

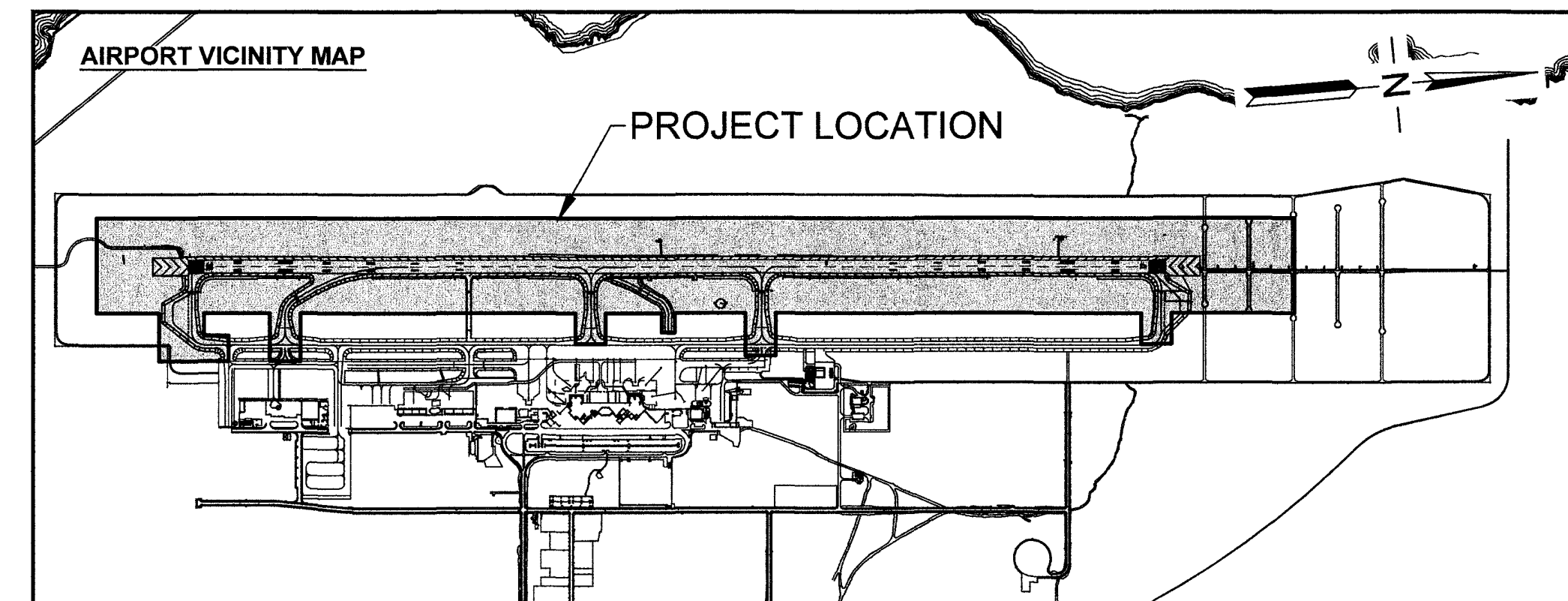
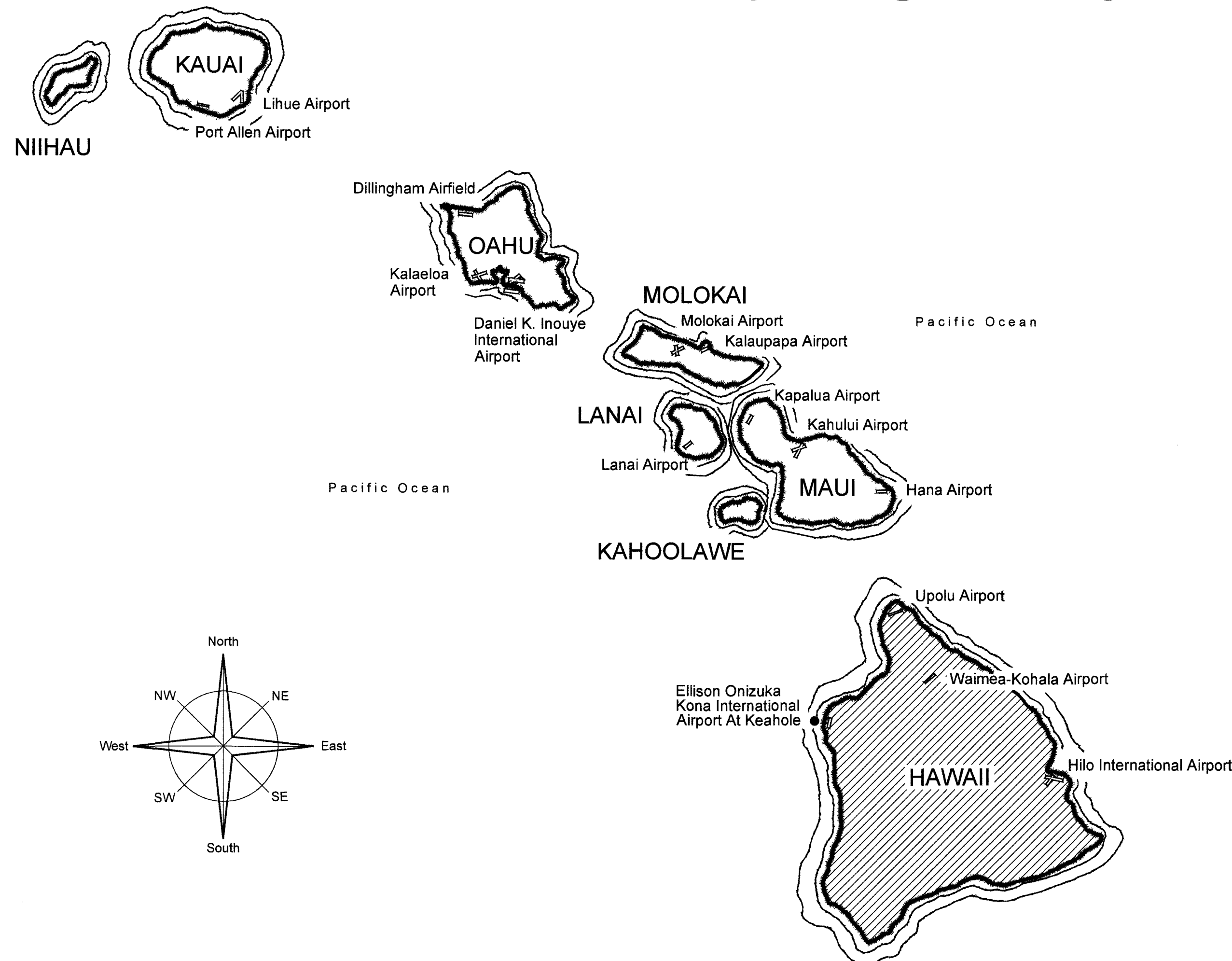
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS

PLANS FOR

**RUNWAY 17-35  
REHABILITATION**

AT

**ELLISON ONIZUKA KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII  
STATE PROJECT NO. AH2021-16**



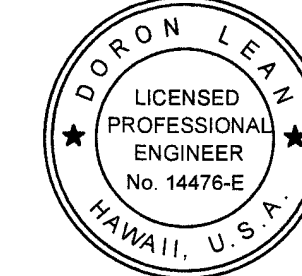
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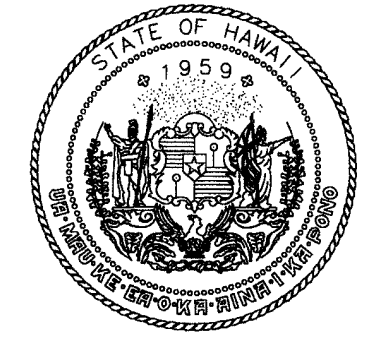


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STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS



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4/30/24  
License Expiration Date

This work was prepared by me or under my supervision.

DSGN.	DRWN.	CHKD.	APPD.
AC	AT	TR	SH

**KEY PLAN / NOTES:**

NO.	DATE	REVISIONS

**CONSTRUCTION DOCUMENTS**  
SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35  
REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

**SHEET TITLE:**

**TITLE SHEET**

DEPARTMENT OF TRANSPORTATION  
STATE OF HAWAII

APPROVED:  
*[Signature]*  
DIRECTOR OF TRANSPORTATION

*9/8/23*  
DATE

DATE :	DWG. NO.
09/2023	G-001
SHEET :	
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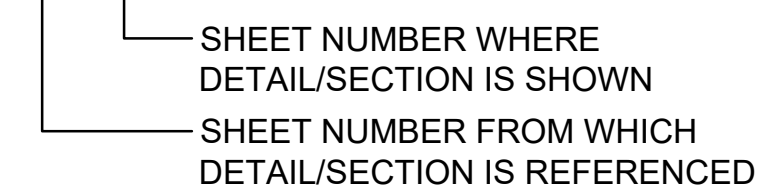
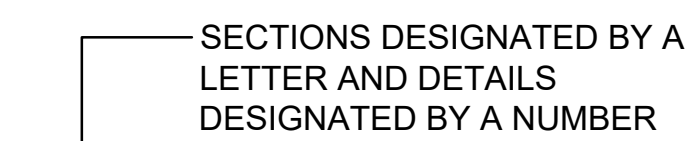
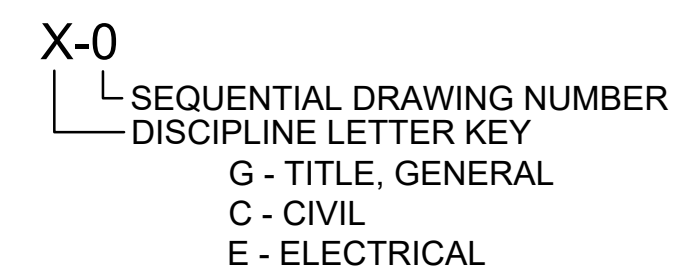
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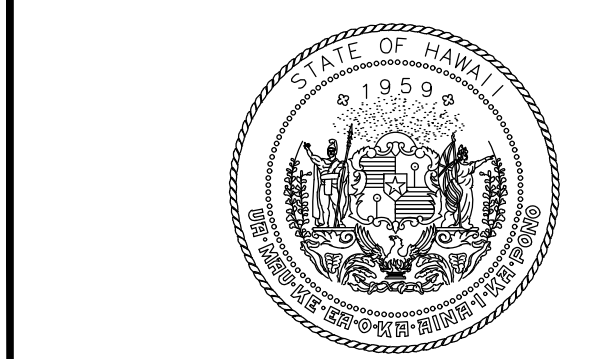
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**SHEET NUMBERING SCHEME**

ALL SHEETS WILL BE NUMBERED BEGINNING WITH A LETTER FOLLOWED BY A NUMBER AS FOLLOWS:



SCALE: 1"=10'



4/30/24  
Licensed Expiration Date

This work was prepared by me or under my supervision.

DSGN.	DRWN.	CHKD.	APPD.
AC	AT	TR	SH

**KEY PLAN / NOTES:**

NO.	DATE	REVISIONS

**CONSTRUCTION DOCUMENTS**  
SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

**SHEET TITLE:**

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DATE :	DWG. NO.
09/2023	<b>G-002</b>
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**GENERAL NOTES**

- THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT PLANS AND SPECIFICATIONS AND ANY RULES, REGULATIONS, STANDARDS OR SPECIFICATIONS REFERENCED THEREIN. THE PROJECT IS SUBJECT TO INSPECTION BY REPRESENTATIVES OF THE HAWAII DEPARTMENT OF TRANSPORTATION AIRPORTS DIVISION, THE FEDERAL AVIATION ADMINISTRATION (FAA) AND OTHER GOVERNING AGENCIES.
- LIQUIDATED DAMAGES, AS STATED IN THE CONTRACT AND CONSTRUCTION DOCUMENTS, SHALL APPLY TO THIS PROJECT.
- AS THIS PROJECT REQUIRES CONSTRUCTION ON OR NEAR ACTIVE AIRPORT FACILITIES, ALL CONSTRUCTION ACTIVITIES SHALL BE CONDUCTED IN A MANNER ACCEPTABLE TO THE OWNER AND THE FAA.
- THE CONTRACTOR IS HEREBY NOTIFIED THAT THE FAA ASSESSES PENALTIES AND FINES FOR INCURSIONS INTO ANY PART OF THE AIRPORT THAT IS NOT OTHERWISE AUTHORIZED BY THE RPR AND AIRPORT OPERATIONS. ALL SUCH PENALTIES AND FINES RESULTING FROM CONTRACTOR'S OPERATIONS SHALL BE PAID FOR AT THE CONTRACTOR'S EXPENSE. REPEATED OFFENSES MAY RESULT IN INDIVIDUAL DISBARMENT OF THE OFFENDING CONTRACTOR'S PERSONNEL.
- THE PRIME CONTRACTOR SHALL HAVE A JOB SUPERINTENDENT ON SITE AT ALL TIMES WHILE WORK IS IN PROGRESS.
- ALL PERSONNEL SHALL CLEAR THE CONSTRUCTION AREA ONCE WORK HAS STOPPED FOR THE DAY. ALL MECHANICS NEEDING ACCESS TO THE AOA DURING EVENINGS AND WEEKENDS TO WORK ON CONSTRUCTION EQUIPMENT SHALL BE ESCORTED AND HAVE THEIR VEHICLES IDENTIFIED WITH THE CONTRACTOR'S NAME AND APPROPRIATE LIGHTING. THE CONTRACTOR SHALL DESIGNATE A LEAD ON-SITE REPRESENTATIVE WHILE THE SUPERINTENDENT IS NOT ON-SITE.
- MAXIMUM CONSTRUCTION TRAFFIC SPEED ON ALL AIRPORT PROPERTY SHALL BE 15 MPH, UNLESS POSTED OTHERWISE.
- THE CONTRACTOR SHALL PERFORM ALL CONSTRUCTION IN STRICT ACCORDANCE WITH THE REQUIREMENTS OF FAA ADVISORY CIRCULAR AC-150/5370-2 LATEST EDITION "OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION".

**CONTRACTOR'S GENERAL SECURITY AND OPERATIONAL REQUIREMENTS AND RESTRICTIONS**

- THE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF THE AIRPORT SECURITY PLAN AND WITH THE SECURITY REQUIREMENTS SPECIFIED HEREIN. THE CONTRACTOR SHALL DESIGNATE TO THE CONSTRUCTION MANAGER AND AIRPORT OPERATIONS THE NAME OF ITS "CONTRACTOR SECURITY OFFICER" (CSO). THE CSO SHALL REPRESENT THE CONTRACTOR ON THE SECURITY REQUIREMENTS FOR THE CONTRACT. CSO SHALL BE ON SITE AT ALL TIMES DURING WORKING HOURS.
- CONTRACTOR PERSONNEL SECURITY ORIENTATION: THE CSO SHALL BE RESPONSIBLE FOR BRIEFING ALL CONTRACTOR PERSONNEL ON AIRPORT SECURITY REQUIREMENTS AND OTHER SECURITY PROVISIONS. ALL NEW CONTRACTOR EMPLOYEES SHALL BE BRIEFED ON THESE REQUIREMENTS PRIOR TO WORKING IN THE CONSTRUCTION AREA.
- ALL CONTRACTOR PERSONNEL ENTERING THE AOA MUST BE PROPERLY BADGED PER THE PROJECT SPECIFICATIONS.

- THE CONTRACTOR'S CSO WILL BE RESPONSIBLE FOR ALL OPERATIONAL PRECAUTIONS. PRIOR TO THE COMMENCEMENT OF THE WORK THE CSO SHALL PROVIDE THE RPR AND AIRPORT OPERATIONS AN OUTLINE OF A PROPOSED ACCIDENT AND FIRE PROTECTION PLAN FOR ALL WORK CONTEMPLATED UNDER THE CONTRACT AND CONDUCT AT LEAST ONE SAFETY MEETING EACH WEEK FOR EACH SHIFT AND REQUIRE THE ATTENDANCE OF ALL SUPERVISORS AT SUCH MEETINGS. COPIES OF THE MINUTES OF SAFETY MEETINGS SHALL BE KEPT ON FILE IN THE CONTRACTOR'S FIELD OFFICE AND MADE AVAILABLE UPON REQUEST TO THE RPR OR AIRPORT OPERATIONS.

**CONTRACTOR ACCESS, STORAGE AREAS, AND HAUL ROUTES**

- LOCATION OF HAUL ROUTES AND STAGING AREAS ON THE AIRPORT SITE AS SHOWN ON THE CONSTRUCTION PHASING PLANS ARE APPROXIMATE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE EXACT LOCATIONS IN THE FIELD WITH THE RPR AND AIRPORT OPERATIONS, AND TO COORDINATE OFF-SITE HAUL ROUTES (STATE HIGHWAYS OR CITY AND COUNTY ROADS) WITH THE APPROPRIATE OWNER WHO HAS JURISDICTION OVER THE AFFECTED ROUTE. ALL HAUL ROUTES AND STAGING AREAS SHALL BE MAINTAINED BY THE CONTRACTOR AND SHALL BE RESTORED TO THEIR ORIGINAL CONDITION UPON COMPLETION OF BEING USED AS A HAUL ROUTE. THE BEFORE AND AFTER CONDITION OF ON-SITE HAUL ROUTES AND STAGING AREAS SHALL BE JOINTLY INSPECTED AND DOCUMENTED BY THE CONTRACTOR, THE RPR, AND AIRPORT OPERATIONS. THE BEFORE AND AFTER CONDITION OF OFF-SITE HAUL ROUTES SHALL BE JOINTLY INSPECTED BY THE CONTRACTOR AND THE OWNER HAVING JURISDICTION. THE CONTRACTOR SHALL PROVIDE THE RPR A VIDEO TAPE OR DIGITAL PICTURES OF ALL HAUL ROUTES AND STAGING AREAS BEFORE START OF WORK AND UPON COMPLETION. FENCING, DRAINAGE, SEDIMENT CONTROL, GRADING AND OTHER MISCELLANEOUS CONSTRUCTION REQUIRED TO CONSTRUCT TEMPORARY HAUL ROUTES OR ACCESS POINTS ON THE AIRPORT WILL BE THE CONTRACTOR'S TOTAL RESPONSIBILITY AND SHALL BE APPROVED BY THE RPR AND AIRPORT OPERATIONS PRIOR TO THE WORK. ALL ON-SITE ACCESS ROADS TO AIRPORT FACILITIES SHALL REMAIN OPEN, KEPT CLEAN OF CONSTRUCTION DEBRIS, AND MAINTAINED AT ALL TIMES.
- THE CONTRACTOR SHALL ONLY USE THE HAUL ROUTES APPROVED BY THE RPR AND AIRPORT OPERATIONS AND AS SHOWN ON THE CONSTRUCTION PHASING AND BARRICADE PLANS. THE HAUL TRUCKS MUST BE COVERED AT ALL TIMES. THE CONTRACTOR SHALL CLEAN TIRES AND CONTINUOUSLY CLEAN THE HAUL ROUTE WITH A POWER VACUUM DURING ALL PERIODS WHEN HAULING. FAILURE TO MAINTAIN THE HAUL ROUTE IN AN ACCEPTABLE MANNER WILL RESULT IN SUSPENSION OF WORK. IN THE EVENT THAT ANY FOREIGN OBJECT, SPILLAGE, DEBRIS OR DUST BUILDS UP AS A RESULT OF HAULING, THE CONTRACTOR SHALL BE REQUIRED TO IMMEDIATELY CLEAN AND REMOVE THE MATERIAL.
- ALL MATERIALS AND EQUIPMENT, WHEN NOT IN USE, SHALL BE PLACED IN APPROVED AREAS WHERE THEY WILL NOT CONSTITUTE A HAZARD TO AIRCRAFT OPERATIONS. ALL EQUIPMENT SHALL BE STORED IN A LOWERED CONFIGURATION WHEN NOT IN USE. THE APPROVED STORAGE AREA FOR EQUIPMENT AND MATERIALS IS THE CONTRACTOR'S STAGING AREA. ANY OTHER AREAS TO BE USED FOR STORAGE MUST BE APPROVED BY THE RPR AND AIRPORT OPERATIONS. EQUIPMENT AND STOCKPILED MATERIAL SHALL BE CONSTRAINED IN A MANNER TO PREVENT MOVEMENT RESULTING FROM AIRCRAFT JET BLAST OR WIND CONDITIONS.

- THE CONTRACTOR'S ACCESS POINTS TO THE SITE SHALL BE AS SHOWN ON THE CONSTRUCTION PHASING AND BARRICADE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN AIRPORT SECURITY FOR ALL VEHICLES AND PERSONNEL WHO ENTER AIRPORT PROPERTY.
- AREAS WILL BE MADE AVAILABLE FOR THE CONTRACTOR'S MOBILIZATION AND STAGING AS SHOWN ON THE CONSTRUCTION PHASING PLAN. THESE AREAS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION OR AS ACCEPTED BY THE RPR UPON COMPLETION OF THE PROJECT.
- EMPLOYEE PARKING SHALL BE ADDRESSED AT THE PRECONSTRUCTION CONFERENCE.
- ALL CONTRACTOR'S VEHICLES SHALL BE IN GOOD WORKING ORDER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING VEHICLE ACCESS TO THE AIRPORT WITH THE RPR AND AIRPORT OPERATIONS.
- ALL CONTRACTOR VEHICLES/EQUIPMENT THAT ARE AUTHORIZED TO OPERATE ON THE AIRPORT'S AOA SHALL DISPLAY IN FULL VIEW ABOVE THE VEHICLE/EQUIPMENT A FLAG/LIGHT FOR DAYTIME AND A LIGHT FOR NIGHTTIME. THE FLAG SHALL BE A 3'x3' (MIN.) ORANGE AND WHITE CHECKER BOARD FLAG. EACH CHECKER BOARD COLOR BEING ONE SQUARE FOOT. ANY VEHICLE OPERATING ON THE AOA SHALL ALSO BE EQUIPPED WITH A FLASHING AMBER (YELLOW) DOME TYPE LIGHT, MOUNTED ON TOP OF THE VEHICLE AND OF SUCH INTENSITY TO CONFORM TO LOCAL AND FEDERAL CODES FOR MAINTENANCE AND EMERGENCY VEHICLES (DAY OR NIGHT OPERATIONS).
- THE CONTRACTOR SHALL FURNISH ALL ESCORTS, FLAG TRAFFIC CONTROL PERSONNEL PEOPLE, AND COMMUNICATION DEVICES SPECIFIED IN THE AIRPORT DIVISION SPECIAL PROVISIONS AND SECTION 01565-SECURITY MEASUREMENTS FOR CONTRACTORS ON THE AOA AS WELL AS, ALL AOA TRAFFIC CONTROL DEVICES SPECIFIED IN THE AIRPORT SPECIAL PROVISIONS AND SECTION 01565-SECURITY MEASUREMENTS FOR CONTRACTORS ON THE AOA.
- THE CONTRACTOR'S ESCORTS SHALL CONTINUOUSLY MONITOR RADIO FREQUENCY, INDICATED IN THE AIRPORT DIVISION SPECIAL PROVISIONS FOR CONTRACTORS ON THE AOA FOR ALL POTENTIAL AIRCRAFT ACTIVITY THAT IS UNFORESEEN.
- BEFORE STARTING ANY WORK OF EACH WORKDAY, THE CONTRACTOR SHALL SET UP ALL AOA TRAFFIC CONTROL DEVICES IN THE ORDER REQUIRED BY THE CONTRACT. AT THE END OF EACH WORKDAY, THE CONTRACTOR SHALL TAKE DOWN ALL AOA TRAFFIC CONTROL DEVICES IN THE REVERSE ORDER, UNLESS INDICATED OTHERWISE IN THE CONTRACT DOCUMENTS.

**UNDERGROUND UTILITIES**

- THE CONTRACTOR SHALL LOCATE AND IDENTIFY ALL UNDERGROUND UTILITIES IN THE WORK AREA PRIOR TO CONSTRUCTION. ANY UNDERGROUND UTILITIES LOCATED WHICH DO NOT APPEAR ON THE PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE RPR AND AIRPORT OPERATIONS. ANY DAMAGE TO UTILITIES, CAUSED BY THE CONTRACTOR, SHALL BE REPAIRED AT THE CONTRACTOR'S SOLE EXPENSE.
- INTERRUPTION TO EXISTING AIRFIELD LIGHTING SYSTEMS NOT INCLUDED IN THIS PROJECT SHALL NOT BE PERMITTED. ALL AIRFIELD ELECTRICAL CIRCUITS AFFECTED BY THIS PROJECT SHALL BE PROTECTED AND MAINTAINED DURING OPERATIONAL PERIODS BY THE CONTRACTOR. THE CONTRACTOR, AT ITS EXPENSE, SHALL IMMEDIATELY REPAIR, WITH IDENTICAL MATERIAL AND BY SKILLED LABORER, ANY

UNDERGROUND CABLES SERVING FAA NAVAIDS, WEATHER BUREAU AND/OR OTHER AIRPORT FACILITIES, WHICH ARE DAMAGED BY HIS WORKMEN, EQUIPMENT OR WORK TO THE SATISFACTION OF THE AHJ. PRIOR WRITTEN APPROVAL FROM THE FAA MUST BE OBTAINED FOR THE MATERIALS, WORKMEN, TIME OF DAY OR NIGHT, METHOD OF REPAIRS AND FOR ANY TEMPORARY OR PERMANENT REPAIRS THE CONTRACTOR PROPOSES TO MAKE TO ANY FAA NAVAIDS AND FACILITIES DAMAGED BY THE CONTRACTOR. APPROVAL MUST BE OBTAINED FROM THE RPR AND AIRPORT OPERATIONS FOR ANY REPAIRS THE CONTRACTOR PROPOSES TO MAKE TO ANY OTHER AIRPORT FACILITIES AND CABLES DAMAGED BY THE CONTRACTOR. SUCH REPAIRS MUST BE STARTED IMMEDIATELY AND CONTINUED UNTIL COMPLETE. ANY FAA CABLE AND OR CONDUIT DAMAGED MUST BE REPLACED FROM FIXTURE TO FIXTURE IN ACCORDANCE WITH FAA REQUIREMENTS AND IN THE PRESENCE OF AN FAA REPRESENTATIVE. THE OWNER MAY ELECT TO HAVE SUCH REPAIRS PERFORMED BY OTHERS BUT THE CONTRACTOR SHALL STILL BE RESPONSIBLE FOR PAYING THE INCURRED COSTS.

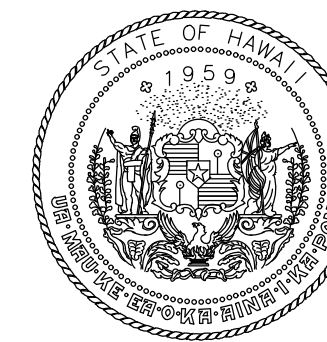
- THE CONTRACTOR SHALL NOTIFY, AT LEAST TWO WORKING DAYS PRIOR TO COMMENCING CONSTRUCTION OPERATIONS IN AN AREA WHICH MAY INVOLVE UNDERGROUND UTILITY FACILITIES, THE RPR AND AIRPORT OPERATIONS, THE REGISTERED UTILITY PROTECTION SERVICE, AND THE OWNER OF EACH UNDERGROUND UTILITY FACILITY SHOWN ON THE PLANS.
- THE CONTRACTOR SHALL IMMEDIATELY ALERT THE OCCUPANTS OF NEARBY PREMISES OR FACILITY AS TO ANY EMERGENCY THAT IT MAY CREATE OR DISCOVER AT OR NEAR SUCH PREMISES OR FACILITIES. THE CONTRACTOR SHALL REPORT IMMEDIATELY TO THE RPR, AIRPORT OPERATIONS, AND THE OPERATOR OF THE UNDERGROUND FACILITY ANY BREAK OR LEAK ON ITS LINES OR ANY DENT, GOUGE, GROVE OR OTHER DAMAGE TO SUCH LINES OR THEIR COATING OR CATHODIC PROTECTION, MADE OR DISCOVERED IN THE COURSE OF THEIR EXCAVATION.
- ALL REQUIRED TEMPORARY UTILITIES INCLUDING POWER, WATER, AND SEWER FOR THE CONTRACTOR'S STAGING AREA SHALL BE ARRANGED AND PAID FOR BY THE CONTRACTOR. THE CONTRACTOR SHALL PROVIDE ALL POLES, LINES, PIPES, METERS, ETC. TO BRING THE SERVICE FROM EXISTING SOURCES TO THE AREA.
- THE CONTRACTOR SHALL DEAL DIRECTLY WITH RPR, AIRPORT OPERATIONS, AND APPROPRIATE UTILITY AGENCIES. ALL TEMPORARY UTILITY ARRANGEMENTS SHALL BE SUBJECT TO THE PRIOR APPROVAL OF THE RPR AND AIRPORT OPERATIONS. UPON COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL HAVE ALL UTILITIES DISCONNECTED AND SHALL REMOVE ALL POLES, PIPES, METERS, ETC. AND RESTORE THE AREAS TO THEIR PREVIOUS CONDITION.
- FOR ALL ITEMS REQUIRING THE USE OF WATER, THE CONTRACT UNIT PRICE BID FOR THE RESPECTIVE ITEM SHALL INCLUDE THE COST OF FURNISHING THE WATER.
- ANY UTILITIES DAMAGED OR BROKEN BY THE CONTRACTOR WILL BE REPAIRED AND PUT BACK INTO WORKING ORDER IN A MANNER ACCEPTABLE TO THE OWNER OF THE AFFECTED UTILITY BY THE CONTRACTOR AT ITS EXPENSE.

**CONTACT INFORMATION**

HAWAII DOT PROJECT MANAGER: HANY SOKAR, 808-838-8848  
AIRPORT MANAGER: CHAUNCEY WONG-YUEN, 808-327-9522

**ABBREVIATION**

ABDN	ABANDONED	DWG	DRAWING(S)	LVC	LENGTH OF VERTICAL CURVE	PT	POINT OF TANGENCY	TDZ	TOUCHDOWN ZONE
AC	ASPHALT CONCRETE	E	EASTING	MAG	MAGNESIUM	PVC	POINT OF VERTICAL CURVE	TEMP	TEMPORARY
ADG	AIRPLANE DESIGN GROUP	E-HH	ELECTRICAL HANDHOLE	MALS	MEDIUM APPROACH LIGHT SYSTEM WITH RUNWAY ALIGNMENT INDICATOR LIGHTS	PVI	POINT OF VERTICAL INTERSECTION	TODA	TAKEOFF DISTANCE AVAILABLE
AFL	AIRFIELD LIGHTING	ELEC	ELECTRIC / ELECTRICAL	PVT	POINT OF VERTICAL TANGENCY	TORA	TAKEOFF RUNWAY AVAILABLE	TSA	TAXIWAY SAFETY AREA
AGG	AGGREGATE	ELEV	ELEVATION	R	RADIUS	RD	ROAD	TWY	TAXIWAY
AHJ	AUTHORITY HAVING JURISDICTION	EMH	ELECTRICAL MANHOLE	REIL	RUNWAY END IDENTIFICATION LIGHT	REIL	RUNWAY END IDENTIFICATION LIGHT	TXL	TAXILANE
AIR-EE	AIRPORT ENVIRONMENTAL SECTION	EX	EXISTING	REM	REMOVE	MPH	MILES PER HOUR	TYP	TYPICAL
AOA	AIRPORT OPERATIONS AREA	FAA	FEDERAL AVIATION ADMINISTRATION	ROFA	RUNWAY OBJECT FREE AREA	MPI	MASTER PAINTERS INSTITUTE	VOC	VOLATILE ORGANIC CONTENT
APPROX	APPROXIMATE	FOD	FOREIGN OBJECT DEBRIS	RPR	RESIDENT PROJECT REPRESENTATIVE	N	NORTHING	VSR	VEHICLE SERVICE ROAD
ARFF	AIRCRAFT RESCUE FIREFIGHTING	FS	COMPOST FILTER SOCK	RSA	RUNWAY SAFETY AREA	NAD	NORTH AMERICAN DATUM	W	WIDTH
ASDA	ACCELERATE STOP DISTANCE AVAILABLE	FT	FEET	RT	RIGHT	NAVAID	NAVIGATIONAL AID	%	PERCENT
ASOS	AUTOMATED SURFACE OBSERVING SYSTEM	GS	GLIDE SLOPE	RT	RIGHT	NE	NORTHEAST		
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	HAR	HAWAII ADMINISTRATIVE RULES	RWY	RUNWAY	NO	NUMBER		
ATCT	AIRPORT TRAFFIC CONTROL TOWER	HDG	HOT DIP GALVANIZED	S	SOUTH	NOTAM	NOTICE TO AIRMEN		
BMP	BEST MANAGEMENT PRACTICE	HDOT-A	HAWAII DEPARTMENT OF TRANSPORTATION - AIRPORT DIVISION	SAC	SECONDARY AIRPORT CONTROL	NPDES	NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM		
C-HH	COMMUNICATION HANDHOLE	HH	HAND HOLE	SE	SOUTHEAST	NTS	NOT TO SCALE		
CL	CENTER LINE	HNL	HONOLULU INTERNATIONAL AIRPORT	SERV	SERVICE	NW	NORTHWEST		
CONC	CONCRETE	HRS	HOURS	SHLDR	SHOULDER	OFF	OFFSET		
CSO	CONTRACTOR SECURITY OFFICER	JBD	JET BLAST DEFLECTOR	SPEC	SPECIFICATIONS	OTS	OUT OF SERVICE		
DEMO	DEMOLITION	JBOX	JUNCTION BOX	SPHPS	SURFACE PAINTED HOLDING POSITION SIGN	PAC	PRIMARY AIRPORT CONTROL		
DIA	DIAMETER	K	K-VALUE	STA	STATION	PAPI	PRECISION APPROACH PATH INDICATOR		
DME	DISTANCE MEASURING EQUIPMENT	KOA	KONA INTERNATIONAL AIRPORT	SW	SOUTHWEST	PBX	PRIVATE BRANCH EXCHANGE		
DOH	DEPARTMENT OF HEALTH	LDA	LANDING DISTANCE AVAILABLE	SWP	SWITCH PAD	PC	POINT OF CURVATURE		
DOT	DEPARTMENT OF TRANSPORTATION	LIT	LIGHT(S)	SWPP	STORMWATER POLLUTION PREVENTION PLAN	PCC	PORTLAND CEMENT CONCRETE		
DOTA	DEPARTMENT OF TRANSPORTATION-AIRPORTS	LOC	LOCALIZER ANTENNA ARRAY	SY	SQUARE YARD	PMT	PAD MOUNT TRANSFORMER		
		LT	LEFT	TDG	TAXIWAY DESIG GROUP	POFZ	PRECISION OBSTACLE FREE ZONE		



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AC	AT	TR	SH

**KEY PLAN / NOTES:**

NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENTS**

SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**

AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

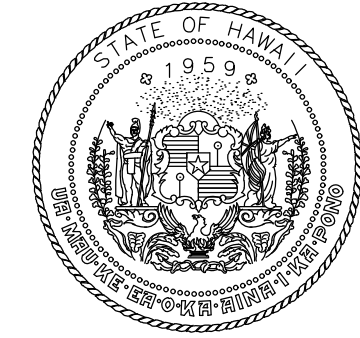
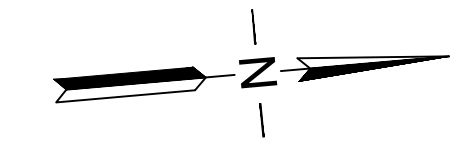
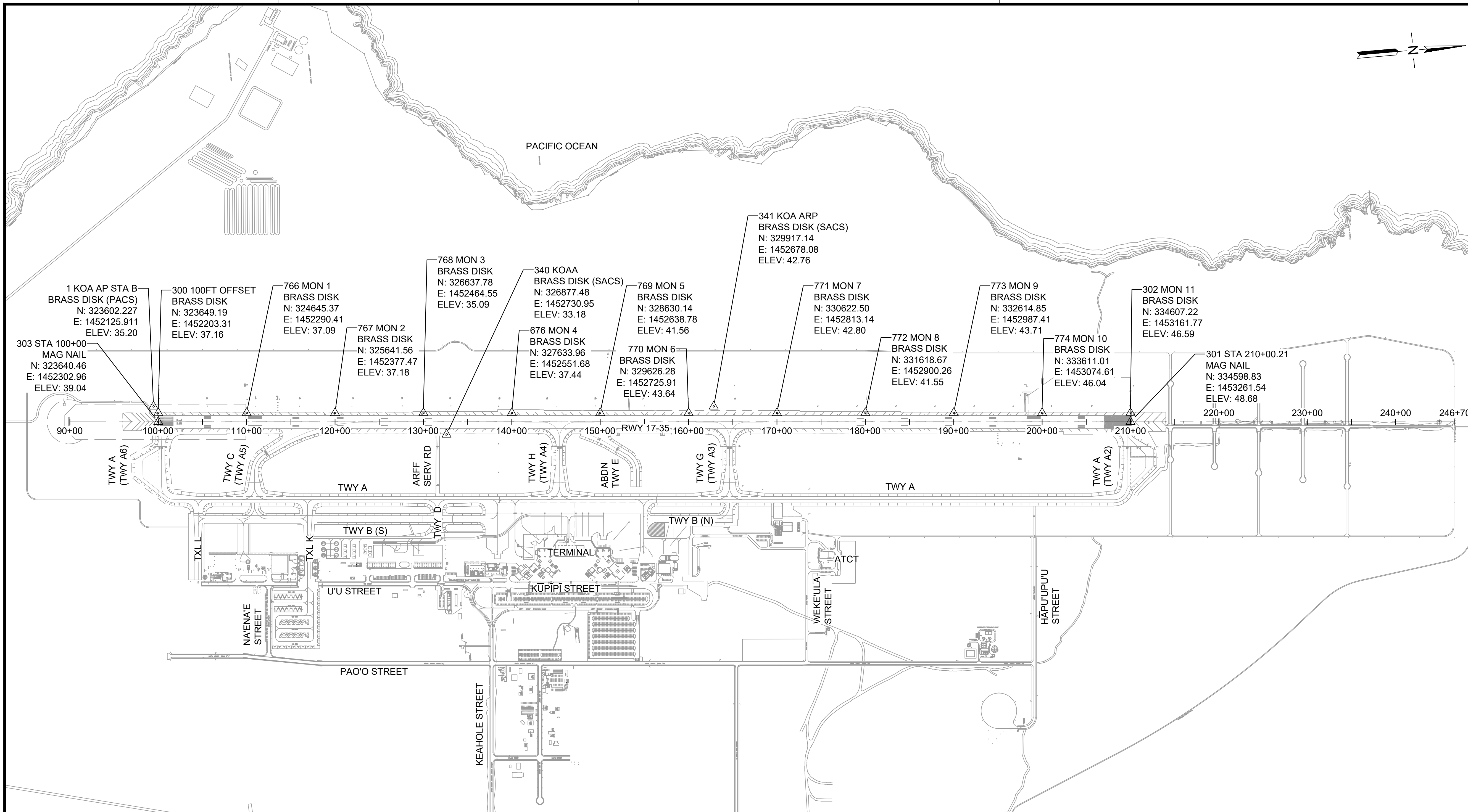
**AH2021-16**

**SHEET TITLE:**

**NOTES AND ABBREVIATIONS**

DATE :	DWG. NO.
09/2023	G-003
SHEET :	
3 OF 190 SHEETS	





STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
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**KEY PLAN / NOTES:**



NO.	DATE	REVISIONS

**CONSTRUCTION DOCUMENTS**  
SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

**SHEET TITLE:**

**SURVEY CONTROL PLAN**

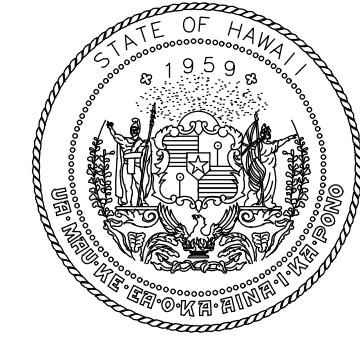
DATE :	09/2023	DWG. NO.	<b>G-004</b>
SHEET :	4 OF 190 SHEETS		



- LEGEND:**
- △ SURVEY CONTROL POINT
  - TWY A EXISTING TWY NAME
  - (TWY A2) FUTURE TWY NAME

- NOTES:**
1. AZIMUTHS AND COORDINATES REFERRED TO HAWAII STATE PLANE, NAD 83, ZONE 1 U.S. FEET
  2. PRIOR TO DISTURBING THE EXISTING SURVEY CONTROL, THE CONTRACTOR SHALL ESTABLISH ADDITIONAL TEMPORARY SURVEY CONTROL NECESSARY FOR CONSTRUCTION AND SUBMIT TO THE RPR FOR REVIEW.
  3. CONTRACTOR SHALL CONSTRUCT NEW RUNWAY END MARKERS AS SHOWN ON DWG C-406.
  4. SAC CONTROL POINTS DISTURBED BY CONSTRUCTION ACTIVITIES WILL BE REPLACED BY OTHERS.

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4/30/24  
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**KEY PLAN / NOTES:**



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENTS**  
SEPTEMBER 2023  
DATE

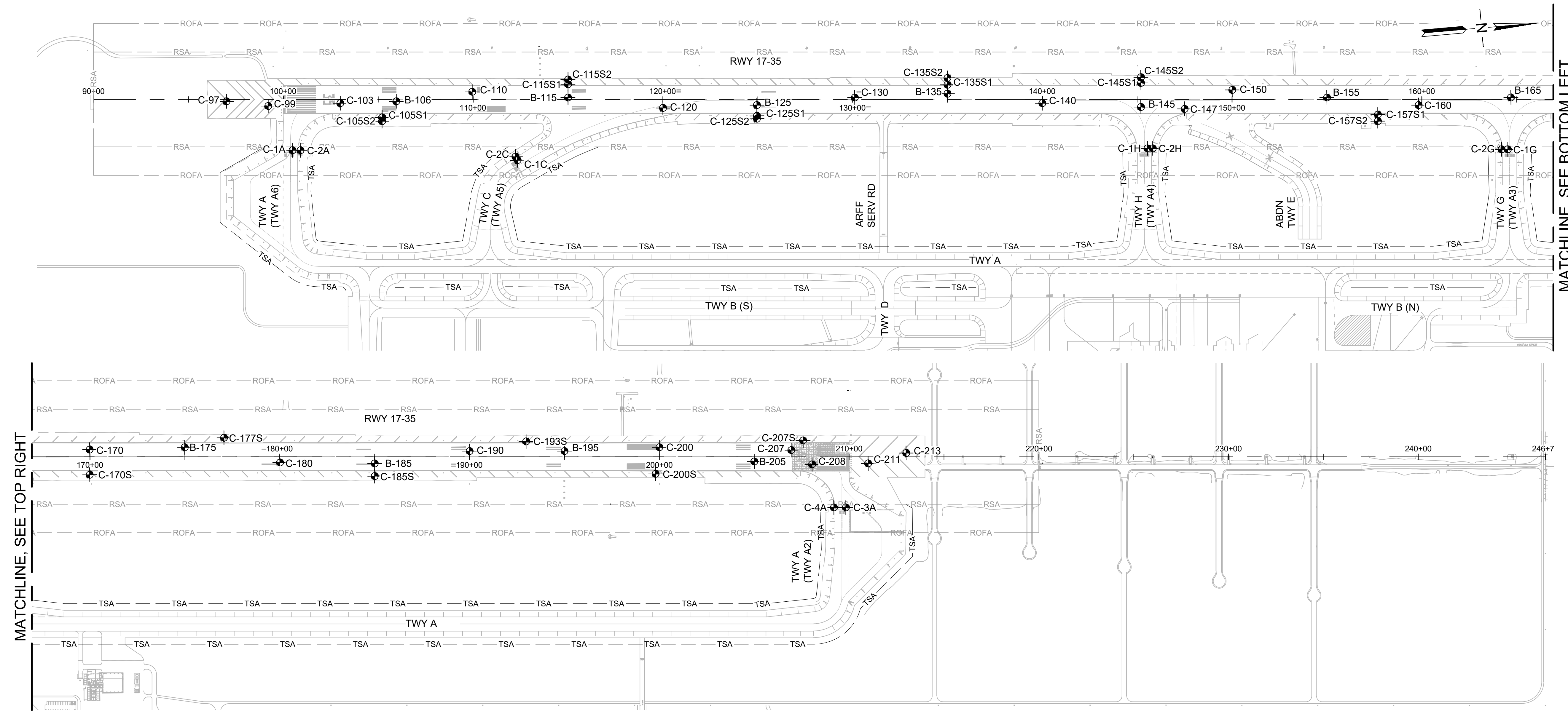
**PROJECT TITLE :**  
**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**  
**AH2021-16**

**SHEET TITLE:**

**BORING AND CORING LAYOUT PLAN**

DATE :	09/2023	DWG. NO.	<b>G-005</b>
SHEET :			
5 OF 190 SHEETS			



MATCHLINE, SEE TOP RIGHT

MATCHLINE, SEE BOTTOM LEFT

**LEGEND:**

- APPROXIMATE BORING \ CORING LOCATION
- B-XXX BORING LOG NUMBER
- C-XXX CORING LOG NUMBER
- TWY A (TWY A2) EXISTING TWY NAME FUTURE TWY NAME
- RSA — RUNWAY SAFETY AREA
- ROFA — RUNWAY OBJECT FREE AREA
- TSA — TAXIWAY SAFETY AREA

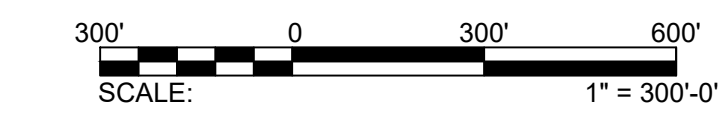
**SOURCE:**  
GEOTECHNICAL DATA REPORT  
ELLISON ONIZUKA KONA INTERNATIONAL AIRPORT  
KAILUA-KONA, HAWAII ISLAND, HAWAII  
DECEMBER 2021, YKE PROJECT NO. 21004  
PREPARED BY YKE

BORING / CORING LOCATION TABLE				
STATION	NAME	OFFSET	PAVEMENT THICKNESS	
105+95	B-106	10' RT	10" AC	
115+00	B-115	10' LT	9.5" AC	
124+96	B-125	30' RT	8.5" AC	
135+00	B-135	30' LT	8" AC	
145+19	B-145	40' RT	10.5" AC	
154+99	B-155	10' LT	10" AC	
164+69	B-165	10' LT	10" AC	
174+99	B-175	50' LT	15" AC	
185+00	B-185	35' RT	14" AC	
195+00	B-195	30' LT	14" AC	
205+01	B-205	25' RT	14" AC	
100+48	C-1A	268' RT	11.5" AC	
112+34	C-1C	321' RT	13.5" AC	
164+53	C-1G	263' RT	11.5" AC	
145+53	C-1H	258' RT	16" AC	

BORING / CORING LOCATION TABLE				
STATION	NAME	OFFSET	PAVEMENT THICKNESS	
100+90	C-2A	268' RT	9" AC	
112+23	C-2C	302' RT	11.5" AC	
164+20	C-2G	263' RT	5.5" AC	
145+82	C-2H	258' RT	3.25" AC	
209+83	C-3A	267' RT	14.5" AC	
209+20	C-4A	267' RT	4" AC	
97+00	C-97	10' RT	3.75" AC	
99+20	C-99	35' RT	2" AC	
103+00	C-103	20' RT	10" AC	
105+20	C-105S1	95' RT	4" AC	
105+20	C-105S2	115' RT	1.5" AC	
109+95	C-110	40' LT	9.5" AC	
115+00	C-115S1	80' LT	9" AC	
115+00	C-115S2	105' LT	4" AC	
120+01	C-120	45' RT	8" AC	

BORING / CORING LOCATION TABLE				
STATION	NAME	OFFSET	PAVEMENT THICKNESS	
124+96	C-125S1	87' RT	3.5" AC	
124+96	C-125S2	102' RT	1.5" AC	
130+11	C-130	10' LT	10.5" AC	
135+00	C-135S1	77' LT	7" AC	
135+00	C-135S2	113' LT	3.5" AC	
140+00	C-140	20' RT	11" AC	
145+19	C-145S1	87' LT	8" AC	
145+19	C-145S2	117' LT	2" AC	
147+49	C-147	50' RT	9.5" AC	
150+00	C-150	50' LT	8.5" AC	
157+68	C-157S1	80' RT	8" AC	
157+68	C-157S2	115' RT	2.5" AC	
159+83	C-160	30' RT	9" AC	
169+98	C-170	37' LT	14" AC	
169+98	C-170S	95' RT	3.5" AC	

BORING / CORING LOCATION TABLE				
STATION	NAME	OFFSET	PAVEMENT THICKNESS	
177+06	C-177S	100' LT	3.5" AC	
180+00	C-180	30' RT	15" AC	
185+00	C-185S	102' RT	3.5" AC	
190+00	C-190	30' LT	14.5" AC	
192+98	C-193S	80' LT	3" AC	
200+00	C-200	50' LT	14.5" AC	
199+80	C-200S	90' RT	3" AC	
206+95	C-207	35' LT	5.5" AC & PCC	
207+58	C-207S	86' LT	3.5" AC	
208+05	C-208	40' RT	15.5" PCC	
211+01	C-211	35' RT	3.75" AC	
213+01	C-213	20' LT	3.5" AC	



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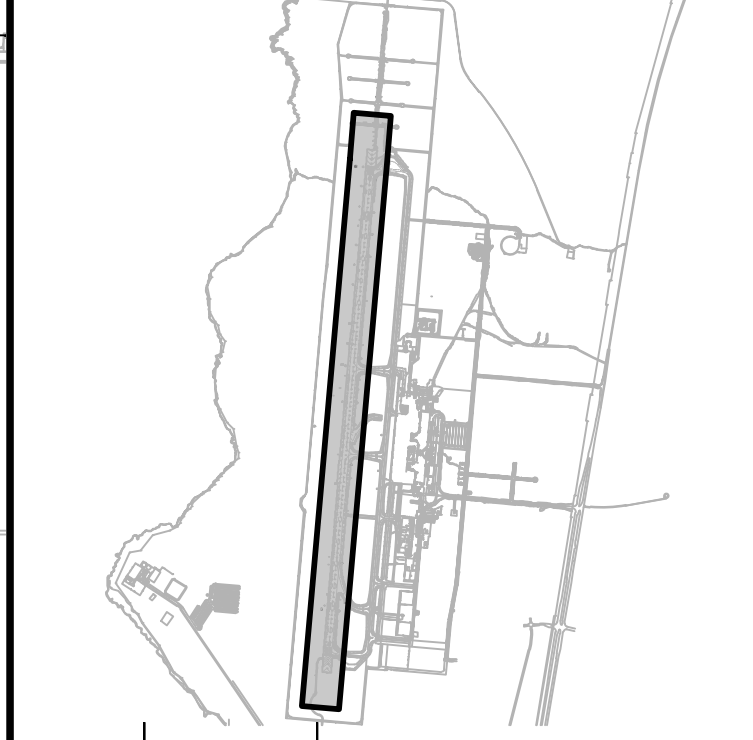


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4/30/24  
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DSGN.	DRWN.	CHKD.	APPD.
AC	AT	TR	SH

### KEY PLAN / NOTES:



NO.	DATE	REVISIONS
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## CONSTRUCTION DOCUMENTS

SEPTEMBER 2023  
DATE

### PROJECT TITLE :

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

### PROJECT NO.:

**AH2021-16**

### SHEET TITLE:

## PHASING AND BARRICADE PLAN PHASE 1A

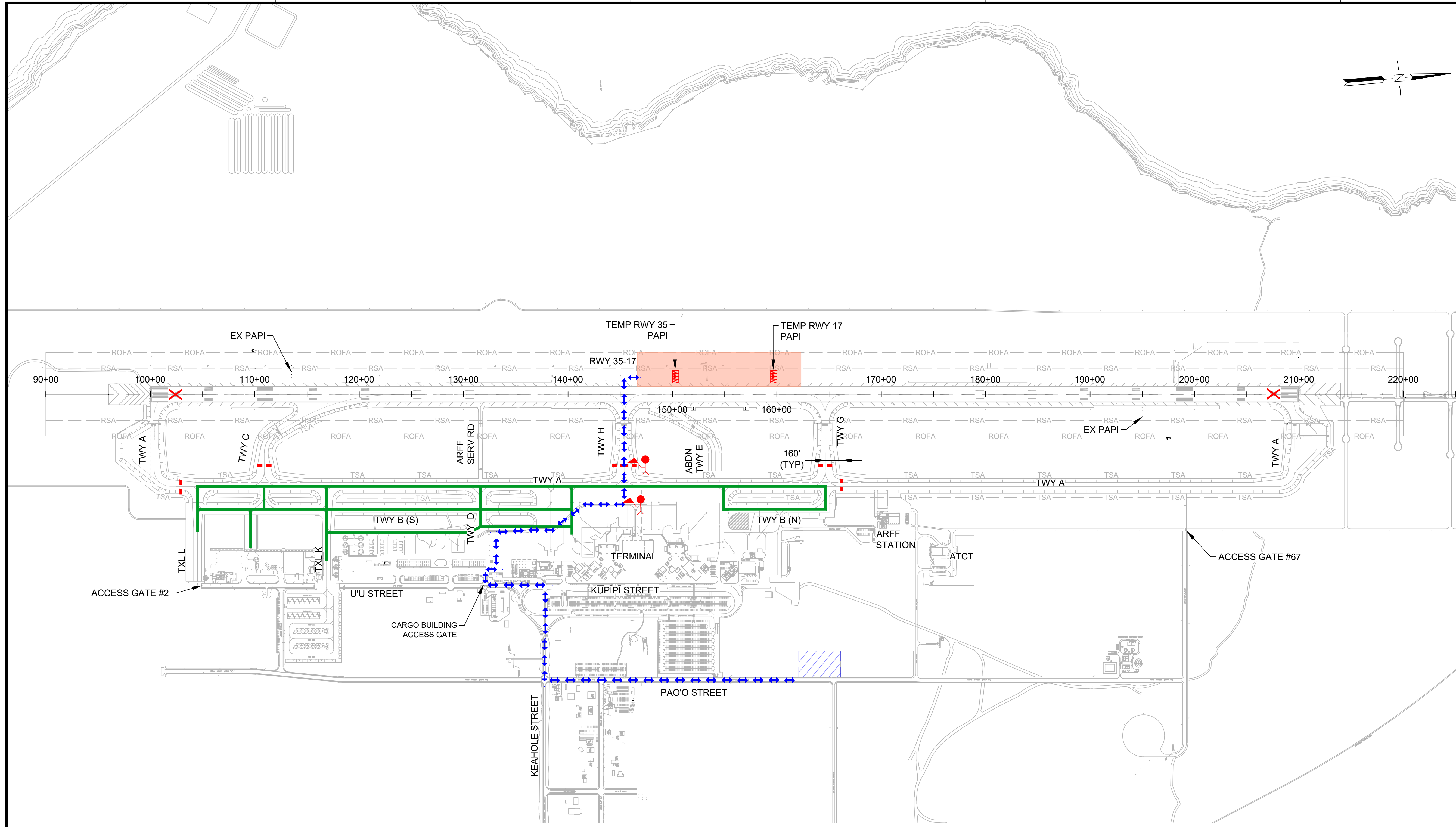
DATE : **09/2023**

SHEET : **G-102**

7 OF 190 SHEETS

DWG. NO.

**G-102**



#### LEGEND:

- WORK AREA
- AIRCRAFT TRAVEL ROUTE
- LOW-PROFILE BARRICADES (CONTINUOUS)
- LOW-PROFILE BARRICADES (WITH GAPS)
- LIGHTED CLOSED RUNWAY MARKER
- CONTRACTOR STAGING AREA
- CONTRACTOR HAUL ROUTE (2 WAY)
- BLAST FENCE BARRIER
- FLAGGERS

### PHASING AND BARRICADE PLAN - PHASE 1A

**DESCRIPTION OF WORK:**  
TEMPORARY PAPI INSTALLATION AND PREPARATORY WORK  
REPLACE RUNWAY EDGE LIGHTS AND CCR

**HOURS:**  
2200-0600 DAILY

**DURATION:**  
30 WORKING DAYS  
ANTICIPATED DATES: 11/12/2024 TO 11/23/2024  
12/2/2024 TO 12/18/2024  
1/2/2025 TO 1/5/2025

#### REQUIRED NOTAMS (WORK HOURS ONLY):

1. RUNWAY 17-35 CLOSED
2. TAXIWAY A CLOSED, SOUTH OF TAXILANE L
3. TAXIWAY C CLOSED
4. TAXIWAY H CLOSED
5. TAXIWAY G CLOSED
6. TAXIWAY A CLOSED, NORTH OF TAXIWAY G

#### NAVAID STATUS:

- RUNWAY 17 PAPI: OTS
- RUNWAY 17 LOC/DME: OTS
- RUNWAY 17 GS: OTS
- RUNWAY 35 PAPI: OTS

#### PHASING NOTES:

1. TEMP PAPIs TO REMAIN OUT OF SERVICE DURING NON-WORKING HOURS.
2. IN THE EVENT OF EMERGENCY, CONTRACTOR SHALL VACATE THE RSA AND REOPEN THE RUNWAY WITHIN 1-HR NOTICE BY AIRPORT OPERATIONS FOR ARRIVAL OR DEPARTURE OF EMERGENCY MEDEVAC AIRCRAFT.

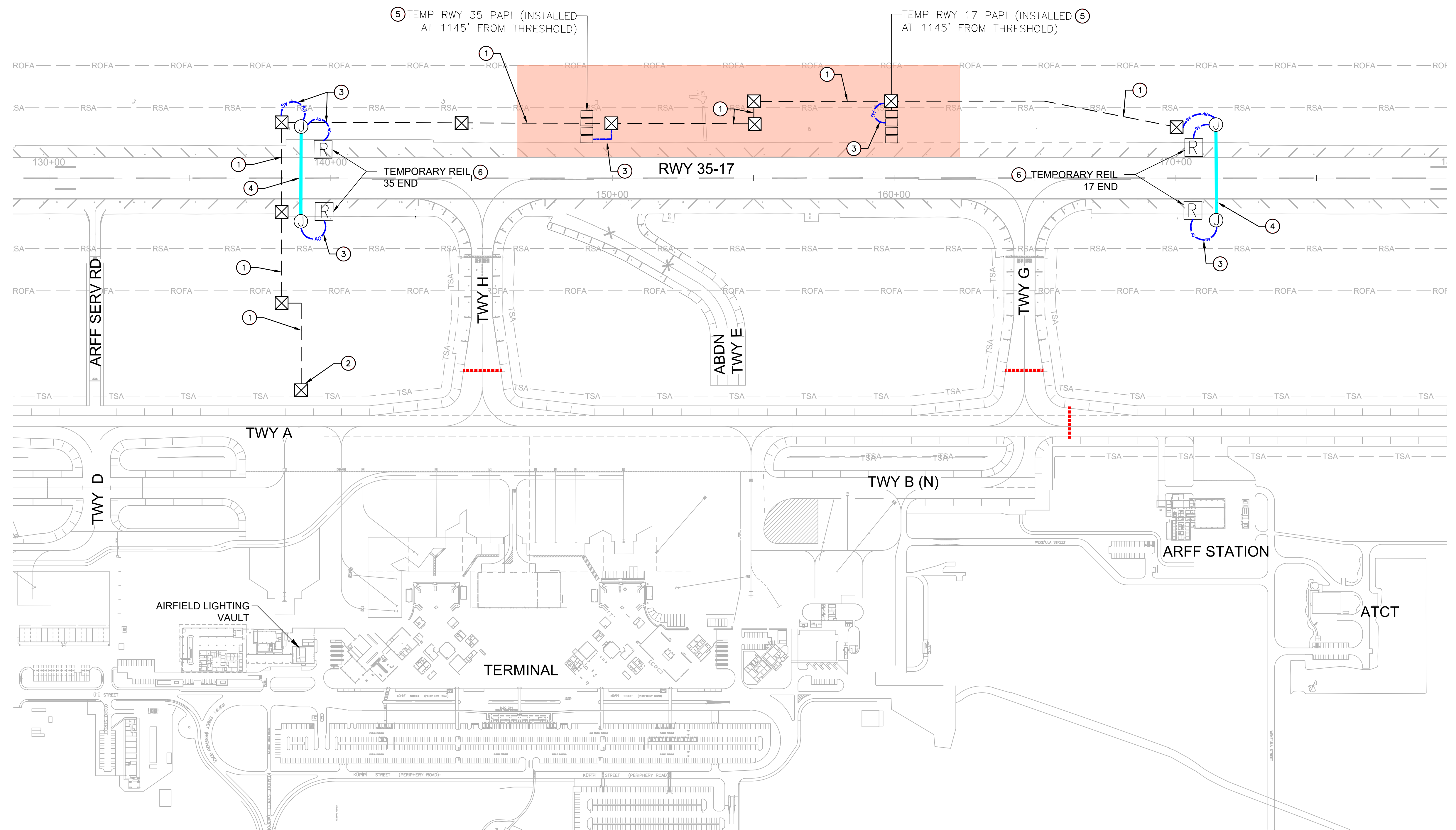
#### SEQUENCE OF WORK:

1. INSTALL LIGHTED CLOSED RUNWAY SIGN AND LOW-PROFILE BARRICADES.
2. PERFORM WORK.
3. REQUEST INSPECTION FOLLOWING CLEANING, PERFORM ADDITIONAL CLEANING AS NEEDED.
4. REMOVE LIGHTED CLOSED RUNWAY SIGN AND LOW-PROFILE BARRICADES.



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**TEMPORARY ELECTRICAL LEGEND**

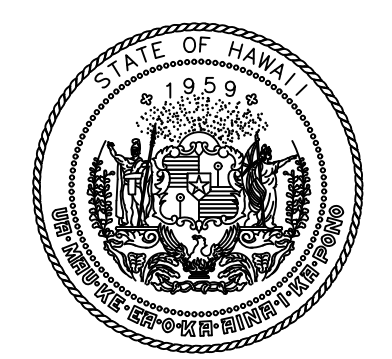
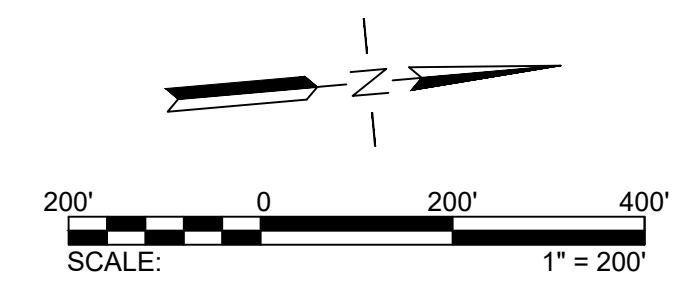
- WORK AREA
- LOW-PROFILE BARRICADES (WITH GAPS)
- INSTALL TEMPORARY ABOVE GROUND CONDUIT AND 2#8 AFL CABLE, U.O.N.
- INSTALL TEMPORARY SAW-KERF FOR REIL COMMUNICATION CABLES, REFER TO DETAIL 3/G126.
- EXISTING HANDHOLE TO BE ACCESSED FOR CABLE PULL.
- INSTALL TEMPORARY REIL ON STEEL PLATE, REFER TO DETAIL 1/G130.
- INSTALL TEMPORARY PAPI ON STEEL PLATE, REFER TO DETAIL 1/G129.
- INSTALL JUNCTION CAN FOR TEMPORARY REIL POWER AND COMMUNICATION.

**KEY NOTES**

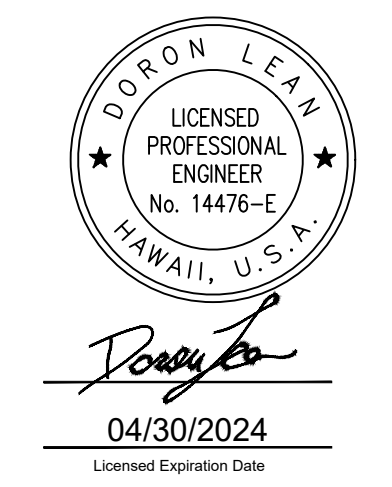
- ITEMS TO BE TEMPORARILY INSTALLED.
- ① INSTALL 2#8 5KV L-824C CABLES IN EXISTING DUCTBANK TO FEED TEMPORARY PAPI AND REILS.
  - ② SPLICE INTO CKT R-4 (TAXIWAY A EDGE LIGHTS - MIDDLE) WITH 2#8 5KV CABLES.
  - ③ INSTALL ABOVE GROUND 2" RGS CONDUIT AND CABLES FOR TEMPORARY PAPI POWER.
  - ④ INSTALL SAW-KERF CONDUIT FOR TEMPORARY REIL CONNECTION. REFER TO DETAIL 3 ON SHEET G-129 FOR INSTALLATION DETAIL.
  - ⑤ INSTALL TEMPORARY PAPI ON STEEL PLATES. REFER TO DETAIL 1 ON SHEET G-129 FOR INSTALLATION REQUIREMENTS.
  - ⑥ INSTALL TEMPORARY REIL ON STEEL BOX. REFER TO DETAIL 2 ON SHEET G-130 FOR INSTALLATION REQUIREMENTS.

**SHEET NOTES**

1. CONTRACTOR SHALL INSTALL HIGH INTENSITY RUNWAY EDGE/END LIGHTS AND CCRS (PER NEW ELECTRICAL PLANS) DURING PHASE 1 WITH THE FOLLOWING SEQUENCE:  
 STEP 1: INSTALL NEW CCRS AND ENERGIZE EXISTING LIGHTS WITH NEW CCRS. THIS WORK CAN BE PERFORMED IN THE DAY TIME INSIDE THE AIRFIELD LIGHTING VAULT.  
 STEP 2: DURING EACH NIGHT SHIFT, CONTRACTOR SHALL FURNISH AND INSTALL NEW TRANSFORMERS AND ENERGIZE NEW TRANSFORMERS WITH EXISTING LIGHTS.  
 STEP 3: AFTER ALL TRANSFORMERS ARE INSTALLED, CONTRACTOR SHALL FURNISH AND INSTALL NEW RUNWAY EDGE LIGHTS IN A SINGLE NIGHT CLOSURE.  
 NOTE: RUNWAY EDGE LIGHT CIRCUIT SHALL ALWAYS BE ENERGIZED BETWEEN ONE HOUR PRIOR TO SUNSET AND ONE HOUR PRIOR TO SUNRISE.



Airports Division  
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS



DSGN.	DRWN.	CHKD.	APPD.
JP	KV	JA	DL

**KEY PLAN / NOTES:**



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENT**  
SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**  
AT  
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KAILUA-KONA, HAWAII

**PROJECT NO.:**

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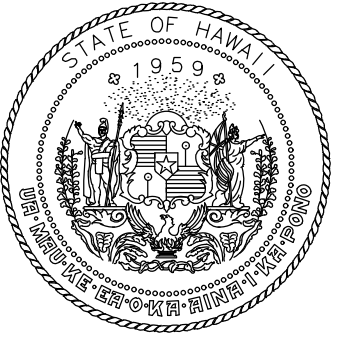
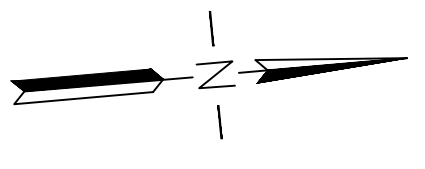
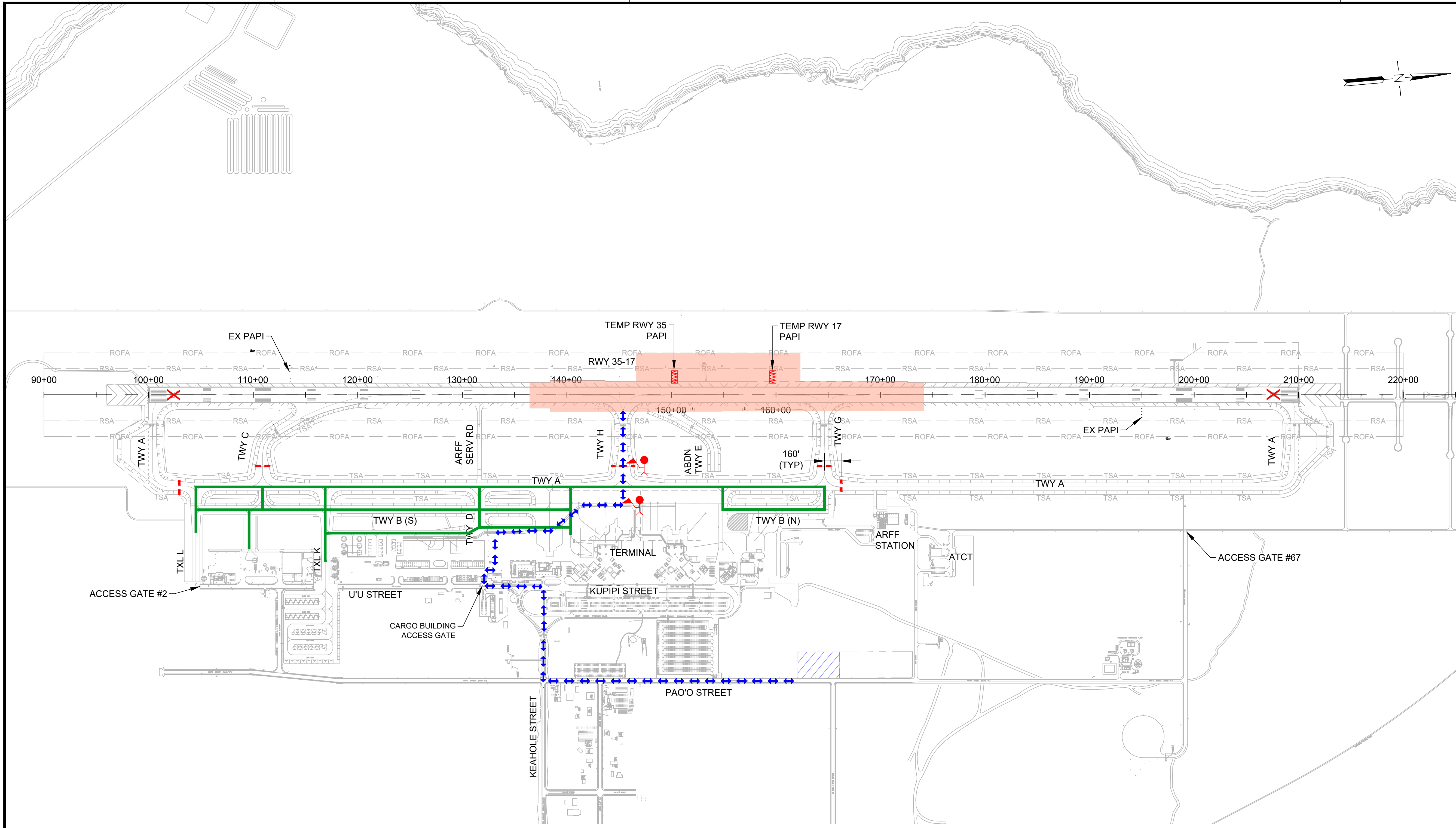
**SHEET TITLE:**

**ELECTRICAL PHASING PLAN 1A**

DATE :	DWG. NO.
09/2023	<b>G-103</b>
SHEET :	
8 OF 190 SHEETS	

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STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS

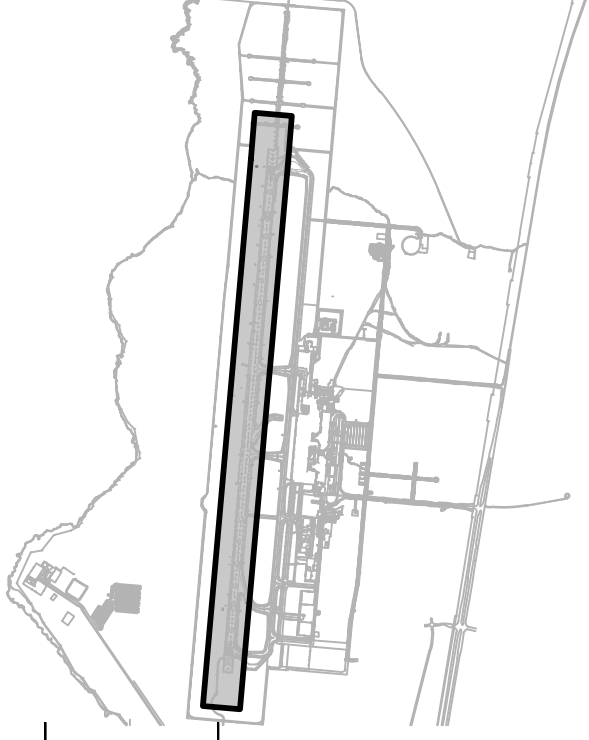


*Mark A. Clevlen*  
4/30/24  
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DSGN.	DRWN.	CHKD.	APPD.
AC	AT	TR	SH

**KEY PLAN / NOTES:**



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENTS**

SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**

AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

**SHEET TITLE:**

**PHASING AND BARRICADE PLAN PHASE 1B**

DATE : **09/2023**

DWG. NO.

SHEET :

**G-104**

9 OF 190 SHEETS

**LEGEND:**

- WORK AREA
- AIRCRAFT TRAVEL ROUTE
- LOW-PROFILE BARRICADES (CONTINUOUS)
- LOW-PROFILE BARRICADES (WITH GAPS)
- LIGHTED CLOSED RUNWAY MARKER
- CONTRACTOR STAGING AREA
- CONTRACTOR HAUL ROUTE (2 WAY)
- BLAST FENCE BARRIER
- FLAGGERS
- SECURITY GUARD (SEE SPEC 01565 SECURITY MEASURES)

**PHASING AND BARRICADE PLAN - PHASE 1B**

**DESCRIPTION OF WORK:**  
FLIGHT INSPECTION

**HOURS:**  
0600-0900 DAILY

**DURATION:**  
2 CALENDAR DAYS  
ANTICIPATED DATES: 1/6/2025 TO 2/19/2025

**REQUIRED NOTAMS (WORK HOURS ONLY):**

**NAVAID STATUS:**

- RUNWAY 17 PAPI (FAA): OTS
- RUNWAY 17 PAPI (TEMP): IN-SERVICE
- RUNWAY 17 LOC/DME: OTS
- RUNWAY 17 GS: OTS
- RUNWAY 35 PAPI (FAA): OTS
- RUNWAY 35 PAPI (TEMP): IN-SERVICE

**PHASING NOTES:**

1. TEMP PAPIs TO REMAIN OUT OF SERVICE DURING NON-WORKING HOURS.
2. CONTRACTOR SHALL COORDINATE WITH FAA, AND PROVIDE AND INSTALL TEMPORARY THRESHOLD BAR AND AIMING POINTS MADE FROM WHITE PAINTED PLYWOOD DURING FAA FLIGHT CHECK FOR EACH TEMPORARY PAPI LOCATION. PLYWOOD SHALL BE ANCHORED WITH SANDBAGS NO GREATER THAN 3" HIGH.



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DEPARTMENT OF TRANSPORTATION  
AIRPORTS

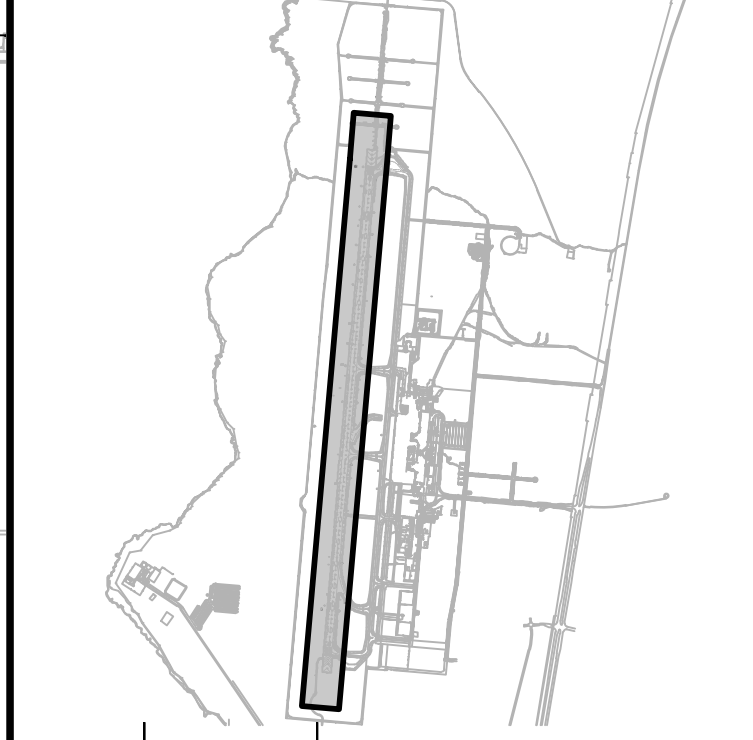


*Markin A. Cleven*  
4/30/24  
Licensed Expiration Date

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AC	AT	TR	SH

**KEY PLAN / NOTES:**



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENTS**  
SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

**SHEET TITLE:**

**PHASING AND BARRICADE PLAN  
PHASE 2A**

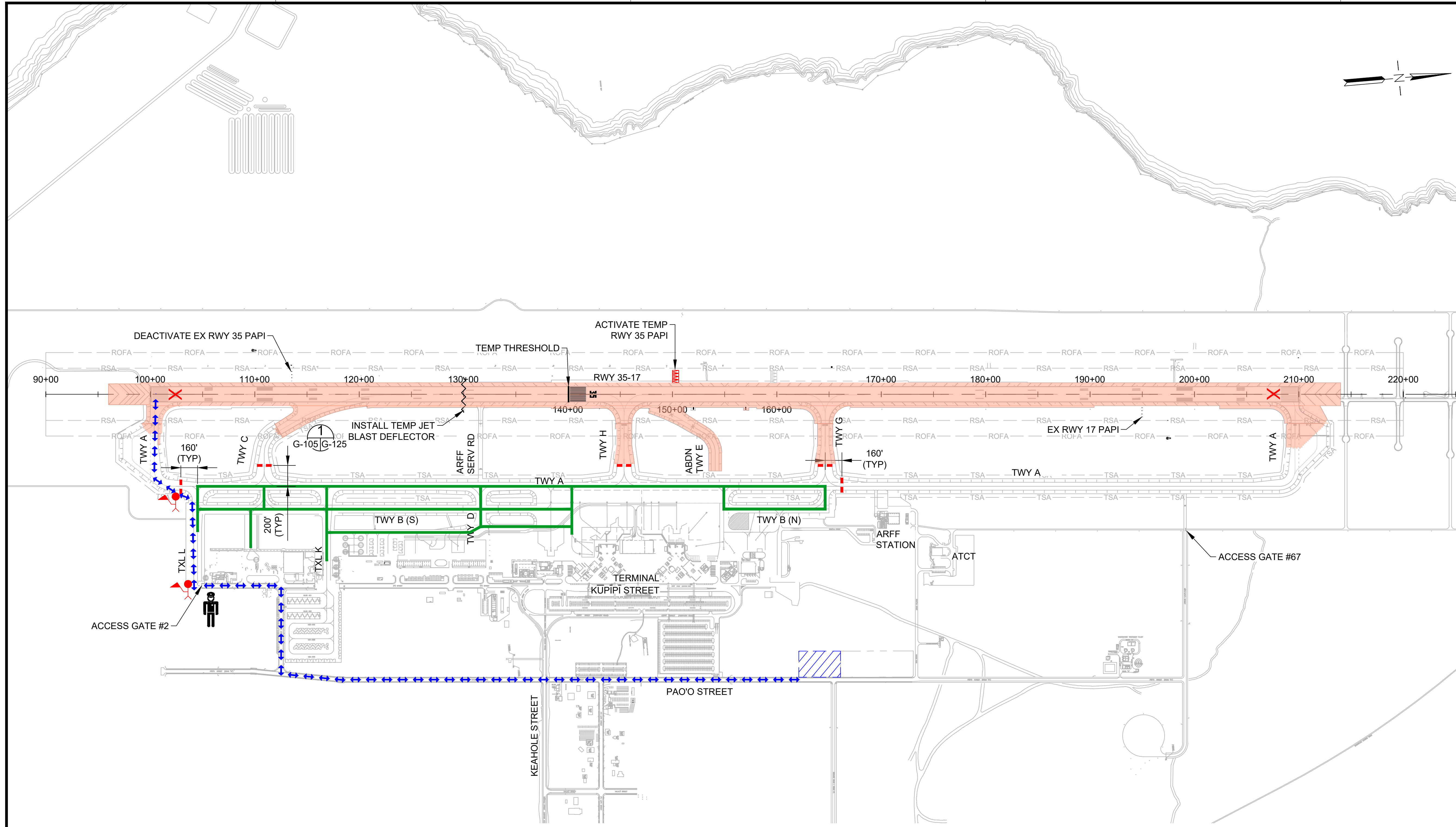
DATE : **09/2023**

SHEET : **G-105**

10 OF 190 SHEETS

DWG. NO.

**G-105**



**LEGEND:**

- WORK AREA
- AIRCRAFT TRAVEL ROUTE
- LOW-PROFILE BARRICADES (CONTINUOUS)
- LOW-PROFILE BARRICADES (WITH GAPS)
- LIGHTED CLOSED RUNWAY MARKER
- CONTRACTOR STAGING AREA
- CONTRACTOR HAUL ROUTE (2 WAY)
- BLAST FENCE BARRIER
- FLAGGERS
- SECURITY GUARD (SEE SPEC 01565 SECURITY MEASURES)

**PHASING AND BARRICADE PLAN - PHASE 2A**

**DESCRIPTION OF WORK:**  
INSTALL TEMPORARY RUNWAY 35 THRESHOLD, MARKING REMOVAL, TEMPORARY MARKING, AND ELECTRICAL WORK REQUIRED FOR SHORTENED RUNWAY CONFIGURATION

**HOURS:**  
2200-0600

**DURATION:**  
ANTICIPATED DATE: 2/19/2025

**REQUIRED NOTAMS (WORK HOURS ONLY):**

1. RUNWAY 17-35 CLOSED
2. TAXIWAY A CLOSED, SOUTH OF TAXILANE L
3. TAXIWAY C CLOSED
4. TAXIWAY H CLOSED
5. TAXIWAY G CLOSED
6. TAXIWAY A CLOSED, NORTH OF TAXIWAY G

**NAVAID STATUS:**

- RUNWAY 17 PAPI (FAA): OTS
- RUNWAY 17 PAPI (TEMP): OTS
- RUNWAY 17 LOC/DME: OTS
- RUNWAY 17 GS: OTS
- RUNWAY 35 PAPI (FAA): OTS
- RUNWAY 35 PAPI (TEMP): OTS

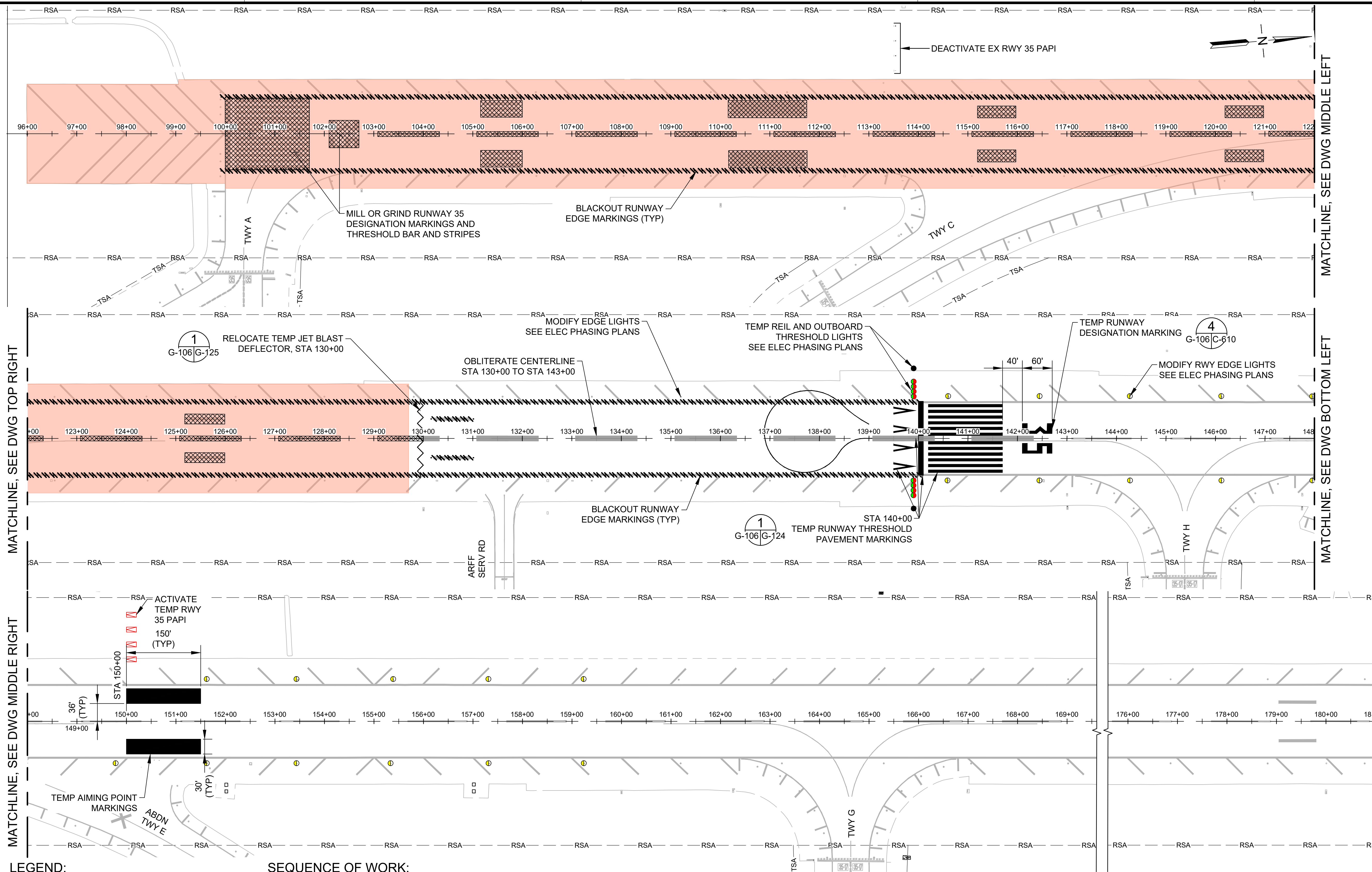
**PHASING NOTES:**

1. SEE DWG G-106 FOR DESCRIPTION OF MARKING REMOVAL, TEMPORARY MARKING, AND TEMPORARY ELECTRICAL REQUIREMENTS.
2. ALL TEMPORARY MARKINGS SHALL BE HALF APPLICATION MARKINGS.
3. SEE SPECIAL PROVISIONS FOR LIQUIDATED DAMAGES FOR FAILURE TO REOPEN THE RUNWAY AT 0600 HRS.



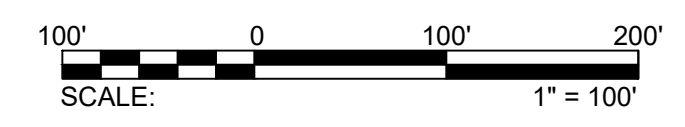
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- LEGEND:**
- PHASE 2B WORK AREA
  - TEMP BLAST DEFLECTOR
  - TEMP RUNWAY LIGHTS
  - BLACKOUT MARKING
  - MARKING REMOVAL - OBLITERATION
  - MODIFY RUNWAY EDGE LIGHTS
  - MARKING REMOVAL - MILL OR GRIND

- SEQUENCE OF WORK:**
1. CONFIRM RWY AND TWY CLOSURES WITH KOA OPERATIONS.
  2. INSTALL LIGHTED X'S AT EACH END OF RWY.
  3. INSTALL REQUIRED LOW-PROFILE BARRICADES.
  4. RELOCATE JET BLAST DEFLECTOR.
  5. MARKING REMOVAL
    - A. OBLITERATE CONFLICTING SPHPS MARKINGS.
    - B. OBLITERATE RWY CENTERLINE MARKINGS IN 1,000' RSA AS SHOWN.
    - C. MILL OR GRIND TWY MARKINGS IN WORK AREA AS SHOWN.
  6. APPLY TEMPORARY MARKINGS AS SHOWN.
  7. ELECTRICAL
    - A. ACTIVATE TEMP RWY 35 PAPI.
    - B. INSTALL TEMP RWY 35 OUTBOARD THRESHOLD AND REIL LIGHTS.
    - C. CHANGE RWY EDGE LIGHTING FROM WHITE TO AMBER/WHITE FOR LAST 2,000' OF RWY.
    - D. COVER OR DEACTIVATE RWY EDGE LIGHTS IN PHASE 3 WORK AREA AND 1,000' RSA.
  8. SIGNAGE
    - A. CHANGE RWY DISTANCE REMAINING SIGNS.
    - B. COVER APPROPRIATE TWY DIRECTIONAL SIGNS FOR TWYS SCHEDULED TO BE CLOSED.
  9. OPENING OF RUNWAY
    - A. CONDUCT FOD CHECK AND OBTAIN FINAL ACCEPTANCE FROM KOA OPERATIONS.
    - B. REMOVE LOW PROFILE BARRICADES.
    - C. REMOVE LIGHTED X'S AT EACH END OF RWY.
    - D. OPEN RWY 17-35 AT 7,000' LENGTH.

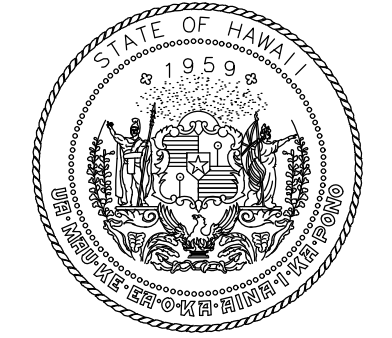


MATCHLINE, SEE DWG MIDDLE LEFT

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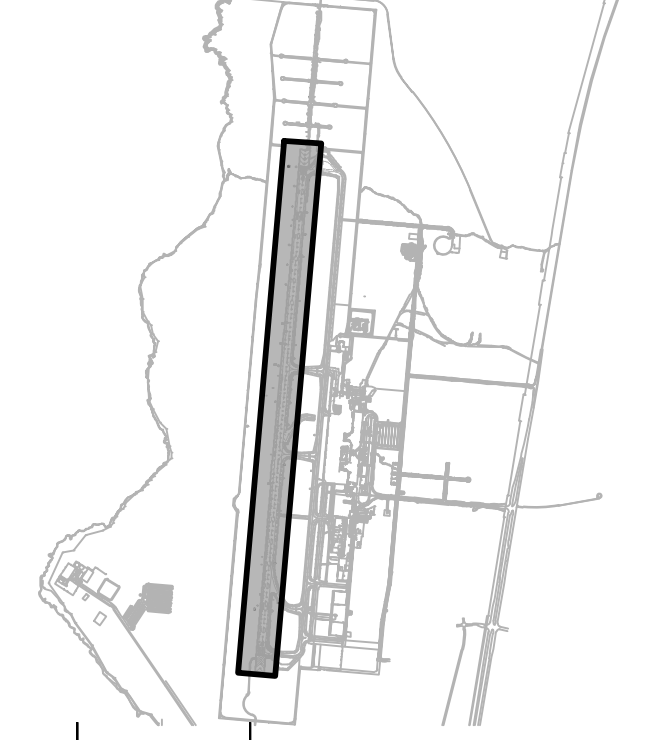


*Markin A. Clevon*  
4/30/24  
Licensed Expiration Date

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DSGN.	DRWN.	CHKD.	APPD.
AC	AT	TR	SH

**KEY PLAN / NOTES:**



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENTS**  
SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

**SHEET TITLE:**

**TEMPORARY MARKING AND LIGHTING PLAN PHASE 2A**

DATE : **09/2023**

SHEET : **G-106**

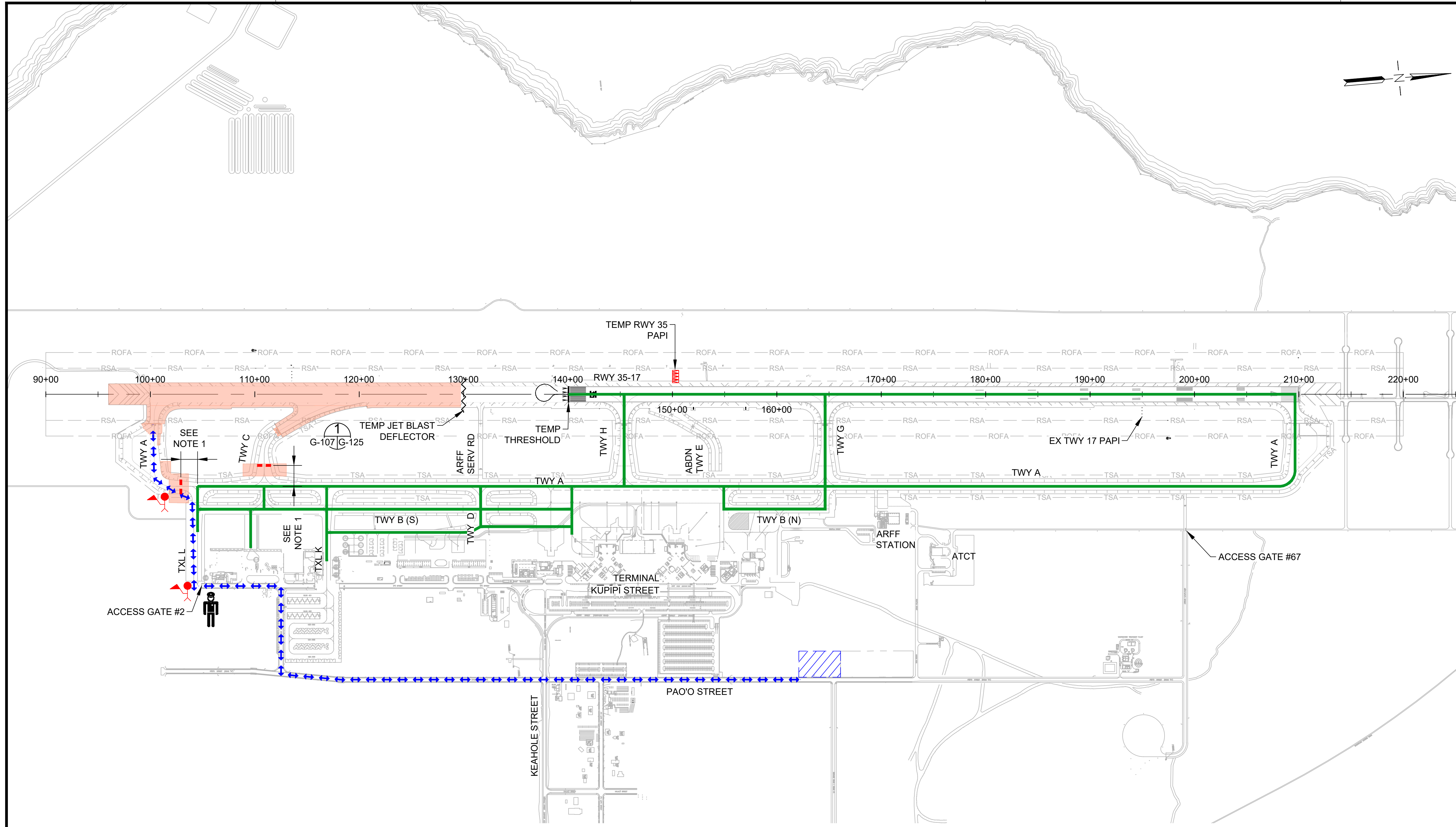
11 OF 190 SHEETS

DWG. NO.

**G-106**

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**LEGEND:**

- WORK AREA
- AIRCRAFT TRAVEL ROUTE
- LOW-PROFILE BARRICADES (CONTINUOUS)
- LOW-PROFILE BARRICADES (WITH GAPS)
- X LIGHTED CLOSED RUNWAY MARKER
- CONTRACTOR STAGING AREA
- CONTRACTOR HAUL ROUTE (2 WAY)
- BLAST FENCE BARRIER
- FLAGGERS
- SECURITY GUARD (SEE SPEC 01565 SECURITY MEASURES)

**PHASING AND BARRICADE PLAN - PHASE 2B**

**DESCRIPTION OF WORK:**  
RUNWAY AND TAXIWAY REHABILITATION

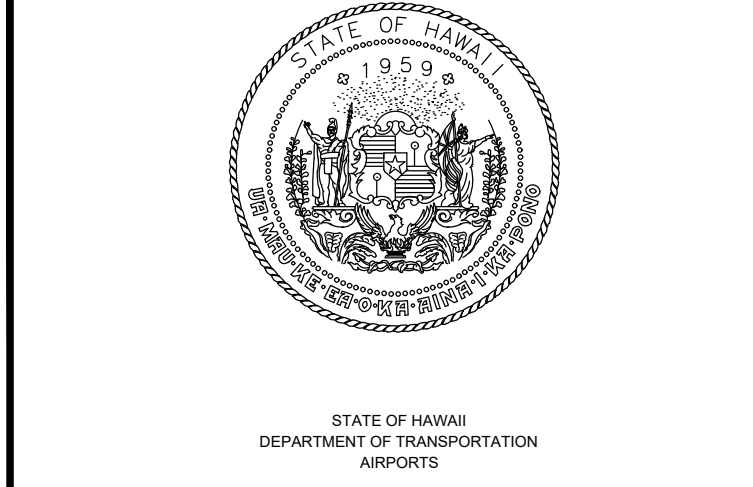
**HOURS:**  
24/7 SHORTENED RUNWAY  
WORKING HOURS: 1900-0700 DAILY

**DURATION:**  
111 CALENDAR DAYS  
ANTICIPATED DATES: 2/20/25 TO 6/11/2025

- REQUIRED NOTAMS**
1. RUNWAY 17-35 TORA, TODA, ASDA, LDA = 7,000'
  2. TAXIWAY A CLOSED, SOUTH OF TAXILANE L
  3. TAXIWAY C CLOSED
  4. LAST EXIT TWY H FOR RWY 17 ARRIVALS
  5. SOUTH 4,000' OF RWY 17-35 CLOSED
  6. TAXIWAY A BETWEEN TAXIWAYS L AND K RESTRICTED TO ADG III AND SMALLER (WORKING HOURS ONLY)

**NAVAID STATUS:**  
 RUNWAY 17 PAPI (FAA): IN-SERVICE  
 RUNWAY 17 PAPI (TEMP): OTS  
 RUNWAY 17 LOC/DME: OTS  
 RUNWAY 17 GS: OTS  
 RUNWAY 35 PAPI (FAA): OTS  
 RUNWAY 35 PAPI (TEMP): IN-SERVICE

- PHASING NOTES:**
1. BARRICADES SHALL BE LOCATED 86' FROM TAXIWAY CENTERLINE DURING WORKING HOURS. BARRICADES SHALL BE LOCATED 143' FROM TAXIWAY CENTERLINE DURING NON-WORKING HOURS
  2. MATERIAL STOCKPILES AND EQUIPMENT ARE NOT PERMITTED IN THE WORK AREA DURING NON-WORKING HOURS.
  3. PRIOR TO THE COMPLETION OF PHASE 2B, THE CONTACTOR SHALL APPLY NEW PAVEMENT MARKINGS WITHIN THE WORK AREA. NEW THRESHOLD, TDZ AND AIMING POINT MARKINGS SHALL BE COVERED WITH GEOTEXTILE FABRIC SECURED WITH SANDBAGS OR BY OTHER MEANS ACCEPTABLE TO THE RPR AND AOC.
  4. RENAMING OF TAXIWAYS A (A6) AND C (A5) SHALL BE COMPLETED DURING PHASE 2B.



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AC	AT	TR	SH

**KEY PLAN / NOTES:**



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENTS**  
SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

**SHEET TITLE:**

**PHASING AND BARRICADE PLAN PHASE 2B**

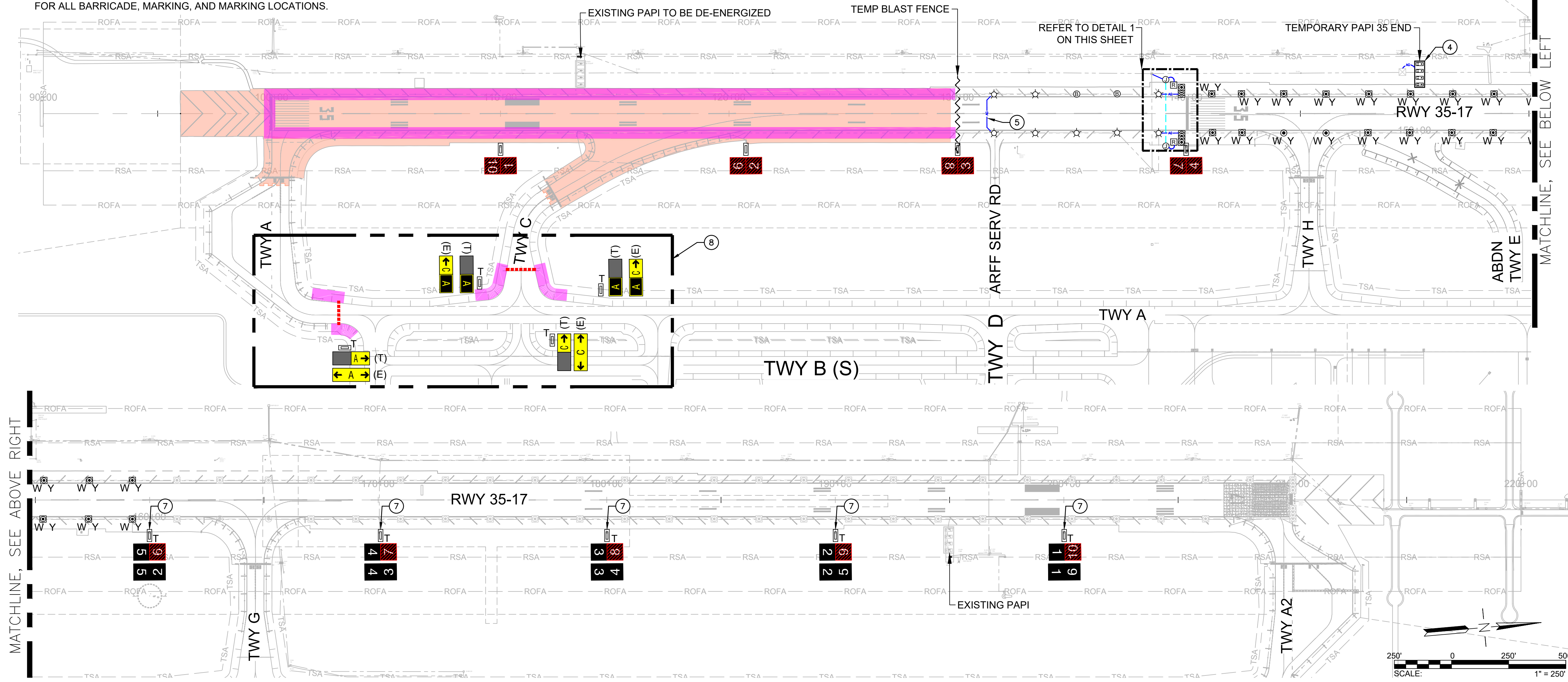
DATE :	DWG. NO.
<b>09/2023</b>	<b>G-107</b>
SHEET :	
12 OF 190 SHEETS	

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**ELECTRICAL PHASING NOTES**

- REFER TO SHEET G-126 THRU G-131 FOR TEMPORARY ELECTRICAL DETAILS.
- REFER TO CONSTRUCTION WORK SEQUENCING DRAWINGS FOR ALL BARRICADE, MARKING, AND MARKING LOCATIONS.



MATCHLINE, SEE ABOVE RIGHT

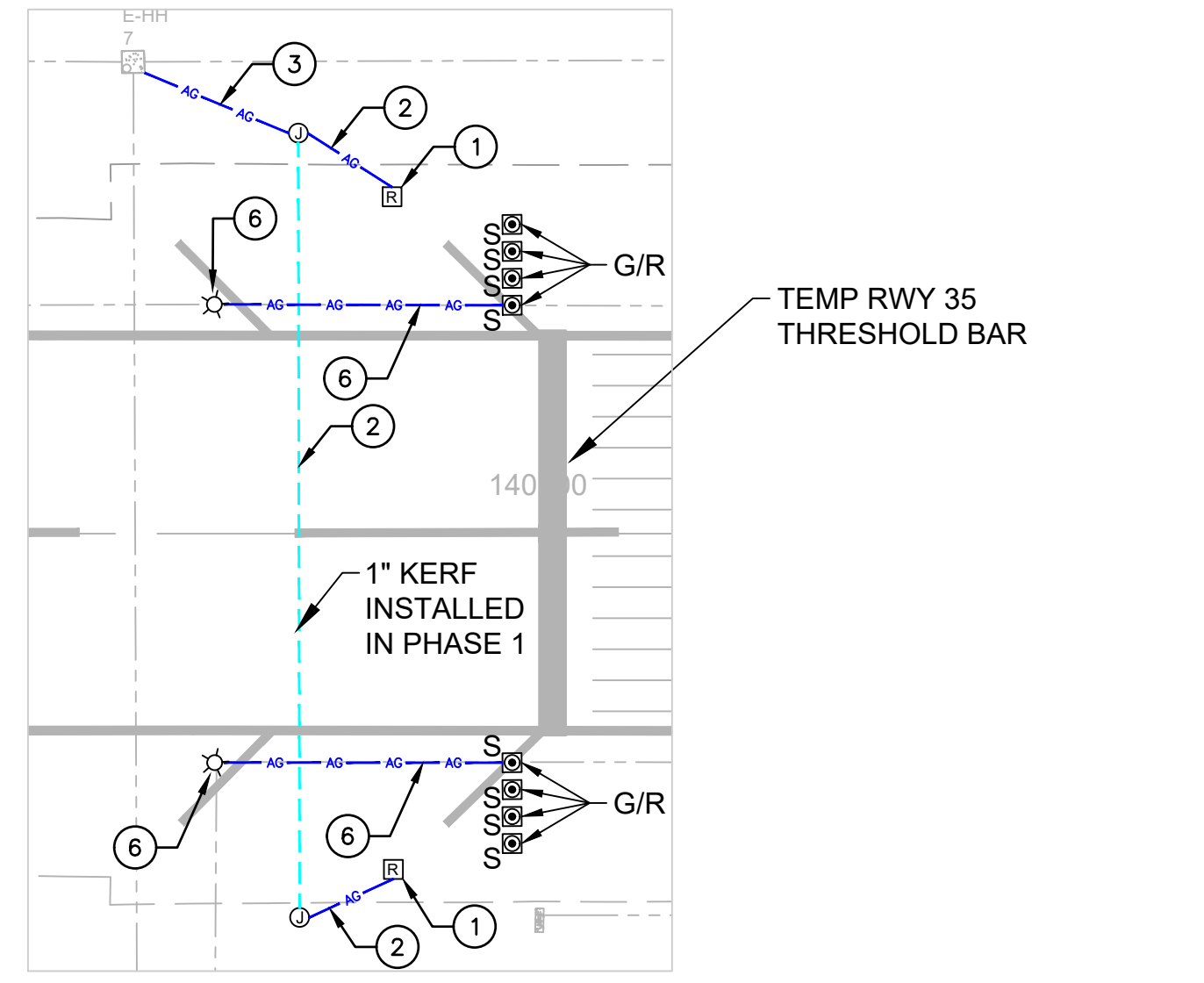
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**TEMPORARY ELECTRICAL LEGEND**

- EXTINGUISH THE LIGHT FIXTURES BY COVERING WITH PVC SLEEVE. METHOD SHALL BE AS NOTED ON THE DRAWING FOR COVERING WITH PVC SLEEVE. REFER TO SHEET G-127, DETAIL 2.
- WORK AREA
- TEMPORARY ABOVE GROUND CONDUIT WITH 2#8 AWG, L-824C 5KV CABLES. REFER TO SHEET G-127, DETAIL 3.
- 01 EXISTING RUNWAY DISTANCE REMAINING SIGN TO BE COVERED WITH BLANK PANEL.
- T EXISTING RUNWAY DISTANCE REMAINING SIGN WITH NEW PANELS.
- 9 01 EXISTING RUNWAY EDGE/END/THRESHOLD LIGHTS INSTALLED IN PHASE 1 WITH NEW COLOR CODE, AS SHOWN BY PHYSICALLY RELOCATION THE LIGHTS AS REQUIRED. "W" DENOTES CLEAR LENS, "R" DENOTES RED LENS, "Y" DENOTES YELLOW LENS, "G" DENOTES GREEN LENS, "B" DENOTES BLANK LENS. "S" ADJACENT TO SYMBOL DENOTES LIGHT TO BE INSTALLED ON STEEL PLATE AS SHOWN IN DETAIL 1 & 2/G-126.
- TEMPORARY REIL ON STEEL PLATE. REFER TO SHEET G-130.
- JUNCTION CAN FOR TEMPORARY REIL.
- FURNISH AND INSTALL NEW TAXIWAY EDGE LIGHTS, ENERGIZED ON THE RUNWAY EDGE.
- TEMPORARY L-867B COVER PLATE.
- EXISTING RUNWAY EDGE LIGHTS, INSTALLED IN PHASE 1, TO REMAIN.
- EXISTING RUNWAY THRESHOLD LIGHTS, INSTALLED IN PHASE 1, TO REMAIN.
- EXISTING HANDHOLE TO REMAIN.
- EXISTING PAPI TO REMAIN IN PLACE, U.O.N.
- NEW TEMPORARY PAPI ON STEEL PLATES. REFER TO SHEET G-129.
- (T) A → INSTALL NEW PANELS ON EXISTING AIRFIELD GUIDANCE SIGN AS SHOWN, SEE DETAIL 2/G-128.
- (E) ← A "E" DENOTES EXISTING CONFIGURATION OF SIGN TO BE MODIFIED. "T" DENOTES TEMPORARY SIGN PANEL CONFIGURATION FOR THE DURATION OF THE PHASE

**KEY NOTES**

- ITEMS TO BE TEMPORARILY INSTALLED.
- INSTALL NEW REIL ON STEEL PLATE. REFER TO SHEET G-130 FOR SITING AND INSTALLATION REQUIREMENTS.
  - INSTALL POWER AND CONTROL CABLES IN ABOVE GROUND CONDUIT AS SHOWN ON SHEET G-130 & G-131.
  - INSTALL 2#8 5KV AIRFIELD LIGHTING CABLES IN ABOVE GROUND CONDUIT TO POWER TEMPORARY REIL. REGULATOR R-4 SHALL REMAIN ENERGIZED FOR THE DURATION OF THE PHASE TO PROVIDE POWER TO TEMPORARY RELOCATED RUNWAY 35 REIL.
  - CABLES INSTALLED IN PHASE 1 FOR REGULATOR R-4 SHALL BE SPLICED INTO AT THE START OF THIS PHASE TO ENERGIZE TEMPORARY RUNWAY 35 PAPI. REGULATOR R-4 SHALL REMAIN ENERGIZED FOR THE DURATION OF THE PHASE TO PROVIDE POWER TO TEMPORARY RUNWAY 35 PAPI.
  - INSTALL ABOVE GROUND CONDUIT CONNECTING EXISTING BASE CANS. INSTALL 1#8 5KV CABLE AND SPLICE INTO CIRCUIT R-2 TO LOOP OUT CIRCUIT WITHIN CONSTRUCTION AREA.
  - INSTALL 2#10 600V SECONDARY CABLES IN ABOVE GROUND CONDUIT TO ENERGIZE THRESHOLD/END LIGHTS. INSTALL ISOLATION XFMR INSIDE EXISTING BASE CAN.
  - INSTALL NEW PANELS WITH MODIFIED NUMBERS ON EXISTING RUNWAY DISTANCE REMAINING SIGN. FIELD VERIFY SIGN SIZE AND MANUFACTURE PRIOR TO ORDERING PANELS.
  - NEW SIGNS WITHIN THIS AREA SHALL BE INSTALLED, BUT COVERED AND DE-ENERGIZED UNTIL THE COMPLETION OF THE PHASE.



**1 ENLARGEMENT 1**  
SCALE: NOT TO SCALE

State of Hawaii  
1959  
Airports Division  
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS

DORON LEO  
LICENSED PROFESSIONAL ENGINEER  
No. 14476-E  
HAWAII, U.S.A.  
*Doron Leao*  
04/30/2024  
Licensed Expiration Date

DSGN.	DRWN.	CHKD.	APPD.
JP	KV	JA	DL

**KEY PLAN / NOTES:**



NO.	DATE	REVISIONS
<b>CONSTRUCTION DOCUMENT</b>		
SEPTEMBER 2023 DATE		

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

**SHEET TITLE:**

**ELECTRICAL PHASING PLAN 2B**

DATE :	09/2023	DWG. NO.	<b>G-108</b>
SHEET :	13 OF 190 SHEETS		

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DEPARTMENT OF TRANSPORTATION  
AIRPORTS

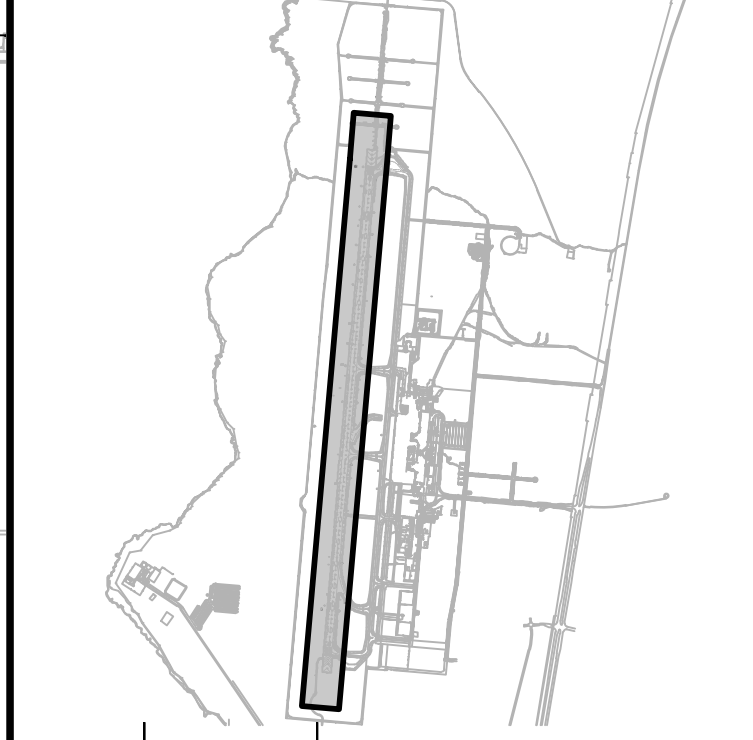


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AC	AT	TR	SH

**KEY PLAN / NOTES:**



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENTS**  
SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

**SHEET TITLE:**

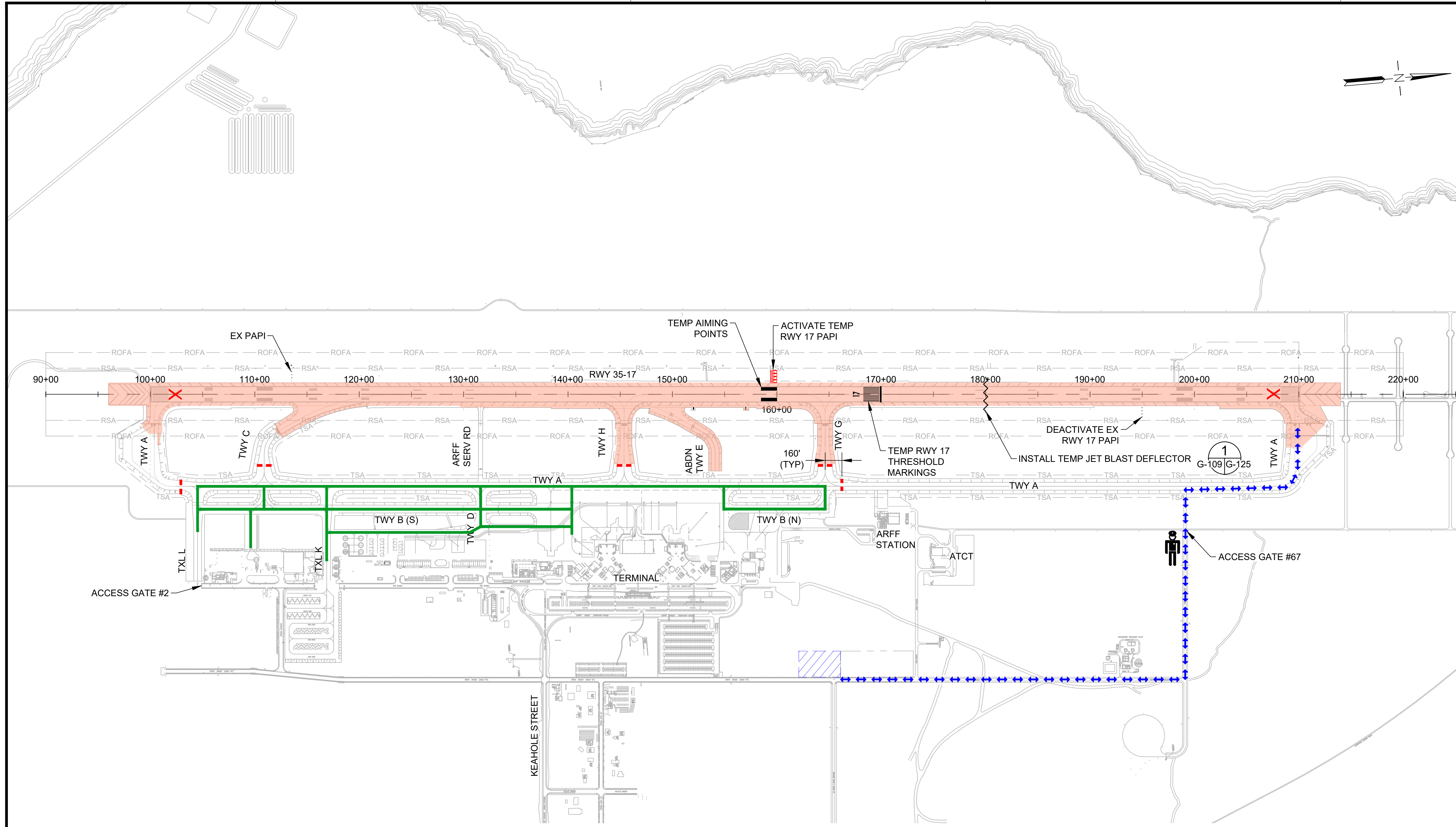
**PHASING AND BARRICADE PLAN  
PHASE 3A**

DATE : **09/2023**

SHEET : **G-109**

14 OF 190 SHEETS

DWG. NO.  
**G-109**



**LEGEND:**

- WORK AREA
- AIRCRAFT TRAVEL ROUTE
- LOW-PROFILE BARRICADES (CONTINUOUS)
- LOW-PROFILE BARRICADES (WITH GAPS)
- LIGHTED CLOSED RUNWAY MARKER
- CONTRACTOR STAGING AREA
- CONTRACTOR HAUL ROUTE (2 WAY)
- BLAST FENCE BARRIER
- FLAGGERS
- SECURITY GUARD (SEE SPEC 01565 SECURITY MEASURES)

**PHASING AND BARRICADE PLAN - PHASE 3A**

**DESCRIPTION OF WORK:**  
INSTALL TEMPORARY RUNWAY 17 THRESHOLD MARKING REMOVAL, TEMPORARY MARKING, AND ELECTRICAL WORK REQUIRED FOR SHORTENED RUNWAY CONFIGURATION

**HOURS:**  
2200-0600

**DURATION:**  
1 CALENDAR DAY  
ANTICIPATED DATE: 6/11/2025

**REQUIRED NOTAMS (WORK HOURS ONLY):**

1. RUNWAY 17-35 CLOSED
2. TAXIWAY A CLOSED, SOUTH OF TAXILANE L
3. TAXIWAY C CLOSED
4. TAXIWAY H CLOSED
5. TAXIWAY G CLOSED
6. TAXIWAY A CLOSED, NORTH OF TAXIWAY G

**NAVAID STATUS:**

- RUNWAY 17 PAPI (FAA): OTS
- RUNWAY 17 PAPI (TEMP): OTS
- RUNWAY 17 LOC/DME: OTS
- RUNWAY 17 GS: OTS
- RUNWAY 35 PAPI (FAA): OTS
- RUNWAY 35 PAPI (TEMP): OTS

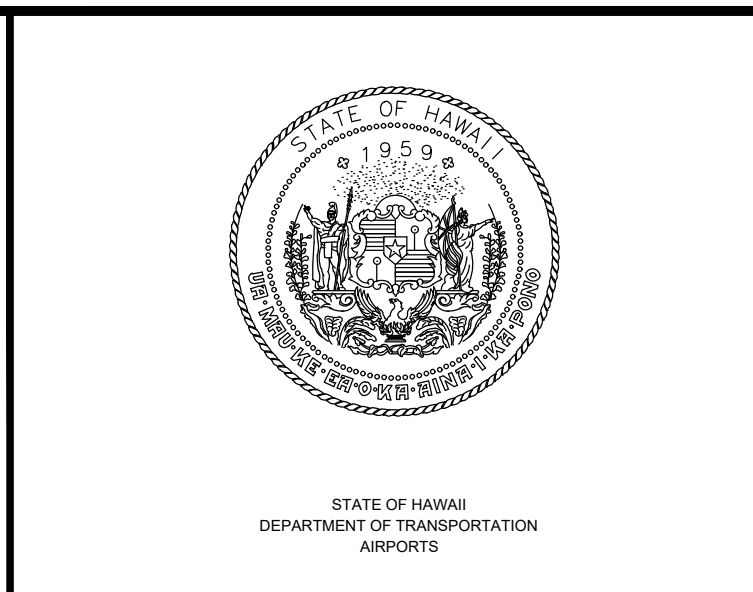
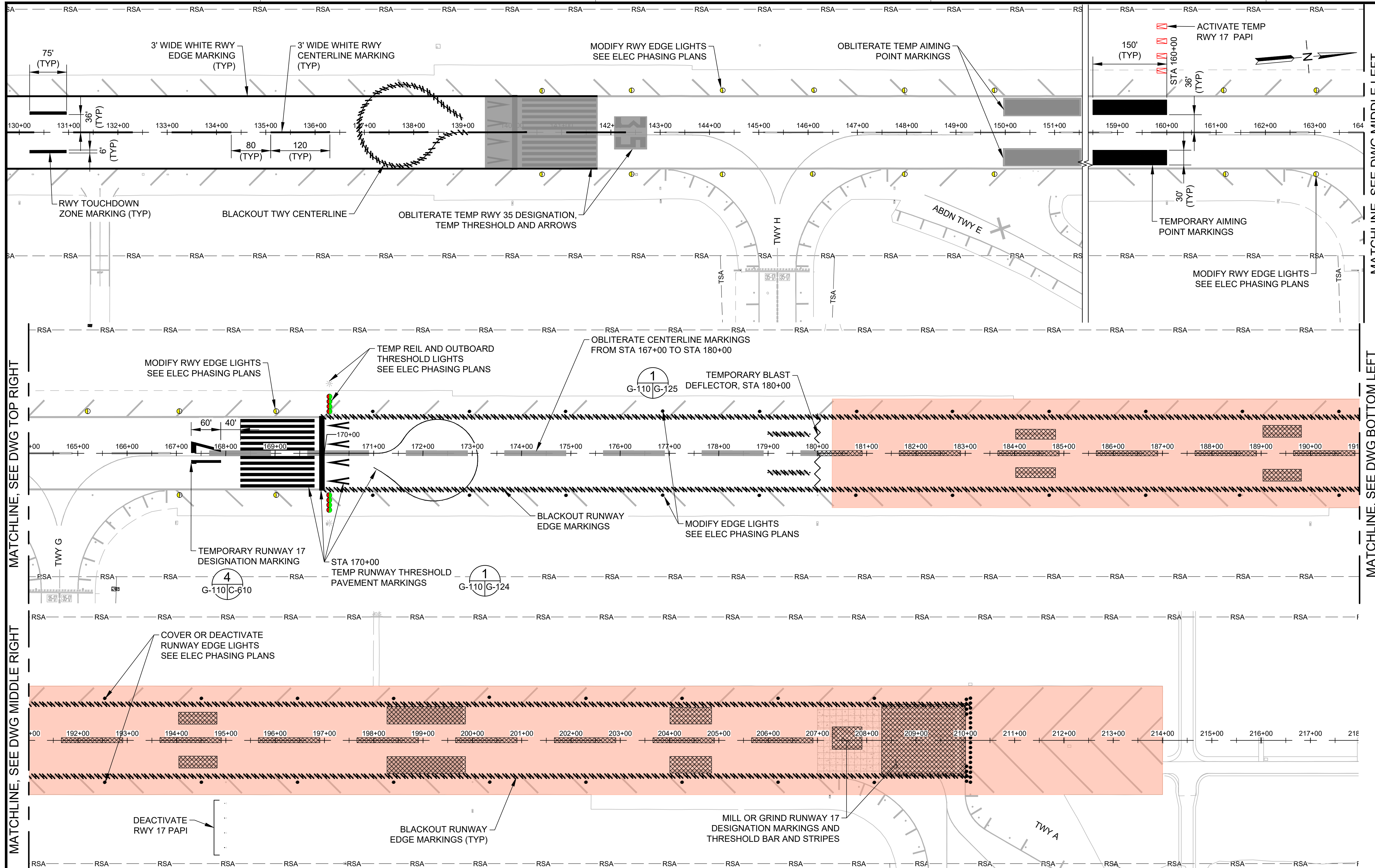
**PHASING NOTES:**

1. SEE DWG G-110 FOR DESCRIPTION OF MARKING REMOVAL, TEMPORARY MARKING, AND TEMPORARY ELECTRICAL REQUIREMENTS.
2. ALL TEMP MARKINGS SHALL BE HALF APPLICATION MARKINGS.
3. SEE SPECIAL PROVISIONS FOR LIQUIDATED DAMAGES FOR FAILURE TO REOPEN THE RUNWAY AT 0600 HRS.



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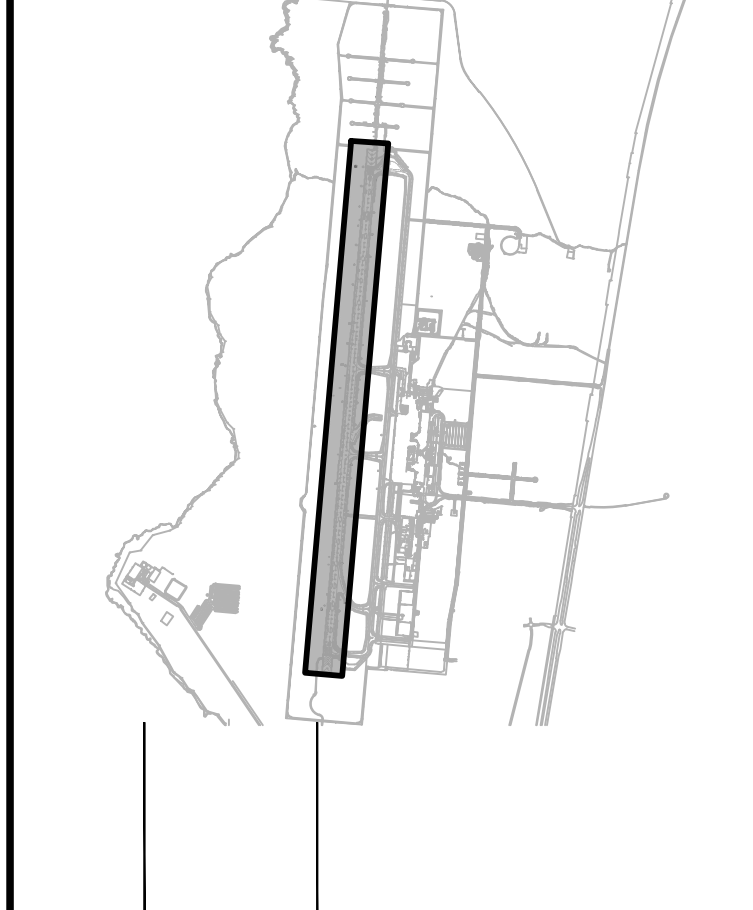


HARRY A. CLEVELAND  
 LICENSED PROFESSIONAL ENGINEER  
 No. 12828-C  
 HAWAII, USA  
 4/30/24  
 Licensed Expiration Date

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DSGN.	DRWN.	CHKD.	APPD.
AC	AT	TR	SH

**KEY PLAN / NOTES:**



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENTS**  
 SEPTEMBER 2023  
 DATE

**PROJECT TITLE :**  
**RUNWAY 17-35 REHABILITATION**  
 AT  
 ELLISON ONIZUKA  
 KONA INTERNATIONAL AIRPORT AT KEAHOLE  
 KAILUA-KONA, HAWAII

**PROJECT NO.:**  
**AH2021-16**

**SHEET TITLE:**  
**TEMPORARY MARKING AND LIGHTING PLAN PHASE 3A**

DATE : **09/2023**  
 SHEET :  
 15 OF 190 SHEETS

DWG. NO.  
**G-110**

MATCHLINE, SEE DWG TOP RIGHT

MATCHLINE, SEE DWG MIDDLE LEFT

MATCHLINE, SEE DWG BOTTOM LEFT

**LEGEND:**

- PHASE 3B WORK AREA
- TEMP BLAST DEFLECTOR
- TEMPORARY RUNWAY LIGHTS
- BLACKOUT MARKING
- MARKING REMOVAL - OBLITERATION
- MODIFY RUNWAY EDGE LIGHTS
- MARKING REMOVAL - MILL OR GRIND
- COVERED OR DEACTIVATED RUNWAY LIGHTS

**SEQUENCE OF WORK:**

1. CONFIRM RWY AND TWY CLOSURES WITH KOA OPERATIONS.
2. INSTALL LIGHTED X'S AT EACH END OF RWY.
3. INSTALL REQUIRED LOW-PROFILE BARRICADES.
4. INSTALL JET BLAST DEFLECTOR.
5. MARKING REMOVAL
  - A. OBLITERATE CONFLICTING RWY 35 DESIGNATION AND SPHPS MARKINGS.
  - B. OBLITERATE RWY CENTERLINE MARKINGS IN 1,000' RSA AS SHOWN.
  - C. MILL OR GRIND RWY MARKINGS IN WORK AREA AS SHOWN.
6. APPLY TEMPORARY MARKINGS AS SHOWN.
7. ELECTRICAL
  - A. ACTIVATE TEMPORARY RWY 17 PAPI.
  - B. INSTALL TEMPORARY OUTBOARD THRESHOLD AND REIL LIGHTS.
  - C. CHANGE RWY EDGE LIGHTING FROM WHITE TO AMBER/WHITE FOR THE LAST 2,000' OF RWY.
  - D. COVER OR DEACTIVATE RWY EDGE LIGHTS IN WORK AREA AND 1,000' RSA
8. SIGNAGE
  - A. CHANGE RWY DISTANCE REMAINING SIGNS.
  - B. COVER APPROPRIATE TWY DIRECTIONAL SIGNS FOR TWYS SCHEDULED TO BE CLOSED.
9. OPENING OF RUNWAY
  - A. CONDUCT FOD CHECK AND OBTAIN FINAL ACCEPTANCE FROM KOA OPERATIONS.
  - B. REMOVE LOW PROFILE BARRICADES.
  - C. REMOVE LIGHTED X'S AT EACH END OF RWY.
  - D. OPEN RWY 17-35 AT 7,000' LENGTH.



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STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS

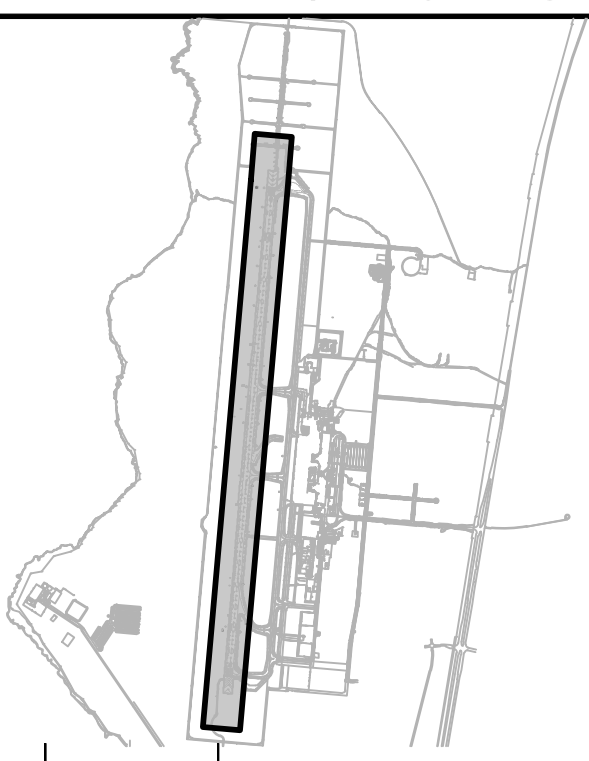


MARK A. CLEVON  
LICENSED PROFESSIONAL ENGINEER  
No. 12828-C  
HAWAII, USA  
4/30/24  
Licensed Expiration Date

This work was prepared by me or under my supervision.

DSGN.	DRWN.	CHKD.	APPD.
AC	AT	TR	SH

**KEY PLAN / NOTES:**



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENTS**

SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**

AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

**SHEET TITLE:**

**PHASING AND BARRICADE PLAN  
PHASE 3B**

DATE :

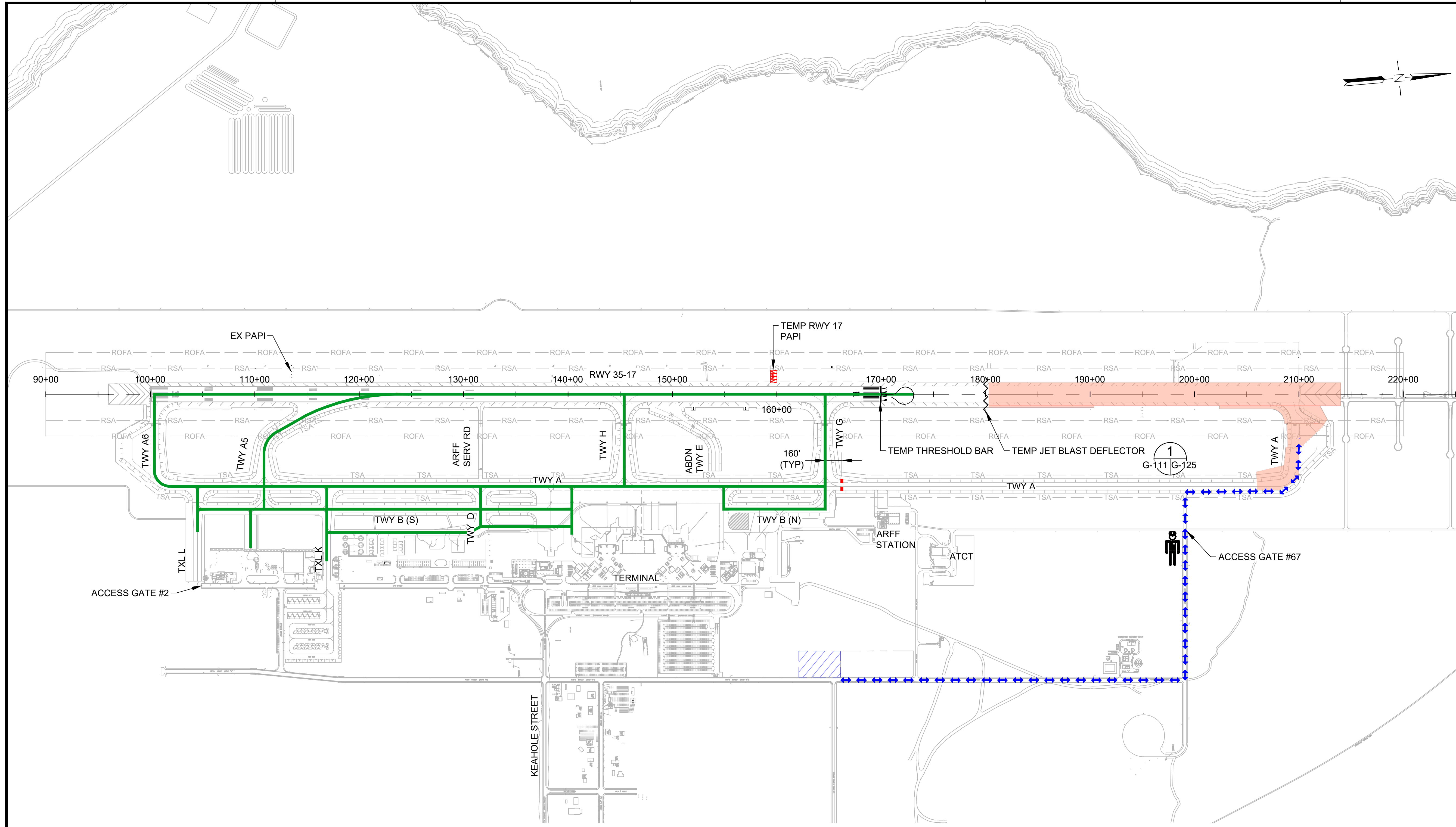
**09/2023**

SHEET :

16 OF 190 SHEETS

DWG. NO.

**G-111**



**LEGEND:**

- WORK AREA
- AIRCRAFT TRAVEL ROUTE
- LOW-PROFILE BARRICADES (CONTINUOUS)
- LOW-PROFILE BARRICADES (WITH GAPS)
- LIGHTED CLOSED RUNWAY MARKER
- CONTRACTOR STAGING AREA
- CONTRACTOR HAUL ROUTE (2 WAY)
- BLAST FENCE BARRIER
- FLAGGERS
- SECURITY GUARD (SEE SPEC 01565 SECURITY MEASURES)

**PHASING AND BARRICADE PLAN - PHASE 3B**

**DESCRIPTION OF WORK:**  
RUNWAY AND TAXIWAY REHABILITATION

**HOURS:**  
24/7 SHORTENED RUNWAY  
WORKING HOURS: 1900-0700 DAILY

**DURATION:**  
111 CALENDAR DAYS  
ANTICIPATED DATES: 6/12/2025 TO 10/1/2025

- REQUIRED NOTAMS**
1. RUNWAY 17-35 TORA, TODA, ASDA, LDA = 7000'
  2. TAXIWAY A CLOSED, NORTH OF TAXIWAY G
  3. SOUTH 3,000' OF RUNWAY 17-35 UNGROOVED
  4. LAST EXIT TAXIWAY G FOR RUNWAY 35 ARRIVALS
  5. NORTH 4,000' OF RUNWAY 17-35 CLOSED

**NAVAID STATUS:**

RUNWAY 17 PAPI (FAA):	OTS
RUNWAY 17 PAPI (TEMP):	IN-SERVICE
RUNWAY 17 LOC/DME:	OTS
RUNWAY 17 GS:	OTS
RUNWAY 17 MALSR:	OTS
RUNWAY 35 PAPI (FAA):	IN-SERVICE
RUNWAY 35 PAPI (TEMP):	OTS

- PHASING NOTES:**
1. MATERIAL STOCKPILES AND EQUIPMENT ARE NOT PERMITTED IN THE WORK AREA DURING NON-WORKING HOURS.
  2. PRIOR TO THE COMPLETION OF PHASE 3B, THE CONTACTOR SHALL APPLY NEW PAVEMENT MARKINGS WITHIN THE WORK AREA. NEW THRESHOLD, TDZ AND AIMING POINT MARKINGS SHALL BE COVERED WITH GEOTEXTILE FABRIC SECURED WITH SANDBAGS OR BY OTHER MEANS ACCEPTABLE TO THE RPR AND AOC.
  3. RENAMING OF TAXIWAY A (A2) SHALL BE COMPLETED DURING STAGE 3B.

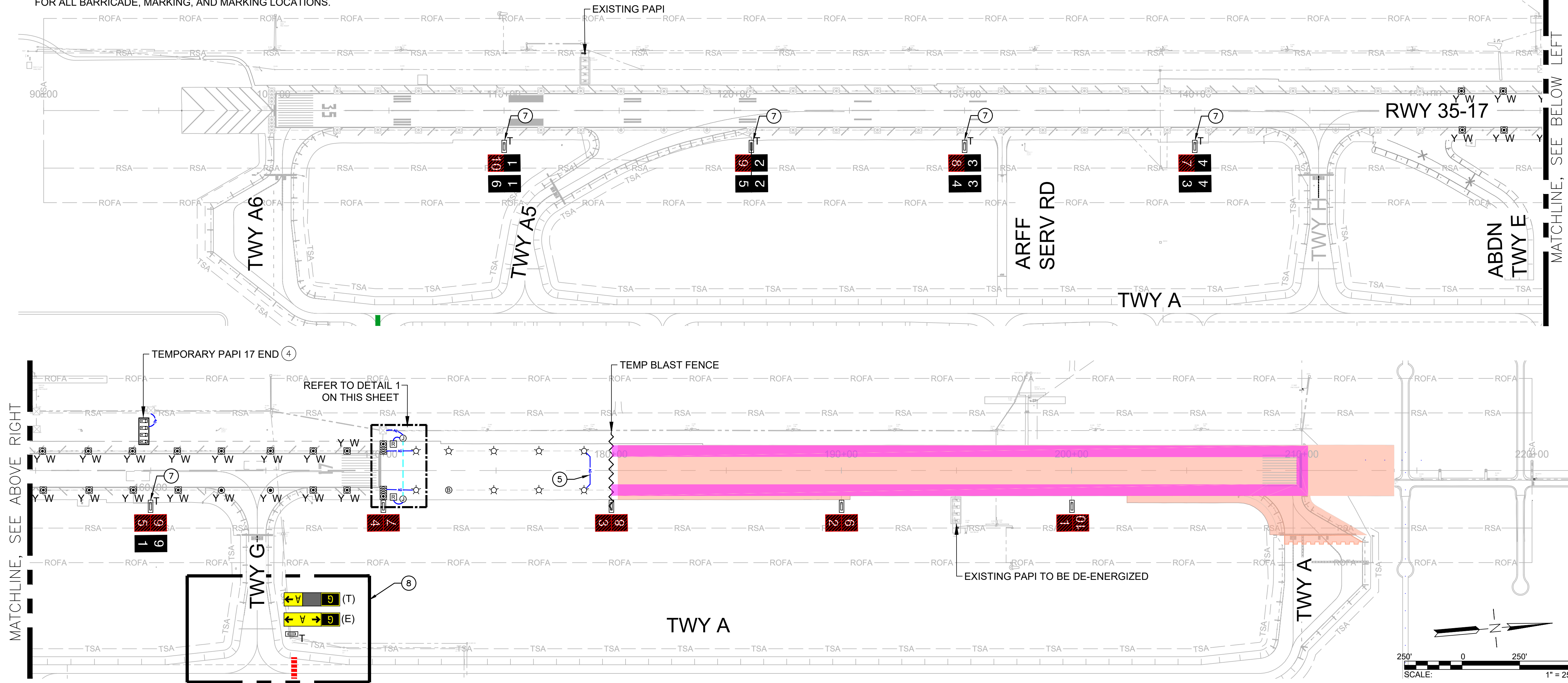


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**ELECTRICAL PHASING NOTES**

1. REFER TO SHEET G-126 THRU G-131 FOR TEMPORARY ELECTRICAL DETAILS.
2. REFER TO CONSTRUCTION WORK SEQUENCING DRAWINGS FOR ALL BARRICADE, MARKING, AND MARKING LOCATIONS.

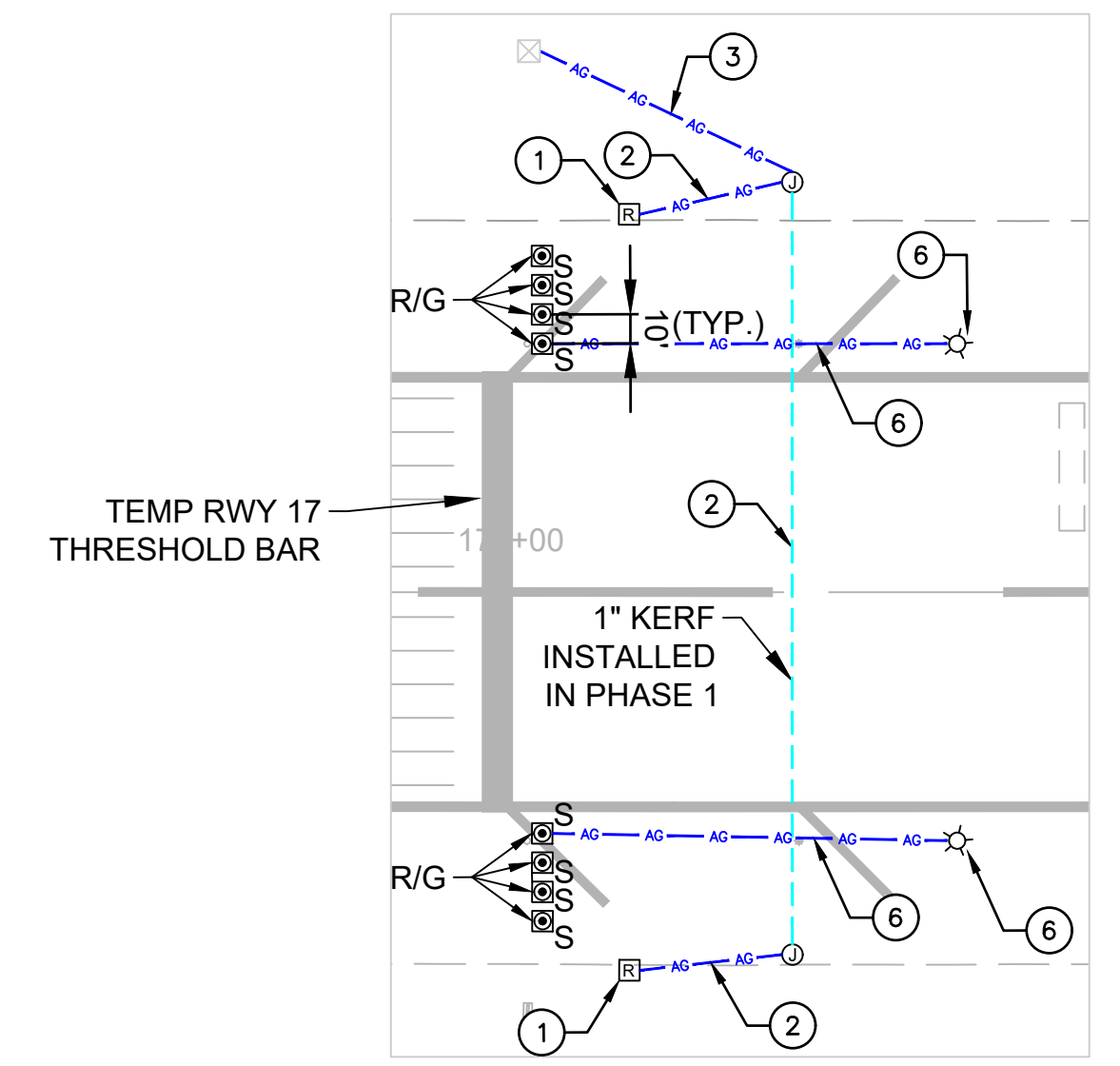


**TEMPORARY ELECTRICAL LEGEND**

- EXTINGUISH THE LIGHT FIXTURES BY COVERING WITH PVC SLEEVE. METHOD SHALL BE AS NOTED ON THE DRAWING FOR COVERING WITH PVC SLEEVE. REFER TO SHEET G-127, DETAIL 2.
- WORK AREA
- TEMPORARY ABOVE GROUND CONDUIT WITH 2#8 AWG, L-824C 5KV CABLES. REFER TO SHEET G-127, DETAIL 3.
- 01 EXISTING RUNWAY DISTANCE REMAINING SIGN TO BE COVERED WITH BLANK PANEL.
- 01<sup>T</sup> EXISTING RUNWAY DISTANCE REMAINING SIGN WITH NEW PANELS.
- 9 01 EXISTING RUNWAY EDGE/END/THRESHOLD LIGHTS INSTALLED IN PHASE 1 WITH NEW COLOR CODE, AS SHOWN BY PHYSICALLY RELOCATION THE LIGHTS AS REQUIRED. "W" DENOTES CLEAR LENS, "R" DENOTES RED LENS, "Y" DENOTES YELLOW LENS, "G" DENOTES GREEN LENS, "B" DENOTES BLANK LENS. "S" ADJACENT TO SYMBOL DENOTES LIGHT TO BE INSTALLED ON STEEL PLATE AS SHOWN IN DETAIL 1 & 2/G-126.
- R TEMPORARY REIL ON STEEL PLATE. REFER TO SHEET G-130.
- JUNCTION CAN FOR TEMPORARY REIL.
- FURNISH AND INSTALL NEW TAXIWAY EDGE LIGHTS, ENERGIZED ON THE RUNWAY EDGE.
- TEMPORARY L-867B COVER PLATE.
- EXISTING RUNWAY EDGE LIGHTS, INSTALLED IN PHASE 1, TO REMAIN.
- EXISTING RUNWAY THRESHOLD LIGHTS, INSTALLED IN PHASE 1, TO REMAIN.
- EXISTING HANDHOLE TO REMAIN.
- EXISTING PAPI TO REMAIN IN PLACE, U.O.N.
- NEW TEMPORARY PAPI ON STEEL PLATES. REFER TO SHEET G-129.
- (T) A INSTALL NEW PANELS ON EXISTING AIRFIELD GUIDANCE SIGN AS SHOWN, SEE DETAIL 2/G-128.
- (E) A "E" DENOTES EXISTING CONFIGURATION OF SIGN TO BE MODIFIED. "T" DENOTES TEMPORARY SIGN PANEL CONFIGURATION FOR THE DURATION OF THE PHASE

**KEY NOTES**

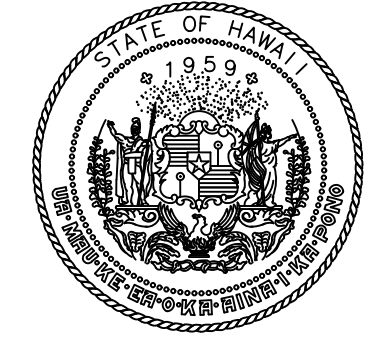
- ITEMS TO BE TEMPORARILY INSTALLED.
1. INSTALL NEW REIL ON STEEL PLATE. REFER TO SHEET G-130 FOR SITING AND INSTALLATION REQUIREMENTS.
  2. INSTALL POWER AND CONTROL CABLES IN ABOVE GROUND CONDUIT AS SHOWN ON SHEET G-131.
  3. INSTALL 2#8 5KV AIRFIELD LIGHTING CABLES IN ABOVE GROUND CONDUIT TO POWER TEMPORARY REIL. REGULATOR R-4 SHALL REMAIN ENERGIZED FOR THE DURATION OF THE PHASE TO PROVIDE POWER TO TEMPORARY RELOCATED RUNWAY 17 REIL.
  4. CABLES INSTALLED IN PHASE 1 FOR REGULATOR R-4 SHALL BE SPLICED INTO AT THE START OF THIS PHASE TO ENERGIZE TEMPORARY RUNWAY 17 PAPI. REGULATOR R-4 SHALL REMAIN ENERGIZED FOR THE DURATION OF THE PHASE TO PROVIDE POWER TO TEMPORARY RUNWAY 17 PAPI.
  5. INSTALL ABOVE GROUND CONDUIT CONNECTING EXISTING BASE CANS. INSTALL 1#8 5KV CABLE AND SPLICE INTO CIRCUIT R-2 TO LOOP OUT CIRCUIT WITHIN CONSTRUCTION AREA.
  6. INSTALL 2#10 600V SECONDARY CABLES IN ABOVE GROUND CONDUIT TO ENERGIZE THRESHOLD/END LIGHTS. INSTALL ISOLATION XFMR INSIDE EXISTING BASE CAN.
  7. INSTALL NEW PANELS WITH MODIFIED NUMBERS ON EXISTING RUNWAY DISTANCE REMAINING SIGN.
  8. NEW SIGNS WITHIN THIS AREA SHALL BE INSTALLED, BUT COVERED AND DE-ENERGIZED UNTIL THE COMPLETION OF THE PHASE.



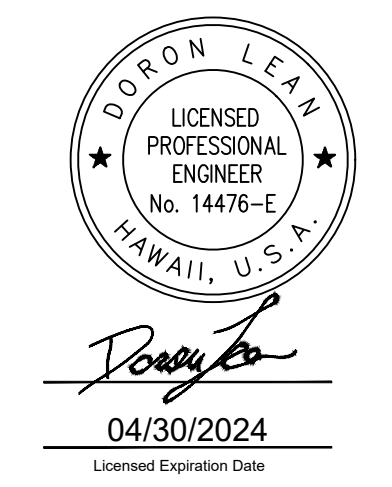
1 ENLARGEMENT 1  
SCALE: NOT TO SCALE

MATCHLINE, SEE BELOW LEFT

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State of Hawaii  
Airports Division  
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS



DSGN.	DRWN.	CHKD.	APPD.
JP	KV	JA	DL

**KEY PLAN / NOTES:**



NO.	DATE	REVISIONS
<b>CONSTRUCTION DOCUMENT</b>		
SEPTEMBER 2023 DATE		

**PROJECT TITLE :**  
  
**RUNWAY 17-35 REHABILITATION**  
  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**  
  
**AH2021-16**

**SHEET TITLE:**  
  
**ELECTRICAL PHASING PLAN 3B**

DATE :	09/2023	DWG. NO.	<b>G-112</b>
SHEET :	17 OF 190 SHEETS		

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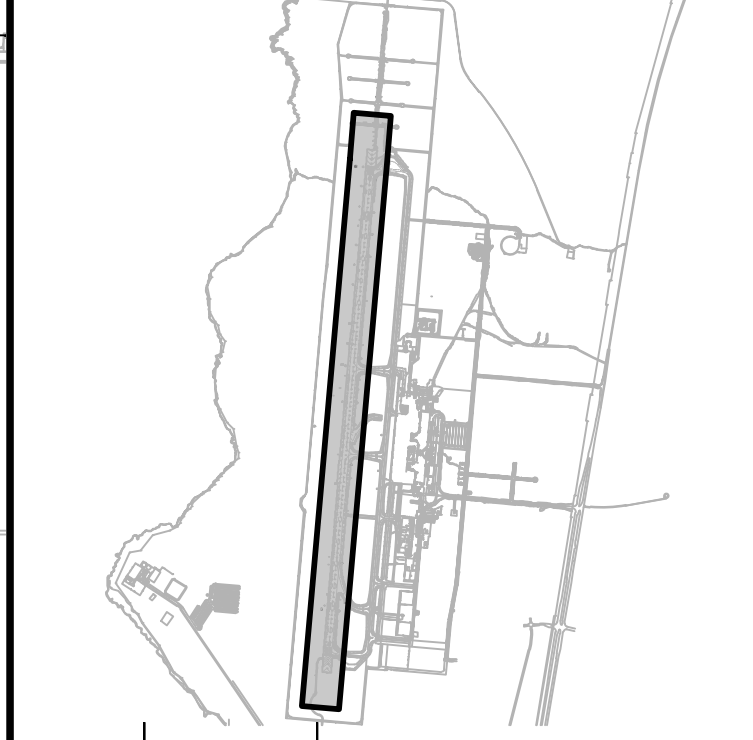


4/30/24  
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DSGN.	DRWN.	CHKD.	APPD.
AC	AT	TR	SH

**KEY PLAN / NOTES:**



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENTS**  
SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

**SHEET TITLE:**

**PHASING AND BARRICADE PLAN  
PHASE 4A**

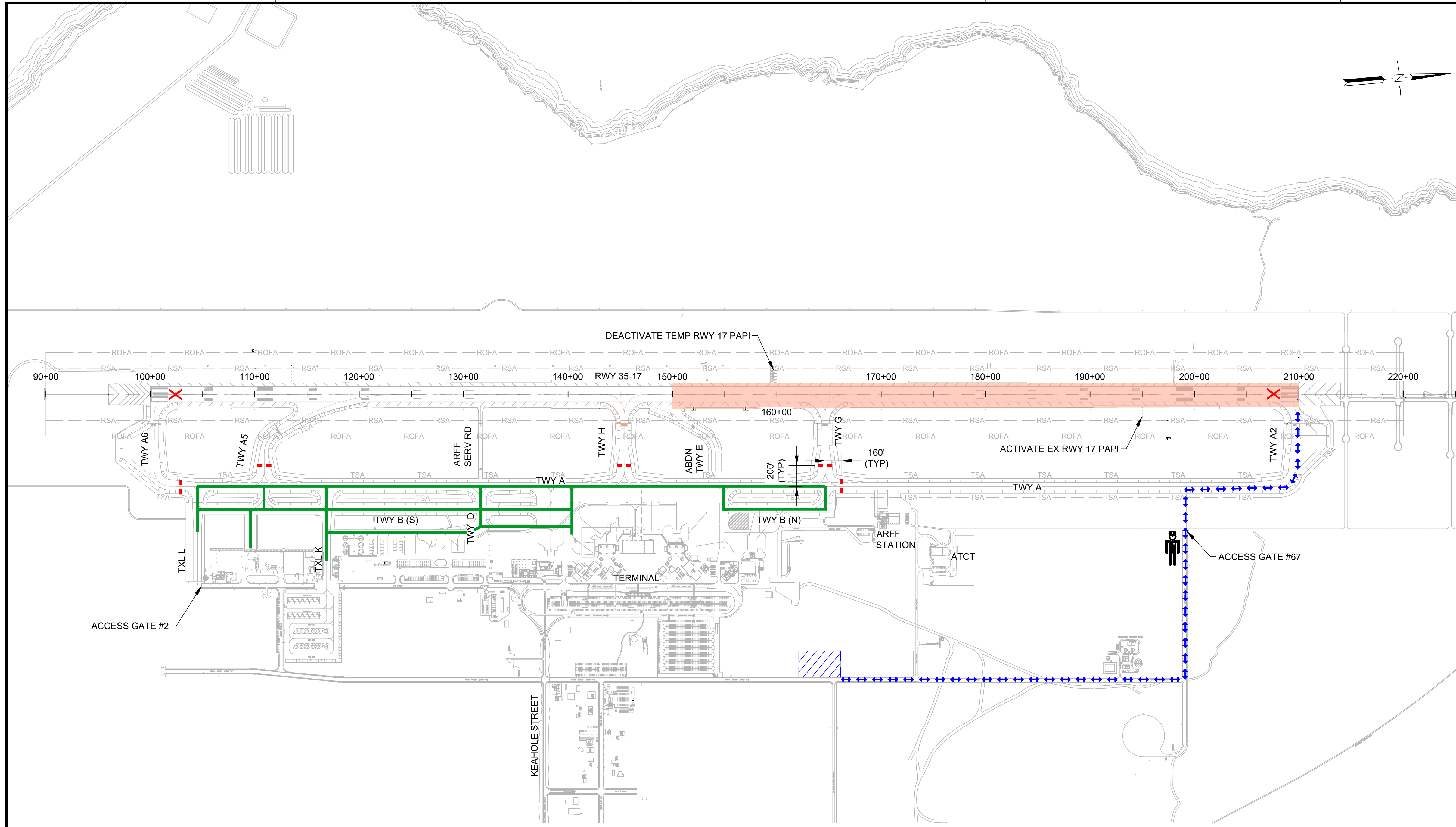
DATE : **09/2023**

SHEET :

18 OF 190 SHEETS

DWG. NO.

**G-113**



**LEGEND:**

- WORK AREA
- AIRCRAFT TRAVEL ROUTE
- LOW-PROFILE BARRICADES (CONTINUOUS)
- LOW-PROFILE BARRICADES (WITH GAPS)
- LIGHTED CLOSED RUNWAY MARKER
- CONTRACTOR STAGING AREA
- CONTRACTOR HAUL ROUTE (2 WAY)
- BLAST FENCE BARRIER
- FLAGGERS
- SECURITY GUARD (SEE SPEC 01565 SECURITY MEASURES)

**PHASING AND BARRICADE PLAN - PHASE 4A**

**DESCRIPTION OF WORK:**  
REMOVE TEMPORARY RUNWAY THRESHOLDS, MARKING REMOVAL, TEMPORARY MARKINGS, AND ELECTRICAL WORK TO RESTORE RUNWAY TO FULL-LENGTH OPERATIONS.

**HOURS:**  
2200-0600

**DURATION:**  
1 CALENDAR DAY  
ANTICIPATED DATES: 10/1/2025 TO 10/2/2025

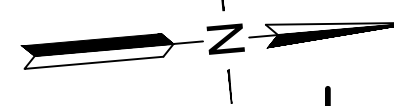
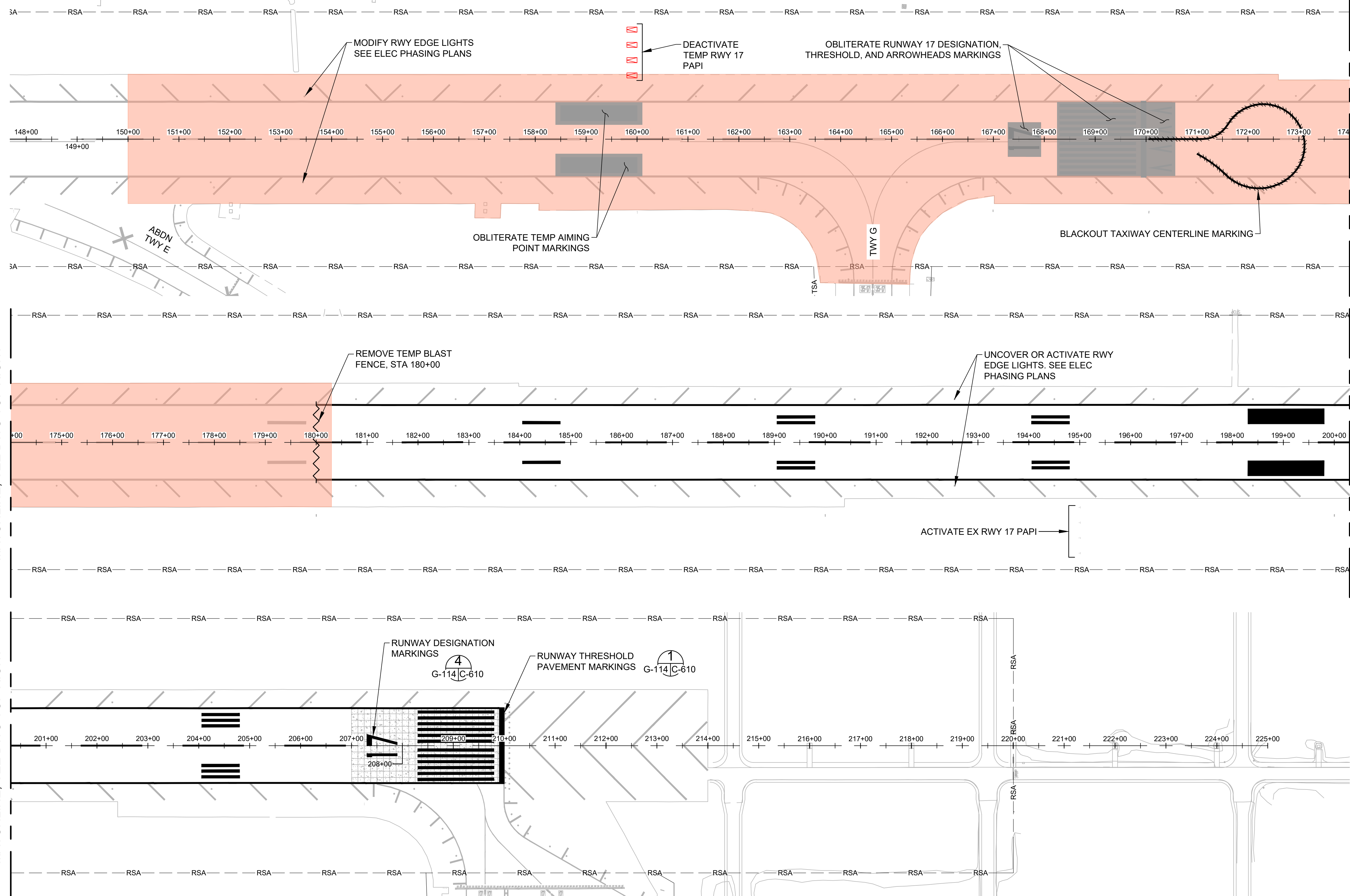
- REQUIRED NOTAMS:**
- RUNWAY 17-35 CLOSED
  - TAXIWAY A6 CLOSED
  - TAXIWAY A5 CLOSED
  - TAXIWAY H CLOSED
  - TAXIWAY G CLOSED
  - TAXIWAY A CLOSED, NORTH OF TAXIWAY G
  - RUNWAY 17-35 UNGROOVED (WORKING AND NONWORKING HOURS)

- NAVAID STATUS:**
- RUNWAY 17 PAPI (FAA): OTS
  - RUNWAY 17 PAPI (TEMP): OTS
  - RUNWAY 17 LOC/DME: OTS
  - RUNWAY 17 GS: OTS
  - RUNWAY 17 MALSR: OTS
  - RUNWAY 35 PAPI (FAA): OTS
  - RUNWAY 35 PAPI (TEMP): OTS

- PHASING NOTES:**
- SEE DWG G-114 FOR DESCRIPTION OF MARKING REMOVAL, TEMPORARY MARKING, AND TEMPORARY ELECTRICAL REQUIREMENTS.
  - ALL TEMP MARKINGS SHALL BE HALF APPLICATION MARKINGS.
  - SEE SPECIAL PROVISIONS FOR LIQUIDATED DAMAGES FOR FAILURE TO REOPEN THE RUNWAY AT 0600 HRS.







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MATCHLINE, SEE DWG BOTTOM LEFT

MATCHLINE, SEE DWG TOP RIGHT

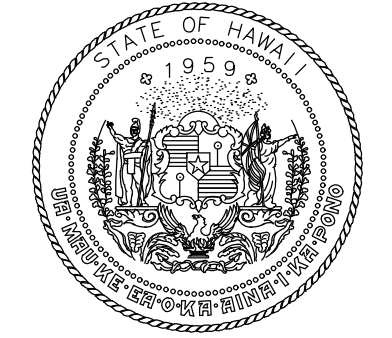
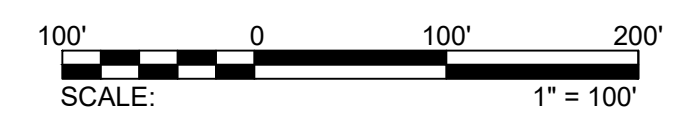
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**LEGEND:**

- PHASE 4B WORK AREA
- BLACKOUT MARKING
- MARKING REMOVAL - OBLITERATION

**SEQUENCE OF WORK:**

1. CONFIRM RWY AND TWY CLOSURES WITH KOA OPERATIONS.
2. INSTALL LIGHTED X'S AT EACH END OF RWY.
3. INSTALL REQUIRED LOW-PROFILE BARRICADES.
4. REMOVE JET BLAST DEFLECTOR.
5. MARKING REMOVAL
  - A. OBLITERATE TEMP RWY 17 DESIGNATION AND THRESHOLD MARKINGS.
  - B. OBLITERATE TEMP RWY 17 AIMING POINT MARKING
6. APPLY TEMPORARY MARKINGS AS SHOWN.
7. ELECTRICAL
  - A. DEACTIVATE TEMP RWY 17 PAPI.
  - B. ACTIVATE RWY 17 PAPI.
  - C. CHANGE PHASE 3 RWY EDGE LIGHTING FROM AMBER/WHITE TO WHITE.
  - D. UNCOVER OR ACTIVATE RWY EDGE LIGHTS IN PHASE 3 WORK AREA AND 1,000' RSA.
8. SIGNAGE
  - A. UNCOVER RWY DISTANCE REMAINING SIGNS.
  - B. CHANGE RWY HOLDING POSITION SIGN PANELS.
  - C. UNCOVER TWY DIRECTIONAL SIGNS.
9. OPENING OF RUNWAY
  - A. CONDUCT FOD CHECK AND OBTAIN FINAL ACCEPTANCE FROM KOA OPERATIONS.
  - B. REMOVE LOW PROFILE BARRICADES.
  - C. REMOVE LIGHTED X'S AT EACH END OF RWY.
  - D. OPEN RWY 17-35.



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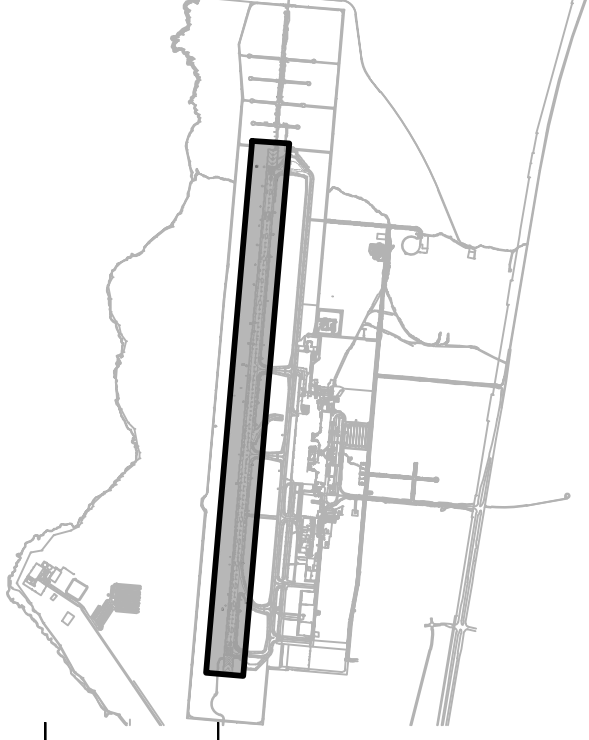


*Markin A. Clevon*  
4/30/24  
Licensed Expiration Date

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DSGN.	DRWN.	CHKD.	APPD.
AC	AT	TR	SH

**KEY PLAN / NOTES:**



NO.	DATE	REVISIONS

**CONSTRUCTION DOCUMENTS**  
SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

**SHEET TITLE:**

**TEMPORARY MARKING AND LIGHTING PLAN  
PHASE 4A**

DATE : <b>09/2023</b>	DWG. NO. <b>G-114</b>
SHEET : 19 OF 190 SHEETS	

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**KEY PLAN / NOTES:**



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENTS**  
SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

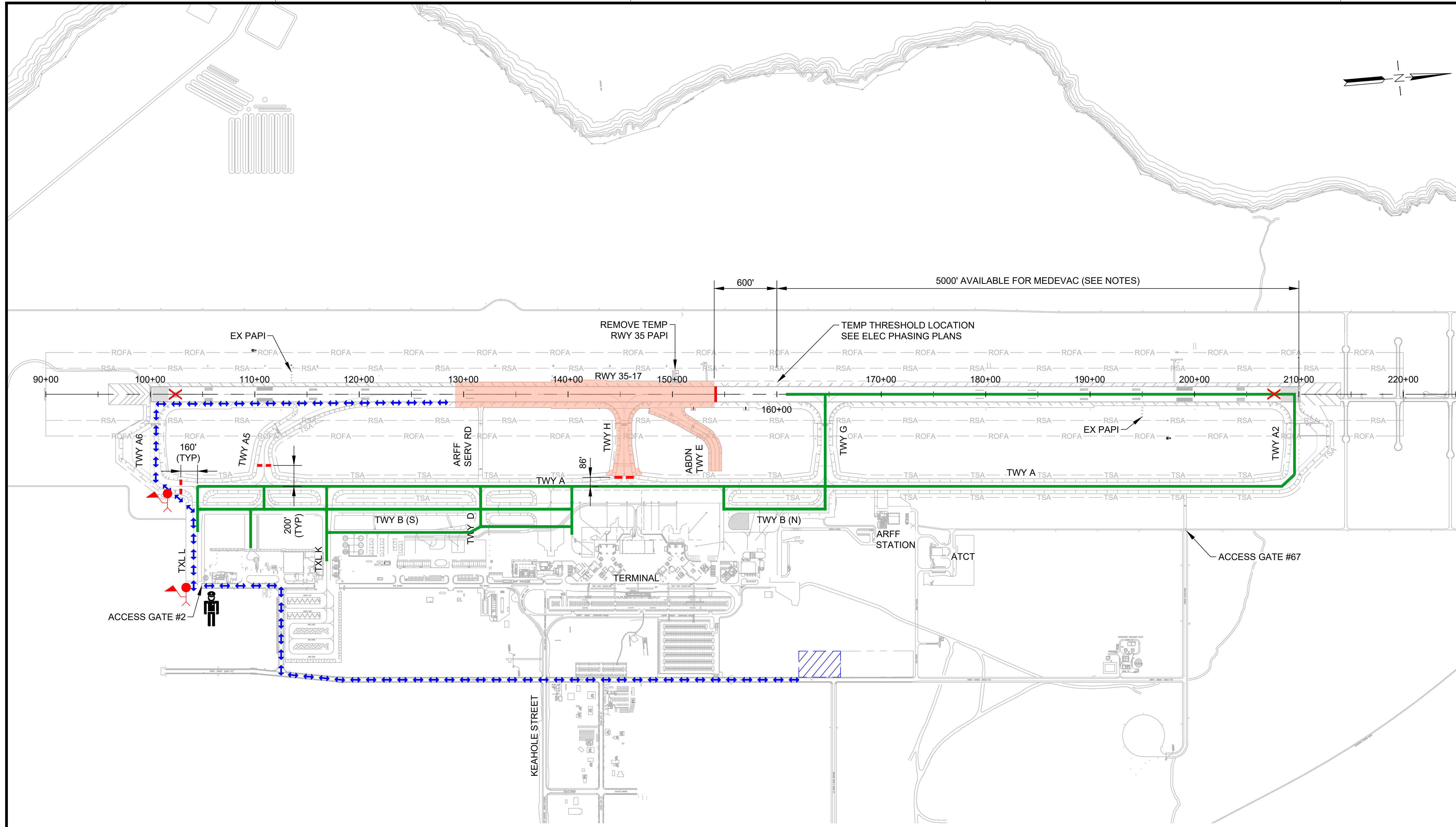
**PROJECT NO.:**

**AH2021-16**

**SHEET TITLE:**

**PHASING AND BARRICADE PLAN PHASE 4B.1**

DATE :	DWG. NO.
09/2023	G-115
SHEET :	
20 OF 190 SHEETS	



**LEGEND:**

- WORK AREA
- AIRCRAFT TRAVEL ROUTE
- LOW-PROFILE BARRICADES (CONTINUOUS)
- LOW-PROFILE BARRICADES (WITH GAPS)
- LIGHTED CLOSED RUNWAY MARKER
- CONTRACTOR STAGING AREA
- CONTRACTOR HAUL ROUTE (2 WAY)
- BLAST FENCE BARRIER
- FLAGGERS
- SECURITY GUARD (SEE SPEC 01565 SECURITY MEASURES)

**PHASING AND BARRICADE PLAN - PHASE 4B.1**

**DESCRIPTION OF WORK:**  
COLD MILLING, CRACK REPAIR, AC PAVING, PAVEMENT MARKING

**HOURS:**  
2200-0600 DAILY

**DURATION:**  
45 CALENDAR DAYS  
ANTICIPATED DATES: 10/2/2025 TO 11/16/2025

- REQUIRED NOTAMS:**
- RUNWAY 17-35 CLOSED, EXCEPT MEDEVAC AIRCRAFT WITH 1-HR PPR
  - TAXIWAY A6 CLOSED
  - TAXIWAY A5 CLOSED
  - TAXIWAY H CLOSED
  - RUNWAY 17-35 UNGROOVED (WORKING AND NONWORKING HOURS)
  - TAXIWAY A AT TAXIWAY H RESTRICTED TO ADG III AND SMALLER

**NAVAID STATUS:**

RUNWAY 17 PAPI (FAA):	OTS (IN-SERVICE WITH 1-HR PPR)
RUNWAY 17 PAPI (TEMP):	OTS
RUNWAY 17 LOC/DME:	OTS
RUNWAY 17 GS:	OTS
RUNWAY 17 MALSR:	OTS
RUNWAY 35 PAPI (FAA):	OTS
RUNWAY 35 PAPI (TEMP):	N/A

- PHASING NOTES:**
- CONTRACTOR SHALL CONSTRUCT THE NEW AC PAVEMENT ACROSS THE FULL WIDTH OF THE RUNWAY AND/OR TAXIWAY DURING EACH OVERNIGHT CLOSURE. ALL MILLED SURFACES SHALL BE PAVED AND TRANSITION RAMPS SHALL BE CONSTRUCTED PRIOR TO REOPENING THE RUNWAY EACH MORNING.
  - THE CONTRACTOR SHALL APPLY HALF APPLICATION PAVEMENT MARKINGS PRIOR TO REOPENING THE RUNWAY OR TAXIWAY TO AIRCRAFT OPERATIONS.
  - PRIOR TO OPENING THE RUNWAY, THE CONTRACTOR SHALL COORDINATE FOR AOC TO CONDUCT A RUNWAY INSPECTION.

- SEE SPECIAL PROVISIONS FOR LIQUIDATED DAMAGES FOR FAILURE TO REOPEN THE RUNWAY AT 0600 HRS.
- EACH NIGHT, THE CONTRACTOR SHALL PROVIDE EDGE LIGHTS AND TEMPORARY THRESHOLD LIGHTS ON THE DESIGNATED PORTION OF THE RUNWAY (SEE ELECTRICAL PHASING PLANS). WITHIN 1-HR OF NOTIFICATION BY AIRPORT OPERATIONS, THE CONTRACTOR SHALL PERFORM A FOD INSPECTION ON THE DESIGNATED PORTION OF THE RUNWAY AND PREPARE FOR THE ARRIVAL AND/OR DEPARTURE OF EMERGENCY MEDEVAC AIRCRAFT. CONTRACTOR SHALL CONTACT AOC FOR FINAL INSPECTION AND APPROVAL PRIOR TO OPENING THE RUNWAY FOR EMERGENCY MEDEVAC OPERATIONS.
- CONTRACTOR SHALL PROVIDE A DEDICATED RADIO MONITORING PERSON DURING WORKING HOURS TO MONITOR THE CTAF FREQUENCY.
- RUNWAY CLOSURE INFORMATION SHALL BE BROADCAST ON ATIS.
- THE CONTRACTOR SHALL REMOVE THE RWY 17 LIGHTED X IMMEDIATELY PRIOR TO ARRIVAL OR DEPARTURE OF MEDEVAC AIRCRAFT AND SHALL REPLACE THE LIGHTED X IMMEDIATELY AFTER THE AIRCRAFT HAS CLEARED THE RUNWAY.



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STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS



*Mark A. Clevon*  
4/30/24  
Licensed Expiration Date

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DSGN.	DRWN.	CHKD.	APPD.
AC	AT	TR	SH

**KEY PLAN / NOTES:**



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENTS**  
SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

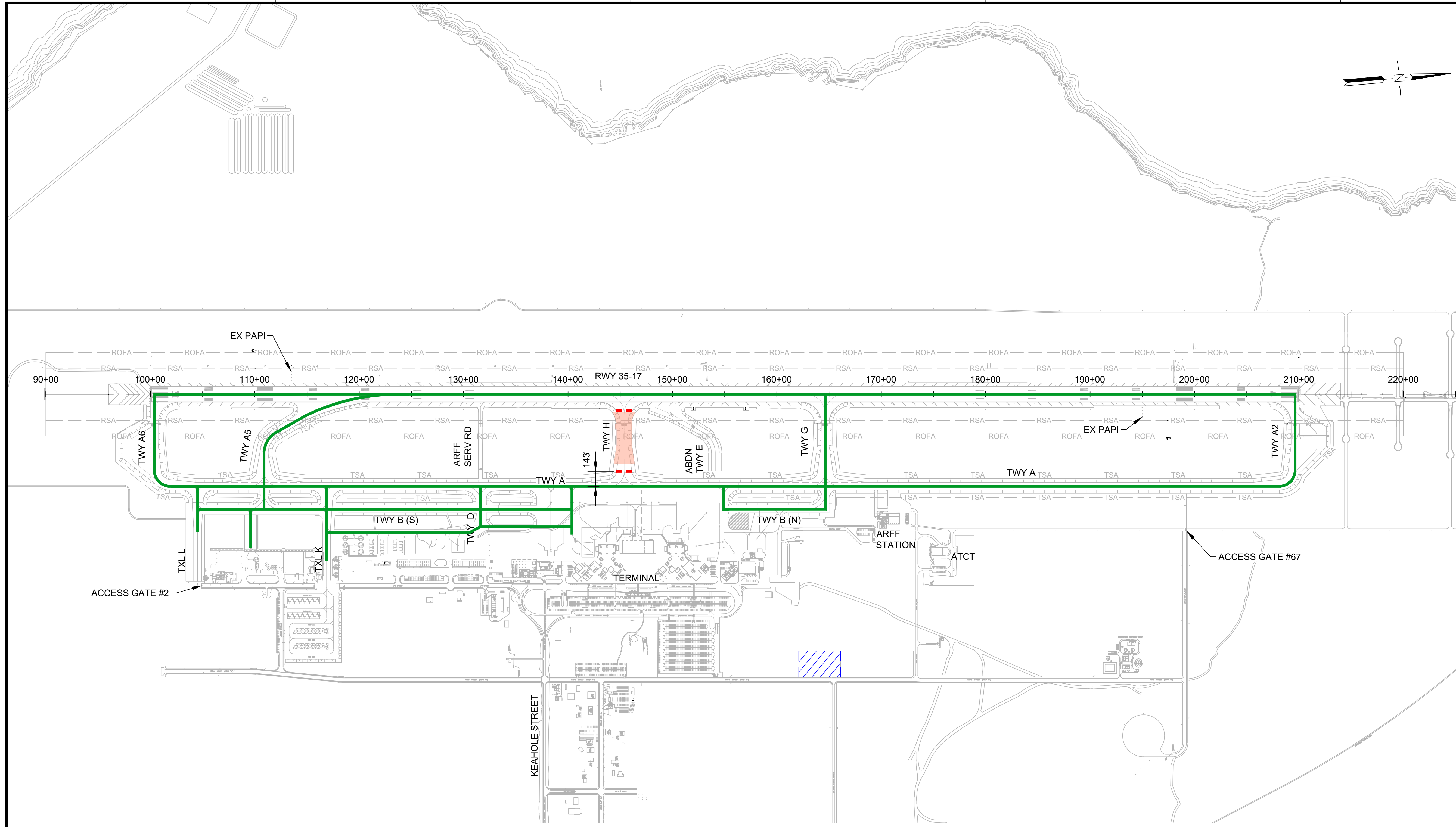
**PROJECT NO.:**

**AH2021-16**

**SHEET TITLE:**

**PHASING AND BARRICADE PLAN PHASE 4B.2**

DATE :	DWG. NO.
09/2023	G-116
SHEET :	
21 OF 190 SHEETS	



**LEGEND:**

- WORK AREA
- AIRCRAFT TRAVEL ROUTE
- LOW-PROFILE BARRICADES (CONTINUOUS)
- LOW-PROFILE BARRICADES (WITH GAPS)
- LIGHTED CLOSED RUNWAY MARKER
- CONTRACTOR STAGING AREA
- CONTRACTOR HAUL ROUTE (2 WAY)
- BLAST FENCE BARRIER
- FLAGGERS

**PHASING AND BARRICADE PLAN - PHASE 4B.2**

**DESCRIPTION OF WORK:**  
NON-WORKING HOURS TAXIWAY H REHABILITATION

**HOURS:**  
0600-2200 DAILY

**DURATION:**  
45 CALENDAR DAYS  
ANTICIPATED DATES: 10/2/2025 TO 11/16/2025

**REQUIRED NOTAMS**  
1. TAXIWAY H CLOSED  
2. RUNWAY 17-35 UNGROOVED

**NAVAID STATUS:**  
RUNWAY 17 PAPI (FAA): IN-SERVICE  
RUNWAY 17 PAPI (TEMP): OTS  
RUNWAY 17 LOC/DME: IN-SERVICE  
RUNWAY 17 GS: IN-SERVICE  
RUNWAY 35 PAPI (FAA): IN-SERVICE  
RUNWAY 35 PAPI (TEMP): N/A

**PHASING NOTES:**  
1. PHASE 4B.2 SHALL BE CONCURRENT WITH PHASE 4B.1.

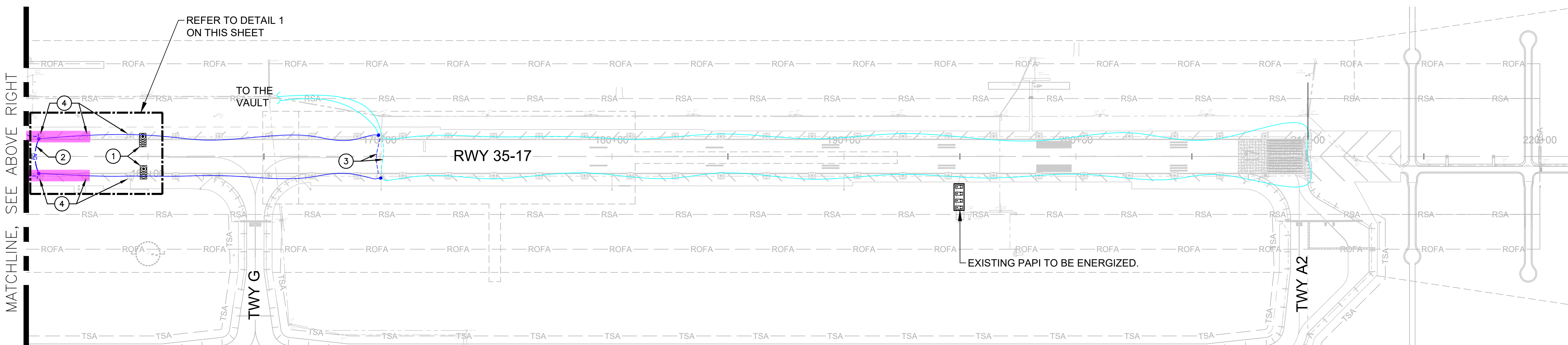
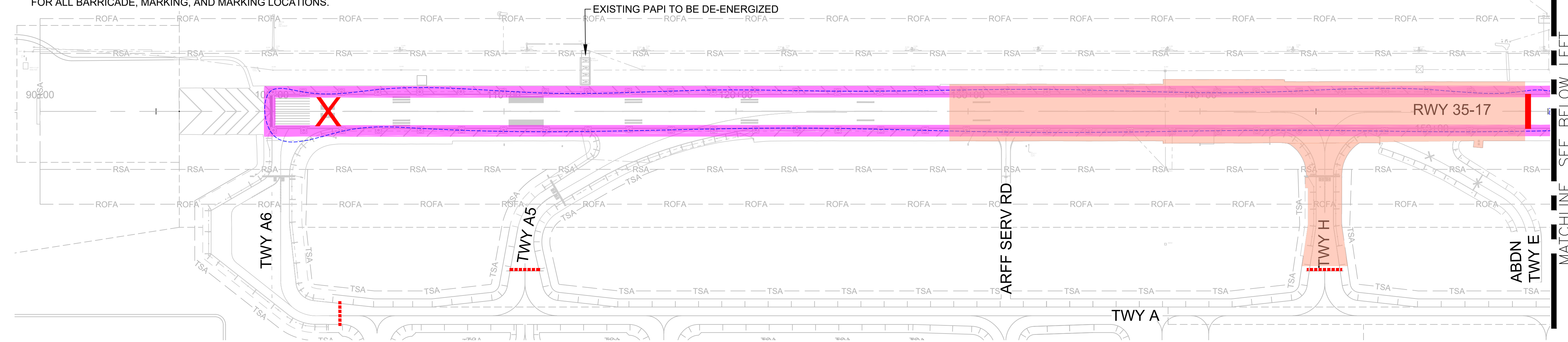


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**ELECTRICAL PHASING NOTES**

1. REFER TO SHEET G-126 THRU G-131 FOR TEMPORARY ELECTRICAL DETAILS.
2. REFER TO CONSTRUCTION WORK SEQUENCING DRAWINGS FOR ALL BARRICADE, MARKING, AND MARKING LOCATIONS.

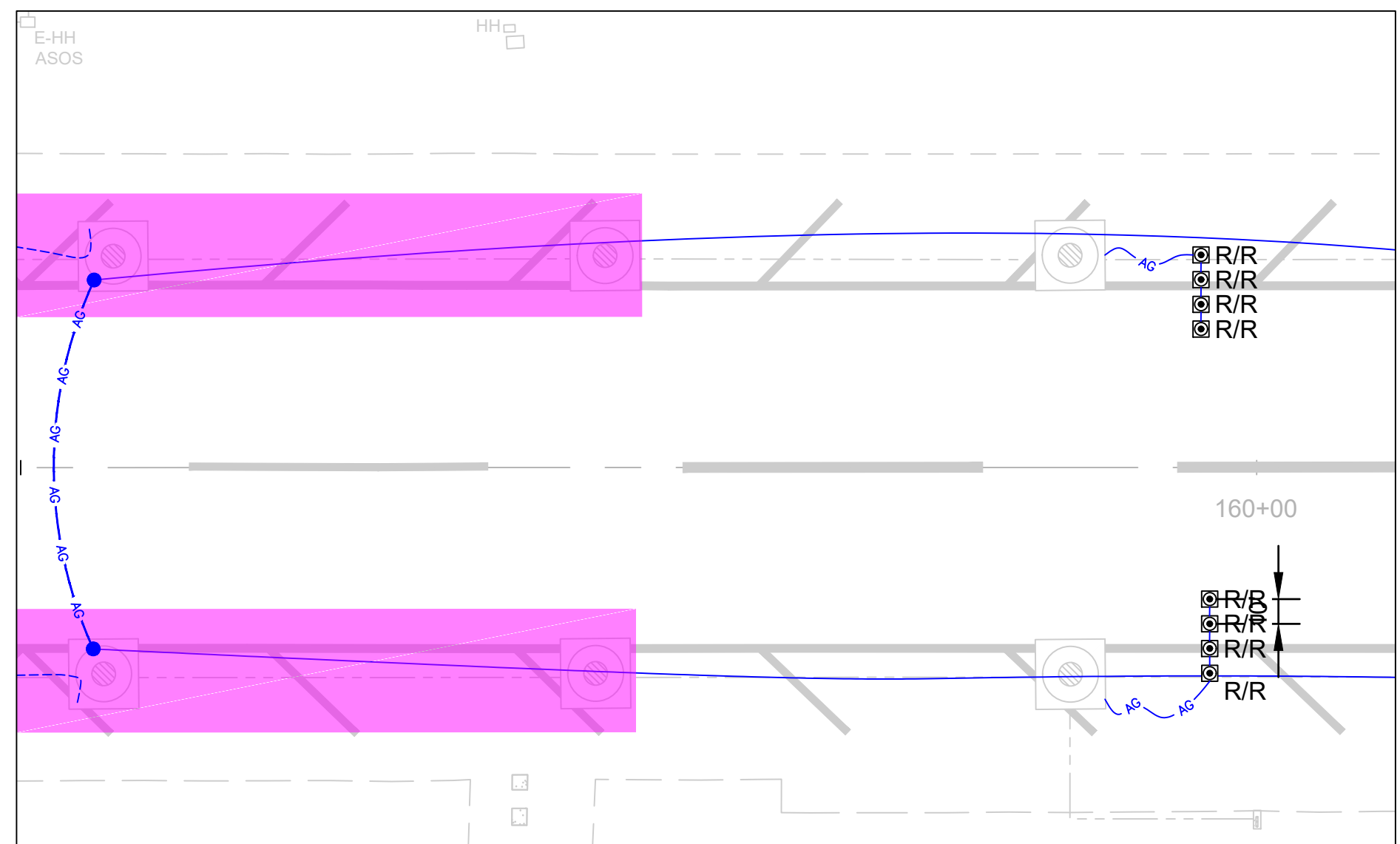


**TEMPORARY ELECTRICAL LEGEND**

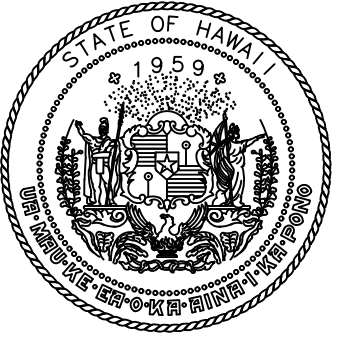
- EXISTING RUNWAY EDGE LIGHTS TO BE DE-ENERGIZED.
- WORK AREA
- AG — AG — TEMPORARY ABOVE GROUND CABLE. 1#8 AWG, L-824C 5KV CABLE ANCHORED TO PAVEMENT WITH SAND BAGS.
- EXISTING R-1 CIRCUIT WITH 1#8 5KV CABLE TO BE DE-ENERGIZED.
- EXISTING R-1 CIRCUIT WITH 1#8 5KV CABLE TO BE ENERGIZED.
- EXISTING R-2 CIRCUIT WITH 1#8 5KV CABLE TO BE DE-ENERGIZED.
- EXISTING R-2 CIRCUIT WITH 1#8 5KV CABLE TO BE ENERGIZED.
- JUNCTION CAN FOR TEMPORARY REIL.
- EXISTING RUNWAY EDGE LIGHTS, INSTALLED IN PHASE 1, TO REMAIN.
- EXISTING RUNWAY THRESHOLD LIGHTS, INSTALLED IN PHASE 1, TO REMAIN.
- EXISTING HANDHOLE TO REMAIN.
- EXISTING PAPI TO REMAIN IN PLACE, U.O.N.
- EXISTING PAPI TO REMAIN TO BE ENERGIZED.

**KEY NOTES**

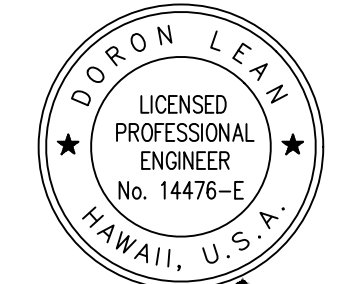
- ITEMS TO BE TEMPORARILY INSTALLED.
1. FURNISH AND INSTALL HIGH INTENSITY RUNWAY EDGE LIGHT WITH RED/RED LENS ON STEEL BOX. REFER TO DETAIL 2 ON SHEET G-126 FOR INSTALLATION.
  2. INSTALL ABOVE GROUND 1#8 5KV CABLE BETWEEN EXISTING BASE CANS. CABLE SHALL BE SECURED TO THE PAVEMENT WITH SAND BAGS EVERY 5'. LOOP OUT CIRCUIT R-2 AND CONNECT ABOVE GROUND CABLE TO EXISTING CABLE COMING FROM THE NORTH. AT THE END OF THE SHIFT, REMOVE CABLE AND RECONNECT CIRCUIT R-2 TO SOUTH.
  3. ACCESS JUNCTION CAN TO DISCONNECT CIRCUITS R-1 & R-2 AS SHOWN. CONTRACTOR SHALL TEMPORARILY FEED RUNWAY EDGE LIGHTS USING R-1 CIRCUIT. AT THE END OF THE NIGHT CLOSURE, RECONNECT BOTH CIRCUITS BACK TO ORIGINAL CONFIGURATION.
  4. COVER EXISTING RWY EDGE LIGHT WITH PVC SLEEVE PER DETAIL 2 ON SHEET G-127.



**1 ENLARGEMENT 1**  
SCALE: NOT TO SCALE



Airports Division  
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS



*Doron Lema*  
04/30/2024  
Licensed Expiration Date

DSGN.	DRWN.	CHKD.	APPD.
JP	KV	JA	DL

**KEY PLAN / NOTES:**



NO.	DATE	REVISIONS
<b>CONSTRUCTION DOCUMENT</b>		
SEPTEMBER 2023 DATE		

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

**SHEET TITLE:**

**ELECTRICAL PHASING PLAN 4B**

DATE :	DWG. NO.
09/2023	<b>G-117</b>
SHEET :	
22 OF 190 SHEETS	

C:\USERS\EDUARDO SALCINES\LEAN PHOTOMETRICS DROPPROX\ACTIVE PROJECTS\1472\02A ORION-KOA RUNWAY 17-35 REHABILITATION\01 DRAWINGS\WORKING DRAWINGS\SHEETS\ELECTRICAL\G-117-16-DEA-KOA-PH04B.DWG





STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS



4/30/24  
Licensed Expiration Date

This work was prepared by me or under my supervision.

DSGN.	DRWN.	CHKD.	APPD.
AC	AT	TR	SH

KEY PLAN / NOTES:



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENTS**  
SEPTEMBER 2023  
DATE

PROJECT TITLE :

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

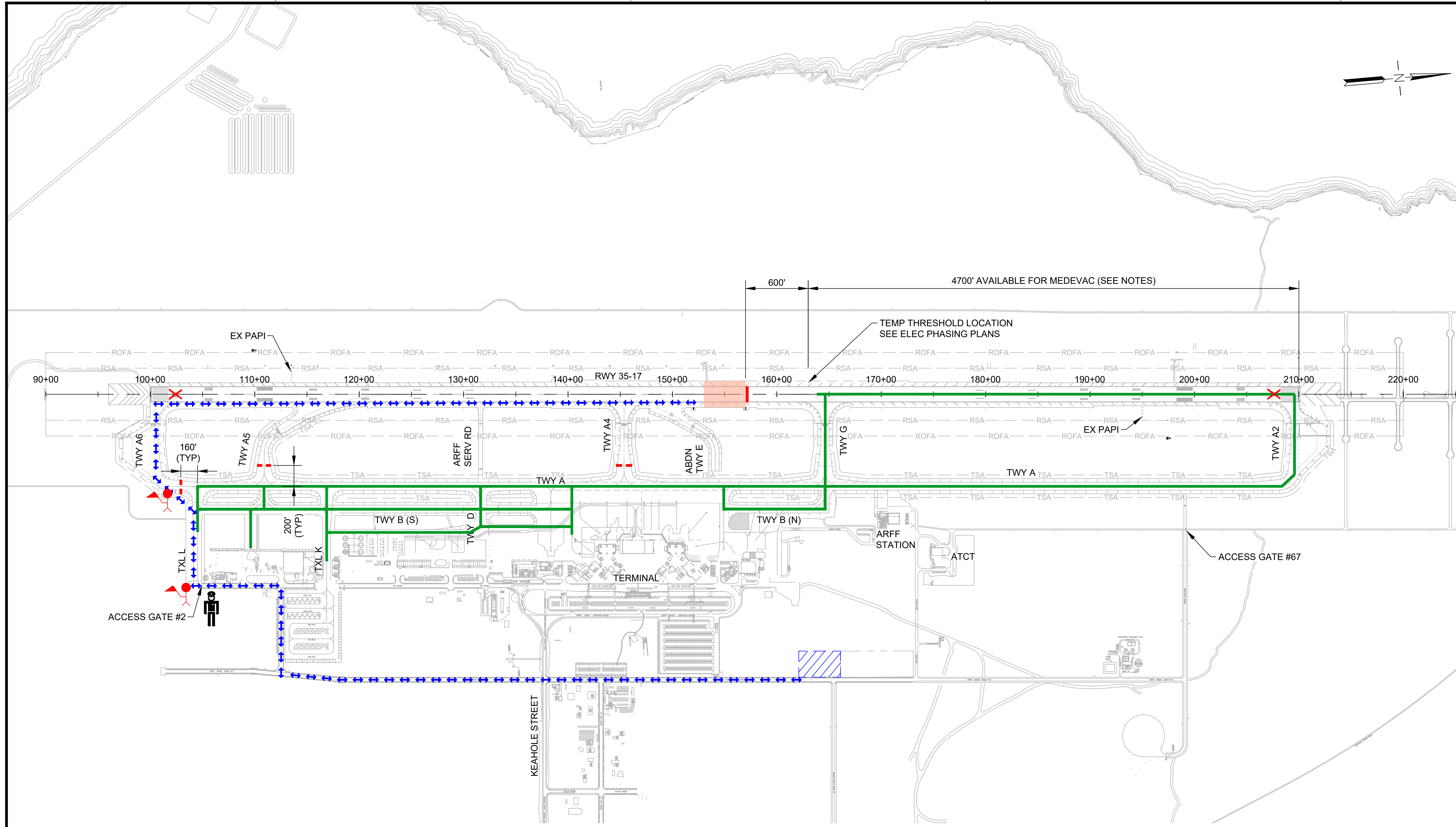
PROJECT NO.:

**AH2021-16**

SHEET TITLE:

**PHASING AND BARRICADE PLAN  
PHASE 4C**

DATE :	DWG. NO.
<b>09/2023</b>	<b>G-118</b>
SHEET :	
23 OF 190 SHEETS	



LEGEND:

- WORK AREA
- AIRCRAFT TRAVEL ROUTE
- LOW-PROFILE BARRICADES (CONTINUOUS)
- LOW-PROFILE BARRICADES (WITH GAPS)
- LIGHTED CLOSED RUNWAY MARKER
- CONTRACTOR STAGING AREA
- CONTRACTOR HAUL ROUTE (2 WAY)
- BLAST FENCE BARRIER
- FLAGGERS
- SECURITY GUARD (SEE SPEC 01565 SECURITY MEASURES)

PHASING AND BARRICADE PLAN - PHASE 4C

**DESCRIPTION OF WORK:**  
COLD MILLING, CRACK REPAIR, AC PAVING, PAVEMENT MARKING

**HOURS:**  
2200-0600 DAILY

**DURATION:**  
4 CALENDAR DAYS  
ANTICIPATED DATES: 11/16/2025 TO 11/20/2025

- REQUIRED NOTAMS (WORK HOURS):**
- RUNWAY 17-35 CLOSED, EXCEPT MEDEVAC AIRCRAFT WITH 1-HR PPR
  - TAXIWAY A6 CLOSED
  - TAXIWAY A5 CLOSED
  - TAXIWAY A4 CLOSED
  - TAXIWAY H RENAMED TO TAXIWAY A4
  - RUNWAY 17-35 UNGROOVED (WORKING AND NONWORKING HOURS)

**NAVAID STATUS:**

RUNWAY 17 PAPI (FAA):	OTS (IN-SERVICE WITH 1-HR PPR)
RUNWAY 17 PAPI (TEMP):	OTS
RUNWAY 17 LOC/DME:	OTS
RUNWAY 17 GS:	OTS
RUNWAY 17 MALSR:	OTS
RUNWAY 35 PAPI (FAA):	OTS
RUNWAY 35 PAPI (TEMP):	N/A

- PHASING NOTES:**
- CONTRACTOR SHALL CONSTRUCT THE NEW AC PAVEMENT ACROSS THE FULL WIDTH OF THE RUNWAY AND/OR TAXIWAY DURING EACH OVERNIGHT CLOSURE. ALL MILLED SURFACES SHALL BE PAVED AND TRANSITION RAMPS SHALL BE CONSTRUCTED PRIOR TO REOPENING THE RUNWAY EACH MORNING.
  - THE CONTRACTOR SHALL APPLY HALF APPLICATION PAVEMENT MARKINGS PRIOR TO REOPENING THE RUNWAY OR TAXIWAY TO AIRCRAFT OPERATIONS.
  - PRIOR TO OPENING THE RUNWAY, THE CONTRACTOR SHALL COORDINATE FOR AOC TO CONDUCT A RUNWAY INSPECTION.
  - SEE SPECIAL PROVISIONS FOR LIQUIDATED DAMAGES FOR FAILURE TO REOPEN THE RUNWAY AT 0600 HRS.

- EACH NIGHT, THE CONTRACTOR SHALL PROVIDE EDGE LIGHTS AND TEMPORARY THRESHOLD LIGHTS ON THE DESIGNATED PORTION OF THE RUNWAY (SEE ELECTRICAL PHASING PLANS). WITHIN 1-HR OF NOTIFICATION BY AIRPORT OPERATIONS, THE CONTRACTOR SHALL PERFORM A FOD INSPECTION ON THE DESIGNATED PORTION OF THE RUNWAY AND PREPARE FOR THE ARRIVAL AND/OR DEPARTURE OF EMERGENCY MEDEVAC AIRCRAFT. CONTRACTOR SHALL CONTACT AOC FOR FINAL INSPECTION AND APPROVAL PRIOR TO OPENING THE RUNWAY FOR EMERGENCY MEDEVAC OPERATIONS.
- CONTRACTOR SHALL PROVIDE A DEDICATED RADIO MONITORING PERSON DURING WORKING HOURS TO MONITOR THE CTAF FREQUENCY.
- RUNWAY CLOSURE INFORMATION SHALL BE BROADCAST ON ATIS.
- THE CONTRACTOR SHALL REMOVE THE RWY 17 LIGHTED X IMMEDIATELY PRIOR TO ARRIVAL OR DEPARTURE OF MEDEVAC AIRCRAFT AND SHALL REPLACE THE LIGHTED X IMMEDIATELY AFTER THE AIRCRAFT HAS CLEARED THE RUNWAY.

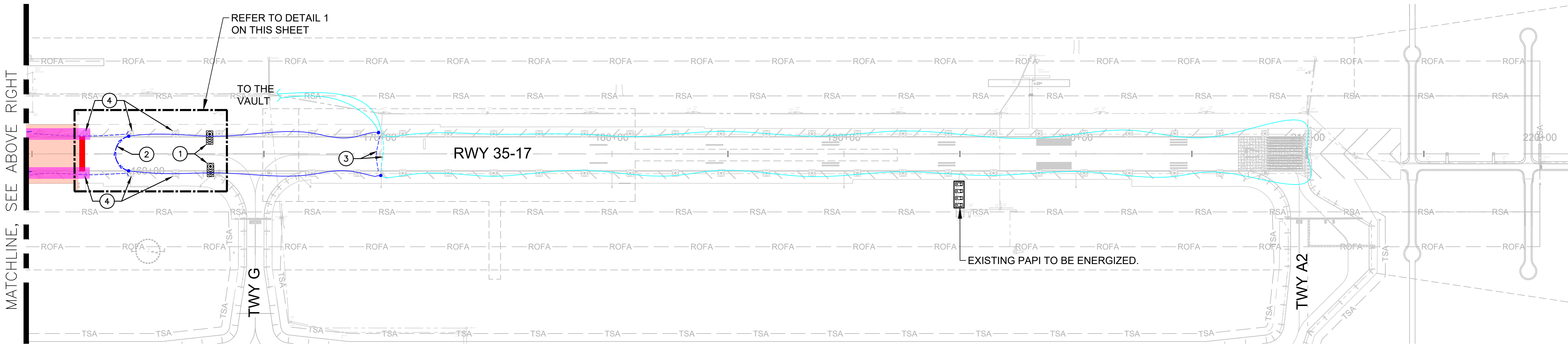
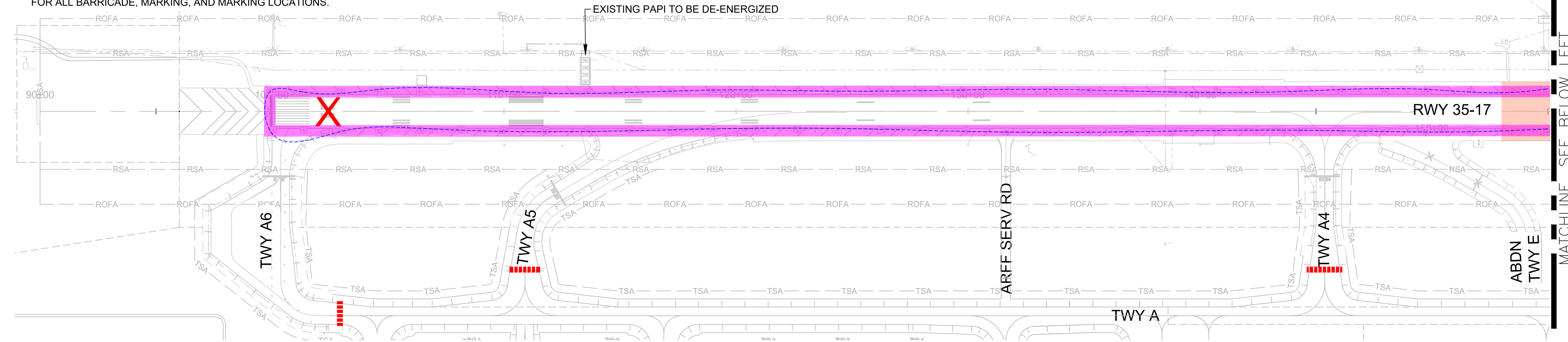


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**ELECTRICAL PHASING NOTES**

1. REFER TO SHEET G-126 THRU G-131 FOR TEMPORARY ELECTRICAL DETAILS.
2. REFER TO CONSTRUCTION WORK SEQUENCING DRAWINGS FOR ALL BARRICADE, MARKING, AND MARKING LOCATIONS.

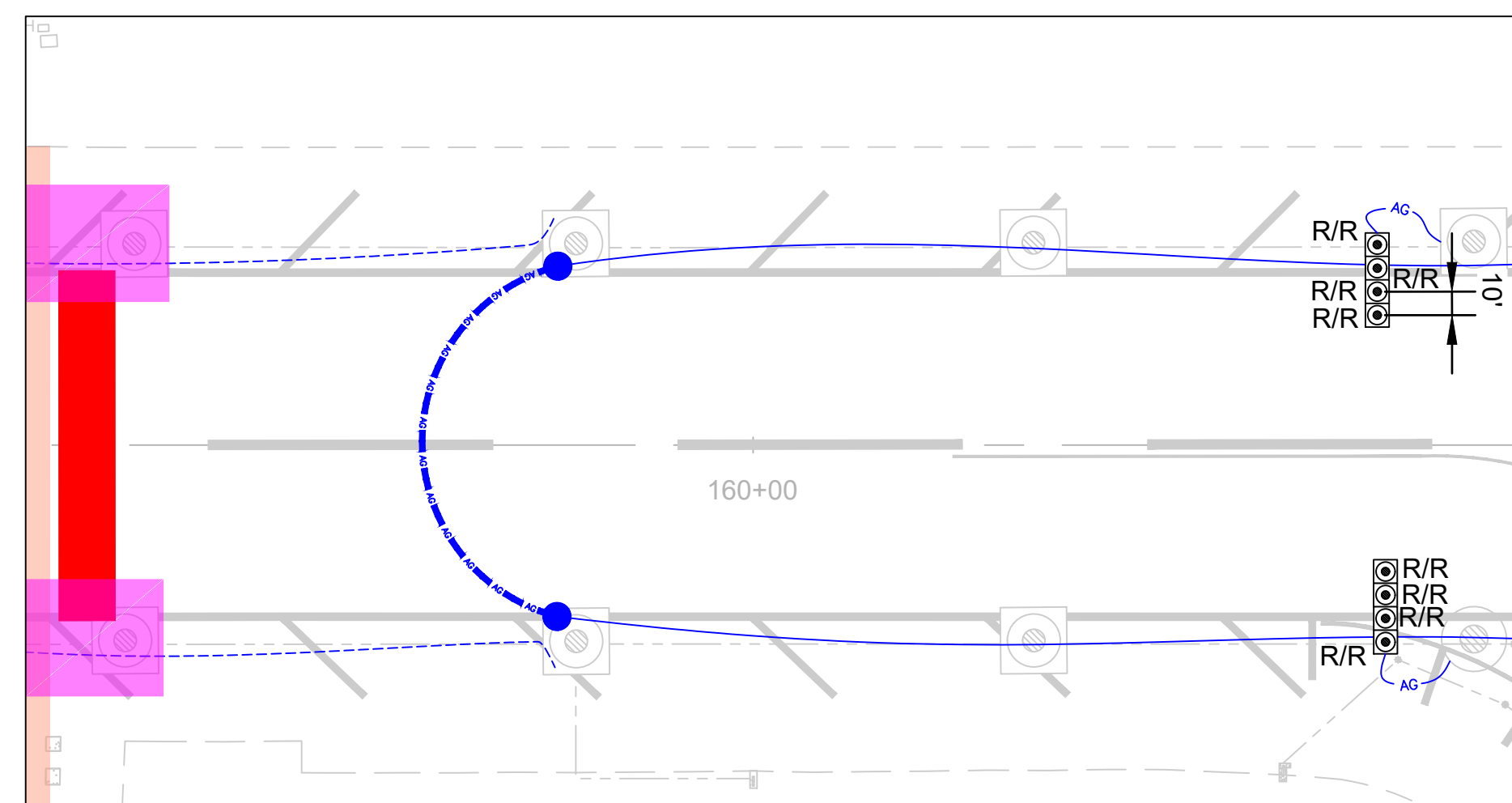


**TEMPORARY ELECTRICAL LEGEND**

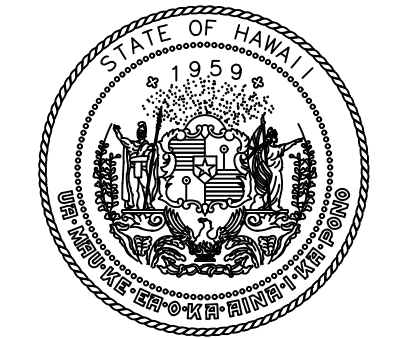
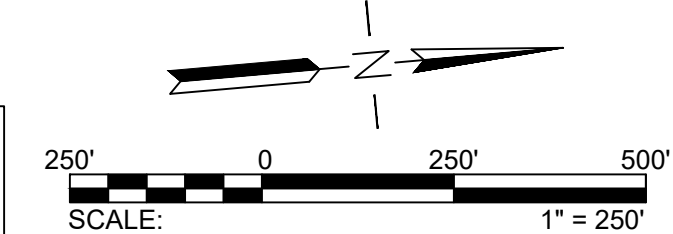
- EXISTING RUNWAY EDGE LIGHTS TO BE DE-ENERGIZED.
- AG — AG — TEMPORARY ABOVE GROUND CABLE. 1#8 AWG, L-824C 5KV CABLE ANCHORED TO PAVEMENT WITH SAND BAGS.
- EXISTING R-1 CIRCUIT WITH 1#8 5KV CABLE TO BE DE-ENERGIZED.
- EXISTING R-1 CIRCUIT WITH 1#8 5KV CABLE TO BE ENERGIZED.
- EXISTING R-2 CIRCUIT WITH 1#8 5KV CABLE TO BE DE-ENERGIZED.
- EXISTING R-2 CIRCUIT WITH 1#8 5KV CABLE TO BE ENERGIZED.
- ⊙ JUNCTION CAN FOR TEMPORARY REIL.
- ⊙ EXISTING RUNWAY EDGE LIGHTS, INSTALLED IN PHASE 1, TO REMAIN.
- ⊙ EXISTING RUNWAY THRESHOLD LIGHTS, INSTALLED IN PHASE 1, TO REMAIN.
- ⊗ EXISTING HANDHOLE TO REMAIN.
- ⊠ EXISTING PAPI TO REMAIN IN PLACE, U.O.N.
- ⊠ EXISTING PAPI TO REMAIN TO BE ENERGIZED.

**KEY NOTES**

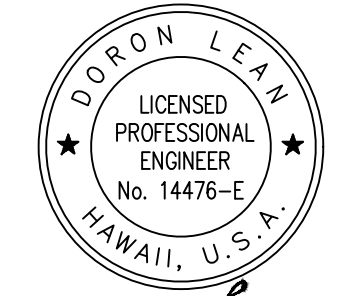
- ITEMS TO BE TEMPORARILY INSTALLED.
1. FURNISH AND INSTALL HIGH INTENSITY RUNWAY EDGE LIGHT WITH RED/RED LENS ON STEEL BOX. REFER TO DETAIL 2 ON SHEET G-126 FOR INSTALLATION.
  2. INSTALL ABOVE GROUND 1#8 5KV CABLE BETWEEN EXISTING BASE CANS. CABLE SHALL BE SECURED TO THE PAVEMENT WITH SAND BAGS EVERY 5'. LOOP OUT CIRCUIT R-2 AND CONNECT ABOVE GROUND CABLE TO EXISTING CABLE COMING FROM THE NORTH. AT THE END OF THE SHIFT, REMOVE CABLE AND RECONNECT CIRCUIT R-2 TO SOUTH.
  3. ACCESS JUNCTION CAN TO DISCONNECT CIRCUITS R-1 & R-2 AS SHOWN. CONTRACTOR SHALL TEMPORARILY FEED RUNWAY EDGE LIGHTS USING R-1 CIRCUIT. AT THE END OF THE NIGHT CLOSURE, RECONNECT BOTH CIRCUITS BACK TO ORIGINAL CONFIGURATION.
  4. COVER EXISTING RWY EDGE LIGHT WITH PVC SLEEVE PER DETAIL 2 ON SHEET G-127.



1 ENLARGEMENT 1  
SCALE: NOT TO SCALE



Airports Division  
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS



*Doron Leao*  
04/30/2024  
Licensed Expiration Date

DSGN.	DRWN.	CHKD.	APPD.
JP	KV	JA	DL

**KEY PLAN / NOTES:**



NO.	DATE	REVISIONS
<b>CONSTRUCTION DOCUMENT</b>		
SEPTEMBER 2023 DATE		

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

**SHEET TITLE:**

**ELECTRICAL PHASING PLAN 4C**

DATE :	09/2023	DWG. NO.	<b>G-119</b>
SHEET :	24 OF 190 SHEETS		

C:\USERS\EDUARDO SALCINES\LEAN PHOTOMETRICS DROPPROX\ACTIVE PROJECTS\1472\02A ORION-KONA RUNWAY 17-35 REHABILITATION\01 DRAWINGS\WORKING DRAWINGS\SHEETS\ELECTRICAL\PHASING\AH2021-16-0EA-KOA-PC4C.DWG





STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS



MARK A. CLEVON  
LICENSED PROFESSIONAL ENGINEER  
No. 12828-C  
HAWAII, USA  
4/30/24  
Licensed Expiration Date

This work was prepared by me or under my supervision.

DSGN.	DRWN.	CHKD.	APPD.
AC	AT	TR	SH

### KEY PLAN / NOTES:



NO.	DATE	REVISIONS
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## CONSTRUCTION DOCUMENTS

SEPTEMBER 2023  
DATE

### PROJECT TITLE :

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

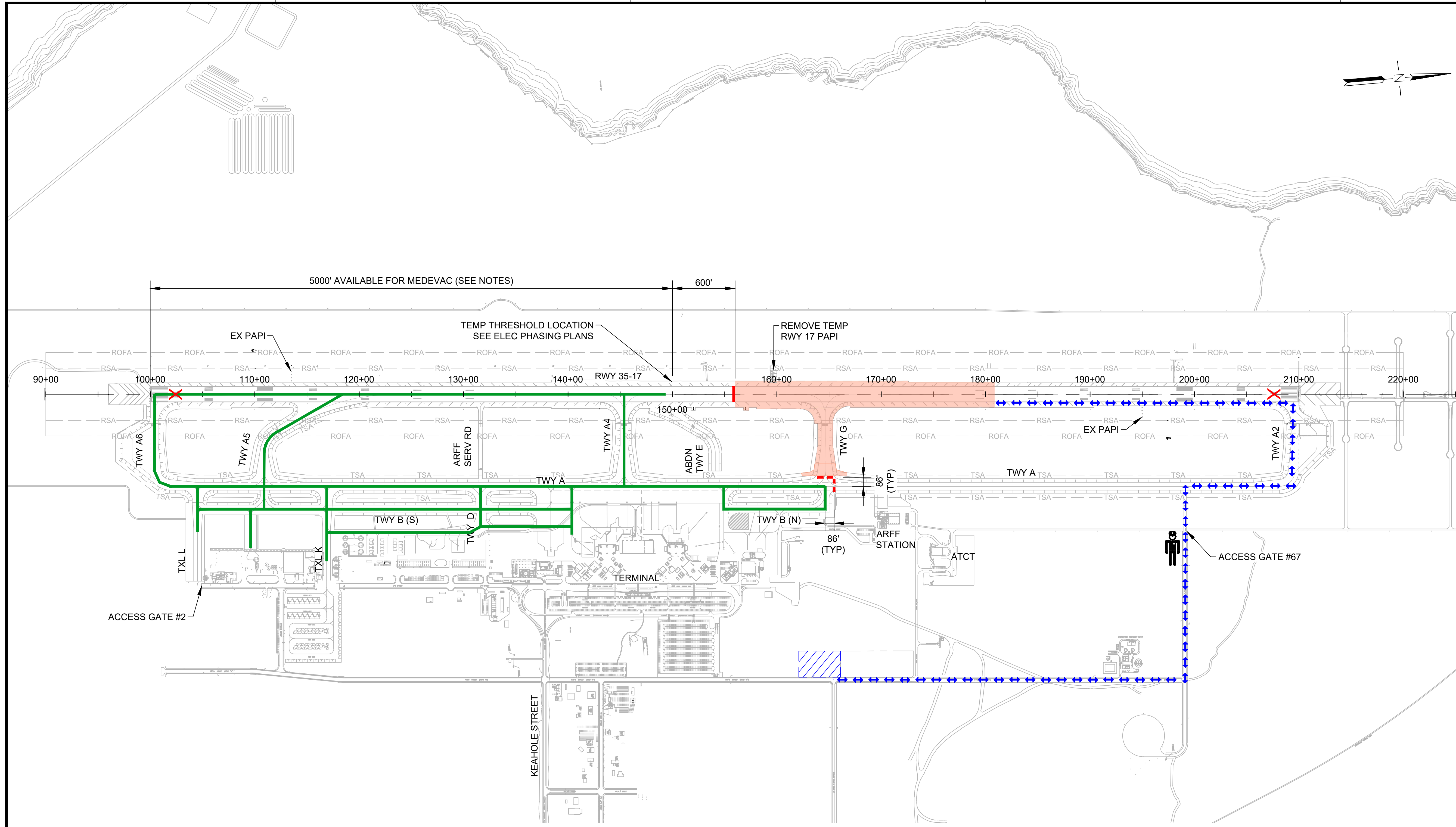
### PROJECT NO.:

**AH2021-16**

### SHEET TITLE:

## PHASING AND BARRICADE PLAN PHASE 4D.1

DATE :	DWG. NO.
09/2023	G-120
SHEET :	
25 OF 190 SHEETS	



#### LEGEND:

- WORK AREA
- AIRCRAFT TRAVEL ROUTE
- LOW-PROFILE BARRICADES (CONTINUOUS)
- LOW-PROFILE BARRICADES (WITH GAPS)
- LIGHTED CLOSED RUNWAY MARKER
- CONTRACTOR STAGING AREA
- CONTRACTOR HAUL ROUTE (2 WAY)
- BLAST FENCE BARRIER
- FLAGGERS
- SECURITY GUARD (SEE SPEC 01565 SECURITY MEASURES)

#### PHASING AND BARRICADE PLAN - PHASE 4D.1

**DESCRIPTION OF WORK:**  
COLD MILLING, CRACK REPAIR, AC PAVING, PAVEMENT MARKING

**HOURS:**  
2200-0600 DAILY

**DURATION:**  
45 WORKING DAYS  
ANTICIPATED DATES: 12/11/2025 TO 12/16/2025  
1/1/2026 TO 1/31/2026

#### REQUIRED NOTAMS:

- RUNWAY 17-35 CLOSED, EXCEPT MEDEVAC AIRCRAFT WITH 1-HR PPR
- TAXIWAY G CLOSED
- TAXIWAY A2 CLOSED
- TAXIWAY A CLOSED, NORTH OF TAXIWAY G
- TAXIWAY A AT TAXIWAY G RESTRICTED TO ADG III AND SMALLER
- TAXIWAY H RENAMED TAXIWAY A4
- RUNWAY 17-35 UNGROOVED (WORKING AND NONWORKING HOURS)

#### NAVAID STATUS:

RUNWAY 17 PAPI (FAA):	OTS (IN-SERVICE WITH 1-HR PPR)
RUNWAY 17 PAPI (TEMP):	N/A
RUNWAY 17 LOC/DME:	OTS
RUNWAY 17 GS:	OTS
RUNWAY 17 MALS/R:	OTS
RUNWAY 35 PAPI (FAA):	IN-SERVICE
RUNWAY 35 PAPI (TEMP):	N/A

#### PHASING NOTES:

- CONTRACTOR SHALL CONSTRUCT THE NEW AC PAVEMENT ACROSS THE FULL WIDTH OF THE RUNWAY AND/OR TAXIWAY DURING EACH OVERNIGHT CLOSURE. ALL MILLED SURFACES SHALL BE PAVED AND TRANSITION RAMPS SHALL BE CONSTRUCTED PRIOR TO REOPENING THE RUNWAY EACH MORNING.
- THE CONTRACTOR SHALL APPLY HALF APPLICATION PAVEMENT MARKINGS PRIOR TO REOPENING THE RUNWAY OR TAXIWAY TO AIRCRAFT OPERATIONS.
- PRIOR TO OPENING THE RUNWAY, THE CONTRACTOR SHALL COORDINATE FOR AOC TO CONDUCT A RUNWAY INSPECTION.

- SEE SPECIAL PROVISIONS FOR LIQUIDATED DAMAGES FOR FAILURE TO REOPEN THE RUNWAY AT 0600 HRS.
- EACH NIGHT, THE CONTRACTOR SHALL PROVIDE EDGE LIGHTS AND TEMPORARY THRESHOLD LIGHTS ON THE DESIGNATED PORTION OF THE RUNWAY (SEE ELECTRICAL PHASING PLANS). WITHIN 1-HR OF NOTIFICATION BY AIRPORT OPERATIONS, THE CONTRACTOR SHALL PERFORM A FOD INSPECTION ON THE DESIGNATED PORTION OF THE RUNWAY AND PREPARE FOR THE ARRIVAL AND/OR DEPARTURE OF EMERGENCY MEDEVAC AIRCRAFT. CONTRACTOR SHALL CONTACT AOC FOR FINAL INSPECTION AND APPROVAL PRIOR TO OPENING THE RUNWAY FOR EMERGENCY MEDEVAC OPERATIONS.
- CONTRACTOR SHALL PROVIDE A DEDICATED RADIO MONITORING PERSON DURING WORKING HOURS TO MONITOR THE CTAF FREQUENCY.
- RUNWAY CLOSURE INFORMATION SHALL BE BROADCAST ON ATIS.
- THE CONTRACTOR SHALL REMOVE THE RWY 17 LIGHTED X IMMEDIATELY PRIOR TO ARRIVAL OR DEPARTURE OF MEDEVAC AIRCRAFT AND SHALL REPLACE THE LIGHTED X IMMEDIATELY AFTER THE AIRCRAFT HAS CLEARED THE RUNWAY.



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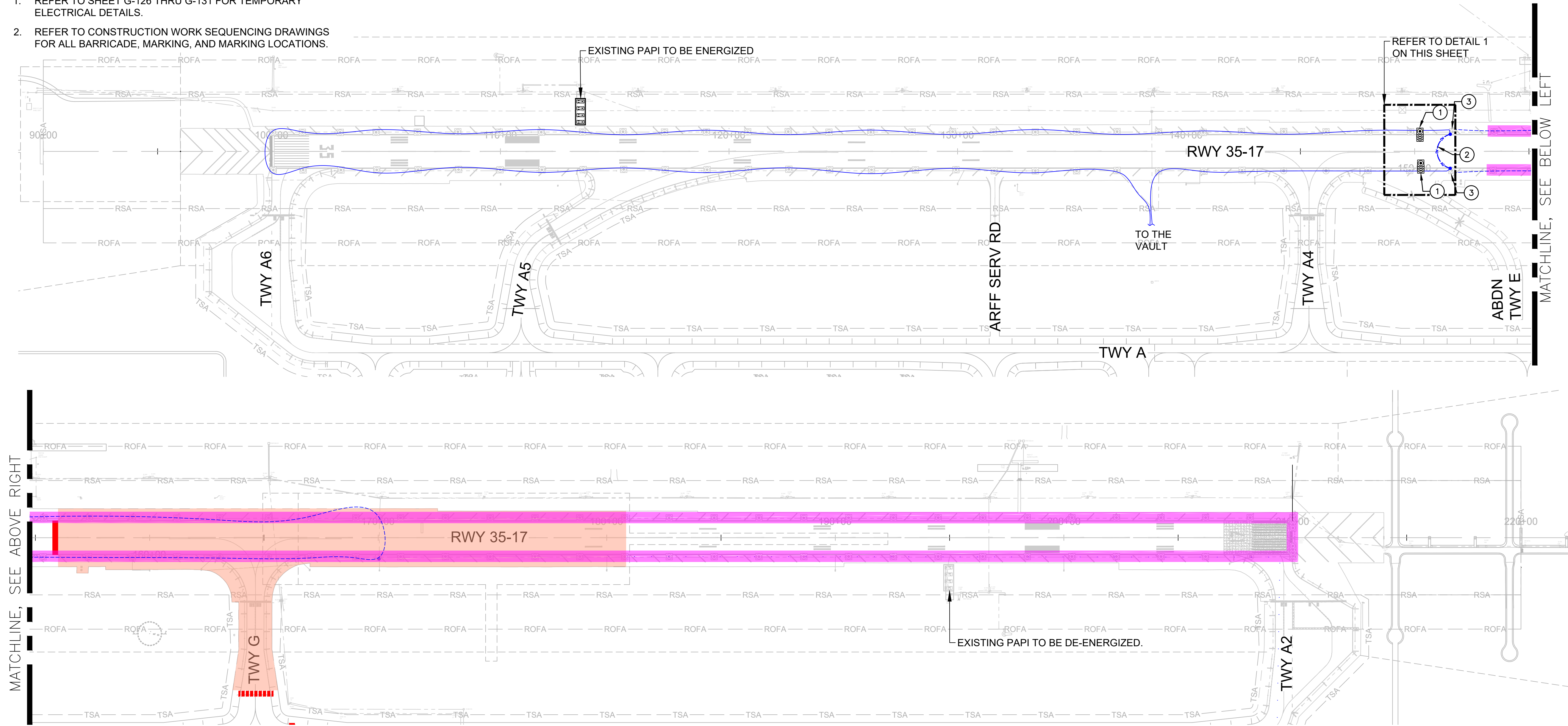






**ELECTRICAL PHASING NOTES**

1. REFER TO SHEET G-126 THRU G-131 FOR TEMPORARY ELECTRICAL DETAILS.
2. REFER TO CONSTRUCTION WORK SEQUENCING DRAWINGS FOR ALL BARRICADE, MARKING, AND MARKING LOCATIONS.

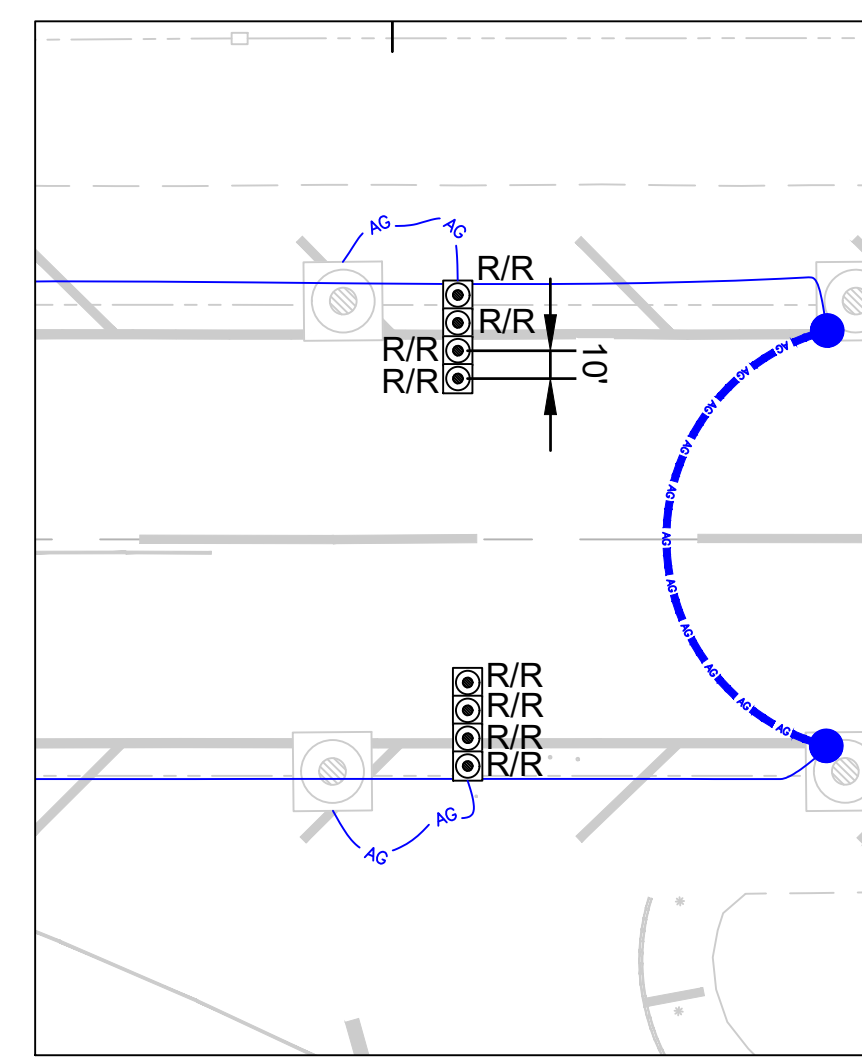


**TEMPORARY ELECTRICAL LEGEND**

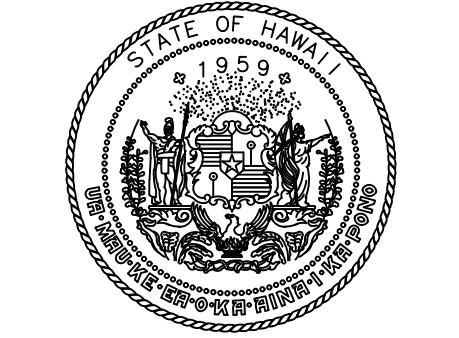
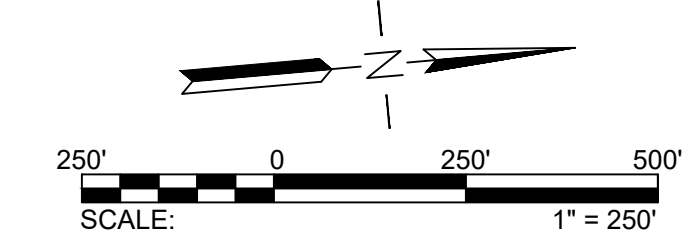
- EXISTING RUNWAY EDGE LIGHTS TO BE DE-ENERGIZED.
- TEMPORARY ABOVE GROUND CABLE. 1#8 AWG, L-824C 5KV CABLE ANCHORED TO PAVEMENT WITH SAND BAGS.
- EXISTING R-2 CIRCUIT WITH 1#8 5KV CABLE TO BE DE-ENERGIZED.
- EXISTING R-2 CIRCUIT WITH 1#8 5KV CABLE TO BE ENERGIZED.
- JUNCTION CAN FOR TEMPORARY REIL.
- EXISTING RUNWAY EDGE LIGHTS, INSTALLED IN PHASE 1, TO REMAIN.
- EXISTING RUNWAY THRESHOLD LIGHTS, INSTALLED IN PHASE 1, TO REMAIN.
- EXISTING HANDHOLE TO REMAIN.
- EXISTING PAPI TO REMAIN IN PLACE, U.O.N.
- EXISTING PAPI TO REMAIN TO BE ENERGIZED.

**KEY NOTES**

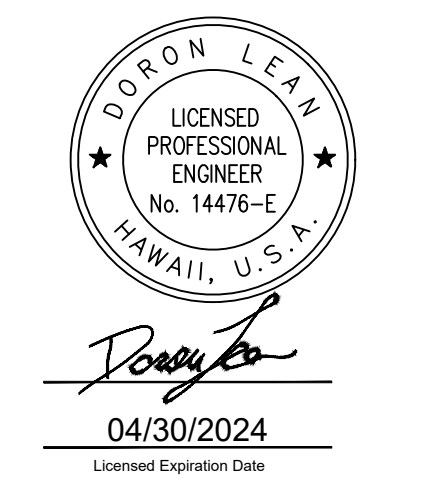
- ITEMS TO BE TEMPORARILY INSTALLED.
- 1 FURNISH AND INSTALL HIGH INTENSITY RUNWAY EDGE LIGHT WITH RED/RED LENS ON STEEL BOX. REFER TO DETAIL 2 ON SHEET G-126 FOR INSTALLATION.
  - 2 INSTALL ABOVE GROUND 1#8 5KV CABLE BETWEEN EXISTING BASE CANS. CABLE SHALL BE SECURED TO THE PAVEMENT WITH SAND BAGS EVERY 5'. LOOP OUT CIRCUIT R-2 AND CONNECT ABOVE GROUND CABLE TO EXISTING CABLE COMING FROM THE NORTH. AT THE END OF THE SHIFT, REMOVE CABLE AND RECONNECT CIRCUIT R-2 TO SOUTH.
  - 3 COVER EXISTING RWY EDGE LIGHT WITH PVC SLEEVE PER DETAIL 2 ON SHEET G-127.



1 ENLARGEMENT 1  
SCALE: NOT TO SCALE

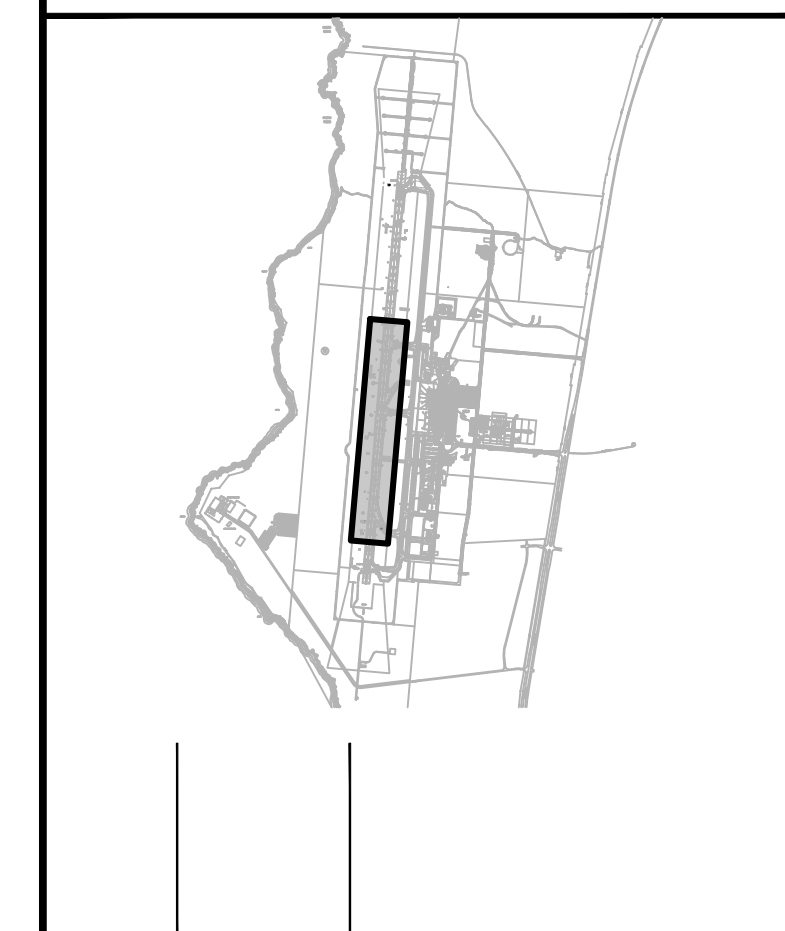


Airports Division  
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS



DSGN.	DRWN.	CHKD.	APPD.
JP	KV	JA	DL

**KEY PLAN / NOTES:**



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENT**  
SEPTEMBER 2023  
DATE

PROJECT TITLE :

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

PROJECT NO.:

**AH2021-16**

SHEET TITLE:

**ELECTRICAL PHASING PLAN 4D**

DATE :	09/2023	DWG. NO.	<b>G-122</b>
SHEET :	27 OF 190 SHEETS		





STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS

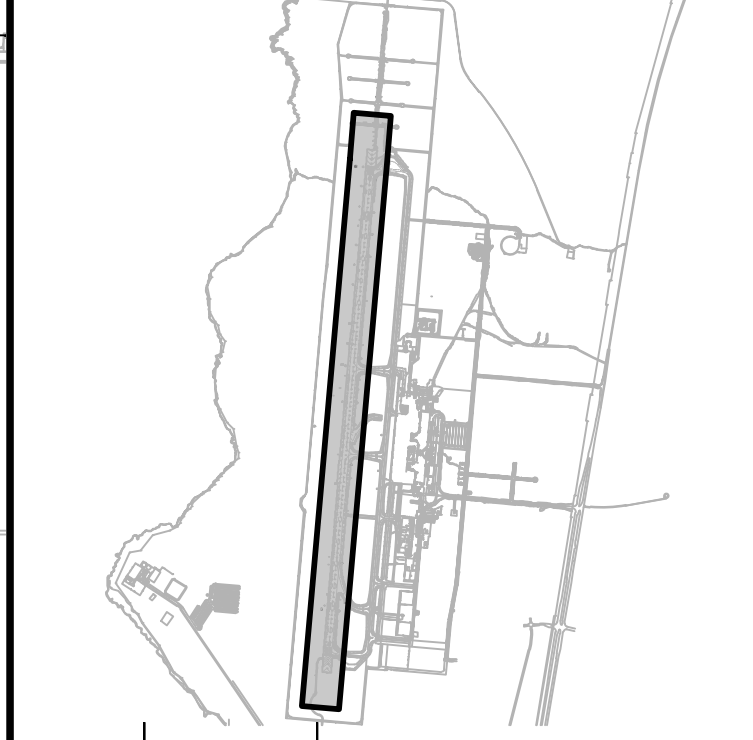


MARK A. CLEVON  
LICENSED PROFESSIONAL ENGINEER  
No. 12828-C  
HAWAII, USA  
4/30/24  
Licensed Expiration Date

This work was prepared by me or under my supervision.

DSGN.	DRWN.	CHKD.	APPD.
AC	AT	TR	SH

**KEY PLAN / NOTES:**



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENTS**  
SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

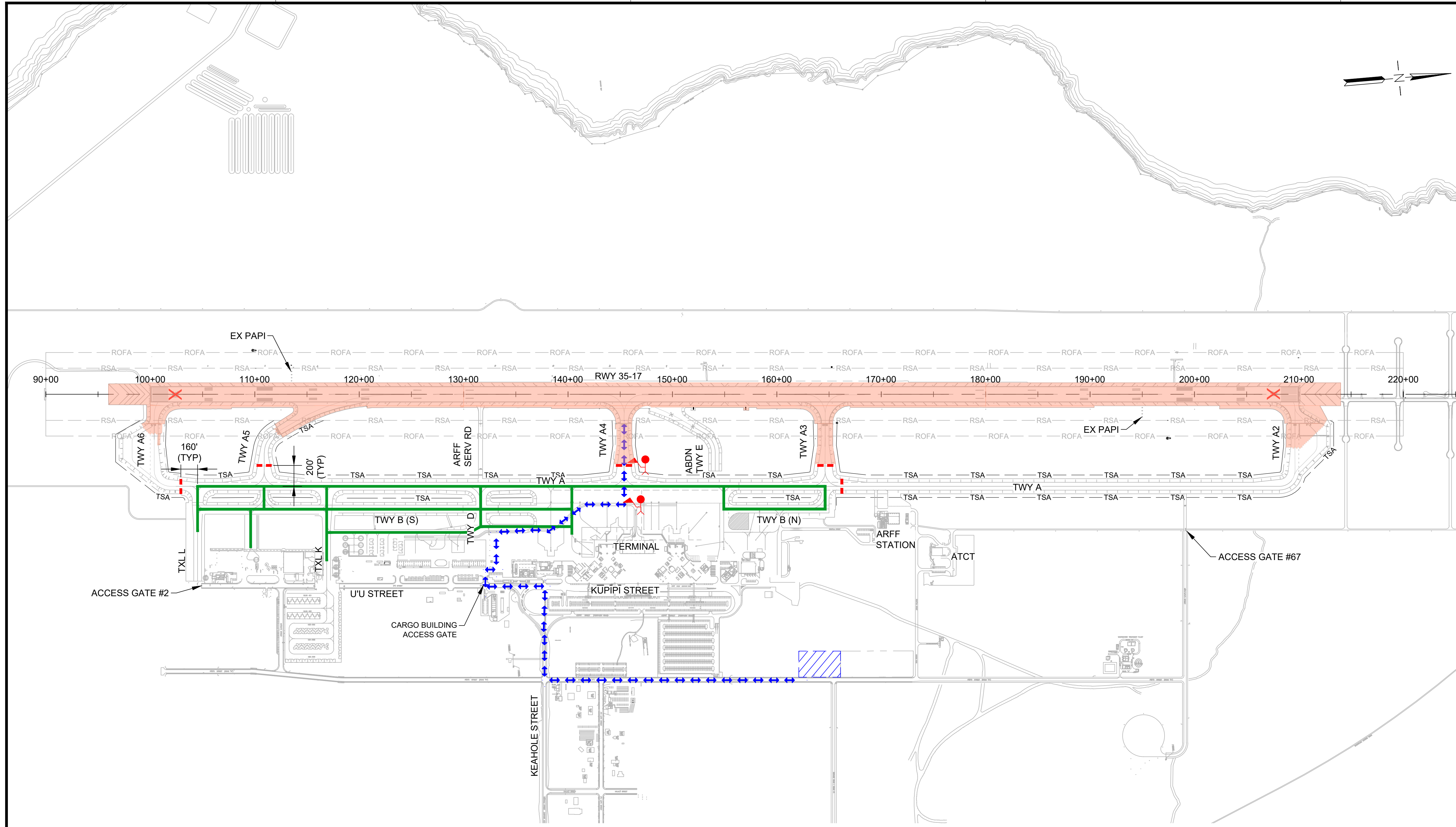
**PROJECT NO.:**

**AH2021-16**

**SHEET TITLE:**

**PHASING AND BARRICADE PLAN  
PHASE 5**

DATE :	DWG. NO.
09/2023	G-123
SHEET :	
28 OF 190 SHEETS	



**LEGEND:**

- WORK AREA
- AIRCRAFT TRAVEL ROUTE
- LOW-PROFILE BARRICADES (CONTINUOUS)
- LOW-PROFILE BARRICADES (WITH GAPS)
- LIGHTED CLOSED RUNWAY MARKER
- CONTRACTOR STAGING AREA
- CONTRACTOR HAUL ROUTE (2 WAY)
- BLAST FENCE BARRIER
- FLAGGERS

**PHASING AND BARRICADE PLAN - PHASE 5**

**DESCRIPTION OF WORK:**  
RUNWAY GROOVING AND FINAL PAVEMENT MARKINGS

**HOURS:**  
SUNDAY - THURSDAY: 0000-0600 (HST), 1000-1600 (UTC)

**DURATION:**  
78 CALENDAR DAYS  
ANTICIPATED DATES: 1/31/2026 TO 4/12/2026

- REQUIRED NOTAMS (WORK HOURS):**
1. RUNWAY 17-35 CLOSED
  2. TAXIWAY A6 CLOSED
  3. TAXIWAY A5 CLOSED
  4. TAXIWAY A3 CLOSED
  5. TAXIWAY A4 CLOSED
  6. TAXIWAY A2 CLOSED
  7. TAXIWAY A CLOSED, NORTH OF TAXIWAY A3

**REQUIRED NOTAMS (NONWORK HOURS):**

1. RUNWAY 17-35 UNGROOVED
2. TAXIWAY H RENAMED TAXIWAY A4
3. TAXIWAY G RENAMED TAXIWAY A3

**NAVAID STATUS:**

- RUNWAY 17 PAPI (FAA): OTS
- RUNWAY 17 PAPI (TEMP): N/A
- RUNWAY 17 LOC/DME: OTS
- RUNWAY 17 GS: OTS
- RUNWAY 35 PAPI (FAA): OTS
- RUNWAY 35 PAPI (TEMP): N/A

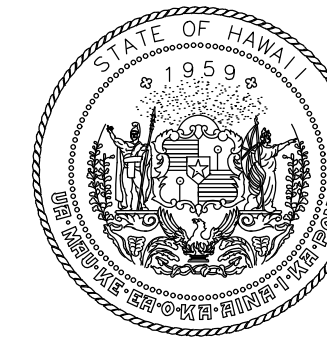
**PHASING NOTES:**

1. PRIOR TO OPENING THE RUNWAY, THE CONTRACTOR SHALL COORDINATE FOR AOC TO CONDUCT A RUNWAY INSPECTION.
2. SEE SPECIAL PROVISIONS FOR LIQUIDATED DAMAGES FOR FAILURE TO REOPEN THE RUNWAY AT 0600 HRS.

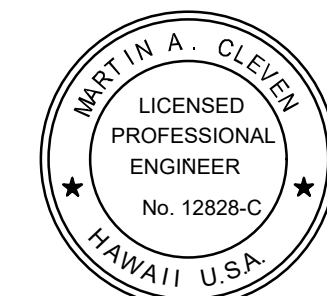
3. IN THE EVENT OF MEDICAL EMERGENCY, WITHIN 1-HR OF NOTIFICATION BY AIRPORT OPERATIONS, THE CONTRACTOR SHALL CLEAN THE RUNWAY OF ALL FOD AND DEBRIS, VACATE THE RSA, AND REOPEN THE RUNWAY TO ALLOW FOR ARRIVAL OR DEPARTURE OF EMERGENCY MEDEVAC AIRCRAFT.







STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS



4/30/24  
Licensed Expiration Date

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DSGN.	DRWN.	CHKD.	APPD.
AC	AT	TR	SH

**KEY PLAN / NOTES:**

NO.	DATE	REVISIONS
-----	------	-----------

**CONSTRUCTION DOCUMENTS**  
SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**

AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

**SHEET TITLE:**

**PHASING DETAILS 1**

DATE :

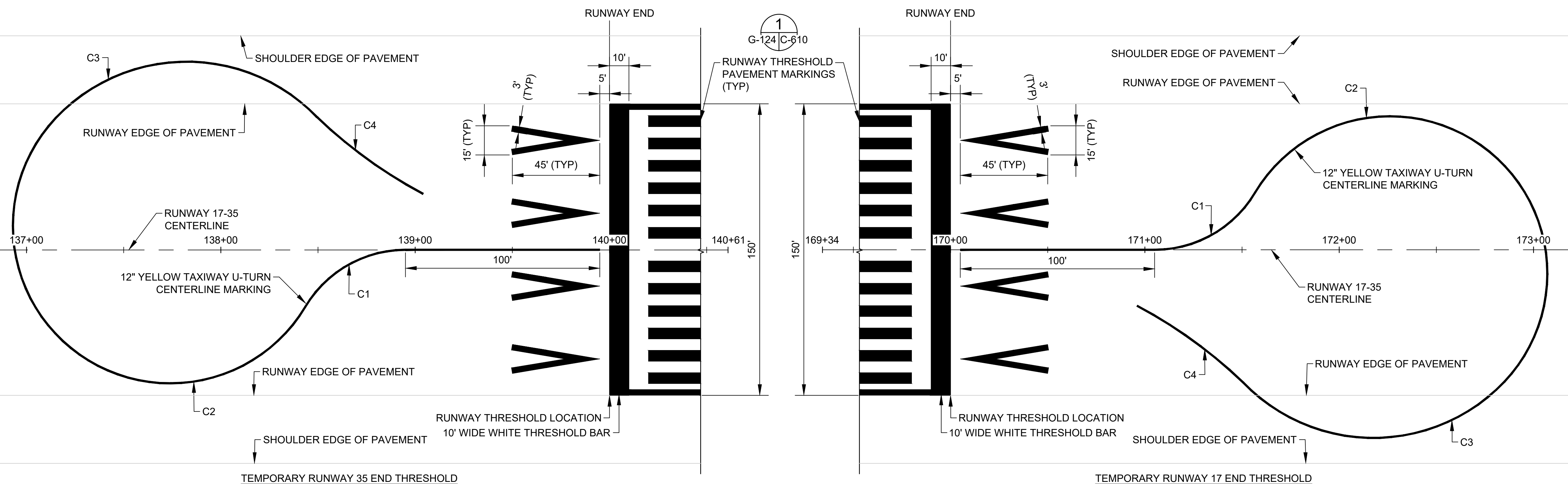
09/2023

SHEET :

29 OF 190 SHEETS

DWG. NO.

**G-124**

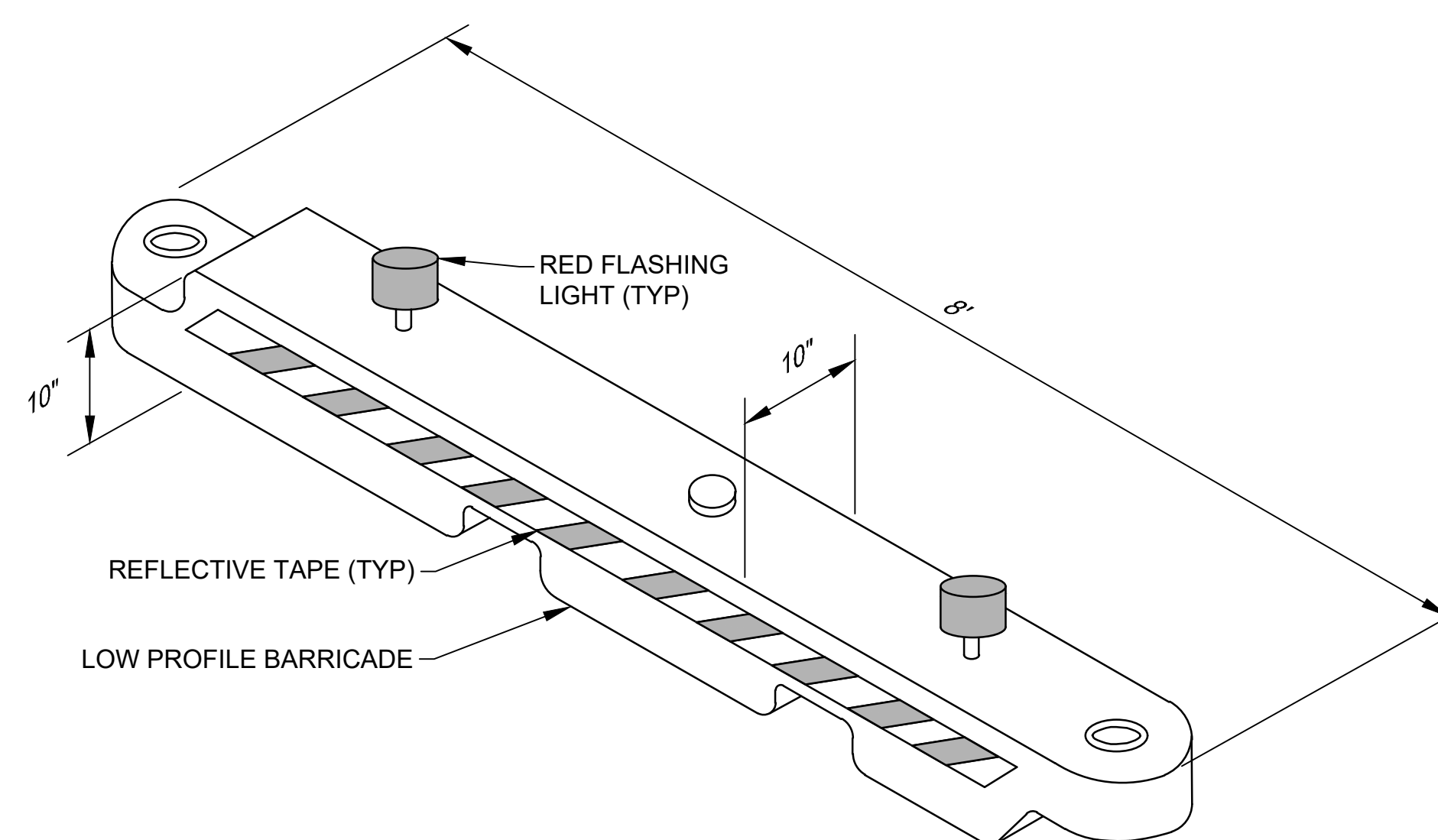


**1** TEMPORARY RUNWAY THRESHOLD PAVEMENT MARKINGS  
G-106, G-110 | G-124 SCALE: NTS

CURVE TABLE				
CURVE #	CORD LENGTH	RADIUS	DELTA	TANGENT
C1	59.44	60.00	059.38	34.21
C2	161.09	81.00	192.18	759.26
C3	134.59	93.00	092.71	97.50
C4	67.40	244.00	015.88	34.02

**BARRICADE NOTES:**

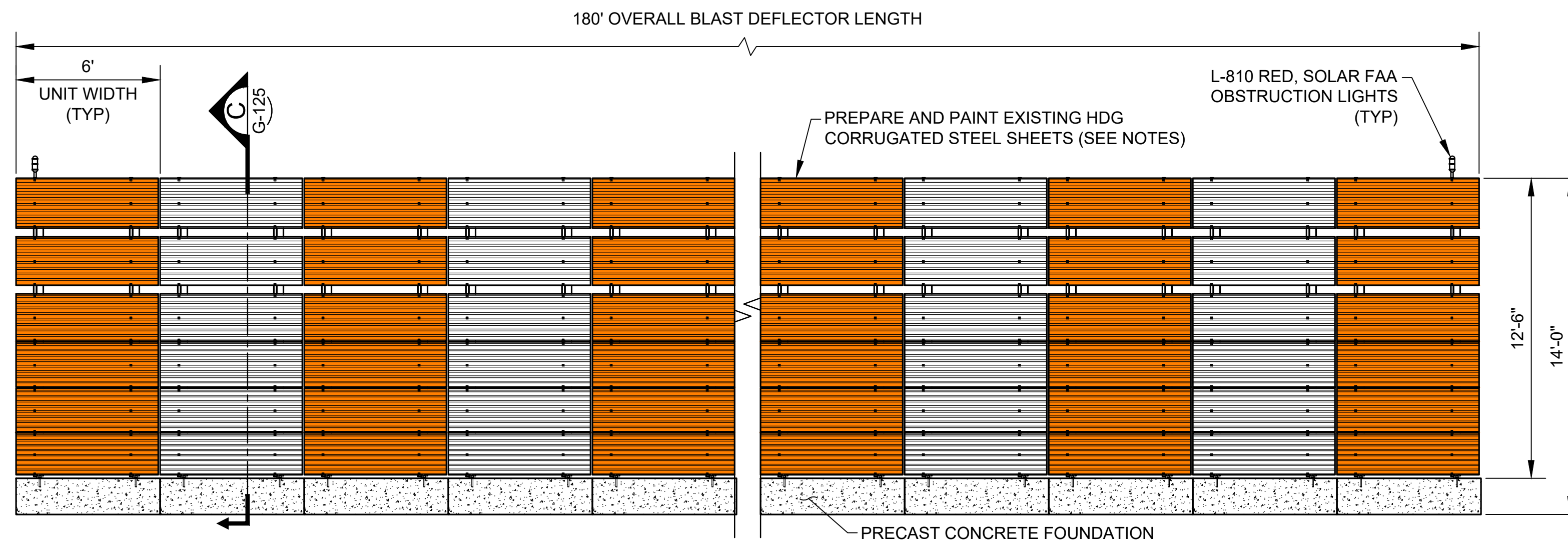
1. LOW PROFILE BARRICADES MAY BE SPACED AT A MAX OF 10' APART UNLESS OTHERWISE NOTED.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING PROPER POSITIONING AND OPERATION OF ALL BARRICADES FOR THE DURATION OF THE PROJECT.
3. LOW PROFILE BARRICADES SHALL BE WEIGHTED AGAINST JET BLAST AND CAPABLE OF WITHSTANDING UP TO 110 M.P.H. WIND FORCES. THE CONTRACTOR SHALL IMMEDIATELY REPLACE ANY BARRICADES THAT ARE PUNCTURED OR DO NOT RETAIN WATER.
4. INSTALL A MINIMUM OF 2 BATTERY OPERATED RED PHOTOCELL LIGHTS EQUALLY SPACED PER EACH 8' LONG BARRICADE. LIGHTS SHALL MAINTAIN SUCH INTENSITY SO AS TO BE READILY IDENTIFIED FROM DISTANCES OF 200' OR GREATER DURING DARKNESS PERIOD.
5. THE CONTRACTOR SHALL PROVIDE A SUBMITTAL TO THE ENGINEERS FOR REVIEW OF THE PROPOSED LOW PROFILE BARRICADE TYPE AND MANUFACTURE.



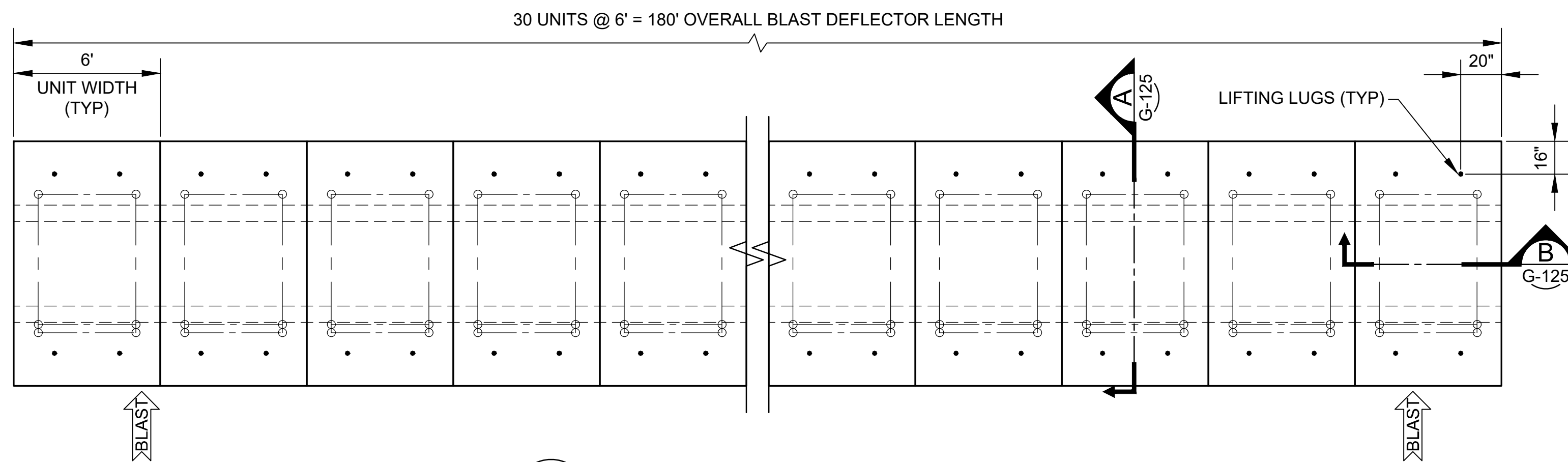
**2** LOW PROFILE BARRICADE  
G-102 - G-123 | G-124 SCALE: NTS

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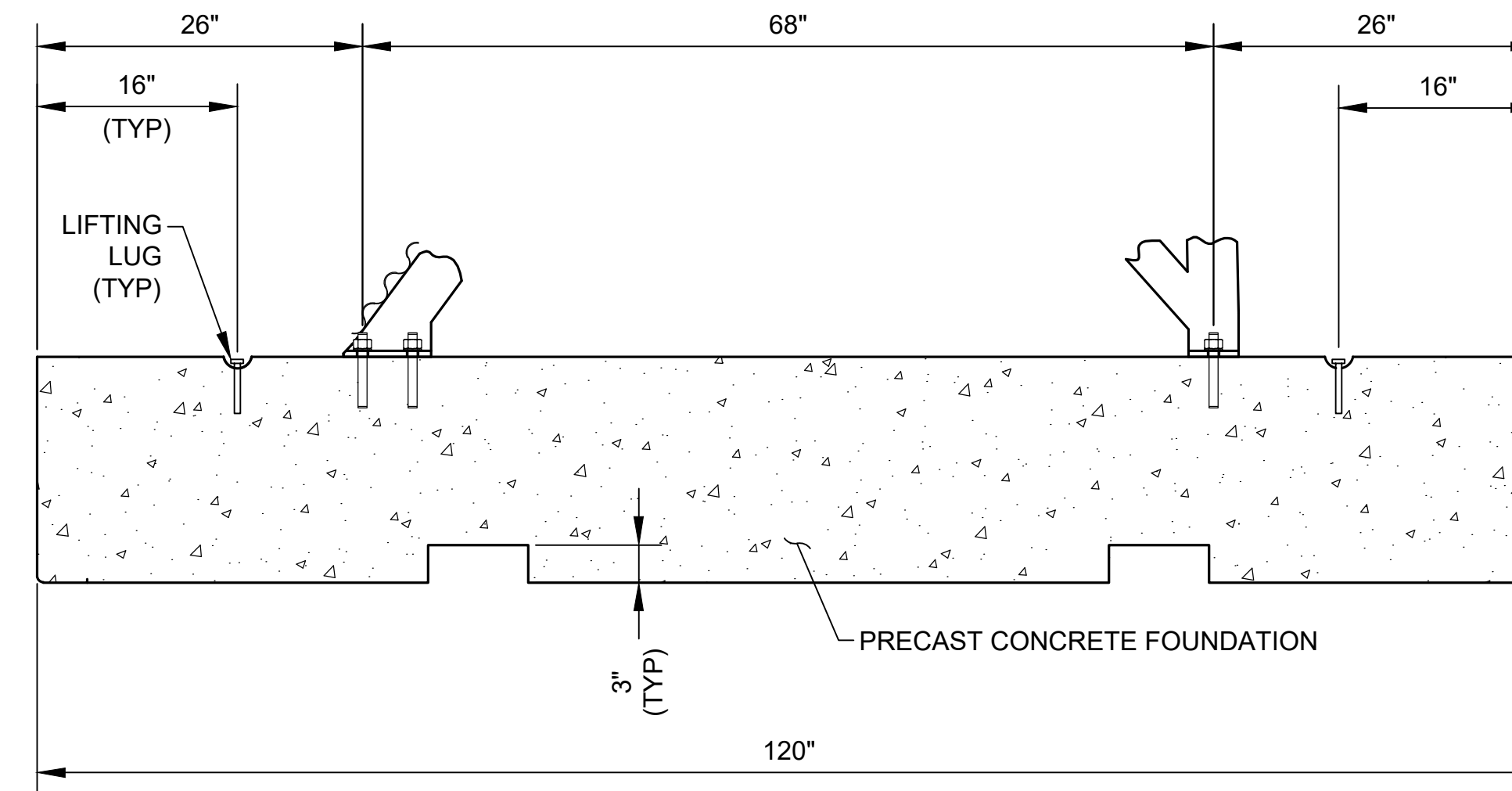




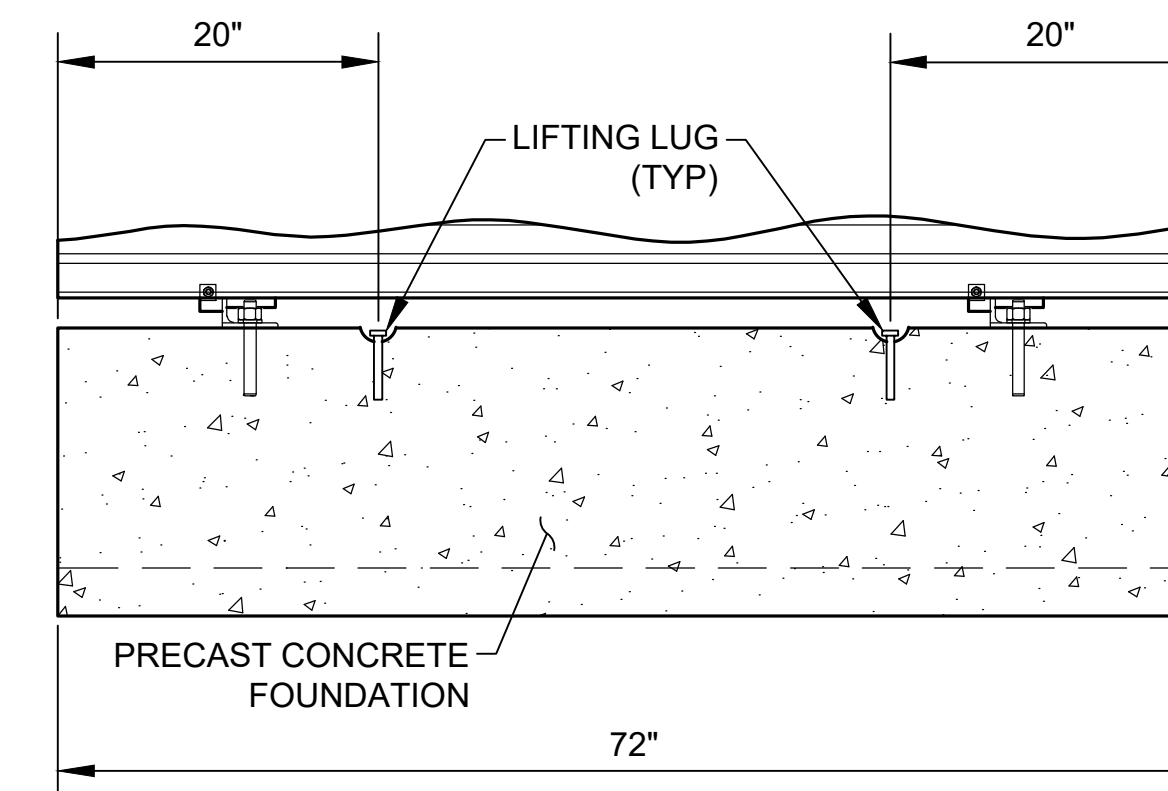
**1 JET BLAST DEFLECTOR ELEVATION VIEW**  
G-106 - G-111 G-125 SCALE: NTS



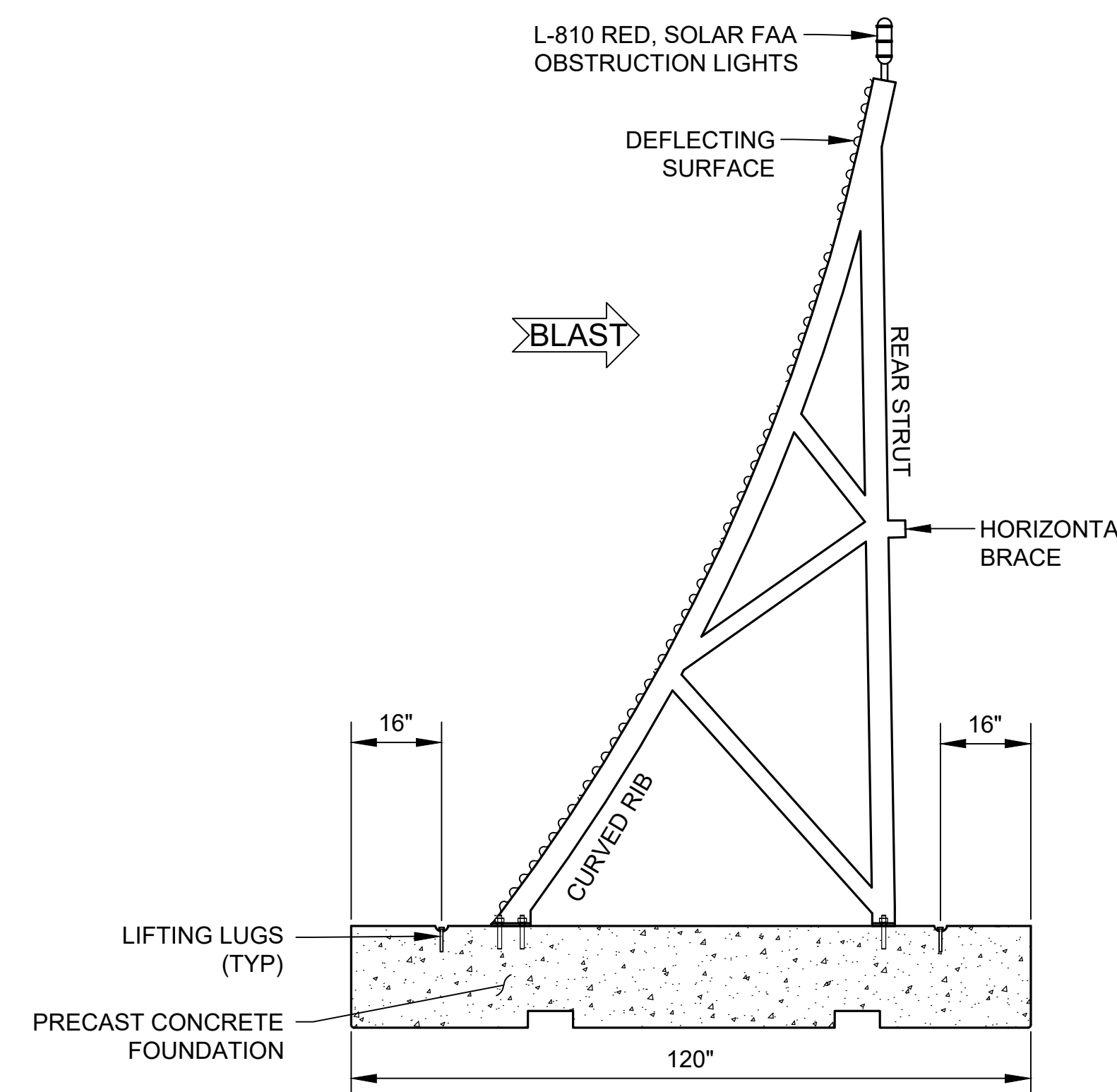
**2 PRECAST CONCRETE FOUNDATION PLAN**  
G-125 SCALE: NTS



**A FOUNDATION SECTION VIEW 1**  
G-125 SCALE: NTS



**B FOUNDATION SECTION VIEW 2**  
G-125 SCALE: NTS



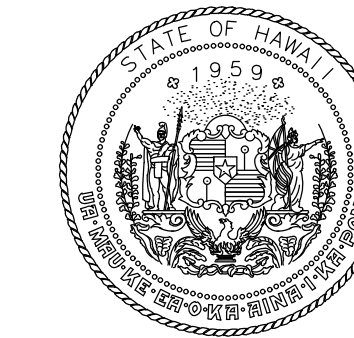
**C JET BLAST DEFLECTOR (JBD)**  
G-125 SCALE: NTS

**NOTES:**

- TEMPORARY JET BLAST DEFLECTORS SHALL BE PROVIDED BY HDOT-A. JET BLAST DEFLECTORS ARE LOCATED IN THE CONSTRUCTION STAGING AREA.
- JET BLAST DEFLECTOR DETAILS ARE PROVIDED FOR INFORMATION ONLY.
- CONTRACTOR SHALL PREPARE AND PAINT THE EXISTING HDG CORRUGATED STEEL SHEETS (SEE PAINTING NOTES).
- CONTRACTOR SHALL FURNISH AND INSTALL TWO L-810 RED, SOLAR FAA OBSTRUCTION LIGHTS.
- CONTRACTOR SHALL REPAIR OR REPLACE ANY JET BLAST DEFLECTORS OR COMPONENTS DAMAGED DURING HANDLING OR TRANSPORT AS DIRECTED BY THE RPR OR HDOT-A.

**PAINT NOTES:**

- CONTRACTOR SHALL PREPARE AND PAINT THE HOT DIP GALVANIZED (HDG) CORRUGATED STEEL SHEETS. 15 BLAST DEFLECTOR UNITS SHALL BE WHITE. 15 BLAST DEFLECTOR UNITS SHALL BE ORANGE.
- CORRUGATED STEEL SHEETS SHALL BE PREPARED FOR PAINTING PER ASTM D6386.
- PRIMING PAINT FOR GALVANIZED METAL SURFACES SHALL BE A ZINC-RICH EPOXY PRIMER PAINT PER MIL-DTL-24441/19C, FORMULA 159, TYPE III. USE MIL-24441 THINNER PER PAINT MANUFACTURER'S RECOMMENDATIONS.
- ORANGE PAINT SHALL CONSIST OF A READY-MIXED NON-FADING PAINT MEETING THE REQUIREMENTS OF MASTER PAINTER'S INSTITUTE (MPI) REFERENCE #9 (GLOSS). THE COLOR SHALL BE PER FEDERAL STANDARD 595, INTERNATIONAL ORANGE NUMBER 12197.
- WHITE PAINT SHALL BE READY-MIXED PAINT PER THE MASTER PAINTER'S INSTITUTE, REFERENCE #9, EXTERIOR ALKYD, GLOSS, VOLATILE ORGANIC CONTENT (VOC) RANGE E2.



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AIRPORTS



4/30/24  
Licensed Expiration Date

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AC	AT	TR	SH

**KEY PLAN / NOTES:**

NO.	DATE	REVISIONS

**CONSTRUCTION DOCUMENTS**  
SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

**SHEET TITLE:**

**PHASING DETAILS 2**

DATE :

09/2023

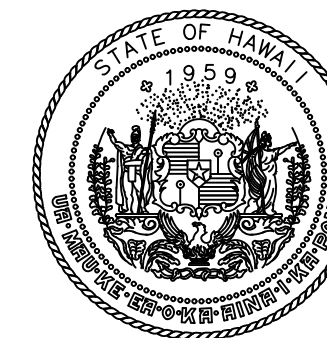
SHEET :

30 OF 190 SHEETS

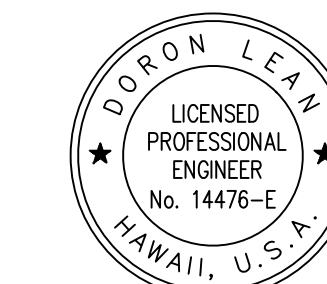
DWG. NO.

**G-125**





Airports Division  
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS



DORON LEUNG  
LICENSED PROFESSIONAL ENGINEER  
No. 14476-E  
HAWAII, U.S.A.  
*Doron Leung*  
04/30/2024  
Licensed Expiration Date

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JP	KV	JA	DL

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KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

**SHEET TITLE:**

**TEMPORARY ELECTRICAL DETAIL 1**

DATE :

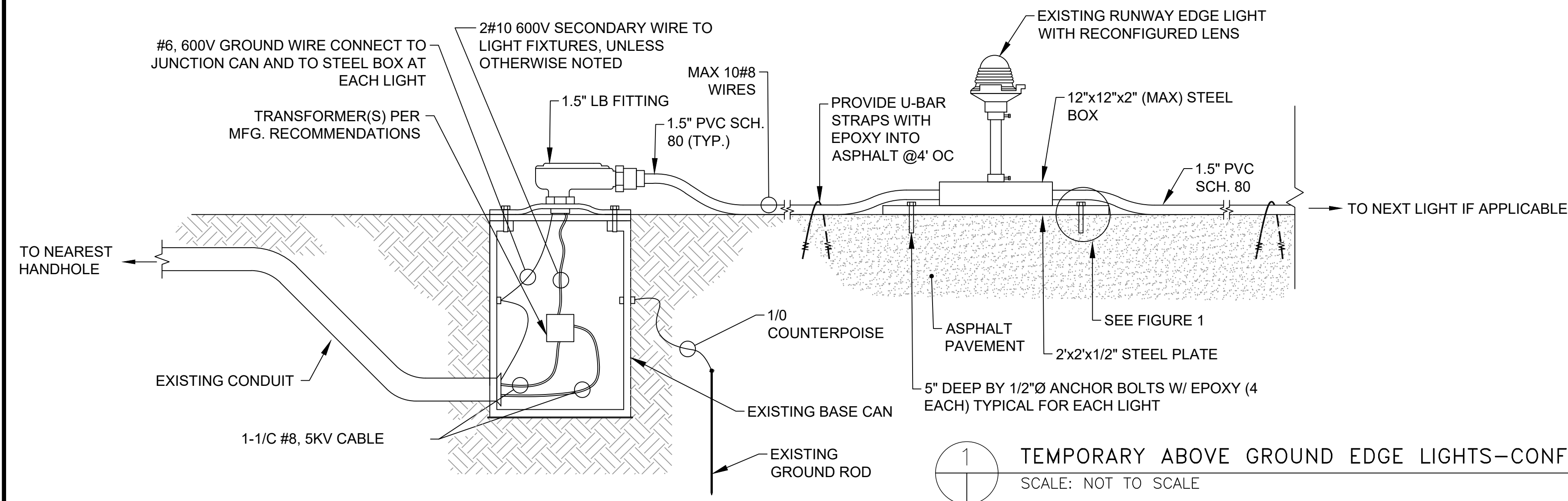
09/2023

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DWG. NO.

**G-126**

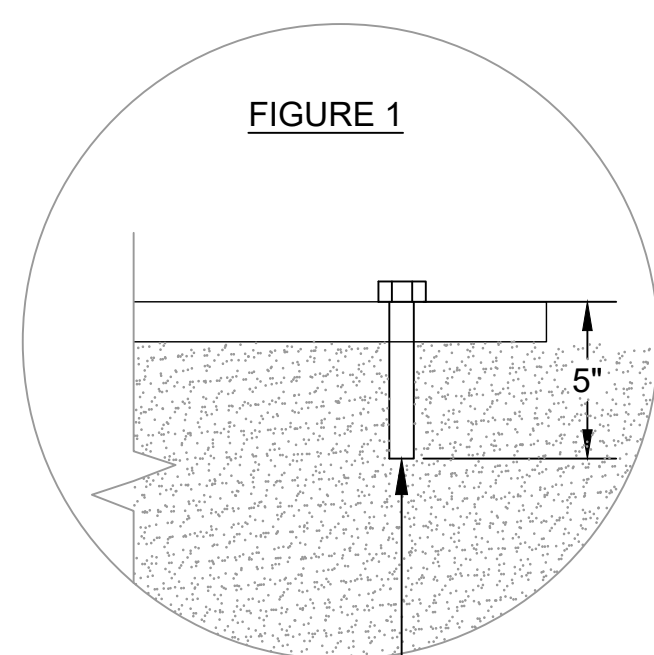
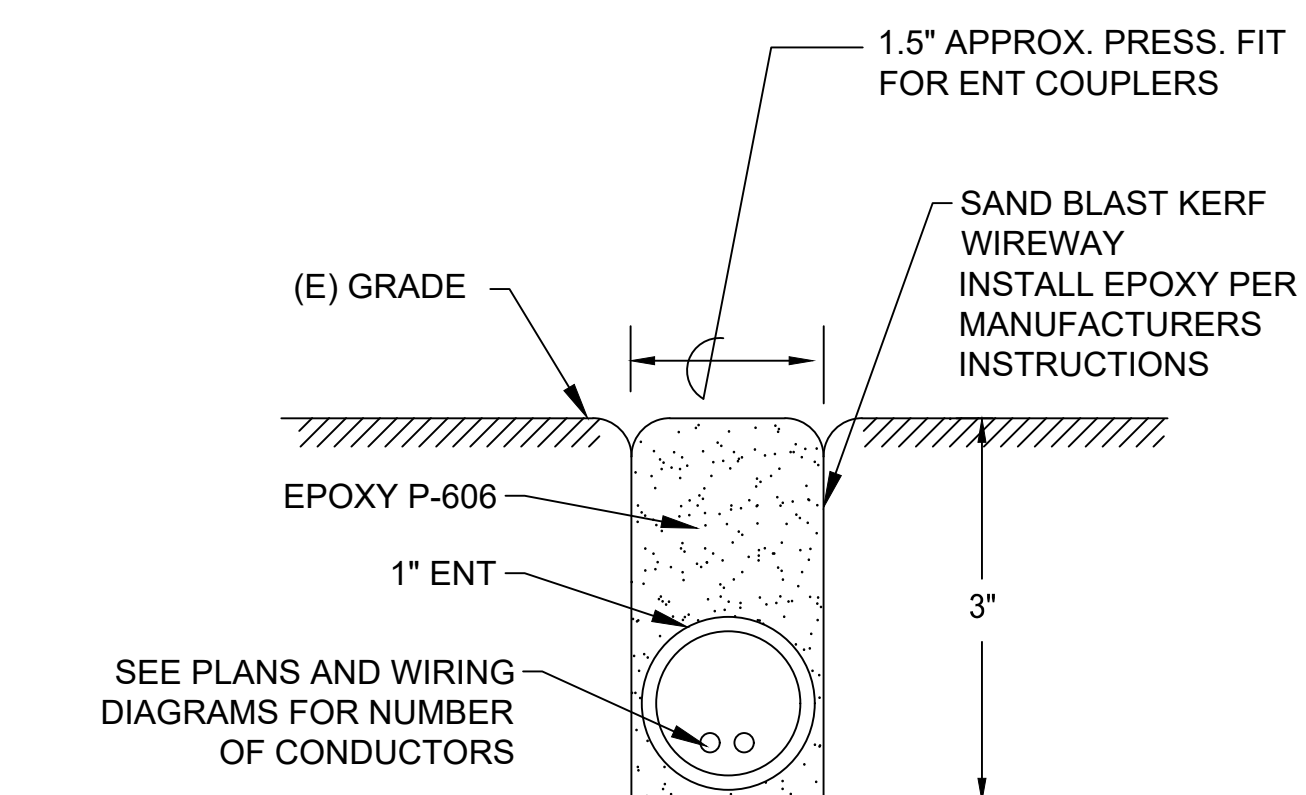


**1** TEMPORARY ABOVE GROUND EDGE LIGHTS—CONFIGURATION 1  
SCALE: NOT TO SCALE

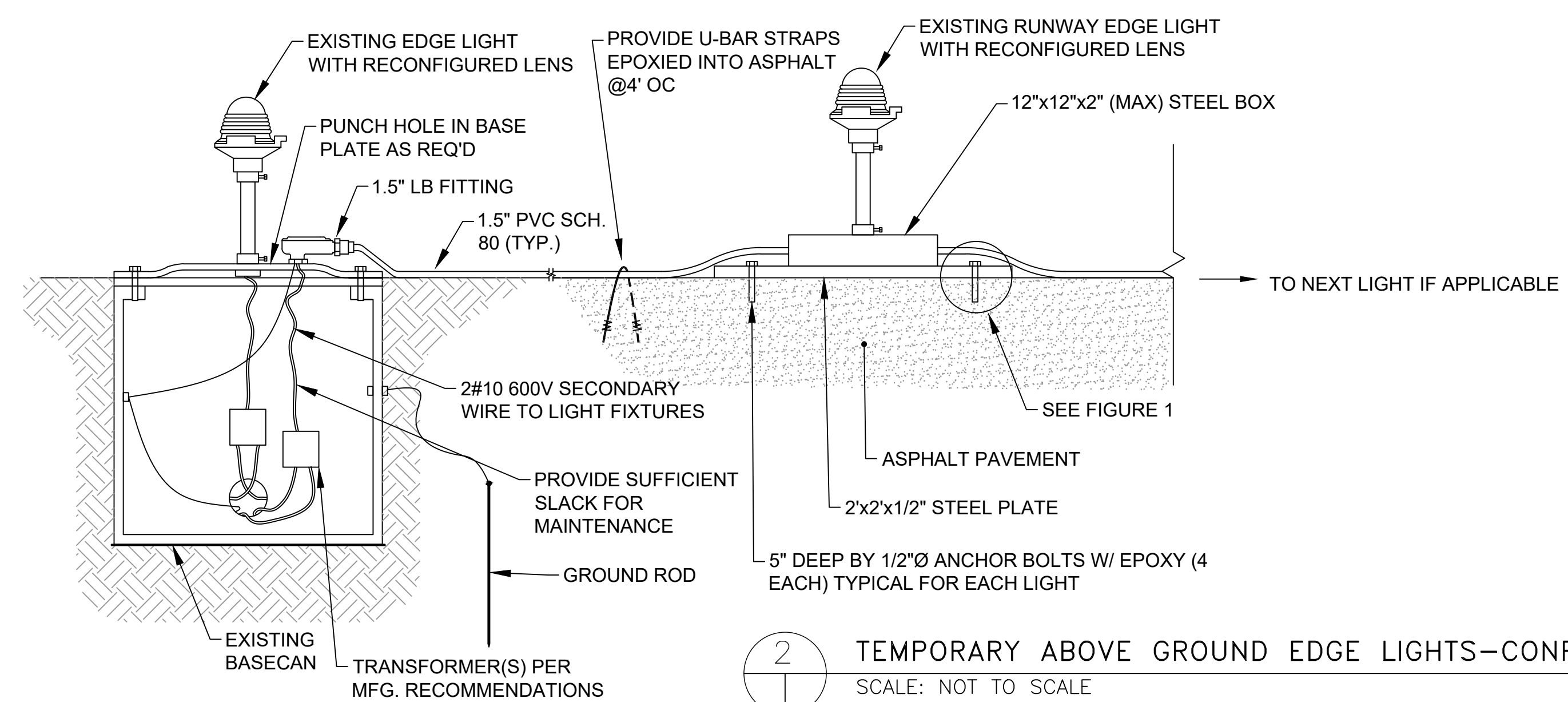
**NOTES FOR STEP 4 :**

- PRIOR TO INSTALLATION OF CONDUIT, SAND BLAST CONDUIT, KERF AND EXTERIOR OF CONDUIT AND KERF SHALL THEN BE CLEANED WITH A HIGH VELOCITY DRY AIR JET TO ENSURE A GOOD BOND. ENT SHALL BE WEDGED DOWN IN KERF BY SPLIT CUT ENT COUPLER. EXTERNAL HEAT SOURCE MAY BE REQUIRED TO CURE TO EPOXY TO MAXIMUM STRENGTH.

**3** 1" ENT KERF WIREWAY  
SCALE: NOT TO SCALE



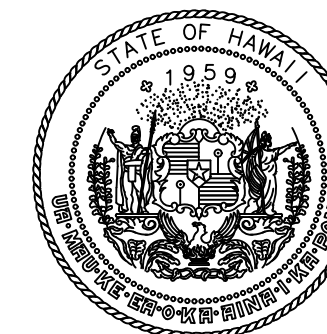
5" DEEP BY 1/2"Ø ANCHOR BOLTS W/ EPOXY (4 EACH) TYPICAL FOR EACH LIGHT



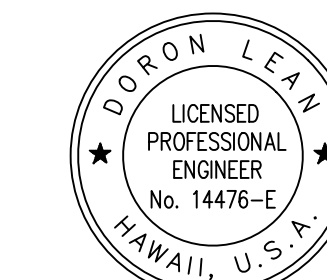
**2** TEMPORARY ABOVE GROUND EDGE LIGHTS—CONFIGURATION 2  
SCALE: NOT TO SCALE

C:\USERS\EDUARDO SALCINES\LEAN PHOTOMETRICS DROPPROX\ACTIVE PROJECTS\1472\02A ORION-KOA RUNWAY 17-35 REHABILITATION\01 DRAWINGS\WORKING DRAWINGS\SHEETS\PHASING\PHASING DETAIL.DWG





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**KEY PLAN / NOTES:**

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SEPTEMBER 2023  
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AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

**SHEET TITLE:**

**TEMPORARY ELECTRICAL DETAIL 2**

DATE :

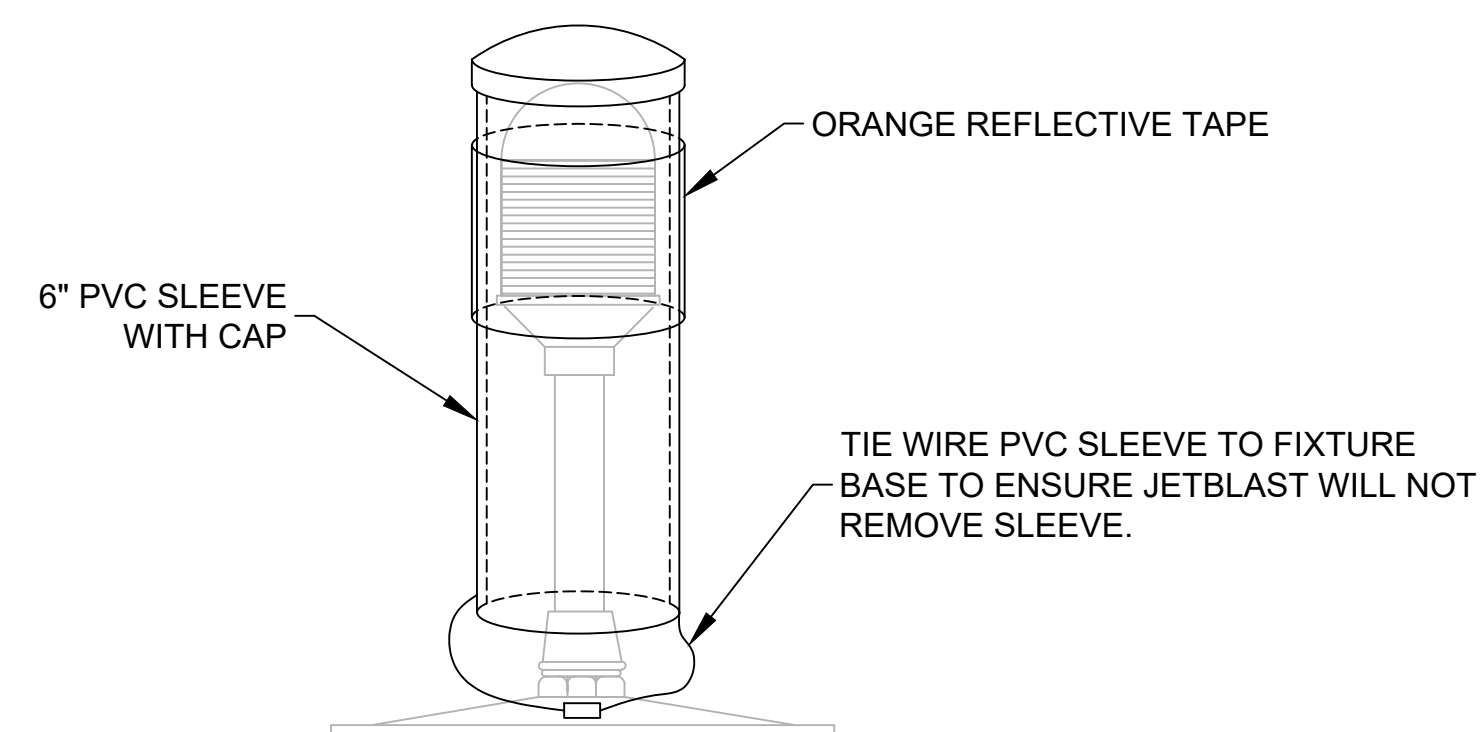
09/2023

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DWG. NO.

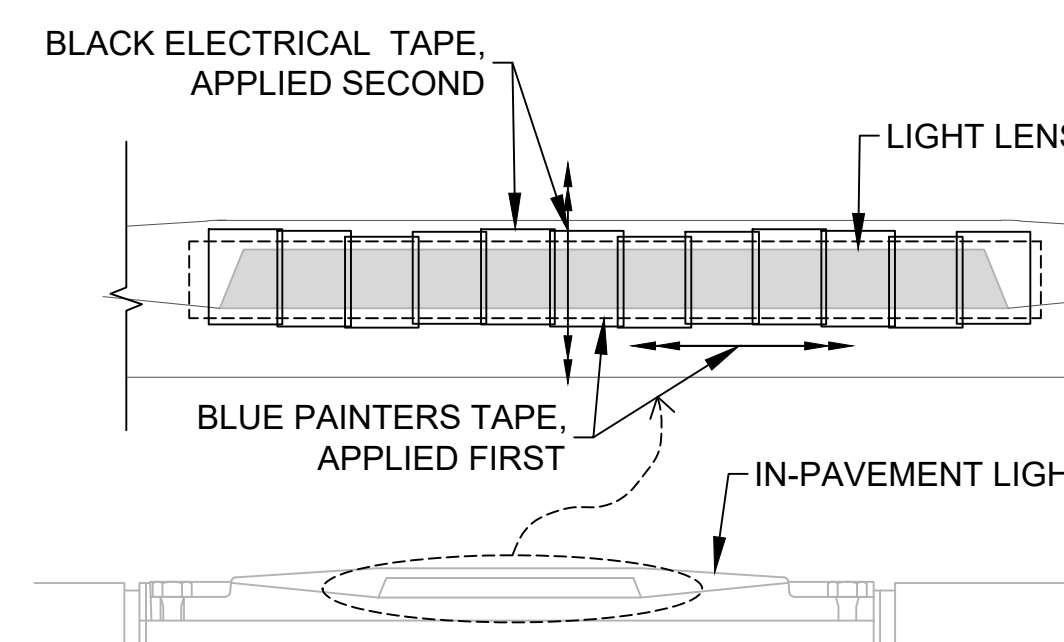
**G-127**



**NOTES FOR STEP 1:**

1. RUNWAY EDGE LIGHTS INSIDE WORK AREA SHALL BE COVERED AS TO ELIMINATE ALL LIGHT, AMBIENT OR DIRECT. COMPLETE DARKNESS IS TO BE ACHIEVED.

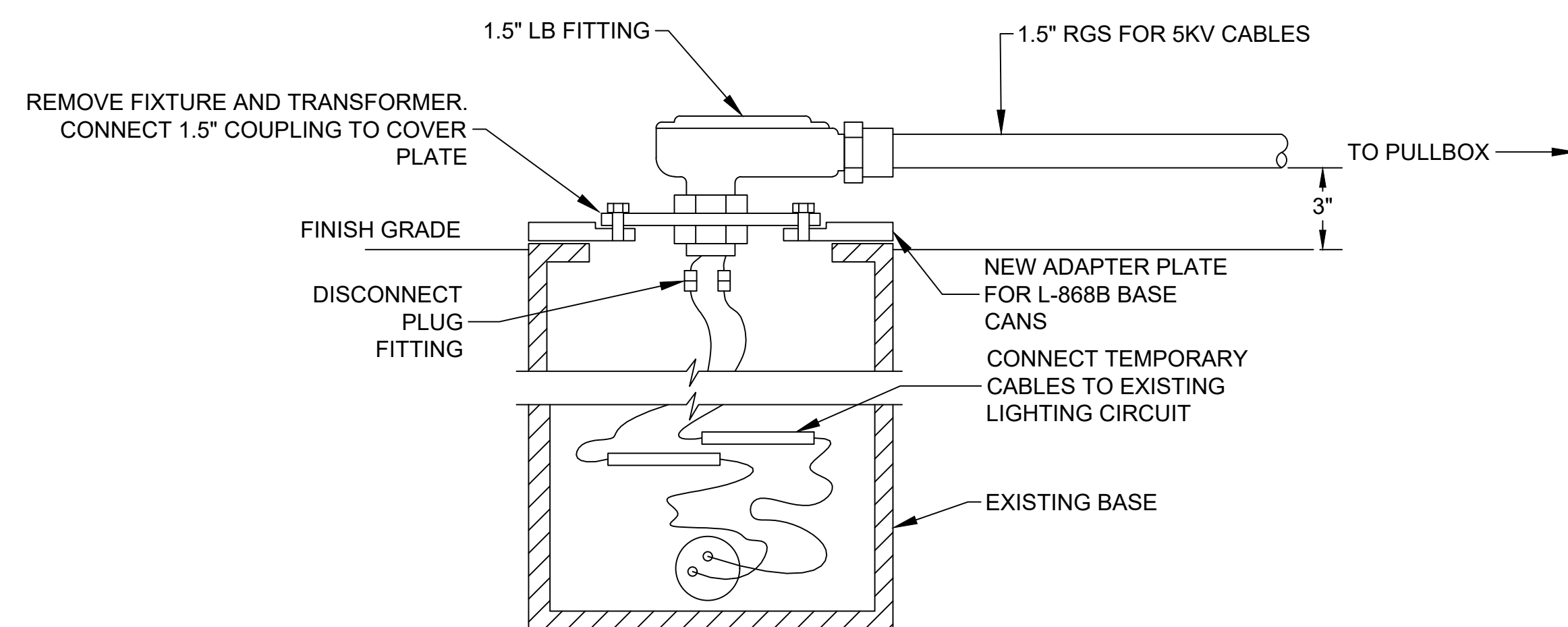
**1** ELEVATED RUNWAY AND TAXIWAY EDGE LIGHT COVER  
SCALE: NOT TO SCALE



**NOTES FOR STEP 2:**

1. CONTRACTOR SHALL PERFORM ONE SAMPLE TAPE COVERING AND GET AIRPORT OPERATIONS AND ENGINEERING APPROVAL.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF LIGHT COVERING FOR THE DURATION OF THE PHASE/PROJECT.

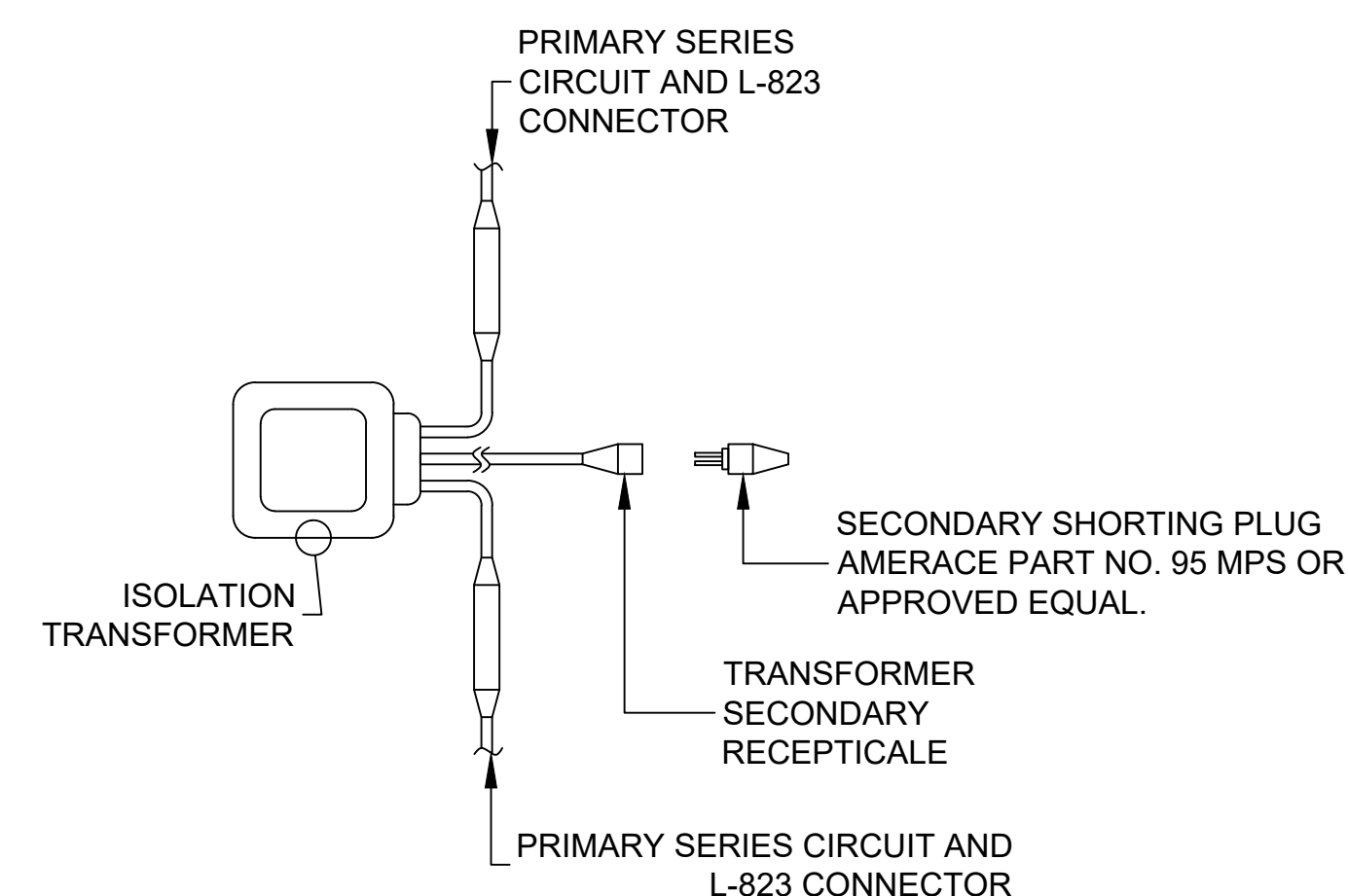
**2** IN-PAVEMENT LIGHT COVER DETAIL  
SCALE: NOT TO SCALE



**NOTES FOR STEP 3:**

1. CONTRACTOR SHALL PENETRATE (E) HANDHOLES IF NEEDED TO INSTALL TEMPORARY CONDUIT SAFELY.
2. PROVIDE SAND BAGS ALONG TEMPORARY ABOVE GROUND CONDUIT.

**3** TEMPORARILY ABOVE GROUND CONDUIT DETAIL  
SCALE: NOT TO SCALE



**NOTES FOR STEP 4:**

1. DISCONNECT LIGHT FIXTURE SECONDARY SIDE OF XFMR.
2. INSTALL SHORTING PLUG ON SECONDARY SIDE OF XFMR IN PLACE OF LIGHT FIXTURE.

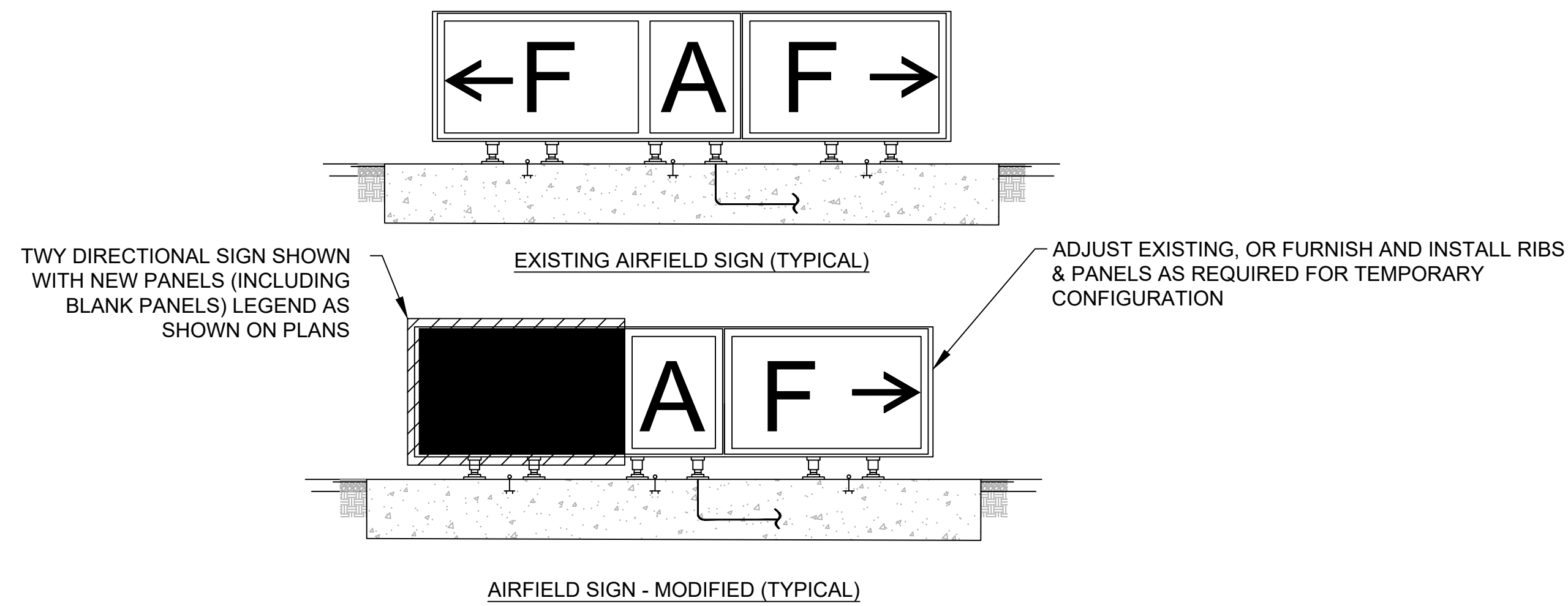
**4** SECONDARY SHORTING PLUG  
SCALE: NOT TO SCALE

C:\USERS\EDUARDO SALCINES\LEAN PHOTOMETRICS DROPPROX\ACTIVE PROJECTS\1472\02A ORION-KOA RUNWAY 17-35 REHABILITATION\01 DRAWINGS\WORKING DRAWINGS\SHEETS\PHASING\PHASING DETAIL 2.DWG



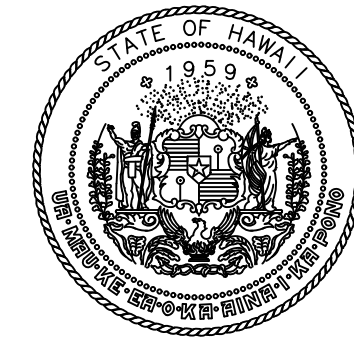
KEY NOTES:

- ① TETHER. MINIMUM 1 PER MODULE AND AT LEAST 2 TETHERS PER SIGN.
- ② RELOCATE EXISTING RDR SIGNS, WITH PANELS, PER MANUFACTURER MOUNTING PLATE TEMPLATE, RECOMMENDATIONS, AND INSTRUCTIONS. NUMBER AND SPACING OF LEGS AS PER MANUFACTURERS REQUIREMENTS. INSTALL SIGN 150' FROM RUNWAY CENTERLINE TO CLOSEST EDGE OF SIGN.
- ③ PROVIDE NEW L-830 ISOLATION TRANSFORMERS PER MANUFACTURER'S RECOMMENDATION. PROVIDE NEW L-823 EXTENSION CORDSETS OF REQUIRED LENGTH.
- ④ PROVIDE GUIDANCE SIGN IDENTIFICATION MARKER ON EACH END OF THE SIGN (TOTAL OF TWO MARKERS PER SIGN).
- ⑤ PROVIDE SAND BAGS ALONG TEMPORARY ABOVE GROUND CONDUIT.

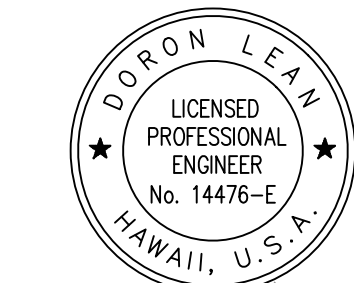


NOTES FOR STEP 2:

1. CONTRACTOR SHALL FIELD VERIFY (E) SIGN LAYOUTS PRIOR TO PANEL REARRANGING TO ENSURE CORRECT PANEL & RIB COLORING & ALIGNMENT/SPACING MEET FAA AC CRITERIA. CONTRACTOR SHALL FURNISH AND INSTALL NEW SIGN PANELS AND RIBS AS REQUIRED TO ENSURE PROPER SPACING AND SIGN COMPLIANCE.



Airports Division  
STATE OF HAWAII  
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*Doron Leung*  
04/30/2024  
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JP	KV	JA	DL

KEY PLAN / NOTES:

NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENT**

SEPTEMBER 2023  
DATE

PROJECT TITLE :

**RUNWAY 17-35 REHABILITATION**

AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

PROJECT NO.:

**AH2021-16**

SHEET TITLE:

**TEMPORARY ELECTRICAL DETAIL 3**

DATE :

09/2023

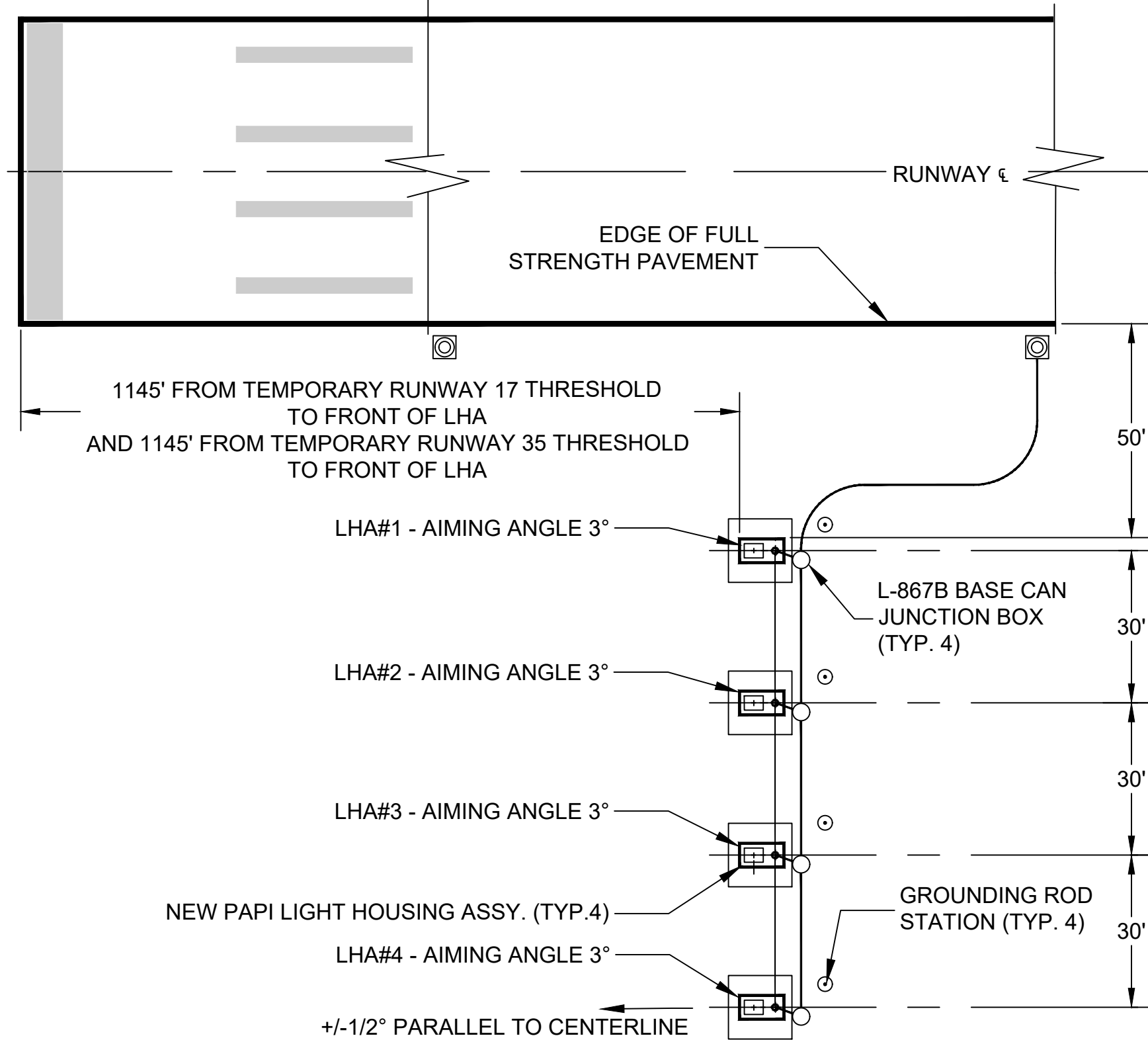
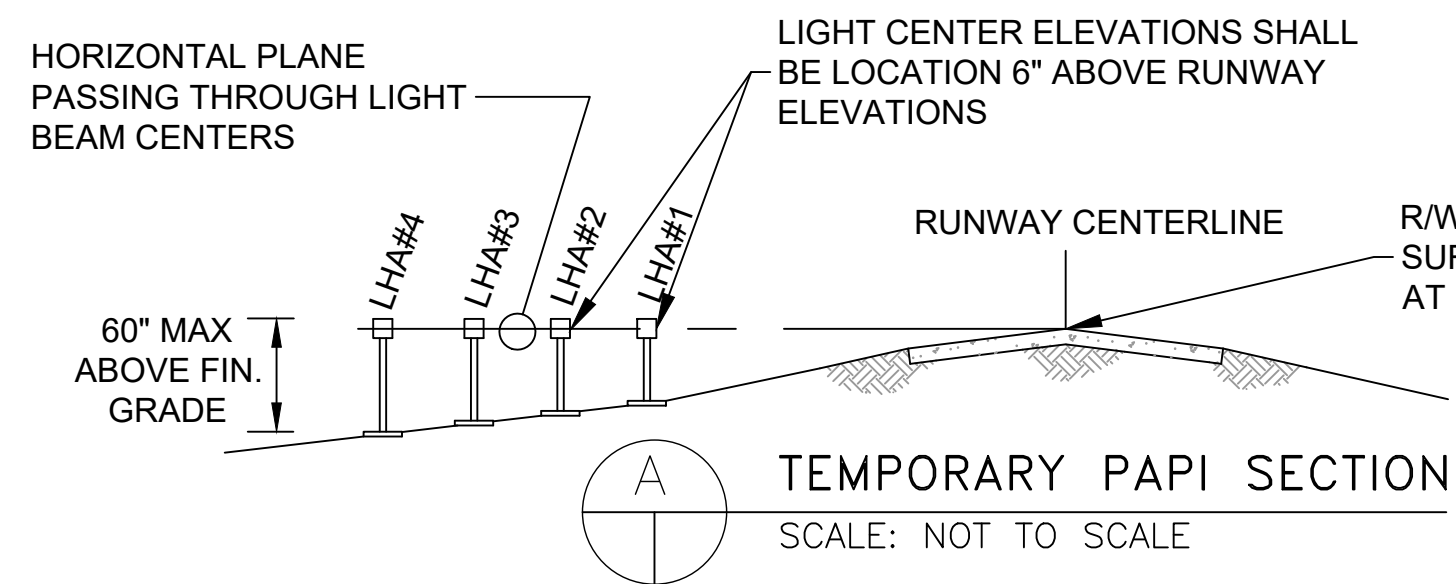
SHEET :

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DWG. NO.

**G-128**





**C** TEMPORARY PAPI SITE PLAN  
SCALE: NOT TO SCALE

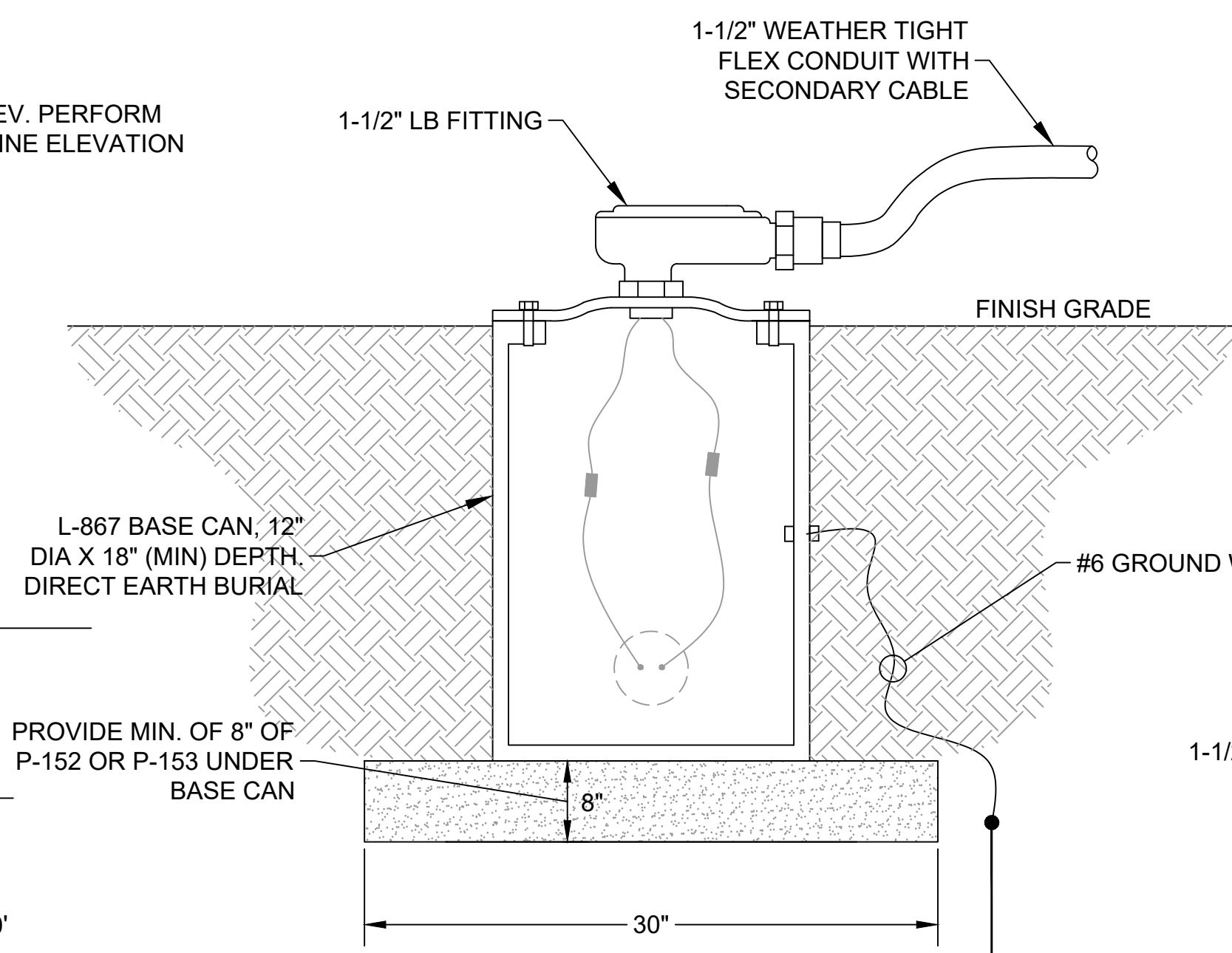
**PAPI SITING NOTES:**

1. ALL UNITS IN A BAR SHALL BE LOCATED ON A LINE PERPENDICULAR TO THE RUNWAY CENTERLINE. THE FRONT FACES OF EACH LIGHT UNIT TO BE WITHIN  $\pm 6"$  OF THIS LINE.
2. PAPI AIMING SHALL BE PROVIDED IN THE FIELD BY ENGINEER.

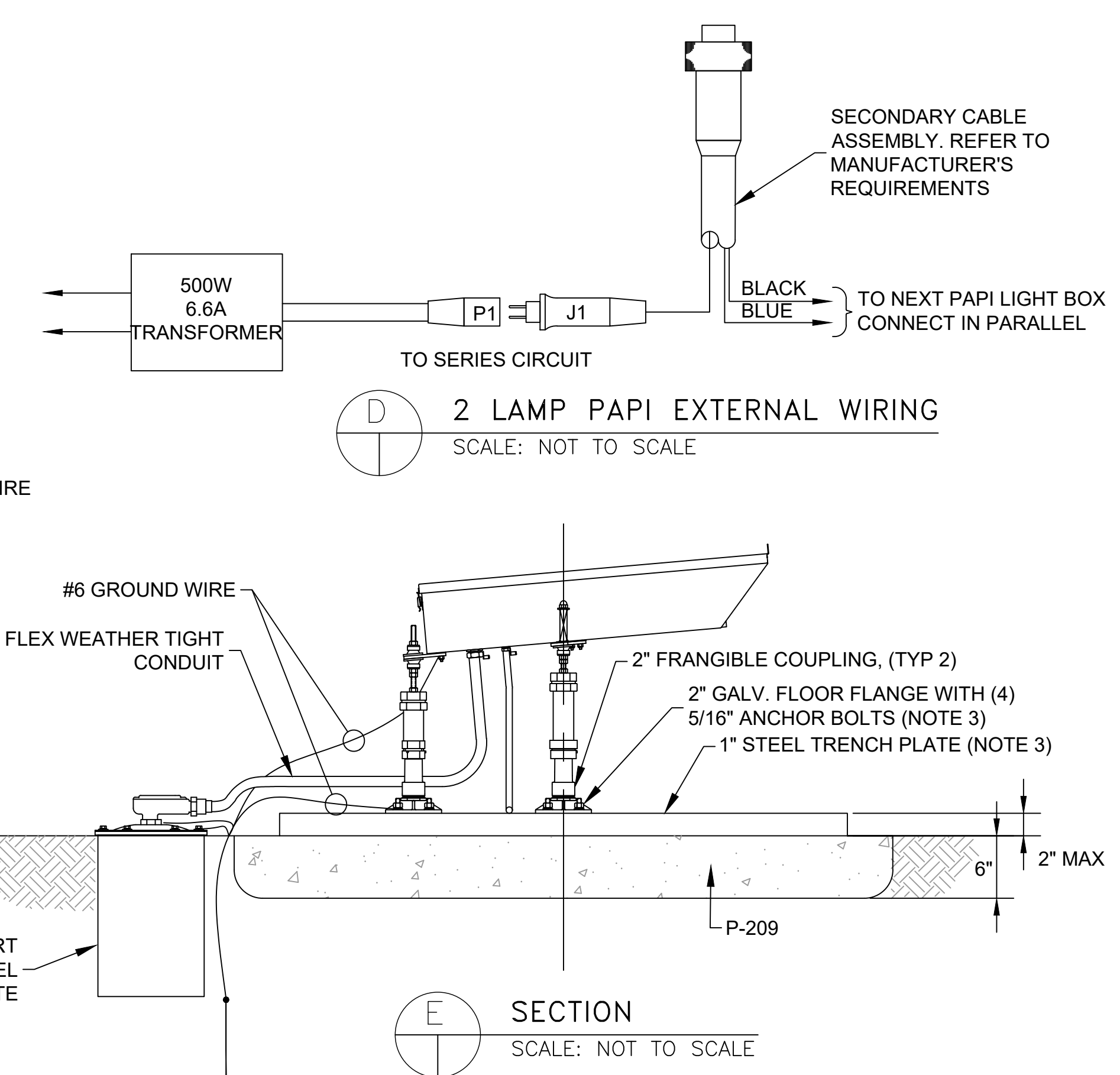
**PAPI - TYPICAL CONSTRUCTION AND INSTALLATION NOTES:**

1. CONTRACTOR INSTALL NEW TEMPORARY PAPI FOR TEMPORARY LOCATIONS. PAPI SHALL BE CURRENT DRIVEN AND SHALL BE MFG. BY EITHER NBP, ADB, OR CROUSE-HINDS. THE PAPI SHALL BE LOCATED AND AIMED IN ACCORDANCE WITH FAA ORDER 6850.2A. AIRPORT SHALL PROVIDE THE AIMING ANGLES AND LOCATION OF EACH TEMPORARY PAPI DURING EACH PHASE. NOTE: CONTRACTOR SHALL MAINTAIN THE TEMPORARY PAPI DURING EACH DURATION OF THE PHASE. REFER TO DRAWING E1.10 AND E2.20 FOR PAPI LOCATION. PAPI SHALL BE FED FROM THE TEMPORARY RUNWAY EDGE LIGHTS.
2. ALL STEEL ASSOCIATED WITH THE PAPI FABRICATION (EXCEPTING THE BASE PLATES) SHALL BE GALVANIZED AND HARDWARE SHALL BE GALVANIZED OR STAINLESS STEEL.
3. INSTALL PAPI LIGHT HOUSE ASSEMBLY AND CONTROL CABINET ON STEEL TRENCH PLATES. INSTALL SUPPORT LEG FRANGIBLE COUPLINGS ON FLANGE FITTINGS SECURED TO THE TRENCH PLATES WITH WELDED BOLT STUDS. SET TRENCH PLATES ON COMPACTED GRAVEL BASE AND SECURE IN LOCATION BY USE OF STEEL STAKES. NON-FRANGIBLE INSTALLATION ELEMENTS SHALL NOT EXCEED 3" ABOVE FINISHED GRADE.
4. POWER AND SIGNAL CABLE BETWEEN THE PAPI UNITS SHALL BE SIZED (CABLE AND CONDUIT) ACCORDING TO MANUFACTURER'S REQUIREMENTS.
5. CONTRACTOR SHALL BE PAID SEPARATELY FOR EACH TIME PAPI IS RELOCATED AND INSTALLED AS SEPARATELY.
6. PROVIDE EARTH ELECTRODE SYSTEM & GROUNDING FOR TEMPORARY PAPI AS IS REQUIRED FOR PERMANENT PAPI INSTALLATION.

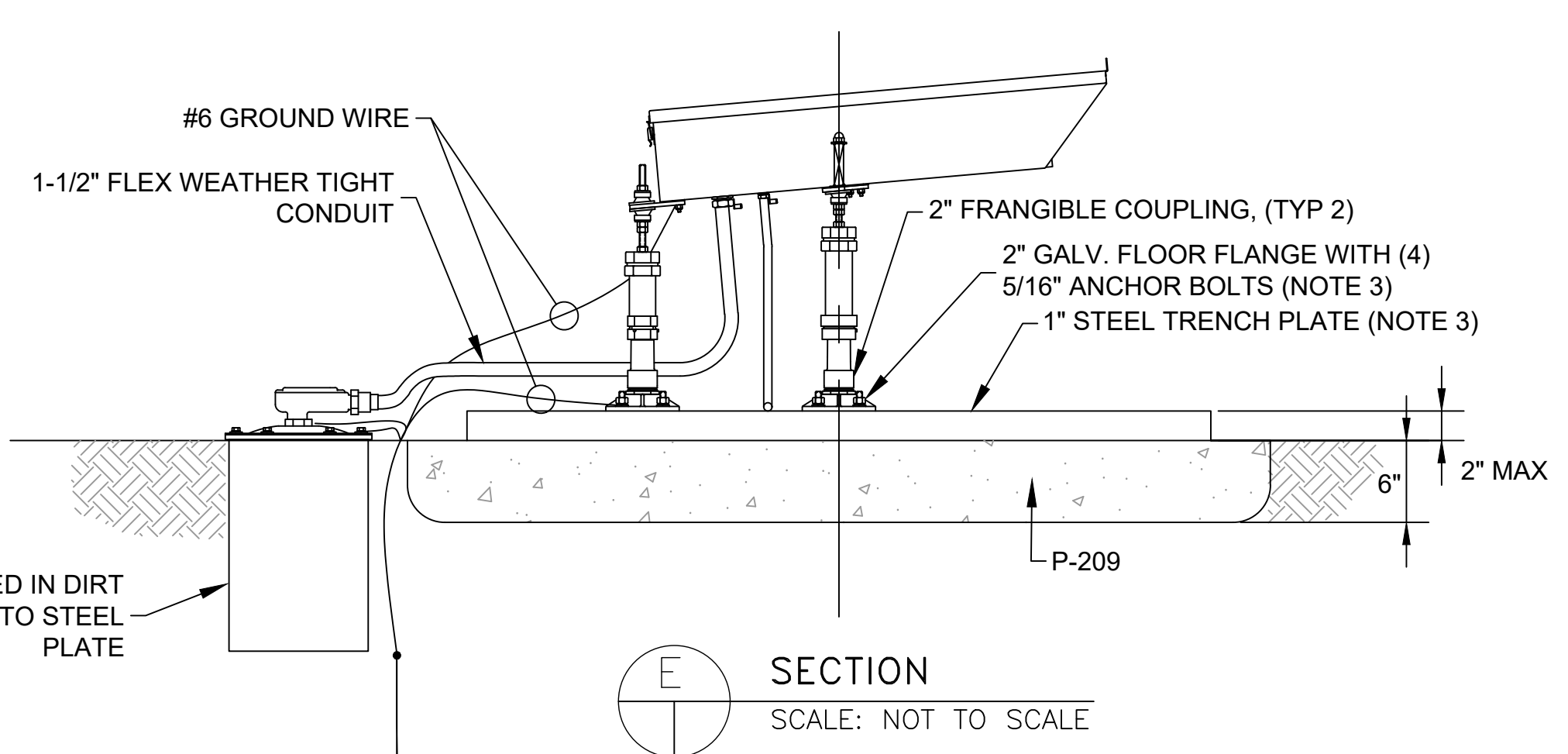
**1** TEMPORARY PAPI FOR RUNWAY 17-35 (PHASE 2 & 3)  
SCALE: NOT TO SCALE



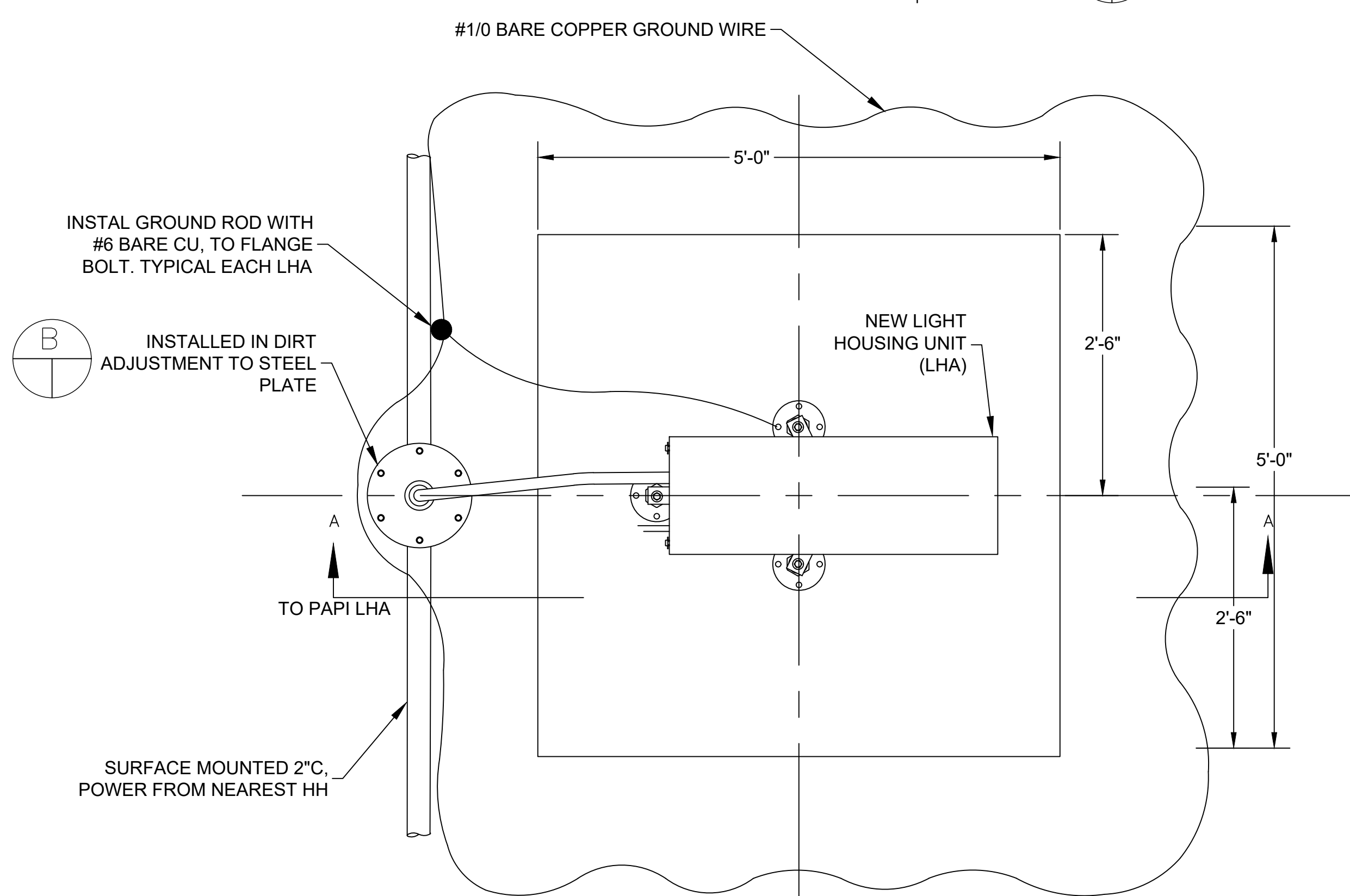
**B** CONDUIT INSTALLATION DETAIL  
SCALE: NOT TO SCALE



**D** 2 LAMP PAPI EXTERNAL WIRING  
SCALE: NOT TO SCALE



**E** SECTION  
SCALE: NOT TO SCALE



**E** SECTION PLAN VIEW  
SCALE: NOT TO SCALE



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JP	KV	JA	DL

**KEY PLAN / NOTES:**

NO.	DATE	REVISIONS

**CONSTRUCTION DOCUMENT**  
SEPTEMBER 2023  
DATE

**PROJECT TITLE :**  
**RUNWAY 17-35 REHABILITATION**  
AT ELLISON ONIZUKA KONA INTERNATIONAL AIRPORT AT KEAHOLE KAILUA-KONA, HAWAII

**PROJECT NO.:**  
**AH2021-16**

**SHEET TITLE:**

**TEMPORARY PAPI SITING AND LAYOUT PLAN**

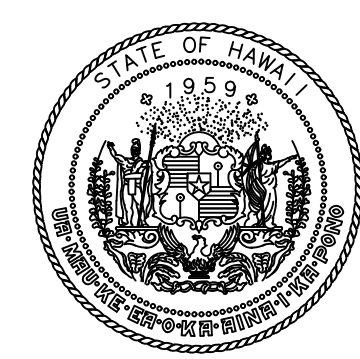
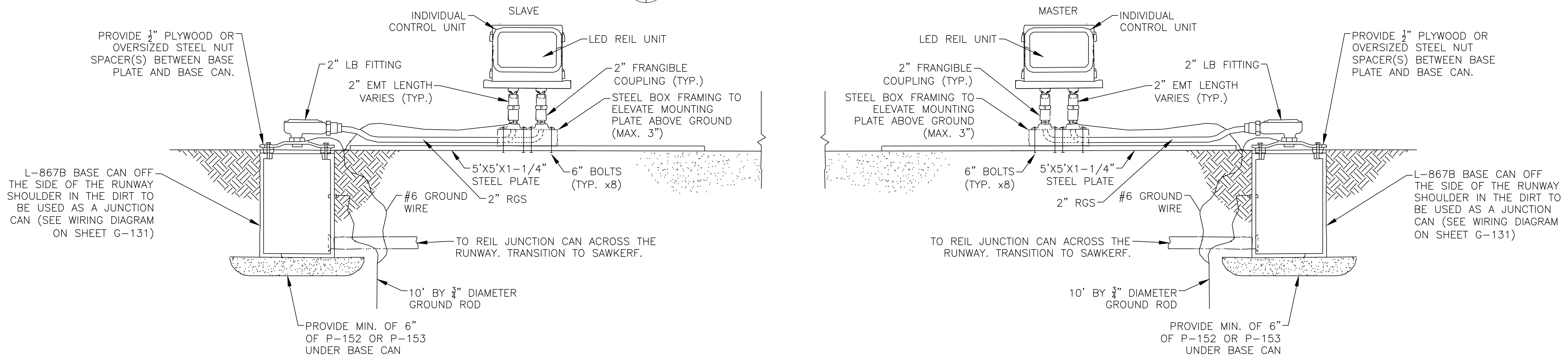
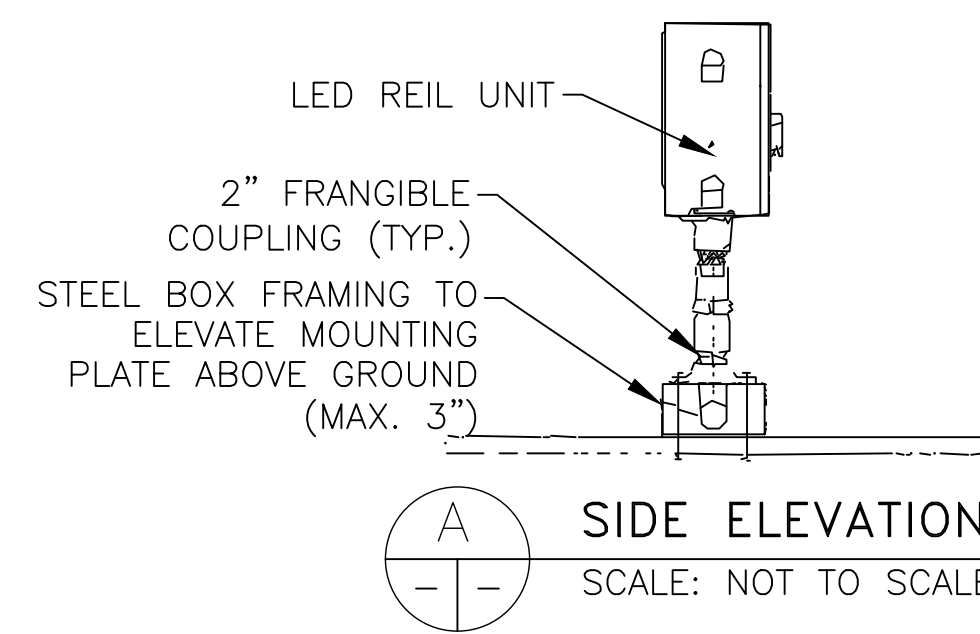
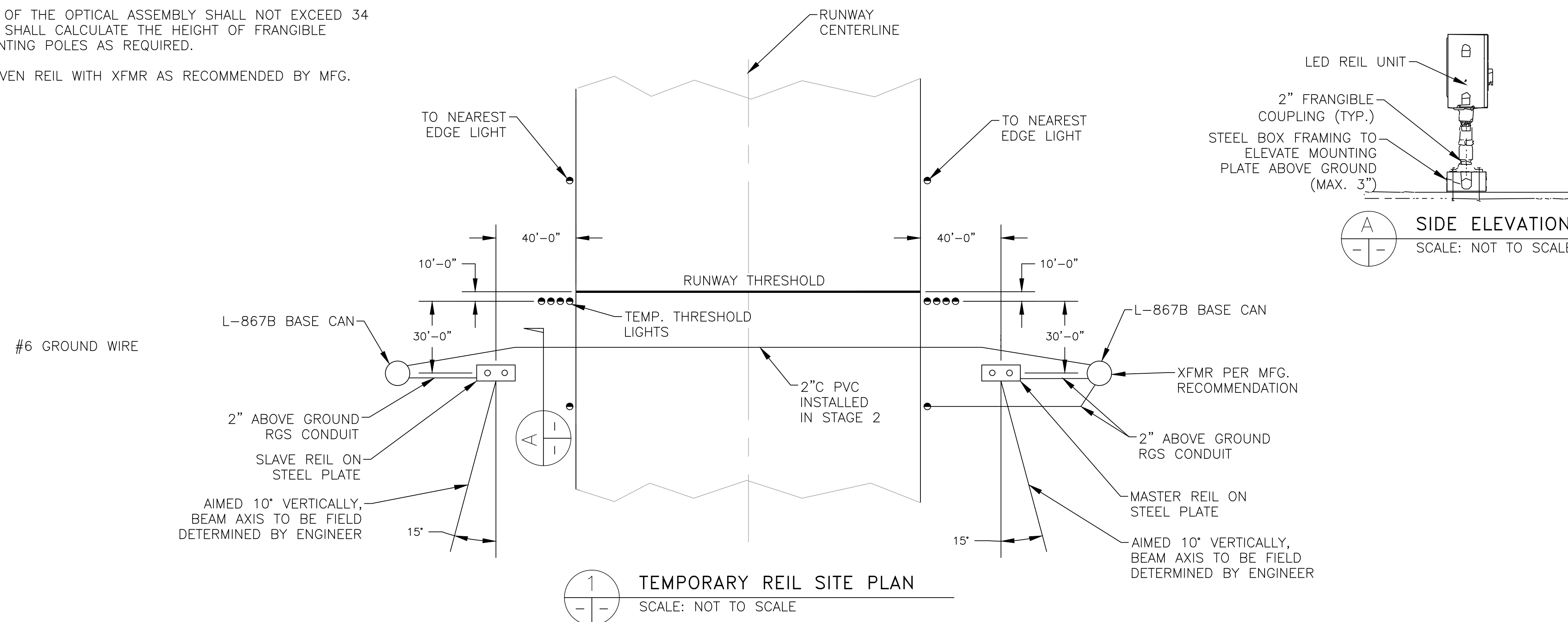
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09/2023	G-129
SHEET :	34 OF 190 SHEETS

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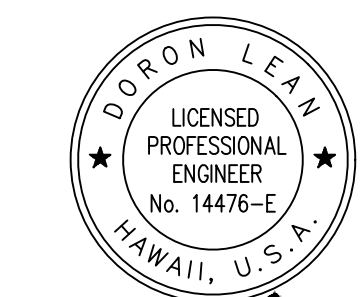


SHEET NOTES:

- OPTIONAL BASE FLANGE SHOWN FOR REFERENCE ONLY.
- USE 2 INCH RGS FEMALE COUPLING IF BASE FLANGE NOT USED.
- 2 INCH ELBOW FOR EXTERNAL WIRES.
- THE OVERALL HEIGHT OF THE OPTICAL ASSEMBLY SHALL NOT EXCEED 34 INCHES. CONTRACTOR SHALL CALCULATE THE HEIGHT OF FRANGIBLE COUPLINGS AND MOUNTING POLES AS REQUIRED.
- INSTALL CURRENT DRIVEN REIL WITH XFMR AS RECOMMENDED BY MFG.



Airports Division  
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS



Doron Leav  
LICENSED PROFESSIONAL ENGINEER  
No. 14476-E  
HAWAII, U.S.A.  
04/30/2024  
Licensed Expiration Date

DSGN.	DRWN.	CHKD.	APPD.
JP	KV	JA	DL

KEY PLAN / NOTES:

NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENT**  
SEPTEMBER 2023  
DATE

PROJECT TITLE :

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

PROJECT NO.:

**AH2021-16**

SHEET TITLE:

**TEMPORARY REIL SITING AND LAYOUT PLAN**

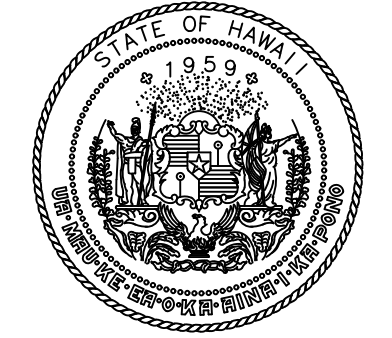
DATE :	09/2023	DWG. NO.	<b>G-130</b>
SHEET :			
35 OF 190 SHEETS			

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GENERAL NOTES:

- REFER TO DRAWINGS E-001 THRU E-002 FOR GENERAL NOTES AND ABBREVIATIONS.



Airports Division  
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS



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NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENT**

SEPTEMBER 2023  
DATE

PROJECT TITLE :

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

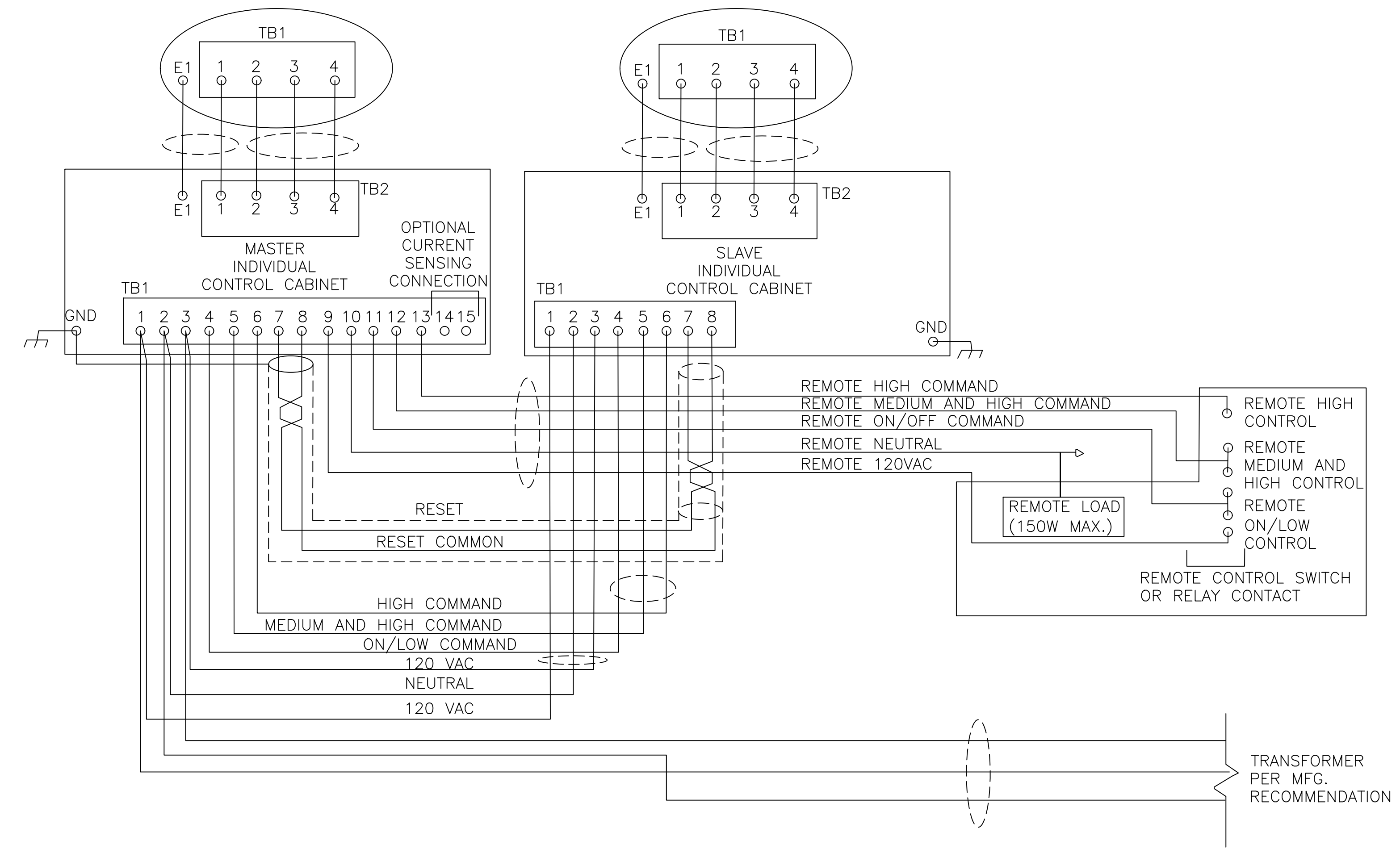
PROJECT NO.:

**AH2021-16**

SHEET TITLE:

**TEMPORARY REIL WIRING DIAGRAM**

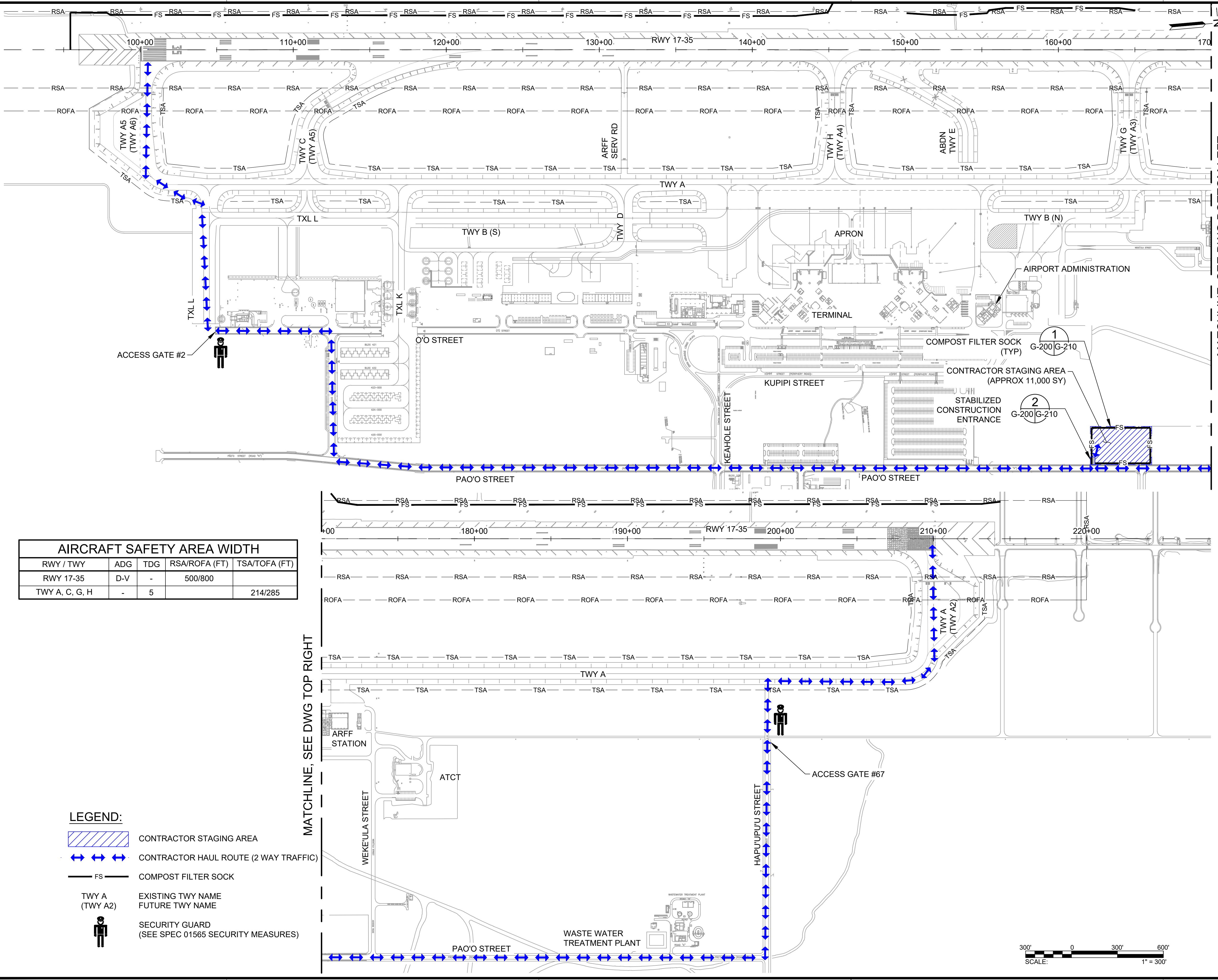
DATE :	DWG. NO.
09/2023	<b>G-131</b>
SHEET :	
36 OF 190 SHEETS	



1 L-849 REIL EXTERNAL WIRING SCHEMATIC  
SCALE: NOT TO SCALE

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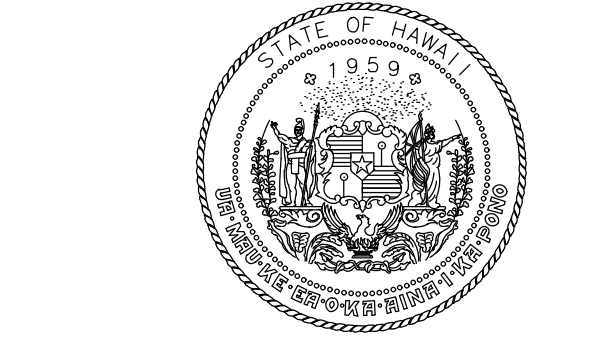


MATCHLINE, SEE DWG BOTTOM LEFT

AIRCRAFT SAFETY AREA WIDTH				
RWY / TWY	ADG	TDG	RSA/ROFA (FT)	TSA/TOFA (FT)
RWY 17-35	D-V	-	500/800	
TWY A, C, G, H	-	5		214/285

- LEGEND:**
- CONTRACTOR STAGING AREA
  - CONTRACTOR HAUL ROUTE (2 WAY TRAFFIC)
  - COMPOST FILTER SOCK
  - EXISTING TWY NAME  
FUTURE TWY NAME
  - SECURITY GUARD  
(SEE SPEC 01565 SECURITY MEASURES)

MATCHLINE, SEE DWG TOP RIGHT

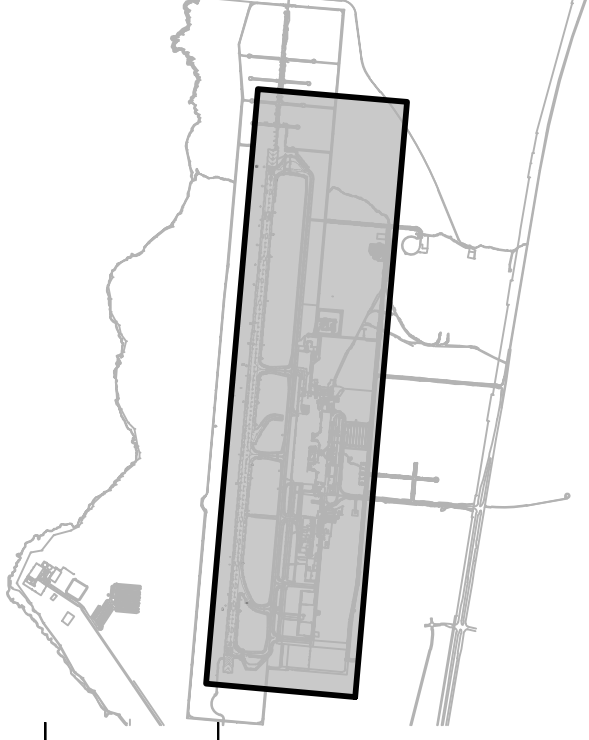


4/30/24  
Licensed Expiration Date

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AC	AT	TR	SH

**KEY PLAN / NOTES:**



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENTS**

SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**

AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

**SHEET TITLE:**

**EXISTING CONDITIONS AND EROSION CONTROL PLAN OVERVIEW**

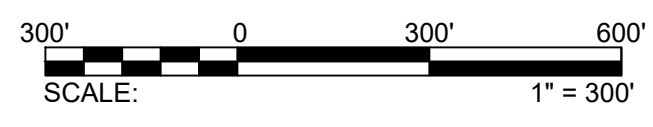
DATE : **09/2023**

SHEET : **G-200**

37 OF 190 SHEETS

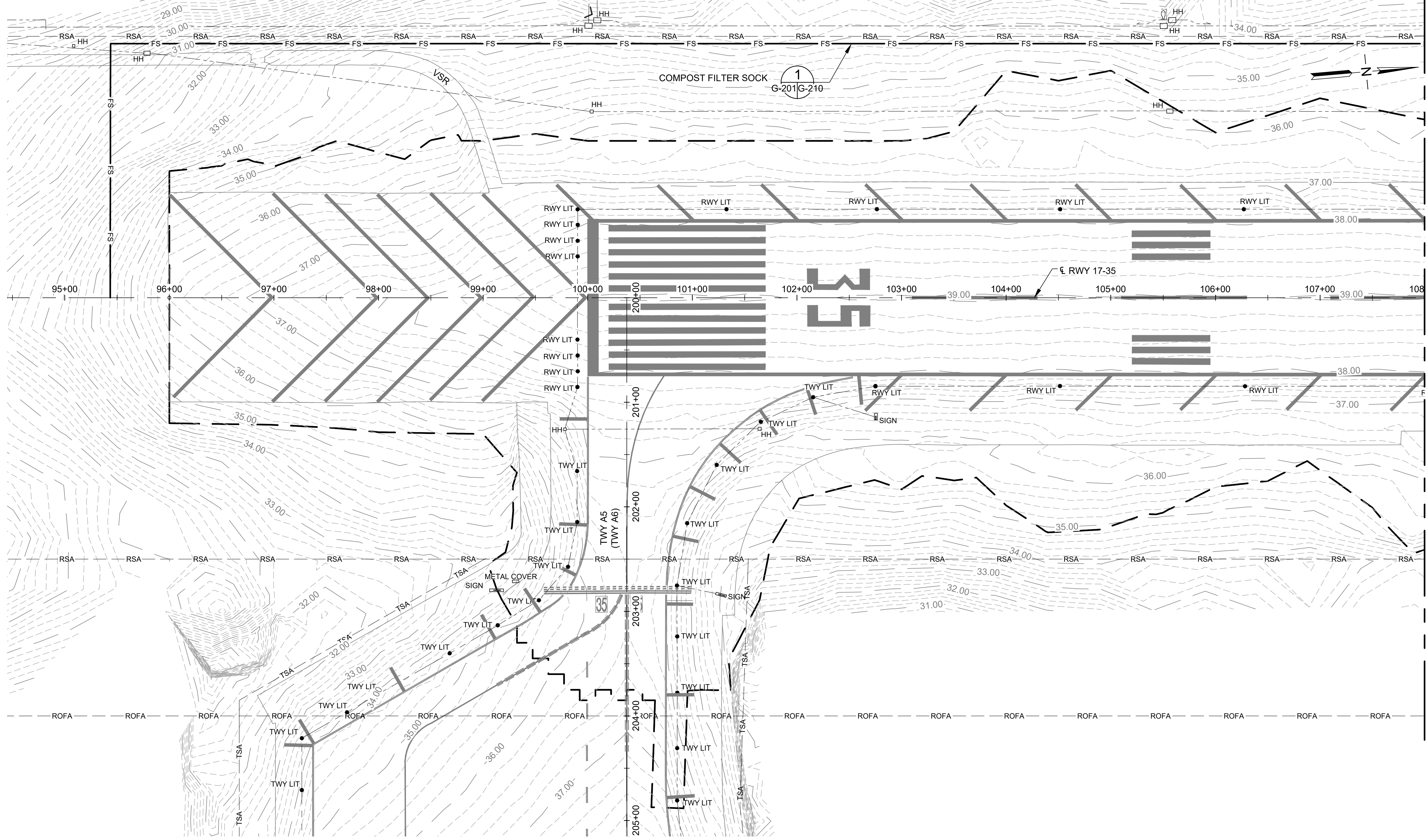
DWG. NO.

**G-200**



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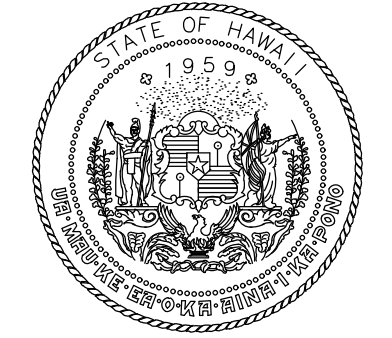
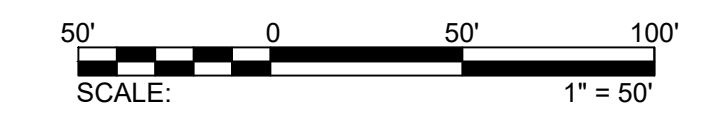
MATCHLINE: SEE DWG NO G-202

**LEGEND:**

- |  |                             |  |  |
|--|-----------------------------|--|--|
|  | LIMITS OF GRADING           |  | PRECISION APPROACH PATH INDICATOR (PAPI) |
|  | COMPOST FILTER SOCK         |  | HANDHOLE                                 |
|  | EXISTING MAJOR CONTOUR      |  | EXISTING PCC PAVEMENT                    |
|  | EXISTING MINOR CONTOUR      |  | MANHOLE OR METAL COVER                   |
|  | EXISTING ELECTRICAL CONDUIT |  | EXISTING TWY NAME                        |
|  | EXISTING RWY/TWY LIGHTS     |  | FUTURE TWY NAME                          |
|  | SIGN                        |  |  |

**NOTE:**

FILTER SOCK LOCATIONS ARE APPROXIMATE. THE CONTRACTOR SHALL INSTALL AND/OR MODIFY BMPS AS DIRECTED THE HDOT-A INSPECTOR. CONTRACTOR IS RESPONSIBLE FOR UPDATING THE NOI AND SWPPP AS DIRECTED BY THE HDOT-A BMP INSPECTOR.



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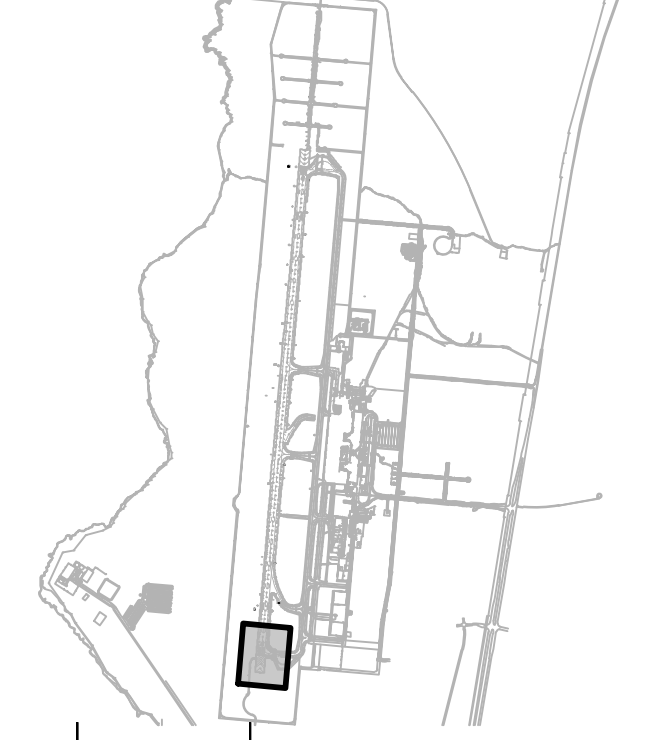


*Mark A. Clevon*  
4/30/24  
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AC	AT	TR	SH

**KEY PLAN / NOTES:**



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENTS**  
SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

**SHEET TITLE:**

**EXISTING CONDITIONS AND EROSION CONTROL PLAN 1**

DATE : **09/2023**

SHEET : **G-201**

38 OF 190 SHEETS

DWG. NO.

**G-201**

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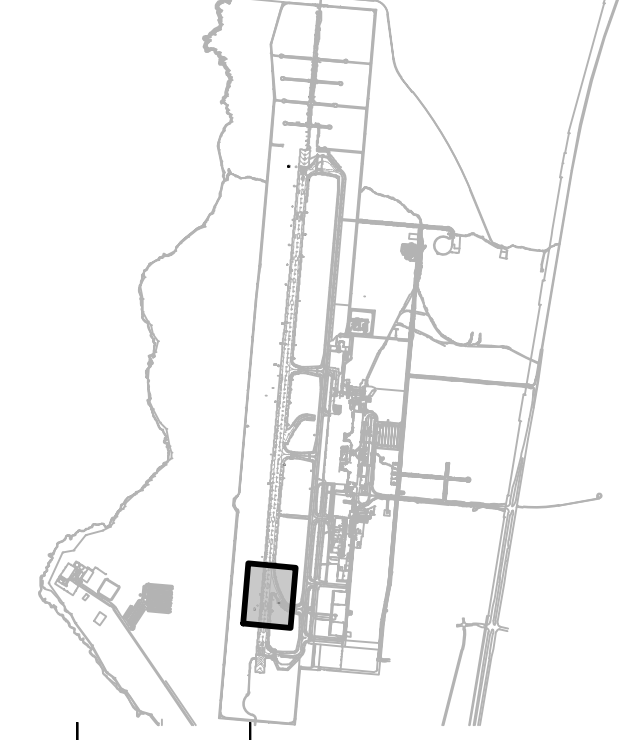


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**CONSTRUCTION DOCUMENTS**  
SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

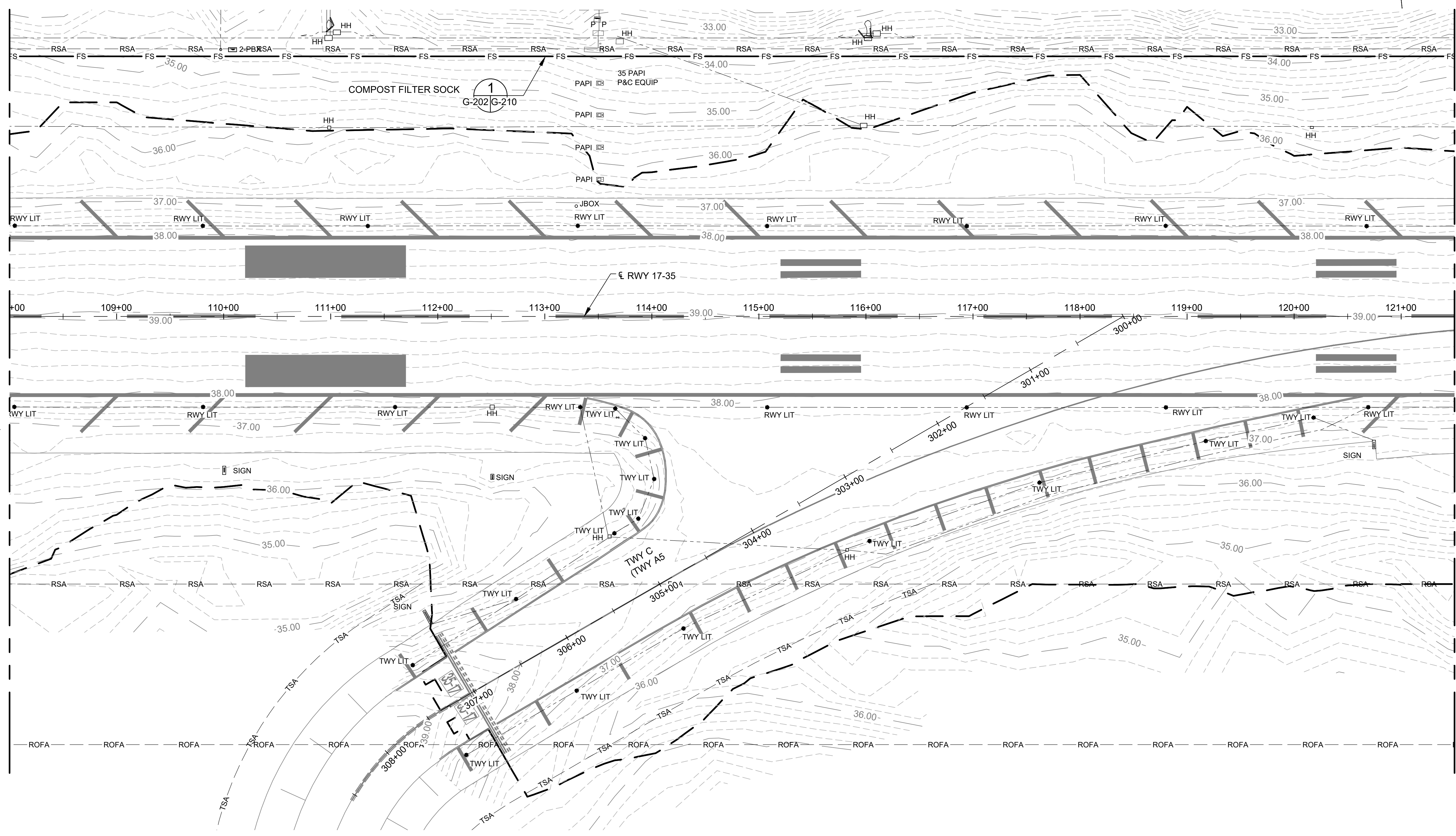
**SHEET TITLE:**

**EXISTING CONDITIONS AND EROSION CONTROL PLAN 2**

DATE :	09/2023	DWG. NO.	<b>G-202</b>
SHEET :			
39 OF 190 SHEETS			

MATCHLINE, SEE DWG NO G-201

MATCHLINE, SEE DWG NO G-203



**LEGEND:**

- — — — — LIMITS OF GRADING
- FS — — — COMPOST FILTER SOCK
- 32.0 — — — EXISTING MAJOR CONTOUR
- - - - - EXISTING MINOR CONTOUR
- - - - - EXISTING ELECTRICAL CONDUIT
- EXISTING RWY/TWY LIGHTS
- ▭ SIGN
- ▭ PRECISION APPROACH PATH INDICATOR (PAPI)
- HANDHOLE
- ◻ EXISTING PCC PAVEMENT
- MANHOLE OR METAL COVER
- TWY A (TWY A2) EXISTING TWY NAME
- TWY B (TWY B1) FUTURE TWY NAME

**NOTE:**

FILTER SOCK LOCATIONS ARE APPROXIMATE. THE CONTRACTOR SHALL INSTALL AND/OR MODIFY BMPS AS DIRECTED THE HDOT-A INSPECTOR. CONTRACTOR IS RESPONSIBLE FOR UPDATING THE NOI AND SWPPP AS DIRECTED BY THE HDOT-A BMP INSPECTOR.



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NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENTS**  
SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

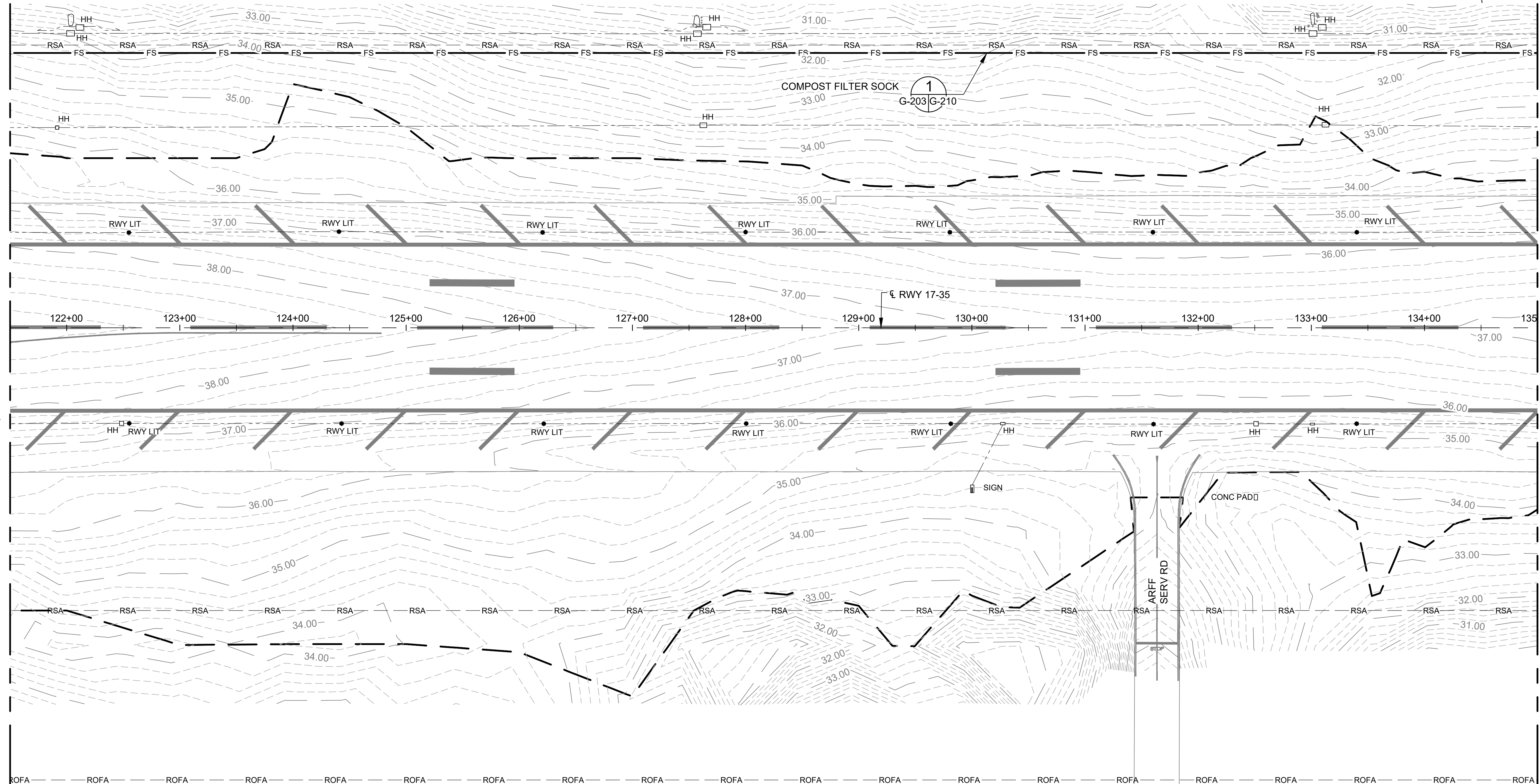
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**EXISTING CONDITIONS AND EROSION CONTROL PLAN 3**

DATE :	DWG. NO.
09/2023	G-203
SHEET :	
40 OF 190 SHEETS	

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MATCHLINE, SEE DWG NO G-204

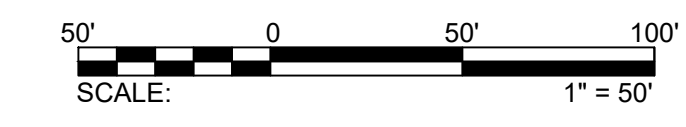


**LEGEND:**

- — — — — LIMITS OF GRADING
- FS — — — — — COMPOST FILTER SOCK
- 32.0 — — — — — EXISTING MAJOR CONTOUR
- - - - - EXISTING MINOR CONTOUR
- - - - - EXISTING ELECTRICAL CONDUIT
- EXISTING RWY/TWY LIGHTS
- ▭ SIGN
- ▣ PRECISION APPROACH PATH INDICATOR (PAPI)
- HANDHOLE
- MANHOLE OR METAL COVER
- TWY A (TWY A2) EXISTING TWY NAME
- EXISTING PCC PAVEMENT
- FUTURE TWY NAME

**NOTE:**

FILTER SOCK LOCATIONS ARE APPROXIMATE. THE CONTRACTOR SHALL INSTALL AND/OR MODIFY BMPS AS DIRECTED THE HDOT-A INSPECTOR. CONTRACTOR IS RESPONSIBLE FOR UPDATING THE NOI AND SWPPP AS DIRECTED BY THE HDOT-A BMP INSPECTOR.



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DEPARTMENT OF TRANSPORTATION  
AIRPORTS

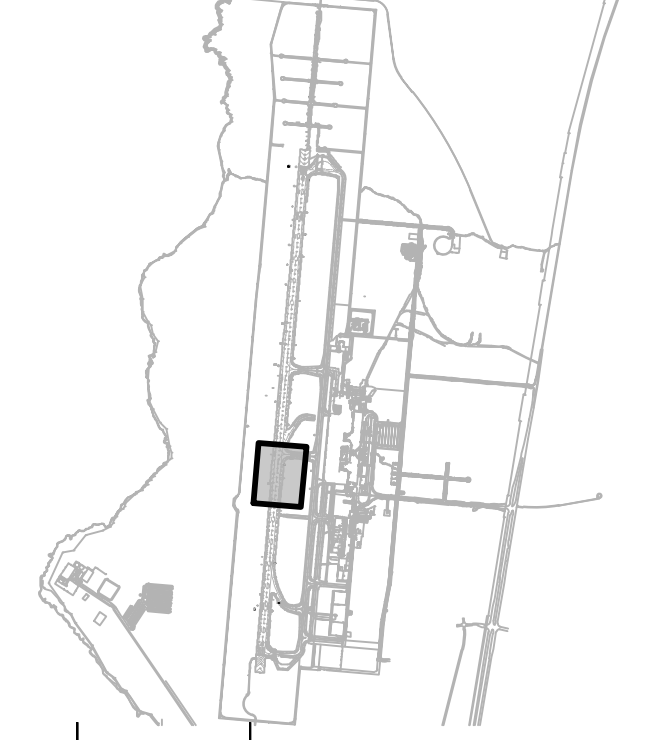


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**KEY PLAN / NOTES:**



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**CONSTRUCTION DOCUMENTS**

SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35  
REHABILITATION**

AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

**SHEET TITLE:**

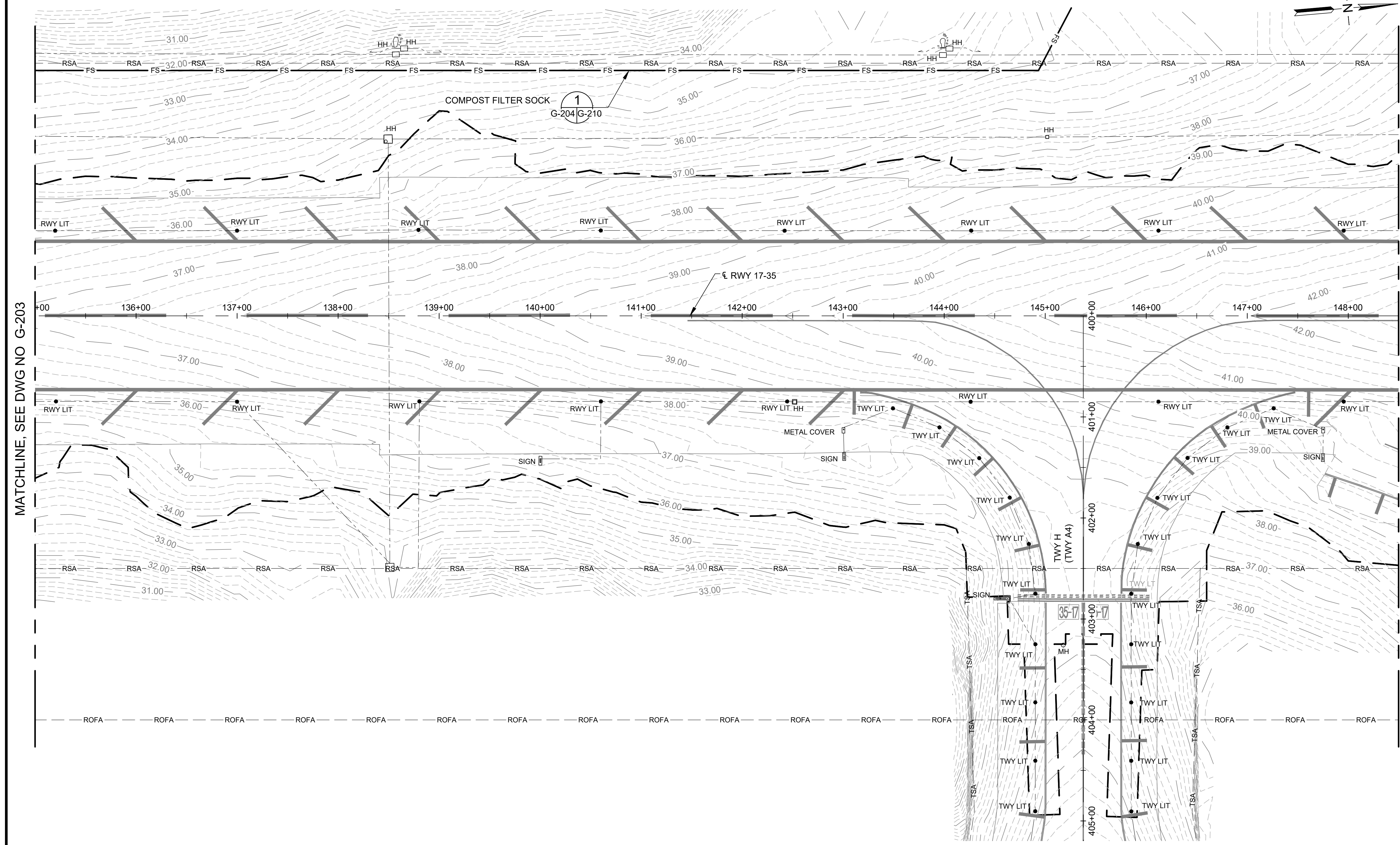
**EXISTING CONDITIONS  
AND EROSION  
CONTROL PLAN 4**

DATE : **09/2023**

SHEET : **G-204**

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DWG. NO.  
**G-204**



MATCHLINE, SEE DWG NO G-203

MATCHLINE, SEE DWG NO G-205

**LEGEND:**

- LIMITS OF GRADING
- COMPOST FILTER SOCK
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EXISTING ELECTRICAL CONDUIT
- EXISTING RWY/TWY LIGHTS
- SIGN
- PRECISION APPROACH PATH INDICATOR (PAPI)
- HANDHOLE
- EXISTING PCC PAVEMENT
- MANHOLE OR METAL COVER
- EXISTING TWY NAME
- FUTURE TWY NAME

**NOTE:**

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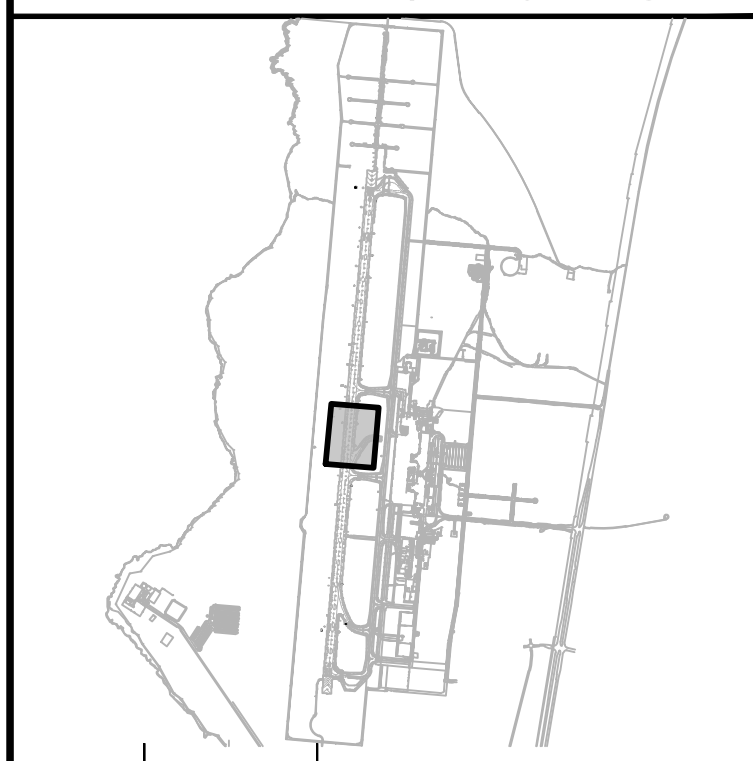


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**CONSTRUCTION DOCUMENTS**  
SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

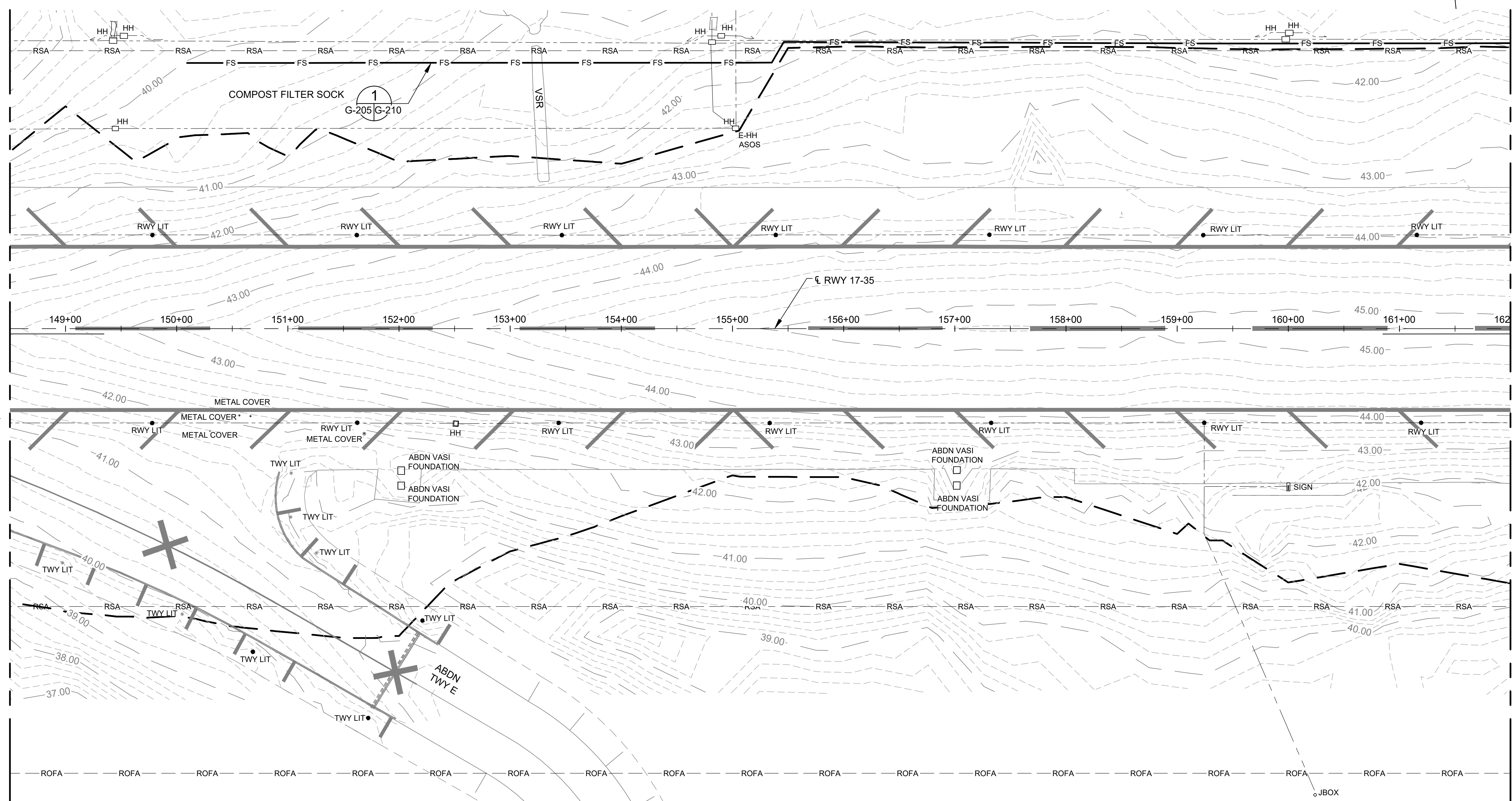
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**EXISTING CONDITIONS AND EROSION CONTROL PLAN 5**

DATE :	DWG. NO.
09/2023	G-205
SHEET :	
42 OF 190 SHEETS	

MATCHLINE, SEE DWG NO G-204

MATCHLINE, SEE DWG NO G-206



**LEGEND:**

- — — — — LIMITS OF GRADING
- FS — — — — — COMPOST FILTER SOCK
- 32.0 — — — — — EXISTING MAJOR CONTOUR
- - - - - EXISTING MINOR CONTOUR
- - - - - EXISTING ELECTRICAL CONDUIT
- EXISTING RWY/TWY LIGHTS
- ▭ SIGN
- ▣ PRECISION APPROACH PATH INDICATOR (PAPI)
- HANDHOLE
- ◻ EXISTING PCC PAVEMENT
- MANHOLE OR METAL COVER
- TWY A (TWY A2) EXISTING TWY NAME
- TWY A2 FUTURE TWY NAME

**NOTE:**

FILTER SOCK LOCATIONS ARE APPROXIMATE. THE CONTRACTOR SHALL INSTALL AND/OR MODIFY BMPS AS DIRECTED THE HDOT-A INSPECTOR. CONTRACTOR IS RESPONSIBLE FOR UPDATING THE NOI AND SWPPP AS DIRECTED BY THE HDOT-A BMP INSPECTOR.



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DEPARTMENT OF TRANSPORTATION  
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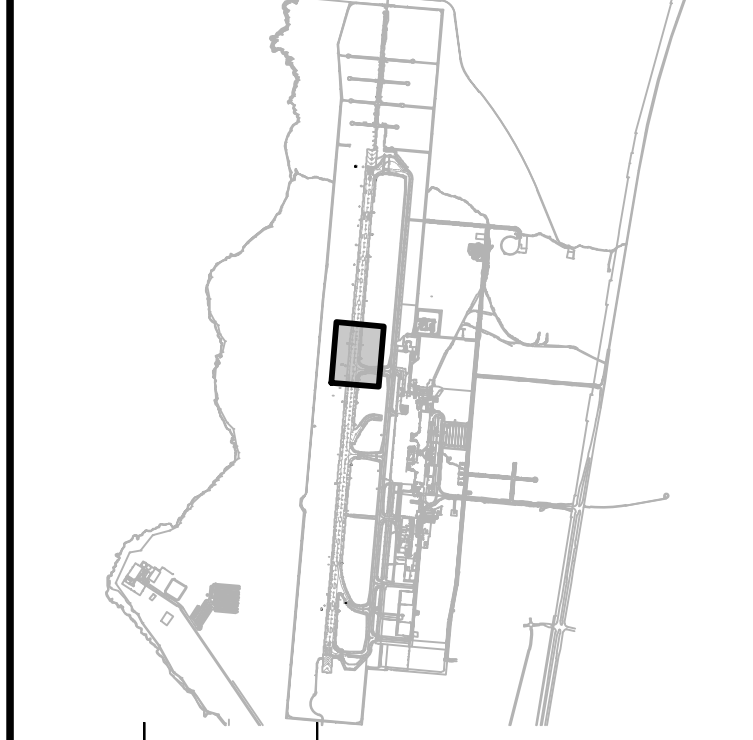


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AC	AT	TR	SH

**KEY PLAN / NOTES:**



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**CONSTRUCTION DOCUMENTS**  
SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

**SHEET TITLE:**

**EXISTING CONDITIONS AND EROSION CONTROL PLAN 6**

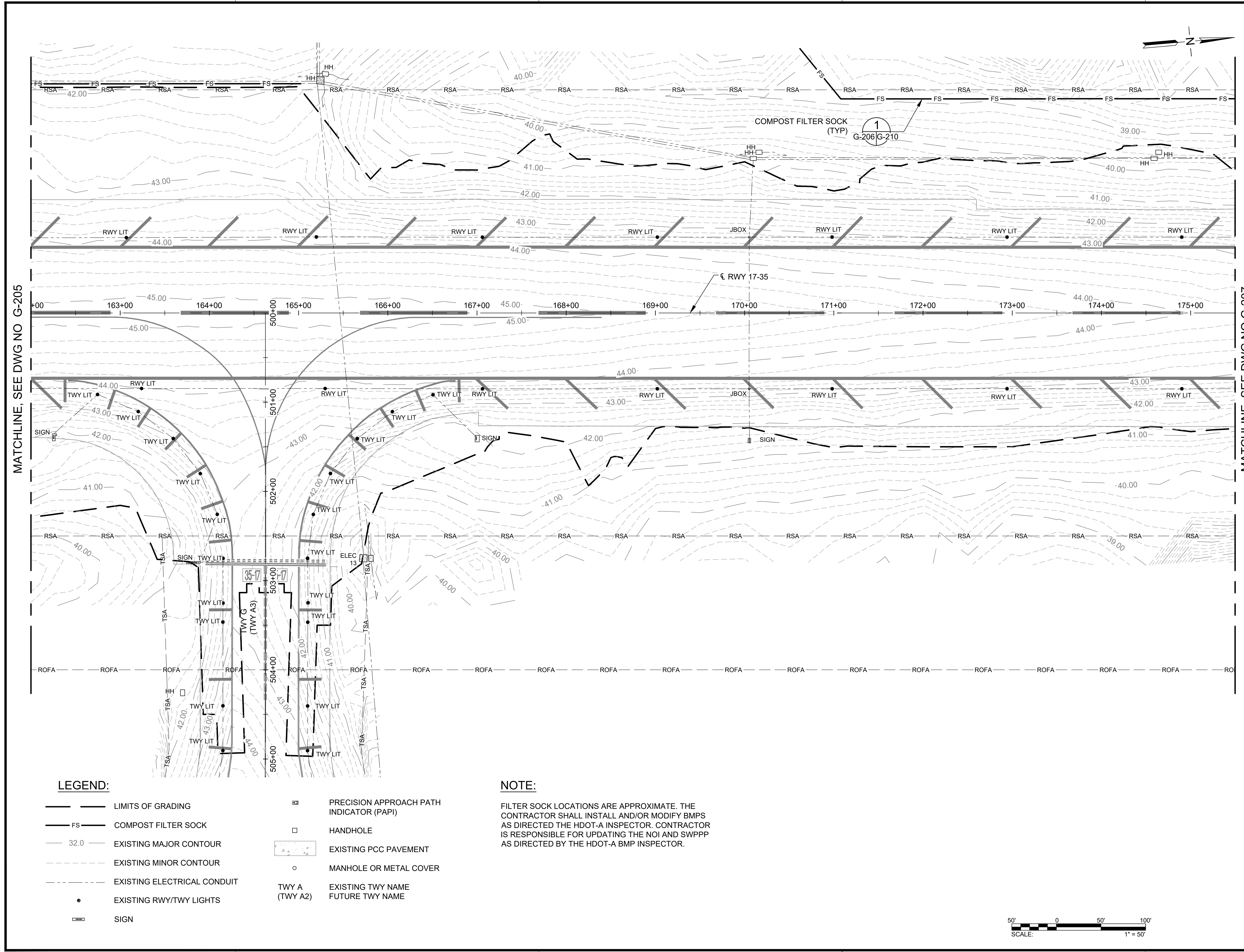
DATE : **09/2023**

SHEET : **G-206**

43 OF 190 SHEETS

DWG. NO.

**G-206**



MATCHLINE, SEE DWG NO G-205

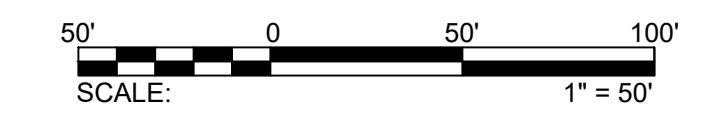
MATCHLINE, SEE DWG NO G-207

**LEGEND:**

- — — LIMITS OF GRADING
- FS — COMPOST FILTER SOCK
- 32.0 — EXISTING MAJOR CONTOUR
- - - - - EXISTING MINOR CONTOUR
- - - - - EXISTING ELECTRICAL CONDUIT
- EXISTING RWY/TWY LIGHTS
- ▭ SIGN
- ▣ PRECISION APPROACH PATH INDICATOR (PAPI)
- HANDHOLE
- ◻ EXISTING PCC PAVEMENT
- MANHOLE OR METAL COVER
- TWY A (TWY A2) EXISTING TWY NAME
- TWY A2 FUTURE TWY NAME

**NOTE:**

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AC	AT	TR	SH

**KEY PLAN / NOTES:**



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENTS**  
SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

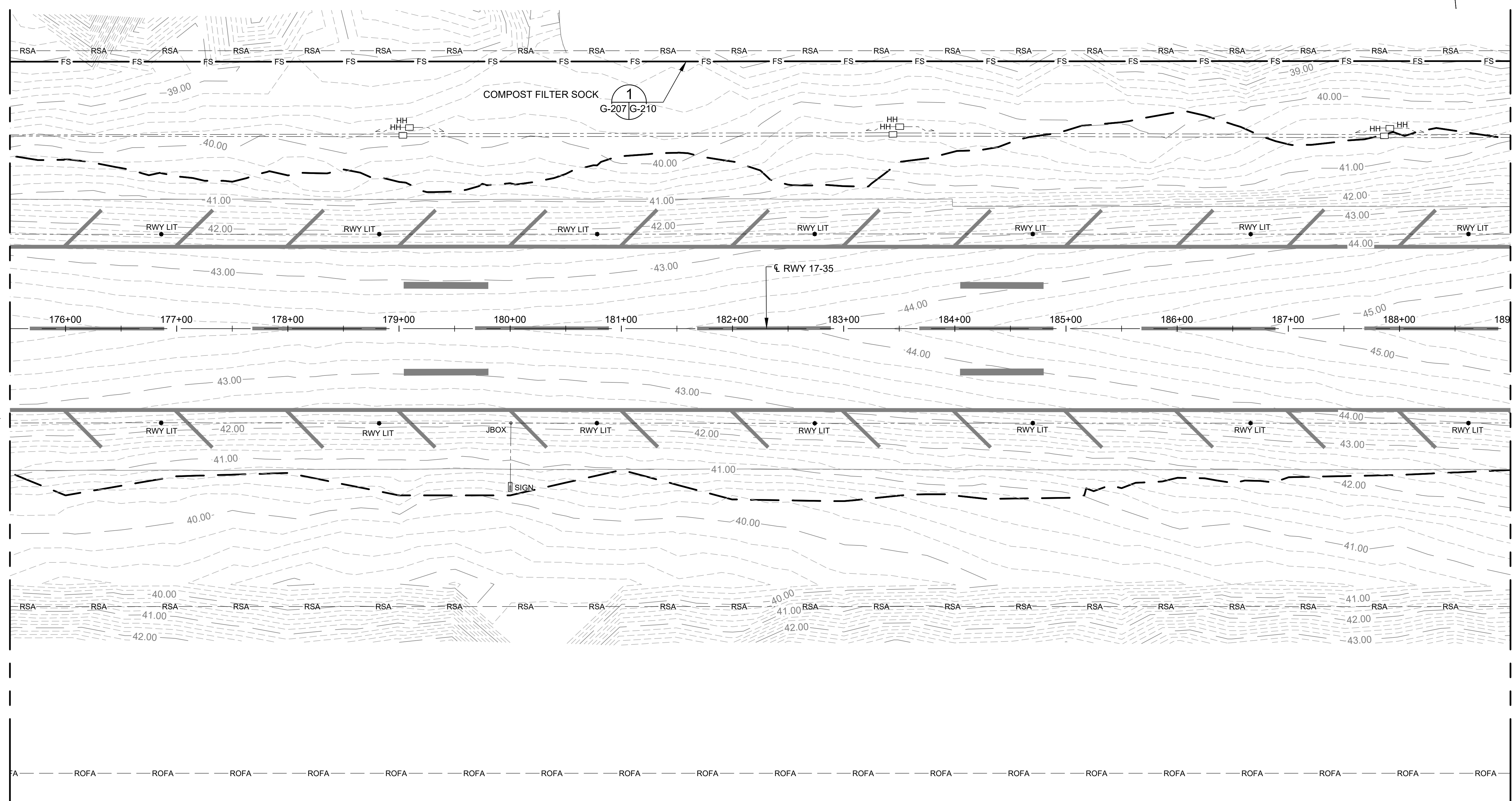
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**EXISTING CONDITIONS AND EROSION CONTROL PLAN 7**

DATE :	DWG. NO.
09/2023	G-207
SHEET :	
44 OF 190 SHEETS	

MATCHLINE, SEE DWG NO G-206

MATCHLINE, SEE DWG NO G-208



**LEGEND:**

- LIMITS OF GRADING
- COMPOST FILTER SOCK
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EXISTING ELECTRICAL CONDUIT
- EXISTING RWY/TWY LIGHTS
- SIGN
- PRECISION APPROACH PATH INDICATOR (PAPI)
- HANDHOLE
- EXISTING PCC PAVEMENT
- MANHOLE OR METAL COVER
- EXISTING TWY NAME
- FUTURE TWY NAME

**NOTE:**

FILTER SOCK LOCATIONS ARE APPROXIMATE. THE CONTRACTOR SHALL INSTALL AND/OR MODIFY BMPS AS DIRECTED THE HDOT-A INSPECTOR. CONTRACTOR IS RESPONSIBLE FOR UPDATING THE NOI AND SWPPP AS DIRECTED BY THE HDOT-A BMP INSPECTOR.



C:\USERS\JBERNORION\ENGINEERS & ASSOCIATES\TESHDOT KOA 17-35 REHAB - DOCUMENTS\2023\ENGINEERING\05 - DRAWING\2021-16-OEA-KOA-EROS-SEDI-CONTL.DWG





STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS



*Martin A. Cleven*  
4/30/24  
Licensed Expiration Date

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DSGN.	DRWN.	CHKD.	APPD.
AC	AT	TR	SH

**KEY PLAN / NOTES:**



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENTS**  
SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

**SHEET TITLE:**

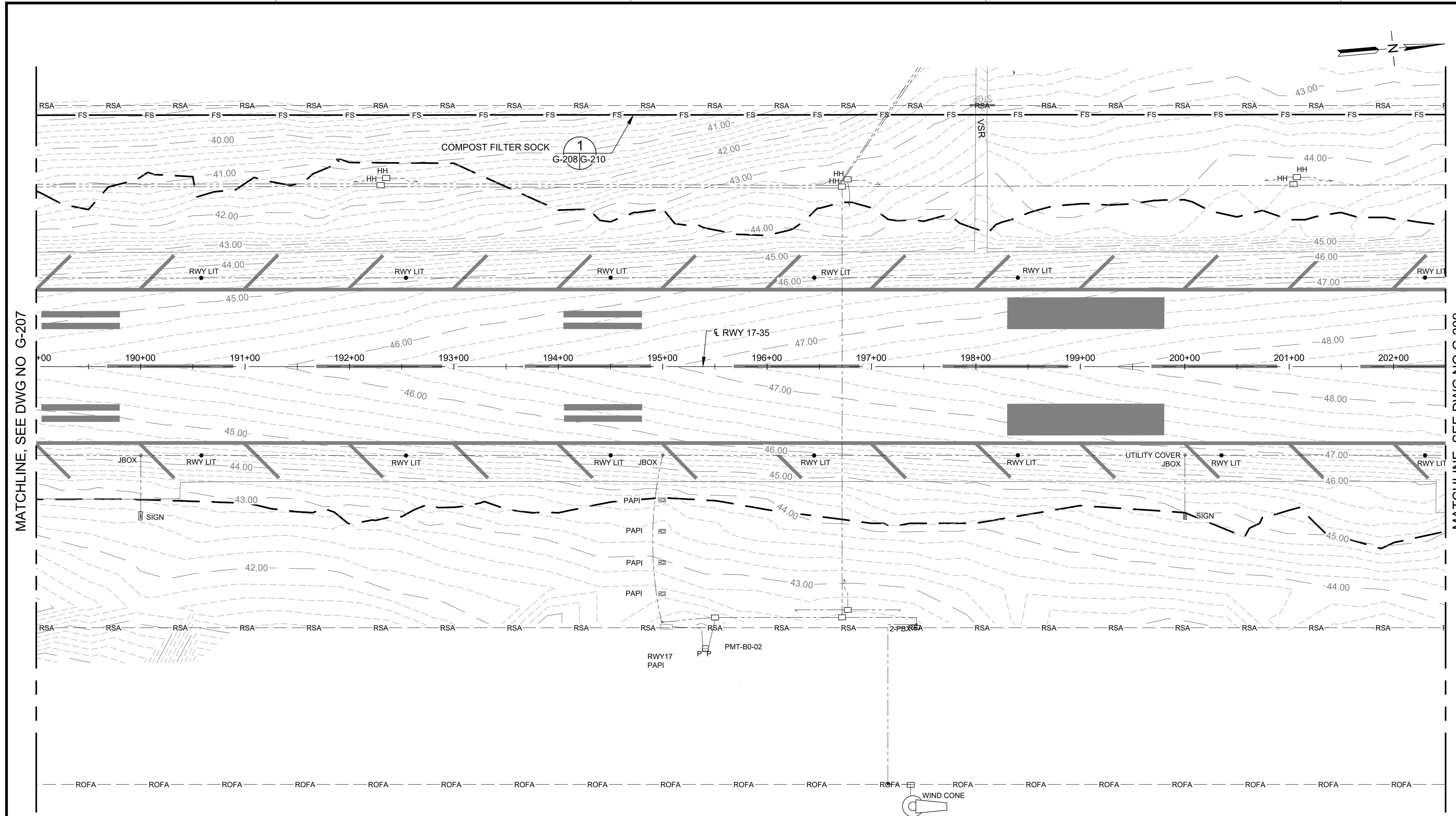
**EXISTING CONDITIONS AND EROSION CONTROL PLAN 8**

DATE : **09/2023**

SHEET : **G-208**

45 OF 190 SHEETS

DWG. NO. **G-208**



MATCHLINE, SEE DWG NO G-207

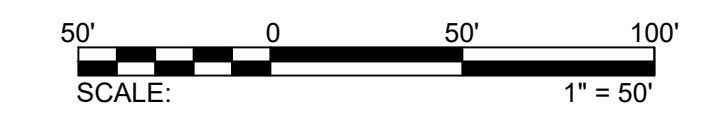
MATCHLINE, SEE DWG NO G-209

**LEGEND:**

- LIMITS OF GRADING
- COMPOST FILTER SOCK
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- EXISTING ELECTRICAL CONDUIT
- EXISTING RWY/TWY LIGHTS
- SIGN
- PRECISION APPROACH PATH INDICATOR (PAPI)
- HANDHOLE
- EXISTING PCC PAVEMENT
- MANHOLE OR METAL COVER
- EXISTING TWY NAME  
FUTURE TWY NAME

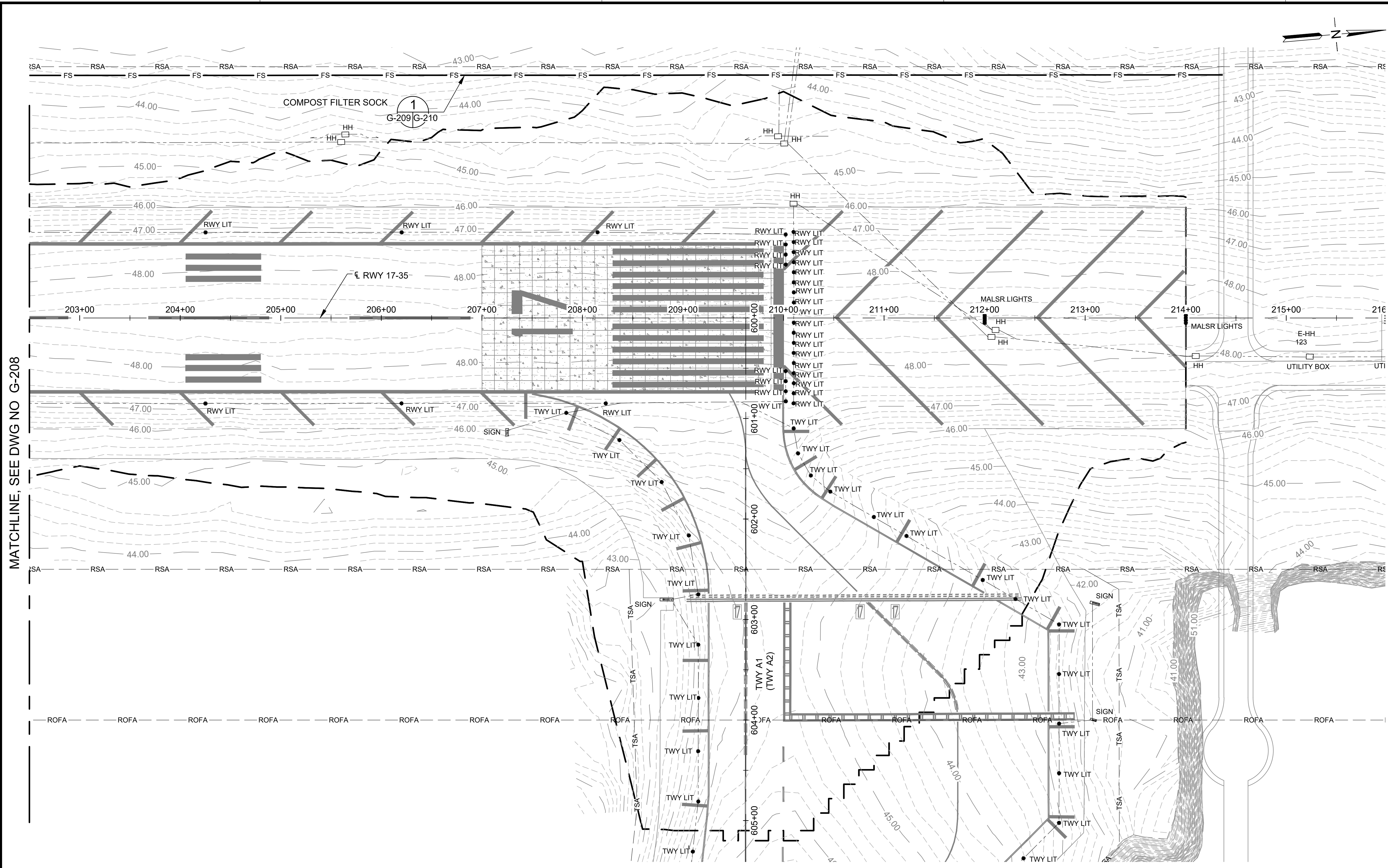
**NOTE:**

FILTER SOCK LOCATIONS ARE APPROXIMATE. THE CONTRACTOR SHALL INSTALL AND/OR MODIFY BMPs AS DIRECTED THE HDOT-A INSPECTOR. CONTRACTOR IS RESPONSIBLE FOR UPDATING THE NOI AND SWPPP AS DIRECTED BY THE HDOT-A BMP INSPECTOR.



C:\USERS\JBERNOR\ENGINEERS & ASSOCIATES\TESH\DOT KONA 17-35 REHAB - DOCUMENTS\2023\ENGINEERING\05 - DRAWING\AH2021-16-OEA-KOA-EROS-SEDI-CONTL.DWG





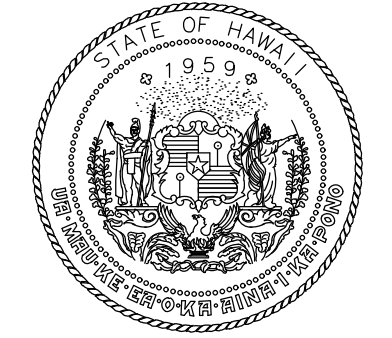
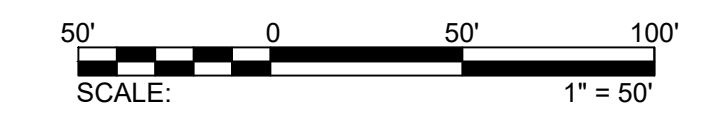
MATCHLINE, SEE DWG NO G-208

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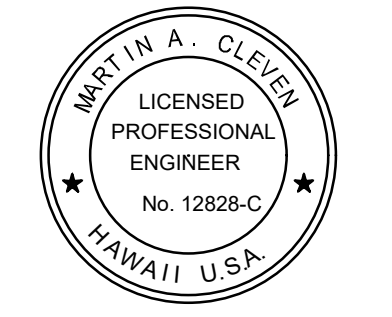
- — — — — LIMITS OF GRADING
- FS — — — — — COMPOST FILTER SOCK
- 32.0 — — — — — EXISTING MAJOR CONTOUR
- - - - - EXISTING MINOR CONTOUR
- - - - - EXISTING ELECTRICAL CONDUIT
- EXISTING RWY/TWY LIGHTS
- ▭ SIGN
- ▣ PRECISION APPROACH PATH INDICATOR (PAPI)
- HANDHOLE
- ◊ EXISTING PCC PAVEMENT
- MANHOLE OR METAL COVER
- TWY A EXISTING TWY NAME
- (TWY A2) FUTURE TWY NAME

**NOTE:**

FILTER SOCK LOCATIONS ARE APPROXIMATE. THE CONTRACTOR SHALL INSTALL AND/OR MODIFY BMPs AS DIRECTED THE HDOT-A INSPECTOR. CONTRACTOR IS RESPONSIBLE FOR UPDATING THE NOI AND SWPPP AS DIRECTED BY THE HDOT-A BMP INSPECTOR.



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS

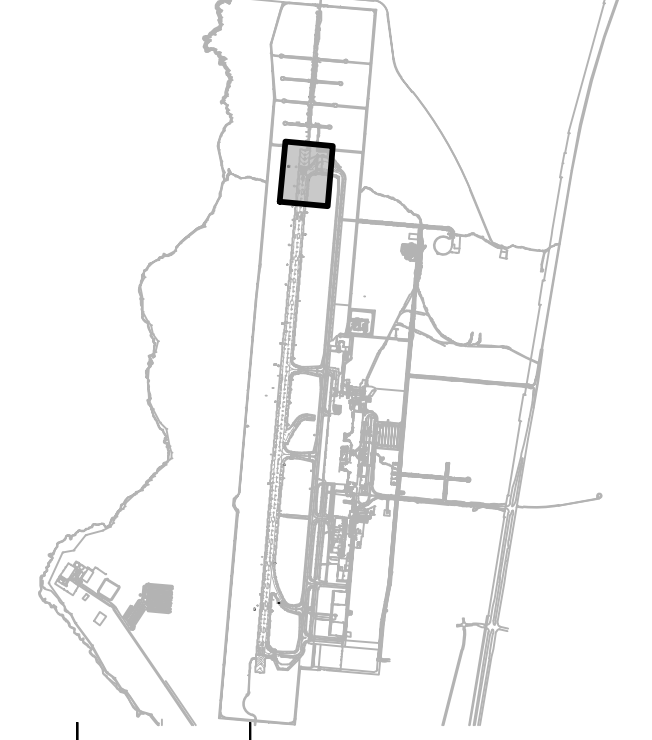


*M. A. Cleven*  
4/30/24  
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DSGN.	DRWN.	CHKD.	APPD.
AC	AT	TR	SH

**KEY PLAN / NOTES:**



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENTS**  
SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

**SHEET TITLE:**

**EXISTING CONDITIONS AND EROSION CONTROL PLAN 9**

DATE : **09/2023**

SHEET : **G-209**

46 OF 190 SHEETS

DWG. NO.

**G-209**

C:\USERS\JBERNORION\ENGINEERS & ASSOCIATES\TESHDOT\KOA 17-35 REHAB - DOCUMENTS\2021-16-OEA-KOA-EROS-SEDI-CONTL.DWG

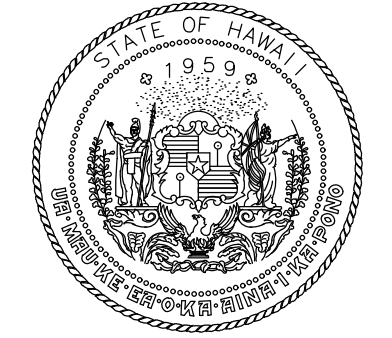


**BEST MANAGEMENT PRACTICE EROSION CONTROL NOTES:**

1. THE CONTRACTOR SHALL DEVELOP AND SUBMIT TO HDOT-A FOR ACCEPTANCE, A CONTRACTOR'S STORMWATER POLLUTION PREVENTION PLAN (SWPPP), AND UPDATES AS NEEDED.
2. BEFORE LAND-DISTURBING ACTIVITIES BEGIN, AND ANNUALLY DURING CONSTRUCTION, ALL CONTRACTOR AND SUBCONTRACTOR EMPLOYEES INVOLVED WITH CONSTRUCTION PROJECT RESPONSIBILITIES MUST COMPLETE THE HDOT-A CONSTRUCTION BMP TRAINING. THERE ARE TWO TRAINING OPTIONS:
  - A. ALL CONTRACTOR AND SUBCONTRACTOR EMPLOYEES INVOLVED WITH CONSTRUCTION PROJECT RESPONSIBILITIES WATCH THE HDOT-A CONSTRUCTION BMP TRAINING VIDEO LOCATED ON THE HDOT-A CONSTRUCTION SITE RUNOFF CONTROL PROGRAM WEBPAGE AND COMPLETE THE HDOT-A CONSTRUCTION BMP TRAINING SURVEY WITH A PASSING SCORE.
  - B. THE CONTRACTOR AND SUBCONTRACTOR SUPERVISORS / MANAGERS WATCH THE HDOT-A CONSTRUCTION BMP TRAINING VIDEO LOCATED ON THE HDOT-A CONSTRUCTION SITE RUNOFF CONTROL PROGRAM WEBPAGE, COMPLETE THE HDOT-A CONSTRUCTION BMP TRAINING SURVEY WITH A PASSING SCORE, TRAIN ALL EMPLOYEES INVOLVED WITH CONSTRUCTION PROJECT RESPONSIBILITIES, AND SUBMIT A SIGN-IN ROSTER FOR THE TRAINING OF THE EMPLOYEES AT THE BOTTOM OF THE CONSTRUCTION BMP SURVEY.
3. ALL CONTRACTORS AND SUBCONTRACTOR PERSONNEL INVOLVED WITH CONSTRUCTION PROJECT RESPONSIBILITIES MUST ALSO BE TRAINED ON THE SITE-SPECIFIC BMPs THAT ARE UTILIZED DURING CONSTRUCTION AND SPILL RESPONSE. RECORDS OF COMPLETION AND/OR TRAINING ROSTER SIGN-IN SHEET MUST BE UP TO DATE.
4. THE CONTRACTOR SHALL DESIGNATE AN NPDES PERMIT, DULY AUTHORIZED REPRESENTATIVE WITH THE HAWAII DEPARTMENT OF HEALTH (DOH), CLEAN WATER BRANCH (CWB). THE AUTHORIZED REPRESENTATIVE SHALL BE RESPONSIBLE FOR COMPLIANCE WITH THE NPDES PERMIT AND MUST CERTIFY, SIGN, AND DATE THE SWPPP INSPECTION DOCUMENTS AND OTHER REQUIRED NPDES DOCUMENTS.
5. INSTALL AND MAINTAIN BMPs AS SHOWN ON THE EROSION CONTROL / BMP PLAN, AND THE HDOT-A CONSTRUCTION ACTIVITIES BMP FIELD MANUAL. ALL BMP MEASURES AND PRACTICES SHALL BE IN COMPLIANCE WITH THE DOTA CONSTRUCTION ACTIVITIES BMP FIELD MANUAL. ANY REVISIONS THAT MAY BE NECESSARY MUST BE SUBMITTED TO AND ACCEPTED BY THE DOTA AIR-EE.

6. PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL OBTAIN A CONSTRUCTION CONNECTION, DISCHARGE, AND SURFACE RUNOFF PERMIT FROM HDOT-A.
7. PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES, HDOT-A WILL CONDUCT AN INITIAL SITE BMP INSPECTION, INCLUDING REVIEW OF THE CONTRACTOR'S SWPPP AND APPLICABLE PERMITS, AND VERIFICATION OF PROPER BMP INSTALLATION. THE CONTRACTOR'S REPRESENTATIVE SHALL ATTEND THE INITIAL INSPECTIONS AND SHALL PROMPTLY ADDRESS THE DEFICIENCIES NOTED. THE BMP MEASURES TO CONTROL EROSION, SEDIMENT, AND OTHER POLLUTANTS SHALL BE IN PLACE PRIOR TO CONDUCTING LAND-DISTURBING ACTIVITIES. THE SITE SHALL ONLY BE DISTURBED TO THE EXTENT NECESSARY FOR THE IMPLEMENTATION OF THESE MEASURES. AFTER INSTALLATION OF THE MEASURES IS COMPLETED, THE CONTRACTOR SHALL REQUEST FROM DOTA AIR-EE THAT DOTA'S AUTHORIZED INSPECTOR CONDUCT A PRE-CONSTRUCTION BMP INSPECTION OF THE SITE. THIS INSPECTION WILL BE SUBJECT TO THE AVAILABILITY OF THE INSPECTOR. ONLY AFTER ANY DEFICIENCIES THAT ARE OBSERVED BY THE INSPECTOR AND DOTA AIR-EE SHALL LAND-DISTURBING ACTIVITIES BE ALLOWED TO COMMENCE ON THE SITE.
8. THE CONTRACTOR SHALL CONDUCT WEEKLY BMP SELF INSPECTIONS TO ENSURE COMPLIANCE WITH THE PLANS AND BMP FIELD MANUAL.
9. A CONTRACTOR'S REPRESENTATIVE SHALL ATTEND ALL HDOT-A BMP INSPECTIONS AND SHALL PROMPTLY ADDRESS DEFICIENCIES NOTED BY THE HDOT-A INSPECTOR.
10. TEMPORARY EROSION AND SEDIMENT CONTROLS MEASURES SHALL NOT BE REMOVED BEFORE THE PERMANENT EROSION CONTROLS AND/OR PERMANENT STABILIZATION MEASURES ARE IN-PLACE AND ESTABLISHED. ALL AREAS THAT WERE DISTURBED DURING CONSTRUCTION SHALL BE PERMANENTLY STABILIZED. THE CONTRACTOR SHALL REQUEST FROM THE DOTA AIR-EE THAT DOTA'S AUTHORIZED INSPECTOR CONDUCT A FINAL BMP INSPECTION OF THE SITE. THIS INSPECTION WILL BE SUBJECT TO THE AVAILABILITY OF THE INSPECTOR. ONLY AFTER ANY DEFICIENCIES THAT ARE OBSERVED BY THE INSPECTOR DURING THE INSPECTION ARE ADDRESSED AND CORRECTED BY THE CONTRACTOR TO THE ACCEPTANCE OF THE INSPECTOR AND DOTA AIR-EE SHALL THE TEMPORARY BMPs BE ALLOWED TO BE REMOVED BY THE CONTRACTOR.

11. THE CONTRACTOR SHALL NOTIFY DOH OF THE CONSTRUCTION START DATE WITHIN SEVEN (7) CALENDAR DAYS BEFORE THE START OF CONSTRUCTION ACTIVITIES.
12. COMPLETE AND SUBMIT THE NOTICE OF CESSATION WITHIN SEVEN (7) CALENDAR DAYS AFTER THE END OF THE MONTH THE PROJECT WAS COMPLETED.
13. CONTRACTOR SHALL SUBMIT THE FOLLOWING DOCUMENTS TO HDOT-A, IF APPLICABLE:
  - A. C-EHMP CLOSE-OUT REPORT.
  - B. SOLID WASTE DISCLOSURE FORM FOR NPDES PERMITTED PROJECTS.
  - C. UIC WELL FINAL REPORT, AND DOH SDWB UIC WELL APPROVAL TO USE.
  - D. INDIVIDUAL WASTEWATER SYSTEM FINAL REPORT, AND DOH WWB INDIVIDUAL WASTEWATER SYSTEM APPROVAL TO USE.
  - E. UNDERGROUND STORAGE TANK REMOVAL REPORT.
  - F. NOI-F APPLICATION FOR HYDROTESTING, AND DOH CWB NPDES HYDROTESTING PERMIT.
  - G. NOI-G APPLICATION FOR DEWATERING, AND DOH CWB NPDES DEWATERING PERMIT.
  - H. WARRANTIES AND O&M MANUALS FOR POST-CONSTRUCTION BMPs INSTALLED.



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS



4/30/24  
Licensed Expiration Date

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DSGN.	DRWN.	CHKD.	APPD.
AC	AT	TR	SH

**KEY PLAN / NOTES:**

NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENTS**  
SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

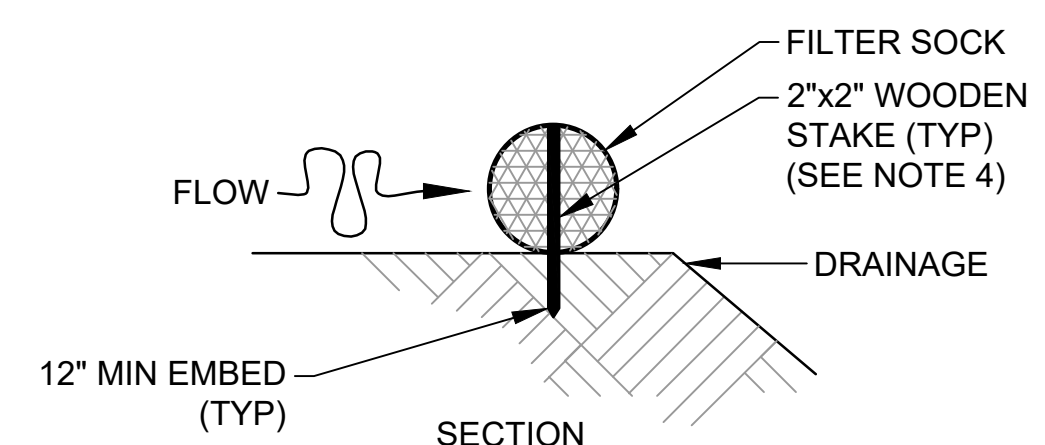
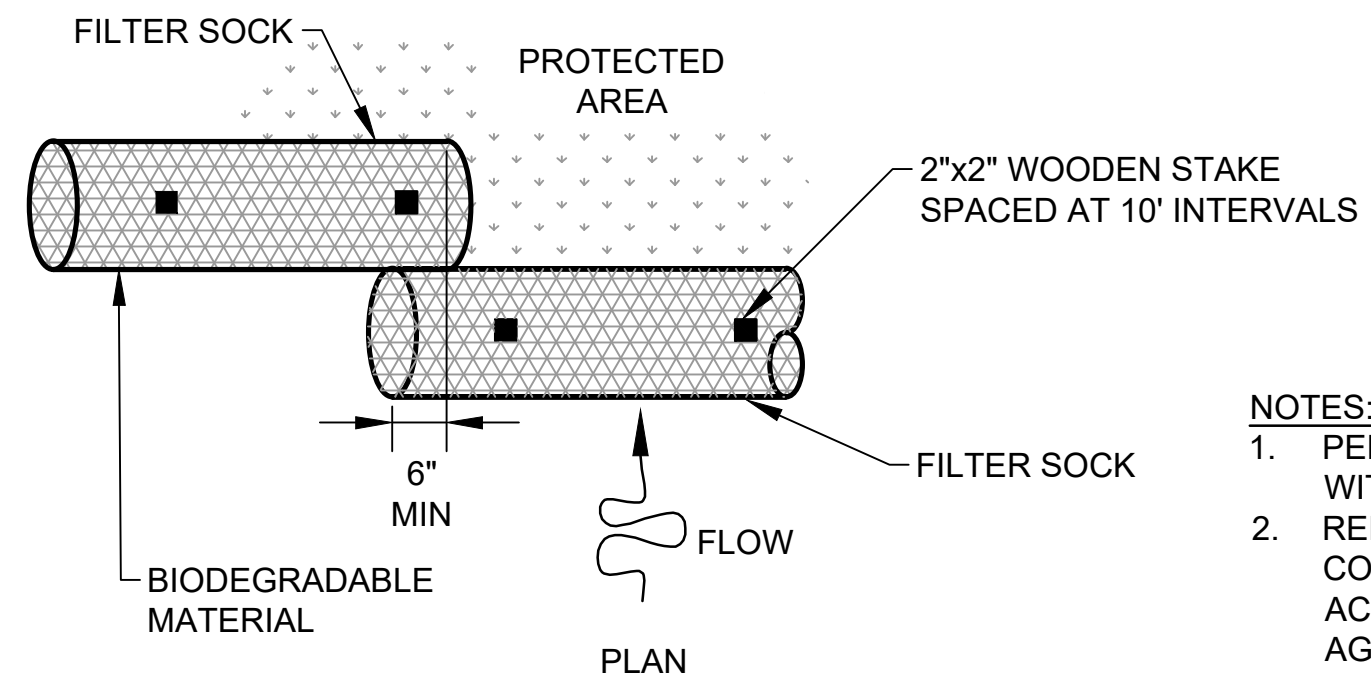
**PROJECT NO.:**

**AH2021-16**

**SHEET TITLE:**

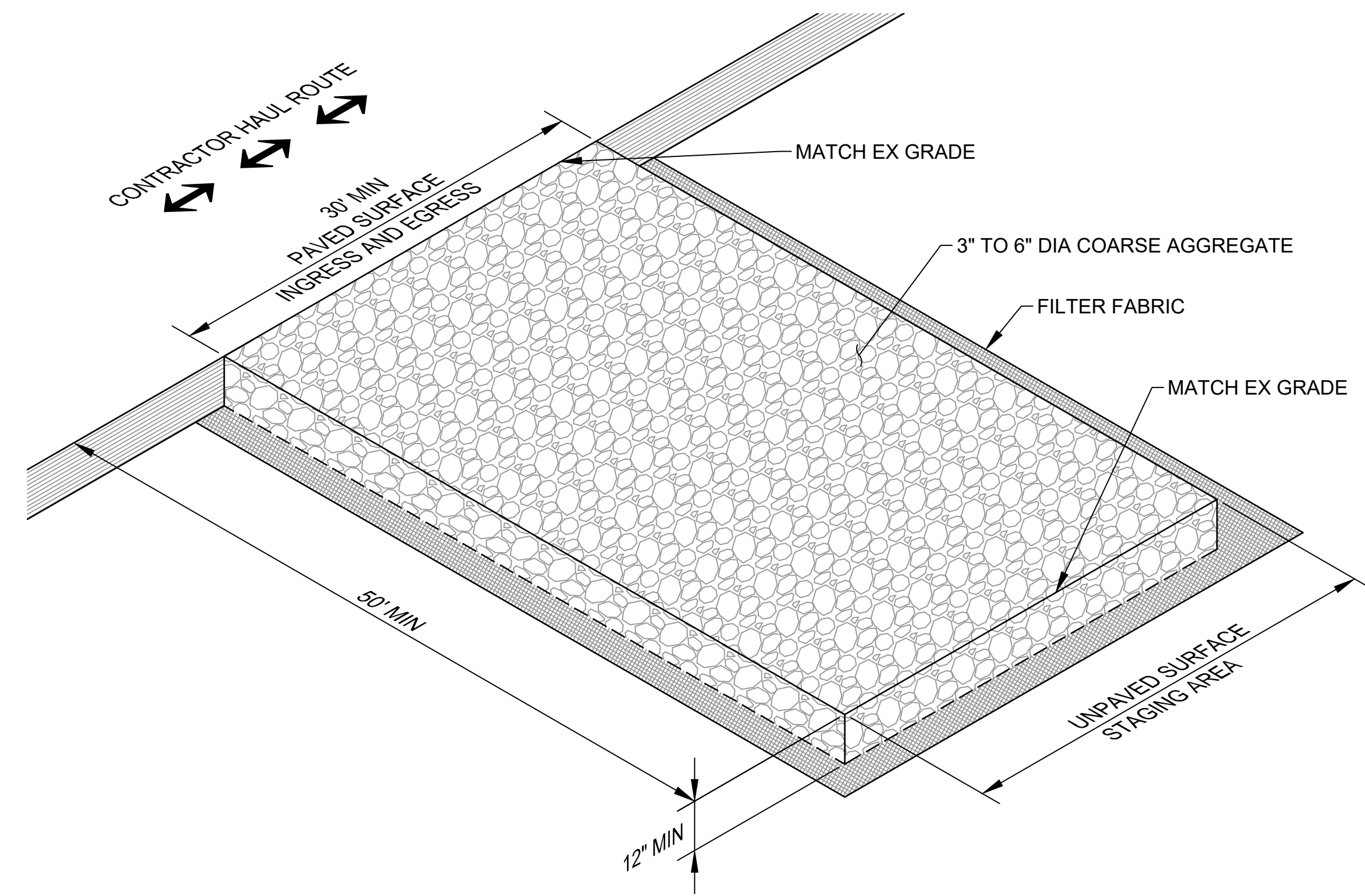
**EROSION CONTROL DETAILS**

DATE :	DWG. NO.
09/2023	G-210
SHEET :	
47 OF 190 SHEETS	



**1 COMPOST FILTER SOCK**  
G-200-G-209 G-210 SCALE: NTS

- NOTES:**
1. PERFORM MAINTENANCE IN ACCORDANCE WITH PERMITTING AGENCY.
  2. REMOVE FILTER SOCKS AT THE CONCLUSION OF THE PROJECT, IN ACCORDANCE WITH THE PERMITTING AGENCY REQUIREMENTS.
  3. USE ALTERNATIVE METHOD FOR ANCHORING OF FILTER SOCKS DEPENDING ON TERRAIN, AS RECOMMENDED BY THE MANUFACTURER/SUPPLIER, AND AS APPROVED BY THE RPR.
  4. FOR FILTER SOCKS LOCATED ON SLOPES, STAKES SHALL BE PLACED ON THE DOWNSTREAM SIDE OF THE FILTER SOCKS.



- NOTES:**
1. DRIVEWAY SHALL MEET THE REQUIREMENTS OF THE PERMITTING AGENCY.
  2. RECOMMENDED THE ENTRANCE BE CROWNED OR GRADED SUCH THAT RUNOFF DRAINS AWAY FROM THE PAVED SURFACE / HAUL ROUTE.

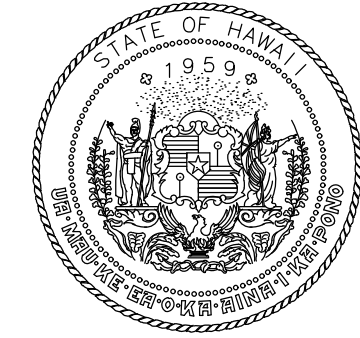
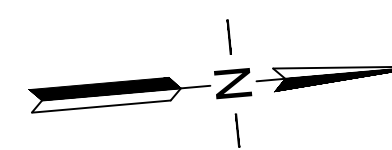
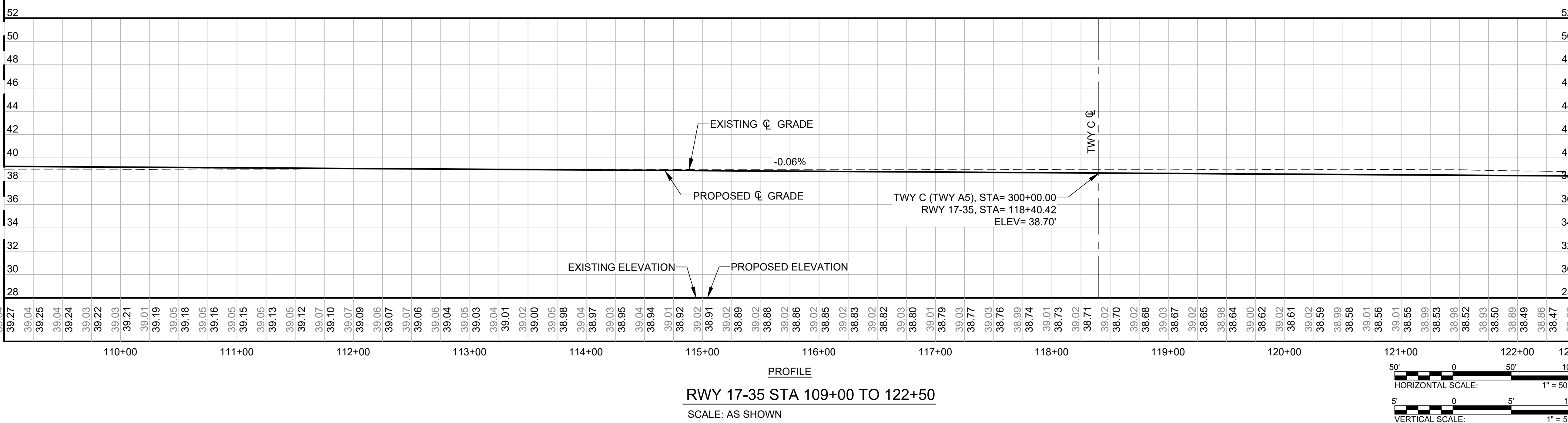
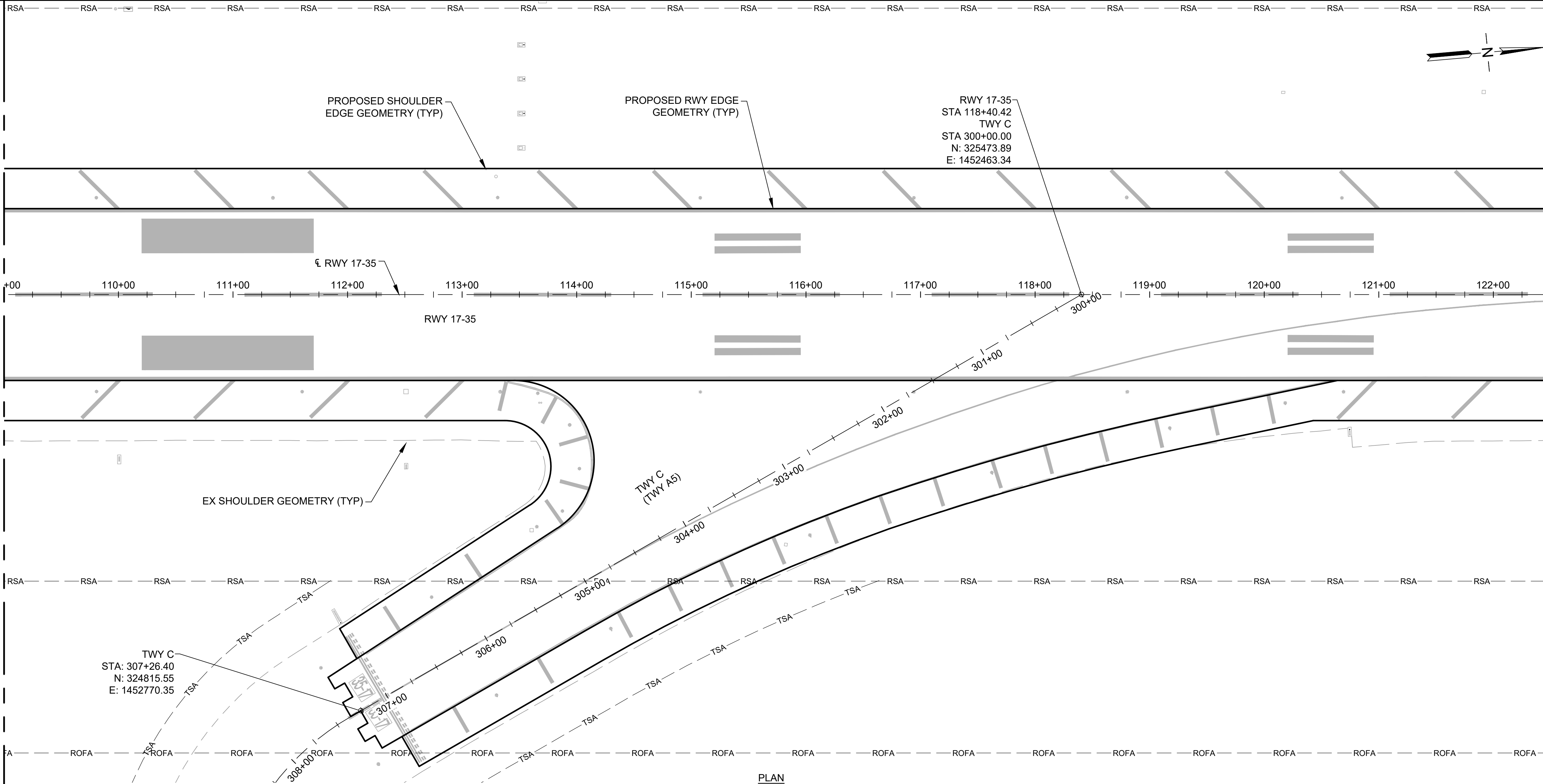
**2 STABILIZED CONSTRUCTION ENTRANCE**  
G-200 G-210 SCALE: NTS

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STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS



4/30/24  
Licensed Expiration Date

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AC	AT	TR	SH

KEY PLAN / NOTES:



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENTS**  
SEPTEMBER 2023  
DATE

PROJECT TITLE :

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

PROJECT NO.:

**AH2021-16**

SHEET TITLE:

**HORIZONTAL & VERTICAL CONTROL PLAN 2**

DATE :	DWG. NO.
09/2023	<b>C-102</b>
SHEET :	
49 OF 190 SHEETS	

MATCHLINE, SEE DWG NO C-101

MATCHLINE, SEE DWG NO C-103

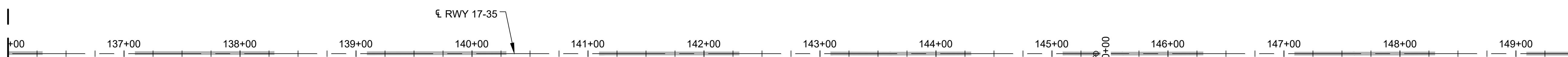
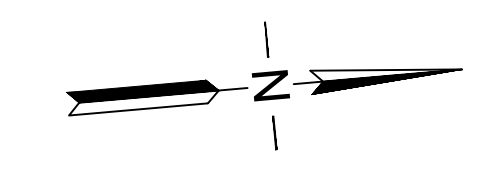
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PROPOSED SHOULDER  
EDGE GEOMETRY (TYP)

PROPOSED RWY EDGE  
GEOMETRY (TYP)



℄ RWY 17-35

RWY 17-35

EX SHOULDER GEOMETRY (TYP)

RWY 17-35  
STA 145+37.77  
TWY H  
STA 400+00.00  
N: 328160.97  
E: 1452698.39

PROPOSED TWY EDGE  
GEOMETRY (TYP)

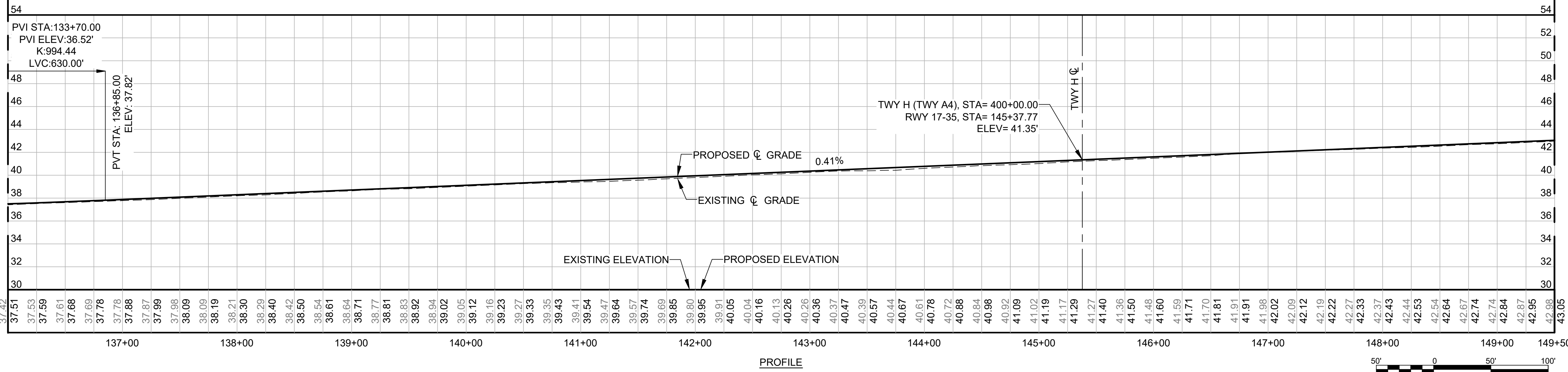
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STA: 403+15.00  
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TWY H  
(TWY A4)

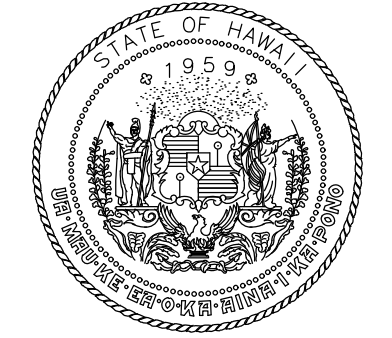
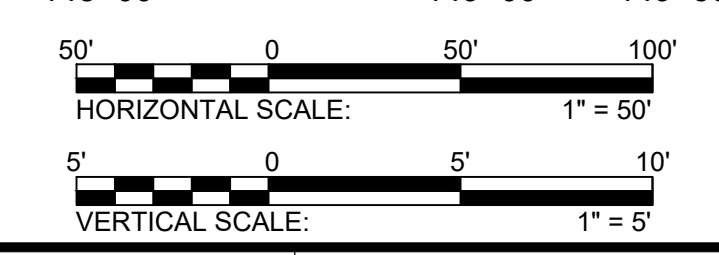
MATCHLINE, SEE DWG NO C-103

MATCHLINE, SEE DWG NO C-105

PLAN



RWY 17-35 STA 136+00 TO 149+50  
SCALE: AS SHOWN



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS

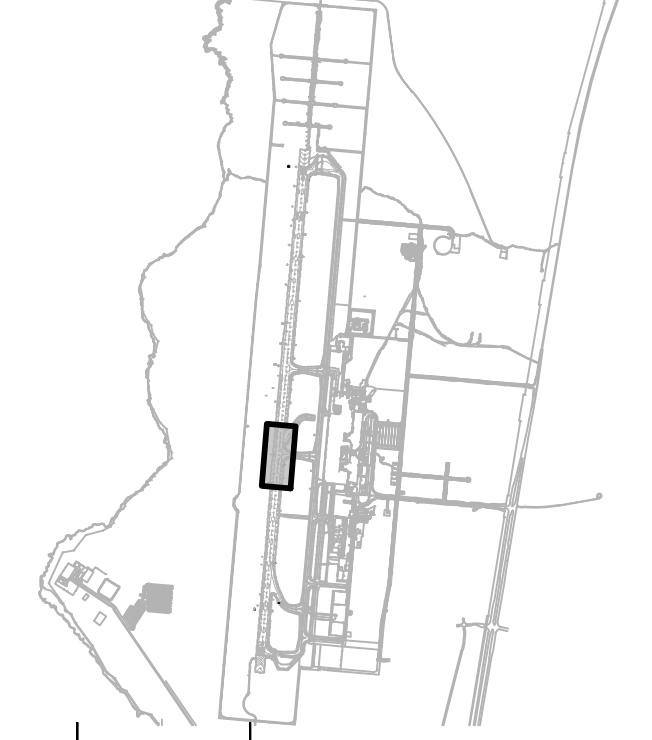


*Mark A. Clevon*  
4/30/24  
Licensed Expiration Date

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AC	AT	TR	SH

KEY PLAN / NOTES:



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENTS**  
SEPTEMBER 2023  
DATE

PROJECT TITLE :

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

PROJECT NO.:

**AH2021-16**

SHEET TITLE:

**HORIZONTAL & VERTICAL CONTROL PLAN 4**

DATE : **09/2023**

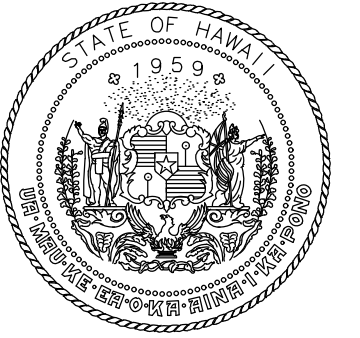
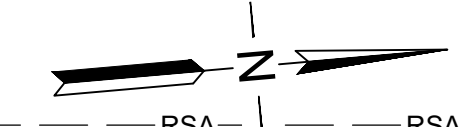
SHEET :

51 OF 190 SHEETS

DWG. NO.

**C-104**

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STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
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*M. A. Clevon*  
4/30/24  
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DSGN.	DRWN.	CHKD.	APPD.
AC	AT	TR	SH

**KEY PLAN / NOTES:**



NO.	DATE	REVISIONS
-----	------	-----------

**CONSTRUCTION DOCUMENTS**

SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**

AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

**SHEET TITLE:**

**HORIZONTAL & VERTICAL CONTROL PLAN 5**

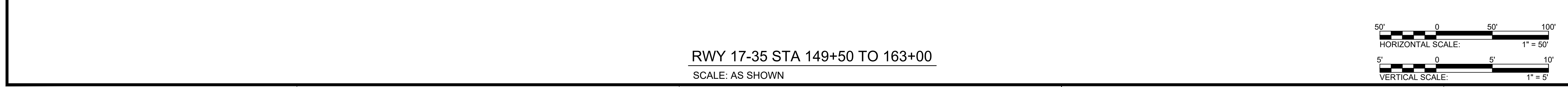
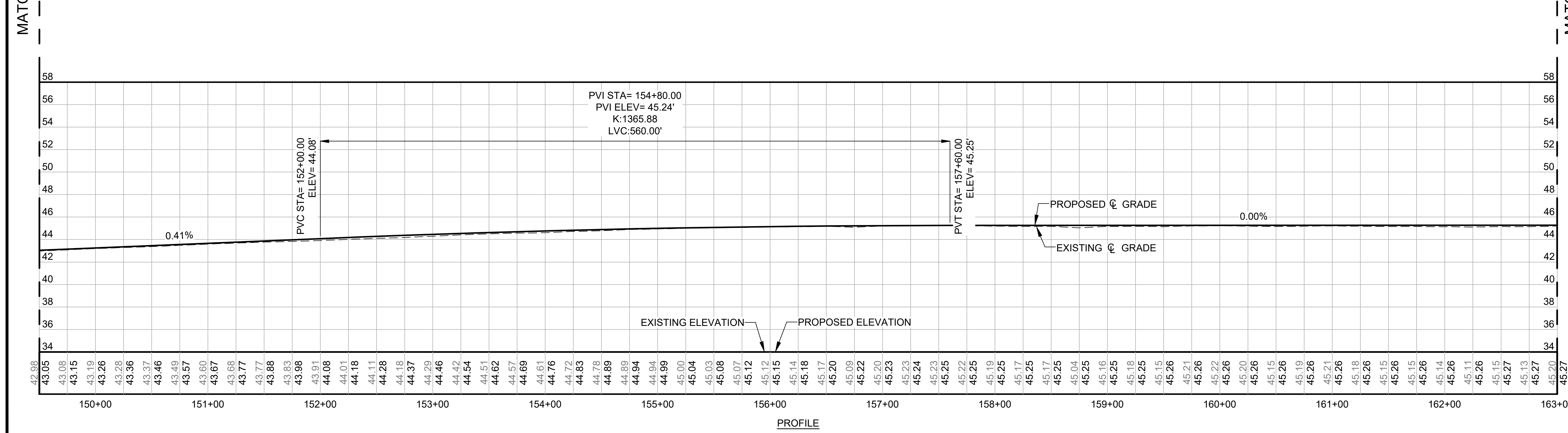
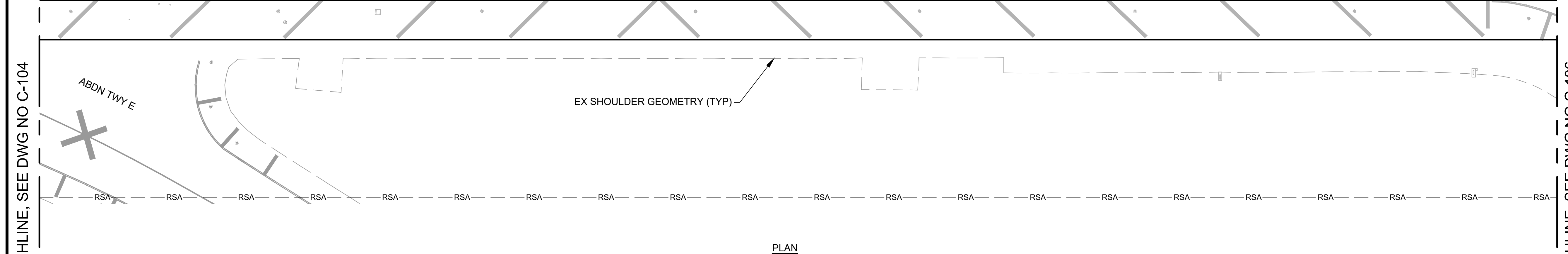
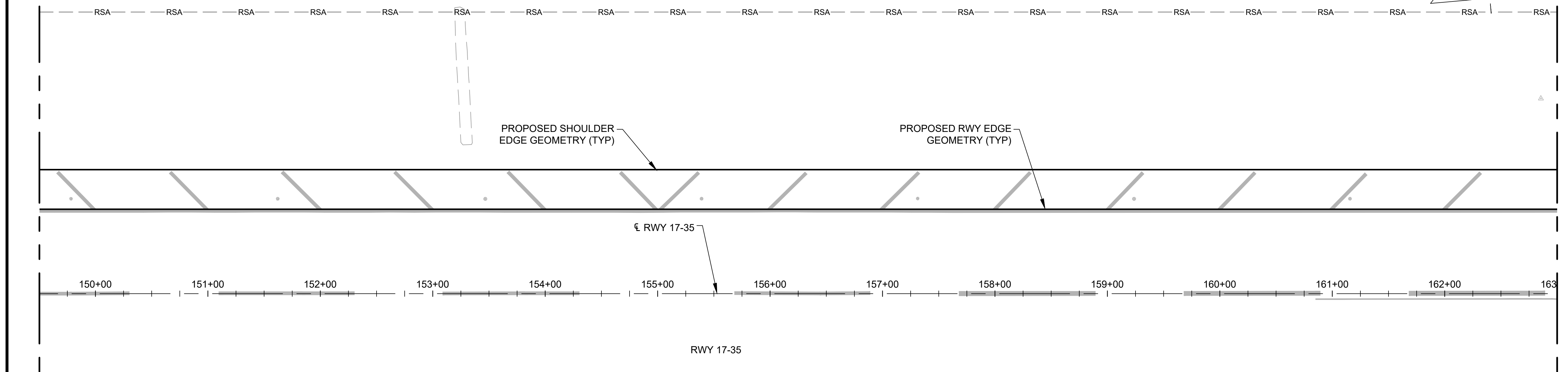
DATE : **09/2023**

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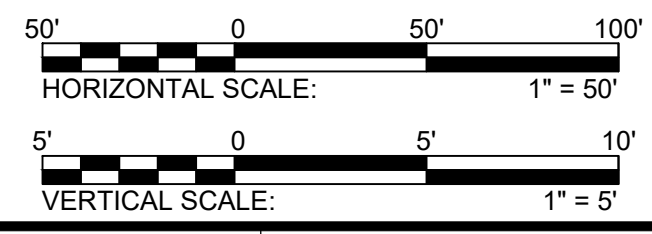
52 OF 190 SHEETS

DWG. NO.

**C-105**



**RWY 17-35 STA 149+50 TO 163+00**  
SCALE: AS SHOWN



MATCHLINE, SEE DWG NO C-104

MATCHLINE, SEE DWG NO C-106

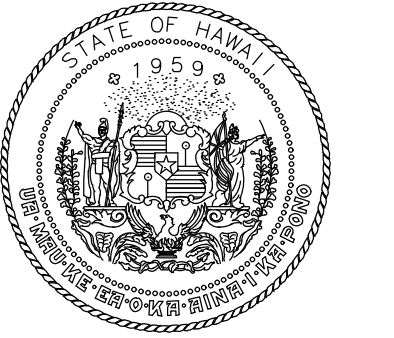
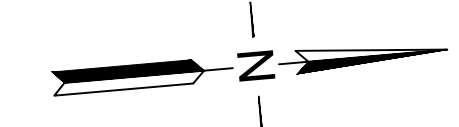
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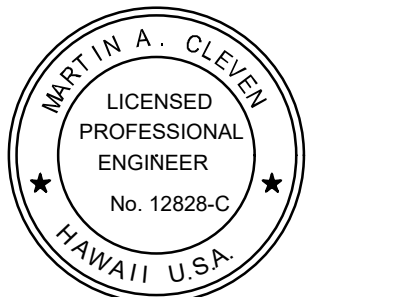
RWY 17-35  
 STA 164+62.92  
 TWY G  
 STA 500+00.00  
 N: 330078.80  
 E: 1452866.16

PROPOSED SHOULDER  
 EDGE GEOMETRY (TYP)

PROPOSED RWY EDGE  
 GEOMETRY (TYP)



STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 AIRPORTS



*Mark A. Clevon*  
 4/30/24  
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AC	AT	TR	SH

**KEY PLAN / NOTES:**



NO.	DATE	REVISIONS

**CONSTRUCTION DOCUMENTS**  
 SEPTEMBER 2023  
 DATE

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**  
 AT  
 ELLISON ONIZUKA  
 KONA INTERNATIONAL AIRPORT AT KEAHOLE  
 KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

**SHEET TITLE:**

**HORIZONTAL &  
 VERTICAL CONTROL  
 PLAN 6**

DATE : **09/2023**

SHEET : **C-106**

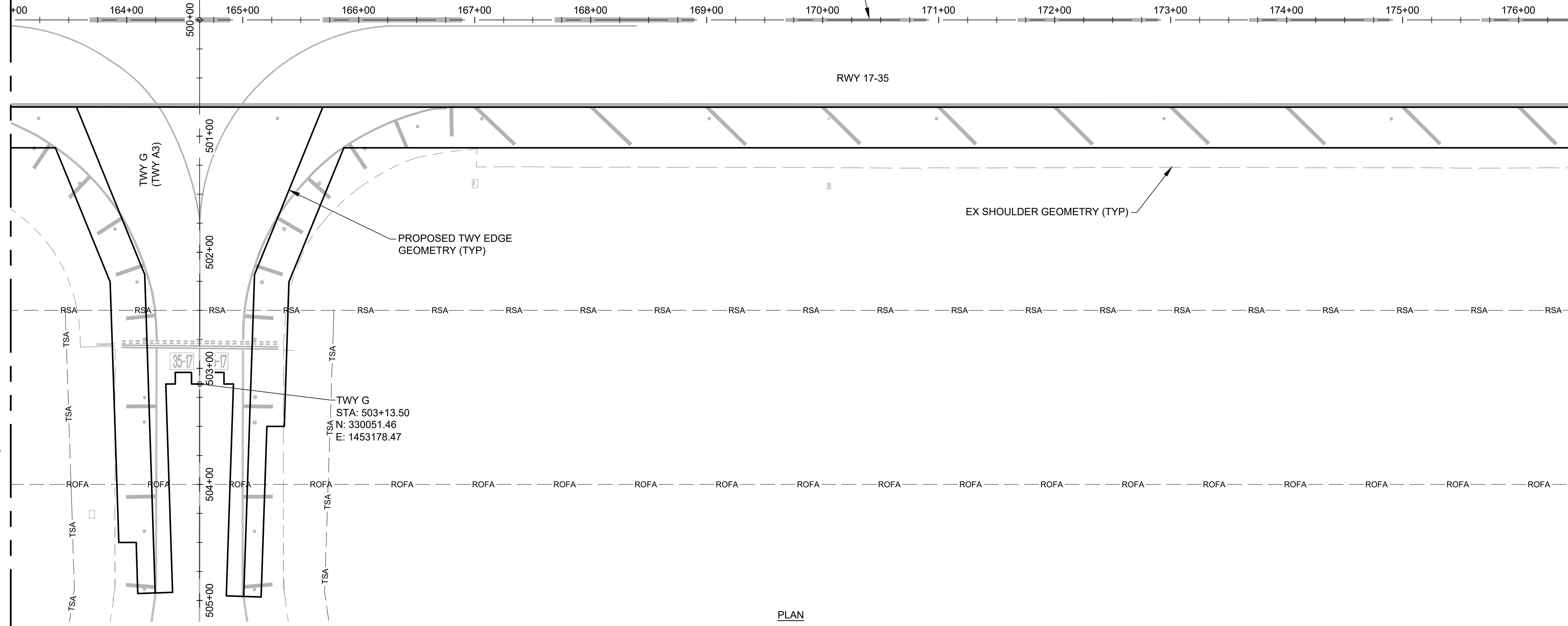
53 OF 190 SHEETS

DWG. NO.

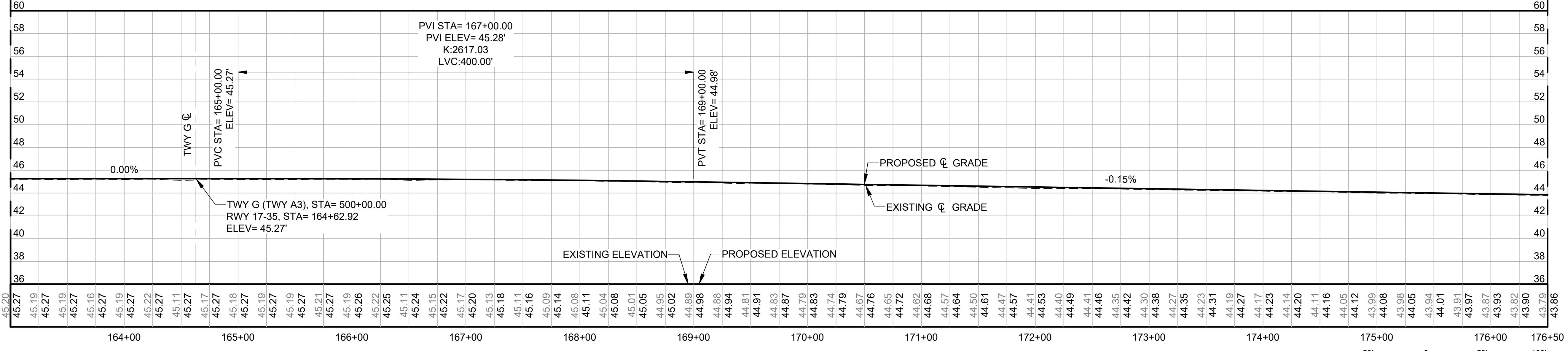
**C-106**

MATCHLINE, SEE DWG NO C-105

MATCHLINE, SEE DWG NO C-107

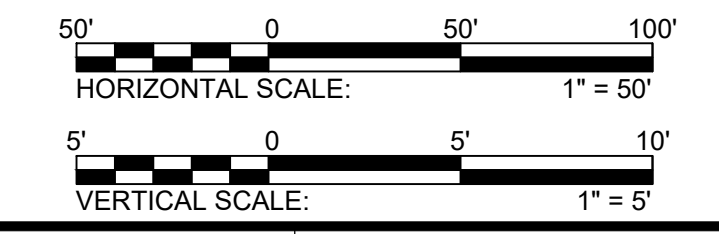


PLAN

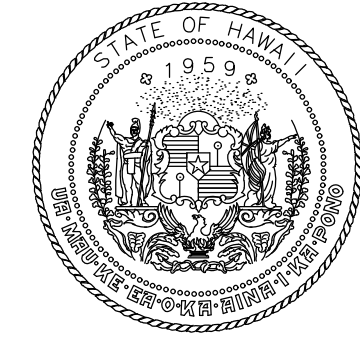
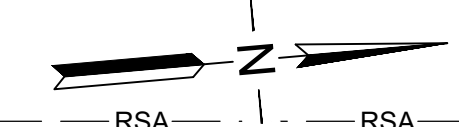


PROFILE

**RWY 17-35 STA 163+00 TO 176+50**  
 SCALE: AS SHOWN



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STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS



*Mark A. Clevon*  
4/30/24  
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AC	AT	TR	SH

**KEY PLAN / NOTES:**



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENTS**

SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**

AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

**SHEET TITLE:**

**HORIZONTAL & VERTICAL CONTROL PLAN 7**

DATE :

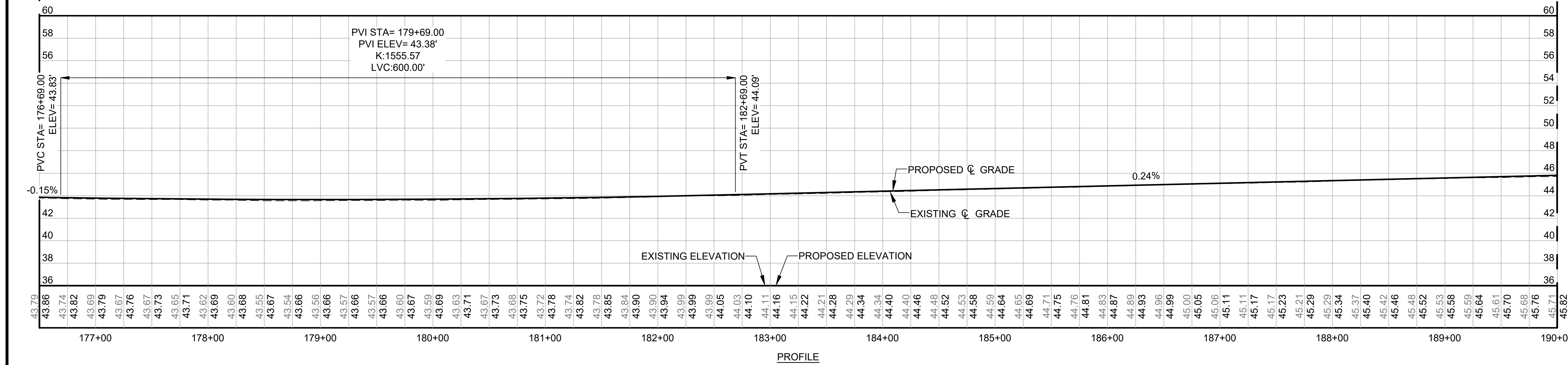
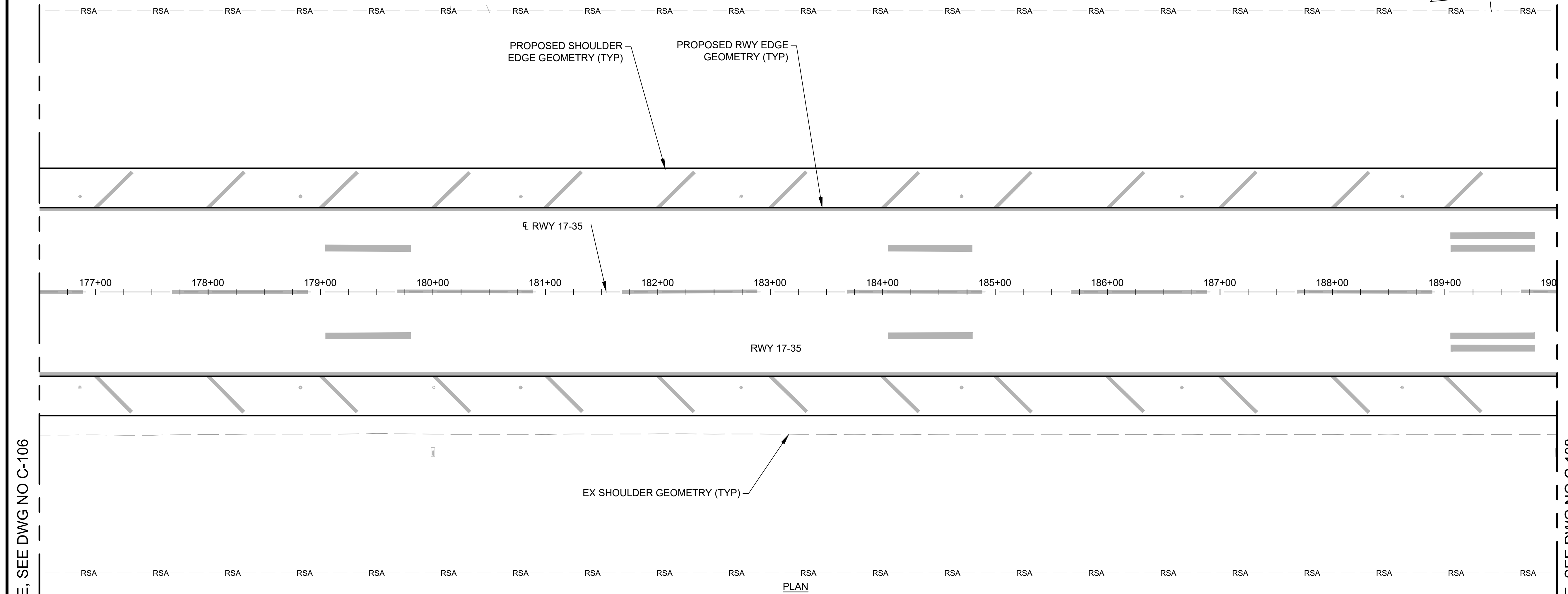
09/2023

SHEET :

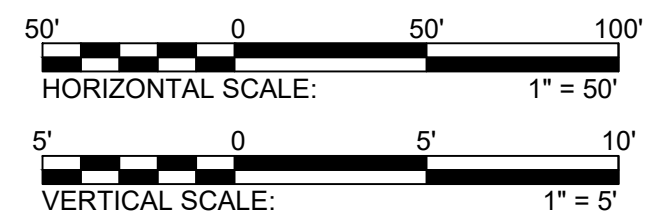
54 OF 190 SHEETS

DWG. NO.

**C-107**



**RWY 17-35 STA 176+50 TO 190+00**  
SCALE: AS SHOWN

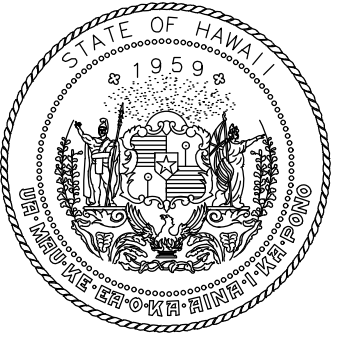
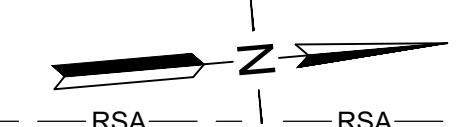


MATCHLINE; SEE DWG NO C-106

MATCHLINE; SEE DWG NO C-108

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STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS

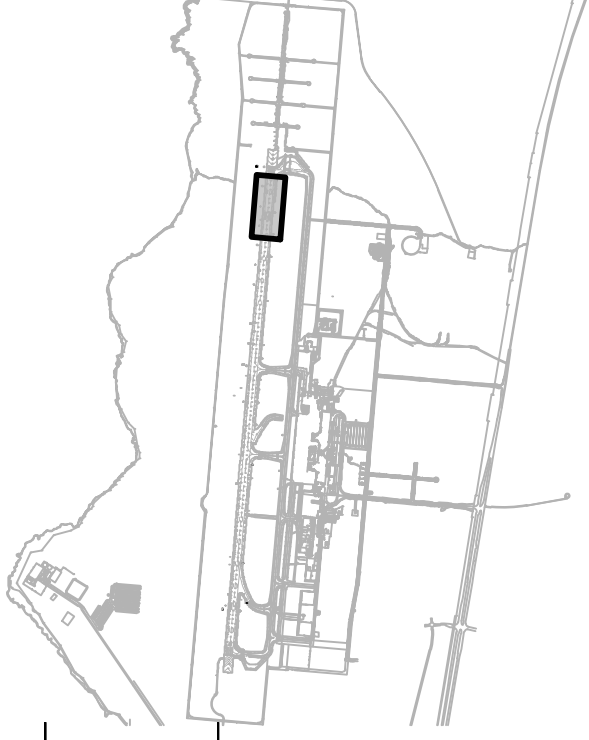


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4/30/24  
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AC	AT	TR	SH

**KEY PLAN / NOTES:**



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENTS**

SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35  
REHABILITATION**

AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

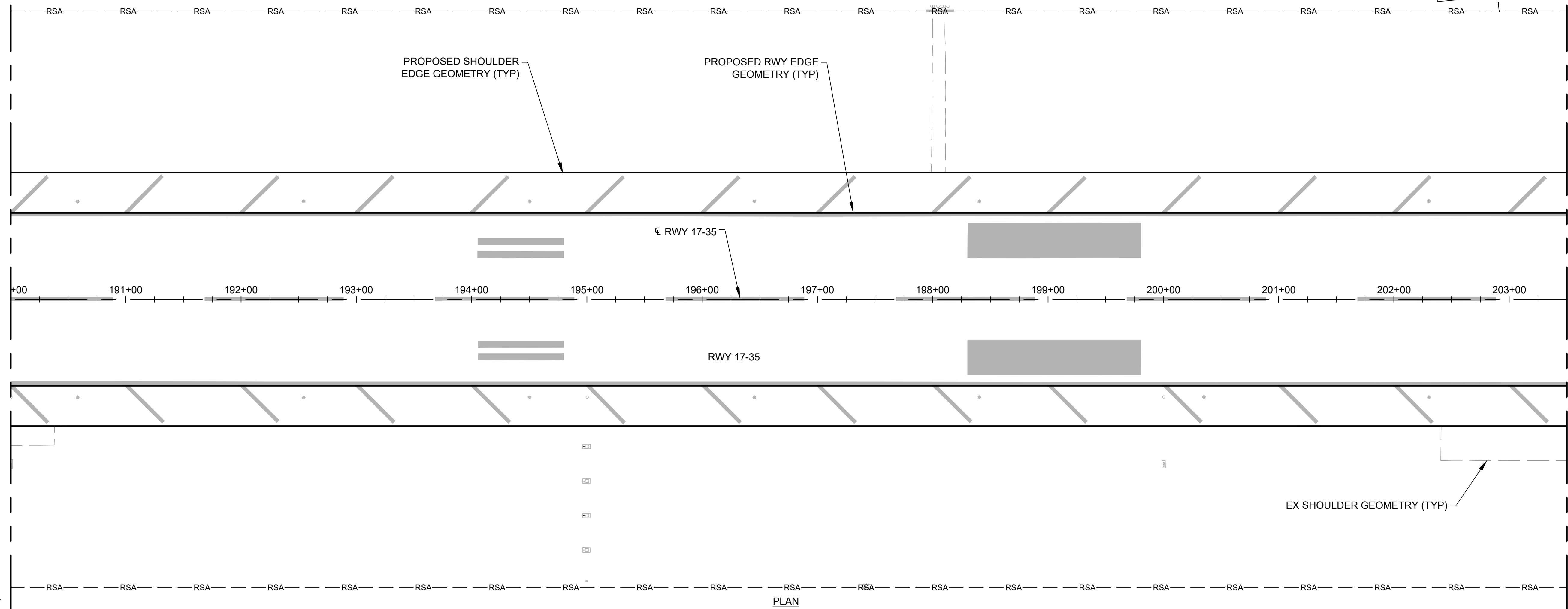
**SHEET TITLE:**

**HORIZONTAL &  
VERTICAL CONTROL  
PLAN 8**

DATE : **09/2023**

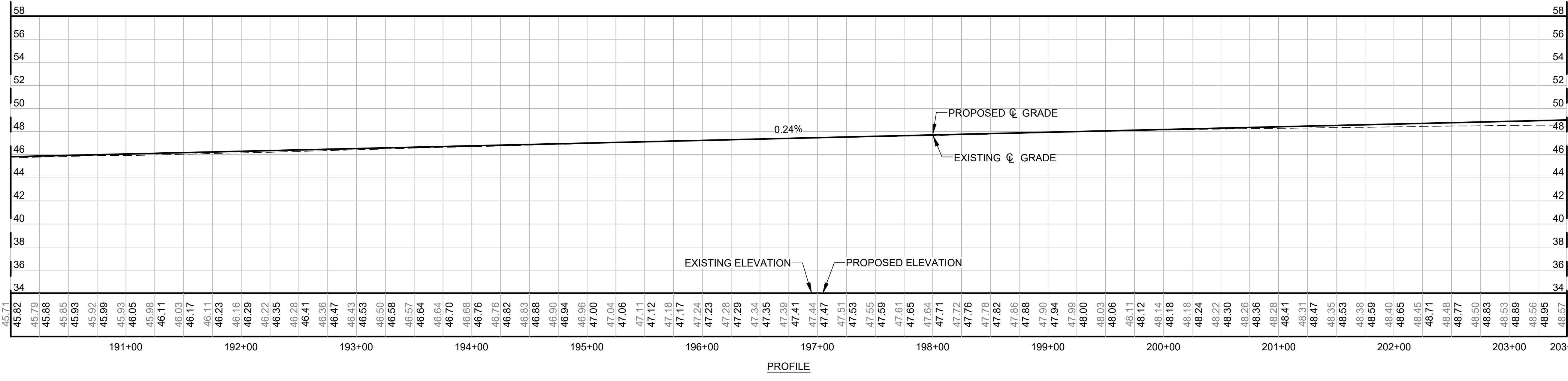
DWG. NO. **C-108**

SHEET : **55 OF 190 SHEETS**

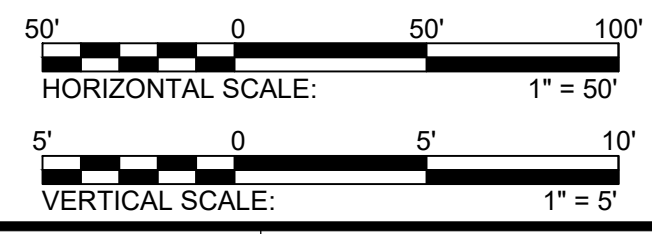


MATCHLINE; SEE DWG NO C-107

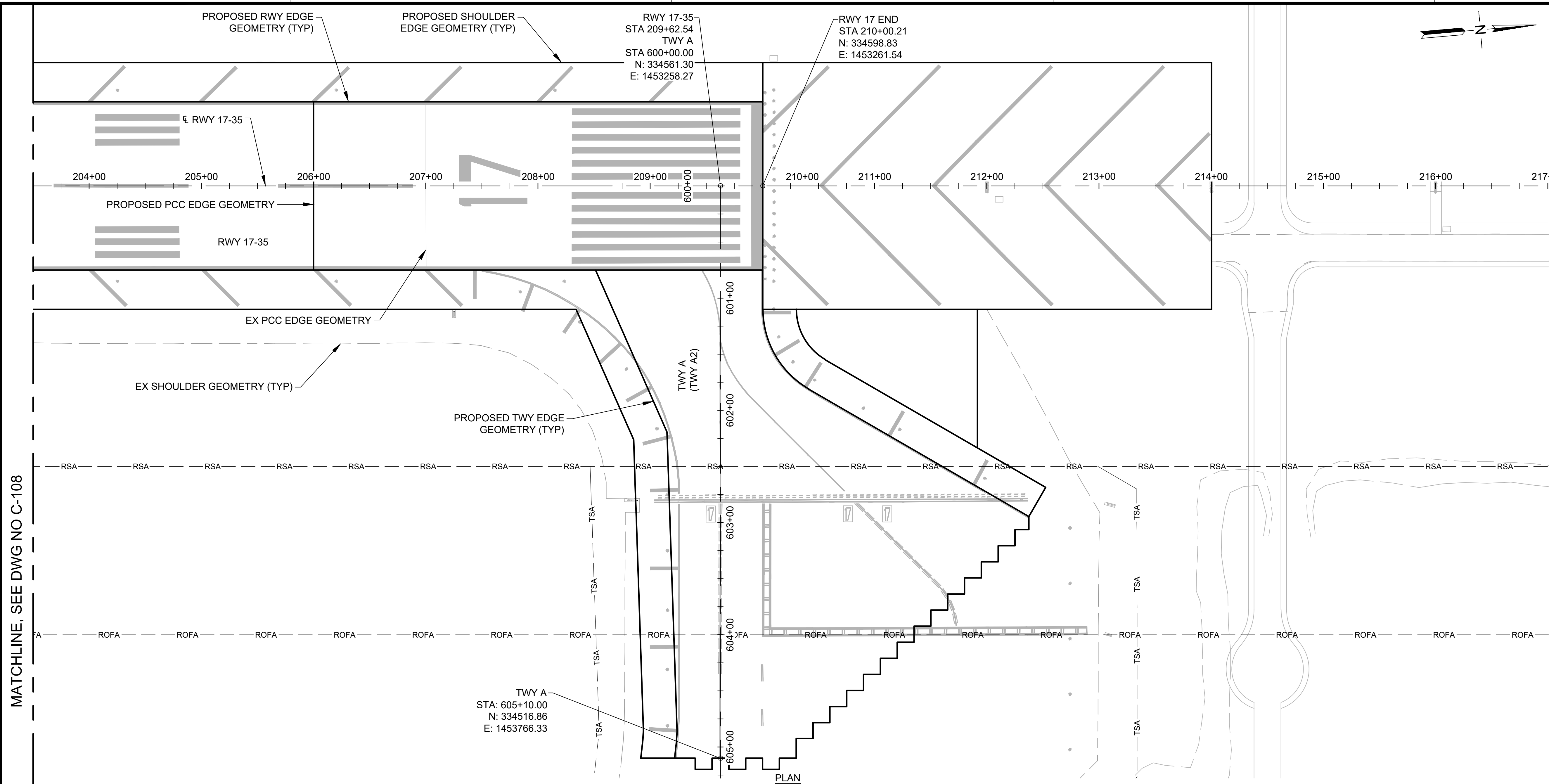
MATCHLINE; SEE DWG NO C-109



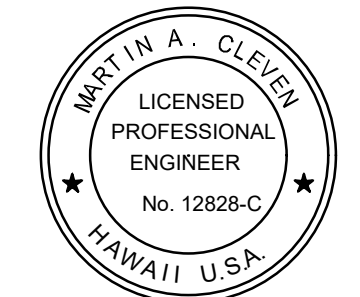
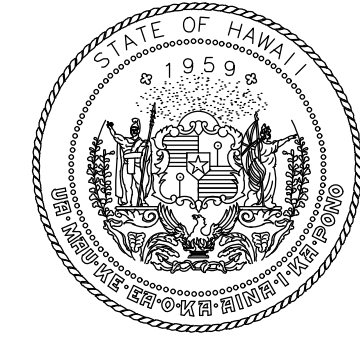
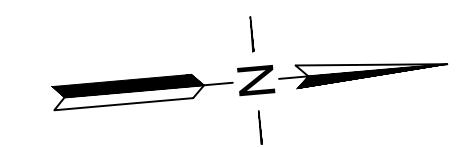
**RWY 17-35 STA 190+00 TO 203+50**  
SCALE: AS SHOWN



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MATCHLINE, SEE DWG NO C-108

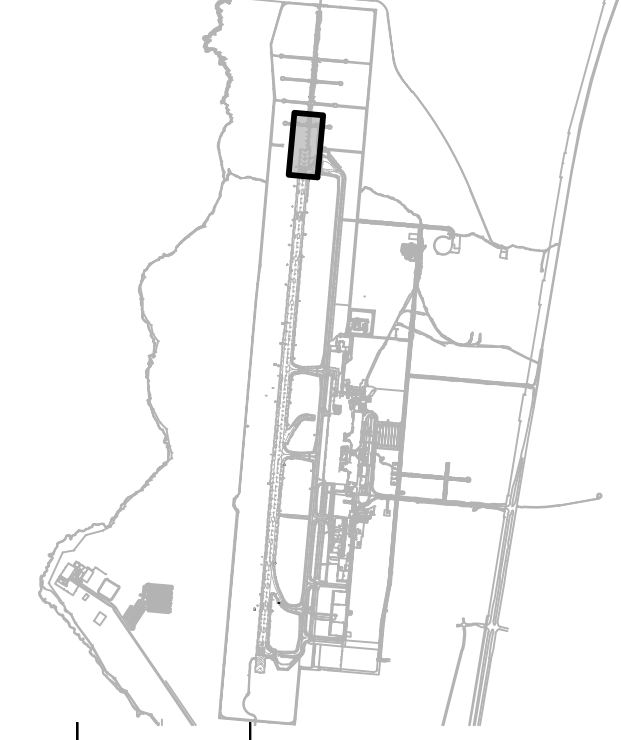


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4/30/24  
Licensed Expiration Date

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AC	AT	TR	SH

**KEY PLAN / NOTES:**



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENTS**  
SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

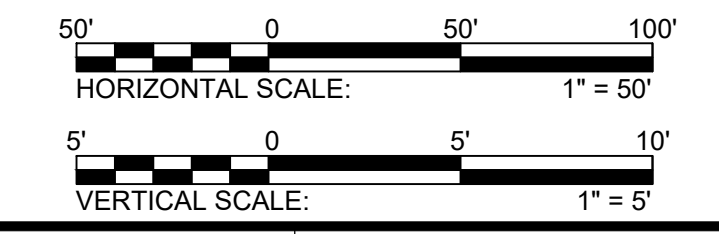
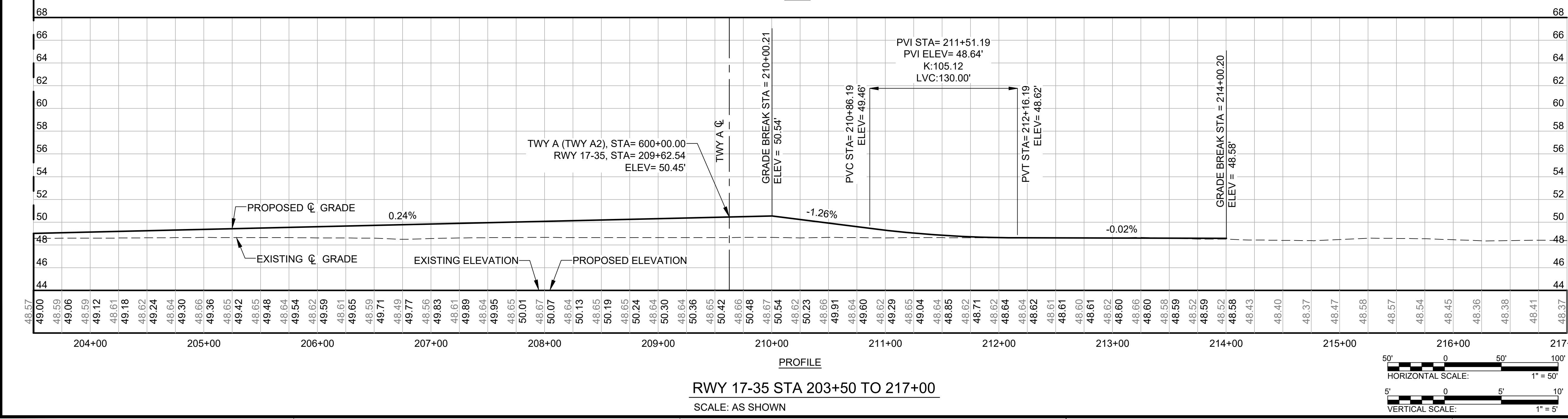
**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

**SHEET TITLE:**

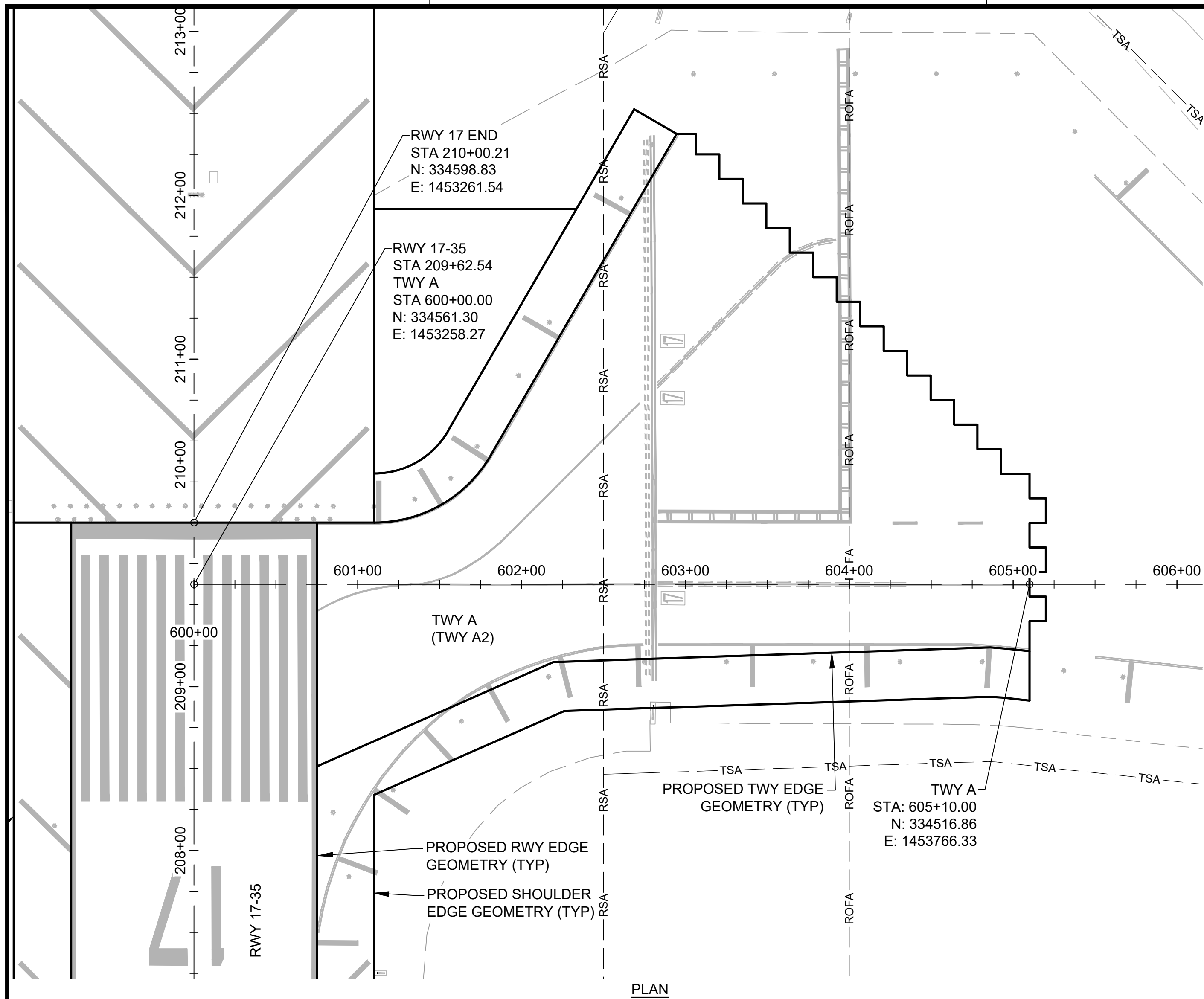
**HORIZONTAL & VERTICAL CONTROL PLAN 9**



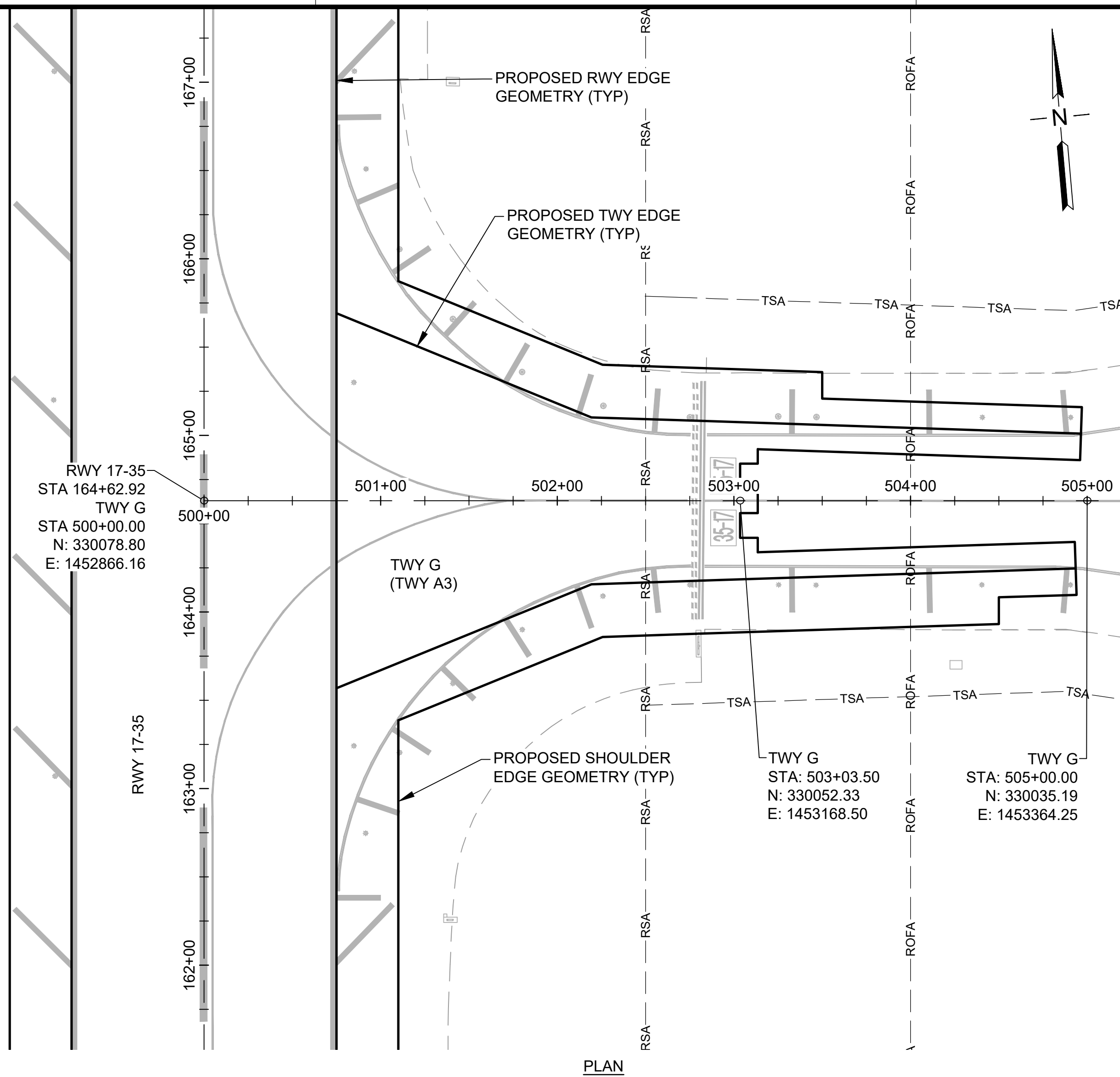
DATE :	DWG. NO.
09/2023	C-109
SHEET :	
56 OF 190 SHEETS	

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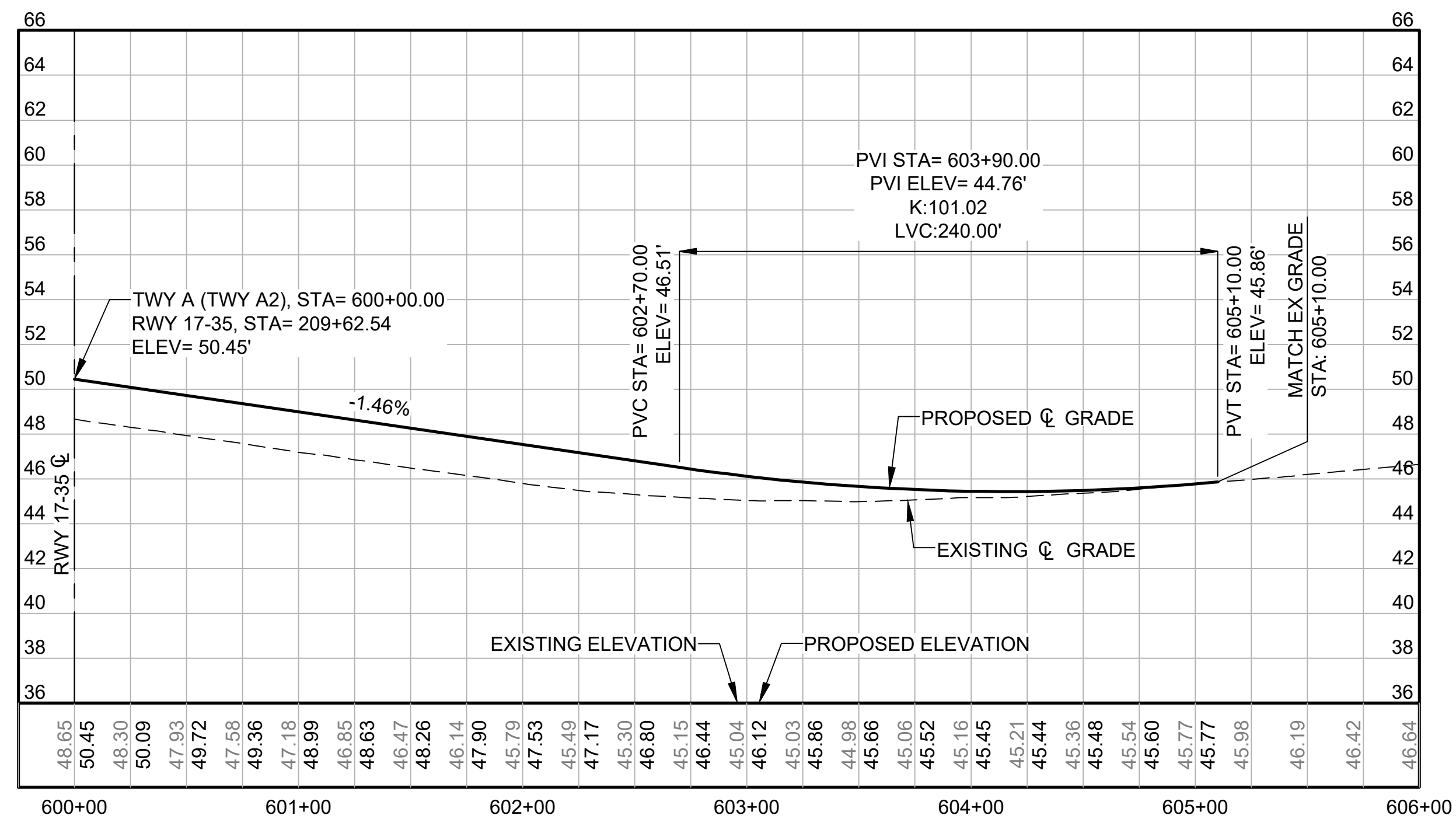




PLAN



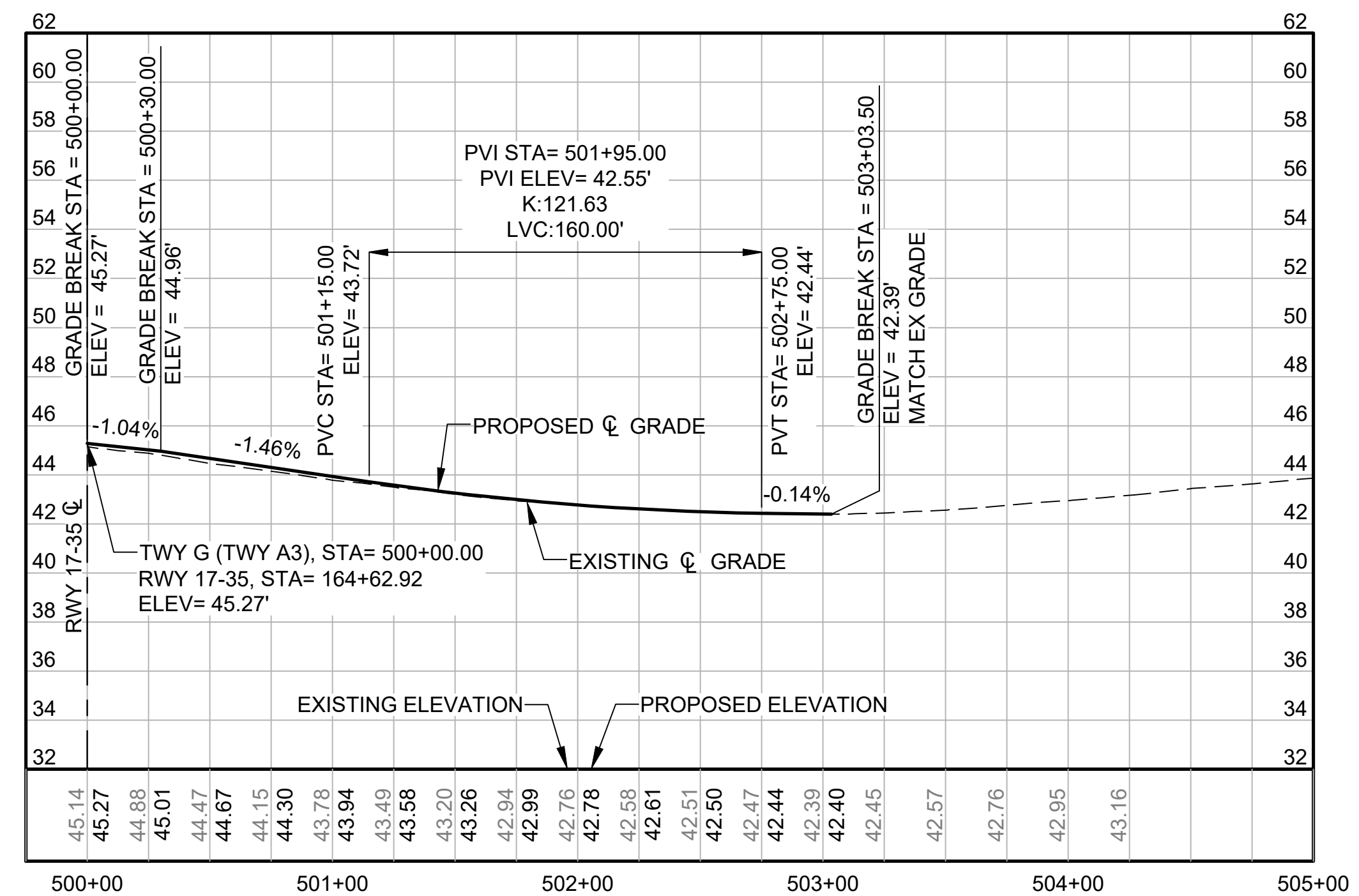
PLAN



PROFILE

TWY A (TWY A2)

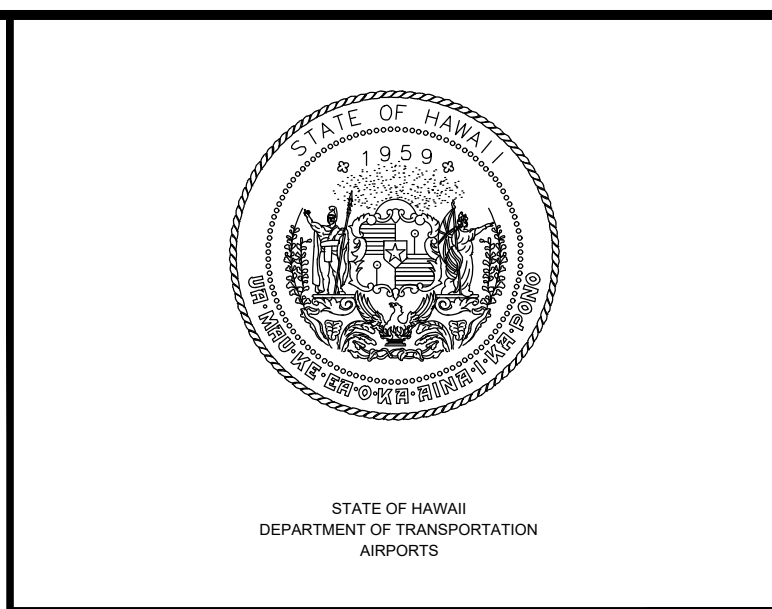
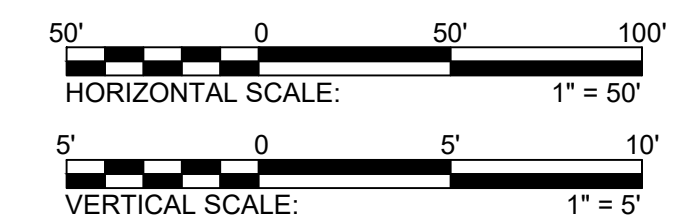
SCALE: AS SHOWN



PROFILE

TWY G (TWY A3)

SCALE: AS SHOWN



STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 AIRPORTS

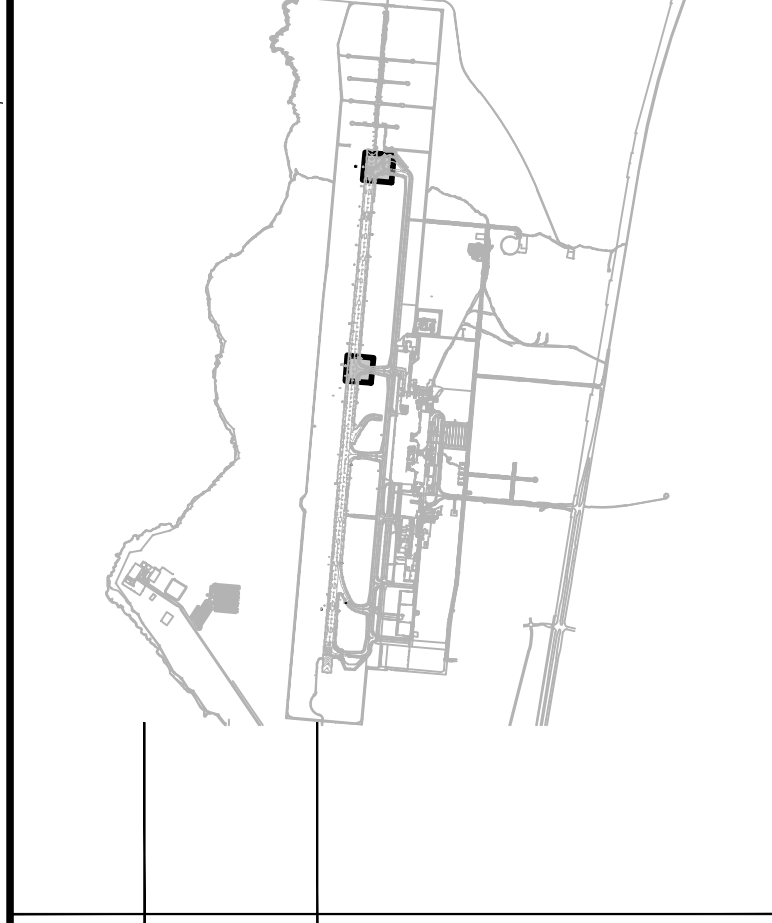
MARTIN A. CLEVEN  
 LICENSED PROFESSIONAL ENGINEER  
 No. 12828-C  
 HAWAII, USA

4/30/24  
 Licensed Expiration Date

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AC	AT	TR	SH

KEY PLAN / NOTES:



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENTS**  
 SEPTEMBER 2023  
 DATE

PROJECT TITLE :

**RUNWAY 17-35 REHABILITATION**  
 AT  
 ELLISON ONIZUKA  
 KONA INTERNATIONAL AIRPORT AT KEAHOLE  
 KAILUA-KONA, HAWAII

PROJECT NO.:

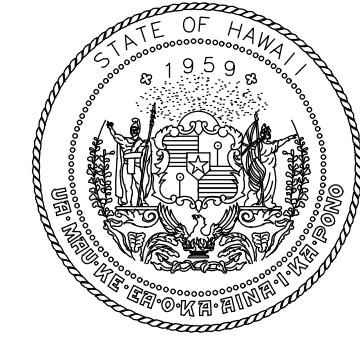
**AH2021-16**

SHEET TITLE:

**HORIZONTAL & VERTICAL CONTROL PLAN 10**

DATE :	DWG. NO.
09/2023	C-110
SHEET :	
57 OF 190 SHEETS	

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STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS

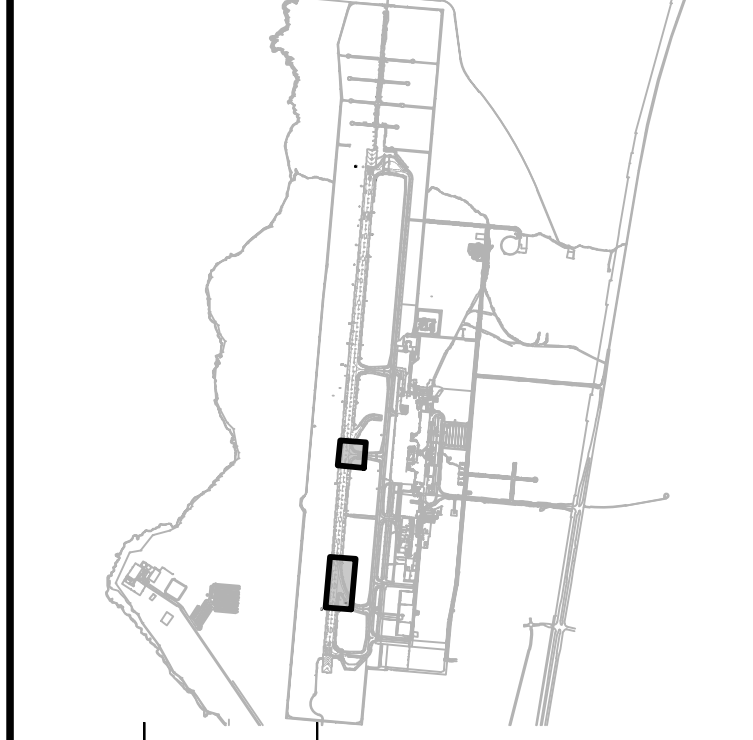


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AC	AT	TR	SH

**KEY PLAN / NOTES:**



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENTS**  
SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

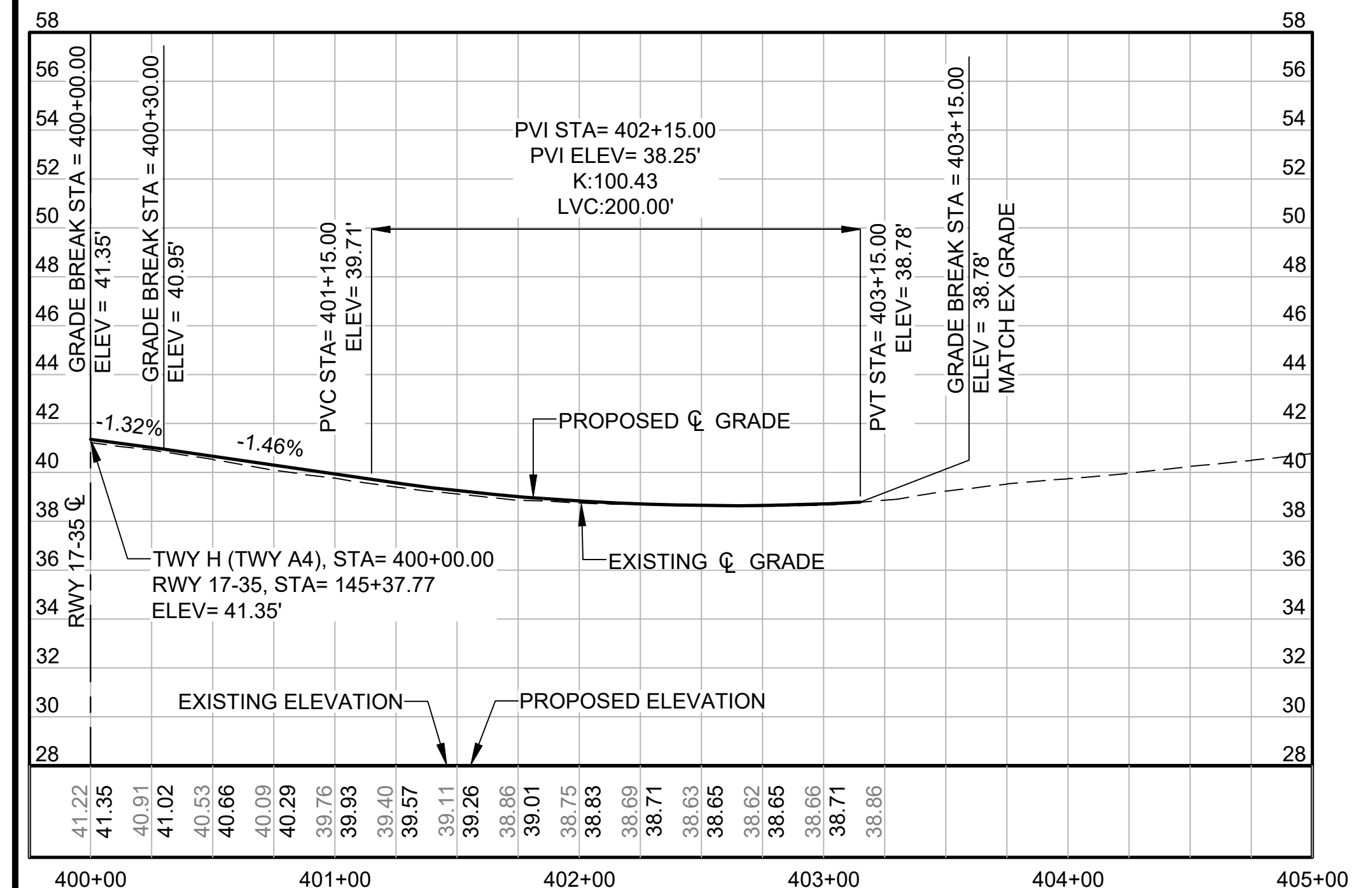
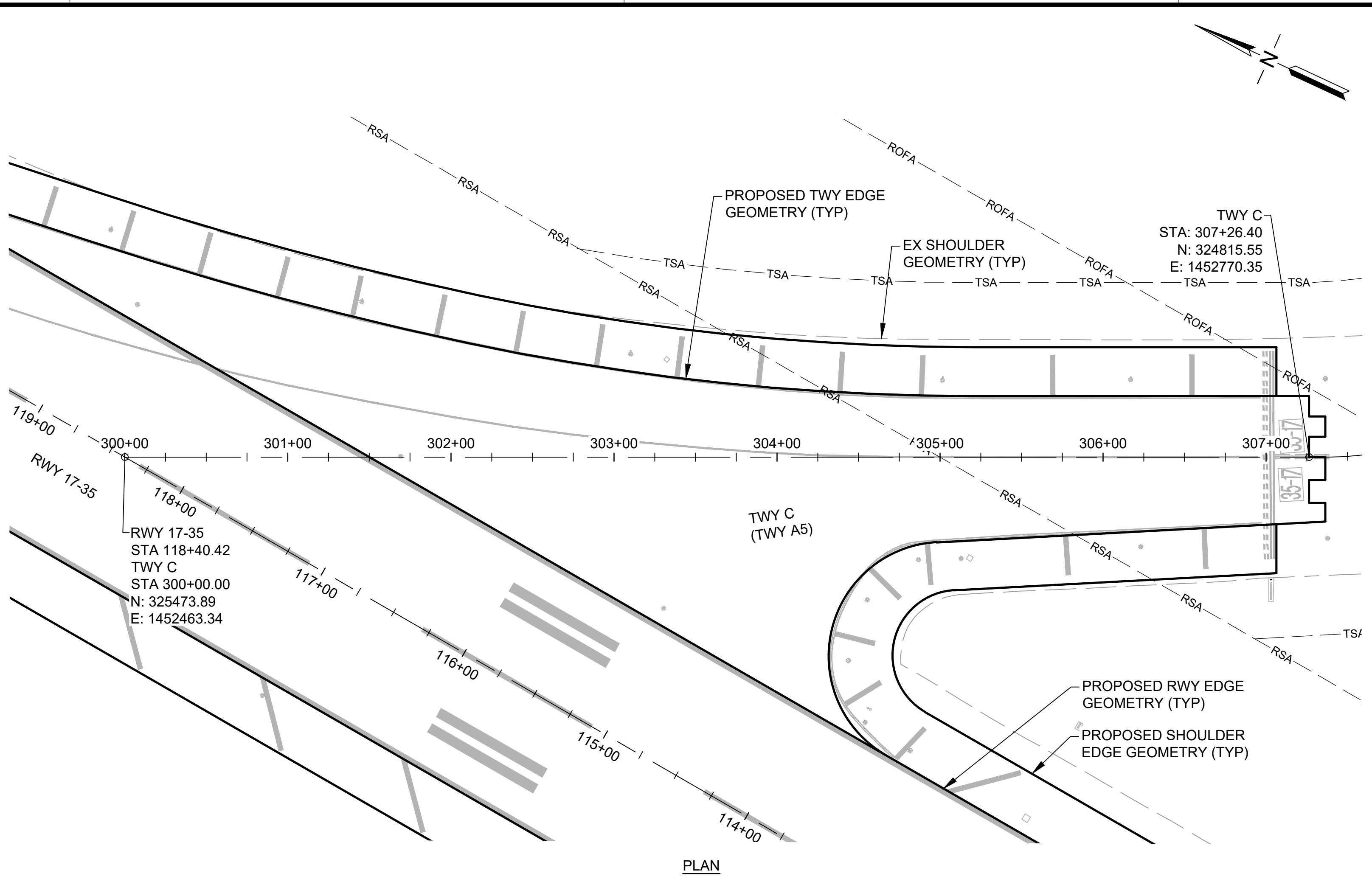
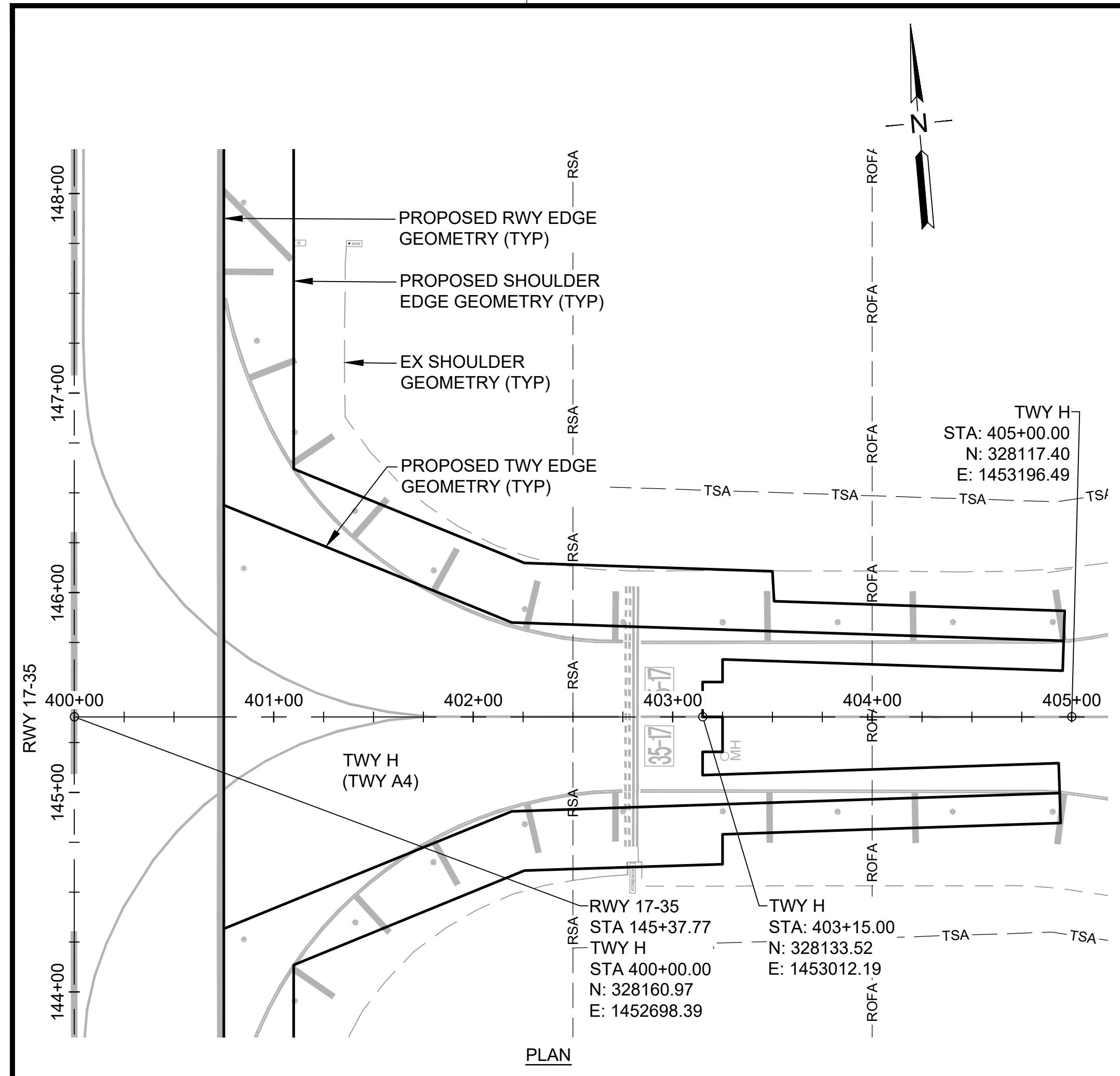
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**HORIZONTAL & VERTICAL CONTROL PLAN 11**

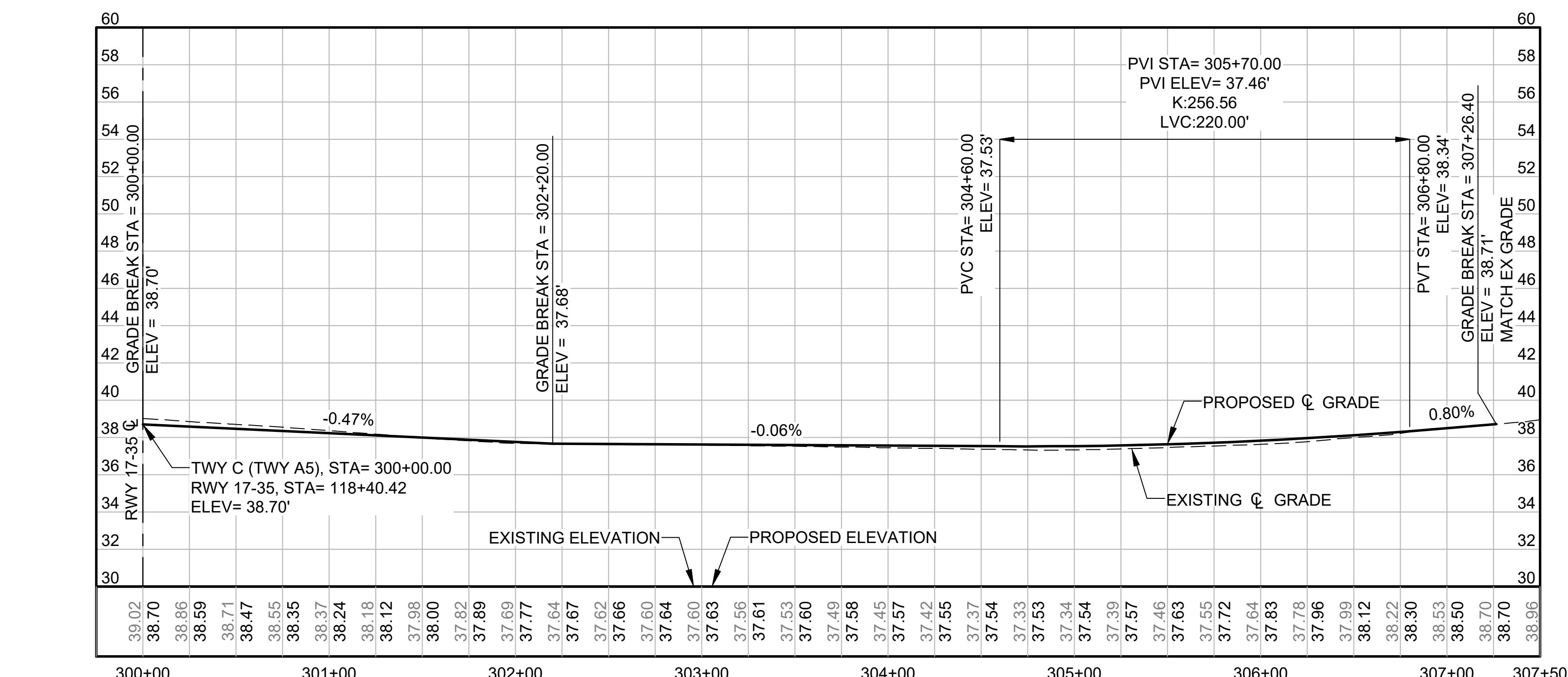
DATE : **09/2023** DWG. NO.

SHEET : **C-111**

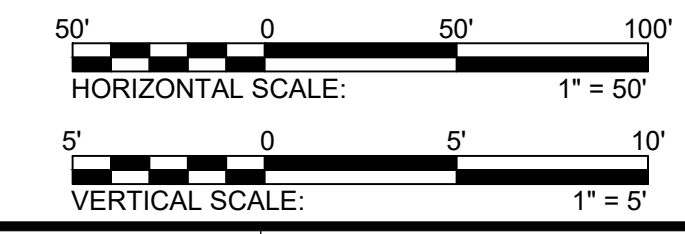
58 OF 190 SHEETS



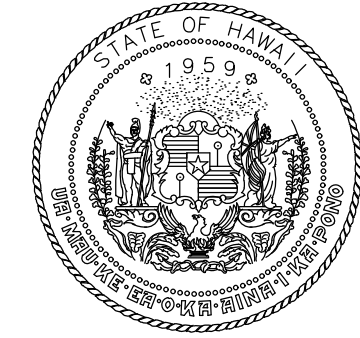
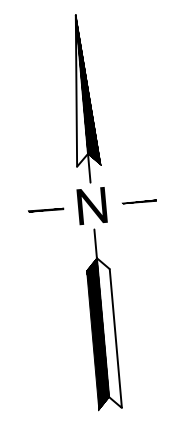
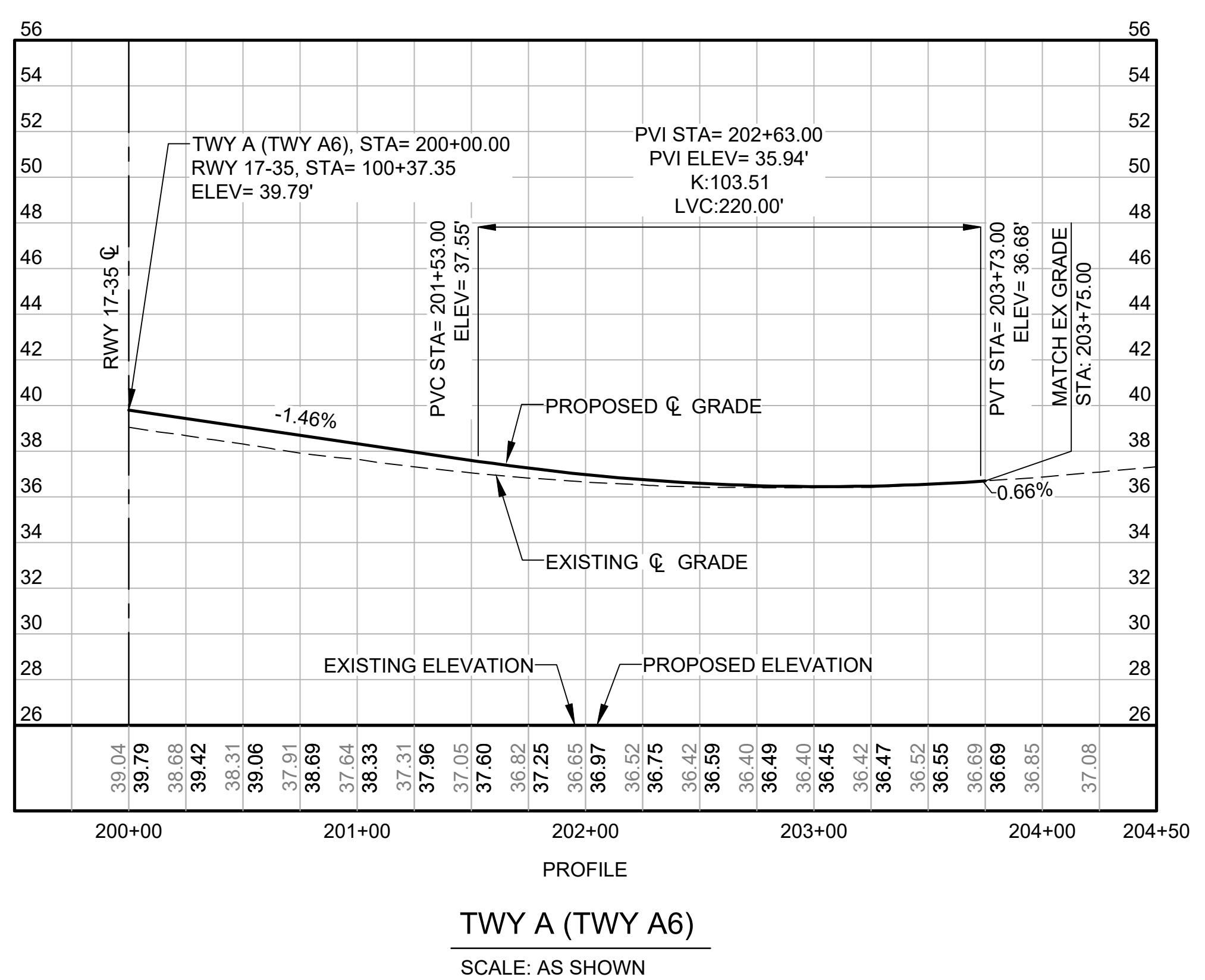
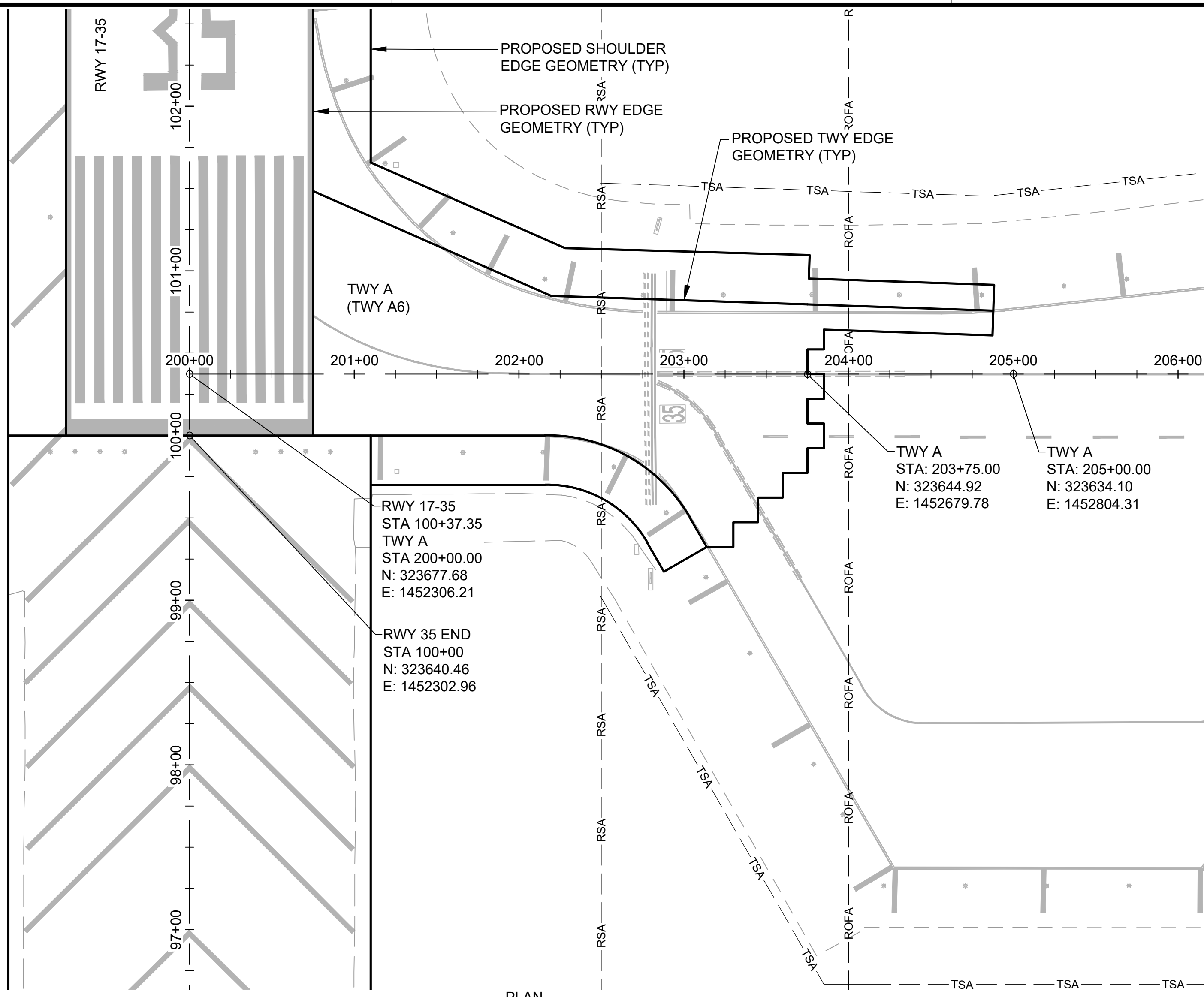
**TWY H (TWY A4)**  
SCALE: AS SHOWN



**TWY C (TWY A5)**  
SCALE: AS SHOWN







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AC	AT	TR	SH

KEY PLAN / NOTES:



NO.	DATE	REVISIONS
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CONSTRUCTION DOCUMENTS  
SEPTEMBER 2023  
DATE

PROJECT TITLE :

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

PROJECT NO.:

**AH2021-16**

SHEET TITLE:

**HORIZONTAL & VERTICAL CONTROL PLAN 12**

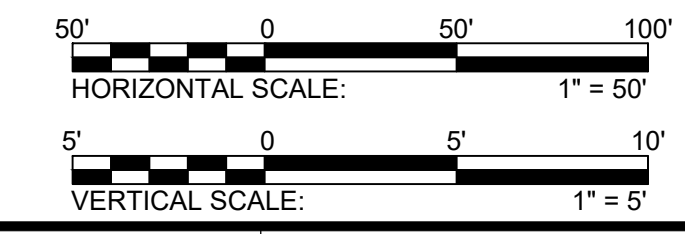
DATE : **09/2023**

SHEET :

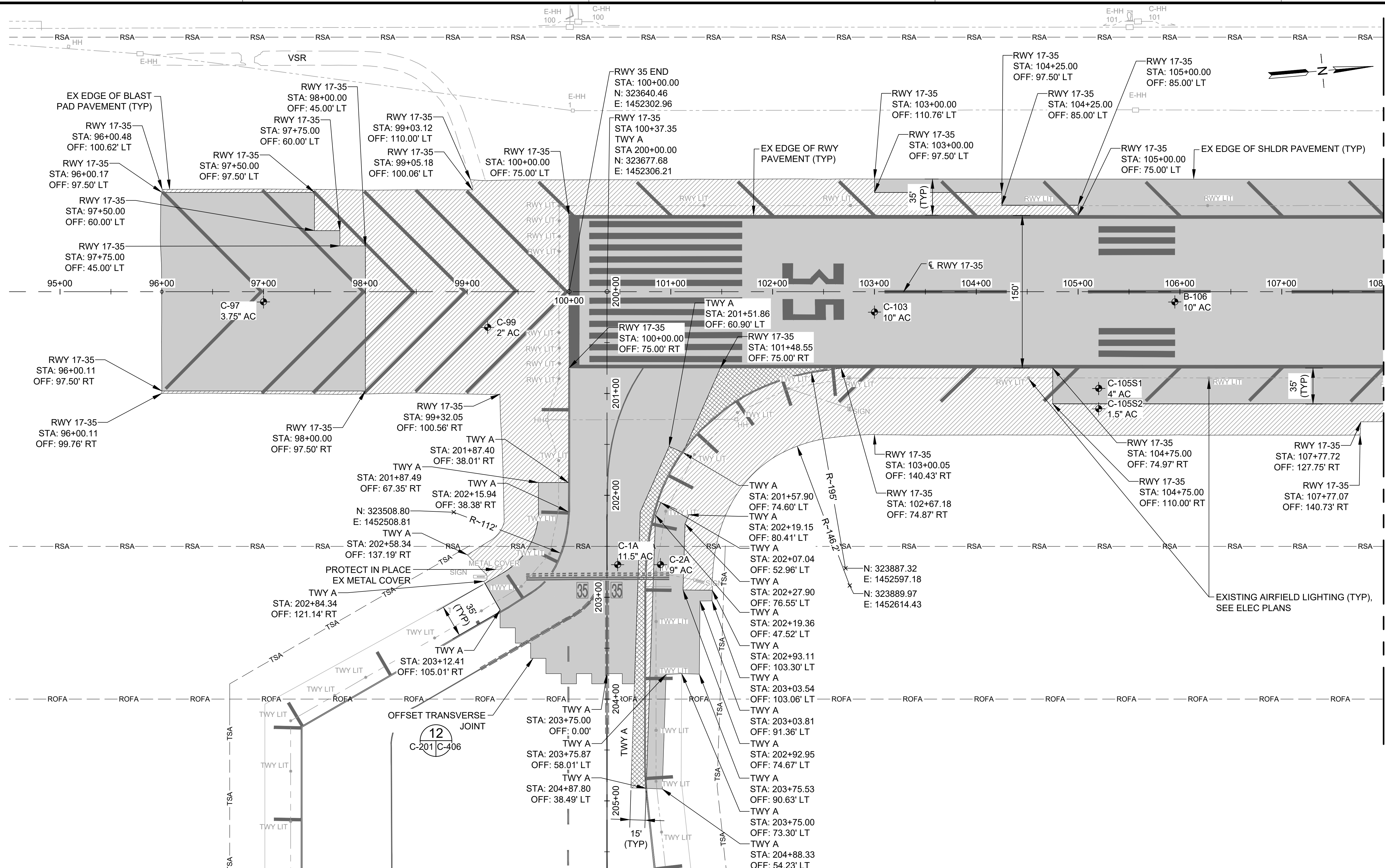
59 OF 190 SHEETS

DWG. NO.

**C-112**



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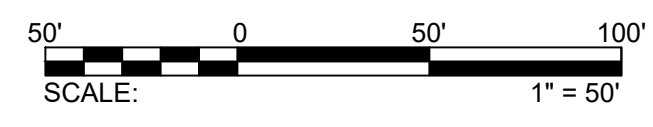
**LEGEND:**

	AC MILLING (±0.5" TO ±4" DEPTH)		RSA	RUNWAY SAFETY AREA
	AC PAVEMENT DEMOLITION (±1.5" TO ±4" DEPTH)		ROFA	RUNWAY OBJECT FREE AREA
	AC PAVEMENT DEMOLITION, FULL-DEPTH (±8" TO ±14" DEPTH)		TSA	TAXIWAY SAFETY AREA
	PCC PAVEMENT DEMOLITION, FULL-DEPTH (±15" DEPTH)			BORE/CORE LOCATION
				EXISTING TWY NAME FUTURE TWY NAME

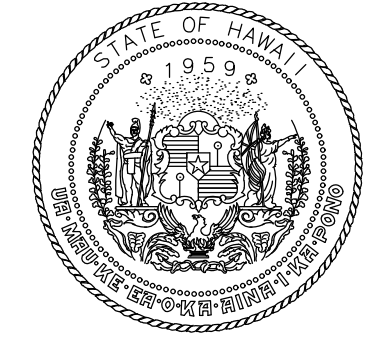
**NOTES:**

- PAVEMENT THICKNESS VARIES. SEE BORING AND CORE LAYOUT PLAN.
- REFER TO ELECTRICAL DRAWINGS FOR ELECTRICAL STRUCTURES TO BE PROTECTED, ADJUSTED, REMOVED OR ABANDONED.
- MILLING AND DEMOLITION LIMITS ARE BASED ON 15-FT PAVING LANES (UNLESS OTHERWISE SHOWN). ACTUAL LIMITS MAY VARY DEPENDING ON THE CONTRACTOR'S PAVING PLAN.
- CONTRACTOR SHALL PERFORM MILLING AND OVERLAY ACROSS THE ENTIRE RUNWAY WIDTH DURING EACH OVERNIGHT CLOSURE.
- ALL MILLED RUNWAY SURFACES SHALL BE PAVED AND TRANSITION RAMPS COMPLETED PRIOR TO REOPENING THE RUNWAY TO AIRCRAFT TRAFFIC. NO DROP-OFFS ARE PERMITTED ON RUNWAY OR TAXIWAY PAVEMENT WHEN OPEN TO AIRCRAFT.
- FOLLOWING MILLING OPERATIONS, THE RPR SHALL INSPECT THE MILLED SURFACE TO DETERMINE IF THE CONDITION OF THE UNDERLYING PAVEMENT IS SATISFACTORY. THE CONTRACTOR SHALL MILL ADDITIONAL DEPTH AS DIRECTED BY THE RPR.

- AT THE CONCLUSION OF EACH WORK SHIFT, PRIOR TO REOPENING THE RUNWAY OR TAXIWAY TO AIRCRAFT TRAFFIC, THE CONTRACTOR SHALL ENSURE THAT NO DROP-OFFS GREATER THAN 3" ARE PRESENT WITHIN THE RUNWAY OR TAXIWAY SAFETY AREA.
- CAUTION: BURIED ELECTRICAL CONDUITS ARE PRESENT IN THE SHOULDER EXCAVATION AREA. CONTRACTOR SHALL PROTECT ALL EXISTING ELECTRICAL. ANY DAMAGE TO ELECTRICAL CONDUITS SHALL BE REPAIRED AT THE CONTRACTORS' EXPENSE.
- SEE PHASING AND BARRICADE PLANS FOR APPROVED CONSTRUCTION HAUL ROUTES.
- ASPHALT PAVEMENT TO BE REMOVED SHALL BE CUT TO THE FULL DEPTH OF THE ASPHALT PAVEMENT AROUND THE PERIMETER OF THE AREA TO BE REMOVED.



MATCHLINE, SEE DWG NO C-202

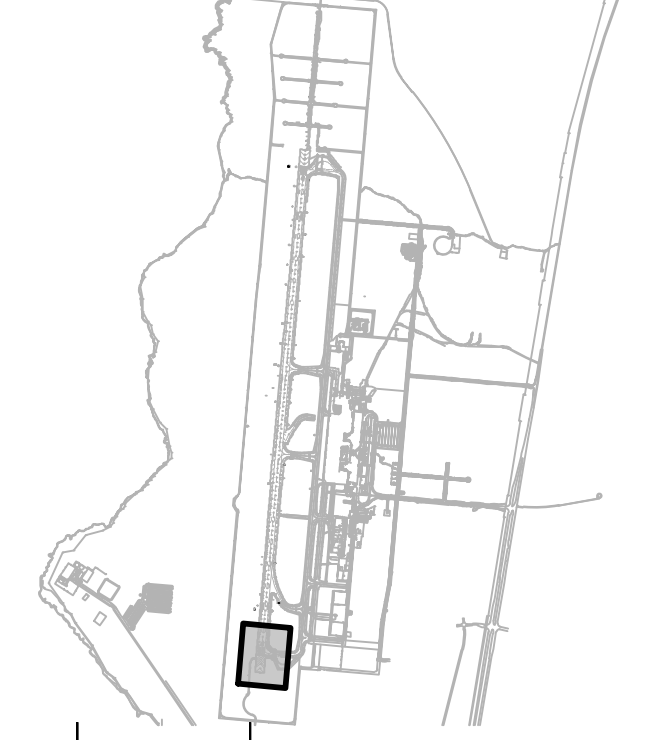


4/30/24  
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AC	AT	TR	SH

**KEY PLAN / NOTES:**



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENTS**

SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**

AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

**SHEET TITLE:**

**CIVIL DEMOLITION PLAN 1**

DATE : **09/2023**

SHEET : **C-201**

60 OF 190 SHEETS

DWG. NO.

**C-201**

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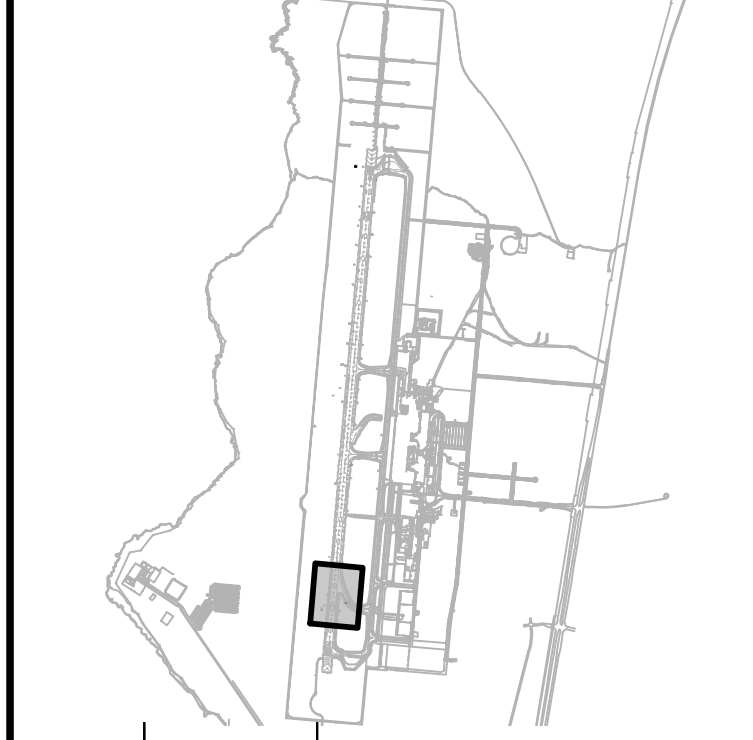


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AC	AT	TR	SH

KEY PLAN / NOTES:



NO.	DATE	REVISIONS
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CONSTRUCTION DOCUMENTS  
SEPTEMBER 2023  
DATE

PROJECT TITLE :

**RUNWAY 17-35  
REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

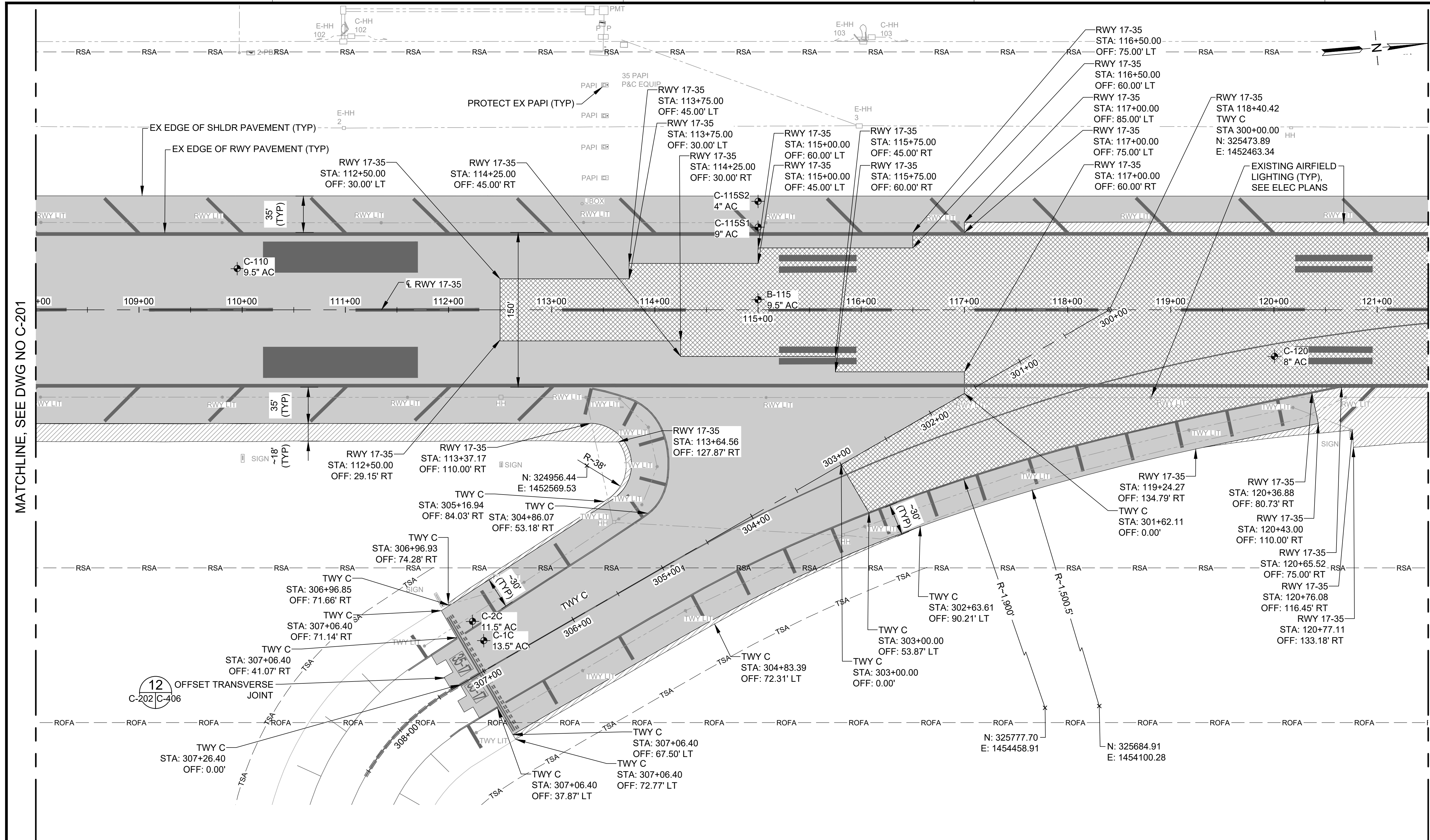
PROJECT NO.:

**AH2021-16**

SHEET TITLE:

**CIVIL DEMOLITION  
PLAN 2**

DATE :	09/2023	DWG. NO.	C-202
SHEET :	61 OF 190 SHEETS		



MATCHLINE, SEE DWG NO C-201

MATCHLINE, SEE DWG NO C-203

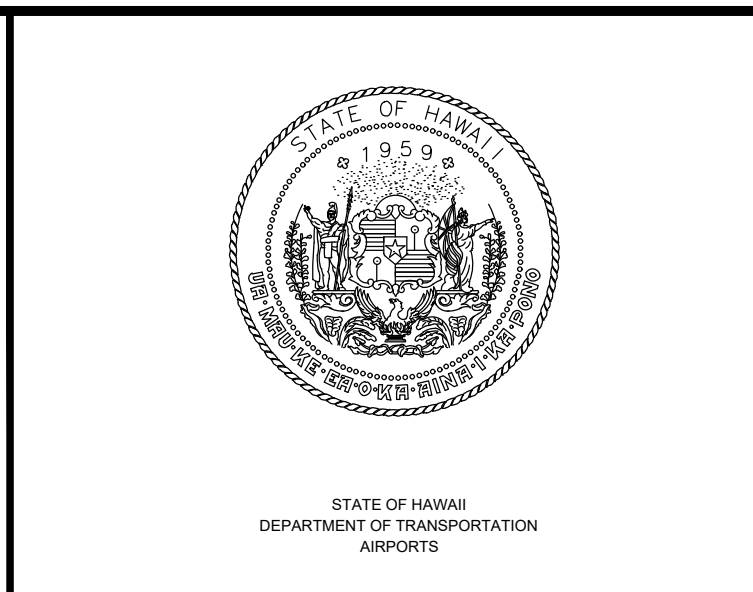
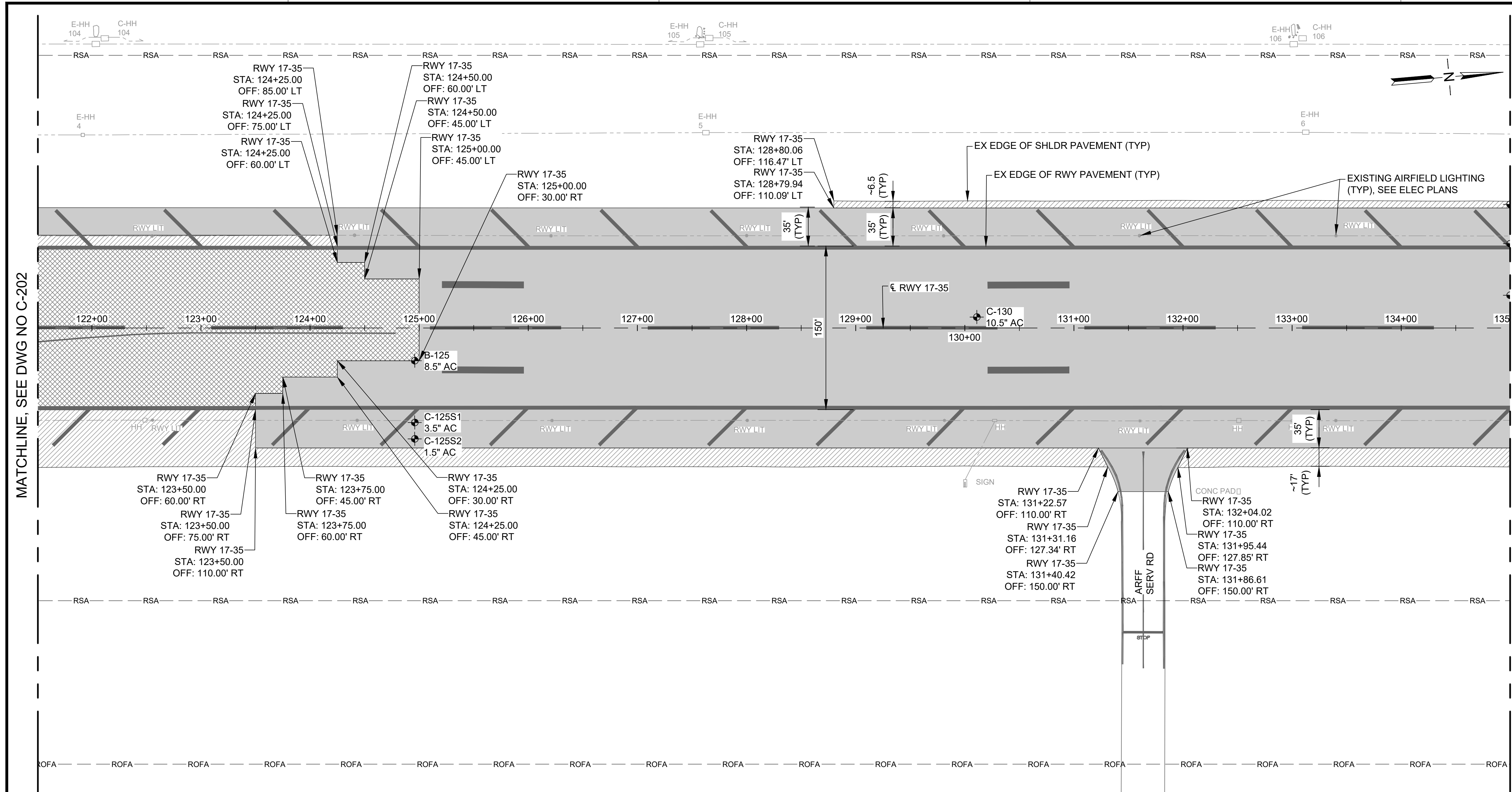
LEGEND:

- AC MILLING (±0.5" TO ±4" DEPTH)
- AC PAVEMENT DEMOLITION (±1.5" TO ±4" DEPTH)
- AC PAVEMENT DEMOLITION, FULL-DEPTH (±8" TO ±14" DEPTH)
- PCC PAVEMENT DEMOLITION, FULL-DEPTH (±15" DEPTH)
- RSA - RUNWAY SAFETY AREA
- ROFA - RUNWAY OBJECT FREE AREA
- TSA - TAXIWAY SAFETY AREA
- BORE/CORE LOCATION
- TWY A (TWY A2) - EXISTING TWY NAME / FUTURE TWY NAME

NOTES:

- PAVEMENT THICKNESS VARIES. SEE BORING AND CORE LAYOUT PLAN.
- REFER TO ELECTRICAL DRAWINGS FOR ELECTRICAL STRUCTURES TO BE PROTECTED, ADJUSTED, REMOVED OR ABANDONED.
- MILLING AND DEMOLITION LIMITS ARE BASED ON 15-FT PAVING LANES (UNLESS OTHERWISE SHOWN). ACTUAL LIMITS MAY VARY DEPENDING ON THE CONTRACTOR'S PAVING PLAN.
- CONTRACTOR SHALL PERFORM MILLING AND OVERLAY ACROSS THE ENTIRE RUNWAY WIDTH DURING EACH OVERNIGHT CLOSURE.
- ALL MILLED RUNWAY SURFACES SHALL BE PAVED AND TRANSITION RAMP COMPLETED PRIOR TO REOPENING THE RUNWAY TO AIRCRAFT TRAFFIC. NO DROP-OFFS ARE PERMITTED ON RUNWAY OR TAXIWAY PAVEMENT WHEN OPEN TO AIRCRAFT.
- FOLLOWING MILLING OPERATIONS, THE RPR SHALL INSPECT THE MILLED SURFACE TO DETERMINE IF THE CONDITION OF THE UNDERLYING PAVEMENT IS SATISFACTORY. THE CONTRACTOR SHALL MILL ADDITIONAL DEPTH AS DIRECTED BY THE RPR.
- AT THE CONCLUSION OF EACH WORK SHIFT, PRIOR TO REOPENING THE RUNWAY OR TAXIWAY TO AIRCRAFT TRAFFIC, THE CONTRACTOR SHALL ENSURE THAT NO DROP-OFFS GREATER THAN 3" ARE PRESENT WITHIN THE RUNWAY OR TAXIWAY SAFETY AREA.
- CAUTION: BURIED ELECTRICAL CONDUITS ARE PRESENT IN THE SHOULDER EXCAVATION AREA. CONTRACTOR SHALL PROTECT ALL EXISTING ELECTRICAL. ANY DAMAGE TO ELECTRICAL CONDUITS SHALL BE REPAIRED AT THE CONTRACTORS' EXPENSE.
- SEE PHASING AND BARRICADE PLANS FOR APPROVED CONSTRUCTION HAUL ROUTES.
- ASPHALT PAVEMENT TO BE REMOVED SHALL BE CUT TO THE FULL DEPTH OF THE ASPHALT PAVEMENT AROUND THE PERIMETER OF THE AREA TO BE REMOVED.



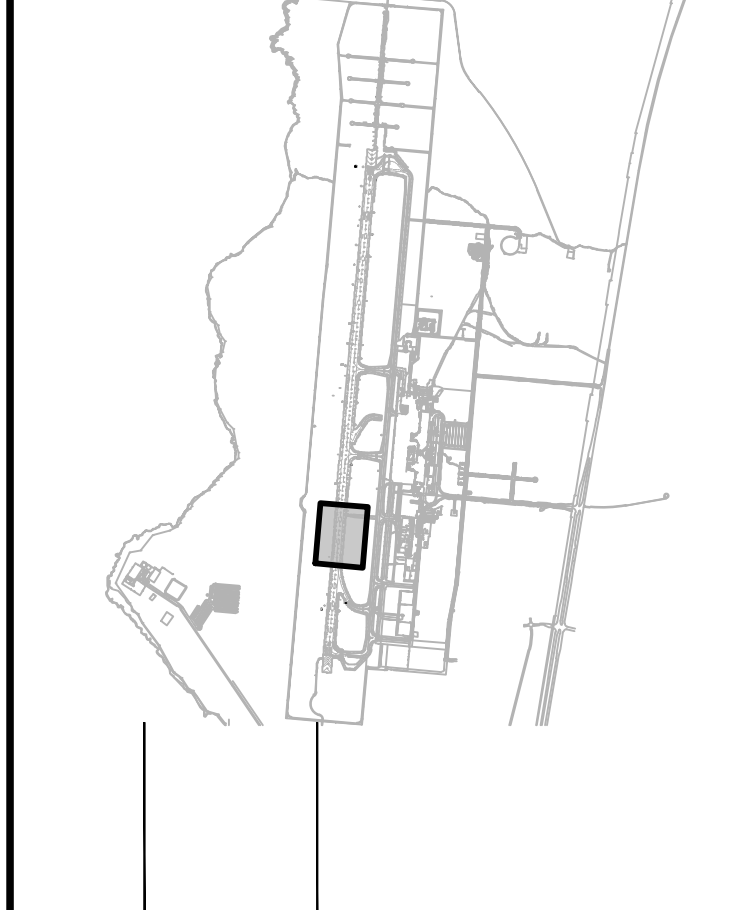


MARTIN A. CLEVELAND  
 LICENSED PROFESSIONAL ENGINEER  
 No. 12828-C  
 HAWAII, USA  
 4/30/24  
 Licensed Expiration Date

This work was prepared by me or under my supervision.

DSGN.	DRWN.	CHKD.	APPD.
AC	AT	TR	SH

**KEY PLAN / NOTES:**



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENTS**  
 SEPTEMBER 2023  
 DATE

**PROJECT TITLE :**  
**RUNWAY 17-35 REHABILITATION**  
 AT  
 ELLISON ONIZUKA  
 KONA INTERNATIONAL AIRPORT AT KEAHOLE  
 KAILUA-KONA, HAWAII

**PROJECT NO.:**  
**AH2021-16**

**SHEET TITLE:**

**CIVIL DEMOLITION PLAN 3**

DATE :	09/2023	DWG. NO.	C-203
SHEET :	62 OF 190 SHEETS		

**LEGEND:**

- AC MILLING (±0.5" TO ±4" DEPTH)
- AC PAVEMENT DEMOLITION (±1.5" TO ±4" DEPTH)
- AC PAVEMENT DEMOLITION, FULL-DEPTH (±8" TO ±14" DEPTH)
- PCC PAVEMENT DEMOLITION, FULL-DEPTH (±15" DEPTH)
- RSA RUNWAY SAFETY AREA
- ROFA RUNWAY OBJECT FREE AREA
- TSA TAXIWAY SAFETY AREA
- BORE/CORE LOCATION
- TWY A (TWY A2) EXISTING TWY NAME
- TWY A2 (TWY A2) FUTURE TWY NAME

**NOTES:**

- PAVEMENT THICKNESS VARIES. SEE BORING AND CORE LAYOUT PLAN.
- REFER TO ELECTRICAL DRAWINGS FOR ELECTRICAL STRUCTURES TO BE PROTECTED, ADJUSTED, REMOVED OR ABANDONED.
- MILLING AND DEMOLITION LIMITS ARE BASED ON 15-FT PAVING LANES (UNLESS OTHERWISE SHOWN). ACTUAL LIMITS MAY VARY DEPENDING ON THE CONTRACTOR'S PAVING PLAN.
- CONTRACTOR SHALL PERFORM MILLING AND OVERLAY ACROSS THE ENTIRE RUNWAY WIDTH DURING EACH OVERNIGHT CLOSURE.
- ALL MILLED RUNWAY SURFACES SHALL BE PAVED AND TRANSITION RAMPS COMPLETED PRIOR TO REOPENING THE RUNWAY TO AIRCRAFT TRAFFIC. NO DROP-OFFS ARE PERMITTED ON RUNWAY OR TAXIWAY PAVEMENT WHEN OPEN TO AIRCRAFT.
- FOLLOWING MILLING OPERATIONS, THE RPR SHALL INSPECT THE MILLED SURFACE TO DETERMINE IF THE CONDITION OF THE UNDERLYING PAVEMENT IS SATISFACTORY. THE CONTRACTOR SHALL MILL ADDITIONAL DEPTH AS DIRECTED BY THE RPR.
- AT THE CONCLUSION OF EACH WORK SHIFT, PRIOR TO REOPENING THE RUNWAY OR TAXIWAY TO AIRCRAFT TRAFFIC, THE CONTRACTOR SHALL ENSURE THAT NO DROP-OFFS GREATER THAN 3" ARE PRESENT WITHIN THE RUNWAY OR TAXIWAY SAFETY AREA.
- CAUTION: BURIED ELECTRICAL CONDUITS ARE PRESENT IN THE SHOULDER EXCAVATION AREA. CONTRACTOR SHALL PROTECT ALL EXISTING ELECTRICAL. ANY DAMAGE TO ELECTRICAL CONDUITS SHALL BE REPAIRED AT THE CONTRACTORS' EXPENSE.
- SEE PHASING AND BARRICADE PLANS FOR APPROVED CONSTRUCTION HAUL ROUTES.
- ASPHALT PAVEMENT TO BE REMOVED SHALL BE CUT TO THE FULL DEPTH OF THE ASPHALT PAVEMENT AROUND THE PERIMETER OF THE AREA TO BE REMOVED.



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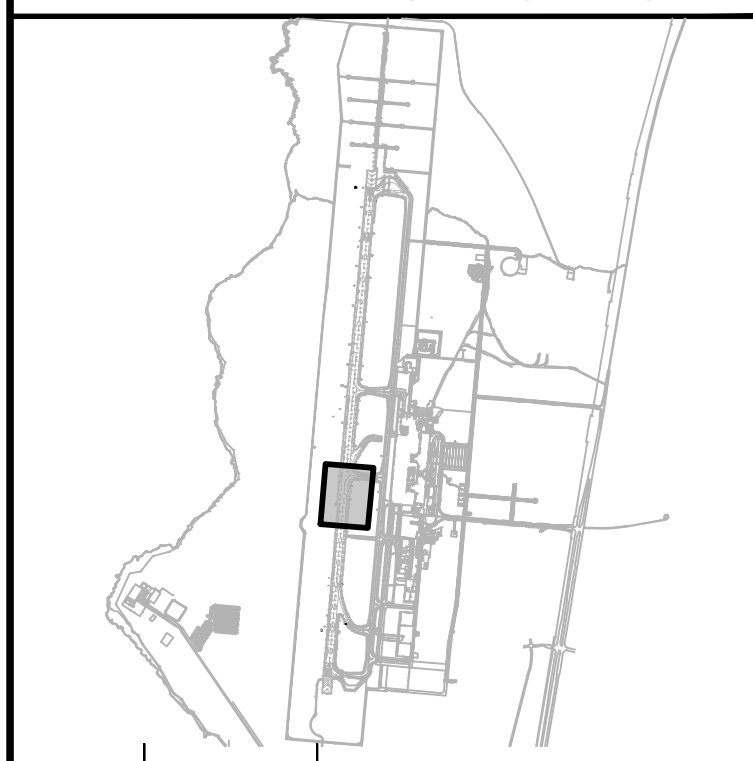


4/30/24  
Licensed Expiration Date

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DSGN.	DRWN.	CHKD.	APPD.
AC	AT	TR	SH

### KEY PLAN / NOTES:



NO.	DATE	REVISIONS
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## CONSTRUCTION DOCUMENTS

SEPTEMBER 2023  
DATE

### PROJECT TITLE :

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

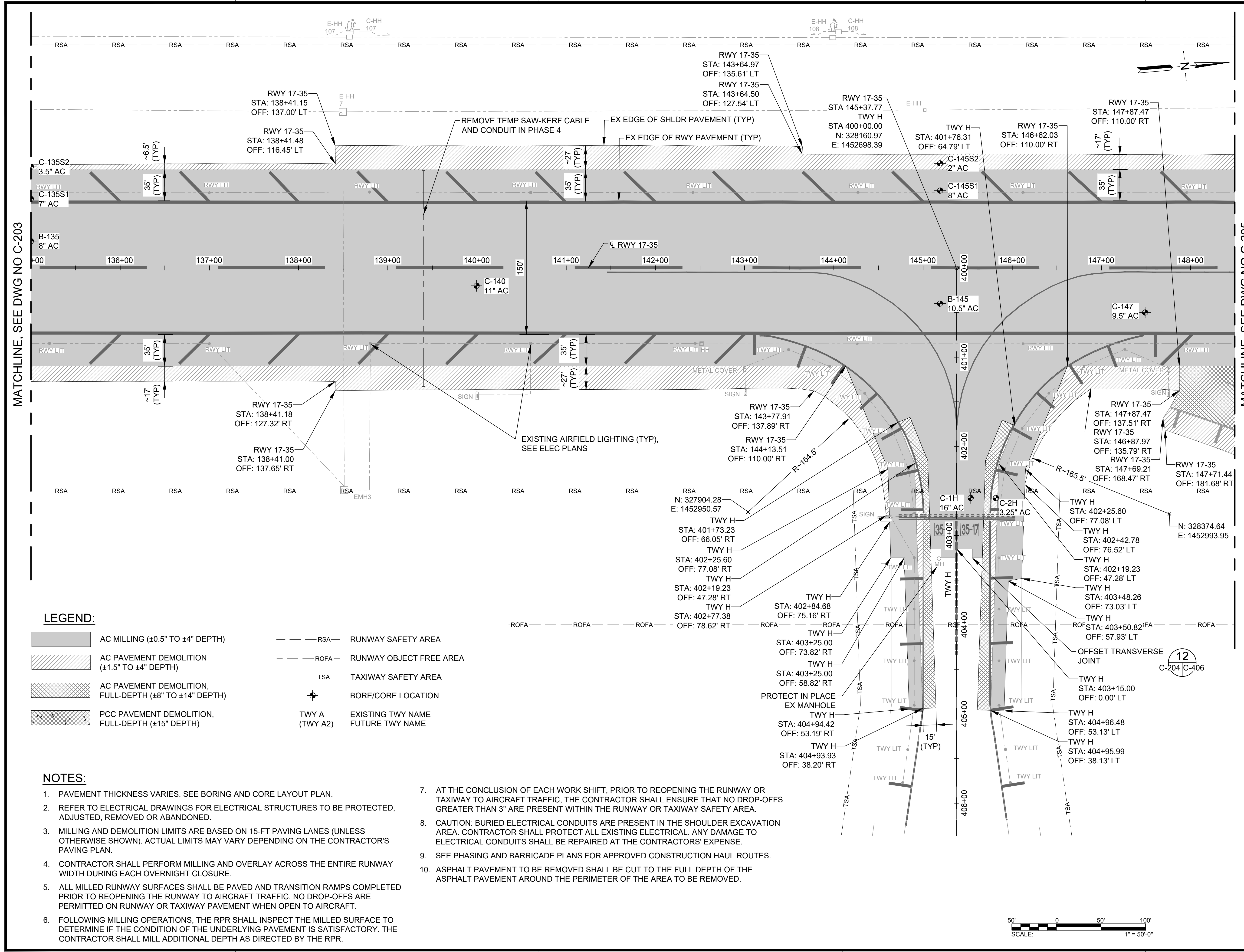
### PROJECT NO.:

**AH2021-16**

### SHEET TITLE:

## CIVIL DEMOLITION PLAN 4

DATE :	DWG. NO.
09/2023	C-204
SHEET :	
63 OF 190 SHEETS	



MATCHLINE, SEE DWG NO C-203

MATCHLINE, SEE DWG NO C-205

### LEGEND:

	AC MILLING (±0.5" TO ±4" DEPTH)		RSA	RUNWAY SAFETY AREA
	AC PAVEMENT DEMOLITION (±1.5" TO ±4" DEPTH)		ROFA	RUNWAY OBJECT FREE AREA
	AC PAVEMENT DEMOLITION, FULL-DEPTH (±8" TO ±14" DEPTH)		TSA	TAXIWAY SAFETY AREA
	PCC PAVEMENT DEMOLITION, FULL-DEPTH (±15" DEPTH)			BORE/CORE LOCATION
			TWY A (TWY A2)	EXISTING TWY NAME FUTURE TWY NAME

### NOTES:

- PAVEMENT THICKNESS VARIES. SEE BORING AND CORE LAYOUT PLAN.
- REFER TO ELECTRICAL DRAWINGS FOR ELECTRICAL STRUCTURES TO BE PROTECTED, ADJUSTED, REMOVED OR ABANDONED.
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- CONTRACTOR SHALL PERFORM MILLING AND OVERLAY ACROSS THE ENTIRE RUNWAY WIDTH DURING EACH OVERNIGHT CLOSURE.
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- SEE PHASING AND BARRICADE PLANS FOR APPROVED CONSTRUCTION HAUL ROUTES.
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STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS

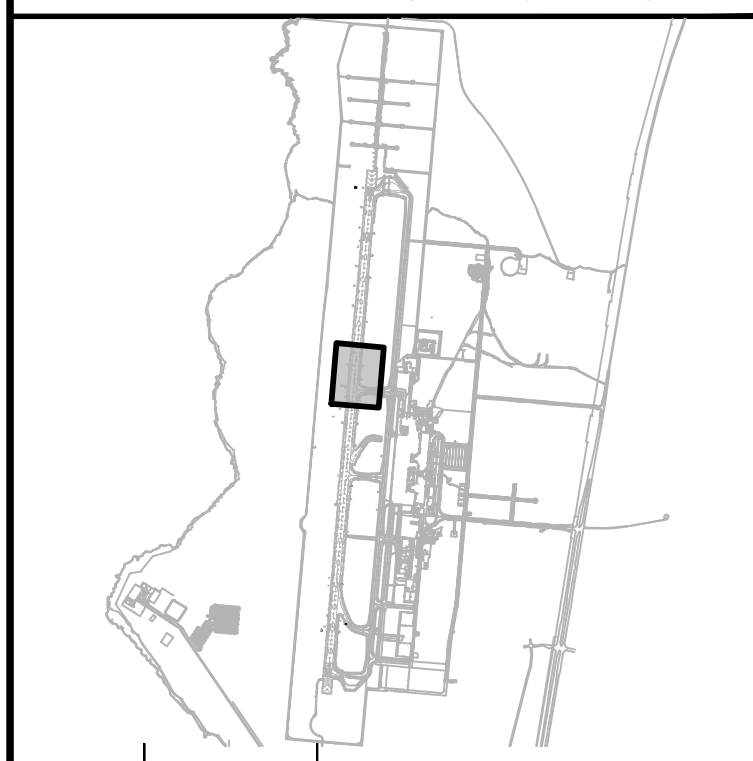


4/30/24  
Licensed Expiration Date

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DSGN.	DRWN.	CHKD.	APPD.
AC	AT	TR	SH

KEY PLAN / NOTES:



NO.	DATE	REVISIONS
-----	------	-----------

CONSTRUCTION DOCUMENTS  
SEPTEMBER 2023  
DATE

PROJECT TITLE :

**RUNWAY 17-35  
REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

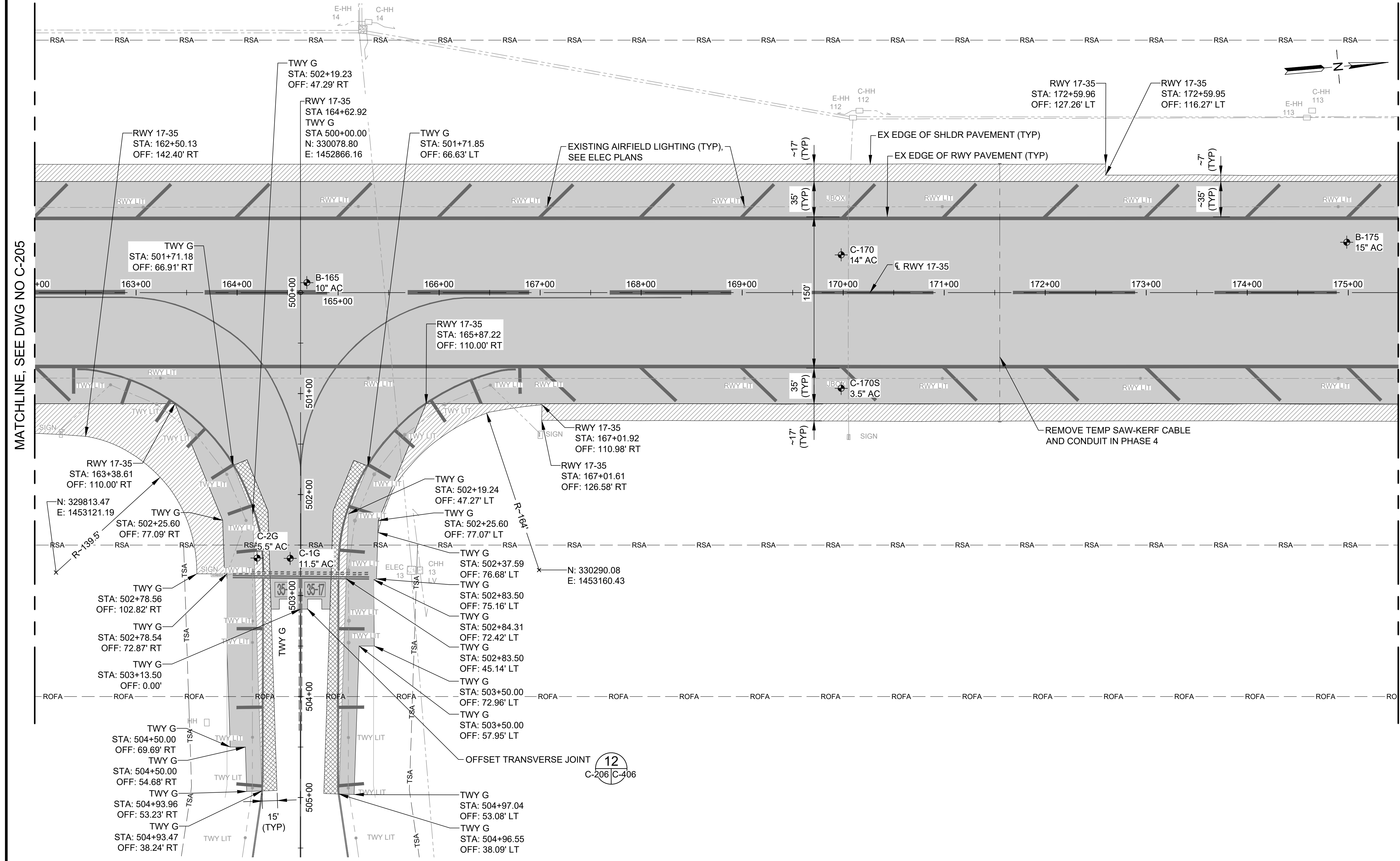
PROJECT NO.:

**AH2021-16**

SHEET TITLE:

**CIVIL DEMOLITION  
PLAN 6**

DATE :	09/2023	DWG. NO.	<b>C-206</b>
SHEET :			
65 OF 190 SHEETS			



MATCHLINE, SEE DWG NO C-205

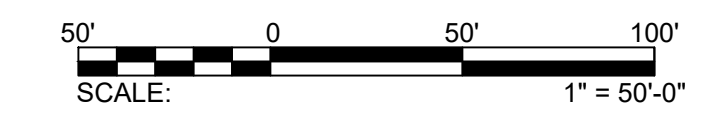
MATCHLINE, SEE DWG NO C-207

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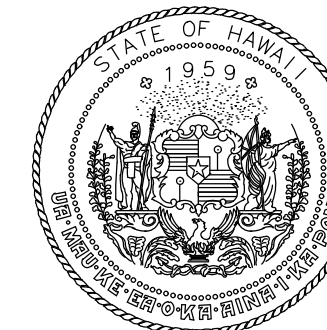
	AC MILLING (±0.5" TO ±4" DEPTH)		RSA - RUNWAY SAFETY AREA
	AC PAVEMENT DEMOLITION (±1.5" TO ±4" DEPTH)		ROFA - RUNWAY OBJECT FREE AREA
	AC PAVEMENT DEMOLITION, FULL-DEPTH (±8" TO ±14" DEPTH)		TSA - TAXIWAY SAFETY AREA
	PCC PAVEMENT DEMOLITION, FULL-DEPTH (±15" DEPTH)		BORE/CORE LOCATION
			TWY A (TWY A2) - EXISTING TWY NAME TWY A2 - FUTURE TWY NAME

NOTES:

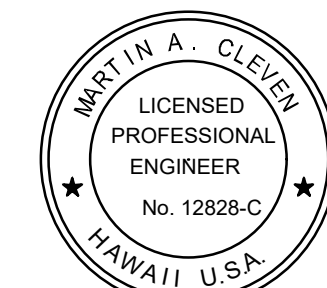
- PAVEMENT THICKNESS VARIES. SEE BORING AND CORE LAYOUT PLAN.
- REFER TO ELECTRICAL DRAWINGS FOR ELECTRICAL STRUCTURES TO BE PROTECTED, ADJUSTED, REMOVED OR ABANDONED.
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- SEE PHASING AND BARRICADE PLANS FOR APPROVED CONSTRUCTION HAUL ROUTES.
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STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS

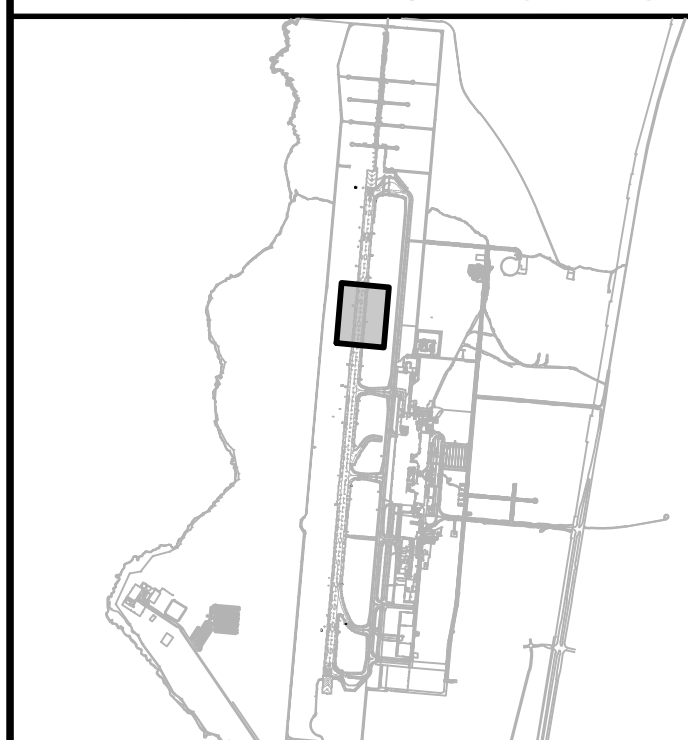


*M. Clevon*  
4/30/24  
Licensed Expiration Date

This work was prepared by me or under my supervision.

DSGN.	DRWN.	CHKD.	APPD.
AC	AT	TR	SH

**KEY PLAN / NOTES:**



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENTS**

SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35  
REHABILITATION**

AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

**SHEET TITLE:**

**CIVIL DEMOLITION  
PLAN 7**

DATE :

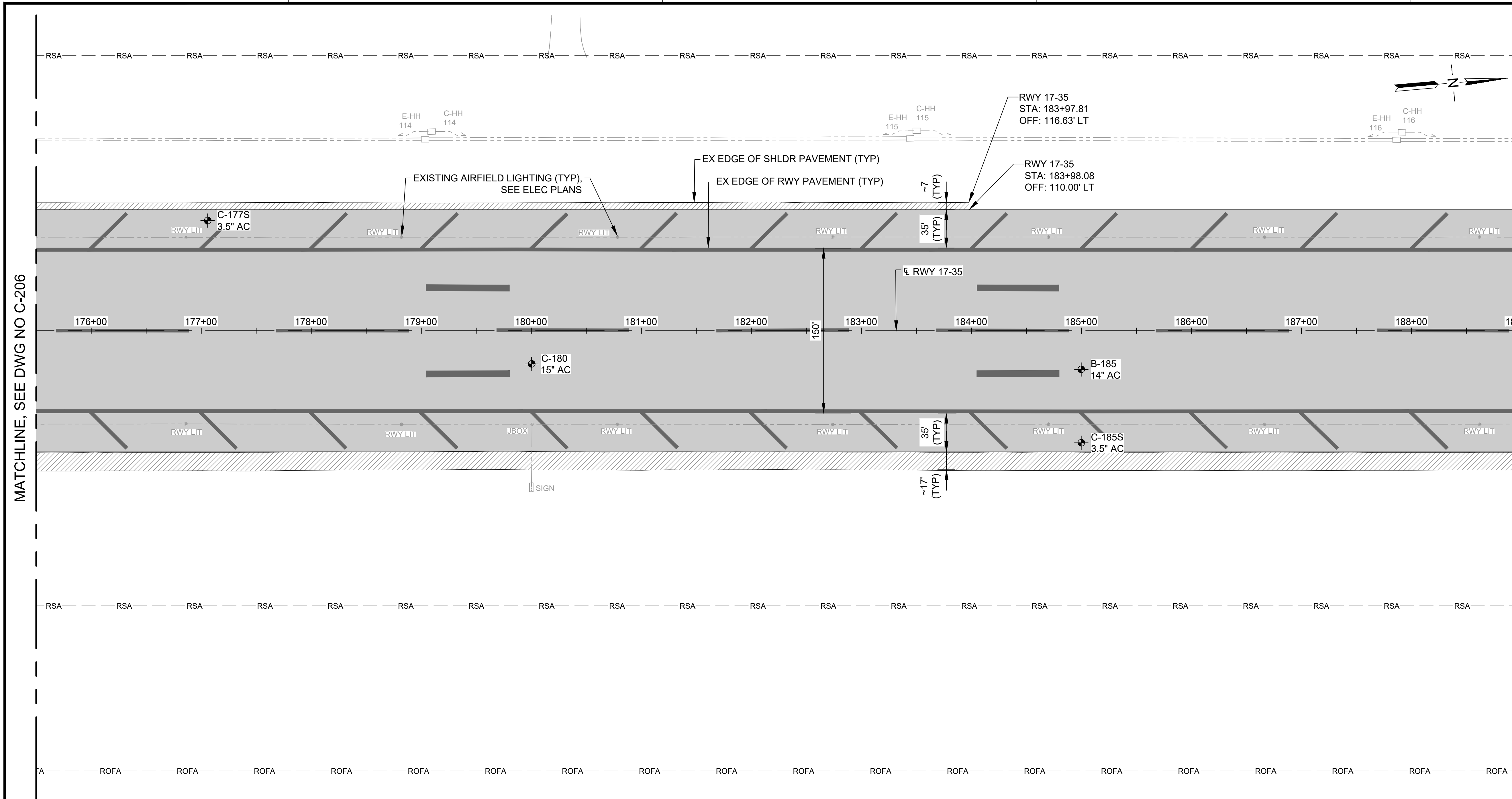
09/2023

SHEET :

66 OF 190 SHEETS

DWG. NO.

**C-207**



MATCHLINE, SEE DWG NO C-206

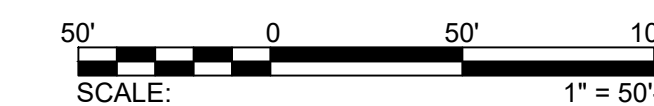
MATCHLINE, SEE DWG NO C-208

**LEGEND:**

	AC MILLING (±0.5" TO ±4" DEPTH)		RSA	RUNWAY SAFETY AREA
	AC PAVEMENT DEMOLITION (±1.5" TO ±4" DEPTH)		ROFA	RUNWAY OBJECT FREE AREA
	AC PAVEMENT DEMOLITION, FULL-DEPTH (±8" TO ±14" DEPTH)		TSA	TAXIWAY SAFETY AREA
	PCC PAVEMENT DEMOLITION, FULL-DEPTH (±15" DEPTH)			BORE/CORE LOCATION
			TWY A (TWY A2)	EXISTING TWY NAME FUTURE TWY NAME

**NOTES:**

- PAVEMENT THICKNESS VARIES. SEE BORING AND CORE LAYOUT PLAN.
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- SEE PHASING AND BARRICADE PLANS FOR APPROVED CONSTRUCTION HAUL ROUTES.
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STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS



4/30/24  
Licensed Expiration Date

This work was prepared by me or under my supervision.

DSGN.	DRWN.	CHKD.	APPD.
AC	AT	TR	SH

**KEY PLAN / NOTES:**



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENTS**

SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**

AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

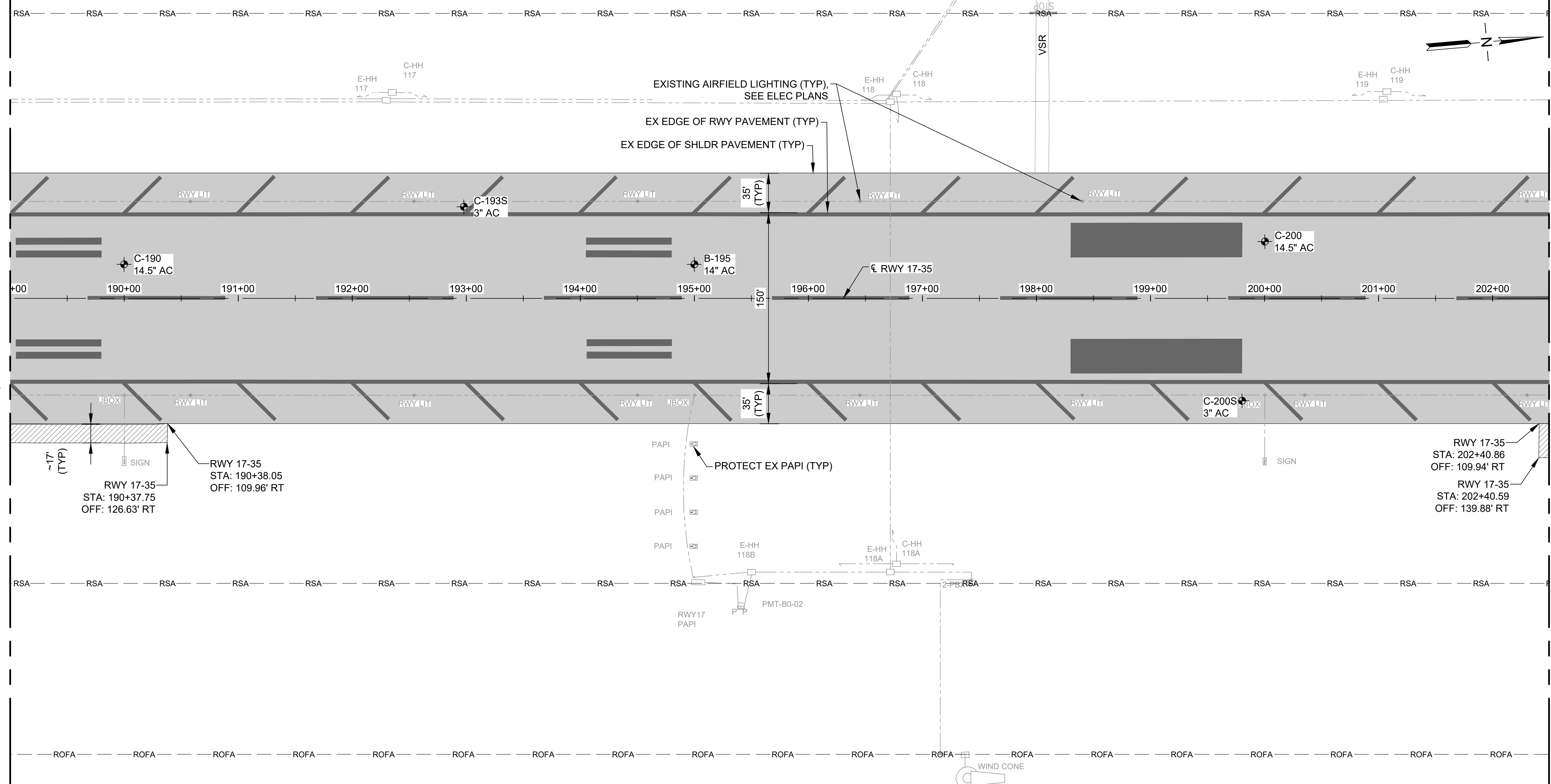
**SHEET TITLE:**

**CIVIL DEMOLITION PLAN 8**

DATE :	09/2023	DWG. NO.	C-208
SHEET :			
67 OF 190 SHEETS			

MATCHLINE, SEE DWG NO C-207

MATCHLINE, SEE DWG NO C-209

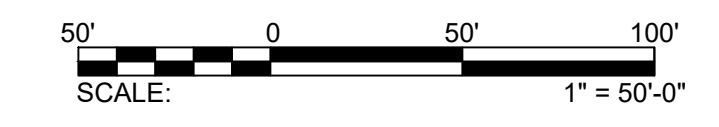


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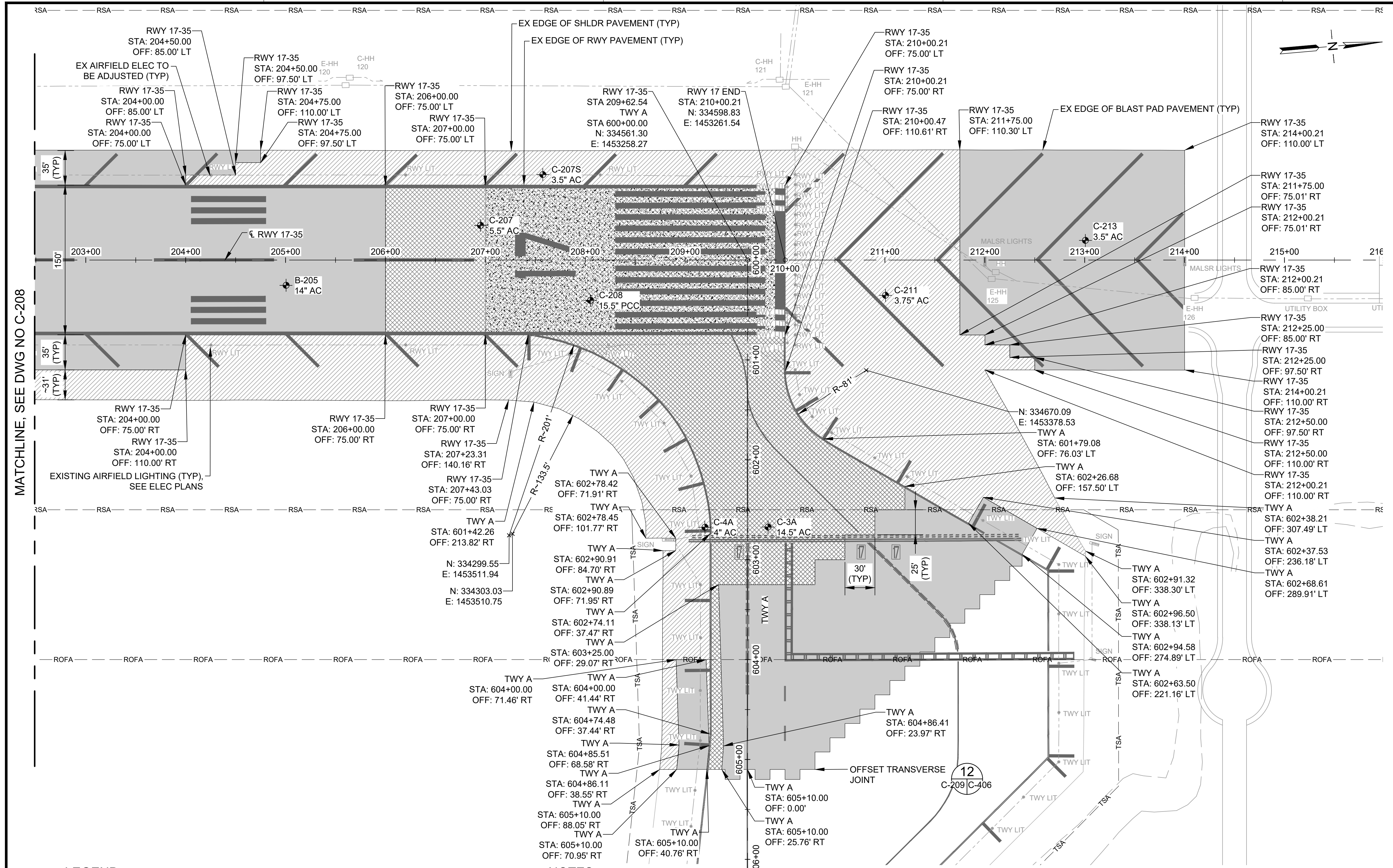
	AC MILLING (±0.5" TO ±4" DEPTH)		RSA	RUNWAY SAFETY AREA
	AC PAVEMENT DEMOLITION (±1.5" TO ±4" DEPTH)		ROFA	RUNWAY OBJECT FREE AREA
	AC PAVEMENT DEMOLITION, FULL-DEPTH (±8" TO ±14" DEPTH)		TSA	TAXIWAY SAFETY AREA
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			TWY A (TWY A2)	EXISTING TWY NAME FUTURE TWY NAME

**NOTES:**

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MATCHLINE, SEE DWG NO C-208

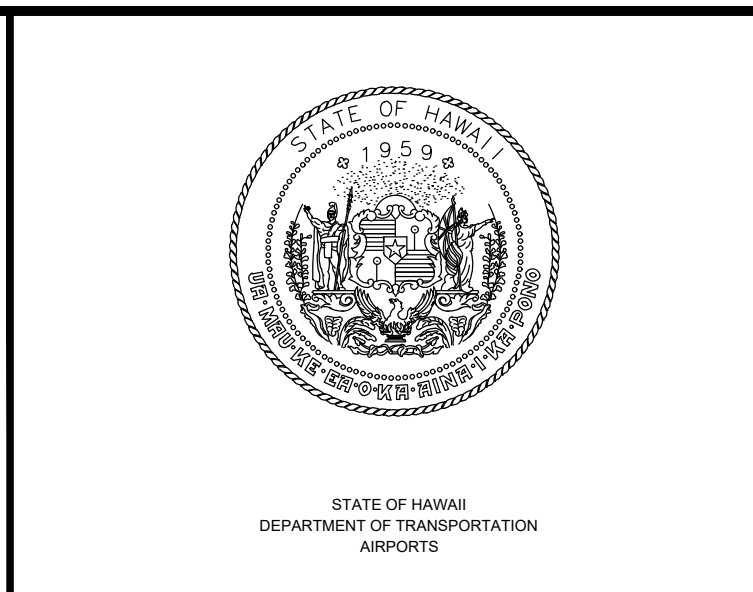
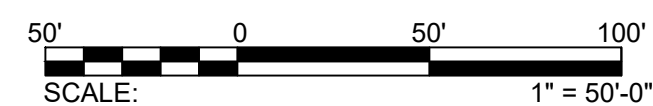
**LEGEND:**

- |  |  |  |                            |
|--|--|--|----------------------------|
|  | AC MILLING (±0.5" TO ±4" DEPTH)                        |  | RUNWAY SAFETY AREA         |
|  | AC PAVEMENT DEMOLITION (±1.5" TO ±4" DEPTH)            |  | RUNWAY OBJECT FREE AREA    |
|  | AC PAVEMENT DEMOLITION, FULL-DEPTH (±8" TO ±14" DEPTH) |  | TAXIWAY SAFETY AREA        |
|  | PCC PAVEMENT DEMOLITION, FULL-DEPTH (±15" DEPTH)       |  | BORE/CORE LOCATION         |
|  |  |  | EXISTING TWY NAME (TWY A2) |
|  |  |  | FUTURE TWY NAME            |

**NOTES:**

- PAVEMENT THICKNESS VARIES. SEE BORING AND CORE LAYOUT PLAN.
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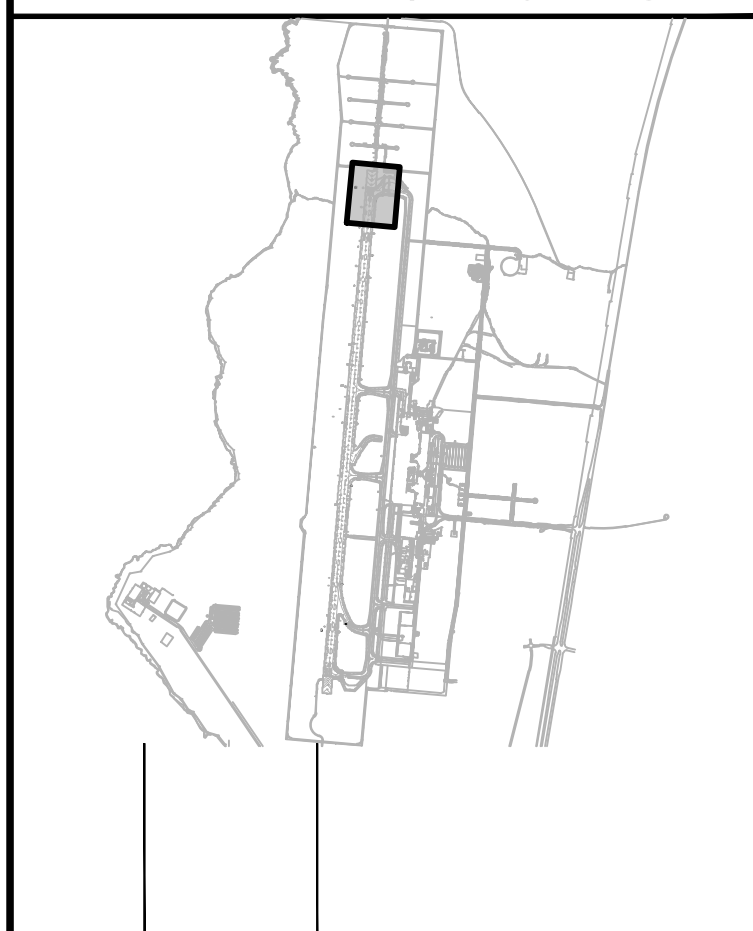


MARTIN A. CLEVEN  
 LICENSED PROFESSIONAL ENGINEER  
 No. 12828-C  
 HAWAII, U.S.A.  
 4/30/24  
 Licensed Expiration Date

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AC	AT	TR	SH

**KEY PLAN / NOTES:**



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENTS**  
 SEPTEMBER 2023  
 DATE

**PROJECT TITLE :**  
 RUNWAY 17-35 REHABILITATION  
 AT ELLISON ONIZUKA KONA INTERNATIONAL AIRPORT AT KEAHOLE KAILUA-KONA, HAWAII

**PROJECT NO.:**  
 AH2021-16

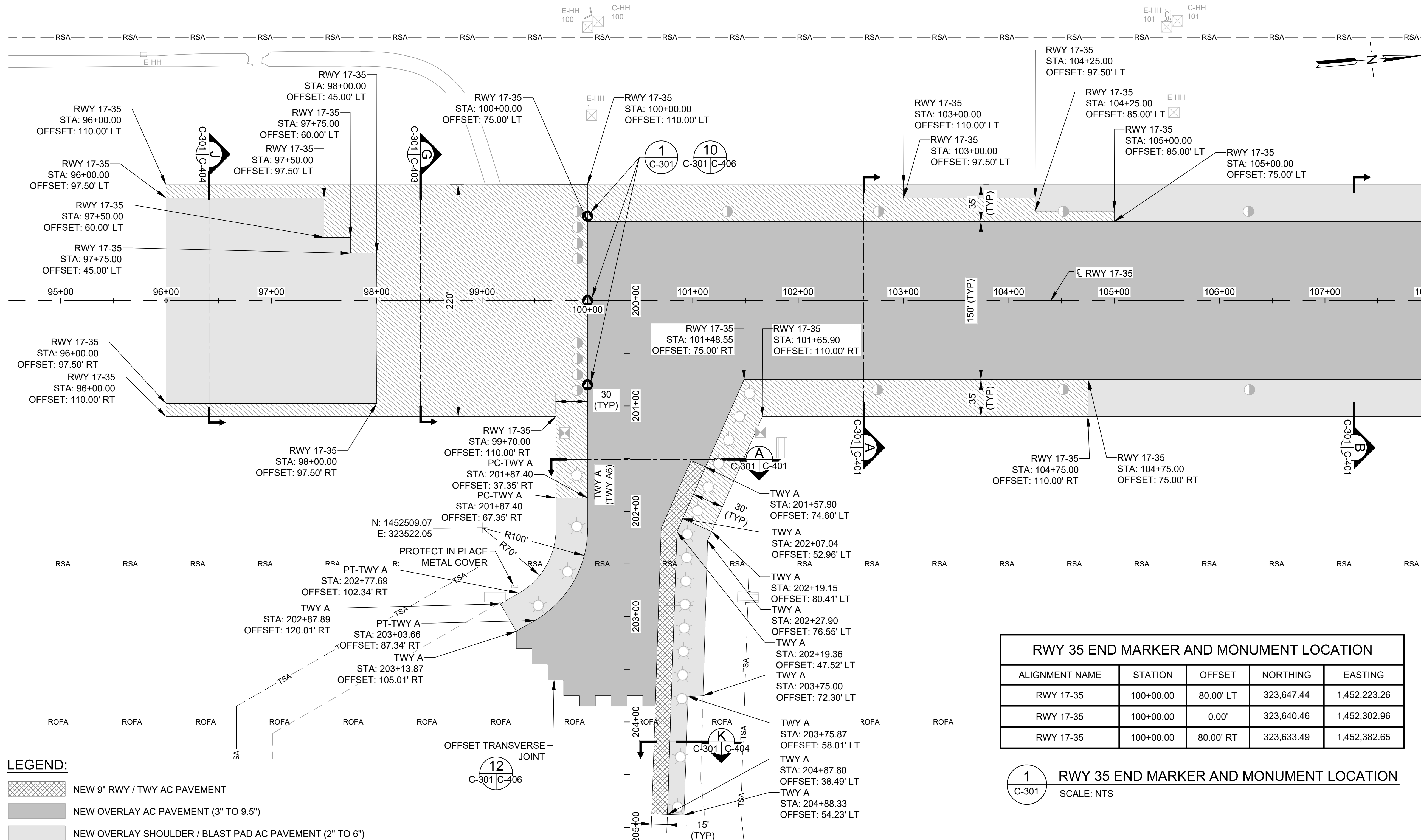
**SHEET TITLE:**

**CIVIL DEMOLITION PLAN 9**

DATE :	DWG. NO.
09/2023	C-209
SHEET :	
68 OF 190 SHEETS	

C:\USERS\JIBEN\ORION ENGINEERS & ASSOCIATES\TSDHOT\KOA 17-35 REHAB - DOCUMENTS\2021-16-CEA-KOA-DEMO.DWG





- LEGEND:**
- NEW 9" RWY / TWY AC PAVEMENT
  - NEW OVERLAY AC PAVEMENT (3" TO 9.5")
  - NEW OVERLAY SHOULDER / BLAST PAD AC PAVEMENT (2" TO 6")
  - NEW 4" SHOULDER / BLAST PAD AC PAVEMENT
  - ELEVATED RUNWAY LIGHT
  - SEMI-FLUSH RUNWAY LIGHT
  - ELEVATED TAXIWAY LIGHT
  - MALSR LIGHT
  - BASE CAN
  - NEW HANDHOLE
  - ADJUST EXISTING HANDHOLE
  - EXISTING HANDHOLE
  - SIGN
  - RUNWAY END MARKER AND MONUMENT

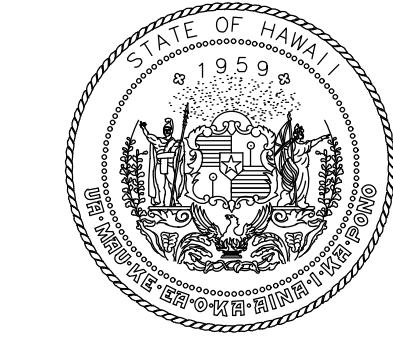
- NOTE:**
1. ALL MILLED RUNWAY SURFACES SHALL BE PAVED AND TRANSITION RAMP COMPLETED PRIOR TO REOPENING THE RUNWAY TO AIRCRAFT TRAFFIC.
  2. OFFSET TRANSVERSE JOINTS SHALL BE CONSTRUCTED AT THE INTERFACE WITH PAVEMENTS PLACED DURING PREVIOUS WORK SHIFTS. THE CONTRACTOR SHALL DEVELOP A PAVING PLAN THAT MINIMIZES OFFSET TRANSVERSE JOINTS.
  3. OFFSET TRANSVERSE JOINTS ON THE SURFACE COURSE SHALL BE OFFSET A MINIMUM OF 10' FROM TRANSVERSE JOINTS ON LOWER PAVING LIFTS.
  4. OFFSET TRANSVERSE JOINTS ARE NOT REQUIRED ON SHOULDERS.
  5. STEEL DRUM ROLLERS SHALL NOT BE PERMITTED ON CONCRETE, ONLY PNEUMATIC ROLLERS ARE PERMITTED ON CONCRETE. ANY DAMAGE TO CONCRETE SURFACES CAUSED BY ROLLERS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
  6. TRUCKS SHALL NOT TRAVERSE OVER CUT AND PREPARED JOINTS.
  7. VEHICLE TRAFFIC OVER TACK COAT SHALL BE KEPT TO A MINIMUM. TACKED SURFACES THAT HAVE BEEN CONTAMINATED SHALL BE CLEANED AND RE-TACKED AT THE DIRECTION OF THE ENGINEER AND AT THE CONTRACTOR'S EXPENSE.
  8. THE ALIGNMENT AND ELEVATION OF THE PAVER SHALL BE REGULATED FROM OUTSIDE REFERENCE LINES. THE CONTRACTOR'S LICENSED SURVEYOR SHALL SURVEY HMA AND CERTIFY TO ENGINEER THAT EVERY LOT MEETS THE CONTRACT GRADE TOLERANCES.
  9. AT THE CONCLUSION OF EACH WORK SHIFT, PRIOR TO OPENING THE RUNWAY OR TAXIWAY TO AIRCRAFT, THE CONTRACTOR SHALL ENSURE THAT NO DROP-OFFS GREATER THAN 3" ARE PRESENT.
  10. REFER TO ELECTRICAL DRAWINGS FOR ELECTRICAL STRUCTURES TO BE PROTECTED, ADJUSTED, REMOVED OR ABANDONED.
  11. SEE PHASING AND BARRICADE PLANS FOR APPROVED CONTRACTOR HAUL ROUTES.

RWY 35 END MARKER AND MONUMENT LOCATION				
ALIGNMENT NAME	STATION	OFFSET	NORTHING	EASTING
RWY 17-35	100+00.00	80.00' LT	323,647.44	1,452,223.26
RWY 17-35	100+00.00	0.00'	323,640.46	1,452,302.96
RWY 17-35	100+00.00	80.00' RT	323,633.49	1,452,382.65

1 RWY 35 END MARKER AND MONUMENT LOCATION  
 C-301 SCALE: NTS



MATCHLINE, SEE DWG NO C-302



4/30/24  
 Licensed Expiration Date

This work was prepared by me or under my supervision.

DSGN.	DRWN.	CHKD.	APPD.
AC	AT	TR	SH

**KEY PLAN / NOTES:**



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENTS**  
 SEPTEMBER 2023  
 DATE

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**  
 AT  
 ELLISON ONIZUKA  
 KONA INTERNATIONAL AIRPORT AT KEAHOLE  
 KAILUA-KONA, HAWAII

**PROJECT NO.:**

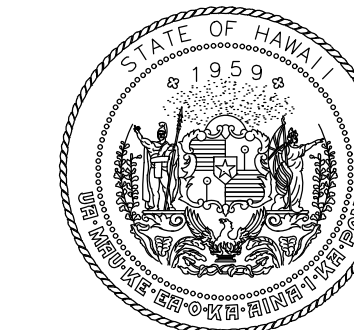
**AH2021-16**

**SHEET TITLE:**

**PAVING LAYOUT PLAN 1**

DATE :	DWG. NO.
09/2023	C-301
SHEET :	
69 OF 190 SHEETS	

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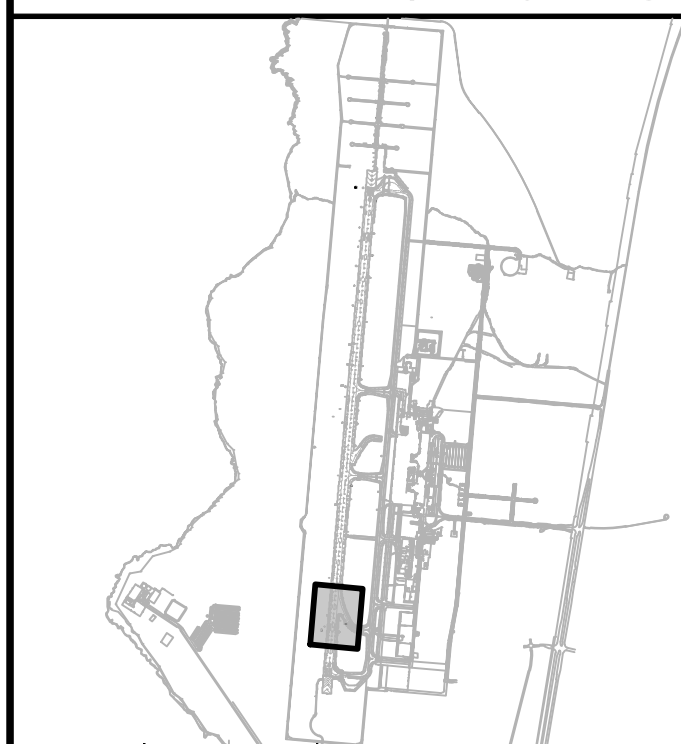
4/30/24

Licensed Expiration Date

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DSGN.	DRWN.	CHKD.	APPD.
AC	AT	TR	SH

### KEY PLAN / NOTES:



NO.	DATE	REVISIONS
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## CONSTRUCTION DOCUMENTS

SEPTEMBER 2023  
DATE

### PROJECT TITLE :

## RUNWAY 17-35 REHABILITATION

AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

### PROJECT NO.:

**AH2021-16**

### SHEET TITLE:

## PAVING LAYOUT PLAN 2

DATE :

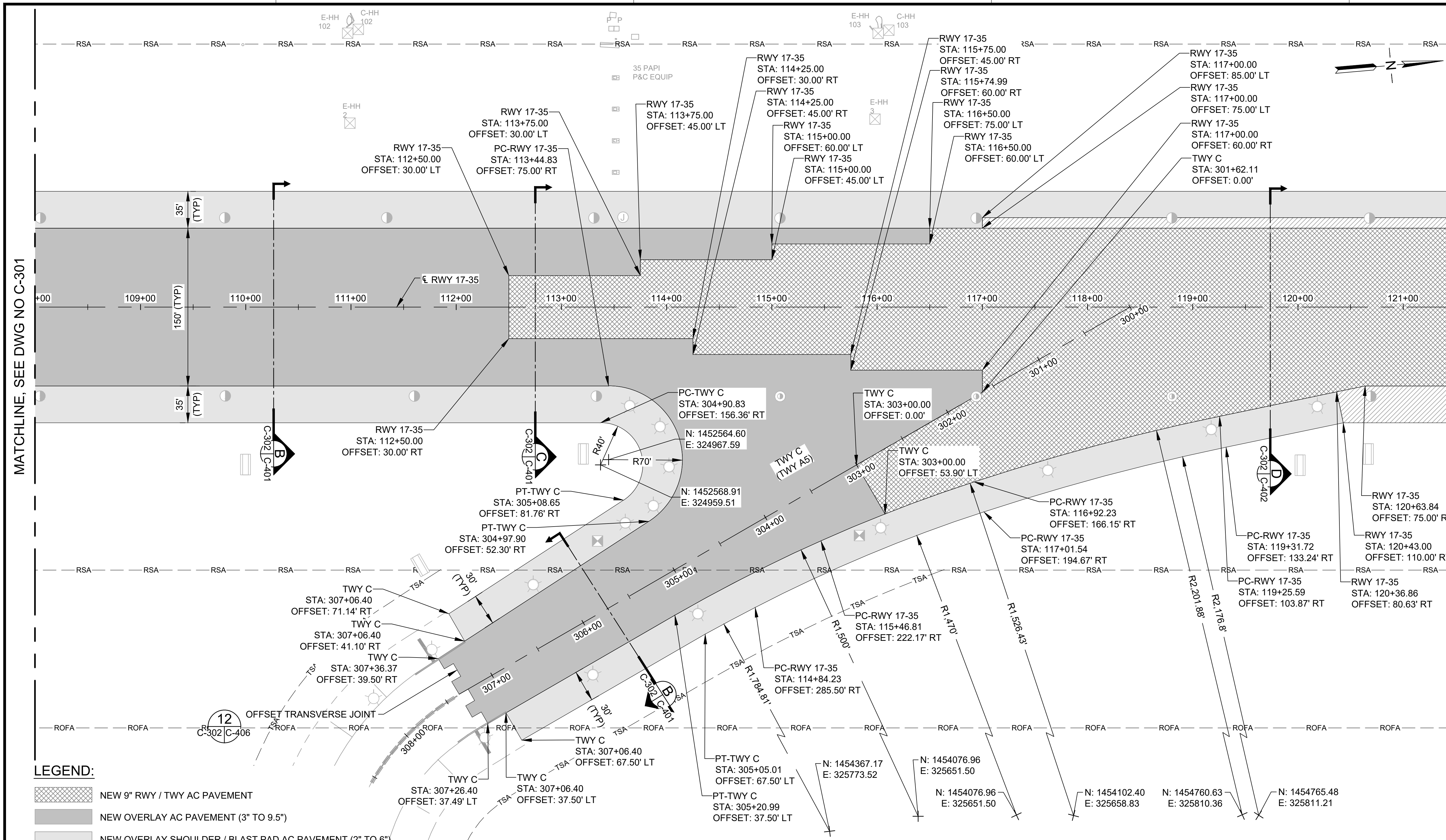
**09/2023**

SHEET :

70 OF 190 SHEETS

DWG. NO.

**C-302**

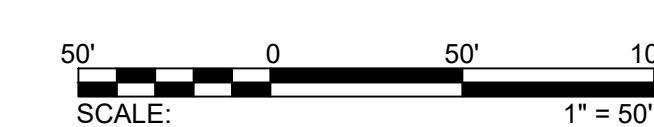


MATCHLINE, SEE DWG NO C-301

MATCHLINE, SEE DWG NO C-303

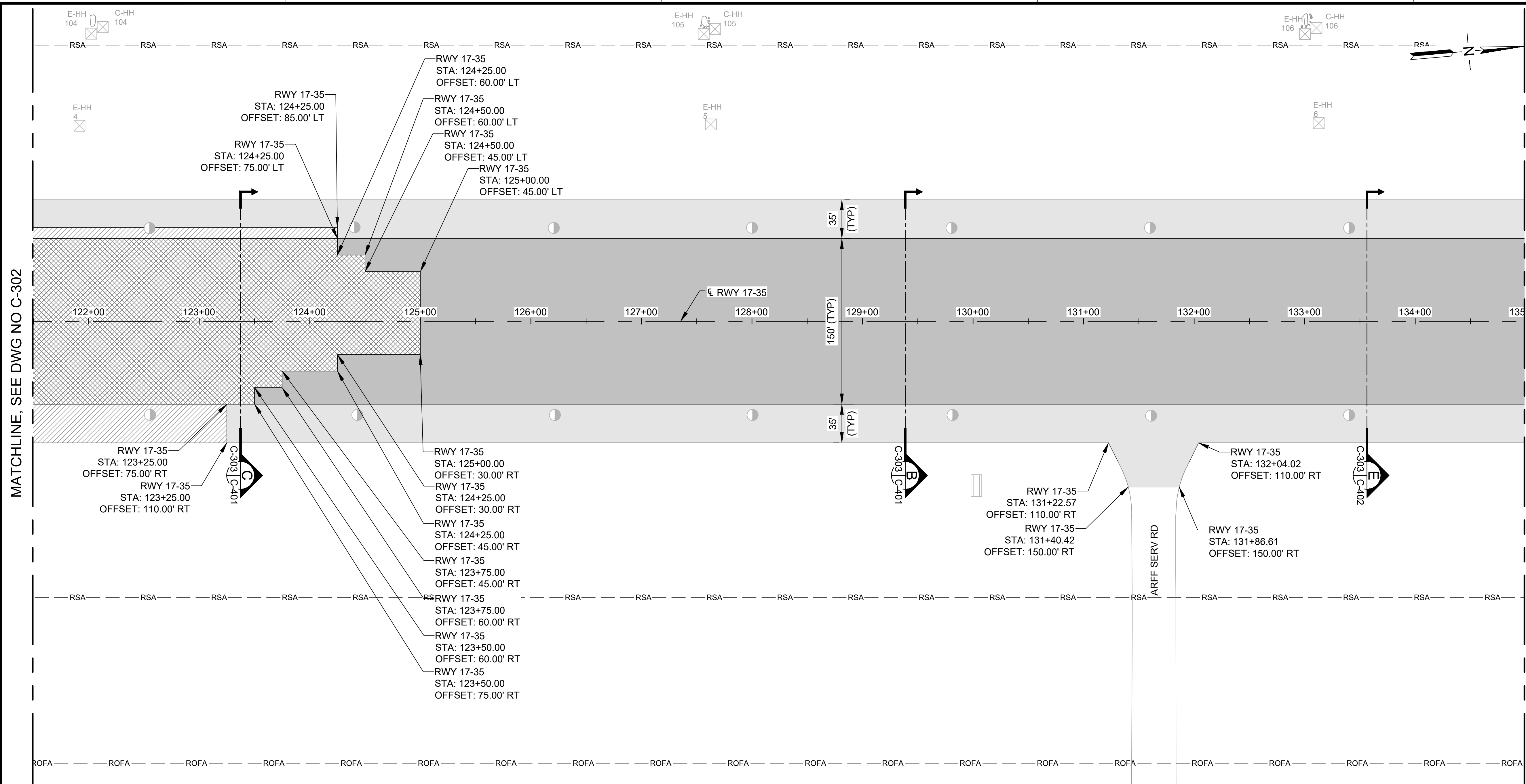
- LEGEND:**
- NEW 9" RWY / TWY AC PAVEMENT
  - NEW OVERLAY AC PAVEMENT (3" TO 9.5")
  - NEW OVERLAY SHOULDER / BLAST PAD AC PAVEMENT (2" TO 6")
  - NEW 4" SHOULDER / BLAST PAD AC PAVEMENT
  - ELEVATED RUNWAY LIGHT
  - SEMI-FLUSH RUNWAY LIGHT
  - ELEVATED TAXIWAY LIGHT
  - MALSR LIGHT
  - BASE CAN
  - NEW HANDHOLE
  - ADJUST EXISTING HANDHOLE
  - EXISTING HANDHOLE
  - SIGN
  - RUNWAY END MARKER AND MONUMENT

- NOTE:**
1. ALL MILLED RUNWAY SURFACES SHALL BE PAVED AND TRANSITION RAMP COMPLETED PRIOR TO REOPENING THE RUNWAY TO AIRCRAFT TRAFFIC.
  2. OFFSET TRANSVERSE JOINTS SHALL BE CONSTRUCTED AT THE INTERFACE WITH PAVEMENTS PLACED DURING PREVIOUS WORK SHIFTS. THE CONTRACTOR SHALL DEVELOP A PAVING PLAN THAT MINIMIZES OFFSET TRANSVERSE JOINTS.
  3. OFFSET TRANSVERSE JOINTS ON THE SURFACE COURSE SHALL BE OFFSET A MINIMUM OF 10' FROM TRANSVERSE JOINTS ON LOWER PAVING LIFTS.
  4. OFFSET TRANSVERSE JOINTS ARE NOT REQUIRED ON SHOULDERS.
  5. STEEL DRUM ROLLERS SHALL NOT BE PERMITTED ON CONCRETE, ONLY PNEUMATIC ROLLERS ARE PERMITTED ON CONCRETE. ANY DAMAGE TO CONCRETE SURFACES CAUSED BY ROLLERS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
  6. TRUCKS SHALL NOT TRAVERSE OVER CUT AND PREPARED JOINTS.
  7. VEHICLE TRAFFIC OVER TACK COAT SHALL BE KEPT TO A MINIMUM. TACKED SURFACES THAT HAVE BEEN CONTAMINATED SHALL BE CLEANED AND RE-TACKED AT THE DIRECTION OF THE ENGINEER AND AT THE CONTRACTOR'S EXPENSE.
  8. THE ALIGNMENT AND ELEVATION OF THE PAVER SHALL BE REGULATED FROM OUTSIDE REFERENCE LINES. THE CONTRACTOR'S LICENSED SURVEYOR SHALL SURVEY HMA AND CERTIFY TO ENGINEER THAT EVERY LOT MEETS THE CONTRACT GRADE TOLERANCES.
  9. AT THE CONCLUSION OF EACH WORK SHIFT, PRIOR TO OPENING THE RUNWAY OR TAXIWAY TO AIRCRAFT, THE CONTRACTOR SHALL ENSURE THAT NO DROP-OFFS GREATER THAN 3" ARE PRESENT.
  10. REFER TO ELECTRICAL DRAWINGS FOR ELECTRICAL STRUCTURES TO BE PROTECTED, ADJUSTED, REMOVED OR ABANDONED.
  11. SEE PHASING AND BARRICADE PLANS FOR APPROVED CONTRACTOR HAUL ROUTES.



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MATCHLINE, SEE DWG NO C-302

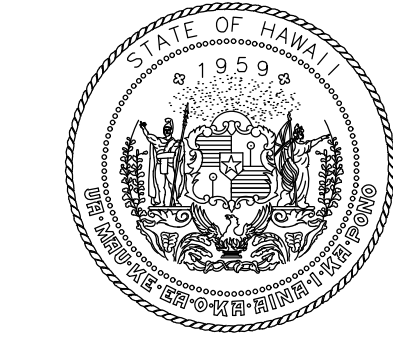
MATCHLINE, SEE DWG NO C-304

**LEGEND:**

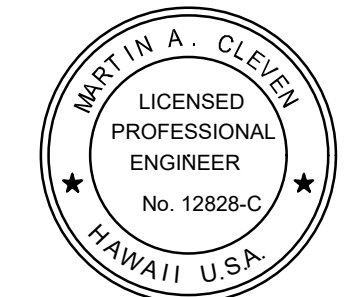
- NEW 9" RWY / TWY AC PAVEMENT
- NEW OVERLAY AC PAVEMENT (3" TO 9.5")
- NEW OVERLAY SHOULDER / BLAST PAD AC PAVEMENT (2" TO 6")
- NEW 4" SHOULDER / BLAST PAD AC PAVEMENT
- ELEVATED RUNWAY LIGHT
- SEMI-FLUSH RUNWAY LIGHT
- ELEVATED TAXIWAY LIGHT
- MALS R LIGHT
- BASE CAN
- NEW HANDHOLE
- ADJUST EXISTING HANDHOLE
- EXISTING HANDHOLE
- SIGN
- RUNWAY END MARKER AND MONUMENT

**NOTE:**

1. ALL MILLED RUNWAY SURFACES SHALL BE PAVED AND TRANSITION RAMPS COMPLETED PRIOR TO REOPENING THE RUNWAY TO AIRCRAFT TRAFFIC.
2. OFFSET TRANSVERSE JOINTS SHALL BE CONSTRUCTED AT THE INTERFACE WITH PAVEMENTS PLACED DURING PREVIOUS WORK SHIFTS. THE CONTRACTOR SHALL DEVELOP A PAVING PLAN THAT MINIMIZES OFFSET TRANSVERSE JOINTS.
3. OFFSET TRANSVERSE JOINTS ON THE SURFACE COURSE SHALL BE OFFSET A MINIMUM OF 10' FROM TRANSVERSE JOINTS ON LOWER PAVING LIFTS.
4. OFFSET TRANSVERSE JOINTS ARE NOT REQUIRED ON SHOULDERS.
5. STEEL DRUM ROLLERS SHALL NOT BE PERMITTED ON CONCRETE, ONLY PNEUMATIC ROLLERS ARE PERMITTED ON CONCRETE. ANY DAMAGE TO CONCRETE SURFACES CAUSED BY ROLLERS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
6. TRUCKS SHALL NOT TRAVERSE OVER CUT AND PREPARED JOINTS.
7. VEHICLE TRAFFIC OVER TACK COAT SHALL BE KEPT TO A MINIMUM. TACKED SURFACES THAT HAVE BEEN CONTAMINATED SHALL BE CLEANED AND RE-TACKED AT THE DIRECTION OF THE ENGINEER AND AT THE CONTRACTOR'S EXPENSE.
8. THE ALIGNMENT AND ELEVATION OF THE PAVER SHALL BE REGULATED FROM OUTSIDE REFERENCE LINES. THE CONTRACTOR'S LICENSED SURVEYOR SHALL SURVEY HMA AND CERTIFY TO ENGINEER THAT EVERY LOT MEETS THE CONTRACT GRADE TOLERANCES.
9. AT THE CONCLUSION OF EACH WORK SHIFT, PRIOR TO OPENING THE RUNWAY OR TAXIWAY TO AIRCRAFT, THE CONTRACTOR SHALL ENSURE THAT NO DROP-OFFS GREATER THAN 3" ARE PRESENT.
10. REFER TO ELECTRICAL DRAWINGS FOR ELECTRICAL STRUCTURES TO BE PROTECTED, ADJUSTED, REMOVED OR ABANDONED.
11. SEE PHASING AND BARRICADE PLANS FOR APPROVED CONTRACTOR HAUL ROUTES.



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS



4/30/24  
Licensed Expiration Date

This work was prepared by me or under my supervision.

DSGN.	DRWN.	CHKD.	APPD.
AC	AT	TR	SH

**KEY PLAN / NOTES:**



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENTS**  
SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**

AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

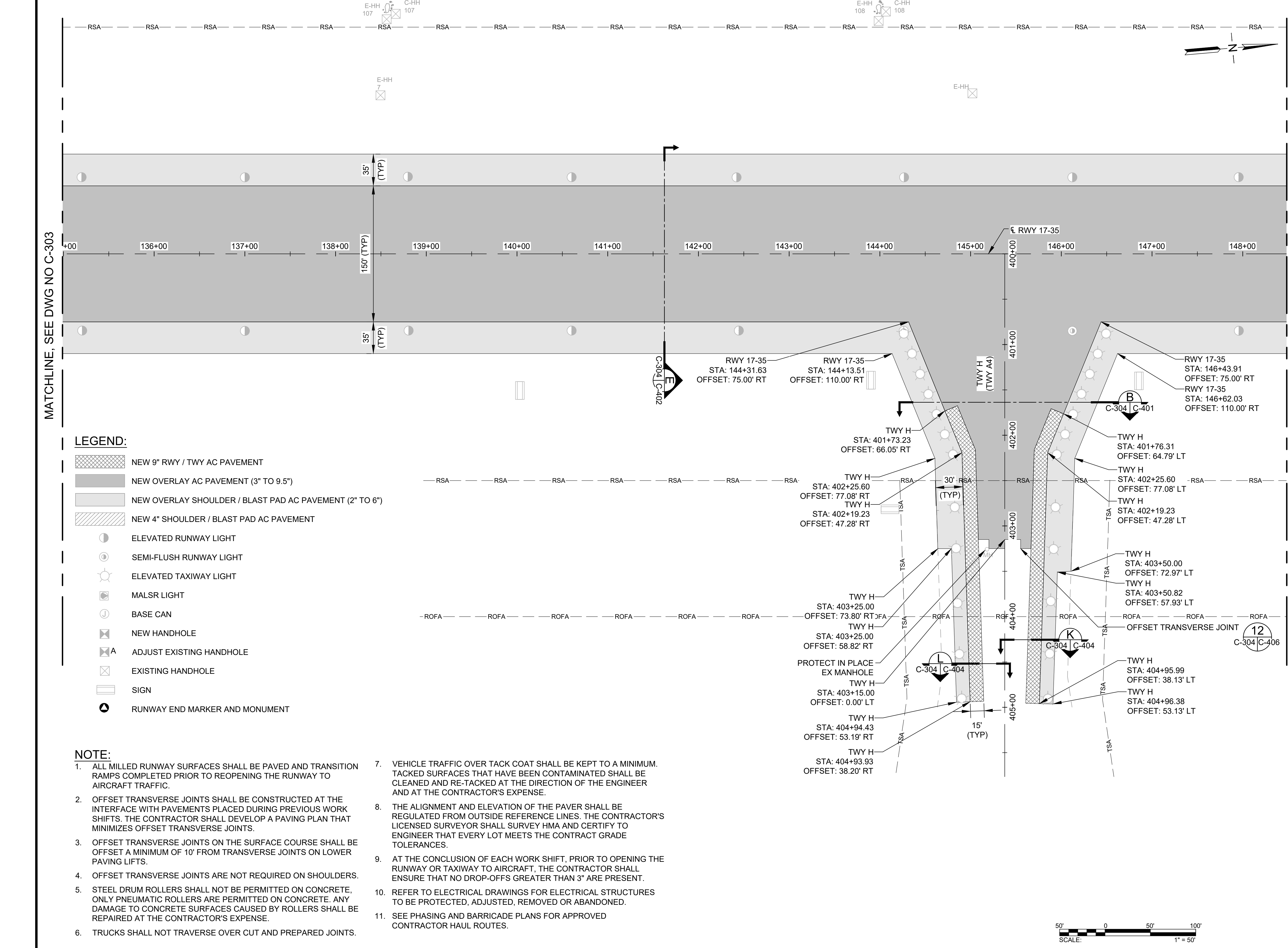
**AH2021-16**

**SHEET TITLE:**

**PAVING LAYOUT PLAN 3**

DATE :	DWG. NO.
09/2023	C-303
SHEET :	
71 OF 190 SHEETS	

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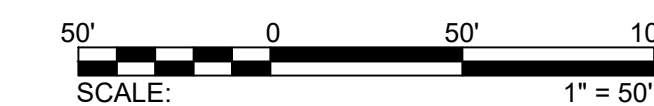


**LEGEND:**

- NEW 9" RWY / TWY AC PAVEMENT
- NEW OVERLAY AC PAVEMENT (3" TO 9.5")
- NEW OVERLAY SHOULDER / BLAST PAD AC PAVEMENT (2" TO 6")
- NEW 4" SHOULDER / BLAST PAD AC PAVEMENT
- ELEVATED RUNWAY LIGHT
- SEMI-FLUSH RUNWAY LIGHT
- ELEVATED TAXIWAY LIGHT
- MALSR LIGHT
- BASE CAN
- NEW HANDHOLE
- ADJUST EXISTING HANDHOLE
- EXISTING HANDHOLE
- SIGN
- RUNWAY END MARKER AND MONUMENT

**NOTE:**

1. ALL MILLED RUNWAY SURFACES SHALL BE PAVED AND TRANSITION RAMPS COMPLETED PRIOR TO REOPENING THE RUNWAY TO AIRCRAFT TRAFFIC.
2. OFFSET TRANSVERSE JOINTS SHALL BE CONSTRUCTED AT THE INTERFACE WITH PAVEMENTS PLACED DURING PREVIOUS WORK SHIFTS. THE CONTRACTOR SHALL DEVELOP A PAVING PLAN THAT MINIMIZES OFFSET TRANSVERSE JOINTS.
3. OFFSET TRANSVERSE JOINTS ON THE SURFACE COURSE SHALL BE OFFSET A MINIMUM OF 10' FROM TRANSVERSE JOINTS ON LOWER PAVING LIFTS.
4. OFFSET TRANSVERSE JOINTS ARE NOT REQUIRED ON SHOULDERS.
5. STEEL DRUM ROLLERS SHALL NOT BE PERMITTED ON CONCRETE, ONLY PNEUMATIC ROLLERS ARE PERMITTED ON CONCRETE. ANY DAMAGE TO CONCRETE SURFACES CAUSED BY ROLLERS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
6. TRUCKS SHALL NOT TRAVERSE OVER CUT AND PREPARED JOINTS.
7. VEHICLE TRAFFIC OVER TACK COAT SHALL BE KEPT TO A MINIMUM. TACKED SURFACES THAT HAVE BEEN CONTAMINATED SHALL BE CLEANED AND RE-TACKED AT THE DIRECTION OF THE ENGINEER AND AT THE CONTRACTOR'S EXPENSE.
8. THE ALIGNMENT AND ELEVATION OF THE PAVER SHALL BE REGULATED FROM OUTSIDE REFERENCE LINES. THE CONTRACTOR'S LICENSED SURVEYOR SHALL SURVEY HMA AND CERTIFY TO ENGINEER THAT EVERY LOT MEETS THE CONTRACT GRADE TOLERANCES.
9. AT THE CONCLUSION OF EACH WORK SHIFT, PRIOR TO OPENING THE RUNWAY OR TAXIWAY TO AIRCRAFT, THE CONTRACTOR SHALL ENSURE THAT NO DROP-OFFS GREATER THAN 3" ARE PRESENT.
10. REFER TO ELECTRICAL DRAWINGS FOR ELECTRICAL STRUCTURES TO BE PROTECTED, ADJUSTED, REMOVED OR ABANDONED.
11. SEE PHASING AND BARRICADE PLANS FOR APPROVED CONTRACTOR HAUL ROUTES.

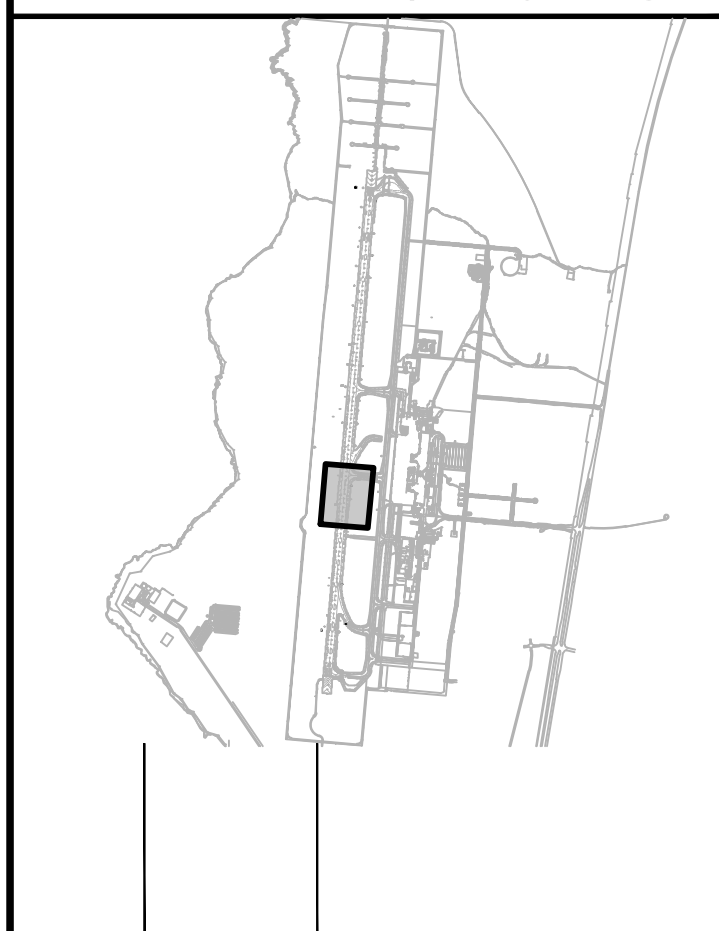


4/30/24  
 Licensed Expiration Date

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AC	AT	TR	SH

**KEY PLAN / NOTES:**



NO.	DATE	REVISIONS
12		C-304 C-406

**CONSTRUCTION DOCUMENTS**  
SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

**SHEET TITLE:**

**PAVING LAYOUT PLAN 4**

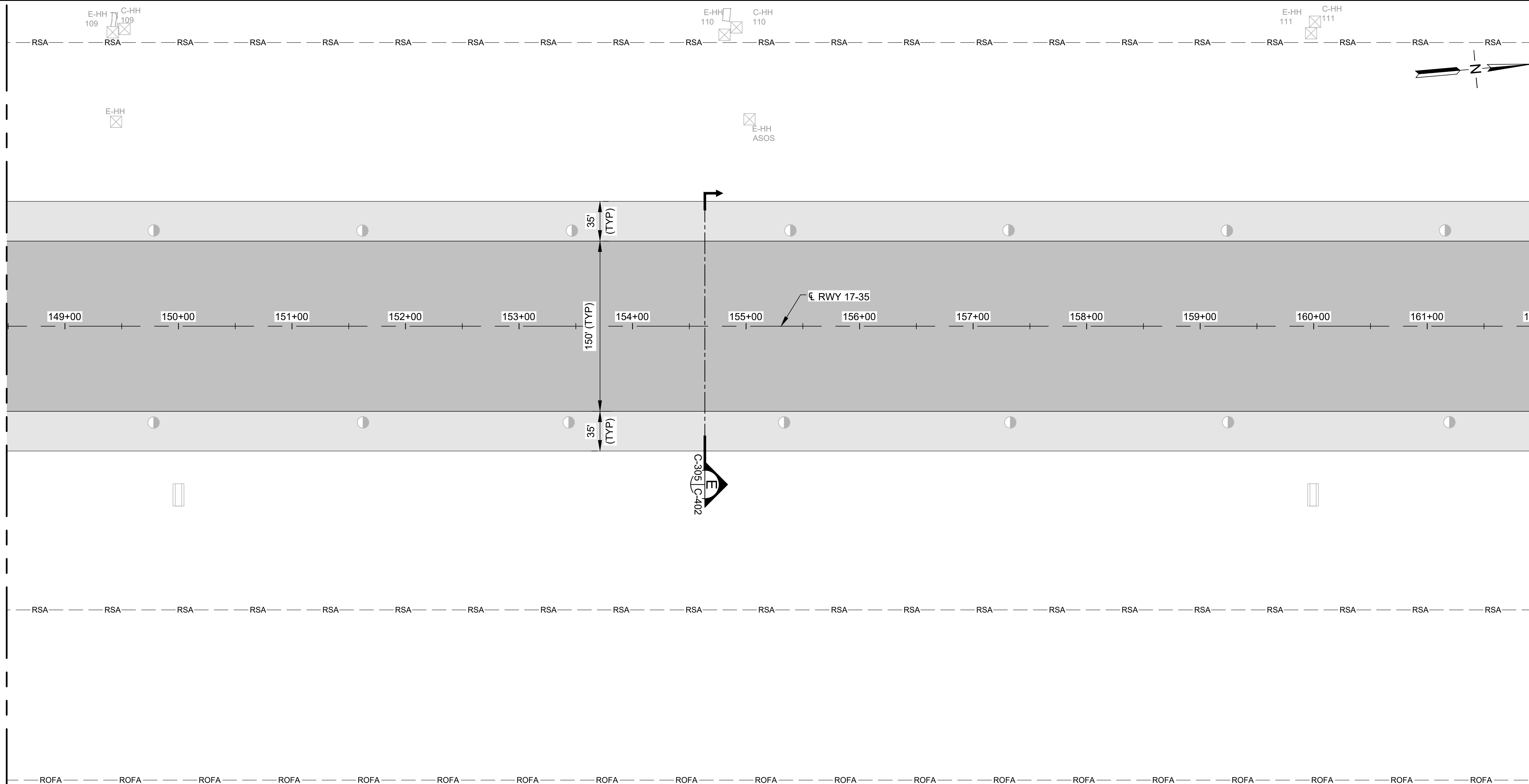
DATE :	DWG. NO.
09/2023	<b>C-304</b>
SHEET :	
72 OF 190 SHEETS	

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MATCHLINE, SEE DWG NO C-304

MATCHLINE, SEE DWG NO C-306

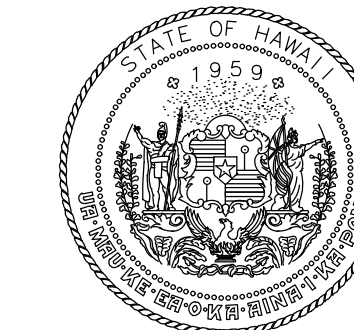
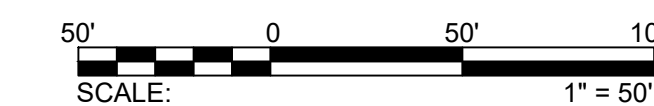


**LEGEND:**

-  NEW 9" RWY / TWY AC PAVEMENT
-  NEW OVERLAY AC PAVEMENT (3" TO 9.5")
-  NEW OVERLAY SHOULDER / BLAST PAD AC PAVEMENT (2" TO 6")
-  NEW 4" SHOULDER / BLAST PAD AC PAVEMENT
-  ELEVATED RUNWAY LIGHT
-  SEMI-FLUSH RUNWAY LIGHT
-  ELEVATED TAXIWAY LIGHT
-  MALS-R LIGHT
-  BASE CAN
-  NEW HANDHOLE
-  ADJUST EXISTING HANDHOLE
-  EXISTING HANDHOLE
-  SIGN
-  RUNWAY END MARKER AND MONUMENT

**NOTE:**

1. ALL MILLED RUNWAY SURFACES SHALL BE PAVED AND TRANSITION RAMPS COMPLETED PRIOR TO REOPENING THE RUNWAY TO AIRCRAFT TRAFFIC.
2. OFFSET TRANSVERSE JOINTS SHALL BE CONSTRUCTED AT THE INTERFACE WITH PAVEMENTS PLACED DURING PREVIOUS WORK SHIFTS. THE CONTRACTOR SHALL DEVELOP A PAVING PLAN THAT MINIMIZES OFFSET TRANSVERSE JOINTS.
3. OFFSET TRANSVERSE JOINTS ON THE SURFACE COURSE SHALL BE OFFSET A MINIMUM OF 10' FROM TRANSVERSE JOINTS ON LOWER PAVING LIFTS.
4. OFFSET TRANSVERSE JOINTS ARE NOT REQUIRED ON SHOULDERS.
5. STEEL DRUM ROLLERS SHALL NOT BE PERMITTED ON CONCRETE. ONLY PNEUMATIC ROLLERS ARE PERMITTED ON CONCRETE. ANY DAMAGE TO CONCRETE SURFACES CAUSED BY ROLLERS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
6. TRUCKS SHALL NOT TRAVERSE OVER CUT AND PREPARED JOINTS.
7. VEHICLE TRAFFIC OVER TACK COAT SHALL BE KEPT TO A MINIMUM. TACKED SURFACES THAT HAVE BEEN CONTAMINATED SHALL BE CLEANED AND RE-TACKED AT THE DIRECTION OF THE ENGINEER AND AT THE CONTRACTOR'S EXPENSE.
8. THE ALIGNMENT AND ELEVATION OF THE PAVER SHALL BE REGULATED FROM OUTSIDE REFERENCE LINES. THE CONTRACTOR'S LICENSED SURVEYOR SHALL SURVEY HMA AND CERTIFY TO ENGINEER THAT EVERY LOT MEETS THE CONTRACT GRADE TOLERANCES.
9. AT THE CONCLUSION OF EACH WORK SHIFT, PRIOR TO OPENING THE RUNWAY OR TAXIWAY TO AIRCRAFT, THE CONTRACTOR SHALL ENSURE THAT NO DROP-OFFS GREATER THAN 3" ARE PRESENT.
10. REFER TO ELECTRICAL DRAWINGS FOR ELECTRICAL STRUCTURES TO BE PROTECTED, ADJUSTED, REMOVED OR ABANDONED.
11. SEE PHASING AND BARRICADE PLANS FOR APPROVED CONTRACTOR HAUL ROUTES.



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS

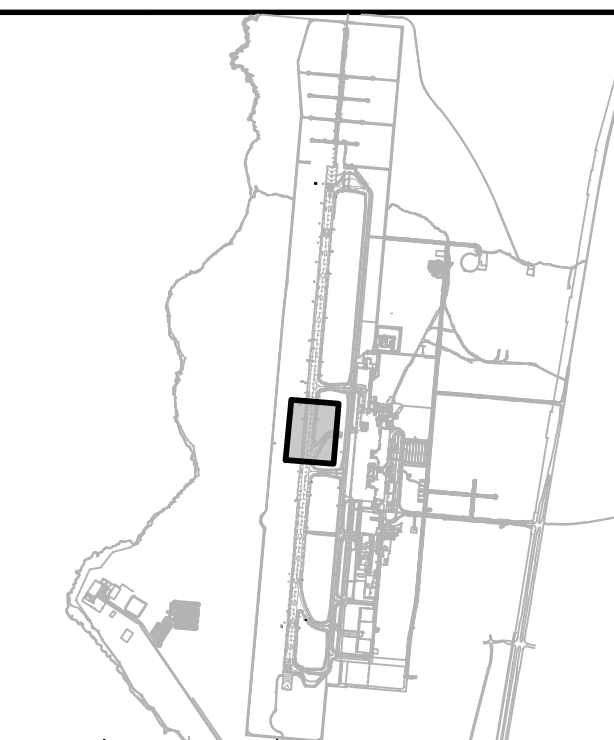


4/30/24  
Licensed Expiration Date

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DSGN.	DRWN.	CHKD.	APPD.
AC	AT	TR	SH

**KEY PLAN / NOTES:**



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENTS**  
SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**

AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

**SHEET TITLE:**

**PAVING LAYOUT PLAN 5**

DATE :

**09/2023**

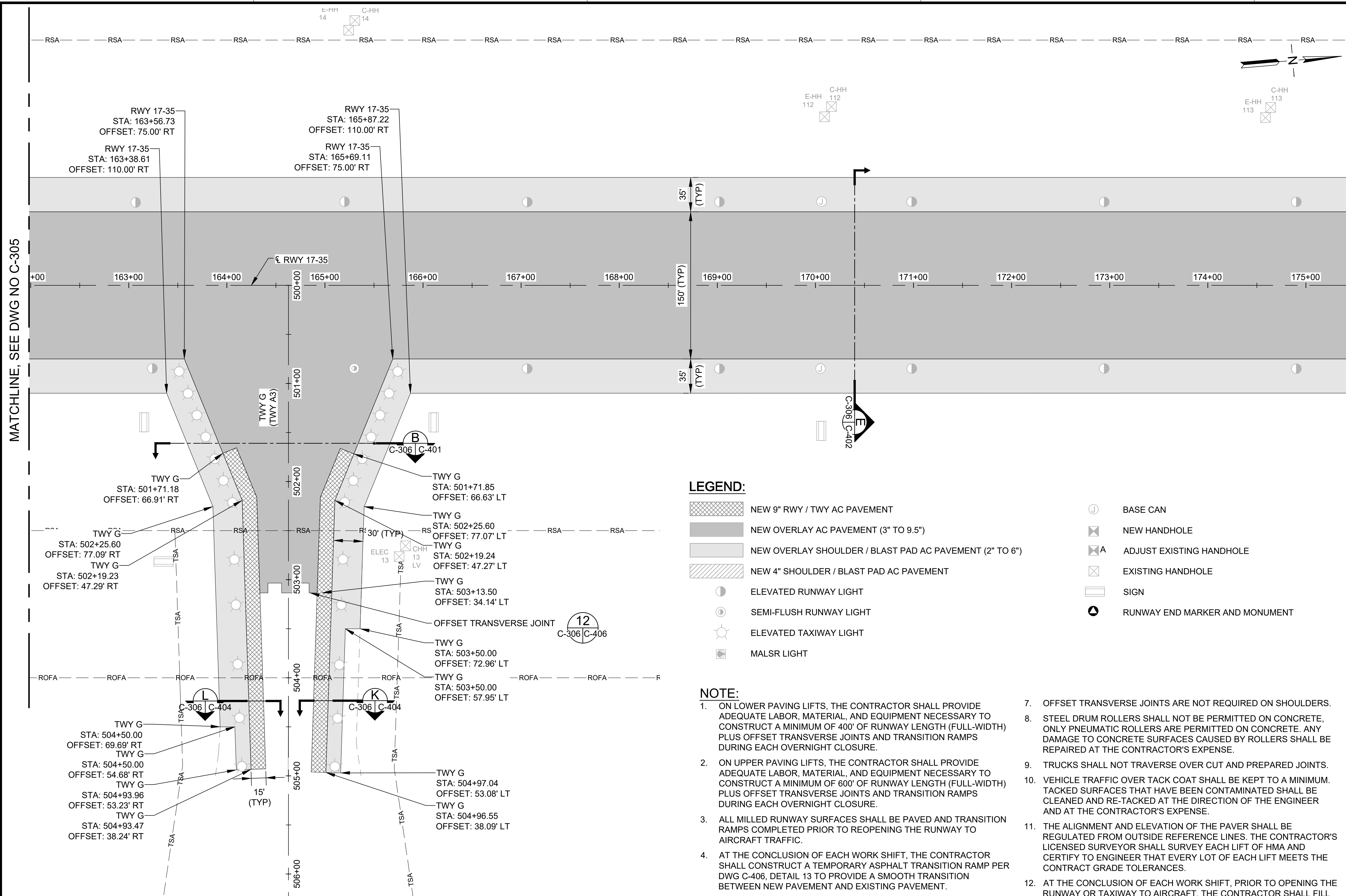
SHEET :

73 OF 190 SHEETS

DWG. NO.

**C-305**

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MATCHLINE, SEE DWG NO C-305

MATCHLINE, SEE DWG NO C-307

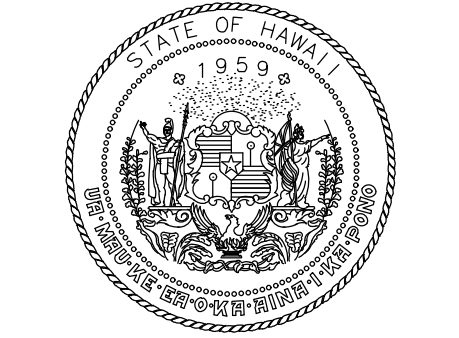
**LEGEND:**

- NEW 9" RWY / TWY AC PAVEMENT
- NEW OVERLAY AC PAVEMENT (3" TO 9.5")
- NEW OVERLAY SHOULDER / BLAST PAD AC PAVEMENT (2" TO 6")
- NEW 4" SHOULDER / BLAST PAD AC PAVEMENT
- ELEVATED RUNWAY LIGHT
- SEMI-FLUSH RUNWAY LIGHT
- ELEVATED TAXIWAY LIGHT
- MALSR LIGHT

- BASE CAN
- NEW HANDHOLE
- ADJUST EXISTING HANDHOLE
- EXISTING HANDHOLE
- SIGN
- RUNWAY END MARKER AND MONUMENT

**NOTE:**

1. ON LOWER PAVING LIFTS, THE CONTRACTOR SHALL PROVIDE ADEQUATE LABOR, MATERIAL, AND EQUIPMENT NECESSARY TO CONSTRUCT A MINIMUM OF 400' OF RUNWAY LENGTH (FULL-WIDTH) PLUS OFFSET TRANSVERSE JOINTS AND TRANSITION RAMPS DURING EACH OVERNIGHT CLOSURE.
2. ON UPPER PAVING LIFTS, THE CONTRACTOR SHALL PROVIDE ADEQUATE LABOR, MATERIAL, AND EQUIPMENT NECESSARY TO CONSTRUCT A MINIMUM OF 600' OF RUNWAY LENGTH (FULL-WIDTH) PLUS OFFSET TRANSVERSE JOINTS AND TRANSITION RAMPS DURING EACH OVERNIGHT CLOSURE.
3. ALL MILLED RUNWAY SURFACES SHALL BE PAVED AND TRANSITION RAMPS COMPLETED PRIOR TO REOPENING THE RUNWAY TO AIRCRAFT TRAFFIC.
4. AT THE CONCLUSION OF EACH WORK SHIFT, THE CONTRACTOR SHALL CONSTRUCT A TEMPORARY ASPHALT TRANSITION RAMP PER DWG C-406, DETAIL 13 TO PROVIDE A SMOOTH TRANSITION BETWEEN NEW PAVEMENT AND EXISTING PAVEMENT.
5. OFFSET TRANSVERSE JOINTS PER DWG C-406, DETAIL 12 SHALL BE CONSTRUCTED AT THE INTERFACE WITH PAVEMENTS PLACED DURING PREVIOUS WORK SHIFTS. THE CONTRACTOR SHALL DEVELOP A PAVING PLAN THAT MINIMIZES OFFSET TRANSVERSE JOINTS.
6. OFFSET TRANSVERSE JOINTS ON THE SURFACE COURSE SHALL BE OFFSET A MINIMUM OF 25' FROM TRANSVERSE JOINTS ON LOWER PAVING LIFTS.
7. OFFSET TRANSVERSE JOINTS ARE NOT REQUIRED ON SHOULDERS.
8. STEEL DRUM ROLLERS SHALL NOT BE PERMITTED ON CONCRETE, ONLY PNEUMATIC ROLLERS ARE PERMITTED ON CONCRETE. ANY DAMAGE TO CONCRETE SURFACES CAUSED BY ROLLERS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
9. TRUCKS SHALL NOT TRAVERSE OVER CUT AND PREPARED JOINTS.
10. VEHICLE TRAFFIC OVER TACK COAT SHALL BE KEPT TO A MINIMUM. TACKED SURFACES THAT HAVE BEEN CONTAMINATED SHALL BE CLEANED AND RE-TACKED AT THE DIRECTION OF THE ENGINEER AND AT THE CONTRACTOR'S EXPENSE.
11. THE ALIGNMENT AND ELEVATION OF THE PAVER SHALL BE REGULATED FROM OUTSIDE REFERENCE LINES. THE CONTRACTOR'S LICENSED SURVEYOR SHALL SURVEY EACH LIFT OF HMA AND CERTIFY TO ENGINEER THAT EVERY LOT OF EACH LIFT MEETS THE CONTRACT GRADE TOLERANCES.
12. AT THE CONCLUSION OF EACH WORK SHIFT, PRIOR TO OPENING THE RUNWAY OR TAXIWAY TO AIRCRAFT, THE CONTRACTOR SHALL FILL AND COMPACT ALL SHOULDER EXCAVATION AREAS SO THAT NO DROP-OFFS GREATER THAN 3" ARE PRESENT.
13. REFER TO DRAWINGS E-200 THRU E-216 FOR ELECTRICAL STRUCTURES TO BE PROTECTED, ADJUSTED, REMOVED OR ABANDONED.
14. SEE PHASING AND BARRICADE PLANS DWG G-101 TO G-123 FOR APPROVED CONTRACTOR HAUL ROUTES.



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS

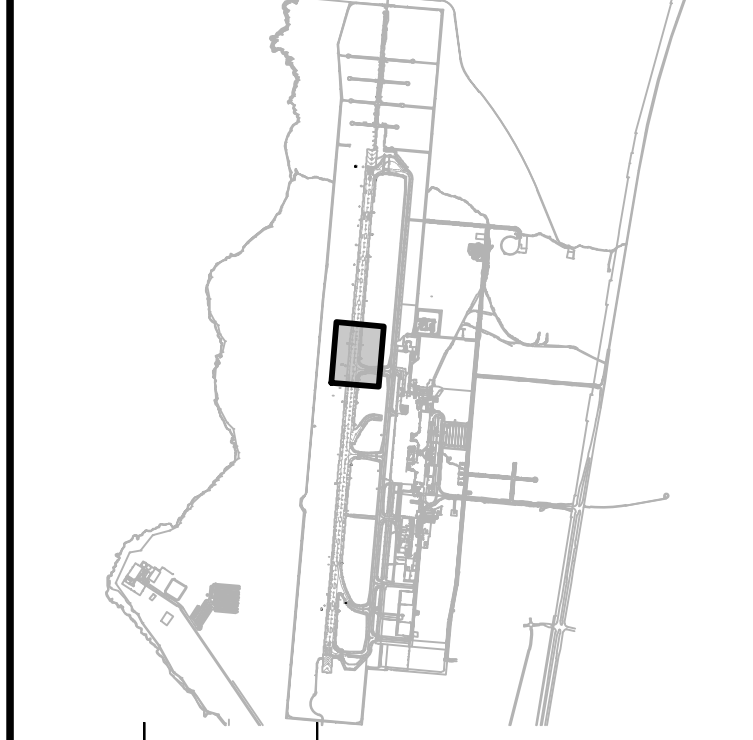


4/30/24  
Licensed Expiration Date

This work was prepared by me or under my supervision.

DSGN.	DRWN.	CHKD.	APPD.
AC	AT	TR	SH

**KEY PLAN / NOTES:**



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENTS**  
SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

**SHEET TITLE:**

**PAVING LAYOUT PLAN 6**

DATE : **09/2023**

SHEET : **C-306**

74 OF 190 SHEETS

DWG. NO.

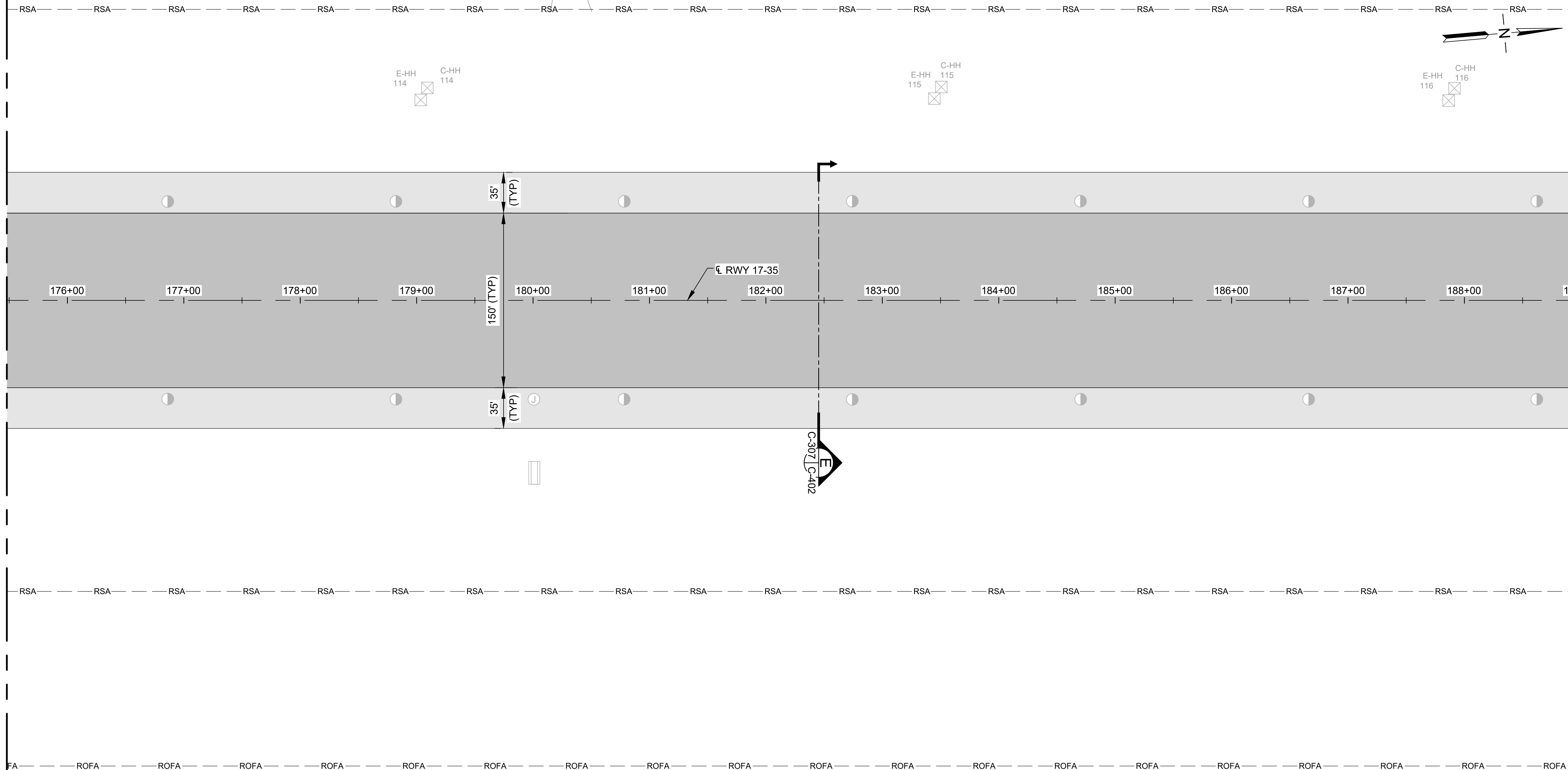
**C-306**

C:\USERS\JBERNOR\ENGINEERS & ASSOCIATES\TESHDOT\KOA 17-35 REHAB - DOCUMENTS\2021-16-OEA-KOA-PAVE\LOT.DWG












MATCHLINE, SEE DWG NO C-306

MATCHLINE, SEE DWG NO C-308

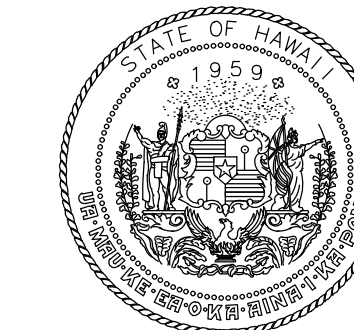
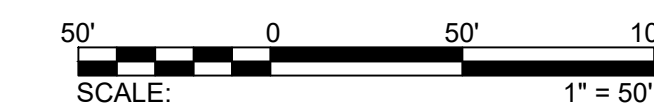


**LEGEND:**

-  NEW 9" RWY / TWY AC PAVEMENT
-  NEW OVERLAY AC PAVEMENT (3" TO 9.5")
-  NEW OVERLAY SHOULDER / BLAST PAD AC PAVEMENT (2" TO 6")
-  NEW 4" SHOULDER / BLAST PAD AC PAVEMENT
-  ELEVATED RUNWAY LIGHT
-  SEMI-FLUSH RUNWAY LIGHT
-  ELEVATED TAXIWAY LIGHT
-  MALS-R LIGHT
-  BASE CAN
-  NEW HANDHOLE
-  ADJUST EXISTING HANDHOLE
-  EXISTING HANDHOLE
-  SIGN
-  RUNWAY END MARKER AND MONUMENT

**NOTE:**

1. ALL MILLED RUNWAY SURFACES SHALL BE PAVED AND TRANSITION RAMP COMPLETED PRIOR TO REOPENING THE RUNWAY TO AIRCRAFT TRAFFIC.
2. OFFSET TRANSVERSE JOINTS SHALL BE CONSTRUCTED AT THE INTERFACE WITH PAVEMENTS PLACED DURING PREVIOUS WORK SHIFTS. THE CONTRACTOR SHALL DEVELOP A PAVING PLAN THAT MINIMIZES OFFSET TRANSVERSE JOINTS.
3. OFFSET TRANSVERSE JOINTS ON THE SURFACE COURSE SHALL BE OFFSET A MINIMUM OF 10' FROM TRANSVERSE JOINTS ON LOWER PAVING LIFTS.
4. OFFSET TRANSVERSE JOINTS ARE NOT REQUIRED ON SHOULDERS.
5. STEEL DRUM ROLLERS SHALL NOT BE PERMITTED ON CONCRETE. ONLY PNEUMATIC ROLLERS ARE PERMITTED ON CONCRETE. ANY DAMAGE TO CONCRETE SURFACES CAUSED BY ROLLERS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
6. TRUCKS SHALL NOT TRAVERSE OVER CUT AND PREPARED JOINTS.
7. VEHICLE TRAFFIC OVER TACK COAT SHALL BE KEPT TO A MINIMUM. TACKED SURFACES THAT HAVE BEEN CONTAMINATED SHALL BE CLEANED AND RE-TACKED AT THE DIRECTION OF THE ENGINEER AND AT THE CONTRACTOR'S EXPENSE.
8. THE ALIGNMENT AND ELEVATION OF THE PAVER SHALL BE REGULATED FROM OUTSIDE REFERENCE LINES. THE CONTRACTOR'S LICENSED SURVEYOR SHALL SURVEY HMA AND CERTIFY TO ENGINEER THAT EVERY LOT MEETS THE CONTRACT GRADE TOLERANCES.
9. AT THE CONCLUSION OF EACH WORK SHIFT, PRIOR TO OPENING THE RUNWAY OR TAXIWAY TO AIRCRAFT, THE CONTRACTOR SHALL ENSURE THAT NO DROP-OFFS GREATER THAN 3" ARE PRESENT.
10. REFER TO ELECTRICAL DRAWINGS FOR ELECTRICAL STRUCTURES TO BE PROTECTED, ADJUSTED, REMOVED OR ABANDONED.
11. SEE PHASING AND BARRICADE PLANS FOR APPROVED CONTRACTOR HAUL ROUTES.



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
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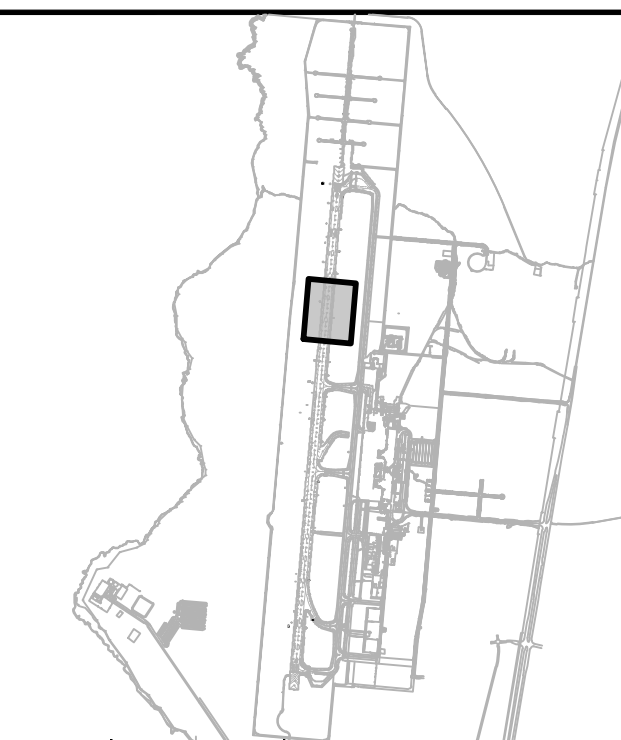


*Martin A. Cleven*  
4/30/24  
Licensed Expiration Date

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DSGN.	DRWN.	CHKD.	APPD.
AC	AT	TR	SH

**KEY PLAN / NOTES:**



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENTS**  
SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35  
REHABILITATION**

AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

**SHEET TITLE:**

**PAVING LAYOUT PLAN 7**

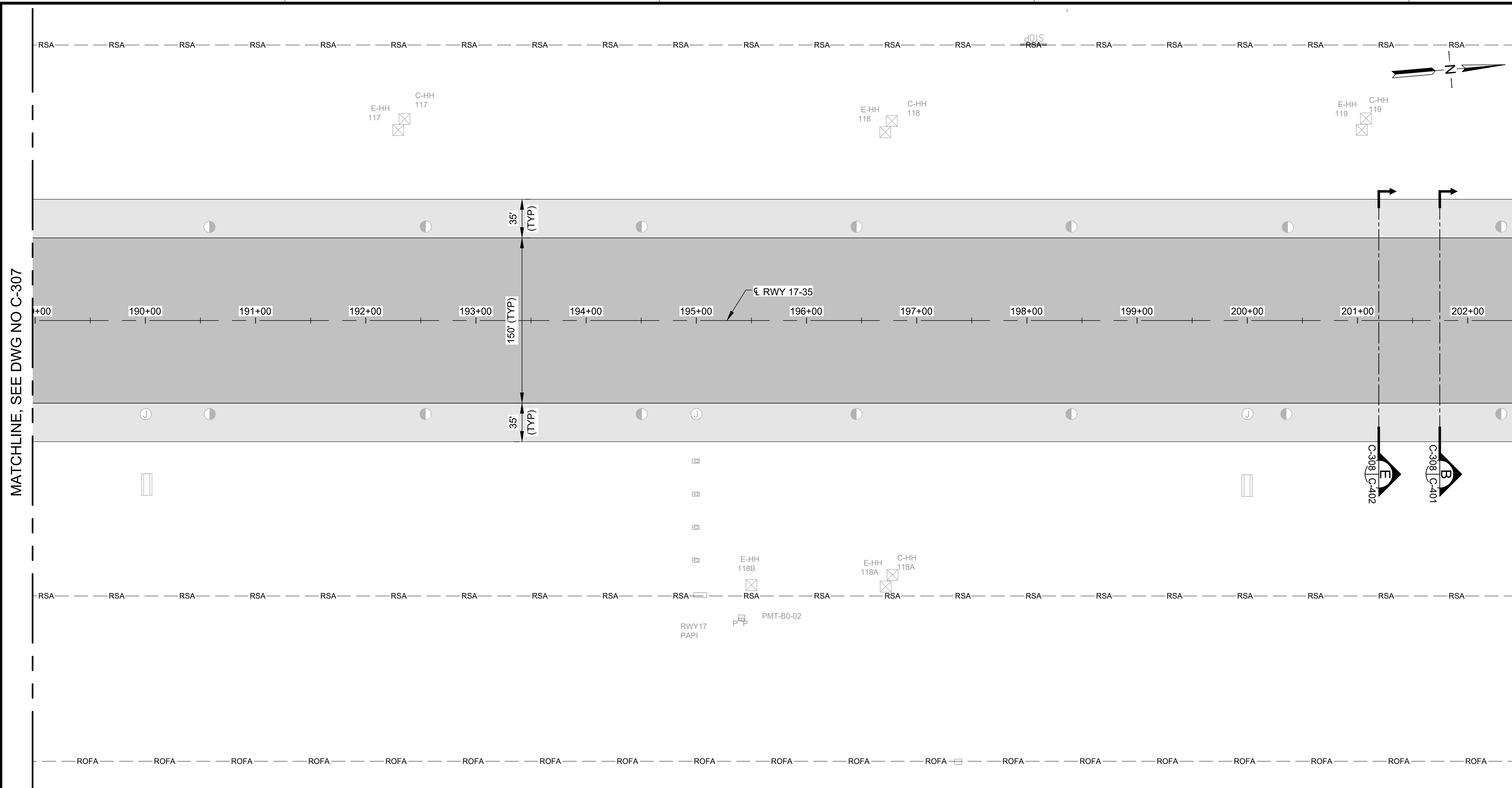
DATE :  
**09/2023**

SHEET :

75 OF 190 SHEETS

DWG. NO.

**C-307**



MATCHLINE, SEE DWG NO C-307

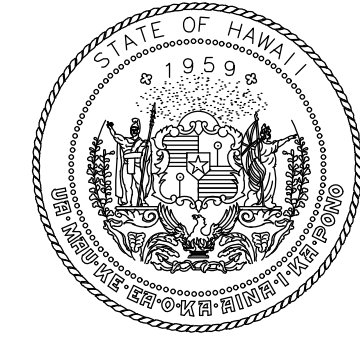
MATCHLINE, SEE DWG NO C-309

**LEGEND:**

- NEW 9" RWY / TWY AC PAVEMENT
- NEW OVERLAY AC PAVEMENT (3" TO 9.5")
- NEW OVERLAY SHOULDER / BLAST PAD AC PAVEMENT (2" TO 6")
- NEW 4" SHOULDER / BLAST PAD AC PAVEMENT
- ELEVATED RUNWAY LIGHT
- SEMI-FLUSH RUNWAY LIGHT
- ELEVATED TAXIWAY LIGHT
- MALS R LIGHT
- BASE CAN
- NEW HANDHOLE
- ADJUST EXISTING HANDHOLE
- EXISTING HANDHOLE
- SIGN
- RUNWAY END MARKER AND MONUMENT

**NOTE:**

1. ALL MILLED RUNWAY SURFACES SHALL BE PAVED AND TRANSITION RAMPS COMPLETED PRIOR TO REOPENING THE RUNWAY TO AIRCRAFT TRAFFIC.
2. OFFSET TRANSVERSE JOINTS SHALL BE CONSTRUCTED AT THE INTERFACE WITH PAVEMENTS PLACED DURING PREVIOUS WORK SHIFTS. THE CONTRACTOR SHALL DEVELOP A PAVING PLAN THAT MINIMIZES OFFSET TRANSVERSE JOINTS.
3. OFFSET TRANSVERSE JOINTS ON THE SURFACE COURSE SHALL BE OFFSET A MINIMUM OF 10' FROM TRANSVERSE JOINTS ON LOWER PAVING LIFTS.
4. OFFSET TRANSVERSE JOINTS ARE NOT REQUIRED ON SHOULDERS.
5. STEEL DRUM ROLLERS SHALL NOT BE PERMITTED ON CONCRETE. ONLY PNEUMATIC ROLLERS ARE PERMITTED ON CONCRETE. ANY DAMAGE TO CONCRETE SURFACES CAUSED BY ROLLERS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
6. TRUCKS SHALL NOT TRAVERSE OVER CUT AND PREPARED JOINTS.
7. VEHICLE TRAFFIC OVER TACK COAT SHALL BE KEPT TO A MINIMUM. TACKED SURFACES THAT HAVE BEEN CONTAMINATED SHALL BE CLEANED AND RE-TACKED AT THE DIRECTION OF THE ENGINEER AND AT THE CONTRACTOR'S EXPENSE.
8. THE ALIGNMENT AND ELEVATION OF THE PAVER SHALL BE REGULATED FROM OUTSIDE REFERENCE LINES. THE CONTRACTOR'S LICENSED SURVEYOR SHALL SURVEY HMA AND CERTIFY TO ENGINEER THAT EVERY LOT MEETS THE CONTRACT GRADE TOLERANCES.
9. AT THE CONCLUSION OF EACH WORK SHIFT, PRIOR TO OPENING THE RUNWAY OR TAXIWAY TO AIRCRAFT, THE CONTRACTOR SHALL ENSURE THAT NO DROP-OFFS GREATER THAN 3" ARE PRESENT.
10. REFER TO ELECTRICAL DRAWINGS FOR ELECTRICAL STRUCTURES TO BE PROTECTED, ADJUSTED, REMOVED OR ABANDONED.
11. SEE PHASING AND BARRICADE PLANS FOR APPROVED CONTRACTOR HAUL ROUTES.



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS



*M. A. Clevon*  
4/30/24  
Licensed Expiration Date

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AC	AT	TR	SH

**KEY PLAN / NOTES:**



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENTS**  
SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

**SHEET TITLE:**

**PAVING LAYOUT PLAN 8**

DATE :	DWG. NO.
09/2023	C-308
SHEET :	
76 OF 190 SHEETS	

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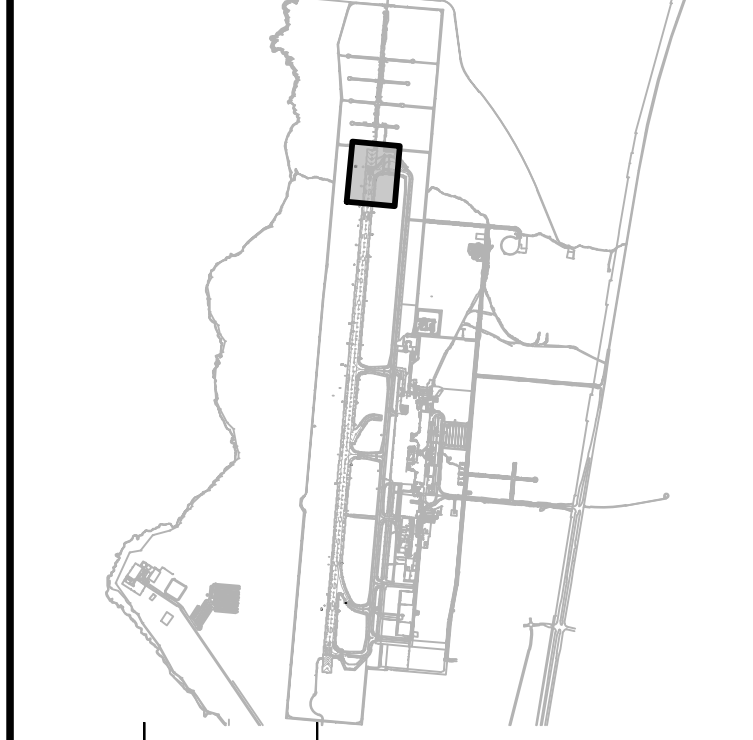


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Licensed Expiration Date

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AC	AT	TR	SH

### KEY PLAN / NOTES:



NO.	DATE	REVISIONS
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## CONSTRUCTION DOCUMENTS

SEPTEMBER 2023  
DATE

### PROJECT TITLE :

## RUNWAY 17-35 REHABILITATION

AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

### PROJECT NO.:

## AH2021-16

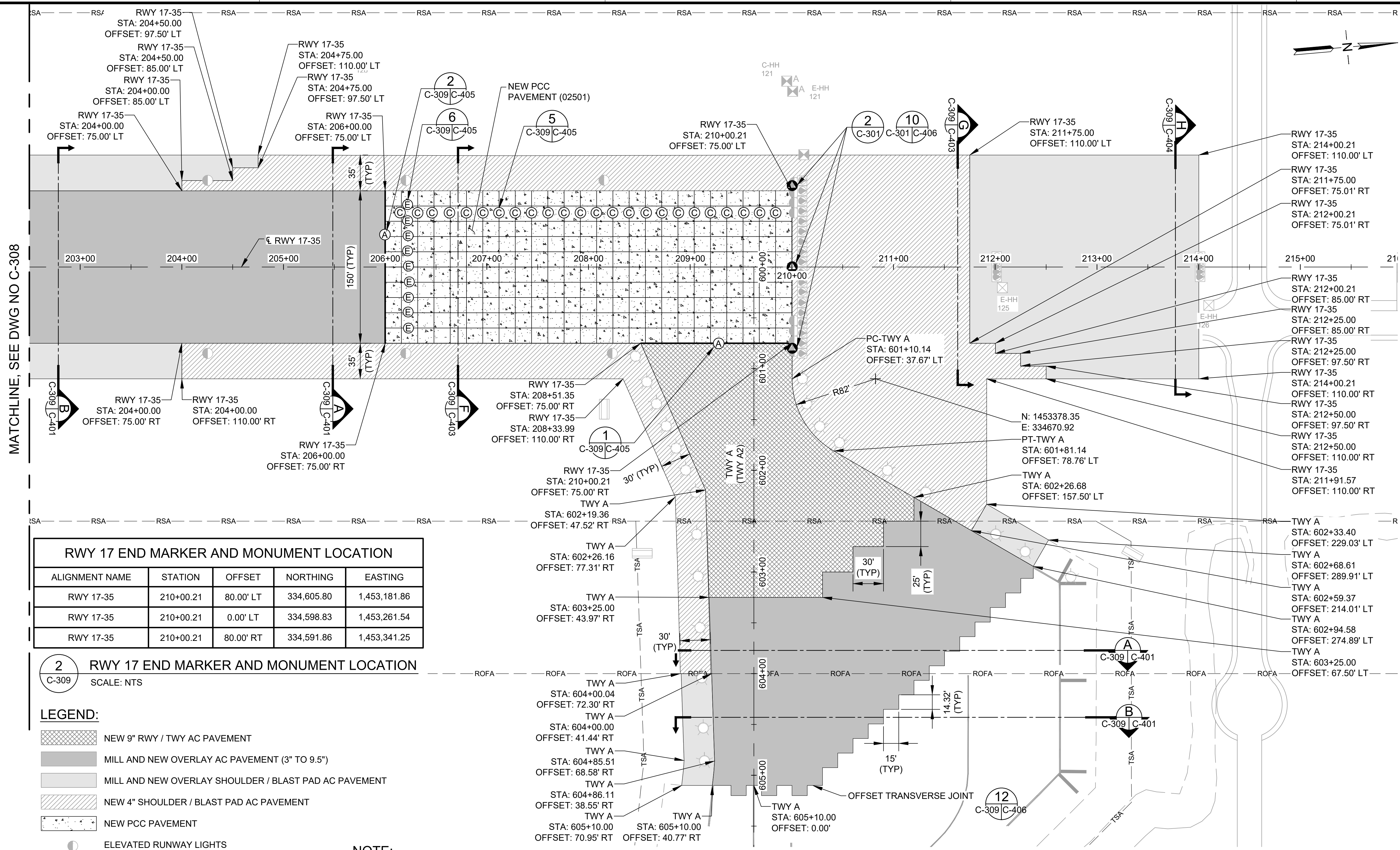
### SHEET TITLE:

## PAVING LAYOUT PLAN 9

DATE : 09/2023

SHEET : 77 OF 190 SHEETS

DWG. NO. C-309



### RWY 17 END MARKER AND MONUMENT LOCATION

ALIGNMENT NAME	STATION	OFFSET	NORTHING	EASTING
RWY 17-35	210+00.21	80.00' LT	334,605.80	1,453,181.86
RWY 17-35	210+00.21	0.00' LT	334,598.83	1,453,261.54
RWY 17-35	210+00.21	80.00' RT	334,591.86	1,453,341.25

### 2 RWY 17 END MARKER AND MONUMENT LOCATION

SCALE: NTS

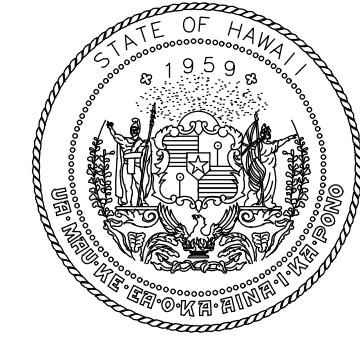
- #### LEGEND:
- NEW 9" RWY / TWY AC PAVEMENT
  - MILL AND NEW OVERLAY AC PAVEMENT (3" TO 9.5")
  - MILL AND NEW OVERLAY SHOULDER / BLAST PAD AC PAVEMENT
  - NEW 4" SHOULDER / BLAST PAD AC PAVEMENT
  - NEW PCC PAVEMENT
  - ELEVATED RUNWAY LIGHTS
  - SEMI-FLUSH RUNWAY LIGHTS
  - ELEVATED TAXIWAY LIGHTS
  - MALSr LIGHTS
  - BASE CAN
  - JUNCTION CAN
  - NEW HANDHOLE
  - ADJUST EXISTING HANDHOLE
  - EXISTING HANDHOLE
  - SIGNS
  - RUNWAY END MARKER AND MONUMENT

- #### NOTE:
- ALL MILLED RUNWAY SURFACES SHALL BE PAVED AND TRANSITION RAMPS COMPLETED PRIOR TO REOPENING THE RUNWAY TO AIRCRAFT TRAFFIC.
  - OFFSET TRANSVERSE JOINTS SHALL BE CONSTRUCTED AT THE INTERFACE WITH PAVEMENTS PLACED DURING PREVIOUS WORK SHIFTS. THE CONTRACTOR SHALL DEVELOP A PAVING PLAN THAT MINIMIZES OFFSET TRANSVERSE JOINTS.
  - OFFSET TRANSVERSE JOINTS ON THE SURFACE COURSE SHALL BE OFFSET A MINIMUM OF 10' FROM TRANSVERSE JOINTS ON LOWER PAVING LIFTS.
  - OFFSET TRANSVERSE JOINTS ARE NOT REQUIRED ON SHOULDERS.
  - STEEL DRUM ROLLERS SHALL NOT BE PERMITTED ON CONCRETE, ONLY PNEUMATIC ROLLERS ARE PERMITTED ON CONCRETE. ANY DAMAGE TO CONCRETE SURFACES CAUSED BY ROLLERS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
  - TRUCKS SHALL NOT TRAVERSE OVER CUT AND PREPARED JOINTS.
  - VEHICLE TRAFFIC OVER TACK COAT SHALL BE KEPT TO A MINIMUM. TACKED SURFACES THAT HAVE BEEN CONTAMINATED SHALL BE CLEANED AND RE-TACKED AT THE DIRECTION OF THE ENGINEER AND AT THE CONTRACTOR'S EXPENSE.
  - THE ALIGNMENT AND ELEVATION OF THE PAVER SHALL BE REGULATED FROM OUTSIDE REFERENCE LINES. THE CONTRACTOR'S LICENSED SURVEYOR SHALL SURVEY HMA AND CERTIFY TO ENGINEER THAT EVERY LOT MEETS THE CONTRACT GRADE TOLERANCES.
  - AT THE CONCLUSION OF EACH WORK SHIFT, PRIOR TO OPENING THE RUNWAY OR TAXIWAY TO AIRCRAFT, THE CONTRACTOR SHALL ENSURE THAT NO DROP-OFFS GREATER THAN 3" ARE PRESENT.
  - REFER TO ELECTRICAL DRAWINGS FOR ELECTRICAL STRUCTURES TO BE PROTECTED, ADJUSTED, REMOVED OR ABANDONED.
  - SEE PHASING AND BARRICADE PLANS FOR APPROVED CONTRACTOR HAUL ROUTES.



MATCHLINE, SEE DWG NO C-308

C:\USERS\JBERNOR\ENGINEERS & ASSOCIATES\TESHDOT\KOA 17-35 REHAB - DOCUMENTS\2021-16-OEA-KOA-PAVE-LYOT.DWG



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS



*Martin A. Cleven*  
4/30/24  
Licensed Expiration Date

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DSGN.	DRWN.	CHKD.	APPD.
AC	AT	TR	SH

**KEY PLAN / NOTES:**

NO.	DATE	REVISIONS

**CONSTRUCTION DOCUMENTS**  
SEPTEMBER 2023  
DATE

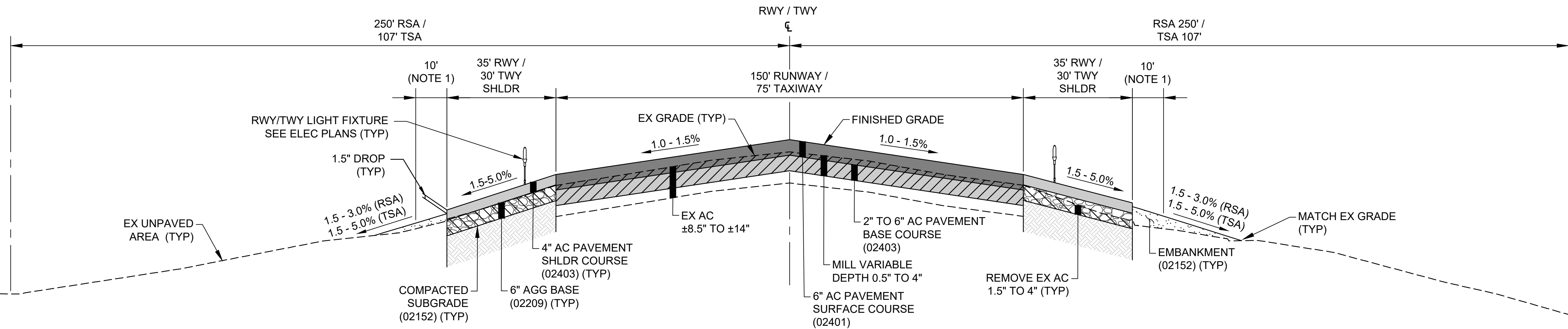
**PROJECT TITLE :**  
**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**  
**AH2021-16**

**SHEET TITLE:**

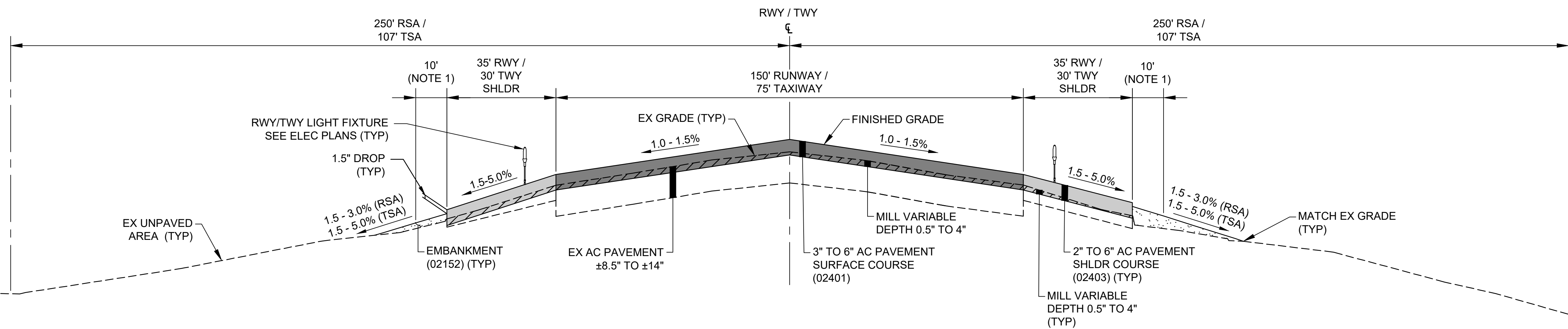
**PAVEMENT SECTIONS 1**

DATE :	DWG. NO.
09/2023	C-401
SHEET :	78 OF 190 SHEETS



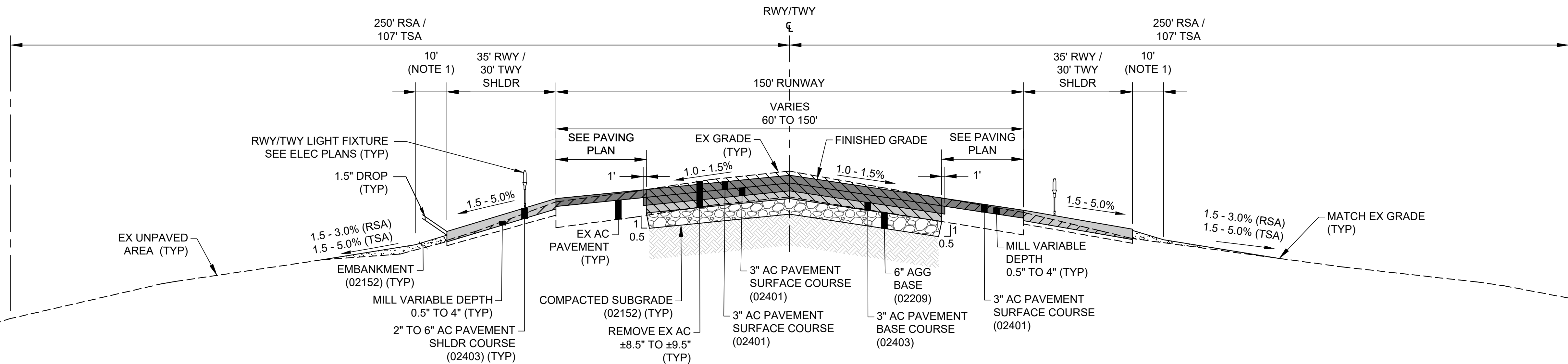
**A RUNWAY-TAXIWAY OVERLAY AND SHOULDER RECONSTRUCTION**

C-301, C-309 | C-401 SCALE: NTS  
APPROX STA 100+00 TO 105+00  
APPROX STA 204+00 TO 206+00



**B RUNWAY-TAXIWAY OVERLAY AND SHOULDER OVERLAY**

C-301-C-304, C-306, C-308, C-309 | C-401 SCALE: NTS  
APPRX STA 105+00 TO 112+50  
APPRX STA 125+00 TO 131+50  
APPRX STA 201+50 TO 204+00



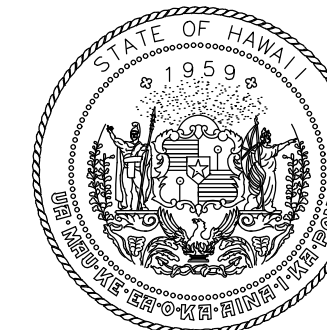
**C RUNWAY RECONSTRUCTION-OVERLAY AND SHOULDER OVERLAY**

C-302, C-303 | C-401 SCALE: NTS  
APPRX STA 112+50 TO 115+75  
APPRX STA 123+25 TO 125+00

**NOTE:**  
1. 5% SLOPE IN TSA.  
3-5% SLOPE IN RSA.

C:\USERS\JBERNOR\ENGINEERS & ASSOCIATES\TESHDOT\KOA 17-35 REHAB - DOCUMENTS\2 ENGINEERING\05 DRAWING\2021-16-OEA-KOA-PAVE-SECT.DWG





STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS



MARTIN A. CLEVEN  
LICENSED PROFESSIONAL ENGINEER  
No. 12828-C  
4/30/24  
Licensed Expiration Date

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AC	AT	TR	SH

KEY PLAN / NOTES:

NO.	DATE	REVISIONS
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CONSTRUCTION DOCUMENTS

SEPTEMBER 2023  
DATE

PROJECT TITLE :

RUNWAY 17-35 REHABILITATION

AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

PROJECT NO.:

AH2021-16

SHEET TITLE:

PAVEMENT SECTIONS 2

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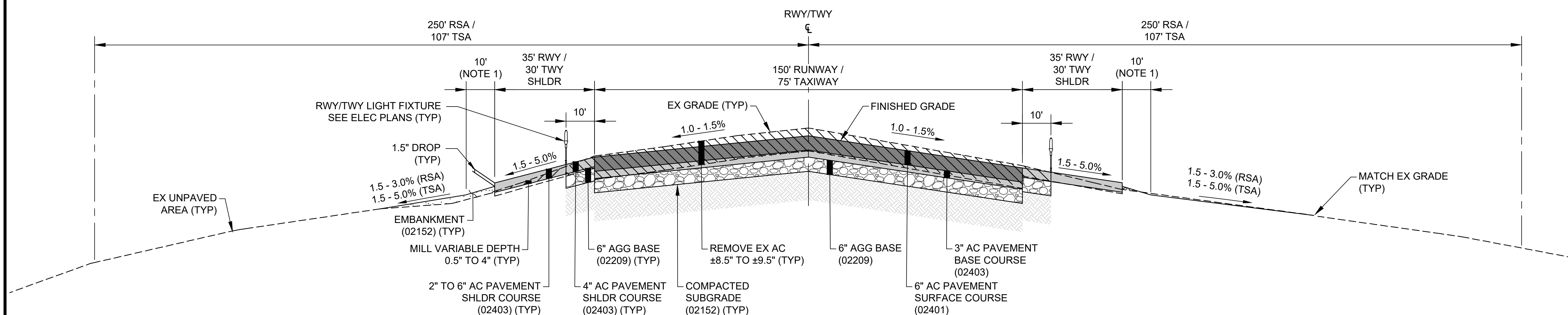
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SHEET :

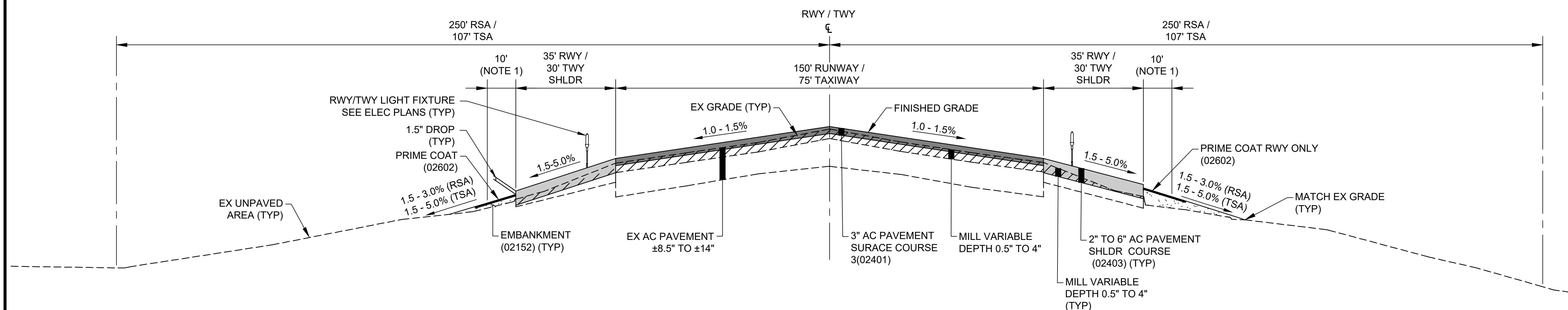
79 OF 190 SHEETS

DWG. NO.

C-402



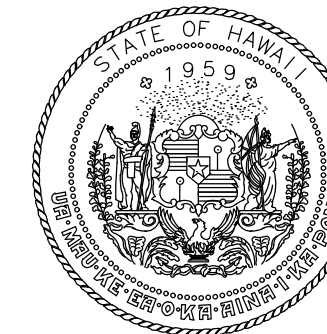
D RUNWAY-TAXIWAY RECONSTRUCTION AND SHOULDER RECONSTRUCTION-OVERLAY  
C-302 | C-402 SCALE: NTS APPROX STA 117+00 TO 123+50



E RUNWAY-TAXIWAY OVERLAY AND SHOULDER OVERLAY  
C-303-C-308 | C-402 SCALE: NTS APPROX STA 131+50 TO 201+50

NOTE:  
1. 5% SLOPE IN TSA.  
3-5% SLOPE IN RSA.

C:\USERS\JIBENLORION\ENGINEERS & ASSOCIATES\TESHDOT\KOA 17-35 REHAB - DOCUMENTS\2023\ENGINEERING\05\_DRAWING\2021-16\_OEA-KOA-PAVE-SECT.DWG



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS



MARTIN A. CLEVON  
LICENSED PROFESSIONAL ENGINEER  
No. 12828-C  
HAWAII, U.S.A.  
4/30/24  
Licensed Expiration Date

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DSGN.	DRWN.	CHKD.	APPD.
AC	JB	TR	SH

KEY PLAN / NOTES:

NO.	DATE	REVISIONS
-----	------	-----------

CONSTRUCTION DOCUMENTS

SEPTEMBER 2023  
DATE

PROJECT TITLE :

RUNWAY 17-35 REHABILITATION

AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

PROJECT NO.:

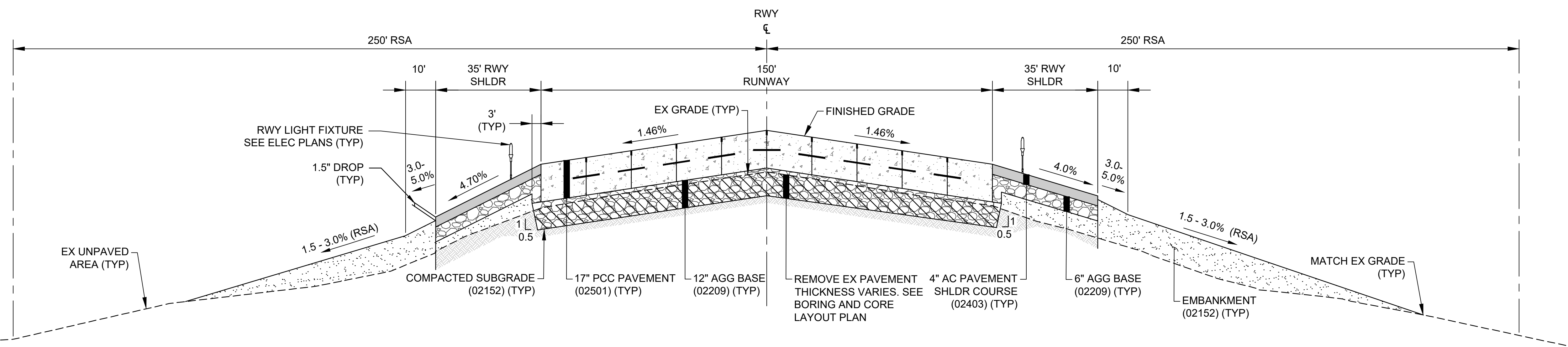
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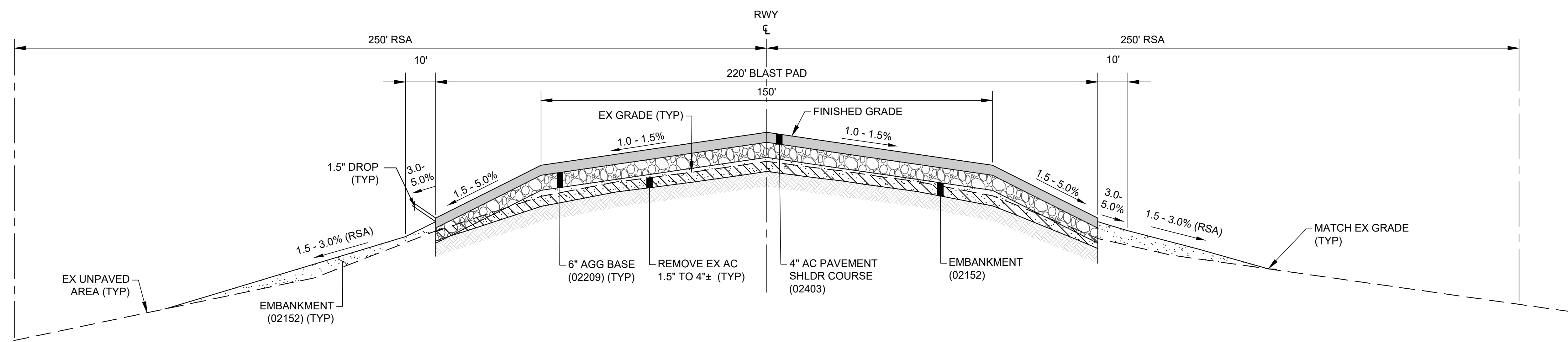
PAVEMENT SECTIONS 3

DATE :  
09/2023  
SHEET :  
80 OF 190 SHEETS

DWG. NO.  
C-403



**F** RUNWAY PCC AND SHOULDER RECONSTRUCTION  
C-309 C-403 SCALE: NTS APPROX STA 206+00 TO 210+00



**G** BLAST PAD RECONSTRUCTION  
C-301, C-309 C-403 SCALE: NTS APPROX STA 98+00 TO 100+00  
APPROX STA 210+00 TO 211+75

NOTE:  
1. 5% SLOPE IN TSA.  
3-5% SLOPE IN RSA.

C:\USERS\JIBEN\ORION ENGINEERS & ASSOCIATES\TESHDOT KOA 17-35 REHAB - DOCUMENTS\02 ENGINEERING\05 DRAWING\AH2021-16-OEA-KOA-PAVE-SECT.DWG





STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS



*M. A. Cleven*  
4/30/24  
Licensed Expiration Date

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DSGN.	DRWN.	CHKD.	APPD.
AC	AT	TR	SH

**KEY PLAN / NOTES:**

NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENTS**  
SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

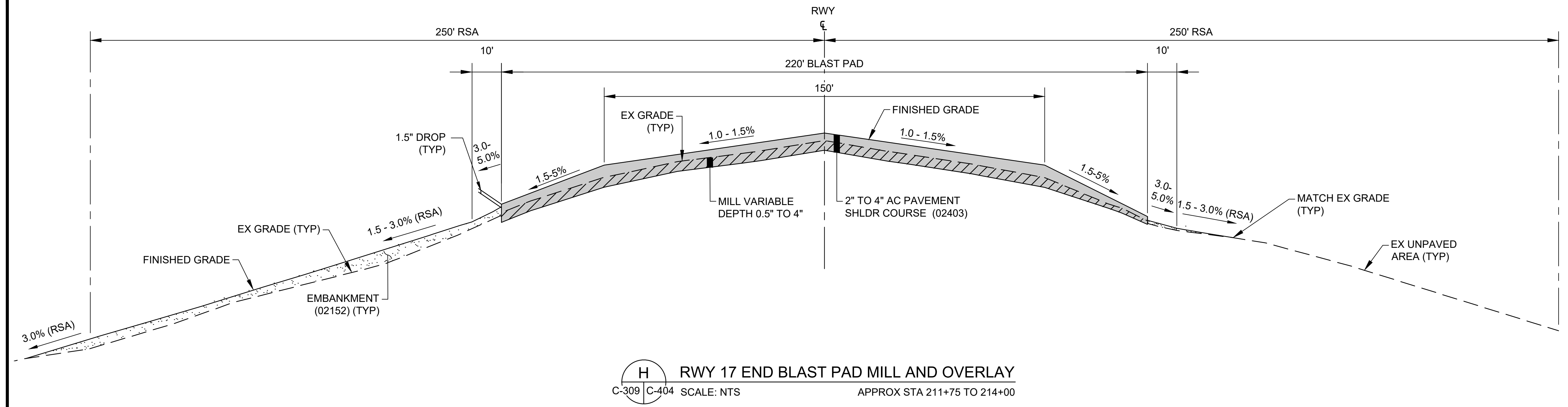
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**PAVEMENT SECTIONS 4**

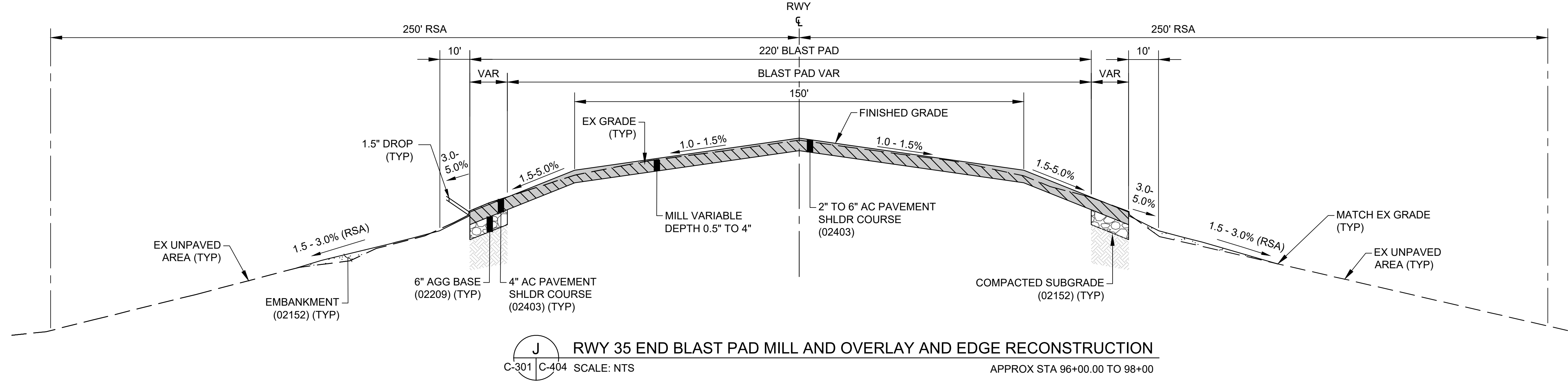
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SHEET : **81 OF 190 SHEETS**

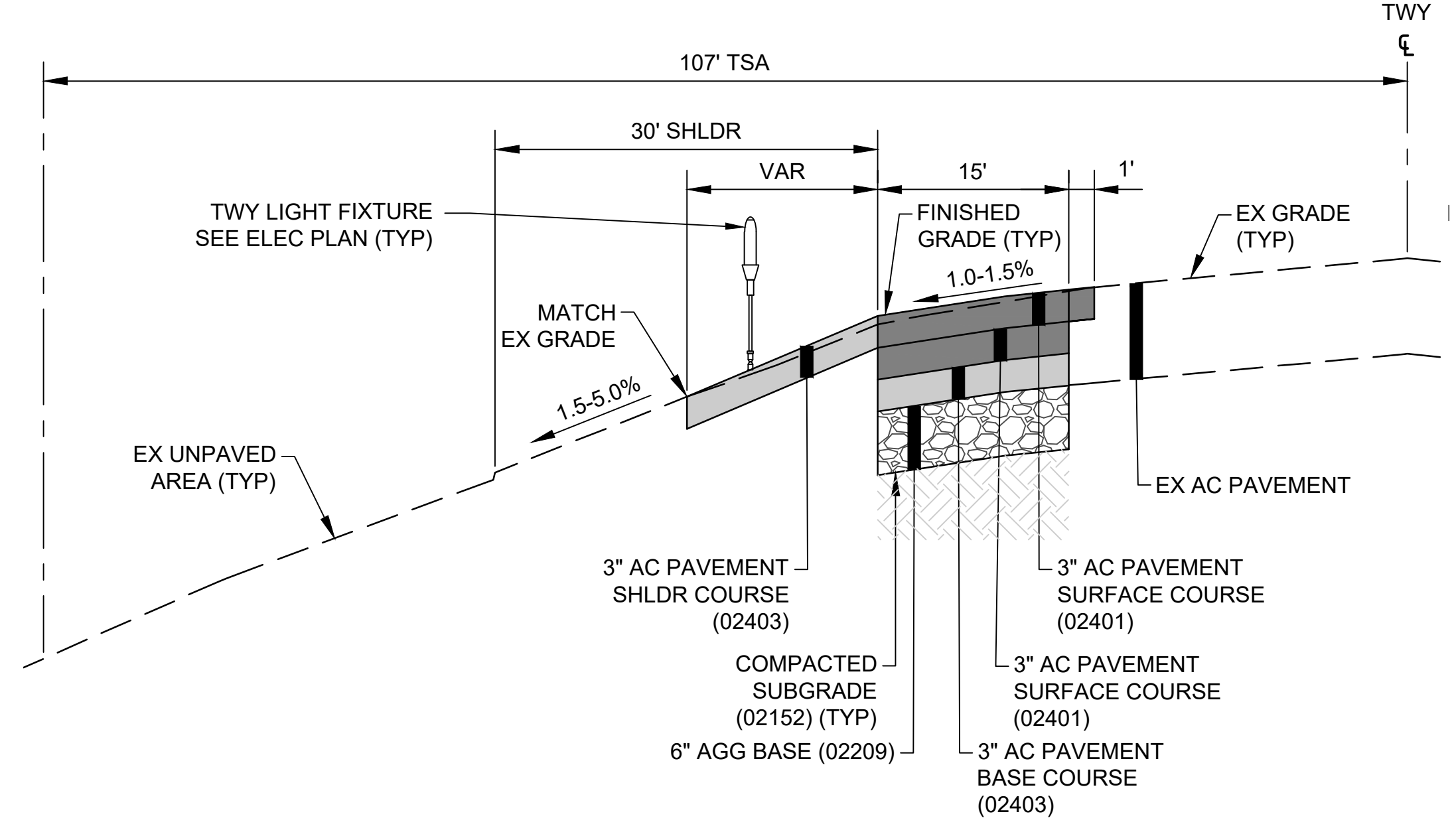
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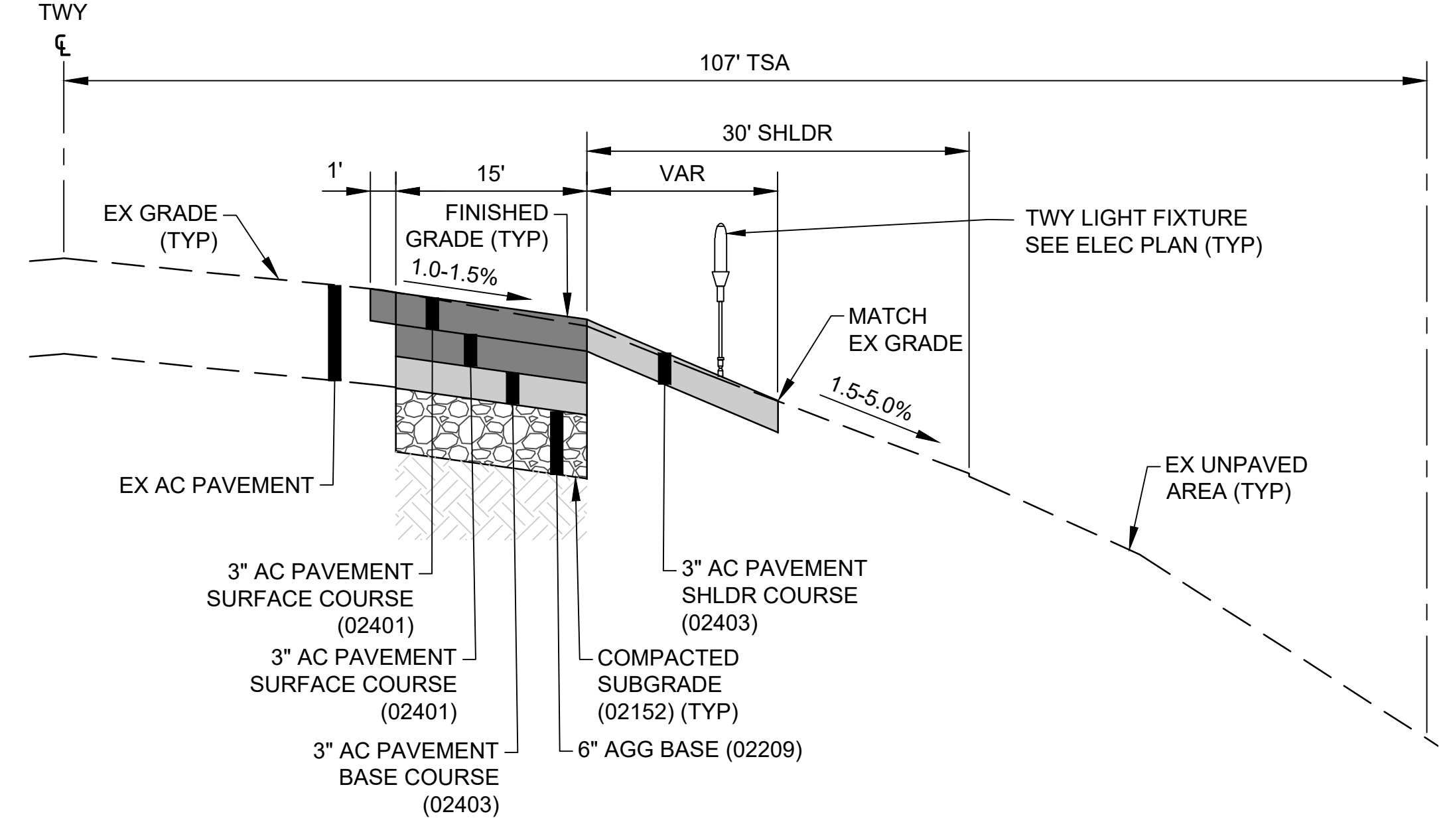
**H RWY 17 END BLAST PAD MILL AND OVERLAY**  
C-309 | C-404 SCALE: NTS APPROX STA 211+75 TO 214+00



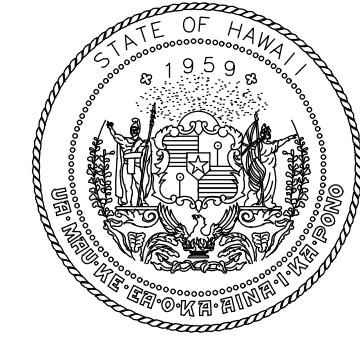
**J RWY 35 END BLAST PAD MILL AND OVERLAY AND EDGE RECONSTRUCTION**  
C-301 | C-404 SCALE: NTS APPROX STA 96+00.00 TO 98+00



**K LEFT EDGE TAXIWAY RECONSTRUCTION**  
C-301, C-304, C-306 | C-404 SCALE: NTS



**L RIGHT EDGE TAXIWAY RECONSTRUCTION**  
C-304, C-306 | C-404 SCALE: NTS



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS



4/30/24  
Licensed Expiration Date

This work was prepared by me or under my supervision.

DSGN.	DRWN.	CHKD.	APPD.
AC	AT	TR	SH

### KEY PLAN / NOTES:

NO.	DATE	REVISIONS

## CONSTRUCTION DOCUMENTS

JUNE 10, 2022  
DATE

### PROJECT TITLE :

## RUNWAY 17-35 REHABILITATION

AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

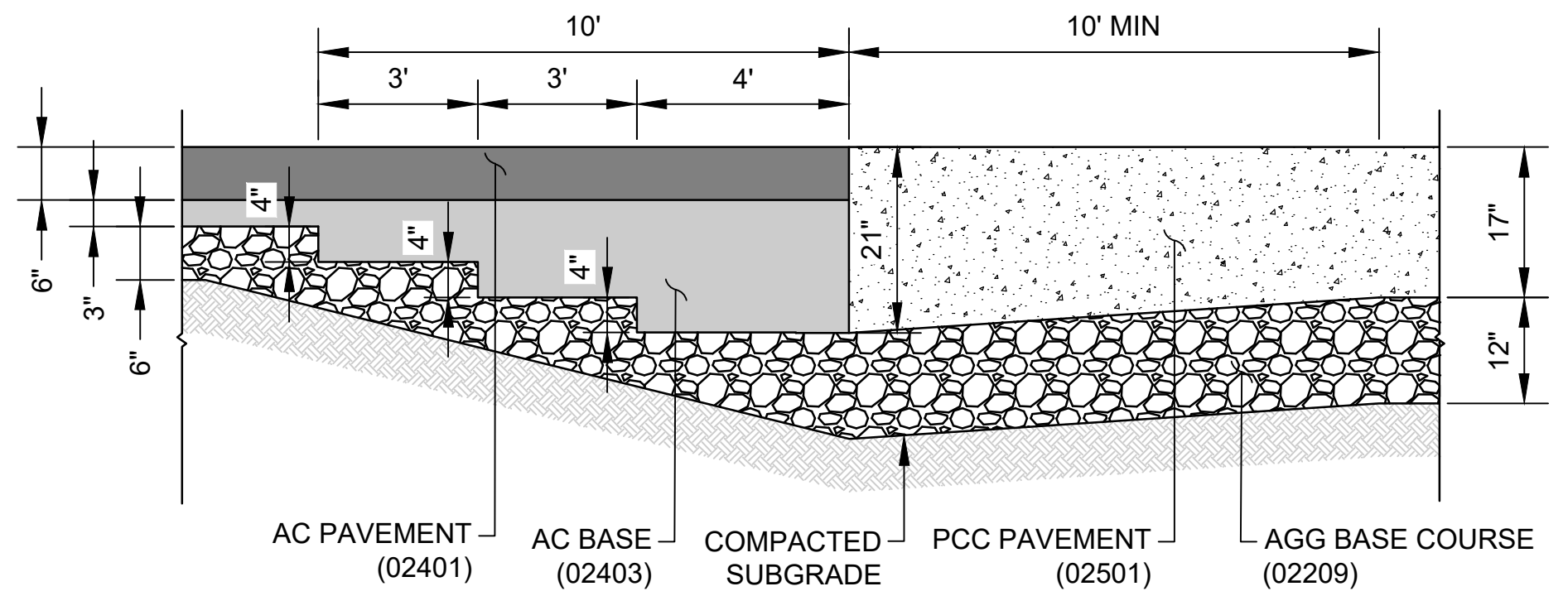
### PROJECT NO.:

AH2021-16

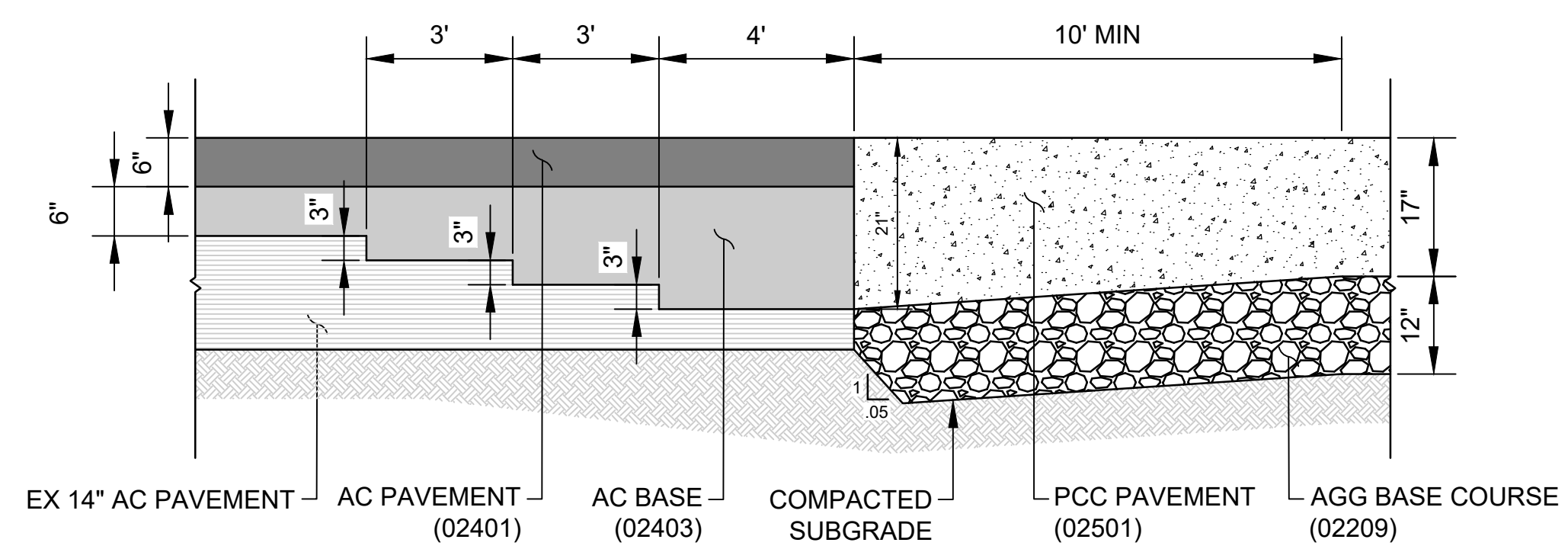
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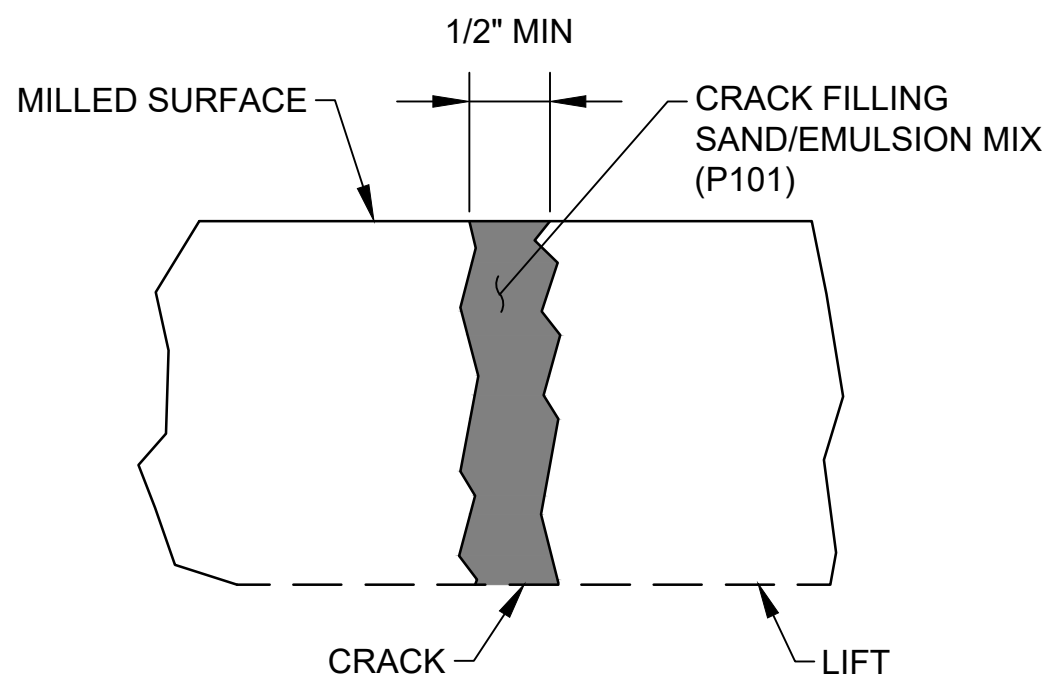
DATE :	09/2023	DWG. NO.	C-405
SHEET :	82 OF 190 SHEETS		



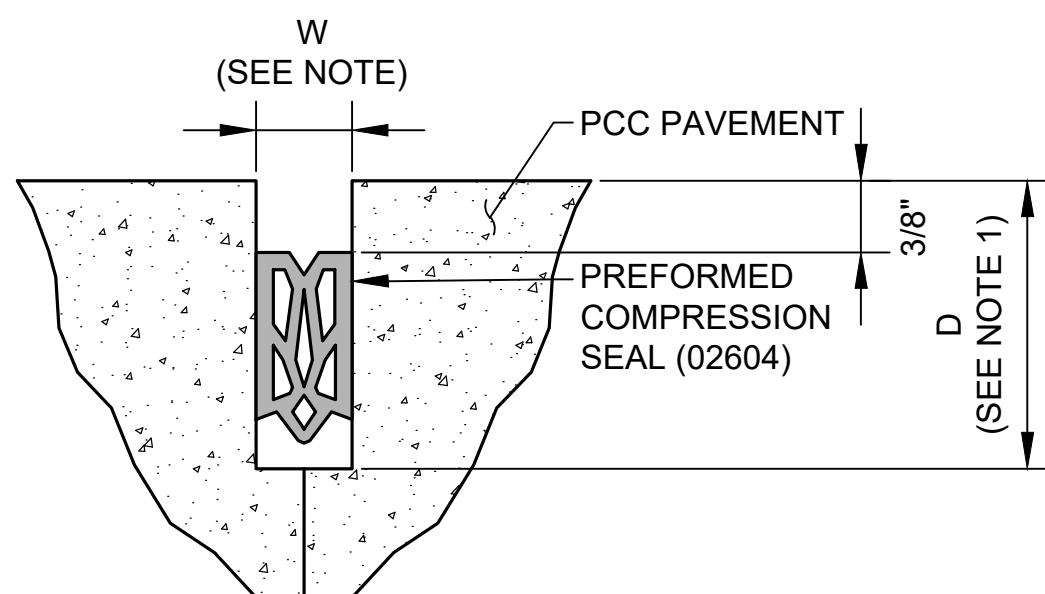
1 THICKENED EDGE TRANSITION JOINT - TYPE A  
C-309 C-405 SCALE: NTS



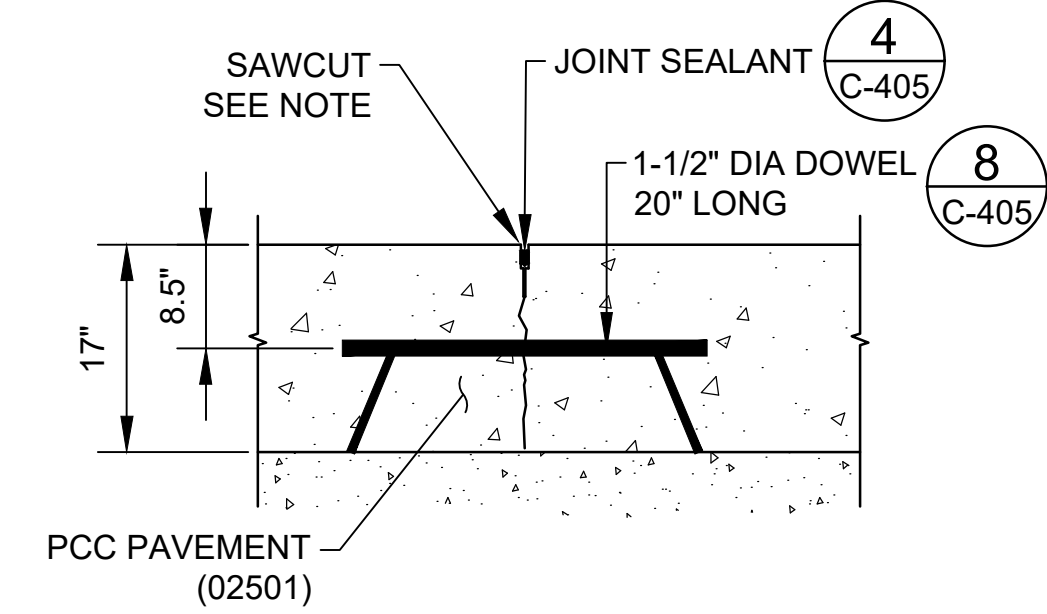
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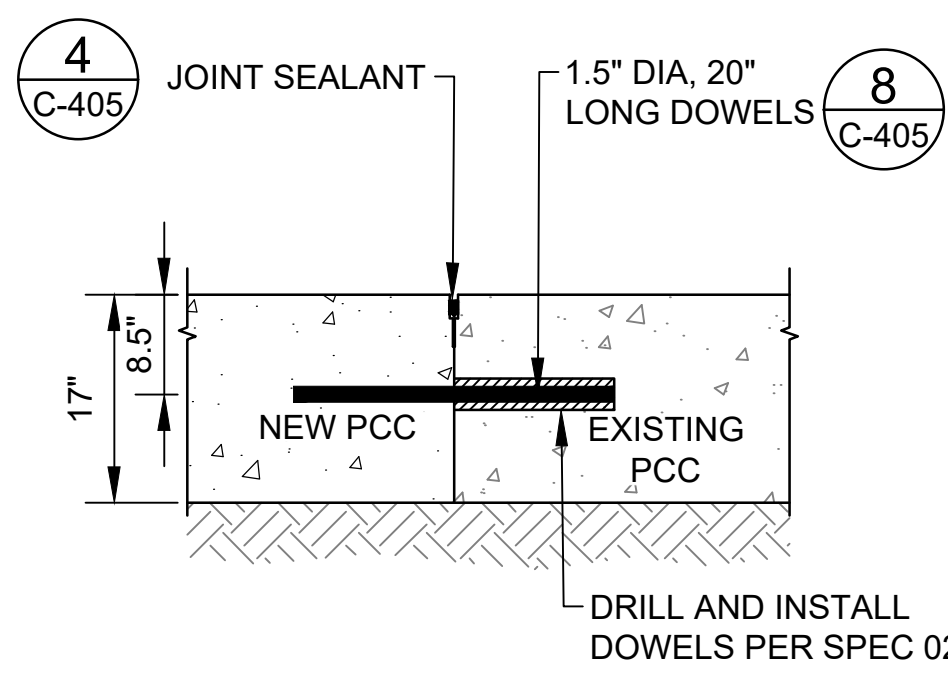
3 CRACK FILL DETAIL  
C-301-C-309 C-405 SCALE: NTS



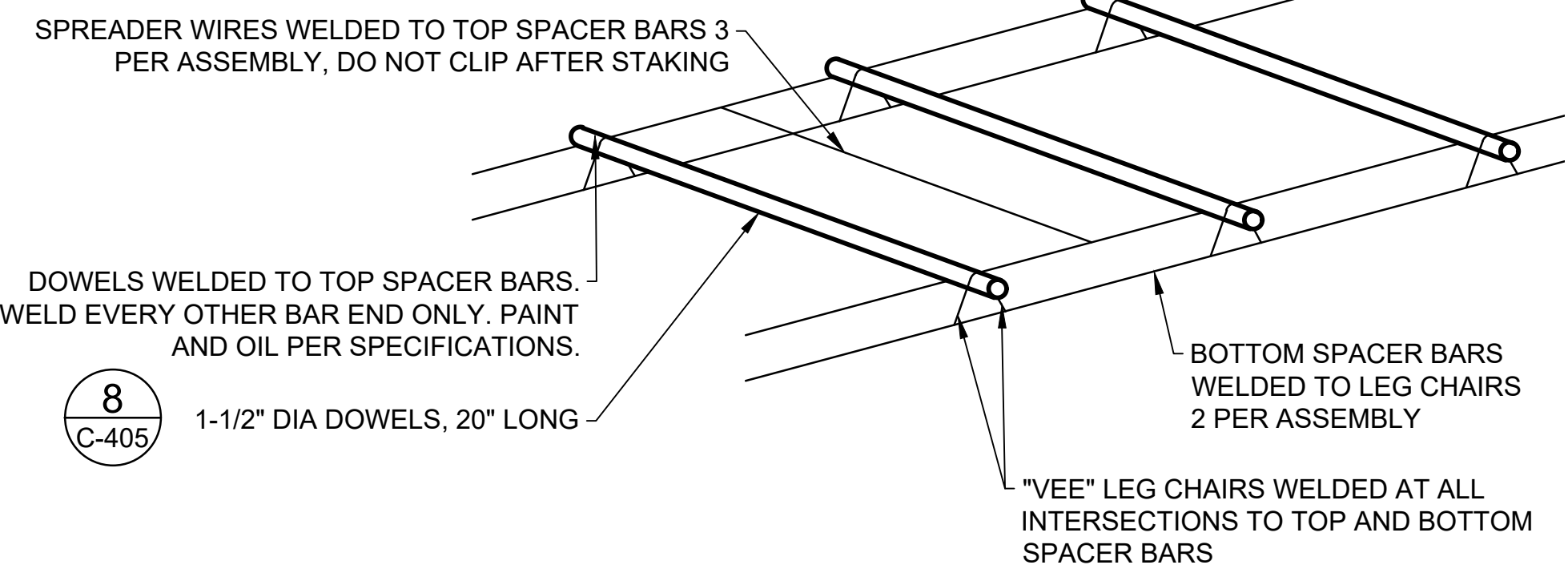
4 JOINT SEAL DETAILS  
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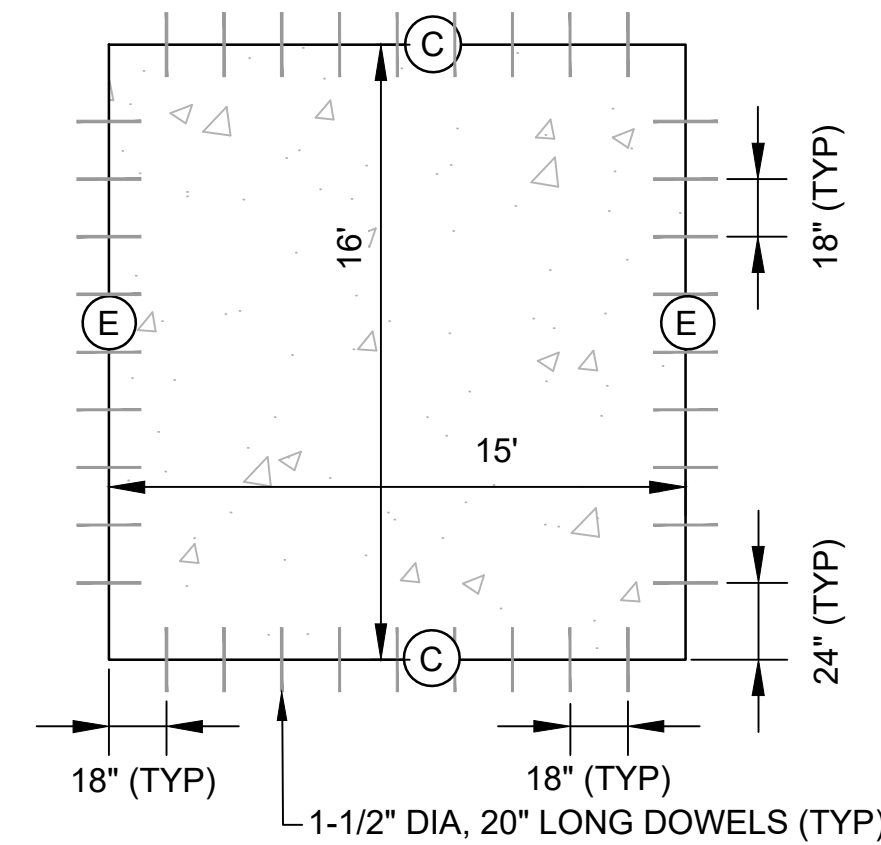
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C-309 C-405 SCALE: NTS



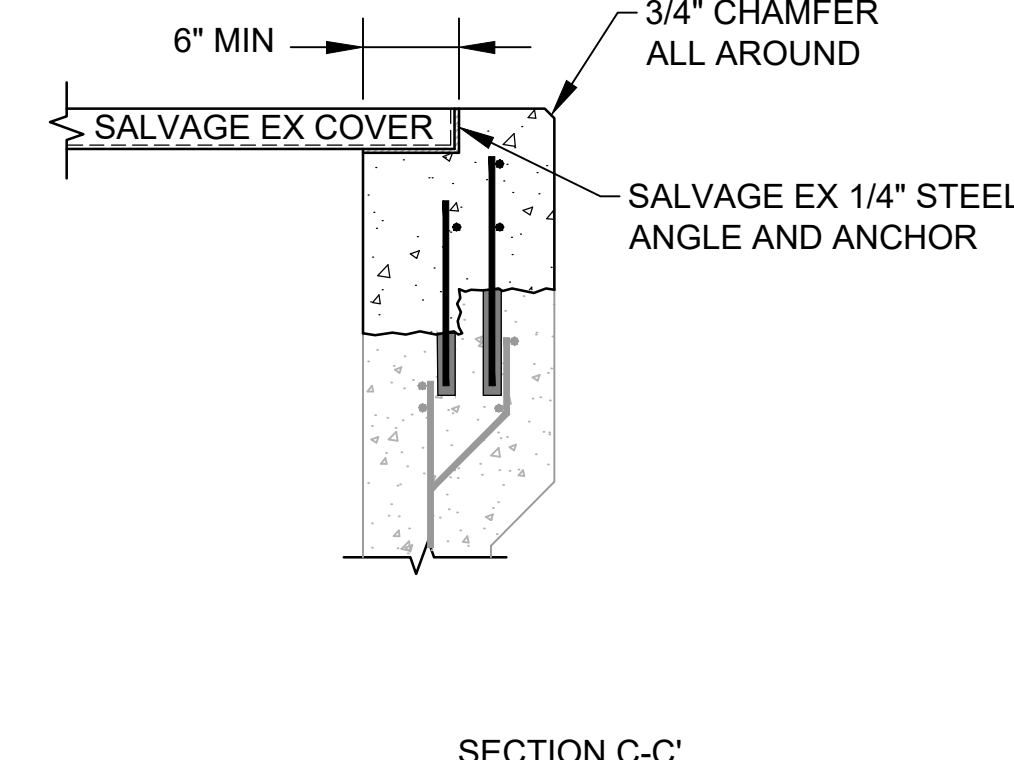
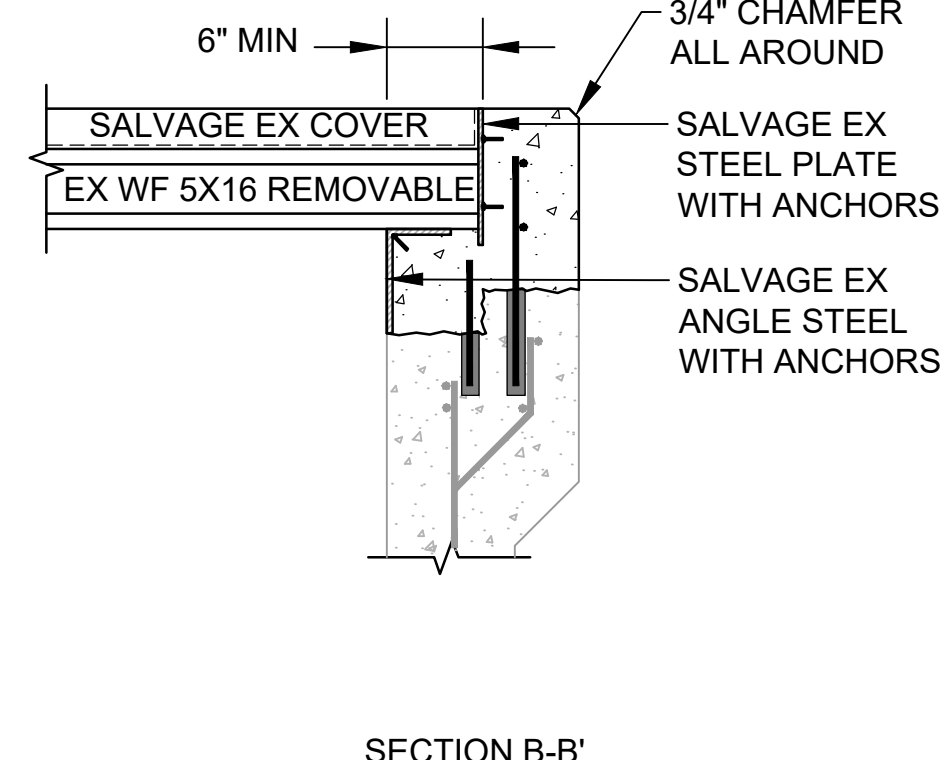
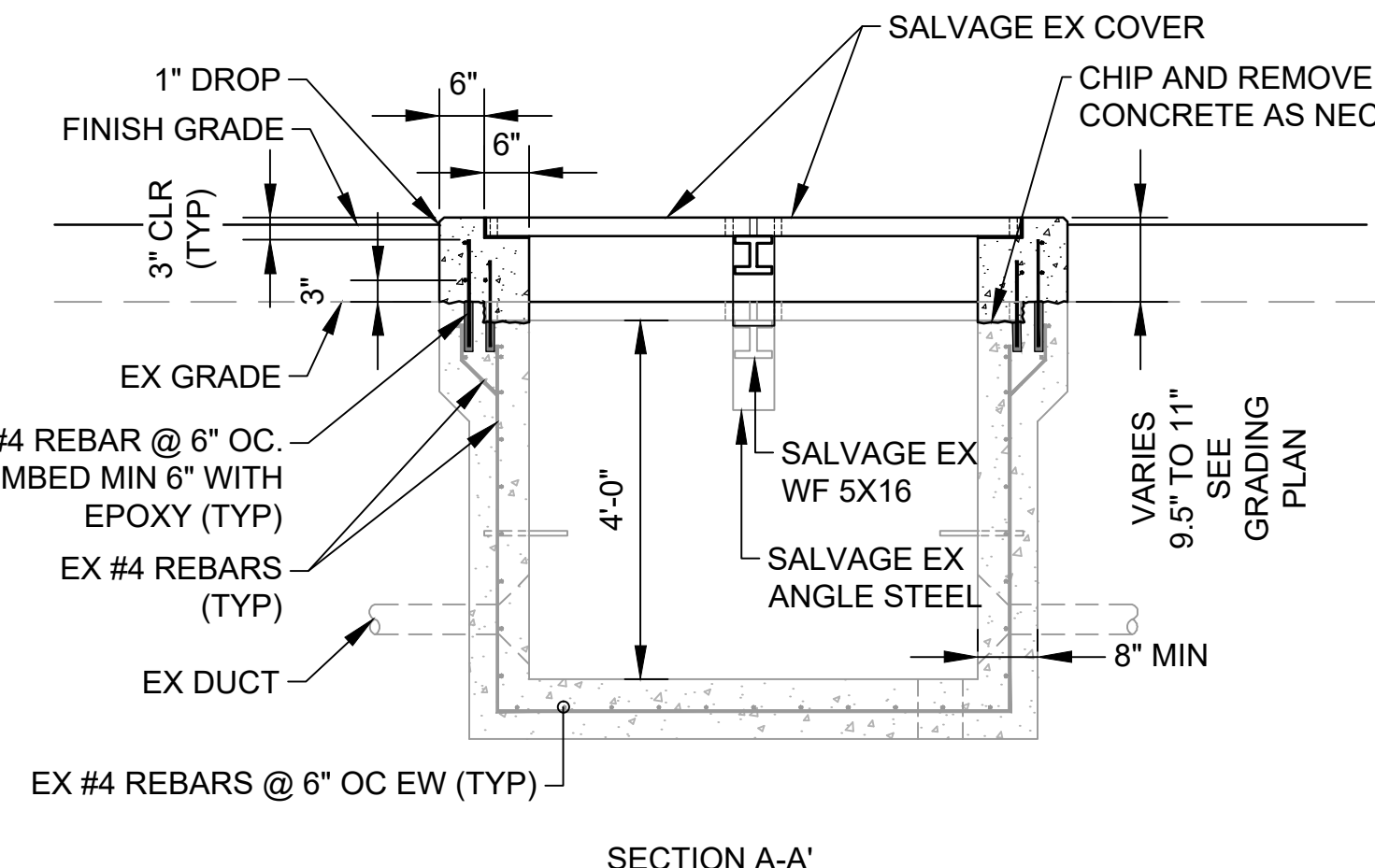
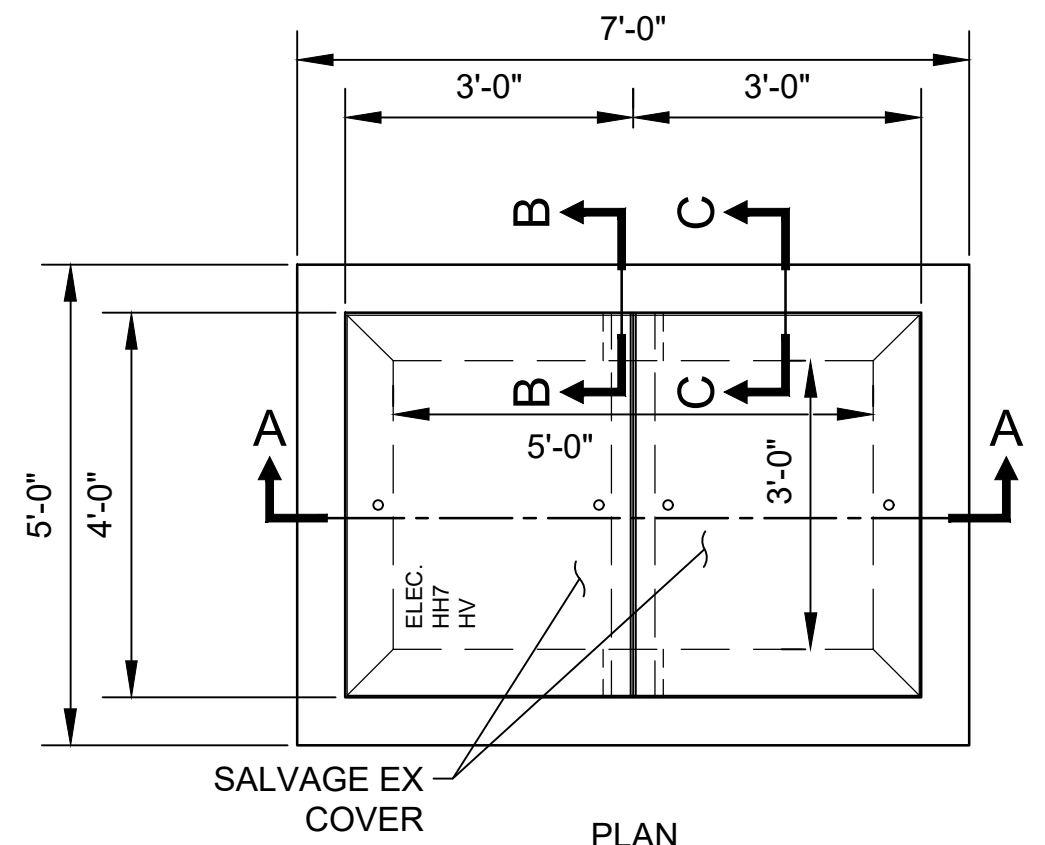
6 CONSTRUCTION JOINT - TYPE E  
C-309 C-405 SCALE: NTS



7 TYPICAL DOWEL ASSEMBLY  
C-405 SCALE: NTS



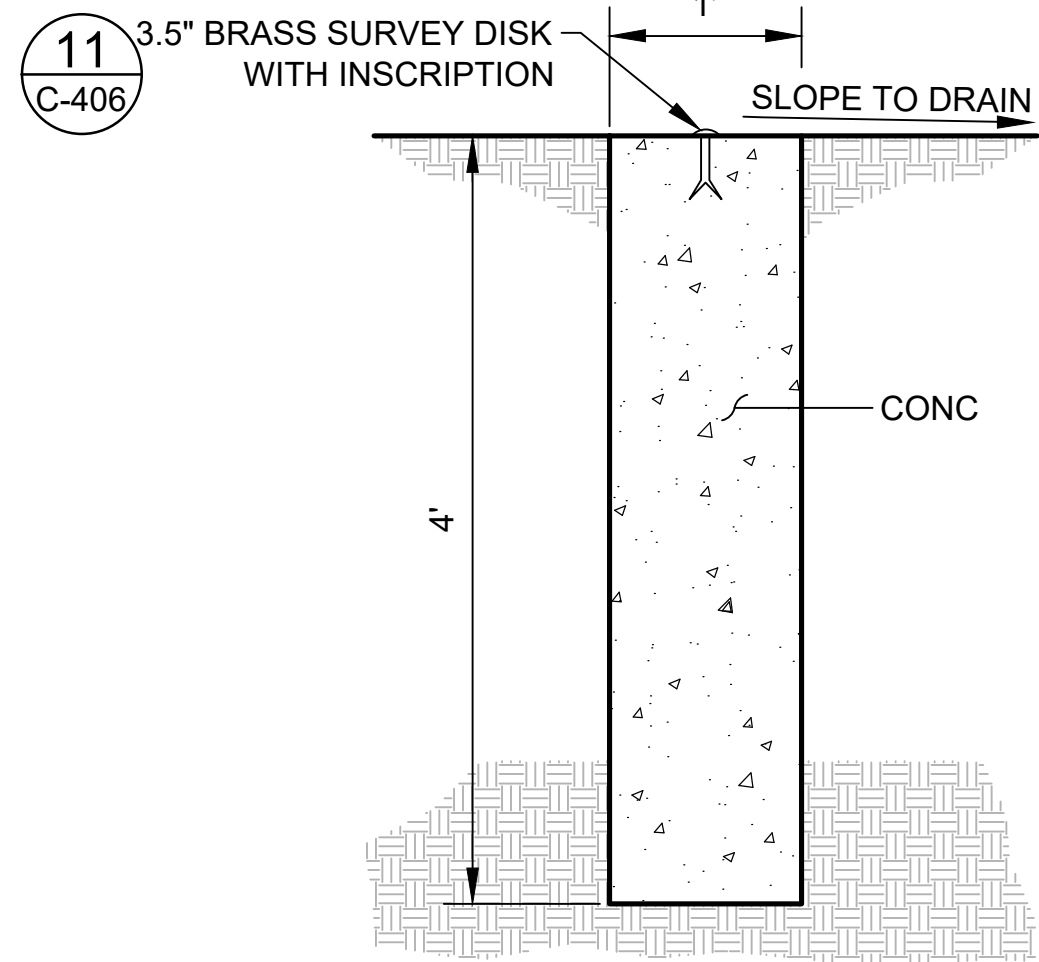
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9 AIRCRAFT-RATED HANDHOLE DETAIL  
C-509 C-405 SCALE: NTS

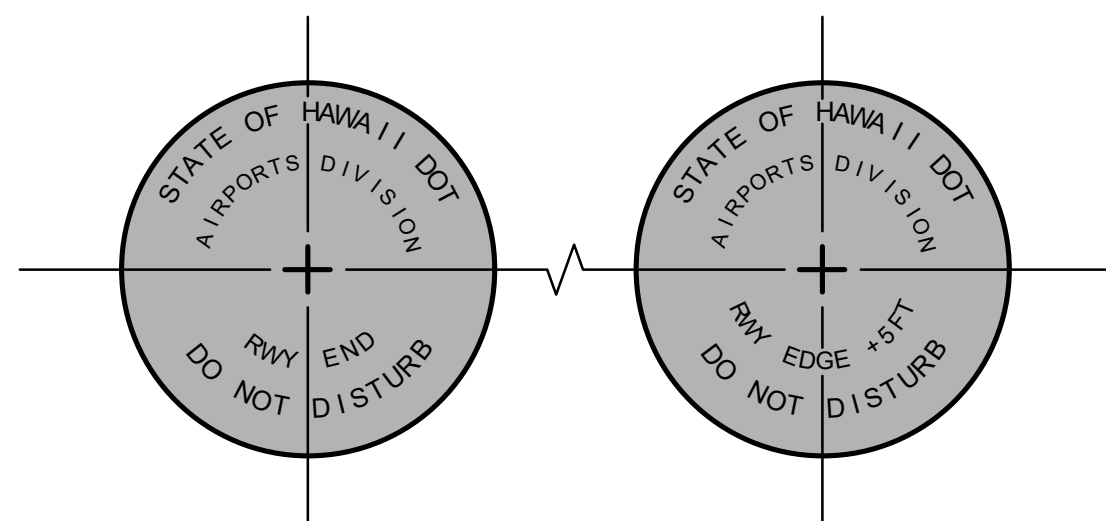
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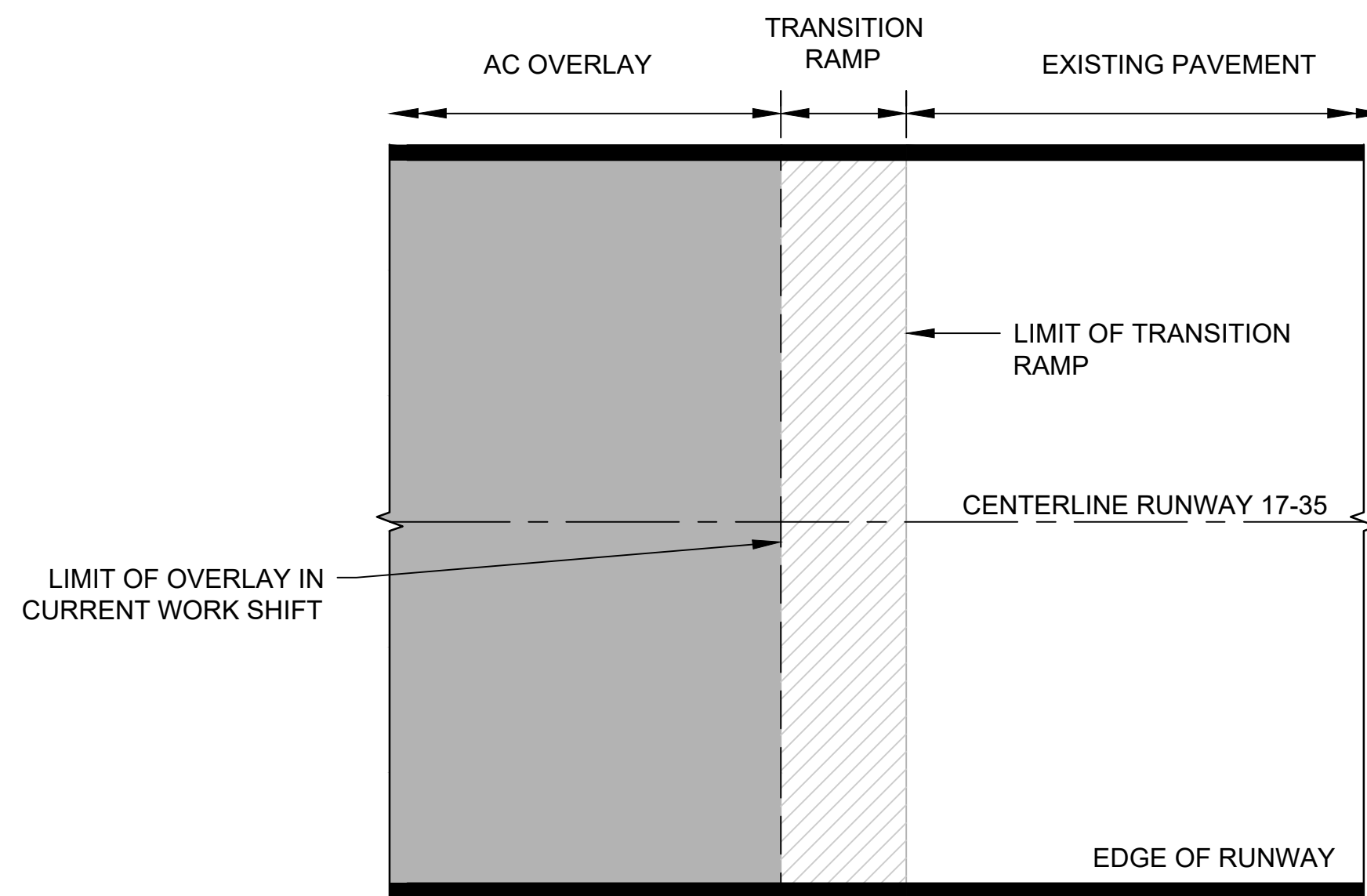
RUNWAY END SURVEY MARKER MONUMENT

10 RUNWAY END SURVEY MARKER  
C-301, C-309, C-406 SCALE: NTS

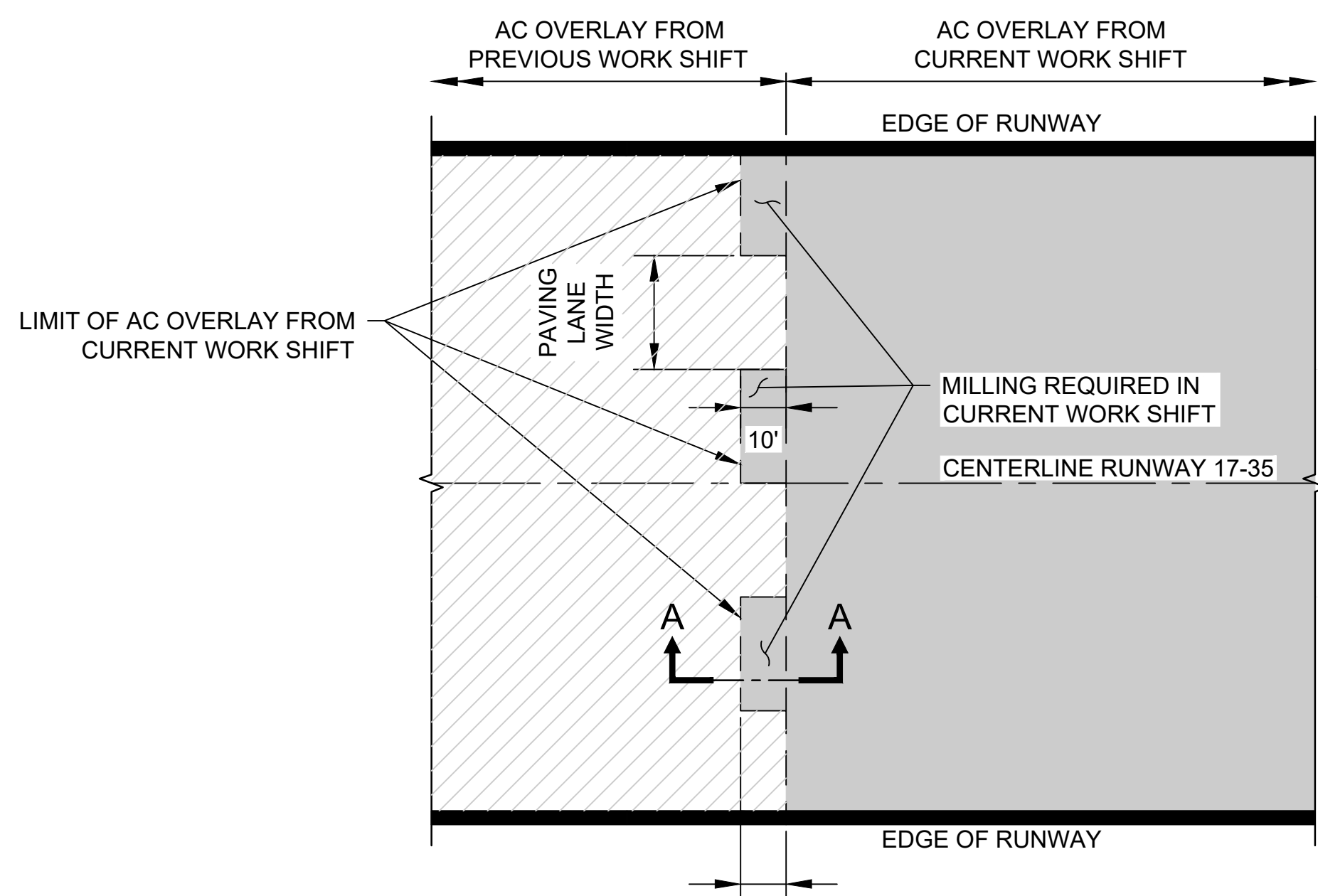


NOTE:  
SEE DRAWINGS C-301 AND C-309 FOR RUNWAY 17  
AND 35 END MARKERS AND MONUMENT LOCATIONS

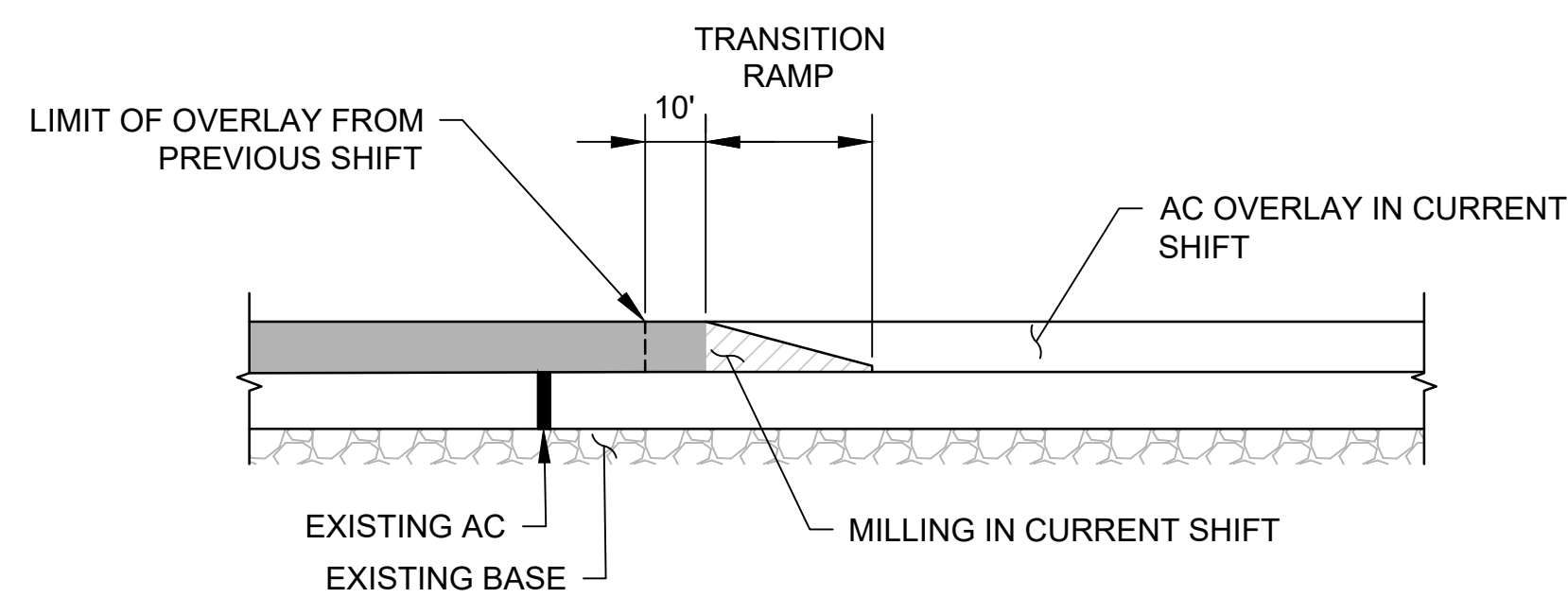
11 RUNWAY END MARKER DETAILS  
C-406 SCALE: NTS



OFFSET TRANSVERSE JOINT CONSTRUCTION

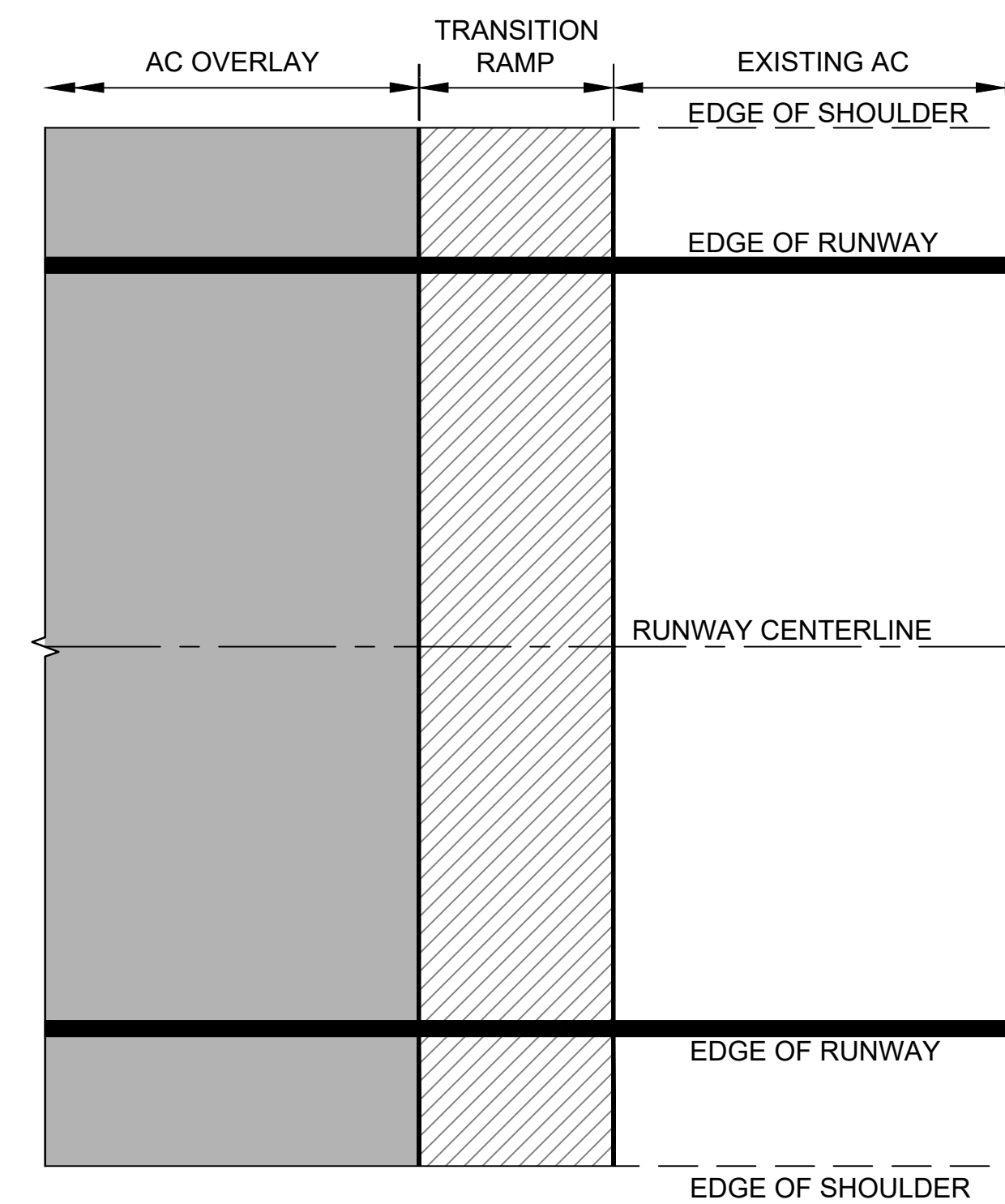


OFFSET TRANSVERSE JOINT  
PLAN  
OFFSET TRANSVERSE JOINT

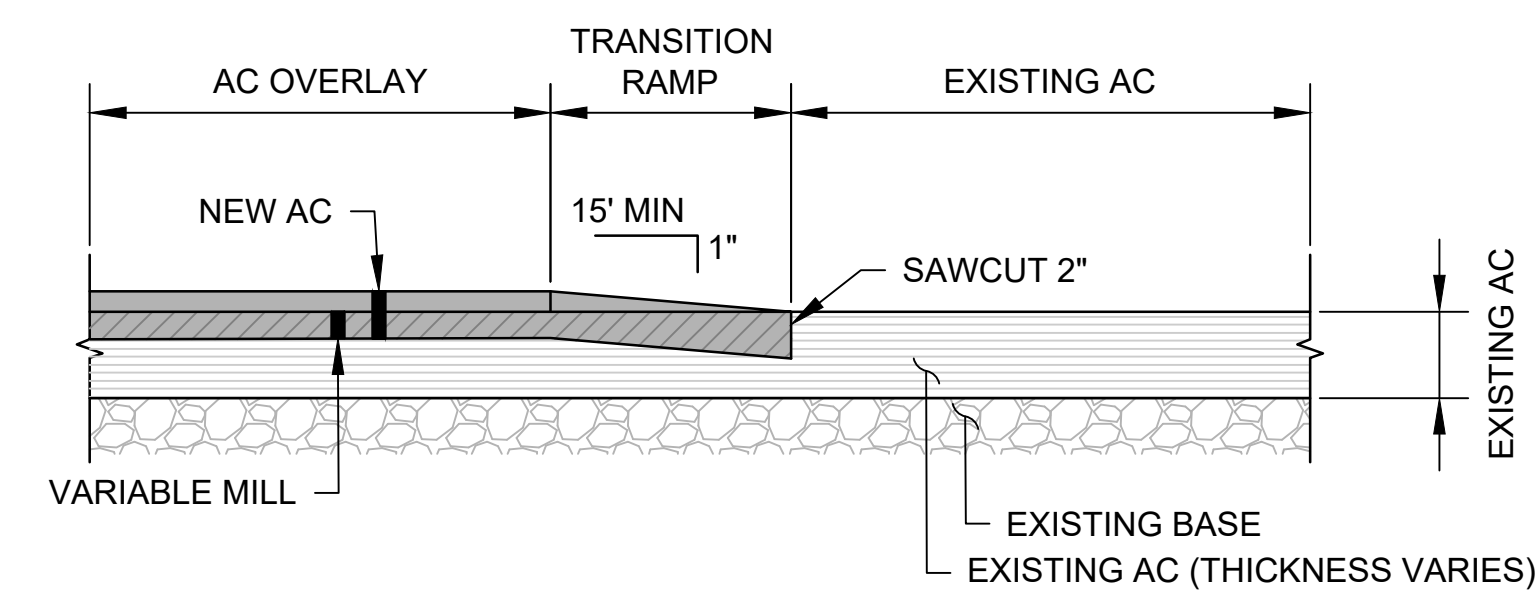


SECTION A-A  
OFFSET TRANSVERSE JOINT SECTION

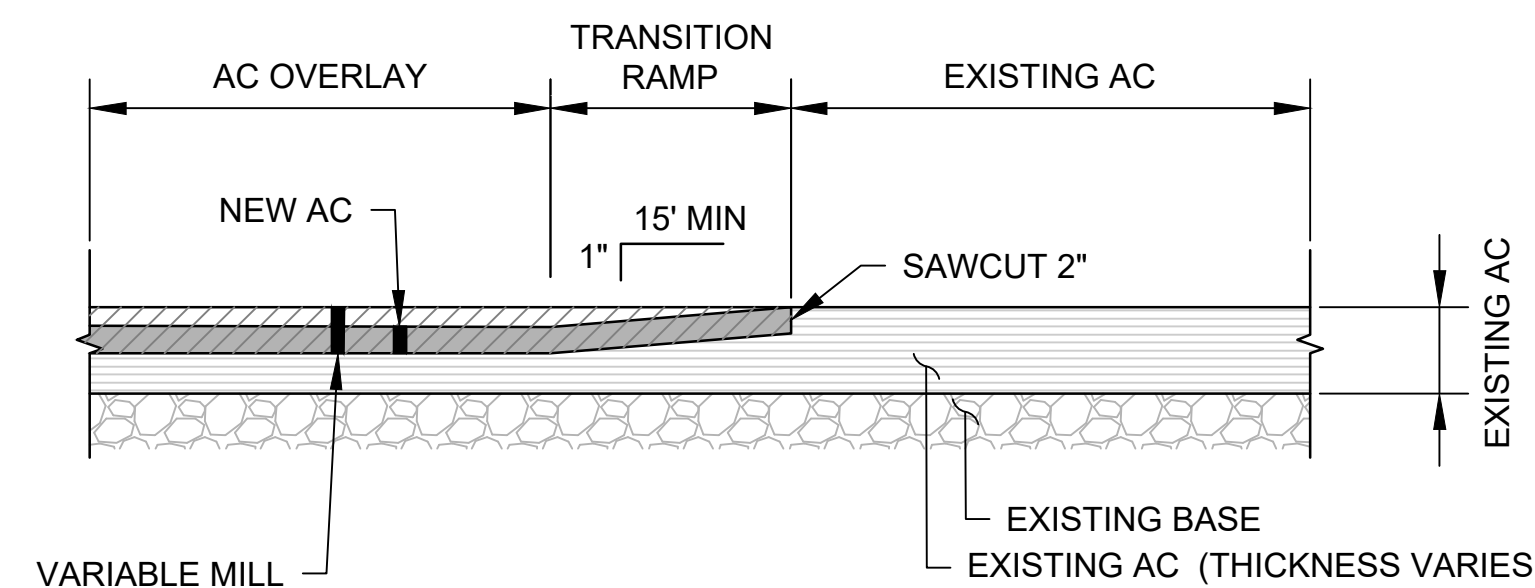
12 OFFSET TRANSVERSE JOINT  
C-201, C-202, C-204, C-206, C-209, C-406 SCALE: NTS  
C-301, C-302, C-304, C-306, C-309



PLAN



TYPICAL PROFILE FOR TRANSITION DOWN

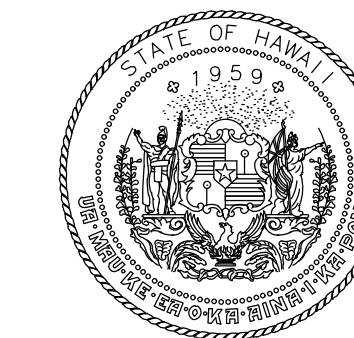


TYPICAL PROFILE FOR TRANSITION UP

NOTES:

1. THE LENGTH OF TRANSITION RAMP WILL VARY AT EACH TRANSITION RAMP LOCATION. EACH RAMP LENGTH SHALL BE THE MAXIMUM DIFFERENCE BETWEEN OVERLAY ELEVATION AND EXISTING GRADE (IN INCHES) MULTIPLIED BY 15 FEET.
2. TRANSITION RAMP SLOPES MAY VARY ACROSS THE WIDTH OF THE RUNWAY BUT SHALL NOT BE STEEPER THAN 15 FEET HORIZONTAL PER 1 INCH VERTICAL.

13 TEMPORARY TRANSITION RAMP  
C-406 SCALE: NTS



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS



*M. A. Clevon*  
4/30/24  
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AC	NM	TR	SH

KEY PLAN / NOTES:

NO.	DATE	REVISIONS

CONSTRUCTION DOCUMENTS

JUNE 10, 2022  
DATE

PROJECT TITLE :

RUNWAY 17-35  
REHABILITATION

AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

PROJECT NO.:

AH2021-16

SHEET TITLE:

PAVING DETAILS 2

DATE :

09/2023

SHEET :

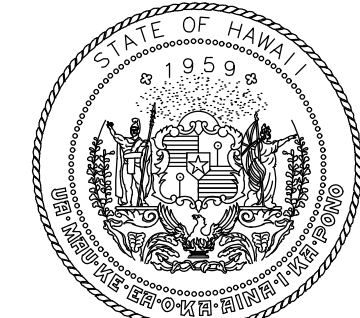
83 OF 190 SHEETS

DWG. NO.

C-406







STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
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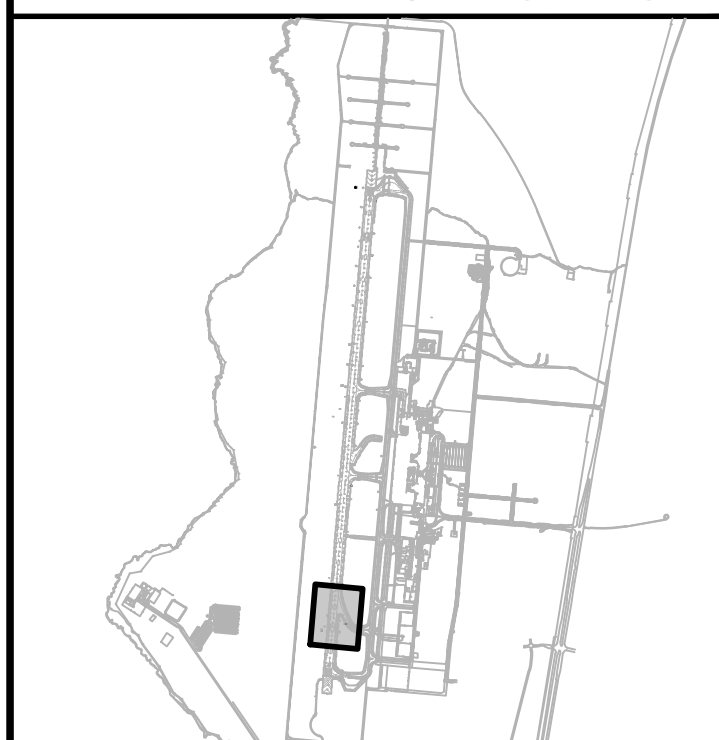


MARK A. CLEVEN  
LICENSED PROFESSIONAL ENGINEER  
No. 12828-C  
4/30/24  
Licensed Expiration Date

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AC	AT	TR	SH

KEY PLAN / NOTES:



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENTS**  
SEPTEMBER 2023  
DATE

PROJECT TITLE :

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

PROJECT NO.:

**AH2021-16**

SHEET TITLE:

**GRADING PLAN 2**

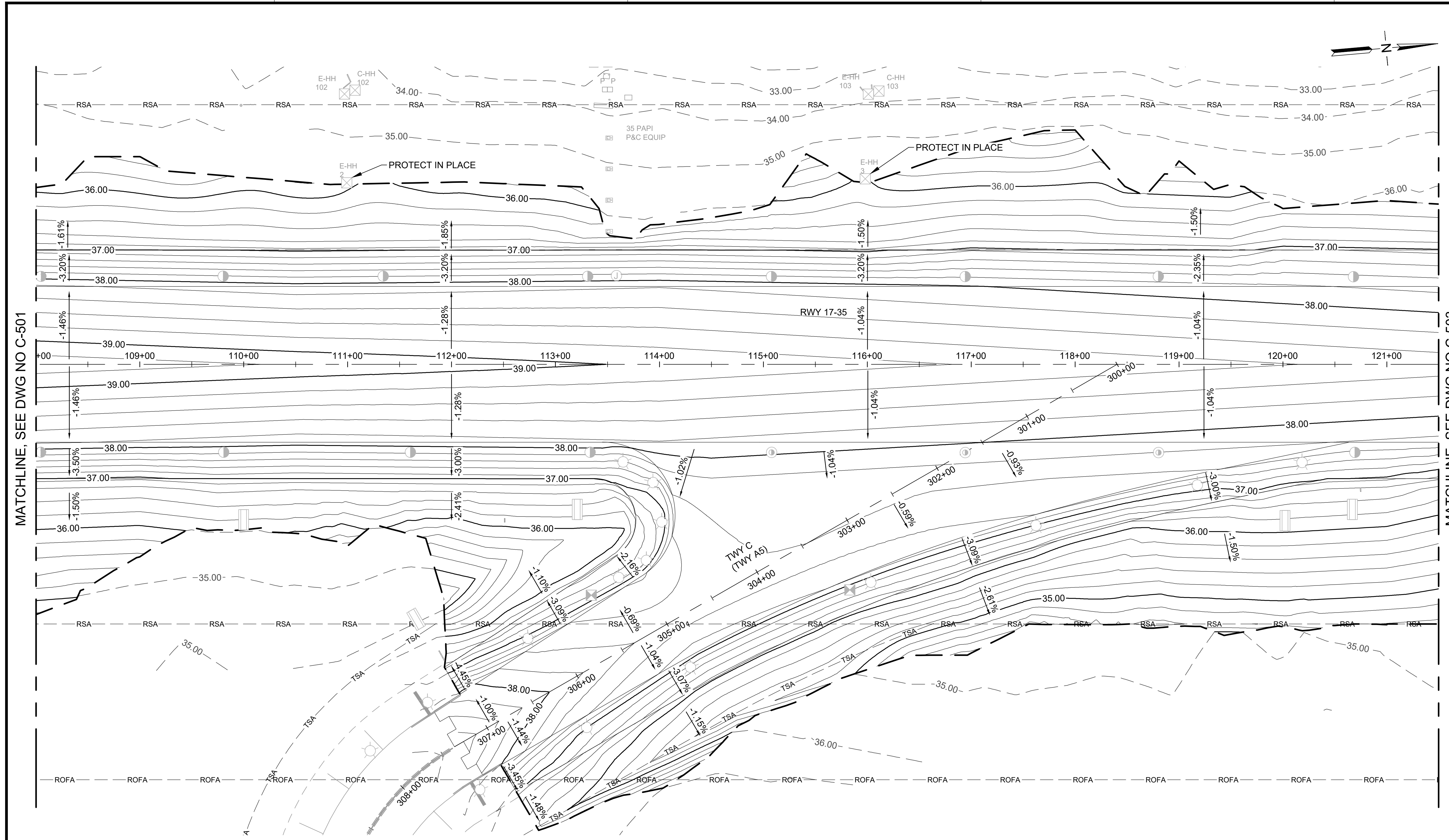
DATE : **09/2023**

SHEET : **C-502**

85 OF 190 SHEETS

DWG. NO.

**C-502**



MATCHLINE, SEE DWG NO C-501

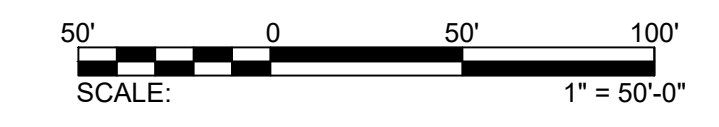
MATCHLINE, SEE DWG NO C-503

LEGEND:

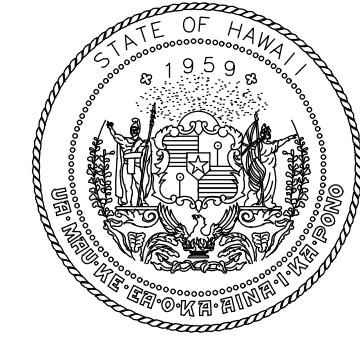
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	PROPOSED MAJOR CONTOURS		SEMI-FLUSH RUNWAY LIGHT		JUNCTION CAN		SIGNS
	PROPOSED MINOR CONTOURS		ELEVATED TAXIWAY LIGHT		NEW HANDHOLE		RUNWAY END MARKER AND MONUMENT
	EXISTING MAJOR CONTOURS		MALSRL LIGHT		ADJUST EXISTING HANDHOLE		

NOTES:

- REFER TO DRAWINGS E-200 THRU E-216 FOR ELECTRICAL STRUCTURES FOR ANY MODIFICATION.
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STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
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*Mark A. Clevon*  
4/30/24  
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AC	AT	TR	SH

**KEY PLAN / NOTES:**



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**CONSTRUCTION DOCUMENTS**  
SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

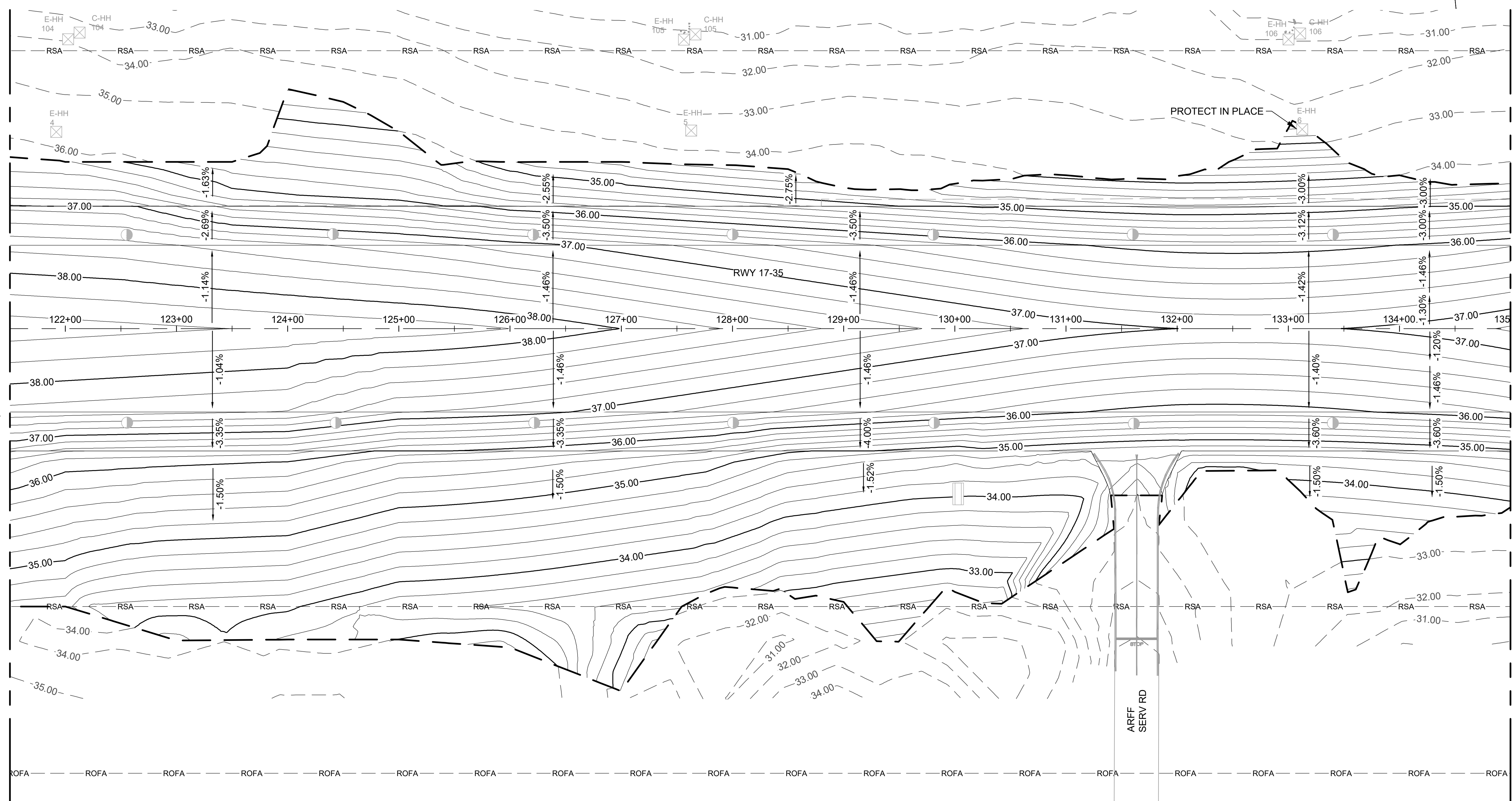
**SHEET TITLE:**

**GRADING PLAN 3**

DATE :	DWG. NO.
09/2023	C-503
SHEET :	
86 OF 190 SHEETS	

MATCHLINE, SEE DWG NO C-502

MATCHLINE, SEE DWG NO C-504

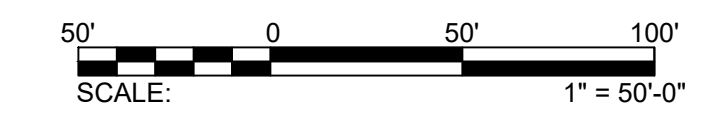


**LEGEND:**

	LIMITS OF GRADING		ELEVATED RUNWAY LIGHT		BASE CAN		EXISTING HANDHOLE
	PROPOSED MAJOR CONTOURS		SEMI-FLUSH RUNWAY LIGHT		JUNCTION CAN		SIGNS
	PROPOSED MINOR CONTOURS		ELEVATED TAXIWAY LIGHT		NEW HANDHOLE		RUNWAY END MARKER AND MONUMENT
	EXISTING MAJOR CONTOURS		MALSR LIGHT		ADJUST EXISTING HANDHOLE		

**NOTES:**

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STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS

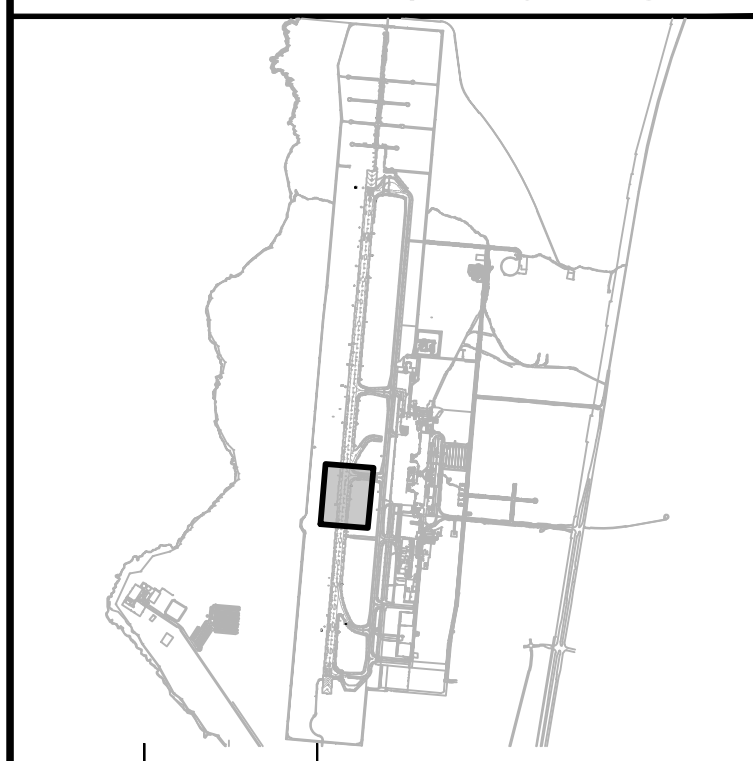


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4/30/24  
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AC	AT	TR	SH

**KEY PLAN / NOTES:**



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENTS**  
SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

**SHEET TITLE:**

**GRADING PLAN 4**

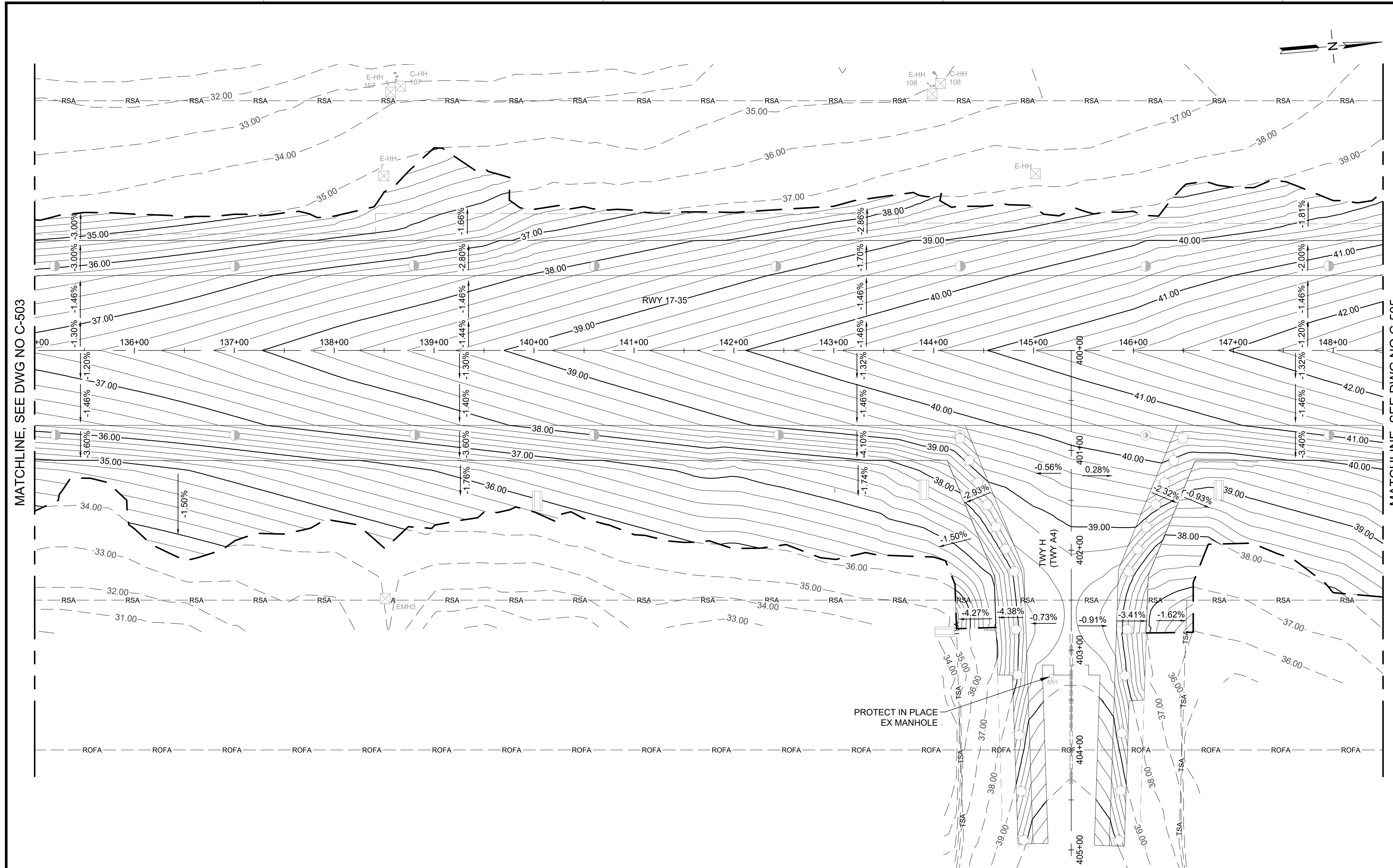
DATE : **09/2023**

SHEET : **C-504**

87 OF 190 SHEETS

DWG. NO.

**C-504**



MATCHLINE, SEE DWG NO C-503

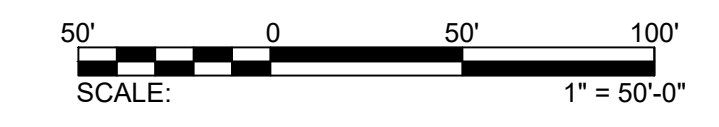
MATCHLINE, SEE DWG NO C-505

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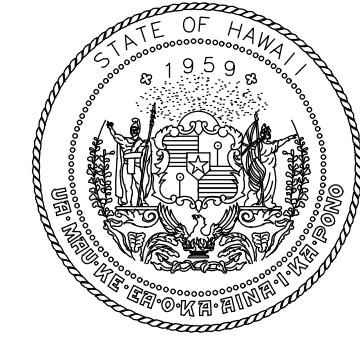
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| — — — — —       | LIMITS OF GRADING       | ● | ELEVATED RUNWAY LIGHT   | ⊕ | BASE CAN                 | ⊗ | EXISTING HANDHOLE              |
| — 9.0 —         | PROPOSED MAJOR CONTOURS | ⊙ | SEMI-FLUSH RUNWAY LIGHT | ⊕ | JUNCTION CAN             | ⊗ | SIGNS                          |
| — 9.2 —         | PROPOSED MINOR CONTOURS | ⊙ | ELEVATED TAXIWAY LIGHT  | ⊗ | NEW HANDHOLE             | ⊗ | RUNWAY END MARKER AND MONUMENT |
| - - - 8.0 - - - | EXISTING MAJOR CONTOURS | ⊙ | MALSR LIGHT             | ⊗ | ADJUST EXISTING HANDHOLE |   |                                |

**NOTES:**

- REFER TO DRAWINGS E-200 THRU E-216 FOR ELECTRICAL STRUCTURES FOR ANY MODIFICATION.
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DEPARTMENT OF TRANSPORTATION  
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4/30/24  
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AC	AT	TR	SH

**KEY PLAN / NOTES:**



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**CONSTRUCTION DOCUMENTS**  
SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

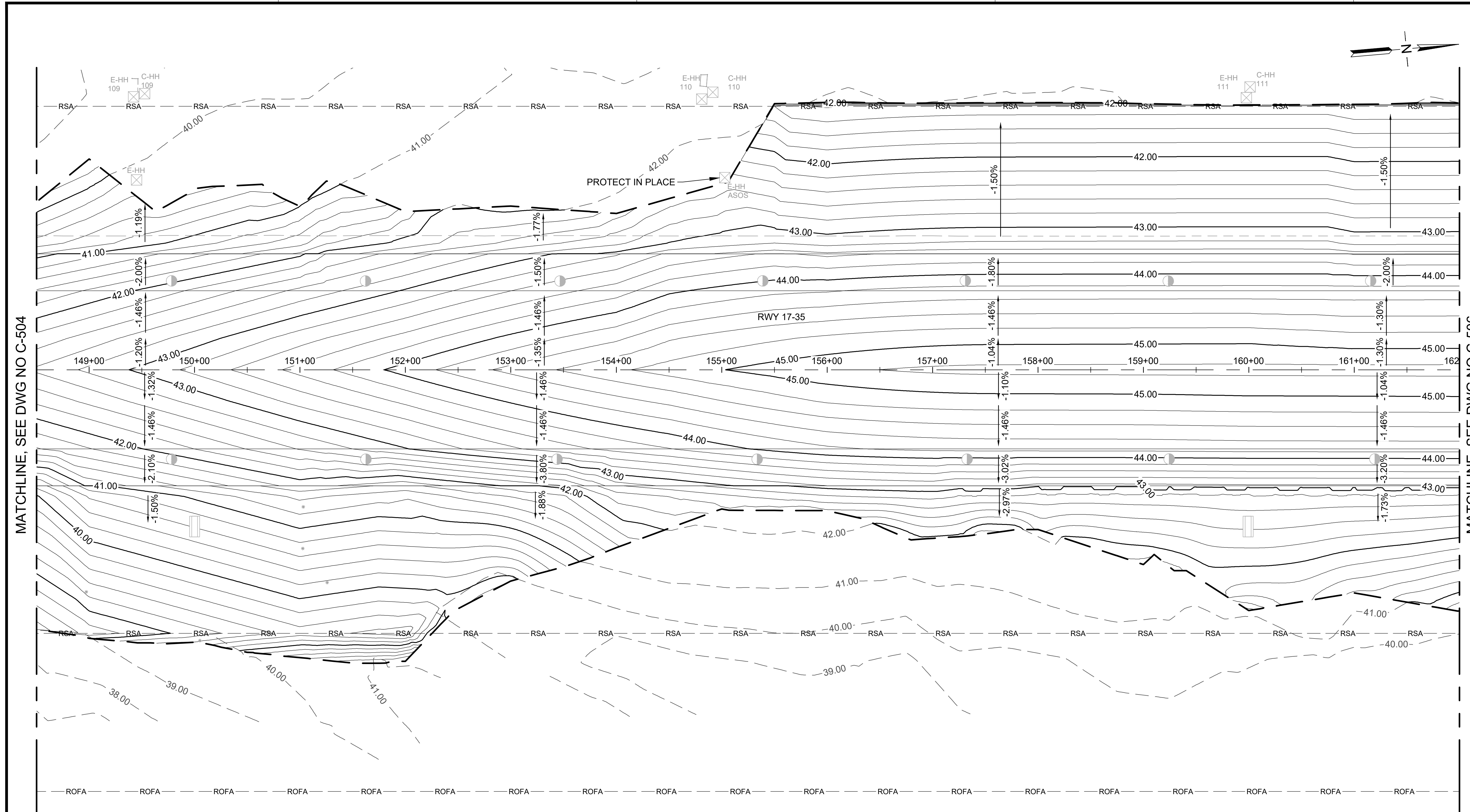
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**GRADING PLAN 5**

DATE : **09/2023**  
SHEET :  
88 OF 190 SHEETS

DWG. NO.

**C-505**



MATCHLINE, SEE DWG NO C-504

MATCHLINE, SEE DWG NO C-506

**LEGEND:**

- — — — — LIMITS OF GRADING
- 9.0 — — — — PROPOSED MAJOR CONTOURS
- 9.2 — — — — PROPOSED MINOR CONTOURS
- - - 8.0 - - - - EXISTING MAJOR CONTOURS
- ELEVATED RUNWAY LIGHT
- SEMI-FLUSH RUNWAY LIGHT
- ⊙ ELEVATED TAXIWAY LIGHT
- ⊕ MALSR LIGHT
- ⊕ BASE CAN
- ⊕ JUNCTION CAN
- ⊕ NEW HANDHOLE
- ⊕ A ADJUST EXISTING HANDHOLE
- ⊗ EXISTING HANDHOLE
- ⊗ SIGNS
- ⊗ RUNWAY END MARKER AND MONUMENT

**NOTES:**

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STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
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AC	AT	TR	SH

**KEY PLAN / NOTES:**



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**CONSTRUCTION DOCUMENTS**  
SEPTEMBER 2023  
DATE

PROJECT TITLE :

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

PROJECT NO.:

**AH2021-16**

SHEET TITLE:

**GRADING PLAN 6**

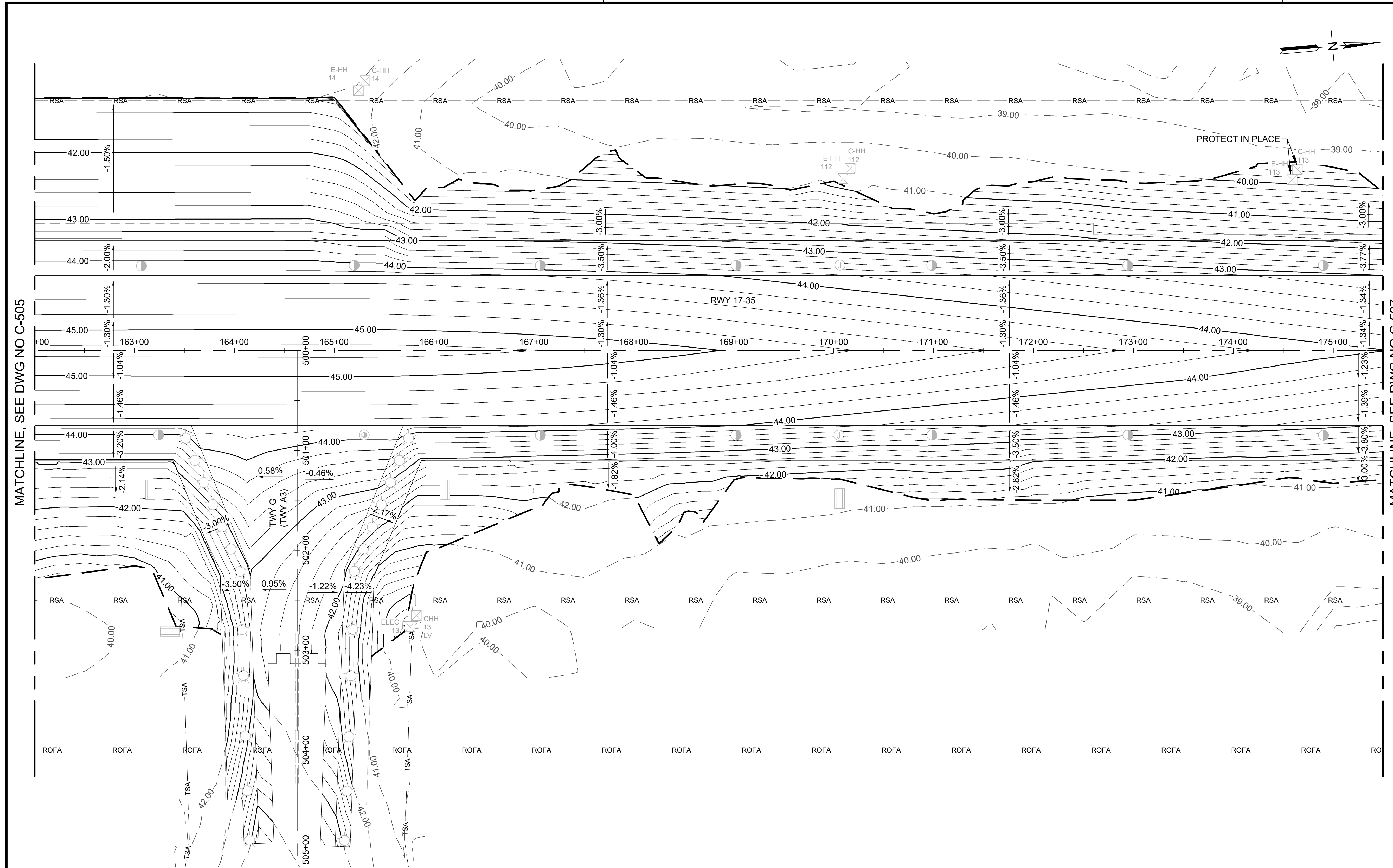
DATE : **09/2023**

SHEET : **C-506**

89 OF 190 SHEETS

DWG. NO.

**C-506**



MATCHLINE, SEE DWG NO C-505

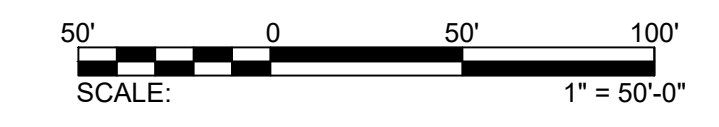
MATCHLINE, SEE DWG NO C-507

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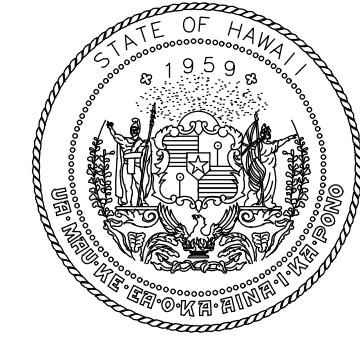
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| — — — — —       | LIMITS OF GRADING       | ● | ELEVATED RUNWAY LIGHT   | ⊙ | BASE CAN                 | ⊗ | EXISTING HANDHOLE              |
| — 9.0 — — —     | PROPOSED MAJOR CONTOURS | ⊙ | SEMI-FLUSH RUNWAY LIGHT | ⊕ | JUNCTION CAN             | ⊞ | SIGNS                          |
| — 9.2 — — —     | PROPOSED MINOR CONTOURS | ⊙ | ELEVATED TAXIWAY LIGHT  | ⊗ | NEW HANDHOLE             | ⊞ | RUNWAY END MARKER AND MONUMENT |
| - - - 8.0 - - - | EXISTING MAJOR CONTOURS | ⊙ | MALSR LIGHT             | ⊗ | ADJUST EXISTING HANDHOLE |   |                                |

**NOTES:**

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STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
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4/30/24  
Licensed Expiration Date

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AC	AT	TR	SH

**KEY PLAN / NOTES:**



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENTS**  
SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

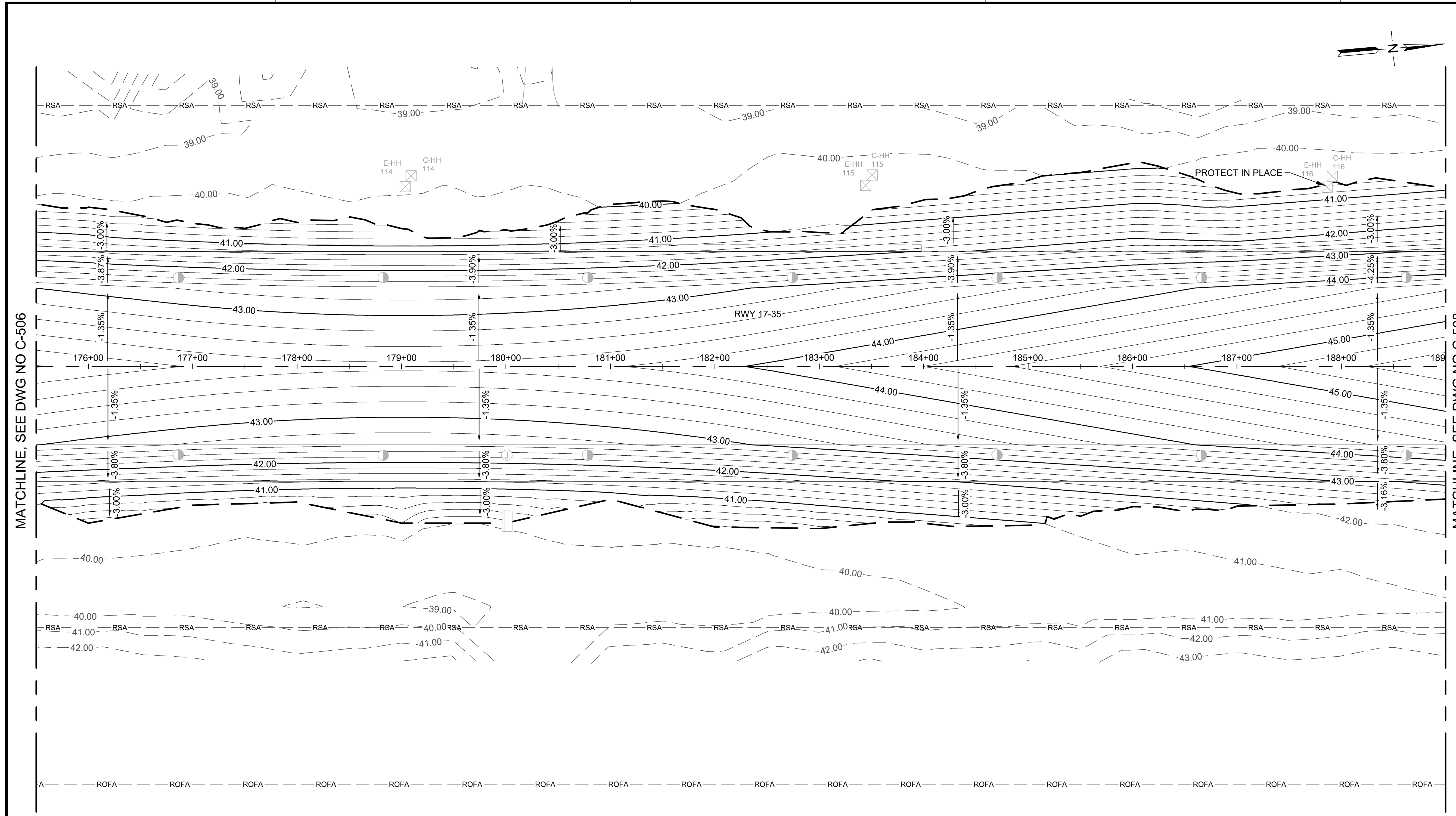
**PROJECT NO.:**

**AH2021-16**

**SHEET TITLE:**

**GRADING PLAN 7**

DATE :	DWG. NO.
09/2023	C-507
SHEET :	
90 OF 190 SHEETS	



MATCHLINE, SEE DWG NO C-506

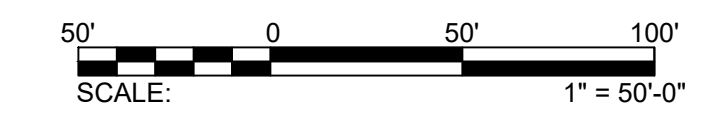
MATCHLINE, SEE DWG NO C-508

**LEGEND:**

- |                 |                         |   |                         |   |                          |   |                                |
|-----------------|-------------------------|---|-------------------------|---|--------------------------|---|--------------------------------|
| — — — — —       | LIMITS OF GRADING       | ● | ELEVATED RUNWAY LIGHT   | Ⓧ | BASE CAN                 | ⊗ | EXISTING HANDHOLE              |
| — 9.0 —         | PROPOSED MAJOR CONTOURS | ⊙ | SEMI-FLUSH RUNWAY LIGHT | Ⓧ | JUNCTION CAN             | ⊗ | SIGNS                          |
| — 9.2 —         | PROPOSED MINOR CONTOURS | ⊙ | ELEVATED TAXIWAY LIGHT  | Ⓧ | NEW HANDHOLE             | ⊗ | RUNWAY END MARKER AND MONUMENT |
| - - - 8.0 - - - | EXISTING MAJOR CONTOURS | ⊙ | MALSR LIGHT             | Ⓧ | ADJUST EXISTING HANDHOLE |   |                                |

**NOTES:**

- REFER TO DRAWINGS E-200 THRU E-216 FOR ELECTRICAL STRUCTURES FOR ANY MODIFICATION.
- SEE PAVING PLANS, DWG C-301 TO DWG C-309, FOR GEOMETRIC LAYOUT.
- ALL GRADING WORK SHALL CONFORM TO THE REQUIREMENTS OF THE COUNTY GRADING PERMIT AND HAWAII COUNTY CODE, CHAPTER 10.
- ALL GRADING OPERATIONS SHALL BE PERFORMED IN CONFORMANCE WITH THE NPDES PERMIT AND THE HDOT-A CONSTRUCTION ACTIVITIES BMP FIELD MANUAL.
- THE CONTRACTOR SHALL FIELD ADJUST GRADING AROUND SIGN BASES. THE GRADED AREA MUST HAVE A SLOPE OF NO MORE THAN 3 PERCENT IN ANY DIRECTION AND MUST BE DRAINED TO PREVENT PONDING OR EROSION AT THE SIGN FOUNDATION. SIGN SIZES AND LOCATIONS ARE APPROXIMATE. SEE ELECTRICAL PLANS.



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*M. A. Cleven*  
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AC	AT	TR	SH

**KEY PLAN / NOTES:**



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENTS**

SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**

AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

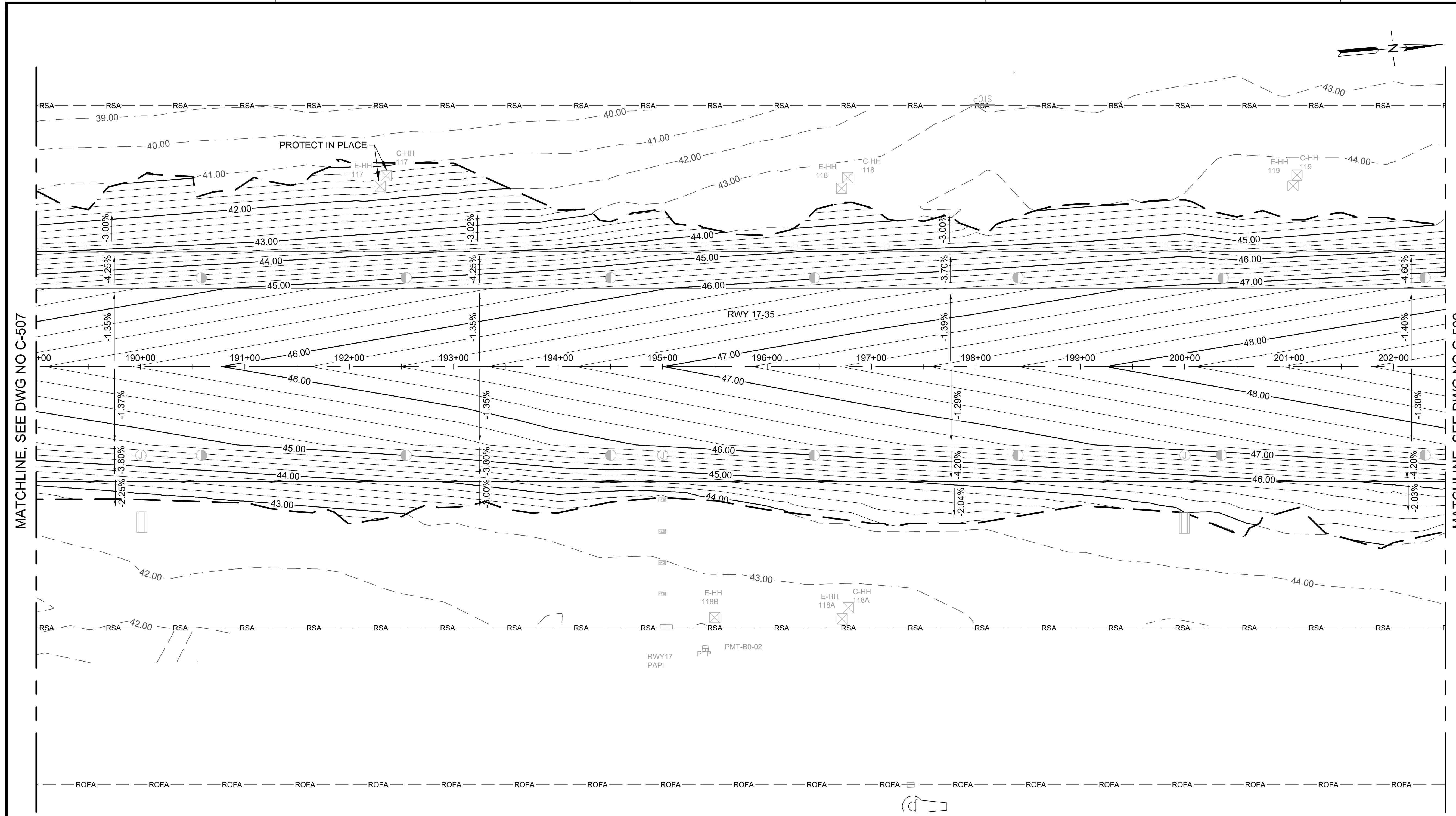
**SHEET TITLE:**

**GRADING PLAN 8**

DATE : **09/2023** DWG. NO.

SHEET : **C-508**

91 OF 190 SHEETS



MATCHLINE, SEE DWG NO C-507

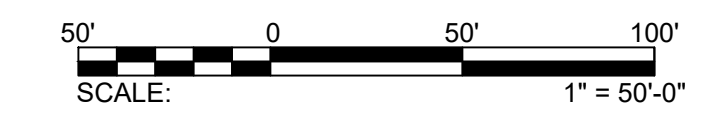
MATCHLINE, SEE DWG NO C-509

**LEGEND:**

- |  |                         |  |                         |  |                          |  |                                |
|--|-------------------------|--|-------------------------|--|--------------------------|--|--------------------------------|
|  | LIMITS OF GRADING       |  | ELEVATED RUNWAY LIGHT   |  | BASE CAN                 |  | EXISTING HANDHOLE              |
|  | PROPOSED MAJOR CONTOURS |  | SEMI-FLUSH RUNWAY LIGHT |  | JUNCTION CAN             |  | SIGNS                          |
|  | PROPOSED MINOR CONTOURS |  | ELEVATED TAXIWAY LIGHT  |  | NEW HANDHOLE             |  | RUNWAY END MARKER AND MONUMENT |
|  | EXISTING MAJOR CONTOURS |  | MALSRL LIGHT            |  | ADJUST EXISTING HANDHOLE |  |                                |

**NOTES:**

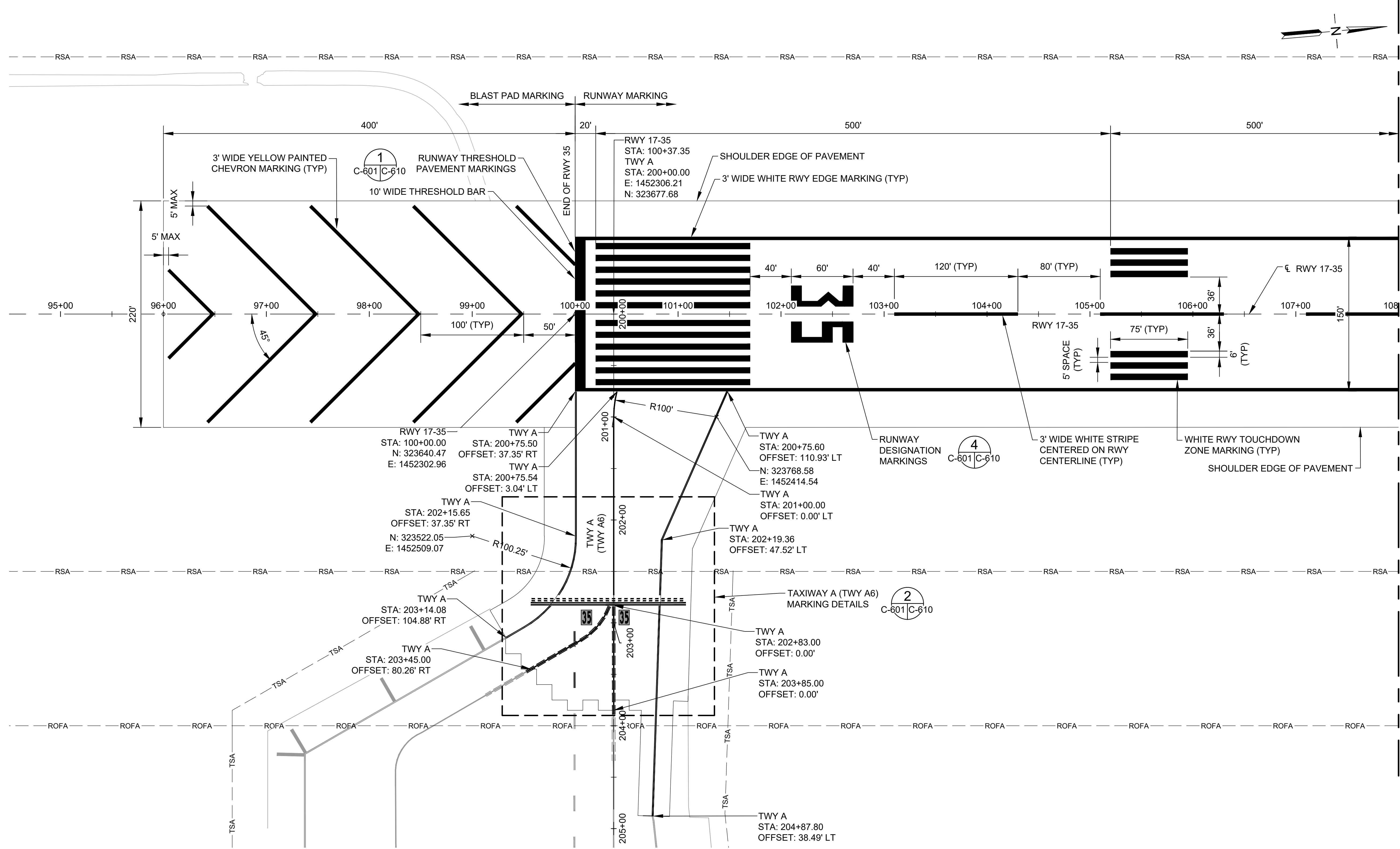
- REFER TO DRAWINGS E-200 THRU E-216 FOR ELECTRICAL STRUCTURES FOR ANY MODIFICATION.
- SEE PAVING PLANS, DWG C-301 TO DWG C-309, FOR GEOMETRIC LAYOUT.
- ALL GRADING WORK SHALL CONFORM TO THE REQUIREMENTS OF THE COUNTY GRADING PERMIT AND HAWAII COUNTY CODE, CHAPTER 10.
- ALL GRADING OPERATIONS SHALL BE PERFORMED IN CONFORMANCE WITH THE NPDES PERMIT AND THE HDOT-A CONSTRUCTION ACTIVITIES BMP FIELD MANUAL.
- THE CONTRACTOR SHALL FIELD ADJUST GRADING AROUND SIGN BASES. THE GRADED AREA MUST HAVE A SLOPE OF NO MORE THAN 3 PERCENT IN ANY DIRECTION AND MUST BE DRAINED TO PREVENT PONDING OR EROSION AT THE SIGN FOUNDATION. SIGN SIZES AND LOCATIONS ARE APPROXIMATE. SEE ELECTRICAL PLANS.



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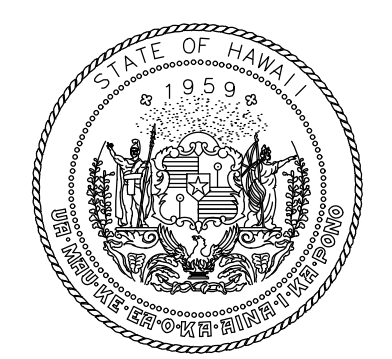






- NOTES:**
- SEE TABLE ON DWG C-611 FOR MARKINGS REQUIRING BLACK OUTLINE OR GLASS BEADS.
  - PRIOR TO REOPENING ANY RUNWAY OR TAXIWAY PAVEMENT TO AIRCRAFT TRAFFIC, THE CONTRACTOR SHALL APPLY TEMPORARY MARKINGS PER SPEC 02620.
  - ALL SURFACE PAINTED HOLDING POSITION SIGNS SHALL BE PREFORMED THERMOPLASTIC.

MATCHLINE, SEE DWG NO C-602



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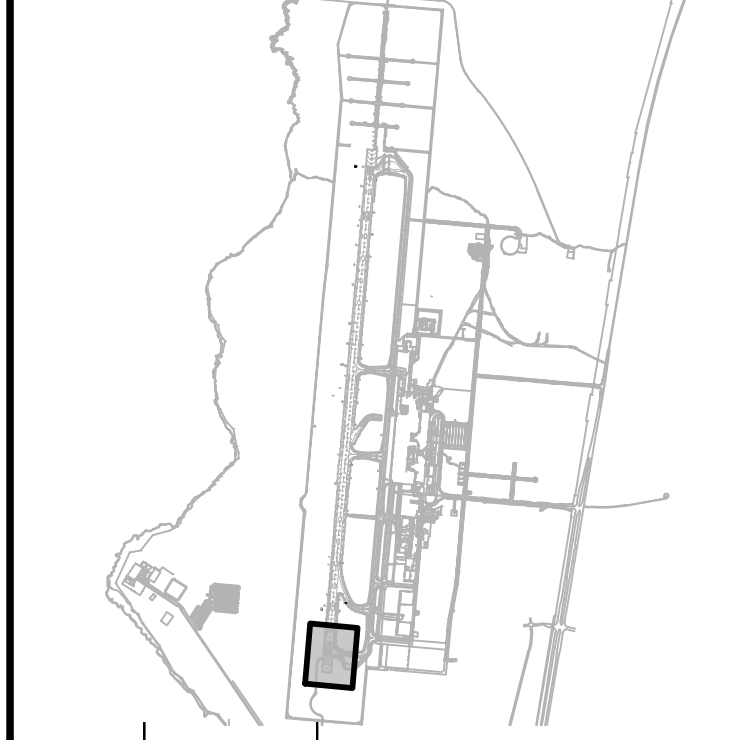


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AC	AT	TR	SH

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**CONSTRUCTION DOCUMENTS**  
SEPTEMBER 2023  
DATE

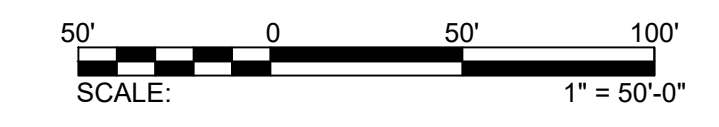
**PROJECT TITLE :**  
**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**  
**AH2021-16**

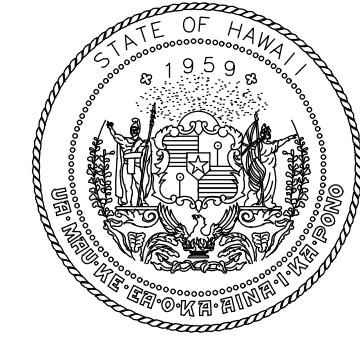
**SHEET TITLE:**

**PAVEMENT MARKING PLAN 1**

DATE :	DWG. NO.
09/2023	C-601
SHEET :	
93 OF 190 SHEETS	



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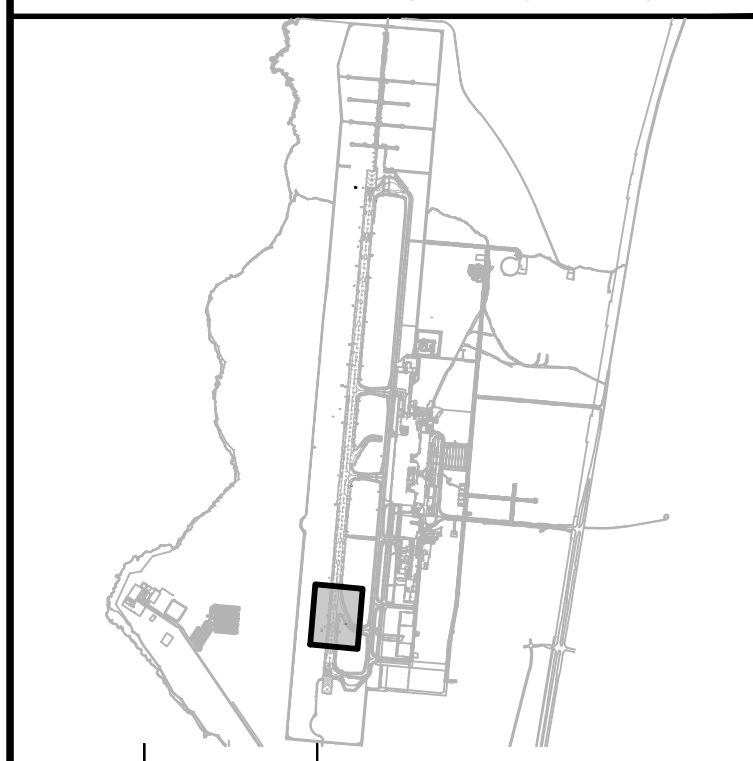


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**CONSTRUCTION DOCUMENTS**  
SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

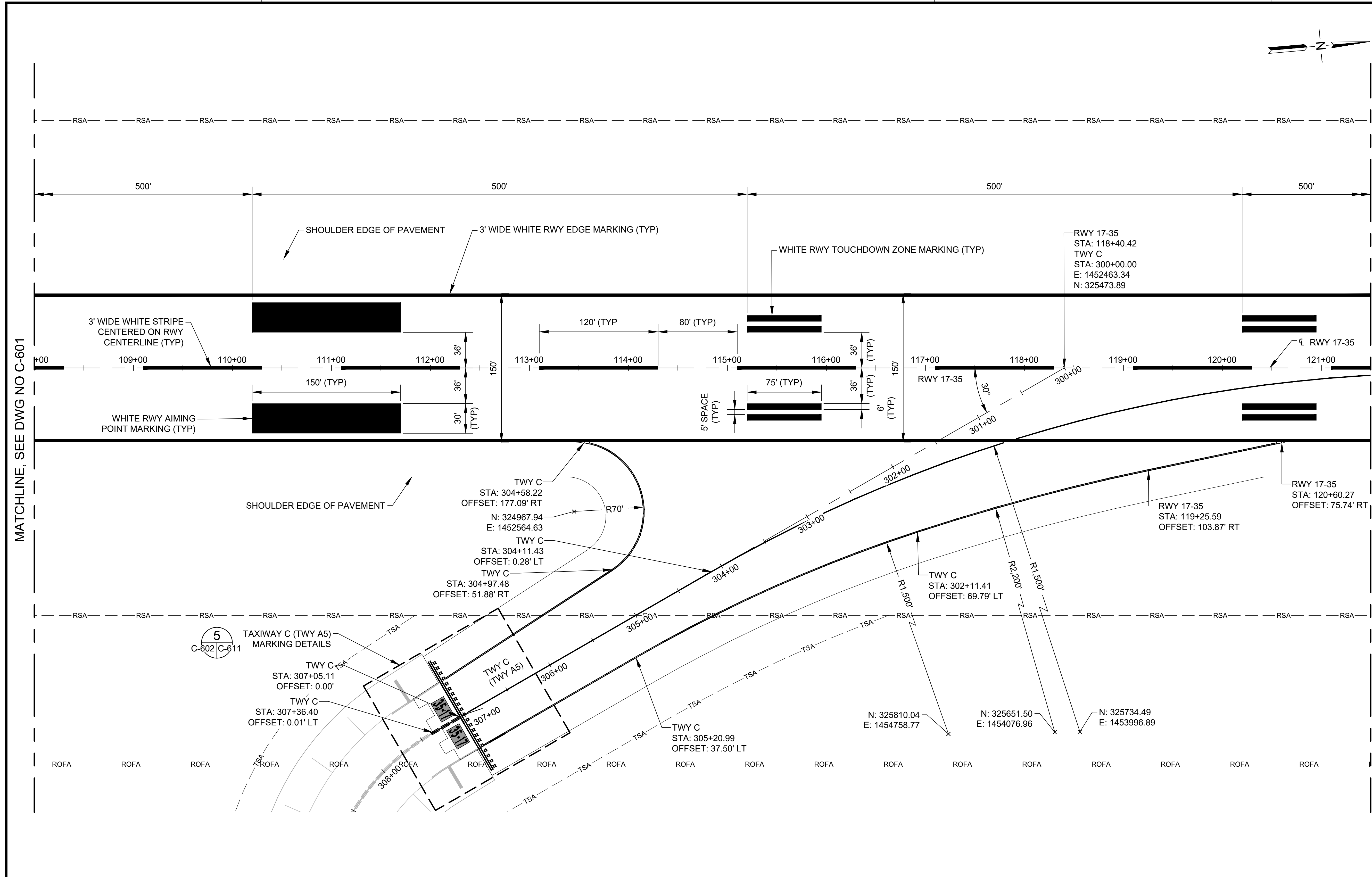
**PROJECT NO.:**

**AH2021-16**

**SHEET TITLE:**

**PAVEMENT MARKING PLAN 2**

DATE :	09/2023	DWG. NO.	<b>C-602</b>
SHEET :	94 OF 190 SHEETS		

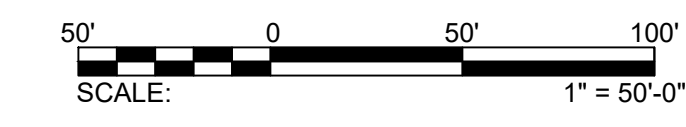


MATCHLINE, SEE DWG NO C-601

MATCHLINE, SEE DWG NO C-603

**NOTES:**

- SEE TABLE ON DWG C-611 FOR MARKINGS REQUIRING BLACK OUTLINE OR GLASS BEADS.
- PRIOR TO REOPENING ANY RUNWAY OR TAXIWAY PAVEMENT TO AIRCRAFT TRAFFIC, THE CONTRACTOR SHALL APPLY TEMPORARY MARKINGS PER SPEC 02620.
- ALL SURFACE PAINTED HOLDING POSITION SIGNS SHALL BE PERFORMED THERMOPLASTIC.



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DATE

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

**SHEET TITLE:**

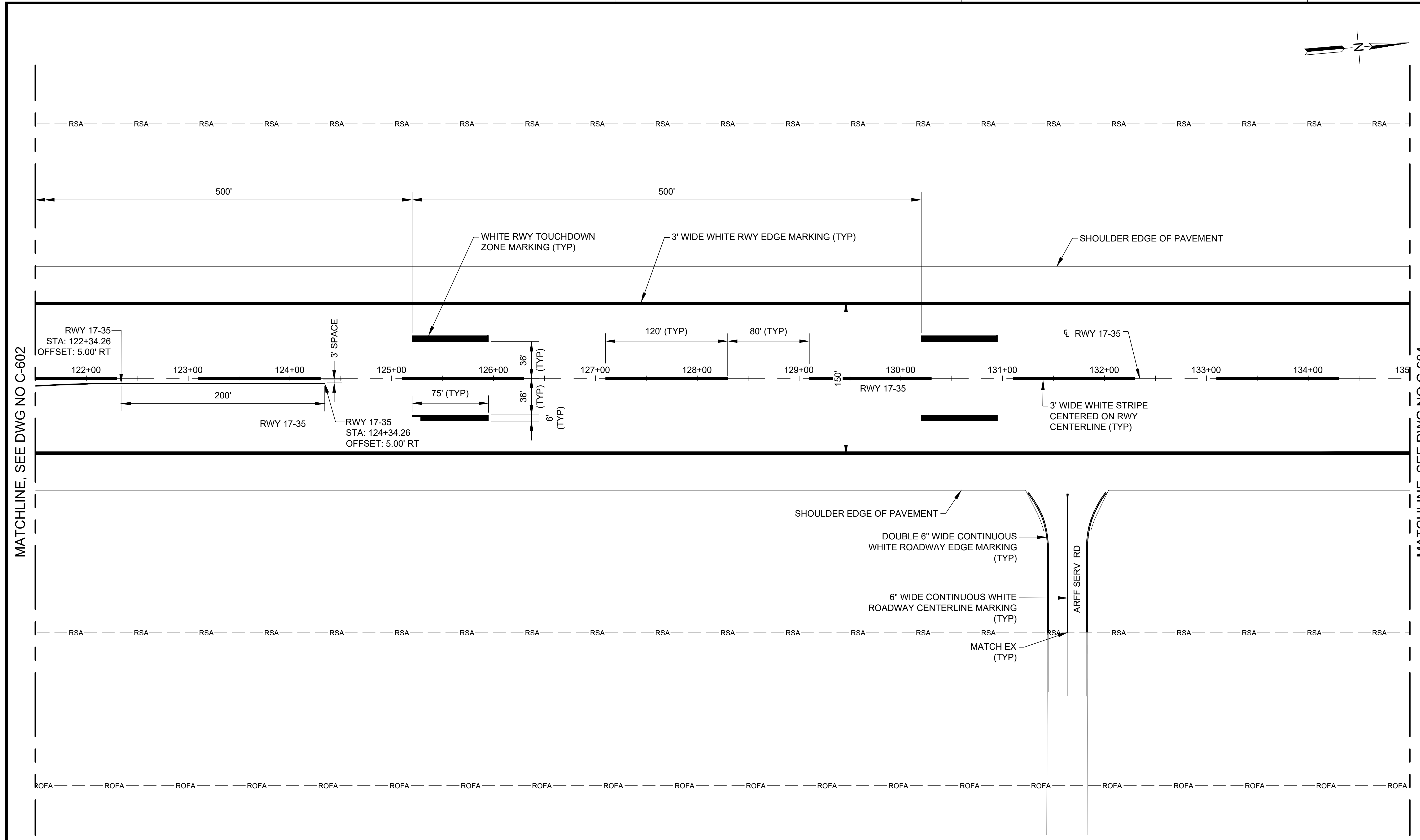
**PAVEMENT MARKING PLAN 3**

DATE : **09/2023**

SHEET : **95 OF 190 SHEETS**

DWG. NO.

**C-603**



MATCHLINE, SEE DWG NO C-602

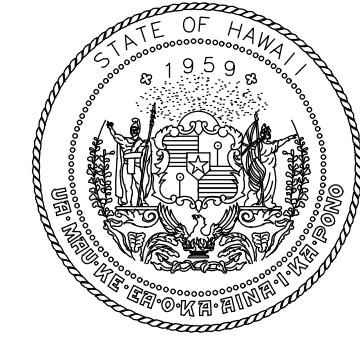
MATCHLINE, SEE DWG NO C-604

**NOTES:**

- SEE TABLE ON DWG C-611 FOR MARKINGS REQUIRING BLACK OUTLINE OR GLASS BEADS.
- PRIOR TO REOPENING ANY RUNWAY OR TAXIWAY PAVEMENT TO AIRCRAFT TRAFFIC, THE CONTRACTOR SHALL APPLY TEMPORARY MARKINGS PER SPEC 02620.
- ALL SURFACE PAINTED HOLDING POSITION SIGNS SHALL BE PREFORMED THERMOPLASTIC.



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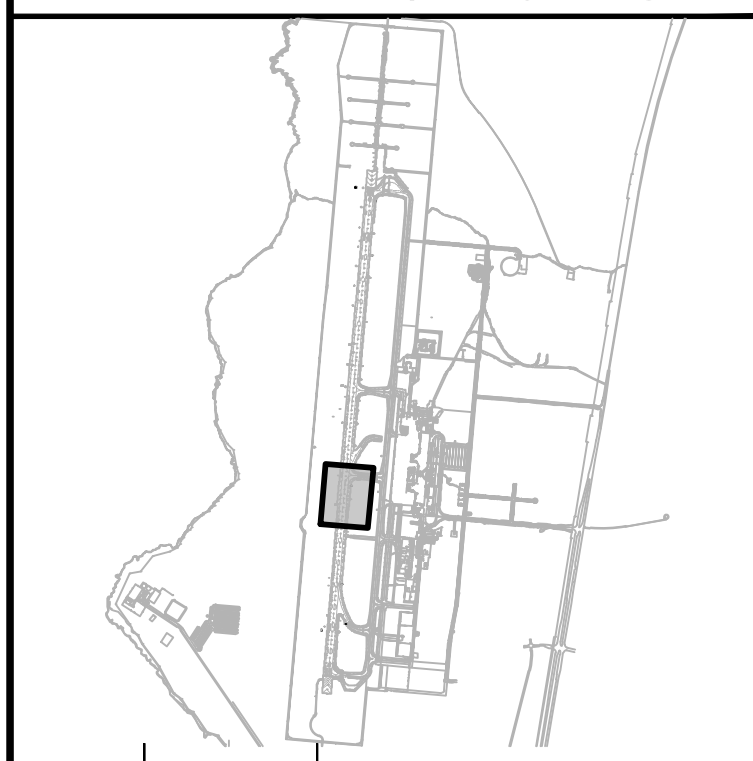


MARKIN A. CLEVON  
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4/30/24  
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SEPTEMBER 2023  
DATE

### PROJECT TITLE :

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

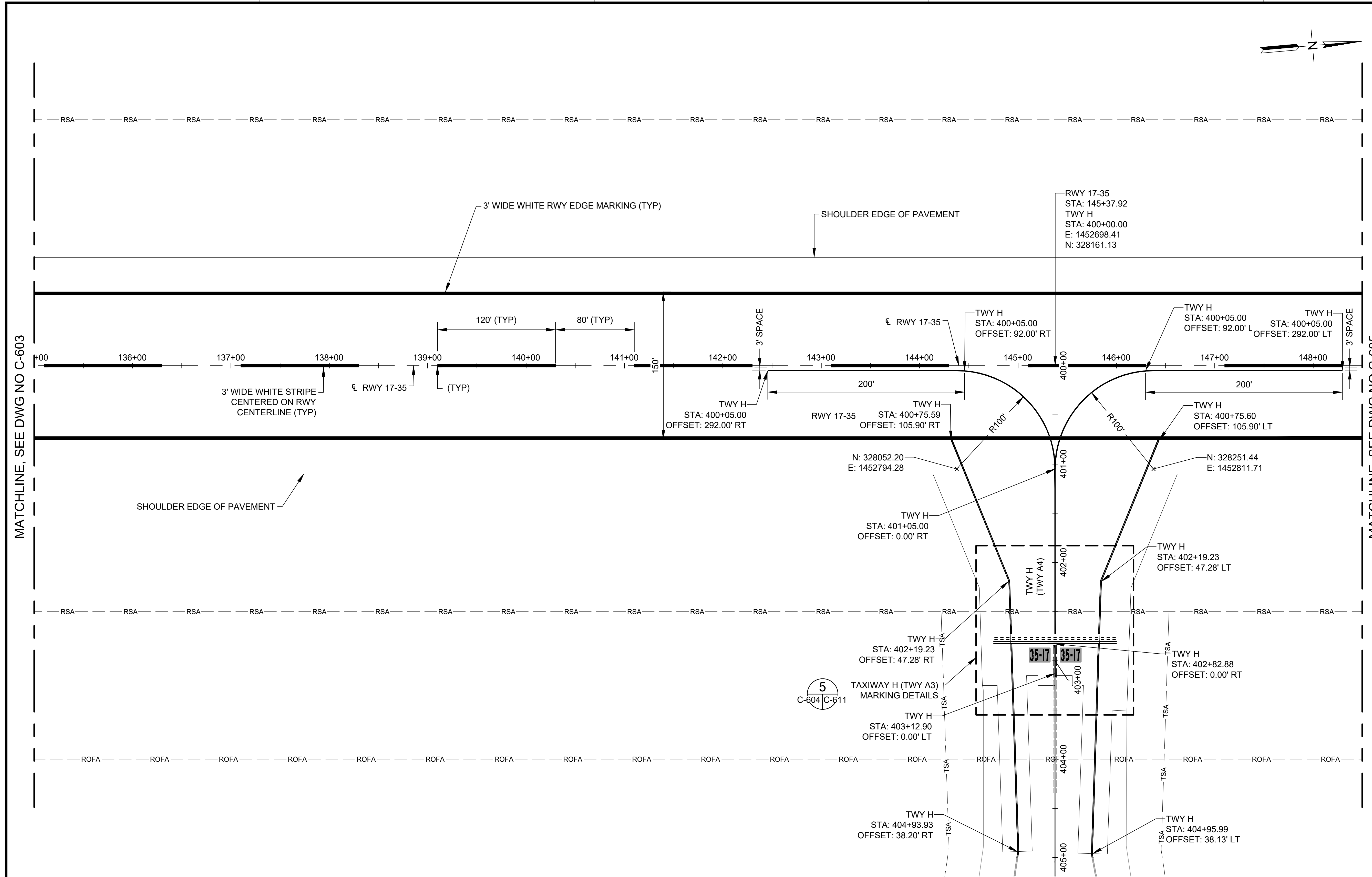
### PROJECT NO.:

**AH2021-16**

### SHEET TITLE:

**PAVEMENT MARKING PLAN 4**

DATE :	DWG. NO.
09/2023	C-604
SHEET :	
96 OF 190 SHEETS	

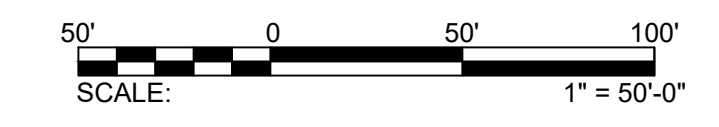
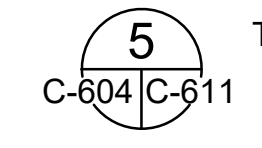


MATCHLINE, SEE DWG NO C-603

MATCHLINE, SEE DWG NO C-605

### NOTES:

- SEE TABLE ON DWG C-611 FOR MARKINGS REQUIRING BLACK OUTLINE OR GLASS BEADS.
- PRIOR TO REOPENING ANY RUNWAY OR TAXIWAY PAVEMENT TO AIRCRAFT TRAFFIC, THE CONTRACTOR SHALL APPLY TEMPORARY MARKINGS PER SPEC 02620.
- ALL SURFACE PAINTED HOLDING POSITION SIGNS SHALL BE PREFORMED THERMOPLASTIC.



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**CONSTRUCTION DOCUMENTS**  
SEPTEMBER 2023  
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**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

**SHEET TITLE:**

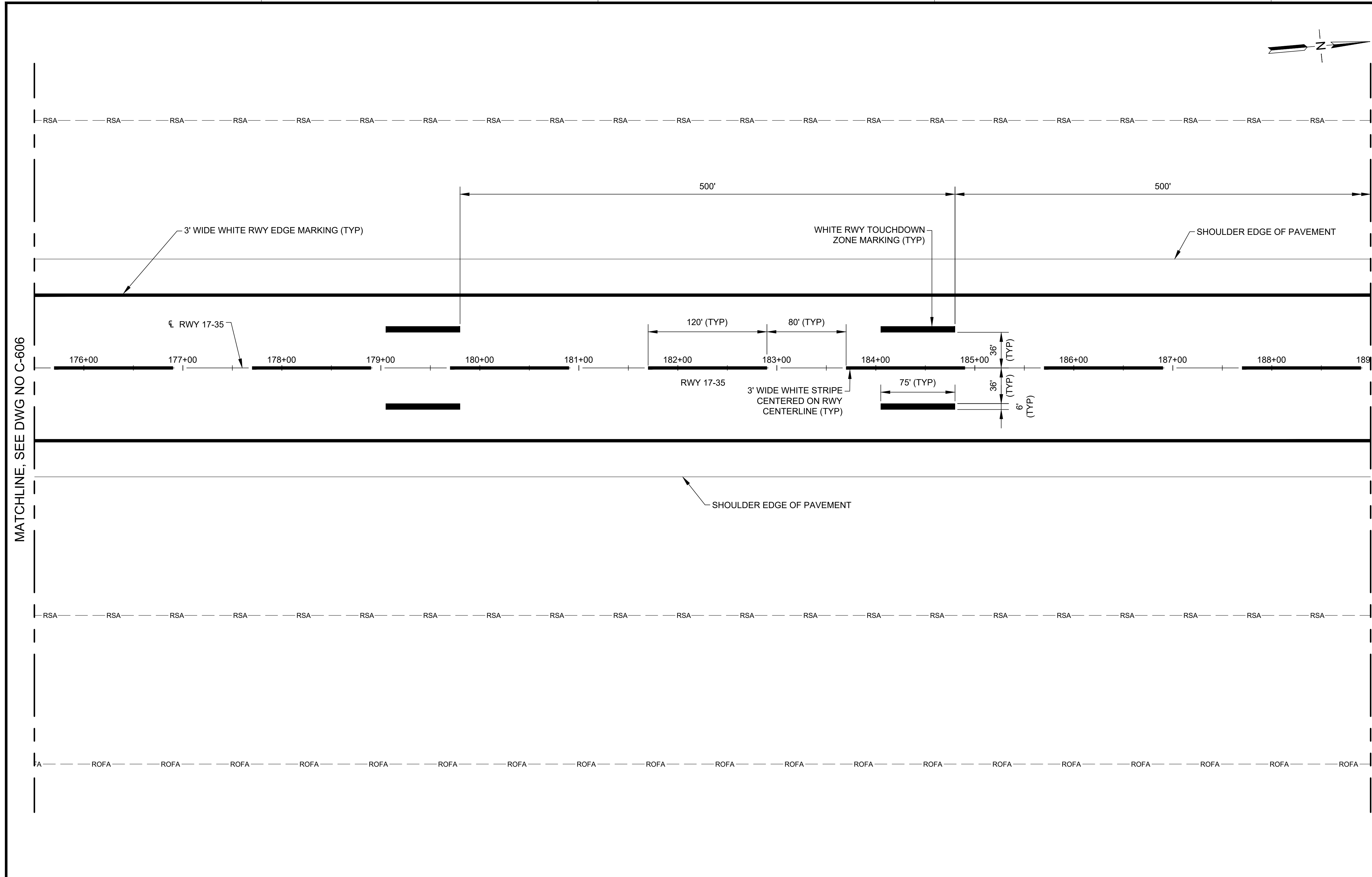
**PAVEMENT MARKING PLAN 7**

DATE : **09/2023**

SHEET : **99 OF 190 SHEETS**

DWG. NO.

**C-607**



MATCHLINE, SEE DWG NO C-606

MATCHLINE, SEE DWG NO C-608

**NOTES:**

- SEE TABLE ON DWG C-611 FOR MARKINGS REQUIRING BLACK OUTLINE OR GLASS BEADS.
- PRIOR TO REOPENING ANY RUNWAY OR TAXIWAY PAVEMENT TO AIRCRAFT TRAFFIC, THE CONTRACTOR SHALL APPLY TEMPORARY MARKINGS PER SPEC 02620.
- ALL SURFACE PAINTED HOLDING POSITION SIGNS SHALL BE PREFORMED THERMOPLASTIC.



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DEPARTMENT OF TRANSPORTATION  
AIRPORTS

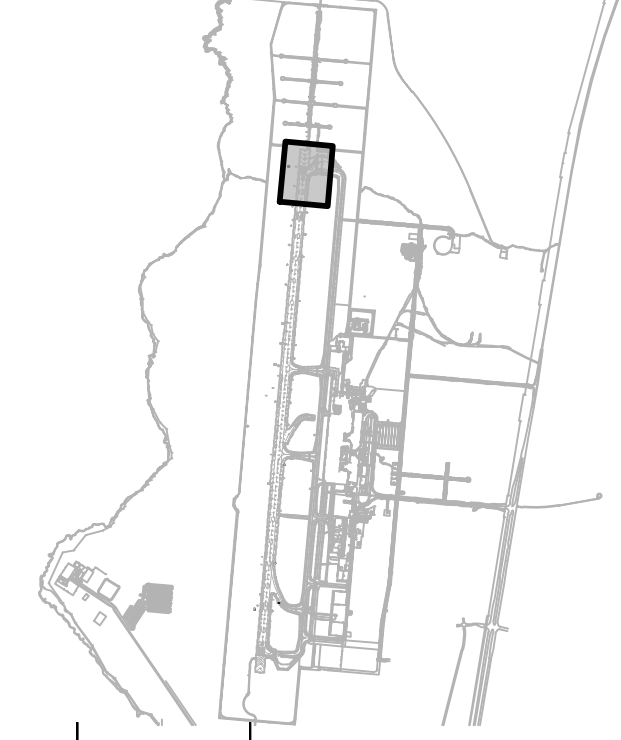


MARK A. CLEVON  
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No. 12828-C  
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4/30/24  
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**CONSTRUCTION DOCUMENTS**  
SEPTEMBER 2023  
DATE

PROJECT TITLE :

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

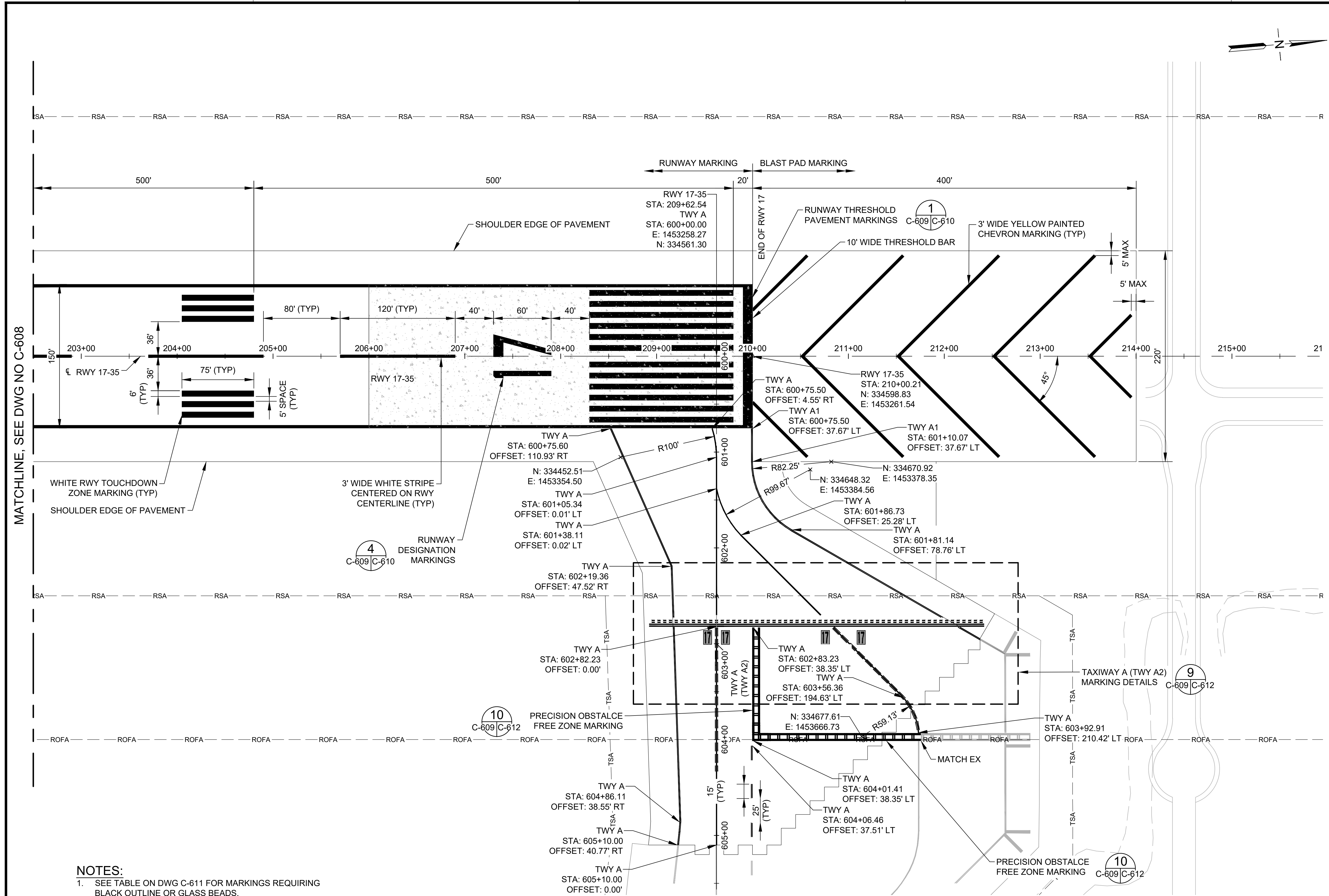
PROJECT NO.:

AH2021-16

SHEET TITLE:

**PAVEMENT MARKING PLAN 9**

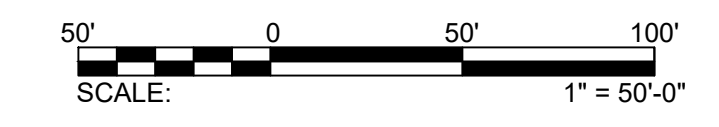
DATE :	09/2023	DWG. NO.	C-609
SHEET :			
101 OF 190 SHEETS			



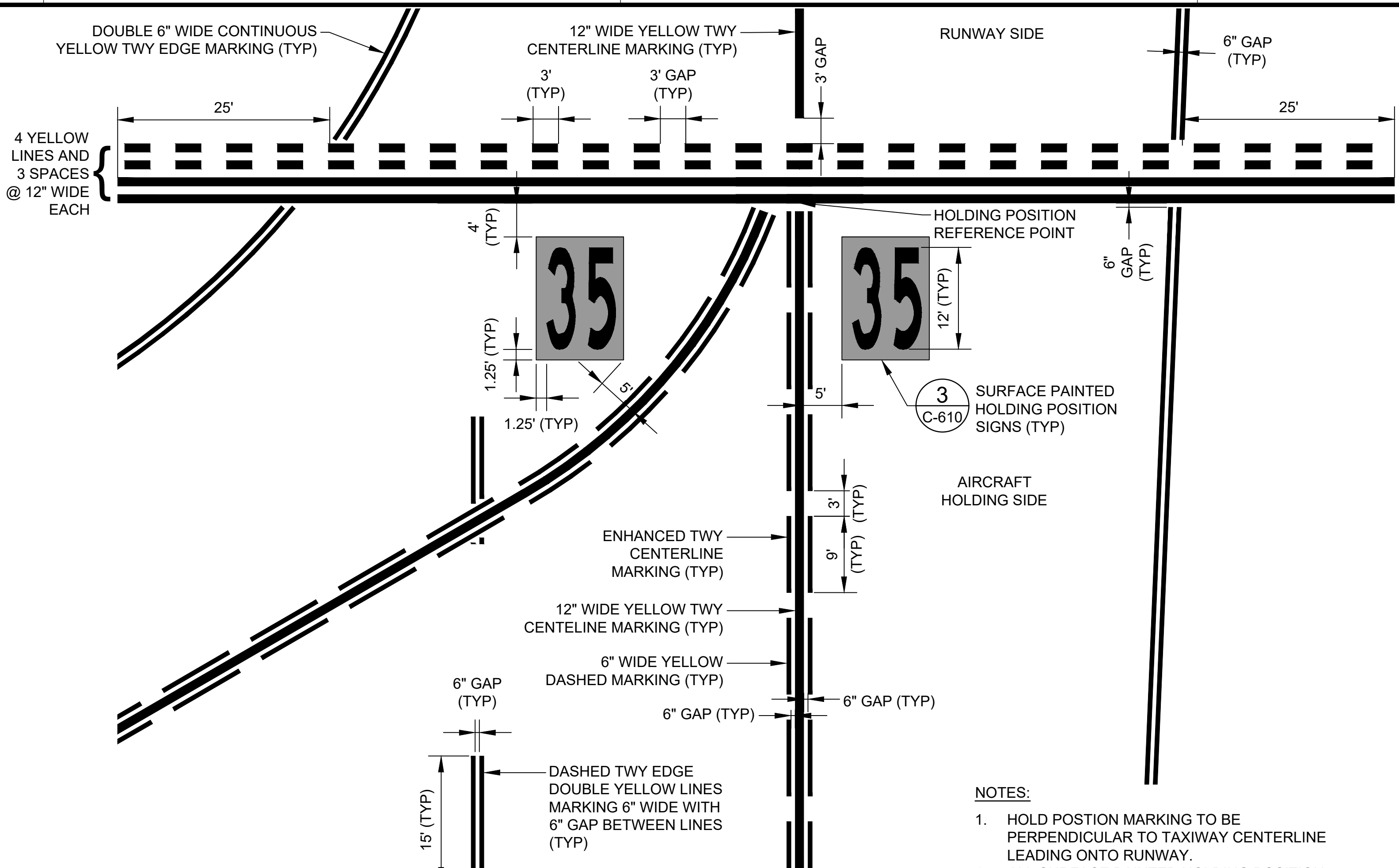
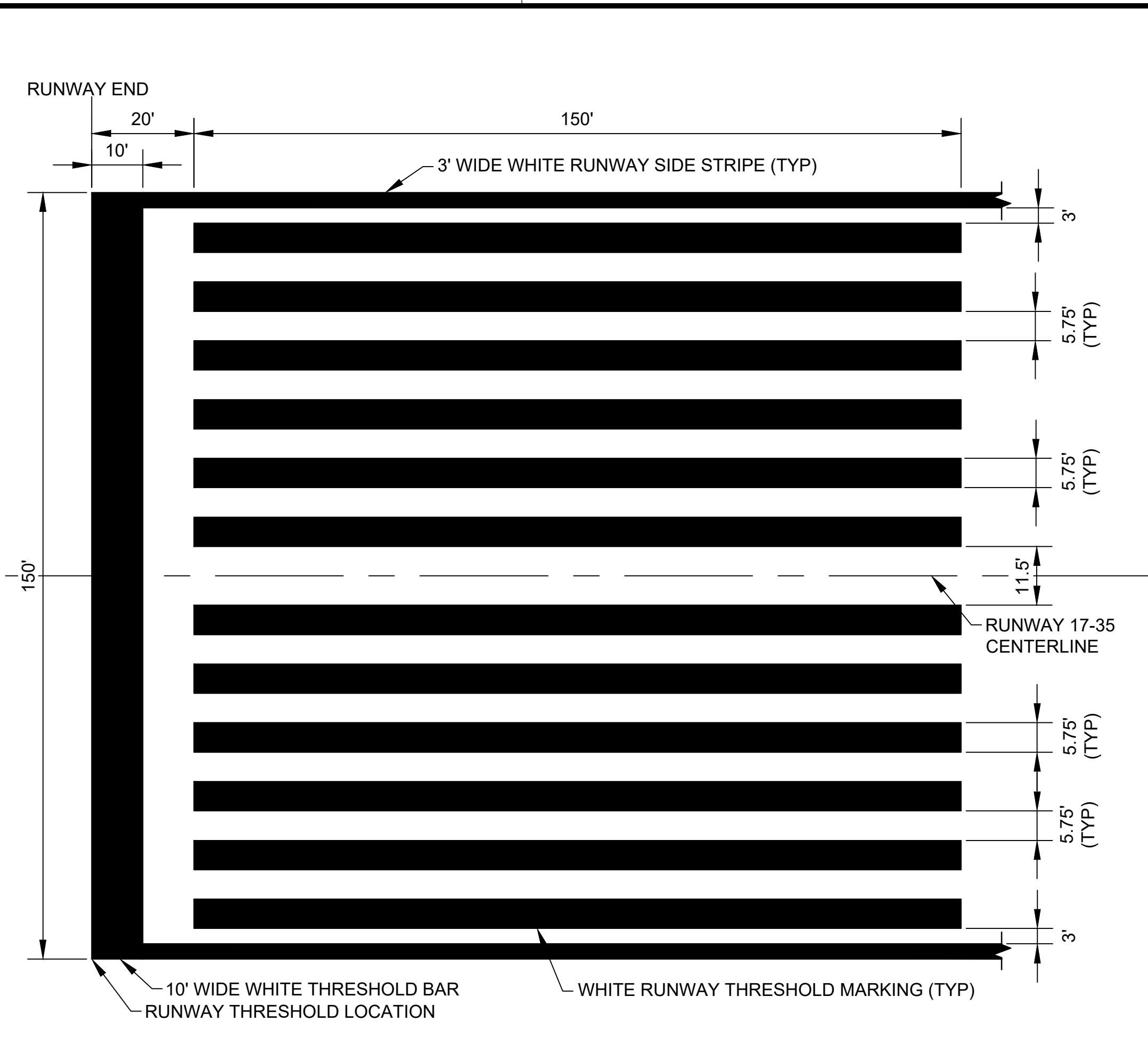
MATCHLINE, SEE DWG NO C-608

MATCH EX

- NOTES:**
- SEE TABLE ON DWG C-611 FOR MARKINGS REQUIRING BLACK OUTLINE OR GLASS BEADS.
  - PRIOR TO REOPENING ANY RUNWAY OR TAXIWAY PAVEMENT TO AIRCRAFT TRAFFIC, THE CONTRACTOR SHALL APPLY TEMPORARY MARKINGS PER SPEC 02620.
  - ALL SURFACE PAINTED HOLDING POSITION SIGNS SHALL BE PERFORMED THERMOPLASTIC.

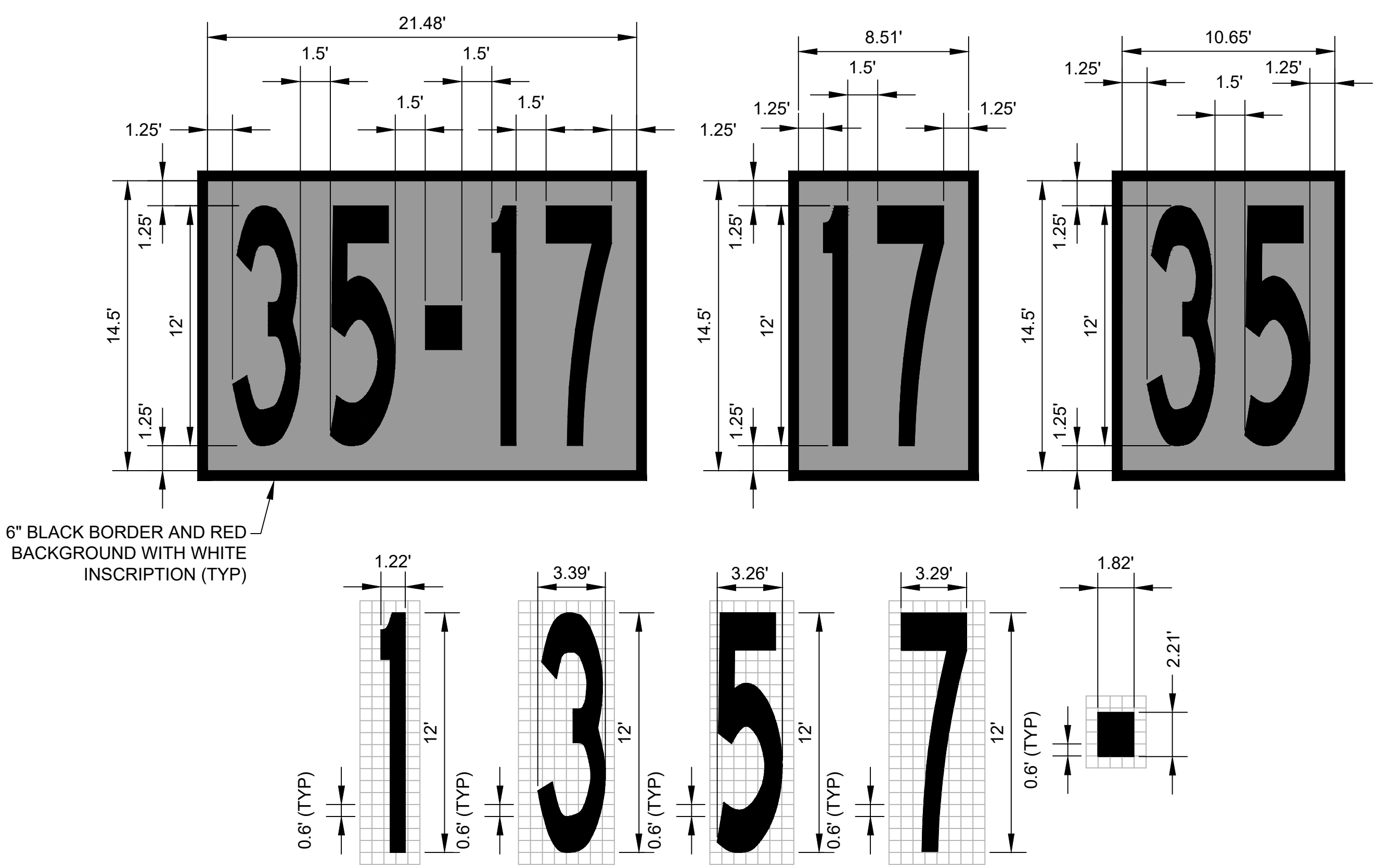


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**1 RUNWAY THRESHOLD PAVEMENT MARKINGS**

G-114, G-124, C-601, C-609 C-610 SCALE: NTS

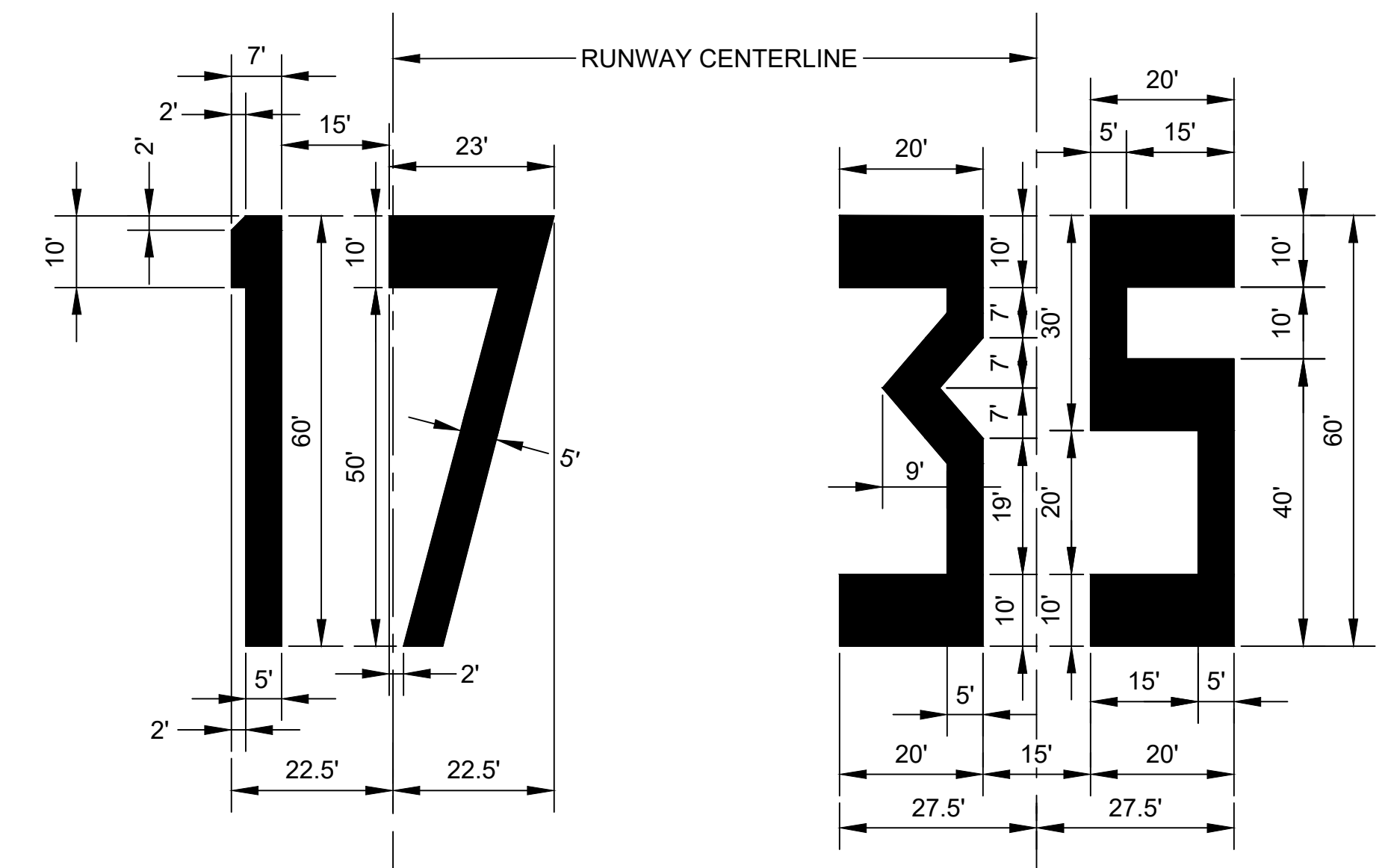


**3 SURFACE PAINTED HOLDING POSITION SIGNS**

C-611, C-612 C-610 SCALE: NTS

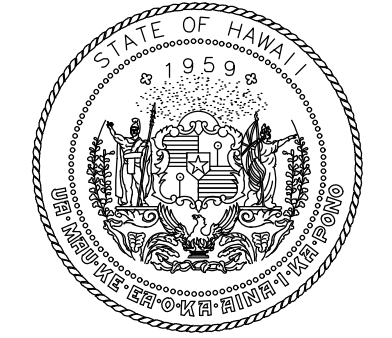
**2 TAXIWAY A (TWY A6) MARKING DETAILS**

C-601 C-610 SCALE: NTS



**4 RUNWAY DESIGNATION MARKINGS**

G-106, G-110, G-114, C-601, C-609 C-610 SCALE: NTS



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**KEY PLAN / NOTES:**

- NOTES:
- HOLD POSTION MARKING TO BE PERPENDICULAR TO TAXIWAY CENTERLINE LEADING ONTO RUNWAY.
  - ALL SURFACE PAINTED HOLDING POSITION SIGNS SHALL BE PERFORMED THERMOPLASTIC.

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**CONSTRUCTION DOCUMENTS**  
SEPTEMBER 2023  
DATE

PROJECT TITLE :

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

PROJECT NO.:

**AH2021-16**

SHEET TITLE:

**PAVEMENT MARKING DETAILS 1**

DATE : **09/2023**

SHEET :

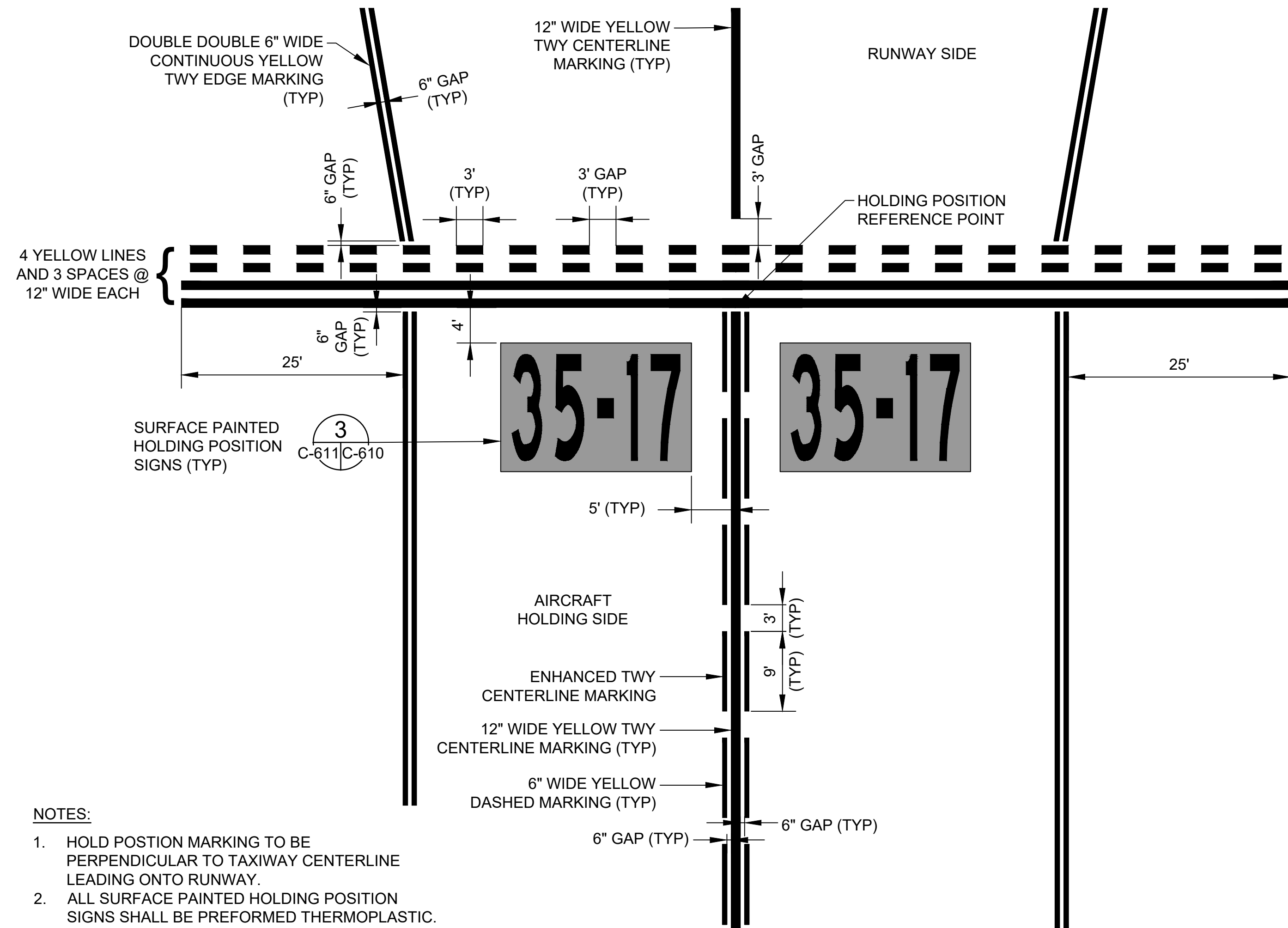
102 OF 190 SHEETS

DWG. NO.

**C-610**

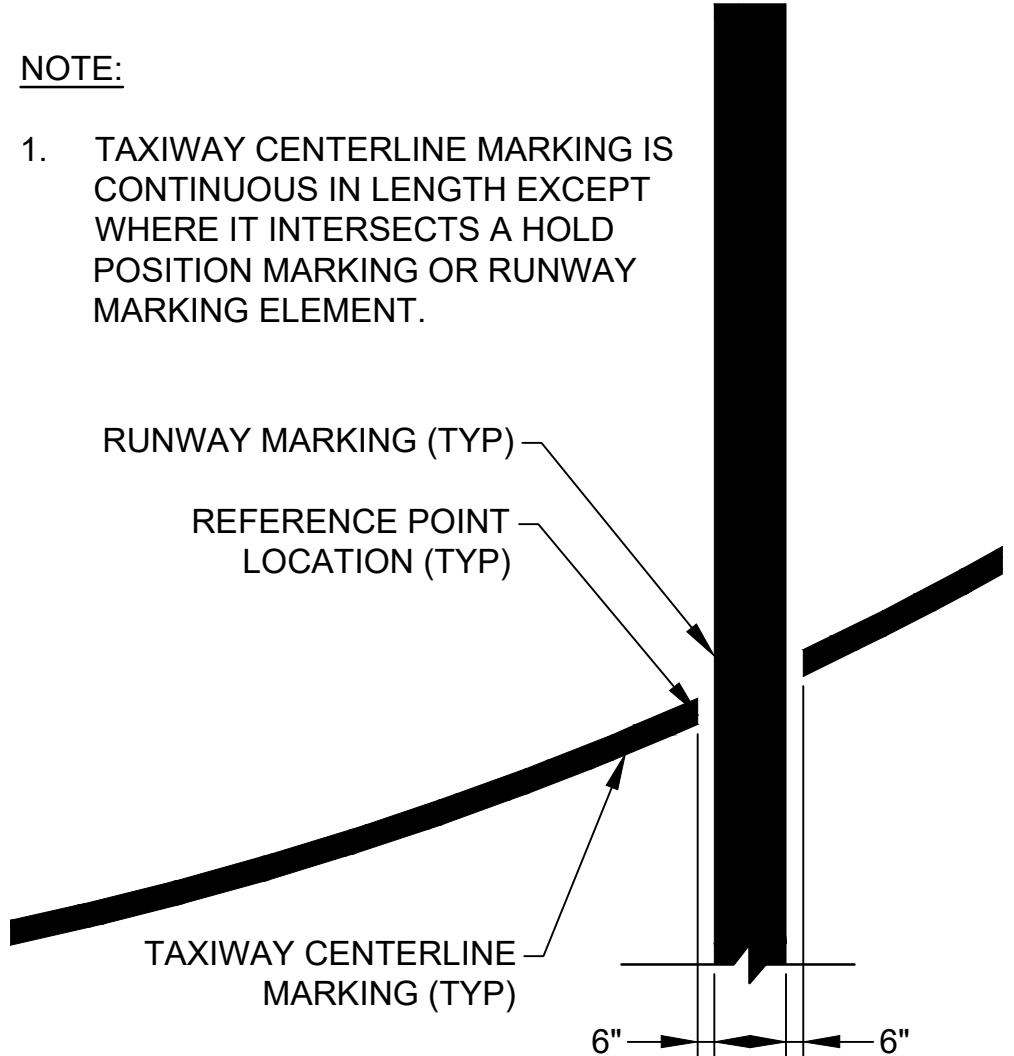
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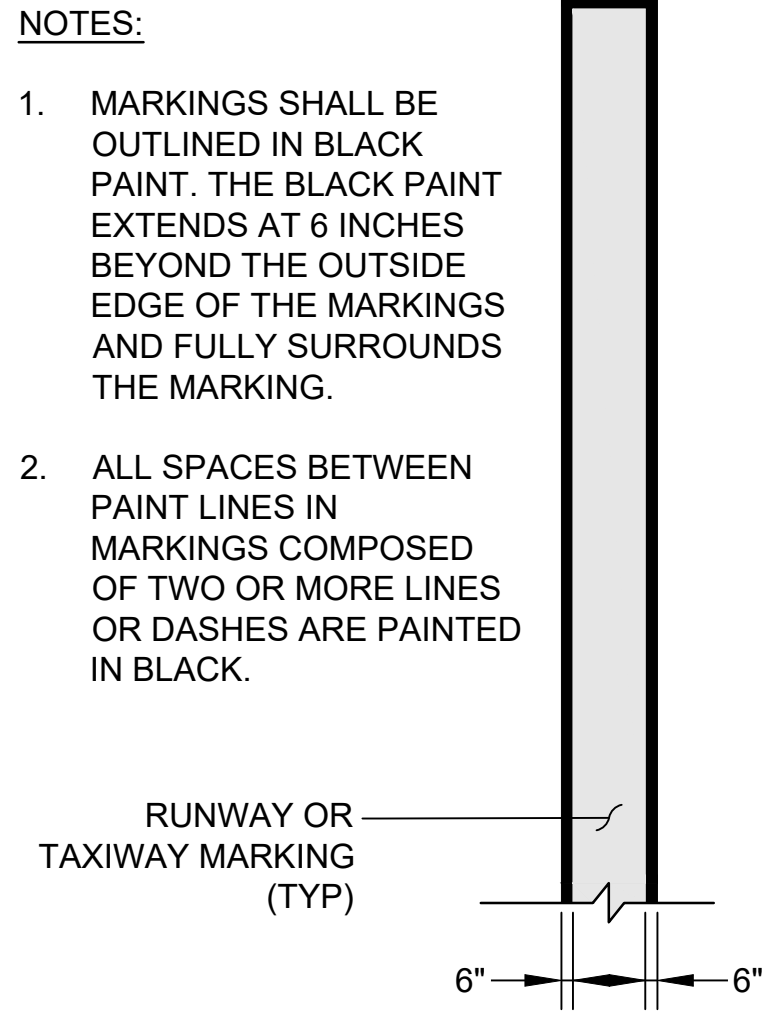


- NOTES:**
- HOLD POSITION MARKING TO BE PERPENDICULAR TO TAXIWAY CENTERLINE LEADING ONTO RUNWAY.
  - ALL SURFACE PAINTED HOLDING POSITION SIGNS SHALL BE PERFORMED THERMOPLASTIC.

**5 TAXIWAY C (TWY A5) H (TWY A4) AND G (TWY A3) MARKING DETAILS**  
C-602, C-604, C-606 C-611 SCALE: NTS



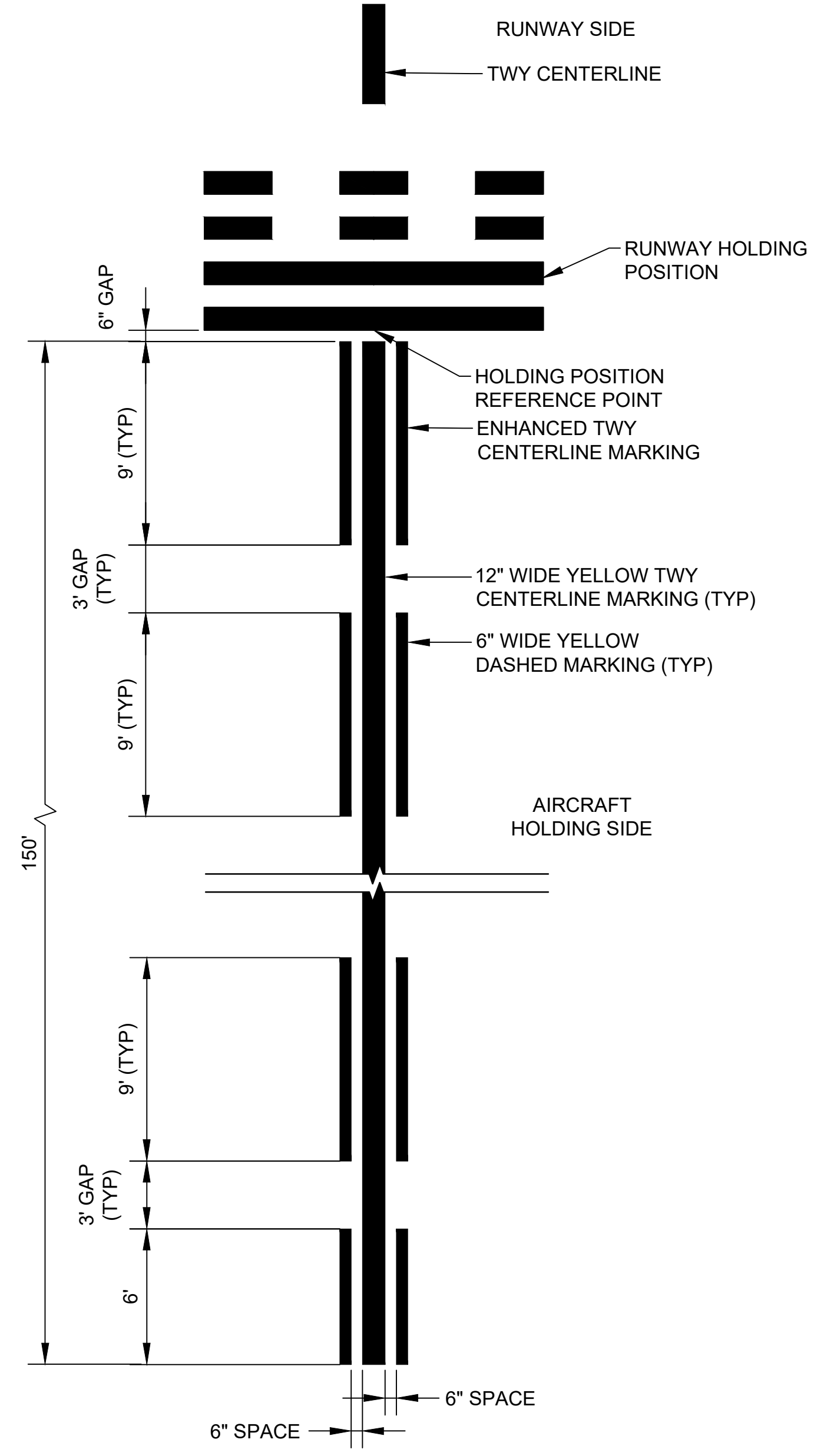
**6 MARKING INTERRUPTION**  
C-611 SCALE: NTS



**7 BLACK OUTLINE**  
C-611 SCALE: NTS

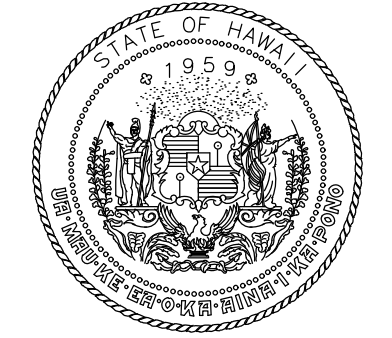
BLACK OUTLINE MARKINGS AND GLASS BEADS TABLE		
MARKING	BLACK OUTLINE	GLASS BEADS
RUNWAY CENTERLINE	YES	YES
RUNWAY EDGE MARKING	NO	YES
RUNWAY AIMING POINT	YES	YES
RUNWAY TOUCH DOWN ZONE	YES	YES
RUNWAY THRESHOLD BAR	YES	YES
RUNWAY THRESHOLD STRIPE	YES	YES
RUNWAY NUMERAL	YES	YES
BLAST PAD CHEVRONS	NO	YES
TAXIWAY CENTERLINE	YES	YES
ENHANCED TAXIWAY CENTERLINE MARKING	YES	YES
TAXIWAY EDGE MARKING	NO	YES
SURFACE PAINTED HOLDING POSITION SIGNS	YES	YES
RUNWAY HOLDING POSITION AND POZ MARKINGS	YES	YES

**NOTE:**  
1. LOCATIONS REQUIRING GLASS BEADS AND BLACK OUTLINE MARKING ARE SHOWN IN THE TABLE ABOVE.



**NOTE:**  
1. DASHED LINES DIMENSIONS ARE TAKEN ALONG THE CENTER OF THE TAXIWAY CENTERLINE.

**8 TYPICAL ENHANCED TAXIWAY MARKING**  
C-611 SCALE: NTS



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Martin A. Cleven  
4/30/24  
Licensed Expiration Date

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**KEY PLAN / NOTES:**

NO.	DATE	REVISIONS

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SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**

AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

**SHEET TITLE:**

**PAVEMENT MARKING DETAILS 2**

DATE : **09/2023**

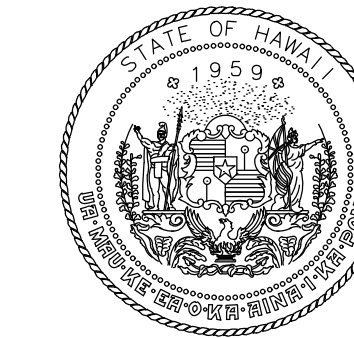
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103 OF 190 SHEETS

DWG. NO.

**C-611**

C:\USERS\JIBEN\ORION ENGINEERS & ASSOCIATES\TESHDOT KOA 17-35 REHAB - DOCUMENTS\2021-16-OEA-KOA-PAVE-MRKG-DETL.DWG



STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS



*M. Clevon*  
4/30/24  
Licensed Expiration Date

This work was prepared by me or under my supervision.

DSGN.	DRWN.	CHKD.	APPD.
AC	AT	TR	SH

**KEY PLAN / NOTES:**

NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENTS**  
SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

**SHEET TITLE:**

**PAVEMENT MARKING  
DETAILS 3**

DATE :

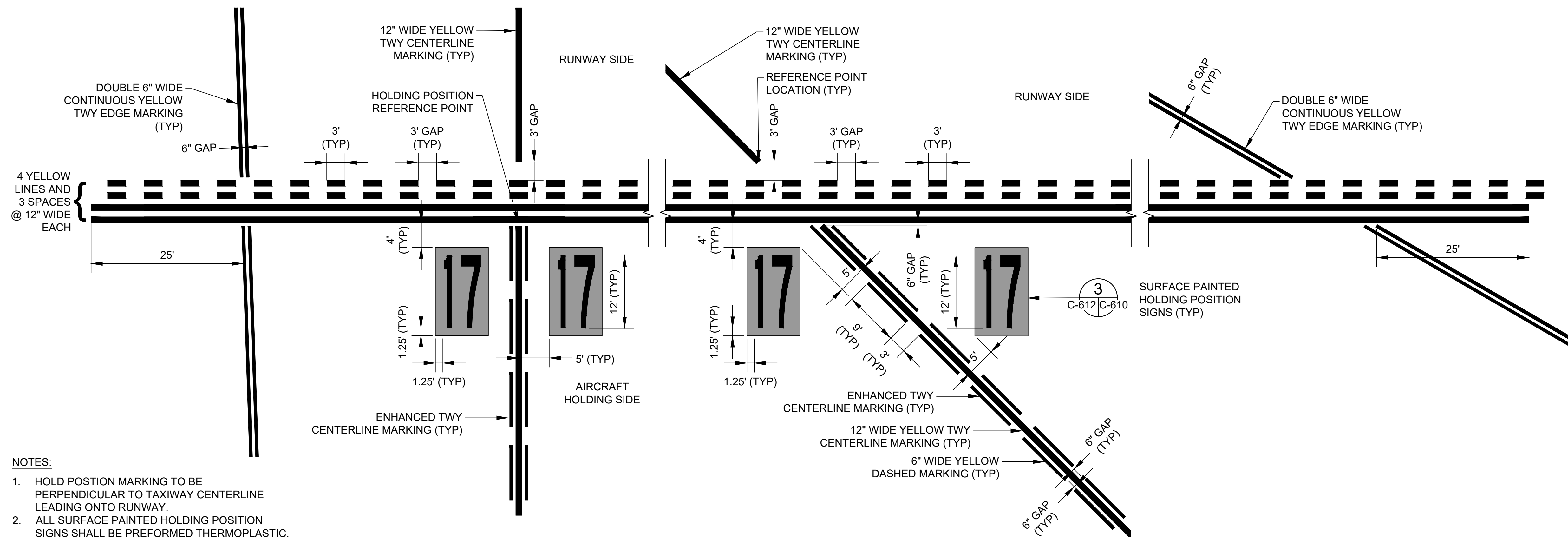
**09/2023**

SHEET :

104 OF 190 SHEETS

DWG. NO.

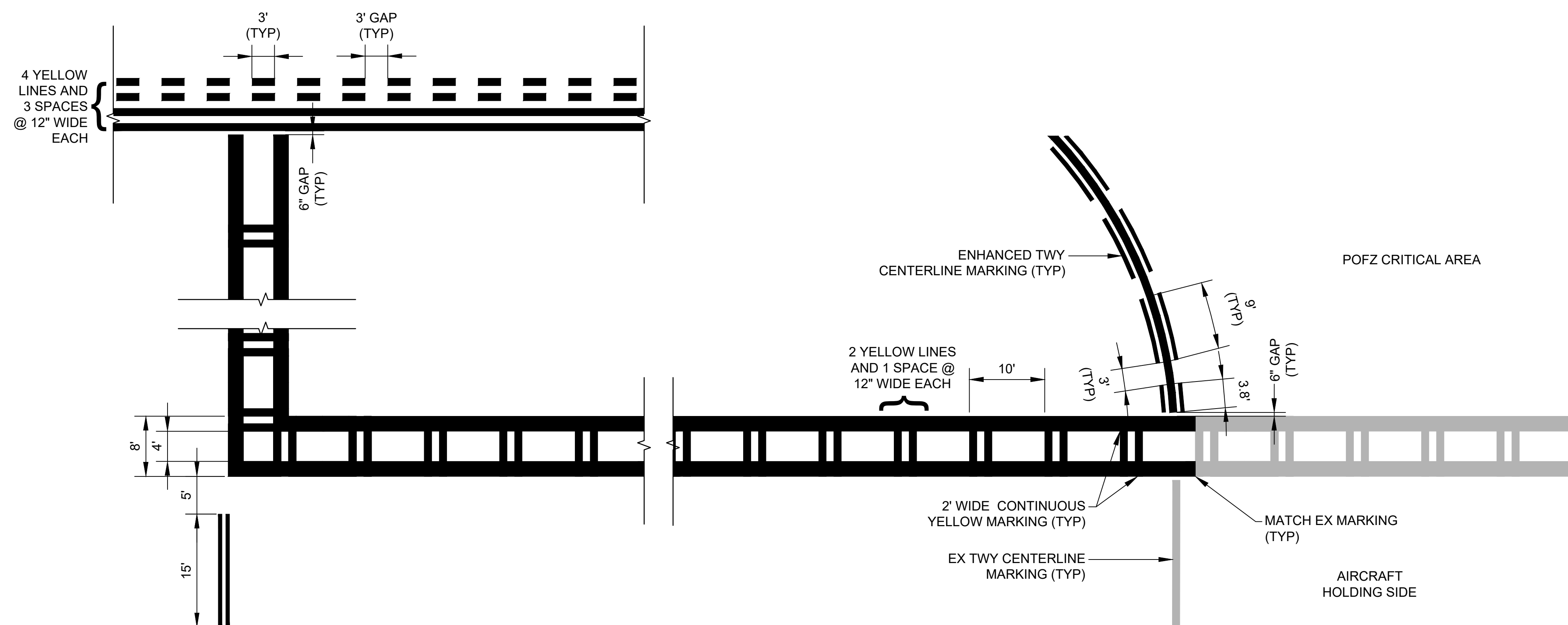
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**NOTES:**

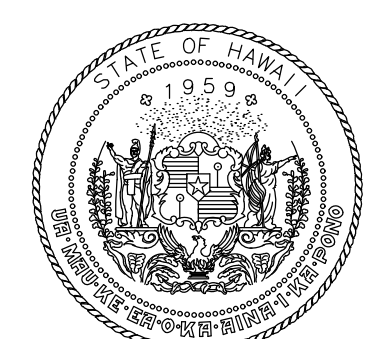
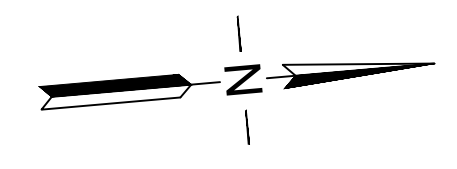
- HOLD POSITION MARKING TO BE PERPENDICULAR TO TAXIWAY CENTERLINE LEADING ONTO RUNWAY.
- ALL SURFACE PAINTED HOLDING POSITION SIGNS SHALL BE PREFORMED THERMOPLASTIC.

**9 TAXIWAY A (TWY A2) MARKING DETAILS**  
C-609 C-612 SCALE: NTS



**10 PRECISION OBSTACLE FREE ZONE MARKING**  
C-609 C-612 SCALE: NTS





STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS



*Mark A. Clevon*  
4/30/24  
Licensed Expiration Date

This work was prepared by me or under my supervision.

DSGN.	DRWN.	CHKD.	APPD.
AC	AT	TR	SH

**KEY PLAN / NOTES:**



NO.	DATE	REVISIONS

**CONSTRUCTION DOCUMENTS**  
JUNE 10, 2022  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

**SHEET TITLE:**

**GROOVING PLAN AND DETAILS**

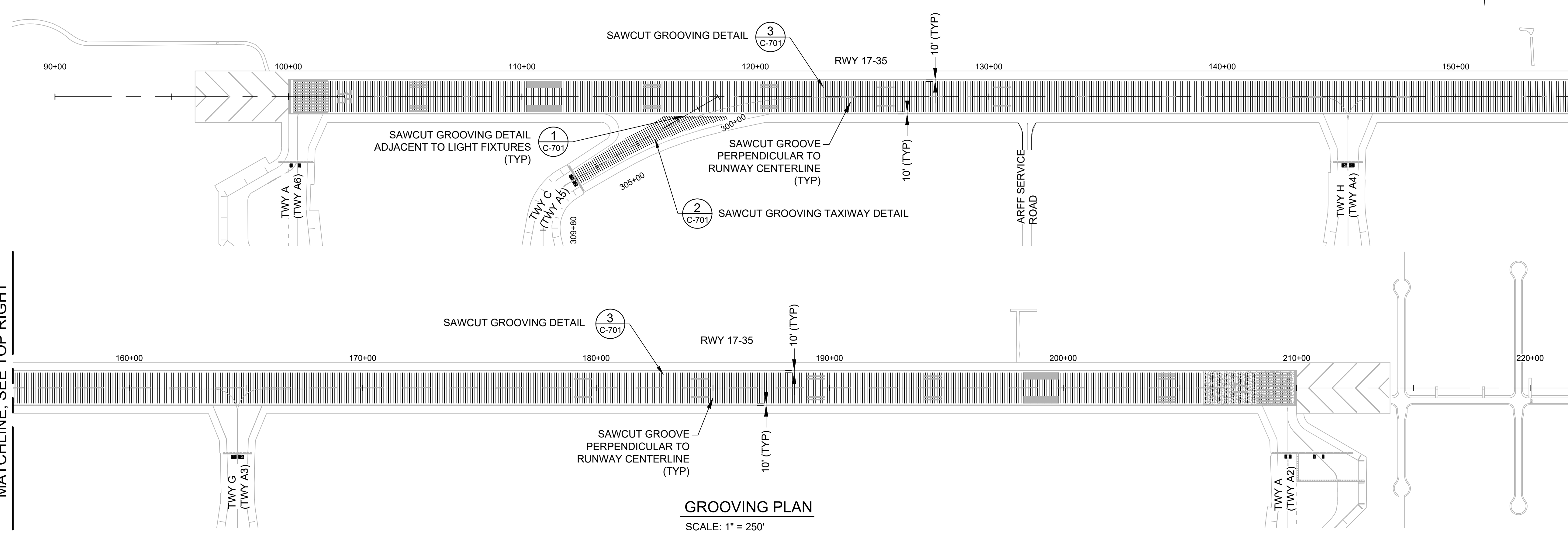
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09/2023  
C-701

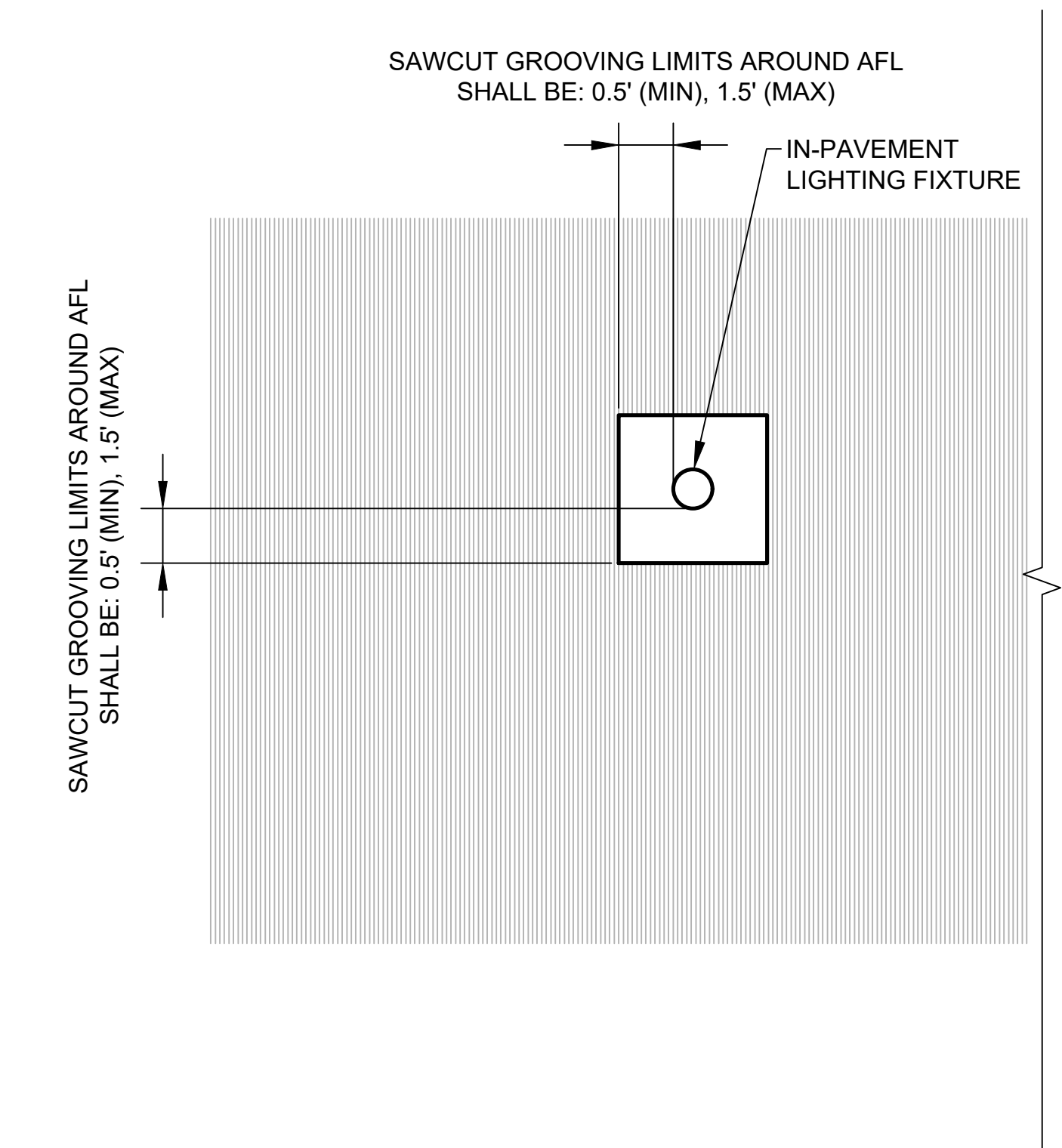
105 OF 190 SHEETS

MATCHLINE, SEE TOP RIGHT

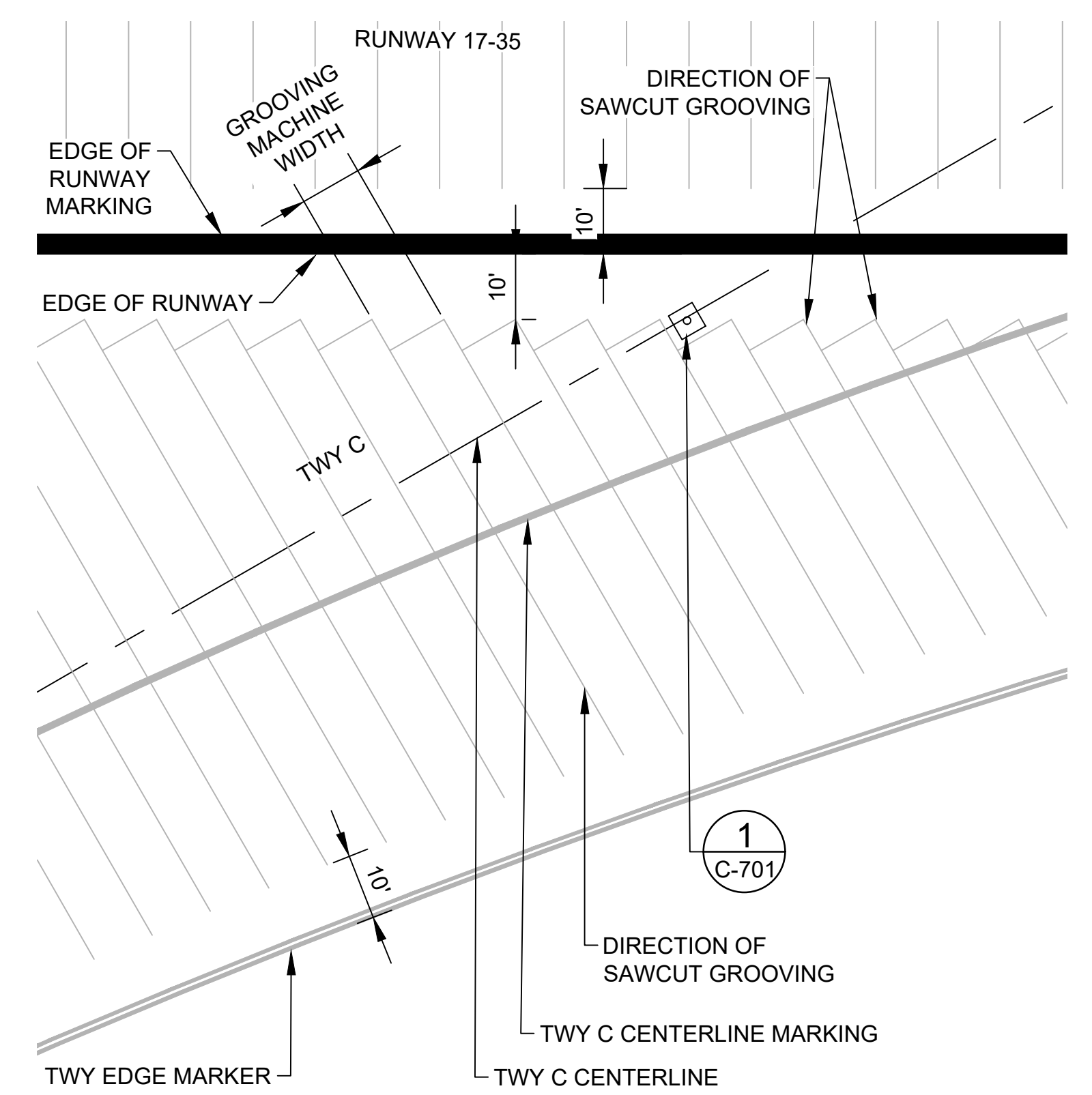
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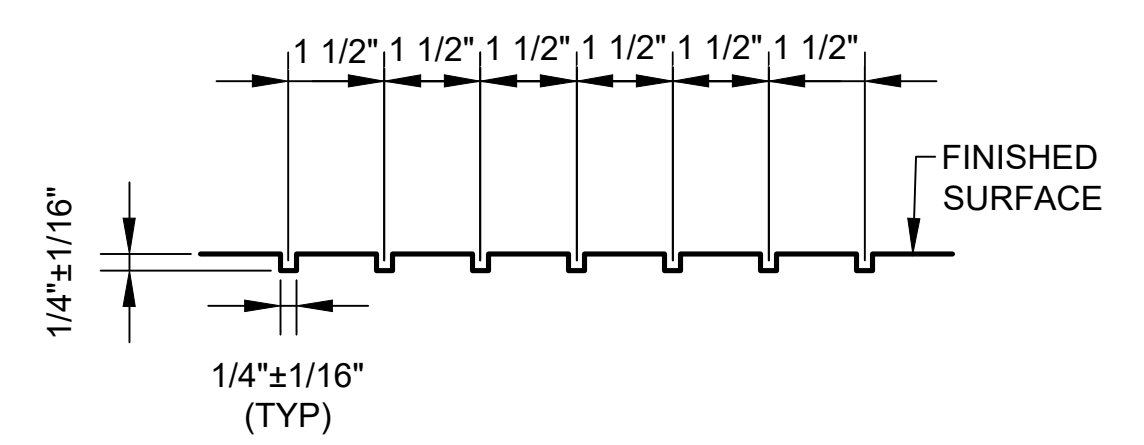
**GROOVING PLAN**  
SCALE: 1" = 250'



**1** SAWCUT GROOVING DETAIL ADJACENT TO LIGHT FIXTURES  
C-701 SCALE: NTS



**2** SAWCUT GROOVING TAXIWAY DETAIL  
C-701 SCALE: NTS



**3** SAWCUT GROOVING DETAIL  
C-701 SCALE: NTS



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**AIRFIELD LIGHTING ELECTRICAL NOTES:**

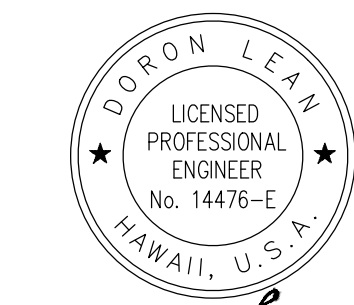
1. LIGHTING CIRCUITS, HOME RUN CABLES AND POWER SERVICE CABLES SHALL BE MARKED AND IDENTIFIED AT ALL POINTS ACCESSIBLE TO THESE CIRCUITS. LOCATIONS SHALL INCLUDE, BUT NOT BE LIMITED TO, MANHOLES, HANDHOLES, ENTRANCES INTO DUCTS, WIREWAYS, PULL AND JUNCTION BOXES, BREAKOUT BOXES, AND EACH LIGHTING FIXTURE CAN. THE MARKING SHALL BE PERMANENT AND OF MATERIAL WHICH WILL NOT DETERIORATE DURING THE LIFE OF THE CABLE. THE MARKERS SHALL BE PERMANENTLY ATTACHED TO THE CABLE AND SHOULD NOT DAMAGE OR BE ABLE TO BE TORN FROM THE CABLE.
2. TRENCHES SHALL NOT BE LEFT OPEN WHEN A TAXIWAY IS OPERATIONAL, AND CONDUCTOR ENDS SHALL NOT REMAIN EXPOSED TO THE WEATHER.
3. THE CONTRACTOR SHALL STAKE OUT THE ROUTE FOR NEW CONDUITS AND OBTAIN ENGINEER APPROVAL BEFORE STARTING THE TRENCHING AT EACH SITE.
4. EXISTING AIRFIELD LIGHTING SHALL BE KEPT IN OPERATION DURING THE CONSTRUCTION UNLESS OTHERWISE SPECIFIED OR PRIOR APPROVAL HAS BEEN OBTAINED FROM THE ENGINEER. AIRFIELD LIGHTING INCLUDES ALL RUNWAY AND TAXIWAY LIGHTING ON ACTIVE PORTIONS OF RUNWAYS AND TAXIWAYS. PROVIDE A DETAILED PLAN FOR TEMPORARY SPLICES OF PRIMARY CABLE TO MAINTAIN CIRCUIT CONTINUITY FOR ENGINEER APPROVAL PRIOR TO INTERRUPTING ANY CIRCUIT.
5. ANY UNPROTECTED CABLE (DIRECT-BURIED) ENCOUNTERED THAT IS VERIFIED AS NOT ABANDONED IN PLACE SHALL BE PLACED IN SPLIT DUCT OF APPROPRIATE SIZE AND CONCRETE-ENCASED FOR ITS UNPROTECTED LENGTH THROUGH THE AREA OF CONSTRUCTION. CONTRACTOR SHALL TAKE ALL REASONABLE MEASURES TO AVOID HAVING TO CUT AND SPLICE DIRECT-BURIED CABLE. BE SURE TO NOTE SPLIT DUCT PORTIONS ON AS-BUILTS.
6. DAILY AS-BUILTS OF ALL ELECTRICAL INSTALLATIONS SHALL BE KEPT BY THE CONTRACTOR ON SITE. SUBMIT MONTHLY AS PART OF PAY REQUESTS.
7. ALL WORK REQUIRED TO ENTER A MANHOLE OR HANDHOLE TO PERFORM WORK INCLUDING PUMPING WATER, SAFETY EQUIPMENT AND CONFINED SPACE PERMIT SHALL BE INCIDENTAL TO THE PROJECT WITH NO SEPARATE PAYMENT. FOR EXISTING MANHOLES AND HANDHOLES PUMP OUT WATER AND CLEAN OUT ANY DEBRIS, AND REPAIR ANY CRACKS OR "CHIPS" IN THE WALL. REPLACE ANY DAMAGED RACKS, AND VERIFY ALL GROUND CONNECTIONS IN MANHOLE/HANDHOLE. OBTAIN ENGINEERS APPROVAL PRIOR TO CORRECTING THESE DEFICIENCIES. ALL MANHOLES AND HANDHOLES ENTERED UNDER THIS WORK SHALL BE PHOTOGRAPHED PRIOR TO RECONFIGURATION AND AFTER RECONFIGURATION. ALL NEW MANHOLES AND HANDHOLES SHALL BE PHOTOGRAPHED AFTER ALL CIRCUITS HAVE BEEN PULLED. FOR MANHOLES, EACH WALL, FLOOR AND CEILING SHALL BE INDIVIDUALLY PROVIDED WITH IDENTIFICATION OF THE NORTH, SOUTH, EAST AND WEST WALLS. AFTER RECONFIGURATION OF EXISTING AND INSTALLATION OF NEW MANHOLES AND HANDHOLES PROVIDED BUTTERFLY TYPE DETAILS OF EACH INDICATING CONDUIT ENTRANCES AND CABLES INSTALLED IN EACH RESPECTIVE CONDUIT. ALL CABLES INSIDE MANHOLE OR HANDHOLE SHALL BE DE-ENERGIZED AND TAGGED OUT WHEN WORK IS BEING PERFORMED. WORK IN MANHOLE SHALL ONLY BE ALLOWED DURING DAYTIME HOURS.
8. NEW PAVEMENT LIMITS ARE INDICATED FOR INFORMATIONAL PURPOSES ONLY. REFER TO CIVIL DRAWINGS FOR ACTUAL LOCATIONS AND DESIGN LAYOUT.
9. WHEN INSTALLING AIRFIELD GROUND LIGHTING CIRCUITS IN A DUCT, CONTRACTOR SHALL INSTALL UP TO 10 CONDUCTORS PLUS A GROUND WIRE PER EACH 4" CONDUIT, UNLESS OTHERWISE NOTED. CONTRACTOR SHALL FILL EACH CONDUIT TO THIS LIMIT (STARTING AT THE BOTTOM OF THE MANHOLE) BEFORE INSTALLING CABLE IN A NEW CONDUIT. AIRPORT SHALL NOT PAY FOR CABLE INSTALLED IN INCORRECT CONDUIT.
10. ALL CURRENT CARRYING COMPONENTS SHALL BE COPPER.
11. A GREEN INSULATED EQUIPMENT GROUNDING CONDUCTOR TO BE INCLUDED IN EACH POWER CONDUIT.
12. ALL NON-CURRENT CARRYING METALLIC PARTS OF DEVICES AND SYSTEMS, ENCLOSURES, OUTLET BOXES, SUPPORTS, ETC., SHALL BE BONDED THROUGH THE INTERIOR GROUNDING SYSTEM. FACE PLATES AND COVERS SHALL BE EFFECTIVELY GROUNDED PER MANUFACTURER'S UL LISTING.
13. CONDUIT SYSTEMS UNLESS OTHERWISE NOTED SHALL BE:
  - A. ALL UNDERGROUND AFL CONDUITS TO BE SCHEDULE 40 PVC.
  - B. ALL UNDERGROUND FAA CONDUITS TO BE SCHEDULE 80 PVC.
  - C. ALL EMPTY CONDUITS SHALL BE PROVIDED WITH PULL STRING.
  - D. PVC CONDUIT SHALL NOT BE USED FOR ANY EXPOSED APPLICATION.
14. KONA MAINTENANCE SHALL HAVE RIGHT OF FIRST REFUSAL FOR ALL REMOVED EQUIPMENT. EQUIPMENT NOT REQUIRED BY AIRPORT SHALL BECOME THE RESPONSIBLY OF THE CONTRACTOR. DISPOSED AT CONTRACTOR'S OWN EXPENSE.
15. GROUNDING:
  - A. CONTRACTOR SHALL FURNISH AND INSTALL GROUND-WIRE IN EACH NEW 2" CONDUIT AND IN EXISTING CONDUIT. TERMINATE GROUND WIRE IN EACH NEW BASE CAN.
  - B. CONTRACTOR SHALL FURNISH AND INSTALL A GROUND ROD AT EACH NEW BASE CAN AND LIGHT FIXTURE
  - C. TERMINATE A BARE COPPER WIRE BETWEEN GROUND ROD AND NEAREST COPPER WIRE
  - D. IN ALL NEW DUCTBANKS CONTRACTOR SHALL INSTALL ONE NEW 1/C #6 GREEN 600V RATED GROUND WIRE IN THE LOWEST CONDUIT. ONLY ONE GROUND WIRE IS REQUIRED IN A DUCTBANK REGARDLESS OF THE NUMBER OF CONDUITS.
16. CONTRACTOR SHALL PROVIDE NEW PULL STRING FOR ALL CONDUITS.

17. INSPECTION TO BE PERFORMED PRIOR TO DEMOLITION AND REMOVAL:
  - A. PERFORM A VISUAL INSPECTION WITH ENGINEER TO CONFIRM THAT FIXTURES TO BE REUSED ARE NOT DAMAGED AND WORKING. ANY DEFICIENCIES SHALL BE NOTED IN WRITING WITHIN 7 DAYS OF INSPECTION PERIOD. CONTRACTOR SHALL STORE FIXTURES INDOORS AND PROTECT THEM FROM DAMAGE. FIXTURES DAMAGED DURING THE STORAGE AND REINSTALLATION PROCESS SHALL BE REPLACED AT NO ADDITIONAL COST TO THE AIRPORT.
  - B. CONTRACTOR SHALL OPEN EXISTING HANDHOLES/BASE CANS AND MANHOLES WHERE CABLE/CONDUIT WILL BE DEMOLISHED TO ASCERTAIN THE CIRCUIT ROUTING AND CONFIRM THE CIRCUIT ROUTING SHOWN ON THE DRAWINGS. THIS IS REQUIRED TO ENSURE THAT CIRCUIT CONTINUITY IS MAINTAINED. PROVIDE DRAWING TO ENGINEER DETAILING ANY DISCREPANCIES AS WELL AS LOCATIONS WHERE ALTERNATIVE CABLE ROUTING WILL BE REQUIRED TO ENSURE THAT ALL CIRCUIT MAINTAIN THE REQUIRED CONNECTIVITY. THE FIELD INVESTIGATION SHALL BE INCIDENTAL TO THE PROJECT WITH SEPARATE PAYMENT.
18. DEMOLITION AND REMOVAL NOTES:
  - A. EXISTING FIXTURES & SIGNS TO BE SALVAGED AND NOT REQUIRING REINSTALLATION FOR THE AIRPORT SHALL BE DELIVERED TO THE AIRPORT MAINTENANCE YARD WRAPPED AND PALLETED, (INCLUDING TAPING THE FIXTURE CONNECTORS TOGETHER) TO ENSURE THEY ARE PROTECTED. ALL OTHER MATERIAL NOT REUSED ON THE PROJECT SHALL BE REMOVED BY THE CONTRACTOR AT CONTRACTOR'S OWN EXPENSE AND RISK.
  - B. CABLE:
    - a. CONTRACTOR SHALL REMOVE EXISTING CABLE AS DETAILED ON THE CONSTRUCTION DRAWINGS. DUCTBANK TO BE ABANDONED SHALL HAVE ALL CABLE REMOVED FROM INSIDE EACH CONDUIT WITH EACH CONDUIT CAPPED.
    - b. REMOVE EXISTING CABLE AND PULL NEW CABLE WHENEVER NEW CABLE IS BEING INSTALLED IN SAME CONDUIT.
    - c. CONTRACTOR SHALL ASSUME THAT CABLE LENGTH TO BE REMOVED EQUALS THE QUANTITY OF NEW CABLE TO BE INSTALLED UNDER THE APPROPRIATE 16108 BID ITEMS.
    - d. EXISTING GROUND WIRE LOCATED IN EXISTING BASE CANS WHERE NEW CABLE IS BEING INSTALLED MAY BE REUSED.
  - C. CONDUIT AND DUCTBANK:
    - a. CONTRACTOR SHALL REMOVE EXISTING CONDUIT AND DUCTBANK AS DETAILED ON THE DRAWINGS. FOR CONDUIT OR DUCTBANK TO BE ABANDONED REMOVE ALL EXISTING CABLES AND PROVIDE CAPS ON CONDUITS. FOR CONDUIT OR DUCTBANK TO BE REMOVED PUMP OUT WATER FROM NEAREST HANDHOLES AND MANHOLES PRIOR TO REMOVAL.
    - b. ASSUME EXISTING DUCTBANK IS APPROXIMATELY 4' TO 8' BELOW GRADE.
    - c. CONDUITS TO BE ABANDONED SHALL BE CAPPED AT THE END WITH ALL CABLES REMOVED BACK TO NEAREST HANDHOLE OR BASE CAN. PROVIDE SURVEY OF CONDUIT AT 50' INTERVALS.
    - d. CONTRACTOR IS ADVISED THAT ALL EXISTING ELECTRICAL CONDUIT INFRASTRUCTURE CONTAINS ASBESTOS TRANSITE PIPE. ASBESTOS MATERIALS SHALL BE HANDLED AND DISPOSED OF IN ACCORDANCE WITH HAWAII DEPARTMENT OF HEALTH REGULATIONS. PAYMENT FOR THE HANDLING AND DISPOSAL OF ASBESTOS PIPING AND MATERIALS SHALL BE INCIDENTAL TO PRICE PAID FOR THE DEMOLITION OF EXISTING ELECTRICAL SYSTEMS.
  - D. BASE CANS:
    - a. REMOVE BASE CANS AND BACKFILL AS DETAILED ON THE DRAWINGS.
  - E. MANHOLES:
    - a. MANHOLES TO BE REMOVED SHALL BE BACKFILLED BY THE APPROPRIATE GRADE REQUIRED TO COMPLETE THE TAXIWAY PAVEMENT SECTION.
    - b. MANHOLES TO BE ABANDONED SHALL HAVE ALL CABLES REMOVED FROM INSIDE THE MANHOLE. INSTALL COVER PLATE ON MANHOLE COVER WITH THE DESCRIPTION: "ABANDONED - ELECTRICAL"
19. ALL ELECTRICAL MATERIALS AND COMPONENTS USED IN THIS PROJECT SHALL BE NEW UNLESS EXPLICITLY NOTED OTHERWISE.
20. RUNWAY GUARD LIGHT CIRCUITS, IF APPLICABLE, SHALL REMAIN ENERGIZED AT ALL TIMES WHEN CONTRACTOR IS PERFORMING WORK WITHIN THE MANHOLE OR HANDHOLE. LOCK OUT AND TAG OUT ALL OTHER CIRCUITS WITHIN MANHOLE, HANDHOLE LIGHT BASE CAN ETC. WHEN PERFORMING WORK WITHIN THE CONFINES OF THE STRUCTURE.
21. NEW AIRFIELD LIGHTING CABLE:
  - A. CONTRACTOR SHALL PROVIDE 3' SLACK FOR EACH CIRCUIT AT EACH TRANSFORMER SO TRANSFORMER CAN BE EASILY PLACED ON THE PAVEMENT WHEN SERVICING TRANSFORMER.
  - B. CONTRACTOR SHALL PROVIDE 12' SLACK FOR EACH CIRCUIT AT EACH HANDHOLE/MANHOLE.
  - C. INSULATION RESISTANCE: FOR NEW CIRCUITS CONTRACTOR SHALL ENSURE A RESISTANCE OF 500 MEGAOHMS IS PROVIDED AS MEASURED IN THE VAULT FOR THE ENTIRE CIRCUIT PATH.
  - D. CONTRACTOR SHALL PERFORM THESE INSULATION TESTS BEFORE FINAL ACCEPTANCE TESTING IS PERFORMED AND PROVIDE TEST RESULTS TO ENGINEER. RESISTANCE SHALL THEN BE MEASURED AGAIN AS PART OF FINAL ACCEPTANCE TESTING.
  - E. COST FOR CABLE INSTALLATION SHALL BE BID SEPARATELY WITH THE APPROPRIATE BID ITEM IN 16108. COST FOR THE TRAINING IS INCIDENTAL TO THE PROJECT.
22. GROUND ROD:
  - A. EACH NEW BASE (REGARDLESS OF WHERE INSTALLED) SHALL BE INSTALLED WITH A 10' BY 3/4" DIAMETER GROUND ROD CONNECTED TO THE BASE CAN VIA A #6 GREEN GROUND WIRE CONNECTED TO THE EXTERNAL GROUND LUG OF THE BASE CAN.
  - B. FURNISH ALL BASE CANS WITH EXTERNAL AND INTERNAL GROUND LUG.

23. TAXIWAY LIGHTS:
  - A. TAXIWAY EDGE LIGHTS. CONTRACTOR SHALL FURNISH AND INSTALL NEW L-861T(L) LIGHTS WITH NEW TRANSFORMERS. BOLTS, WASHERS, SPLICES, BASE PLATE, FRANGIBLE COUPLING, POLE AND ALL ASSOCIATED APPURTENANCES SHALL BE NEW. LIGHTS SHALL BE 14" TALL AND STYLE 3.
24. RUNWAY LIGHTS:
  - A. RUNWAY EDGE/THRESHOLD LIGHTS. CONTRACTOR SHALL FURNISH AND INSTALL HIGH-INTENSITY L-862(L)/L-862E(L) LIGHTS WITH NEW TRANSFORMERS. BOLTS, WASHERS, SPLICES, BASE PLATE, FRANGIBLE COUPLING, POLE AND ALL ASSOCIATED APPURTENANCES SHALL BE NEW. LIGHTS SHALL BE 14" TALL AND STYLE 3.
  - B. RUNWAY IN-PAVEMENT EDGE LIGHTS. CONTRACTOR SHALL FURNISH AND INSTALL HIGH-INTENSITY, L-850C(L) EDGE LIGHTS WITH EXISTING TRANSFORMERS. BOLTS, WASHERS, SPLICES, AND ALL ASSOCIATED APPURTENANCES SHALL BE NEW. LIGHTS SHALL BE STYLE 3.
25. THE COST FOR REMOVING AND REINSTALLING ANY LIGHT FIXTURE OR COVER PLATE REQUIRED TO PULL NEW CABLE (INCLUDING NEW CIRCUIT TAG) SHALL BE INCIDENTAL TO THE PROJECT WITH NO SEPARATE PAYMENT.
26. BOLTS SHALL BE STAINLESS STEEL TAP BOLTS OF APPROPRIATE LENGTH TO PROVIDE FULL THREAD ENGAGEMENT.
27. LIGHT BASE CANS:
  - A. CONTRACTOR SHALL OBTAIN THE SERVICES OF THE LIGHT BASE MFG. REPRESENTATIVE TO BE ON-SITE FOR A MINIMUM OF 3 DAYS DURING THE FIRST INSTALLATION OF THE BASE CANS TO PROVIDE TRAINING, INSPECTION, AND COMMISSIONING.
  - B. SURVEY LOCATION OF NEW BASE CAN AND COORDINATE PLACEMENT AND SUBMIT LOCATIONS AS SHOP DRAWING.
28. TRANSFORMERS AND L-823 CONNECTORS.
  - A. ALL NEW LIGHT FIXTURES SHALL BE SUPPLIED WITH NEW TRANSFORMER(S) PER MANUFACTURER RECOMMENDATIONS
  - B. NEW TRANSFORMERS SHALL BE FURNISHED WITH L-823 CONNECTORS.
  - C. L-823 CONNECTORS SHALL BE AMERACE SUPER KITS OR APPROVED EQUAL. MFG. OF THE SPLICE KITS SHALL PROVIDE TRAINING FOR L-823 CONNECTORS ON-SITE. COST FOR TRAINING SHALL BE INCIDENTAL WITH NO SEPARATE PAYMENT. PROVIDE A MINIMUM OF 3 WEEKS NOTICE FOR TRAINING. ALL CONTRACTOR PERSONNEL WHO ARE TO PERFORM SPLICES SHALL BE TRAINED BY MANUFACTURER.
29. FINAL ACCEPTANCE TESTING:
  - A. ALL WORK ASSOCIATED WITH FINAL ACCEPTANCE TESTING AND INSPECTION SHALL BE INCIDENTAL TO THE PROJECT WITH NO SEPARATE PAYMENT.
  - B. CONTRACTOR SHALL TEST THE INSULATION RESISTANCE OF ALL CIRCUITS AT THE VAULT AND HANDHOLES AS REQUIRED.



Airports Division  
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS



*Doron Leao*  
04/30/2024  
Licensed Expiration Date

DSGN.	DRWN.	CHKD.	APPD.
JP	KV	JA	DL

**KEY PLAN / NOTES:**

NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENT**  
SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

**SHEET TITLE:**

**AIRFIELD LIGHTING ELECTRICAL NOTES**

DATE :	09/2023	DWG. NO.	<b>E-001</b>
SHEET :			
106 OF 190 SHEETS			



**NOTES FOR TEMPORARY ELECTRICAL WORK:**

- ALL RUNWAY AND TAXIWAY LIGHTING, INCLUDING LIGHTED SIGNS, SHALL BE MAINTAINED UNLESS OTHERWISE APPROVED BY THE ENGINEER.
- TEMPORARY CABLING MAY BE USED TO MAINTAIN CIRCUIT CONTINUITY, IN ACCORDANCE WITH SPECIFICATIONS. TEMPORARY CABLE INSTALLED ABOVE GROUND SHALL BE IN RIGID CONDUIT, FASTENED TO PAVEMENT AT MAXIMUM 10' SPACING. CABLE ACROSS SURFACES SHALL BE PLACED BEHIND BARRICADES USED TO CLOSE PORTIONS OF TAXIWAYS OR OTHER SURFACES.
- TEMPORARY CABLE CONNECTIONS SHALL BE MADE AT LIGHT BASES OR HANDHOLES AS REQUIRED BY A PARTICULAR CONSTRUCTION PHASE OR SEQUENCE. THE PLAN FOR TEMPORARY CONNECTIONS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO INTERRUPTING A LIGHTING CIRCUIT OR POWER SERVICE. ALL CONNECTIONS FOR AIRFIELD LIGHTING CIRCUITS SHALL BE MADE WITH APPROPRIATE SIZE L-823 CONNECTORS.
- CONTRACTOR SHALL CONFIGURE TEMPORARY MODIFICATIONS TO AIRFIELD LIGHTING CIRCUITS AND POWER FEEDERS AS REQUIRED BY HIS WORK AREA AND FOR MAINTAINING LIGHTING FOR ACTIVE SURFACES AND POWER TO FACILITIES.
  - IDENTIFY THE CABLE FOR THE CIRCUIT TO BE MODIFIED IN A NEARBY LIGHT BASE, JUNCTION BOX, OR HANDHOLE.
  - SUBMIT A SKETCH FOR EACH PROPOSED TEMPORARY MODIFICATION OR CIRCUIT RECONFIGURATION FOR ENGINEER APPROVAL PRIOR TO MODIFYING A CIRCUIT.
  - TEST TO VERIFY THAT EACH TEMPORARY MODIFICATION IS AS INTENDED. CONTRACTOR SHALL CARRY WITH HIM APPROPRIATE CABLE, CONNECTORS, AND OTHER ITEMS NEEDED TO COMPLETE THE MODIFICATION AND TO MAKE ANY REPAIRS REQUIRED BY HIS ACTION.
- IN TRANSITIONING FROM ONE AREA OF WORK TO THE NEXT, TEMPORARY CIRCUIT CONNECTIONS SHALL BE REMOVED IF NO LONGER REQUIRED, CIRCUITS SHALL BE RESTORED IN ACCORDANCE WITH REQUIREMENTS FOR THE NEXT PHASE OR FOR PERMANENT INSTALLATION, AS APPROPRIATE.
- TEMPORARY ELECTRICAL WORK FOR MAINTAINING AIRFIELD LIGHTING CIRCUITS AND POWER SERVICE DURING CONSTRUCTION SHALL BE BID UNDER 16128 BID ITEM. CONTRACTOR SHALL DE-ENERGIZE LIGHTS TEMPORARILY BY DISCONNECTING THE TRANSFORMER ON THE PRIMARY SIDE AND PROVIDING TEMPORARY SPLICE CONNECTIONS TO ENSURE HOME-RUN CABLE CONTINUITY. CONTRACTOR SHALL NOT DE-ENERGIZE THE LIGHT BY DISCONNECTING THE FIXTURE ON THE SECONDARY SIDE WHILE THE PRIMARY IS CONNECTED.
- COORDINATE WITH ENGINEER AND OPERATIONS PERSONNEL TO VERIFY PROPER OPERATION OF AIRFIELD LIGHTING CIRCUITS AT THE END OF EACH DAYLIGHT SHIFT.
- CONTRACTOR SHALL MAINTAIN ON HAND SUFFICIENT MATERIAL AND EQUIPMENT REQUIRED TO PROVIDE TEMPORARY LIGHTING AND CIRCUIT EXTENSIONS. MATERIAL AND EQUIPMENT SHALL INCLUDE, BUT NOT BE LIMITED TO, FIXTURES, TRANSFORMERS, BASES, CONDUIT, L-824 CABLE AND L-823 SPLICE KITS.
- CONTRACTOR SHALL LABEL AND TAG TEMPORARY CABLE.
- PROVIDE TEMPORARY POWER AND LIGHTING TO ENSURE CIRCUIT CONTINUITY AS SHOWN ON TEMPORARY PHASING DRAWINGS.

**LOCATIONS OF UNDERGROUND UTILITIES:**

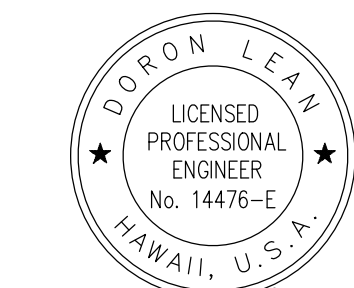
- THE LOCATIONS OF UNDERGROUND UTILITIES, CABLES, DUCTS, CONDUITS, ETC. AS INDICATED ON PLANS HAVE BEEN OBTAINED FROM EXISTING RECORDS AND ARE APPROXIMATE. NEITHER THE AIRPORT NOR THE ARCHITECT/ENGINEER ASSUMES ANY RESPONSIBILITY WHATEVER IN RESPECT TO THE ACCURACY, COMPLETENESS, OR SUFFICIENCY OF THE INFORMATION SHOWN. THERE IS NO GUARANTEE, EITHER EXPRESSED OR IMPLIED, THAT THE LOCATIONS, SIZE AND TYPE OF MATERIALS OF EXISTING UNDERGROUND UTILITIES INDICATED ARE REPRESENTATIVE OF THOSE TO BE ENCOUNTERED IN THE CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF HIS OPERATIONAL PLANS. IN THE EVENT AN UNEXPECTED UTILITY INTERFERENCE IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER. ANY SUCH MAINS AND/OR SERVICES DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED IMMEDIATELY AT HIS EXPENSE.
- THE CONTRACTOR SHALL USE HAND EXCAVATION TO PROVIDE INVESTIGATIVE PITS TO IDENTIFY LOCATION OF EXISTING UTILITIES PRIOR TO ANY OTHER EXCAVATION ACTIVITIES.
- THE CONTRACTOR SHALL EXERCISE CAUTION AND USE HAND EXCAVATION FOR ANY EXCAVATION IN THE VICINITY OF EXISTING INSTALLATIONS. ANY DAMAGE SHALL BE REPAIRED BY THE CONTRACTOR AT NO COST TO THE AIRPORT.
- DISTURBED AREAS OUTSIDE OF PAVEMENT AREAS SHALL BE RESTORED TO ORIGINAL SURFACE ELEVATIONS.

**ABBREVIATIONS:**

- |  |   |
|--|---|
| A, AMP – AMPERE  | JB – JUNCTION BOX   |
| AFF/AFG – ABOVE FINISHED FLOOR/GRADE                         | KOA – KONA INTERNATIONAL AIRPORT  |
| AFL – AIRFIELD LIGHTING                                      | KVA – KILOVOLT AMPERE   |
| ALCS – AIRFIELD LIGHTING CONTROL SYSTEM                      | KW – KILOWATT   |
| ALS – APPROACH LIGHTING SYSTEM                               | (L) – LIGHT EMITTING DIODE (LED)  |
| ALSF – APPROACH LIGHTING SYSTEM WITH SEQUENCE FLASHING LIGHT | LV – LOW VISIBILITY   |
| ATCT – AIR TRAFFIC CONTROL TOWER                             | LCB – LEAN CONCRETE BASE  |
| AWG – AMERICAN WIRE GAUGE                                    | LCU – LOCAL CONTROL UNIT (SIEMENS BRITE)  |
| BCU – BARE COPPER  | MALSR – MEDIUM INTENSITY APPROACH LIGHTING SYSTEM WITH RUNWAY ALIGNMENT INDICATOR LIGHT |
| BLDG – BUILDING  | MCB – MAIN CIRCUIT BREAKER  |
| BOB – BREAK OUT BOX  | MCU – MASTER CONTROL UNIT   |
| C/B – CIRCUIT BREAKER  | MFG – MANUFACTURER  |
| CCR – CONSTANT CURRENT REGULATOR                             | MH – MANHOLE  |
| CLN – CENTERLINE   | MTD – MOUNTED   |
| CKT – CIRCUIT  | (N) – NEW   |
| CND – CONDUIT  | NF – NONFUSIBLE   |
| CTL – CENTERLINE   | NTS – NOT TO SCALE  |
| CU – COPPER  | NIC – NOT IN CONTRACT   |
| DB – DUCT BANK   | PCC – PORTLAND CEMENT CONCRETE  |
| DEB – DIRECT BURIED  | PH – PHASE  |
| DET – DEFINED EDGE OF TAXIWAY                                | PVC – POLYVINYL CHLORIDE  |
| DIA – DIAMETER   | RDR – RUNWAY DISTANCE REMAINING   |
| DU – DISTRIBUTION PANEL                                      | REIL – RUNWAY END IDENTIFIER LIGHTS   |
| DWG(S) – DRAWING(S)  | RECP – RECEPTACLE   |
| EA – EACH  | RGL – RUNWAY GUARD LIGHT  |
| EOAS – EDGE OF ASPHALT SHOULDER                              | RGS – RIGID GALVANIZED STEEL  |
| EC – EMPTY CONDUIT   | RLIM – RUNWAY LIGHT INTENSITY MONITOR   |
| ELS – EDGE LIGHTING SYSTEM                                   | RMVD – REMOVED  |
| EMH – ELECTRIC MANHOLE                                       | ROFA – RUNWAY OBJECT FREE AREA  |
| EHH – ELECTRIC HANDHOLE                                      | RSA – RUNWAY SAFETY AREA  |
| EMT – ELECTRICAL METALLIC TUBING                             | R/W – RUNWAY  |
| ERGL – ELEVATED RUNWAY GUARD LIGHT                           | SCHED – SCHEDULE  |
| ESBL – ELEVATED STOP BAR LIGHT                               | SGRS – SWITCHGEAR REGULATOR SYSTEM  |
| EXIST OR (E) – EXISTING                                      | SPEC – SPECIFICATION  |
| EXT – EXTENSION  | SS – STAINLESS STEEL  |
| FAA – FEDERAL AVIATION ADMINISTRATION                        | T/W – TAXIWAY   |
| FCU – FIELD CONTROL UNIT                                     | TBD – TO BE DETERMINED  |
| FF – FINISHED FLOOR  | TDZ – TOUCH DOWN ZONE   |
| FO – FIBER OPTIC (CABLE)                                     | TOFA – TAXIWAY OBJECT FREE AREA   |
| GFCI – GROUND FAULT CIRCUIT INTERRUPTER                      | TSA – TAXIWAY SAFETY AREA   |
| GND – GROUND   | TVSS – TRANSIENT VOLTAGE SURGE SUPPRESSOR   |
| HH – HANDHOLE  | TYP – TYPICAL   |
| HPS – HIGH PRESSURE SODIUM                                   | UON – UNLESS OTHERWISE NOTED  |
| IRGL – INPAVEMENT RUNWAY GUARD LIGHT                         | UPS – UNINTERRUPTIBLE POWER SUPPLY  |
| ISBL – INPAVEMENT RUNWAY STOP BAR                            | V – VOLT  |
|  | W/ – WITH   |
|  | W – WATT  |
|  | WP – WEATHERPROOF   |
|  | XFMR – TRANSFORMER  |



Airports Division  
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS



*Doron Leung*  
04/30/2024  
Licensed Expiration Date

DSGN.	DRWN.	CHKD.	APPD.
JP	KV	JA	DL

**KEY PLAN / NOTES:**

NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENT**

SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**

AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

**SHEET TITLE:**

**GENERAL NOTES AND ABBREVIATIONS**

DATE :	DWG. NO.
09/2023	<b>E-002</b>
SHEET :	
107 OF 190 SHEETS	



# ELECTRICAL DEMOLITION LEGEND

## SHEET NOTES:

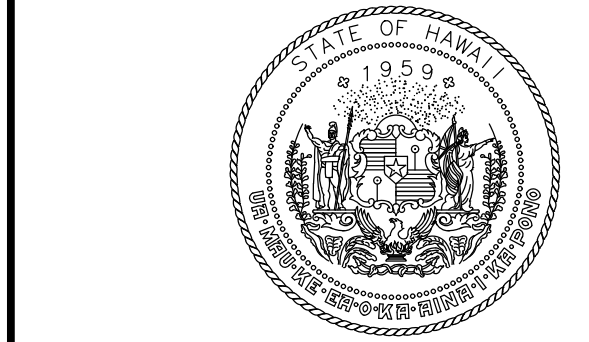
- REFER TO DRAWINGS E-001 & E-002 FOR GENERAL NOTES AND ABBREVIATIONS.

DEMOLITION (FOR SHEETS E-101 THRU E-116)	
	EXISTING CONDUIT TO REMAIN. REMOVE EXISTING CABLE TO NEAREST PULL BOX OR BASE CAN. "R-2" DENOTES CIRCUIT IDENTIFICATION OF CABLES TO BE REMOVED.
	REMOVE EXISTING CONDUIT & CABLES. "R-2" DENOTES CIRCUIT IDENTIFICATION OF CABLES TO BE REMOVED.
	EXISTING CONDUIT TO BE ABANDONED. REMOVE EXISTING CABLE TO NEAREST PULL BOX OR BASE CAN. "R-2" DENOTES CIRCUIT IDENTIFICATION OF CABLES TO BE REMOVED.
	REMOVE EXISTING THRESHOLD/END/EDGE LIGHT & BASE CAN & TRANSFORMER. SALVAGE LIGHT AND TRANSFORMER FOR AIRPORT TO USE AS SPARE. IN AREAS OF PAVEMENT RECONSTRUCTION (ASPHALT SHOULDER, FULL-STRENGTH ASPHALT, OR CONCRETE PAVEMENT), BACKFILL WITH AGGREGATE BASE COURSE TO THE REQUIRED HEIGHT PER CIVIL DRAWINGS, COORDINATE ELEVATIONS WITH CIVIL CONTRACTOR.
	REMOVE EXISTING THRESHOLD/END/EDGE LIGHT & TRANSFORMER. SALVAGE LIGHT AND TRANSFORMER FOR AIRPORT TO USE AS SPARE. BASE CAN TO REMAIN. IN AREAS OF PAVEMENT RECONSTRUCTION. REMOVE EXISTING SPACER PACKAGE AND EXTENSION. MEASURE FOR NEW SPACER PACKAGE AND EXTENSION.
	REMOVE EXISTING THRESHOLD/END/EDGE LIGHT & TRANSFORMER. SALVAGE LIGHT AND TRANSFORMER FOR AIRPORT TO USE AS SPARE. BASE CAN TO REMAIN. IN AREAS OF PAVEMENT RECONSTRUCTION. REMOVE EXISTING SPACER PACKAGE. MEASURE FOR NEW SPACER PACKAGE.
	REMOVE AND STORE EXISTING ELEVATED MALS R LIGHT. REMOVE FRANGIBLE COUPLING AND FOUNDATION. IN AREAS OF PAVEMENT RECONSTRUCTION (ASPHALT SHOULDER, FULL-STRENGTH ASPHALT, OR CONCRETE PAVEMENT), BACKFILL WITH AGGREGATE BASE COURSE TO THE REQUIRED HEIGHT PER CIVIL DRAWINGS, COORDINATE ELEVATIONS WITH CIVIL CONTRACTOR. IN AREAS OF NON-PAVED EARTH FILL WITH AGGREGATE BASE COURSE TO 3" BELOW GRADE AND BACKFILL WITH NATIVE FILL.
	ADJUST EXISTING ELECTRICAL VAULT. HAND HOLE SIZE IS 4'X4'X4', UNLESS OTHERWISE NOTED.
	REMOVE EXISTING ELECTRICAL VAULT. HAND HOLE SIZE IS 4'X4'X4', UNLESS OTHERWISE NOTED. BACKFILL AS REQUIRED BY CIVIL PLANS AND SPECIFICATIONS. REMOVE EXISTING CABLES AS SHOWN ON PLANS. PROTECT EXISTING CONDUITS FOR RECONNECTION.
	ADD SYMBOL FOR REMOVAL OF JUNCTION CAN. REMOVE EXISTING COVER PLATE, EXTENSION, SPACER PACKAGE AND BASE CAN. BACKFILL PER CIVIL SPECIFICATION AND PLANS.
	REMOVE EXISTING COVER PLATE. BASE CAN TO REMAIN. REMOVE EXISTING SPACER PACKAGE AND EXTENSION. MEASURE FOR NEW SPACER PACKAGE AND EXTENSION.
	REMOVE EXISTING COVER PLATE. BASE CAN TO REMAIN. IN AREAS OF PAVEMENT RECONSTRUCTION. MEASURE FOR NEW SPACER PACKAGE (ASPHALT SHOULDER, FULL-STRENGTH ASPHALT, OR CONCRETE PAVEMENT).
	REMOVE EXISTING TAXIWAY EDGE LIGHT AND MEASURE FOR SPACER PACKAGE. COORDINATE ELEVATIONS WITH CIVIL CONTRACTOR.
	REMOVE EXISTING TAXIWAY EDGE LIGHT AND BASE CAN. BACKFILL WITH AGGREGATE BASE COURSE TO THE REQUIRED HEIGHT PER CIVIL DRAWINGS, COORDINATE ELEVATIONS WITH CIVIL CONTRACTOR.
	REMOVE EXISTING TAXIWAY LIGHT & TRANSFORMER. BASE CAN TO REMAIN. IN AREAS OF PAVEMENT RECONSTRUCTION. MEASURE FOR NEW SPACER PACKAGE AND EXTENSION (ASPHALT SHOULDER, FULL-STRENGTH ASPHALT, OR CONCRETE PAVEMENT),
	REMOVE EXISTING TAXIWAY LIGHT & TRANSFORMER. BASE CAN TO REMAIN. IN AREAS OF PAVEMENT RECONSTRUCTION. MEASURE FOR NEW SPACER PACKAGE (ASPHALT SHOULDER, FULL-STRENGTH ASPHALT, OR CONCRETE PAVEMENT),
	REMOVE EXISTING AIRFIELD GUIDANCE SIGN, FOUNDATION AND ASSOCIATED HARDWARE .

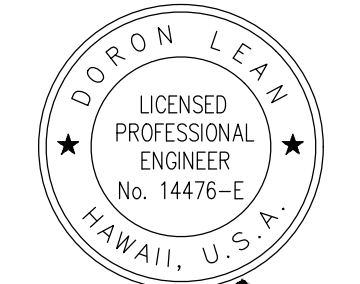
EXISTING (FOR SHEETS E-101 THRU E-116)	
	EXISTING CONDUIT & CABLE TO REMAIN.
	EXISTING DUCTBANK & CABLE TO REMAIN.
	EXISTING ABANDONED CONDUIT TO REMAIN.
	EDGE OF ASPHALT LIMITS. SHOWN FOR REFERENCE ONLY.
	EXISTING FAA ELD CONDUIT/DUCTBANK TO BE REMAIN
	EXISTING RUNWAY EDGE LIGHT & BASE CAN TO REMAIN.
	EXISTING TAXIWAY EDGE LIGHT & BASE CAN TO REMAIN.
	EXISTING AIRFIELD GUIDANCE SIGN TO REMAIN.
	EXISTING ELECTRICAL HANDHOLE TO REMAIN.
	EXISTING WINDCONE AND FOUNDATION TO REMAIN.
	EXISTING PAPI AND FOUNDATION TO REMAIN.

ELD CABLE SCHEDULE	
ELD CABLE #1	15KV 1-1/C #2 AWG CU MV-105 CONCENTRIC NEUTRAL CABLE.

CIVIL DEMOLITION (FOR SHEETS E-101 THRU E-116)	
	APPROXIMATE CIVIL DEMOLITION LIMITS. SHOWN AS REFERENCE ONLY, REFER TO CIVIL DWGS FOR DETAILS.
	APPROXIMATE RUNWAY/TAXIWAY AC MILLING (0.5" TO 4" DEPTH) DEMOLITION LIMITS. SHOWN AS REFERENCE ONLY, REFER TO CIVIL DWGS FOR DETAILS.
	APPROXIMATE RUNWAY/TAXIWAY AC PAVING (1.5" TO 4" DEPTH) DEMOLITION LIMITS. SHOWN AS REFERENCE ONLY, REFER TO CIVIL DWGS FOR DETAILS.
	APPROXIMATE RUNWAY/TAXIWAY AC PAVING (8" TO 14" DEPTH) DEMOLITION LIMITS. SHOWN AS REFERENCE ONLY, REFER TO CIVIL DWGS FOR DETAILS.
	APPROXIMATE RUNWAY/TAXIWAY PCC DEMOLITION LIMITS. SHOWN AS REFERENCE ONLY, REFER TO CIVIL DWGS FOR DETAILS.



Airports Division  
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS



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04/30/2024  
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JP	KV	JA	DL

### KEY PLAN / NOTES:

NO.	DATE	REVISIONS

## CONSTRUCTION DOCUMENT

SEPTEMBER 2023  
DATE

### PROJECT TITLE :

**RUNWAY 17-35  
REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

### PROJECT NO.:

**AH2021-16**

### SHEET TITLE:

## AIRFIELD LIGHTING DEMOLITION LEGEND

DATE :	DWG. NO.
09/2023	<b>E-100</b>
SHEET :	
108 OF 190 SHEETS	

© UNDESIGNED/LEARN PHOTOGRAPHICS PROPOSED PROJECT: AIRFIELD LIGHTING DEMOLITION LEGEND, DRAWING NO. 17-35-001, PROJECT: RUNWAY 17-35 REHABILITATION, KONA INTERNATIONAL AIRPORT AT KEAHOLE, KAILUA-KONA, HAWAII. DATE: 09/2023. DRAWING NO. 17-35-001, PROJECT: RUNWAY 17-35 REHABILITATION, KONA INTERNATIONAL AIRPORT AT KEAHOLE, KAILUA-KONA, HAWAII. DATE: 09/2023. DRAWING NO. 17-35-001, PROJECT: RUNWAY 17-35 REHABILITATION, KONA INTERNATIONAL AIRPORT AT KEAHOLE, KAILUA-KONA, HAWAII. DATE: 09/2023.



SHEET NOTES:

- REFER TO DRAWINGS E-001 THRU E-002, & E-100 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND.



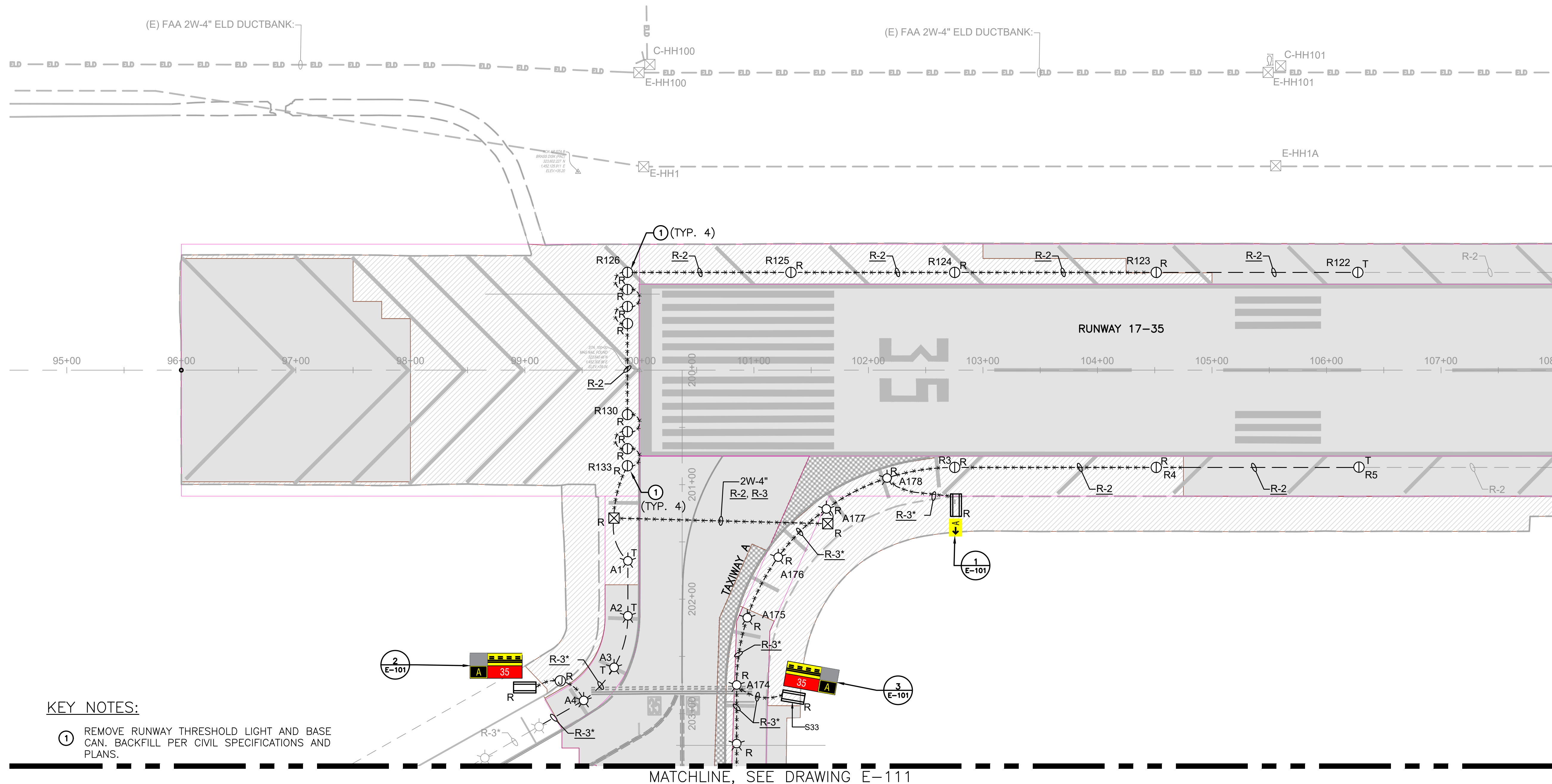
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2 IMAGE OF SIGN  
SCALE: NOT TO SCALE



3 IMAGE OF SIGN 33  
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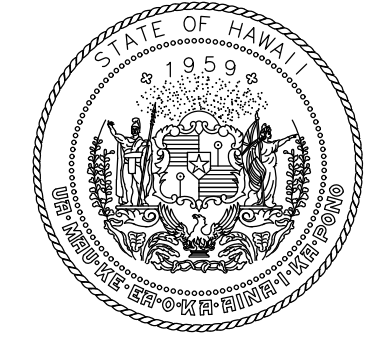
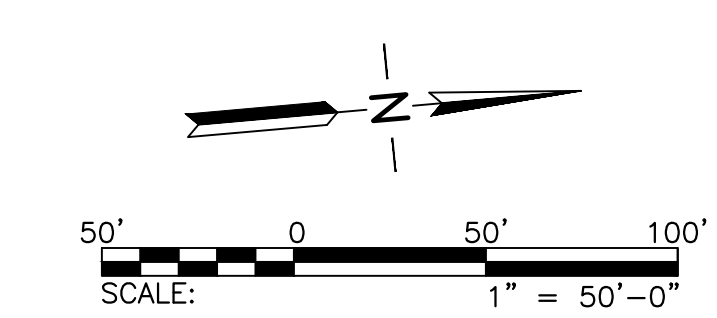


KEY NOTES:

- REMOVE RUNWAY THRESHOLD LIGHT AND BASE CAN. BACKFILL PER CIVIL SPECIFICATIONS AND PLANS.

MATCHLINE, SEE DRAWING E-102

MATCHLINE, SEE DRAWING E-111



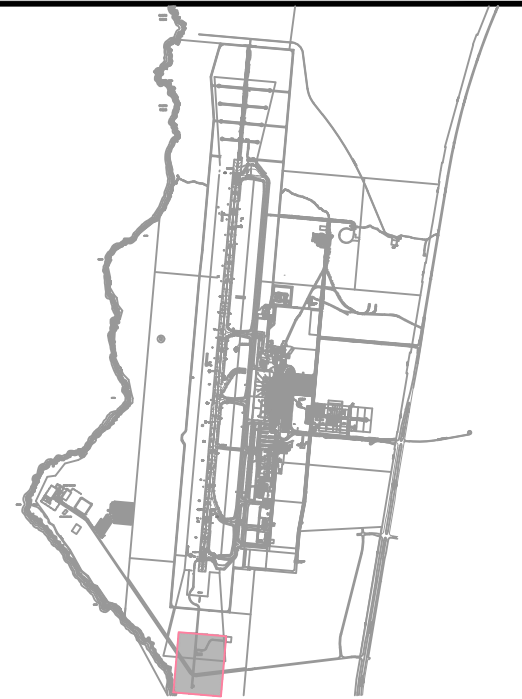
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STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS



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04/30/2024  
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NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENT**  
SEPTEMBER 2023  
DATE

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**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

PROJECT NO.:

**AH2021-16**

SHEET TITLE:

**AIRFIELD LIGHTING DEMOLITION PLAN**  
1

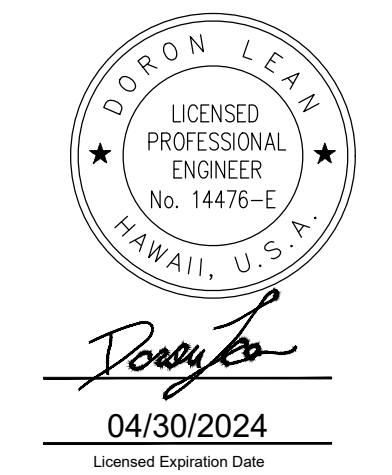
DATE :	DWG. NO.
09/2023	<b>E-101</b>
SHEET :	
109 OF 190 SHEETS	

© UNBESIEGELTES SALONIER LEAN PHOTO METRICS DROPPROACTIVE PROJECTS 1472 02A DRONHAWA RUNWAY REHABILITATION DRAWINGS WORKING DRAWINGS SHEET E-101 (PANO AREA) DWG



SHEET NOTES:

- REFER TO DRAWINGS E-001 THRU E-002, & E-100 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND.



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NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENT**  
 SEPTEMBER 2023  
 DATE

PROJECT TITLE :

**RUNWAY 17-35 REHABILITATION**  
 AT  
 ELLISON ONIZUKA  
 KONA INTERNATIONAL AIRPORT AT KEAHOLE  
 KAILUA-KONA, HAWAII

PROJECT NO.:

**AH2021-16**

SHEET TITLE:

**AIRFIELD LIGHTING DEMOLITION PLAN**  
 2

DATE :	DWG. NO.
09/2023	<b>E-102</b>
SHEET :	
110 OF 190 SHEETS	



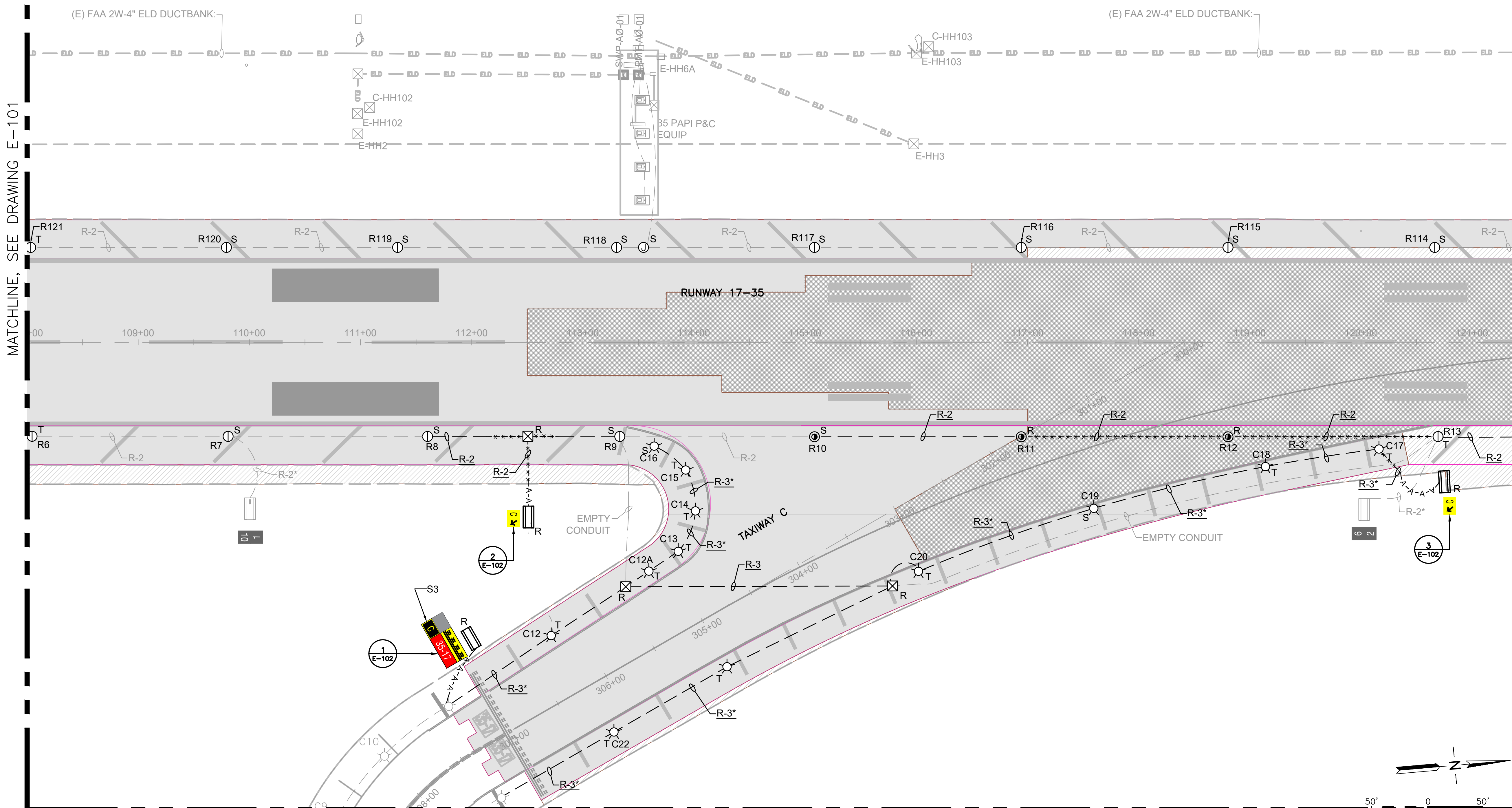
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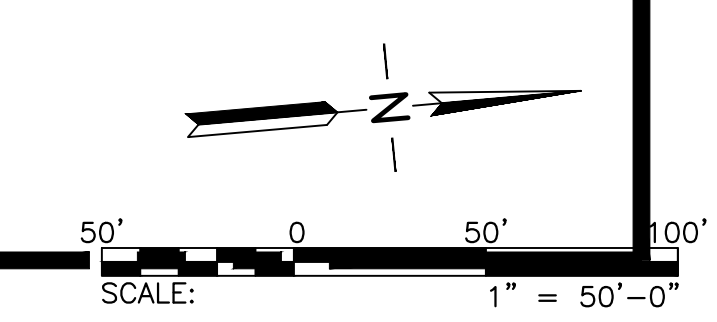
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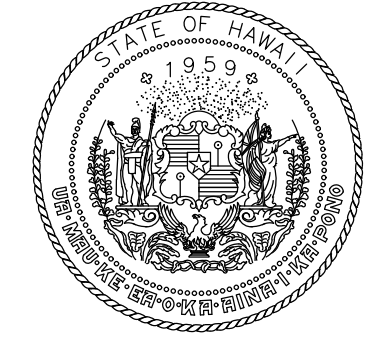
MATCHLINE, SEE DRAWING E-101

MATCHLINE, SEE DRAWING E-103

MATCHLINE, SEE DRAWING E-112







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STATE OF HAWAII  
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SEPTEMBER 2023  
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KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

PROJECT NO.:

**AH2021-16**

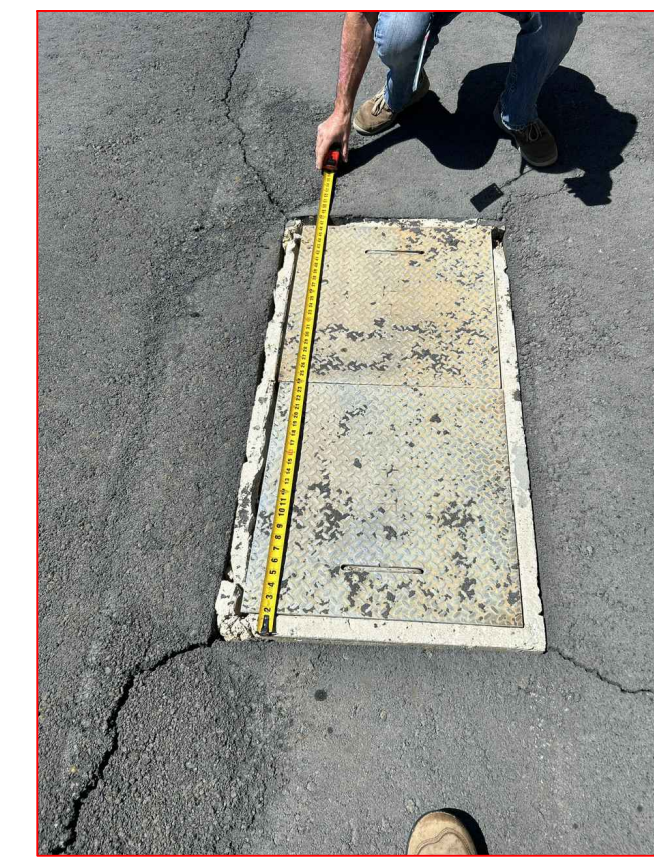
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**AIRFIELD LIGHTING  
DEMOLITION PLAN**  
3

DATE :	DWG. NO.
09/2023	<b>E-103</b>
SHEET :	
111 OF 190 SHEETS	

SHEET NOTES:

- REFER TO DRAWINGS E-001 THRU E-002, & E-100 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND.



1 IMAGE OF HANDHOLE  
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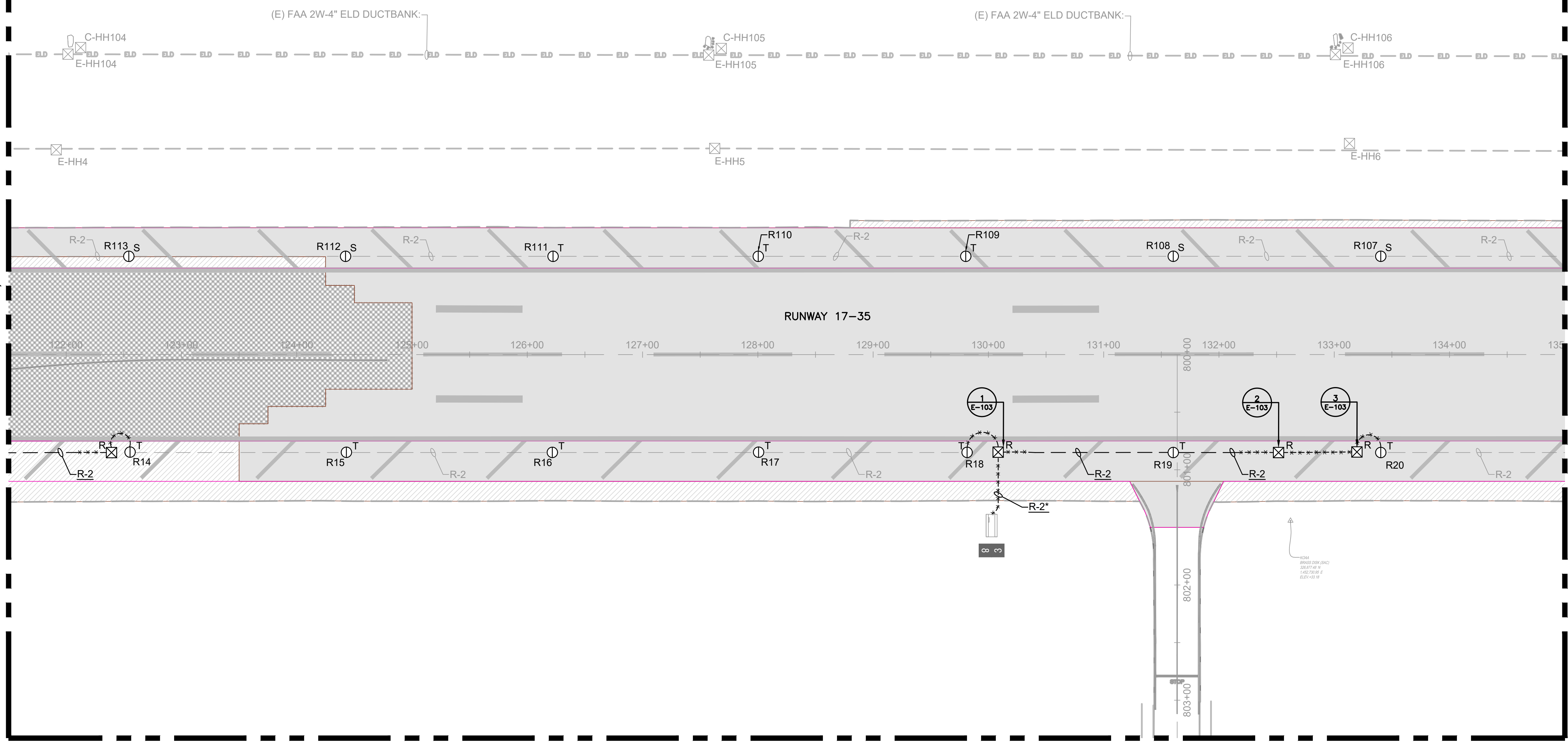
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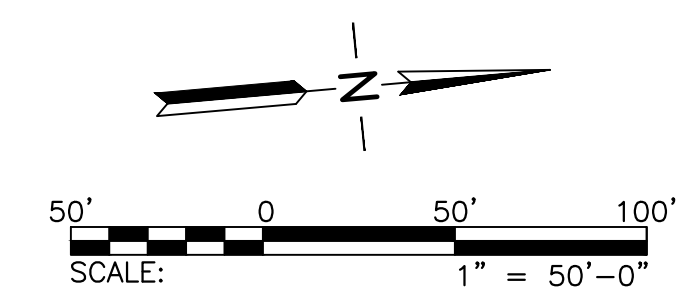
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MATCHLINE, SEE DRAWING E-102

MATCHLINE, SEE DRAWING E-104



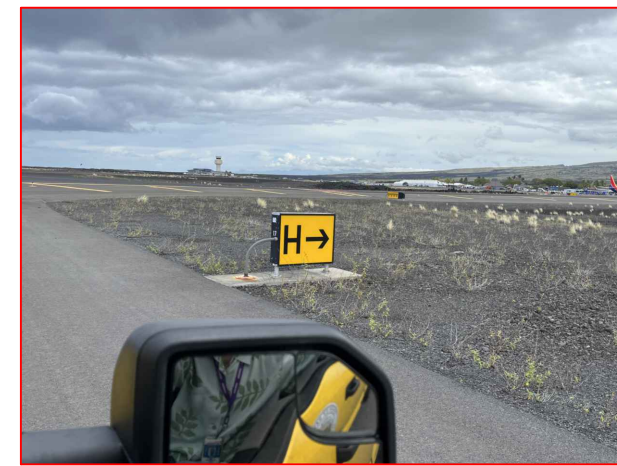
MATCHLINE, SEE DRAWING E-113





SHEET NOTES:

- REFER TO DRAWINGS E-001 THRU E-002, & E-100 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND.



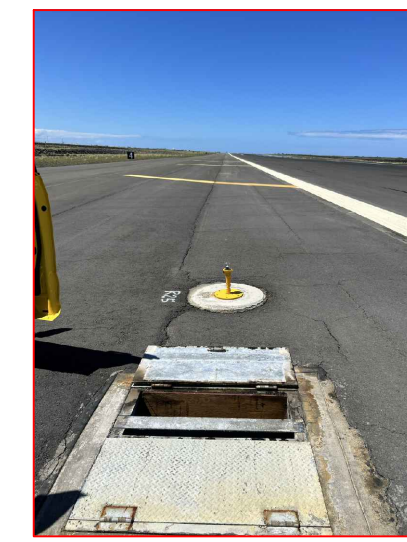
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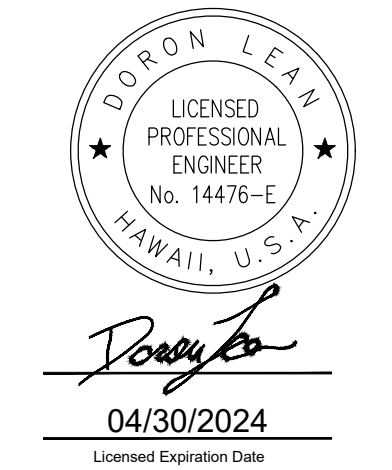
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SCALE: NOT TO SCALE



3 IMAGE OF SIGN 3  
SCALE: NOT TO SCALE



4 IMAGE OF HANDHOLE  
SCALE: NOT TO SCALE



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KEY PLAN / NOTES:



NO.	DATE	REVISIONS
<b>CONSTRUCTION DOCUMENT</b>		
SEPTEMBER 2023 DATE		

PROJECT TITLE :  
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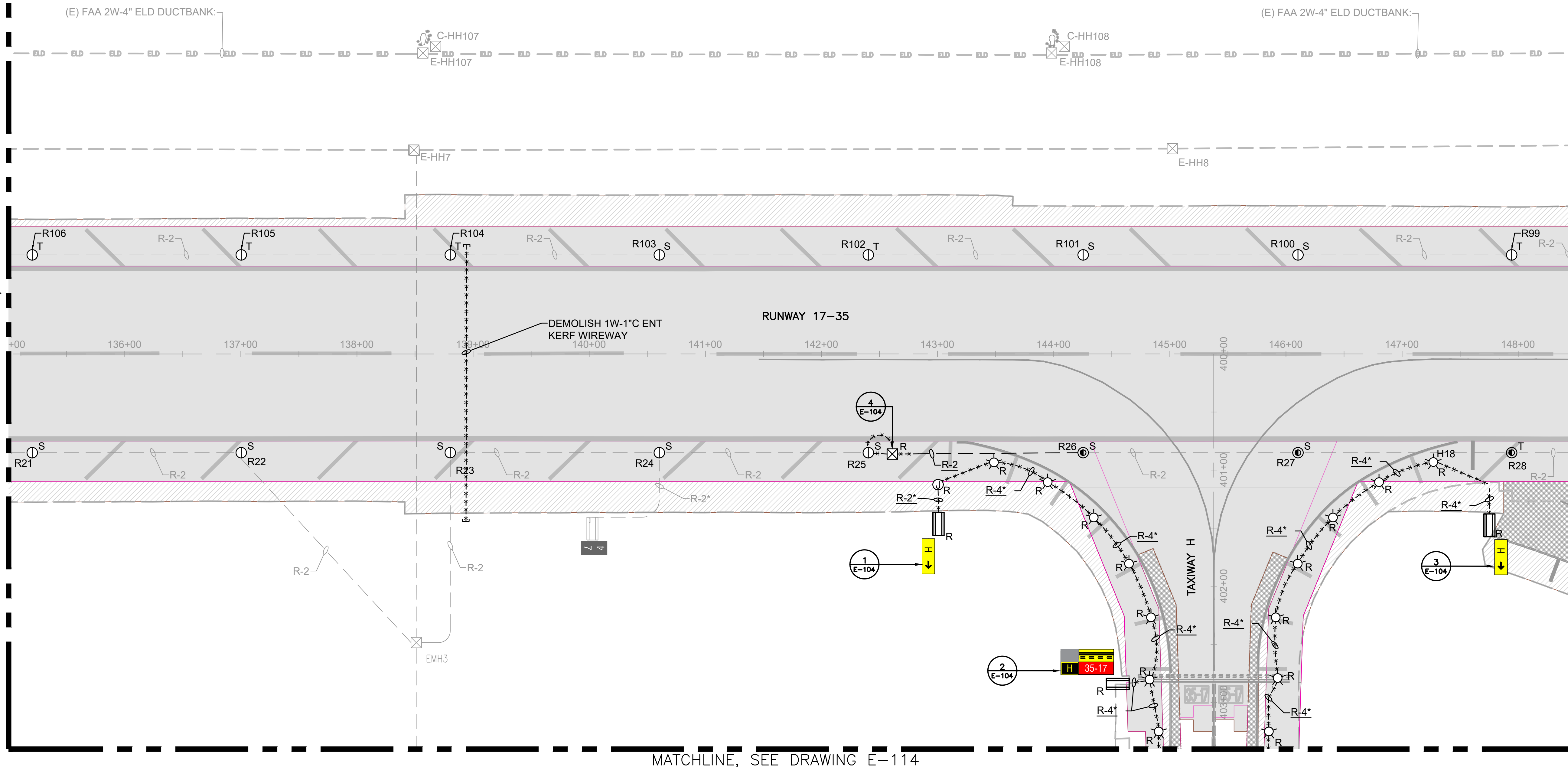
PROJECT NO.:  
**AH2021-16**

SHEET TITLE:  
**AIRFIELD LIGHTING DEMOLITION PLAN**  
4

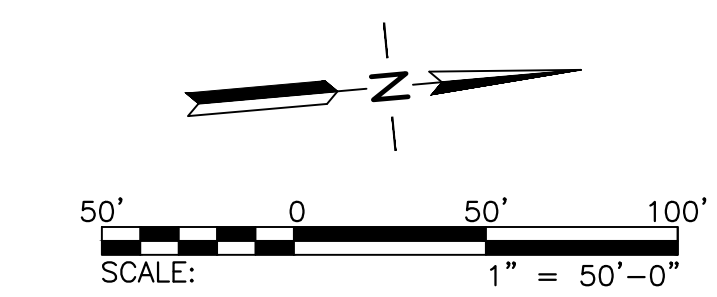
DATE : 09/2023	DWG. NO. <b>E-104</b>
SHEET : 112 OF 190 SHEETS	

MATCHLINE, SEE DRAWING E-103

MATCHLINE, SEE DRAWING E-105



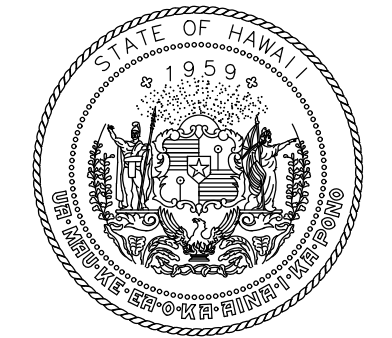
MATCHLINE, SEE DRAWING E-114



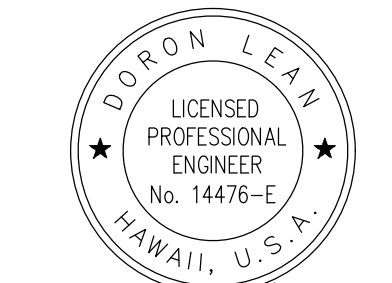


SHEET NOTES:

- REFER TO DRAWINGS E-001 THRU E-002, & E-100 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND.



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JP	KV	JA	DL

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NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENT**  
SEPTEMBER 2023  
DATE

PROJECT TITLE :

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

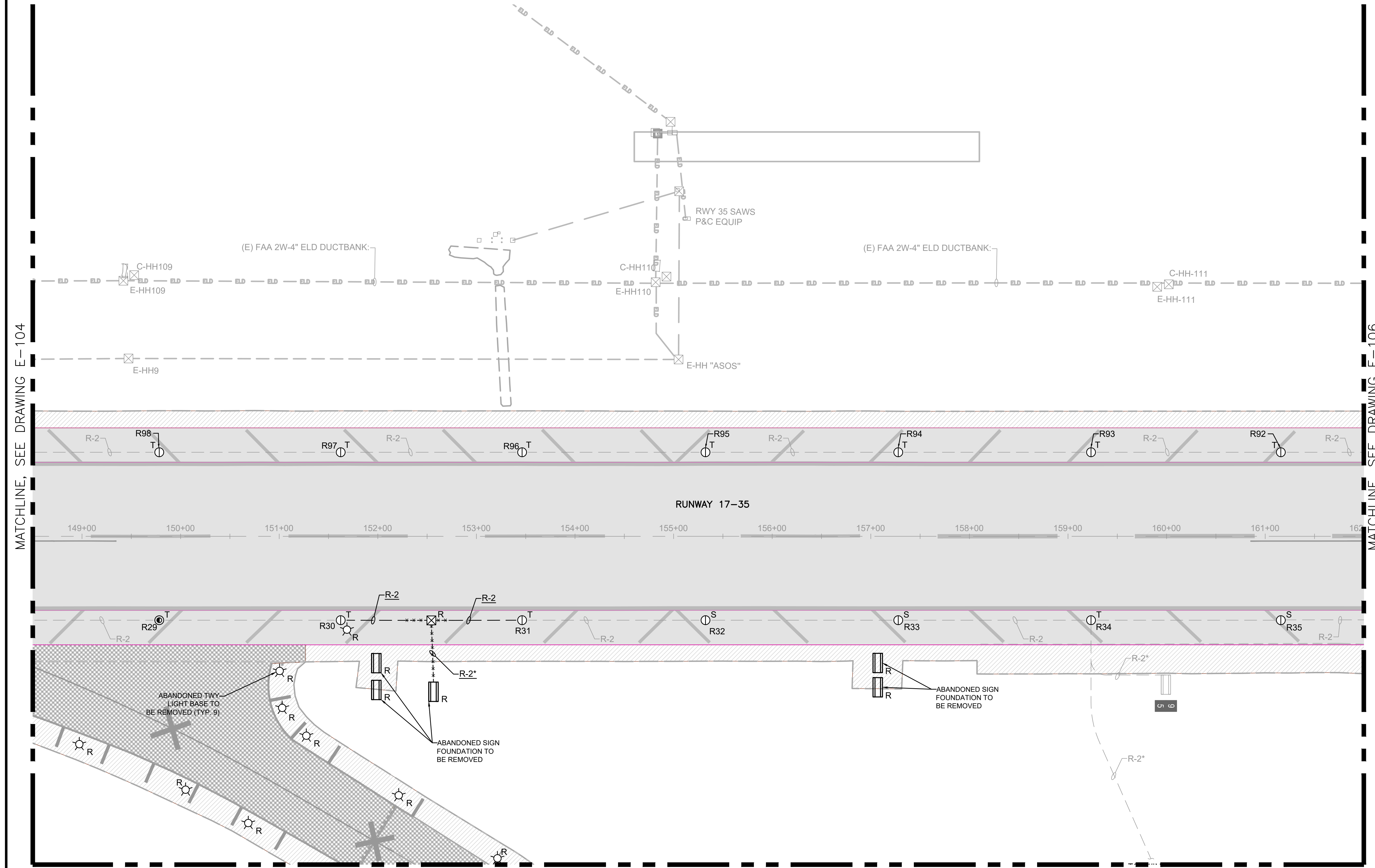
PROJECT NO.:

**AH2021-16**

SHEET TITLE:

**AIRFIELD LIGHTING DEMOLITION PLAN**  
5

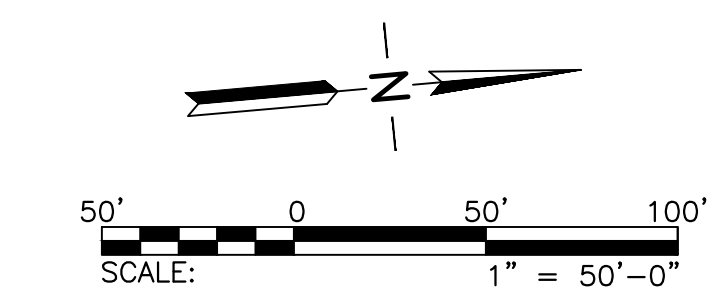
DATE :	DWG. NO.
09/2023	<b>E-105</b>
SHEET :	
113 OF 190 SHEETS	



MATCHLINE, SEE DRAWING E-104

MATCHLINE, SEE DRAWING E-106

MATCHLINE, SEE DRAWING E-115





SHEET NOTES:

- REFER TO DRAWINGS E-001 THRU E-002, & E-100 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND.



1 IMAGE OF SIGN 21  
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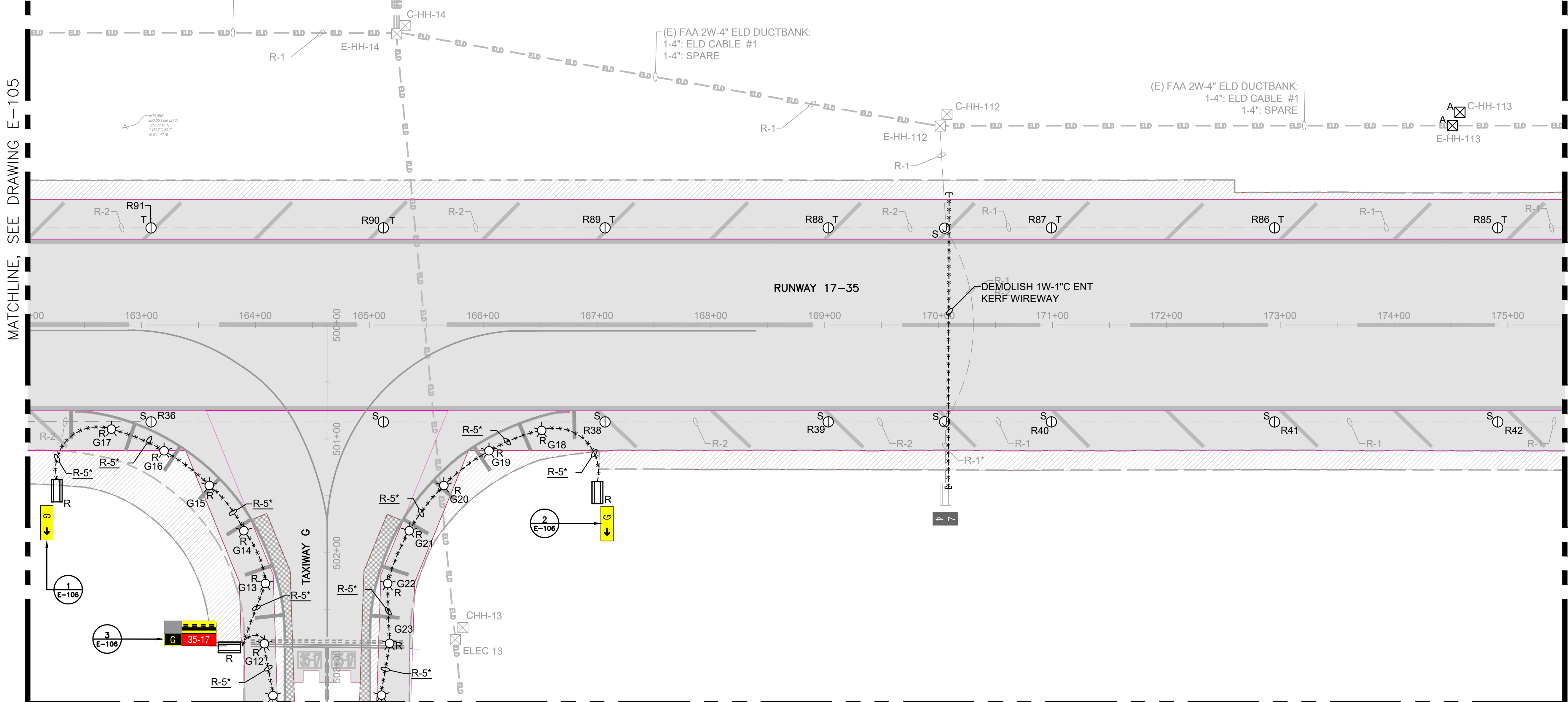


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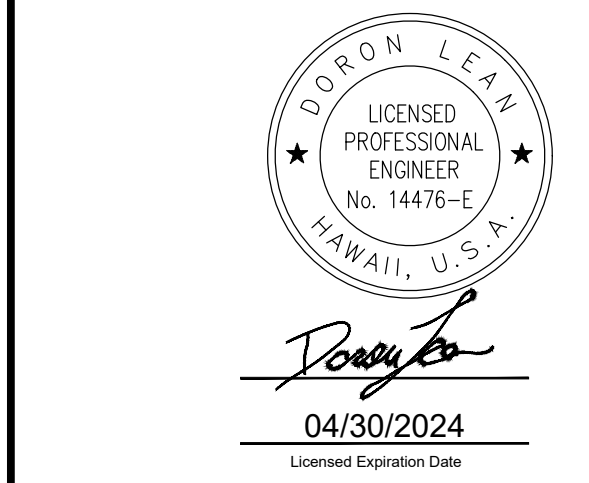


3 IMAGE OF SIGN 22  
SCALE: NOT TO SCALE

(E) FAA 2W-4" ELD DUCTBANK:



MATCHLINE, SEE DRAWING E-116



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KEY PLAN / NOTES:



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENT**  
SEPTEMBER 2023  
DATE

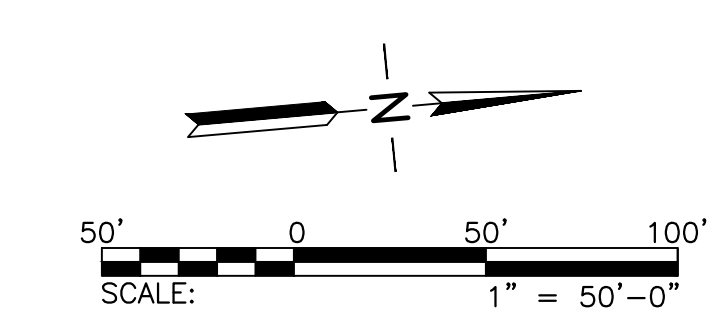
**PROJECT TITLE :**  
**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
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KAILUA-KONA, HAWAII

**PROJECT NO.:**  
**AH2021-16**

**SHEET TITLE:**

**AIRFIELD LIGHTING DEMOLITION PLAN**  
**6**

DATE :	DWG. NO.
09/2023	<b>E-106</b>
SHEET :	
114 OF 190 SHEETS	

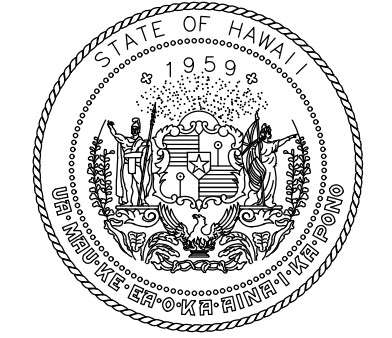




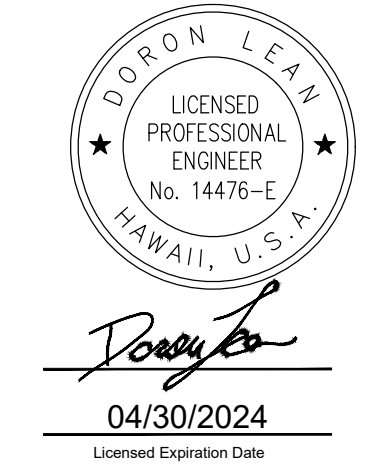


SHEET NOTES:

- REFER TO DRAWINGS E-001 THRU E-002, & E-100 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND.



Airports Division  
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS



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KEY PLAN / NOTES:



NO.	DATE	REVISIONS

**CONSTRUCTION DOCUMENT**  
SEPTEMBER 2023  
DATE

PROJECT TITLE :

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

PROJECT NO.:

**AH2021-16**

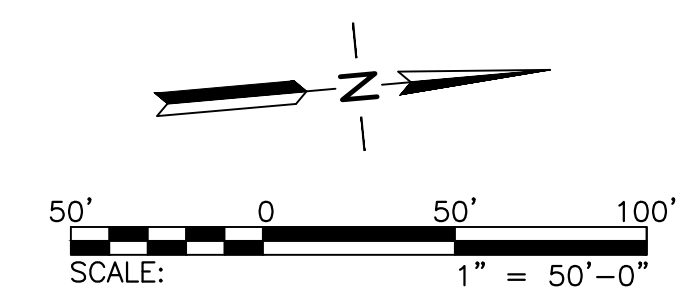
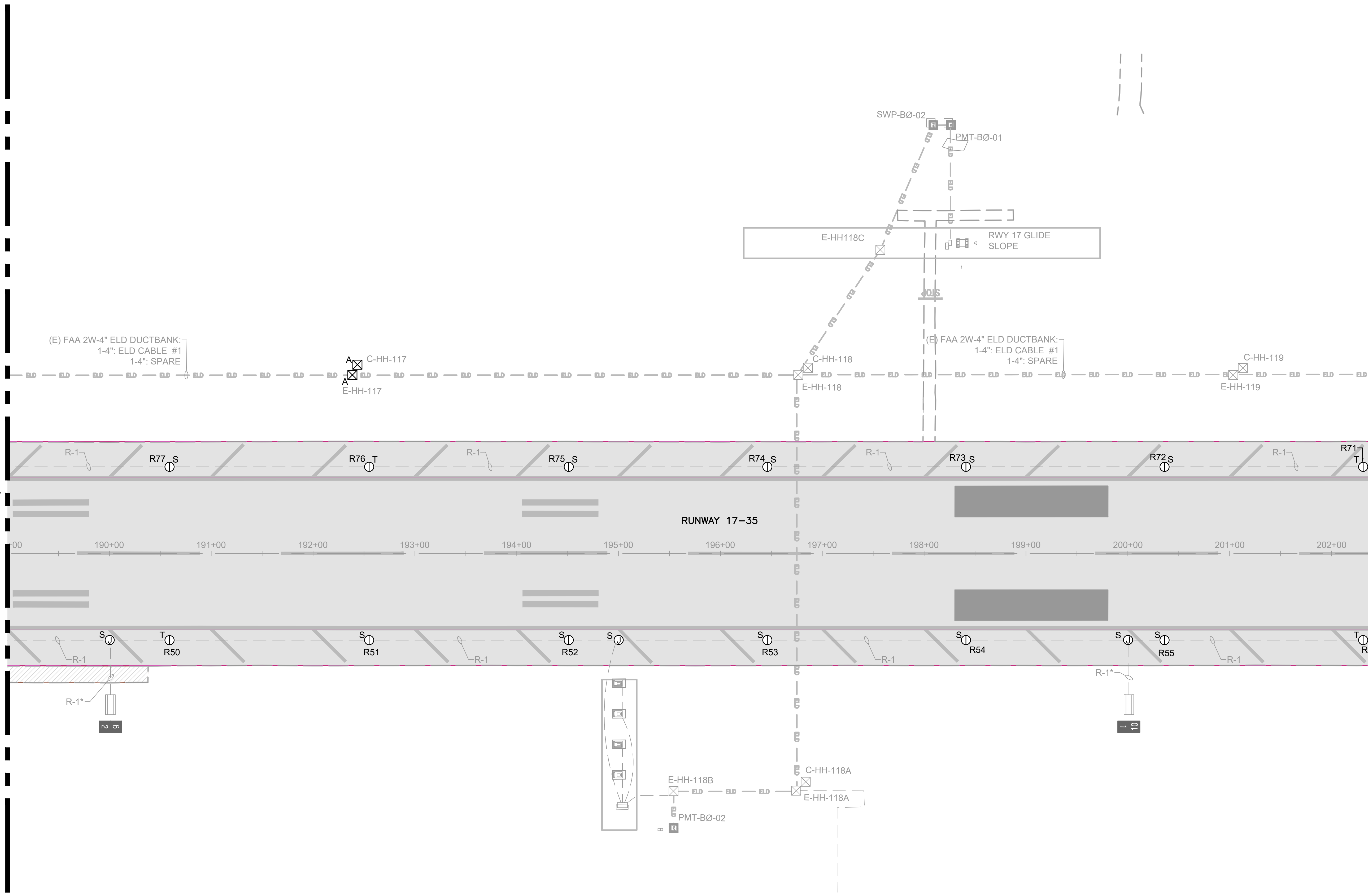
SHEET TITLE:

**AIRFIELD LIGHTING DEMOLITION PLAN**  
8

DATE :	DWG. NO.
09/2023	<b>E-108</b>
SHEET :	
116 OF 190 SHEETS	

MATCHLINE, SEE DRAWING E-107

MATCHLINE, SEE DRAWING E-109



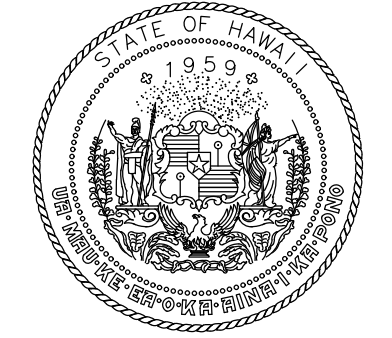






SHEET NOTES:

- REFER TO DRAWINGS E-001 THRU E-002, & E-100 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND.



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*Doron Lean*  
04/30/2024  
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JP	KV	JA	DL

KEY PLAN / NOTES:



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENT**  
SEPTEMBER 2023  
DATE

PROJECT TITLE :

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

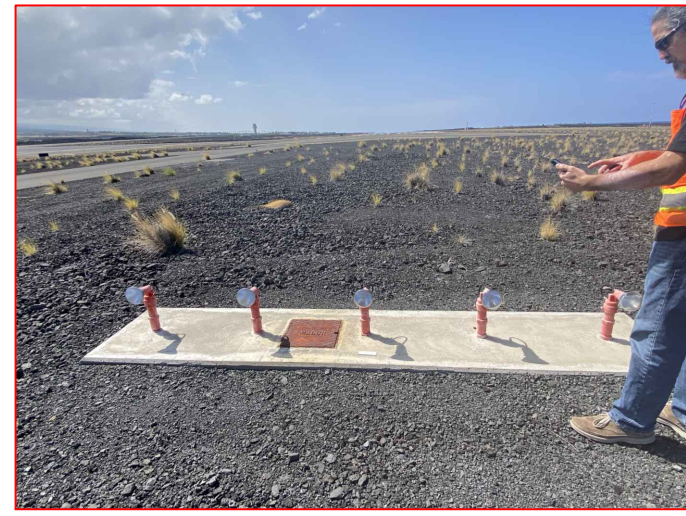
PROJECT NO.:

**AH2021-16**

SHEET TITLE:

**AIRFIELD LIGHTING DEMOLITION PLAN**  
**10**

DATE :	DWG. NO.
09/2023	<b>E-110</b>
SHEET :	
118 OF 190 SHEETS	



1 MALSR STA. 6  
SCALE: NOT TO SCALE



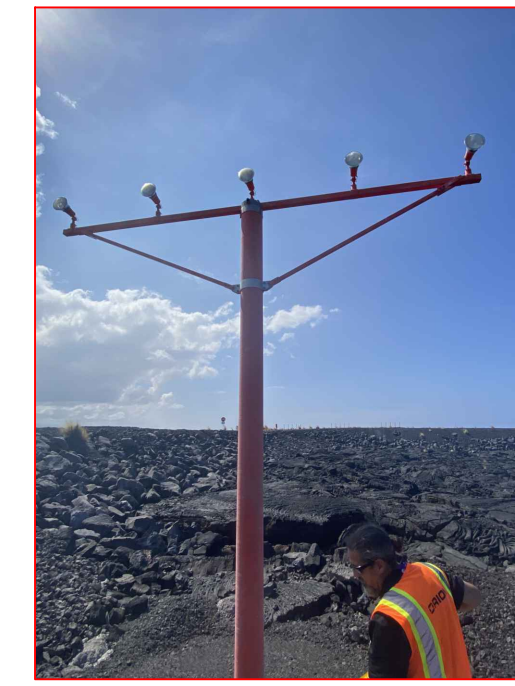
2 MALSR STA. 8  
SCALE: NOT TO SCALE



3 MALSR STA. 10  
SCALE: NOT TO SCALE

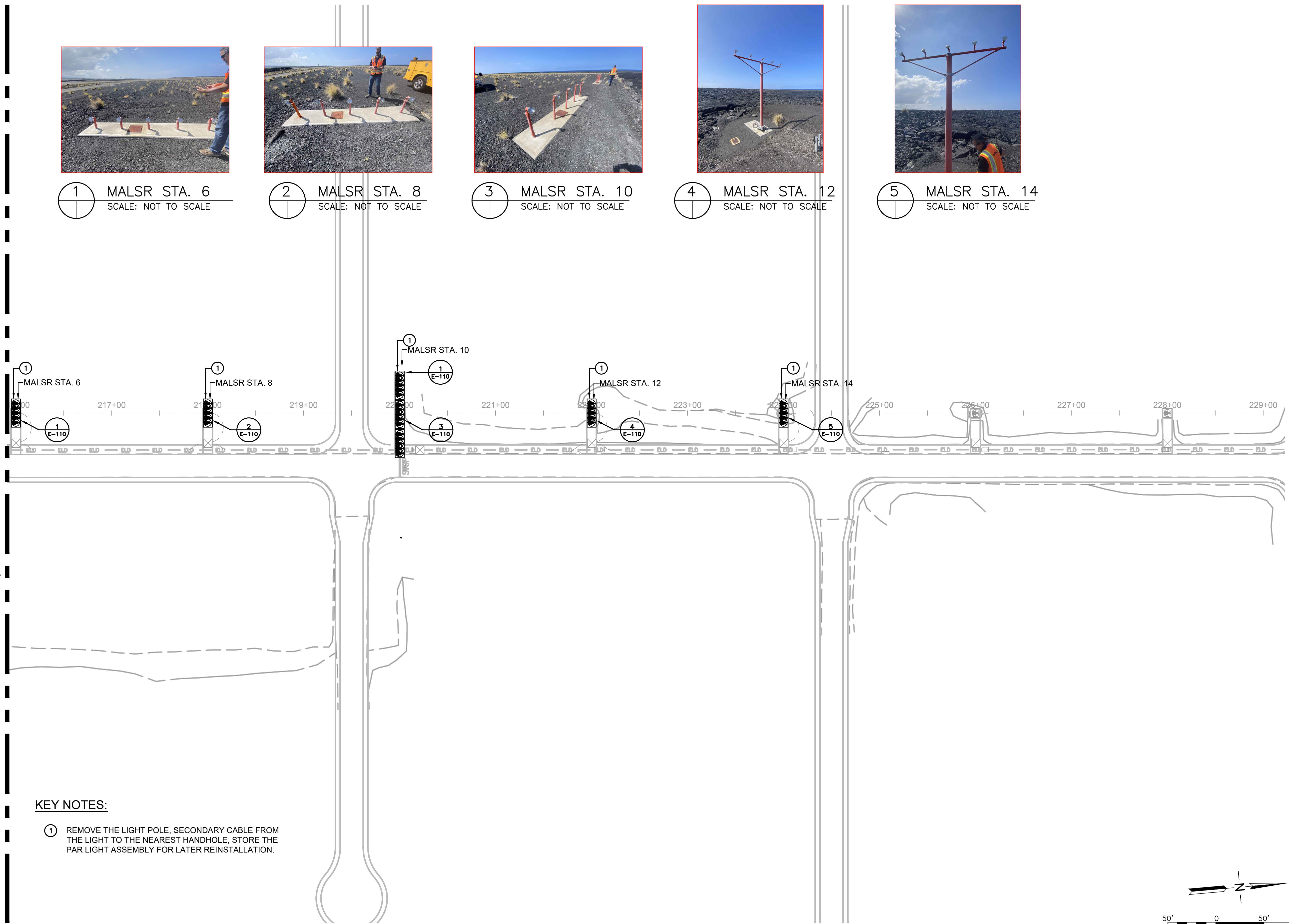


4 MALSR STA. 12  
SCALE: NOT TO SCALE



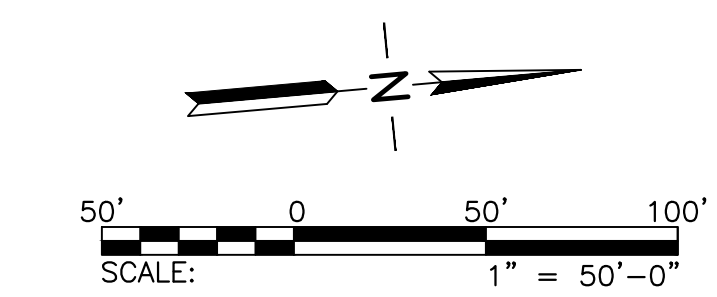
5 MALSR STA. 14  
SCALE: NOT TO SCALE

MATCHLINE, SEE DRAWING E-109



KEY NOTES:

- REMOVE THE LIGHT POLE. SECONDARY CABLE FROM THE LIGHT TO THE NEAREST HANDHOLE. STORE THE PAR LIGHT ASSEMBLY FOR LATER REINSTALLATION.





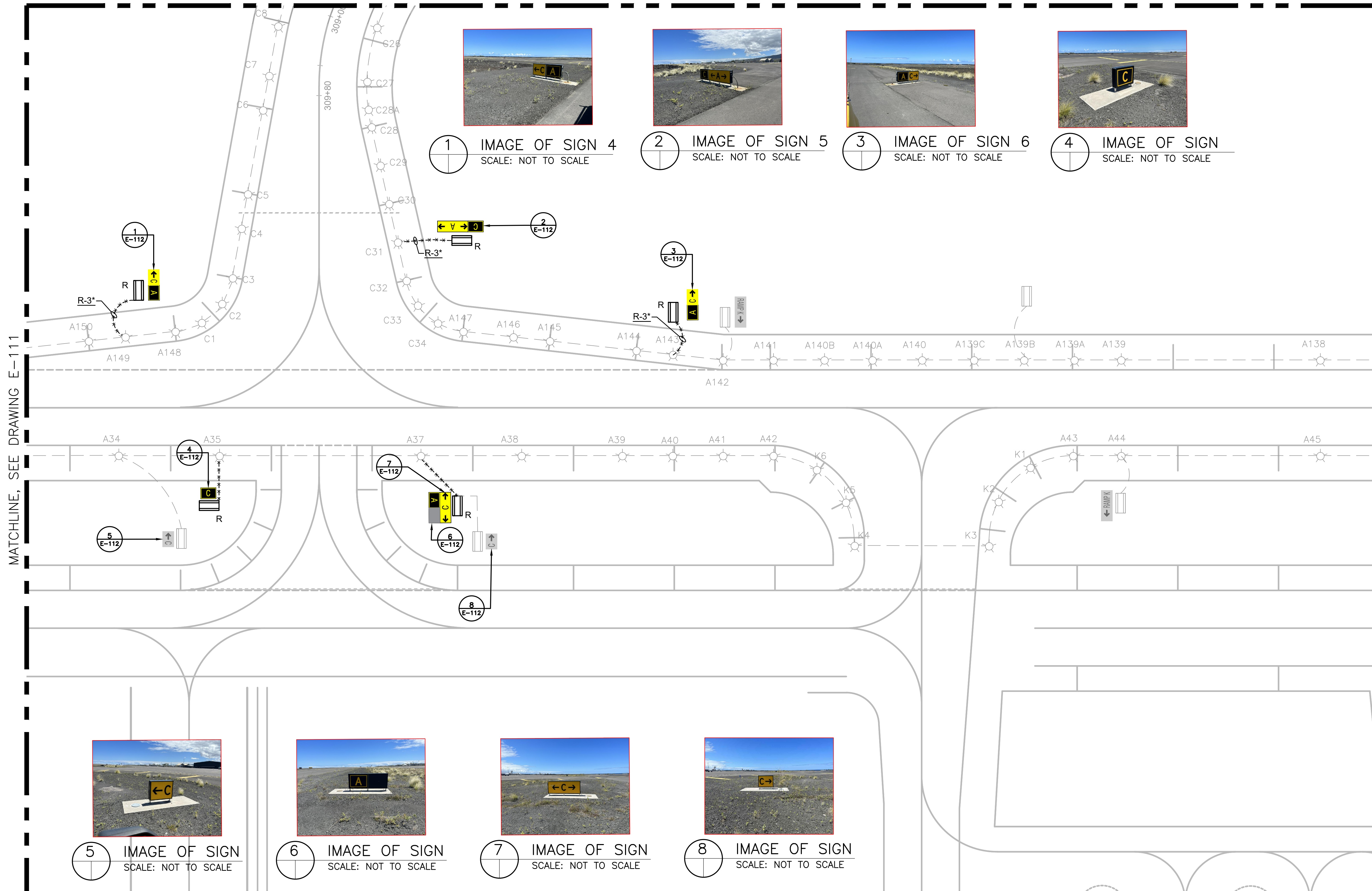




SHEET NOTES:

- REFER TO DRAWINGS E-001 THRU E-002, & E-100 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND.

MATCHLINE, SEE DRAWING E-102



1 IMAGE OF SIGN 4  
SCALE: NOT TO SCALE



2 IMAGE OF SIGN 5  
SCALE: NOT TO SCALE



3 IMAGE OF SIGN 6  
SCALE: NOT TO SCALE



4 IMAGE OF SIGN  
SCALE: NOT TO SCALE



5 IMAGE OF SIGN  
SCALE: NOT TO SCALE



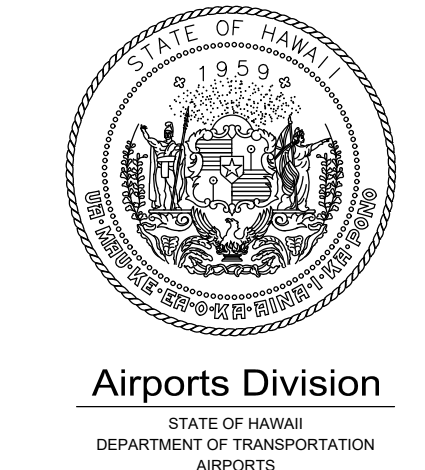
6 IMAGE OF SIGN  
SCALE: NOT TO SCALE



7 IMAGE OF SIGN  
SCALE: NOT TO SCALE

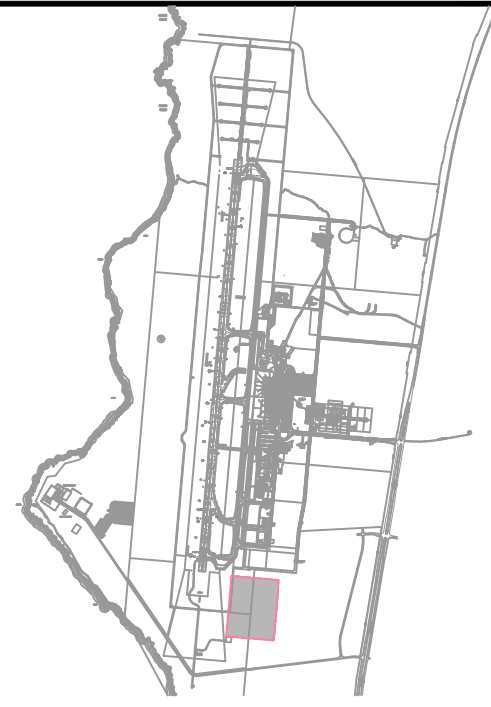


8 IMAGE OF SIGN  
SCALE: NOT TO SCALE



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KEY PLAN / NOTES:



NO.	DATE	REVISIONS
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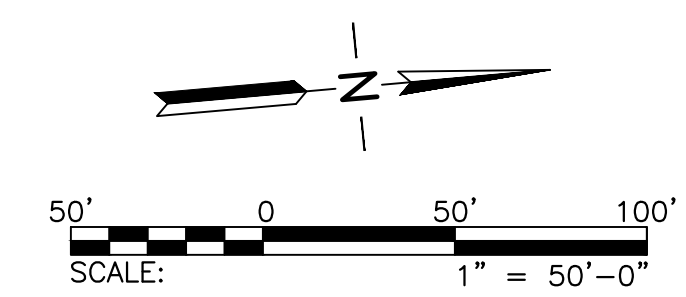
**CONSTRUCTION DOCUMENT**  
SEPTEMBER 2023  
DATE

PROJECT TITLE :  
**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

PROJECT NO.:  
**AH2021-16**

SHEET TITLE:  
**AIRFIELD LIGHTING DEMOLITION PLAN**  
12

DATE : 09/2023	DWG. NO. <b>E-112</b>
SHEET : 120 OF 190 SHEETS	













SHEET NOTES:

1. REFER TO DRAWINGS E-001 THRU E-002, & E-100 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND.

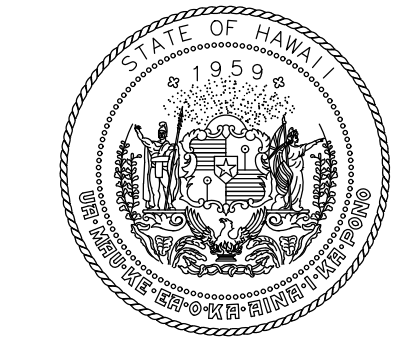
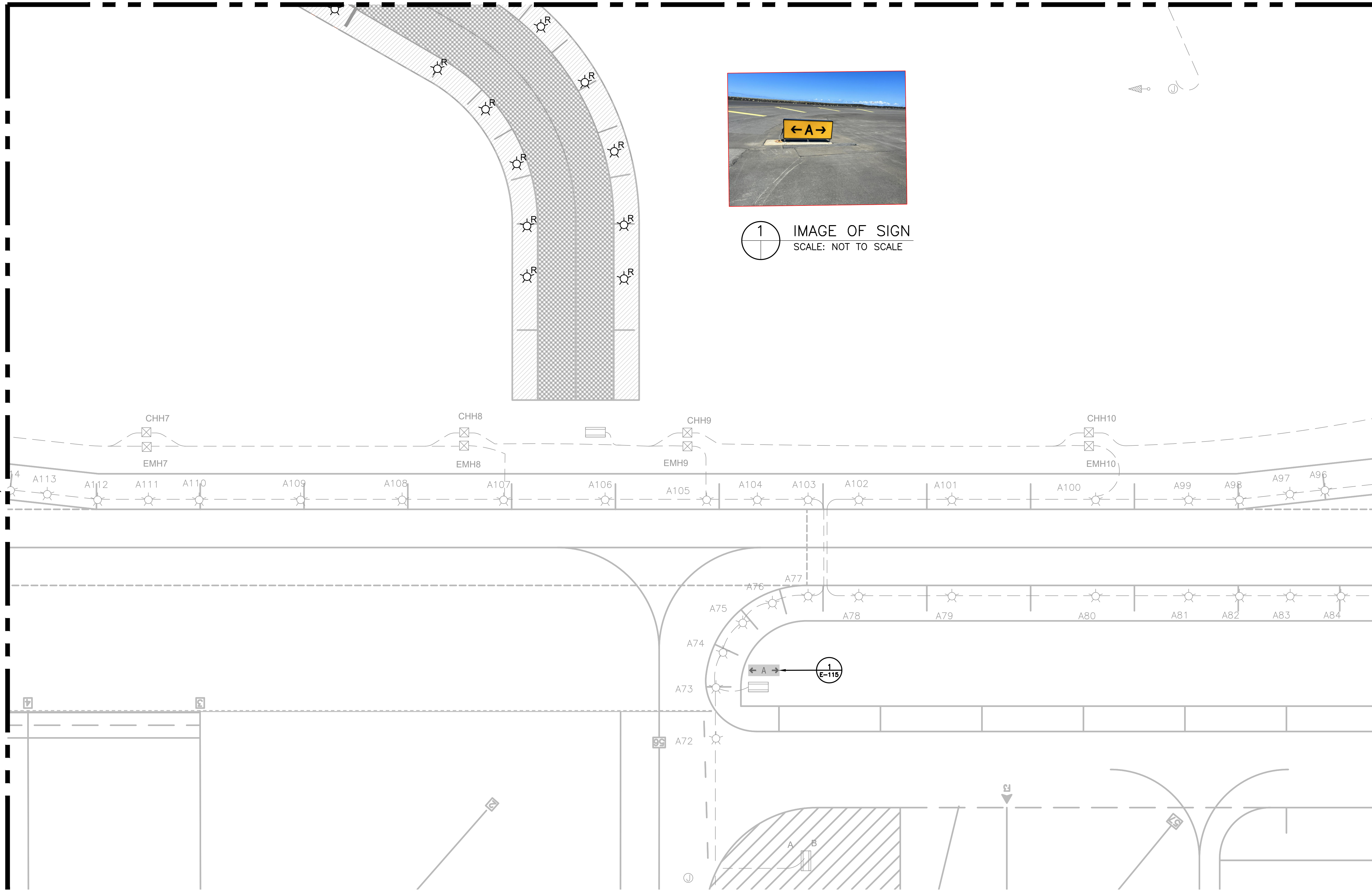
MATCHLINE, SEE DRAWING E-105



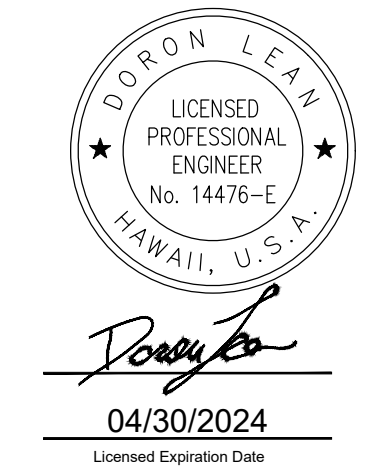
1 IMAGE OF SIGN  
SCALE: NOT TO SCALE

MATCHLINE, SEE DRAWING E-114

MATCHLINE, SEE DRAWING E-116



Airports Division  
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KEY PLAN / NOTES:



NO.	DATE	REVISIONS
<b>CONSTRUCTION DOCUMENT</b>		
SEPTEMBER 2023 DATE		

PROJECT TITLE :

**RUNWAY 17-35  
REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

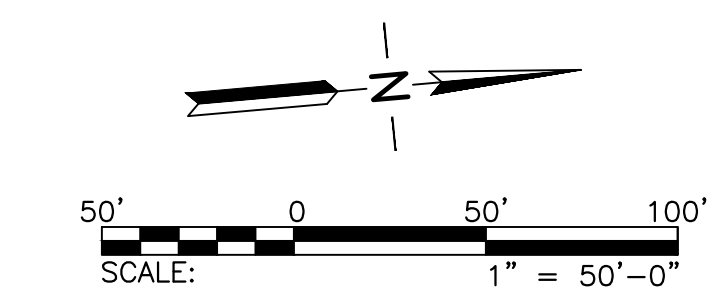
PROJECT NO.:

**AH2021-16**

SHEET TITLE:

**AIRFIELD LIGHTING  
DEMOLITION PLAN  
15**

DATE :	DWG. NO.
09/2023	<b>E-115</b>
SHEET :	
123 OF 190 SHEETS	

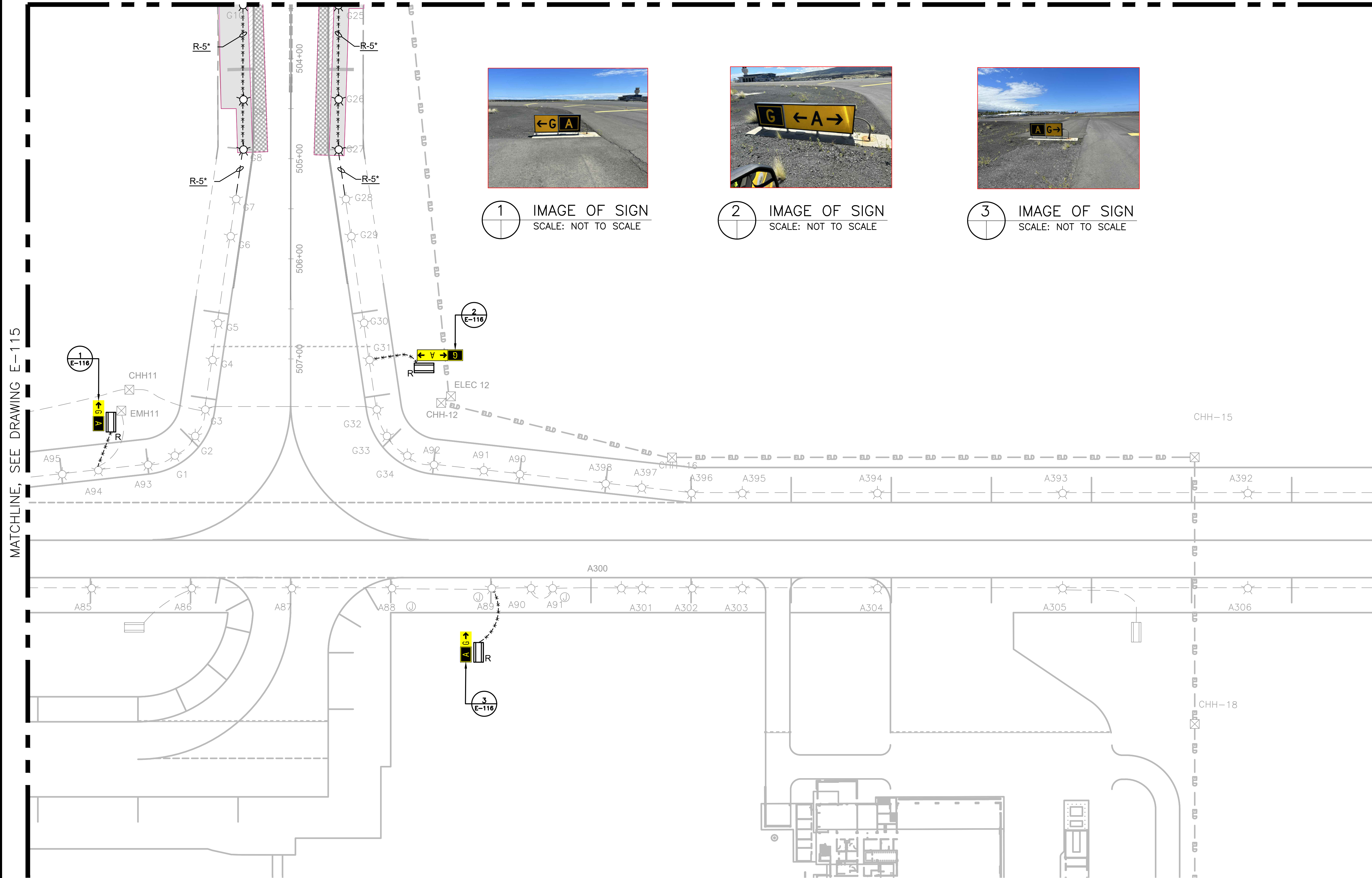




SHEET NOTES:

1. REFER TO DRAWINGS E-001 THRU E-002, & E-100 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND.

MATCHLINE, SEE DRAWING E-106



1 IMAGE OF SIGN  
SCALE: NOT TO SCALE

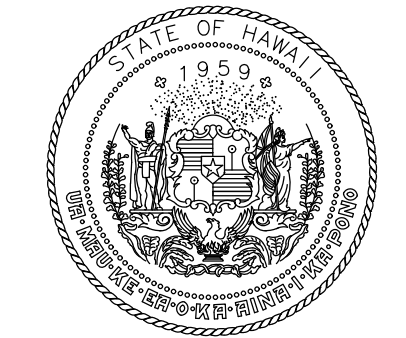


2 IMAGE OF SIGN  
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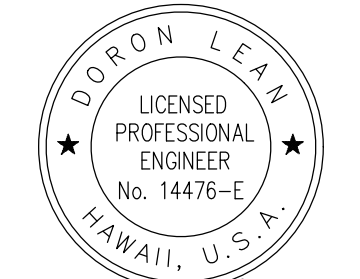


3 IMAGE OF SIGN  
SCALE: NOT TO SCALE

MATCHLINE, SEE DRAWING E-115



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STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
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KEY PLAN / NOTES:



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENT**  
SEPTEMBER 2023  
DATE

PROJECT TITLE :

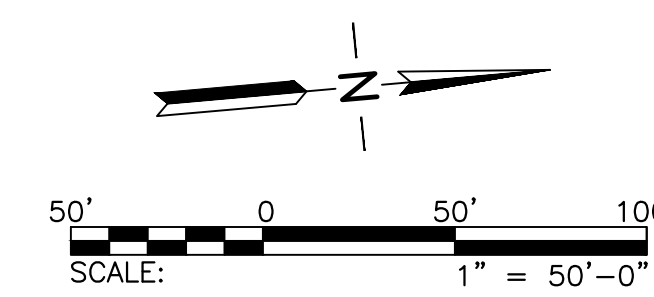
**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

PROJECT NO.:

**AH2021-16**

SHEET TITLE:

**AIRFIELD LIGHTING DEMOLITION PLAN**  
**16**



DATE :	09/2023	DWG. NO.	<b>E-116</b>
SHEET :	124 OF 190 SHEETS		



**SHEET NOTES:**

- REFER TO DRAWINGS E-001 & E-002 FOR GENERAL NOTES AND ABBREVIATIONS.
- REFER TO E-500 SERIES FOR AIRFIELD LIGHTING DETAILS AND E-600 SERIES FOR MALSR DETAILS

**ELECTRICAL PROPOSED LEGEND**

LEGEND APPLIES TO SHEET E-201 THRU E-217	
	INSTALL NEW AIRFIELD ELECTRICAL 2" PVC SCH 40 CONDUIT & CABLE. "R-2" DENOTES CONSTANT CURRENT REGULATOR DESIGNATION WITH 1-1/C #8, 5KV RATED L-824C CABLE AND #6 600V RATED GREEN GROUND WIRE. *** DENOTES 2-1/C #8, 5KV RATED L-824C CABLE AND #6 600V RATED GREEN GROUND WIRE. REFER TO DWG E-506 FOR CONDUIT INSTALLATION.
	INSTALL NEW CABLE IN EXISTING CONDUIT. "R-2" DENOTES CONSTANT CURRENT REGULATOR DESIGNATION WITH 1-1/C #8, 5KV RATED L-824C CABLE AND #6 600V RATED GREEN GROUND WIRE. *** DENOTES 2-1/C #8, 5KV RATED L-824C CABLE AND #6 600V RATED GREEN GROUND WIRE.
	INSTALL NEW AIRFIELD ELECTRICAL CONCRETE ENCASED DUCTBANK. "4W-4" DENOTES NUMBER OF CONDUITS AND SIZE OF EACH CONDUIT. "MALSRL" DENOTES MALSRL CIRCUIT DESIGNATION WITH 2-1/C #8, 5KV RATED L-824C CABLE AND #6 600V RATED GREEN GROUND WIRE. REFER TO DWG E-511 FOR DUCTBANK INSTALLATION.
	REINSTALL EXISTING MALSR LIGHT ON NEW FOUNDATION. REFER TO E-600 SERIES OF DRAWINGS FOR WORK, CABLING, & FOUNDATION DETAIL. REFER TO DWG E-610 FOR MALSR LIGHT AND FOUNDATION INSTALLATION.
	5 LIGHT MALSR BAR. REFER TO E-600 SERIES OF DRAWINGS FOR WORK DESCRIPTION DETAILS.
	INSTALL NEW L-850C(L) SEMI-FLUSH RUNWAY EDGE/END/THRESHOLD LIGHT WITH NEW TRANSFORMER ON NEW L-868B BASE CAN. LETTERS ADJACENT TO SYMBOLS DENOTE: - "R45" DENOTES FIXTURE ID. - REFER TO NOTE 1 FOR COLOR CODE. REFER TO DWG E-501 DETAIL 1 FOR INSTALLATION.
	INSTALL NEW L-850C(L) SEMI-FLUSH RUNWAY EDGE LIGHT ON EXISTING L-868B BASE CAN WITH NEW TRANSFORMER AND NEW SPACER PACKAGE. LETTERS ADJACENT TO SYMBOLS DENOTE: - "R45" DENOTES FIXTURE ID. - REFER TO NOTE 1 FOR COLOR CODE. REFER TO DWG E-508 AND E-509 DETAIL 1 FOR INSTALLATION.
	INSTALL NEW L-862(L)/L-862E(L) ELEVATED RUNWAY EDGE/END/THRESHOLD LIGHT WITH NEW TRANSFORMER ON NEW L-868B BASE CAN. LETTERS ADJACENT TO SYMBOLS DENOTE: - "R45" DENOTES FIXTURE ID. - REFER TO NOTE 1 FOR COLOR CODE. REFER TO DWG E-501 DETAIL 1 FOR INSTALLATION.
	INSTALL NEW L-862(L)/L-862E(L) ELEVATED RUNWAY EDGE LIGHT ON L-868B BASE CAN WITH NEW TRANSFORMER AND NEW EXTENSION. LETTERS ADJACENT TO SYMBOLS DENOTE: - "R45" DENOTES FIXTURE ID. - REFER TO NOTE 1 FOR COLOR CODE. REFER TO DWG E-507 DETAIL 1 FOR INSTALLATION.
	INSTALL NEW L-862(L)/L-862E(L) ELEVATED RUNWAY EDGE LIGHT ON L-868B BASE CAN WITH NEW TRANSFORMER AND NEW SPACER PACKAGE. LETTERS ADJACENT TO SYMBOLS DENOTE: - "R45" DENOTES FIXTURE ID. - REFER TO NOTE 1 FOR COLOR CODE. REFER TO DWG E-508 AND E-509 DETAIL 1 FOR INSTALLATION.
	INSTALL NEW L-861T(L) ELEVATED LED TAXIWAY EDGE LIGHT ON NEW L-868B BASE CAN. LETTERS ADJACENT TO SYMBOLS DENOTE: - "YT45" DENOTES FIXTURE ID.
	INSTALL NEW L-861T(L) ELEVATED LED TAXIWAY EDGE LIGHT ON NEW L-868B BASE CAN. LETTERS ADJACENT TO SYMBOLS DENOTE: - "YT45" DENOTES FIXTURE ID. REFER TO DWG E-501 DETAIL 1 FOR INSTALLATION.
	INSTALL NEW L-861T(L) ELEVATED LED TAXIWAY EDGE LIGHT ON NEW L-868B BASE CAN. LETTERS ADJACENT TO SYMBOLS DENOTE: - "YT45" DENOTES FIXTURE ID. REFER TO DWG E-508 AND E-509 DETAIL 1 FOR INSTALLATION.
	ADJUST EXISTING HANDHOLE TO BE AIRCRAFT RATED. REFER TO CIVIL SHEET FOR HAND HOLE ADJUSTMENT DETAILS.
	INSTALL 4'X4' AIRCRAFT RATED HANDHOLE. REFER TO DETAIL E-516 FOR INSTALLATION.
	INSTALL NEW COVER PLATE ON L-868B BASE CAN WITH NEW EXTENSION. REFER TO DWG E-501 DETAIL 1 FOR INSTALLATION.

**NOTES:**

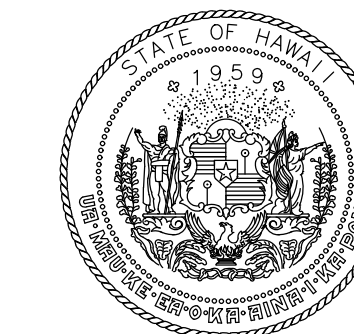
- CONTRACTOR SHALL SURVEY EXISTING RWY COLOR CODE. REINSTALL THE LIGHT IN THE SAME LOCATION SO THAT THE COLOR CODE REMAINS PROPER.

	INSTALL NEW COVER PLATE ON L-868B BASE CAN WITH NEW SPACER PACKAGE. REFER TO DWG E-508 AND E-509 DETAIL 1 FOR INSTALLATION.
	INTERCEPT EXISTING CONDUIT WITH NEW CONDUIT. NEW CONDUIT CONNECTED AT BOLD END.
	INSTALL NEW AIRFIELD GUIDANCE SIGN AND ASSOCIATED HARDWARE ON NEW FOUNDATION. REFER TO DWG E-512 AND E-513 DETAIL 1 FOR INSTALLATION.

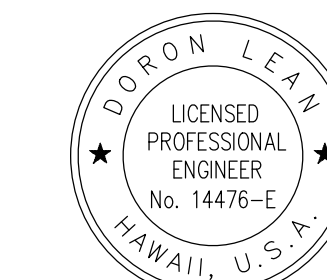
EXISTING (FOR SHEETS E-201 THRU E-210)	
	EXISTING CONDUIT & CABLE TO REMAIN.
	EXISTING DUCTBANK & CABLE TO REMAIN.
	EXISTING ABANDONED CONDUIT TO REMAIN.
	EDGE OF ASPHALT LIMITS. SHOWN FOR REFERENCE ONLY.
	EXISTING FAA ELD CONDUIT/DUCTBANK TO BE REMAIN
	EXISTING RUNWAY EDGE LIGHT & BASE CAN TO REMAIN.
	EXISTING TAXIWAY EDGE LIGHT & BASE CAN TO REMAIN.
	EXISTING AIRFIELD GUIDANCE SIGN TO REMAIN.
	EXISTING ELECTRICAL HANDHOLE TO REMAIN.
	EXISTING WINDCONE AND FOUNDATION TO REMAIN.
	EXISTING PAPI AND FOUNDATION TO REMAIN.

ELD CABLE SCHEDULE	
ELD CABLE #1	15KV 1-1/C #2 AWG CU MV-105 CONCENTRIC NEUTRAL CABLE.

CIVIL DEMOLITION (FOR SHEETS E-201 THRU E-210)	
	APPROXIMATE CIVIL PAVEMENT LIMITS. SHOWN AS REFERENCE ONLY, REFER TO CIVIL DWGS FOR DETAILS.
	APPROXIMATE RUNWAY/TAXIWAY AC MILLING (0.5" TO 4" DEPTH) DEMOLITION LIMITS. SHOWN AS REFERENCE ONLY, REFER TO CIVIL DWGS FOR DETAILS.
	APPROXIMATE RUNWAY/TAXIWAY AC PAVING (1.5" TO 4" DEPTH) DEMOLITION LIMITS. SHOWN AS REFERENCE ONLY, REFER TO CIVIL DWGS FOR DETAILS.
	APPROXIMATE RUNWAY/TAXIWAY AC PAVING (8" TO 14" DEPTH) DEMOLITION LIMITS. SHOWN AS REFERENCE ONLY, REFER TO CIVIL DWGS FOR DETAILS.
	APPROXIMATE RUNWAY/TAXIWAY PCC DEMOLITION LIMITS. SHOWN AS REFERENCE ONLY, REFER TO CIVIL DWGS FOR DETAILS.



Airports Division  
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS



Doron Leung  
04/30/2024  
Licensed Expiration Date

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JP	KV	JA	DL

**KEY PLAN / NOTES:**

NO.	DATE	REVISIONS

**CONSTRUCTION DOCUMENT**  
SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

**SHEET TITLE:**

**AIRFIELD LIGHTING NEW LEGEND**

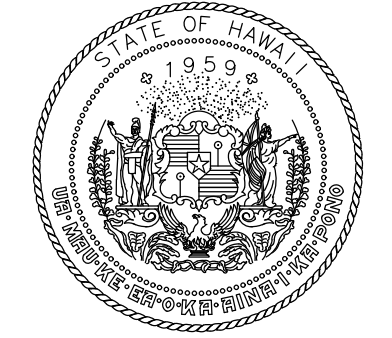
DATE :	09/2023	DWG. NO.	<b>E-200</b>
SHEET :	125 OF 190 SHEETS		





SHEET NOTES:

- REFER TO DRAWINGS E-001 THRU E-002, & E-200 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND.



Airports Division  
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DEPARTMENT OF TRANSPORTATION  
AIRPORTS



DORON LEAV  
LICENSED PROFESSIONAL ENGINEER  
No. 14476-E  
HAWAII, U.S.A.  
*Doron Leav*  
04/30/2024  
Licensed Expiration Date

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JP	KV	JA	DL

KEY PLAN / NOTES:



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENT**  
SEPTEMBER 2023  
DATE

PROJECT TITLE :

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

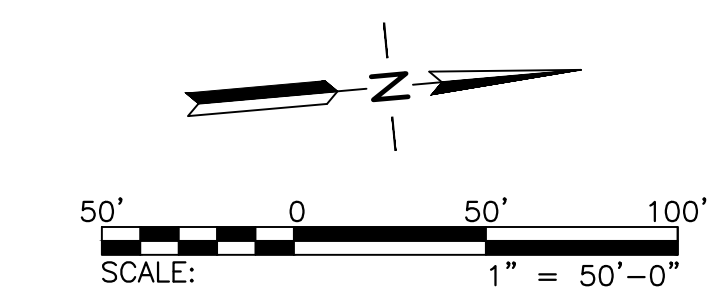
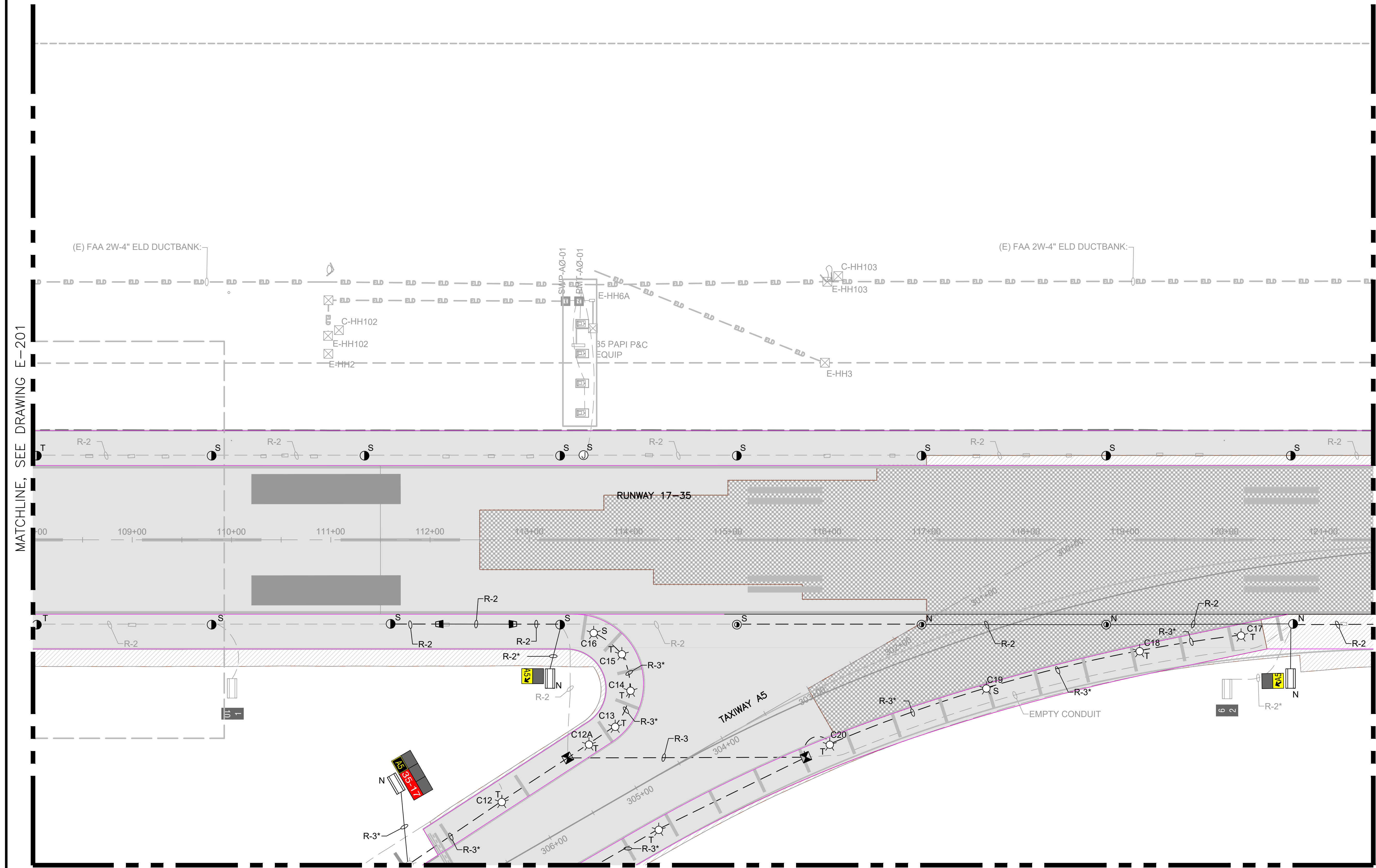
PROJECT NO.:

**AH2021-16**

SHEET TITLE:

**AIRFIELD LIGHTING  
NEW PLAN 2**

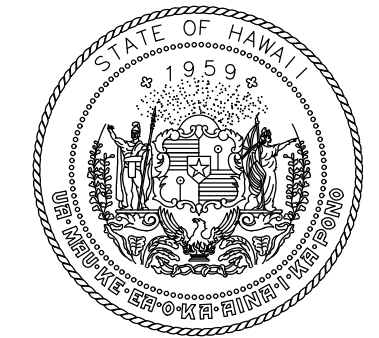
DATE :	DWG. NO.
09/2023	<b>E-202</b>
SHEET :	
127 OF 190 SHEETS	



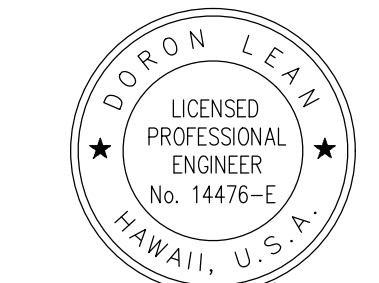


SHEET NOTES:

- REFER TO DRAWINGS E-001 THRU E-002, & E-200 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND.



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KEY PLAN / NOTES:



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENT**

SEPTEMBER 2023  
DATE

PROJECT TITLE :

**RUNWAY 17-35  
REHABILITATION**

AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

PROJECT NO.:

**AH2021-16**

SHEET TITLE:

**AIRFIELD LIGHTING  
NEW PLAN 3**

DATE :

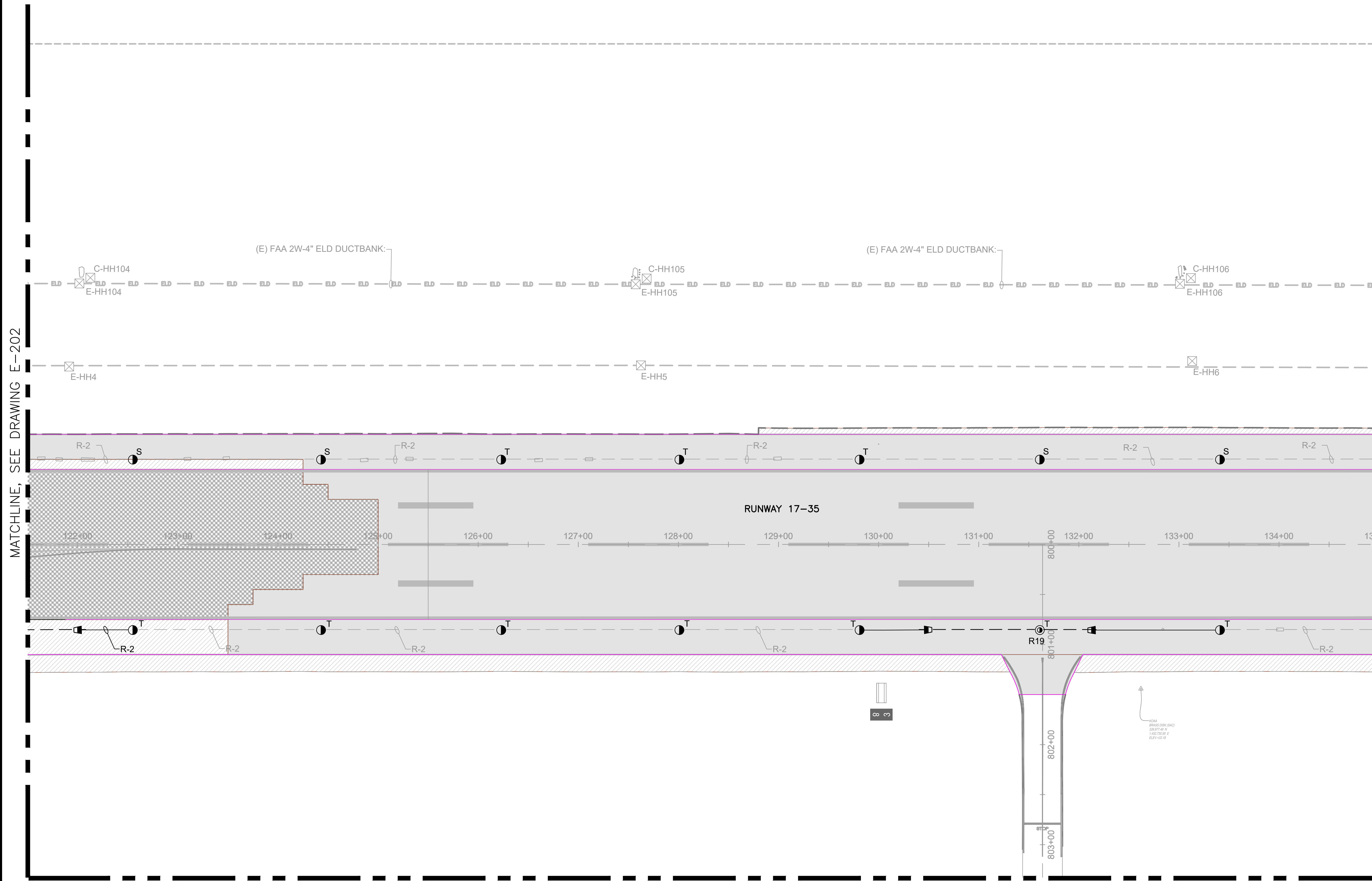
09/2023

SHEET :

128 OF 190 SHEETS

DWG. NO.

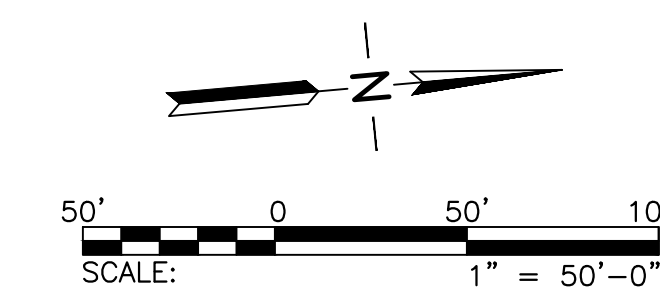
**E-203**



MATCHLINE, SEE DRAWING E-202

MATCHLINE, SEE DRAWING E-204

MATCHLINE, SEE DRAWING E-213



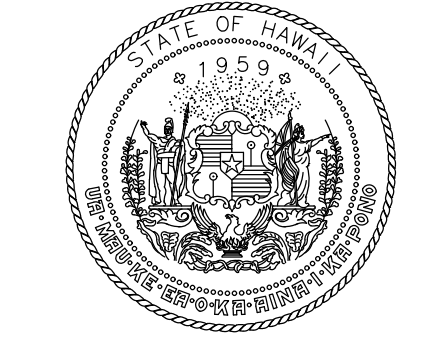
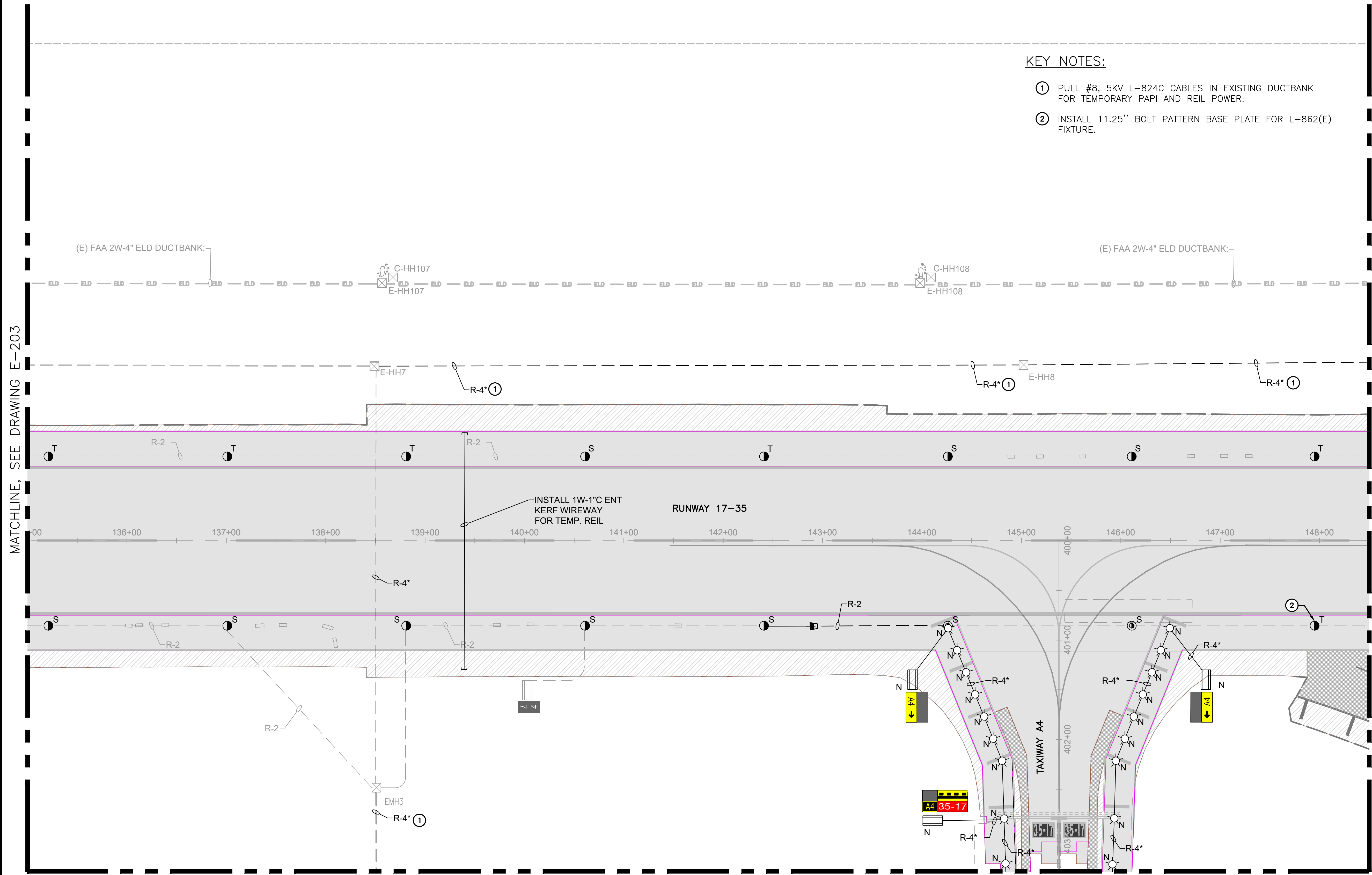


**SHEET NOTES:**

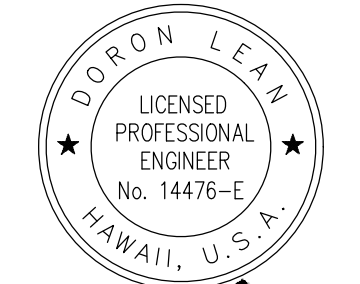
1. REFER TO DRAWINGS E-001 THRU E-002, & E-200 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND.

**KEY NOTES:**

- ① PULL #8, 5KV L-824C CABLES IN EXISTING DUCTBANK FOR TEMPORARY PAPI AND REIL POWER.
- ② INSTALL 11.25" BOLT PATTERN BASE PLATE FOR L-862(E) FIXTURE.



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JP	KV	JA	DL

**KEY PLAN / NOTES:**



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENT**

SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**

AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

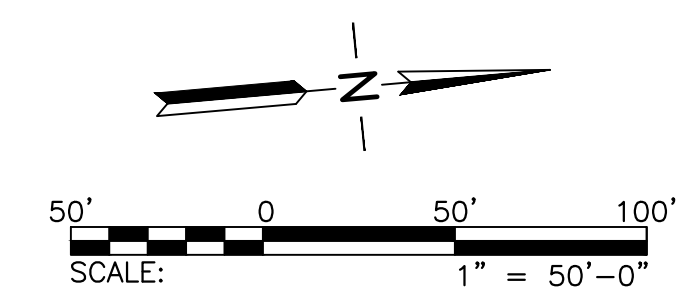
**PROJECT NO.:**

**AH2021-16**

**SHEET TITLE:**

**AIRFIELD LIGHTING  
NEW PLAN 4**

DATE :	DWG. NO.
09/2023	<b>E-204</b>
SHEET :	
129 OF 190 SHEETS	



MATCHLINE, SEE DRAWING E-203

MATCHLINE, SEE DRAWING E-205

MATCHLINE, SEE DRAWING E-214

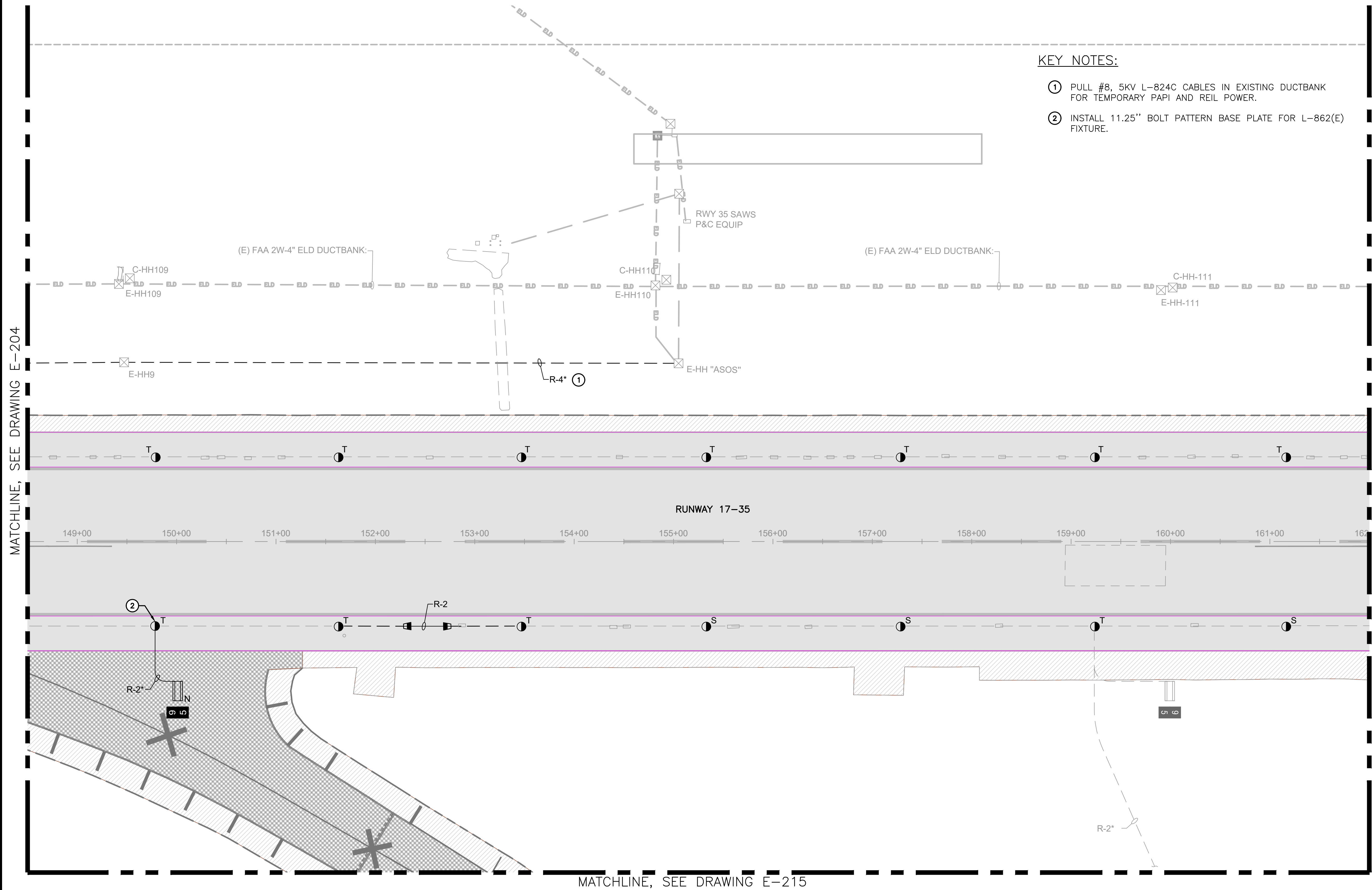
© USER: EDUARDO SALDANES | LEAN PHOTOMETRICS | D:\PROJECTS\ACTIVE PROJECTS\1472\02A\_01\ONION\KONA RUNWAY REHABILITATION\DRAWINGS\WORKING DRAWINGS\SHEET E-204\NEW AREA.DWG

**SHEET NOTES:**

1. REFER TO DRAWINGS E-001 THRU E-002, & E-200 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND.

**KEY NOTES:**

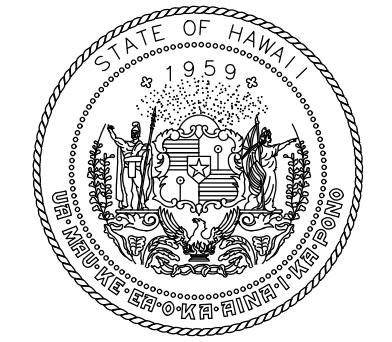
- ① PULL #8, 5KV L-824C CABLES IN EXISTING DUCTBANK FOR TEMPORARY PAPI AND REIL POWER.
- ② INSTALL 11.25" BOLT PATTERN BASE PLATE FOR L-862(E) FIXTURE.



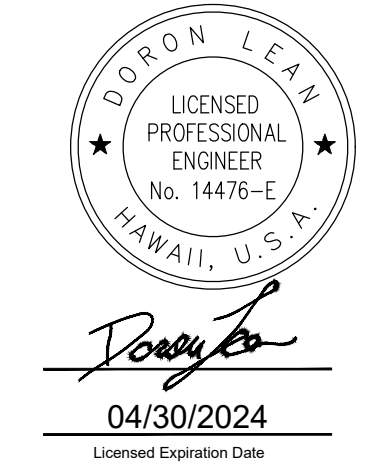
MATCHLINE, SEE DRAWING E-204

MATCHLINE, SEE DRAWING E-206

MATCHLINE, SEE DRAWING E-215



Airports Division  
STATE OF HAWAII  
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AIRPORTS



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JP	KV	JA	DL

**KEY PLAN / NOTES:**



NO.	DATE	REVISIONS

**CONSTRUCTION DOCUMENT**  
SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

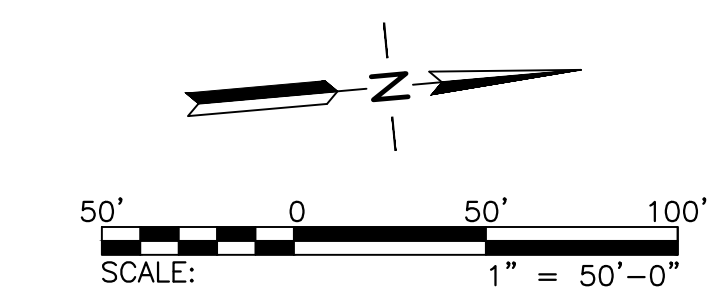
**PROJECT NO.:**

**AH2021-16**

**SHEET TITLE:**

**AIRFIELD LIGHTING  
NEW PLAN 5**

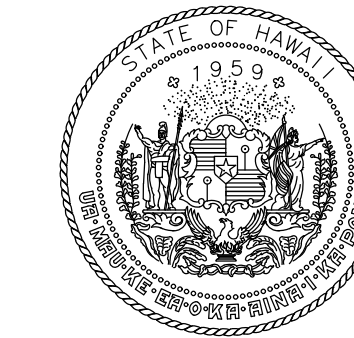
DATE :	DWG. NO.
09/2023	<b>E-205</b>
SHEET :	
130 OF 190 SHEETS	



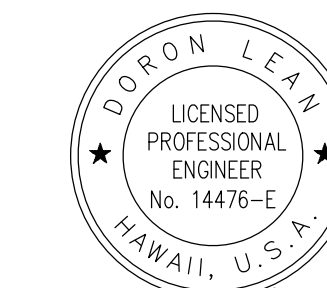


SHEET NOTES:

- REFER TO DRAWINGS E-001 THRU E-002, & E-200 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND.



Airports Division  
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS



DORON LEO  
LICENSED PROFESSIONAL ENGINEER  
No. 14476-E  
HAWAII, U.S.A.  
*Doron Leao*  
04/30/2024  
Licensed Expiration Date

DSGN.	DRWN.	CHKD.	APPD.
JP	KV	JA	DL

KEY PLAN / NOTES:



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENT**

SEPTEMBER 2023  
DATE

PROJECT TITLE :

**RUNWAY 17-35  
REHABILITATION**

AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

PROJECT NO.:

**AH2021-16**

SHEET TITLE:

**AIRFIELD LIGHTING  
NEW PLAN 6**

DATE :

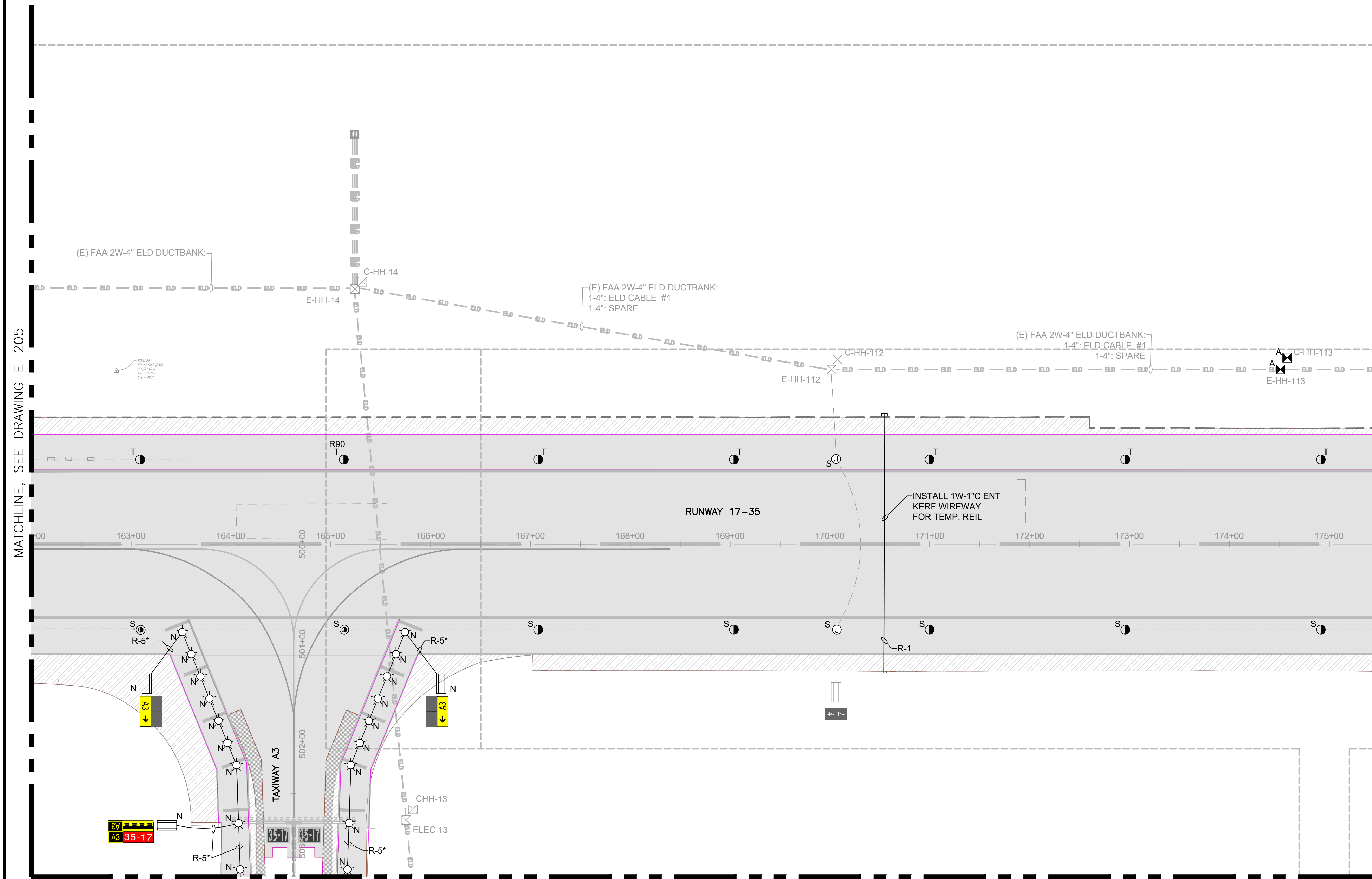
09/2023

SHEET :

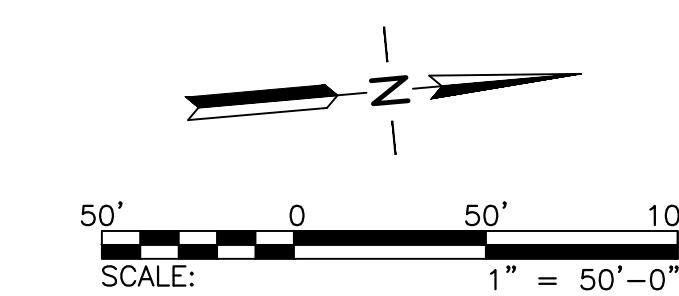
131 OF 190 SHEETS

DWG. NO.

**E-206**



MATCHLINE, SEE DRAWING E-216





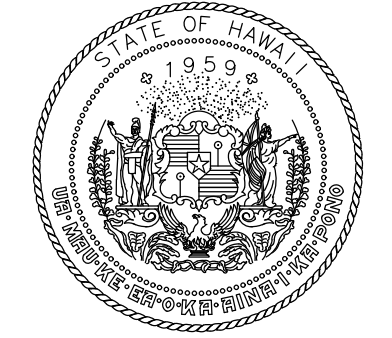






SHEET NOTES:

- REFER TO DRAWINGS E-001 THRU E-002, & E-200 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND.



Airports Division  
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS



Doron Leao  
LICENSED PROFESSIONAL ENGINEER  
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HAWAII, U.S.A.  
04/30/2024  
Licensed Expiration Date

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JP	KV	JA	DL

KEY PLAN / NOTES:



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENT**  
SEPTEMBER 2023  
DATE

PROJECT TITLE :

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

PROJECT NO.:

**AH2021-16**

SHEET TITLE:

**AIRFIELD LIGHTING  
NEW PLAN 9**

DATE :	09/2023	DWG. NO.	<b>E-209</b>
SHEET :	134 OF 190 SHEETS		

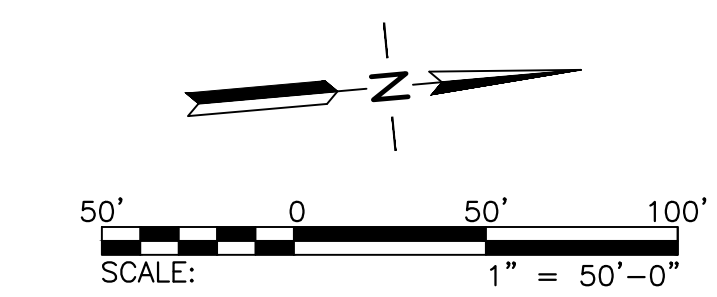
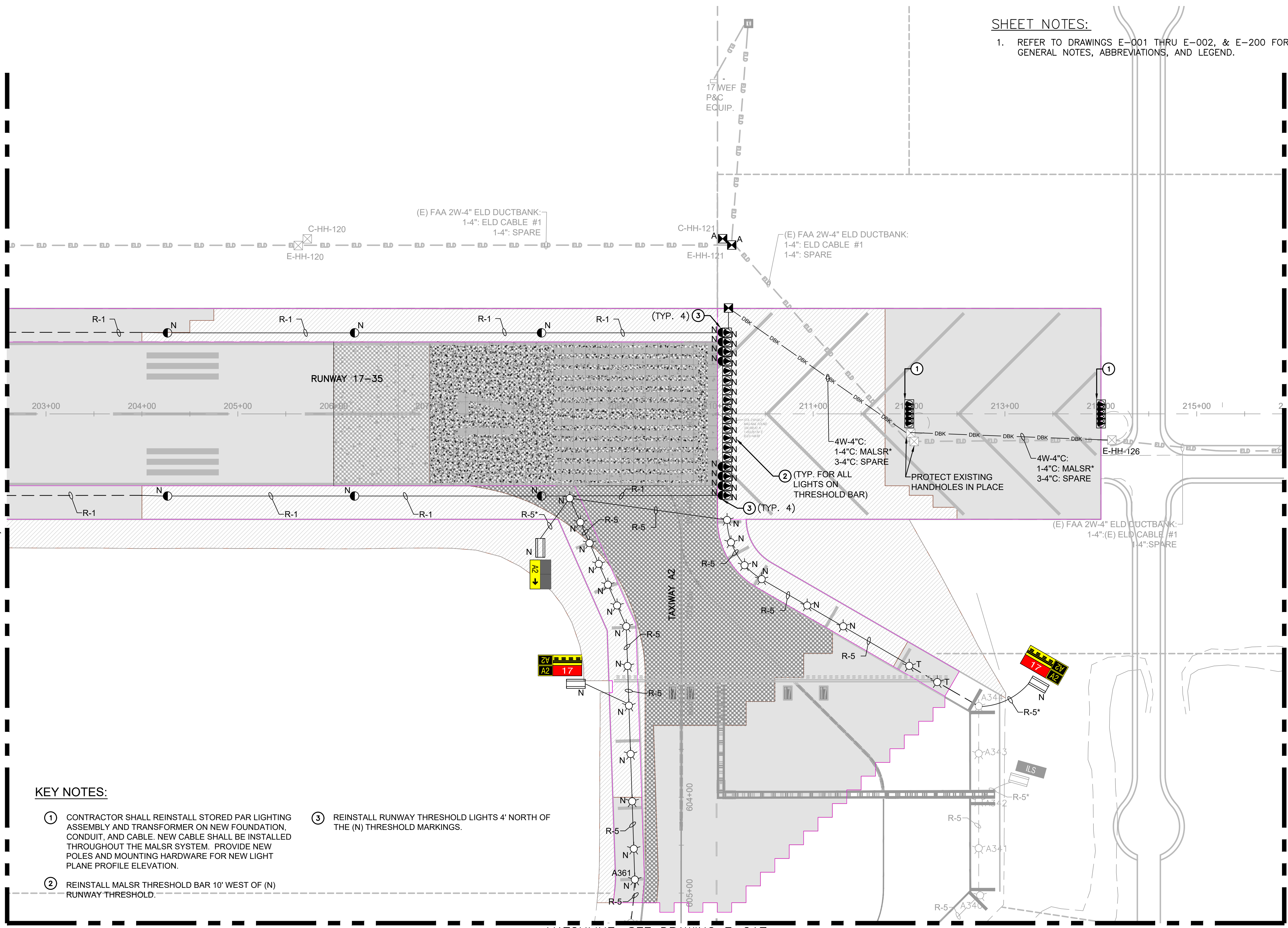
MATCHLINE, SEE DRAWING E-208

MATCHLINE, SEE DRAWING E-210

MATCHLINE, SEE DRAWING E-217

KEY NOTES:

- CONTRACTOR SHALL REINSTALL STORED PAR LIGHTING ASSEMBLY AND TRANSFORMER ON NEW FOUNDATION, CONDUIT, AND CABLE. NEW CABLE SHALL BE INSTALLED THROUGHOUT THE MALSR SYSTEM. PROVIDE NEW POLES AND MOUNTING HARDWARE FOR NEW LIGHT PLANE PROFILE ELEVATION.
- REINSTALL MALSR THRESHOLD BAR 10' WEST OF (N) RUNWAY THRESHOLD.
- REINSTALL RUNWAY THRESHOLD LIGHTS 4' NORTH OF THE (N) THRESHOLD MARKINGS.







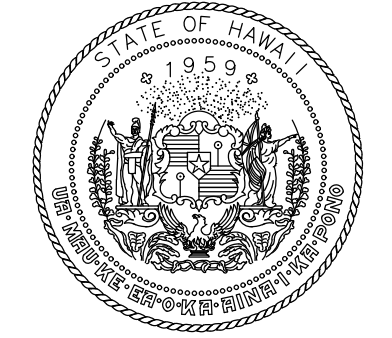
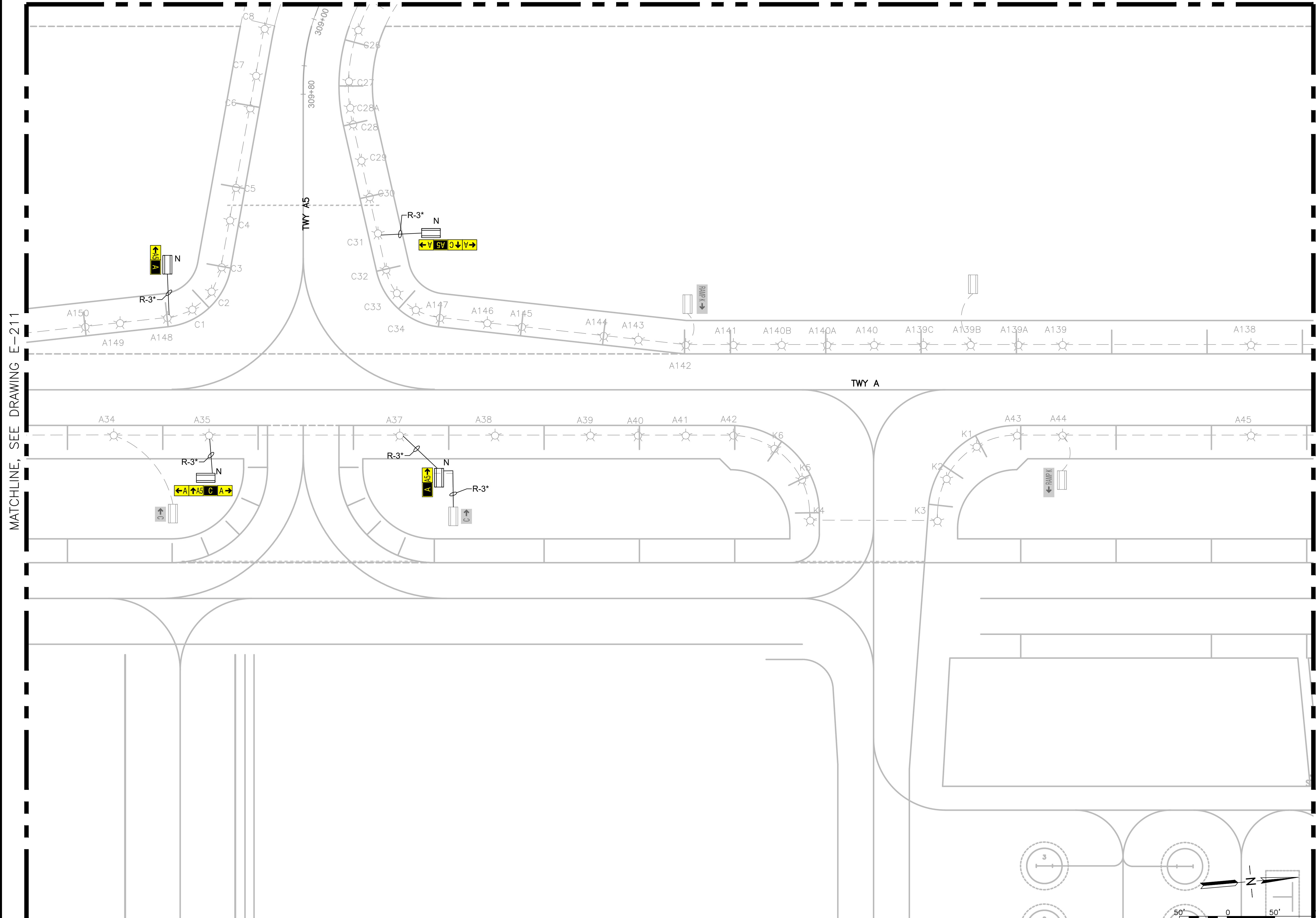




SHEET NOTES:

- REFER TO DRAWINGS E-001 THRU E-002, & E-200 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND.

MATCHLINE, SEE DRAWING E-202



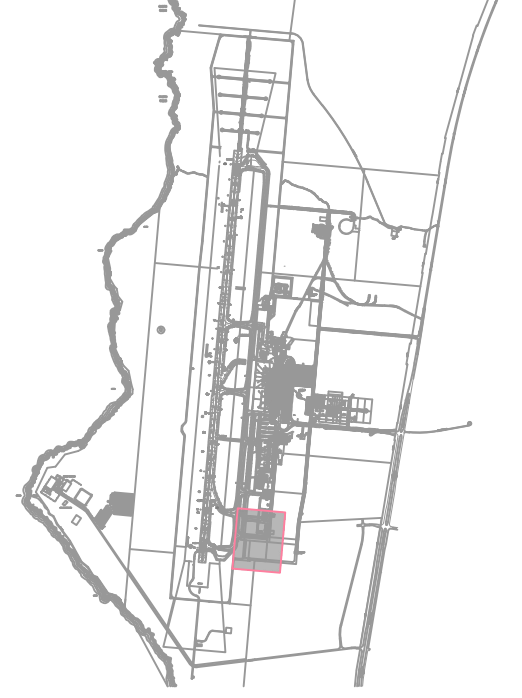
Airports Division  
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS



*Doron Leao*  
04/30/2024  
Licensed Expiration Date

DSGN.	DRWN.	CHKD.	APPD.
JP	KV	JA	DL

KEY PLAN / NOTES:



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENT**

SEPTEMBER 2023  
DATE

PROJECT TITLE :

**RUNWAY 17-35 REHABILITATION**

AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

PROJECT NO.:

**AH2021-16**

SHEET TITLE:

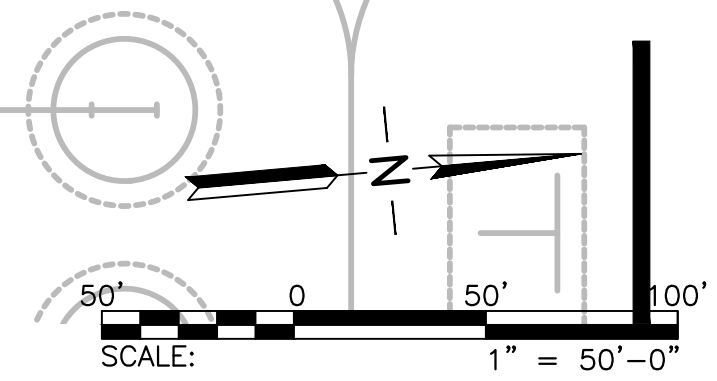
**AIRFIELD LIGHTING  
NEW PLAN 12**

DATE : 09/2023

DWG. NO.

SHEET : 137 OF 190 SHEETS

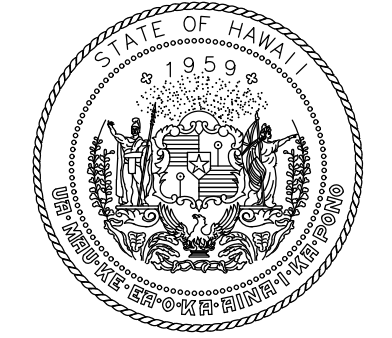
**E-212**



MATCHLINE, SEE DRAWING E-203

**SHEET NOTES:**

1. REFER TO DRAWINGS E-001 THRU E-002, & E-200 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND.



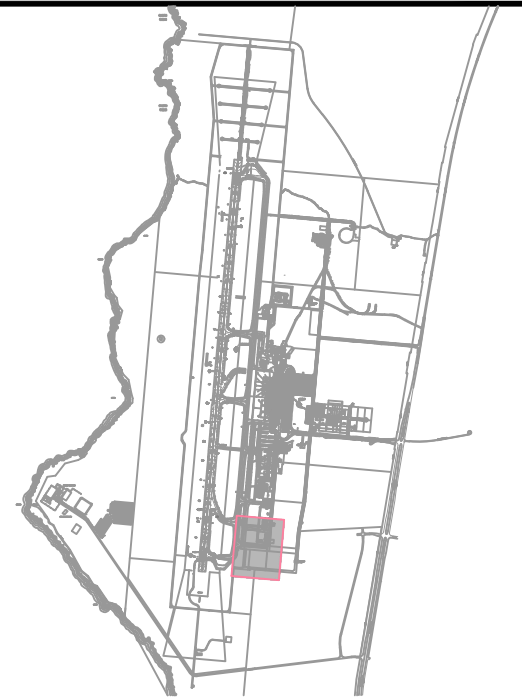
Airports Division  
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS



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JP	KV	JA	DL

**KEY PLAN / NOTES:**



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENT**  
SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

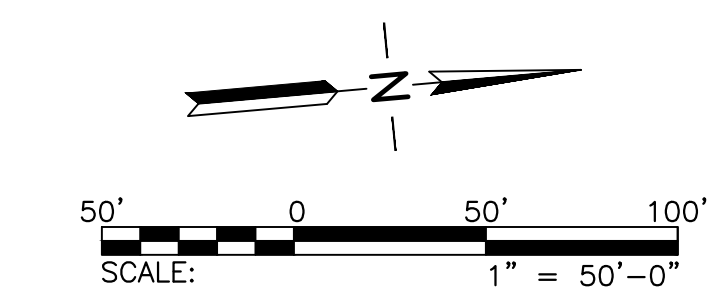
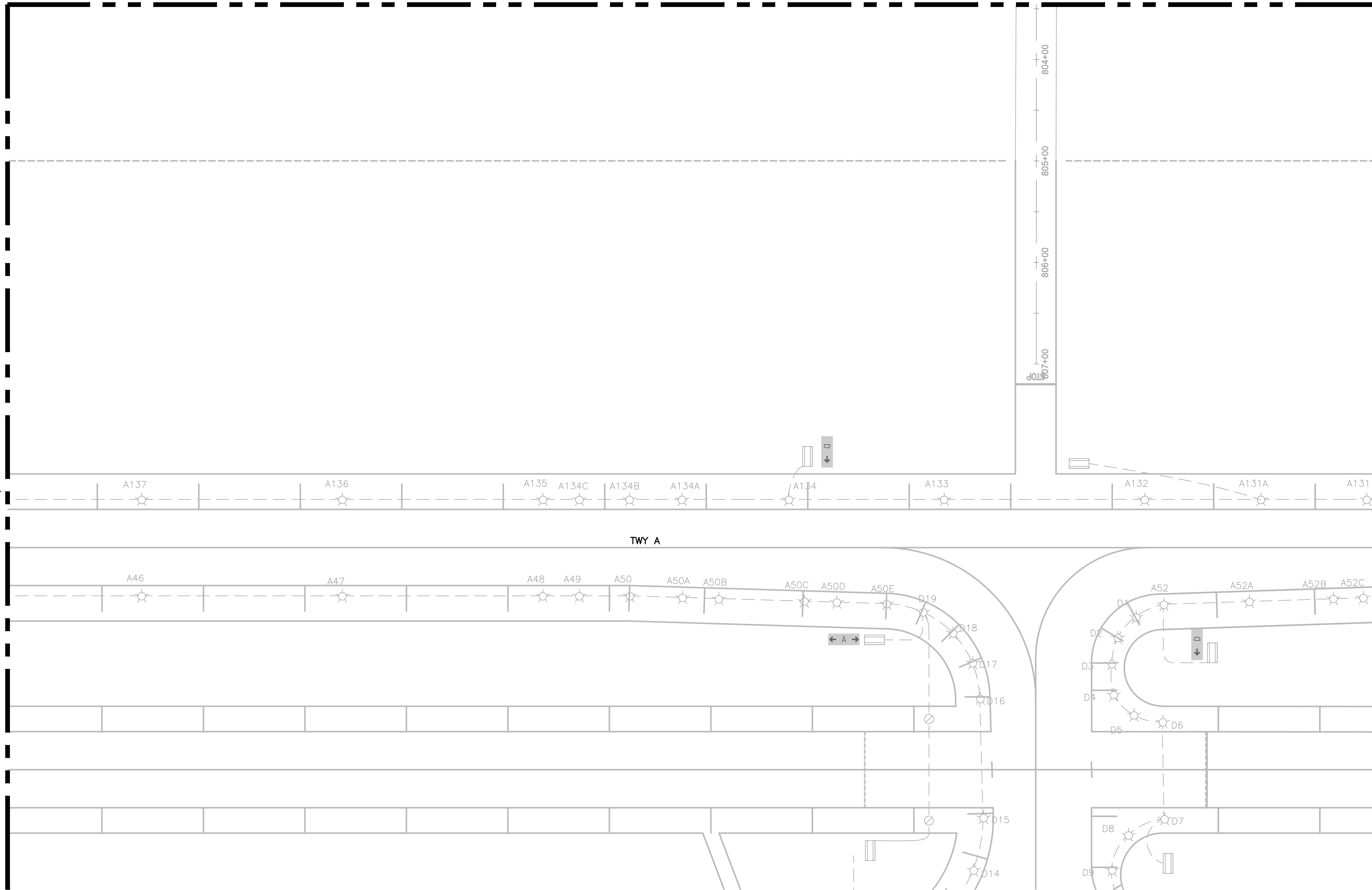
**SHEET TITLE:**

**AIRFIELD LIGHTING  
NEW PLAN 13**

DATE :	DWG. NO.
09/2023	<b>E-213</b>
SHEET :	
138 OF 190 SHEETS	

MATCHLINE, SEE DRAWING E-212

MATCHLINE, SEE DRAWING E-214



C:\USERS\LEAV\PHOTO\METRICS\PROJECTS\1472\02A\_01\RUNWAY\REHABILITATION\DRAWINGS\WORKING DRAWINGS\SHEET E-213 NEW AREA.DWG



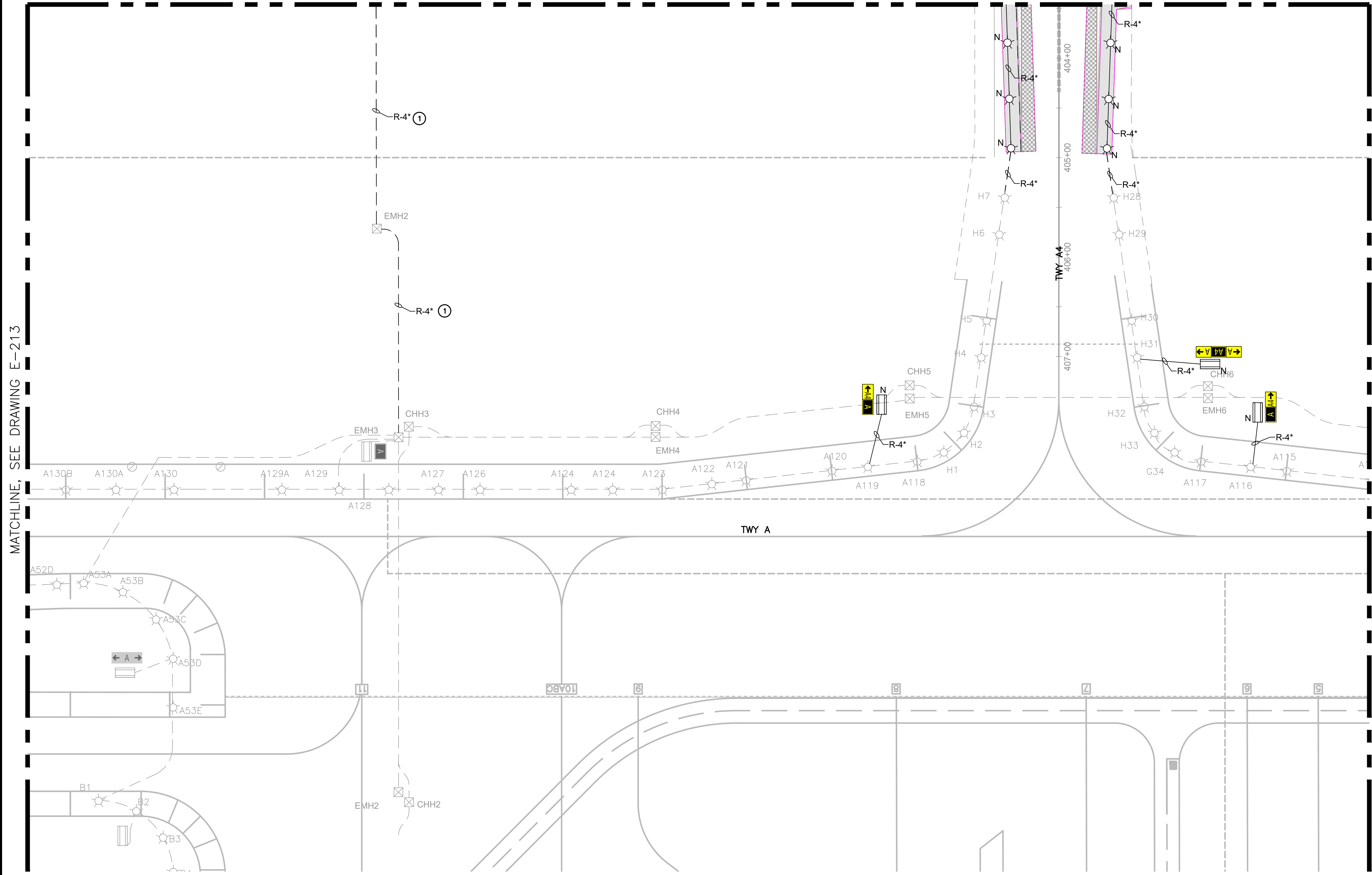
KEY NOTES:

- ① PULL #8, 5KV L-824C CABLES IN EXISTING DUCTBANK FOR TEMPORARY PAPI AND REIL POWER.

SHEET NOTES:

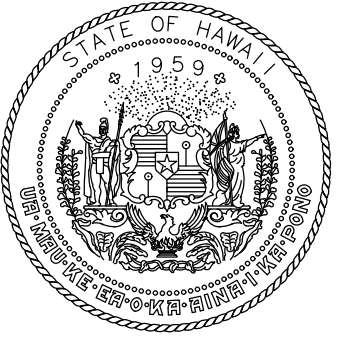
- 1. REFER TO DRAWINGS E-001 THRU E-002, & E-200 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND.

MATCHLINE, SEE DRAWING E-204

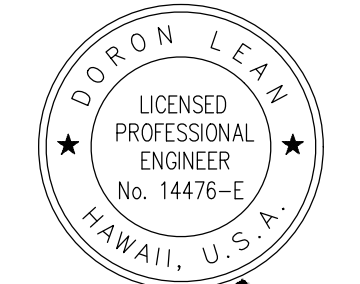


MATCHLINE, SEE DRAWING E-213

MATCHLINE, SEE DRAWING E-215



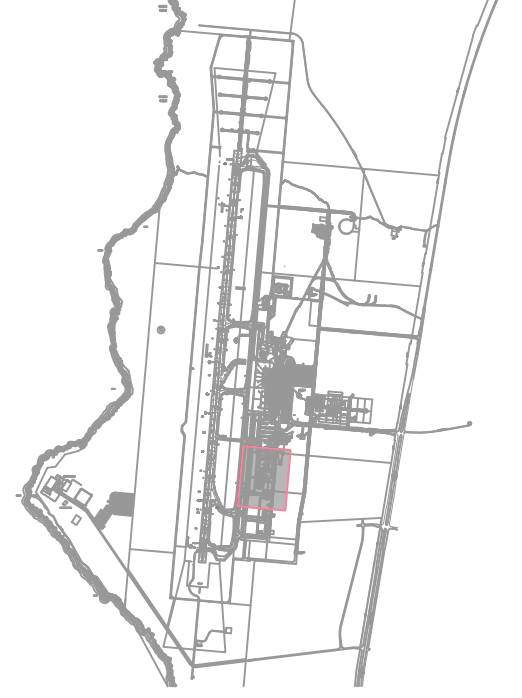
Airports Division  
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
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*Doron Leao*  
04/30/2024  
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DSGN.	DRWN.	CHKD.	APPD.
JP	KV	JA	DL

KEY PLAN / NOTES:



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENT**  
SEPTEMBER 2023  
DATE

PROJECT TITLE :

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

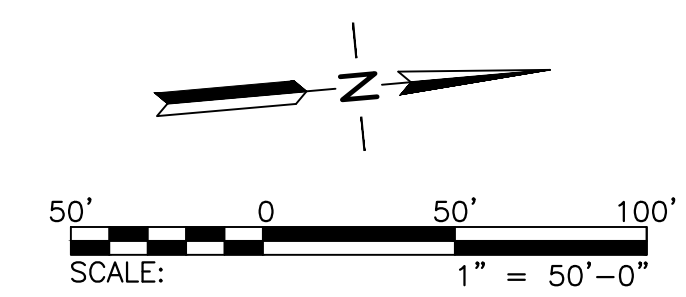
PROJECT NO.:

**AH2021-16**

SHEET TITLE:

**AIRFIELD LIGHTING  
NEW PLAN 14**

DATE :	DWG. NO.
09/2023	<b>E-214</b>
SHEET :	
139 OF 190 SHEETS	



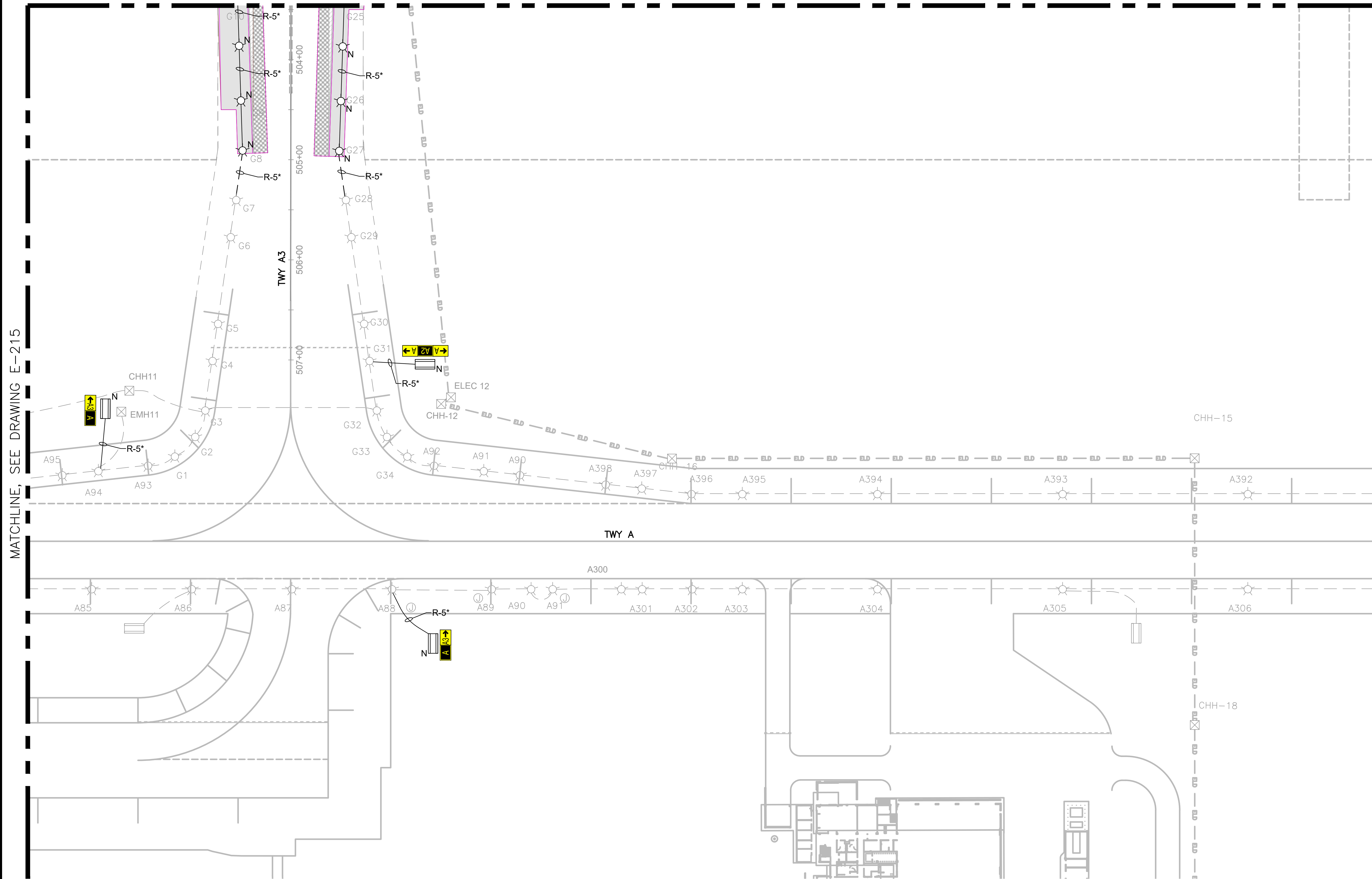




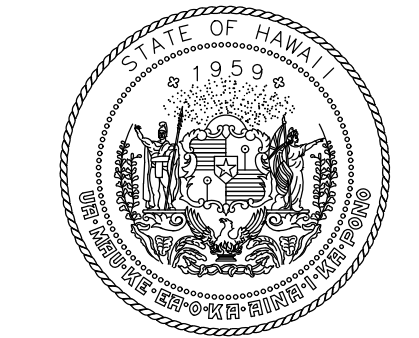
SHEET NOTES:

- REFER TO DRAWINGS E-001 THRU E-002, & E-200 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND.

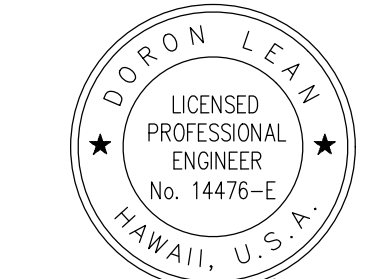
MATCHLINE, SEE DRAWING E-206



MATCHLINE, SEE DRAWING E-215



Airports Division  
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JP	KV	JA	DL

KEY PLAN / NOTES:



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENT**

SEPTEMBER 2023  
DATE

PROJECT TITLE :

**RUNWAY 17-35  
REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

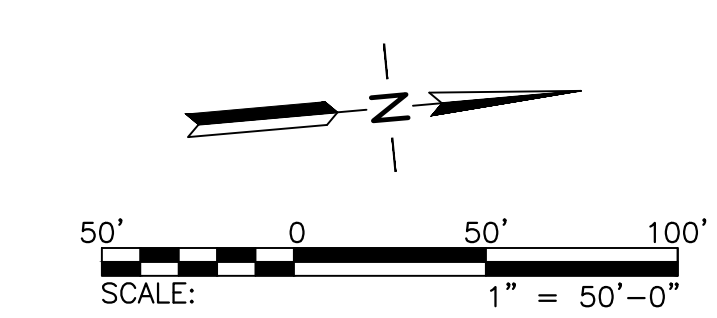
PROJECT NO.:

**AH2021-16**

SHEET TITLE:

**AIRFIELD LIGHTING  
NEW PLAN 16**

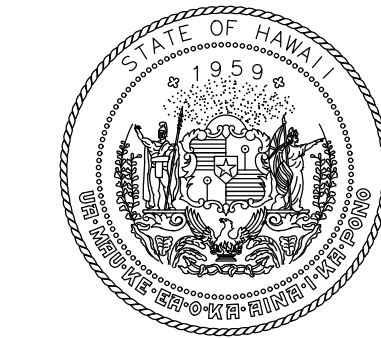
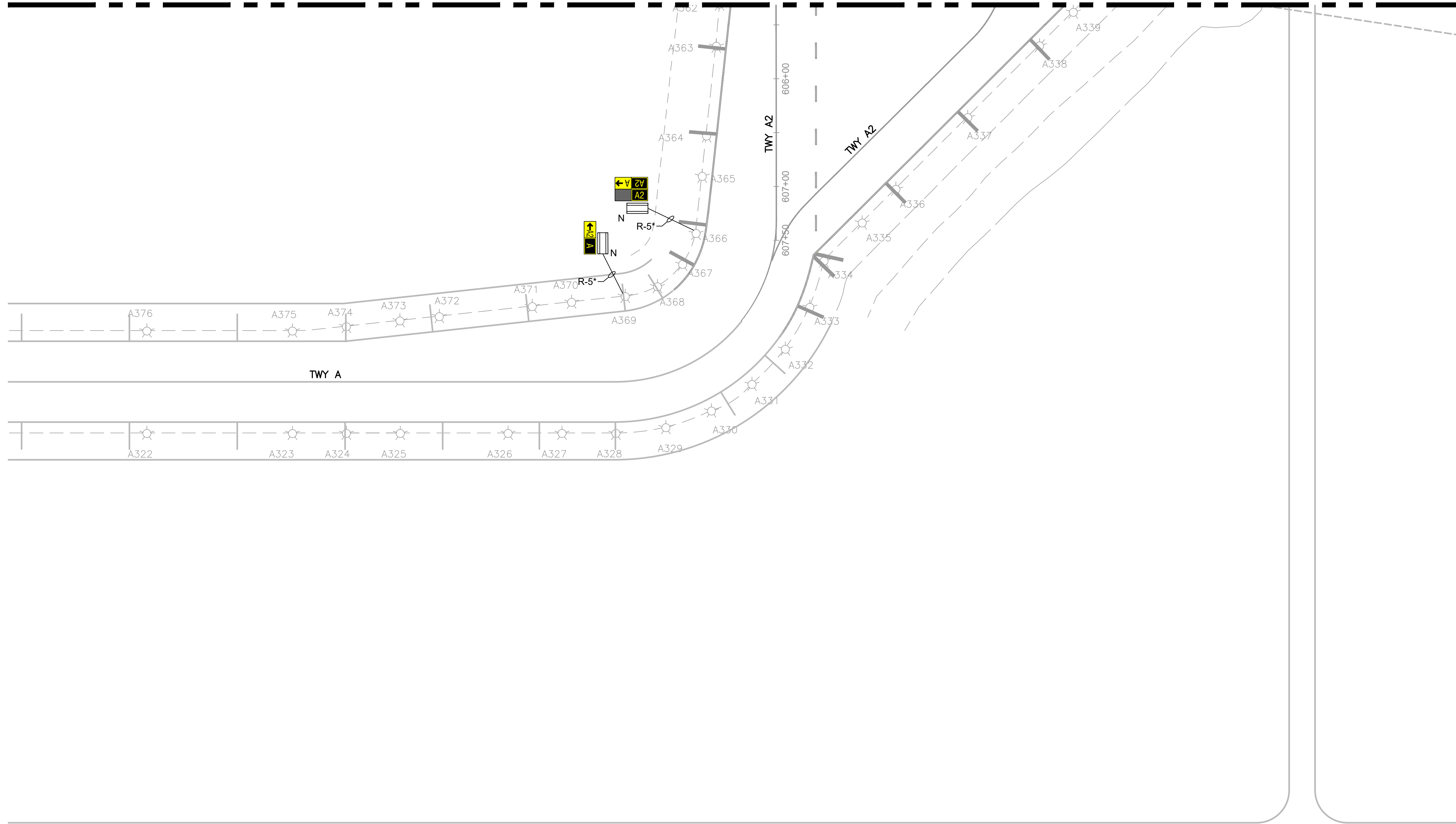
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09/2023	<b>E-216</b>
SHEET :	
141 OF 190 SHEETS	



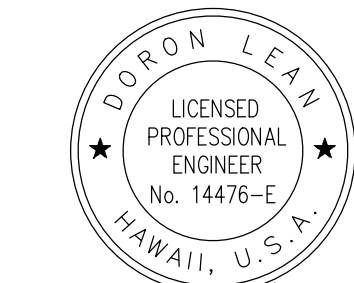
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1. REFER TO DRAWINGS E-001 THRU E-002, & E-200 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND.

MATCHLINE, SEE DRAWING E-209



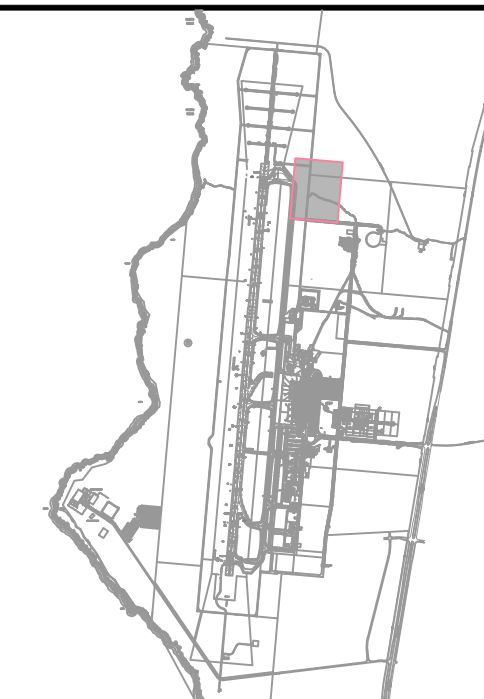
Airports Division  
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS



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04/30/2024  
Licensed Expiration Date

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JP	KV	JA	DL

**KEY PLAN / NOTES:**



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENT**

SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35  
REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

**SHEET TITLE:**

**AIRFIELD LIGHTING  
NEW PLAN 17**

DATE :

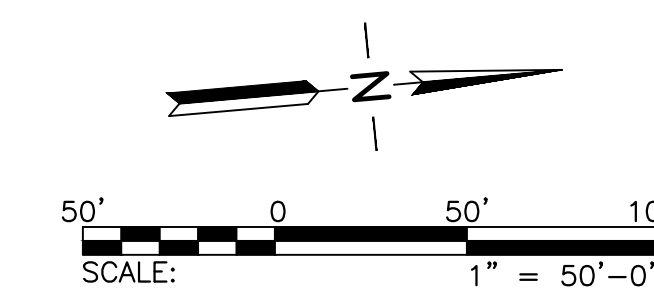
09/2023

SHEET :

142 OF 190 SHEETS

DWG. NO.

**E-217**

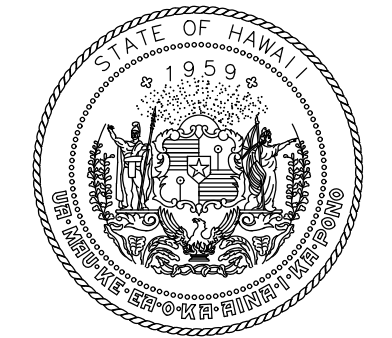


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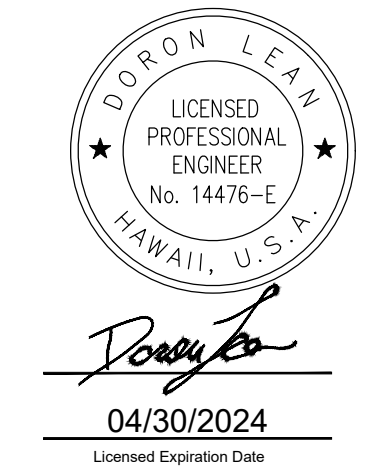


SHEET NOTES:

- REFER TO DRAWINGS E-001 THRU E-002, & E-200 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND.



Airports Division  
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
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JP	KV	JA	DL

KEY PLAN / NOTES:



NO.	DATE	REVISIONS
-----	------	-----------

**CONSTRUCTION DOCUMENT**  
SEPTEMBER 2023  
DATE

PROJECT TITLE :

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

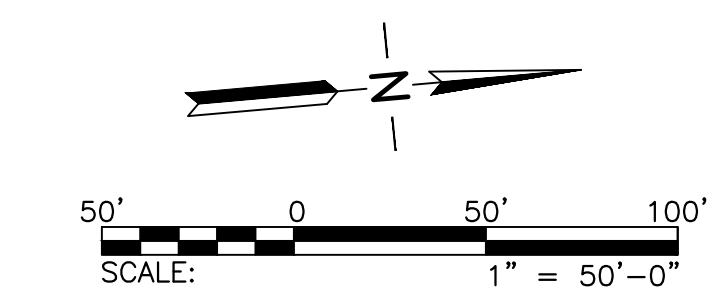
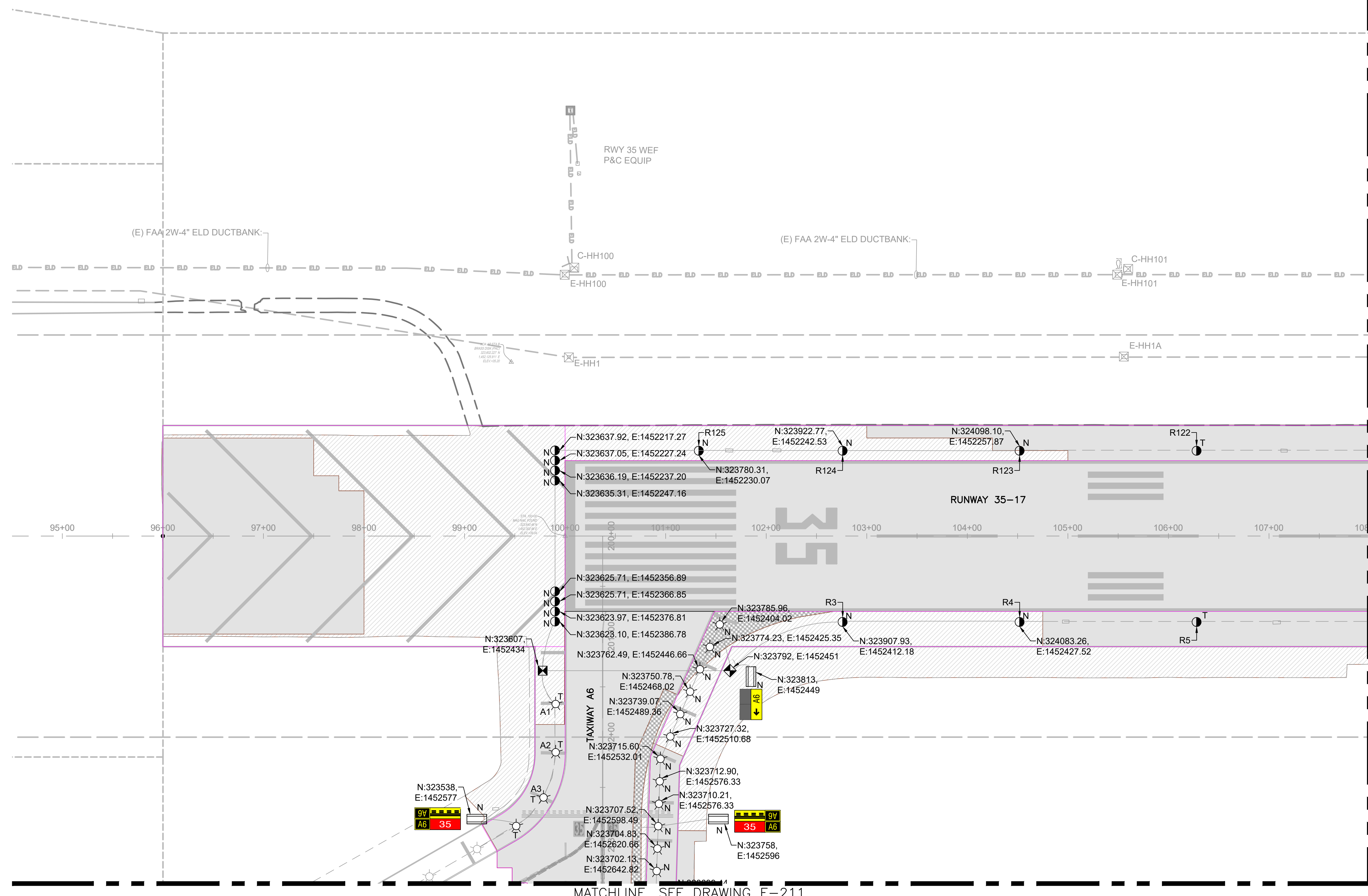
PROJECT NO.:

**AH2021-16**

SHEET TITLE:

**AIRFIELD LIGHTING COORDINATES PLAN 1**

DATE :	DWG. NO.
09/2023	<b>E-301</b>
SHEET :	
143 OF 190 SHEETS	

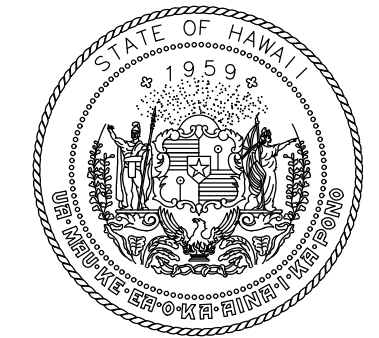


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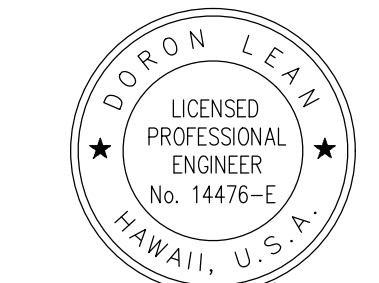


SHEET NOTES:

- REFER TO DRAWINGS E-001 THRU E-002, & E-200 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND.



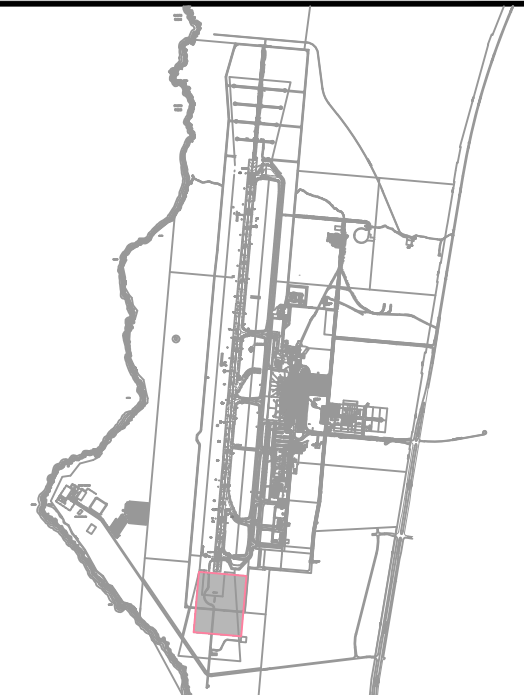
Airports Division  
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS



DORON LEAO  
LICENSED PROFESSIONAL ENGINEER  
No. 14476-E  
HAWAII, U.S.A.  
*Doron Leao*  
04/30/2024  
Licensed Expiration Date

DSGN.	DRWN.	CHKD.	APPD.
JP	KV	JA	DL

KEY PLAN / NOTES:



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENT**

SEPTEMBER 2023  
DATE

PROJECT TITLE :

**RUNWAY 17-35 REHABILITATION**

AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

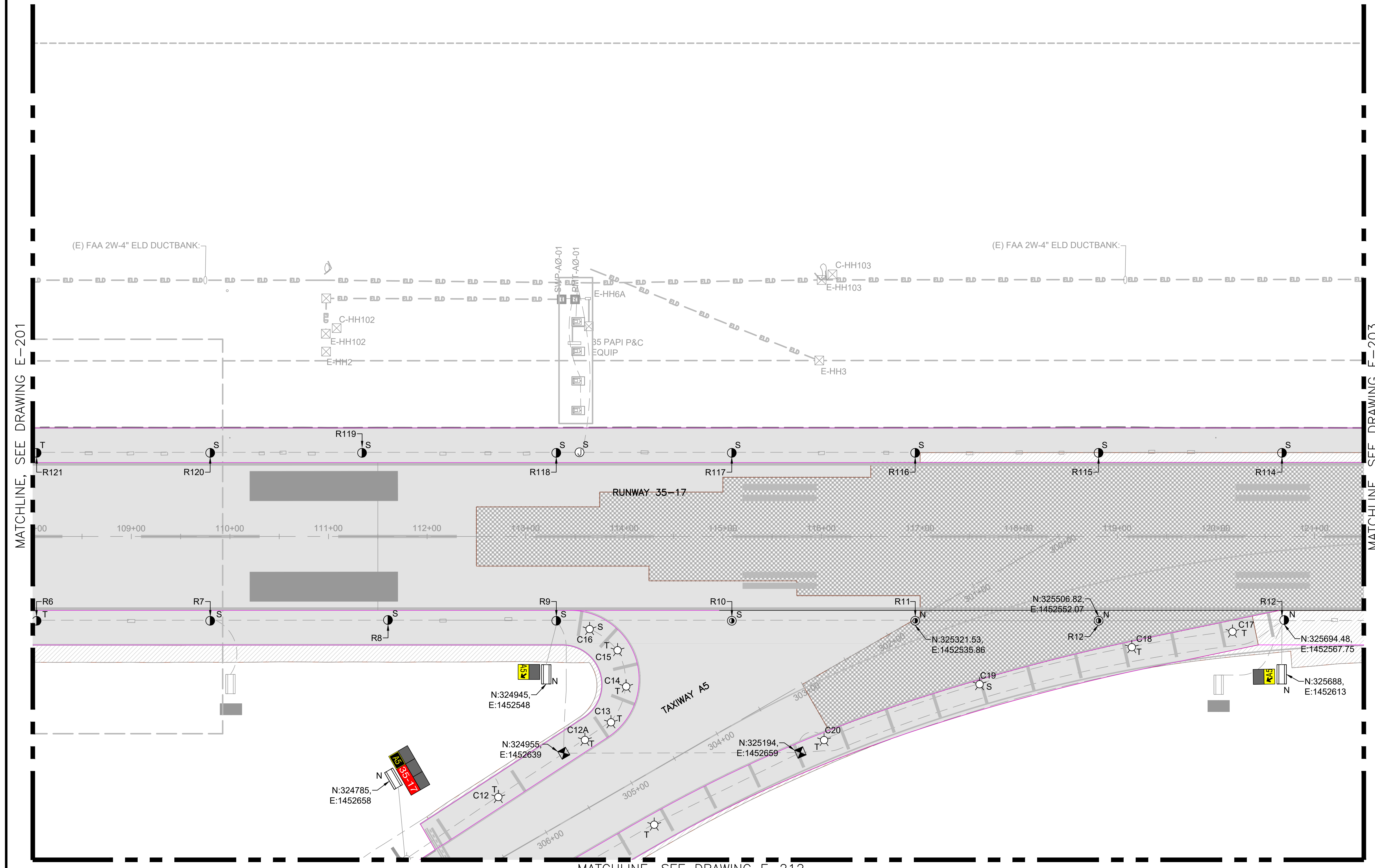
PROJECT NO.:

**AH2021-16**

SHEET TITLE:

**AIRFIELD LIGHTING COORDINATES PLAN 2**

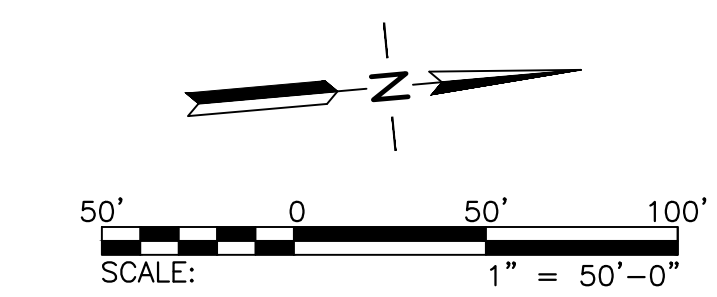
DATE :	DWG. NO.
09/2023	<b>E-302</b>
SHEET :	
144 OF 190 SHEETS	



MATCHLINE, SEE DRAWING E-201

MATCHLINE, SEE DRAWING E-203

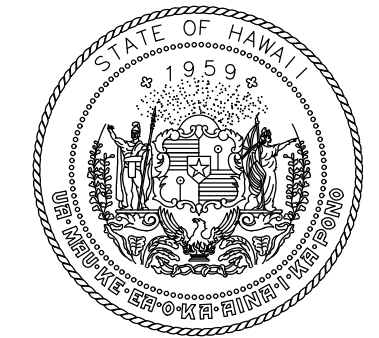
MATCHLINE, SEE DRAWING E-212



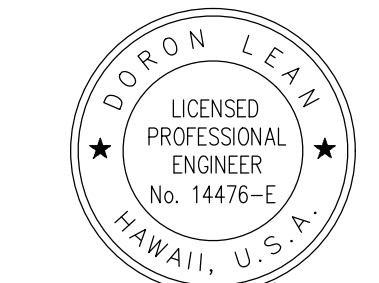


SHEET NOTES:

- REFER TO DRAWINGS E-001 THRU E-002, & E-200 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND.



Airports Division  
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS



*Doron Leao*  
04/30/2024  
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DSGN.	DRWN.	CHKD.	APPD.
JP	KV	JA	DL

KEY PLAN / NOTES:



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENT**  
SEPTEMBER 2023  
DATE

PROJECT TITLE :

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

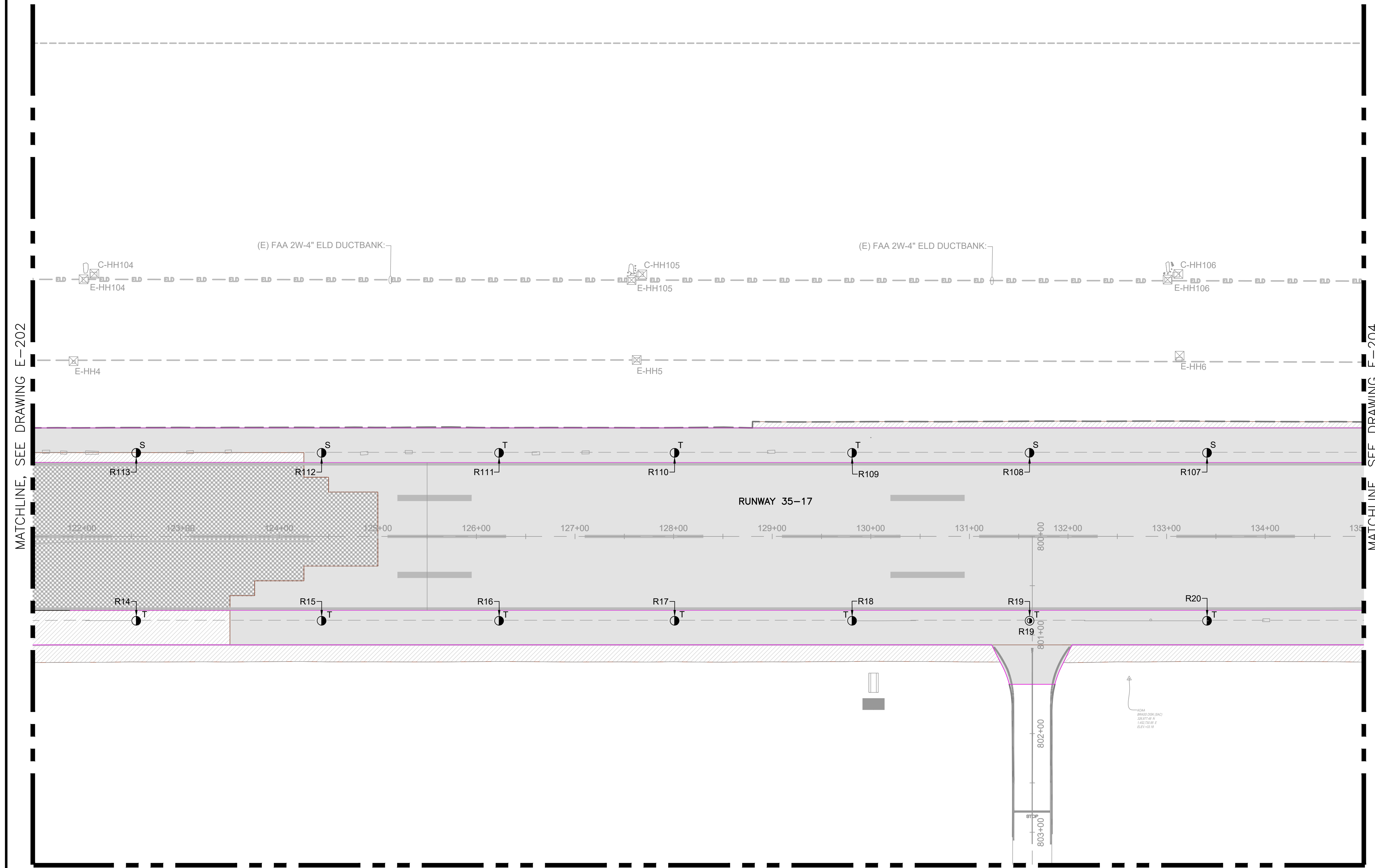
PROJECT NO.:

**AH2021-16**

SHEET TITLE:

**AIRFIELD LIGHTING COORDINATES PLAN 3**

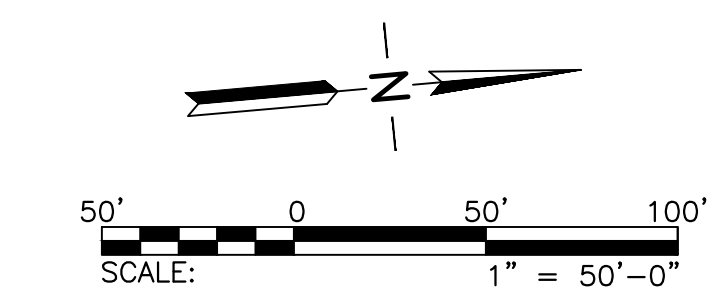
DATE :	DWG. NO.
09/2023	<b>E-303</b>
SHEET :	
145 OF 190 SHEETS	



MATCHLINE, SEE DRAWING E-202

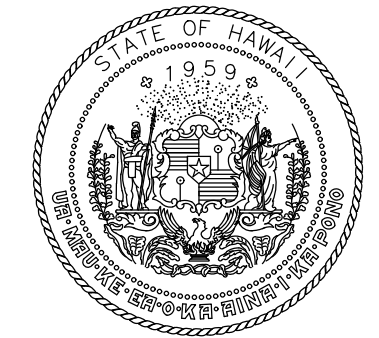
MATCHLINE, SEE DRAWING E-204

MATCHLINE, SEE DRAWING E-213

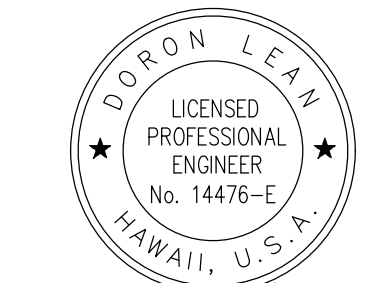


SHEET NOTES:

- REFER TO DRAWINGS E-001 THRU E-002, & E-200 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND.



Airports Division  
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS



*Doron Leao*  
04/30/2024  
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JP	KV	JA	DL

KEY PLAN / NOTES:



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENT**

SEPTEMBER 2023  
DATE

PROJECT TITLE :

**RUNWAY 17-35 REHABILITATION**

AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

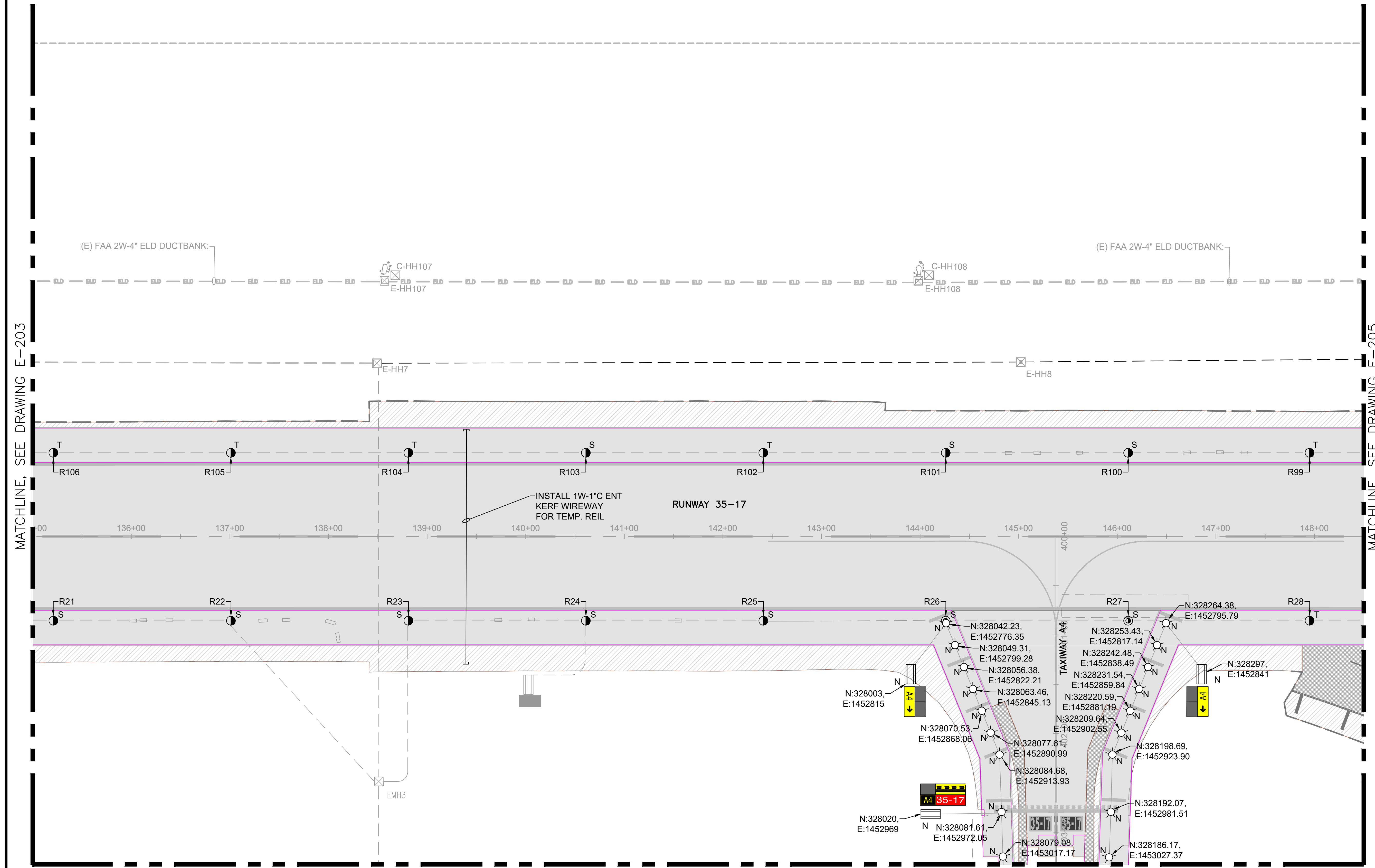
PROJECT NO.:

**AH2021-16**

SHEET TITLE:

**AIRFIELD LIGHTING COORDINATES PLAN 4**

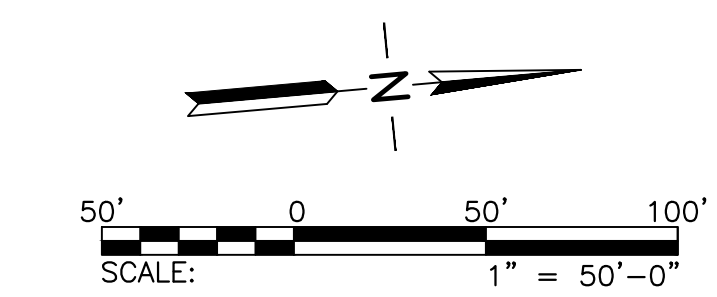
DATE :	DWG. NO.
09/2023	<b>E-304</b>
SHEET :	
146 OF 190 SHEETS	



MATCHLINE, SEE DRAWING E-203

MATCHLINE, SEE DRAWING E-205

MATCHLINE, SEE DRAWING E-214

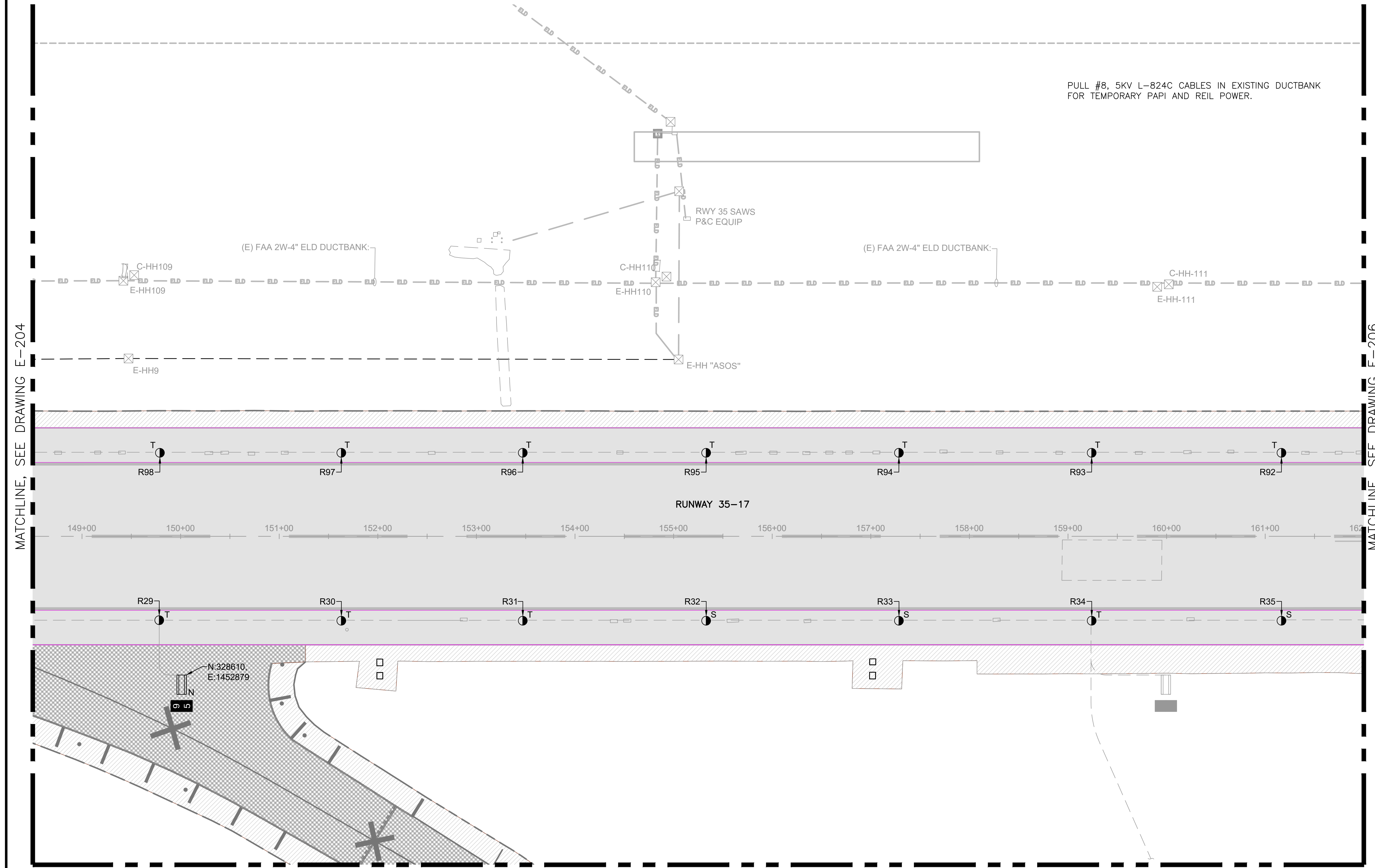




SHEET NOTES:

- REFER TO DRAWINGS E-001 THRU E-002, & E-200 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND.

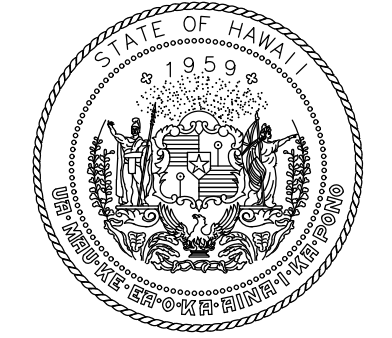
PULL #8, 5KV L-824C CABLES IN EXISTING DUCTBANK FOR TEMPORARY PAPI AND REIL POWER.



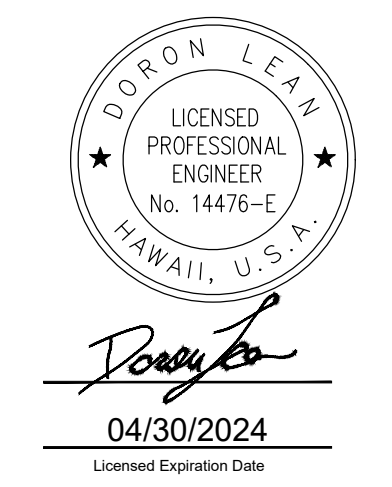
MATCHLINE, SEE DRAWING E-204

MATCHLINE, SEE DRAWING E-206

MATCHLINE, SEE DRAWING E-215



Airports Division  
STATE OF HAWAII  
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KEY PLAN / NOTES:



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENT**  
SEPTEMBER 2023  
DATE

PROJECT TITLE :

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

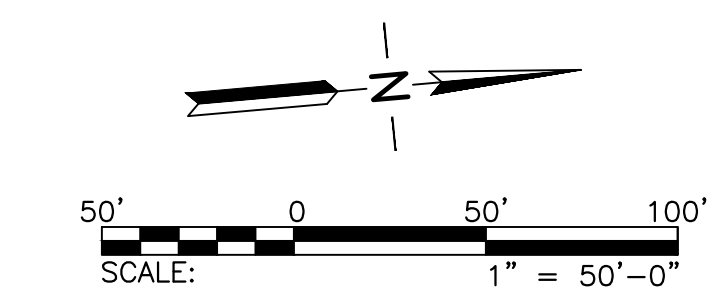
PROJECT NO.:

**AH2021-16**

SHEET TITLE:

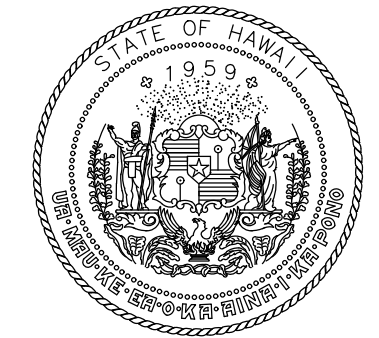
**AIRFIELD LIGHTING COORDINATES PLAN 5**

DATE :	DWG. NO.
09/2023	<b>E-305</b>
SHEET :	
147 OF 190 SHEETS	

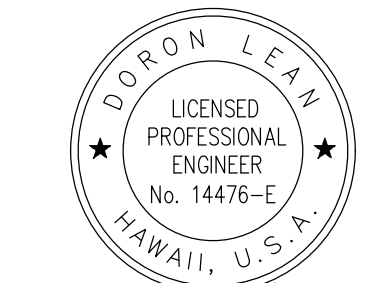


SHEET NOTES:

- REFER TO DRAWINGS E-001 THRU E-002, & E-200 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND.



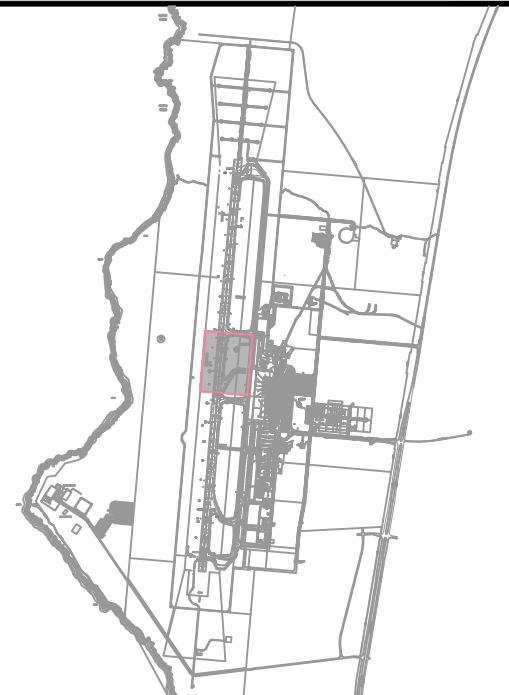
Airports Division  
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS



Doron Leao  
LICENSED PROFESSIONAL ENGINEER  
No. 14476-E  
HAWAII, U.S.A.  
04/30/2024  
Licensed Expiration Date

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KEY PLAN / NOTES:



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENT**  
SEPTEMBER 2023  
DATE

PROJECT TITLE :

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

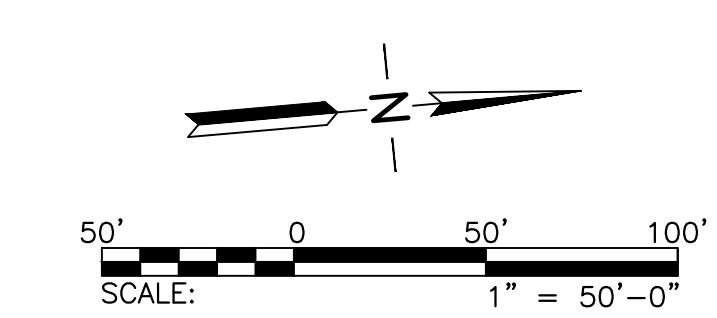
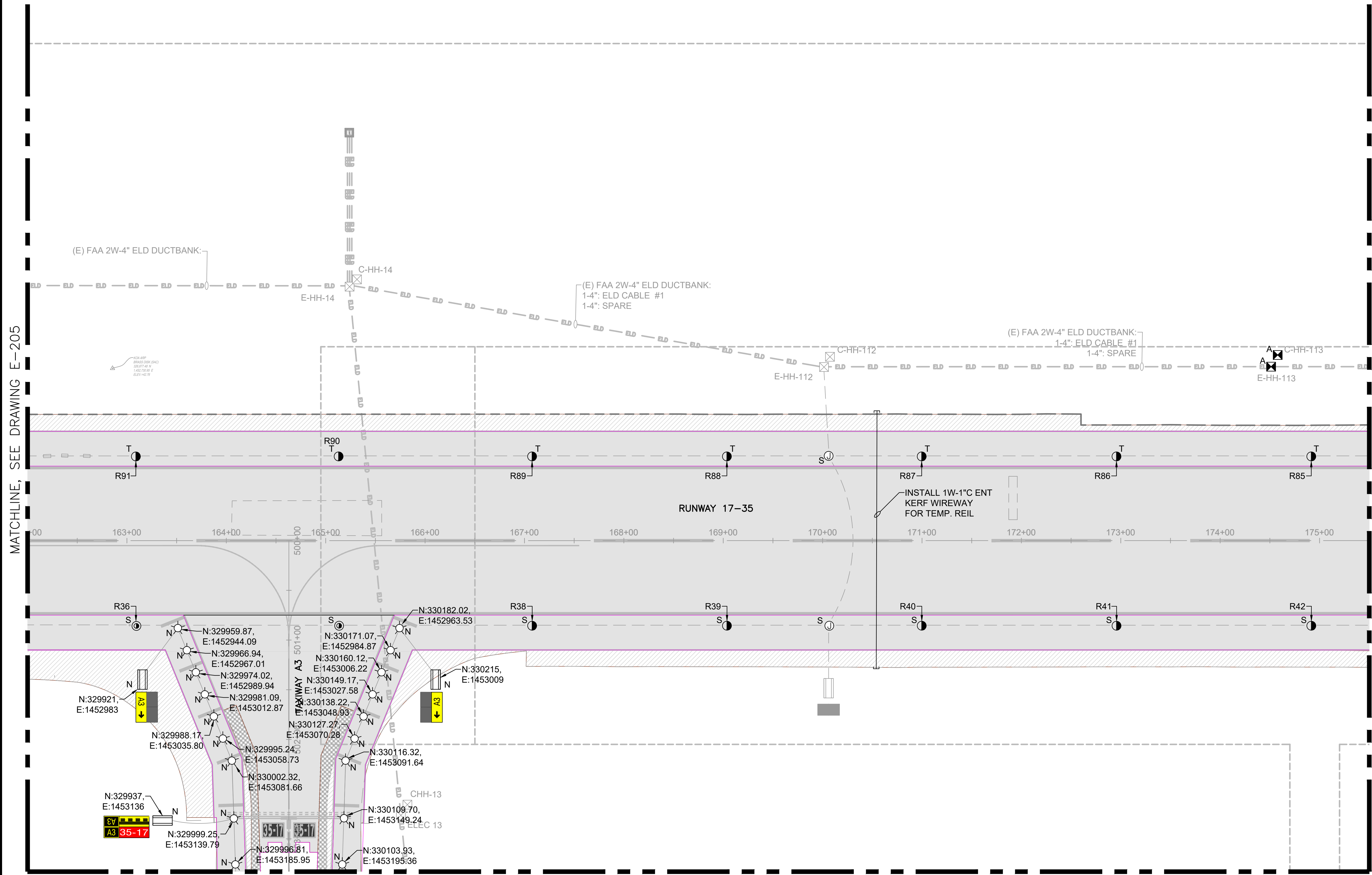
PROJECT NO.:

**AH2021-16**

SHEET TITLE:

**AIRFIELD LIGHTING COORDINATES PLAN 6**

DATE :	DWG. NO.
09/2023	<b>E-306</b>
SHEET :	
148 OF 190 SHEETS	



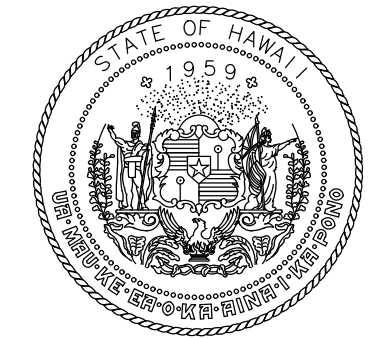
© USER: EDUARDO SALGUEIRO LEAO PHOTOMETRICS DRP/PROACTIVE PROJECTS/1472/02A ORION/ACIA RUNWAY REHABILITATION/01 DRAWINGS/WORKING DRAWINGS/SHEET/E-306/COORDINATES.DWG



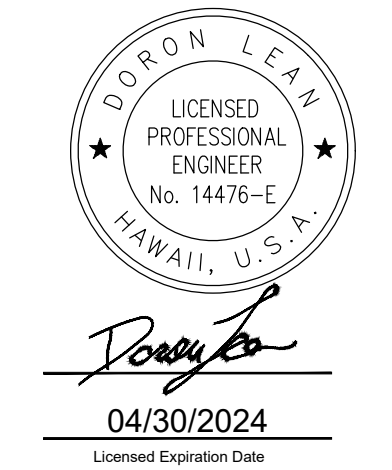


SHEET NOTES:

- REFER TO DRAWINGS E-001 THRU E-002, & E-200 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND.



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KEY PLAN / NOTES:



NO.	DATE	REVISIONS

**CONSTRUCTION DOCUMENT**  
SEPTEMBER 2023  
DATE

PROJECT TITLE :

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

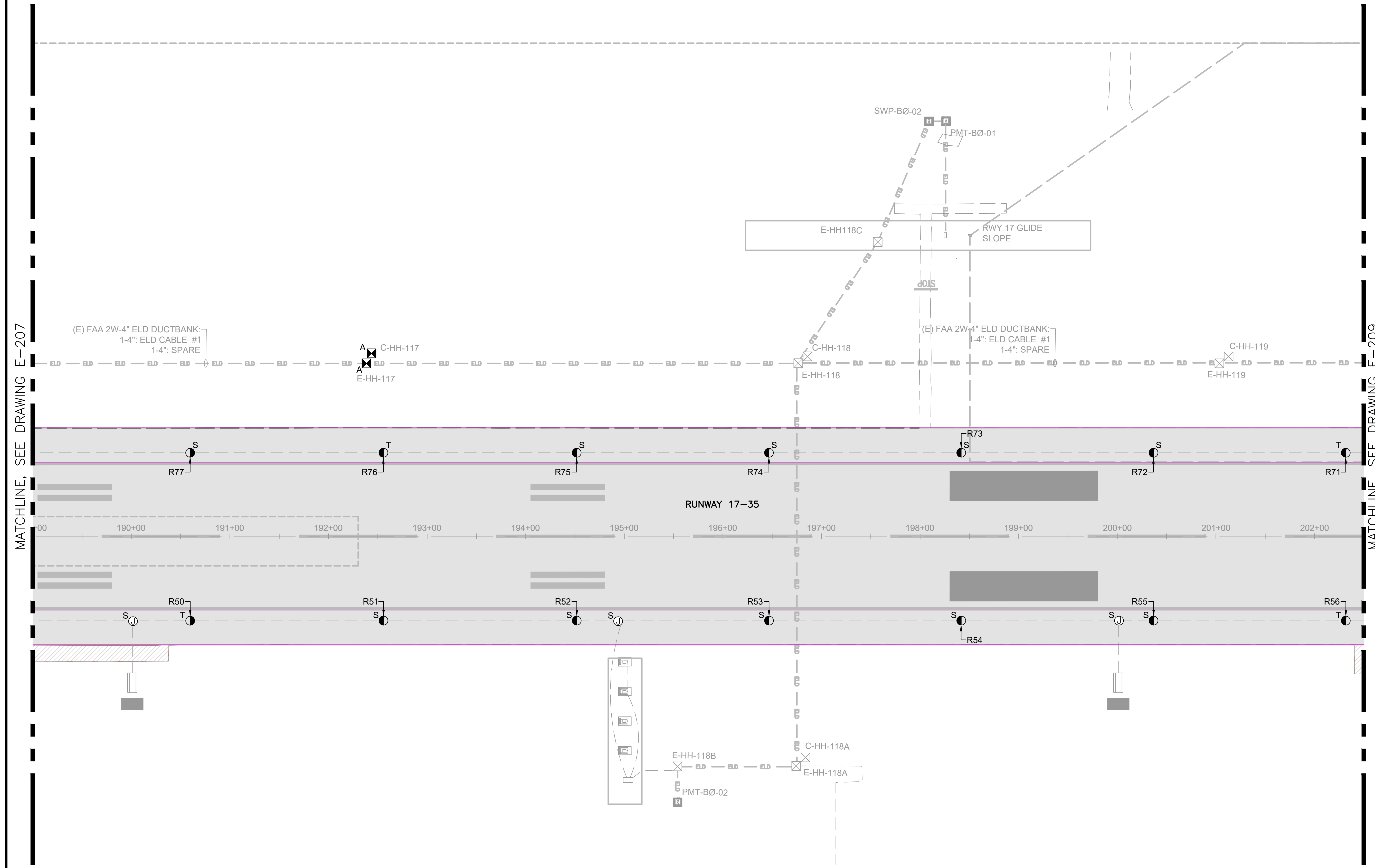
PROJECT NO.:

**AH2021-16**

SHEET TITLE:

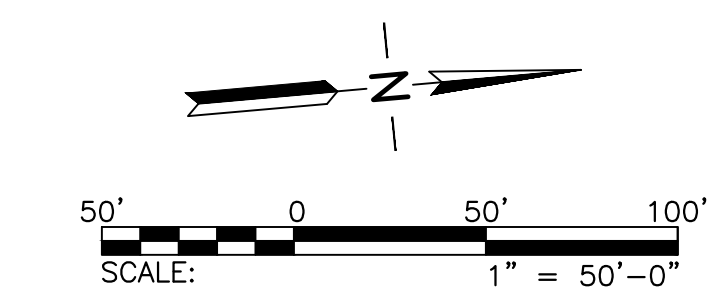
**AIRFIELD LIGHTING COORDINATES PLAN 8**

DATE :	DWG. NO.
09/2023	<b>E-308</b>
SHEET :	
150 OF 190 SHEETS	



MATCHLINE, SEE DRAWING E-207

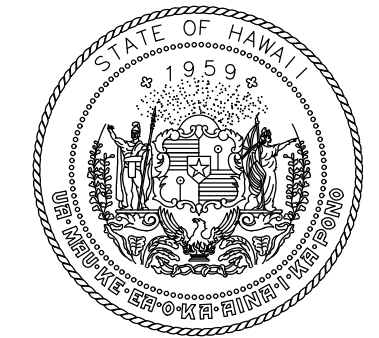
MATCHLINE, SEE DRAWING E-209



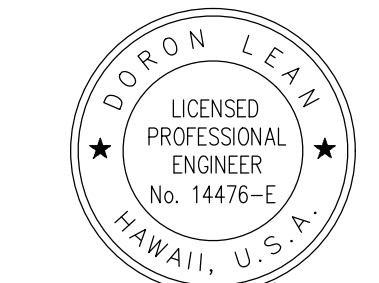


SHEET NOTES:

1. REFER TO DRAWINGS E-001 THRU E-002, & E-200 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND.



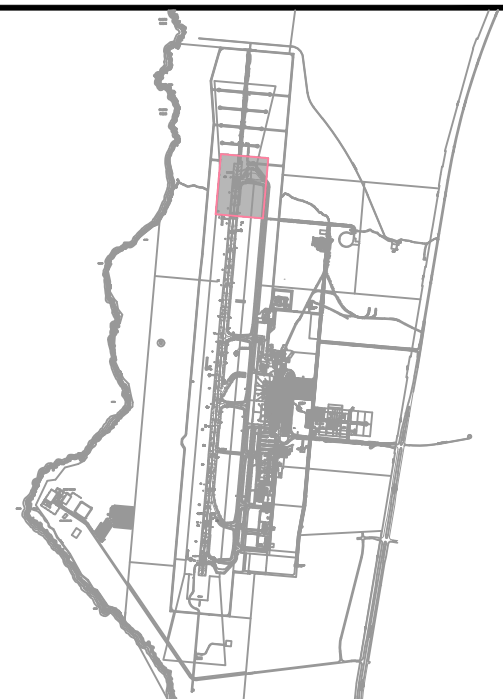
Airports Division  
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DEPARTMENT OF TRANSPORTATION  
AIRPORTS



Doron Leao  
LICENSED PROFESSIONAL ENGINEER  
No. 14476-E  
HAWAII, U.S.A.  
04/30/2024  
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KEY PLAN / NOTES:



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**CONSTRUCTION DOCUMENT**  
SEPTEMBER 2023  
DATE

PROJECT TITLE :

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

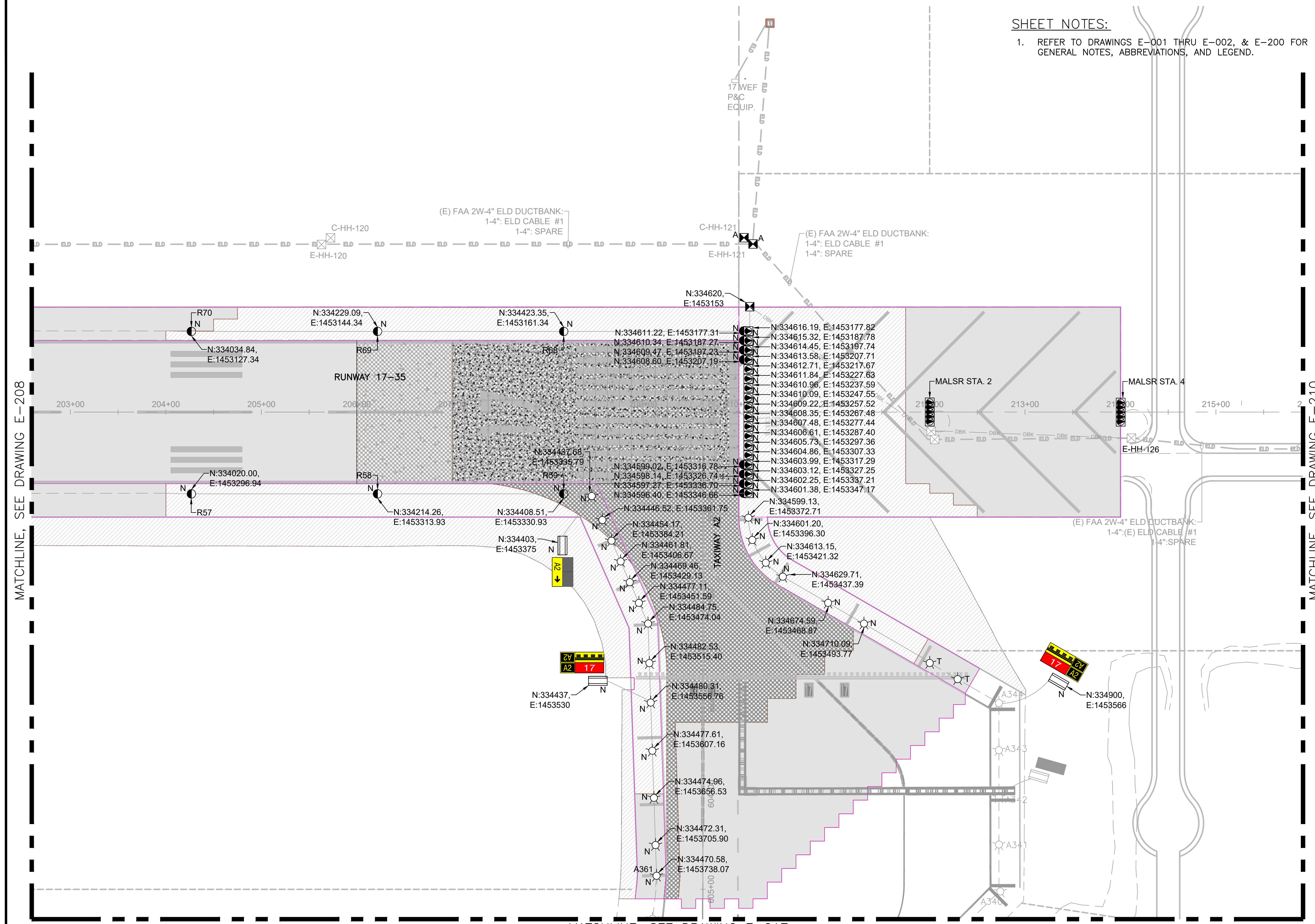
PROJECT NO.:

**AH2021-16**

SHEET TITLE:

**AIRFIELD LIGHTING COORDINATES PLAN 9**

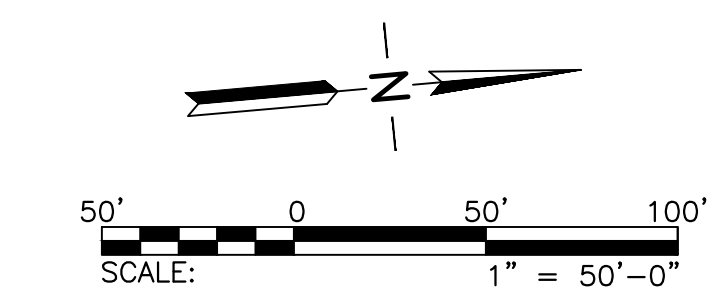
DATE :	DWG. NO.
09/2023	<b>E-309</b>
SHEET :	
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MATCHLINE, SEE DRAWING E-208

MATCHLINE, SEE DRAWING E-210

MATCHLINE, SEE DRAWING E-217







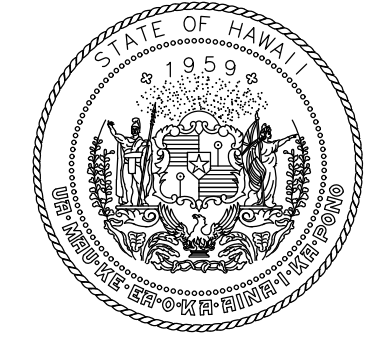
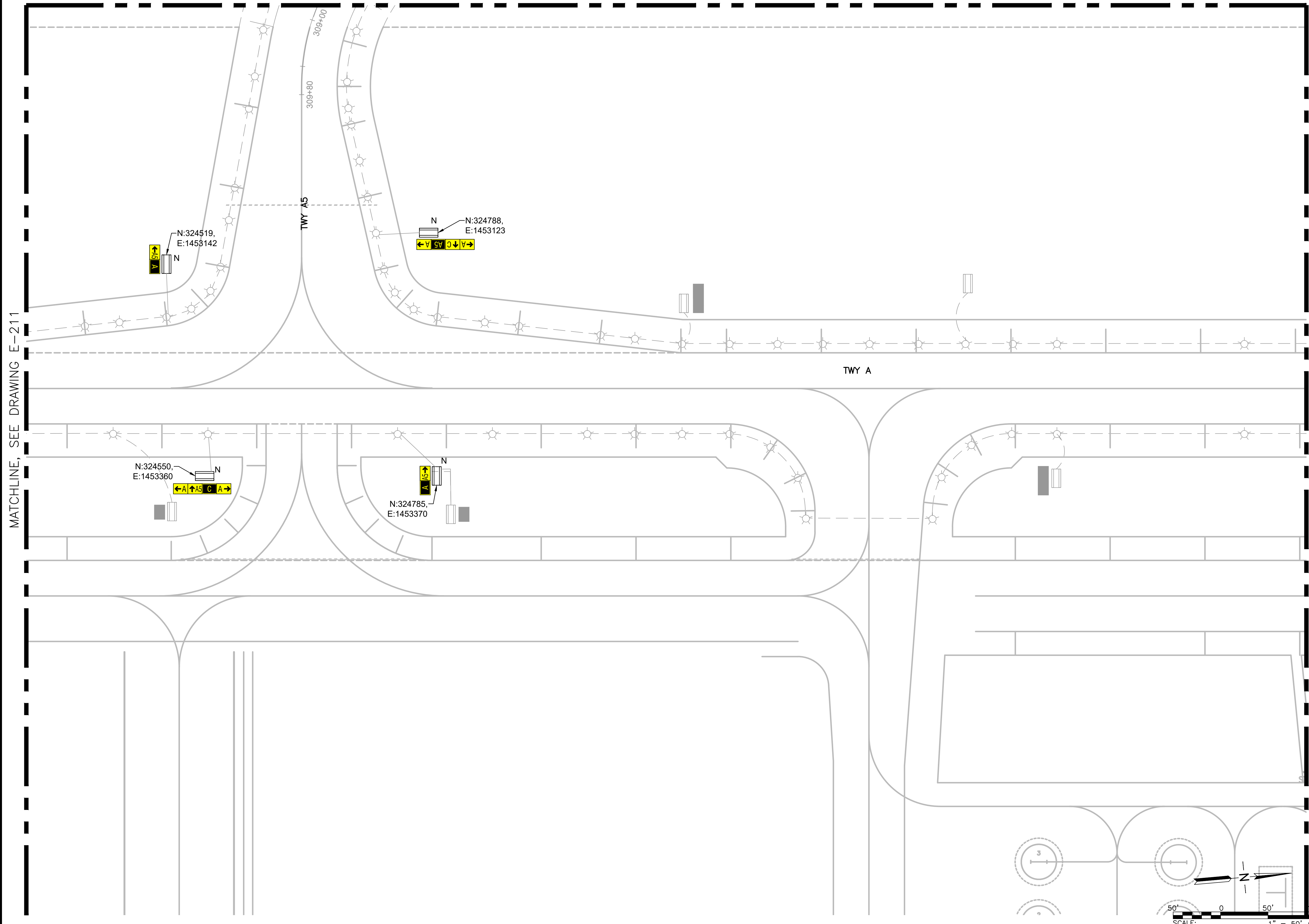




SHEET NOTES:

- REFER TO DRAWINGS E-001 THRU E-002, & E-200 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND.

MATCHLINE, SEE DRAWING E-202



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KEY PLAN / NOTES:



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENT**  
SEPTEMBER 2023  
DATE

PROJECT TITLE :  
**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

PROJECT NO.:  
**AH2021-16**

SHEET TITLE:

**AIRFIELD LIGHTING COORDINATES PLAN 12**

DATE : 09/2023	DWG. NO. <b>E-312</b>
SHEET : 154 OF 190 SHEETS	





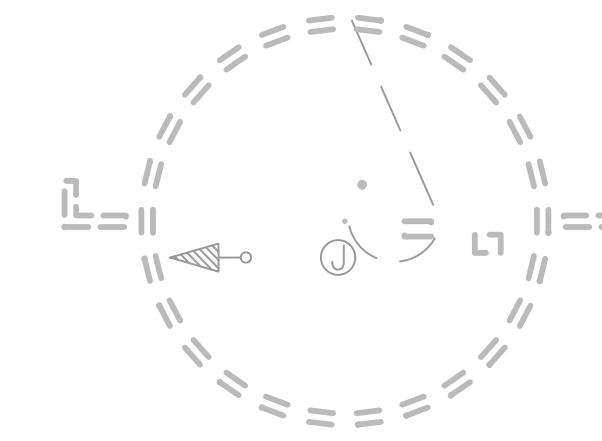




SHEET NOTES:

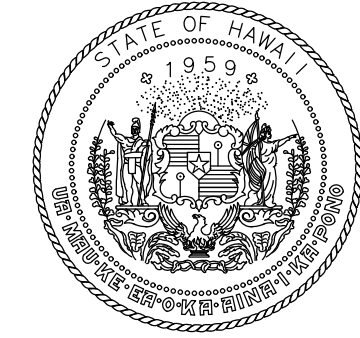
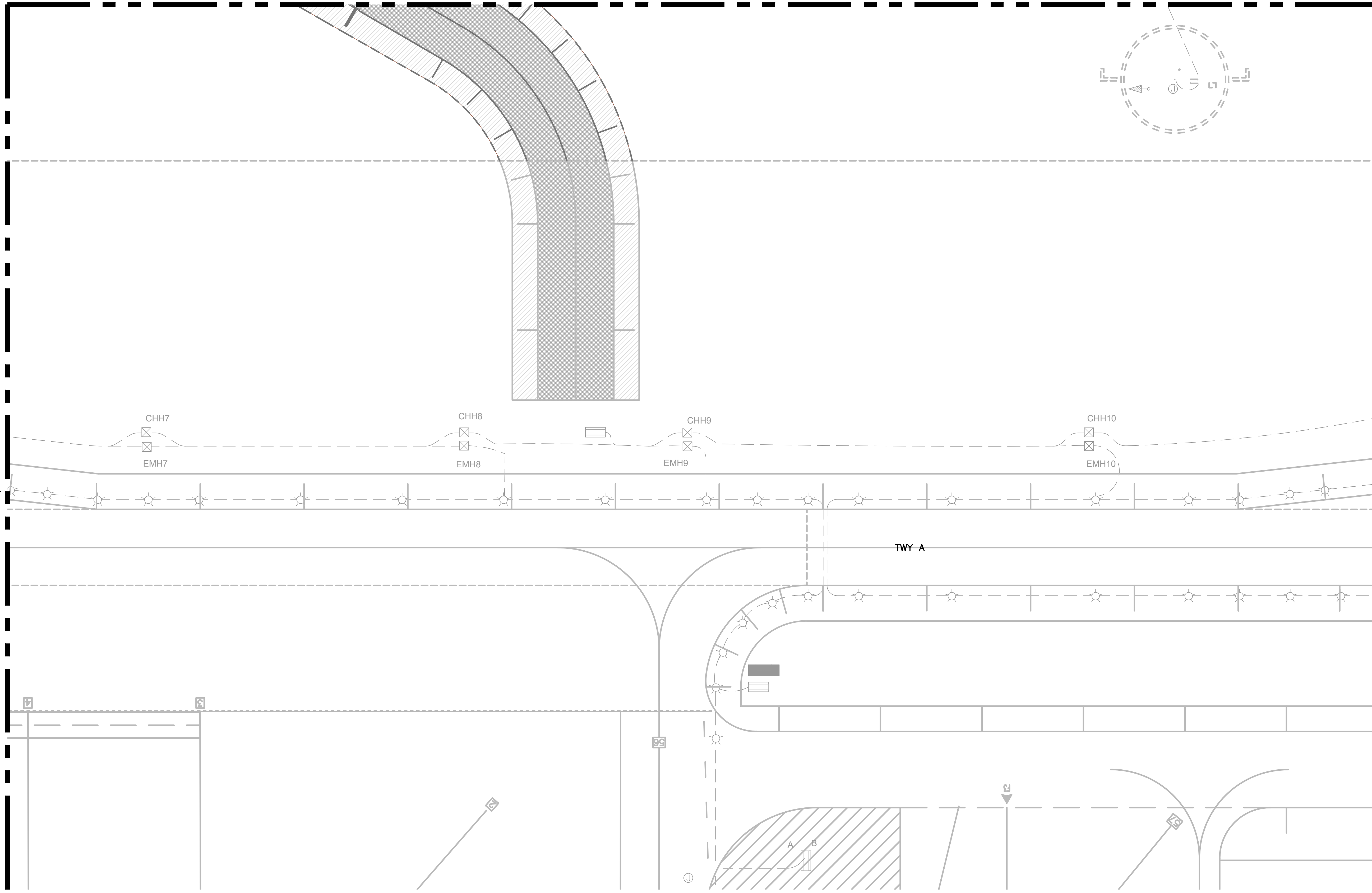
1. REFER TO DRAWINGS E-001 THRU E-002, & E-200 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND.

MATCHLINE, SEE DRAWING E-205

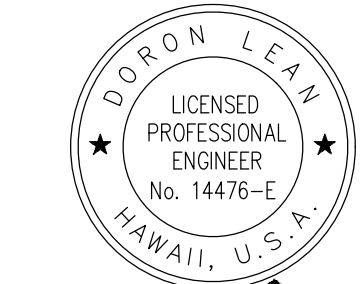


MATCHLINE, SEE DRAWING E-214

MATCHLINE, SEE DRAWING E-216



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KEY PLAN / NOTES:



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENT**  
SEPTEMBER 2023  
DATE

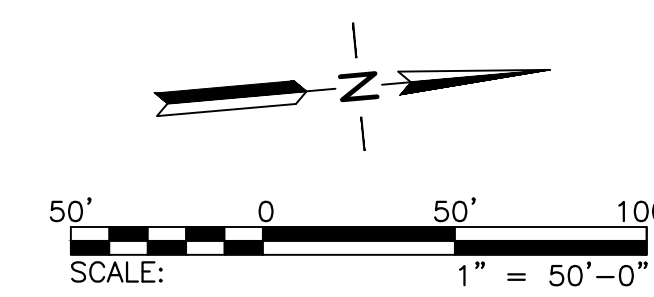
PROJECT TITLE :  
**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

PROJECT NO.:  
**AH2021-16**

SHEET TITLE:

**AIRFIELD LIGHTING COORDINATES PLAN 15**

DATE : 09/2023	DWG. NO. <b>E-315</b>
SHEET : 157 OF 190 SHEETS	

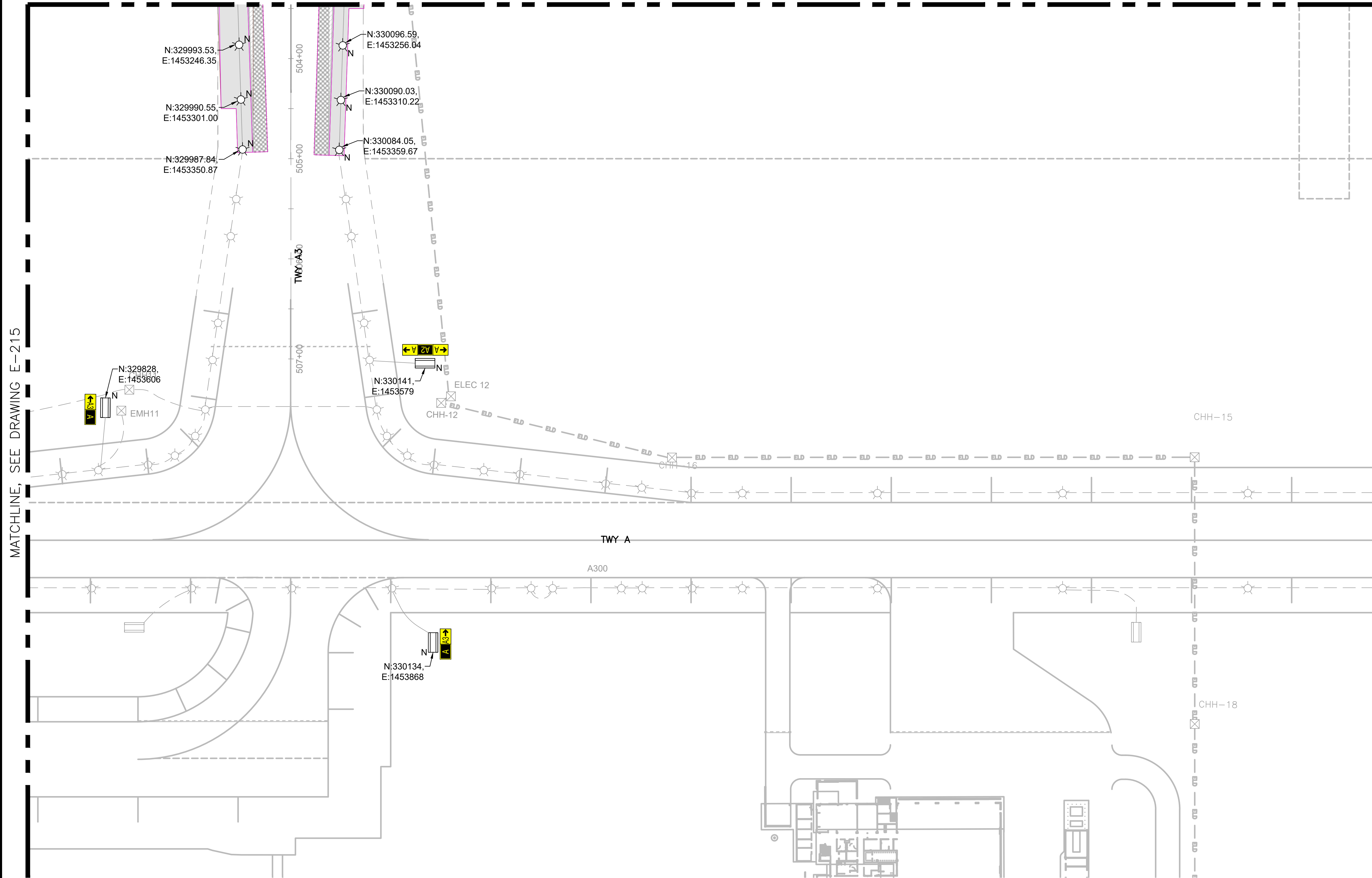


© USER: EDUARDO SALGONES LEAN PHOTO: METRICS DROPPROACTIVE PROJECT: BIL 1472 US2A DRON: ACA RUNWAY REHABILITATION: 01 DRAWING: WORKING DRAWING: SHEET: E-315 COORDINATES.DWG

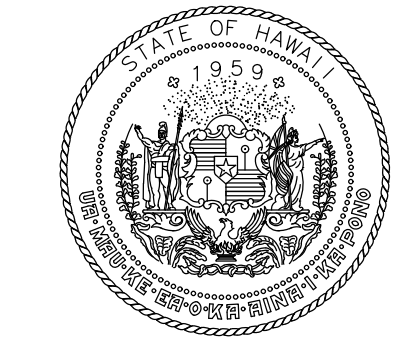
SHEET NOTES:

- REFER TO DRAWINGS E-001 THRU E-002, & E-200 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND.

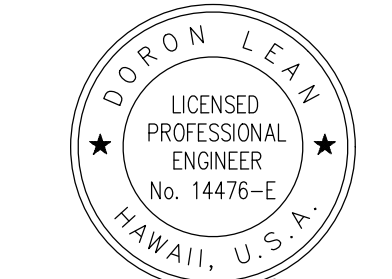
MATCHLINE, SEE DRAWING E-206



MATCHLINE, SEE DRAWING E-215



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04/30/2024  
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JP	KV	JA	DL

KEY PLAN / NOTES:



NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENT**  
SEPTEMBER 2023  
DATE

PROJECT TITLE :

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

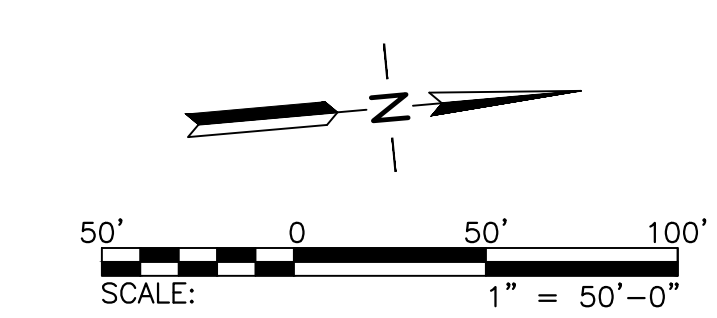
PROJECT NO.:

**AH2021-16**

SHEET TITLE:

**AIRFIELD LIGHTING COORDINATES PLAN 16**

DATE :	DWG. NO.
09/2023	<b>E-316</b>
SHEET :	
158 OF 190 SHEETS	







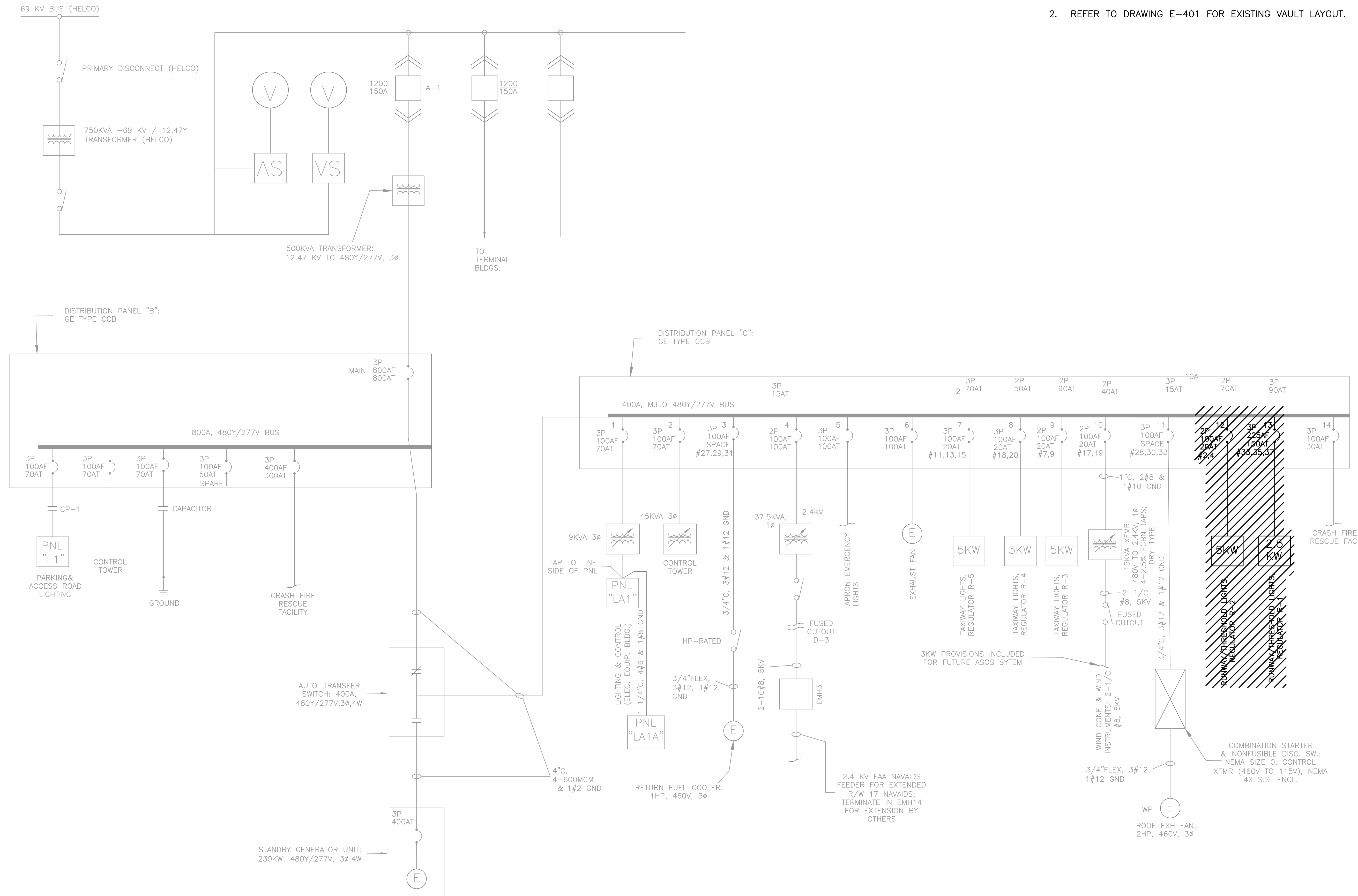






**SHEET NOTES:**

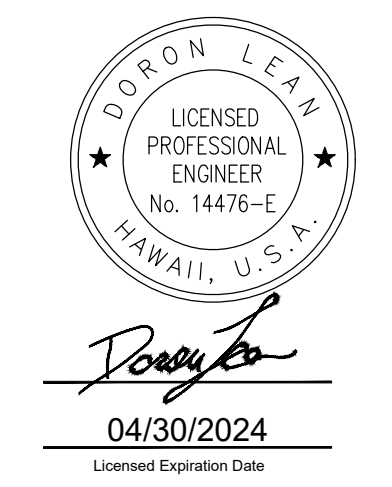
1. REFER TO DRAWINGS E-001 THRU E-002, & E-100 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND.
2. REFER TO DRAWING E-401 FOR EXISTING VAULT LAYOUT.



**1** AIRFIELD LIGHTING VAULT – EXISTING SINGLE LINE  
SCALE: NOT TO SCALE



Airports Division  
STATE OF HAWAII  
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**KEY PLAN / NOTES:**

NO.	DATE	REVISIONS
<b>CONSTRUCTION DOCUMENT</b>		
SEPTEMBER 2023 DATE		

**PROJECT TITLE :**  
**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**  
**AH2021-16**

**SHEET TITLE:**  
**AIRFIELD LIGHTING VAULT EXISTING SINGLE LINE DIAGRAM**

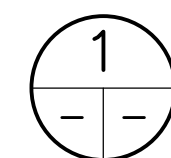
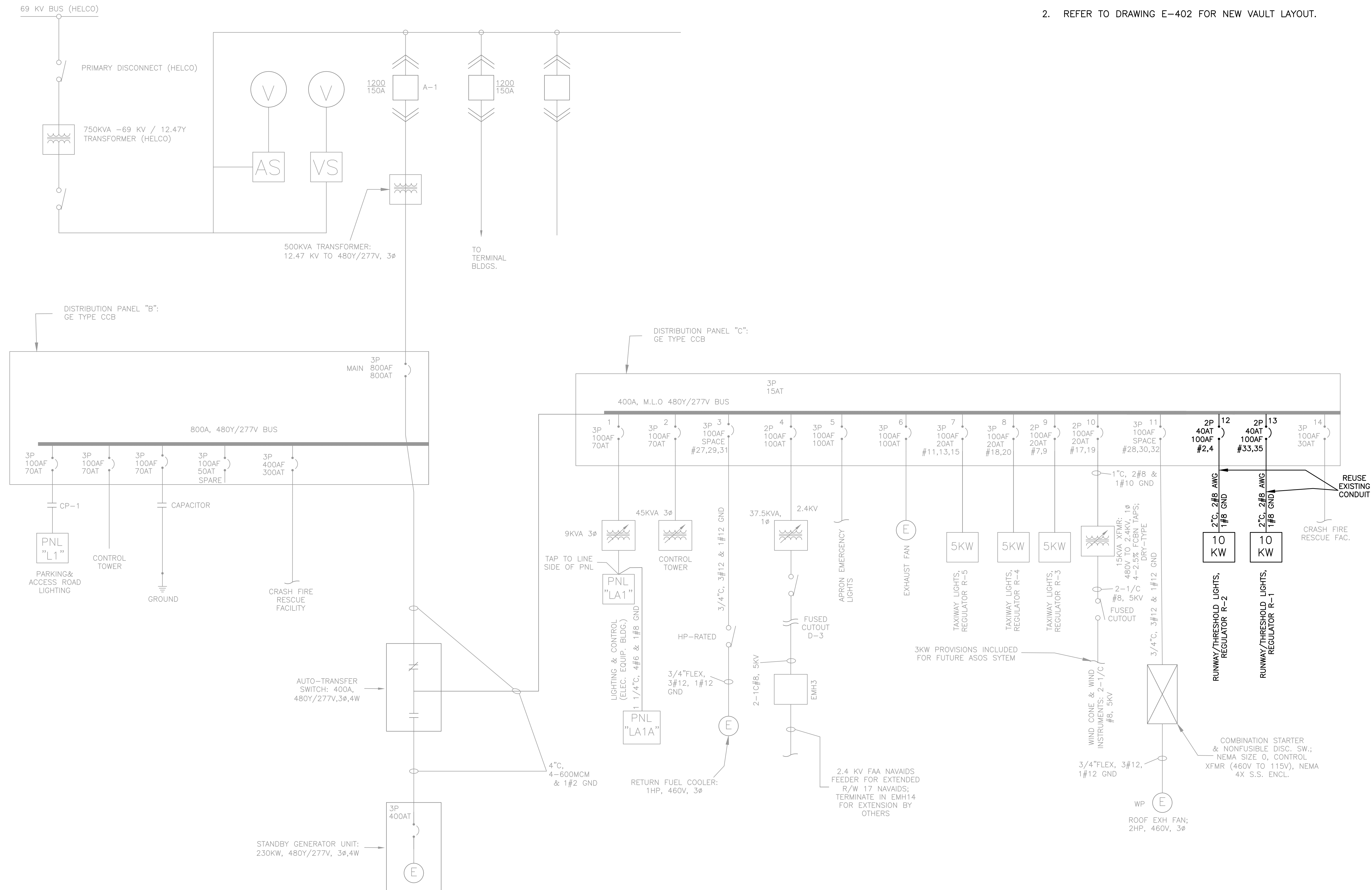
DATE :	09/2023	DWG. NO.	<b>E-403</b>
SHEET :			
162 OF 190 SHEETS			

© USER: EDUARDO SALDANES | CLEAN PHOTOMETRICS | PROJECT: BIL 1472 | USER: ORION | KONA RUNWAY & REHABILITATION | DRAWING: WORKING DRAWINGS | SHEET: E-401 | DWG

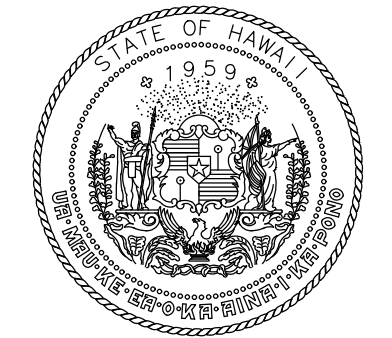


**SHEET NOTES:**

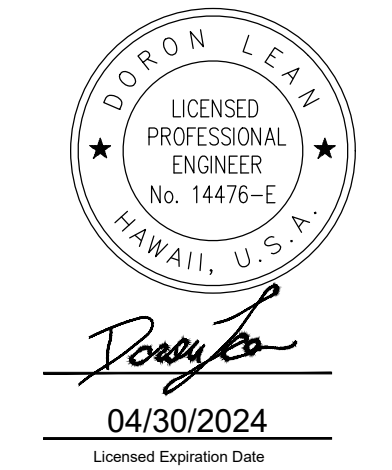
1. REFER TO DRAWINGS E-001 THRU E-002, & E-100 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND.
2. REFER TO DRAWING E-402 FOR NEW VAULT LAYOUT.



**AIRFIELD LIGHTING VAULT – EXISTING SINGLE LINE**  
SCALE: NOT TO SCALE



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**KEY PLAN / NOTES:**

NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENT**  
SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

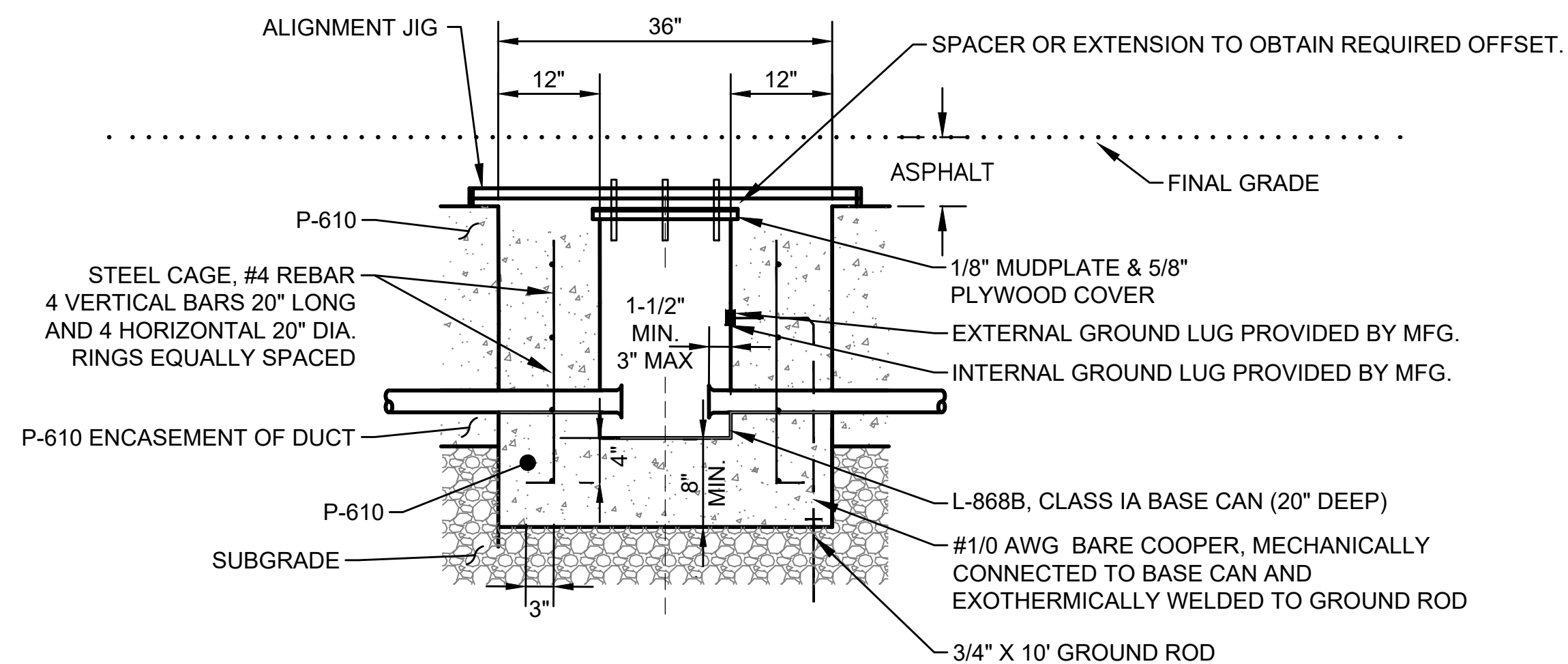
**SHEET TITLE:**

**AIRFIELD LIGHTING VAULT NEW SINGLE LINE DIAGRAM**

DATE :	09/2023	DWG. NO.	<b>E-404</b>
SHEET :			
163 OF 190 SHEETS			

**NOTES:**

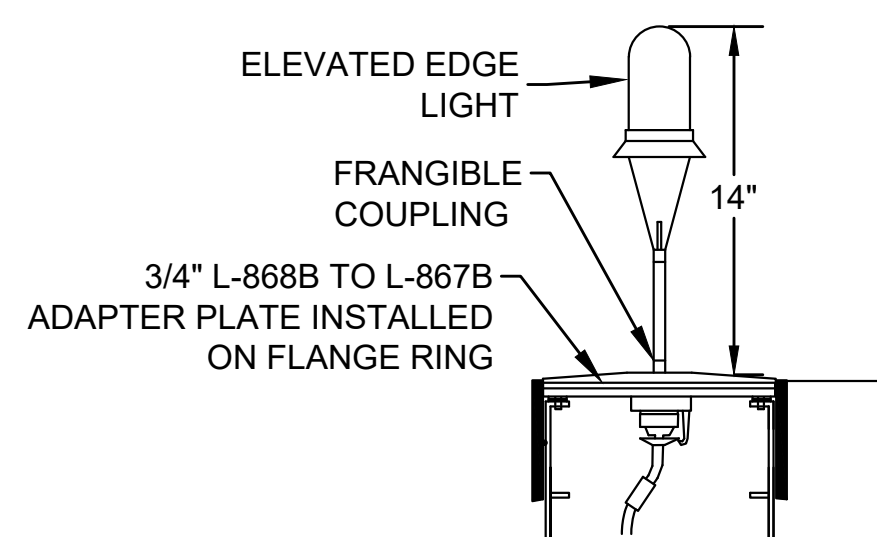
1. REFER TO DRAWINGS E-001 THRU E-002 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND.
2. ALL EQUIPMENT AND MATERIAL SHALL BE NEW UNLESS INDICATED AS EXISTING ON THE DRAWINGS.



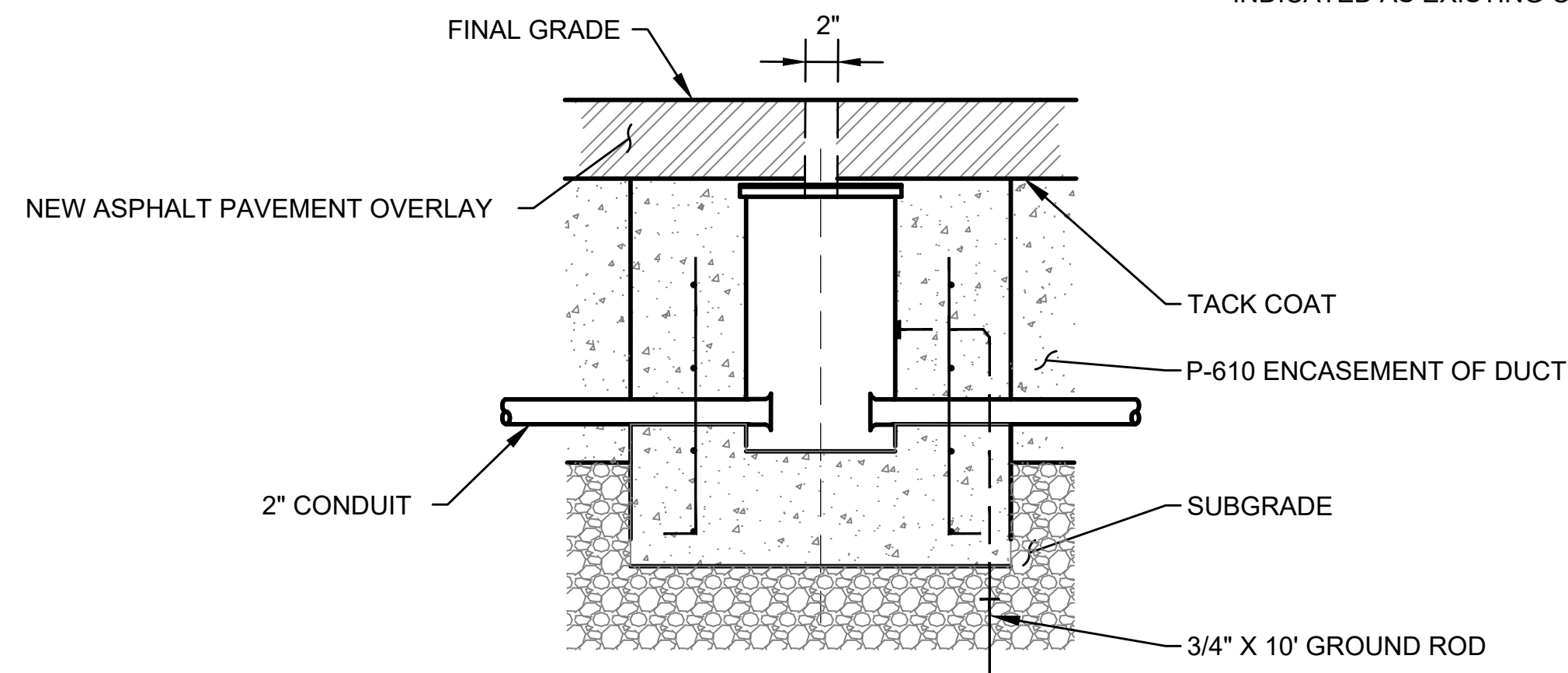
**NOTES FOR STEP 1:**

1. CORE 36" HOLE. PRIOR TO PAVING OPERATIONS, INSTALL BASE CAN SO THAT A MINIMUM 3" (MAXIMUM 6") EXTENSION WILL BE USED. COORDINATE WITH GENERAL CONTRACTOR THE FINAL PAVEMENT GRADE TO OBTAIN REQUIRED EXTENSION HEIGHT. USE ALIGNMENT JIG AS SUPPLIED BY JAQUITH (AW9100 OR APPROVED EQUAL). BASE CAN MAY NEED TO BE INSTALLED BELOW MILLED SURFACE TO ENSURE COMPLIANCE.
2. INSTALL STEEL REINFORCEMENT CAGE AND POSITION BASE CAN. STUB CONDUITS INTO BASE CAN. ADJUSTMENTS TO CONDUIT LOCATION SHALL BE ACCOMPLISHED USING A MINIMUM BEND RADIUS PER NEC.
3. POUR P-610 TO 1" BELOW SURFACE AND ALLOW TO CURE PER MFG'S RECOMMENDATIONS. USE BOLTS TO SECURE ALIGNMENT JIG TO MILLED SURFACE SO JIG DOESN'T MOVE DURING CONCRETE POUR.
4. REMOVE ALIGNMENT JIG AND RE-INSTALL MUD-PLATE AND PLYWOOD COVER.
5. AFTER POURING, VERIFY LOCATION AND AZIMUTH OF BASE CAN. CANS NOT INSTALLED CORRECTLY SHALL BE REMOVED AND NEW CAN TO BE INSTALLED AT CONTRACTOR'S OWN EXPENSE. AZIMUTH CORRECTION RING WILL NOT BE ALLOWED.

**1A** STEP 1  
SCALE: NOT TO SCALE



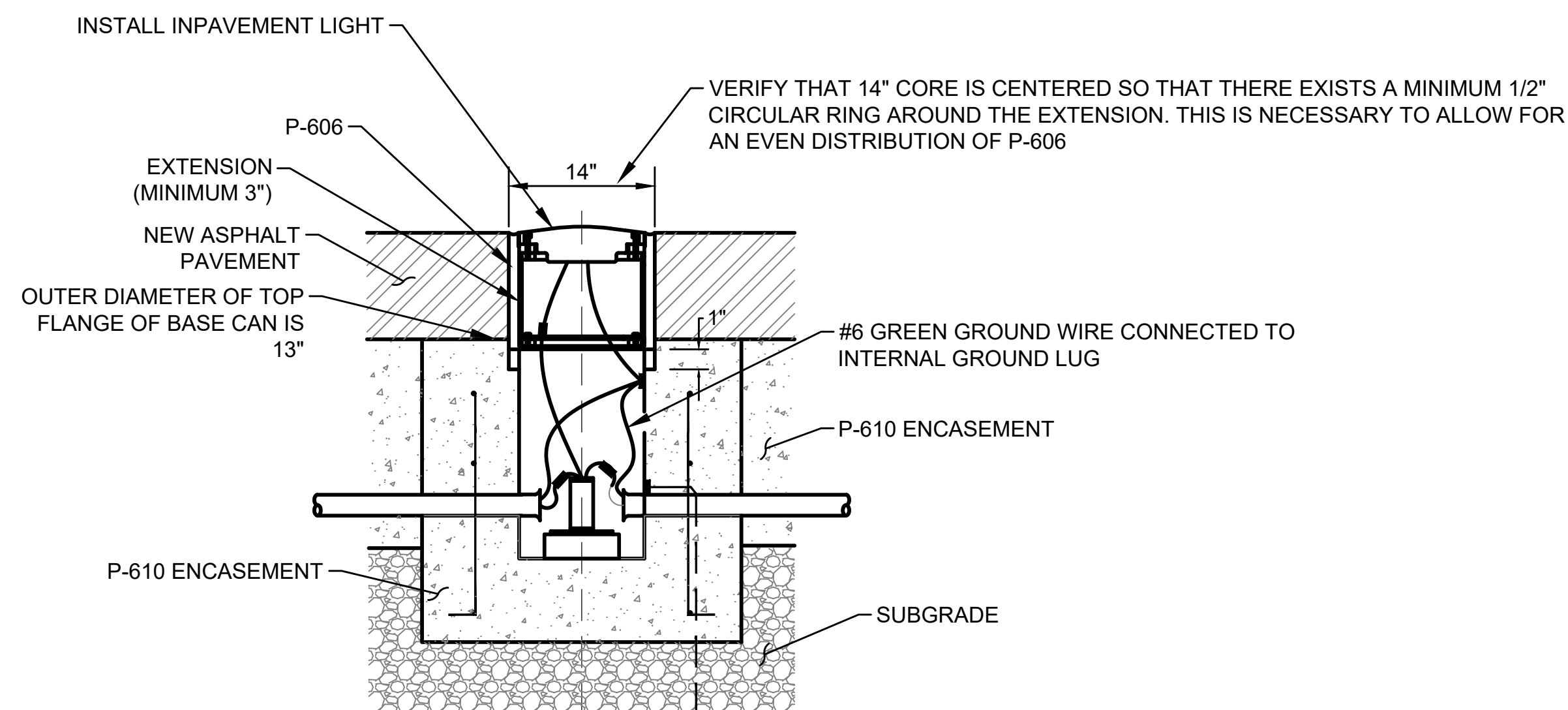
**DETAIL 2 NOTES:**  
INSTALL BASE CAN AS SHOWN IN DETAIL 1 ON THIS SHEET. ELEVATED LIGHTS OR COVER PLATES INSTALLED ON A L-868B BASE CAN SHALL INCLUDE A 3/4" DEEP ADAPTOR PLATE ON TOP OF THE FLANGE RING TO CONVERT FROM 11-1/4" BOLT PATTERN FOR INSET LIGHT TO 10-1/4" BOLT PATTERN.



**NOTES FOR STEP 2:**

1. BEFORE PAVING, CONTRACTOR SHALL APPLY TACK COAT.
2. IT IS POSSIBLE THAT DEPTH OF ASPHALT SURFACE AROUND BASE IS SLIGHTLY DEEPER AROUND THE CAN THAN IN OTHER LOCATIONS. CONTRACTOR SHALL TAKE SPECIAL CARE IN COMPACTING THIS AREA PROPERLY.
3. AFTER PAVEMENT OVERLAY, CORE A MAXIMUM 2" DIAMETER HOLE TO LOCATE CENTER OF CAN AND REMOVE CORE.
4. MEASURE AND INSTALL EXTENSION. PROVIDE HEIGHT OF EXTENSION TO ENGINEER AS PART OF SHOP DRAWING. THE EXTENSION SHALL BE NO LESS THAN 3" BUT NO MORE THAN 6". NOTE, THE HEIGHT AT THE MIDDLE OF THE FIXTURE MAY BE 1/8" TALLER THAN THE ELEVATION OF THE FIXTURE ON THE LOW SIDE OF THE PAVEMENT. TAKE THIS INTO ACCOUNT WHEN PERFORMING CALCULATIONS TO DETERMINE THE EXTENSION HEIGHT.

**1B** STEP 2  
SCALE: NOT TO SCALE



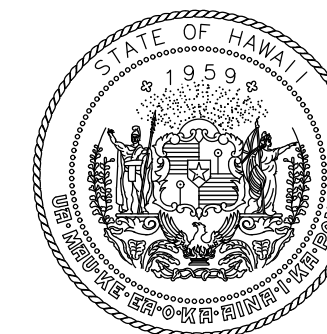
**NOTES FOR STEP 3:**

1. CORE 14" DIA. HOLE TO 1" BELOW TOP OF BASE CAN.
2. REMOVE MUDPLATE AND PLYWOOD COVER. INSTALL EXTENSION, SPACER RINGS, AND FLANGE/PAVEMENT RING.
3. FILL VOID AROUND EXTENSION WITH P-606. NOTE: CONTRACTOR MAY HAVE TO POUR P-606 TO 2" BELOW FINAL GRADE AS A FIRST LIFT AND THEN AFTER IT HARDENS, THE CONTRACTOR MAY NEED TO POUR ANOTHER LIFT. REFER TO P-606 MANUFACTURING DETAILS.
4. INSTALL FIXTURE OR STEEL PLATE, SPACERS AND FLANGE RING AND COMPLETE AS SHOWN IN DETAILS ON E-503.

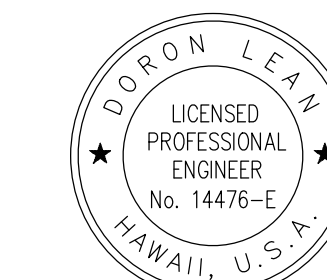
**1C** STEP 3  
SCALE: NOT TO SCALE

**1** INPAVEMENT LIGHT FIXTURE ON NEW L-868B BASE CAN IN NEW ASPHALT FULL STRENGTH PAVEMENT  
SCALE: NOT TO SCALE

USE DETAIL FOR L-850C, L-852T, L-861T & L-862  
INSTALLED IN FULL STRENGTH PAVEMENT



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DEPARTMENT OF TRANSPORTATION  
AIRPORTS



Doron Leav  
LICENSED PROFESSIONAL ENGINEER  
No. 14476-E  
HAWAII, U.S.A.  
04/30/2024  
Licensed Expiration Date

DSGN.	DRWN.	CHKD.	APPD.
JP	KV	JA	DL

**KEY PLAN / NOTES:**

NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENT**

SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35  
REHABILITATION**

AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

**SHEET TITLE:**

**AIRFIELD LIGHTING  
DETAIL 1**

DATE :

09/2023

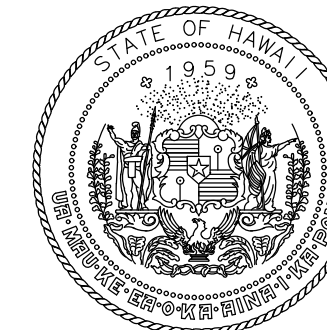
SHEET :

164 OF 190 SHEETS

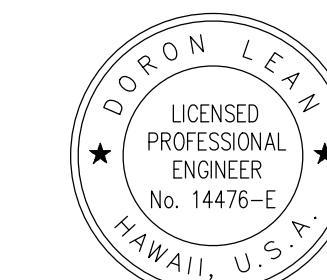
DWG. NO.

**E-501**





Airports Division  
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS



Doron Lean  
LICENSED PROFESSIONAL ENGINEER  
No. 14476-E  
HAWAII, U.S.A.  
04/30/2024  
Licensed Expiration Date

**NOTES:**

1. REFER TO DRAWINGS E-001 THRU E-002 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND.
2. ALL EQUIPMENT AND MATERIAL SHALL BE NEW UNLESS INDICATED AS EXISTING ON THE DRAWINGS.

DSGN.	DRWN.	CHKD.	APPD.
JP	KV	JA	DL

**KEY PLAN / NOTES:**

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SEPTEMBER 2023  
DATE

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REHABILITATION**

AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

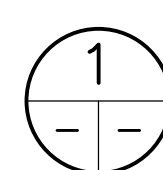
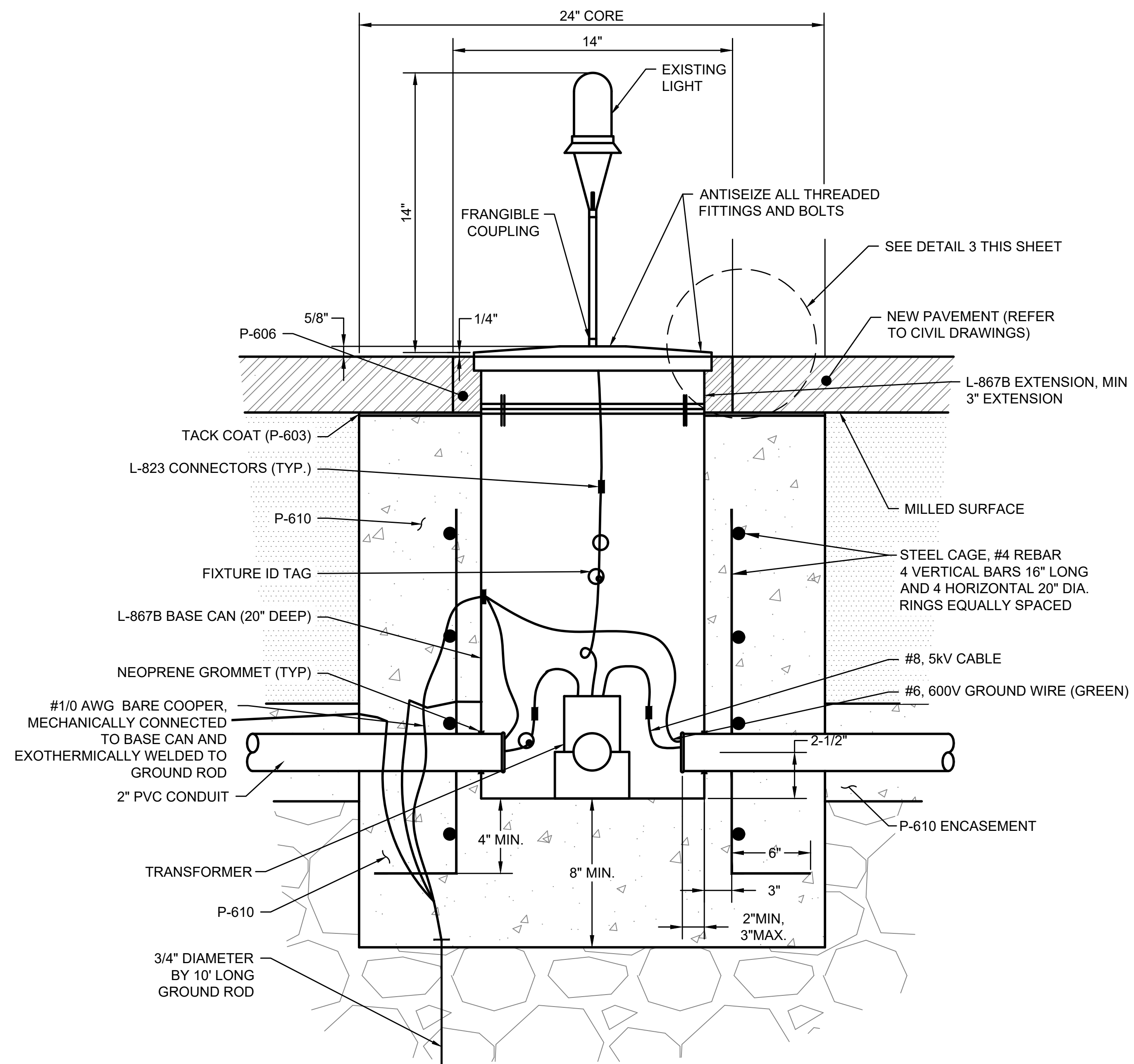
**SHEET TITLE:**

**AIRFIELD LIGHTING  
DETAIL 2**

DATE :  
09/2023  
SHEET :  
165 OF 190 SHEETS

DWG. NO.

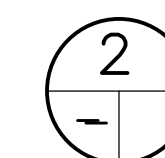
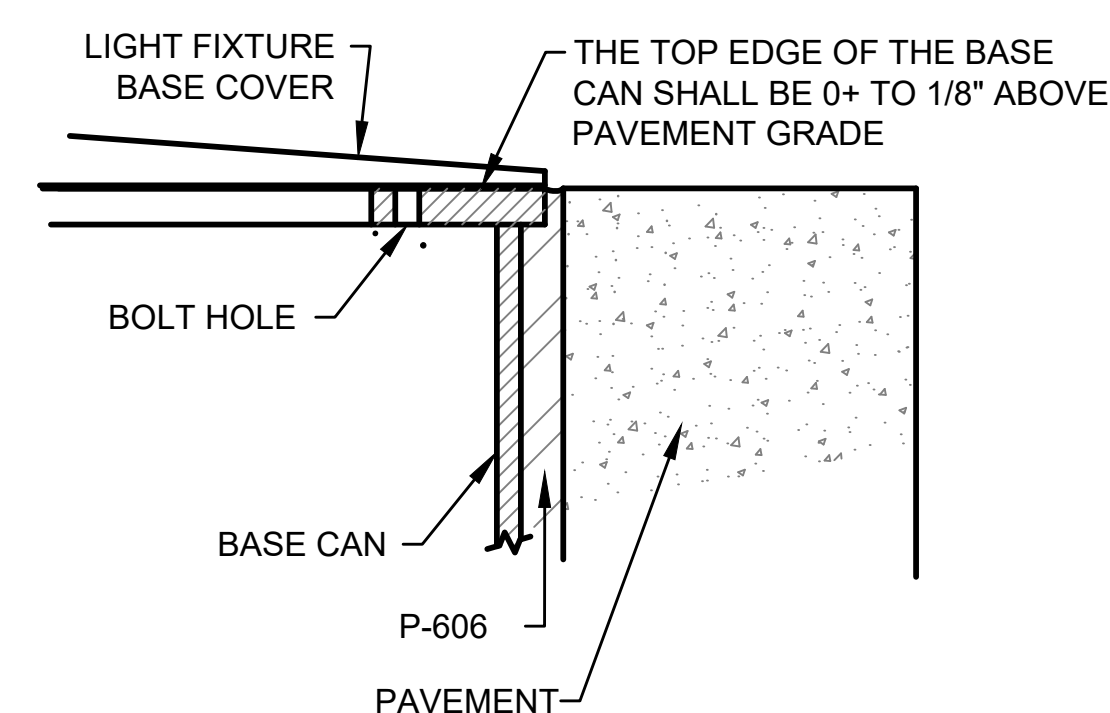
**E-502**



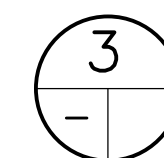
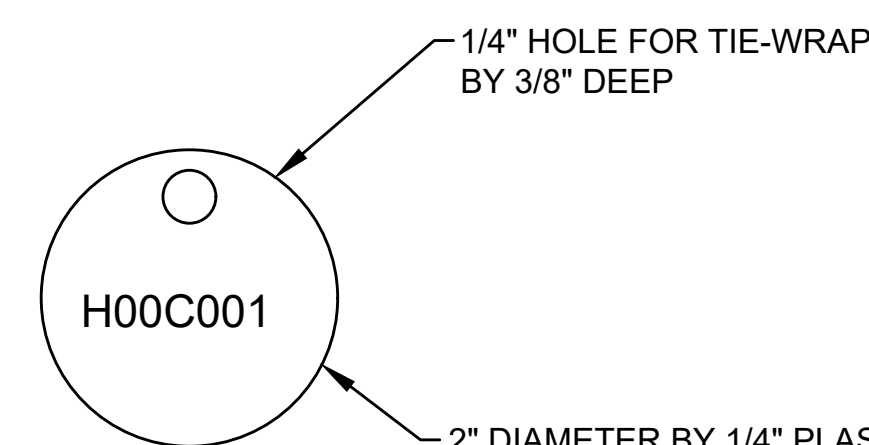
**ELEVATED EDGE LIGHT (T/W) ON L-867B BASE CAN IN  
NEW MILLED ASPHALT SHOULDER**

SCALE: NOT TO SCALE

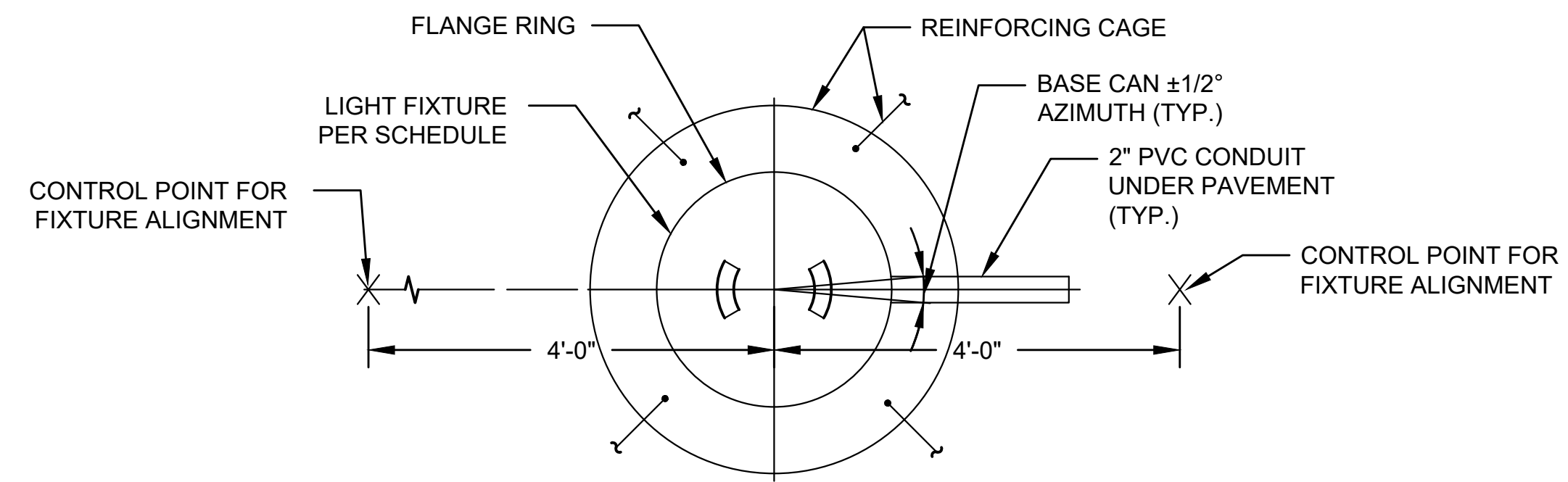
USE THIS DETAIL FOR ALL LIGHTS AND COVER  
PLATES INSTALLED IN MILLED ASPHALT



**BASE CAN EDGE DETAIL**  
SCALE: NOT TO SCALE



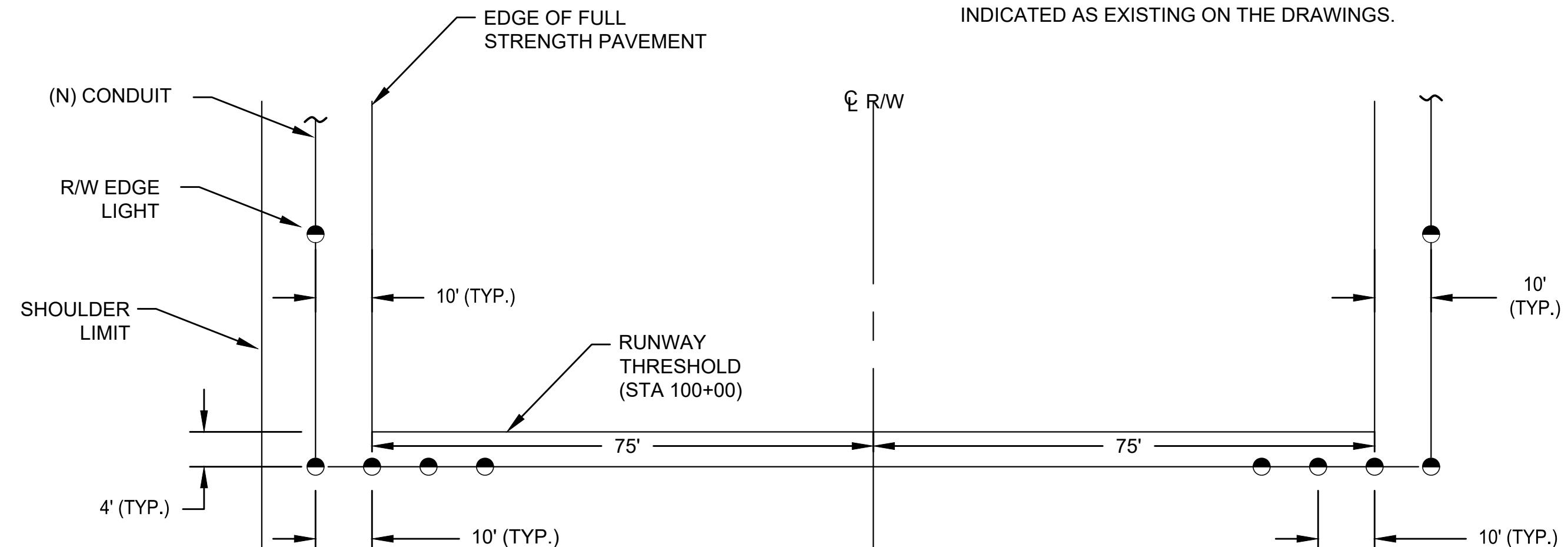
**FIXTURE ID TAG INSIDE LIGHT BASE**  
SCALE: NOT TO SCALE



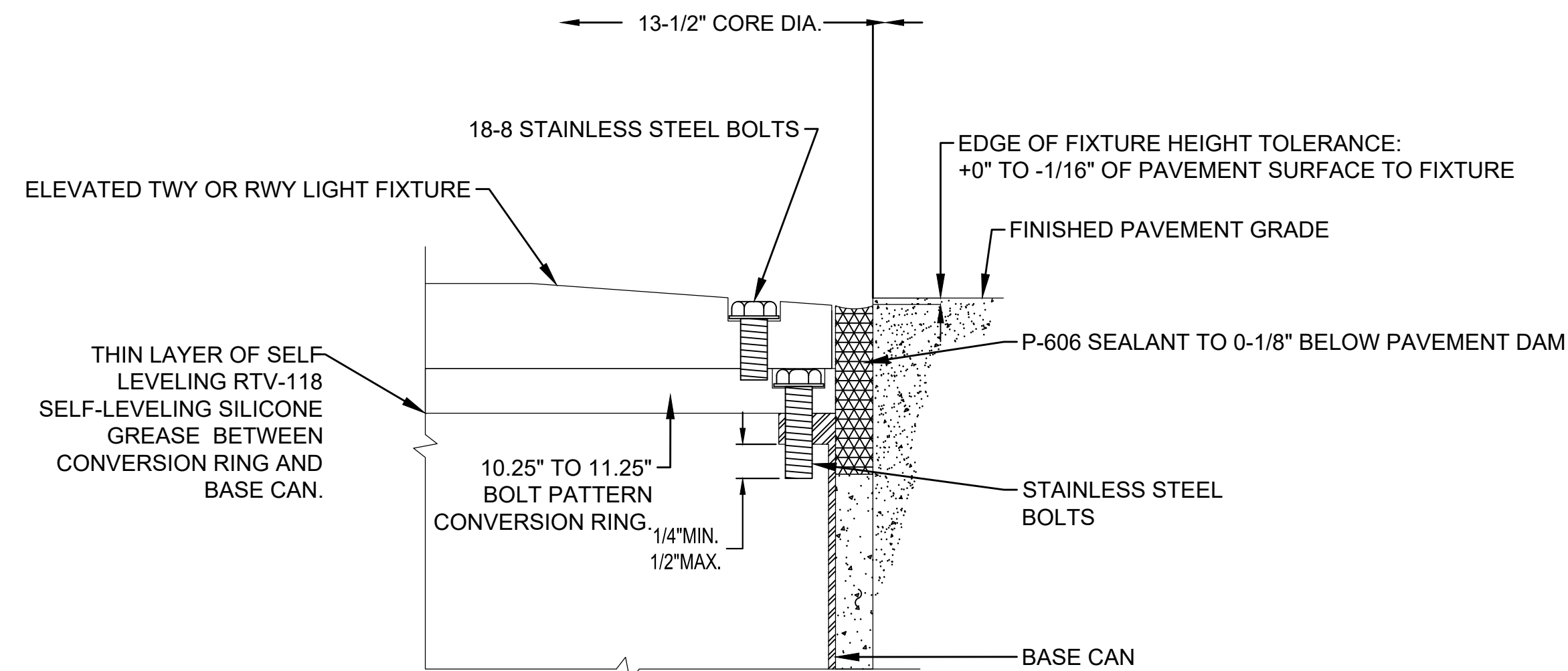
**TOLERANCES:**

INPAVEMENT LIGHT BASE CAN: AZIMUTH: ± 1/2 DEGREE  
 LEVEL ± 1/2 DEGREE LONGITUDINAL ± 2"  
 LATERAL ± 1/4"

**1** L-868B BASE CAN INSTALLATION AND TOLERANCES  
 SCALE: NOT TO SCALE



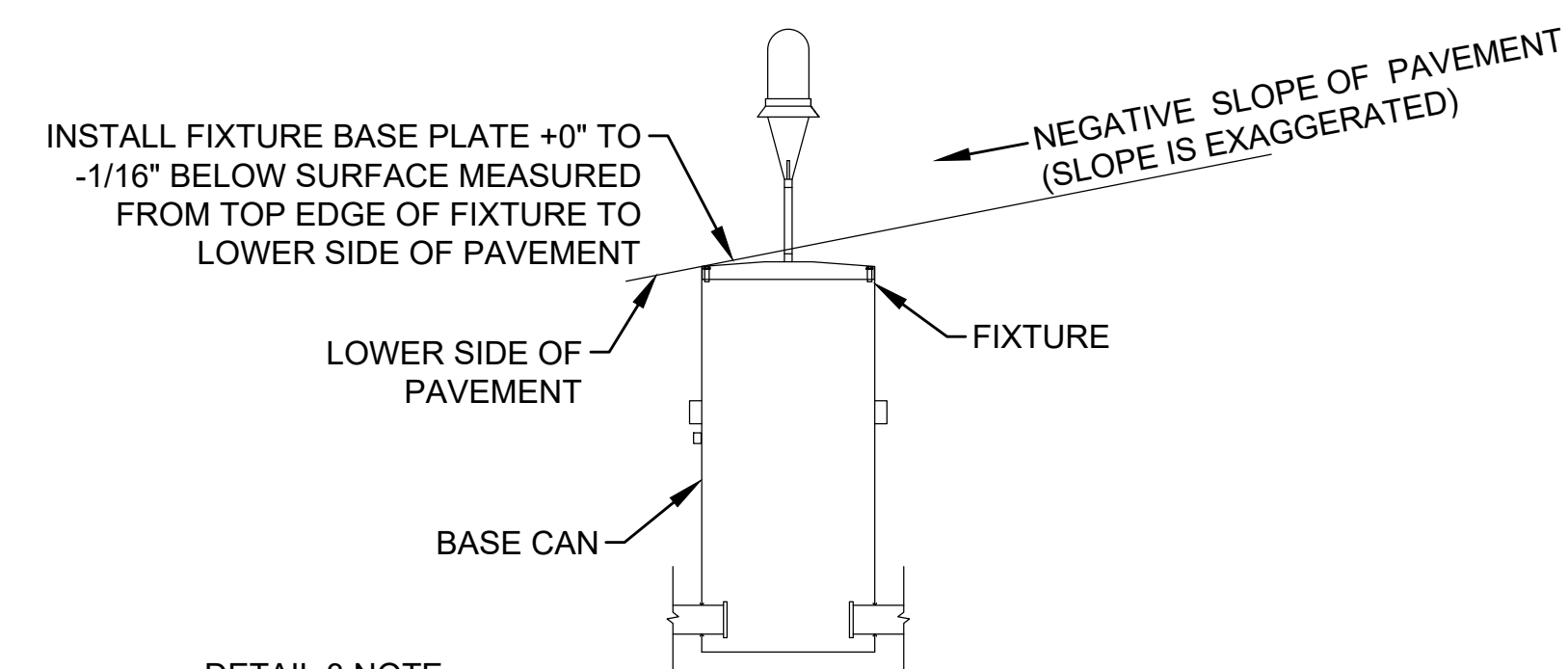
**2** TYPICAL R/W EDGE LIGHT LAYOUT  
 SCALE: NOT TO SCALE



**NOTES:**

- AFTER REMOVING 13-1/2" CORE, REMOVE THE PLYWOOD COVER & MUD-PLATE ALONG WITH ANY DIRT, GRIT AND OTHER MATERIAL, WHICH MAY HAVE SEEPED INTO THE BASE CAN. INSTALL CABLE (PROVIDE 3' FEET OF SLACK FOR CONNECTIONS AS MEASURED FROM THE GROUND), TRANSFORMER SADDLE, ISOLATION TRANSFORMER(S), AND TAGS AND MAKE ALL NECESSARY SPLICES.
- INSTALL 10.25" TO 11.25" BOLT PATTERN CONVERSION RING. ENSURE THAT SILICONE DRIES ENOUGH OR IS CLEANED FROM SURFACE TO ENSURE THAT NO SEALER GETS ON THE STAINLESS STEEL BOLTS DURING FIXTURE PLACEMENT.
- FILL VOID AROUND THE BASE CAN WITH P-606 SEALER COMPOUND UP TO 1/8" BELOW TOP OF FLANGE RING WITH EPOXY DAM. REMOVE ANY P-606 THAT HAS POURED OVER THE EPOXY DAM.
- GROUNDING: CONNECT #6 AWG GROUND WIRE TO INTERNAL GROUND LUG IN EVERY BASE CAN. AT LOCATIONS WHERE THE CIRCUIT IS CONNECTED TO AN EXISTING BASE CAN AND EXISTING BASE CAN DOES NOT HAVE A GROUND LUG, CONTRACTOR SHALL RETROFIT BASE CAN. ASSUME ALL OF THE EXISTING BASE CANS REQUIRE GROUND LUG RETROFIT.
- IN ORDER TO MAINTAIN TIMELY COMPLETION OF THE PHASING, CONTRACTOR SHALL HAVE A MINIMUM OF SPARE MATERIAL SUCH AS TRANSFORMERS, SPLICE KITS, CABLE, AND ALL OTHER ACCESSORIES AT THE JOB SITE AT ALL TIMES. EQUIPMENT WILL NOT BE AVAILABLE FROM KOA MAINTENANCE.
- CONTRACTOR SHALL FURNISH BOLTS WITH VARYING LENGTHS TO ENSURE PROPER DEPTH AS SHOWN ON DETAIL. ALL BOLTS SHALL BE THREADED FULL LENGTH (NO SHOULDER BOLTS.) ALL BOLTS MUST BE LONG ENOUGH TO PROVIDE FULL THREAD ENGAGEMENT AND EXTEND BEYOND BOTTOM PORTION OF FLANGE, MINIMUM 1/4" MAX. 1/2".
- USING A CALIBRATED COMPRESSED AIR RATCHETING TOOL, TIGHTEN EACH BOLT UNTIL THEY ARE LOOSELY SEATED AGAINST THE FIXTURE. TIGHTEN ALL BOLTS IN A STAR PATTERN USING A TORQUE WRENCH. ALL FIXTURES SHALL BE TORQUED AS RECOMMENDED IN FAA ENGINEERING BRIEFING NO. 83A.
- APPLY ACRYLIC RESIN OR SIMILAR MATERIAL TO ALL SECONDARY ELECTRICAL CONNECTIONS AND FIXTURES.

**3** ELEVATED LIGHT FIXTURE INSTALLATION - ELEVATION  
 SCALE: NOT TO SCALE



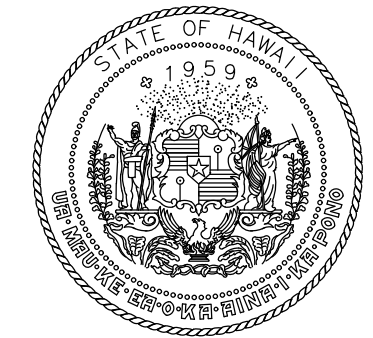
**DETAIL 3 NOTE:**

- CONTRACTOR SHALL ADJUST THE FIXTURE HEIGHT BY PLACING A 2' LEVEL ACROSS THE PAVEMENT SLOPE AND INCREMENTALLY PLACING 1/16" SPACER RINGS UNTIL TOP OF FIXTURE TOUCHES THE 2' LEVEL. ONCE THE FIXTURE BASE PLATE TOUCHES THE LEVEL REMOVE THE LAST SPACER RING SO THAT FIXTURES BASE PLATE IS +0" TO -1/16" BELOW LEVEL.
- THIS DETAIL APPLIES TO ALL ELEVATED LIGHT FIXTURES INSTALLED IN FULL STRENGTH TAXIWAY OR RUNWAY PAVEMENT.

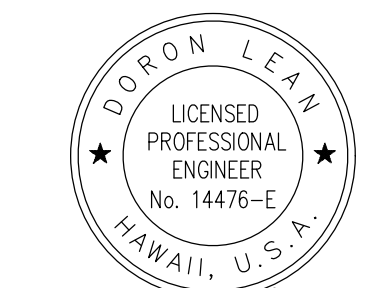
**4** MEASURING FIXTURE ELEVATION  
 SCALE: NOT TO SCALE

**NOTES:**

- REFER TO DRAWINGS E-001 THRU E-002 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND.
- ALL EQUIPMENT AND MATERIAL SHALL BE NEW UNLESS INDICATED AS EXISTING ON THE DRAWINGS.



Airports Division  
 STATE OF HAWAII  
 DEPARTMENT OF TRANSPORTATION  
 AIRPORTS



*Doron Lean*  
 04/30/2024  
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JP	KV	JA	DL

**KEY PLAN / NOTES:**

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**CONSTRUCTION DOCUMENT**

SEPTEMBER 2023  
 DATE

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**

AT  
 ELLISON ONIZUKA  
 KONA INTERNATIONAL AIRPORT AT KEAHOLE  
 KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

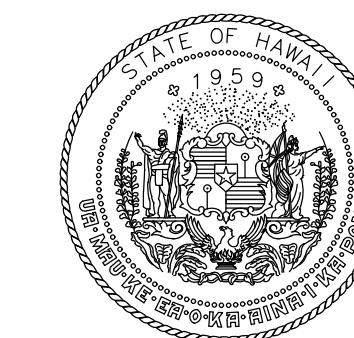
**SHEET TITLE:**

**AIRFIELD LIGHTING  
 DETAIL 3**

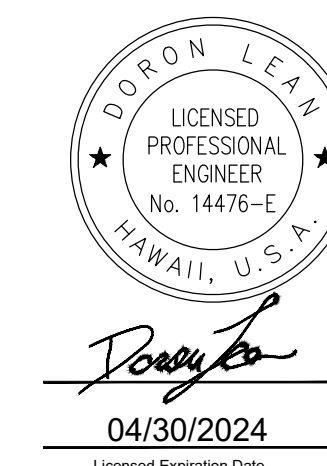
DATE :	09/2023
SHEET :	
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DWG. NO.  
**E-503**





Airports Division  
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS



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SEPTEMBER 2023  
DATE

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**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**  
**AH2021-16**

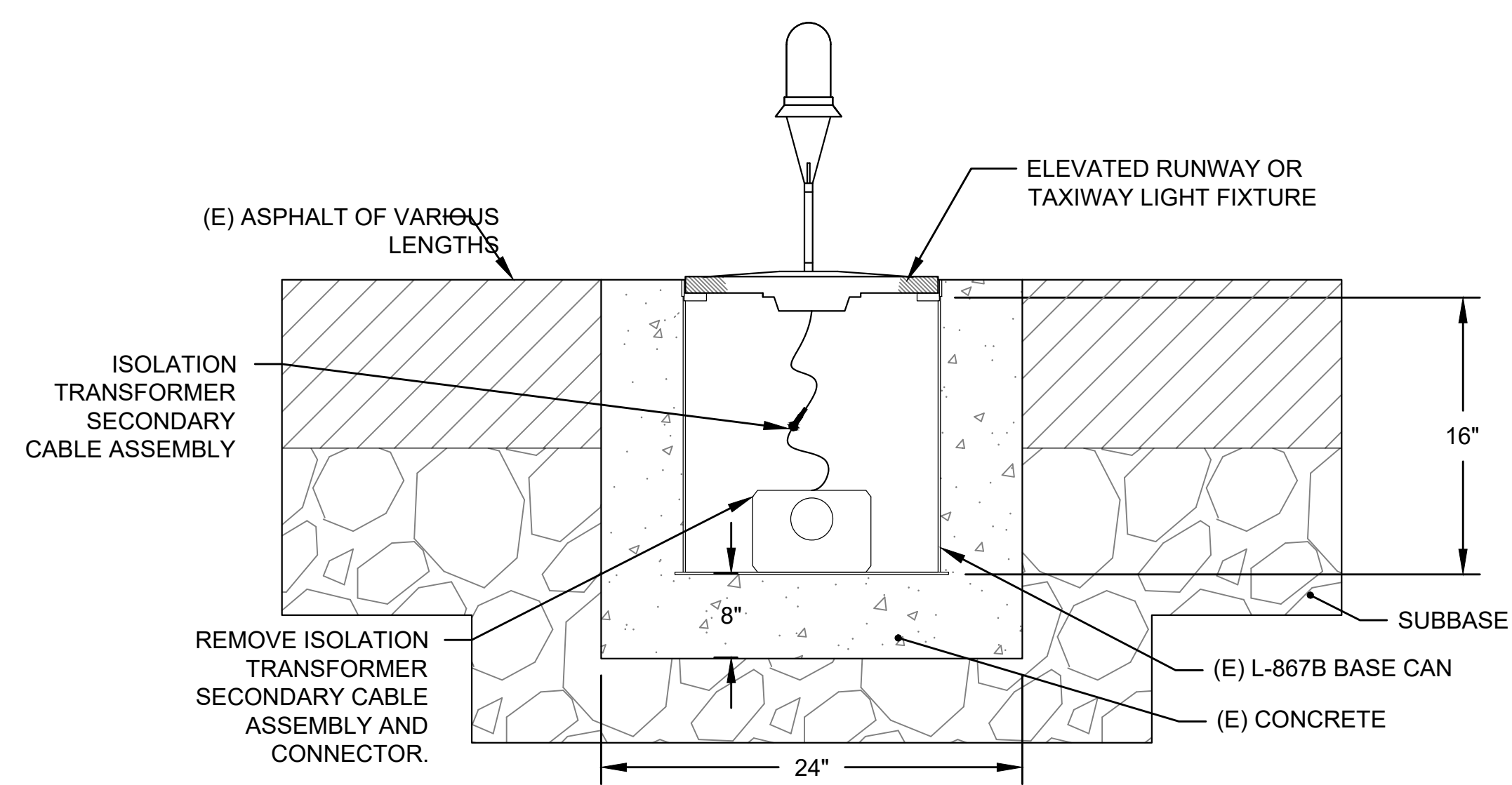
**SHEET TITLE:**

**AIRFIELD LIGHTING  
DETAIL 4**

DATE :	09/2023	DWG. NO.	<b>E-504</b>
SHEET :			
167 OF 190 SHEETS			

**NOTES:**

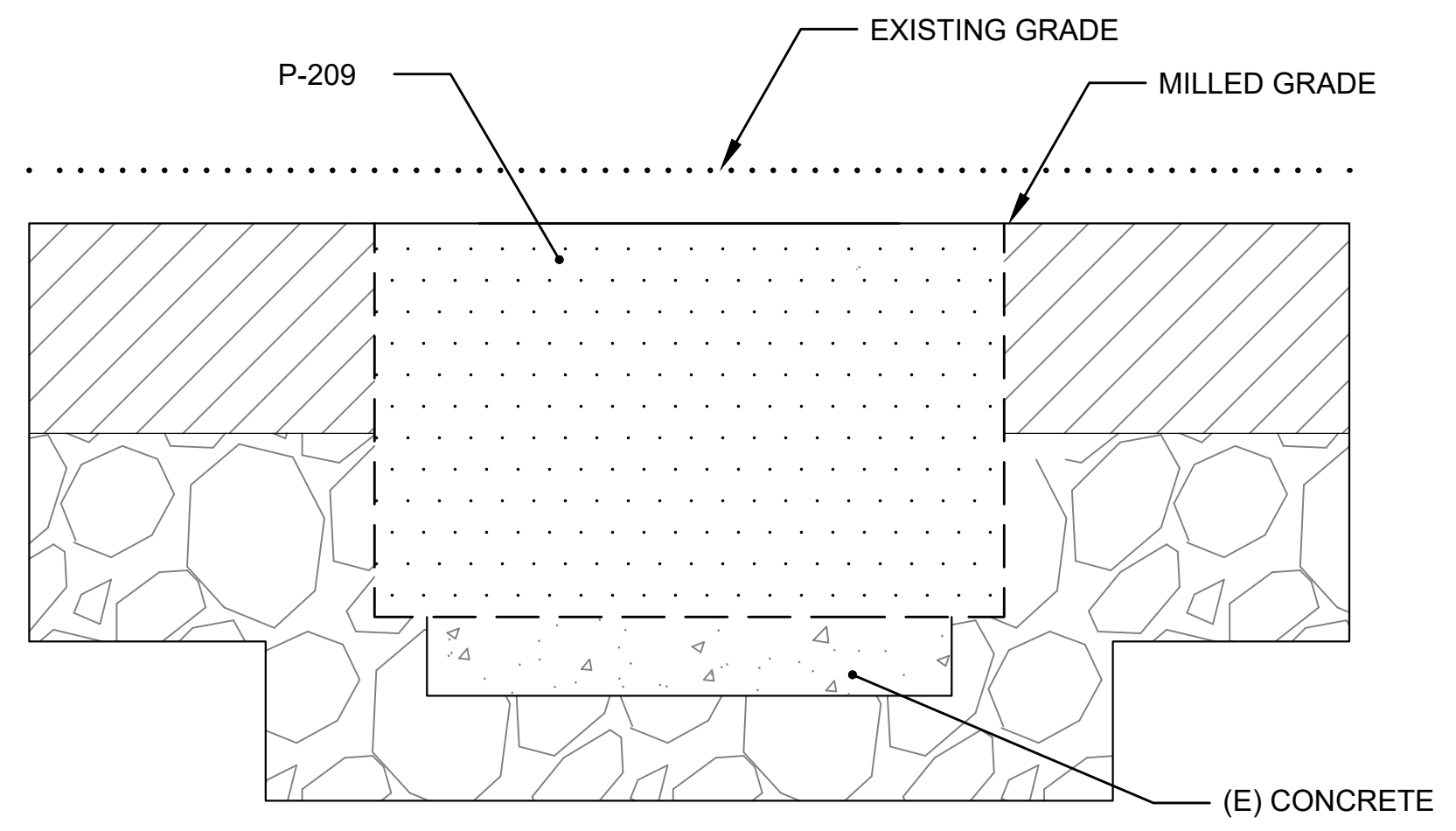
- REFER TO DRAWINGS E-001 THRU E-002 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND.
- ALL EQUIPMENT AND MATERIAL SHALL BE NEW UNLESS INDICATED AS EXISTING ON THE DRAWINGS.



**A** STEP 1: EXISTING LIGHT FIXTURE AND BASE CAN  
SCALE: 1-1/2" = 1'-0"

**NOTES FOR STEP 1:**

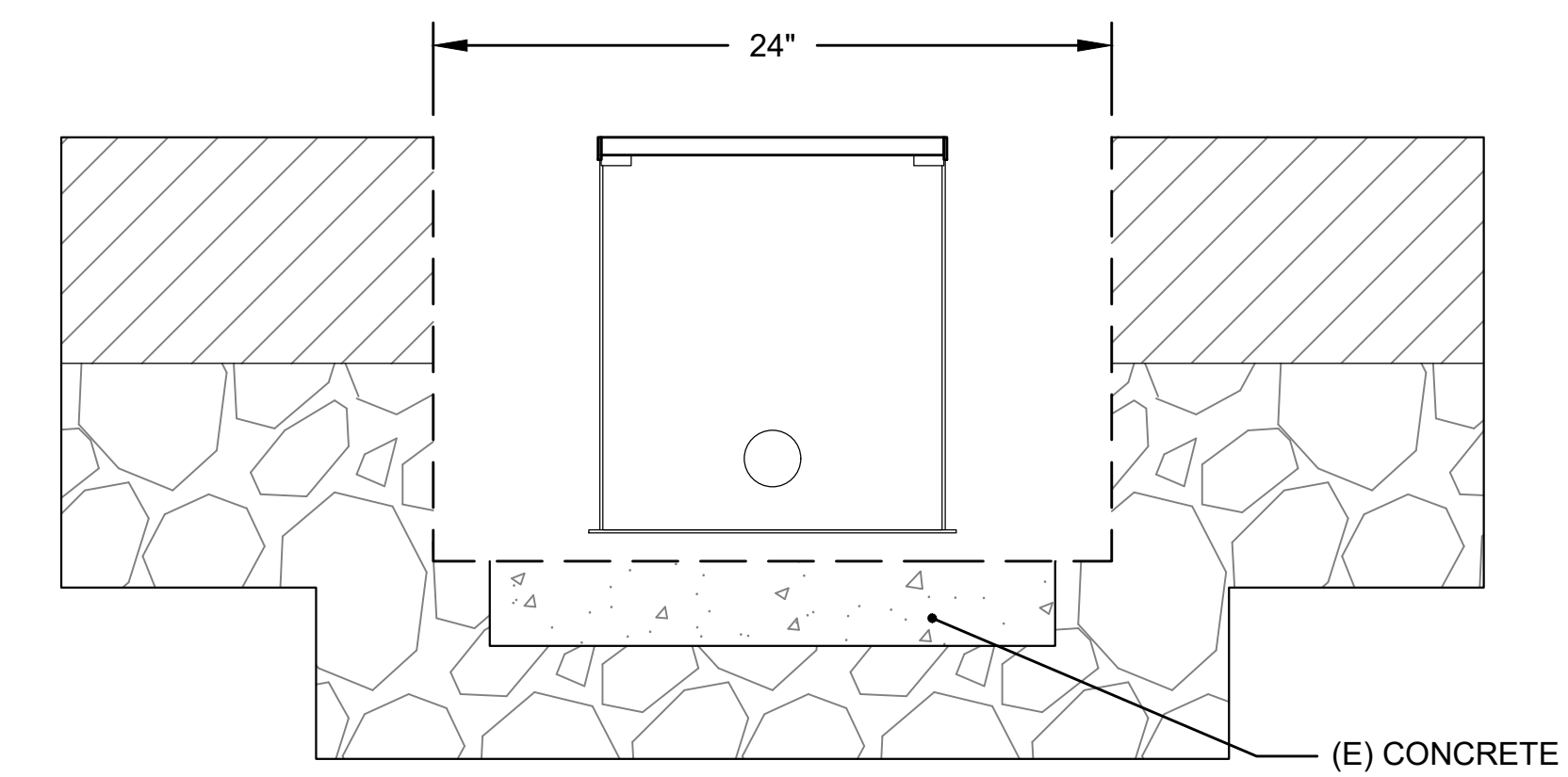
- PRIOR TO PERFORMING ANY WORK CONTRACTOR SHALL FIELD SURVEY (E) BASE CAN DEPTH AND CONFIGURATION INCLUDING DEPTH OF BASE CAN FROM GRADE. USE THIS DEPTH FOR STEPS 2 AND 3 TO CALCULATE CORING DEPTH.
- REMOVE THE LIGHT FIXTURE BOLTS AND LIFT AND REMOVE THE EXISTING LIGHT FIXTURE FROM COVER PLATE OR LID.



**C** STEP 3 AFTER MILLING IS PERFORMED  
FILL 24" CORE WITH P-209 OR P-219  
SCALE: 1-1/2" = 1'-0"

**NOTES FOR STEP 3:**

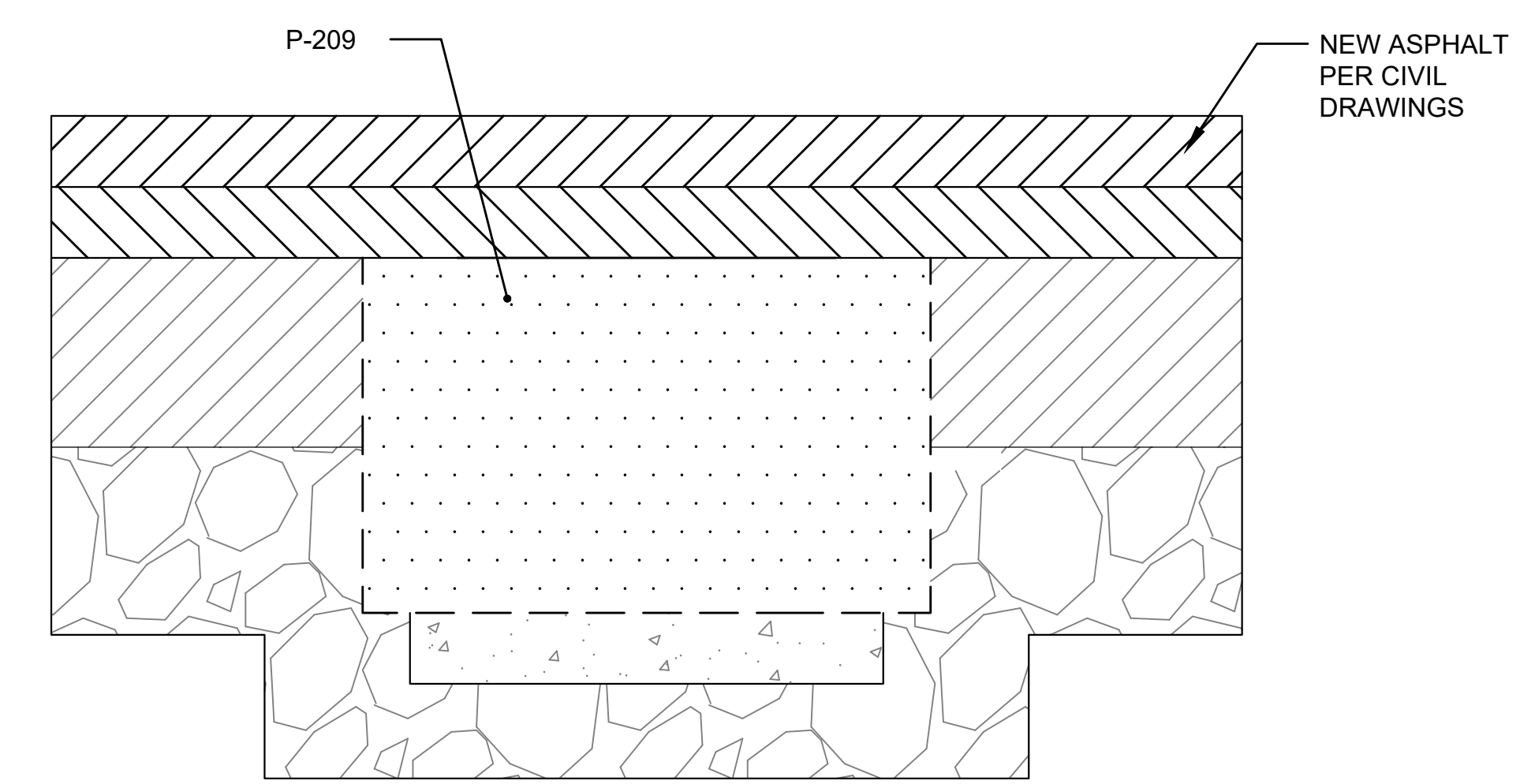
- REMOVE THE 24" DIAMETER CORE. IF THE 24" DIAMETER CORE CANNOT BE REMOVED AS ONE PIECE, USE AN IMPACT CHISEL TO BREAK THE CORE INTO REMOVABLE PIECES. CHISEL THE BOTTOM OF THE CORE LEVEL TO THE SATISFACTION OF THE ENGINEER. SURVEY THE LOCATION OF THE CONDUIT AND TAKE PRECAUTION NOT TO DAMAGE IT.
- FILL VACANT AREA WITH P-209 UNTIL LEVEL WITH EXISTING GRADE.



**B** STEP 2: 24" DIAMETER CORE DRILL  
SCALE: 1-1/2" = 1'-0"

**NOTES FOR STEP 2:**

- PERFORM A 24" DIAMETER CORE DRILL DOWN TO A DEPTH OF 1" BELOW THE BOTTOM OF THE EXISTING BASE CAN.

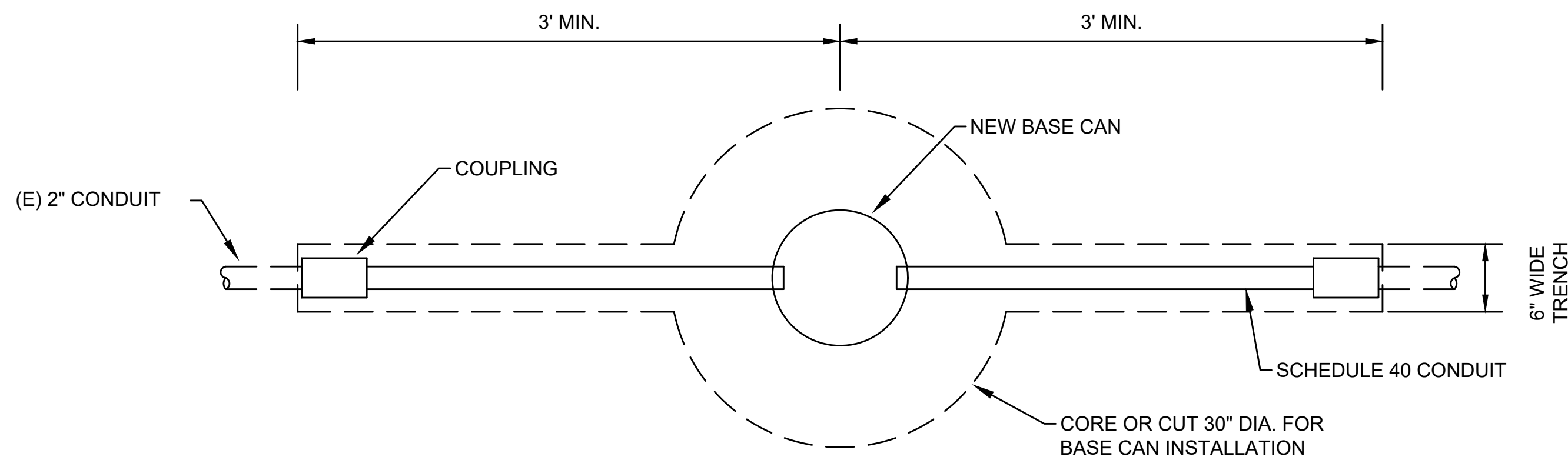


**D** STEP 4: OVERLAY BACKFILLED AREA WITH ASPHALT  
SCALE: 1-1/2" = 1'-0"

**NOTES FOR STEP 4:**

- REFER TO CIVIL DRAWINGS FOR PAVING PLAN AND DEPTH OF MILLING AND PAVING.

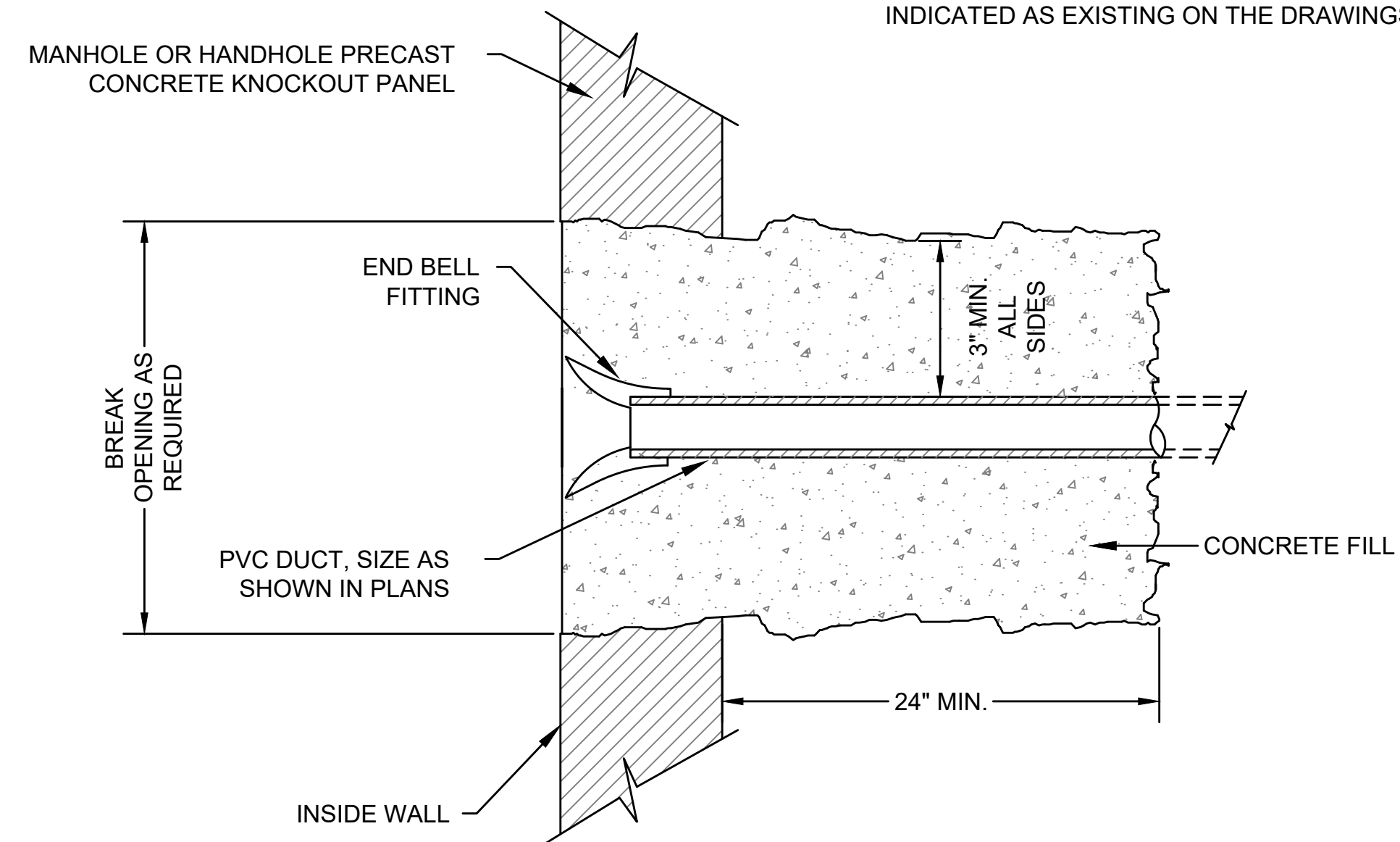
**1** REMOVAL OF BASE CAN PRIOR TO OVERLAY  
SCALE: AS SHOWN



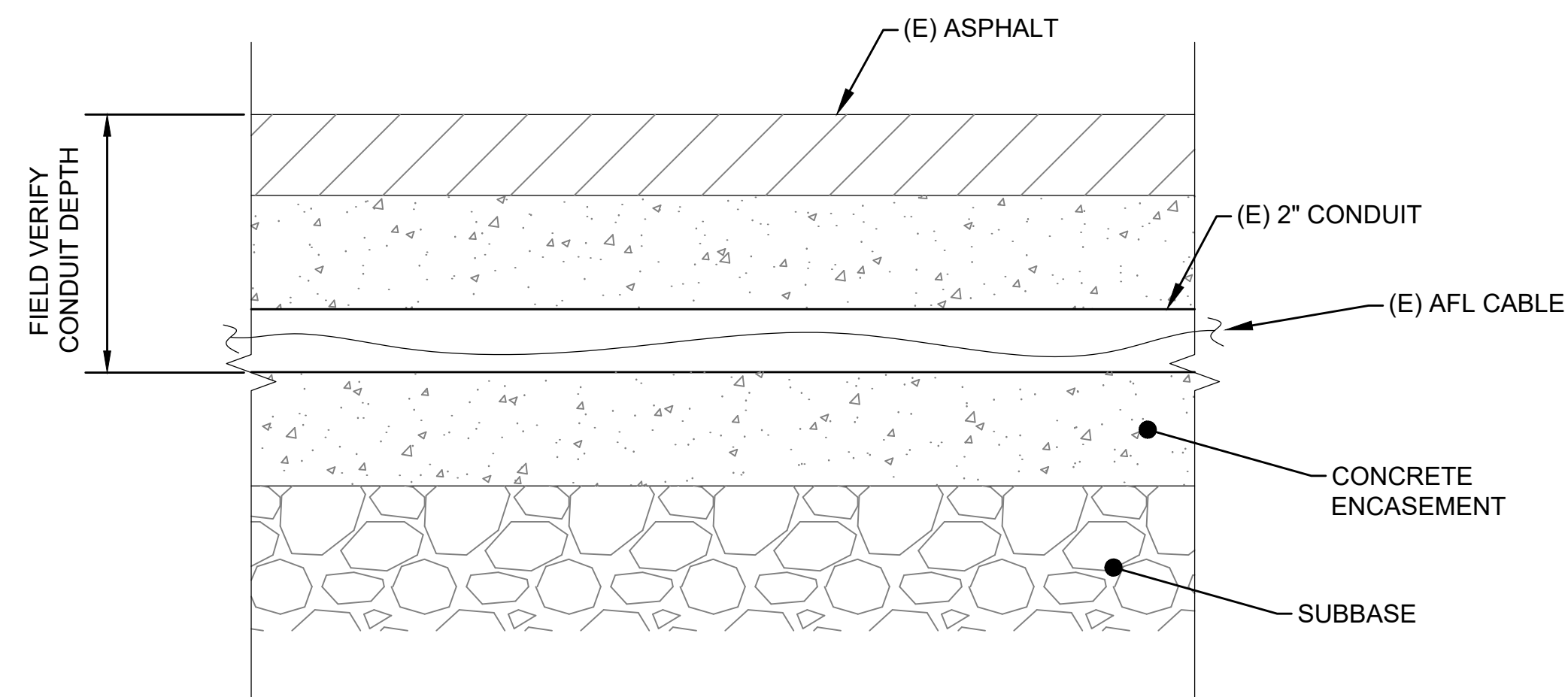
**1** DETAIL FOR CONNECTING EXISTING CONDUIT TO NEW BASE – PLAN  
SCALE: NOT TO SCALE

**NOTES:**

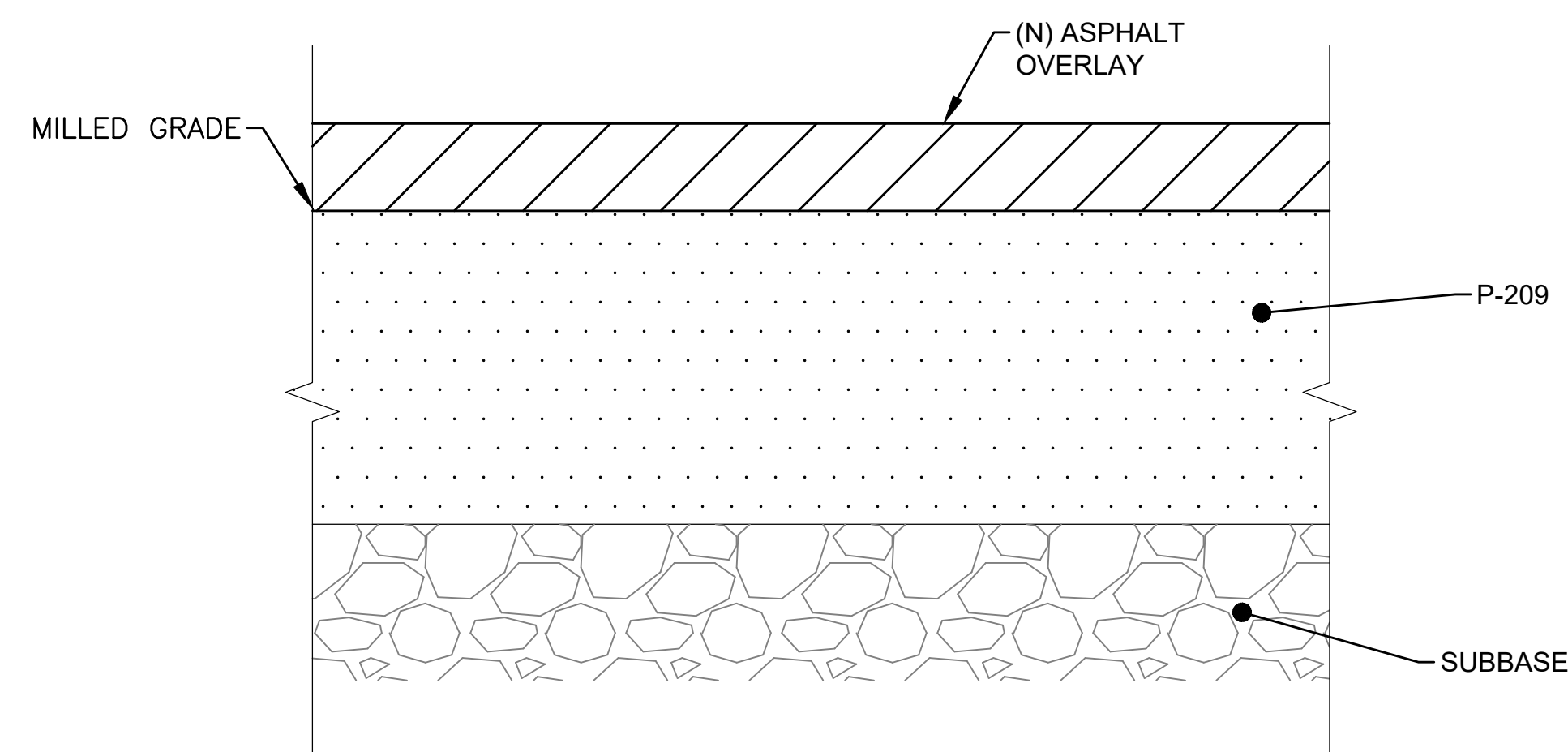
1. PROVIDE SMOOTH CURVES AND ENTER NEW BASE PERPENDICULAR TO SIDE OF BASE CAN.
2. PROVIDE A MINIMUM 3' LONG CONDUIT TRANSITION.



**2** DUCT ENTRY DETAIL AT HANDHOLE AND MANHOLE  
SCALE: NOT TO SCALE



**3A** EXISTING CONDUIT IN EXISTING ASPHALT  
SCALE: NOT TO SCALE

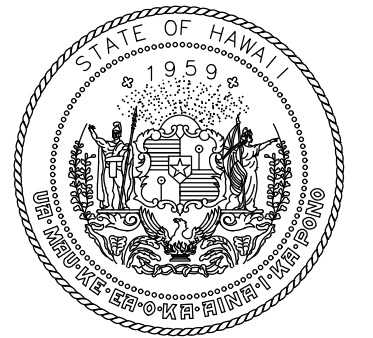


**3B** BACKFILL TRENCH WITH P-209 TO MILLED GRADE  
SCALE: NOT TO SCALE

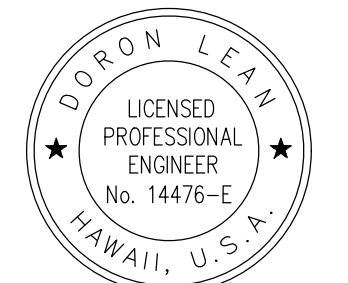
**3** REMOVAL OF EXISTING CONDUIT  
SCALE: NOT TO SCALE

**NOTES:**

1. REFER TO DRAWINGS E-001 THRU E-002 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND.
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ELLISON ONIZUKA  
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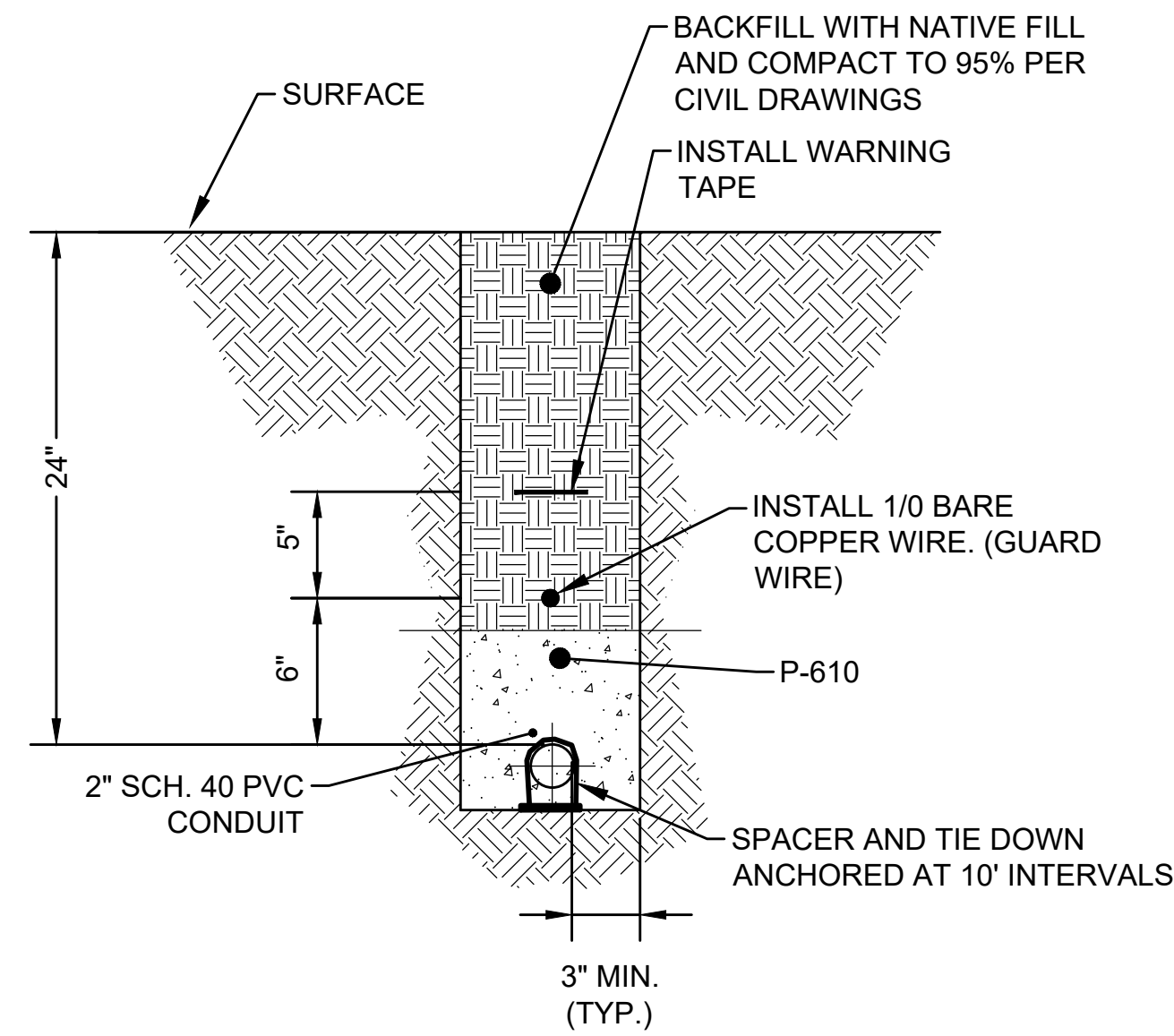
**AH2021-16**

**SHEET TITLE:**

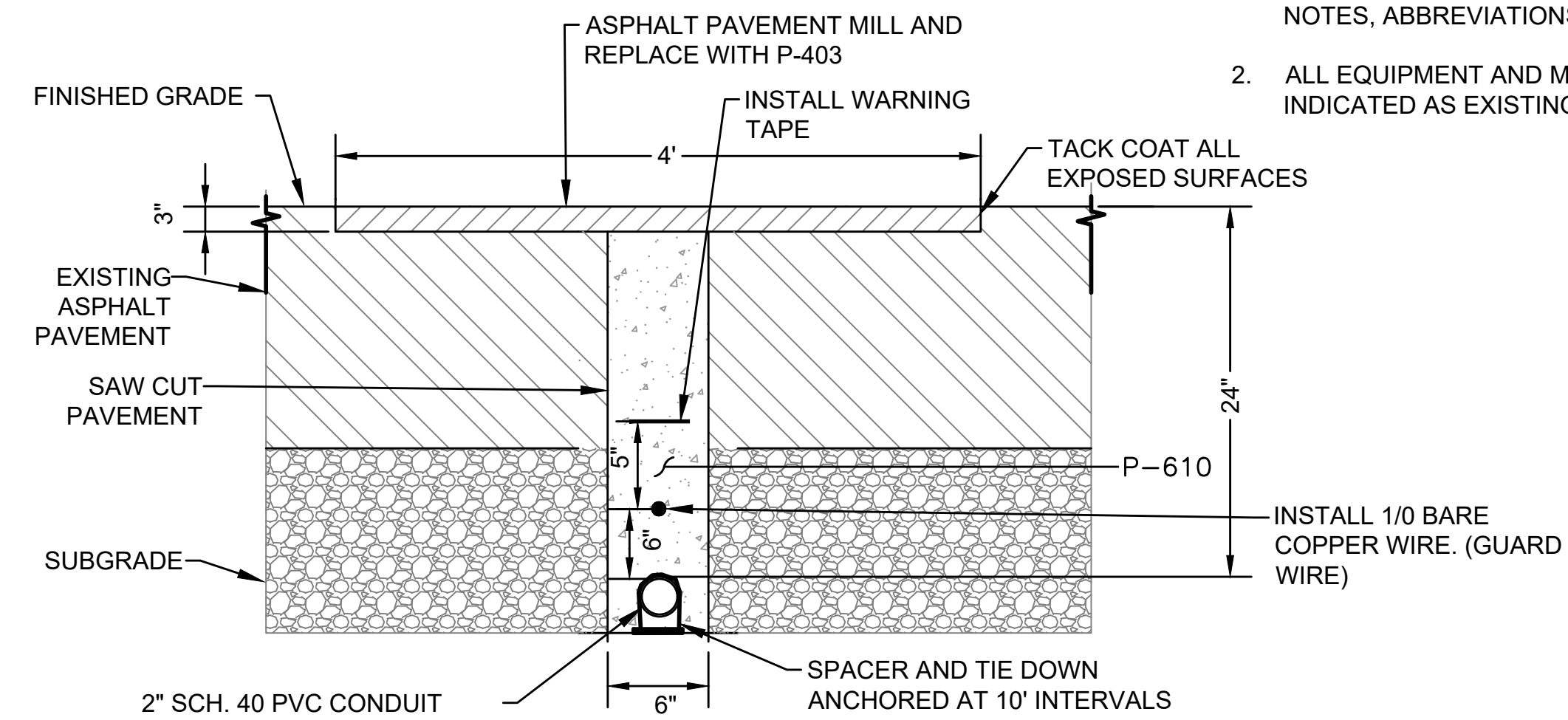
**AIRFIELD LIGHTING  
DETAIL 5**

DATE :	DWG. NO.
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SHEET :	
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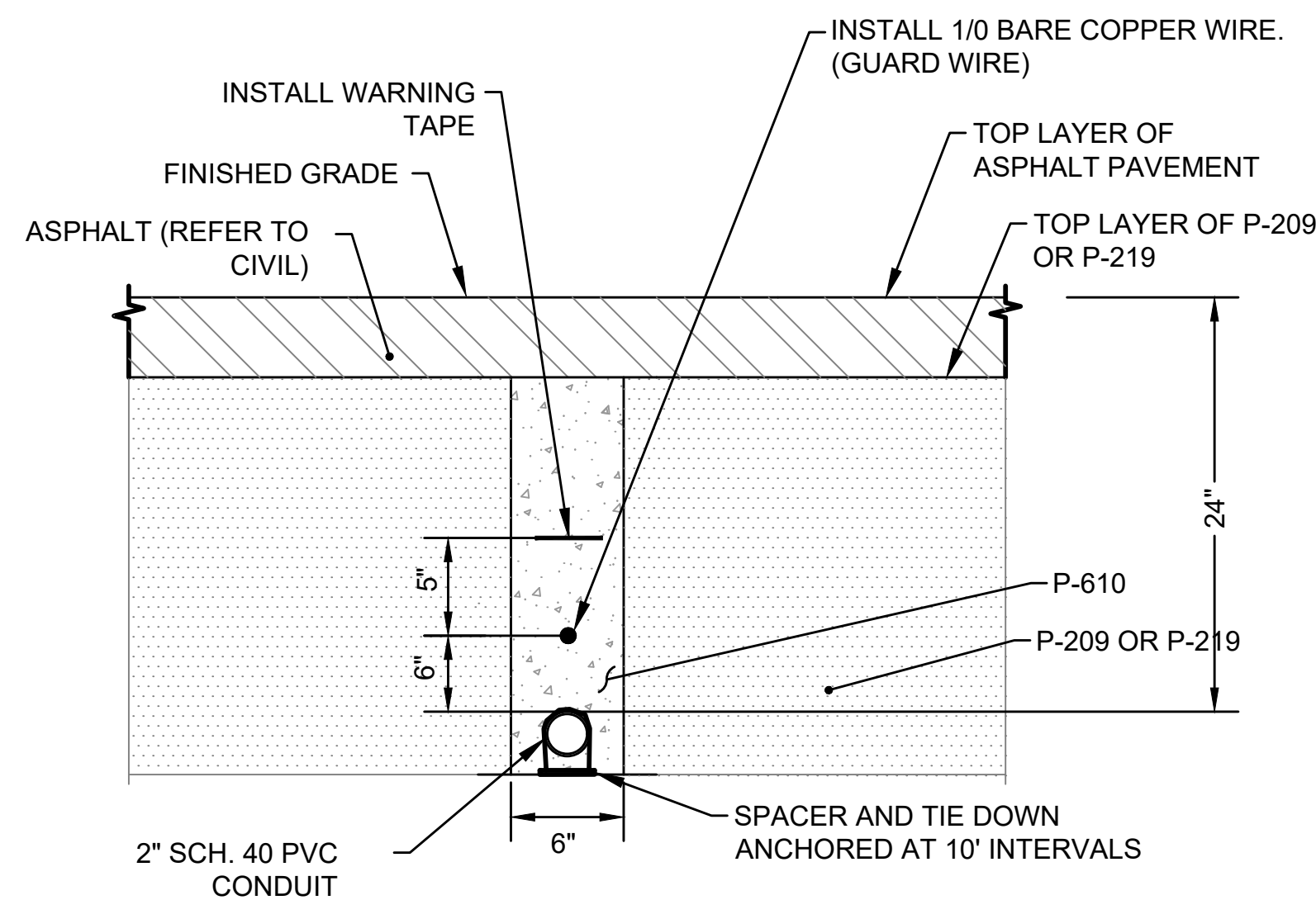
1 2" CONDUIT IN NON-PAVED EARTH  
SCALE: NOT TO SCALE



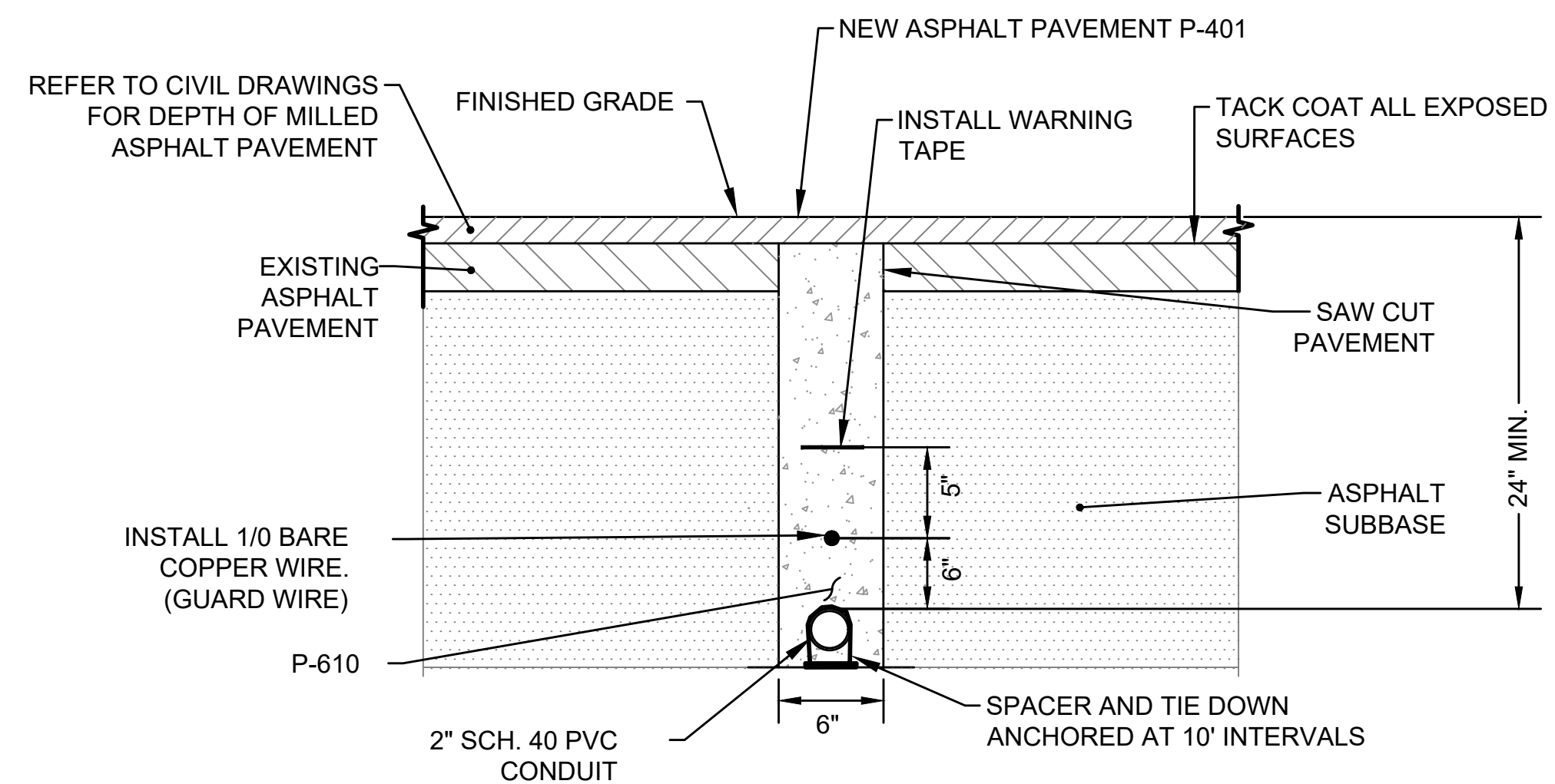
2 2" CONDUIT IN EXISTING ASPHALT OVERLAY  
SCALE: NOT TO SCALE

NOTES:

1. THIS DETAIL APPLIES TO CONDUIT INSTALLATION IN AREAS OUTSIDE OF THE CIVIL MILLING/PAVING CONSTRUCTION LIMITS.
2. SAWCUT 6" WIDE TRENCH IN ASPHALT PAVEMENT TO MIN. 26" DEPTH. THOROUGHLY CLEAN CUT.
3. ENCASE WITH P-610 AS SHOWN.
4. COMPLETE ASPHALT PAVEMENT RESTORATION AS SHOWN.



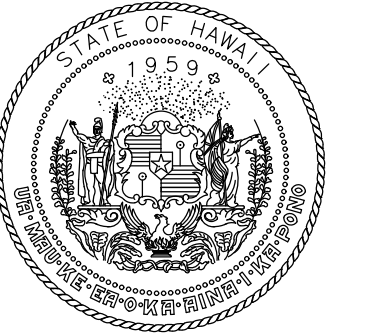
3 2" CONDUIT IN FULL STRENGTH ASPHALT  
SCALE: NOT TO SCALE



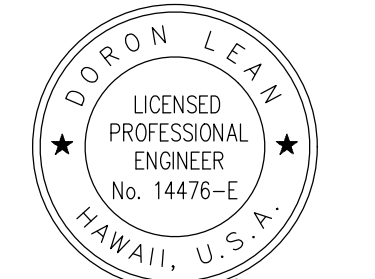
4 2" CONDUIT INSTALLATION IN MILLED ASPHALT  
SCALE: NOT TO SCALE

NOTES:

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CONSTRUCTION DOCUMENT

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AT  
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KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

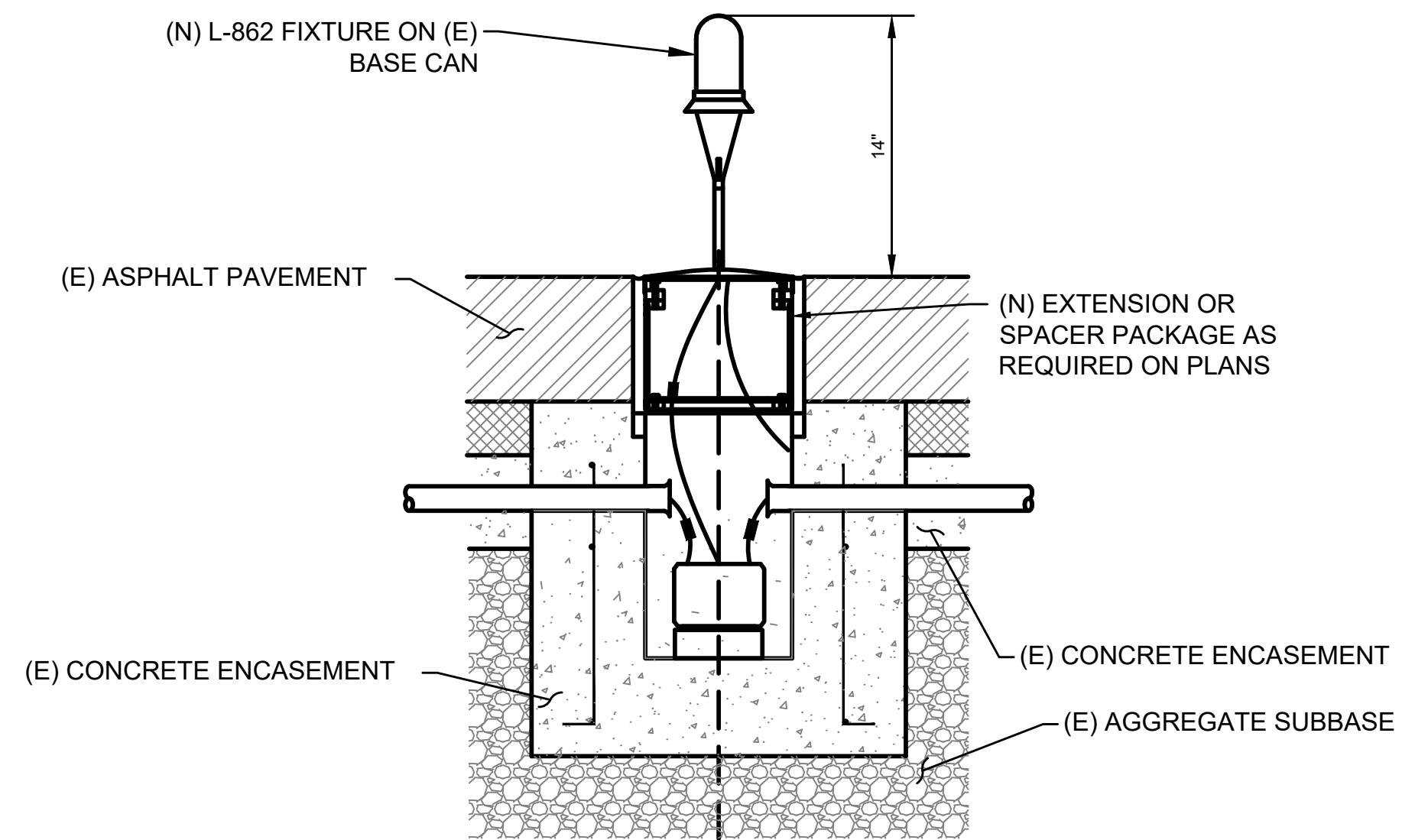
PROJECT NO.:

AH2021-16

SHEET TITLE:

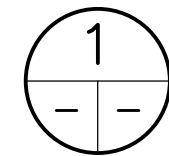
AIRFIELD LIGHTING  
DETAIL 6

DATE :	09/2023	DWG. NO.	E-506
SHEET :			
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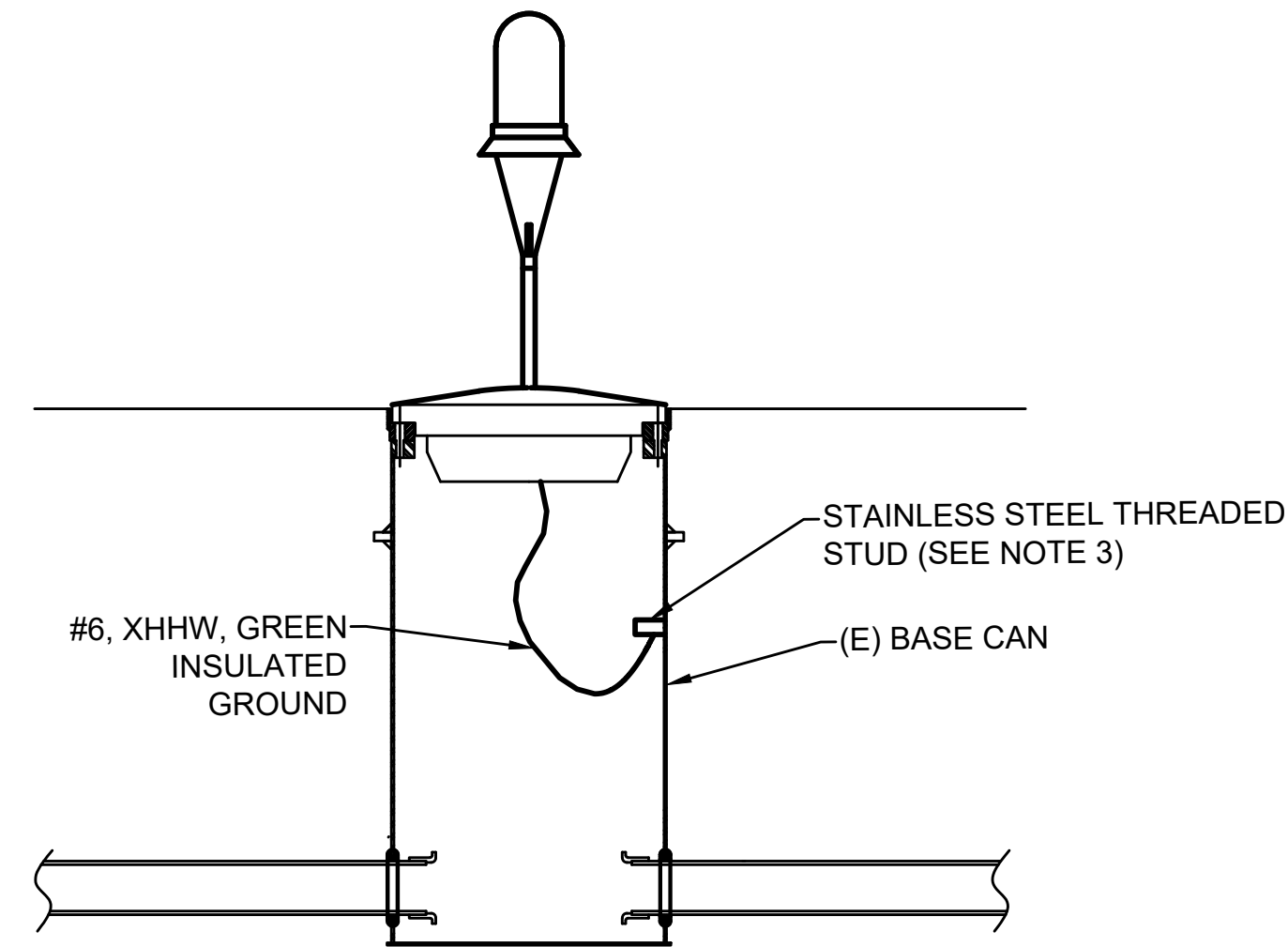


**NOTES:**

1. REMOVE & SALVAGE EXISTING LIGHT FIXTURE. COORDINATE WITH KOA MAINTENANCE FOR DROP OFF LOCATION.
2. INSTALL NEW LIGHT WITH LENS COLOR AS INDICATED ON PLANS.
3. INSTALL NEW TRANSFORMER AND MAKE NEW CONNECTIONS AS REQUIRED. INSTALL NEW #6 GREEN GROUND BETWEEN NEW FIXTURE AND INTERNAL RETROFITTED GROUND LUG.
4. RETROFIT GROUND LUG IN (E) BASE CAN, REFER TO DETAIL 2 ON THIS SHEET.

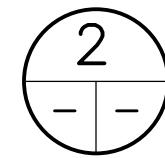


**NEW L -862 ELEVATED RUNWAY  
EDGE LIGHT ON EXISTING BASE CAN**  
SCALE: NOT TO SCALE FOR L-862



**NOTES:**

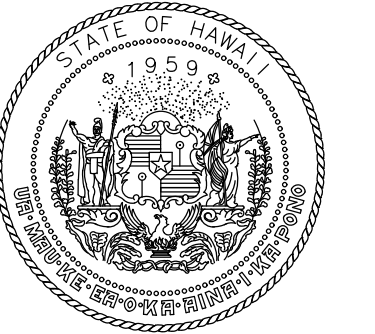
1. LENGTH OF #6 INSULATED GROUND CONDUCTOR SHALL BE OF SUFFICIENT LENGTH TO ALLOW THE INSET LIGHT FIXTURE OR BASE PLATE TO BE EASILY SET ASIDE WITHOUT REMOVAL.
2. VACUUM OUT ANY DEBRIS AND METAL SHAVINGS FROM THE BOTTOM OF THE CAN.
3. INSTALL A 3/8" STAINLESS STEEL THREADED STUD BY MEANS OF AN ARC STUD WELDING GUN, HBS A12 OR DRIVING HILTI BOLT OR APPROVED EQUAL. AFTER WELDING THE STUD, THE CONTRACTOR SHALL COLD GALVANIZE THE INSIDE WALL OF THE BASE CAN AROUND THE STUD WELD. INSTALL COMPRESSION TERMINAL ON XHHW TO CONNECT TO STUD. PROVIDE BURNDY YA6CTC38 OR APPROVED EQUAL.
4. CONTRACTOR SHALL ASSUME THAT ALL BASE CANS REQUIRE GROUND LUG RETROFIT. COST FOR THIS WORK SHALL BE INCIDENTAL TO THE CONTRACT WITH NO SEPARATE PAYMENT.



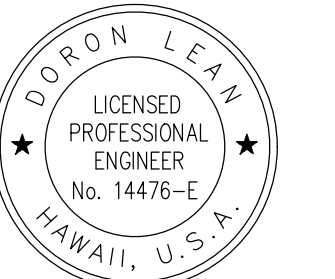
**RETROFIT EXISTING BASE CAN DETAIL**  
SCALE: NOT TO SCALE

**NOTES:**

1. REFER TO DRAWINGS E-001 THRU E-002 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND.
2. ALL EQUIPMENT AND MATERIAL SHALL BE NEW UNLESS INDICATED AS EXISTING ON THE DRAWINGS.



Airports Division  
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS



*Doron Leav*  
04/30/2024  
Licensed Expiration Date

DSGN.	DRWN.	CHKD.	APPD.
JP	KV	JA	DL

**KEY PLAN / NOTES:**

NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENT**

SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35  
REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

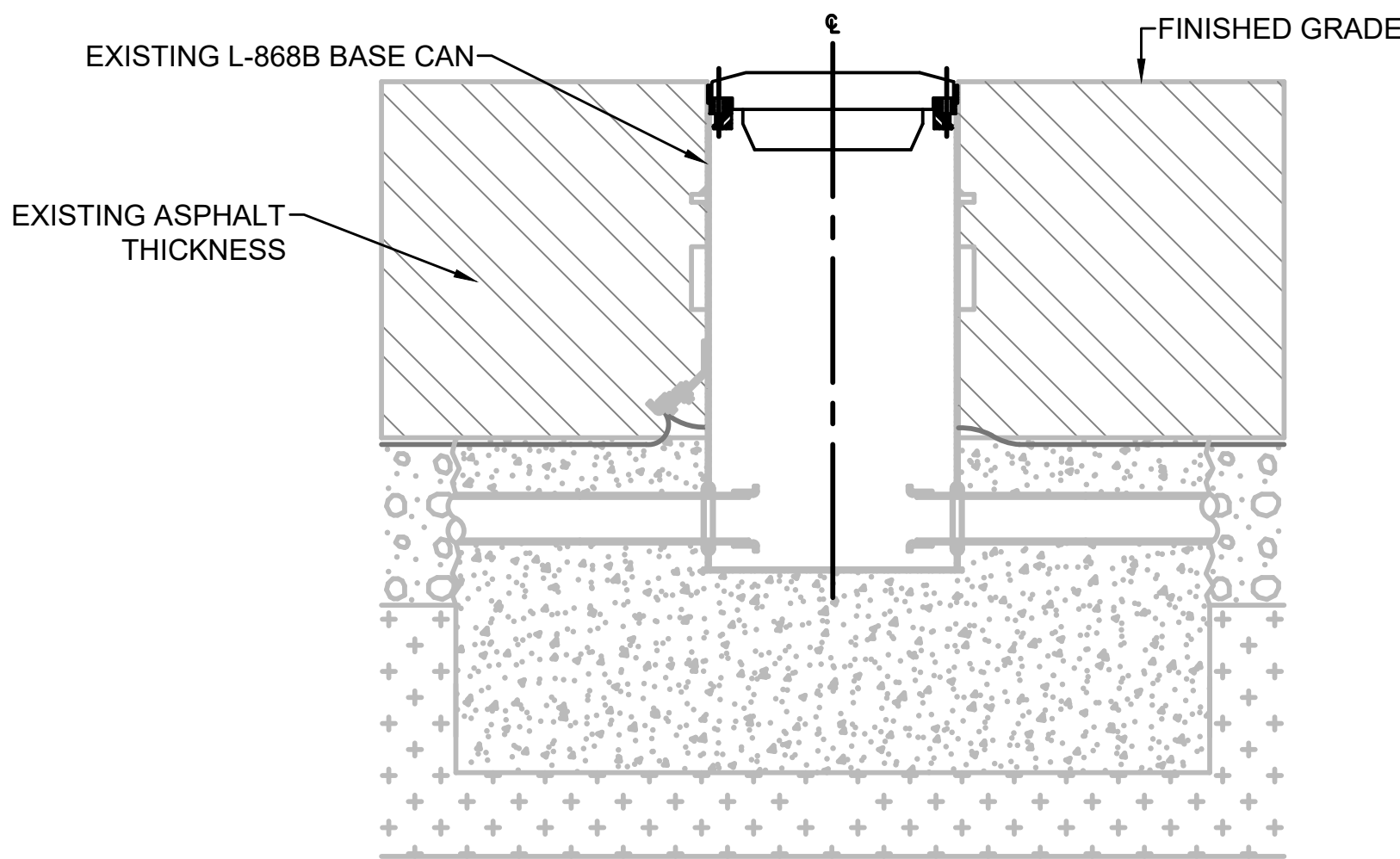
**AH2021-16**

**SHEET TITLE:**

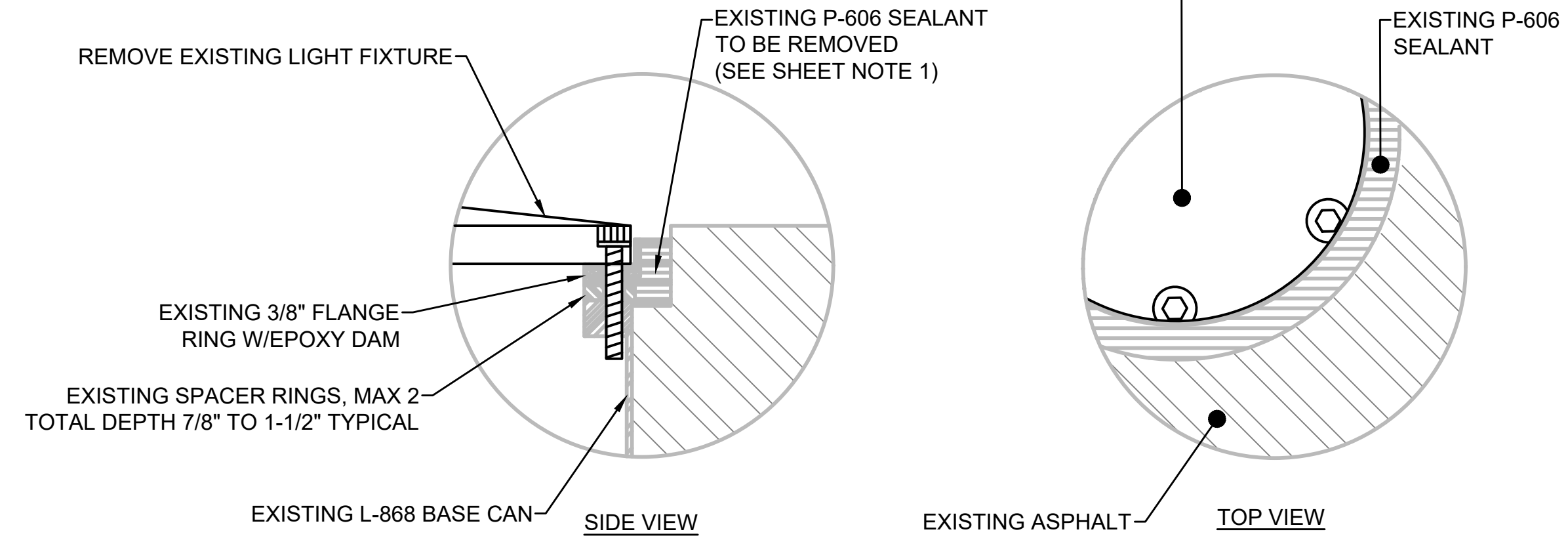
**AIRFIELD LIGHTING  
DETAIL 7**

DATE :	09/2023	DWG. NO.	<b>E-507</b>
SHEET :			
170 OF 190 SHEETS			





**A** GENERAL LAYOUT  
SCALE: NOT TO SCALE



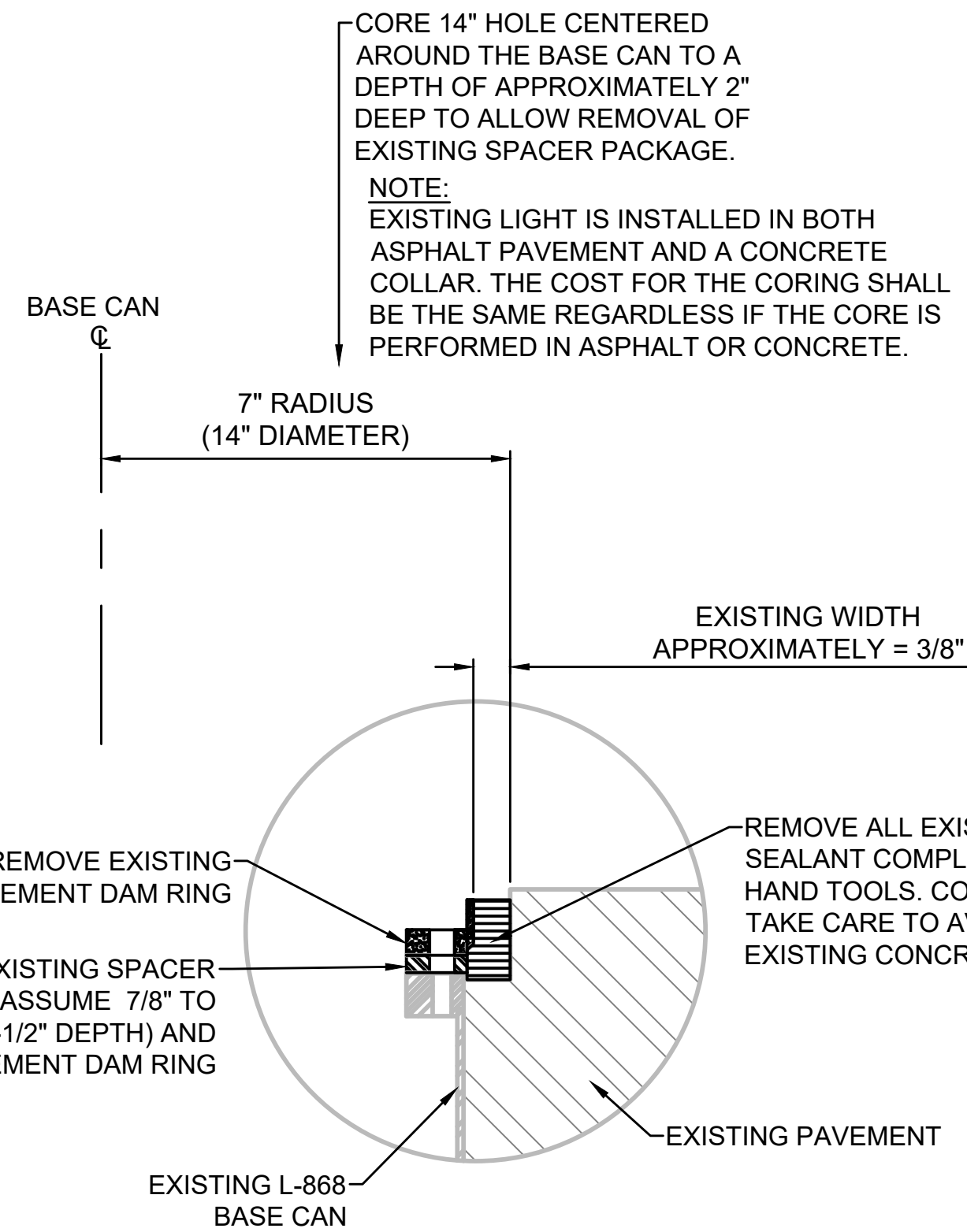
**B** STEP 1 - REMOVE (E) LIGHT FIXTURE  
SCALE: NOT TO SCALE

**NOTES:**

1. REFER TO DRAWINGS E-001 THRU E-002 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND.
2. ALL EQUIPMENT AND MATERIAL SHALL BE NEW UNLESS INDICATED AS EXISTING ON THE DRAWINGS.

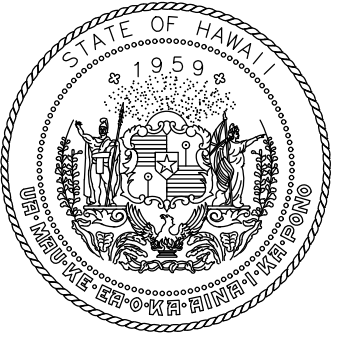
**SHEET NOTES**

1. CONTRACTOR MAY PERFORM FIELD INVESTIGATION PRIOR TO THE STARTING OF THE PROJECT DURING MOBILIZATION. DURING NIGHTTIME HOURS FROM 11:00PM TO 5:30AM TO CONFIRM DEPTH AND NUMBER OF SPACER RINGS FOR EACH LIGHT FIXTURE OR MAINTAIN ON-HAND SUFFICIENT QUANTITIES OF SPACERS OF VARYING THICKNESS TO ACCOMMODATE VARYING DEPTHS. REFER TO DETAIL 1E, THIS SHEET "STEP 4 - INSTALLATION OF NEW SPACER PACKAGE" FOR ADDITIONAL INFORMATION. IF PERFORMING FIELD INVESTIGATION, CONTRACTOR SHALL PROVIDE NEW BOLTS AND TWO-PIECE LOCK WASHERS WHEN REINSTALLING THE LIGHTS AFTER FIELD INVESTIGATION. MATERIALS SHALL NOT BE AVAILABLE FROM MAINTENANCE.
2. CONTRACTOR SHALL TAKE A PICTURE OF EACH LIGHT FIXTURE FROM THE TOP AND RECORD ANY DAMAGE OR DEFICIENCIES TO THE SURROUNDING PAVEMENT. CONTRACTOR SHALL TAKE SPECIAL PRECAUTION NOT TO DAMAGE ANY SURROUNDING PAVEMENT.
3. PLACE THIN LAYER OF RTV-118 SELF-LEVELING SILICONE SEALANT OR APPROVED EQUAL BETWEEN EACH SPACER RING AND TOP FLANGE OF BASE CAN. DO NOT INSTALL EXCESSIVE AMOUNT OF SEALANT AND DO NOT INSTALL SEALANT IN BASE CAN BOLT HOLES.
4. P-606 PLACEMENT:
5. CONTRACTOR SHALL HIRE THE P-606 MANUFACTURER FOR 2 DAYS TO TRAIN AND OVERSEE OF THE FIRST PLACEMENT OF THE P-606. THE COST FOR THIS SHALL BE UNDER BID ITEM L-128-1.
6. THE P-606 SEALANT SHALL FILL THE VOID TO BE FLUSH WITH THE FINISHED GRADE OR WITHIN 0.125" BELOW THE TOP EDGE OF THE FINISHED GRADE AT THE LOWEST POINT OF THE CONCRETE. ANY OVER POURS SHALL BE REPLACED BY AND AT THE CONTRACTOR'S EXPENSE.
7. A MINIMUM OF TWO DAYS AFTER P-606 INSTALLATION, A SECONDARY INSPECTION OF THE P-606 MUST BE PERFORMED WITH THE ENGINEER. ANY P-606 FOUND TO HAVE BUBBLED ABOVE PAVEMENT GRADE OR ONTO ANY FIXTURE OR BOLTS SHALL BE REMOVED BY THE CONTRACTOR AND AT THE CONTRACTOR'S EXPENSE. IF MORE THAN 10% OF THE SURFACE AREA OF A SINGLE FIXTURE HAS BEEN COVERED, THE FIXTURE SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE. ANY P-606 FOUND TO HAVE NOT PROPERLY SET SHALL BE REMOVED AND REPLACED BY THE CONTRACTOR AND AT THE CONTRACTOR'S OWN EXPENSE.
8. INSPECT INTERIOR OF BASE CAN AFTER INSTALLATION OF P-606. IF P-606 HAS LEAKED INTO THE BASE CAN, CONTRACTOR SHALL REPLACE DAMAGED ELECTRICAL COMPONENTS, INCLUDING PLUGGED CONDUITS AT THE CONTRACTOR'S EXPENSE.
9. ALL BOLTS SHALL BE NEW, SAE J429 GRADE 5 CARBON STEEL, ANTI-CORROSION (MFG. BY GBA COMPONENTS OR APPROVED EQUAL).

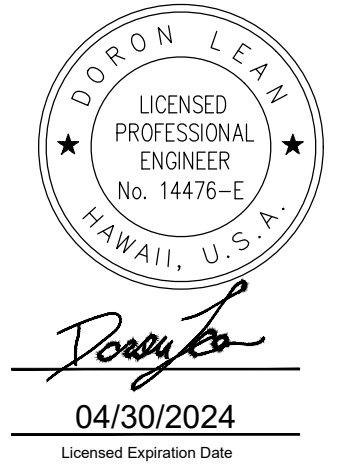


**C** STEP 2 - CORE 14" HOLE CENTERED AROUND BASE CAN & REMOVE EXISTING P-606 AND SPACER PACKAGE  
SCALE: NOT TO SCALE

**1** NEW RWY ELEVATED EDGE OR RWY INPAVEMENT EDGE INPAVEMENT LIGHT WITH NEW SPACER PACKAGE AND P-606 (1 OF 2, CONTINUED ON E-509)  
SCALE: NOT TO SCALE



Airports Division  
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS



DSGN.	DRWN.	CHKD.	APPD.
JP	KV	JA	DL

**KEY PLAN / NOTES:**

NO.	DATE	REVISIONS

**CONSTRUCTION DOCUMENT**

SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**

AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

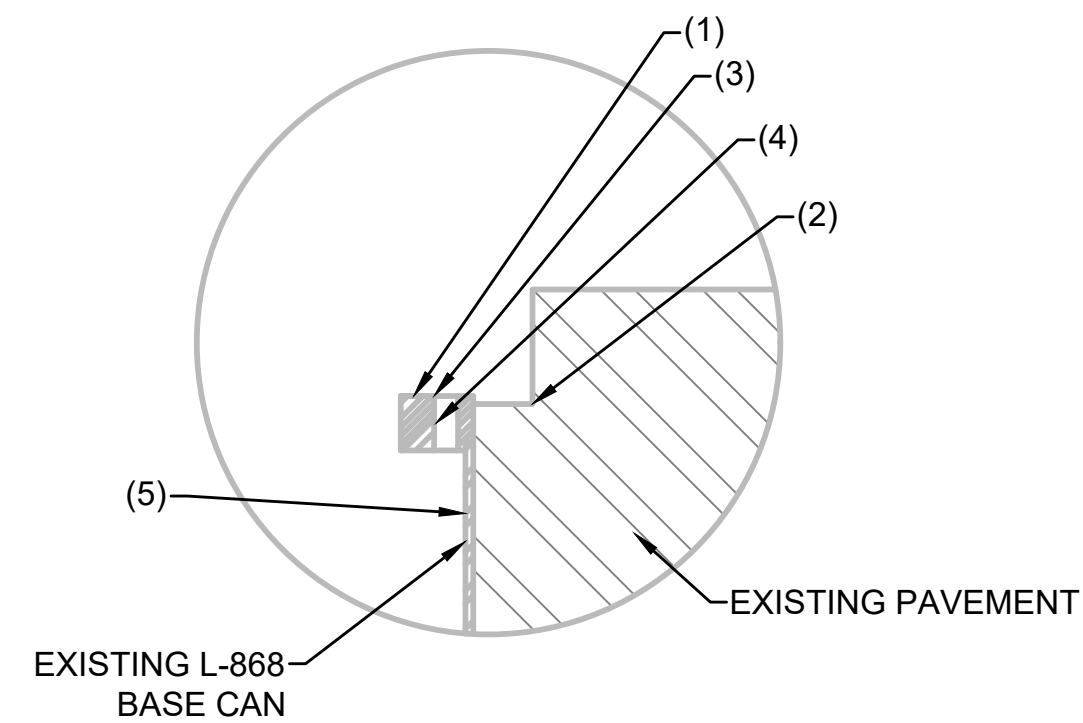
**PROJECT NO.:**

**AH2021-16**

**SHEET TITLE:**

**AIRFIELD LIGHTING  
DETAIL 8**

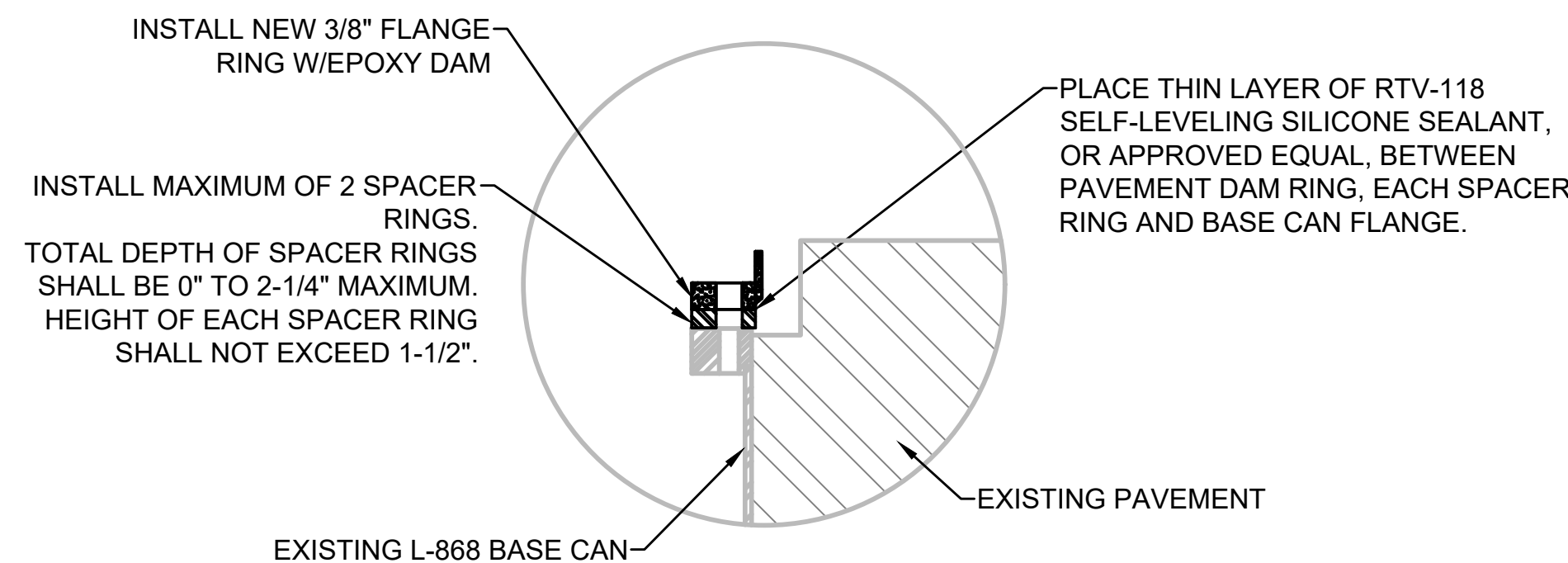
DATE :	09/2023	DWG. NO.	<b>E-508</b>
SHEET :	171 OF 190 SHEETS		



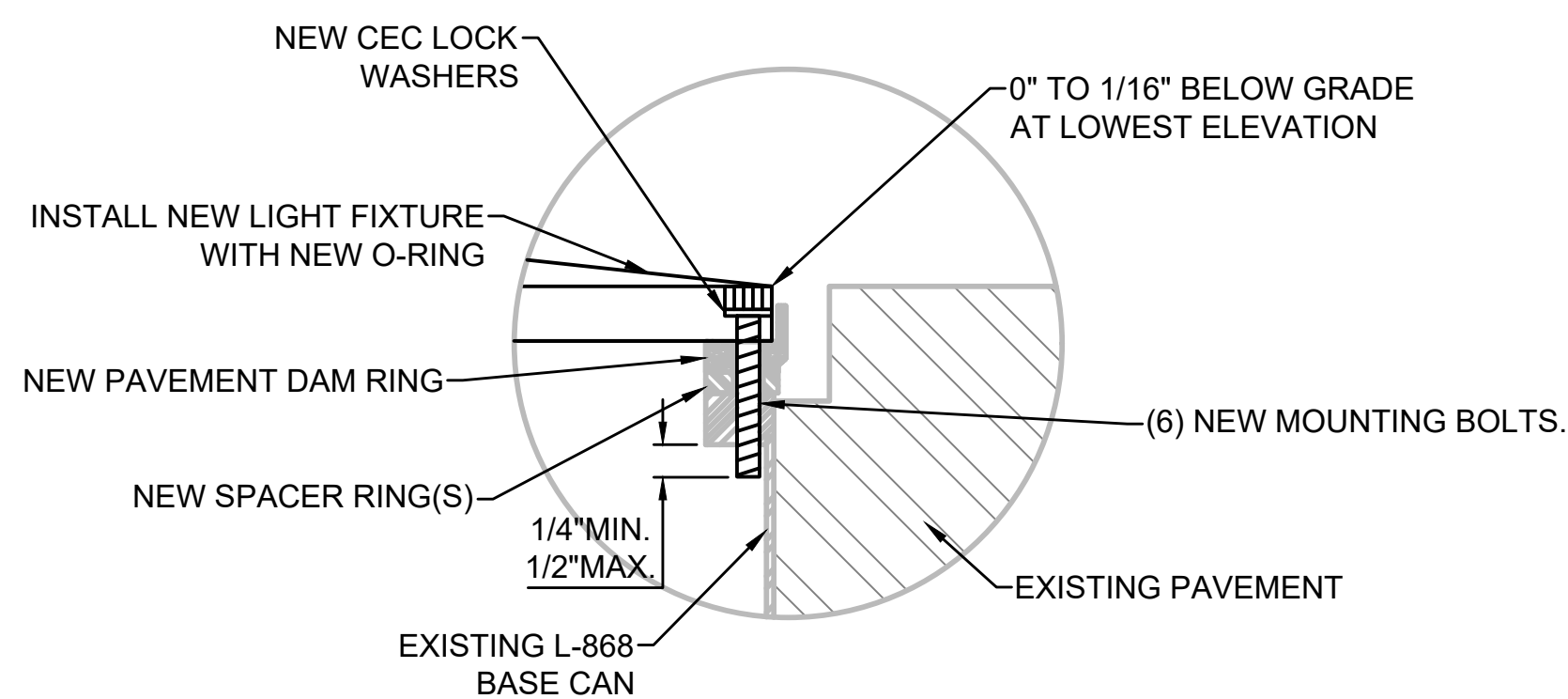
NOTES FOR DETAIL D:

- (1) REMOVE RUST FROM TOP FLANGE OF BASE CAN UTILIZING BRUSH WHEEL (MAKITA P/N A-98516 OR APPROVED EQUAL).
- (2) AFTER ALL REMOVAL TAKES PLACE, THE CAVITY SHALL BE THOROUGHLY CLEANED BY COMPRESSED AIR. AREA SHALL BE FREE OF DEBRIS, LOOSE MATERIAL, AND MOISTURE PRIOR TO SEALING.
- (3) AFTER RUST IS GROUND OFF FROM BASE CAN FLANGE AND AREA IS COMPLETELY CLEANED, COAT SURFACE WITH COLD GALVANIZING COMPOUND MFG. BY ZRC, OR APPROVED EQUAL. ALLOW MATERIAL TO DRY COMPLETELY, PER MFG. RECOMMENDATIONS PRIOR TO INSTALLING NEW SPACER RING
- (4) CLEAN BOLT HOLES WITH WIRE BRUSH (WEILER P/N#3H707 OR APPROVED EQUAL). RETAP HOLES AS REQUIRED. ASSUME 75% OF BOLT HOLES REQUIRE RETAPPING.
- (5) PULL EXISTING TRANSFORMER, TRANSFORMER SADDLE, AND ALL CABLE SLACK OUT OF THE CAN ONTO THE PAVEMENT. UTILIZE A LOW PRESSURE SPRAYER TO WASH BASE CAN WALLS. PRESSURE MUST BE LOW ENOUGH TO NOT DAMAGE INSULATION OF EXISTING CABLE. VACUUM OUT ALL WATER AND DEBRIS FROM THE BOTTOM OF THE BASE CAN.

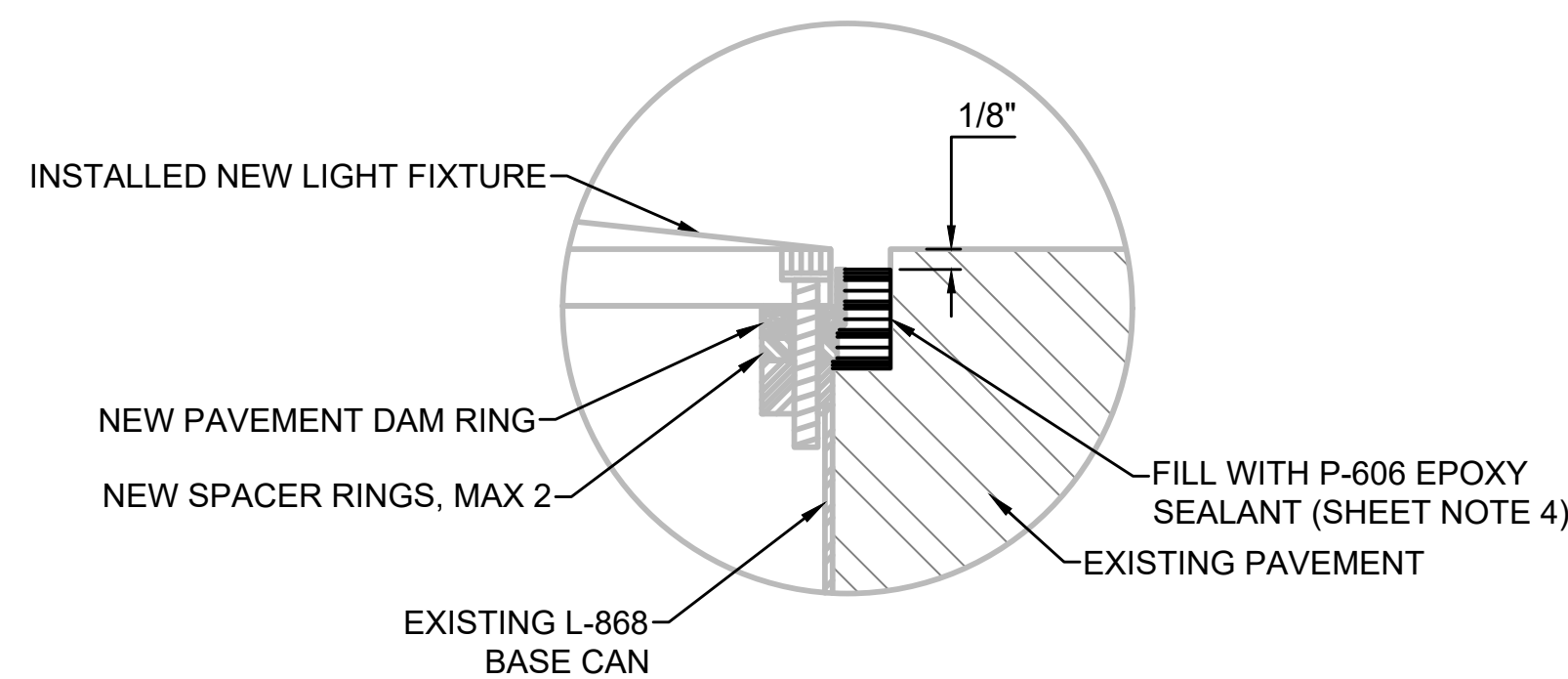
**D** STEP 3 - CLEAN SURFACE  
SCALE: NOT TO SCALE



**E** STEP 4 - INSTALLATION OF NEW SPACER PACKAGE  
SCALE: NOT TO SCALE



**F** STEP 5 - INSTALL NEW LIGHT FIXTURE  
SCALE: NOT TO SCALE



**G** STEP 6 - P-606 PLACEMENT  
SCALE: NOT TO SCALE

**1** NEW RWY ELEVATED EDGE OR RWY INPAVEMENT EDGE INPAVEMENT LIGHT WITH NEW SPACER PACKAGE AND P-606 (2 OF 2, CONTINUED ON E-508)  
SCALE: NOT TO SCALE

NOTES:

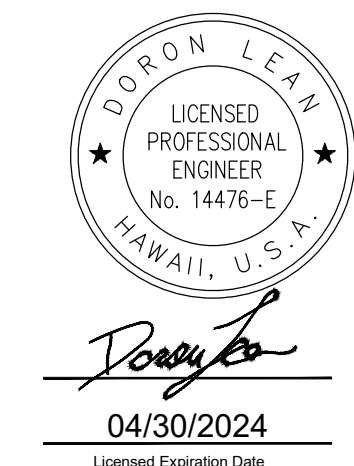
1. REFER TO DRAWINGS E-001 THRU E-002 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND.
2. ALL EQUIPMENT AND MATERIAL SHALL BE NEW UNLESS INDICATED AS EXISTING ON THE DRAWINGS.

SHEET NOTES

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9. ALL BOLTS SHALL BE NEW, SAE J429 GRADE 5 CARBON STEEL, ANTI-CORROSION (MFG. BY GBA COMPONENTS OR APPROVED EQUAL).



Airports Division  
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS



DSGN.	DRWN.	CHKD.	APPD.
JP	KV	JA	DL

KEY PLAN / NOTES:

NO.	DATE	REVISIONS
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CONSTRUCTION DOCUMENT

SEPTEMBER 2023  
DATE

PROJECT TITLE :

RUNWAY 17-35  
REHABILITATION

AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

PROJECT NO.:

AH2021-16

SHEET TITLE:

AIRFIELD LIGHTING  
DETAIL 9

DATE :  
09/2023

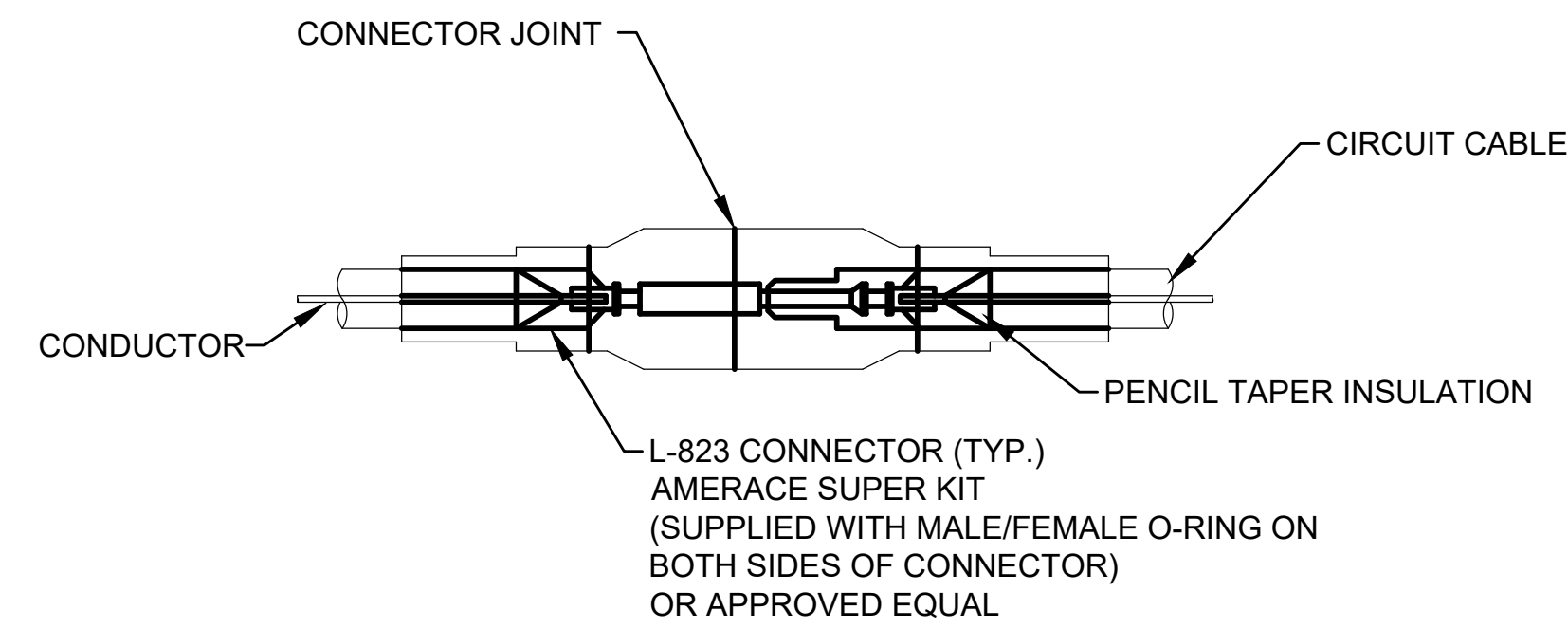
SHEET :

172 OF 190 SHEETS

DWG. NO.

E-509

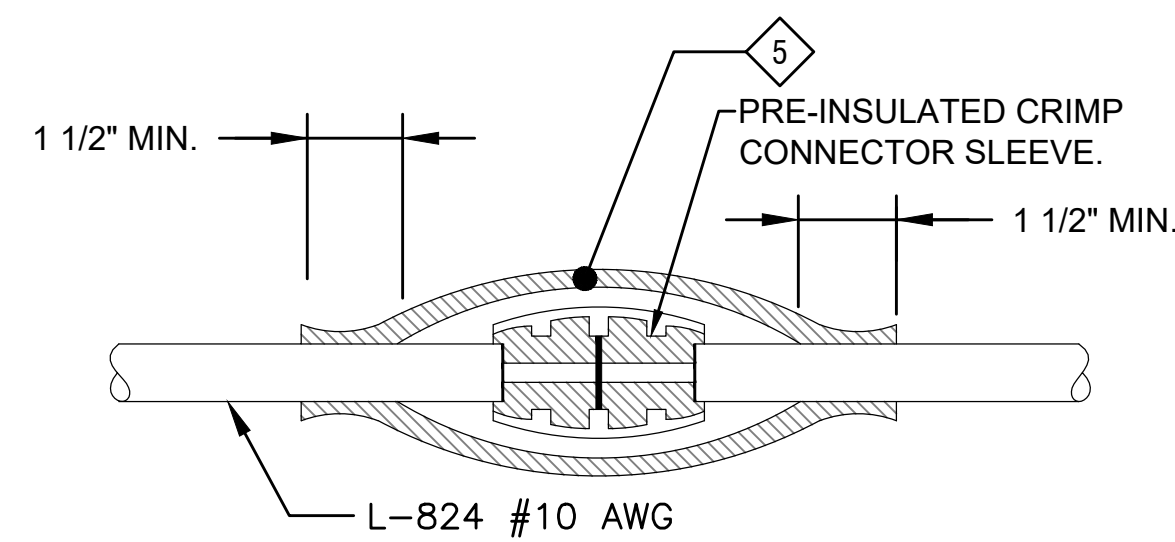




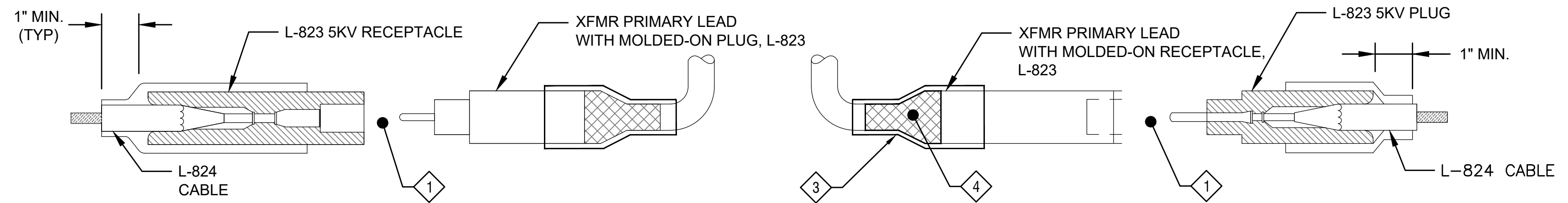
**NOTES:**

1. CONTRACTOR SHALL HAVE A MECHANICAL CRIMPING TOOL AND PENCIL TAPER ON SITE.
2. MAKE ALL CONNECTIONS WITH THESE TOOLS.
3. CONTRACTOR SHALL OBTAIN MANUFACTURING INSTALLATION INSTRUCTIONS PRIOR TO BID. SUBMIT AS PART OF SHOP DRAWING.

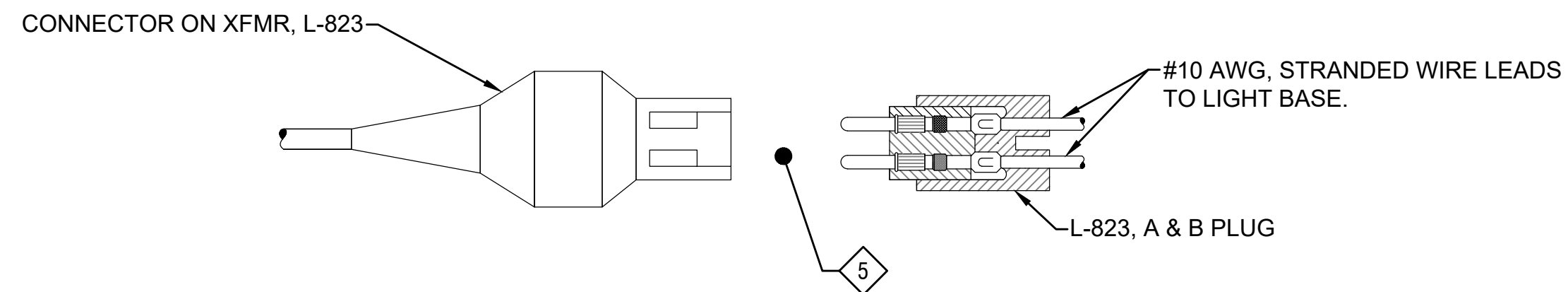
**1** L-823 TYPE 1 CLASS B IN-LINE CONNECTOR  
SCALE: NOT TO SCALE



**3** 600V CABLE IN-LINE SPLICE  
SCALE: NOT TO SCALE



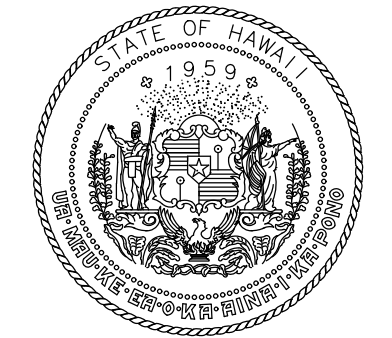
**2** L-824 TRANSFORMER PRIMARY CONNECTIONS (5KV)  
SCALE: NOT TO SCALE



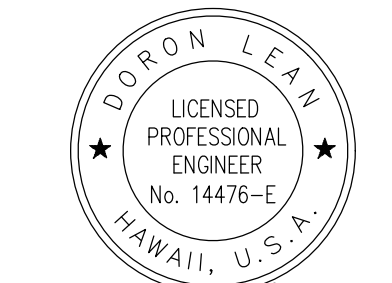
**4** CONNECTION, AND FIXTURE LEAD SPLICE (TRANSFORMER SECONDARY)  
SCALE: NOT TO SCALE

**NOTES:**

1. REFER TO DRAWINGS E-001 THRU E-002 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND.
2. ALL EQUIPMENT AND MATERIAL SHALL BE NEW UNLESS INDICATED AS EXISTING ON THE DRAWINGS.



Airports Division  
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS



Doron Leav  
LICENSED PROFESSIONAL ENGINEER  
No. 14476-E  
HAWAII, U.S.A.  
04/30/2024  
Licensed Expiration Date

DSGN.	DRWN.	CHKD.	APPD.
JP	KV	JA	DL

**KEY PLAN / NOTES:**

NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENT**  
SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

**SHEET TITLE:**

**AIRFIELD LIGHTING  
DETAIL 10**

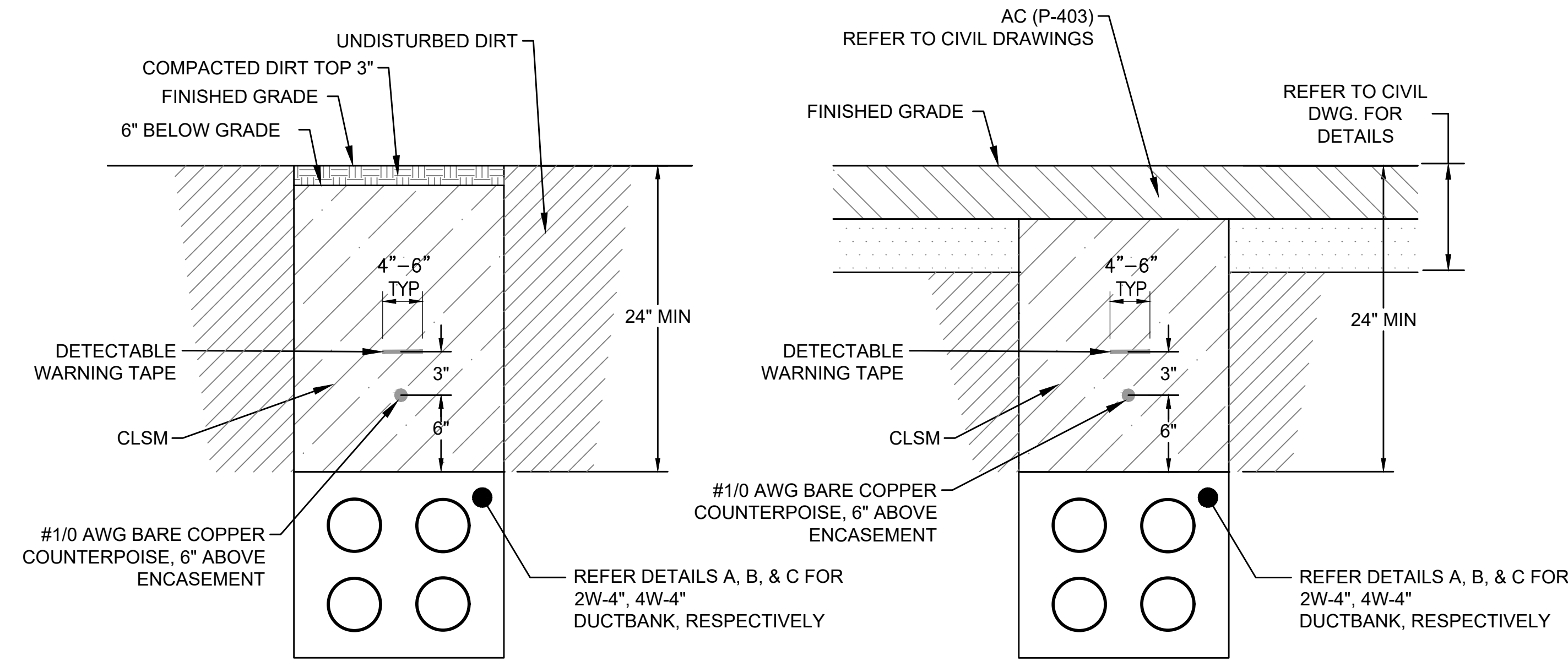
DATE :	09/2023	DWG. NO.	<b>E-510</b>
SHEET :			
173 OF 190 SHEETS			

**DUCTBANK NOTES:**

- INSTALL PULL ROPE IN ALL CONDUITS.
- INSTALL THE SIDES OF THE DUCTBANK WITH A NEAT VERTICAL FACE, OR FORMING IF NECESSARY. THE CONTRACTOR SHALL FURNISH ALL LABOR, EQUIPMENT, MATERIAL AND INCIDENTALS NECESSARY FOR FORMWORK. FORMWORK SHALL NOT BE SEPARATELY MEASURED BUT SHALL BE CONSIDERED INCIDENTAL TO THE RESPECTIVE DUCTBANK PAY ITEM.
- CONTRACTOR SHALL ANTICIPATE DEWATERING ALL TRENCHES. ALL WATER SHALL BE DISCHARGED PER THE APPLICABLE ENVIRONMENTAL REGULATIONS. SUBCONTRACTOR SHALL FURNISH ALL LABOR, EQUIPMENT, MATERIAL, EROSION CONTROL AND INCIDENTALS NECESSARY FOR DEWATERING. DEWATERING SHALL NOT BE SEPARATELY MEASURED FOR PAYMENT. DEWATERING IS INCIDENTAL TO THE VARIOUS DUCTBANK PAY ITEMS. CONTRACTOR SHALL HAUL SPOILS OF AIRPORT PROPERTY IN ACCORDANCE WITH APPLICABLE RULES. COST IS INCIDENTAL TO COST OF TRENCH.
- GROUNDING RODS SHALL BE INSTALLED AT APPROXIMATELY 90-FOOT INTERVALS USING EXOTHERMIC WELDS TO ACHIEVE GROUND RESISTANCE OF LESS THAN 10 OHMS. THE SPACING BETWEEN GROUND RODS MUST VARY 10% TO 20% TO PREVENT RESONANCE. INSTALL THE GROUND RODS APPROXIMATELY 6-FEET FROM DUCTBANK ON EITHER SIDE OF TRENCH.
- TERMINATE 1/0 GUARD WIRE AT HANDHOLE OR BUILDING GROUND ROD BY EXOTHERMIC WELD.
- BARE COPPER CABLE SHALL BE 7 STRANDED, CLASS A.
- MINIMUM 3 INCH CONCRETE BETWEEN REBAR AND OUTER EDGE OF THE CONDUIT AND BETWEEN REBAR AND EDGE OF ENCASEMENT
- USE TYPICAL 4 #4 REBAR AND MAXIMUM 30" SPACING BETWEEN REBARS

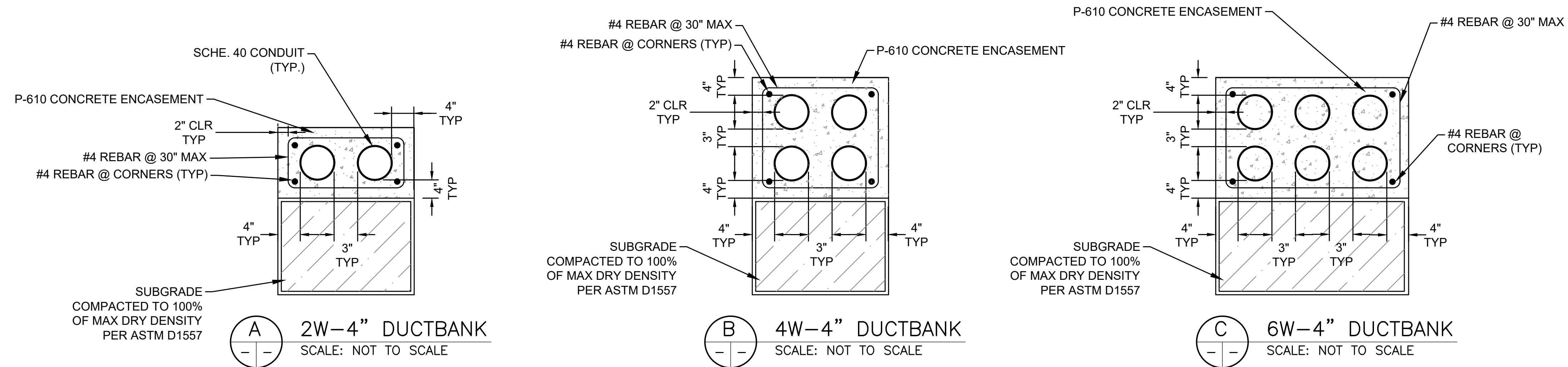
**NOTES:**

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- ALL EQUIPMENT AND MATERIAL SHALL BE NEW UNLESS INDICATED AS EXISTING ON THE DRAWINGS.



**1** DUCTBANK IN NON-PAVED EARTH  
SCALE: NOT TO SCALE

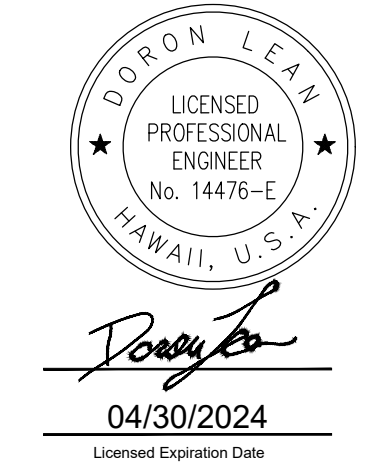
**2** DUCTBANK IN NEW FULL STRENGTH OR SHOULDER ASPHALT  
SCALE: NOT TO SCALE



**A** 2W-4" DUCTBANK  
SCALE: NOT TO SCALE

**B** 4W-4" DUCTBANK  
SCALE: NOT TO SCALE

**C** 6W-4" DUCTBANK  
SCALE: NOT TO SCALE



DSGN.	DRWN.	CHKD.	APPD.
JP	KV	JA	DL

**KEY PLAN / NOTES:**

NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENT**  
SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35 REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

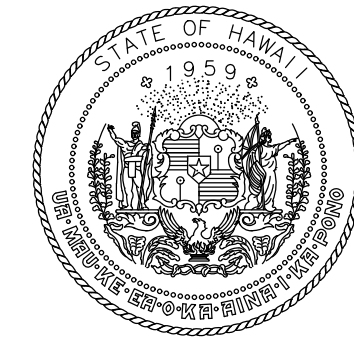
**AH2021-16**

**SHEET TITLE:**

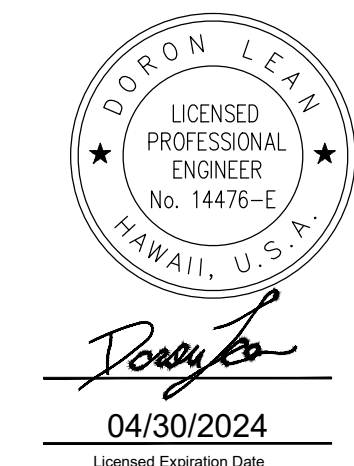
**AIRFIELD LIGHTING  
DETAIL 11**

DATE :	09/2023	DWG. NO.	<b>E-511</b>
SHEET :	174 OF 190 SHEETS		





Airports Division  
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS



04/30/2024  
Licensed Expiration Date

DSGN.	DRWN.	CHKD.	APPD.
JP	KV	JA	DL

**KEY PLAN / NOTES:**

NO.	DATE	REVISIONS
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**CONSTRUCTION DOCUMENT**

SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35  
REHABILITATION**  
AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

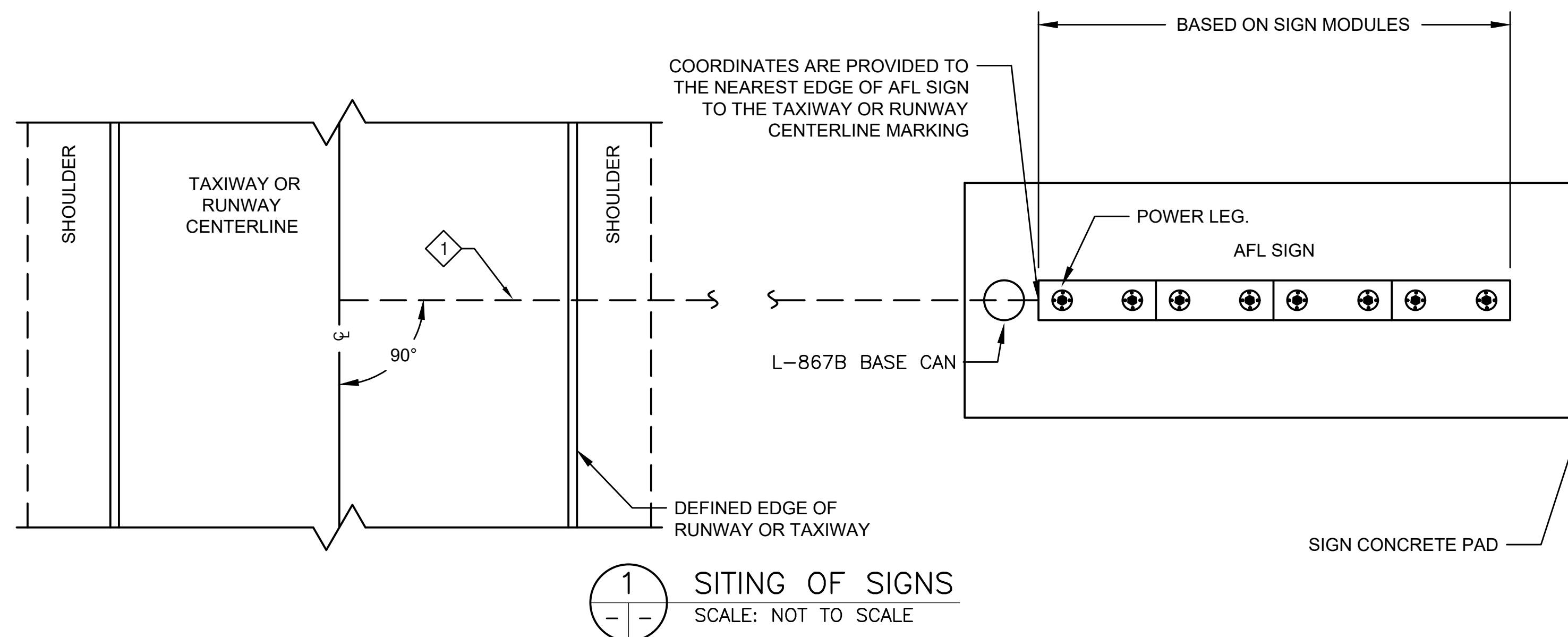
**SHEET TITLE:**

**AIRFIELD LIGHTING  
DETAIL 12**

DATE :	DWG. NO.
09/2023	<b>E-512</b>
SHEET :	
175 OF 190 SHEETS	

**NOTES:**

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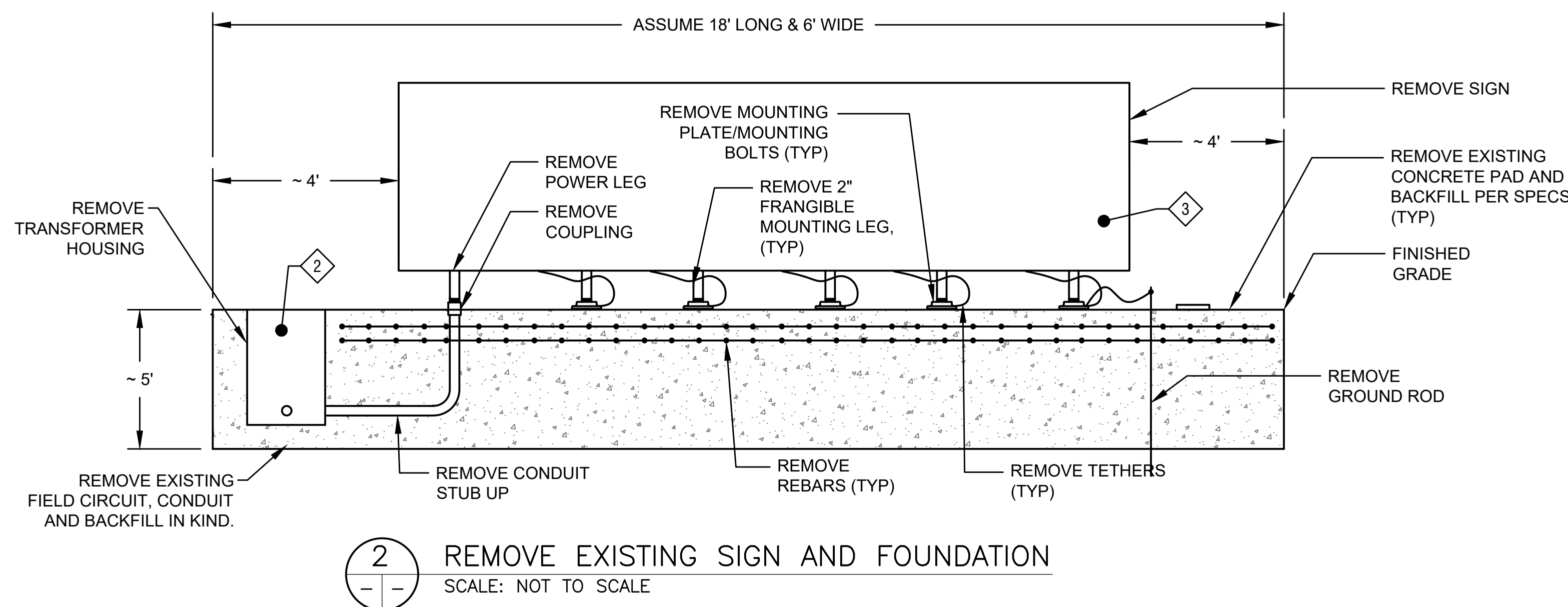


**SHEET NOTES:**

- STAKE ALL LOCATIONS AND GET CONTRACT MANAGER APPROVAL PRIOR TO POURING CONCRETE.
- ASSUME WIDTH OF SIGN FOUNDATION TO BE 5'-0".
- SIGN IS TO BE ANGLED PERPENDICULAR TO CENTERLINE UNLESS NOTED OTHERWISE.
- REMOVE EXISTING SIGN, ISOLATION TRANSFORMER, CORDSETS FROM ISOLATION TRANSFORMER TO SIGN, MOUNTING HARDWARE, AND ALL ASSOCIATED EXISTING SIGNAGE HARDWARE.
- REFER TO SPECS FOR BACKFILL REQUIREMENTS.
- REMOVED SIGN SHALL BE REINSTALLED ON A NEW CONCRETE FOUNDATION.
- ALL ITEMS SHOWN SHALL BE NEW BY CONTRACTOR U.O.N. AS (E).

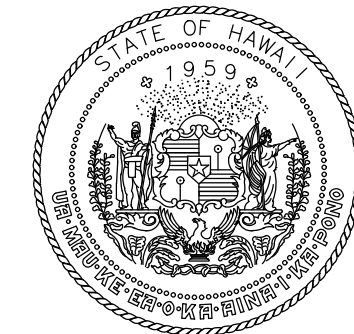
**DETAIL NOTES:**

- CONTRACTOR SHALL SURVEY LOCATION OF DEFINED EDGE OF TAXIWAY OR RUNWAY AND LAY OUT SIGN ACCORDINGLY.
- PULL EXISTING CABLE TO NEAREST HANDHOLE OR BASE CAN AND CONNECT NEW CONNECTORS AS REQUIRED TO ENSURE CIRCUIT CONTINUITY.
- SINGLE EXISTING SINGLE/DOUBLE SIDED SIGN MODULES SHALL VARY FROM 4' UP TO 14'.

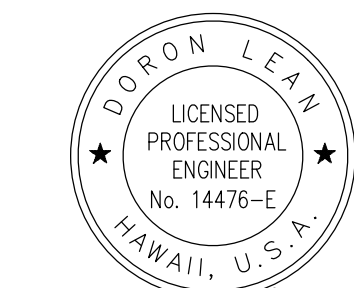








Airports Division  
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS



DORON LEO  
LICENSED PROFESSIONAL ENGINEER  
No. 14476-E  
HAWAII, U.S.A.  
*Doron Leao*  
04/30/2024  
Licensed Expiration Date

DSGN.	DRWN.	CHKD.	APPD.
JP	KV	JA	DL

KEY PLAN / NOTES:

NO.	DATE	REVISIONS
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CONSTRUCTION DOCUMENT

SEPTEMBER 2023  
DATE

PROJECT TITLE :

RUNWAY 17-35  
REHABILITATION

AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

PROJECT NO.:

AH2021-16

SHEET TITLE:

AIRFIELD LIGHTING  
DETAIL 14

DATE :

09/2023

SHEET :

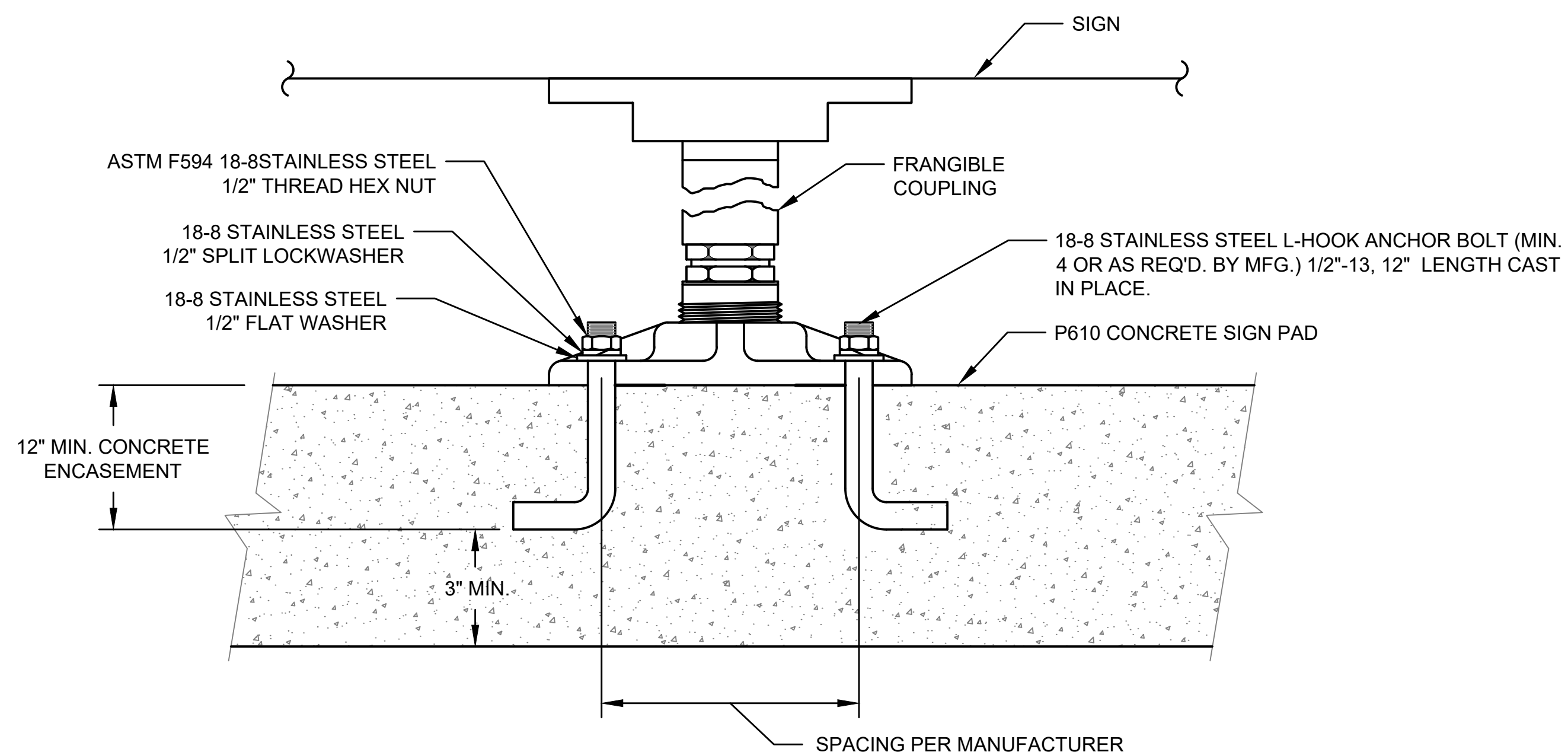
177 OF 190 SHEETS

DWG. NO.

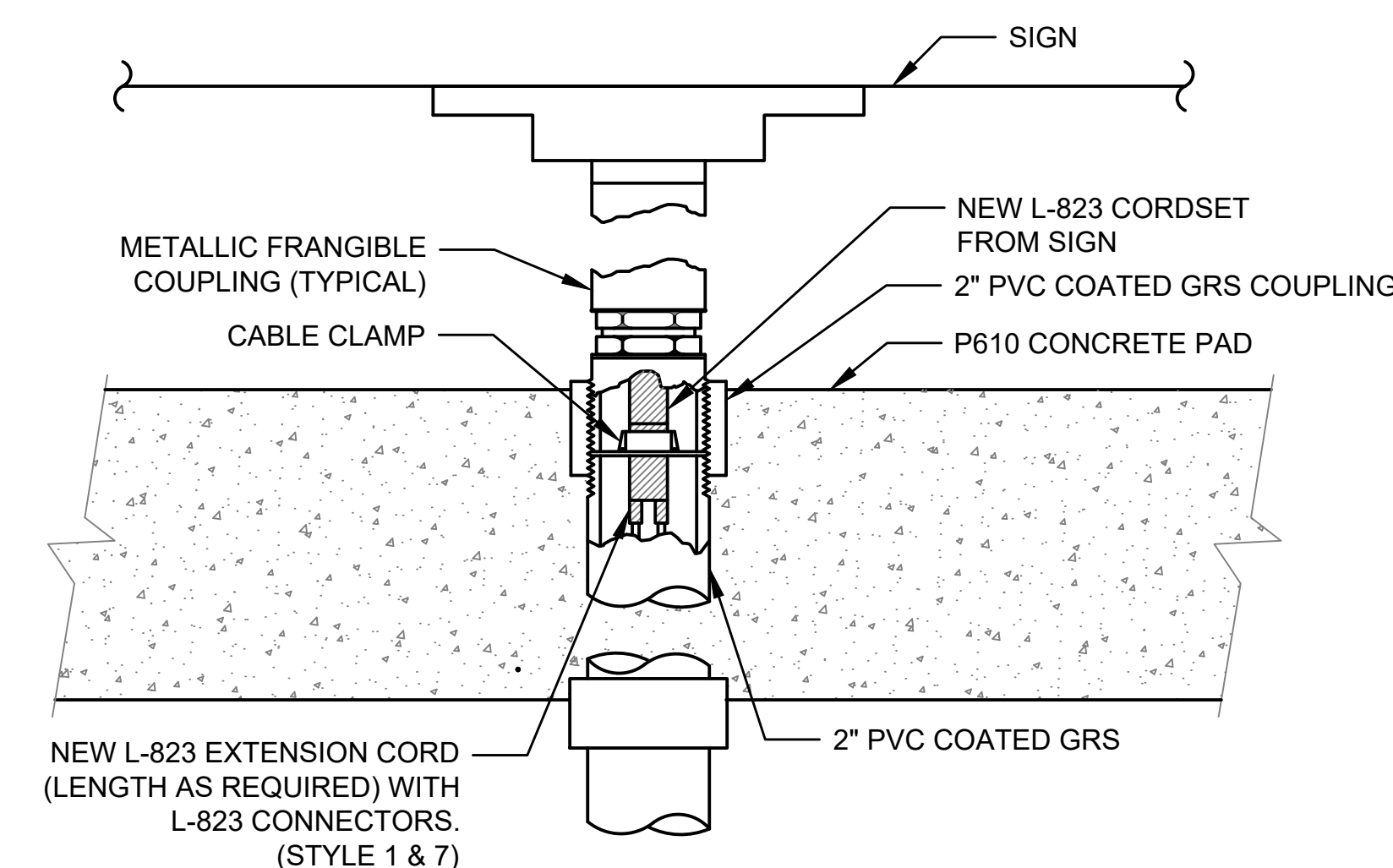
E-514

NOTES:

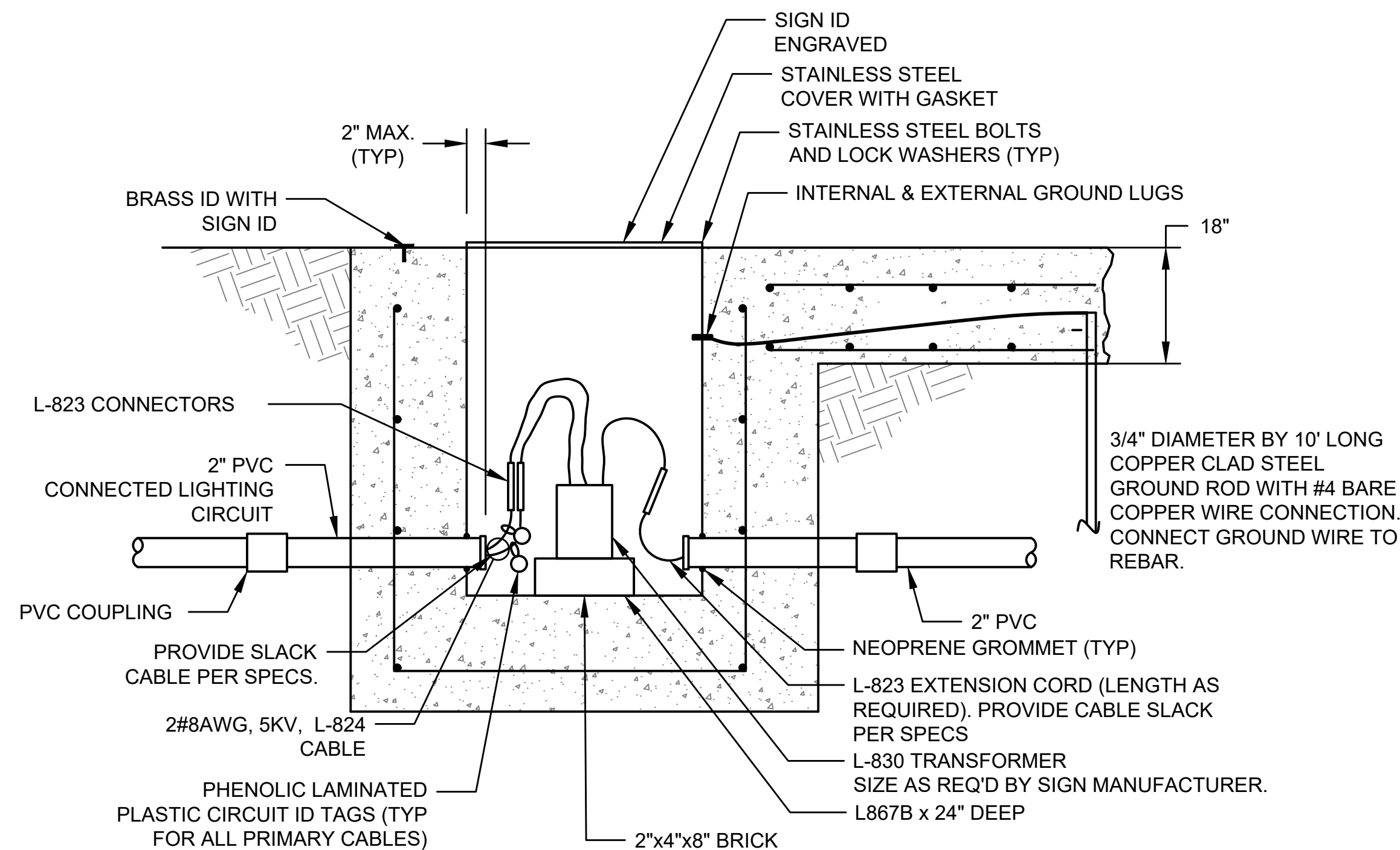
1. REFER TO DRAWINGS E-001 THRU E-002 FOR GENERAL NOTES, ABBREVIATIONS, AND LEGEND.
2. ALL EQUIPMENT AND MATERIAL SHALL BE NEW UNLESS INDICATED AS EXISTING ON THE DRAWINGS.



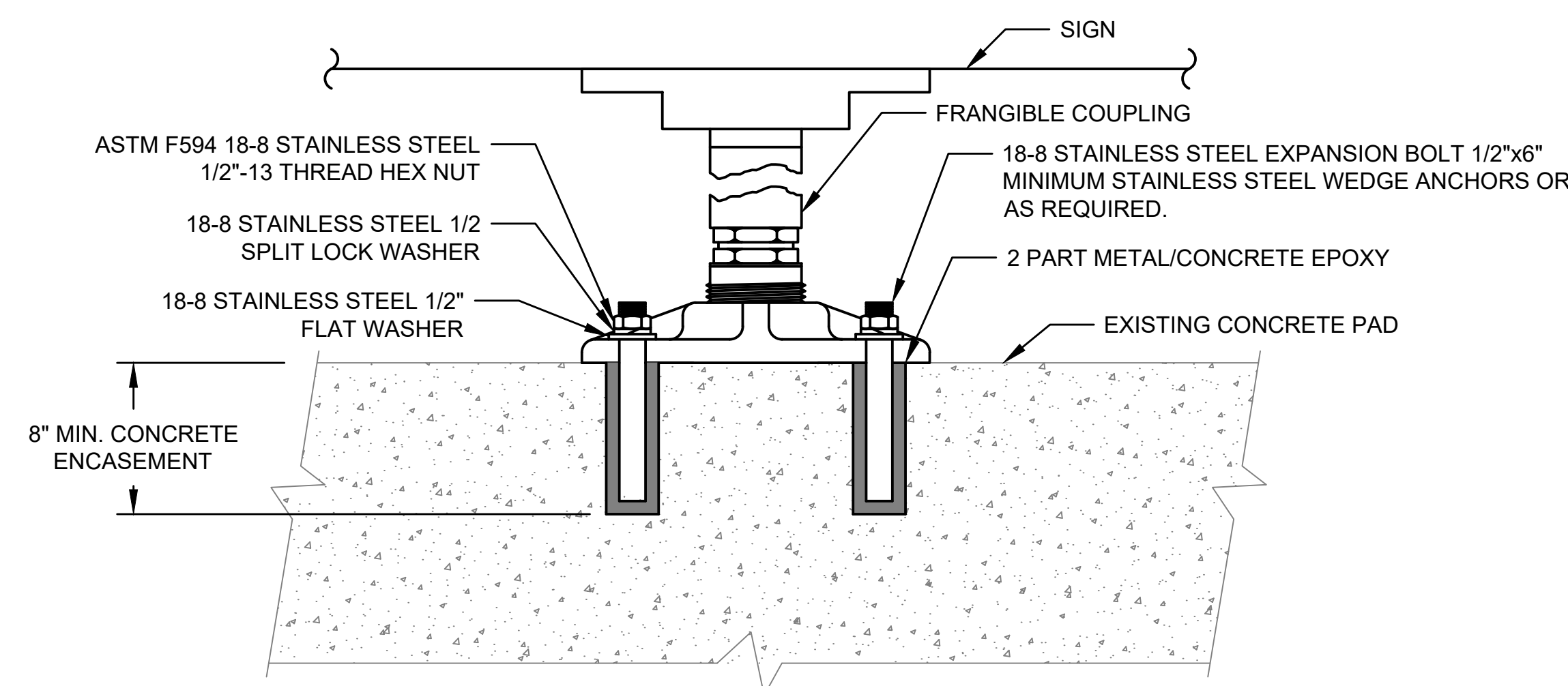
1 ANCHOR BOLT DETAIL NEW CONCRETE PAD  
SCALE: NOT TO SCALE



2 POWER LEG DETAIL NEW CONCRETE PAD  
SCALE: NOT TO SCALE



3 BASE CAN DETAIL NEW AIRFIELD GUIDANCE SIGN  
SCALE: NOT TO SCALE



4 POWER LEG DETAIL EXISTING CONCRETE PAD  
SCALE: NOT TO SCALE

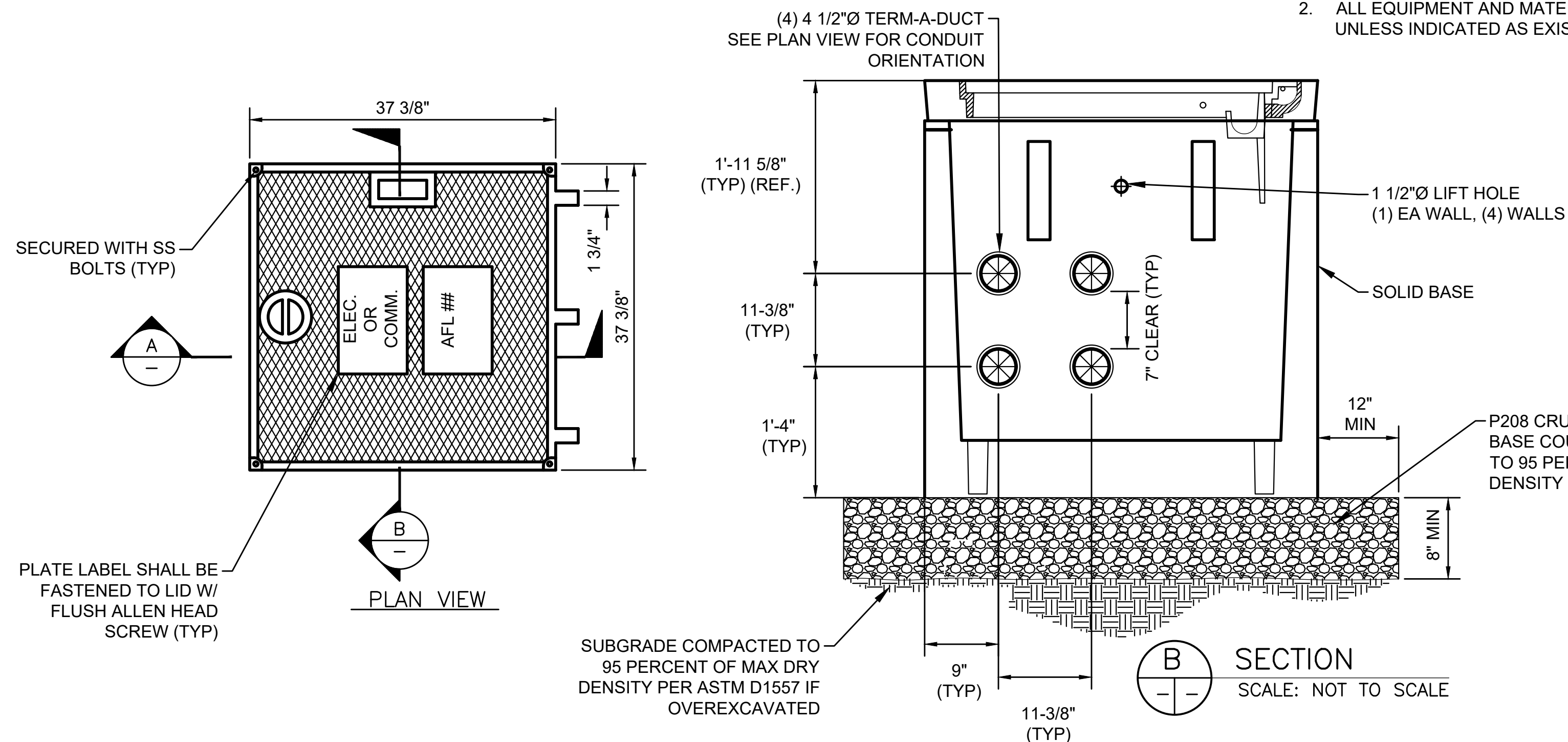


**HANDHOLE NOTES:**

1. EQUIPMENT NOTES:
  - 1.1. EQUIPMENT AND MATERIALS SHALL BE FURNISHED AND INSTALLED BY CONTRACTOR INCLUDING GROUNDING AND SADDLE RACKS
  - 1.2. HANDHOLES ARE PROVIDED WITH HOLES AS SHOWN. CONTRACTOR SHALL CORE-DRILL ADDITIONAL HOLES AS REQUIRED.
2. CONTRACTOR SHALL PROVIDE A STAINLESS STEEL ID TAG WITH THE FOLLOWING DESIGNATION: "AFL" WHERE "##" IS THE RESPECTIVE HAND HOLE IDENTIFICATION.
3. TWO NON-METALLIC SADDLE RACKS SHALL BE INSTALLED ON EACH WALL OF THE HANDHOLE.
4. CONTRACTOR SHALL I.D. EACH CABLE ENTERING & EXITING HANDHOLE.
5. CONTRACTOR SHALL INSTALL A 3/4" DIA. 10' LONG COPPER CLAD GROUND ROD.
6. CONTRACTOR SHALL GROUT AROUND ALL DUCTS ENTERING THE HANDHOLE
7. HANDHOLE SHALL BE NO MORE THAN 3" ABOVE SURROUNDING GROUND WITH BACKFILL MATCHING THE TOP OF THE COVER, SLOPING AWAY FROM THE HANDHOLE.
8. INSTALL A #4/0 BARE CU BONDING CONDUCTOR FOR HANDHOLE COVER. HANDHOLE COVER AND FRAME SHALL A THREADED HOLE TO ACCEPT A GROUND LUG. FURNISH AND INSTALL A GROUND LUG ON COVER AND FRAME TO CONNECT THE #4/0 CONDUCTOR AND EXOTHERMICALLY WELDED TO GROUND ROD. PROVIDE SUFFICIENT SLACK TO OPEN COVER. SECURE 4/0 TO HANDHOLE WALLS ABOVE FLOOR.
9. NOT USED.
10. ALL BACKFILL AROUND HANDHOLES SHALL BE IN ACCORDANCE WITH ITEM AIRPORT CIVIL SPECIFICATIONS FOR BACKFILL. AT A MINIMUM COMPACT NATIVE FILL TO 90%.
11. INSTALL GROUNDING BUSHINGS ON ALL GRS CONDUIT AND GROUND TO GROUND LOOP WITH #2 AWG BARE COPPER CONDUCTOR VIA MECHANICAL LUG.
12. NOT USED.
13. 8" COMPACTED GRAVEL PER SPECIFICATIONS UNDER PULL BOX TO ASSURE UNIFORM DISTRIBUTION OF SOIL PRESSURE AND DRAINAGE.
14. CONDUITS ENTERING PULL BOX SHALL BE FITTED WITH BELL ENDS AND EXTEND 1" INSIDE OF THE HANDHOLE. ALL CONDUIT ENTRANCES SHALL BE NEATLY GROUDED AND SEALED WITH A PLASTIC CONDUIT PLUG.
15. CABLES SHALL CIRCLE THE INTERIOR PERIMETER OF THE HANDHOLE PRIOR TO EXITING TO PROVIDE SLACK FOR FUTURE SPLICE.
16. ALL CIRCUITS SHALL BE TAGGED IN HANDHOLE.
17. DUCTBANKS SHALL BE SLOPED TOWARD HANDHOLES 3" PER 100' FOR DRAINAGE.
18. 3/4"DIA. X 10' COPPER CLAD GROUND INSTALLED AT EACH HANDHOLE. GND ROD SHALL BE PLACED 6FT FROM THE HANDHOLE. #1/0 BARE COPPER CADWELDED TO GND ROD AND ROUTED TO HANDHOLE TO GND COVER AND CONDUITS.
19. PULL BOX COVERS SHALL BE EQUIPPED WITH A 36"x36" CLEAR OPENING, SPRING LOADED LIFTING DEVICE. EAST JORDAN MODEL #00819724B01 OR APPROVED EQUAL.

**GENERAL NOTES:**

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2. ALL EQUIPMENT AND MATERIAL SHALL BE NEW UNLESS INDICATED AS EXISTING ON THE DRAWINGS.

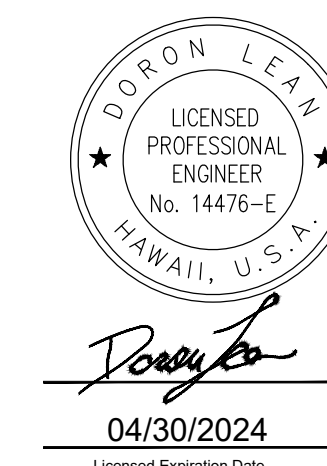
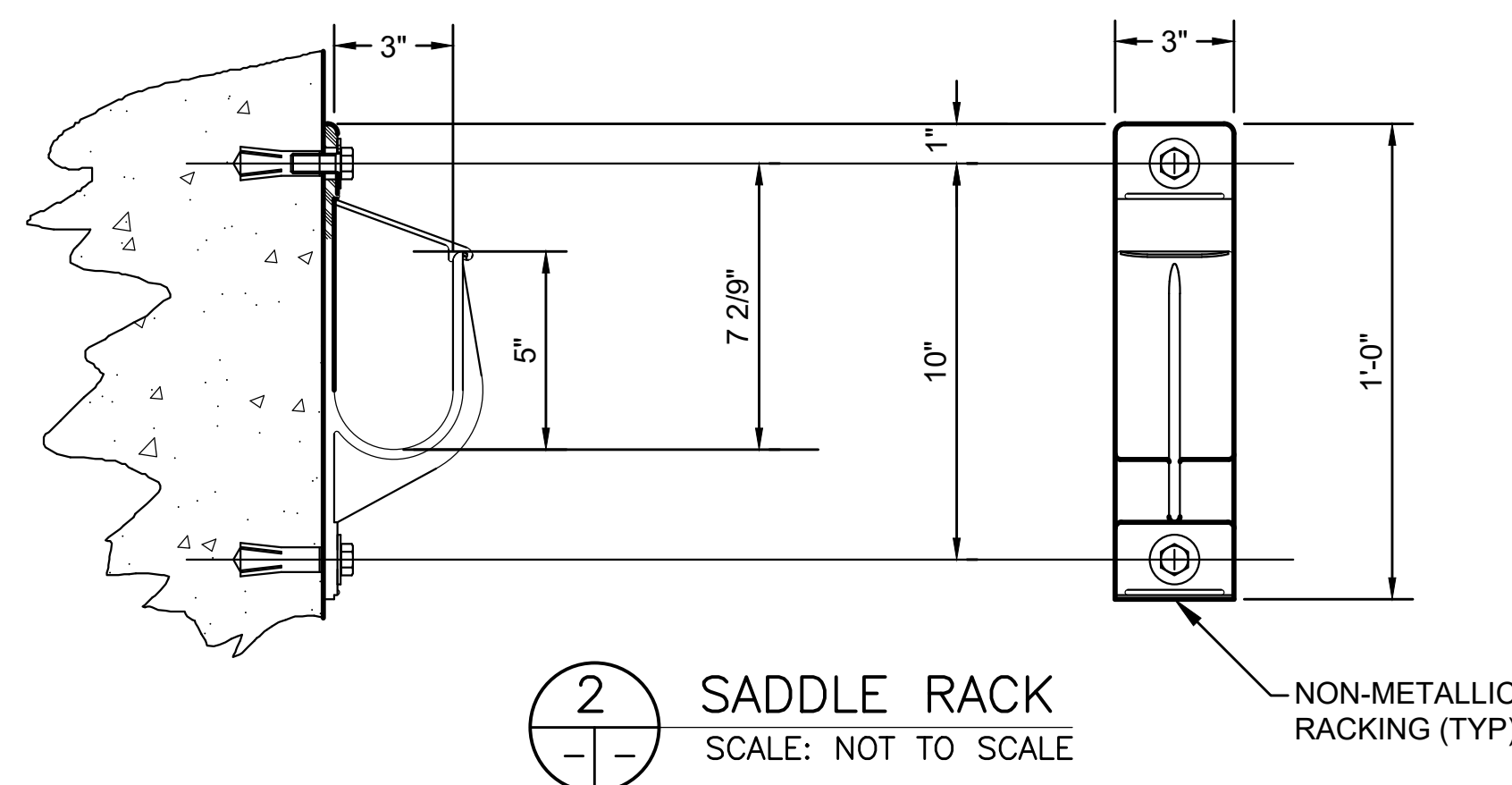
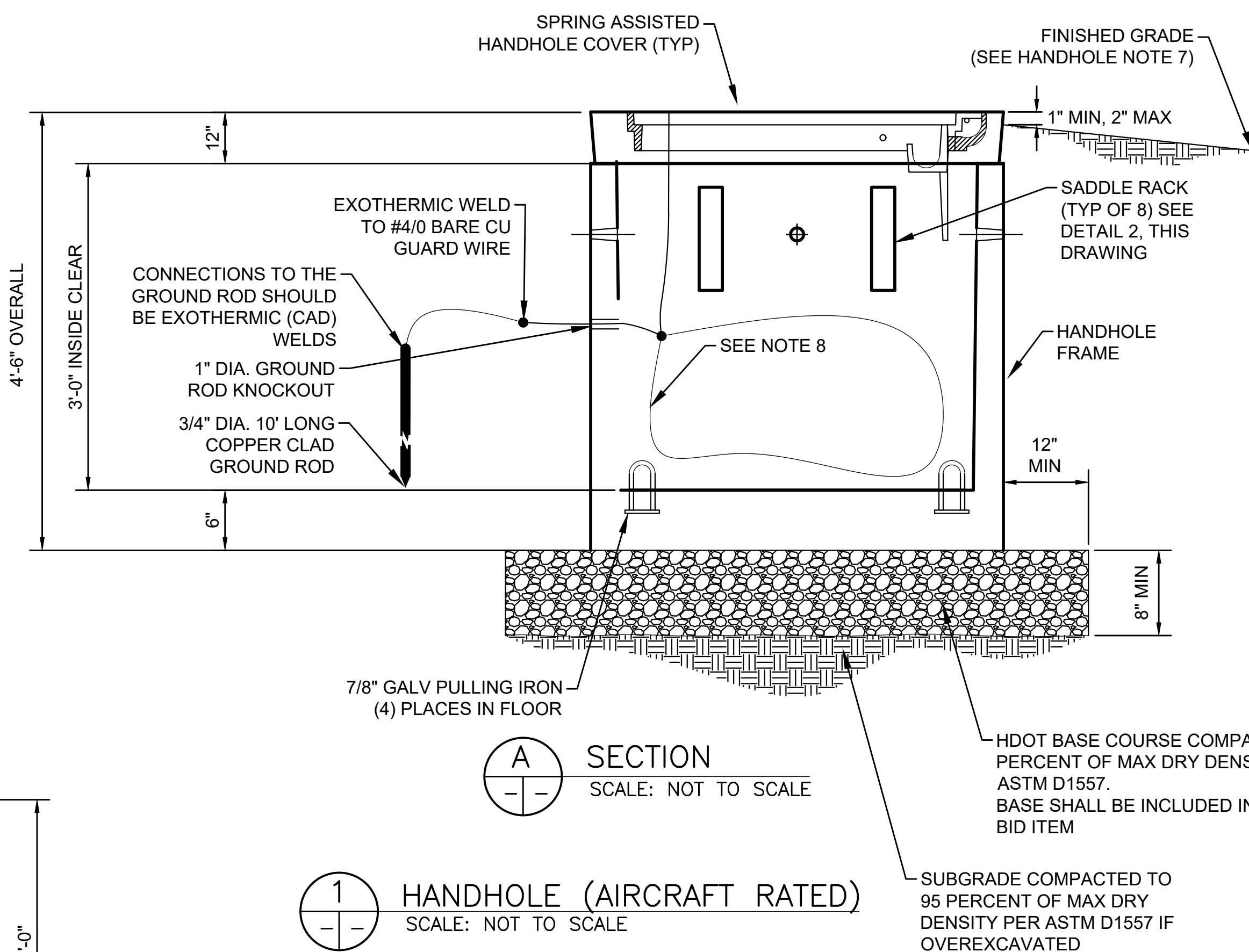


**SADDLE RACK INSTALLATION GUIDELINES:**

1. BE SURE THE SURFACE OF THE CONCRETE WALL IS FLAT AND SMOOTH.
2. ONE FASTENER SHOULD BE INSTALLED IN EACH OF THE SADDLE RACKS ELONGATED HOLES.
3. INSTALL EACH DROP-IN ANCHOR AS SHOWN ON THIS DRAWING AND AS DESCRIBED BELOW:
  - A. DRILL A 5/8" DIA. HOLE 2-3/32" DEEP.
  - B. BLOW OUT HOLE.
  - C. DRIVE ANCHOR 3/32" TO 5/32" BELOW THE SURFACE OF THE CONCRETE.
  - D. EXPAND ANCHOR WITH FRT112 SETTING TOOL. ANCHOR IS PROPERLY SET WHEN SHOULDER OF SETTING TOOL IS FLUSH WITH THE TOP OF ANCHOR.
4. INSTALL THE FLAT WASHER AND TIGHTEN THE CAP SCREW JUST ENOUGH TO ATTAIN A SNUG FIT. AVOID HIGH SCREW TORQUE WHICH INDUCES COMPRESSIVE STRESS.

**STRUCTURAL NOTES. HANDHOLE SHALL BE AIRCRAFT RATED:**

1. CONCRETE: 28 DAY COMPRESSIVE STRENGTH  $f_c = 7,000$  psi
2. REBAR: ASTM A-615 GRADE 60
3. MESH: ASTM A-185 GRADE 65
4. DESIGN: FAA AC 150/5320-6E AIRPORT PAVEMENT DESIGN AND EVALUATION, APPENDIX 3 DESIGN OF STRUCTURES FOR HEAVY AIRPLANES
5. LOADS: 100,000 LBS. WHEEL LOADS
6. PROVIDE STRUCTURAL ENGINEER DRAWINGS STAMPED BY STATE OF HAWAII STRUCTURAL ENGINEER.



DSGN.	DRWN.	CHKD.	APPD.
JP	KV	JA	DL

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**CONSTRUCTION DOCUMENT**  
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AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

**SHEET TITLE:**

**AIRFIELD LIGHTING  
DETAIL 15**

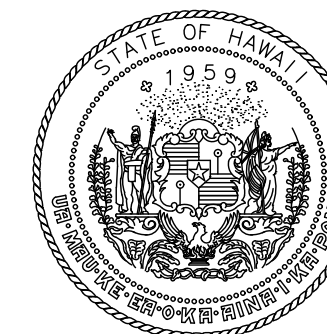
DATE :	DWG. NO.
09/2023	E-515
SHEET :	
178 OF 190 SHEETS	



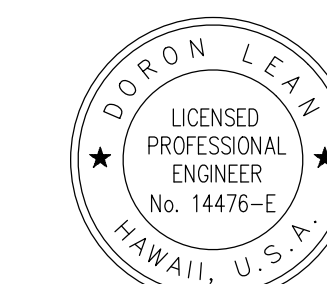








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STATE OF HAWAII  
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KAILUA-KONA, HAWAII

PROJECT NO.:

AH2021-16

SHEET TITLE:

EXISTING RUNWAY  
17 MALSR PROFILE 3

DATE :

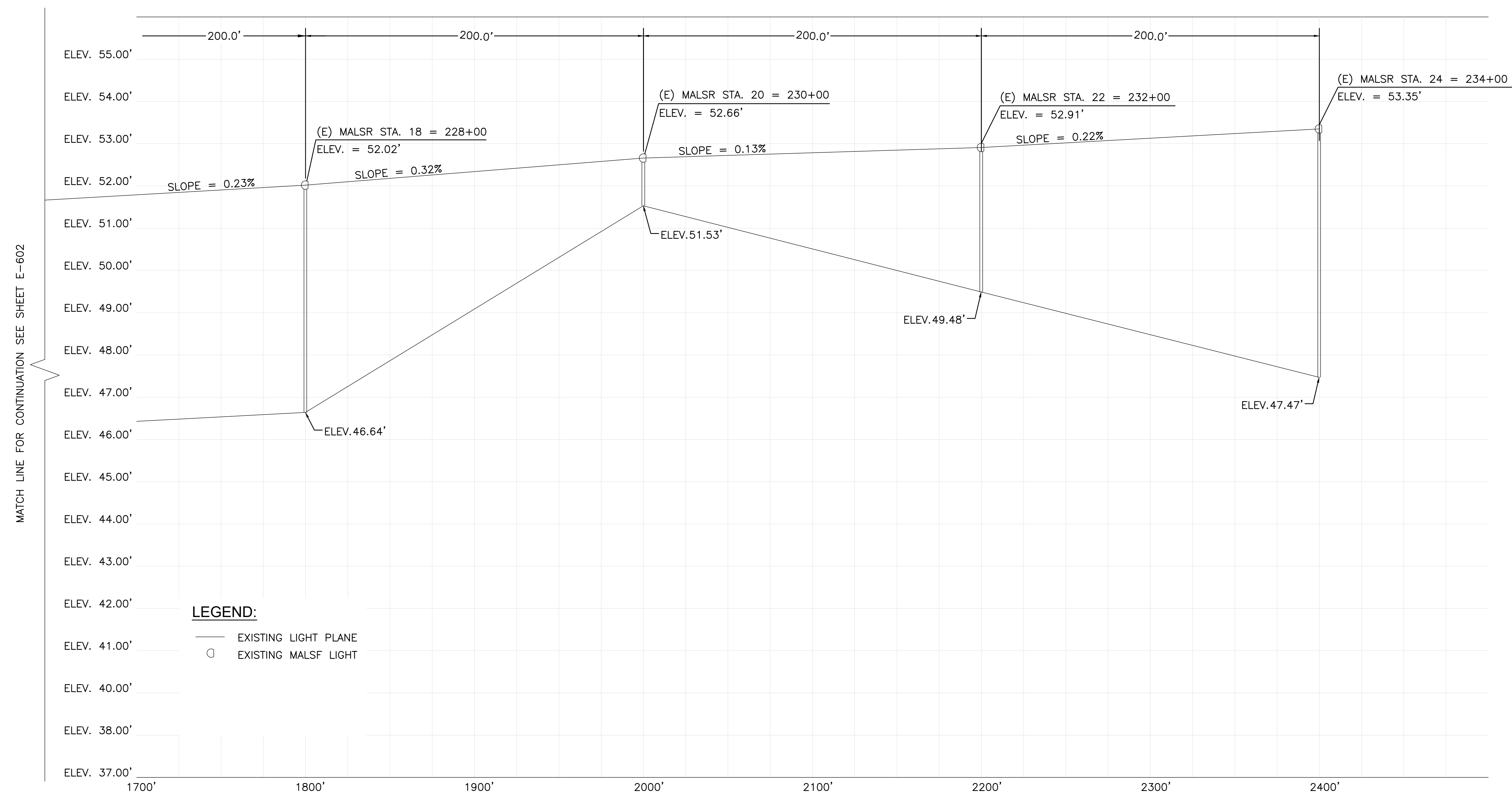
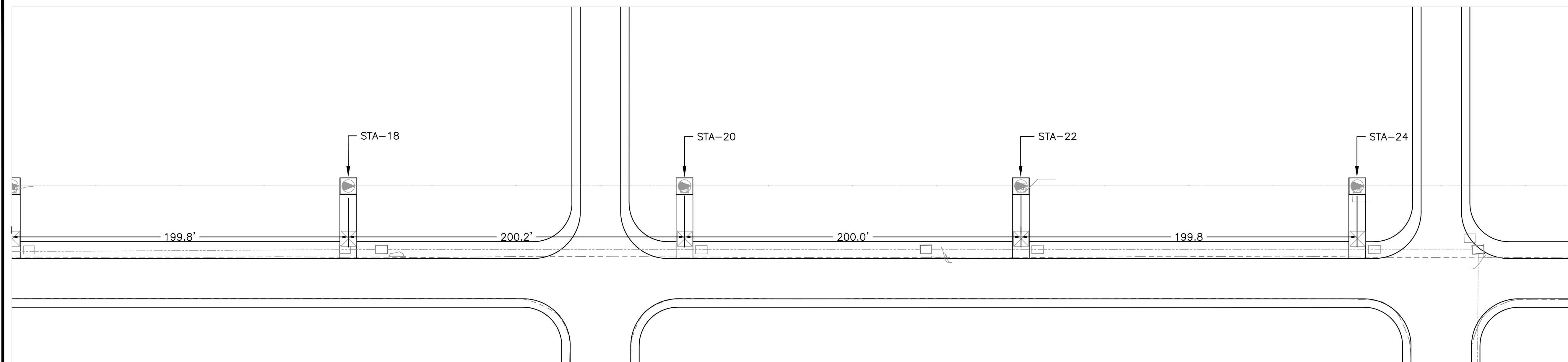
09/2023

SHEET :

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DWG. NO.

E-603

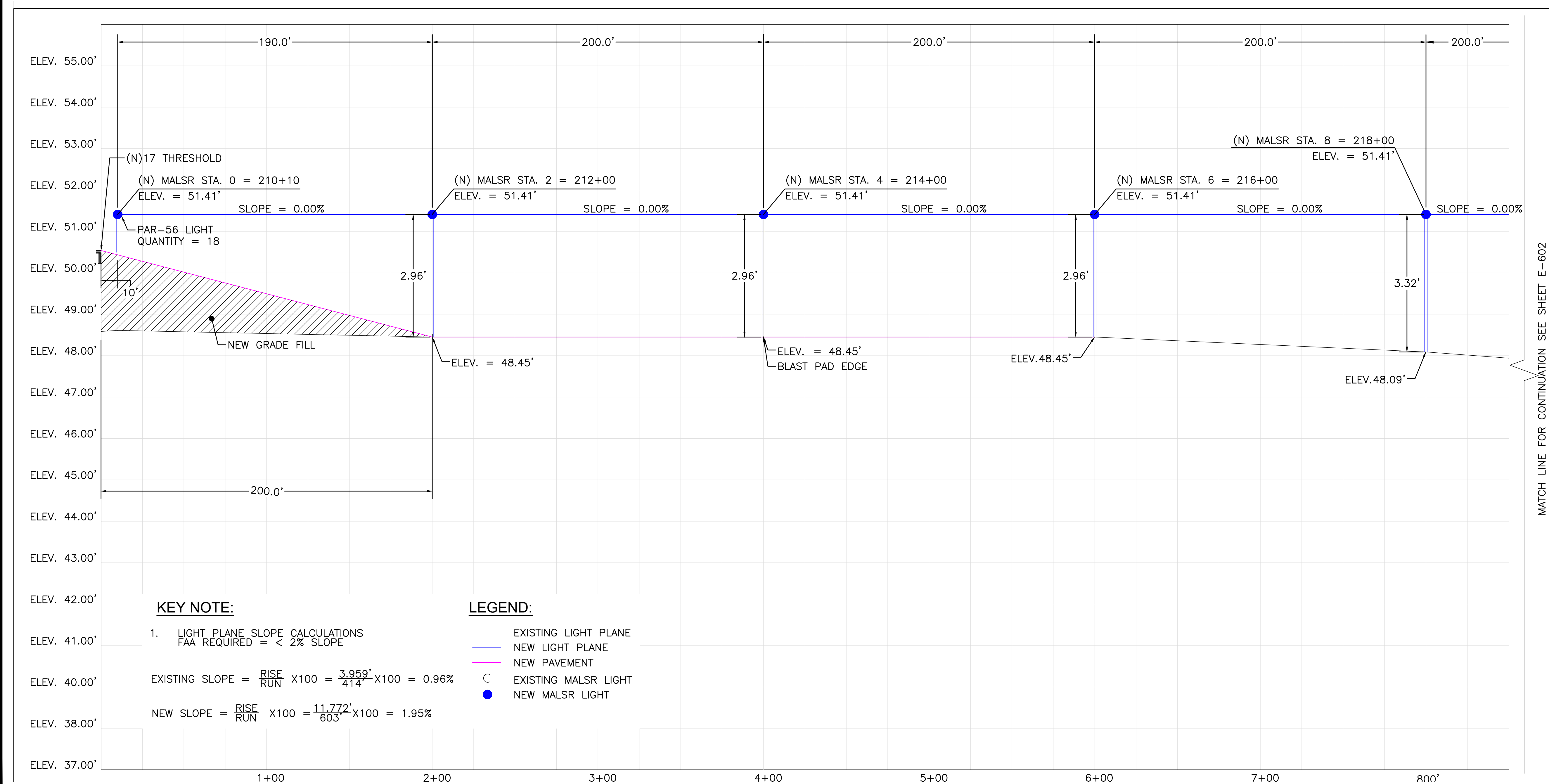
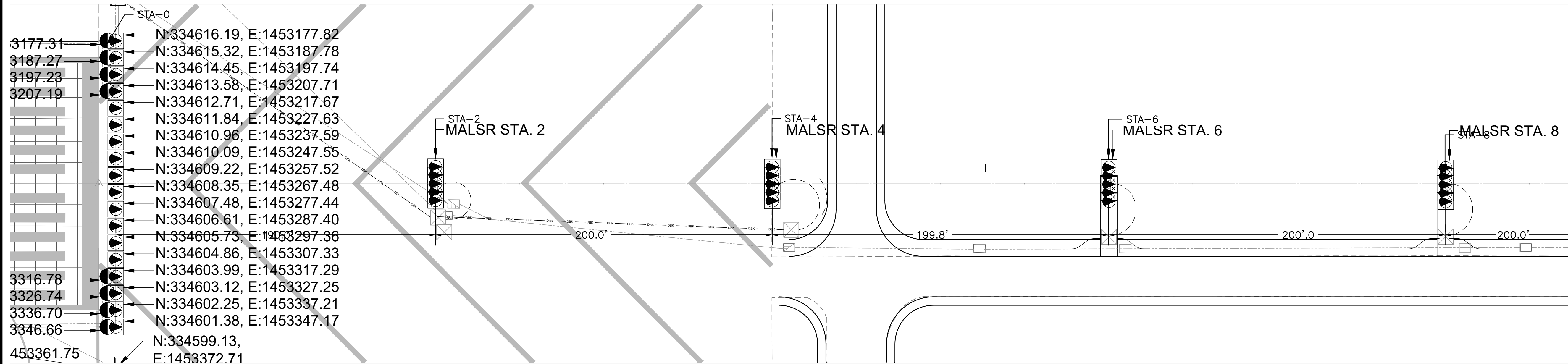


MATCH LINE FOR CONTINUATION SEE SHEET E-602

LEGEND:

- EXISTING LIGHT PLANE
- EXISTING MALSF LIGHT

© LICENSED PROFESSIONAL ENGINEER DORON LEAV PROJECT: KAILUA-KONA INTERNATIONAL AIRPORT AT KEAHOLE, HAWAII. SHEET: E-603. DATE: 09/2023.



**KEY NOTE:**

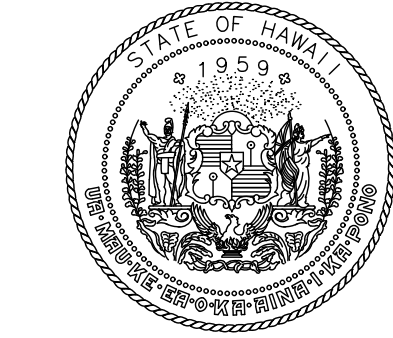
1. LIGHT PLANE SLOPE CALCULATIONS  
 FAA REQUIRED = < 2% SLOPE

EXISTING SLOPE =  $\frac{RISE}{RUN} \times 100 = \frac{3.959'}{414'} \times 100 = 0.96\%$

NEW SLOPE =  $\frac{RISE}{RUN} \times 100 = \frac{11.772'}{603'} \times 100 = 1.95\%$

**LEGEND:**

- EXISTING LIGHT PLANE
- NEW LIGHT PLANE
- NEW PAVEMENT
- EXISTING MALSR LIGHT
- NEW MALSR LIGHT



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 REHABILITATION**

AT  
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 KONA INTERNATIONAL AIRPORT AT KEAHOLE  
 KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

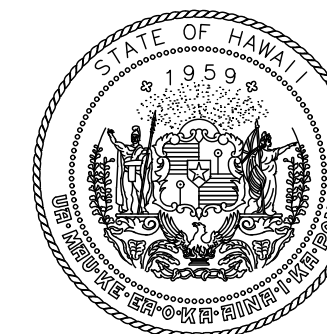
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**NEW RUNWAY 17  
 MALSR PROFILE 1**

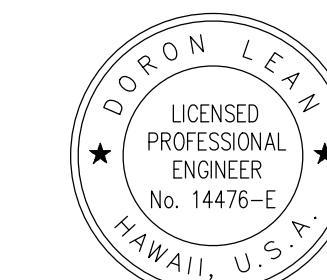
DATE :	09/2023	DWG. NO.	<b>E-604</b>
SHEET :			
182 OF 190 SHEETS			

MATCH LINE FOR CONTINUATION SEE SHEET E-602





Airports Division  
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
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KAILUA-KONA, HAWAII

PROJECT NO.:

AH2021-16

SHEET TITLE:

NEW RUNWAY 17  
MALSR PROFILE 2

DATE :

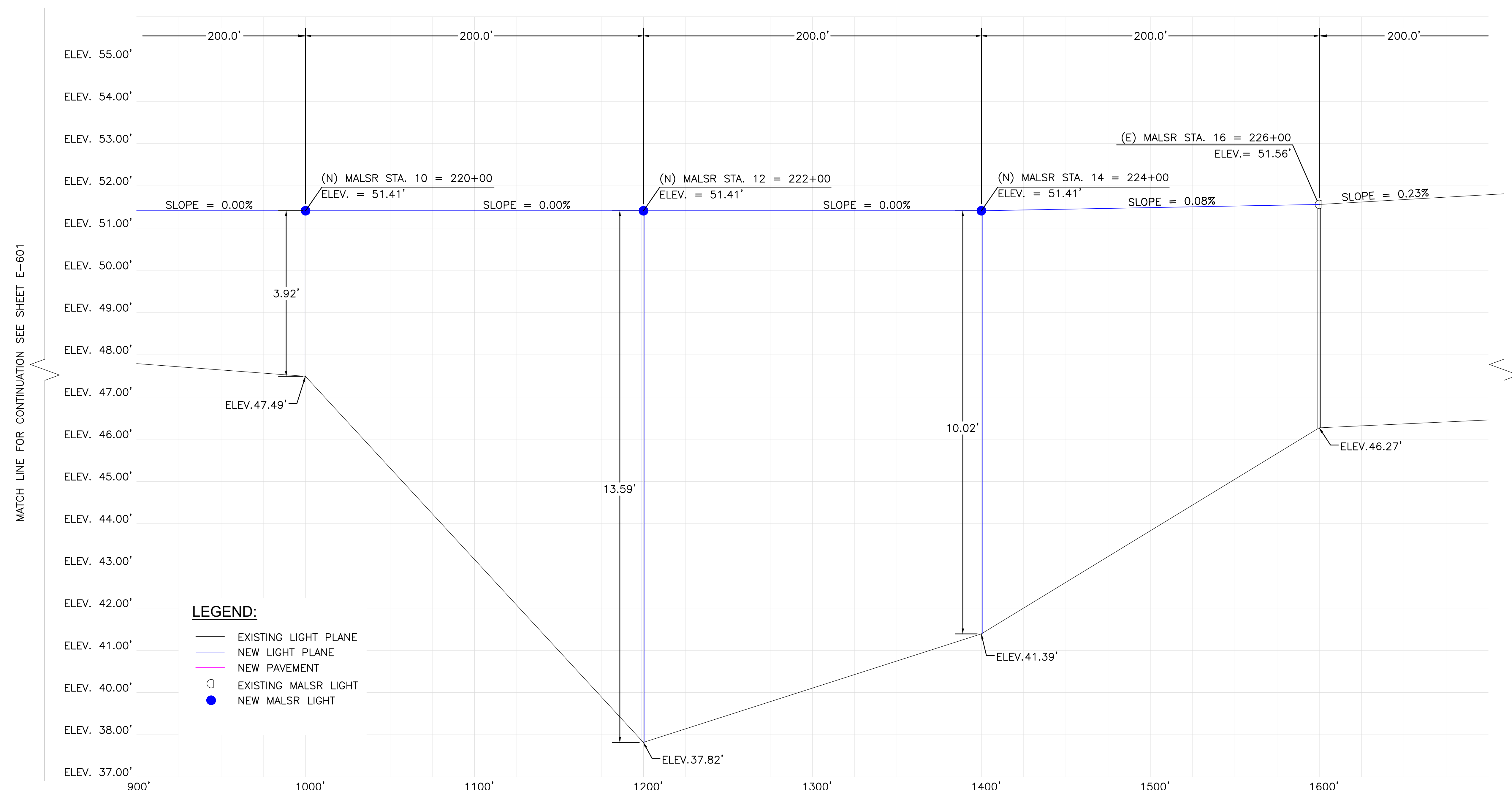
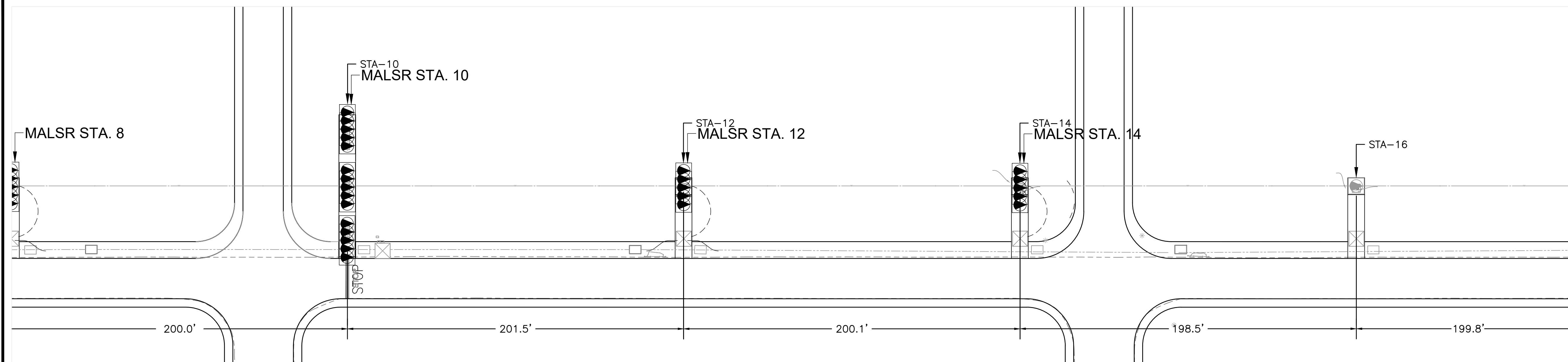
09/2023

SHEET :

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DWG. NO.

E-605



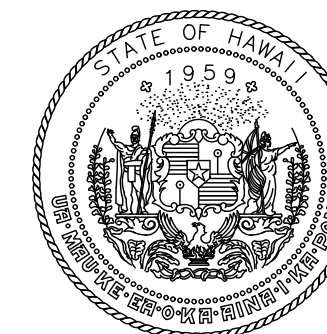
LEGEND:

- EXISTING LIGHT PLANE
- NEW LIGHT PLANE
- NEW PAVEMENT
- EXISTING MALSR LIGHT
- NEW MALSR LIGHT

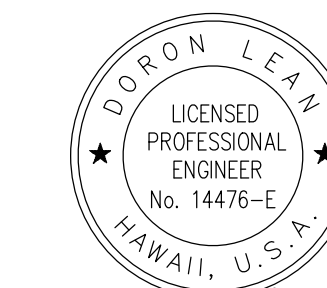
MATCH LINE FOR CONTINUATION SEE SHEET E-601

MATCH LINE FOR CONTINUATION SEE SHEET E-603

© LICENSED PROFESSIONAL ENGINEER DORON LEAO PROJECT ELLISON ONIZUKA RUNWAY 17-35 REHABILITATION DRAWING SHEET E-605 MALSR PROFILE 2



Airports Division  
STATE OF HAWAII  
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KAILUA-KONA, HAWAII

PROJECT NO.:

**AH2021-16**

SHEET TITLE:

**NEW RUNWAY 17  
MALSR PROFILE 3**

DATE :

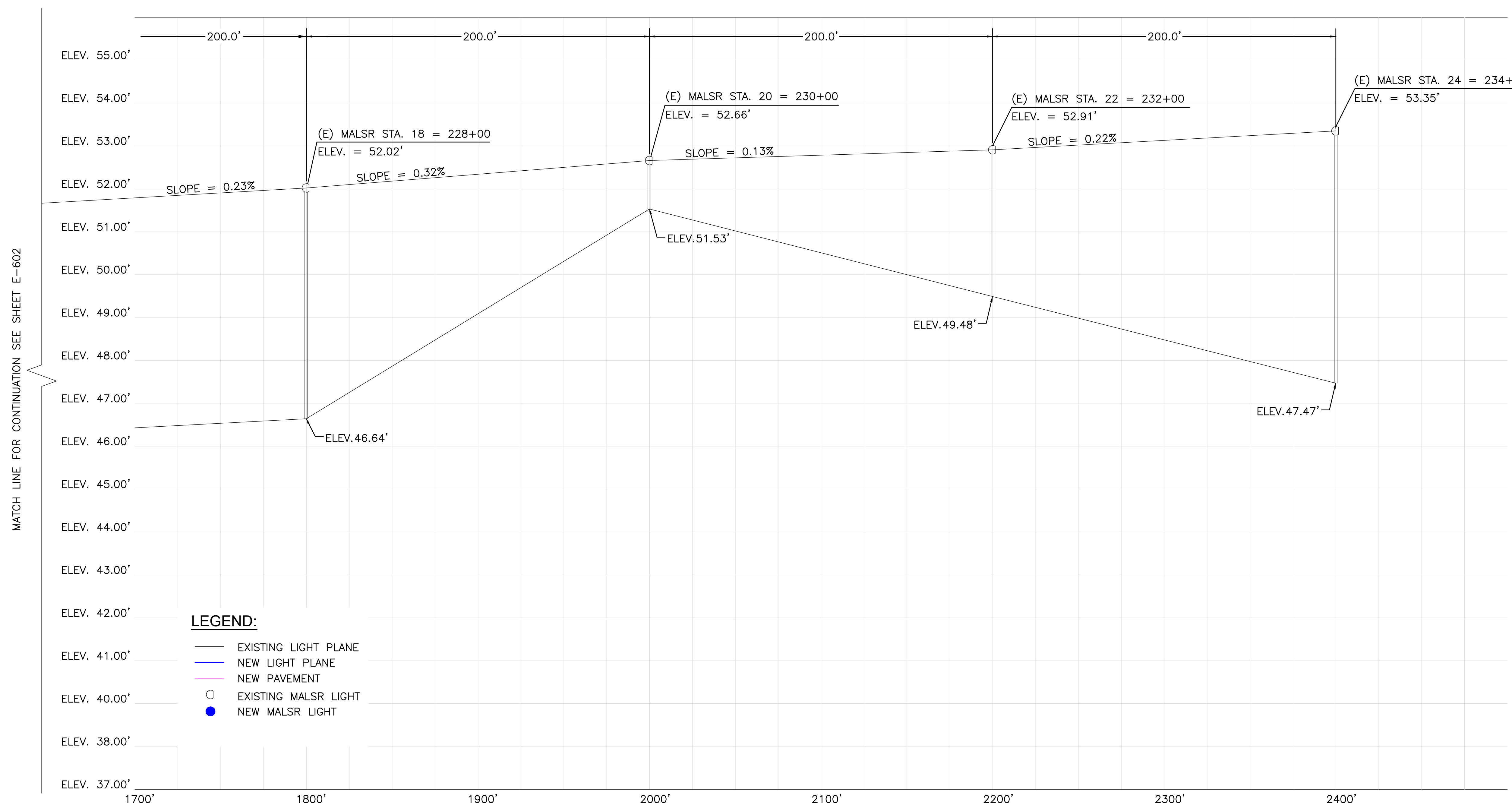
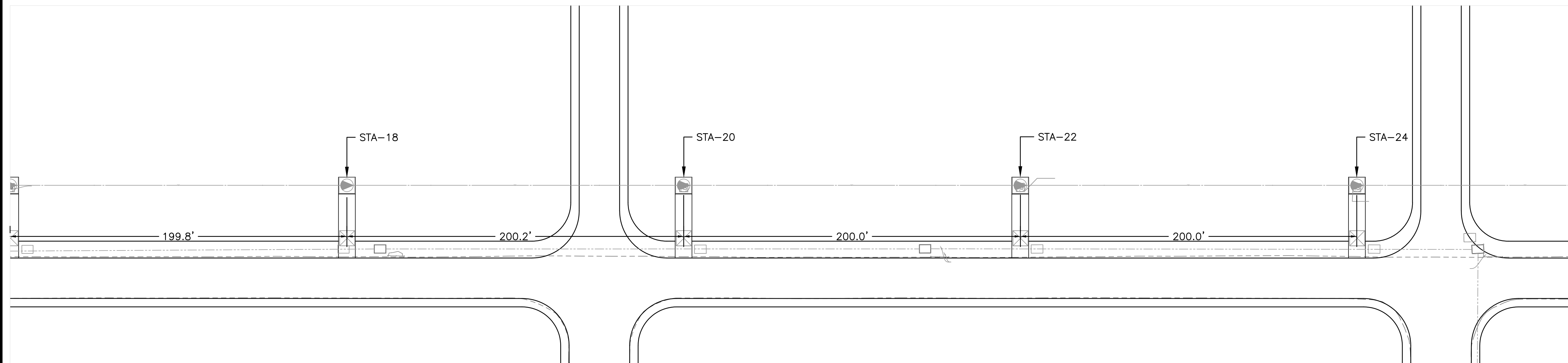
09/2023

SHEET :

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DWG. NO.

**E-606**



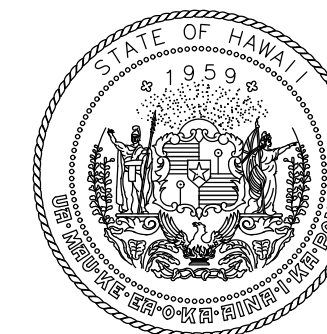
**LEGEND:**

- EXISTING LIGHT PLANE
- NEW LIGHT PLANE
- NEW PAVEMENT
- EXISTING MALSR LIGHT
- NEW MALSR LIGHT

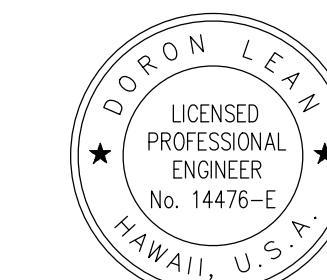
MATCH LINE FOR CONTINUATION SEE SHEET E-602

© USER: EDUARDO SALCINES/LEAN PHOTOMETRICS DRP/PROACTIVE PROJECTS/1472/024 ORION/ACIA RUNWAY REHABILITATION/NOT DRAWING/WORKING DRAWING/SHEET 17 MALSR PROFILE 3





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KAILUA-KONA, HAWAII

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**AH2021-16**

**SHEET TITLE:**

**MALSRL DETAIL 1**

DATE :

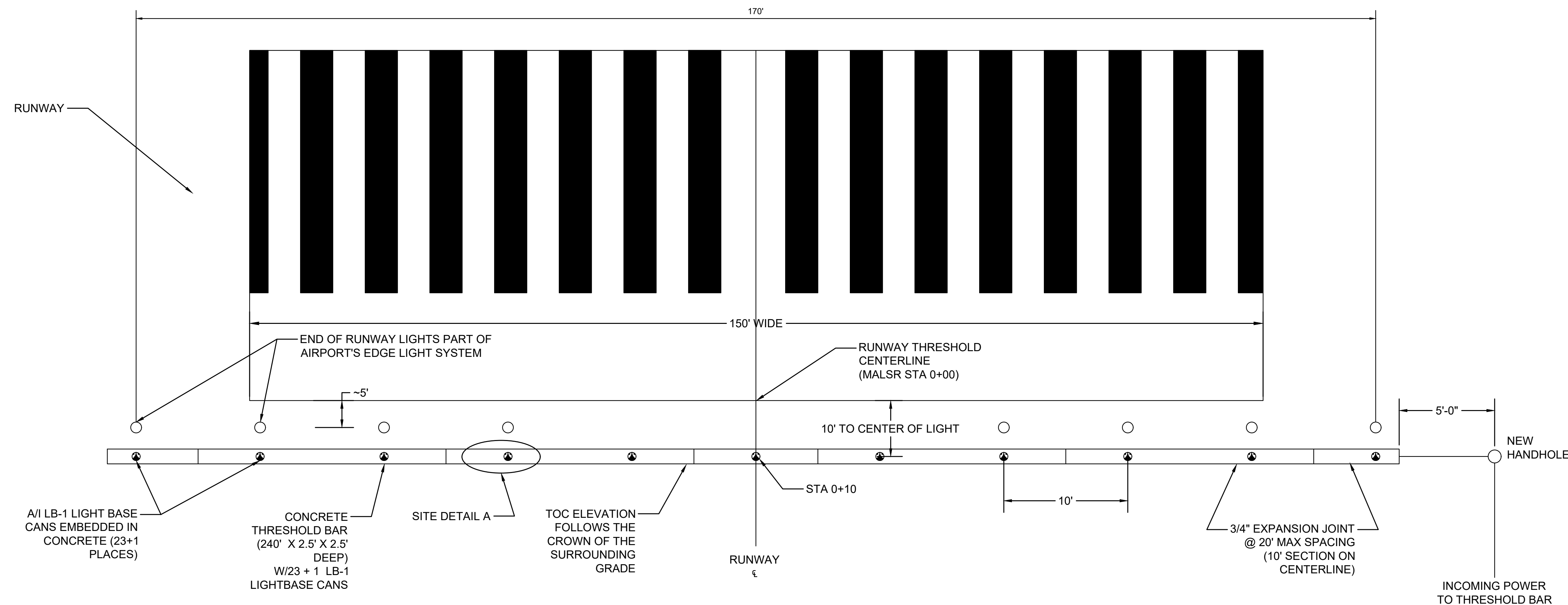
09/2023

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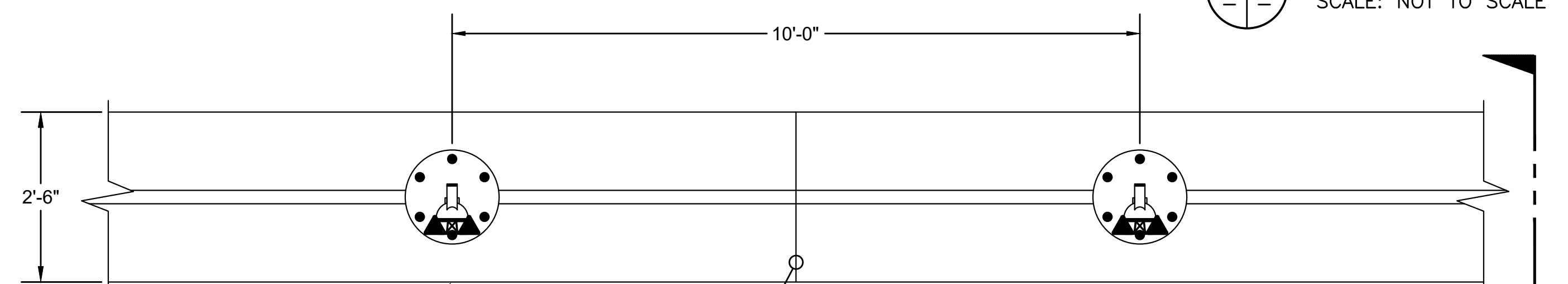
185 OF 190 SHEETS

DWG. NO.

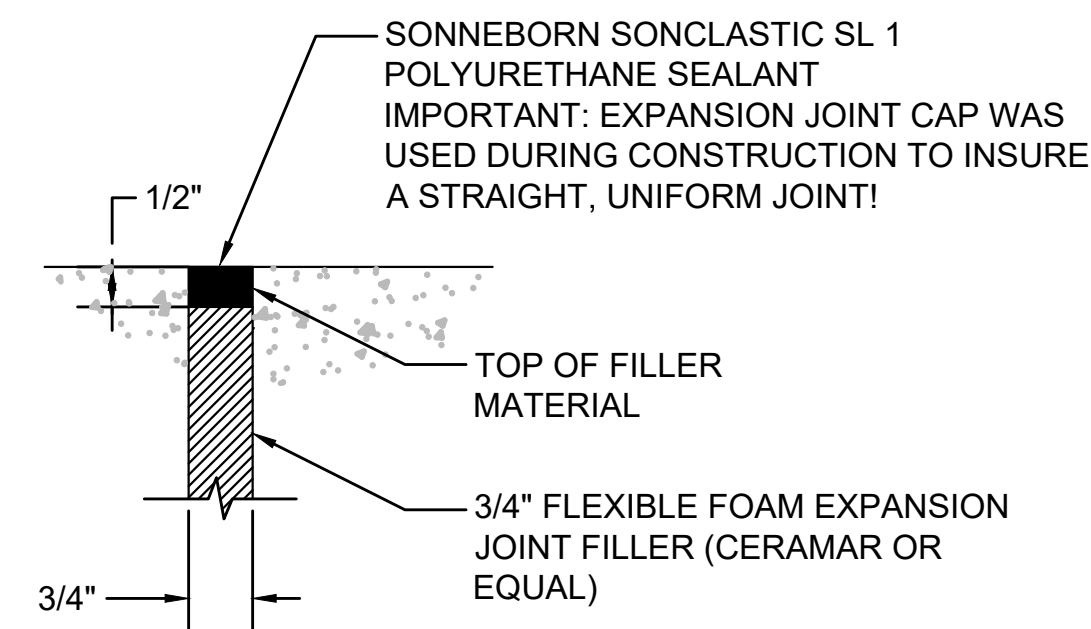
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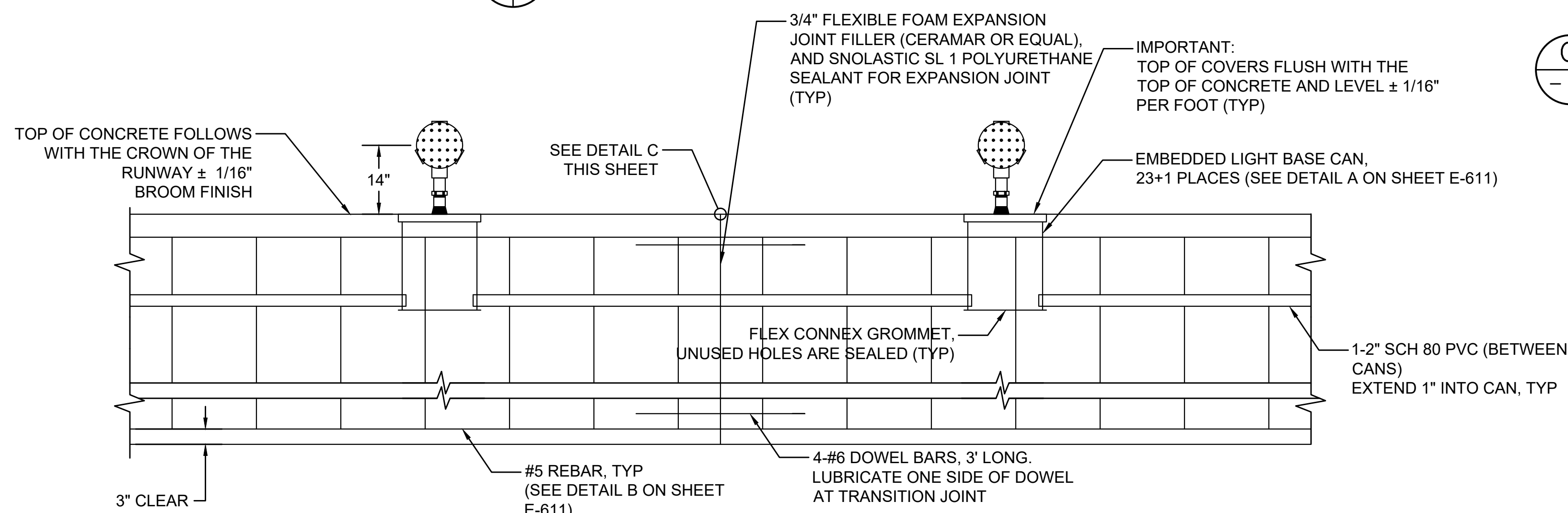
**1 THRESHOLD PLAN**  
SCALE: NOT TO SCALE



**A PLAN VIEW**  
SCALE: NOT TO SCALE



**C JOINT DETAIL**  
SCALE: NOT TO SCALE



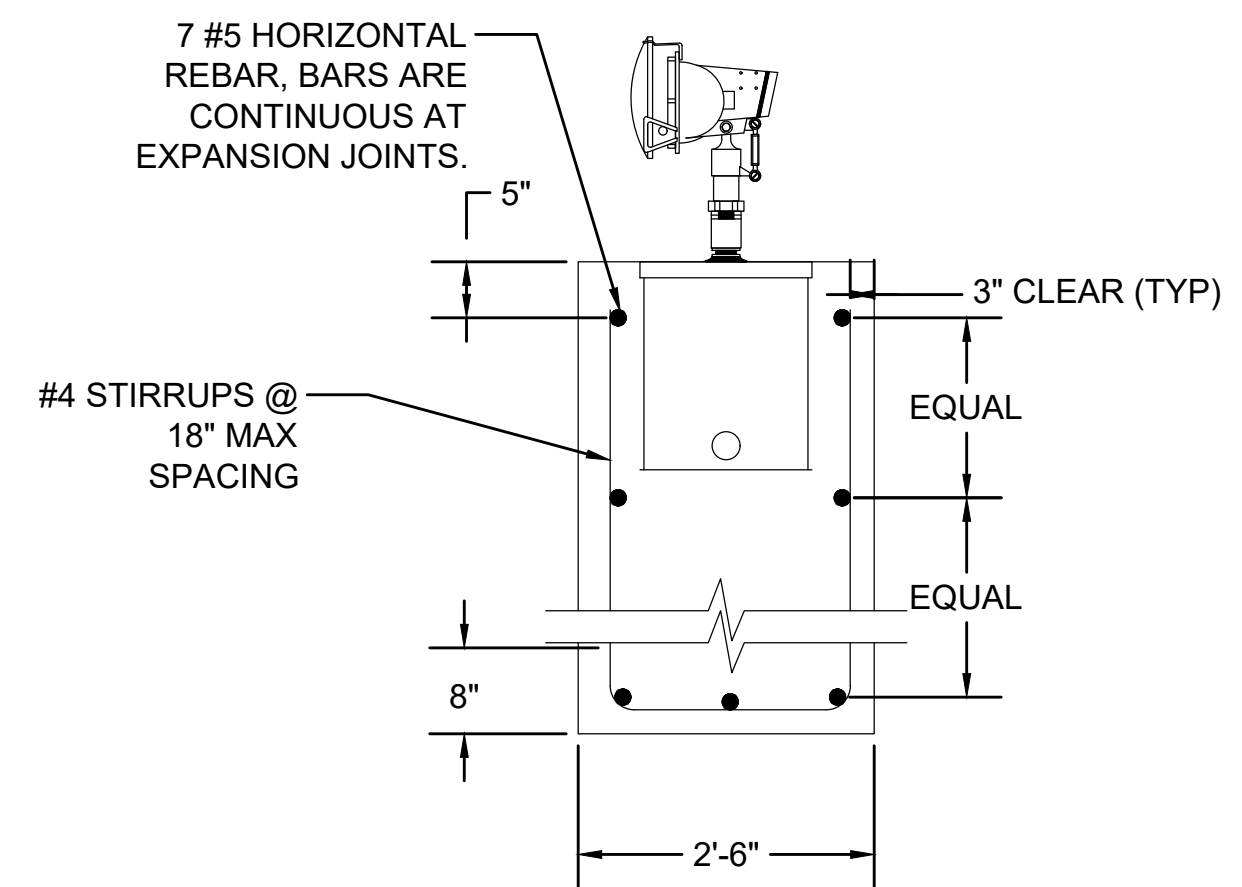
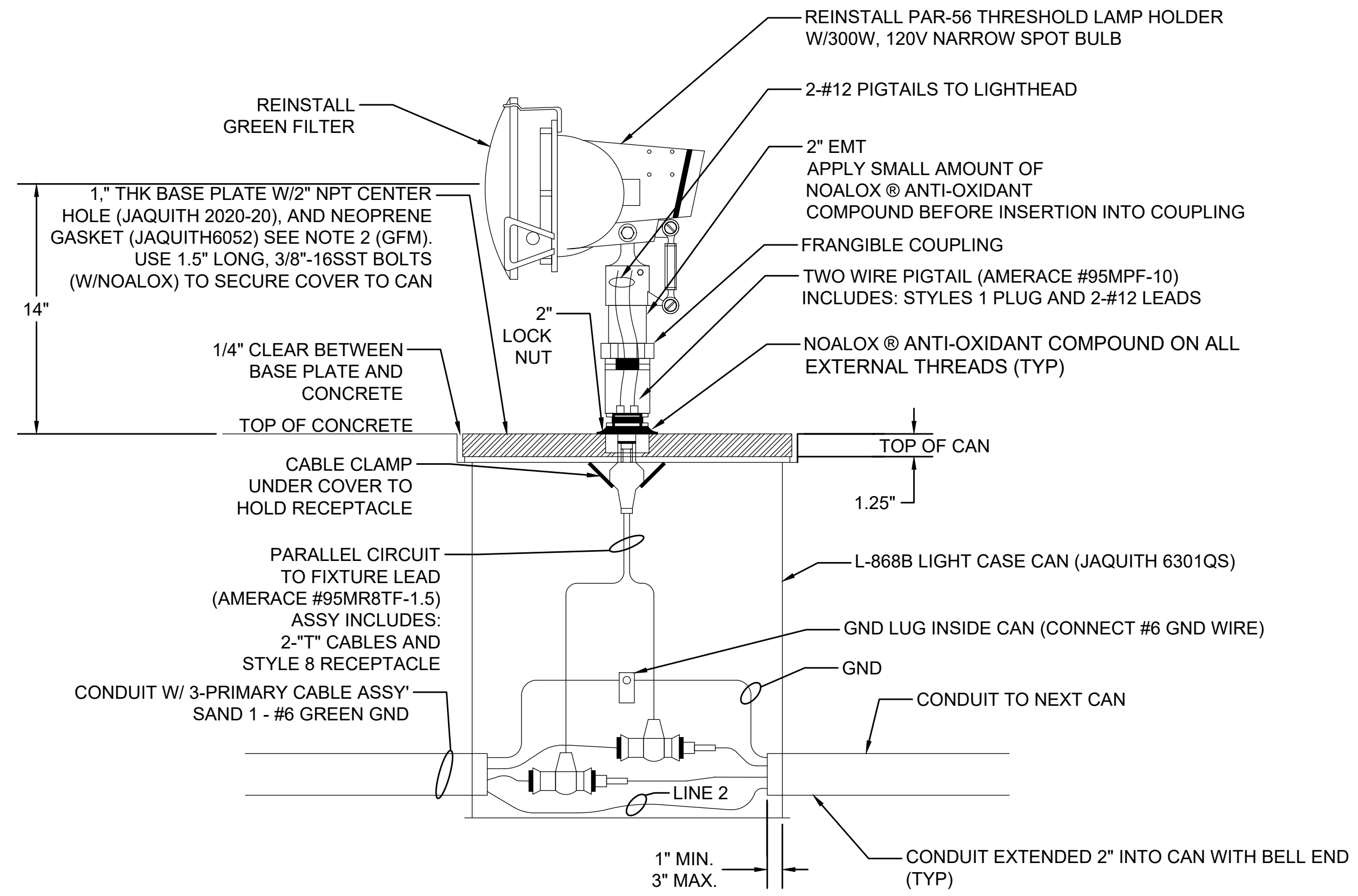
**B ELEVATION VIEW**  
SCALE: NOT TO SCALE

**GENERAL NOTES:**

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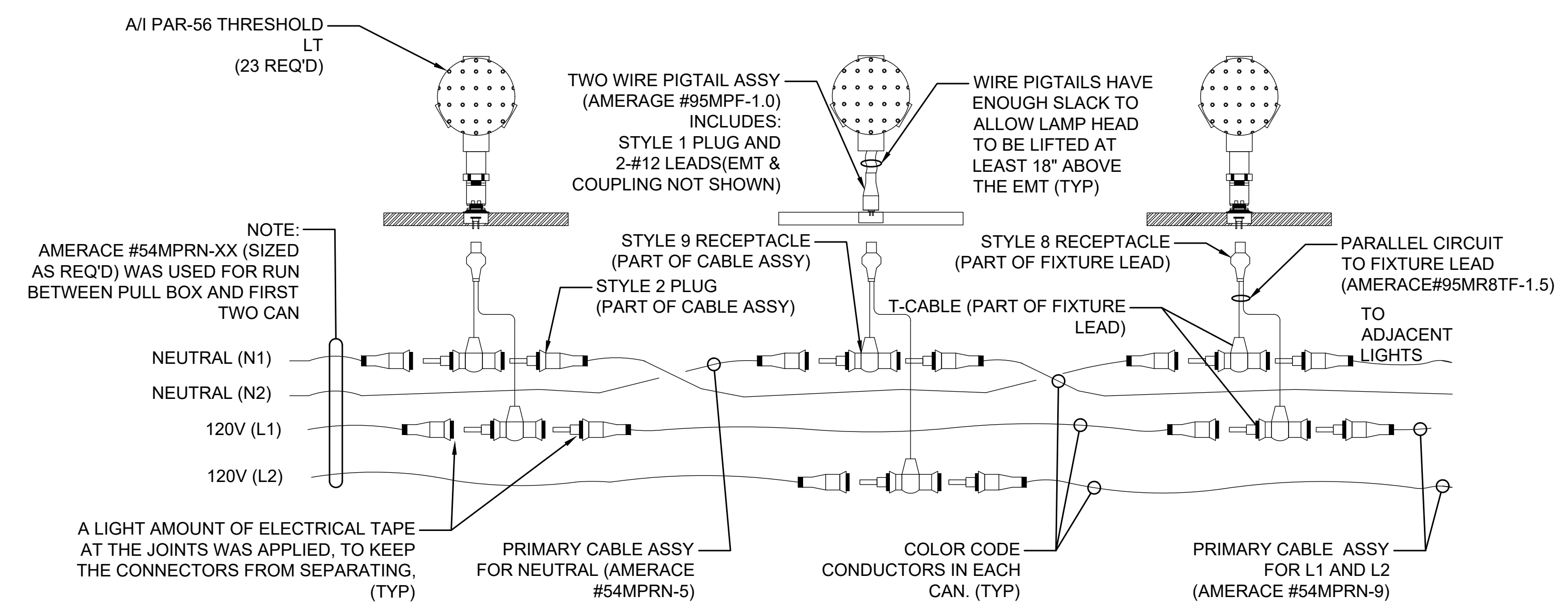
**SHEET NOTES:**

- THRESHOLD LIGHT CONNECTIONS ARE ALTERNATED SO THAT EVERY OTHER LIGHT IS ON THE SAME CIRCUIT. NEUTRAL CONDUCTOR GETS USED AT EVERY LIGHT. IDENTIFY EACH CABLE IN EVERY CAN. PROVIDE AT LEAST 3 FEET OF SLACK AT EACH CABLE END IN CAN. AFTER PLUGGING CONNECTIONS TOGETHER, SEAL THE PLUG/RECEPTACLE SEAM WITH ELECTRICAL TAPE OR AS APPROVED.
- TOP OF LIGHT BASE CAN IS 1" BELOW THE CONCRETE SURFACE TO PERMIT THE INSTALLATION OF THE GASKET AND BASE PLATE. THE TOP OF THE BASE PLATE IS TO BE FLUSH WITH THE CONCRETE SURFACE AFTER INSTALLATION.



**(B)** SECTION C-C  
SCALE: NOT TO SCALE

**(A)** LAMP SHOWN TURNED SIDEWAYS  
SCALE: NOT TO SCALE



**(C)** WIRING DETAILS  
#6 GND REQ'D BUT NOT SHOWN  
SCALE: NOT TO SCALE

**GENERAL NOTES:**

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- FOR THRESHOLD BAR, AIRPORT SHALL FURNISH PAR-56 THRESHOLD LAMP WITH LAMP & FILTER (QUANTITY=23) & LB-1 BASECANS (QUANTITY=24). ALL OTHER EQUIPMENT & MATERIALS SHALL BE NEW & FURNISHED & INSTALLED BY CONTRACTOR.

- SET BASE CAN/FIXTURE AT CORRECT ELEVATION, AZIMUTH AND ROTATION. BOLT IN PLACE WITH STAINLESS STEEL BOLTS AND CEC LOCK WASHERS, TORQUE PER THE MANUFACTURER'S SPECIFICATIONS. APPLY ANTI-SIEZE TO ALL THREADED BOLTS AND CONNECTORS IN ACCORDANCE WITH FIXTURE MANUFACTURER'S RECOMMENDATIONS. INSTALL REINFORCEMENT CAGE AND POSITION CAN USING AN ALIGNMENT JIG (JAQUITH PART #A-9100 OR APPROVED EQUAL) PER MANUFACTURER'S RECOMMENDATIONS. BASE CAN TOLERANCES SHALL MEET THE FOLLOWING:

- A. LONGITUDINAL: ±2' FROM STATIONING WITH ENGINEER'S APPROVAL.
- B. TRANSVERSE: ±1/4" FROM LINE OF LIGHTS.
- C. LEVEL/TILT: ±1/2 DEGREE FROM HORIZONTAL
- D. AZIMUTH: ±1/2 DEGREE FROM LINE OF LIGHTS (FOR BIDIRECTIONAL FIXTURES)
- E. HEIGHT: EDGE OF LIGHT FIXTURE +0", -1/16" RELATIVE TO ADJACENT PAVEMENT (LOW SIDE OF SLOPED PAVEMENT).
- F. AZIMUTH CORRECTION RINGS SHALL NOT BE ALLOWED. MISALIGNED OR INCORRECT BASE CANS SHALL BE REMOVED AT CONTRACTOR'S OWN EXPENSE WITH NO SEPARATE PAYMENT.



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**RUNWAY 17-35 REHABILITATION**  
AT ELLISON ONIZUKA KONA INTERNATIONAL AIRPORT AT KEAHOLE KAILUA-KONA, HAWAII

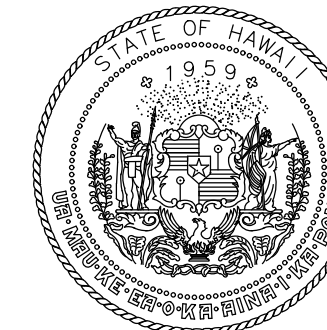
**PROJECT NO.:**  
**AH2021-16**

**SHEET TITLE:**

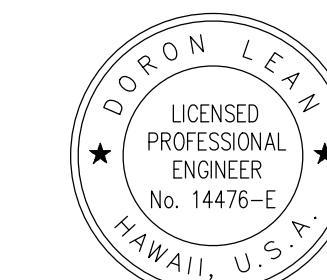
**MALSR DETAIL 2**

DATE :	09/2023	DWG. NO.	<b>E-611</b>
SHEET :			
186 OF 190 SHEETS			





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ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

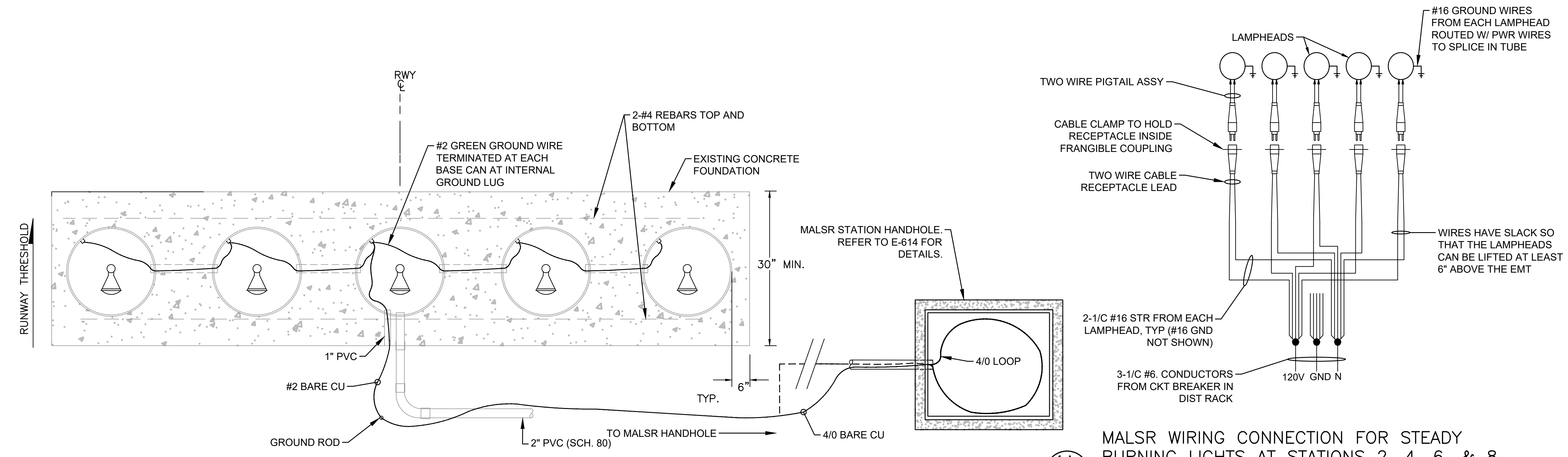
PROJECT NO.:

**AH2021-16**

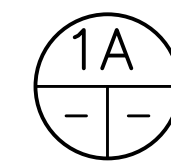
SHEET TITLE:

**MALSR DETAIL 3**

DATE :	DWG. NO.
09/2023	<b>E-612</b>
SHEET :	
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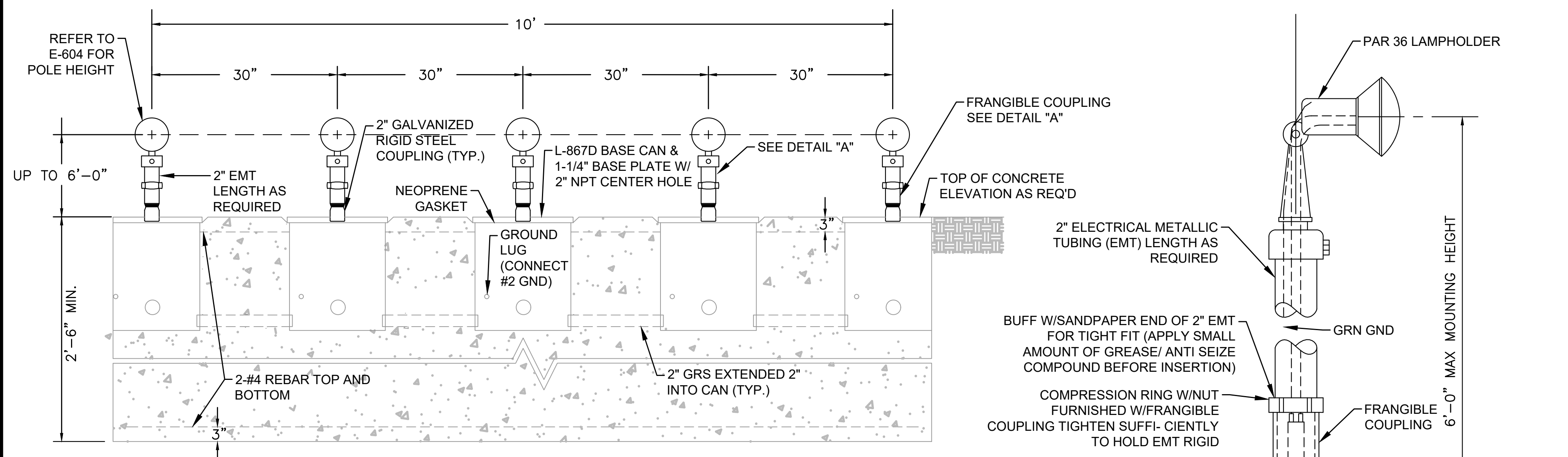
1 PLAN- 5 LIGHT FRANGIBLE BAR FOR MALSR STATION 2, 4, 6, & 8  
SCALE: NOT TO SCALE



MALSR WIRING CONNECTION FOR STEADY BURNING LIGHTS AT STATIONS 2, 4, 6, & 8  
SCALE: NOT TO SCALE

NOTES:

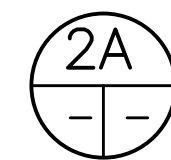
- 1A. THE POWER CABLES SHALL BE CONTINUOUS BETWEEN THE LIGHT STATIONS. WHERE SPLICES ARE REQUIRED, THE CONDUCTORS SHALL BE JOINED WITH COMPRESSION SOLDERLESS WIRE CONNECTORS SEALED AND INSULATED WITH HEAT SHRINK TUBING.
- 1B. "TEE" SPLICED FOR SPLICING THE #12 WIRES OF THE LOWER CABLE CONDUCTORS TO THE POWER SERVICE CABLES SHALL BE JOINED WITH SOLDERLESS WIRE CONNECTORS AND SEALED WITH SELF SEALING HEAT-SHRINKABLE TUBING.
2. LONG SECTIONS OF BURIED GUARD WIRES SHALL BE CONNECTED TO A GROUND ROD ON MAXIMUM 300' SPACING.
3. LEAVE 3 FEET SLACK IN EACH CABLE AT EACH LIGHT BAR.
4. FIELD ATTACHED CONNECTOR, L-823 PLUG AND RECEPTACLE (AC 150-5343-26A).
5. COUPLING THREADS TO BE CLEANED AND COATED WITH SILICONE ANTI-SEIZE COMPOUND.
6. LIGHTS SHALL BE INSTALLED ON A SINGLE CONCRETE FOUNDATION INSTEAD OF A PIER OR PEDESTAL FOUNDATION.
7. CONNECTOR CLAMP PROVIDES FOR HOLDING LOWER SECTION OF L-823 WHILE REMOVING UPPER SECTION.
8. DRILL A HOLE IN THE CABLE CLAMP AND INSTALL A GREEN GROUND FROM GROUND LUG IN LIGHT BASE TO GROUND CONN. IN LAMP HOLDER USE MALE/FEMALE CRIMP-ON CONN. TO ALLOW #16 "GREEN" TO BE DISCONNECTED.



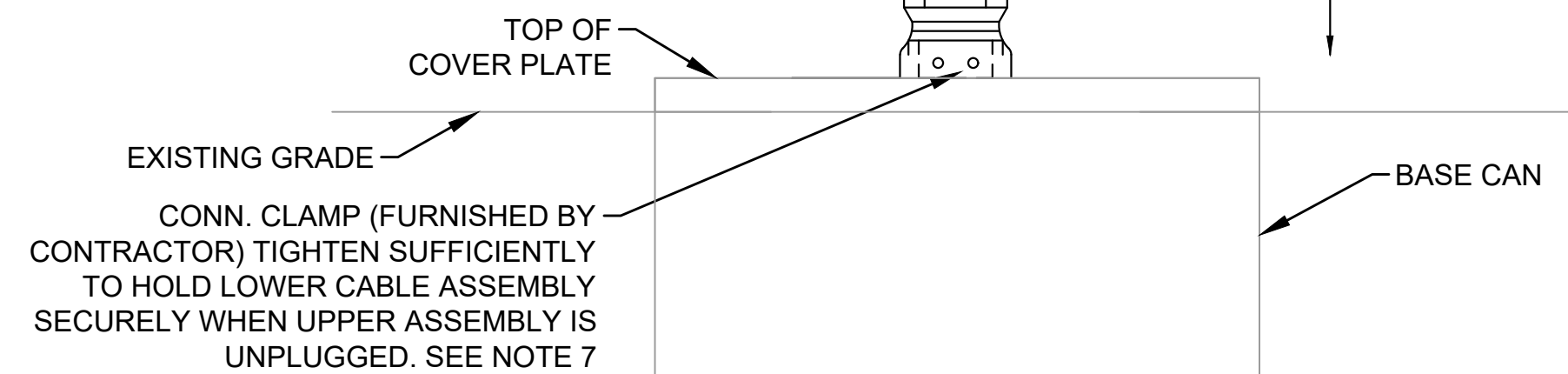
2 ELEVATION VIEW FOR MALSR STATION 2, 4, 6, & 8  
SCALE: NOT TO SCALE

GENERAL NOTES:

1. REFER TO DRAWINGS E-001 THRU E-002 FOR GENERAL NOTES AND ABBREVIATIONS.
2. ALL EQUIPMENT AND MATERIAL SHALL BE NEW UNLESS INDICATED AS EXISTING ON THE DRAWINGS.



2A DETAIL "A" FOR STEADY BURNING LIGHTS  
SCALE: NOT TO SCALE





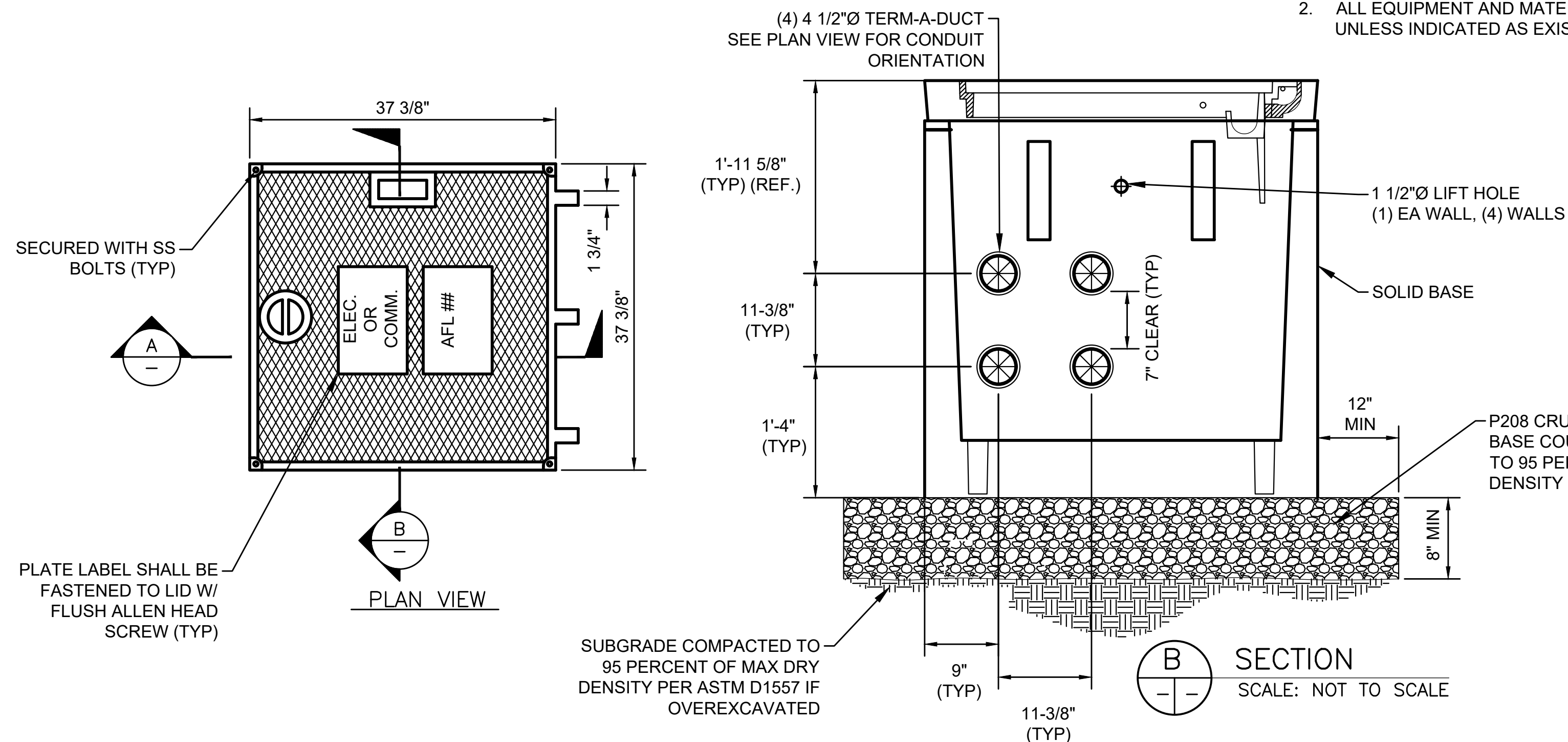


**HANDHOLE NOTES:**

1. EQUIPMENT NOTES:
  - 1.1. EQUIPMENT AND MATERIALS SHALL BE FURNISHED AND INSTALLED BY CONTRACTOR INCLUDING GROUNDING AND SADDLE RACKS
  - 1.2. HANDHOLES ARE PROVIDED WITH HOLES AS SHOWN. CONTRACTOR SHALL CORE-DRILL ADDITIONAL HOLES AS REQUIRED.
2. CONTRACTOR SHALL PROVIDE A STAINLESS STEEL ID TAG WITH THE FOLLOWING DESIGNATION: "AFL" WHERE "##" IS THE RESPECTIVE HAND HOLE IDENTIFICATION.
3. TWO NON-METALLIC SADDLE RACKS SHALL BE INSTALLED ON EACH WALL OF THE HANDHOLE.
4. CONTRACTOR SHALL I.D. EACH CABLE ENTERING & EXITING HANDHOLE.
5. CONTRACTOR SHALL INSTALL A 3/4" DIA. 10' LONG COPPER CLAD GROUND ROD.
6. CONTRACTOR SHALL GROUT AROUND ALL DUCTS ENTERING THE HANDHOLE
7. HANDHOLE SHALL BE NO MORE THAN 3" ABOVE SURROUNDING GROUND WITH BACKFILL MATCHING THE TOP OF THE COVER, SLOPING AWAY FROM THE HANDHOLE.
8. INSTALL A #4/0 BARE CU BONDING CONDUCTOR FOR HANDHOLE COVER. HANDHOLE COVER AND FRAME SHALL A THREADED HOLE TO ACCEPT A GROUND LUG. FURNISH AND INSTALL A GROUND LUG ON COVER AND FRAME TO CONNECT THE #4/0 CONDUCTOR AND EXOTHERMICALLY WELDED TO GROUND ROD. PROVIDE SUFFICIENT SLACK TO OPEN COVER. SECURE 4/0 TO HANDHOLE WALLS ABOVE FLOOR.
9. NOT USED.
10. ALL BACKFILL AROUND HANDHOLES SHALL BE IN ACCORDANCE WITH ITEM AIRPORT CIVIL SPECIFICATIONS FOR BACKFILL. AT A MINIMUM COMPACT NATIVE FILL TO 90%.
11. INSTALL GROUNDING BUSHINGS ON ALL GRS CONDUIT AND GROUND TO GROUND LOOP WITH #2 AWG BARE COPPER CONDUCTOR VIA MECHANICAL LUG.
12. NOT USED.
13. 8" COMPACTED GRAVEL PER SPECIFICATIONS UNDER PULL BOX TO ASSURE UNIFORM DISTRIBUTION OF SOIL PRESSURE AND DRAINAGE.
14. CONDUITS ENTERING PULL BOX SHALL BE FITTED WITH BELL ENDS AND EXTEND 1" INSIDE OF THE HANDHOLE. ALL CONDUIT ENTRANCES SHALL BE NEATLY GROUDED AND SEALED WITH A PLASTIC CONDUIT PLUG.
15. CABLES SHALL CIRCLE THE INTERIOR PERIMETER OF THE HANDHOLE PRIOR TO EXITING TO PROVIDE SLACK FOR FUTURE SPLICE.
16. ALL CIRCUITS SHALL BE TAGGED IN HANDHOLE.
17. DUCTBANKS SHALL BE SLOPED TOWARD HANDHOLES 3" PER 100' FOR DRAINAGE.
18. 3/4"DIA. X 10' COPPER CLAD GROUND INSTALLED AT EACH HANDHOLE. GND ROD SHALL BE PLACED 6FT FROM THE HANDHOLE. #1/0 BARE COPPER CADWELDED TO GND ROD AND ROUTED TO HANDHOLE TO GND COVER AND CONDUITS.
19. PULL BOX COVERS SHALL BE EQUIPPED WITH A 36"X36" CLEAR OPENING, SPRING LOADED LIFTING DEVICE. EAST JORDAN MODEL #00819724B01 OR APPROVED EQUAL.

**GENERAL NOTES:**

1. REFER TO DRAWINGS E-001 THRU E-002 FOR GENERAL NOTES AND ABBREVIATIONS.
2. ALL EQUIPMENT AND MATERIAL SHALL BE NEW UNLESS INDICATED AS EXISTING ON THE DRAWINGS.

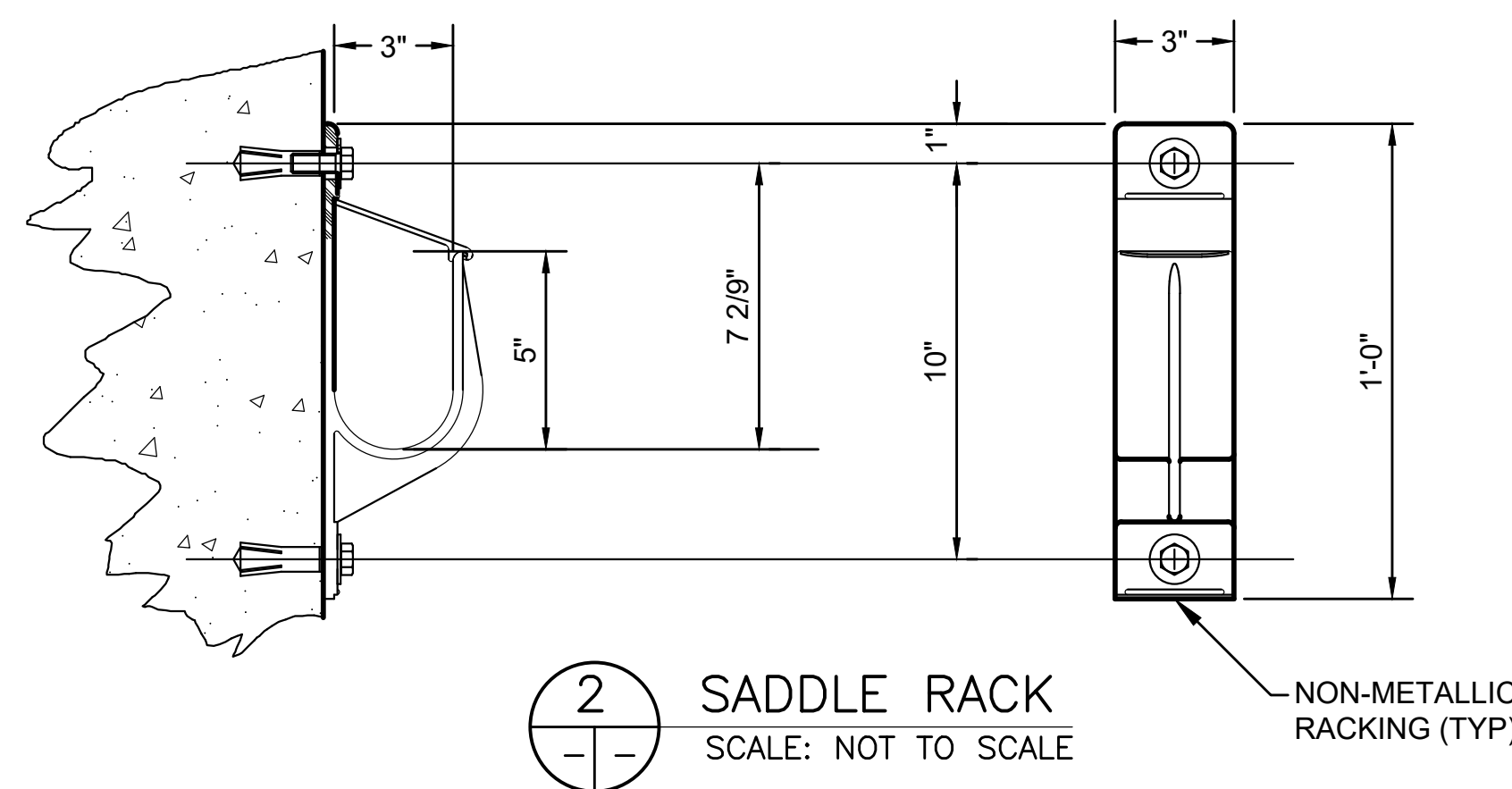


**SADDLE RACK INSTALLATION GUIDELINES:**

1. BE SURE THE SURFACE OF THE CONCRETE WALL IS FLAT AND SMOOTH.
2. ONE FASTENER SHOULD BE INSTALLED IN EACH OF THE SADDLE RACKS ELONGATED HOLES.
3. INSTALL EACH DROP-IN ANCHOR AS SHOWN ON THIS DRAWING AND AS DESCRIBED BELOW:
  - A. DRILL A 5/8" DIA. HOLE 2-3/32" DEEP.
  - B. BLOW OUT HOLE.
  - C. DRIVE ANCHOR 3/32" TO 5/32" BELOW THE SURFACE OF THE CONCRETE.
  - D. EXPAND ANCHOR WITH FRT112 SETTING TOOL. ANCHOR IS PROPERLY SET WHEN SHOULDER OF SETTING TOOL IS FLUSH WITH THE TOP OF ANCHOR.
4. INSTALL THE FLAT WASHER AND TIGHTEN THE CAP SCREW JUST ENOUGH TO ATTAIN A SNUG FIT. AVOID HIGH SCREW TORQUE WHICH INDUCES COMPRESSIVE STRESS.

**STRUCTURAL NOTES, HANDHOLE SHALL BE AIRCRAFT RATED:**

1. CONCRETE: 28 DAY COMPRESSIVE STRENGTH  $f_c = 7,000$  psi
2. REBAR: ASTM A-615 GRADE 60
3. MESH: ASTM A-185 GRADE 65
4. DESIGN: FAA AC 150/5320-6E AIRPORT PAVEMENT DESIGN AND EVALUATION, APPENDIX 3 DESIGN OF STRUCTURES FOR HEAVY AIRPLANES
5. LOADS: 100,000 LBS. WHEEL LOADS
6. PROVIDE STRUCTURAL ENGINEER DRAWINGS STAMPED BY STATE OF HAWAII STRUCTURAL ENGINEER.

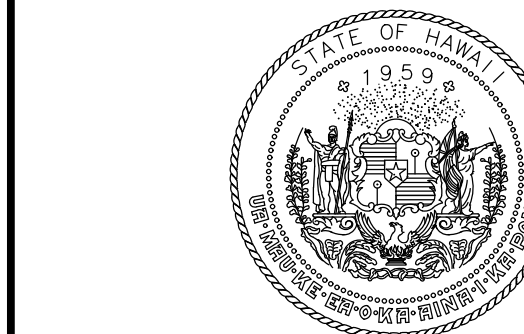


NON-METALLIC RACKING (TYP)

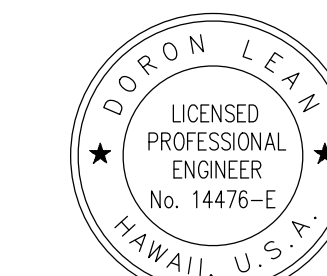
**2 SADDLE RACK**  
SCALE: NOT TO SCALE

**1 HANDHOLE (AIRCRAFT RATED)**  
SCALE: NOT TO SCALE

**A SECTION**  
SCALE: NOT TO SCALE



Airports Division  
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS



Doron Leung  
04/30/2024  
Licensed Expiration Date

DSGN.	DRWN.	CHKD.	APPD.
JP	KV	JA	DL

**KEY PLAN / NOTES:**

NO.	DATE	REVISIONS

**CONSTRUCTION DOCUMENT**

SEPTEMBER 2023  
DATE

**PROJECT TITLE :**

**RUNWAY 17-35  
REHABILITATION**

AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

**PROJECT NO.:**

**AH2021-16**

**SHEET TITLE:**

**MALSR DETAIL 5**

DATE :

09/2023

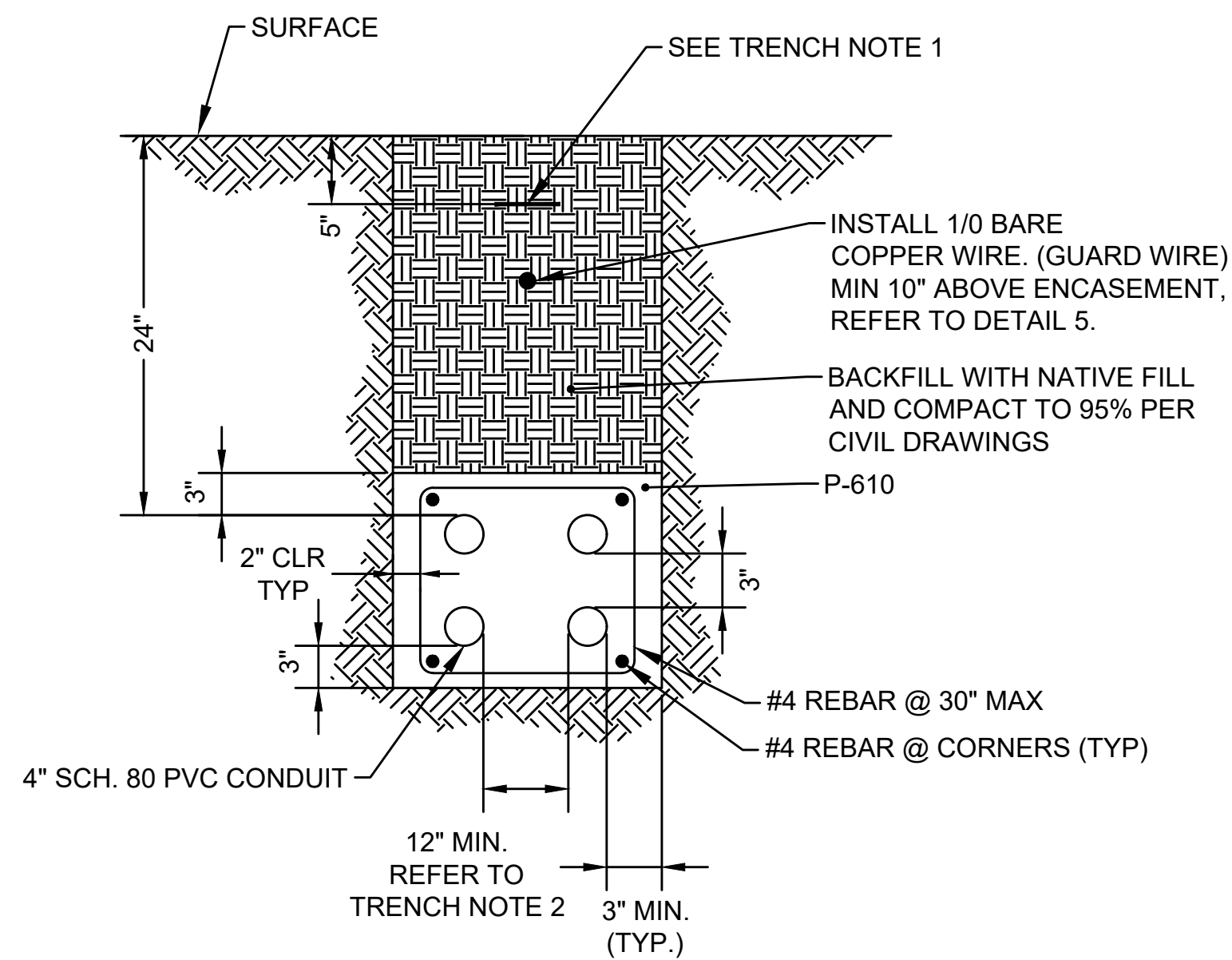
SHEET :

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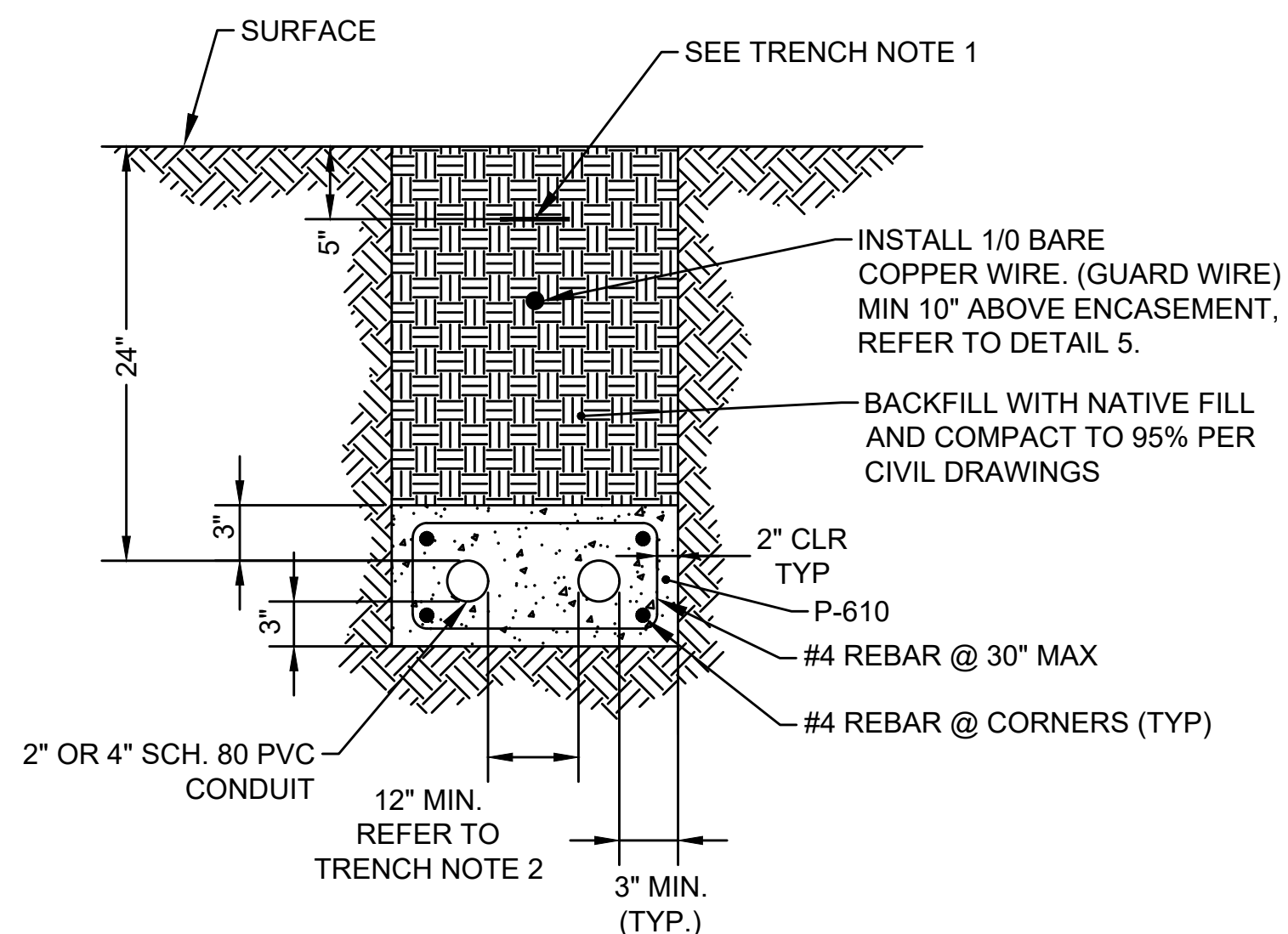
DWG. NO.

**E-614**

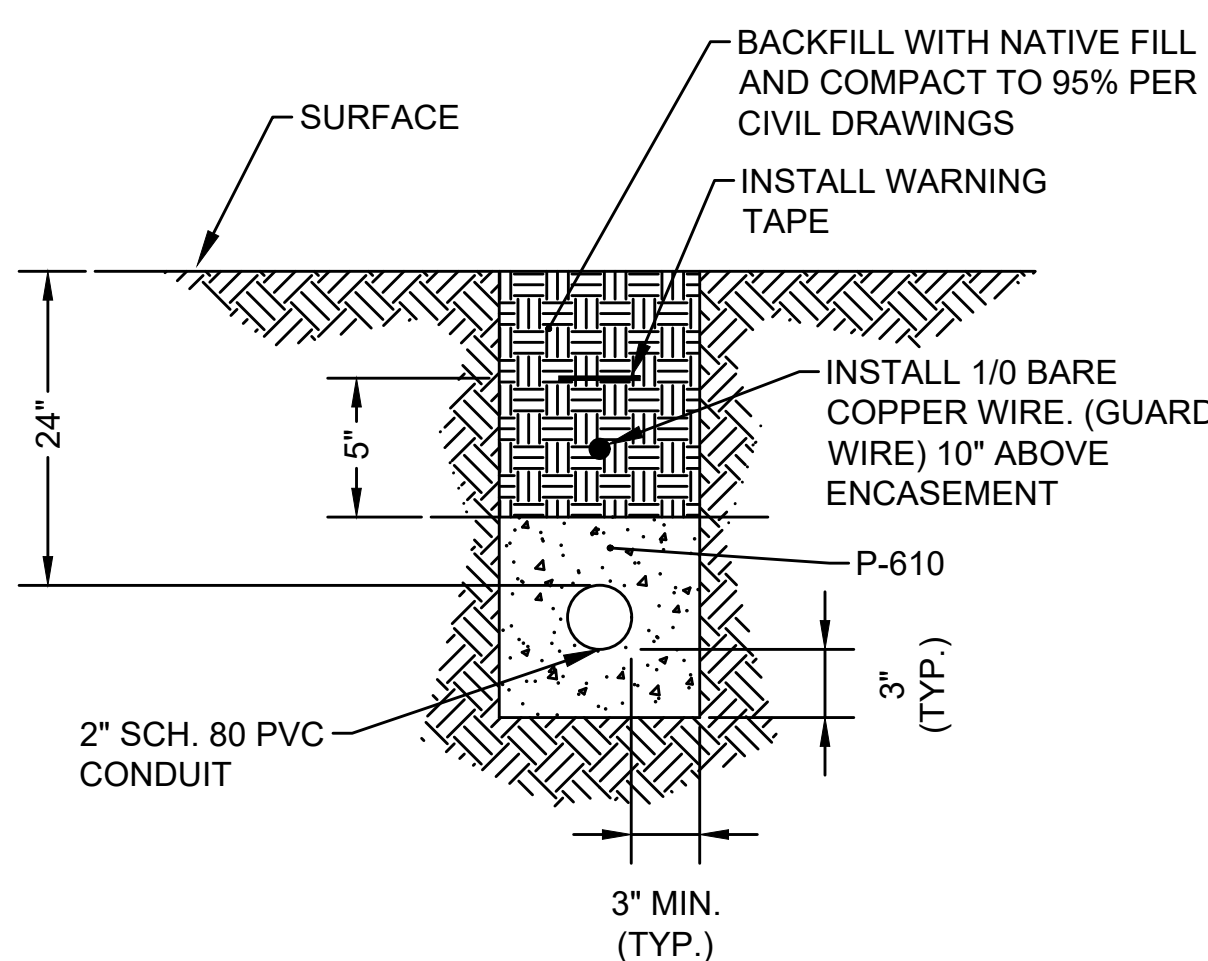




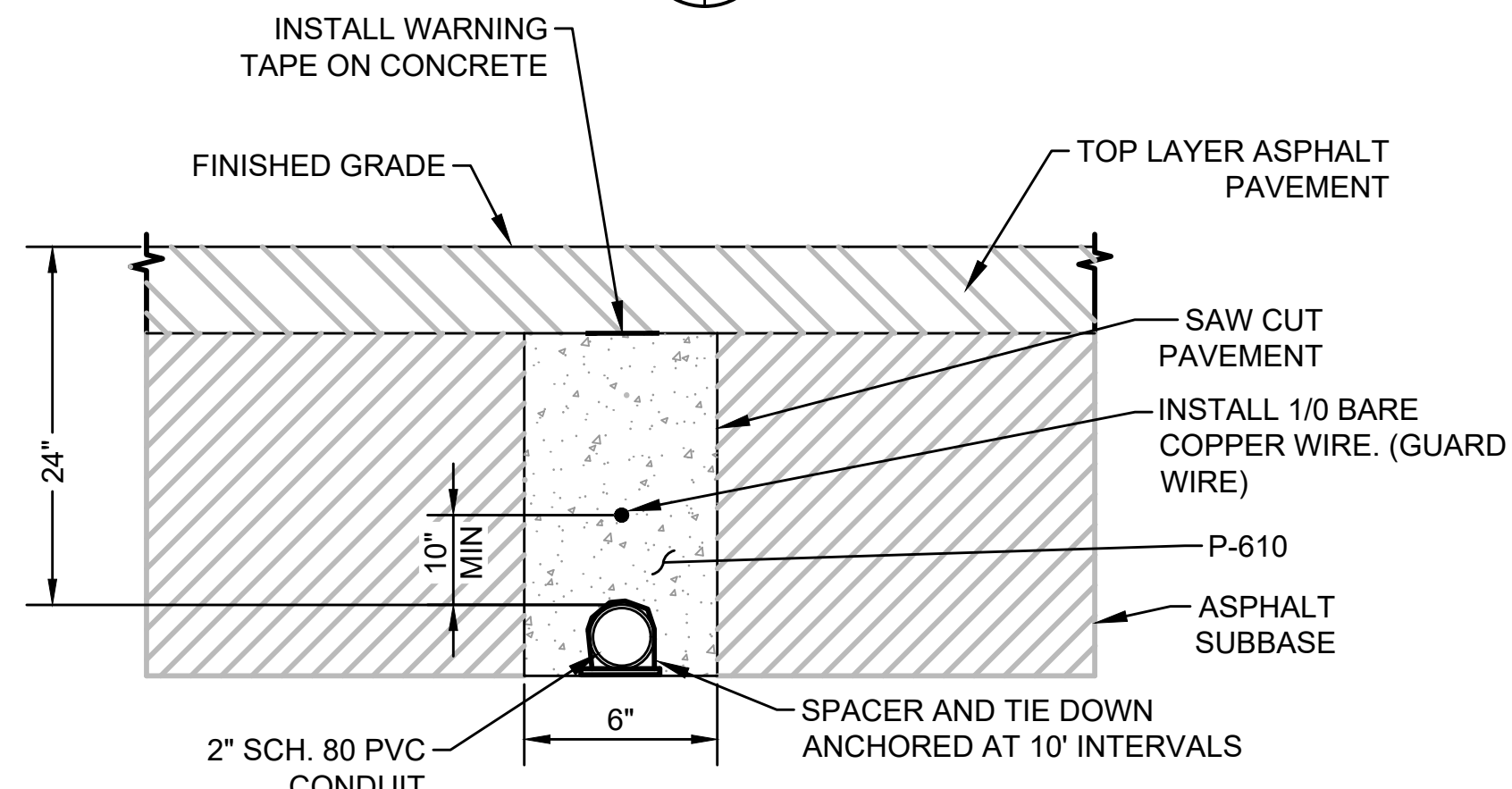
1 4W-4" FAA DB IN NON-PAVED EARTH  
SCALE: AS SHOWN



2 2W-2" OR 4" FAA DB IN NON-PAVED EARTH  
SCALE: AS SHOWN



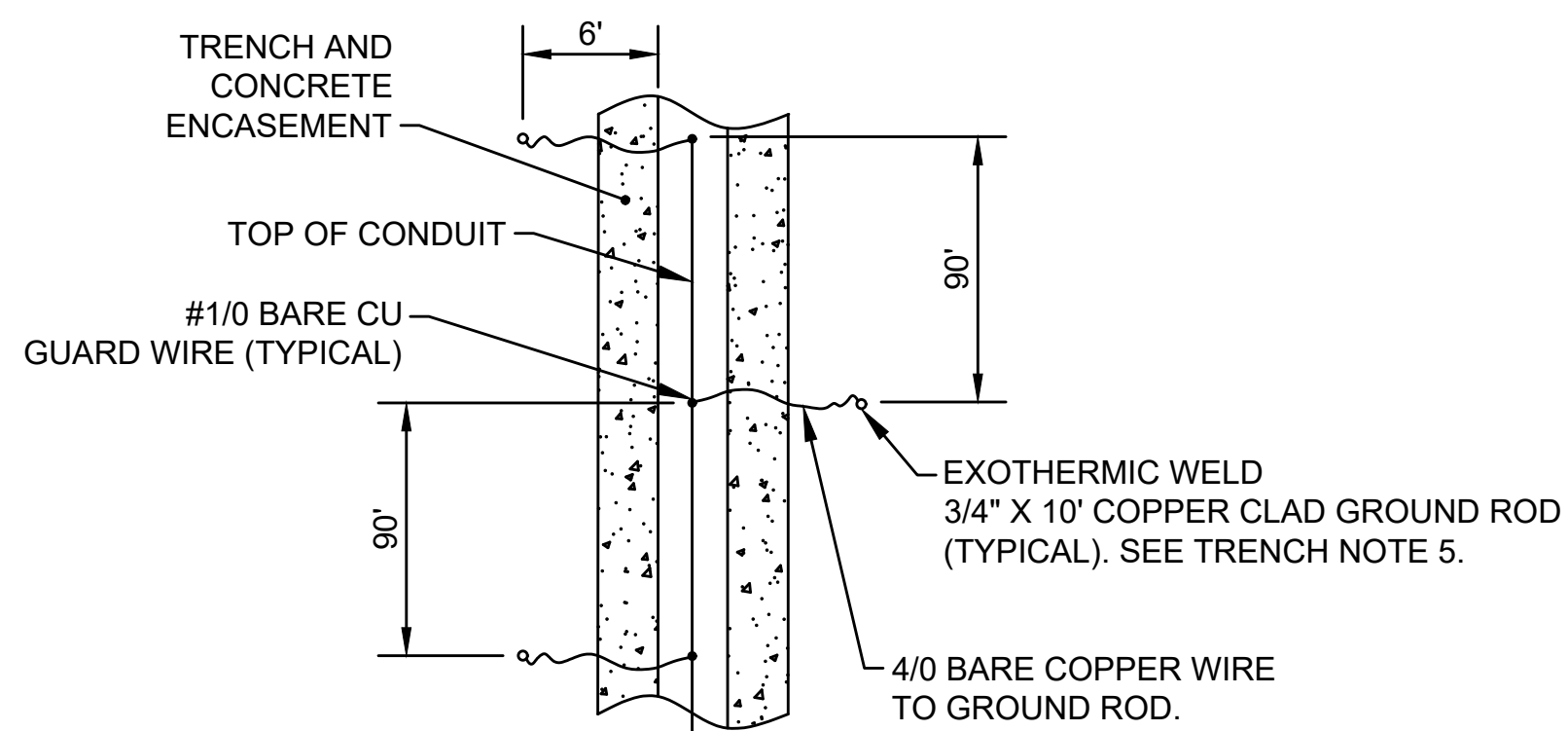
3 1W-2" FAA DB IN NON-PAVED EARTH  
SCALE: NOT TO SCALE



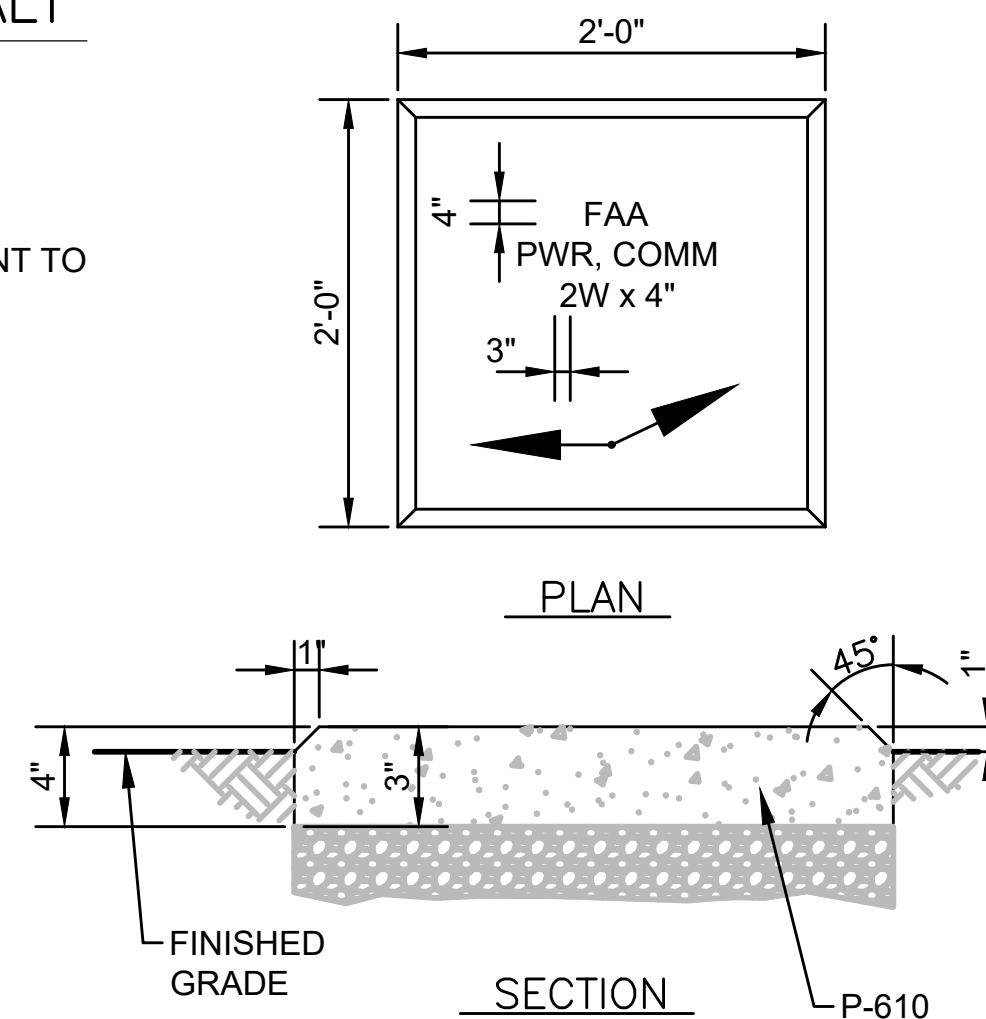
4 1W-2" FAA DB IN ASPHALT  
SCALE: NOT TO SCALE

NOTES:

- SAWCUT 6" WIDE TRENCH IN ASPHALT PAVEMENT TO MIN. 26" DEPTH. THOROUGHLY CLEAN CUT.
- ENCASE WITH CONCRETE AS SHOWN.



5 COUNTERPOISE & GROUND ROD CONNECTION  
SCALE: AS SHOWN



6 DUCT MARKER  
SCALE: AS SHOWN

GENERAL NOTES:

- REFER TO DRAWINGS E-001 THRU E-002 FOR GENERAL NOTES AND ABBREVIATIONS.
- ALL EQUIPMENT AND MATERIAL SHALL BE NEW UNLESS INDICATED AS EXISTING ON THE DRAWINGS.

TRENCH NOTES:

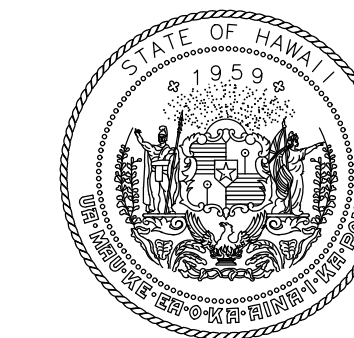
- MARKING TAPE SHALL BE 6" WIDE RED POLYETHYLENE TAPE WITH LEGEND "CAUTION ELECTRICAL LINES BELOW" (BRADY IDENTOLINE OR EQUAL).
- AT LOCATIONS WHERE A POWER AND FIBER CONDUIT SHARE THE SAME CONDUIT, SEPARATE COLUMN OF CONDUITS BY 12" INSIDE TRENCH. (THIS IS THE CONFIGURATION SHOWN) OTHERWISE SEPARATION MAY BE 3" WIDE.
- CONDUITS ENTERING PULL BOX SHALL BE FITTED WITH BELL ENDS AND EXTEND 1" INSIDE OF THE HANDHOLE.
- UNDERGROUND RACEWAY SLOPE TOWARD MANHOLES, PULL BOXES, ETC., AT MINIMUM RATE OF 3 INCHES PER 100 FEET.
- UNDERGROUND RACEWAY SLOPE TOWARD MANHOLES, PULL BOXES, ETC., AT MINIMUM RATE OF 3 INCHES PER 100 FEET.
- 1/0 BARE COPPER SHALL BE STRANDED.

DUCTBANK NOTES:

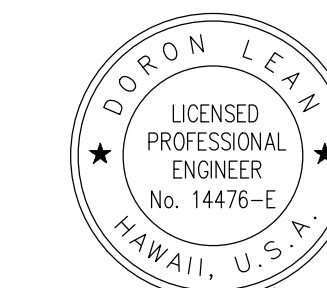
- INSTALL PULLROPE IN ALL CONDUITS.
- INSTALL THE SIDES OF THE DUCTBANK WITH A NEAT VERTICAL FACE, OR FORMING IF NECESSARY. THE CONTRACTOR SHALL FURNISH ALL LABOR, EQUIPMENT, MATERIAL AND INCIDENTALS NECESSARY FOR FORMWORK. FORMWORK SHALL NOT BE SEPARATELY MEASURED BUT SHALL BE CONSIDERED INCIDENTAL TO THE RESPECTIVE DUCTBANK PAY ITEM.
- CONTRACTOR SHALL ANTICIPATE DEWATERING ALL TRENCHES. ALL WATER SHALL BE DISCHARGED PER THE APPLICABLE ENVIRONMENTAL REGULATIONS. CONTRACTOR SHALL FURNISH ALL LABOR, EQUIPMENT, MATERIAL, EROSION CONTROL AND INCIDENTALS NECESSARY FOR DEWATERING. DEWATERING SHALL NOT BE SEPARATELY MEASURED FOR PAYMENT. DEWATERING IS INCIDENTAL TO THE VARIOUS DUCTBANK PAY ITEMS. CONTRACTOR SHALL HAUL SPOILS OF AIRPORT PROPERTY IN ACCORDANCE WITH APPLICABLE RULES. COST IS INCIDENTAL TO COST OF TRENCH.
- GROUNDING RODS SHALL BE INSTALLED AT APPROXIMATELY 90-FOOT INTERVALS USING EXOTHERMIC WELDS TO ACHIEVE GROUND RESISTANCE OF LESS THAN 10 OHMS. THE SPACING BETWEEN GROUND RODS MUST VARY 10% TO 20% TO PREVENT RESONANCE. INSTALL THE GROUND RODS APPROXIMATELY 6-FEET FROM DUCTBANK ON EITHER SIDE OF TRENCH.
- TERMINATE 1/0 GUARD WIRE AT HANDHOLE OR BUILDING GROUND ROD BY EXOTHERMIC WELD.

DUCT MARKER NOTES:

- LETTERS SHALL BE 4" HIGH AND 3" WIDE. THE WIDTH OF STROKE SHALL BE 1/2" AND THE DEPTH 1/4" FOR LETTERING AND GRAPHICS.
- DESIGNATION SHALL BE AS SHOWN ON PLANS.
- MARKERS SHALL BE PROFESSIONALLY FABRICATED USING CASTING IMPRINT DEVICE OR SAND BLASTING.
- PLACE MARKER DIRECTLY ABOVE NEW DUCT. ORIENTATE TO MATCH ACTUAL ALIGNMENT. PROVIDE ONE DUCT MARKER MIDWAY BETWEEN EACH MANHOLE INCLUDING BETWEEN EXISTING MANHOLES AND NEW MANHOLES AND AT ALL POINTS WHERE DUCTBANK TURNS.
- PAINT MARKERS WITH TWO COATS AVIATION ORANGE PAINT.
- COORDINATE LOCATION OF DUCT MARKERS WITH ON SITE ENGINEER. INSTALL MARKERS A MIN. OF 250' AND AT EVERY DUCTBANK DIRECTION CHANGE INCLUDING CHANGES INTO AND OUT-OF HANDHOLES.
- DETAIL APPLIES TO ANY DUCTBANK REGARDLESS OF LENGTH AND ANY CONDUIT (REGARDLESS OF DIAMETER) GREATER THAN 50' IN LENGTH.



Airports Division  
STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
AIRPORTS



Doron Leao  
LICENSED PROFESSIONAL ENGINEER  
No. 14476-E  
HAWAII, U.S.A.  
04/30/2024  
Licensed Expiration Date

DSGN.	DRWN.	CHKD.	APPD.
JP	KV	JA	DL

KEY PLAN / NOTES:

NO.	DATE	REVISIONS

**CONSTRUCTION DOCUMENT**  
SEPTEMBER 2023  
DATE

PROJECT TITLE :

**RUNWAY 17-35 REHABILITATION**

AT  
ELLISON ONIZUKA  
KONA INTERNATIONAL AIRPORT AT KEAHOLE  
KAILUA-KONA, HAWAII

PROJECT NO.:

**AH2021-16**

SHEET TITLE:

**MALSR DETAIL 6**

DATE :

09/2023

SHEET :

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DWG. NO.

**E-615**