checks to be printed and mailed.

In accordance with the contract, payments on this contract will be made utilizing the City's P-Card (MasterCard or Visa). Accordingly, bidders must presently have the ability to accept the credit card or take whatever steps necessary to implement acceptance of a card before the start of the contract term, or contract award by the City.

All costs associated with the Contractor's participation in this purchasing program shall be borne by the Contractor. The City reserves the right to revise this program as necessary.

By signing below, you agree with these terms.

Please indicate which credit card payment you prefer:

____ MasterCard

____ Visa

_____

Company Name

_____ _____

Name (Printed) Signature

_____ _____

Title Date

Solicitation/Bid /Contract No: _____

Project Description:

Contractor/Proposer/Bidder acknowledges and agrees to utilize the U.S. Department of Homeland Security's E-Verify System to verify the employment eligibility of,

A. all persons employed by Contractor/Proposer/Bidder to perform employment duties within Florida during the term of the Contract, and,

B. all persons (including subcontractors/vendors) assigned by Contractor/Proposer/Bidder to perform work pursuant to the Contract.

The Contractor/Proposer/Bidder acknowledges and agrees that use of the U.S. Department of Homeland Security's E-Verify System during the term of the Contract is a condition of the Contract.

Contractor/Proposer/ Bidder Company Name: _____

Authorized Company Person's Signature: _____

Authorized Company Person's Title: _____

Date: _____

NON-COLLUSION STATEMENT

By signing this offer, the vendor/contractor certifies that this offer is made independently and *free* from collusion. Vendor shall disclose below any City of Fort Lauderdale, FL officer or employee, or any relative of any such officer or employee who is an officer or director of, or has a material interest in, the vendor's business, who is in a position to influence this procurement.

Any City of Fort Lauderdale, FL officer or employee who has any input into the writing of specifications or requirements, solicitation of offers, decision to award, evaluation of offers, or any other activity pertinent to this procurement is presumed, for purposes hereof, to be in a position to influence this procurement.

For purposes hereof, a person has a material interest if they directly or indirectly own more than 5 percent of the total assets or capital stock of any business entity, or if they otherwise stand to personally gain if the contract is awarded to this vendor.

In accordance with City of Fort Lauderdale, FL Policy and Standards Manual, 6.10.8.3,

> 3.3. City employees may not contract with the City through any corporation or business entity in which they or their immediate family members hold a controlling financial interest (e.g., ownership of five (5) percent or more).
>
> 3.4. Immediate family members (spouse, parents, and children) are also prohibited from contracting with the City subject to the same general rules.

Failure of a vendor to disclose any relationship described herein shall be reason for debarment in accordance with the provisions of the City Procurement Code.

NAME	RELATIONSHIPS
_____	_____
_____	_____
	_____
	_____

In the event the vendor does not indicate any names, the City shall interpret this to mean that the vendor has indicated that no such relationships exist.

_____ _____

Authorized Signature Title

_____ _____

Name (Printed) Date

CONTRACTOR'S CERTIFICATE OF COMPLIANCE WITH NON-DISCRIMINATION PROVISIONS OF THE CONTRACT

The completed and signed form should be returned with the Contractor's submittal. If not provided with submittal, the Contractor must submit within three business days of City's request. Contractor may be deemed non-responsive for failure to fully comply within stated timeframes.

Pursuant to City Ordinance Sec. 2-17(a)(i)(ii), bidders must certify compliance with the Non-Discrimination provision of the ordinance.

A. Contractors doing business with the City shall not discriminate against their employees based on the employee's race, color, religion, gender (including identity or expression), marital status, sexual orientation, national origin, age, disability, or any other protected classification as defined by applicable law.

   Contracts. Every Contract exceeding $100,000, or otherwise exempt from this section shall contain language that obligates the Contractor to comply with the applicable provisions of this section.

   The Contract shall include provisions for the following:

   (i) The Contractor certifies and represents that it will comply with this section during the entire term of the contract.

   (ii) The failure of the Contractor to comply with this section shall be deemed to be a material breach of the contract, entitling the City to pursue any remedy stated below or any remedy provided under applicable law.

_____ _____

Authorized Signature Print Name and Title

_____

Date

CITY OF FORT LAUDERDALE

SWORN STATEMENT PURSUANT TO SECTION 287.087, FLORIDA STATUTES, ON PREFERENCE TO BUSINESS WITH DRUG-FREE WORK PLACE PROGRAMS

I certify that I have established a Drug Free Work Place program and have complied with the following

a. Published and distributed to each employee a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the workplace and specifying the actions that will be taken against employees for violations of such prohibitions.

b. Required all new employees to undergo laboratory testing as a condition of employment and will require all employees, as a condition of their continued employment, to undergo laboratory testing to detect illegal drug or alcohol use according to Florida Statutes 440.101 and 440.102.

c. Ensured that applicants with a confirmed positive drug or alcohol screening test result are not considered for employment.

d. Have tested employees when reasonably suspected of illegal drug or alcohol use.

e. Ensured that any employee refusing to take a drug or alcohol screening test in violation of the Drug Free Work Place Policy is subject to dismissal for failure to abide by the provisions of the Policy.

f. Informed employees about the dangers of drug abuse in the workplace, the business' policy of maintain a drug-free workplace, any available drug counseling, rehabilitation and employee assistance programs and the penalties that may be imposed upon employees for drug abuse violations.

g. In the statement specified in subparagraph a, notified the employees that, as a condition of their employment, the employee will abide by the terms of the statement and will notify their employer of any conviction of, or plea of guilty or nolo contendere to, any violation of Chapter 893 or of any controlled substance law of the United States of any state, for a violation occurring in the workplace no later than 5 days after such conviction.

h. Have required all employees to sign a copy of this statement of compliance acknowledging their understanding and agreeing to abide with the requirements of the Drug Work Place Policy.

i. Will impose a sanction on or require the satisfactory participation in a drug abuse assistance or rehabilitation program if such is available in the employee's community by, any employee who is so convicted.

j. Am making a good faith effort to continue to maintain a Drug Free Work Place through implementation of this document.

BY: _____ DATE: _____

NAME (Printed) _____ TITLE: _____

COMPANY NAME:_____

Affix Company Seal

City of Fort Lauderdale

REFERENCES FORM

A minimum of three (3) references shall be provided

NOTE: - items with asterisk (*) are mandatory

Bidder Company Name*			
Key Contact Name*		**Title**	
Email*		**Phone***	

References

Note: References will be contacted via emails with Key Contact Copied

1. Ref. Company Name			
Address			
Contact Name		Title	
Email*		Phone	
Contract/Project Value ($)		Year	
Project Title*			
Project Description			

2. Ref. Company Name			
Address			
Contact Name		Title	
Email*		Phone	
Contract/Project Value ($)		Year	
Project Title*			
Project Description			

3. Ref. Company Name			
Address			
Contact Name		Title	
Email*		Phone	

City of Fort Lauderdale

REFERENCES FORM

A minimum of three (3) references shall be provided

Contract/Project Value ($)		Year	
Project Title			
Project Description			

4. Ref. Company Name			
Address			
Contact Name		Title	
Email*		Phone	
Contract/Project Value ($)		Year	
Project Title*			
Project Description			

5. Ref. Company Name			
Address			
Contact Name		Title	
Email*		Phone	
Contract/Project Value ($)		Year	
Project Title*			
Project Description			

CITY OF FORT LAUDERDALE

ANTI-HUMAN TRAFFICKING AFFIDAVIT

Rev Date: 01/13/2025

The undersigned, on behalf of _____,
(Print complete name incorporated with suffix: INC, LLC, LTD, LP, PA, etc.)
a _____ (*State corporation is registered*) _____ (Type of entity: profit or non-profit), ("Nongovernmental Entity"), under penalty of perjury, hereby deposes and says:

1. My name is _____.
(Print complete name of corporate officer/authorized representative)
2. I am an ☐ officer or ☐ authorized representative (Select one) of the Nongovernmental Entity. My title is: _____.
(Print title of corporate officer/authorized representative)
3. I attest that the Nongovernmental Entity does not use coercion for labor or services as defined in Section 787.06, Florida Statutes (2024), as may be amended or revised.

Under penalties of perjury, I declare that I have read the foregoing Anti-Human Trafficking Affidavit and that the facts stated in it are true.

Signature of Officer or Representative: _____

Office Address: _____

Email Address: _____

Main Phone Number: _____ FEIN No.: _____

STATE OF _____
COUNTY OF _____

Sworn to and subscribed before me by means of ❑ physical presence or ❑ online notarization, this ____ day of _____, 2025, by _____.
(Print name of corporate officer/representative)

_____
(Signature of Notary Public – State of _____)

(NOTARY SEAL)

_____
Print, Type or Stamp Commissioned Name of Notary Public)

Personally Known ☐ OR Produced Identification ☐

Type of Identification Produced_____

SAMPLE

ADDENDUM NO. 1

ITB No. 596

TITLE: FXE TAXIWAY ECHO PAVEMENT REHABILITATION PROJECT

ISSUED: May 7, 2026

This addendum is being issued to make the following change(s):

1. Bid Lines 15 and 60 were revised as follows:

    a. Line 15 - BASE BID LIME ROCK TRANSITION WEDGE (P-211-5.2): Updated pay item to Lump Sum (LS).

    b. Line 60 - ADD ALT LIME ROCK TRANSITION WEDGE (P-211-5.2): Updated pay item to Lump Sum (LS).

2. Civil Plan sheets C02, C05, C07, C08, C09, C10, and C15 were replaced to include revisions related to lime rock transition wedge quantities and details, temporary access road modifications, phasing language updates, barricade placement revisions, and narrow compaction details.

3. Technical Specification Sections S-103, P-101, P-154, P-211, P-403, P-620, and T-905 were replaced to include clarifications, revised measurement and payment language, updated application requirements, and other revisions as indicated in the attached documents.

Attachments to this Addendum include the revised Civil Plan sheets C02, C05, C07, C08, C09, C10, and C15, and revised Technical Specification Sections S-103, P-101, P-154, P-211, P-403, P-620, and T-905.

All other terms, conditions, and specifications remain unchanged.

Yesenia Pascual
Sr. Procurement Specialist

Company Name: _____
(please print)

Bidder's Signature: _____

Date: _____

BASE BID

ITEM NO.	SPEC NO.	ITEM DESCRIPTION	UNIT	QUANTITY	
				CONTRACT	AS-BUILT
1	C-100-14.1 V2	CONTRACTOR QUALITY CONTROL PROGRAM (CQCP)	LS	1	
2	C-102-5.1 V2	TEMPORARY AIR AND WATER POLLUTION, SOIL EROSION, AND SILTATION CONTROL	LS	1	
3	C-105-6.1 V2	MOBILIZATION	LS	1	
4	S-102-5.1 V2	AIPORT SAFETY AND MAINTENANCE OF TRAFFIC	LS	1	
5	S-102-5.2 V2	TEMPORARY FENCE FOR OWL/TORTOISE NESTS	EA	10	
6	S-103-5.1 V2	PROJECT SURVEY AND STAKEOUT	LS	1	
7	P-101-5.1 V2	FULL DEPTH ASPHALT PAVEMENT REMOVAL	SY	5,550	
8	P-101-5.2 V2	BITUMINOUS PAVEMENT MILLING	SY	7,320	
9	P-152-4.1 V2	UNCLASSIFIED EXCAVATION	CY	3,430	
10	P-152-4.2 V2	EMBANKMENT	CY	100	
11	P-152-4.3 V2	UTILITY SOFT DIG	EA	50	
12	P-154-5.1 V2	SUBBASE COURSE, 12" THICK	SY	6,380	
13	P-154-5.2 V2	SUBBASE COURSE, 6" THICK	SY	3,240	
14	P-211-5.1 V2	LIME ROCK BASE COURSE, 8" THICK	SY	5,580	
1 15	P-211-5.2 V2	LIME ROCK TRANSITION WEDGE	LS	1	
16	P-401-8.1 V2	HOT MIXED ASPHALT PAVEMENT (SURFACE)	TON	2,220	
17	P-403-8.1 V2	HOT MIXED ASPHALT PAVEMENT (LEVELING)	TON	320	
18	P-602-5.1 V2	EMULSIFIED ASPHALT PRIME COAT	GAL	1,600	
19	P-603-5.1 V2	EMULSIFIED ASPHALT TACK COAT	GAL	2,010	
20	P-620-5.1 V2	PERMANENT AIRFIELD PAINTING WITH TYPE III GLASS BEADS (YELLOW AND WHITE)	SF	5,450	
21	P-620-5.3 V2	PERMANENT AIRFIELD PAINTING WITH NO GLASS BEADS (BLACK)	SF	7,070	
22	P-620-5.4 V2	TEMPORARY AIRFIELD PAINTING WITH TYPE I GLASS BEADS (YELLOW AND WHITE)	SF	5,450	
23	P-620-5.6 V2	AIRFIELD PAINT REMOVAL	SF	430	
24	T-904-5.1 V2	SODDING	SF	4,130	
25	S-906-5.1 V2	HYDROSEEDING	SY	5,400	
26	L-108-5.1 V2	HAND EXCAVATE MINIMUM 8" WIDE X 28" DEEP IN EARTH.	LF	20	
27	L-108-5.2 V2	3/4" X 20' GROUND RODS CONNECTED TO COUNTERPOISE.	EA	11	
28	L-108-5.3 V2	ADDITIONAL 10' GROUND ROD SECTIONS.	EA	11	
29	L-108-5.4 V2	#6 BARE SOLID AWG COUNTERPOISE CONDUCTOR INSTALLED OVER CONDUIT SYSTEM.	LF	2,990	
30	L-108-5.5 V2	#8, 5KV, L-824 CONDUCTOR INSTALLED IN NEW AND EXISTING CONDUIT/DUCTBANK SYSTEM.	LF	5,825	
31	L-110-5.1 V2	ONE 2" SCHEDULE 40 PVC CONDUIT NON-ENCASED DIRECT BURIED IN EARTH, 24-INCH MINIMUM COVER, COMPLETE IN PLACE.	LF	2,885	
32	L-110-5.2 V2	ONE 2" SCHEDULE 40 PVC CONDUIT CONCRETE ENCASED AND INSTALLED IN NEW FULL-STRENGTH PAVEMENT, 24-INCH MINIMUM COVER, COMPLETE IN PLACE.	LF	95	
33	L-110-5.3 V2	ONE 2" SCHEDULE 40 PVC CONDUIT CONCRETE ENCASED AND INSTALLED IN EXISTING FULL-STRENGTH PAVEMENT, 24-INCH MINIMUM COVER, COMPLETE IN PLACE.	LF	25	
34	L-110-5.4 V2	INTERCEPT EXISTING CONDUIT SYSTEM AND CONNECT TO NEW CONDUIT SYSTEM.	EA	28	
35	L-115-5.1 V2	L-867 16" DIAMETER JUNCTION CAN WITH COVER INSTALLED IN EARTH.	EA	1	
36	L-115-5.2 V2	L-867 16" DIAMETER BOTTOMLESS 2 CAN JUNCTION CAN PLAZA INSTALLED IN EARTH.	EA	2	
37	L-115-5.3 V2	L-867 16" DIAMETER BOTTOMLESS 3 CAN JUNCTION CAN PLAZA INSTALLED IN EARTH.	EA	2	
38	L-115-5.4 V2	INTERCEPT EXISTING LIGHT BASE CAN IN EARTH/EXISTING PAVEMENT AND CONNECT TO CONDUIT SYSTEM.	EA	1	
39	L-115-5.5 V2	REMOVAL OF EXISTING JUNCTION CAN/LIGHT BASE CAN IN EARTH/EXISTING PAVEMENT, COMPLETE.	EA	45	
40	L-115-5.7 V2	REMOVAL OF EXISTING 2 CAN JUNCTION CAN PLAZA IN EARTH, COMPLETE	EA	2	
41	L-125-5.1 V2	NEW L-861T(L), LED TAXIWAY ELEVATED EDGE LIGHT AND NEW BASE CAN INSTALLED IN EARTH.	EA	26	
42	L-125-5.2 V2	NEW L-861T(L), LED TAXIWAY ELEVATED EDGE LIGHT AND NEW BASE CAN INSTALLED IN EXISTING PAVEMENT	EA	2	
43	L-125-5.3 V2	NEW L-858(L), SIZE 1, 3-4 CHARACTERS LED GUIDANCE SIGN AND CONCRETE BASE INSTALLED IN EARTH.	EA	5	
44	L-125-5.4 V2	NEW L-858(L), SIZE 1, 5-6 CHARACTERS LED GUIDANCE SIGN AND CONCRETE BASE INSTALLED IN EARTH.	EA	0	
45	L-125-5.5 V2	REMOVAL OF EXISTING GUIDANCE SIGN AND CONCRETE BASE IN EARTH/EXISTING PAVEMENT, COMPLETE.	EA	5	
46	L-125-5.6 V2	INTERCEPT EXISTING CIRCUIT CONDUCTORS IN EXISTING BASE CAN/MANHOLE /JUNCTION CAN AND EXTEND CIRCUITS ACCORDINGLY.	EA	15	

TW E REHABILITATION

ADD ALTERNATE BID

ITEM NO.	SPEC NO.	ITEM DESCRIPTION	UNIT	QUANTITY	
				CONTRACT	AS-BUILT
1	C-100-14.1 V2 ALT1	CONTRACTOR QUALITY CONTROL PROGRAM (CQCP)	LS	1	
2	C-102-5.1 V2 ALT1	TEMPORARY AIR AND WATER POLLUTION, SOIL EROSION, AND SILTATION CONTROL	LS	1	
3	C-105-6.1 V2 ALT1	MOBILIZATION	LS	1	
4	S-102-5.1 V2 ALT1	AIPORT SAFETY AND MAINTENANCE OF TRAFFIC	LS	1	
5	S-102-5.2 V2 ALT1	TEMPORARY FENCE FOR OWL/TORTOISE NESTS	EA	10	
6	S-103-5.1 V2 ALT1	PROJECT SURVEY AND STAKEOUT	LS	1	
7	P-101-5.1 V2 ALT1	FULL DEPTH ASPHALT PAVEMENT REMOVAL	SY	2,490	
8	P-101-5.2 V2 ALT1	BITUMINOUS PAVEMENT MILLING	SY	6,860	
9	P-152-4.1 V2 ALT1	UNCLASSIFIED EXCAVATION	CY	780	
10	P-152-4.2 V2 ALT1	EMBANKMENT	CY	100	
11	P-152-4.3 V2 ALT1	UTILITY SOFT DIG	EA	50	
12	P-154-5.1 V2 ALT1	SUBBASE COURSE, 12" THICK	SY	1,100	
13	P-154-5.2 V2 ALT1	SUBBASE COURSE, 6" THICK	SY	1,610	
14	P-211-5.1 V2 ALT1	LIME ROCK BASE COURSE, 8" THICK	SY	840	
1 15	P-211-5.2 V2 ALT1	LIME ROCK TRANSITION WEDGE	LS	1	
16	P-401-8.1 V2 ALT1	HOT MIXED ASPHALT PAVEMENT (SURFACE)	TON	200	
17	P-403-8.2 V2 ALT1	HOT MIXED ASPHALT PAVEMENT (LEVELING)	TON	260	
18	P-602-5.1 V2 ALT1	EMULSIFIED ASPHALT PRIME COAT	GAL	250	
19	P-603-5.1 V2 ALT1	EMULSIFIED ASPHALT TACK COAT	GAL	770	
20	P-620-5.1 V2 ALT1	PERMANENT AIRFIELD PAINTING WITH TYPE III GLASS BEADS (YELLOW AND WHITE)	SF	2,640	
21	P-620-5.2 V2 ALT1	PERMANENT AIRFIELD PAINTING WITH TYPE I GLASS BEADS (RED SURFACE PAINTED SIGNS)	SF	480	
22	P-620-5.3 V2 ALT1	PERMANENT AIRFIELD PAINTING WITH NO GLASS BEADS (BLACK)	SF	4,940	
23	P-620-5.4 V2 ALT1	TEMPORARY AIRFIELD PAINTING WITH TYPE I GLASS BEADS (YELLOW AND WHITE)	SF	2,640	
24	P-620-5.5 V2 ALT1	TEMPORARY AIRFIELD PAINTING WITH NO GLASS BEADS (RED SURFACE PAINTED SIGNS)	SF	480	
25	P-620-5.6 V2 ALT1	AIRFIELD PAINT REMOVAL	SF	1,000	
26	T-904-5.1 V2 ALT1	SODDING	SF	2,380	
27	S-906-5.1 V2 ALT1	HYDROSEEDING	SY	5,130	
28	L-108-5.1 V2 ALT1	HAND EXCAVATE MINIMUM 8" WIDE X 28" DEEP IN EARTH.	LF	20	
29	L-108-5.2 V2 ALT1	3/4" X 20' GROUND RODS CONNECTED TO COUNTERPOISE.	EA	5	
30	L-108-5.3 V2 ALT1	ADDITIONAL 10' GROUND ROD SECTIONS.	EA	5	
31	L-108-5.4 V2 ALT1	#6 BARE SOLID AWG COUNTERPOISE CONDUCTOR INSTALLED OVER CONDUIT SYSTEM.	LF	1,420	
32	L-108-5.5 V2 ALT1	#8, 5KV, L-824 CONDUCTOR INSTALLED IN NEW AND EXISTING CONDUIT/DUCTBANK SYSTEM.	LF	3,950	
33	L-110-5.1 V2 ALT1	ONE 2" SCHEDULE 40 PVC CONDUIT NON-ENCASED DIRECT BURIED IN EARTH, 24-INCH MINIMUM COVER, COMPLETE IN PLACE.	LF	1,370	
34	L-110-5.2 V2 ALT1	ONE 2" SCHEDULE 40 PVC CONDUIT CONCRETE ENCASED AND INSTALLED IN NEW FULL-STRENGTH PAVEMENT, 24-INCH MINIMUM COVER, COMPLETE IN PLACE.	LF	0	
35	L-110-5.3 V2 ALT1	ONE 2" SCHEDULE 40 PVC CONDUIT CONCRETE ENCASED AND INSTALLED IN EXISTING FULL-STRENGTH PAVEMENT, 24-INCH MINIMUM COVER, COMPLETE IN PLACE.	LF	55	
36	L-110-5.4 V2 ALT1	INTERCEPT EXISTING CONDUIT SYSTEM AND CONNECT TO NEW CONDUIT SYSTEM.	EA	15	
37	L-115-5.1 V2 ALT1	L-867 16" DIAMETER JUNCTION CAN WITH COVER INSTALLED IN EARTH.	EA	0	
38	L-115-5.2 V2 ALT1	L-867 16" DIAMETER BOTTOMLESS 2 CAN JUNCTION CAN PLAZA INSTALLED IN EARTH.	EA	2	
39	L-115-5.3 V2 ALT1	L-867 16" DIAMETER BOTTOMLESS 3 CAN JUNCTION CAN PLAZA INSTALLED IN EARTH.	EA	0	
40	L-115-5.4 V2 ALT1	INTERCEPT EXISTING LIGHT BASE CAN IN EARTH/EXISTING PAVEMENT AND CONNECT TO CONDUIT SYSTEM.	EA	1	
41	L-115-5.5 V2 ALT1	REMOVAL OF EXISTING JUNCTION CAN/LIGHT BASE CAN IN EARTH/EXISTING PAVEMENT, COMPLETE.	EA	26	
42	L-115-5.7 V2 ALT1	REMOVAL OF EXISTING 2 CAN JUNCTION CAN PLAZA IN EARTH, COMPLETE	EA	2	
43	L-125-5.1 V2 ALT1	NEW L-861T(L), LED TAXIWAY ELEVATED EDGE LIGHT AND NEW BASE CAN INSTALLED IN EARTH.	EA	23	
44	L-125-5.2 V2 ALT1	NEW L-861T(L), LED TAXIWAY ELEVATED EDGE LIGHT AND NEW BASE CAN INSTALLED IN EXISTING PAVEMENT	EA	3	
45	L-125-5.3 V2 ALT1	NEW L-858(L), SIZE 1, 3-4 CHARACTERS LED GUIDANCE SIGN AND CONCRETE BASE INSTALLED IN EARTH.	EA	2	
46	L-125-5.4 V2 ALT1	NEW L-858(L), SIZE 1, 5-6 CHARACTERS LED GUIDANCE SIGN AND CONCRETE BASE INSTALLED IN EARTH.	EA	1	
47	L-125-5.5 V2 ALT1	REMOVAL OF EXISTING GUIDANCE SIGN AND CONCRETE BASE IN EARTH/EXISTING PAVEMENT, COMPLETE.	EA	3	
48	L-125-5.6 V2 ALT1	INTERCEPT EXISTING CIRCUIT CONDUCTORS IN EXISTING BASE CAN/MANHOLE /JUNCTION CAN AND EXTEND CIRCUITS ACCORDINGLY.	EA	9	

TW E REHABILITATION

ENGINEER: THOMAS F. O'DONNELL
REG. No: 62478
DATE:
TEL: 561-840-0825
FAX:

DRAWN BY: ADC | DATE: 08/28/2025
DESIGNED BY: KAS | SCALE: AS NOTED
CHECKED BY: TFO | FIELD BOOK:

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION
1	05/05/2026	AC	TFO	REVISED CBR VALUES AND METHOD OF REHABILITATION

PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
SUMMARY OF QUANTITIES

SHEET NO. C02 | OF
TOTAL: 37
CAD FILE: 12884-C02-QUAN
DRAWING FILE NO.

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LICENSE NO. CA30805

BID SET

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LEGEND

ACCESS / HAUL ROUTE

CONTRACTOR'S STAGING AND STORAGE AREA. MAXIMUM EQUIPMENT HEIGHT = 20'

PROJECT WORK AREA

TEMPORARY SECURITY FENCE. SEE DETAIL 7 SHEET C05.

RSA RUNWAY SAFETY AREA

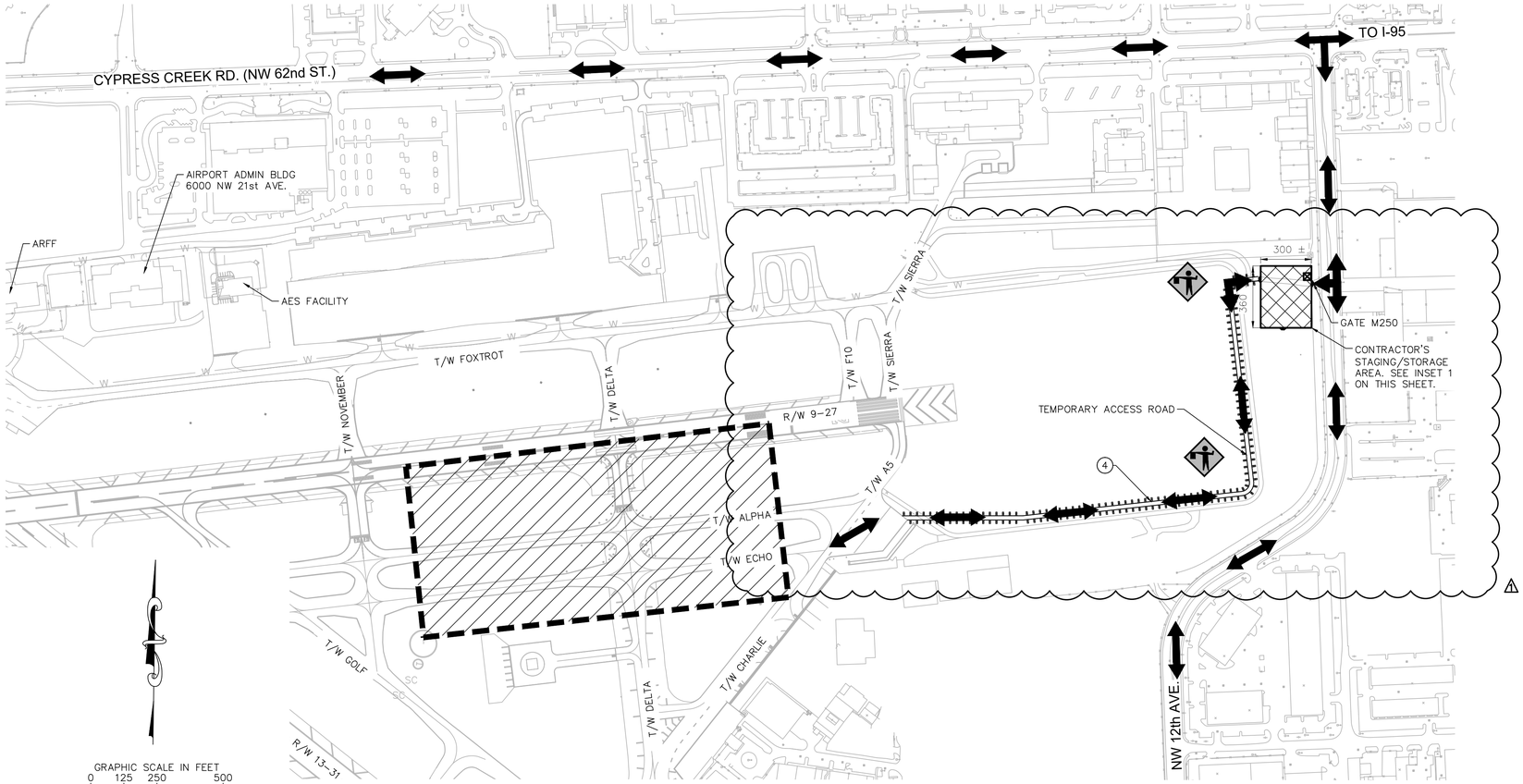
1. EXISTING CONTRACTOR'S STAGING AND STORAGE AREA. CONTRACTOR TO INSTALL FENCE PRIVACY SCREEN FABRIC ON EXISTING SECURITY FENCE. EMPLOYEE VEHICLES SHALL NOT GO BEYOND CONTRACTOR'S FENCED STAGING AREA.
2. EXISTING CONTRACTOR'S ACCESS GATE. CONTRACTOR TO REMOVE, SALVAGE, AND STORE EXISTING ENTRANCE GATE AND PERIMETER ROAD GATE PRIOR TO CONSTRUCTION. TEMPORARY DOUBLE GATES TO BE INSTALLED. TEMPORARY GATES TO BE REMOVED AND ORIGINAL GATES RESTORED AFTER CONSTRUCTION IS COMPLETE. INSTALLATION AND REMOVAL OF TEMPORARY GATES TO BE INCLUDED IN MOBILIZATION PAY ITEM.
3. CONTRACTOR'S SECURITY GUARD SHACK LOCATION (OPTIONAL).
4. CONTRACTOR TO BUILD TEMPORARY ACCESS ROAD. SEE DETAIL 6 ON SHEET C06. LOCATION TO BE FIELD ADJUSTED TO AVOID EXISTING OWL/GOPHER TORTOISE BORROWS AND AS DIRECTED BY OWNER. REMOVE AND SOD WHEN CONSTRUCTION IS COMPLETE. CONSTRUCTION AND REMOVAL OF TEMPORARY ACCESS ROAD TO BE INCLUDED IN MOBILIZATION PAY ITEM.
5. TYPE II BARRICADES WITH FLASHING LIGHT AT 30' SPACING. SEE DETAIL 9 ON SHEET C06.

S CONSTRUCTION TRAFFIC SIGN

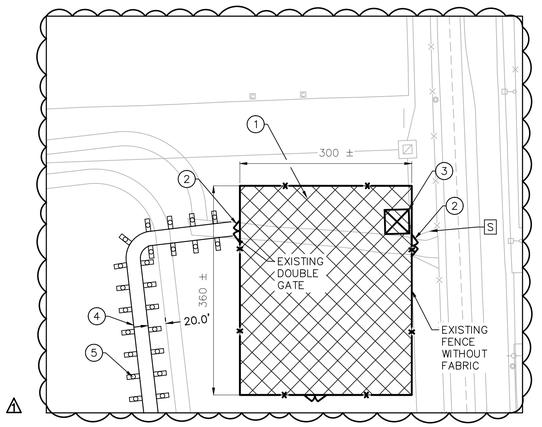
FLAGGER

CONTRACTOR STAGING AREA NOTES:

1. THERE IS AN EXISTING STAGING AREA WITH A STABILIZED SURFACE AND FENCING IN THE GENERAL LOCATION AND LIMITS SHOWN ON THIS SHEET. THE EXISTING STAGING AREA FENCING WILL NEED NEW PRIVACY SCREEN FABRIC TO BE INSTALLED AND MAINTAINED FOR THIS PROJECT DURING THE MOBILIZATION PHASE. THIS IS INCIDENTAL TO THE MOBILIZATION PAY ITEM, C-105-6.1. ANY AND ALL REQUIRED UTILITIES FOR THE CONTRACTOR'S OPERATIONS SHALL BE ARRANGED FOR AND PAID FOR BY THE CONTRACTOR DIRECTLY WITH THE APPROPRIATE UTILITY AGENCIES. UTILITY ARRANGEMENTS SHALL BE SUBJECT TO THE APPROVAL OF THE OWNER. THE CONTRACTOR SHALL USE THE STORAGE AND STAGING AREA SHOWN ON THE PLANS FOR ITS FIELD OFFICE, SHOP, MATERIAL AND EQUIPMENT STORAGE AND OTHER PROJECT RELATED ACTIVITIES INCLUDING EMPLOYEE PARKING. AT THE COMPLETION OF THE PROJECT, THE STAGING AREA, ITS ROCK STABILIZATION, AND ITS FENCING WILL BE RETURNED TO EXISTING CONDITION OR BETTER AT NO ADDITIONAL COST TO THE OWNER. THIS WORK IS INCIDENTAL TO THE MOBILIZATION PAY ITEM, C-105-6.1.
2. CONSTRUCTION EQUIPMENT WILL BE PARKED ONLY WITHIN CONTRACTOR'S STAGING AND STORAGE AREA OUTSIDE OF ESTABLISHED HOURS OF CONSTRUCTION.



GRAPHIC SCALE IN FEET
0 125 250 500



INSET 1 - CONTRACTOR'S STAGING / STORAGE AREA

GRAPHIC SCALE IN FEET
0 40 80 160

ACCESS AND HAUL ROAD NOTES:

1. HAUL ROADS TO BE USED UNDER THIS PROJECT SHALL BE THOSE INDICATED ON THE DRAWINGS OR OTHERWISE SPECIFICALLY AUTHORIZED BY THE OWNER. IN GENERAL, THE CONTRACTOR SHALL CONFINE EQUIPMENT AND HAULING TO THE AREAS UNDER CONSTRUCTION. NO DEBRIS SHALL BE ALLOWED ON THE ROADWAYS OR AIRPORT PAVED SURFACES. ACTIVE TAXIWAYS SHALL BE KEPT FREE OF DEBRIS AT ALL TIMES. CONTRACTOR SHALL MAINTAIN VACUUM SWEEPERS ON SITE FOR THAT USE. OTHER PAVEMENTS SHALL BE CLEANED BY THE CONTRACTOR DAILY, AND AS REQUIRED, USING VACUUM SWEEPERS TO KEEP ALL ACCESS AND CONSTRUCTION AREAS CLEAR OF SOILS, CLODS OR OTHER DEBRIS.
2. THE ACCESS POINTS TO THE PROJECT SITE ARE SHOWN ON THE PLANS.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING ALL AIRPORT SERVICE ROADS TO THEIR PRECONSTRUCTION CONDITION WHERE SUCH ROADS ARE USED BY THE CONTRACTOR FOR HAULING OPERATIONS.
4. THE CONTRACTOR SHALL RESTORE ALL TURFED AND PAVED AREAS USED FOR HAUL ROADS TO THEIR ORIGINAL CONDITION, INCLUDING THE ESTABLISHMENT OF TURF. ALL COSTS FOR CONSTRUCTING, REMOVING AND RESTORING OF HAUL ROADS REQUIRED FOR THE COMPLETION OF THE WORK SHALL BE BORNE BY THE CONTRACTOR.
5. THE CONTRACTOR SHALL NOT PERMIT ANY UNAUTHORIZED CONSTRUCTION PERSONNEL OR TRAFFIC ON THE SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TRAFFIC CONTROL TO AND FROM THE VARIOUS CONSTRUCTION AREAS ON THE SITE. THE CONTRACTOR IS RESPONSIBLE FOR THE IMMEDIATE CLEAN-UP OF ANY DEBRIS DEPOSITED AT THE PROJECT SITE AND ALONG ANY ROAD AS A RESULT OF HIS/HER CONSTRUCTION TRAFFIC. DIRECTIONAL SIGNAGE AT THE ACCESS GATE AND ALONG THE DELIVERY ROUTE TO THE STORAGE AREA OR WORK SITE SHALL BE APPROVED BY THE OWNER.
   ALL CONTRACTOR'S MATERIAL ORDERS FOR DELIVERY TO THE SITE SHALL BE DIRECTED TO THE ACCESS POINTS IDENTIFIED.
6. ON EXISTING AIRPORT PAVEMENTS TO REMAIN, ONLY RUBBER TIRE VEHICLES SHALL BE PERMITTED.
7. THE CONTRACTOR, THROUGH THE CONTRACTOR SECURITY OFFICER, SHALL ESTABLISH AND MAINTAIN A LIST OF CONTRACTOR AND SUBCONTRACTOR VEHICLES AUTHORIZED TO OPERATE ON THE SITE. VEHICLE PERMITS SHALL BE ASSIGNED IN ACCORDANCE WITH AIRPORT SECURITY PROCEDURES.
8. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE OFF-SITE ROUTES (STATE HIGHWAYS, COUNTY ROADS OR CITY STREETS) WITH THE APPROPRIATE OWNER WHO HAS JURISDICTION OVER THE AFFECTED ROUTE.
9. ALL CONTRACTOR VEHICLES AND TRAFFIC SHALL REMAIN WITHIN THE DESIGNATED CONSTRUCTION AREAS, STAGING AREAS OR HAUL ROUTES.
10. ALL CONTRACTOR VEHICLES SHALL DISPLAY IN FULL VIEW LOGOS CONSPICUOUSLY PLACED ON EACH SIDE OF THE VEHICLE WITH 4" MINIMUM LETTER HEIGHT . ALL VEHICLES OPERATING IN THE ACTIVE AOA DURING HOURS OF LOW VISIBILITY OR DARKNESS SHALL BE EQUIPPED WITH A FLASHING AMBER (YELLOW) DOME-TYPE LIGHT MOUNTED ON TOP OF THE VEHICLE AND OF SUCH INTENSITY TO CONFORM TO AIRPORT CODES FOR MAINTENANCE AND EMERGENCY VEHICLES.
11. NO CONTRACTOR VEHICLES ARE TO CROSS ACTIVE RUNWAYS, NAVAID CRITICAL AREAS, TAXIWAYS AND APPROACH CLEAR ZONES UNLESS THE ESCORT IS UNDER THE DIRECT CONTROL OF THE AIRPORT GROUND CONTROLLER. CONTRACTOR VEHICLES TO HAVE A WORKING STROBE LIGHT ON AT ALL TIMES. IT SHALL BE UNDERSTOOD BY THE CONTRACTOR THAT AIRPORT TRAFFIC ON RUNWAYS, TAXIWAYS AND APRONS SHALL HAVE PRIORITY OVER CONTRACTOR'S TRAFFIC.
12. CONTRACTOR SHALL PROVIDE PROFESSIONALLY PAINTED SIGNS TO DIRECT MATERIAL SUPPLIERS AND EMPLOYEES TO THE CONSTRUCTION SITE. SIGN AT ENTRANCE GATE SHALL BE PROFESSIONALLY PAINTED 4' X 8' AND READ "CONSTRUCTION VEHICLES ONLY – NO VENDORS ALLOWED."
13. CONTRACTOR ACCESS GATES SHALL BE GUARDED OR LOCKED. CONTRACTOR SHALL PROVIDE GATE GUARDS.
14. CONTRACTOR SHALL OBTAIN AT HIS OWN EXPENSE ANY PERMITS, INCLUDING BUT NOT LIMITED TO DRIVEWAY PERMITS, FOR USE OF ACCESS GATE.
15. ACCESS GATE LOCATION DIFFERENT FROM EXISTING IS SUBJECT TO APPROVAL BY OWNER. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH RELOCATION OF EXISTING ACCESS GATE.
16. UPON COMPLETION OF CONSTRUCTION, CONTRACTOR SHALL REMOVE TEMPORARY ACCESS GATES AND RESTORE FENCE, SWALES, SOD ETC. TO ORIGINAL CONDITION.
17. COVER EXISTING UTILITIES IN AREAS OF TRUCK TRAFFIC WITH MINIMUM 12" OF LIMEROCK, INCLUDE IN PAY ITEM FOR MOBILIZATION, C-105.
18. DISPOSAL OF MILLING WILL BE ON SITE FOR USE TO CONSTRUCT SERVICE ROADS, FOR DISPOSAL IN AREAS SHOWN ON PLANS, AND IN OTHER ON AIRPORT SITES AS DIRECTED BY OWNER. ROUTING OF VEHICLES FOR DISPOSAL OF MILLING WILL BE AS APPROVED BY OWNER AND ATCT AND MAY REQUIRE RADIO CONTACT WITH ATCT DURING HAULING OPERATIONS.
    THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAULING THE MILLINGS NOT USED ON THE AIRPORT OFFSITE AT NO COST TO THE OWNER.

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BID SET

ENGINEER: THOMAS F. O'DONNELL
REG. No: 62478
DATE:
TEL: 561-840-0825
FAX:

DRAWN BY: ADC | DATE: 08/28/2025
DESIGNED BY: KAS | SCALE: AS NOTED
CHECKED BY: TFO | FIELD BOOK:

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION
1	05/05/2026	AC	TFO	REVISED HAUL ROUTE AND ACCESS PLAN

PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
ACCESS AND STAGING AREA

SHEET NO. C05 OF
TOTAL: 37
CAD FILE: 12884-C04-STAG
DRAWING FILE NO.

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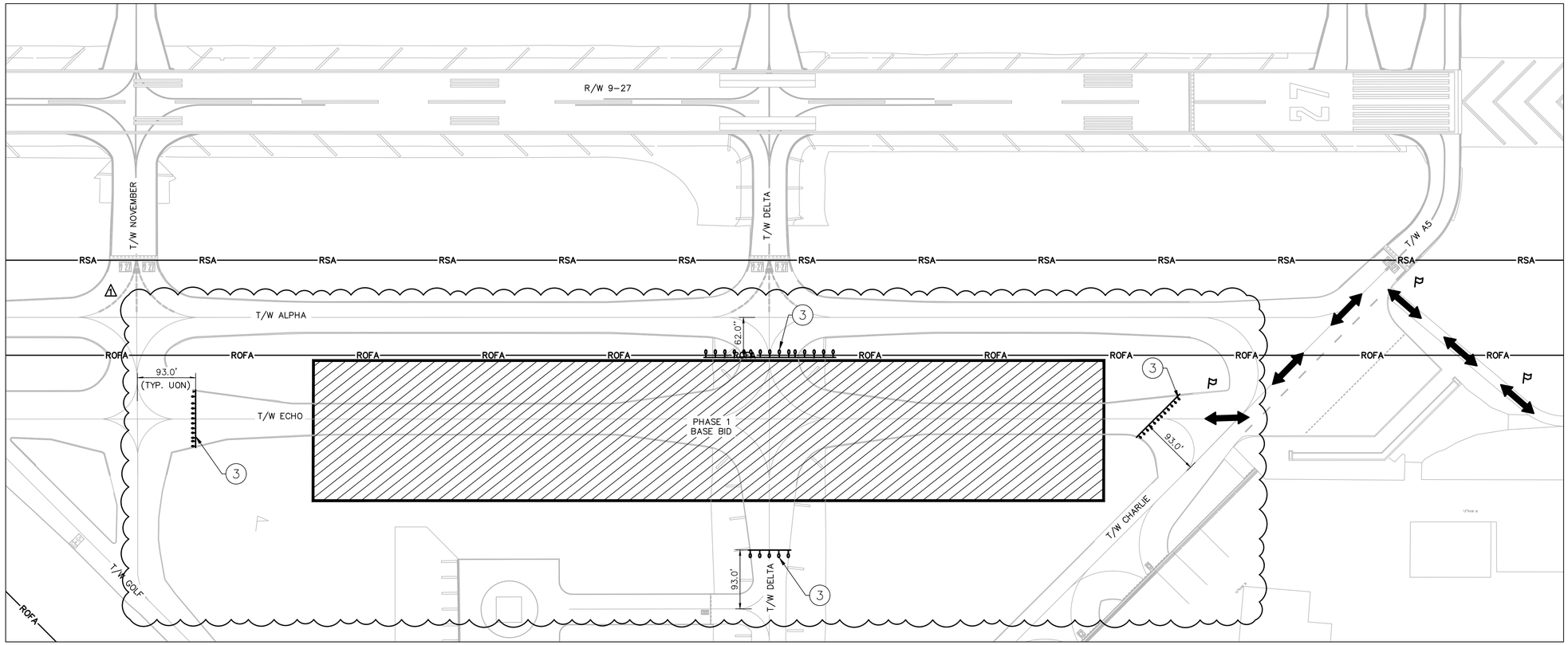

LEGEND

- PHASE 1 WORK LIMITS
- LOW LEVEL AIRFIELD BARRICADES SEE DETAIL 8 SHEET C06.
- TEMP. TAXIWAY CLOSURE MARKER SEE DETAIL 1 SHEET C06.
- TEMP. LIGHTED RUNWAY CLOSURE MARKER SEE DETAIL 4 SHEET C06.
- RSA — RUNWAY SAFETY AREA
- ROFA — RUNWAY OBJECT FREE AREA
- HAUL ROUTE
- FLAG MAN
- (1) LOCATION OF LIGHTED RUNWAY CLOSURE "X"
- (2) LOCATION OF TAXIWAY CLOSURE "X"
- (3) LOW LEVEL AIRFIELD BARRICADE AS REQUIRED TO CLOSE TAXIWAY. IN PLACE FOR DURATION OF SPECIFIED PHASE.

PRIMARY ITEMS OF WORK*

1. SUBMIT AND COMPLETE THE REVIEW PROCESS FOR ALL SHOP DRAWINGS AND SUBMITTALS.
2. INSTALL ANY SIGNAGE AS REQUIRED
3. PREPARE EXISTING STAGING AREA.
4. INSTALL FABRIC TO EXISTING STAGING AREA FENCING AND IMPLEMENT OTHER SECURITY MEASURES.
5. PERFORM PRE-CONSTRUCTION SURVEY VERIFICATION
6. INSTALL STORMWATER POLLUTION PREVENTION (SWPP) MEASURES
7. PERFORM CONTRACTOR'S QUALITY CONTROL WORKSHOP
8. PROCURE AND RECEIVE ALL ELECTRICAL ITEMS AND COMPONENTS. INVENTORIED, STAGED, AND STORED ON SITE.
9. PERFORM PRE-CONSTRUCTION MEETING.

PHASE M (MOBILIZATION)

OPERATIONS

ALL WORK, WITH THE EXCEPTION OF THE INSTALLATION OF SWPP MEASURES, WILL BE PERFORMED OUTSIDE OF THE AIRPORT SAFETY AREAS AND PROTECTED SURFACES. ALL AIRPORT INFRASTRUCTURE TO REMAIN OPEN. WORK WILL BE PERFORMED 8.5 HOURS PER DAY, MONDAY THROUGH FRIDAY, 7:00 AM TO 4:30 PM.

FOR THE INSTALLATION OF SWPP MEASURES, THE CONTRACTOR IS TO COORDINATE WITH AIRPORT STAFF REGARDING ACCESS AND CLOSURE OF AIRPORT INFRASTRUCTURE. ALL CLOSURES WILL BE "ROLLING" AND CONTROLLED BY AIRPORT OPERATIONS STAFF. CONTRACTOR TO COORDINATE CLOSELY WITH AIRPORT OPERATIONS STAFF DURING CLOSURES. WORK TIMES ARE REFERENCED FROM START OF SHIFT.

LIMITS OF WORK

WITH THE EXCEPTION OF THE INSTALLATION OF SWPP MEASURES, THE LIMITS OF THIS WORK AREA WILL CONSIST OF THE EXISTING ACCESS POINT AND THE CONTRACTOR'S STAGING AREA. FOR THE INSTALLATION OF SWPP MEASURES THE LIMITS OF WORK WILL BE THE INFIELD AREA SOUTH OF TAXIWAY ECHO, EAST OF TAXIWAY DELTA AND WEST OF TAXILANE CHARLIE.

WORK SEQUENCING

WORK IN THIS AREA WILL BE PERFORMED SEQUENTIALLY AFTER NTP.

PHASE 1 BASE BID

PRIMARY ITEMS OF WORK*

1. INSTALL BARRICADES AND TAXIWAY CLOSURE MARKINGS.
2. DISABLE OR COVER EXISTING LIGHTS AND SIGNS WITHIN CLOSED WORK AREAS AND/OR THAT DIRECT TRAFFIC TO A WORK AREA.
3. PERFORM P-101 FULL DEPTH PAVEMENT DEMOLITION.
4. P-101 MILL EXISTING ASPHALT.
5. PERFORM ELECTRICAL DEMOLITION AND INSTALLATION WORK.
6. COMPACT IN SITU SUBGRADE, INSTALL P-154 SUBBASE AND P-211 LIMEROCK.
7. PAVE P-401 ASPHALT (INCLUDING CONTROL STRIP).
8. INSTALL P-154 STABILIZED SHOULDERS.
9. APPLY P-620 TEMPORARY PAINT MARKING.
10. INSTALL T-904 SODDING AND S-906 HYDROSEED.
11. INSTALL TRANSITION WEDGES IN WORK AREA AS NEEDED AT THE END OF EACH SHIFT.
12. CLEAN-UP AND REMOVAL OF BARRICADES, CLOSURE MARKINGS, AND SWPPP MEASURES.

*THIS LIST IS NOT EXHAUSTIVE NOR SEQUENTIAL; IT IS THE CONTRACTOR'S RESPONSIBILITY TO FAMILIARIZE THEMSELVES WITH THE PROJECT AND CONTRACT DOCUMENTS TO PERFORM ALL REQUIRED WORK IN ITS APPROPRIATE SEQUENCE.

OPERATIONS

CONSTRUCTION IN THE WORK AREA SHOWN WILL REQUIRE THE CLOSURE OF A PORTION OF TAXIWAY ECHO BETWEEN TAXIWAY NOVEMBER AND TAXILANE CHARLIE INCLUDING ITS INTERSECTION WITH TAXIWAY DELTA. TAXIWAY ALPHA, RUNWAY 9-27 AND RUNWAY 13-31 WILL REMAIN OPEN. WORK WILL BE PERFORMED FROM 7:00 AM TO 4:30 PM MONDAY THROUGH FRIDAY. WORK TIMES ARE REFERENCED FROM START OF SHIFT.

AT THE END OF EACH SHIFT, THE CONTRACTOR MUST INSTALL TRANSITION WEDGES FOR WORK WHICH IS LOCATED IN THE THE RUNWAY SAFETY AREA AND/OR TAXIWAY OBJECT FREE AREAS OF AIRPORT INFRASTRUCTURE WHEN THE INFRASTRUCTURE IS TO BE ACTIVE OUTSIDE OF WORKING HOURS. SEE TYPICAL SECTIONS.

CONTRACTOR TO COORDINATE BARRICADE AND TAXIWAY CLOSURE MARKING PLACEMENT WITH AIRPORT STAFF AND RESIDENT PROJECT REPRESENTATIVE. BARRICADE LOCATIONS ARE SCHEMATIC AND MAY BE ADJUSTED IN THE FIELD AS NECESSARY FOR THE COMPLETION OF THE WORK.

LIMITS OF WORK

THE HORIZONTAL LIMITS OF THIS PHASE ARE ON TAXIWAY ECHO BETWEEN 725' WEST OF TAXIWAY DELTA CENTERLINE AND 525' EAST OF THE TAXIWAY DELTA CENTERLINE, VERTICAL LIMITS ARE GENERALLY BETWEEN 59' NORTH OF THE TAXIWAY ECHO CENTERLINE AND 110' SOUTH OF THE TAXIWAY ECHO CENTERLINE.

WORK SEQUENCING

WORK IN THIS AREA WILL BE PERFORMED SEQUENTIALLY AFTER THE COMPLETION OF THE MOBILIZATION PHASE AFTER CONSTRUCTION NTP IS PROVIDED.

0 150' 300'

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CALL 48 HOURS BEFORE DIGGING FAA FACILITIES 954-356-7212

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PHONE: 954-535-5100 FAX: 954-739-2247
WWW.KIMLEY-HORN.COM REGISTRY No. 35106

QUANTUM Electrical Engineering, Inc.
2751 VISTA PARKWAY SUITE I-9
WEST PALM BEACH, FL 33411
561-210-9224
LICENSE NO. CA30805

BID SET

ENGINEER: THOMAS F. O'DONNELL
REG. No: 62478
DATE:
TEL: 561-840-0825
FAX:

DRAWN BY: ADC | DATE: 08/28/2025
DESIGNED BY: KAS | SCALE: AS NOTED
CHECKED BY: TFO | FIELD BOOK:

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

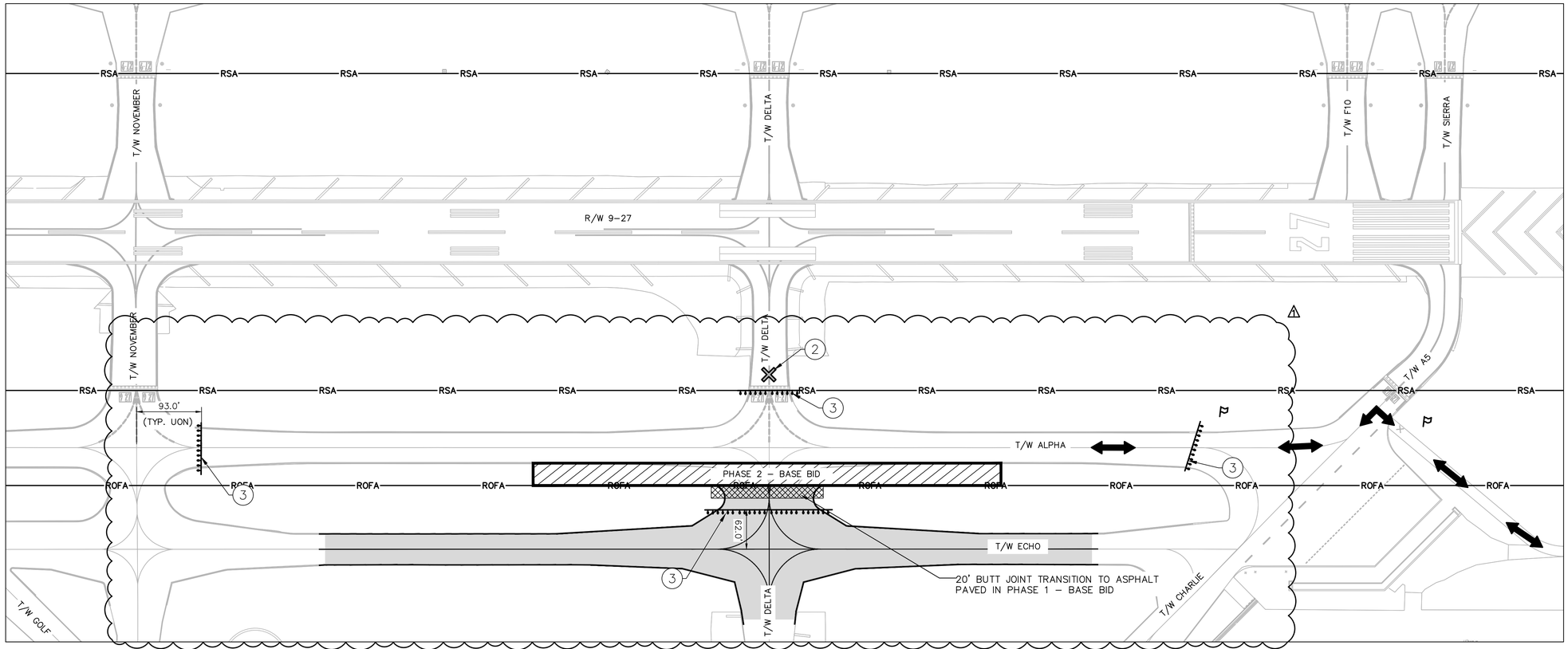
NO.	DATE	BY	CHK'D	DESCRIPTION
1	05/05/2026	AC	TFO	REVISED PER VARIOUS COMMENTS AND MEASUREMENT, PHASING CHANGE

PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
PHASE 1 PLAN

SHEET NO. C07 OF
TOTAL: 37
CAD FILE: 12884-C07-PHAS1
DRAWING FILE NO.

K:\FTL_AVIATION\044693107 - FXE TW E REHAB DESIGN PHASE\CAD\PLANSHEETS\12884-C07-PHAS1.DWG

CAM #26-0689
Exhibit 1B
Page 112 of 175



PHASE 2 – BASE BID ONLY

LEGEND

- LIMITS OF PAVEMENT
- PHASE 2 – BASE BID WORK LIMITS
- LOW LEVEL AIRFIELD BARRICADES SEE DETAIL 8 SHEET C06.
- TEMP. TAXIWAY CLOSURE MARKER SEE DETAIL 1 SHEET C06.
- TEMP. LIGHTED RUNWAY CLOSURE MARKER SEE DETAIL 4 SHEET C06.
- RSA — RUNWAY SAFETY AREA
- ROFA — RUNWAY OBJECT FREE AREA
- HAUL ROUTE
- (1) LOCATION OF LIGHTED RUNWAY CLOSURE "X"
- (2) LOCATION OF TAXIWAY CLOSURE "X"
- (3) LOW LEVEL AIRFIELD BARRICADE AS REQUIRED TO CLOSE TAXIWAY. IN PLACE FOR DURATION OF SPECIFIED PHASE.

PRIMARY ITEMS OF WORK*

1. INSTALL BARRICADES AND TAXIWAY CLOSURE MARKINGS.
2. DISABLE OR COVER EXISTING LIGHTS AND SIGNS WITHIN CLOSED WORK AREAS AND/OR THAT DIRECT TRAFFIC TO A WORK AREA.
3. PERFORM P-101 FULL DEPTH PAVEMENT DEMOLITION.
4. PERFORM CLEARING AND GRUBBING AND EXCAVATION.
5. PERFORM ELECTRICAL DEMOLITION AND INSTALLATION WORK.
6. COMPACT IN SITU SUBGRADE, INSTALL P-154 SUBBASE AND P-211 LIMEROCK.
7. MILL BITUMINOUS ASPHALT.
8. PAVE (P-401 AND P-403) ASPHALT.
9. INSTALL P-161 STABILIZED SHOULDERS.
10. APPLY P-620 TEMPORARY PAINT MARKING.
11. INSTALL T-904 SODDING AND S-906 HYDROSEED.
12. INSTALL TRANSITION WEDGES IN WORK AREA AS NEEDED AT THE END OF EACH SHIFT.

*THIS LIST IS NOT EXHAUSTIVE NOR SEQUENTIAL; IT IS THE CONTRACTOR'S RESPONSIBILITY TO FAMILIARIZE THEMSELVES WITH THE PROJECT AND CONTRACT DOCUMENTS TO PERFORM ALL REQUIRED WORK IN ITS APPROPRIATE SEQUENCE.

OPERATIONS

CONSTRUCTION IN THE WORK AREA SHOWN WILL REQUIRE THE CLOSURE OF TAXIWAY ALPHA BETWEEN TAXIWAY NOVEMBER AND TAXILANE A5. TAXIWAY DELTA WILL BE CLOSED BETWEEN THE RUNWAY 9-27 RSA AND TAXIWAY ECHO. RUNWAY 9-27, RUNWAY 13-31 AND TAXIWAY ECHO WILL REMAIN OPEN. WORK WILL BE PERFORMED FROM 7:00 AM TO 4:30 PM MONDAY THROUGH FRIDAY. WORK TIMES ARE REFERENCED FROM START OF SHIFT.

AT THE END OF EACH SHIFT, THE CONTRACTOR MUST INSTALL TRANSITION WEDGES FOR WORK WHICH IS LOCATED IN THE THE RUNWAY SAFETY AREA AND/OR TAXIWAY OBJECT FREE AREAS OF AIRPORT INFRASTRUCTURE WHEN THE INFRASTRUCTURE IS TO BE ACTIVE OUTSIDE OF WORKING HOURS. SEE TYPICAL SECTIONS.

CONTRACTOR TO COORDINATE BARRICADE AND TAXIWAY CLOSURE MARKING PLACEMENT WITH AIRPORT STAFF AND RESIDENT PROJECT REPRESENTATIVE. BARRICADE LOCATIONS ARE SCHEMATIC AND MAY BE ADJUSTED IN THE FIELD AS NECESSARY FOR THE COMPLETION OF THE WORK.

LIMITS OF WORK

THE LIMITS OF THIS PHASE ARE ON TAXIWAY ALPHA APPROXIMATELY 370' EAST AND WEST OF THE TAXIWAY DELTA CENTERLINE. THE VERTICAL LIMITS ARE GENERALLY 90' NORTH OF THE TAXIWAY ECHO CENTERLINE AND SOUTH OF THE SOUTHERN EDGE OF TAXIWAY ALPHA

WORK SEQUENCING

WORK IN THIS AREA WILL BE PERFORMED SEQUENTIALLY AFTER THE COMPLETION OF PHASE 1 IF ONLY THE BASE BID IS AWARDED.

0 150' 300'

ENGINEER: THOMAS F. O'DONNELL
REG. No: 62478
DATE:
TEL: 561-840-0825
FAX:

DRAWN BY: ADC | DATE: 08/28/2025
DESIGNED BY: KAS | SCALE: AS NOTED
CHECKED BY: TFO | FIELD BOOK:

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION
1	05/05/2026	AC	TFO	REVISED DESIGN METHOD OF MEASUREMENT, PHASING CHANGE

PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
PHASE 2A PLAN

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2755 VISTA PARKWAY SUITE I-9
WEST PALM BEACH, FL 33411
561-210-9224
LICENSE NO. CA30805

BID SET

SHEET NO. C08 | OF
TOTAL: 37
CAD FILE: 12884-C08-PHAS2
DRAWING FILE NO.

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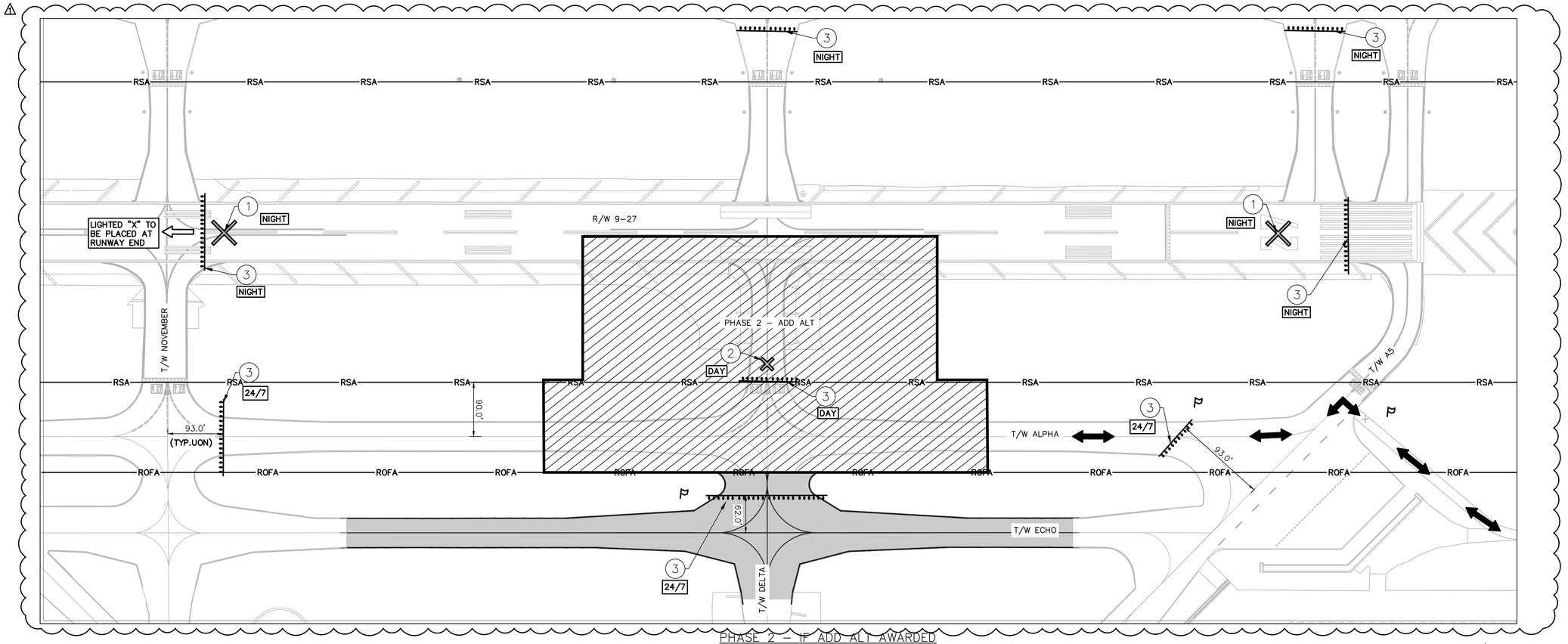


PHASE 2 – IF ADD ALT AWARDED

LEGEND

- LIMITS OF PAVEMENT
- PHASE 2 – ADD ALT WORK LIMITS
- LOW LEVEL AIRFIELD BARRICADES SEE DETAIL 8 SHEET C06.
- TEMP. TAXIWAY CLOSURE MARKER SEE DETAIL 1 SHEET C06.
- TEMP. LIGHTED RUNWAY CLOSURE MARKER SEE DETAIL 4 SHEET C06.
- RSA — RUNWAY SAFETY AREA
- ROFA — RUNWAY OBJECT FREE AREA
- HAUL ROUTE
- (1) LOCATION OF LIGHTED RUNWAY CLOSURE "X"
- (2) LOCATION OF TAXIWAY CLOSURE "X"
- (3) LOW LEVEL AIRFIELD BARRICADE AS REQUIRED TO CLOSE TAXIWAY. IN PLACE FOR DURATION OF SPECIFIED PHASE.
- XXXX — THIS LEGEND DESCRIBES THE TIMES AND DAYS WHEN THIS TRAFFIC CONTROL MEASURE WILL BE DEPLOYED. NIGHT = 10 PM TO 7 AM, NIGHTLY, SUNDAY THROUGH THURSDAY. DAY = 7 AM TO 10 PM, DAILY, MONDAY THROUGH FRIDAY AND 24 HOURS PER DAY ON THE WEEKEND. 24/7 = 24 HOURS PER DAY FOR THE DURATION OF THE PHASE.

PRIMARY ITEMS OF WORK*

1. INSTALL BARRICADES TAXIWAY CLOSURE MARKINGS AND LIGHTED "Xs" AS NOTED.
2. DISABLE OR COVER EXISTING LIGHTS AND SIGNS WITHIN CLOSED WORK AREAS AND/OR THAT DIRECT TRAFFIC TO A WORK AREA.
3. PERFORM P-101 FULL DEPTH PAVEMENT DEMOLITION.
4. PERFORM CLEARING AND GRUBBING AND EXCAVATION.
5. PERFORM ELECTRICAL DEMOLITION AND INSTALLATION WORK.
6. COMPACT IN SITU SUBGRADE, INSTALL P-154 SUBBASE AND P-211 LIMEROCK.
7. MILL BITUMINOUS ASPHALT.
8. PAVE (P-401 AND P-403) ASPHALT.
9. INSTALL P-154 STABILIZED SHOULDERS.
10. APPLY P-620 TEMPORARY PAINT MARKING.
11. INSTALL T-904 SODDING AND S-906 HYDROSEED.
12. INSTALL TRANSITION WEDGES IN WORK AREA AS NEEDED AT THE END OF EACH SHIFT.

*THIS LIST IS NOT EXHAUSTIVE NOR SEQUENTIAL; IT IS THE CONTRACTOR'S RESPONSIBILITY TO FAMILIARIZE THEMSELVES WITH THE PROJECT AND CONTRACT DOCUMENTS TO PERFORM ALL REQUIRED WORK IN ITS ENTIRETY.

APPROPRIATE SEQUENCE.

CONSTRUCTION IN THE WORK AREA SHOW WILL REQUIRE THE NIGHTLY CLOSURE OF RUNWAY 9–27, TAXIWAY DELTA BETWEEN RUNWAY 9–27 AND TAXIWAY FOXTROT, AND TAXIWAY F10. TAXIWAY DELTA BETWEEN RUNWAY 9–27 AND TAXIWAY ECHO AND TAXIWAY ALPHA BETWEEN TAXIWAYS NOVEMBER AND A5 ARE TO BE CLOSED FOR THE DURATION OF THIS PHASE. RUNWAY13–31 AND TAXIWAY ECHO WILL REMAIN OPEN FOR THE DURATION OF THE PHASE. WORK WILL BE PERFORMED FROM 10PM TO 6AM SUNDAY THROUGH THURSDAY. WORK TIMES ARE REFERENCED FROM THE START OF THE SHIFT.

AT THE END OF EACH SHIFT, THE CONTRACTOR MUST INSTALL TRANSITION WEDGES FOR WORK WHICH IS LOCATED IN THE THE RUNWAY SAFETY AREA AND/OR TAXIWAY OBJECT FREE AREAS OF AIRPORT INFRASTRUCTURE WHEN THE INFRASTRUCTURE IS TO BE ACTIVE OUTSIDE OF WORKING HOURS. SEE TYPICAL SECTIONS.

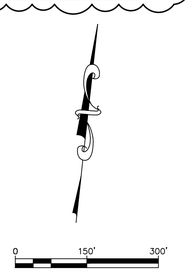
CONTRACTOR TO COORDINATE BARRICADE TAXIWAY CLOSURE MARKING, AND LIGHTED "X" PLACEMENT AND THE INSTALLATION OF TEMPORARY LIME ROCK TRANSITION WEDGES WITH AIRPORT STAFF AND RESIDENT PROJECT REPRESENTATIVE. BARRICADE LOCATIONS ARE SCHEMATIC AND MAY BE ADJUSTED IN THE FIELD AS NECESSARY FOR THE COMPLETION OF THE WORK.

LIMITS OF WORK

THE LIMITS OF THIS PHASE INCLUDE TAXIWAY DELTA BETWEEN TAXIWAY ALPHA AND THE SOUTH EDGE OF RUNWAY 9–27. HORIZONTALLY, THE LIMITS ARE APPROXIMATELY 260' EAST AND WEST OF THE TAXIWAY DELTA CENTERLINE ON RUNWAY 9–27, APPROXIMATELY 120' EAST END WEST OF THE TAXIWAY DELTA CENTERLINE ON TAXIWAY DELTA AND APPROXIMATELY 370' EAST AND WEST OF THE TAXIWAY DELTA CENTERLINE ON TAXIWAY ALPHA 36' NORTH OF THE RUNWAY 9–27 ROFA.

WORK SEQUENCING

WORK IN THIS AREA WILL BE PERFORMED SEQUENTIALLY AFTER THE COMPLETION OF THE PHASE 1 IF THE ADD ALT IS AWARDED.



0 150' 300'

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BID SET

ENGINEER: THOMAS F. O'DONNELL
REG. No: 62478
DATE:
TEL: 561-640-0825
FAX:

DRAWN BY: ADC
DATE: 08/28/2025
DESIGNED BY: KAS
SCALE: AS NOTED
CHECKED BY: TFO
FIELD BOOK:

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS			
NO.	DATE	BY	CHK'D
1	05/05/2026	AC	TFO

REVISED DESCRIPTION OF MEASUREMENT, PHASING CHANGE

PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
PHASE 2B PLAN

SHEET NO. C09 OF
TOTAL: 37
CAD FILE: 12884–C09–PHAS1–ADDALT
DRAWING FILE NO.

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561-210-9224
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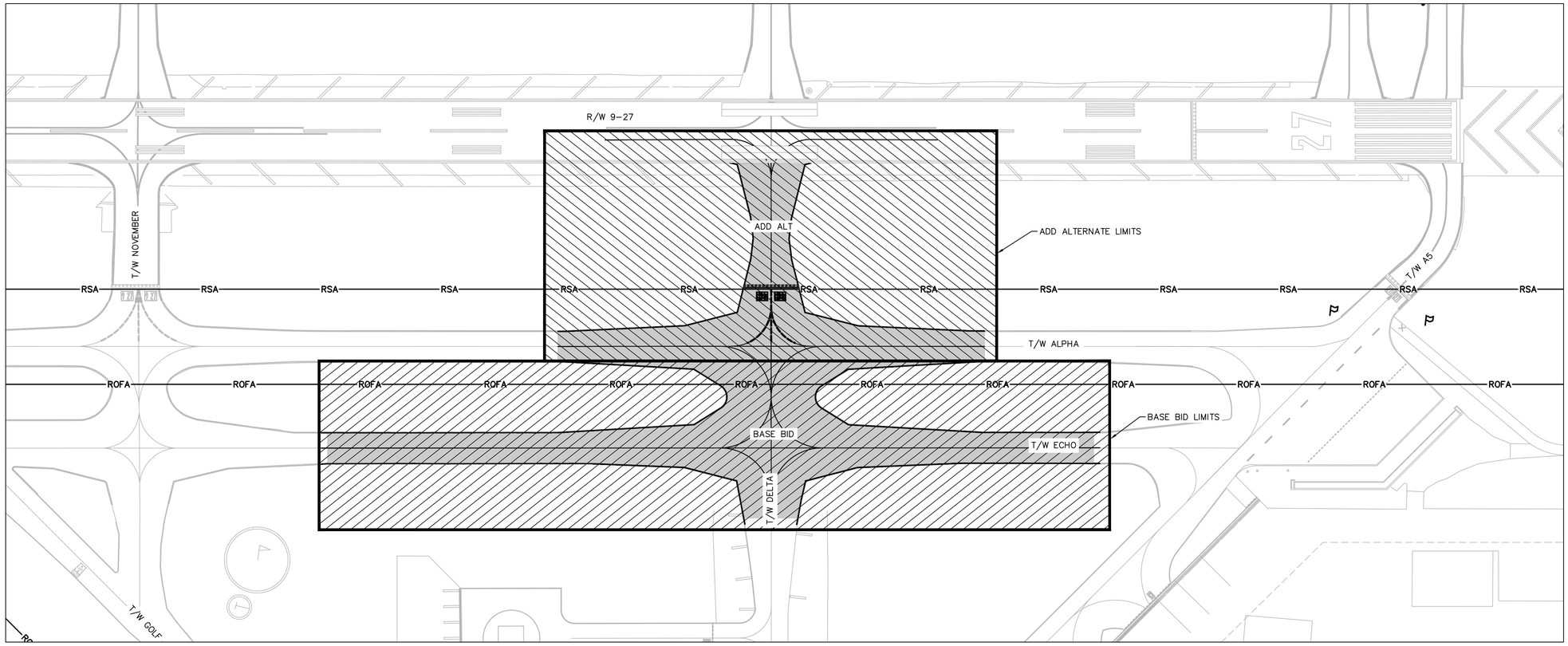

PHASE 3

LEGEND

- LIMITS OF PAVEMENT
- BASE BID
- ADD ALT
- LOW LEVEL AIRFIELD BARRICADES SEE DETAIL 8 SHEET C06.
- TEMP. TAXIWAY CLOSURE MARKER SEE DETAIL 1 SHEET C06.
- TEMP. LIGHTED RUNWAY CLOSURE MARKER SEE DETAIL 4 SHEET C06.
- RSA — RUNWAY SAFETY AREA
- ROFA — RUNWAY OBJECT FREE AREA
- HAUL ROUTE
- (1) LOCATION OF LIGHTED RUNWAY CLOSURE "X"
- (2) LOCATION OF TAXIWAY CLOSURE "X"
- (3) LOW LEVEL AIRFIELD BARRICADE AS REQUIRED TO CLOSE TAXIWAY. IN PLACE FOR DURATION OF SPECIFIED PHASE.

⚠ PRIMARY ITEMS OF WORK*

1. INSTALL BARRICADES, TAXIWAY CLOSURE MARKINGS, AND LIGHTED "Xs" AS DIRECTED BY AIRPORT OPERATIONS STAFF.
2. DISABLE OR COVER EXISTING LIGHTS AND SIGNS WITHIN CLOSED WORK AREAS AND/OR THAT DIRECT TRAFFIC TO A WORK AREA.
3. ALLOW ASPHALT TO CURE FOR 30 DAY.
4. INSTALL REMAINING SOD AND HYDROSEED.
5. PERFORM PUNCHLIST WORK.
6. INSTALL P-620 PERMANENT PAVEMENT MARKINGS.

*THIS LIST IS NOT EXHAUSTIVE NOR SEQUENTIAL; IT IS THE CONTRACTOR'S RESPONSIBILITY TO FAMILIARIZE THEMSELVES WITH THE PROJECT AND CONTRACT DOCUMENTS TO PERFORM ALL REQUIRED WORK IN ITS APPROPRIATE SEQUENCE.

OPERATIONS

CONSTRUCTION IN THE WORK AREA SHOWN WILL REQUIRE THE PERIODIC CLOSURES OF RUNWAY 9-27, TAXIWAYS ALPHA, DELTA, AND ECHO THE EXACT LIMITS OF WORK AREAS WILL BE DETERMINED IN THE FIELD BY AIRPORT OPERATIONS STAFF AND/OR THE RPR. RUNWAYS 13-31 AND TAXIWAYS N AND A5 ARE TO REMAIN OPEN AT ALL TIMES. WORK WILL BE PERFORMED 8.5 HOURS PER DAY, MONDAY THROUGH FRIDAY, 7:30 AM TO 4:00 PM. BARRICADES, TAXIWAY CLOSURE MARKERS, AND LIGHTED "Xs" HAVE BEEN INTENTIONALLY OMITTED FROM THIS DRAWING FOR CLARITY. THE CONTRACTOR IS TO USE THE SAME LEVEL OF EFFORT AND VOLUME AS PRIOR PHASES TO CLOSE INFRASTRUCTURE. CONTRACTOR TO COORDINATE BARRICADE AND CLOSURE MARKING PLACEMENT WITH AIRPORT STAFF AND RESIDENT PROJECT REPRESENTATIVE.

LIMITS OF WORK

THE LIMITS OF THIS PHASE ARE THE FULL LIMITS OF THE BASE BID PORTION OF THE PROJECT IF ONLY THE BASE BID IS AWARDED AND THE FULL LIMITS OF THE BASE BID AND ADD ALTERNATE PORTION OF THE PROJECT IF THE ADD ALTERNATE IS ALSO AWARDED. THE WORK IS TO BE PERFORMED ON A PULL BACK BASIS WITH ROLLING CLOSURES OR WITH CLOSURE MEASURES AS DIRECTED BY AIRPORT OPERATIONS STAFF AND/OR THE RPR..

WORK SEQUENCING

WORK IN THIS AREA WILL BE PERFORMED SEQUENTIALLY AFTER THE COMPLETION OF PHASE 2 BASE BID (OR PHASE 2 ADD ALT IF AWARDED). PERMANENT PAINT MARKING INSTALLATIONS WILL BE PERFORMED SEQUENTIALLY AFTER THE 30 DAY ASPHALT CURING PERIOD.

0 150' 300'

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CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION
⚠	05/05/2026	AC	TFO	REVISED PER VARIOUS RFI'S AND METHOD OF MEASUREMENT, PHASING CHANGE

PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
PHASE 3 PLAN

SHEET NO. C10 OF
TOTAL: 37
CAD FILE: 12884-C10-PHAS2-ADDALT
DRAWING FILE NO.

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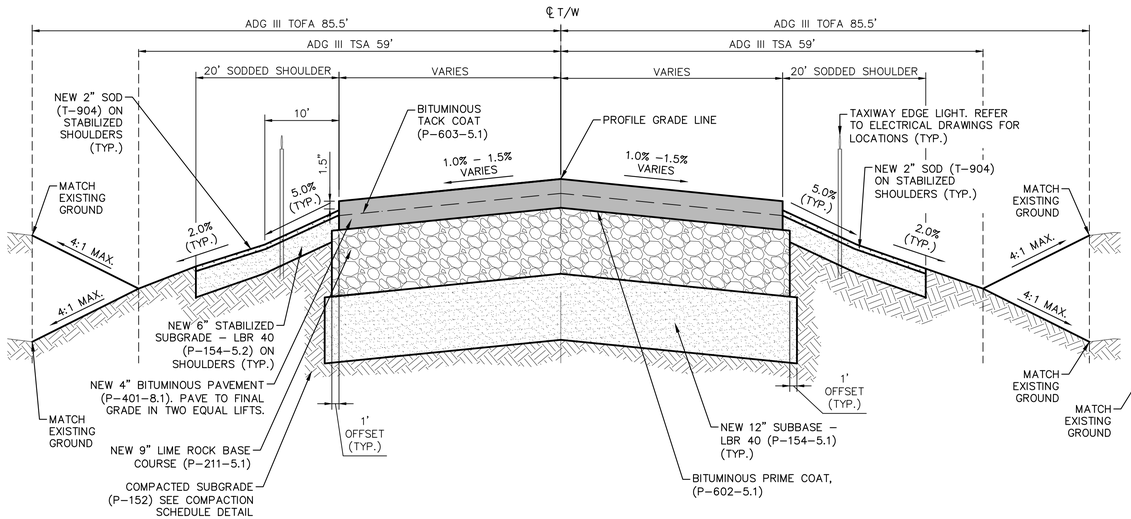
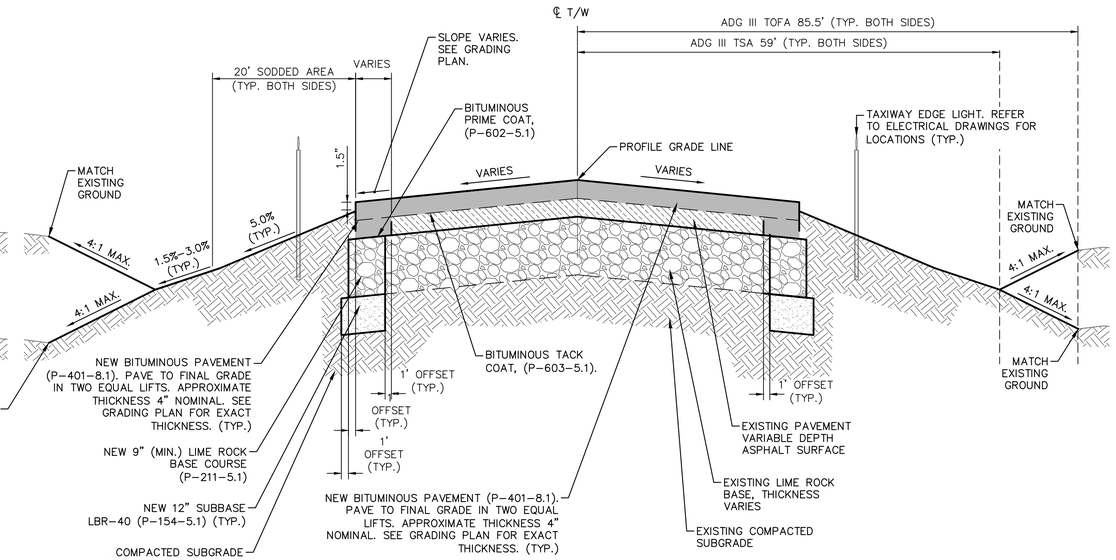


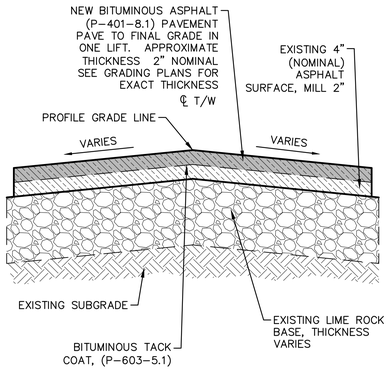
TYPICAL SECTION NO. 1 – FULL DEPTH TAXIWAY CONSTRUCTION

N.T.S.



TYPICAL SECTION NO. 2 – NEW PAVEMENT ADJACENT TO MILL AND OVERLAY

N.T.S.



TYPICAL SECTION NO. 3 – 2" MILL AND 2" OVERLAY

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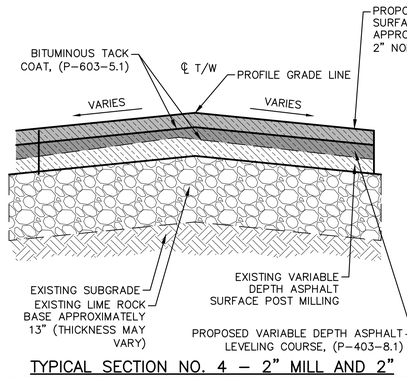
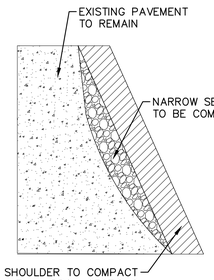


TYPICAL SECTION NO. 4 – 2" MILL AND 2" OVERLAY WITH VARIABLE DEPTH LEVELING COURSE

N.T.S.



TYPICAL SECTION 5 – NARROW COMPACTION SECTIONS

N.T.S.

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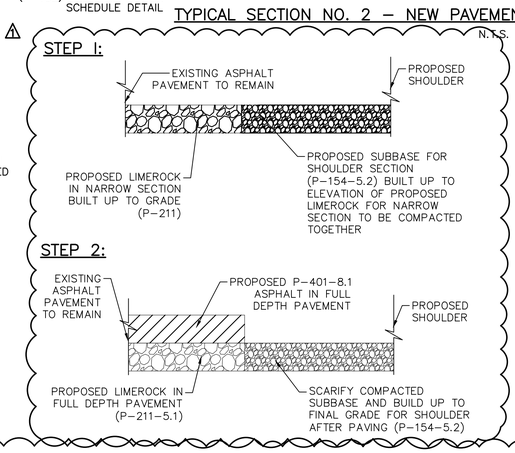
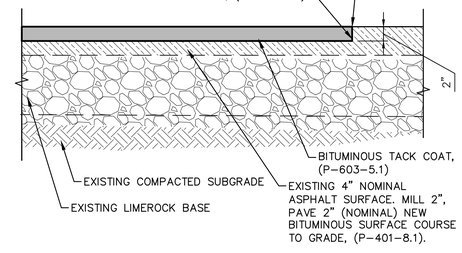
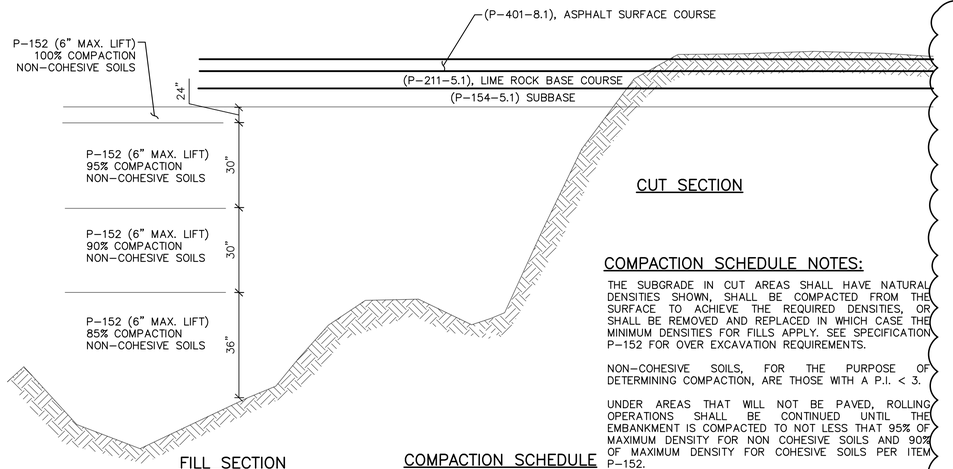




DETAIL 1 – BUTT JOINT OVERLAY TRANSITION TO EXISTING (MILL 2", PAVE 2")

N.T.S.

⚠



CUT SECTION

FILL SECTION

COMPACTION SCHEDULE

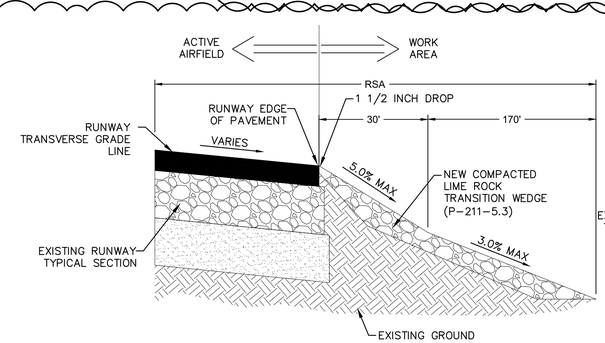
N.T.S.

COMPACTION SCHEDULE NOTES:

THE SUBGRADE IN CUT AREAS SHALL HAVE NATURAL DENSITIES SHOWN, SHALL BE COMPACTED FROM THE SURFACE TO ACHIEVE THE REQUIRED DENSITIES, OR SHALL BE REMOVED AND REPLACED IN WHICH CASE THE MINIMUM DENSITIES FOR FILLS APPLY. SEE SPECIFICATION P-152 FOR OVER EXCAVATION REQUIREMENTS.

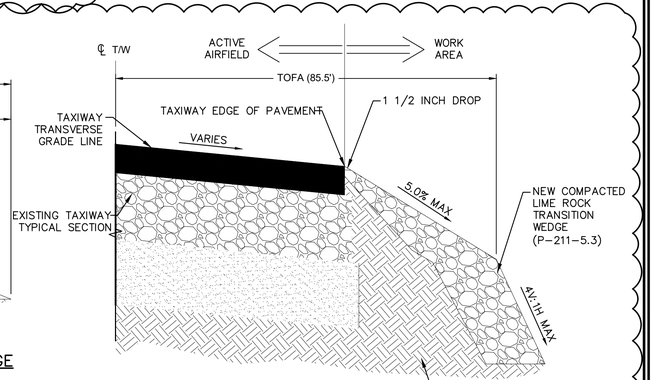
NON-COHESIVE SOILS, FOR THE PURPOSE OF DETERMINING COMPACTION, ARE THOSE WITH A P.I. < 3.

UNDER AREAS THAT WILL NOT BE PAVED, ROLLING OPERATIONS SHALL BE CONTINUED UNTIL THE EMBANKMENT IS COMPACTED TO NOT LESS THAT 95% OF MAXIMUM DENSITY FOR NON COHESIVE SOILS AND 90% OF MAXIMUM DENSITY FOR COHESIVE SOILS PER ITEM P-152.



DETAIL 2 – LIME ROCK TRANSITION WEDGE AT RUNWAY EDGE

N.T.S.



DETAIL 3 – LIME ROCK TRANSITION WEDGE AT TAXIWAY EDGE

N.T.S.

NOTE:

ALL WORK AREAS ADJACENT TO ACTIVE INFRASTRUCTURE SHALL COMPLY WITH THE SLOPE TOLERANCES OUTLINED IN FAA ADVISORY CIRCULAR 150/5300-13B. WHEN PERFORMING WORK WITHIN THE RUNWAY SAFETY AREA (RSA), THE CONTRACTOR SHALL ENSURE THAT TEMPORARY AND FINAL GRADING CONDITIONS MEET ALLOWABLE SLOPE CRITERIA AT ALL TIMES. THE P-211-5.3 LIME ROCK TRANSITION WEDGES WITHIN THE RSA SHALL BE RESTORED TO A MAXIMUM SLOPE OF 5 PERCENT WITHIN THE FIRST 30 FEET FROM THE RUNWAY EDGE UNTIL THE END OF THE RUNWAY SHOULDER, AND A MAXIMUM SLOPE OF 3 PERCENT FOR THE SUBSEQUENT 170 FEET OR UNTIL OUTSIDE OF THE RSA. THESE SLOPE REQUIREMENTS SHALL BE ACHIEVED AT THE END OF EACH WORK SHIFT, AND PRIOR TO REOPENING THE RUNWAY TO AIRCRAFT OPERATIONS

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QUANTUM Electrical Engineering, Inc.
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WEST PALM BEACH, FL 33411
561-210-9224
LICENSE NO. CA30805

BID SET

ENGINEER: THOMAS F. O'DONNELL
REG. No: 62478
DATE:
TEL: 561-840-0825
FAX:

DRAWN BY:	DATE:
ADC	08/28/2025
DESIGNED BY:	SCALE:
KAS	AS NOTED
CHECKED BY:	FIELD BOOK:
TFO	

CITY OF FORT LAUDERDALE
PUBLIC WORKS DEPARTMENT
ENGINEERING & ARCHITECTURE
100 North Andrews Avenue, Fort Lauderdale, Florida 33301

REVISIONS

NO.	DATE	BY	CHK'D	DESCRIPTION
⚠	05/05/2026	AC	TFO	REVISED PLAN TO MEASUREMENT, TRANSITION WEDGE

PROJECT # 12884
TAXIWAY E
REHABILITATION PROJECT
TYPICAL SECTIONS

SHEET NO.	OF
C15	

TOTAL: 37
CAD FILE: 12884-MULTI-TSEC
DRAWING FILE NO.

K:\FTL_AVIATION\044693107 - FXE TW E REHAB DESIGN PHASE\CAD\PLANSHEETS\12884-MULTI-TSEC.DWG

ITEM S-103 PROJECT SURVEY AND STAKEOUT

DESCRIPTION

103-1.1 GENERAL. Under this item, the Contractor shall perform all necessary surveying and project stakeout required to construct all elements of the Project as shown on the Contract Drawings and specified in the Specifications. This shall include but not be limited to stakeout, layout and elevations for pavements, structures, forms and appurtenances as shown and required, consistent with the current practices and shall be performed by a State of Florida licensed professional land surveyor. The Contractor shall keep the Resident Project Representative (RPR) fully informed as to the progress of the stakeout survey.

All survey work shall be provided under the responsible care of a State of Florida licensed professional land surveyor.

MATERIALS

103-2.1 All instruments, equipment, stakes and any other material necessary to perform the work satisfactorily shall be provided by the Contractor. It shall be the Contractor's responsibility to maintain these stakes in their proper position and location at all times.

CONSTRUCTION METHODS

103-3.1 The Contractor shall trim trees, brush, roots and other interfering objects from survey lines in advance of all survey work to permit accurate and unimpeded work by his stakeout survey crews.

The exact position of all work shall be established from control points, baseline transit points or other points of similar nature which are shown on the Contract Drawings and/or modified by the Engineer. Prior to any layout of works to be constructed, the Contractor shall verify the location and accuracy of all control points provided in the plans. Any error, apparent discrepancy or absence in or of data shown or required for accurately accomplishing the stakeout survey shall be referred to the RPR and Engineer for interpretation or furnishing when such is observed or required.

The Contractor shall place two offset stakes or references at each centerline full and half station and at such intermediate locations as the RPR may direct. From computations and measurements made by the Contractor, these stakes shall be clearly and legibly marked with the correct centerline full and half station number, offset and cut or fill so as to permit the establishment of the exact centerline location and elevation during construction. If markings become faded or blurred for any reason, the markings shall be restored by the Contractor at the request of the RPR. He shall locate and place all cut, fill, slope, fine grade or other stakes and points, as the Engineer may direct, for the proper progress of the work. All control points shall be properly guarded and flagged for easy identification.

Drainage structures shall be staked out by the Contractor at the locations and elevations shown on the Contract Drawings or specified by the Engineer through the RPR.

Reference points, baselines, stakes and benchmarks for stockpiles shall be established by the Contractor.

The Contractor shall be responsible for the accuracy of his work and shall maintain all reference points, stakes, etc., throughout the life of the Contract. Damaged or destroyed points, benchmarks or stakes, or any reference points made inaccessible by the progress of the construction, shall be replaced or transferred by the Contractor, with no additional or separate compensation paid to the Contractor. Any of the above points which may be destroyed or damaged shall be transferred by the Contractor before they are damaged or destroyed. All control points shall be referenced by ties to acceptable objects and recorded. Any alterations or revisions in the ties shall be so noted and the information furnished to the RPR immediately. All stakeout survey work shall be referenced to the centerlines shown on the Contract Drawings. All computations necessary to establish the exact position of the work from control points shall be made and preserved by the Contractor. All computations, survey notes and other records shall be made available to the RPR upon request and shall become the property of the ***Airport*** ~~City~~.

The Contractor shall furnish, at his expense, all horizontal and vertical control, all staking and layout of construction work called for on the plans. The RPR, Engineer, and City shall not be responsible for such work. However, the ~~City~~ ***Airport*** and Engineer reserve the right to check all said lines, grades, and measurements with their appointed surveyor. Should the ~~City's~~ ***Airport's*** surveyor detect errors in said lines, grades, and measurements, the contractor shall pay for all said surveying costs and subsequent surveying costs performed to verify correction of errors found in said lines, grades and measurements. Definition of an error shall be a discrepancy of ¼" or more. In the case of a discrepancy between the technical specifications and this defined tolerance, the more severe tolerance shall govern.

During the progress of the construction work, the Contractor will be required to furnish all of the surveying and stakeout incidental to the proper location by line and grade for each phase of the work. For paving and any other operation requiring extreme accuracy, the Contractor will re-stake with pins or other acceptable hubs located directly adjacent to the work at a spacing directed by the RPR.

Any existing stakes, iron pins, survey monuments or other markers defining property lines which may be disturbed during construction shall be properly tied into fixed reference points before being disturbed and accurately reset in their proper position upon completion of the work.

Just prior to completion of the Contract, the Contractor shall reestablish, if necessary, and retie all control points as permanently as possible and to the satisfaction of the RPR.

103-3.2 AS-BUILT SURVEY.

103-3.2.1 POST EXCAVATION SURVEY. Upon the completion of any excavation, the Contractor will perform a topographic survey. A DTM will be submitted to the Engineer for review and determination of pre and post volume of excavation. The submission of the Contractor's DTM is a prerequisite for any earthwork payment.

103-3.2.2 POST EMBANKMENT SURVEY. Upon the completion of any embankment, the Contractor will perform a topographic survey. A DTM will be submitted to the Engineer for review and determination of pre and post volume of embankment. The submission of the Contractor's DTM is a prerequisite for any earthwork payment.

103-3.2.3 POST MILLING/LEVELING SURVEY. Within each phase, after milling and prior to installation of a superior asphalt course, the milled surface shall be reviewed by the

RPR in the presence of the Contractor to determine the acceptability of the milled surface to receive the asphalt surface course. In the opinion of the RPR areas where delamination and/or scabbing is apparent it will be identified and marked on the surface to receive additional milling. Such areas shall be re-milled to a slightly deeper depth to produce a sound and textured surface at no additional expense. In such areas a leveling course shall be installed to permit a subsequent uniform surface course lift to achieve final grade. Leveling material due to delamination and/or scabbing shall be paid for under the Leveling Course Pay Item.

Areas over milled due to the negligence of the Contractor and not as a result of correcting delamination and/or scabbing shall be built up with leveling material. In such areas a leveling course shall be installed to permit a subsequent uniform surface course lift to achieve final grade. In such cases, the grade correction cost shall be borne by the Contractor.

After all leveling material is installed (per phase) the Contractor shall prepare a Post Milling/Leveling survey to the grid provided on the Paving Elevation Plans. The survey will provide elevations to the grid and delineate the limits of leveling due to delamination and/or scabbing. The survey shall be provided to the RPR ~~7 calendar days~~ prior to the installation of the asphalt surface and shall demonstrate that the prepared surface is ready to receive a uniform course(s) that will achieve final grade.

103-3.2.4 FINAL AS-BUILT SURVEY. Upon completion of the work, after Substantial Completion and before Final Acceptance, the Contractor shall supply to the RPR a complete as-built survey of the entire project site including but not limited to electrical elements, drainage structures and features, and utilities. All survey points, including horizontal and vertical control, property corners, section corner and reference (hereinafter referred to as “survey point”) shall be clearly marked and referenced prior to construction. These survey points must be sufficiently referenced so that they can be reestablished after construction if they are disturbed. All survey data shall be state plane coordinates, NAD 83 datum and NAVD 88.

This as-built survey will be a complete topographic and physical features survey of the entire project site surrounded by the limits of construction plus an additional 10’ beyond the limits of construction in all directions. Topographic data will be collected in the same orientation and grid as provided in the plans. If no grid is provided, the Contractor will collect topographic information on a 25’ x 25’ grid with appropriate additional data as needed to asbuilt the work performed. Elevations shall be obtained on all rigid pavement joint intersections and ends. If any work is performed outside the limits of construction for any reason, this limit of survey will be increased to include this area plus 25’. This survey shall be collected, certified by, and performed under the responsible care of a Florida Licensed Professional Land Surveyor as meeting the minimum Technical Standards for topographic surveys as set forth in chapter 21HH-6, Florida Administrative Code. The survey data must be supplied as a signed and sealed drawing (22” x 34” maximum size) at a minimum scale of 1”=50’ and be electronically submitted in AutoCad format, along with the digital terrain model (DTM). Signed and sealed copies of all field notes, sketches and calculations must be submitted concurrently with the as-built survey. Larger scale details shall be provided to clarify any complicated or complex areas. A separate point database file shall be electronically submitted in TXT or ASCII format, with each point on a single row with comma delimited columns with data ordered as follows: point number, northing, easting, elevation, description.

The as-built survey is to be supplied to the RPR for review and approval not more than thirty (30) calendar days after substantial completion for the project has been given. If the acceptable as-built survey is not supplied within the required time, the City reserves the right to perform the required survey and bill the Contractor for this work.

The as-built survey shall include all information needed to complete all project permit (i.e. SWFWMD, etc …) as required by the permits and/or agencies standard requirements. A minimum of six (6) signed and sealed copies of the as-built survey will be supplied to the Engineer and RPR.

103-3.2.5 Datum. All survey data shall be state plane coordinates, North American Datum of 1983 (NAD 83) datum and North American Vertical Datum of 1988 (NAVD 88). Topographic data will be collected in the same orientation and grid as provided in the plans. If no grid is provided, the Contractor will collect topographic information on a 25' x 25' grid with appropriate additional data as needed to asbuilt the work performed. Survey shall be collected, certified by, and performed under the responsible care of a Florida Licensed Professional Land Surveyor as meeting the minimum Technical Standards for topographic surveys as set forth in chapter 21HH-6, Florida Administrative Code. The survey data must be supplied as a signed and sealed drawing (22" x 34" maximum size) at a minimum scale of 1"=50' and be electronically submitted in AutoCad format, along with the digital terrain model (DTM). Signed and sealed copies of all field notes, sketches and calculations must be submitted concurrently with the as-built survey. Larger scale details shall be provided to clarify any complicated or complex areas. A separate point database file shall be electronically submitted in TXT or ASCII format, with each point on a single row with comma delimited columns with data ordered as follows: point number, northing, easting, elevation, description.

METHOD OF MEASUREMENT

1

103-4.1 Payment will be made at the lump sum price bid for this item.

BASIS OF PAYMENT

103-5.1 The lump sum price bid shall include the cost of furnishing all labor, equipment, instruments and all other material necessary to satisfactorily complete the Project stakeout and as built survey. Seventy-five percent (75%) of this item will be paid based on the percentage of work paid for a month vs. the total project cost. The remaining twenty-five percent (25%) will be paid after the as-built survey has been given the RPR and approved.

This item will not be increased or decreased base on changes to the total contract amount.

Payment will be made under:

Item S-103-5.1 V2	Project Survey and Stakeout – per Lump Sum
Item S-103-5.1 V2 ALT1	Project Survey and Stakeout – per Lump Sum

END OF ITEM S-103

NO.	DATE	BY	CHK'D	DECRIPTION
1	05/05/2026	TFO	TFO	REVISED ASBUILT SURVEY

ITEM P-101 PREPARATION/REMOVAL OF EXISTING PAVEMENTS

DESCRIPTION

101-1 This item shall consist of preparation of existing pavement surfaces for overlay, surface treatments, removal of existing pavement, ***hauling and disposal and stockpiling of demolished material*** and other miscellaneous items. The work shall be accomplished in accordance with these specifications and the applicable plans.

All material removed from the work areas are property of the airport. The contractor is to coordinate with the airport where to stockpile the removed materials on site or in an off site location as requested by the owner. The hauling and stockpiling process is to be incidental to the unit price of the removal of the material and is to be conducted at no additional cost to the owner.

EQUIPMENT AND MATERIALS

101-2 All equipment and materials shall be specified here and in the following paragraphs or approved by the Resident Project Representative (RPR). The equipment shall not cause damage to the pavement to remain in place.

CONSTRUCTION

101-3.1 Removal of existing pavement.

The Contractor's removal operation shall be controlled to not damage adjacent pavement structure, and base material, cables, utility ducts, pipelines, or drainage structures which are to remain under the pavement.

~~**a. Concrete pavement removal.** Full depth saw cuts shall be made perpendicular to the slab surface. The Contractor shall saw through the full depth of the slab including any dowels at the joint, removing the pavement and installing new dowels as shown on the plans and per the specifications. Where the perimeter of the removal limits is not located on the joint and there are no dowels present, the perimeter shall be saw cut the full depth of the pavement. The pavement inside the saw cut shall be removed by methods which will not cause distress in the pavement which is to remain in place. If the material is to be wasted on the airport site, it shall be reduced to a maximum size of **one cubic foot**. Concrete slabs that are damaged by under breaking shall be repaired or removed and replaced as directed by the RPR.~~

~~The edge of existing concrete pavement against which new pavement abuts shall be protected from damage at all times. Spall and underbreak repair shall be in accordance with the plans. Any underlaying material that is to remain in place, shall be recompacted and/or replaced as shown on the plans. Adjacent areas damaged during repair shall be repaired or replaced at the Contractor's expense.~~

b. Asphalt pavement removal. Asphalt pavement to be removed shall be cut to the ***depths at the locations shown on the plans. The underlying material adjacent to the edge of and under the existing pavement which is to remain in place shall be protected from damage***

or disturbance during removal operations and until placement of new pavement or shaped as shown on the drawings or as directed by the RPR. Any material under the portion of the pavement to remain in place, which is disturbed or loses its compaction shall be carefully removed and replaced with P-610 Structural Portland Cement Concrete at no additional cost to the Owner. The Contractor's removal operation shall not cause damage to cables, utility ducts, pipelines, or drainage structures under the pavement. Any damage shall be repaired at the Contractor's expense. ~~full depth of the asphalt pavement around the perimeter of the area to be removed.~~ If the material is to be wasted on the airport site it shall be broken to a maximum size of **3** inches(~~mm~~).

c. Repair or removal of Base, Subbase, and/or Subgrade. All failed material including surface, base course, subbase course, and subgrade shall be removed and repaired as shown on the plans or as directed by the RPR. Materials and methods of construction shall comply with the applicable sections of these specifications. Any damage caused by Contractor's removal process shall be repaired at the Contractor's expense.

~~***d. General. In all cases of full depth pavement removal, the Contractor shall protect and preserve the existing underdrain pipes and clean outs that are to remain. There shall be no additional cost for protecting and preserving the existing underdrain system to remain.***~~

101-3.2 Preparation of joints and cracks prior to overlay/surface treatment. Remove all vegetation and debris from cracks to a minimum depth of 1 inch (~~25 mm~~). If extensive vegetation exists, treat the specific area with a concentrated solution of a water-based herbicide approved by the RPR. Fill all cracks greater than 1/4 inch ~~(6 mm)~~ wide) with a crack sealant per ASTM D6690. The crack sealant, preparation, and application shall be compatible with the surface treatment/overlay to be used. To minimize contamination of the asphalt with the crack sealant, underfill the crack sealant a minimum of 1/8 inch (~~3 mm~~), not to exceed ¼ inch (~~6 mm~~). Any excess joint or crack sealer shall be removed from the pavement surface. ***There will be no separate payment for crack sealant, all crack sealant will be incidental to the Pavement Milling Pay Item.***

101-3.3 Removal of Foreign Substances/contaminates prior to overlay *or* remarking . Removal of foreign substances/contaminates from existing pavement that will affect the bond of the new treatment shall consist of removal of rubber, fuel spills, oil, crack sealer, ***refer to Item P-620 for paint removal*** ~~at least 90% of paint~~, and other foreign substances from the surface of the pavement. Areas that require removal are designated on the plans and as directed by the RPR in the field during construction.

High-pressure water may be used. ~~If chemicals are used, they shall comply with the state's environmental protection regulations~~. Removal methods used shall not cause major damage to the pavement, or to any structure or utility within or adjacent to the work area. Major damage is defined as changing the properties of the pavement, removal of asphalt causing the aggregate to ravel, or removing pavement over 1/8 inch (~~3 mm~~) deep. If it is deemed by the RPR that damage to the existing pavement is caused by operational error, such as permitting the application method to dwell in one location for too long, the Contractor shall repair the damaged area without compensation and as directed by the RPR.

Removal of foreign substances shall not proceed until approved by the RPR. Water used for high-pressure water equipment shall be provided by the Contractor at the Contractor's expense. No material shall be deposited on the pavement shoulders. All wastes shall be disposed of ***off site*** in areas indicated in this specification ~~or shown on the plans~~.

101-3.4 Concrete spall or failed asphaltic concrete pavement repair.

~~**a. Repair of concrete spalls in areas to be overlaid with asphalt.** The Contractor shall repair all spalled concrete as shown on the plans or as directed by the RPR. The perimeter of the repair shall be saw cut a minimum of 2 inches (50 mm) outside the affected area and 2 inches (50 mm) deep. The deteriorated material shall be removed to a depth where the existing material is firm or cannot be easily removed with a geologist pick. The removed area shall be filled with asphalt mixture with aggregate sized appropriately for the depth of the patch. The material shall be compacted with equipment approved by the RPR until the material is dense and no movement or marks are visible. The material shall not be placed in lifts over 4 inches (100 mm) in depth. This method of repair applies only to pavement to be overlaid.~~

b. Asphalt pavement repair. The Contractor shall repair all spalled ***asphalt*** concrete as shown on the plans or as directed by the RPR. The failed areas shall be removed as specified in paragraph 101-3.1b. All failed material including surface, base course, subbase course, and subgrade shall be removed. Materials and methods of construction shall comply with the applicable sections of these specifications.

101-3.5 Cold milling. Milling shall be performed with a power-operated milling machine or grinder, capable of producing a uniform finished surface. The milling machine or grinder shall operate without tearing or gouging the underlaying surface. The milling machine or grinder shall be equipped with grade and slope controls, and a positive means of dust control. All millings shall be removed and disposed off Airport. If the Contractor mills or grinds deeper or wider than the plans specify, the Contractor shall replace the material removed with new material at the Contractor's Expense. ***All existing utility structures within the milling area shall be preserved and protected throughout construction. Any damage to the exiting utility structures shall be repaired at the cost of the Contractor. Where the limits of milled pavements abut pavement to remain, the contractor shall neatly sawcut, vertically to the specified depth of overlay in accordance with the details on the plans. In areas that become overmilled due to poor quality control, the Contractor fill with P-401 at no additional cost to the Owner.***

~~Preparation for temporary asphalt transition wedges between phases and their subsequent removal are to be paid for by the Max 2" Milling Pay Item.~~

1

a. Patching. The milling machine shall be capable of cutting a vertical edge without chipping or spalling the edges of the remaining pavement and it shall have a positive method of controlling the depth of cut. ~~The RPR shall layout the area to be milled with a straightedge in increments of 1-foot (30 cm) widths. The area to be milled shall cover only the failed area.~~ Any excessive area that is milled because the Contractor doesn't have the appropriate milling machine, or areas that are damaged because of his negligence, shall be repaired by the Contractor at the Contractor's Expense.

b. Profiling, grade correction, or surface correction. The milling machine shall have a minimum width of 7 feet ~~([2] m)~~ and it shall be equipped with electronic grade control devices that will cut the surface to the grade specified. The tolerances shall be maintained within +0 inch and -1/4 inch ~~(+0 mm and -6mm)~~ of the specified grade. The machine must cut vertical edges and have a positive method of dust control. The machine must have the ability to remove the millings or cuttings from the pavement and load them into a truck. All millings shall be removed and disposed of off the airport.

At the completion of milling, the RPR shall review the milled surface for scabbing or excessive smoothness. Such areas shall be scarified or re-mill to a slightly deeper depth to produce a sound and textured surface at no additional expense.

c. Clean-up. The Contractor shall sweep the milled surface daily and immediately after the milling until all residual materials are removed from the pavement surface. Prior to paving, the Contractor shall wet down the milled pavement and thoroughly sweep and/or blow the surface to remove loose residual material. Waste materials shall be collected and removed from the pavement surface and adjacent areas by sweeping or vacuuming. Waste materials shall be removed and disposed off Airport property

101-3.6. Preparation of asphalt pavement surfaces prior to surface treatment. Existing asphalt pavements to be treated with a surface treatment shall be prepared as follows:

a. Patch asphalt pavement surfaces that have been softened by petroleum derivatives or have failed due to any other cause. Remove damaged pavement to the full depth of the damage and replace with new asphalt pavement similar to that of the existing pavement in accordance with paragraph 101-3.4b.

b. Repair joints and cracks in accordance with paragraph 101-3.2.

c. Remove oil or grease that has not penetrated the asphalt pavement by scrubbing with a detergent and washing thoroughly with clean water. After cleaning, treat these areas with an oil spot primer.

d. Clean pavement surface immediately prior to placing the surface treatment so that it is free of dust, dirt, grease, vegetation, oil or any type of objectionable surface film.

101-3.7 Maintenance. The Contractor shall perform all maintenance work necessary to keep the pavement in a satisfactory condition until the full section is complete and accepted by the RPR. The surface shall be kept clean and free from foreign material. The pavement shall be properly drained at all times. If cleaning is necessary or if the pavement becomes disturbed, any work repairs necessary shall be performed at the Contractor's expense.

~~**101-3.8 Preparation of Joints in Rigid Pavement prior to resealing.** Prior to application of sealant material, clean and dry the joints of all scale, dirt, dust, old sealant, curing compound, moisture and other foreign matter. The Contractor shall demonstrate, in the presence of the RPR, that the method used cleans the joint and does not damage the joint.~~

~~**101-3.8.1 Removal of Existing Joint Sealant**. All existing joint sealants will be removed by plowing or use of hand tools. Any remaining sealant and or debris will be removed by use of wire brushes or other tools as necessary. Resaw joints removing no more than 1/16 inch (2 mm) from each joint face. Immediately after sawing, flush out joint with water and other tools as necessary to completely remove the slurry.~~

~~**101-3.8.2 Cleaning prior to sealing**. Immediately before sealing, joints shall be cleaned by removing any remaining laitance and other foreign material. Allow sufficient time to dry out joints prior to sealing. Joint surfaces will be surface-dry prior to installation of sealant.~~

~~**101-3.8.3 Joint sealant.** Joint material and installation will be in accordance with Item P-605~~

~~**101-3.9 Preparation of Cracks in Flexible Pavement prior to sealing.** Prior to application of sealant material, clean and dry the joints of all scale, dirt, dust, old sealant, curing compound, moisture and other foreign matter. The Contractor shall demonstrate, in the presence of the RPR, that the method used cleans the cracks and does not damage the pavement.~~

~~**101-3.9.1 Preparation of Crack**. Widen crack with router random by removing a minimum of 1/16 inch (2 mm) from each side of crack. Immediately before sealing, cracks will be blown out with a hot air lance combined with oil and water-free compressed air.~~

~~**101-3.9.2 Removal of Existing Crack Sealant**. Existing sealants will be removed b routing. Following routing any remaining debris will be removed by use of a hot lance combined with oil and water-free compressed air.~~

~~**101-3.9.3 Crack Sealant.** Crack sealant material and installation will be in accordance with **[** Item P-605 **]**.~~

101-3.9.4 Removal of Pipe and other Buried Structures.

a. Removal of Existing Pipe Material. Remove the types of pipe as indicated on the plans. The pipe material shall be legally disposed of off-site in a timely manner following removal. Trenches shall be backfilled with material equal to or better in quality than adjacent embankment. Trenches under paved areas must be compacted to 95% of ASTM D1557 D698.

~~**b. Removal of Inlets/Manholes.** Where indicated on the plans or as directed by the RPR, inlets and/or manholes shall be removed and legally disposed of off-site in a timely fashion after removal. Excavations after removal shall be backfilled with material equal or better in quality than adjacent embankment. When under paved areas must be compacted to 95% of ASTM D1557, when outside of paved areas must be compacted to 95% of ASTM D698.~~

Method of Measurement

~~**[101-4.1 Lump sum**. No separate measurement for payment will be made. The work covered by this section shall be considered as a subsidiary obligation of the Contractor and covered under the other contract items. **]**~~

101-4.1 Pavement removal. The unit of measurement for ***full depth*** pavement removal shall be the number of square yards ~~(square meters)~~ removed by the Contractor. Any pavement removed outside the limits of removal because the pavement was damaged by negligence on the part of the Contractor shall not be included in the measurement for payment. No direct measurement or payment shall be made for saw cutting. Saw cutting shall be incidental to pavement removal. Dowel bar installation shall be incidental to pavement removal.

~~**101-4.2 Joint and crack repair**. The unit of measurement for joint and crack repair shall be the linear foot (meter) of joint ***or crack***.~~

~~**101-4.3 Removal of Foreign Substances/contaminates**. The unit of measurement for foreign Substances/contaminates removal shall be the square foot (meter).~~

~~**101-4.4 Spalled and failed asphalt pavement repair.** The unit of measure for failed asphalt pavement repair shall be square foot (square meter).~~ 1

~~**101-4.5 Concrete Spall Repair.** The unit of measure for concrete spall repair shall be the number of square feet (square meter). The location and average depth of the patch shall be determined and agreed upon by the RPR and the Contractor.~~

101-4.6 Cold milling. The unit of measure for cold milling shall be ***specified depth*** ~~inches~~ of milling per square yard ~~(square meter)~~. The location and average depth of the cold milling shall be as shown on the plans ***and confirmed in the field by the RPR prior to the work beginning***. If the initial cut does not correct the condition, the Contractor shall re-mill the area and will be paid for the total depth of milling. ***At the completion of milling, the RPR and Engineer shall review the milled surface for scabbing or excessive smoothness. Such areas shall be re-mill to a slightly deeper depth to produce a sound and textured surface at no additional expense.***

~~**101-4.7 Removal of Pipe Material *and other Buried Structures*.** Remove the types of pipe as indicated on the plans. The pipe material shall be legally disposed of off-site in a timely manner following removal. Trenches shall be backfilled with material equal to or better in quality than adjacent embankment. Trenches under paved areas must be compacted to 95% of ASTM D1557.~~

BASIS OF PAYMENT

101-5.1 Payment. Payment shall be made at contract unit price for the unit of measurement as specified above. This price shall be full compensation for furnishing all materials and for all preparation, hauling, and placing of the material and for all labor, equipment, tools, and incidentals necessary to complete this item. ***Full depth pavement removal thicknesses shown on the plans range from 12.5" to 14.5". Actual thickness may vary. The Contractor shall account for varying full depths in the unit cost of the bid. No additional compensation shall be made to the Contractor for full depth pavement removal for pavements having thicknesses greater than shown on the plans. Electrical cans and conduit (with or without encasement) within the limits of full depth pavement removal shall be considered incidental. Pavement tie-ins as shown on the contract drawings are considered incidental to full depth pavement removal.***

101-5.2 Bituminous Pavement Cold Milling. Payment shall be made at contract unit price per square yard of bituminous pavement milling. This price shall be full compensation for furnishing all materials and for all preparation, hauling, and placing of the material and for all labor, equipment, tools, and incidentals necessary to complete this item including off-site disposal of materials.

An As-Built survey taken by a Professionally Licensed Surveyor of the milled surface must be provided after the milling is completed to receive payment for the milling.

The milling required for the installation and removal of temporary asphalt transitions ramps shall not be measured separately and shall be considered incidental to the overall paving operation.

101-5.4 Sawcutting. All sawcutting alongside areas to be milled or fully removed is to be considered incidental to those pay items. There will be no additional payment for sawcutting.

Item P-101-5.1 V2	***Full Depth Asphalt Pavement Removal – per Square Yard***
Item P-101-5.1 V2 ALT1	***Full Depth Asphalt Pavement Removal – per Square Yard***
Item P-101-5.2 V2	***Bituminous Pavement Milling (up to 2" deep) – per Square Yard***
Item P-101-5.2 V2 ALT1	***Bituminous Pavement Milling (up to 2" deep) – per Square Yard***

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

Advisory Circulars (AC)

AC 150/5380-6 Guidelines and Procedures for Maintenance of Airport Pavements.

ASTM International (ASTM)

ASTM D6690 Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements

END OF ITEM P-101

NO.	DATE	BY	CHK'D	DECRIPTION
1	05/05/2026	TFO	TFO	REVISED PIPE DEMO, METHOD OF MEASUREMENT, BASIS OF PAYMENT.

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ITEM P-154 SUBBASE COURSE

DESCRIPTION

154-1.1 This item shall consist of a subbase course composed of granular materials constructed on a prepared subgrade or underlying course in accordance with these specifications, and in conformity with the dimensions and typical cross-section shown on the plans.

MATERIALS

154-2.1 Materials. The subbase material shall consist of hard durable particles or fragments of granular aggregates The material may be obtained from ***blending in situ materials with P-211 Lime Rock,*** gravel pits, stockpiles, or may be produced from a crushing and screening plant with proper blending. The materials from these sources shall meet the requirements for gradation, quality, and consistency. The material shall be free from vegetative matter, excessive amounts of clay, and other objectionable substances; uniformly blended; and be capable of being compacted into a dense, stable subbase.

The subbase material shall exhibit a California Bearing Ratio (CBR) value of at least ~~20~~ ***32 Lime Rock Bearing Ratio (LBR) value of 40)*** when tested in accordance with ASTM D1883 ***(FM 5-515)***. The subbase material shall meet the gradation specified in the table below.

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Subbase Gradation Requirements

Sieve designation	Percentage by weight passing sieves		Contractor's Final Gradation	Job Control Grading Band Tolerances[1] (Percent)
	Subbase Aggregate	~~Recycled pavement (RAP or RCO)~~		
3 inch (75 mm)	100			0
1 1/2 inch (37.5 mm)		~~100~~		0
3/4 inch (19.0 mm)	70-100	~~70-100~~		±10
No. 10 (2.00 mm)	20-100	~~20-100~~		±10
No. 40 (425 µm)	5-60	~~5-60~~		±5
No. 200 (75 µm)	0-15	~~[0-15]~~		±5

[1]The "Job Control Grading Band Tolerances" shall be applied to "Contractor's Final Gradation" to establish the job control grading band.

The portion of the material passing the No. 40 (425 µm) sieve shall have a liquid limit of not more than 25 and a plasticity index of not more than six (6) when tested in accordance with ASTM D4318.

154-2.2 Sampling and testing.

a. Aggregate base materials. Samples shall be taken by the Contractor per ASTM D75 for initial aggregate subbase requirements and gradation. Material shall meet the requirements in paragraphs 154-2.1. The Contractor shall submit to the Resident Project Representative (RPR) certified test results showing that the aggregate meets the Material requirements of this section. Tests shall be representative of the material to be used for the project.

b. Gradation requirements. The Contractor shall take at least one aggregate subbase sample per day in the presence of the RPR to check the final gradation. Samples shall be taken from the in-place, un-compacted material at sampling locations determined by the RPR on a random basis per ASTM D3665. Sampling shall be per ASTM D75 and tested per ASTM C136 and ASTM C117. Results shall be furnished to the RPR by the Contractor each day during construction. Material shall meet the requirements in paragraph 154-2.1.

154-2.3 Separation Geotextile. Not used

154-2.4 Geogrid. Not used.

CONSTRUCTION METHODS

154-3.1 General. The subbase course shall be placed where designated on the plans or as directed by the RPR. The material shall be shaped and thoroughly compacted within the tolerances specified.

Granular subbases which, due to grain sizes or shapes, are not sufficiently stable to support the construction equipment without movement, shall be mechanically modified to the depth necessary to provide stability as directed by the RPR. The mechanical modification shall include the addition of a fine-grained medium to bind the particles of the subbase material sufficiently to furnish a bearing strength, so the course will not deform under construction equipment traffic.

154-3.2 Preparing underlying course. Prior to constructing the subbase course, clean the underlying course or subgrade of all foreign substances. The surface of the underlying course or subgrade shall meet specified compaction and surface tolerances in accordance with Item P-152. Correct ruts, soft yielding spots in the underlying courses, and subgrade areas having inadequate compaction and/or deviations of the surface from the specified requirements, by loosening and removing soft or unsatisfactory material, adding approved material, reshaping to line and grade, and recompacting to specified density requirements. For cohesionless underlying courses or subgrades containing sands or gravels, as defined in ASTM D2487, the surface shall be stabilized prior to placement of the overlying course by mixing the overlying course material into the underlying course, and compacting by approved methods. The stabilized material shall be considered as part of the underlying course and shall meet all requirements for the underlying course. The finished underlying course shall not be disturbed by traffic or other operations and shall be maintained in a satisfactory condition until the overlying course is placed. The underlying course shall be checked and accepted by the RPR before placing and spreading operations are started.

To protect the subgrade and to ensure proper drainage, spreading of the subbase shall begin along the centerline of the pavement on a crowned section or on the high side of pavements with a one-way slope.

154-3.3 Control Strip. The first half-day of subbase construction shall be considered as a control strip for the Contractor to demonstrate, in the presence of the RPR, that the materials, equipment, and construction processes meet the requirements of this specification. The sequence and manner of rolling necessary to obtain specified density requirements shall be determined. The maximum compacted thickness may be increased to a maximum of 12 inches (300 mm) upon the Contractor's demonstration that approved equipment and operations will uniformly compact the lift to the specified density. The RPR must witness this demonstration and approve the lift thickness prior to full production.

Control strips that do not meet specification requirements shall be reworked, re-compacted, or removed and replaced at the Contractor's expense. Full operations shall not begin until the control strip has been accepted by the RPR. The Contractor shall use the same equipment, materials, and construction methods for the remainder of construction, unless adjustments made by the Contractor are approved in advance by the RPR.

154-3.4 Placement. The material shall be placed and spread on the prepared underlying layer by spreader boxes or other devices as approved by the RPR, to a uniform thickness and width. The equipment shall have positive thickness controls to minimize the need for additional manipulation of the material. Dumping from vehicles that require re-handling shall not be permitted. Hauling over the uncompacted base course shall not be permitted. The material shall not be placed when the underlying course is soft or yielding.

The material shall meet gradation and moisture requirements prior to compaction. Material may be free-draining and the minimum moisture content shall be established for placement and compaction of the material.

The material shall be constructed in lifts as established in the control strip, but not less than 4 inches (100 mm) nor more than 12 inches (300 mm) of compacted thickness.

When more than one lift is required to establish the layer thickness shown on the plans, the construction procedure described here shall apply to each lift. No lift shall be covered by subsequent lifts until tests verify that compaction requirements have been met. The Contractor shall rework, re-compact and retest any material placed which does not meet the specifications.

154-3.5 Compaction. The subbase material shall be compacted, adjusting moisture as necessary, to be within ±2% of optimum moisture. The field density of the compacted material shall be at least 100% of the maximum density as specified in paragraph 154-3.9a. If the specified density is not attained, the area of the lift represented by the test shall be reworked and/or re-compacted and additional random tests made. This procedure shall be followed until the specified density is reached. Maximum density refers to maximum dry density at optimum moisture content unless otherwise specified.

The compaction of the P-154 material alongside the P-211 material in the sections referenced in the narrow compaction detail is to be considered incidental to the P-154 for Stabilized Shoulders. The subsequent scarifying and addition of remaining P-154 required to complete the section of P-154 Stabilized Shoulders is also to be included in the cost of P-154 for Stabilized Shoulders.

154-3.6 Weather limitation. Material shall not be placed unless the ambient air temperature is at least 40°F (4°C) and rising. Work on subbase course shall not be conducted when the subgrade is wet or frozen or the subbase material contains frozen material.

154-3.7 Maintenance. No base or surface course shall be placed on the subbase until the subbase has been accepted by the RPR. The Contractor shall maintain the completed course in satisfactory condition throughout placement of subsequent layers. When material has been exposed to excessive rain, snow, or freeze-thaw conditions, the Contractor shall verify that materials still meet all specification requirements before placement of additional material. Equipment may be routed over completed sections of subbase course, provided the equipment does not damage the subbase course and the equipment is routed over the full width of the completed subbase course. Any damage to the subbase course from routing equipment over the subbase course shall be repaired by the Contractor at their expense.

154-3.8 Surface tolerance. In those areas on which a subbase or base course is to be placed, the surface shall be tested for smoothness and accuracy of grade and crown. Any portion lacking the required smoothness or failing in accuracy of grade or crown shall be scarified to a depth of at least 3 inches (75 mm), reshaped and re-compacted to grade until the required smoothness and accuracy are obtained and approved by the RPR. The Contractor shall perform all final smoothness and grade checks in the presence of the RPR. Any deviation in surface tolerances shall be corrected by the Contractor at the Contractor's expense.

a. Smoothness. The finished surface shall not vary more than +/- ½ inch (12 mm) when tested with a 12-foot (3.7-m) straightedge applied parallel with and at right angles to the centerline. The straightedge shall be moved continuously forward at half the length of the 12-foot (3.7-m) straightedge for the full length of each line on a 50-foot (15-m) grid.

b. Grade. The grade and crown shall be measured on a 50-foot (15-m) grid and shall be within +/-0.05 feet (15 mm) of the specified grade.

154-3.9 Acceptance sampling and testing. The aggregate base course shall be accepted for density and thickness on an area basis. Two tests shall be made for density and thickness for each 1,200 square yards ~~(1000 square meters)~~. Sampling locations will be determined on a random basis per ASTM D3665.

a. Density. ~~The RPR shall perform all density tests~~ ***The RPR shall perform density tests as needed for QA. The Contractor shall perform density tests every 1,000 SY for QC.***

Each area shall be accepted for density when the field density is at least 100% of the maximum density of laboratory specimens compacted and tested per ASTM **D698 or D1557**. The in-place field density shall be determined per ASTM **D6938**. If the specified density is not attained, the area represented by the failed test shall be reworked and/or recompacted and two additional random tests made. This procedure shall be followed until the specified density is reached. Maximum density refers to maximum dry density at optimum moisture content unless otherwise specified.

When the material has greater than 30 percent retained on the ¾ inch (19.0 mm) sieve, use methods in ASTM D1557 and the procedures in AASHTO T180 Annex for correction of maximum dry density and optimum moisture for oversized particles.

b. Thickness. The thickness of the base course shall be within +0 and -1/2 inch (12 mm) of the specified thickness as determined by depth tests taken by the Contractor in the presence of the RPR for each area. Where the thickness is deficient by more than 1/2-inch (12 mm), the Contractor shall correct such areas at no additional cost by scarifying to a depth of at least 3 inches (75 mm), adding new material of proper gradation, and the material shall be blended and recompacted to grade. The Contractor shall replace, at his expense, base material where depth tests have been taken.

METHOD OF MEASUREMENT

154-4.1 Subbase course shall be measured by the number of square yards of subbase course material placed and compacted to specified density and plan thickness requirements in the completed course. The quantity of subbase course material shall be measured in final position based upon survey of the completed work computed from elevations to the nearest 0.01 foot. On individual depth measurements, thicknesses more than 1/2 inch (12 mm) in excess of that shown on the plans shall be considered as the specified thickness plus 1/2 inch (12 mm) in computing the yardage for payment. Subbase materials shall not be included in any other excavation quantities.

154-4.2 Contractor will perform a detailed survey, after the subbase has been installed, with a professionally licensed surveyor and supply it to the RPR and Engineer. Survey will be submitted in digital terrain model (DTM) format. The survey is a requirement to receive payment for subbase.

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BASIS OF PAYMENT

154-5.1 Payment shall be made at the contract unit price per square yard for subbase course. This price shall be full compensation for furnishing all materials; for all preparation, hauling, and placing of these materials; and for all labor, equipment, tools, ***surveying,*** and incidentals necessary to complete the item.

Payment will be made under:

Item P-154-5.1 V2	Subbase Course, 12” Thick - per Square Yard
Item P-154-5.1 V2 ALT1	Subbase Course, 12” Thick - per Square Yard
Item P-154-5.2 V2	Subbase Course, 6” Thick - per Square Yard
Item P-154-5.2 V2 ALT1	Subbase Course, 6” Thick - per Square Yard

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM C117	Standard Test Method for Materials Finer than 75-µm (No. 200) Sieve in Mineral Aggregates by Washing
ASTM C136	Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates
ASTM D75	Standard Practice for Sampling Aggregates
ASTM D698	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft^3 (600 kN-m/m^3))
ASTM D1556	Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method
ASTM D1557	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft^3 (2,700 kN-m/m^3))
ASTM D2487	Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System)
ASTM D4253	Standard Test Methods for Maximum Index Density and Unit Weight of Soils Using a Vibratory Table
ASTM D4759	Practice for Determining the Specification Conformance of Geosynthetics
ASTM D4318	Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils
ASTM D6938	Standard Test Method for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)

American Association of State Highway and Transportation Officials (AASHTO)

M 288	Geotextile Specification for Highway Applications

Florida Department of Transportation (FDOT) Florida Sampling and Testing Methods (FSTM)

FM 5-515	***Florida Method of Test for Lime Rock Bearing Ratio***

END OF ITEM P-154

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NO.	DATE	BY	CHK'D	DECRIPTION
1	05/05/2026	AC	TFO	REVISED CBR AND METHOD OF MEASUREMENT.

ITEM P-211 LIME ROCK BASE COURSE

DESCRIPTION

211-1.1 This item shall consist of a base course composed of lime rock constructed on the prepared underlying course per these specifications and shall conform to the dimensions and typical cross-section shown on the plans.

MATERIALS

211-2.1 Materials. The lime rock base course material shall consist of fossiliferous limestone of uniform quality. The material shall not contain hard or flinty pieces that will cause a rough surface containing pits and pockets. The rock shall show no tendency to "air slake" or undergo chemical change when exposed to the weather. ***Lime rock material shall not contain chert or other extremely hard pieces, or lumps, balls or pockets of sand or clay material in sufficient quantity as to be detrimental to the proper bonding, finishing or strength of the lime rock base course.*** The material when watered and rolled shall be capable of compacting to a dense and well-bonded base.

Lime Rock Base Course Material Properties[2]

	Lime Rock	Oolitic	Non-Oolitic
Carbonates of calcium and magnesium[1]	95% minimum	70% minimum	75% minimum
Oxides of iron and aluminum[1]	Less than or equal to 2%	Less than or equal to 2%	Less than or equal to 2%
Liquid limit	Not greater than 35	NA	Not greater than 35
Plasticity Index	Not greater than 6	NA	Not greater than 6
Organic or foreign matter	Not more than 0.5%	Not more than 0.5%	Not more than 0.5%
Lime Bearing Ratio (LBR)[3] at 0 to +1.5% optimum	125	125	125

[1] The combined amount of carbonates, oxides, and silica shall be at least 97%. The material shall be non-plastic.

[2] The chemical analysis of lime rock shall consist of determining the insoluble silica, iron oxide, and alumina by solution of the sample in hydrochloric (HCl) acid, evaporating, dehydrating, re-dissolving the residue, and neutralizing with ammonium hydroxide, filtering, washing, and igniting the residue lime rock. The difference between the percentage of insoluble matter and 100% is reported as carbonates of calcium and magnesium.

[3] FM 5-515, Florida Method of Test for Lime Rock Bearing Ratio

Lime Rock Base Course Gradation

Sieve Designation (square openings)	Percentage by Weight Passing Sieves
3-1/2 inch (87.5 mm)	100
3/4 inch (19.0 mm)	50-100

All fine material shall consist entirely of dust of fracture (fine portion passing the No. 10 (2.00 mm) sieve). ***The maximum individual dimension shall not exceed 6 inches. All crushing or break-up, which is necessary in order to meet these gradation requirements, shall be done before the lime rock is placed in the base course.***

211-2.2 Sampling and Testing.

a. Aggregate base materials. The Contractor shall take samples of the aggregate base in accordance with ASTM D75 to verify initial aggregate base requirements and gradation. Material shall meet the requirements in paragraph 211-2.1. This sampling and testing will be the basis for approval of the aggregate base quality requirements.

b. Gradation requirements. The Contractor shall take at least two aggregate base samples per day in the presence of the Resident Project Representative (RPR) to check the final gradation ***providing a consistent material source is used for that day***. Sampling shall be per ASTM D75. Material shall meet the requirements in paragraph 209-2.1. The lot will be consistent with the lot size used for density. The samples shall be taken from the in-place, un-compacted material at sampling points and intervals designated by the RPR.

c. Sampling shall be taken by the Contractor Quality Control (QC) technician in the presence of the RPR's Quality Assurance (QA) representative. Each sample shall be mixed and quartered by the QC Technician such that the QC technician and the QA representative will each possess adequate size sample for testing.

211-2.3 Separation Geotextile. Not used.

CONSTRUCTION METHODS

211-3.1 Control strip. The first half-day of construction shall be considered the control strip. The Contractor shall demonstrate, in the presence of the RPR, that the materials, equipment, and construction processes meet the requirements of the specification. The sequence and manner of rolling necessary to obtain specified density requirements shall be determined. Control strips that do not meet specification requirements shall be removed and replaced at the Contractor's expense. Full operations shall not continue until the control strip has been accepted by the RPR. Upon acceptance of the control strip by the RPR, the Contractor shall use the same equipment, materials, and construction methods for the remainder of construction, unless adjustments made by the Contractor are approved in advance by the RPR.

211-3.2 Preparing underlying course. ***Before any rock base course material is placed, the underlying course shall be prepared and conditioned as specified.*** The RPR shall check and accept the underlying course before placing and spreading operations are started. Any ruts or soft yielding places caused by improper drainage conditions, hauling, or any other cause shall be corrected at the Contractor's expense before the base course is placed. Material shall not be placed on frozen subgrade.

To protect the underlying course and to insure proper drainage the spreading of the limerock shall begin along the centerline of the pavement on a crowned section or on the high side of pavement with a one-way slope.

211-3.3 Placement. The material shall be placed and spread on the prepared underlying layer by spreader boxes or other devices as approved by the RPR, to a uniform thickness and width. The equipment shall have positive thickness controls to minimize the need for additional manipulation of the material. Dumping from vehicles that require re-handling shall not be permitted. Hauling over the uncompacted base course shall not be permitted.

The material shall meet gradation and moisture requirements prior to compaction. The layer shall be constructed in lifts as established in the control strip, but not less than 4 inches (~~100 mm~~) nor more than 12 inches (~~300 mm~~) of compacted thickness.

When more than one lift is required to establish the layer thickness shown on the plans, the construction procedure described here shall apply to each lift. No lift shall be covered by subsequent lifts until tests verify that compaction requirements have been met. The Contractor shall rework, re-compact and retest any material placed which does not meet the specifications.

211-3.4 Compaction. Immediately upon completion of the spreading operations, compact each layer of the base course, as specified, with approved compaction equipment. The number, type, and weight of rollers shall be sufficient to compact the material to the required density within the same day that the aggregate is placed on the subgrade. The field density of each compacted lift of material shall be at least 100% of the maximum density of laboratory specimens prepared from samples of the subbase material delivered to the jobsite. The moisture content of the material during placing operations shall be within ±2 percentage points of the optimum moisture content as determined by ASTM **1557**. Maximum density refers to maximum dry density at optimum moisture content unless otherwise specified.

Sufficient rollers of the designated types shall be furnished to adequately handle the compaction of the material that has been placed and spread. Blading and rolling shall be done alternately as required or directed to obtain a smooth, even surface and until the entire depth of base is compacted into a dense, unyielding mass. Re-rolling of previous day's spread shall be done as directed. When the shoulder backfill material has been placed, the shoulder shall be thoroughly rolled and compacted

Along curbs, headers, and all areas inaccessible to the roller, the base course material shall be tamped thoroughly with mechanical or hand tampers.

In the areas of narrow full depth construction called out in the plans, refer to the typical detail for compaction methods.

211-3.5 Finishing. After the watering and rolling of the base course, the entire surface shall be scarified to a depth of at least 3 inches (~~75 mm~~) and shaped to the exact crown and cross-section with a blade grader. The scarified material shall be rewetted and thoroughly rolled. Rolling shall continue until the base is bonded and compacted to a dense, unyielding mass, true to grade and cross-section. Scarifying and rolling of the surface of the base shall follow the initial rolling of the lime rock by not more than four (4) days. When the lime rock base is constructed in two layers, the scarifying of the surface shall be to a depth of 2 inches (~~50 mm~~).

If cracks or checks appear in the base before the surface course is laid, the Contractor shall rescarify, reshape, water, add lime rock where necessary, and recompact. If the underlying

material becomes mixed with the base course material, the Contractor shall, without additional compensation, remove, reshape, and recompact the mixture.

211-3.6 Weather limitations. Material shall not be placed unless the ambient air temperature is at least 40°F (4°C) and rising. Work on base course shall not be conducted when the subgrade or subbase is wet or frozen or the base material contains frozen material.

211-3.7 Maintenance. The base course shall be maintained in a condition that will meet all specification requirements until the work is accepted by the RPR. When material has been exposed to excessive rain, snow, or freeze-thaw conditions, prior to placement of additional material, the Contractor shall verify that materials still meet all specification requirements. Equipment may be routed over completed sections of base course, provided that no damage results and the equipment is routed over the full width of the completed base course. Any damage resulting to the base course from routing equipment over the base course shall be repaired by the Contractor at the Contractor's expense.

211-3.8 Surface tolerance. After the course has been compacted, the surface shall be tested for smoothness and accuracy of grade and crown. Any portion lacking the required smoothness or failing in accuracy of grade or crown shall be scarified to a depth of at least 3 inches (~~75 mm~~), reshaped and recompacted to grade until the required smoothness and accuracy are obtained and approved by the RPR. Any deviation in surface tolerances shall be corrected by the Contractor at the Contractor's expense. The smoothness and accuracy requirements specified here apply only to the top layer when base course is constructed in more than one layer.

a. Smoothness. The finished surface shall not vary more than 3/8-inch (~~9 mm~~) when tested with a 12-foot (~~3.7 m~~) straightedge applied parallel with and at right angles to the centerline. The straightedge shall be moved continuously at half the length of the 12-foot (~~3.7 m~~) straightedge for the full length of each line on a 50-foot (~~15 m~~) grid. **Straightedge shall be provided by the Contractor.**

b. Grade. The grade and crown shall be measured on a 50-foot (~~15 m~~) grid and shall be within +0 and -1/2 inch (12 mm) of the specified grade.

211-3.9 Acceptance sampling and testing. Lime rock base course shall be accepted for density on an area basis. Two tests shall be made for density and thickness for each 2400 square yds (~~1000 m^2~~). Sampling locations will be determined on a random basis per ASTM D3665.

a. Density. The Contractor's laboratory shall perform all density tests in the RPR's presence and provide the test results upon completion to the RPR for acceptance**.** ***The Contractor shall perform density tests every 1,000 SY for QC. The RPR shall perform density tests as needed for QA.***

Each area shall be accepted for density when the field density is at least 100% of the maximum density of laboratory specimens compacted and tested per ASTM D1557. The in-place field density shall be determined per ASTM D1556 or ASTM D6938 using Procedure A, the direct transmission method, and ASTM D6938 shall be used to determine the moisture content of the material. The machine shall be calibrated in accordance with ASTM D6938. If the specified density is not attained, the entire area shall be reworked and/or recompacted and two additional random tests made. This procedure shall be followed until the specified density is reached. Maximum density refers to maximum dry density at optimum moisture content unless otherwise specified.

b. Thickness. Depth tests shall be made by ***survey*** ~~test holes or cores at least 3 inches (75 mm) in diameter that extend through the base~~ ***at intervals so each test shall represent 300 square yards in the presence of the RPR***. The thickness of the base course shall be within +0 and -1/2 inch ~~(12 mm)~~ of the specified thickness ~~as determined by depth tests taken by the Contractor in the presence of the RPR for each area~~. Where the thickness is deficient by more than 1/2-inch (~~12 mm~~), the Contractor shall correct such areas at no additional cost by scarifying to a depth of at least 3 inches (~~75 mm~~), adding new material of proper gradation, and the material shall be blended and recompacted to grade. The Contractor shall replace, at his expense, base material where depth tests have been taken.

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211-3.10 Lime Rock Transition Wedges at Runway or Taxiway Edge. All work shall comply with the slope tolerances outlined in FAA Advisory Circular 150/5300-13B. When performing work within the runway safety area (RSA) or taxiway object free area (TOFA), the contractor shall ensure that temporary and final grading conditions meet allowable slope criteria at all times.

The Lime Rock Transition Wedges at Runway Edge shall be restored to a maximum slope of 5 percent within the first 30 feet from the runway edge until the end of the runway shoulder, and a maximum slope of 3 percent for the subsequent 170 feet or until outside of the RSA.

The Lime Rock Transition Wedges at Taxiway Edge shall be restored to a maximum slope of 5 percent, outside the pavement edge, within 85.5 feet from the centerline of the taxiway until the end of the taxiway object free area, and a maximum slope of 4 vertical : 1 horizontal outside of the TOFA.

These slope requirements shall be achieved at the end of each work shift, and prior to reopening the runway and or taxiway to aircraft operations. These slopes will be removed at the start of each work shift as required.

Compaction will be performed in accordance with 211-3.4.

METHOD OF MEASUREMENT

211-4.1 The quantity of lime rock base course shall be the number of square yards ~~(square meters)~~ of base material placed, bonded, and accepted in the completed base course ***at the specified thickness***. The quantity of base course material shall be measured in final position based upon depth tests ***taken by the Contractor's Surveyor*** as directed by the RPR. On individual depth measurements, thicknesses more than 1/2 inch (~~12 mm~~) in excess of that shown on the plans shall be considered as the specified thickness plus 1/2 inch (~~12 mm~~) in computing the yardage for payment.

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211-4.2 Measurement for the lime rock transition wedges will be made at the lump sum for this item's installation and removal each shift.

BASIS OF PAYMENT

211-5.1 Payment shall be made at the contract unit price per square yards ~~(square meters)~~ for lime rock base course. This price shall be full compensation for furnishing all materials and for all preparation, hauling, and placing of these materials, and for all labor, equipment, tools, ***survey,*** and incidentals necessary to complete the item.

The cost of removing cracks and checks including the labor, and the additional lime rock necessary for crack elimination, will not be paid for separately but shall be included in the contract price per square yard (~~square meter~~) for lime rock base course.

An As-Built survey taken by a Professionally Licensed Surveyor of the finished lime rock surface must be provided after the installation of lime rock is completed to receive payment for the lime rock.

1 ***211-5.2 Lime Rock Transition Wedge payment shall be made at the contract price per lump sum. This price shall be full compensation for loading and hauling, compaction, furnishing all materials, labor, equipment, tools, surveying, and incidentals necessary to complete the item, each shift, to the grades and requirements shown on the plans.***

Payment will be made under:

Item P-211-5.1 V2	***Lime Rock Base Course, 9" Thick – per Square Yard***
Item P-211-5.1 V2 ALT1	***Lime Rock Base Course, 9" Thick – per Square Yard***

1

Item P-211-5.2 V2	***Lime Rock Transition Wedge – Lump Sum***
Item P-211-5.2 V2 ALT1	***Lime Rock Transition Wedge – Lump Sum***

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM C136	Standard Test Method for Sieve or Screen Analysis of Fine and Coarse Aggregates
ASTM D75	Standard Practice for Sampling Aggregates
ASTM D698	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft^3 (600 kN-m/m^3))
ASTM D1556	Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method
ASTM D1557	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft^3 (2700 kN-m/m^3))
ASTM D3665	Standard Practice for Random Sampling of Construction Materials
ASTM D4318	Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils
ASTM D4491	Standard Test Methods for Water Permeability of Geotextiles by Permittivity
ASTM D4751	Standard Test Methods for Determining Apparent Opening Size of a Geotextile

American Association of State Highway and Transportation Officials (AASHTO)

M288 Standard Specification for Geosynthetic Specification for Highway Applications

END OF ITEM P-211

ITEM P-403 ASPHALT MIX PAVEMENT COURSE

DESCRIPTION

403-1.1 This item shall consist of pavement courses composed of mineral aggregate and asphalt binder mixed in a central mixing plant and placed on a prepared course in accordance with these specifications and shall conform to the lines, grades, thicknesses, and typical cross-sections shown on the plans. Each course shall be constructed to the depth, typical section, and elevation required by the plans and shall be rolled, finished, and approved before the placement of the next course.

~~***All materials and construction shall conform to the Florida Department of Transportation (FDOT) "Standard Specifications for Road and Bridge Construction" (Specifications) dated July 2018.***~~

MATERIALS

1

403-2.1 Aggregate. Aggregates shall consist of crushed stone, crushed gravel, ~~crushed slag~~, screenings, natural sand and mineral filler, as required. The aggregates should have no known history of detrimental pavement staining due to ferrous sulfides, such as pyrite. ***The Contractor shall provide certification that aggregates are free of ferrous sulfides***. Coarse aggregate is the material retained on the No. 4 (4.75 mm) sieve. Fine aggregate is the material passing the No. 4 (4.75 mm) sieve.

a. Coarse aggregate. Coarse aggregate shall consist of sound, tough, durable particles, free from films of matter that would prevent thorough coating and bonding with the asphalt material and free from organic matter and other deleterious substances. Coarse aggregate material requirements are given in the table below.

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Coarse Aggregate Material Requirements

Material Test	Requirement	Standard
Resistance to Degradation	Loss: 40% maximum for ~~surface,~~ asphalt binder, and leveling course ~~Loss: 50% maximum for base course~~	ASTM C131
Soundness of Aggregates by Use of Sodium Sulfate **or** Magnesium Sulfate	Loss after 5 cycles: 12% maximum using Sodium sulfate - or - 18% maximum using magnesium sulfate	ASTM C88
Clay lumps and friable particles	0.3% maximum	ASTM C142
Percentage of Fractured Particles	For pavements designed for aircraft gross weights of 60,000 pounds (27200 kg) or more: Minimum 75% by weight of particles with at least two fractured faces and 85% with at least one fractured face[1]	ASTM D5821
	~~For pavements designed for aircraft gross weights less than 60,000 pounds (27200 kg):~~ ~~Minimum 50% by weight of particles with at least two fractured faces and 65% with at least one fractured face~~[4]	
Flat, Elongated, or Flat and Elongated Particles	8% maximum, by weight, of flat, elongated, or flat and elongated particles with a value of 5:1 [2]	ASTM D4791
Bulk density of slag[3]	Weigh not less than 70 pounds per cubic foot (1.12 Mg/cubic meter)	ASTM C29.

[1] The area of each face shall be equal to at least 75% of the smallest mid-sectional area of the piece. When two fractured faces are contiguous, the angle between the planes of fractures shall be at least 30 degrees to count as two fractured faces.

[2] A flat particle is one having a ratio of width to thickness greater than five (5); an elongated particle is one having a ratio of length to width greater than five (5).

[3] Only required if slag is specified.

b. Fine aggregate. Fine aggregate shall consist of clean, sound, tough, durable, angular shaped particles produced by crushing stone, slag, or gravel and shall be free from coatings of clay, silt, or other objectionable matter. Natural (non-manufactured) sand may be used to obtain the gradation of the aggregate blend or to improve the workability of the mix. Fine aggregate material requirements are listed in the table below.

Fine Aggregate Material Requirements

Material Test	Requirement	Standard
Liquid limit	25 maximum	ASTM D4318
Plasticity Index	4 maximum	ASTM D4318
Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate	Loss after 5 cycles: 10% maximum using Sodium sulfate - or - 15% maximum using magnesium sulfate	ASTM C88
Clay lumps and friable particles	0.3% maximum	ASTM C142
Sand equivalent	45 minimum	ASTM D2419
Natural Sand	0 to 15% maximum by weight of total aggregate	ASTM D1073

c. Sampling. ASTM D75 shall be used in sampling coarse and fine aggregate, and ASTM C183 shall be used in sampling mineral filler.

403-2.2 Mineral filler. Mineral filler (baghouse fines) may be added in addition to material naturally present in the aggregate. Mineral filler shall meet the requirements of ASTM D242.

Mineral filler Requirements

Material Test	Requirement	Standard
Plasticity Index	4 maximum	ASTM D4318

403-2.3 Asphalt binder. Asphalt binder shall conform to ASTM D6373 Performance Grade (PG) **76-22 (PMA)**

Asphalt Binder PG Plus Test Requirements

Material Test	Requirement	Standard
Elastic Recovery	75% minimum	ASTM D6084

403-2.4 Anti-stripping agent. Any anti-stripping agent or additive (anti-strip) shall be heat stable and shall not change the asphalt binder grade beyond specifications. Anti-strip shall be an approved material of the Department of Transportation of the State in which the project is located.

COMPOSITION

403-3.1 Composition of mixture. The asphalt plant mix shall be composed of a mixture of well-graded aggregate, filler and anti-strip agent if required, and asphalt binder. The several aggregate fractions shall be sized, handled in separate size groups, and combined in such proportions that the resulting mixture meets the grading requirements of the job mix formula (JMF).

403-3.2 Job mix formula (JMF) laboratory. The laboratory used to develop the JMF shall possess a current certificate of accreditation, listing D3666 from a national accrediting authority and all test methods required for developing the JMF, and listed on the accrediting authority's website. A copy of the laboratory's current accreditation and accredited test methods shall be submitted to the RPR prior to start of construction.

403-3.3 Job mix formula (JMF). No asphalt mixture shall be placed until an acceptable mix design has been submitted to the RPR for review and accepted in writing. The RPR's review shall not relieve the Contractor of the responsibility to select and proportion the materials to comply with this section.

When the project requires asphalt mixtures of differing aggregate gradations and/or binders, a separate JMF shall be submitted for each mix. Add anti-stripping agent to meet tensile strength requirements.

The JMF shall be prepared by an accredited laboratory that meets the requirements of paragraph 403-3.2. The asphalt mixture shall be designed using procedures contained in Asphalt Institute MS-2 Mix Design Manual, 7th Edition. Samples shall be prepared and compacted using a Marshall compactor in accordance with ASTM D6926.

Should a change in sources of materials be made, a new JMF must be submitted to the RPR for review and accepted in writing before the new material is used. After the initial production JMF has been approved by the RPR and a new or modified JMF is required for whatever reason, the subsequent cost of the new or modified JMF, including a new control strip when required by the RPR, will be borne by the Contractor.

The RPR may request samples at any time for testing, prior to and during production, to verify the quality of the materials and to ensure conformance with the applicable specifications.

The JMF shall be submitted in writing by the Contractor at least **30** days prior to the start of paving operations. The JMF shall be developed within the same construction season using aggregates proposed for project use.

The submitted JMF shall be dated, and stamped or sealed by the responsible professional Engineer of the laboratory and shall include the following items as a minimum:

- Manufacturer's Certificate of Analysis (COA) for the asphalt binder used in the JMF in accordance with paragraph 403-2.3. Certificate of asphalt performance grade is with modifier already added, if used and must indicate compliance with ASTM D6373. For plant modified asphalt binder, certified test report indicating grade certification of modified asphalt binder.
- Manufacturer's Certificate of Analysis (COA) for the anti-stripping agent if used in the JMF in accordance with paragraph 403-2.4.
- Certified material test reports for the course and fine aggregate and mineral filler in accordance with paragraphs 403-2.1 and 403-2.2.
- Percent passing each sieve size for individual gradation of each aggregate cold feed and/or hot bin; percent by weight of each cold feed and/or hot bin used; and the total combined gradation in the JMF.
- Specific Gravity and absorption of each course and fine aggregate.
- Percent natural sand.
- Percent fractured faces.

- Percent by weight of flat particles**,** elongated particles, and flat and elongated particles (and criteria).
- Percent of asphalt.
- Number of blows or gyrations.
- Laboratory mixing and compaction temperatures.
- Supplier recommended mixing and compaction temperatures.
- Plot of the combined gradation on the 0.45 power gradation curve.
- Graphical plots of air voids, voids in the mineral aggregate (VMA), and unit weight versus asphalt content. To achieve minimum VMA during production, the mix design needs to account for material breakdown during production.
- Tensile Strength Ratio (TSR).
- Type and amount of Anti-strip agent when used.
- Asphalt Pavement Analyzer (APA) results.
- Date the JMF was developed. Mix designs that are not dated or which are from a prior construction season shall not be accepted. ***All material testing, for shop drawing submittals, will be performed by an engineer registered in the state of Florida. Material testing must be performed within 6 months of shop drawing submittal. Shop drawings with tests performed beyond 6 months will be rejected.***

Table 1. Asphalt Design Criteria

Test Property	Value	Test Method
Number of blows/gyrations	75	
Air voids (%)	***2.8 – 4.2***	ASTM D3203
Percent voids in mineral aggregate (VMA), minimum	See Table 2	ASTM D6995
TSR[1]	not less than 80 at a saturation of 70-80%	ASTM D4867
Asphalt Pavement Analyzer (APA)[2]	Less than 10 mm @ 4000 passes	AASHTO T340 at 250 psi hose pressure at 64°C test temperature

[1] Test specimens for TSR shall be compacted at 7 ± 1.0 % air voids. In areas subject to freeze-thaw, use freeze-thaw conditioning in lieu of moisture conditioning per ASTM D4867.

[2] AASHTO T340 at 100 psi hose pressure at 64°C test temperature may be used in the interim. If this method is used the required Value shall be less than 5 mm @ 8000 passes

The mineral aggregate shall be of such size that the percentage composition by weight, as determined by laboratory sieves, will conform to the gradation or gradations specified in Table 2 when tested in accordance with ASTM C136 and ASTM C117.

The gradations in Table 2 represent the limits that shall determine the suitability of aggregate for use from the sources of supply, be well graded from coarse to fine and shall not vary from the low limit on one sieve to the high limit on the adjacent sieve, or vice versa.

Table 2. Aggregate - Asphalt Pavements

Sieve Size	Percentage by Weight Passing Sieves		
	~~Gradation 1~~	~~Gradation 2~~	Gradation 3[1]
1 inch (25.0 mm)	~~100~~	~~—~~	--
3/4 inch (19.0 mm)	~~90-100~~	~~100~~	--
1/2 inch (12.5 mm)	~~68-88~~	~~90-100~~	100
3/8 inch (9.5 mm)	~~60-82~~	~~72-88~~	90-100
No. 4 (4.75 mm)	~~45-67~~	~~53-73~~	58-78
No. 8 (2.36 mm)	~~32-54~~	~~38-60~~	40-60
No. 16 (1.18 mm)	~~22-44~~	~~26-48~~	28-48
No. 30 (600 µm)	~~15-35~~	~~18-38~~	18-38
No. 50 (300 µm)	~~9-25~~	~~11-27~~	11-27
No. 100 (150 µm)	~~6-18~~	~~6-18~~	6-18
No. 200 (75 µm)	~~3-6~~	~~3-6~~	3-6
Voids in Mineral Aggregate (VMA)	~~14~~	~~15~~	16
Asphalt percent by total weight of mixture:			
Stone or gravel	~~4.5-7.0~~	~~5.0-7.5~~	5.5-8.0
Slag	~~5.0-7.5~~	~~6.5-9.5~~	7.0-10.5
Recommended Minimum Construction Lift Thickness	~~3 inch~~	~~2 inch~~	1 1/2 inch

[1]To achieve minimum VMA during production, the mix design needs to account for material breakdown during production.

The aggregate gradations shown are based on aggregates of uniform specific gravity. The percentages passing the various sieves shall be corrected when aggregates of varying specific gravities are used, as indicated in the Asphalt Institute MS-2 Mix Design Manual, 7th Edition.

[1]Gradation 3 is intended for leveling courses. FAA approval is required for use in other locations.

403-3.5 Control strip. Full production shall not begin until an acceptable control strip has been constructed and accepted in writing by the RPR. The Contractor shall prepare and place a quantity of asphalt according to the JMF. The underlying grade or pavement structure upon which the control strip is to be constructed shall be the same as the remainder of the course represented by the control strip.

The Contractor will not be allowed to place the control strip until the Contractor quality control program (CQCP), showing conformance with the requirements of paragraph 403-5.1, has been accepted, in writing, by the RPR.

The control strip will consist of at least 250 tons (227 metric tons) or 1/2 sublot, whichever is greater. The control strip shall be placed in two lanes of the same width and depth to be used in production with a longitudinal cold joint. The cold joint must be cut back in accordance with paragraph 403-4.13 using the same procedure that will be used during production. The cold joint for the control strip will be an exposed construction joint at least four (4) hours old or when the mat has cooled to less than 160°F (71°C). The equipment used in construction of the control strip shall be the same type, configuration and weight to be used on the project.

The control strip shall be evaluated for acceptance as a single lot in accordance with the acceptance criteria in paragraph 403-6.1 and 403-6.2. The control strip shall be divided into equal sublots. As a minimum, the control strip shall consist of three (3) sublots.

The control strip will be considered acceptable by the RPR if the gradation, asphalt content, and VMA are within the action limits specified in paragraph 403-5.5a; and Mat density, air voids, and joint density meet the requirements specified in paragraphs 403-6.2.

If the control strip is unacceptable, necessary adjustments to the JMF, plant operation, placing procedures, and/or rolling procedures shall be made and another control strip shall be placed. Unacceptable control strips shall be removed at the Contractor's expense.

Payment will only be made for an acceptable control strip in accordance with paragraph 403-8.1.

CONSTRUCTION METHODS

403-4.1 Weather limitations. The asphalt shall not be placed upon a wet surface or when the surface temperature of the underlying course is less than specified in Table 4. The temperature requirements may be waived by the RPR, if requested; however, all other requirements including compaction shall be met.

Table 4. Surface Temperature Limitations of Underlying Course

Mat Thickness	Base Temperature (Minimum)	
	Degrees F	Degrees C
3 inches (7.5 cm) or greater	40	4
Greater than 2 inches (50 mm) but less than 3 inches (7.5 cm)	45	7

403-4.2 Asphalt plant. Plants used for the preparation of asphalt shall conform to the requirements of American Association of State Highway and Transportation Officials (AASHTO) M156 including the following items:

a. Inspection of plant. The RPR, or RPR's authorized representative, shall have access, at all times, to all areas of the plant for checking adequacy of equipment; inspecting operation of the plant: verifying weights, proportions, and material properties; and checking the temperatures maintained in the preparation of the mixtures.

b. Storage bins and surge bins. The asphalt mixture stored in storage and/or surge bins shall meet the same requirements as asphalt mixture loaded directly into trucks. Asphalt mixture shall not be stored in storage and/or surge bins for a period greater than twelve (12)

hours. If the RPR determines there is an excessive heat loss, segregation or oxidation of the asphalt mixture due to temporary storage, temporary storage shall not be allowed.

403-4.3 Aggregate stockpile management. Aggregate stockpiles shall be constructed in such a manner that prevents segregation and intermixing of deleterious materials. Aggregates from different sources shall be stockpiled, weighed and batched separately at the concrete batch plant. Aggregates that have become segregated or mixed with earth or foreign material shall not be used.

A continuous supply of materials shall be provided to the work to ensure continuous placement.

403-4.4 Hauling equipment. Trucks used for hauling asphalt shall have tight, clean, and smooth metal beds. To prevent the asphalt from sticking to the truck beds, the truck beds shall be lightly coated with a minimum amount of paraffin oil, lime solution, or other material approved by the RPR. Petroleum products shall not be used for coating truck beds. Each truck shall have a suitable cover to protect the mixture from adverse weather. When necessary, to ensure that the mixture will be delivered to the site at the specified temperature, truck beds shall be insulated or heated and covers shall be securely fastened.

403-4.4.1 Material transfer vehicle (MTV). A material transfer vehicle is not required.

403-4.5 Asphalt pavers. Asphalt pavers shall be self-propelled with an activated heated screed, capable of spreading and finishing courses of asphalt that will meet the specified thickness, smoothness, and grade. The paver shall have sufficient power to propel itself and the hauling equipment without adversely affecting the finished surface. The asphalt paver shall be equipped with a control system capable of automatically maintaining the specified screed grade and elevation.

If the spreading and finishing equipment in use leaves tracks or indented areas, or produces other blemishes in the pavement that are not satisfactorily corrected by the scheduled operations, the use of such equipment shall be discontinued.

The paver shall be capable of paving to a minimum width specified in paragraph 401-4.11.

403-4.6 Rollers. The number, type, and weight of rollers shall be sufficient to compact the asphalt to the required density while it is still in a workable condition without crushing of the aggregate, depressions or other damage to the pavement surface. Rollers shall be in good condition, capable of operating at slow speeds to avoid displacement of the asphalt. All rollers shall be specifically designed and suitable for compacting asphalt concrete and shall be properly used. Rollers that impair the stability of any layer of a pavement structure or underlying soils shall not be used.

403-4.6.1 Density device. The Contractor shall have on site a density gauge during all paving operations in order to assist in the determination of the optimum rolling pattern, type of roller and frequencies, as well as to monitor the effect of the rolling operations during production paving. The Contractor shall also supply a qualified technician during all paving operations to calibrate the density gauge and obtain accurate density readings for all new asphalt. These densities shall be supplied to the RPR upon request at any time during construction. No ` payment will be made for supplying the density gauge and technician.

403-4.7 Preparation of asphalt binder. The asphalt binder shall be heated in a manner that will avoid local overheating and provide a continuous supply of the asphalt material to the mixer at a uniform temperature. The temperature of the unmodified asphalt binder delivered to the mixer shall be sufficient to provide a suitable viscosity for adequate coating of the aggregate particles, but shall not exceed 325°F (160°C) when added to the aggregate. The temperature of modified asphalt binder shall be no more than 350°F (175°C) when added to the aggregate.

403-4.8 Preparation of mineral aggregate. The aggregate for the asphalt shall be heated and dried. The maximum temperature and rate of heating shall be such that no damage occurs to the aggregates. The temperature of the aggregate and mineral filler shall not exceed 350°F (175°C) when the asphalt binder is added. Particular care shall be taken that aggregates high in calcium or magnesium content are not damaged by overheating. The temperature shall not be lower than is required to obtain complete coating and uniform distribution on the aggregate particles and to provide a mixture of satisfactory workability.

403-4.9 Preparation of asphalt mixture. The aggregates and the asphalt binder shall be weighed or metered and introduced into the mixer in the amount specified by the JMF. The combined materials shall be mixed until the aggregate obtains a uniform coating of asphalt binder and is thoroughly distributed throughout the mixture. Wet mixing time shall be the shortest time that will produce a satisfactory mixture, but not less than 25 seconds for batch plants. The wet mixing time for all plants shall be established by the Contractor, based on the procedure for determining the percentage of coated particles described in ASTM D2489, for each individual plant and for each type of aggregate used. The wet mixing time will be set to achieve 95% of coated particles. For continuous mix plants, the minimum mixing time shall be determined by dividing the weight of its contents at operating level by the weight of the mixture delivered per second by the mixer. The moisture content of all asphalt upon discharge shall not exceed 0.5%.

403-4.10 Application of Prime and Tack Coat. Immediately before placing the asphalt mixture, the underlying course shall be cleaned of all dust and debris.

A prime coat in accordance with Item P-602 shall be applied to aggregate base prior to placing the asphalt mixture.

A tack coat shall be applied in accordance with Item P-603 to all vertical and horizontal asphalt and concrete surfaces prior to placement of the first and each subsequent lift of asphalt mixture.

403-4.11 Laydown plan, transporting, placing, and finishing. Prior to the placement of the asphalt, the Contractor shall prepare a laydown plan with the sequence of paving lanes and width to minimize the number of cold joints; the location of any temporary ramps; laydown temperature; and estimated time of completion for each portion of the work (milling, paving, rolling, cooling, etc.). The laydown plan and any modifications shall be approved by the RPR.

Deliveries shall be scheduled so that placing and compacting of asphalt is uniform with minimum stopping and starting of the paver. Hauling over freshly placed material shall not be permitted until the material has been compacted, as specified, and allowed to cool to approximately ambient temperature. The Contractor, at their expense, shall be responsible for repair of any damage to the pavement caused by hauling operations.

Contractor shall survey each lift of asphalt surface course and certify to RPR that every lot of each lift meets the grade tolerances of paragraph 401-6.2e before the next lift can be placed.

Edges of existing asphalt pavement abutting the new work shall be saw cut and the cut off material and laitance removed. Apply a tack coat in accordance with P-603 before new asphalt material is placed against it.

The speed of the paver shall be regulated to eliminate pulling and tearing of the asphalt mat. Placement of the asphalt mix shall begin along the centerline of a crowned section or on the high side of areas with a one way slope unless shown otherwise on the laydown plan as accepted by the RPR. The asphalt mix shall be placed in consecutive adjacent lanes having a minimum width of **10** feet (m) except where edge lanes require less width to complete the area. Additional screed sections attached to widen the paver to meet the minimum lane width

requirements must include additional auger sections to move the asphalt mixture uniformly along the screed extension.

The longitudinal joint in one course shall offset the longitudinal joint in the course immediately below by at least 1 foot (30 cm); however, the joint in the surface top course shall be at the centerline of crowned pavements. Transverse joints in one course shall be offset by at least 10 feet (3 m) from transverse joints in the previous course. Transverse joints in adjacent lanes shall be offset a minimum of 10 feet (3 m).On areas where irregularities or unavoidable obstacles make the use of mechanical spreading and finishing equipment impractical, the asphalt may be spread and luted by hand tools.

The RPR may at any time, reject any batch of asphalt, on the truck or placed in the mat, which is rendered unfit for use due to contamination, segregation, incomplete coating of aggregate, or overheated asphalt mixture. Such rejection may be based on only visual inspection or temperature measurements. In the event of such rejection, the Contractor may take a representative sample of the rejected material in the presence of the RPR, and if it can be demonstrated in the laboratory, in the presence of the RPR, that such material was erroneously rejected, payment will be made for the material at the contract unit price.

Areas of segregation in the surface course, as determined by the RPR, shall be removed and replaced at the Contractor's expense. The area shall be removed by saw cutting and milling a minimum of the construction lift thickness as specified in paragraph 401-3.3, Table 2 for the approved mix design. The area to be removed and replaced shall be a minimum width of the paver and a minimum of 10 feet (3 m) long.

403-4.12 Compaction of asphalt mixture. After placing, the asphalt mixture shall be thoroughly and uniformly compacted by self-propelled rollers. The surface shall be compacted as soon as possible when the asphalt has attained sufficient stability so that the rolling does not cause undue displacement, cracking or shoving. The sequence of rolling operations and the type of rollers used shall be at the discretion of the Contractor. The speed of the roller shall, at all times, be sufficiently slow to avoid displacement of the hot mixture and be effective in compaction. Any surface defects and/or displacement occurring as a result of the roller, or from any other cause, shall be corrected at the Contractor's expense.

Sufficient rollers shall be furnished to handle the output of the plant. Rolling shall continue until the surface is of uniform texture, true to grade and cross-section, and the required field density is obtained. To prevent adhesion of the asphalt to the roller, the wheels shall be equipped with a scraper and kept moistened with water as necessary.

In areas not accessible to the roller, the mixture shall be thoroughly compacted with approved power tampers.

Any asphalt that becomes loose and broken, mixed with dirt, contains check-cracking, or in any way defective shall be removed and replaced with fresh hot mixture and immediately compacted to conform to the surrounding area. This work shall be done at the Contractor's expense. Skin patching shall not be allowed**.**

403-4.13 Joints. The formation of all joints shall be made in such a manner as to ensure a continuous bond between the courses and obtain the required density. All joints shall have the same texture as other sections of the course and meet the requirements for smoothness and grade.

The roller shall not pass over the unprotected end of the freshly laid asphalt except when necessary to form a transverse joint. When necessary to form a transverse joint, it shall be made by means of placing a bulkhead or by tapering the course. The tapered edge shall be cut

back to its full depth and width on a straight line to expose a vertical face prior to placing the adjacent lane. In both methods, all contact surfaces shall be coated with an asphalt tack coat before placing any fresh asphalt against the joint.

Longitudinal joints which are have been left exposed for more than four (4) hours; the surface temperature has cooled to less than 175°F (80°C); or are irregular, damaged, uncompacted or otherwise defective shall be cut back with a cutting wheel or pavement saw a maximum of 3 inches (75 mm) to expose a clean, sound, uniform vertical surface for the full depth of the course. All cutback material and any laitance produced from cutting joints shall be removed from the project. An asphalt tack coat or other product approved by the RPR shall be applied to the clean, dry joint prior to placing any additional fresh asphalt against the joint. The cost of this work shall be considered incidental to the cost of the asphalt.

403-4.14 Saw-cut grooving. Saw-cut grooving is not required.

403-4.15 Diamond grinding. Diamond grinding shall be completed prior to pavement grooving. Diamond grinding shall be accomplished by sawing with saw blades impregnated with industrial diamond abrasive.

Diamond grinding shall be performed with a machine designed specifically for diamond grinding capable of cutting a path at least 3 feet (0.9 m) wide. The saw blades shall be 1/8-inch (3-mm) wide with a minimum of 55 to 60 blades per 12 inches (300 mm) of cutting head width; grooves between 0.090 and 0.130 inches (2 and 3.5 mm) wide; and peaks and ridges approximately 1/32 inch (1 mm) higher than the bottom of the grinding cut. The actual number of blades will be determined by the Contractor and depend on the hardness of the aggregate. Equipment or grinding procedures that causes ravels, aggregate fractures, spalls or disturbance to the pavement will not be permitted.

Grinding will be tapered in all directions to provide smooth transitions to areas not requiring grinding. The slurry resulting from the grinding operation shall be continuously removed and the pavement left in a clean condition. The Contractor shall apply a surface treatment per P-608 to all areas that have been subject to grinding.

403-4.16 Nighttime Paving Requirements. The Contractor shall provide adequate lighting during any nighttime construction. A lighting plan shall be submitted by the Contractor and approved by the RPR prior to the start of any nighttime work. All work shall be in accordance with the approved CSPP and lighting plan.

The lighting plan will address the following items:

a. All paving machines, rollers, distribution trucks (MTVs) and other vehicles required by the Contractor for his operations shall be equipped with artificial illumination sufficient to safely complete the work.

b. Minimum illumination level shall be twenty (20) horizontal foot-candles and maintained in the following areas:

(1) An area of 30 feet (~~9 m~~) wide by 30 feet (~~9 m~~) long immediately behind the paving machines during the operations of the machines.

(2) An area 15 feet (~~4.5 m~~) wide by 30 feet (~~9 m~~) long immediately in front and back of all rolling equipment, during operation of the equipment.

(3) An area 15 feet (~~4.5 m~~) wide by 15 feet (~~4.5 m~~) long at any point where an area is being tack coated prior to the placement of pavement.

c. As partial fulfillment of the above requirements, the Contractor shall furnish and use, complete artificial lighting units with a minimum capacity of 3,000 watt electric beam lights, affixed to all equipment in such a way to direct illumination on the area under construction.

d. A lighting plan must be submitted by the Contractor and approved by the Engineer prior to the start of any nighttime work. This plan shall be submitted during the Mobilization Phase.

e. The Contractor shall provide sufficient lighting, when requested by the RPR, to review the progression of the Work.

If the Contractor places any out of specification mix in the project work area, the Contractor is required to remove it at its own expense, to the satisfaction of the RPR. If the Contractor has to continue placing non-payment HMA, as directed by the RPR, to make the surfaces safe for aircraft operations, the Contractor shall do so to the satisfaction of the RPR. It is the Contractor's responsibility to leave the facilities to be paved in a safe condition ready for aircraft operations. No consideration for extended closure time of the area being paved will be given. As a first order of work for the next paving shift, the Contractor shall remove all out of specification material and replace with approved material to the satisfaction of the Engineer. When the above situations occur, there will be no consideration given for additional construction time or payment for extra costs.

CONTRACTOR QUALITY CONTROL (CQC)

403-5.1 General. The Contractor shall develop a CQCP in accordance with Item C-100. No partial payment will be made for materials that are subject to specific QC requirements without an approved CQCP.

403-5.2 Contractor quality control (QC) facilities. The Contractor shall provide or contract for testing facilities in accordance with Item C-100. The RPR shall be permitted unrestricted access to inspect the Contractor's QC facilities and witness QC activities. The RPR will advise the Contractor in writing of any noted deficiencies concerning the QC facility, equipment, supplies, or testing personnel and procedures. When the deficiencies are serious enough to be adversely affecting the test results, the incorporation of the materials into the work shall be suspended immediately and will not be permitted to resume until the deficiencies are satisfactorily corrected.

403-5.3 Quality Control (QC) testing. The Contractor shall perform all QC tests necessary to control the production and construction processes applicable to these specifications and as set forth in the approved CQCP. The testing program shall include, but not necessarily be limited to, tests for the control of asphalt content, aggregate gradation, temperatures, aggregate moisture, field compaction, and surface smoothness. A QC Testing Plan shall be developed as part of the CQCP.

a. Asphalt content. A minimum of two tests shall be performed per day in accordance with ASTM D6307 or ASTM D2172 for determination of asphalt content. When using ASTM D6307, the correction factor shall be determined as part of the first test performed at the beginning of plant production; and as part of every tenth test performed thereafter. The asphalt content for the day will be determined by averaging the test results.

b. Gradation. Aggregate gradations shall be determined a minimum of twice per lot from mechanical analysis of extracted aggregate in accordance with ASTM D5444 and ASTM C136, and ASTM C117.

c. Moisture content of aggregate. The moisture content of aggregate used for production shall be determined a minimum of once per lot in accordance with ASTM C566.

d. Moisture content of asphalt. The moisture content of the asphalt shall be determined once per lot in accordance with AASHTO T329 or ASTM D1461.

e. Temperatures. Temperatures shall be checked, at least four times per lot, at necessary locations to determine the temperatures of the dryer, the asphalt binder in the storage tank, the asphalt at the plant, and the asphalt at the job site.

f. In-place density monitoring. The Contractor shall conduct any necessary testing to ensure that the specified density is being achieved. A nuclear gauge may be used to monitor the pavement density in accordance with ASTM D2950.

g. Smoothness for Contractor Quality Control.

The Contractor shall perform smoothness testing in transverse and longitudinal directions daily to verify that the construction processes are producing pavement with variances less than ¼ inch in 12 feet, identifying areas that may pond water which could lead to hydroplaning of aircraft. If the smoothness criteria is not met, appropriate changes and corrections to the construction process shall be made by the Contractor before construction continues

The Contractor may use a 12-foot (3.7 m) “straightedge, a rolling inclinometer meeting the requirements of ASTM E2133 or rolling external reference device that can simulate a 12-foot (3.7m) straightedge approved by the RPR. Straight-edge testing shall start with one-half the length of the straightedge at the edge of pavement section being tested and then moved ahead one-half the length of the straightedge for each successive measurement. Testing shall be continuous across all joints. The surface irregularity shall be determined by placing the freestanding (unleveled) straightedge on the pavement surface and allowing it to rest upon the two highest spots covered by its length, and measuring the maximum gap between the straightedge and the pavement surface in the area between the two high points. If the rolling inclinometer or external reference device is used, the data may be evaluated using the FAA profile program, ProFAA, using the 12-foot straightedge simulation function.

Smoothness readings shall not be made across grade changes or cross slope transitions. The transition between new and existing pavement shall be evaluated separately for conformance with the plans.

(1) Transverse measurements. Transverse measurements shall be taken for each day’s production placed. Transverse measurements will be taken perpendicular to the pavement centerline each 50 feet (15 m) or more often as determined by the RPR. The joint between lanes shall be tested separately to facilitate smoothness between lanes.

(2) Longitudinal measurements. Longitudinal measurements shall be taken for each day’s production placed. Longitudinal tests will be parallel to the centerline of paving; at the center of paving lanes when widths of paving lanes are less than 20 feet (6 m); and at the third points of paving lanes when widths of paving lanes are 20 ft (6 m) or greater.

Deviations on the final surface course in either the transverse or longitudinal direction that will trap water greater than 1/4 inch (6 mm) shall be corrected with diamond grinding per paragraph 403-4.15 or by removing and replacing the surface course to full depth. Grinding shall be tapered in all directions to provide smooth transitions to areas not requiring grinding. All areas in which diamond grinding has been performed shall be subject to the final pavement thickness tolerances specified in paragraph 401-6.1d(3) Areas that have been ground shall be sealed with a surface treatment in accordance with Item P-608. To avoid the surface treatment creating any conflict with runway or taxiway markings, it may be necessary to seal a larger area.

Control charts shall be kept to show area of each day’s placement and the percentage of corrective grinding required. Corrections to production and placement shall be initiated when corrective grinding is required. If the Contractor’s machines and/or methods produce significant

areas that need corrective actions in excess of 10 percent of a day's production, production shall be stopped until corrective measures are implemented by the Contractor.

h. Grade. Grade shall be evaluated daily to allow adjustments to paving operations when grade measurements do not meet specifications. As a minimum, grade shall be evaluated prior to the placement of the first lift and then prior to and after placement of the surface lift.

Measurements will be taken at appropriate gradelines (as a minimum at center and edges of paving lane) and longitudinal spacing as shown on cross-sections and plans. The final surface of the pavement will not vary from the gradeline elevations and cross-sections shown on the plans by more than 1/2 inch (12 mm) vertically and 0.1 feet (30 mm) laterally. The documentation will be provided by the Contractor to the RPR within 24 hours.

Areas with humps or depressions that exceed grade or smoothness criteria and that retain water on the surface must be ground off provided the course thickness after grinding is not more than 1/2 inch (12 mm) less than the thickness specified on the plans. Grinding shall be in accordance with paragraph 403-4.15.

The Contractor shall repair low areas or areas that cannot be corrected by grinding by removal of deficient areas to the depth of the final course plus ½ inch and replacing with new material. Skin patching is not allowed.

403-5.4 Sampling. When directed by the RPR, the Contractor shall sample and test any material that appears inconsistent with similar material being sampled, unless such material is voluntarily removed and replaced or deficiencies corrected by the Contractor. All sampling shall be in accordance with standard procedures specified.

403-5.5 Control charts. The Contractor shall maintain linear control charts both for individual measurements and range (i.e., difference between highest and lowest measurements) for aggregate gradation, asphalt content, and VMA. The VMA for each day shall be calculated and monitored by the QC laboratory.

Control charts shall be posted in a location satisfactory to the RPR and kept current. As a minimum, the control charts shall identify the project number, the contract item number, the test number, each test parameter, the Action and Suspension Limits applicable to each test parameter, and the Contractor's test results. The Contractor shall use the control charts as part of a process control system for identifying potential problems and assignable causes before they occur. If the Contractor's projected data during production indicates a problem and the Contractor is not taking satisfactory corrective action, the RPR may suspend production or acceptance of the material.

a. Individual measurements. Control charts for individual measurements shall be established to maintain process control within tolerance for aggregate gradation, asphalt content, and VMA. The control charts shall use the JMF target values as indicators of central tendency for the following test parameters with associated Action and Suspension Limits:

Control Chart Limits for Individual Measurements

Sieve	Action Limit	Suspension Limit
3/4 inch (19.0 mm)	±6%	±9%
1/2 inch (12.5 mm)	±6%	±9%
3/8 inch (9.5 mm)	±6%	±9%
No. 4 (4.75 mm)	±6%	±9%
No. 16 (1.18 mm)	±5%	±7.5%
No. 50 (300 µm)	±3%	±4.5%
No. 200 (75 µm)	±2%	±3%
Asphalt Content	±0.45%	±0.70%
Minimum VMA	-0.5%	-1.0%

b. Range. Control charts for range shall be established to control process variability for the test parameters and Suspension Limits listed below. The range shall be computed for each lot as the difference between the two test results for each control parameter. The Suspension Limits specified below are based on a sample size of n = 2. Should the Contractor elect to perform more than two tests per lot, the Suspension Limits shall be adjusted by multiplying the Suspension Limit by 1.18 for n = 3 and by 1.27 for n = 4.

Control Chart Limits Based on Range (n = 2)

Sieve	Suspension Limit
1/2 inch (12.5 mm)	11%
3/8 inch (9.5 mm)	11%
No. 4 (4.75 mm)	11%
No. 16 (1.18 mm)	9%
No. 50 (300 µm)	6%
No. 200 (75 µm)	3.5%
Asphalt Content	0.8%

c. Corrective action. The CQCP shall indicate that appropriate action shall be taken when the process is believed to be out of tolerance. The Plan shall contain sets of rules to gauge when a process is out of control and detail what action will be taken to bring the process into control. As a minimum, a process shall be deemed out of control and production stopped and corrective action taken, if:

(1) One point falls outside the Suspension Limit line for individual measurements or range; or

(2) Two points in a row fall outside the Action Limit line for individual measurements.

403-5.6 Quality control (QC) reports. The Contractor shall maintain records and shall submit reports of QC activities daily, in accordance with the CQCP described in Item C-100.

MATERIAL ACCEPTANCE

403-6.1. Quality Assurance Acceptance sampling and testing. Unless otherwise specified, all acceptance sampling and testing necessary to determine conformance with the requirements specified in this section will be performed by the RPR at no cost to the Contractor except that coring as required in this section shall be completed and paid for by the Contractor.

a. Quality Assurance (QA) testing laboratory. The QA testing laboratory performing these acceptance tests will be accredited in accordance with ASTM D3666. The QA laboratory accreditation will be current and listed on the accrediting authority's website. All test methods required for acceptance sampling and testing will be listed on the lab accreditation.

b. Lot Size. A standard lot will be equal to one day's production divided into approximately equal sublots of between 400 to 600 tons. When only one or two sublots are produced in a day's production, the sublots will be combined with the production lot from the previous or next day.

Where more than one plant is simultaneously producing asphalt for the job, the lot sizes will apply separately for each plant.

c. Asphalt air voids. Plant-produced asphalt will be tested for air voids on a sublot basis.

(1) Sampling. Material from each sublot shall be sampled in accordance with ASTM D3665. Samples shall be taken from material deposited into trucks at the plant or at the job site in accordance with ASTM D979. The sample of asphalt may be put in a covered metal tin and placed in an oven for not less than 30 minutes nor more than 60 minutes to maintain the material at or above the compaction temperature as specified in the JMF. ***For mixtures containing aggregates with absorption values greater than 1.5%, the mixture shall be maintained at a temperature at or above the specified compaction temperature for a period of not less than 60 minutes nor more than 90 minutes to stabilize to compaction temperatures.***

(2) Testing. Air voids will be determined for each sublot in accordance with ASTM D3203 for a set of compacted specimens prepared in accordance with ASTM D6926.

d. In-place asphalt mat and joint density. Each sublot will be tested for in-place mat and joint density as a percentage of the theoretical maximum density (TMD).

(1) Sampling. The RPR will cut minimum 5 inches (125 mm) diameter samples in accordance with ASTM D5361. The Contractor shall furnish all tools, labor, and materials for cleaning, and filling the cored pavement. Laitance produced by the coring operation shall be removed immediately after coring, and core holes shall be filled within one day after sampling in a manner acceptable to the RPR.

(2) Bond. Each lift of asphalt shall be bonded to the underlying layer. If cores reveal that the surface is not bonded, additional cores shall be taken as directed by the RPR to determine the extent of unbonded areas. Unbonded areas shall be removed by milling and replaced at no additional cost as directed by the RPR.

(3) Thickness. Thickness of each lift of surface course will be evaluated by the RPR for compliance to the requirements shown on the plans after any necessary corrections for grade. Measurements of thickness will be made using the cores extracted for each sublot for density measurement. The maximum allowable deficiency at any point will not be more than 1/4 inch (6 mm) less than the thickness indicated for the lift. Average thickness of lift, or combined lifts, will not be less than the indicated thickness. Where the thickness tolerances are not met, the lot or sublot shall be corrected by the Contractor at his expense by removing the deficient area and

replacing with new pavement. The Contractor, at his expense, may take additional cores as approved by the RPR to circumscribe the deficient area.

(4) Mat density. One core shall be taken from each sublot. Core locations will be determined by the RPR in accordance with ASTM D3665. Cores for mat density shall not be taken closer than one foot (30 cm) from a transverse or longitudinal joint. The bulk specific gravity of each cored sample will be determined in accordance with ASTM D2726. The percent compaction (density) of each sample will be determined by dividing the bulk specific gravity of each sublot sample by the TMD for that sublot.

(5) Joint density. One core centered over the longitudinal joint shall be taken for each sublot which contains a longitudinal joint. Core locations will be determined by the RPR in accordance with ASTM D3665. The bulk specific gravity of each core sample will be determined in accordance with ASTM D2726. The percent compaction (density) of each sample will be determined by dividing the bulk specific gravity of each joint density sample by the average TMD for the lot. The TMD used to determine the joint density at joints formed between lots will be the lower of the average TMD values from the adjacent lots.

403-6.2 Acceptance criteria.

a. General. Acceptance will be based on the implementation of the Contractor Quality Control Program (CQCP) and the following characteristics of the asphalt and completed pavements: air voids, mat density, joint density, grade and Profilograph smoothness

b. Air voids. Acceptance of each lot of plant produced material for air voids will be based upon the average air void from the sublots. If the average air voids of the lot are equal to or greater than 2% and equal to or less than 5%, then the lot will be acceptable. If the average is below 2% or greater than 5%, the lot shall be removed and replaced at the Contractor's expense.

c. Mat density. Acceptance of each lot of plant produced material for mat density will be based on the average of all of the densities taken from the sublots. If the average mat density of the lot so established equals or exceeds 94%, the lot will be acceptable. If the average mat density of the lot is below 94%, the lot shall be removed and replaced at the Contractor's expense.

d. Joint density. Acceptance of each lot of plant produced asphalt for joint density will be based on the average of all of the joint densities taken from the sublots. If the average joint density of the lot so established equals or exceeds 92%, the lot will be acceptable. If the average joint density of the lot is less than 92%, the Contractor shall stop production and evaluate the method of compacting joints. Production may resume once the reason for poor compaction has been determined and appropriate measures have been taken to ensure proper compaction.

e. Grade. The final finished surface of the pavement of the completed project shall be surveyed to verify that the grade elevations and cross-sections shown on the plans do not deviate more than 1/2 inch (12 mm) vertically or 0.1 feet (30 mm) laterally.

Cross-sections of the pavement shall be taken at a minimum 50-foot (15-m) longitudinal spacing and at all longitudinal grade breaks. Minimum cross-section grade points shall include grade at centerline, ± 10 feet of centerline and edge of taxiway pavement.

The survey and documentation shall be stamped and signed by a licensed surveyor. Payment for sublots that do not meet grade for over 25% of the sublot shall not be more than 95%.

All survey will be performed on the same grid pattern and spacing as shown on the Spot Elevation Plans.

f. Profilograph roughness for QA Acceptance. The final profilograph shall be the full length of the project to facilitate testing of roughness between lots. The RPR will perform a profilograph roughness test on the completed project with a profilograph meeting the requirements of ASTM E1274 or a Class I inertial profiler meeting ASTM E950. Data and results shall be provided within 48 hrs of profilograph roughness tests.

The pavement shall have an average profile index less than 15 inches per mile per 1/10 mile. The equipment shall utilize electronic recording and automatic computerized reduction of data to indicate "must grind" bumps and the Profile Index for the pavement using a 0.2-inch (5 mm) blanking band. The bump template must span one inch (25 mm) with an offset of 0.4 inches (10 mm). The profilograph must be calibrated prior to use and operated by a factory or State DOT approved, trained operator. Profilograms shall be recorded on a longitudinal scale of one inch (25 mm) equals 25 feet (7.5 m) and a vertical scale of one inch (25 mm) equals one inch (25 mm). Profilograph shall be performed one foot right and left of project centerline and 15 feet (4.5 m) right and left of project centerline. Any areas that indicate "must grind" shall be corrected with diamond grinding per paragraph 401-4.15 or by removing and replacing full depth of surface course. as directed by the RPR. Where corrections are necessary, a second profilograph run shall be performed to verify that the corrections produced an average profile index of 15 inches per mile per 1/10 mile or less.

403-6.3 Resampling Pavement for Mat Density.

a. General. Resampling of a lot of pavement will only be allowed for mat density and then, only if the Contractor requests same in writing, within 48 hours after receiving the written test results from the RPR. A retest will consist of all the sampling and testing procedures contained in paragraphs 403-6.1. Only one resampling per lot will be permitted.

(1) A redefined mat density will be calculated for the resampled lot. The number of tests used to calculate the redefined mat density will include the initial tests made for that lot plus the retests.

(2) The cost for resampling and retesting shall be borne by the Contractor.

b. Payment for resampled lots. The redefined mat density for a resampled lot will be used to evaluate the acceptance of that lot in accordance with paragraph 403-6.2.

c. Outliers. Check for outliers in accordance with ASTM E178, at a significance level of 5%. Outliers will be discarded and density determined using the remaining test values.

403-6.4 Leveling course. The leveling course is the first variable thickness lift placed to correct surface irregularities prior to placement of subsequent courses. The leveling course shall meet the aggregate gradation in Table 2, paragraph 403-3.3. The leveling course shall meet the requirements of paragraph 403-3.3, 403-6.1b for air voids, but shall not be subject to the density requirements of paragraph 403-6.1c. The leveling course shall be compacted with the same effort used to achieve density of the control strip. The leveling course shall not exceed the maximum lift thickness associated with each gradation in Table 2, paragraph 403-3.3.

METHOD OF MEASUREMENT

403-7.1 Measurement. Plant mix asphalt mix pavement shall be measured by the number of tons (kg) of asphalt pavement used in the accepted work. Recorded batch weights or truck scale weights will be used to determine the basis for the tonnage.

BASIS OF PAYMENT

403-8.1 Payment. Payment for a lot of asphalt mixture meeting all acceptance criteria as specified in paragraph 403-6.2 shall be made at the contract unit price per ton ~~(kg)~~ for asphalt. The price shall be compensation for furnishing all materials, for all preparation, mixing, and placing of these materials, and for all labor, equipment, tools, and incidentals necessary to complete the item.

e. Survey – The contractor is to provide a survey from a professionally licensed surveyor after the completion of the asphalt installation. This is a requirement for payment for the leveling course of asphalt.

f. The overall amount of thickness of levelling course installed in a section shall not exceed the plan thickness (Max 2"). Excess levelling course installed without the approval of the Engineer or RPR will not be paid for.

Payment will be made under:

Item P-403-8.1 V2	**Hot Mix Asphalt Pavement (Leveling) - per Ton**
Item P-403-8.1 V2 ALT1	**Hot Mix Asphalt Pavement (Leveling) - per Ton**

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM C29	Standard Test Method for Bulk Density ("Unit Weight") and Voids in Aggregate
ASTM C88	Standard Test Method for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate
ASTM C117	Standard Test Method for Materials Finer than 75-µm (No. 200) Sieve in Mineral Aggregates by Washing
ASTM C127	Standard Test Method for Density, Relative Density (Specific Gravity), and Absorption of Coarse Aggregate
ASTM C131	Standard Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
ASTM C136	Standard Test Method for Sieve or Screen Analysis of Fine and Coarse Aggregates
ASTM C142	Standard Test Method for Clay Lumps and Friable Particles in Aggregates

ASTM C183	Standard Practice for Sampling and the Amount of Testing of Hydraulic Cement
ASTM C566	Standard Test Method for Total Evaporable Moisture Content of Aggregate by Drying
ASTM D75	Standard Practice for Sampling Aggregates
ASTM D242	Standard Specification for Mineral Filler for Bituminous Paving Mixtures
ASTM D946	Standard Specification for Penetration-Graded Asphalt Cement for Use in Pavement Construction
ASTM D979	Standard Practice for Sampling Bituminous Paving Mixtures
ASTM D1073	Standard Specification for Fine Aggregate for Bituminous Paving Mixtures
ASTM D1074	Standard Test Method for Compressive Strength of Bituminous Mixtures
ASTM D1461	Standard Test Method for Moisture or Volatile Distillates in Bituminous Paving Mixtures
ASTM D2041	Standard Test Method for Theoretical Maximum Specific Gravity and Density of Bituminous Paving Mixtures
ASTM D2172	Standard Test Method for Quantitative Extraction of Bitumen from Bituminous Paving Mixtures
ASTM D2419	Standard Test Method for Sand Equivalent Value of Soils and Fine Aggregate
ASTM D2489	Standard Practice for Estimating Degree of Particle Coating of Bituminous-Aggregate Mixtures
ASTM D2726	Standard Test Method for Bulk Specific Gravity and Density of Non-Absorptive Compacted Bituminous Mixtures
ASTM D2950	Standard Test Method for Density of Bituminous Concrete in Place by Nuclear Methods
ASTM D3203	Standard Test Method for Percent Air Voids in Compacted Dense and Open Bituminous Paving Mixtures
ASTM D3381	Standard Specification for Viscosity-Graded Asphalt Cement for Use in Pavement Construction
ASTM D3665	Standard Practice for Random Sampling of Construction Materials
ASTM D3666	Standard Specification for Minimum Requirements for Agencies Testing and Inspecting Road and Paving Materials
ASTM D4125	Standard Test Methods for Asphalt Content of Bituminous mixtures by the Nuclear Method
ASTM D4318	Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils
ASTM D4552	Standard Practice for Classifying Hot-Mix Recycling Agents

ASTM D4791	Standard Test Method for Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate
ASTM D4867	Standard Test Method for Effect of Moisture on Asphalt Concrete Paving Mixtures
ASTM D5444	Standard Test Method for Mechanical Size Analysis of Extracted Aggregate
ASTM D5581	Standard Test Method for Resistance to Plastic Flow of Bituminous Mixtures Using Marshall Apparatus (6 inch-Diameter Specimen)
ASTM D5821	Standard Test Method for Determining the Percentage of Fractured Particles in Coarse Aggregate
ASTM D6307	Standard Test Method for Asphalt Content of Hot-Mix Asphalt by Ignition Method
ASTM D6373	Standard Specification for Performance Graded Asphalt Binder
ASTM D6752	Standard Test Method for Bulk Specific Gravity and Density of Compacted Bituminous Mixtures Using Automatic Vacuum Sealing Method
ASTM D6925	Standard Test Method for Preparation and Determination of the Relative Density of Hot Mix Asphalt (HMA) Specimens by Means of the SuperPave Gyratory Compactor
ASTM D6926	Standard Practice for Preparation of Bituminous Specimens Using Marshall Apparatus
ASTM D6927	Standard Test Method for Marshall Stability and Flow of Bituminous Mixtures
ASTM D6995	Standard Test Method for Determining Field VMA based on the Maximum Specific Gravity of the Mix (Gmm)
ASTM E11	Standard Specification for Woven Wire Test Sieve Cloth and Test Sieves
ASTM E178	Standard Practice for Dealing with Outlying Observations
ASTM E2133	Standard Test Method for Using a Rolling Inclinometer to Measure Longitudinal and Transverse Profiles of a Traveled Surface

American Association of State Highway and Transportation Officials (AASHTO)

AASHTO M156	Standard Specification for Requirements for Mixing Plants for Hot-Mixed, Hot-Laid Bituminous Paving Mixtures
AASHTO T329	Standard Method of Test for Moisture Content of Hot Mix Asphalt (HMA) by Oven Method
AASHTO T 340	Standard Method of Test for Determining the Rutting Susceptibility of Hot Mix Asphalt (APA) Using the Asphalt Pavement Analyzer (APA)

Asphalt Institute (AI)

MS-2	Mix Design Manual, 7th Edition

MS-26 Asphalt Binder Handbook
AI State Binder Specification Database

FAA Orders

5300.1 Modifications to Agency Airport Design, Construction, and Equipment Standards

Federal Highway Administration (FHWA)

Long Term Pavement Performance Binder program

Software

FAARFIELD

END OF ITEM P-403

NO.	DATE	BY	CHK'D	DECRIPTION
1	05/05/2026	TFO	TFO	REVISED FDOT SPEC REFERENCE

ITEM P-620 RUNWAY AND TAXIWAY MARKING

DESCRIPTION

620-1.1 This item shall consist of the preparation and painting of numbers, markings, and stripes on the surface of runways, taxiways, and aprons, in accordance with these specifications and at the locations shown on the plans, or as directed by the Resident Project Representative (RPR). The terms "paint" and "marking material" as well as "painting" and "application of markings" are interchangeable throughout this specification. ***Where applicable, The Contractor will comply with best practices as published by the Innovative Pavement Research Foundation Report 01-G-002-05-1 title Airfield Markings Handbook, September 2008 unless otherwise approved by the Engineer.***

MATERIALS

620-2.1 Materials acceptance. The Contractor shall furnish manufacturer's certified test reports, for materials shipped to the project. The certified test reports shall include a statement that the materials meet the specification requirements. This certification along with a copy of the paint manufacturer's surface preparation; marking materials, including adhesion, flow promoting and/or floatation additive; and application requirements must be submitted and approved by the Resident Project Representative (RPR) prior to the initial application of markings. The reports can be used for material acceptance or the RPR may perform verification testing. The reports shall not be interpreted as a basis for payment. The Contractor shall notify the RPR upon arrival of a shipment of materials to the site. All material shall arrive in sealed containers that are easily quantifiable for inspection by the RPR.

620-2.2 Marking materials.

Table 1. Marking Materials

Paint[1]				Glass Beads[2]	
Type	**Color**	**Fed Std. 595 Number**	**Application Rate Maximum**	**Type**	**Application Rate Minimum**
II	White (Final)	**37925**	115 ft²/gal	III	10 lb/gal
II	White (Temp)	**37925**	230 ft²/gal	I	7 lb/gal
II	Red (Final)	**31136**	115 ft²/gal	I	5 lb/gal
II	Red (Temp)	**31136**	230 ft²/gal	-	-
II	Yellow (Final)	**33538 or 33655**	115 ft²/gal	III	10 lb/gal
II	Yellow (Temp)	**33538 or 33655**	230 ft²/gal	I	7 lb/gal
II	Black	**37038**	115 ft²/gal	-	-

[1] **See paragraph 620-2.2a**

[2] **See paragraph 620-2.2b**

1

a. Paint. Paint shall be waterborne in accordance with the requirements of this paragraph. Paint colors shall comply with Federal Standard No. 595.

Black outlining is required for this project unless shown otherwise by the Project Plans.

Waterborne. Paint shall meet the requirements of Federal Specification TT-P-1952F, Type II. The non-volatile portion of the vehicle for all paint types shall be composed of a 100% acrylic polymer as determined by infrared spectral analysis.

b. Reflective media. Glass beads for ***all permanent*** white and yellow paint shall meet the requirements for Federal Specification TT-B-1325D Type III, Gradation A. Glass beads for permanent red and pink paint shall meet the requirements for Type I, Gradation A ***Glass beads for temporary white and yellow paint shall meet the requirements of Federal Specification TT-B-1325D Type I, Gradation A.***

Glass beads shall be treated with all compatible coupling agents recommended by the manufacturers of the paint and reflective media to ensure adhesion and embedment.

Glass beads shall not be used in black and green paint.

Type III glass beads shall not be used in red and pink paint.

CONSTRUCTION METHODS

620-3.1 Weather limitations. Painting shall only be performed when the surface is dry, and the ambient temperature and the pavement surface temperature meet the manufacturer's recommendations in accordance with paragraph 620-2.1. Painting operations shall be discontinued when the ambient or surface temperatures does not meet the manufacturer's recommendations. Markings shall not be applied when the wind speed exceeds 10 mph unless windscreens are used to shroud the material guns. Markings shall not be applied when weather conditions are forecasts to not be within the manufacturers' recommendations for application and dry time.

620-3.2 Equipment. Equipment shall include the apparatus necessary to properly clean the existing surface, a mechanical marking machine, a bead dispensing machine, and such auxiliary hand-painting equipment as may be necessary to satisfactorily complete the job.

The mechanical marker shall be an atomizing spray-type or airless type marking machine with automatic glass bead dispensers suitable for application of traffic paint. It shall produce an even and uniform film thickness and appearance of both paint and glass beads at the required coverage and shall ***be designed so as to*** apply markings of uniform cross-sections and clear-cut edges without running or ~~spattering and without over spray.~~ ***spattering, without over spray, and within the limits for straightness set forth herein. Refer to paragraph 620-3.5 for application.*** The marking equipment for both paint and beads shall be calibrated daily.

Suitable adjustments shall be provided on the sprayer(s) of a single machine or by furnishing additional equipment for painting the width required.

The Contractor shall provide the necessary airfield stencils that have been approved by the Owner to paint the surface painted signs and taxiway location signs as indicated in the plans.

620-3.3 Preparation of surfaces. Immediately before application of the paint, the surface shall be dry and free from dirt, grease, oil, laitance, or other contaminates that would reduce the bond between the paint and the pavement. Use of any chemicals or impact abrasives during surface preparation shall be approved in advance by the RPR. After the cleaning operations, sweeping, blowing, or rinsing with pressurized water shall be performed to ensure the surface is clean and free of grit or other debris left from the cleaning process.

a. Preparation of new pavement surfaces. ***Extreme care shall be taken not to damage the pavement.*** The area to be painted shall be cleaned by broom, blower, ~~water blasting~~, or by other methods approved by the RPR to remove all contaminants, including PCC curing compounds, minimizing damage to the pavement surface.

b. Preparation of pavement to remove existing markings. Existing pavement markings shall be removed by rotary grinding, ~~water blasting~~, or by other methods approved by the RPR minimizing damage to the pavement surface. The removal area may need to be larger than the area of the markings to eliminate ghost markings. ***Pavement markings shall be removed 10' past the limits of demolition work unless otherwise noted.*** After removal of markings on asphalt pavements, apply a fog seal or seal coat to 'block out' the removal area to eliminate 'ghost' markings. ***Coatings will be incidental to this work.***

c. Preparation of pavement markings prior to remarking. Prior to remarking existing markings, loose existing markings must be removed minimizing damage to the pavement surface, with a method approved by the RPR. After removal, the surface shall be cleaned of all residue or debris.

Prior to the application of markings, the Contractor shall certify in writing that the surface is dry and free from dirt, grease, oil, laitance, or other foreign material that would prevent the bond of the paint to the pavement or existing markings. This certification along with a copy of the paint manufactures application and surface preparation requirements must be submitted to the RPR prior to the initial application of markings.

New pavement markings should never be painted over the top of existing, permanent pavement markings.

Markings to be removed and repainted shall be dry and free from dirt, grease, oil, laitance, or other foreign material that would reduce the bond between the new paint and the existing paint. The areas to be painted shall be cleaned by pressure washing or by other methods approved by the Engineer, as required to remove all dirt, laitance, and loose materials.

Prior to each working day, the Contractor shall calibrate the application equipment and provide evidence of that calibration to the RPR. Twice daily, or as directed by the RPR, the Contractor shall test the day's production for thickness and reflectivity. All testing results shall be provided to the RPR/Engineer at the end of each day's production.

620-3.4 Layout of markings. The proposed markings shall be laid out ***by the Contractor with a licensed land surveyor registered in the state of Florida*** in advance of the paint application. ***The Contractor shall provide an experienced technician to supervise the location, alignment, layout, dimensions, and application of the paint. Prior to the markings being laid out in the field, the Contractor and marking Subcontractor shall attend a pre-activity meeting with the Airport, RPR and Engineer.*** The locations of markings to receive glass beads shall be shown on the plans.

620-3.5 Application. A period of **30** days shall elapse between placement of surface course or seal coat and application of the permanent paint markings. Paint shall be applied at the locations and to the dimensions and spacing shown on the plans. Paint shall not be applied until the layout ***has been performed by a licensed surveyor*** and ***the*** condition of the surface has been approved by the RPR.

The edges of the markings shall not vary from a straight line more than 1/2 inch (12 mm) in 50 feet (15 m), and marking dimensions and spacing shall be within the following tolerances:

Marking Dimensions and Spacing Tolerance

Dimension and Spacing	Tolerance
36 inch (910 mm) or less	±1/2 inch (12 mm)
greater than 36 inch to 6 feet (910 mm to 1.85 m)	±1 inch (25 mm)
greater than 6 feet to 60 feet (1.85 m to 18.3 m)	±2 inch (50 mm)
greater than 60 feet (18.3 m)	±3 inch (76 mm)

The paint shall be mixed in accordance with the manufacturer's instructions and applied to the pavement with a marking machine at the rate shown in Table 1. The addition of thinner will not be permitted. ***Subject to the overall scheduling requirements, the Contractor shall allow the maximum time to elapse after paving to allow the asphalt to oxidize prior to any permanent painting.***

Glass beads shall be distributed upon the marked areas at the locations shown on the plans to receive glass beads immediately after application of the paint. A dispenser shall be furnished that is properly designed for attachment to the marking machine and suitable for dispensing glass beads. Glass beads shall be applied at the rate shown in Table 1. Glass beads shall not be applied to black paint or green paint. Glass beads shall adhere to the cured paint or all marking operations shall cease until corrections are made. Different bead types shall not be mixed. Regular monitoring of glass bead embedment and distribution should be performed.

A layer (one coat) of temporary paint, with glass beads as noted in Table 1, shall be applied twenty-four (24) hours after placement of bituminous pavements to allow the prompt re-opening of pavements to aircraft traffic. However, the paint shall not bleed, curl, or discolor when applied. A permanent layer of paint with glass beads shall be applied at the end of the project on top of the temporary markings layer. Black outline shall not be applied for temporary paint.

At no point should any paint be applied to the grass adjacent to the pavement edge.

620-3.6 Application--preformed thermoplastic airport pavement markings. Preformed thermoplastic pavement markings not used.

620-3.7 Control strip. Prior to the full application of airfield markings, the Contractor shall prepare a control strip in the presence of the RPR. The Contractor shall demonstrate the surface preparation method and all striping equipment to be used on the project. The marking equipment must achieve the prescribed application rate of paint and population of glass beads (per Table 1) that are properly embedded and evenly distributed across the full width of the marking. Prior to acceptance of the control strip, markings must be evaluated during darkness

to ensure a uniform appearance. ***Thickness shall be in the range of 12-18 mil and reflectivity measurement shall comply with paragraph 620-2.2***

620-3.8 Retro-reflectance. Reflectance shall be measured with a portable retro-reflectometer meeting ASTM E1710 (or equivalent). A total of 6 reading shall be taken over a 6 square foot area with 3 readings taken from each direction. The average shall be equal to or above the minimum levels of all readings which are within 30% of each other.

Minimum Retro-Reflectance Values

Material	Retro-reflectance mcd/m^2/lux		
	White	**Yellow**	**Red**
Initial Type I	300	175	35
Initial Type III	600	300	35
~~Initial Thermoplastic~~	~~225~~	~~100~~	~~35~~
All materials, remark when less than[1]	100	75	10

[1] 'Prior to remarking determine if removal of contaminants on markings will restore retro-reflectance

620-3.9 Protection and cleanup. After application of the markings, all markings shall be protected from damage until dry. All surfaces shall be protected from excess moisture and/or rain and from disfiguration by spatter, splashes, spillage, or drippings. The Contractor shall remove from the work area all debris, waste, loose reflective media, and by-products generated by the surface preparation and application operations to the satisfaction of the RPR. The Contractor shall dispose of these wastes in strict compliance with all applicable state, local, and federal environmental statutes and regulations. ***Any excess paint outside the limits of markings, including splatters, splashes, spillage, or drippings of paint shall be removed through grinding. Any existing markings to remain that are damaged from Contractor's operations shall be re-painted at the Contractor's expense.***

620-3.10 Stencils. In advance of any marking operations, the Contractor shall submit for review by the Engineer the stencils to be employed for the installation of surface painted signs.

620-3.11 Surfaces to receive new markings. The Contractor shall not apply new markings over newly applied paint. For example, black borders shall not be applied the full width of the marking, then apply yellow markings to achieve black border requirements.

620-3.12 As-Built Survey. At the completion of each work area, the Contractor shall provide as-built evidence prepared by a State of Florida licensed land surveyor demonstrating that newly installed markings comply with the dimensions provided in the Contract Documents. Additionally, the Contractor shall produce testing results for applied thickness and reflectivity. No payment to the Contractor shall be made until such documentation is produced and provided to the Engineer for approval newly installed markings that do not satisfy the required dimensions, thickness or reflectivity shall be

removed and reinstalled by the Contractor. Such removal and reinstallation shall be at the expense of the Contractor.

METHOD OF MEASUREMENT

620-4.1 The quantity of runway and taxiway markings to be paid for shall be the number of square feet of painting including reflective media performed and installed in accordance with the specifications and accepted by the RPR. The quantity of runway and taxiway paint removal shall be paid for by the number of square feet removed and accepted by the RPR. Measurement of markings removed and installed shall occur in the presence of both the Contractor and RPR.

BASIS OF PAYMENT

620-5.1 Payment shall be made at the respective contract price per square foot for runway and taxiway painting. Payment shall be made at the respective contract price per square feet for runway and taxiway paint removal. This price shall be full compensation for furnishing all materials and for all labor, equipment, tools, reflective media, testing, layout, surface cleaning and incidentals necessary to complete the item.

Payment will be made under:

Item P-620-5.1 V2	**Permanent Airfield Painting with Type III Glass Beads (Yellow, White) - per Square Foot**
Item P-620-5.1 V2 ALT1	**Permanent Airfield Painting with Type III Glass Beads (Yellow, White) - per Square Foot**
Item P-620-5.2 V2	**Permanent Airfield Painting with Type I Glass Beads (Red Surface Painted Signs) – per Square Foot**
Item P-620-5.2 V2 ALT1	**Permanent Airfield Painting with Type I Glass Beads (Red Surface Painted Signs) – per Square Foot**
Item P-620-5.3 V2	**Permanent Airfield Painting with No Glass Beads (Black) – per Square Foot**
Item P-620-5.3 V2 ALT1	**Permanent Airfield Painting with No Glass Beads (Black) – per Square Foot**
Item P-620-5.4 V2	**Temporary Airfield Painting with Type I Glass Beads (Yellow and White) – per Square Foot**
Item P-620-5.4 V2 ALT1	**Temporary Airfield Painting with Type I Glass Beads (Yellow and White) – per Square Foot**
Item P-620-5.5 V2	**Temporary Airfield Painting with No Glass Beads (Red Surface Painted Signs) – per Square Foot**
Item P-620-5.5 V2 ALT1	**Temporary Airfield Painting with No Glass Beads (Red Surface Painted Signs) – per Square Foot**

Item P-620-5.6 V2 Airfield Paint Removal – per Square Foot
Item P-620-5.6 V2 ALT1 Airfield Paint Removal – per Square Foot

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM D476	Standard Classification for Dry Pigmentary Titanium Dioxide Products
ASTM D968	Standard Test Methods for Abrasion Resistance of Organic Coatings by Falling Abrasive
ASTM D1652	Standard Test Method for Epoxy Content of Epoxy Resins
ASTM D2074	Standard Test Method for Total, Primary, Secondary, and Tertiary Amine Values of Fatty Amines by Alternative Indicator Method
ASTM D2240	Standard Test Method for Rubber Property - Durometer Hardness
ASTM D7585	Standard Practice for Evaluating Retroreflective Pavement Markings Using Portable Hand-Operated Instruments
ASTM E303	Standard Test Method for Measuring Surface Frictional Properties Using the British Pendulum Tester
ASTM E1710	Standard Test Method for Measurement of Retroreflective Pavement Marking Materials with CEN-Prescribed Geometry Using a Portable Retroreflectometer
ASTM E2302	Standard Test Method for Measurement of the Luminance Coefficient Under Diffuse Illumination of Pavement Marking Materials Using a Portable Reflectometer
ASTM G154	Standard Practice for Operating Fluorescent Ultraviolet (UV) Lamp Apparatus for Exposure of Nonmetallic Materials

Code of Federal Regulations (CFR)

40 CFR Part 60, Appendix A-7, Method 24
Determination of volatile matter content, water content, density, volume solids, and weight solids of surface coatings

29 CFR Part 1910.1200 Hazard Communication

Federal Specifications (FED SPEC)

FED SPEC TT-B-1325D	Beads (Glass Spheres) Retro-Reflective
FED SPEC TT-P-1952F	Paint, Traffic and Airfield Marking, Waterborne
FED STD 595	Colors used in Government Procurement

Commercial Item Description

A-A-2886B Paint, Traffic, Solvent Based

Advisory Circulars (AC)

AC 150/5340-1 Standards for Airport Markings

AC 150/5320-12 Measurement, Construction, and Maintenance of Skid Resistant Airport Pavement Surfaces

END OF ITEM P-620

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NO.	DATE	BY	CHK'D	DECRIPTION
1	05/05/2026	TFO	TFO	REVISED TEMP PAINT APPLICATION RATE MAX.

ITEM T-905 TOPSOIL

DESCRIPTION

905-1.1 This item shall consist of preparing the ground surface for topsoil application, removing topsoil from designated stockpiles or areas to be stripped on the site or from approved sources off the site, and placing and spreading the topsoil on prepared areas in accordance with this specification at the locations shown on the plans or as directed by the RPR.

MATERIALS

905-2.1 Topsoil. Topsoil shall be the surface layer of soil with no admixture of refuse or any material toxic to plant growth, and it shall be reasonably free from subsoil and stumps, roots, brush, stones (2 inches (50 mm) or more in diameter), and clay lumps or similar objects. Brush and other vegetation that will not be incorporated with the soil during handling operations shall be cut and removed. Ordinary sod and herbaceous growth such as grass and weeds are not to be removed, but shall be thoroughly broken up and intermixed with the soil during handling operations. Heavy sod or other cover, which cannot be incorporated into the topsoil by discing or other means, shall be removed. The topsoil or soil mixture, unless otherwise specified or approved, shall have a pH range of approximately 5.5 pH to 7.6 pH, when tested in accordance with the methods of testing of the Association of Official Agricultural Chemists in effect on the date of invitation of bids. The organic content shall be not less than 3% nor more than 20% as determined by the wet-combustion method (chromic acid reduction). There shall be not less than 20% nor more than 80% of the material passing the 200 mesh (75 µm) sieve as determined by the wash test in accordance with ASTM C117.

Natural topsoil may be amended by the Contractor with approved materials and methods to meet the above specifications.

905-2.2 Inspection and tests. Within 10 days following acceptance of the bid, the RPR shall be notified of the source of topsoil to be furnished by the Contractor. The topsoil shall be inspected to determine if the selected soil meets the requirements specified and to determine the depth to which stripping will be permitted. At this time, the Contractor may be required to take representative soil samples from several locations within the area under consideration and to the proposed stripping depths, for testing purposes as specified in paragraph 905-2.1.

CONSTRUCTION METHODS

905-3.1 General. Areas to be topsoiled shall be shown on the plans. If topsoil is available on the site, the location of the stockpiles or areas to be stripped of topsoil and the stripping depths shall be shown on the plans.

Suitable equipment necessary for proper preparation and treatment of the ground surface, stripping of topsoil, and for the handling and placing of all required materials shall be on hand, in good condition, and approved by the RPR before the various operations are started.

905-3.2 Preparing the ground surface. Immediately prior to dumping and spreading the topsoil on any area, the surface shall be loosened by discs or spike-tooth harrows, or by other

means approved by the RPR, to a minimum depth of 2 inches (50 mm) to facilitate bonding of the topsoil to the covered subgrade soil. The surface of the area to be topsoiled shall be cleared of all stones larger than 2 inches (50 mm) in any diameter and all litter or other material which may be detrimental to proper bonding, the rise of capillary moisture, or the proper growth of the desired planting. Limited areas, as shown on the plans, which are too compact to respond to these operations shall receive special scarification.

Grades on the area to be topsoiled, which have been established by others as shown on the plans, shall be maintained in a true and even condition. Where grades have not been established, the areas shall be smooth-graded and the surface left at the prescribed grades in an even and compacted condition to prevent the formation of low places or pockets where water will stand.

905-3.3 Obtaining topsoil. Prior to the stripping of topsoil from designated areas, any vegetation, briars, stumps and large roots, rubbish or stones found on such areas, which may interfere with subsequent operations, shall be removed using methods approved by the RPR. Heavy sod or other cover, which cannot be incorporated into the topsoil by discing or other means shall be removed.

When suitable topsoil is available on the site, the Contractor shall remove this material from the designated areas and to the depth as directed by the RPR. The topsoil shall be spread on areas already tilled and smooth-graded, or stockpiled in areas approved by the RPR. Any topsoil stockpiled by the Contractor shall be rehandled and placed without additional compensation. Any topsoil that has been stockpiled on the site by others, and is required for topsoil purposes, shall be removed and placed by the Contractor. The sites of all stockpiles and areas adjacent thereto which have been disturbed by the Contractor shall be graded if required and put into a condition acceptable for seeding.

When suitable topsoil is secured off the airport site, the Contractor shall locate and obtain the supply, subject to the approval of the RPR. The Contractor shall notify the RPR sufficiently in advance of operations in order that necessary measurements and tests can be made. The Contractor shall remove the topsoil from approved areas and to the depth as directed. The topsoil shall be hauled to the site of the work and placed for spreading, or spread as required. Any topsoil hauled to the site of the work and stockpiled shall be rehandled and placed without additional compensation.

905-3.4 Placing topsoil. The topsoil shall be evenly spread on the prepared areas to a uniform depth of 2 inches (50 mm) after compaction, unless otherwise shown on the plans or stated in the special provisions. Spreading shall not be done when the ground or topsoil is frozen, excessively wet, or otherwise in a condition detrimental to the work. Spreading shall be carried on so that turfing operations can proceed with a minimum of soil preparation or tilling.

After spreading, any large, stiff clods and hard lumps shall be broken with a pulverizer or by other effective means, and all stones or rocks (2 inches (50 mm) or more in diameter), roots, litter, or any foreign matter shall be raked up and disposed of by the Contractor. after spreading is completed, the topsoil shall be satisfactorily compacted by rolling with a cultipacker or by other means approved by the RPR. The compacted topsoil surface shall conform to the required lines, grades, and cross-sections. Any topsoil or other dirt falling upon pavements as a result of hauling or handling of topsoil shall be promptly removed.

METHOD OF MEASUREMENT

~~**905-4.1** Topsoil obtained on the site shall be measured by the number of cubic yards (cubic meters) of topsoil measured in its original position and stripped or excavated. Topsoil stockpiled by others and removed for topsoil by the Contractor shall be measured by the number of cubic yards (cubic meters) of topsoil measured in the stockpile. Topsoil shall be measured by volume in cubic yards (cubic meters) computed by the method of end areas.~~

~~**905-4.2** Topsoil obtained off the site shall be measured by the number of cubic yards (cubic meters) of topsoil measured in its original position and stripped or excavated. Topsoil shall be measured by volume in cubic yards (meters) computed by the method of end areas.~~

BASIS OF PAYMENT

~~**905-5.1** Payment will be made at the contract unit price per cubic yard for topsoil (obtained on the site). This price shall be full compensation for furnishing all materials and for all preparation, placing, and spreading of the materials, and for all labor, equipment, tools, and incidentals necessary to complete the item.~~

~~**905-5.2** Payment will be made at the contract unit price per cubic yard for topsoil (obtained off the site). This price shall be full compensation for furnishing all materials and for all preparation, placing, and spreading of the materials, and for all labor, equipment, tools, and incidentals necessary to complete the item.~~

~~Payment will be made under:~~

~~Item T-905-5.1 Topsoil, 2”- per cubic yard~~

Topsoil will be incidental to the installation of sod and hydroseed. No additional payment for the procurement or installation of topsoil will be provided.

REFERENCES

1 The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM C117 Materials Finer than 75 μm (No. 200) Sieve in Mineral Aggregates by Washing

Advisory Circulars (AC)

AC 150/5200-33 Hazardous Wildlife Attractants on or Near Airports

FAA/United States Department of Agriculture

Wildlife Hazard Management at Airports, A Manual for Airport Personnel

END OF ITEM T-905

NO.	DATE	BY	CHK'D	DECRIPTION
1	05/05/2026	AC	TFO	Making Topsoil incidental to sod and hydroseed

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