ISSUED FOR BID DESIGN PLANS FOR

MEMPHIS INTERNATIONAL AIRPORT

MEMPHIS, TENNESSEE

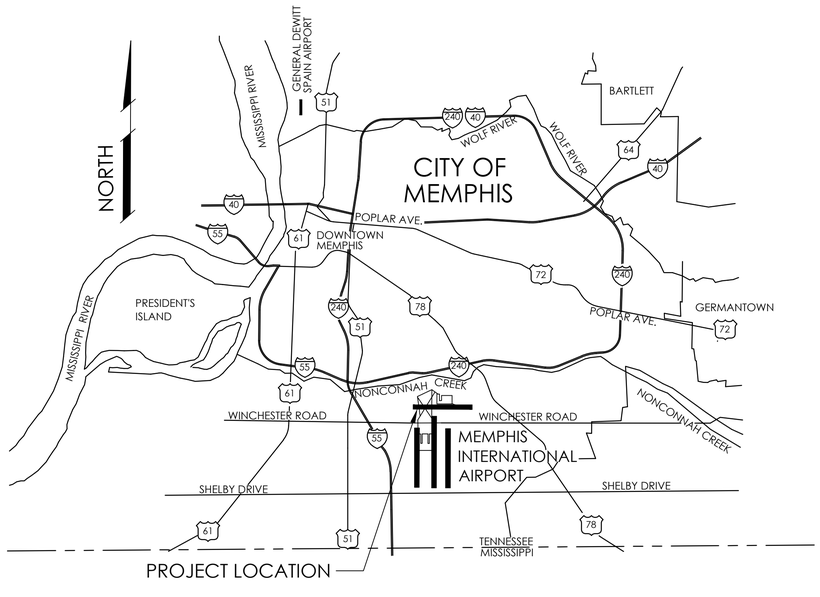
OWNER / SPONSOR

MEMPHIS-SHELBY COUNTY AIRPORT AUTHORITY

RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

MSCAA PROJECT NUMBER 16-1408-01
ENGINEER'S FILE NUMBER 85091

DECEMBER 11, 2025



VICINITY MAP

TAKE OFF WITH US Memphis INTERNATIONAL AIRPORT

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MARK	DATE	DESCRIPTION
0	12/11/2025	ISSUED FOR BID

MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
COVER SHEET

DWG. FILE NAME
161408-G-CS-000.DWG
DATE
12/11/2025
SCALE
N.T.S.
SHEET NO.
G-CS-000

December 10, 2025 C:\coddlib\pw\pwwestcoast\kmille\d0273326\161408-G-CS-000.dwg

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ABBREVIATIONS

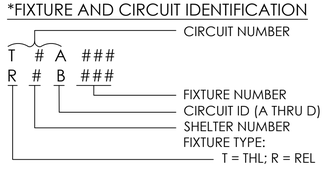
ABAND	ABANDONED
ABC	AGGREGATE BASE COURSE
ACI	AMERICAN CONCRETE INSTITUTE
ACP	ASPHALT CONCRETE PAVEMENT
AF	AVIATION FUEL
AGS	AIRPORT GRID SYSTEM
AMP, A	AMPERE
ALW	ALLOWANCE
AMA	AIRCRAFT MOVEMENT AREA
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AOA	AIRPORT OPERATIONS AREA
APPD	APPROVED
APPROX	APPROXIMATE
ASPH	ASPHALT
AC	ASPHALTIC CONCRETE
ASR	AIR SURFACE RADAR
ATCT	AIRPORT TRAFFIC CONTROL TOWER
AWG	AMERICAN WIRE GAUGE
ARFF	AIRCRAFT RESCUE FIRE FIGHTING
ASDE-X	AIR SURFACE DETECTION EQUIPMENT (GENERATION X)
BC	BARE COPPER
BL	BLUE
BLK	BLACK
BKR	BREAKER
BM	BENCHMARK
BBC	BITUMINOUS BASE COURSE
BLDG	BUILDING
C	CONDUIT
CAA	CIVIL AERONAUTICAL ADMINISTRATION
CAB	CABINET, CRUSHED AGGREGATE BASE
CCR	CONSTANT CURRENT REGULATOR
CI	CAST IRON
CIP	CAST IRON PIPE
CB	CATCH BASIN
CCP	CAB CONTROL PANEL
CEM	CEMENT
CKT	CIRCUIT
CL	CENTERLINE
CC	CENTER TO CENTER
C/O	CLEAN OUT
COMM	COMMUNICATIONS
CONC	CONCRETE
CONN	CONNECTION
CONT	CONTROL
CPU	CENTRAL PROCESSING UNIT
CSP	CONCRETE SEWER PIPE
CMP	CORRUGATED METAL PIPE
CU	COPPER
CU FT	CUBIC FEET
CI	CUBIC INCH
CY	CUBIC YARD
D	DEEP
DB	DUCTBANK
DD	DATA DISTRIBUTION
DEPT	DEPARTMENT
DI	DUCTILE IRON
DIAG	DIAGONAL
DIA	DIAMETER
DIMS	DIMENSION
DW	DOMESTIC WATER
DWG	DRAWING
DWGS	DRAWINGS

EA	EACH
E	EAST, EDGE
EES	EARTH ELECTRODE SYSTEM
EIA	ELECTRONIC INDUSTRIAL ASSOCIATION
EW	EACH WAY
EL	ELEVATION
ELECT	ELECTRICAL
ELEV	ELEVATION
EMT	ELECTRICAL METAL TUBING
ENGR	ENGINEER
ERC	EQUIPMENT ROOM CABINET
EX, EXIST	EXISTING
EXP	EXPANSION
F	FAHRENHEIT
FT OR '	FEET (FOOT)
FAA	FEDERAL AVIATION ADMINISTRATION
FBO	FIXED-BASE OPERATOR
FF	FINISHED FLOOR
FLS	FIELD LIGHTING SYSTEM
FM	FORCE MAIN
FRE	FIBERGLASS REINFORCED EPOXY
FUT	FUTURE
FW	FIRE PROTECTION WATER
GA	GAGE (GAUGE)
GAL	GALLON
GALV	GALVANIZED
GEN	GENERAL
GND	GROUND, INSULATED
GPS	GLOBAL POSITIONING SYSTEM
GSCA	GLIDE SLOPE CRITICAL AREA
G	GAS
HDD	HORIZONTAL DIRECTIONAL DRILLING
HDPE	HIGH DENSITY POLYETHYLENE
HH	HANDHOLE
HIRL	HIGH INTENSITY RUNWAY EDGE LIGHT
HT	HEIGHT
HP	HIGH PRESSURE
HORIZ	HORIZONTAL
IN OR "	INCH
INCL	INCLUDING
ID	IDENTIFIER, INSIDE DIAMETER
IE	INVERT ELEVATION
IFR	INSTRUMENT FLIGHT RULE
ILC	INDIVIDUAL LIGHT CONTROLLER
ILSCA	INSTRUMENT LANDING SYSTEM CRITICAL AREA
IRR	IRRIGATION
I/O	INPUT/OUTPUT
JB	JUNCTION BOX
JC	JUNCTION CAN
JCP	JUNCTION CAN PLAZA
KCMIL	THOUSAND CIRCULAR MILS
KV	KILOVOLT
KVA	KILOVOLT-AMPERE
KVM	KEYBOARD/VIDEO/MOUSE
KW	KILOWATT
LAT	LATITTUDE
L, LT	LEFT
LIN	LINEAR (LINEAL)

LF	LINEAR FOOT
LONG	LONGITUDE
LOC.	LOCALIZE CRITICAL AREA
LS	LUMP SUM
MH	MANHOLE
MAINT	MAINTENANCE
MAX	MAXIMUM
MEM	MEMPHIS INTERNATIONAL AIRPORT
MLC	MASTER LIGHT CONTROLLER
MSL	MEAN SEA LEVEL
MECH	MECHANICAL
MU	MECHANICAL JOINT
MI	MILE
MIN	MINIMUM
MISC	MISCELLANEOUS
MLGW	MEMPHIS LIGHT, GAS AND WATER
MSCAA	MEMPHIS-SHELBY COUNTY AIRPORT AUTHORITY
N	NORTH
N/A	NOT APPLICABLE
NO., #	NUMBER
NTS	NOT TO SCALE
OC	ON CENTER
PAV'T	PAVEMENT
PB	PULL BOX, PUSHBUTTON
%	PERCENT
PMB	PROCESSED MISCELLANEOUS BASE
PNL	PANELBOARD
PC	POINT OF CURVATURE
PCCP	PORTLAND CEMENT CONCRETE PAVEMENT
PROP	PROPOSED
PT	POINT OF TANGENCY
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
PWR	POWER
LB	POUND
R	RADIUS
R	RIGHT
RAACI	REMOTE AREA ACCESS CONTROL ICON
REL	RUNWAY ENTRANCE LIGHT
REQD	REQUIRED
REM	REMOVE
RGS	RIGID GALVANIZED STEEL
RGL	RUNWAY GUARD LIGHT
RH	RELATIVE HUMIDITY
REIL	RUNWAY END INDICATOR LIGHTS
RDR	RUNWAY DISTANCE REMAINING
RPU	REMOTE PROCESSING UNIT
RPZ	RUNWAY PROTECTION ZONE
RS	REQUIREMENT SPECIFICATION
RSA	RUNWAY SAFETY AREA
RWSL	RUNWAY STATUS LIGHTS
RWY	RUNWAY
S	SANITARY SEWER
SCH	SCHEDULE
SHT	SHEET
S	SOUTH
SEC	SECOND
SQ	SQUARE
STD	STANDARD

STA	STATION
SS	STORM SEWER
SWGR	SWITCH GEAR
SY	SQUARE YARD
T	TELECOMMUNICATIONS
TCCA	TOWER CAB CONTROL ASSEMBLY
TDH	TOTAL DYNAMIC HEAD
TDZ	TOUCHDOWN ZONE
TESC	TEMPORARY EROSION AND SEDIMENTATION CONTROL
THL	TAKEOFF HOLD LIGHT
THRU	THROUGH
TN	TENNESSEE
TOFA	TAXIWAY OBJECT FREE AREA
TSA	TAXIWAY SAFETY AREA
TWY	TAXIWAY
TYP	TYPICAL
UN	UNKNOWN
UNO	UNLESS NOTED OTHERWISE
UP	UNDERGROUND POWER
V	VOLT
VAC	VOLTS ALTERNATING CURRENT
VERT	VERTICAL
VOL	VOLUME
W	WATER
W	WATT
W	WEST
W/	WITH
W/O	WITHOUT
XFMR	TRANSFORMER
1-WAY 2"	1 WAY 2" DUCT
1-WAY 4"	1 WAY 4" DUCT
2-WAY 4"	2 WAY 4" DUCTBANK

*FIXTURE AND CIRCUIT IDENTIFICATION



LINETYPES

EXISTING	PROPOSED	DESCRIPTION
P	P	POWER DUCTBANK
C	C	COMM DUCTBANK
	C/P	COMBINED POWER/COMM DUCTBANK
	UP	UTILITY POWER DUCTBANK
		CONDUIT
	· » · » · » · » · » · » ·	INSTALLATION BY HDD
X X		FENCE
RSA / TSA TOFA		RWY/TWY SAFETY AREA
		TAXIWAY OBJECT FREE AREA
		ILS CRITICAL AREA
		GLIDE SLOPE CRITICAL AREA

SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
		EXISTING BASE CAN FOR RWSL SYSTEM
	X#X###*	RWSL FIXTURE INSTALLED IN EXISTING BASE CAN
	X#X###*	RWSL BASE CAN REPLACEMENT/FIXTURE INSTALLED IN PORTLAND CEMENT CONCRETE PAVEMENT (PCCP)
	X#X###*	RWSL BASE CAN RELOCATION/FIXTURE INSTALLED IN PORTLAND CEMENT CONCRETE PAVEMENT (PCCP)
	B	3/4" COVER PLATE ON EXISTING BASE CAN
		CATCH BASIN SEDIMENT PROTECTION
		FILTER SOCK
/		JUNCTION CAN / JUNCTION PLAZA
	P-## P	POWER HANDHOLE, AIRCRAFT RATED
	C-## C	COMM HANDHOLE, AIRCRAFT RATED
		PULL BOX
	SHELTER 1	RWSL SHELTER
		DUCTBANK ("X" INDICATES DUCT TO BE UTILIZED)
		HDD DUCTBANK ("X" INDICATES DUCT TO BE UTILIZED)
	FX	FIBER OPTIC CABLE (WHERE "X" IS THE RWSL SHELTER NUMBER)
RGL1		EXISTING CONDUIT IN EXISTING CONCRETE OR EXISTING ASPHALT PAVEMENT. "RGL1" INDICATES EXISTING CIRCUIT DESIGNATION
		CAP EXISTING CONDUIT

REFERENCE AND DETAIL SYMBOLS

	DESCRIPTION
PLAN TITLE SCALE: N.T.S.	PLAN SUBTITLE
# #-##-### DETAIL/SECTION TITLE SCALE: N.T.S.	DETAIL / SECTION SUBTITLE
ID NUMBER (TYP) → # #-##-### SHEET NUMBER (TYP) →	DETAIL CALLOUT
# #-##-###	SECTION CUT SYMBOL
N	NORTH ARROW

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ITEM	DESCRIPTION	QTY.	UNIT
S-100-3.1	CONSTRUCTION ACCESS AND TRAFFIC CONTROL	1	LS
C-100-14.1	CONTRACTOR QUALITY CONTROL PROGRAM (CQCP)	1	LS
C-102-5.1	INSTALLATION AND REMOVAL OF SILT FENCE	130	LF
C-102-5.2	CATCH BASIN SEDIMENT TRAP	15	EA
C-102-5.3	FILTER SOCK	280	LF
C-105-6.1	MOBILIZATION	1	LS
P-151-4.1	CLEARING AND GRUBBING	440	SY
P-152-4.1	UNCLASSIFIED EXCAVATION	300	CY
P-209-5.1	CRUSHED AGGREGATE BASE COURSE	480	TONS
P-611-6.1	CONCRETE PAVEMENT REPAIRS	50	CY
P-620-5.1	RUNWAY & TAXIWAY MARKING	2,200	SF
T-904-5.1	SODDING	25,860	SY
T-905-5.1	TOPSOIL (4 INCHES THICK)	8,620	CY
L-108-5.1	NO. 8 L-824C CABLE, SOLID BLACK INSULATION	19,580	LF
L-108-5.2	NO. 8 L-824C CABLE, SOLID RED INSULATION	41,180	LF
L-108-5.3	NO. 1/0 AWG INSULATED EQUIPMENT GROUND CONDUCTOR	9,980	LF
L-108-5.4	SOLID NO. 6 AWG INSULATED EQUIPMENT GROUND CONDUCTOR	30,380	LF
L-109-5.1	SINGLE MODE FIBER OPTIC CABLE - 24 FIBERS	6,570	LF
L-110-5.1	2" SCHEDULE 40 PVC CONDUIT, CONCRETE ENCASED	1,750	LF
L-110-5.2	2" RIGID GALVANIZED STEEL CONDUIT, CONCRETE ENCASED, IN PAVEMENT	90	LF
L-110-5.3	4" SCHEDULE 40 PVC CONDUIT, CONCRETE ENCASED	4,990	LF
L-110-5.4	4" RIGID GALVANIZED STEEL CONDUIT, CONCRETE ENCASED	20	LF
L-110-5.5	TWO WAY 4" SCHEDULE 40 PVC CONDUIT, CONCRETE ENCASED	4,600	LF
L-110-5.6	TWO WAY 4" RIGID GALVANIZED STEEL CONDUIT, CONCRETE ENCASED	10	LF
L-110-5.7	HANDHOLE, AIRCRAFT RATED	27	EA
L-112-5.1	HORIZONTAL DIRECTIONAL DRILLING, 4" HDPE CONDUIT	4,600	LF
L-120-5.1	RWSL SHELTER NO. 1	1	LS
L-125-5.1	RUNWAY ENTRANCE LIGHT	23	EA
L-125-5.2	INSTALLATION OF 3/4" COVER PLATE	16	EA
L-125-5.3	RUNWAY ENTRANCE LIGHT IN EXISTING BASE CAN	81	EA
L-125-5.4	TAKEOFF HOLD LIGHT IN EXISTING BASE CAN	64	EA
L-130-5.1	AIRFIELD ELECTRICAL TESTING	1	LS
16-3.1	CCR INSTALLATION	3	EA
16-3.2	EARTH ELECTRODE SYSTEM	1	LS
16-3.3	INSTALLATION OF LIGHTNING PROTECTION SYSTEM	1	LS
16-3.4	UTILITY METER SERVICE, SHELTER 1	1	LS
16-3.5	UTILITY COORDINATION, SHELTER 1	1	ALW

TAKE OFF WITH US
Memphis INTERNATIONAL AIRPORT

PROGRAM MANAGER
PARSONS
Program Management Consultant
Parsons Transportation Group Inc.
Project Office:
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APPROVED BY: CBD

CHARLES B. DEDMON
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12/11/2025

ENGINEER–SUBCONSULTANT

JOB NO.

REVISIONS

MARK	DATE	DESCRIPTION
0	12/11/2025	ISSUED FOR BID

MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
SUMMARY OF QUANTITIES

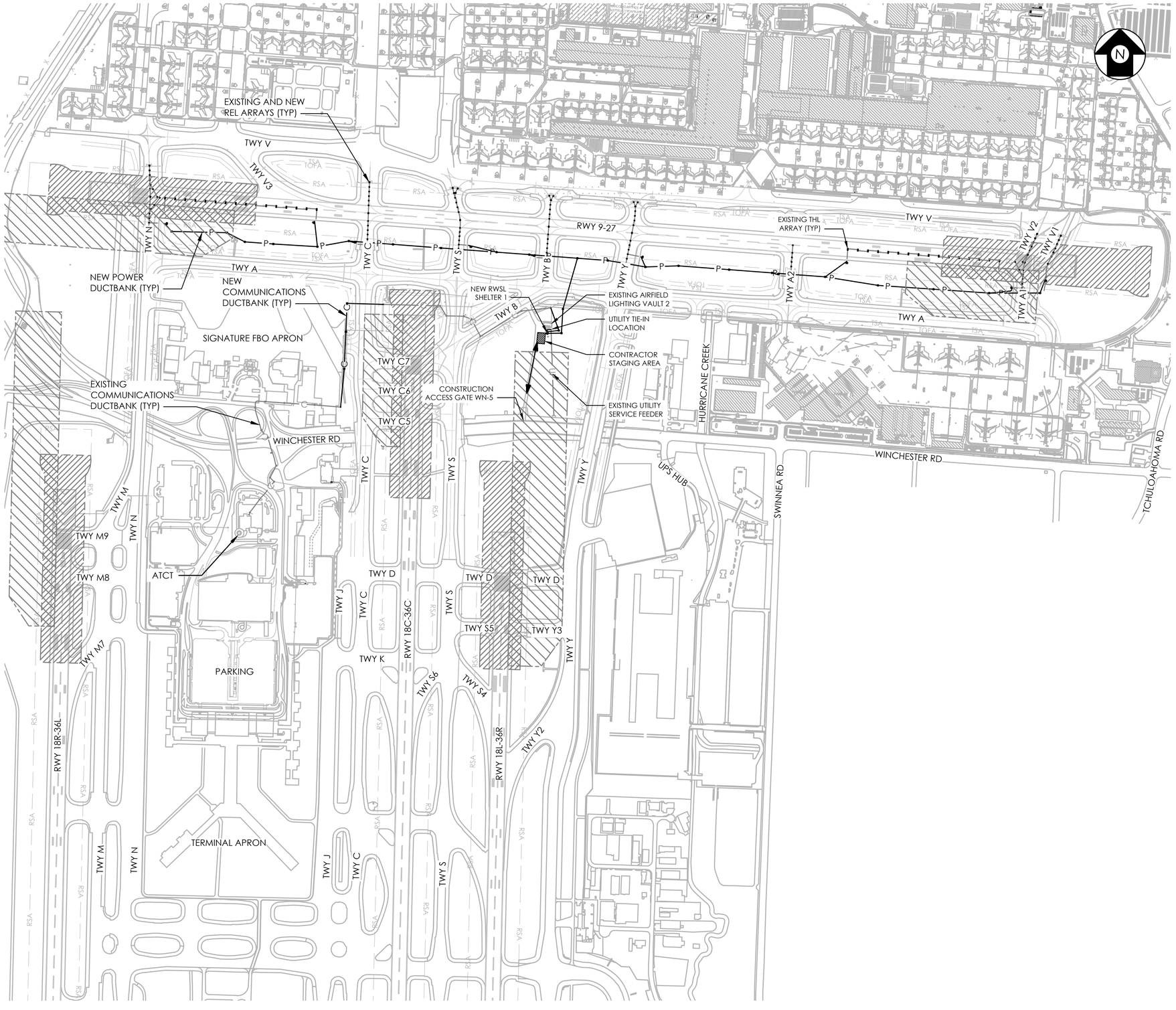
DWG. FILE NAME
161408-G-SQ-003.DWG

DATE
12/11/2025

SHEET NO.
G-SQ-003

SCALE
N.T.S.

December 10, 2025 c:\coddlib\pw\pwwestcoast\kmills\d0273326\161408-G-SQ-003.dwg



OVERALL SITE PLAN
SCALE: 1" = 500'

LEGEND:

- HAUL ROUTE, SEE DRAWINGS G-PH-102 THRU G-PH-113.
- ILS CRITICAL AREAS
- GLIDE SLOPE CRITICAL AREAS

500' 0 500' 1000'
SCALE: 1"=500'

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REVISIONS

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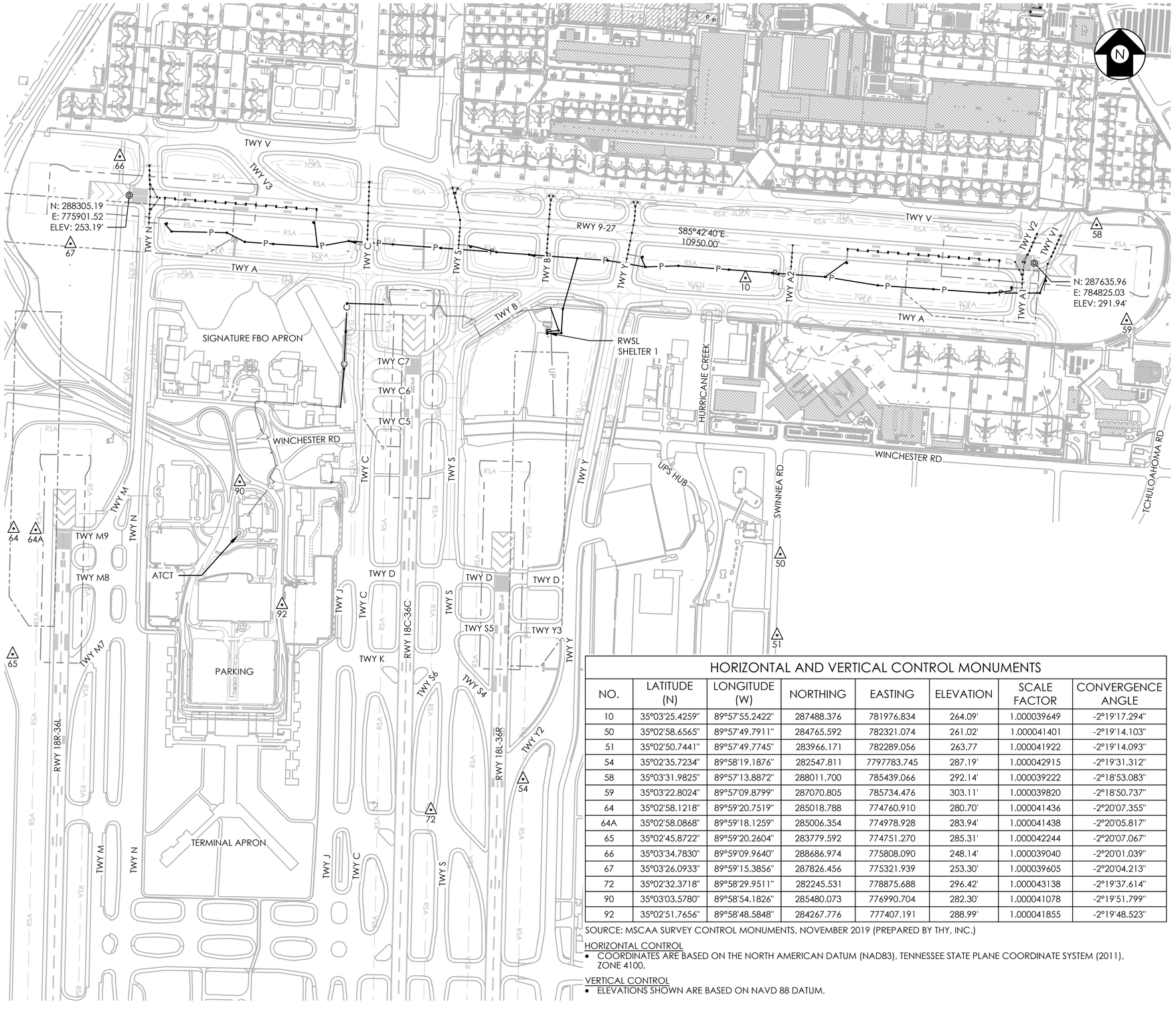
MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
OVERALL SITE PLAN

DWG. FILE NAME
161408-G-SP-004.DWG
DATE 12/11/2025
SCALE 1" = 500'
SHEET NO. G-SP-004

December 10, 2025 c:\caddlib\pw\pwwestcoast1.kmills\d0273326\161408-G-SP-004.dwg



GENERAL NOTES:

1. THE CONTRACTOR SHALL IMMEDIATELY BRING ANY DISCREPANCIES IN THE MONUMENT DATA TO THE ENGINEER'S ATTENTION PRIOR TO FINALIZING PROJECT STAKEOUT.
2. ALL MONUMENTS SHALL BE PROTECTED DURING CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL REPLACE ANY DAMAGED MONUMENTS AND SHALL NOTIFY THE ENGINEER.

LEGEND:

△ ## MONUMENT POINT

HORIZONTAL AND VERTICAL CONTROL MONUMENTS

NO.	LATITUDE (N)	LONGITUDE (W)	NORTHING	EASTING	ELEVATION	SCALE FACTOR	CONVERGENCE ANGLE
10	35°03'25.4259"	89°57'55.2422"	287488.376	781976.834	264.09'	1.000039649	-2°19'17.294"
50	35°02'58.6565"	89°57'49.7911"	284765.592	782321.074	261.02'	1.000041401	-2°19'14.103"
51	35°02'50.7441"	89°57'49.7745"	283966.171	782289.056	263.77	1.000041922	-2°19'14.093"
54	35°02'35.7234"	89°58'19.1876"	282547.811	7797783.745	287.19'	1.000042915	-2°19'31.312"
58	35°03'31.9825"	89°57'13.8872"	288011.700	785439.066	292.14'	1.000039222	-2°18'53.083"
59	35°03'22.8024"	89°57'09.8799"	287070.805	785734.476	303.11'	1.000039820	-2°18'50.737"
64	35°02'58.1218"	89°59'20.7519"	285018.788	774760.910	280.70'	1.000041436	-2°20'07.355"
64A	35°02'58.0868"	89°59'18.1259"	285006.354	774978.928	283.94'	1.000041438	-2°20'05.817"
65	35°02'45.8722"	89°59'20.2604"	283779.592	774751.270	285.31'	1.000042244	-2°20'07.067"
66	35°03'34.7830"	89°59'09.9640"	288686.974	775808.090	248.14'	1.000039040	-2°20'01.039"
67	35°03'26.0933"	89°59'15.3856"	287826.456	775321.939	253.30'	1.000039605	-2°20'04.213"
72	35°02'32.3718"	89°58'29.9511"	282245.531	778875.688	296.42'	1.000043138	-2°19'37.614"
90	35°03'03.5780"	89°58'54.1826"	285480.073	776990.704	282.30'	1.000041078	-2°19'51.799"
92	35°02'51.7656"	89°58'48.5848"	284267.776	777407.191	288.99'	1.000041855	-2°19'48.523"

SOURCE: MSCAA SURVEY CONTROL MONUMENTS, NOVEMBER 2019 (PREPARED BY THY, INC.)

HORIZONTAL CONTROL
- COORDINATES ARE BASED ON THE NORTH AMERICAN DATUM (NAD83), TENNESSEE STATE PLANE COORDINATE SYSTEM (2011), ZONE 4100.

VERTICAL CONTROL
- ELEVATIONS SHOWN ARE BASED ON NAVD 88 DATUM.

SURVEY CONTROL PLAN
SCALE: 1" = 500'

500' 0 500' 1000'
SCALE: 1"=500'

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REVISIONS

MARK	DATE	DESCRIPTION
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MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
SURVEY CONTROL PLAN

DWG. FILE NAME
161408-G-SP-005.DWG
DATE 12/11/2025
SCALE 1" = 500'
SHEET NO. G-SP-005

December 10, 2025 c:\caddlib\pw\pwwestcoast\kmills\d0273326\161408-G-SP-005.dwg

GENERAL SAFETY AND PHASING NOTES

THE CONTRACTOR SHALL COMPLY WITH THE FOLLOWING PROVISIONS. NO DIRECT PAYMENT FOR THIS WORK WILL BE MADE EXCEPT FOR WHERE SPECIFICALLY STATED IN THE PLANS AND/OR SPECIFICATIONS. ALL COSTS FOR MATERIAL, LABOR, EQUIPMENT, ETC., TO COMPLY WITH THESE PROVISIONS SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.

GENERAL NOTES

1. UTILITY AND EMERGENCY TELEPHONE NUMBERS

   - EMERGENCY: (901) 922-8333
   - TENNESSEE ONE-CALL: (800) 351-1111
   - MSCAA COMMUNICATION/NON-EMERGENCY (901) 922-8298
   - MSCAA AIRPORT OPERATIONS CENTER (901) 922-8117

2. IN THE EVENT OF A MEDICAL OR POLICE EMERGENCY, THE CONTRACTOR SHALL CALL AIRPORT POLICE FIRST, (901) 922-8333, AND THE AIRPORT OPERATIONS CENTER IMMEDIATELY THEREAFTER. THE OPERATIONS CENTER WILL COORDINATE ANY EMERGENCY RESPONSE.

3. IN THE EVENT OF A DECLARED AIRCRAFT EMERGENCY, AIRPORT OPERATIONS PERSONNEL MAY REQUEST THE CONTRACTOR TO TEMPORARILY SUSPEND OPERATIONS AND VACATE THE PREMISE UNTIL THE EMERGENCY EVENT IS SATISFACTORILY ADDRESSED.

4. IN THE EVENT OF A DECLARED SEVERE WEATHER EVENT, INCLUDING AN EVENT REQUIRING LOW VISIBILITY OPERATIONS/SURFACE MOVEMENT GUIDANCE AND CONTROL SYSTEM (LVO/SMGCS) PROCEDURES, AIRPORT OPERATIONS PERSONNEL MAY REQUEST THE CONTRACTOR TEMPORARILY SUSPEND OPERATIONS AND VACATE THE PREMISE UNTIL THE EVENT IS OVER.

5. NO SMOKING IS ALLOWED WITHIN THE RESTRICTED AREAS OF THE AIRPORT. NO OPEN FLAMES ALLOWED EXCEPT BY SPECIAL PERMISSION FROM AIRPORT OPERATIONS/PROGRAM MANAGER PERSONNEL. WORK ASSOCIATED WITH TAR KETTLES TO MELT JOINT SEALANT SHALL REMAIN A MINIMUM OF 50 FEET FROM AIRCRAFT AND FUEL VEHICLES.

6. THE AIR OPERATIONS AREA (AOA), CONSISTS OF ALL AREAS OF THE AIRPORT LOCATED WITHIN THE PERIMETER SECURITY FENCE. THE CONTRACTOR SHALL NOTIFY THE MSCAA PROJECT ENGINEER AT LEAST 48 HOURS PRIOR TO ANY WORK ON THIS PROJECT.

7. THE CONTRACTOR SHALL COORDINATE ALL OPERATIONS WITH THE MSCAA PROJECT ENGINEER AND SHALL SUBMIT A PROPOSED SCHEDULE AT LEAST 5 DAYS PRIOR TO THE PRE-CONSTRUCTION MEETING. REFER TO THE MSCAA FRONT ENDS FOR ADDITIONAL INFORMATION..

8. ALL WASTE AND REMOVED ITEMS SHALL BECOME PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE AIRPORT AND DISPOSED OF LEGALLY AND PROPERLY OFFSITE, UNLESS OTHERWISE NOTED IN THE PLANS.

9. ALL UNDERGROUND STRUCTURES (MANHOLES, CATCH BASINS, ETC) ARE CONSIDERED CONFINED SPACE ENTRY. THE CONTRACTOR SHALL TAKE ALL REQUIRED PRECAUTIONS AND COMPLETE THE REQUIRED PERMITS FOR CONFINED SPACE ENTRY.

10. IN THE EVENT OF NIGHT TIME OPERATIONS, THE CONTRACTOR MUST SHIELD ALL FLOOD LIGHTS, KEEP LIGHTS POINTED AWAY FROM THE ATCT, AND INCOMING AND DEPARTING AIRCRAFT.

11. THE AIRPORT MAY TEMPORARILY SUSPEND CONTRACTOR OPERATIONS IN CERTAIN AREAS TO ADDRESS EMERGENCIES.

12. THE PROJECT PHASING PLAN DOES NOT RELIEVE THE CONTRACTOR FROM FOLLOWING OSHA/TOSHA SAFETY REQUIREMENTS.

13. CONTRACTOR IS RESPONSIBLE FOR THE ACTIONS OF THEIR EMPLOYEES AS WELL AS THE ACTIONS OF THEIR SUB-CONTRACTOR'S EMPLOYEES. ANY REQUIREMENT REFERENCE HEREIN TO THE CONTRACTOR'S EMPLOYEES SHALL ALSO MEAN THE REQUIREMENT EXTENDS TO THE SUB-CONTRACTOR'S EMPLOYEES.

14. CONTRACTOR SHALL COORDINATE ANY CRANE USE USAGE AND ALL EQUIPMENT OVER 35' WITH MSCAA 45 DAYS IN ADVANCE. IF CONTRACTOR ELECTS TO EXCEED THIS HEIGHT, THE CONTRACTOR IS REQUIRED TO SUBMIT FAA FORM 7460 REGARDING CONSTRUCTION EQUIPMENT HEIGHT AND OBTAIN APPROVAL PRIOR TO STARTING CONSTRUCTION WORK ASSOCIATED WITH THIS EQUIPMENT. SUBMITTAL REVIEW A RECEIVING A RESPONSE FROM THE FAA TYPICALLY TAKES 60-90 DAYS AND APPROVAL OF THE REQUEST IS NOT ALWAYS GUARANTEED.

COORDINATION

1. WEEKLY CONSTRUCTION PROGRESS MEETINGS WILL BE HELD THROUGHOUT THE DURATION OF THE PROJECT. AT A MINIMUM, REQUIRED ATTENDEES WILL INCLUDE PROJECT SUPERINTENDENT AND FOREMAN OF PRIME CONTRACTOR, AS WELL AS THE PROJECT FOREMAN FOR EACH SUBCONTRACTOR WITH WORK OCCURRING DURING THE CURRENT PERIOD. CONSTRUCTION PHASING AND SAFETY WILL BE A STANDING AGENDA ITEM AT THE WEEKLY CONSTRUCTION PROGRESS MEETINGS.

2. THE CONTRACTOR SHALL PROVIDE, PRIOR TO START OF CONSTRUCTION, THE NAME(S) AND 24 HOUR CONTACT PHONE NUMBERS OF THE FIELD FOREMAN WHO WILL BE IN CHARGE.

3. AT ALL TIMES WHEN CONSTRUCTION ACTIVITIES ARE BEING PERFORMED ON THIS PROJECT THE PRIME CONTRACTOR MUST HAVE A FOREMAN ON-SITE OR IMMEDIATELY AVAILABLE WHO IS AUTHORIZED TO MAKE DECISIONS REGARDING THE OPERATIONS AND SAFETY OF ALL PERSONNEL EMPLOYED BY THE CONTRACTOR AND SUBCONTRACTORS. EACH DAY, THE DESIGNATED FOREMAN MUST COORDINATE THEIR ACTIVITIES WITH THE AIRPORT OPERATIONS MANAGER FOR THE DAYS WORK.

4. CONTRACTOR SHALL COORDINATE WITH THE MSCAA PROJECT ENGINEER AND MSCAA OPERATIONS MANAGER FOR ALL PAVEMENT CLOSURES AND CONSTRUCTION EFFORTS IMPACTING AIRPORT, AIRCRAFT, AND MAINTENANCE OPERATIONS. ADVANCE NOTICE REQUIREMENTS ARE DETAILED ON THE FOLLOWING PAGES AND IN THE CONTRACT DOCUMENTS.

5. CONTRACTOR SHALL COORDINATE WITH MSCAA AND PROGRAM MANAGER A MINIMUM OF 24 HOURS PRIOR TO THE ISSUANCE OF ALL NOTAMS RELATED TO THE PROJECT CONSTRUCTION. AIRPORT AND FAA SHALL GENERATE AND ISSUE NOTAMS BASED ON CONTRACTOR CONSTRUCTION SCHEDULE AND FACILITY IMPACTS.

6. CONTRACTOR MUST PERFORM THIS WORK IN ACCORDANCE WITH THE PROVISIONS INCLUDED WITHIN THE CONTRACT DOCUMENTS.

NAVIGATIONAL AID (NAVAID) FACILITIES

1. AIRCRAFT NAVIGATIONAL AIDS (NAVAIDS) PROVIDE VISUAL AND ELECTRONIC INFORMATION WHICH IS USED BY PILOTS WHO OPERATE AND LAND AIRCRAFT AT THE AIRPORT. CONSTRUCTION ACTIVITIES CAN HAVE NEGATIVE IMPACTS ON THE FUNCTIONALITY AND SERVICEABILITY OF NAVAIDS. THE CONTRACTOR MUST COORDINATE THEIR WORK EFFORT AND LIMIT THEIR OPERATIONS SO THAT NAVAIDS ARE NOT IMPACTED.

2. CONTRACTOR MUST LIMIT OPERATIONS SO THAT MATERIAL, EQUIPMENT, AND PERSONNEL DO NOT ENTER NAVAID CRITICAL AREAS OR DISTURB POWER TO NAVAID FACILITIES WITHOUT PRIOR COORDINATION WITH THE MSCAA OPERATIONS MANAGER AND MSCAA PROJECT ENGINEER.

3. PLANNED NAVAID IMPACTS MUST BE ADDRESSED IN THE CONTRACTORS CONSTRUCTION SCHEDULE. CONTRACTOR IS REQUIRED TO PROVIDE A 45 DAY NOTICE AS WELL AS A MINIMUM 72 HOUR NOTICE TO THE MSCAA OPERATIONS MANAGER AND THE MSCAA PROJECT ENGINEER.

CONTRACTOR ACCESS

1. NO CONTRACTOR'S VEHICLES OR PERSONNEL WILL BE ALLOWED TO ENTER ONTO OR CROSS ACTIVE AIRFIELD PAVEMENTS OR THEIR SAFETY AREAS WITHOUT A CLASS 3 ESCORT. INCURSION ONTO OR ACROSS AN ACTIVE RUNWAY, TAXIWAY, OR RUNWAY APPROACHES WITHOUT PRIOR APPROVAL IS A SERIOUS VIOLATION THAT WILL SUBJECT THE CONTRACTOR TO THE MAXIMUM FINE ALLOWED.

GENERAL SAFETY AND PHASING NOTES

2. THE CONTRACTOR SHALL MEET THE SECURITY AND ACCESS REQUIREMENTS LISTED IN THE CONTRACT DOCUMENTS. REFER TO THE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

3. THE CONTRACTOR SHALL KEEP ALL PAVEMENTS USED BY THEIR VEHICLES CLEAN AND FREE OF FOD AT ALL TIMES. AT A MINIMUM, PAVEMENTS SHALL BE SWEPT AT THE END OF EACH WORKING DAY, OR AS DIRECTED BY THE MSCAA PROJECT ENGINEER.

4. CONTRACTOR SHALL NOT ENTER INTO, OR PLACE STOCKPILES OR STORE MATERIALS AND FUEL IN THE RUNWAY OBSTACLE FREE ZONE OF ANY ACTIVE RUNWAY WITHOUT PRIOR COORDINATION WITH AIRPORT OPERATIONS STAFF. THE GROUND LEVEL PORTION OF THE OBSTACLE FREE ZONE EXTENDS TO 250' FROM THE CENTERLINE OF ANY ACTIVE RUNWAY.

5. VEHICLES DRIVING ON THE AIRPORT MUST GIVE WAY TO ALL AIRCRAFT. DO NOT DRIVE UNDER AIRCRAFT BOARDING BRIDGES. FOLLOW POSTED SPEED LIMIT SIGNS AND DO NOT DRIVE IN A RECKLESS MANNER. REPORT ALL VEHICLE AND AIRCRAFT INCIDENTS, PERSONAL INJURY AND PROPERTY DAMAGE TO AIRPORT OPERATIONS. DRIVE ONLY ON DESIGNATED VEHICLE ROUTES.

6. THE CONTRACTOR MUST LIMIT OPERATION OF THEIR EQUIPMENT AND VEHICLES TO THE DEFINED CONSTRUCTION AREAS. DURING NON-CONSTRUCTION PERIODS, THE CONTRACTOR MUST REMOVE EQUIPMENT AND VEHICLES FROM THE WORK AREA WITHIN THE AOA.

7. CONTRACTOR ACCESS ONTO THE AOA IS LIMITED TO THE GATES SHOWN ON THE PROJECT SAFETY AND PHASING PLANS. NO PERSON SHALL ENTER THE AOA, OR ANY OTHER RESTRICTED AREA, EXCEPT AUTHORIZED PERSONNEL AND ESCORTED BY AN APPROPRIATELY BADGED ESCORT. CONTRACTOR OPERATIONS WITHIN THE AOA ARE LIMITED TO THE AREAS SHOWN ON THE PROJECT SAFETY AND PHASING PLANS. CONSTRUCTION VEHICLES AND PERSONNEL MUST NOT LEAVE THE PROJECT AREAS AT ANY TIME WITHOUT AN APPROVED ESCORT.

8. CONTRACTOR EMPLOYEE PERSONAL VEHICLES MAY NOT BE PARKED OR DRIVEN IN THE AOA. CONTRACTOR VEHICLES AND EQUIPMENT ARE ALLOWED INSIDE OF THE PROJECT WORK AREA WITHIN THE AOA. CONTRACTOR VEHICLES AND EQUIPMENT SHALL BE PARKED NO CLOSER THAN 10 FEET FROM ANY SECURITY FENCE.

9. THE PHASING PLAN SHEETS DEPICT HAUL ROUTES AND SITE ACCESS FROM SURROUNDING PUBLIC ROADWAYS AND HAUL ROUTES TO THE PROJECT WORK AREA THROUGH THE AIRPORT PERIMETER FENCE. CONTRACTOR ACCESS AND HAULING OPERATIONS ARE STRICTLY LIMITED TO THE HAUL ROUTES SHOWN. CONTRACTOR IS RESPONSIBLE FOR ANY PERMITS, IMPROVEMENTS, AND MAINTENANCE TO HAUL ROUTES AS NEEDED TO EFFICIENTLY PERFORM CONSTRUCTION ACTIVITIES, UNLESS SHOWN OTHERWISE ON THE PLANS. FOLLOWING COMPLETION OF CONSTRUCTION CONTRACTOR IS REQUIRED TO RESTORE HAUL ROUTES AND STAGING AND STORAGE AREAS TO THEIR ORIGINAL CONDITION.

10. DRIVING PRIVILEGES INSIDE THE AOA ARE LIMITED TO VEHICLES AND PERSONNEL WITH AN OPERATIONAL NECESSITY AND WHO HAVE BEEN BADGED AND APPROVED BY THE MSCAA BADGING OFFICE. TO DRIVE ON ANY PART OF THE AIRPORT OTHER THAN THE WORK AREAS AS DEFINED IN THE PROJECT PHASING PLANS THE CONTRACTOR MUST FIRST COORDINATE WITH AIRPORT OPERATIONS PERSONNEL. ALL VEHICLES OPERATING OUTSIDE OF THE PROJECT WORK AREA MUST BE ESCORTED BY BADGED PERSONNEL. VEHICLE OPERATORS ARE EXPECTED TO FAMILIARIZE THEMSELVES WITH AIRPORT SIGNS AND MARKINGS.

11. THE PROJECT PLANS SHOW THE ENTRY POINT(S), CONTRACTOR'S STAGING AREA, AND WORK AREA. THE CONTRACTOR SHALL PROVIDE SECURITY FOR THESE AREAS. THE CONTRACTOR IS TO PROVIDE TO THE AIRPORT, FOR REVIEW AND APPROVAL, ALL SECURITY MEASURES, BARRICADES, AND OTHER MEANS TO BE TAKEN TO SECURE SCHEDULED OPENINGS BETWEEN THE SECURE AND NON-SECURE AREAS, PRIOR TO CREATING THE OPENING. THE AIRPORT PROVIDES SECURITY OVERSIGHT AND PATROLS OF THE AIRPORT, BUT THE CONTRACTOR SHOULD NOT RELY ON THE PATROLS TO PROVIDE FULL-TIME SECURITY.

12. IN THE EVENT THE CONTRACTOR IS REQUIRED TO REMOVE AN EXISTING GATE OR PORTION OF THE AOA FENCE, THE CONTRACTOR MUST PROVIDE PERSONNEL WHO ARE BADGED AND APPROVED BY THE AIRPORT OPERATIONS MANAGER TO POSITIVELY CONTROL THE OPENING UNTIL IT HAS BEEN RE-SECURED AND INSPECTED BY THE OPERATIONS CENTER. UNDER NO CIRCUMSTANCES WILL THE CONTRACTOR BE PERMITTED TO LEAVE AN OPENING IN THE AOA FENCE AT THE END OF A WORK DAY.

13. EACH CONTRACTOR LICENSED VEHICLE MUST DISPLAY A COMPANY LOGO ON BOTH SIDES OF SUFFICIENT SIZE TO BE RECOGNIZABLE TO PERSONNEL IN THE CONTROL TOWER. SIGNS MUST BE A MINIMUM OF 200 SQUARE INCHES AND BE APPROVED BY THE AIRPORT. SPECIALIZED CONSTRUCTION EQUIPMENT DOES NOT REQUIRE SIGNS. EACH CONTRACTOR LICENSED VEHICLE MUST HAVE A YELLOW/AMBER ROTATING BEACON AFFIXED TO THE UPPERMOST PART OF THE VEHICLE. LIGHT MUST BE VISIBLE FROM ANY DIRECTION, INCLUDING THE AIR. CONSTRUCTION EQUIPMENT DOES NOT REQUIRE ROTATING BEACON LIGHTS. CONSTRUCTION EQUIPMENT MUST DISPLAY AIRCRAFT WARNING FLAGS DURING ALL PHASES, DAY OPERATIONS ONLY. CONTRACTOR VEHICLE MARKING AND LIGHTING IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE AIRPORT WILL NOT PROVIDE MARKINGS OR LIGHTS.

14. THE CONTRACTOR'S OPERATIONS MUST BE IN ACCORDANCE WITH THE AIRPORT SECURITY REQUIREMENT SPECIFICATION.

STOCKPILED MATERIAL

1. CONTRACTOR IS LIMITED TO PLACEMENT OF STOCKPILED MATERIALS AT THE LOCATIONS SHOWN WITHIN THE PHASING PLANS.

2. CONTRACTOR TO MANAGE STOCKPILES SO THAT THEY DO NOT ATTRACT WILDLIFE. CONTRACTOR TO MANAGE STOCKPILES SO THAT THEY DO NOT CREATE FOD.

3. STOCKPILES SHALL BE NO CLOSER THAN 10 FEET TO A SECURITY FENCE.

WILDLIFE MANAGEMENT

1. FOOD SCRAPS MUST BE COLLECTED FROM CONSTRUCTION PERSONNEL ACTIVITY.

2. ANY ACTIVITY TAKING PLACE THAT CREATES A STANDING BODY OF WATER MUST BE REMEDIED WITHIN 24 HOURS.

3. MOWING SCHEDULES HAVE BEEN ESTABLISHED TO MAINTAIN, WHEN POSSIBLE, A HEIGHT OF 6 TO 10 INCHES, TO HELP PREVENT WILDLIFE FROM BECOMING A HAZARD. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN A MAXIMUM GRASS HEIGHT OF 10 INCHES WITHIN THE CONSTRUCTION WORK AREA.

FOREIGN OBJECT DEBRIS (FOD)

FOREIGN OBJECT DEBRIS AT AIRPORTS INCLUDES ANY OBJECT FOUND IN AN INAPPROPRIATE LOCATION THAT CAN DAMAGE AIRCRAFT, EQUIPMENT, OR AIRPORT PERSONNEL. ON CONSTRUCTION SITES FOD TYPICALLY IS COMPRISED OF LOOSE GRAVEL, BLOWING SAND, WIRE BRISTLES FROM SWEEPER HEADS, FOOD WRAPPERS, OR MATERIAL PACKAGING.

THE PRESENCE OF FOD ON AN AIRPORT'S AOA POSES A SIGNIFICANT THREAT TO THE SAFETY OF AIR TRAVEL. FOD HAS THE POTENTIAL TO DAMAGE AIRCRAFT DURING CRITICAL PHASES OF FLIGHT, WHICH CAN LEAD TO CATASTROPHIC LOSS OF LIFE AND AIRFRAME, AND AT THE VERY LEAST INCREASED MAINTENANCE AND OPERATING COSTS.

METHODS OF FOD CONTROL:

1. CONTRACTOR SHALL PROVIDE TRAINING TO ALL EMPLOYEES WORKING WITHIN THE AOA ON EFFECTIVE FOD MANAGEMENT. TRAINING SHALL INCLUDE DESCRIPTION AND CONSEQUENCES OF FOD, FOD AWARENESS, AND GOOD HOUSEKEEPING PROCEDURES.

2. PREVENTING FOD FROM OCCURRING IS THE MOST EFFECTIVE FORM OF FOD MANAGEMENT. CONTRACTOR MUST MONITOR CONSTRUCTION ACTIVITIES AND PROACTIVELY DEVELOP A PLAN TO PREVENT FOD FROM OCCURRING. TYPICAL FOD PREVENTION MEASURES INCLUDE THE USE OF COVERED TRASH CONTAINERS, COVERED LOADS, ZERO TOLERANCE OF LITTERING, AND TYING DOWN ITEMS WHICH MAY BE EASILY WIND BLOWN.

3. CONTRACTOR TO HAVE HAND BROOMS, SWEEPERS, WATER TRUCK, AND VACUUM SWEEPER TRUCK ON SITE AT ALL TIMES TO IMMEDIATELY REMOVE ANY DEBRIS FROM ACTIVE AIRFIELD AND HAUL ROUTE PAVEMENTS THAT RESULTS FROM CONSTRUCTION ACTIVITY.

4. CONTRACTOR MUST ACTIVELY IMPLEMENT DUST CONTROL MEASURES TO MINIMIZE THE AMOUNT OF DUST ORIGINATING FROM THE WORK AREA, HAUL ROUTES, AND STAGING AND STORAGE AREAS. DUST ON THE AIRFIELD PAVEMENTS WILL NOT BE TOLERATED. IF PROPER MEASURES ARE NOT IMPLEMENTED TO CONTROL DUST, WORK WILL BE STOPPED UNTIL PROPER MEASURES ARE IMPLEMENTED.

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REVISIONS

MARK	DATE	DESCRIPTION
0	12/11/2025	ISSUED FOR BID

MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
CONSTRUCTION SAFETY AND PHASING NOTES

DWG. FILE NAME
161408-G-GN-100.DWG

DATE
12/11/2025

SCALE
N.T.S.

SHEET NO.
G-GN-100

April 15, 2025 C:\pw_workdir\pw_ie\vd_cem3\d0743691\161408-G-GN-100.dwg

GENERAL SAFETY AND PHASING NOTES

FOREIGN OBJECT DEBRIS (CONTINUED)

5. PRIOR TO OPENING SECTIONS OF PAVEMENT WITHIN A WORK AREA, THE CONTRACTOR WILL BE REQUIRED TO CLEAN THE ENTIRE PAVEMENT SURFACE. METAL BRISTLED BROOMS ARE KNOWN TO CREATE FOD, THE CONTRACTOR WILL BE REQUIRED TO CLEAN ALL BRISTLES FROM THE PAVEMENT. THE MSCAA PROJECT ENGINEER WILL INSPECT AREAS TO BE OPENED PRIOR TO OPENING.

INSPECTION REQUIREMENTS

1. CONTRACTOR MUST CONDUCT DAILY INSPECTIONS OF APPLICABLE SAFETY PLAN MEASURES FOR THE CURRENT WORK THIS SHOULD INCLUDE A CHECK OF ALL BARRICADE SPACING AND AN OPERATIONAL CHECK OF THE BARRICADE LIGHTS AT DUSK. THIS ALSO INCLUDES A REQUIREMENT TO IMMEDIATELY CORRECT ANY DISCOVERED DEFICIENCIES.

2. PRIOR TO OPENING WORK AREAS AND PAVEMENT AT THE END OF PROJECT, THE CONTRACTOR MUST COORDINATE WITH AIRPORT OPERATIONS FOR INSPECTION OF WORK AREA. PAVEMENTS MUST BE FREE OF ALL DIRT, SAND, GRAVEL, WIRE BRISTLES OR ANY OTHER OBJECTS THAT COULD CAUSE DAMAGE TO AIRCRAFT ENGINES. ALL SOIL AREAS MUST BE FREE OF DIRT CLODS, RUTS, OR SURFACE IRREGULARITIES THAT COULD DAMAGE AN AIRCRAFT SHOULD IT LEAVE THE PAVEMENT. MUST PROVIDE ADEQUATE TIME AT THE END OF THE CLOSURE TO COMPLETE ALL NECESSARY CLEANING OPERATIONS, INSPECTIONS BY MSCAA, AND BARRICADE REMOVAL PRIOR TO THE SCHEDULED OPENING TIME.

UNDERGROUND UTILITIES

1. THE CONTRACTOR IS REQUIRED TO UTILIZE THE TENNESSEE 811 BEFORE YOU DIG SERVICE AT LEAST 48 HOURS PRIOR TO EXCAVATION ANYWHERE ON THE PROJECT. THE CONTRACTOR MUST ALSO CONTACT THE AIRPORT AND THE FAA AT LEAST 7 DAYS IN ADVANCE FOR LOCATES FOLLOWING THE AIRPORT DIG PERMIT PROCESS. CONTRACTOR TO POTHOLE POSSIBLE CONFLICT LOCATIONS PRIOR TO COMMENCING EXCAVATION ACTIVITIES.

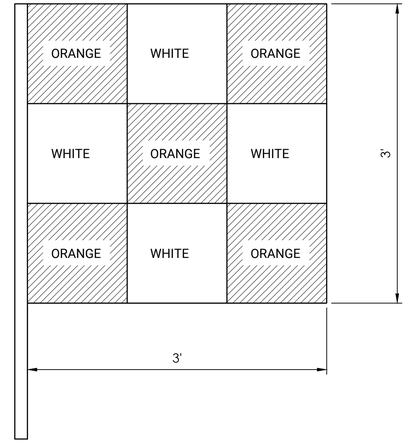
2. UNDERGROUND UTILITY LOCATIONS SHOWN IN THE PLANS ARE APPROXIMATE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY AND SATISFY THEMSELVES AS TO THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES IN THE PROJECT UNLESS OTHERWISE CALLED OUT IN THE PLANS, ALL UNDERGROUND UTILITIES IN THE PROJECT AREA SHALL BE MAINTAINED AND PROTECTED IN PLACE. ALL DAMAGED UNDERGROUND UTILITIES SHALL BE IMMEDIATELY REPAIRED AT THE CONTRACTOR'S EXPENSE.

3. WHEN WORKING IN CLOSE PROXIMITY TO FAA EQUIPMENT OR UTILITIES, THE CONTRACTOR MUST NOTIFY THE FAA 48 HOURS IN ADVANCE AND COORDINATE THE WORK WITH THE FAA TO ALLOW THEM TO BE PRESENT DURING THE WORK, IF THEY CHOOSE.

4. IF EXCAVATIONS ON NEAR UNDERGROUND FUEL LINES, A REPRESENTATIVE FROM VALERO MUST BE ON SITE DURING THE WORK. THE CONTRACTOR IS TO COORDINATE THIS OBSERVATION IN ADVANCE OF THE WORK.

SAFETY AREAS

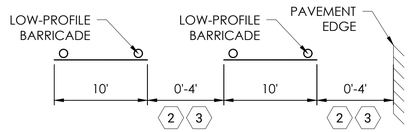
1. THE CONTRACTOR MAY BE REQUIRED TO OPERATE EQUIPMENT IN THE TURF PORTION OF RUNWAY AND/OR TAXIWAY SAFETY AREAS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO TAKE ANY PRECAUTIONS NECESSARY TO PREVENT RUTTING OF THE TURF. THIS MAY INCLUDE USING MATS TO DISTRIBUTE THE EQUIPMENT LOAD. THE AREA WILL NOT BE APPROVED FOR OPENING UNTIL ALL RUTS HAVE BEEN REPAIRED AND THE AREA HAS BEEN INSPECTED BY THE MSCAA PROJECT ENGINEER AND THE OPERATIONS TEAM.

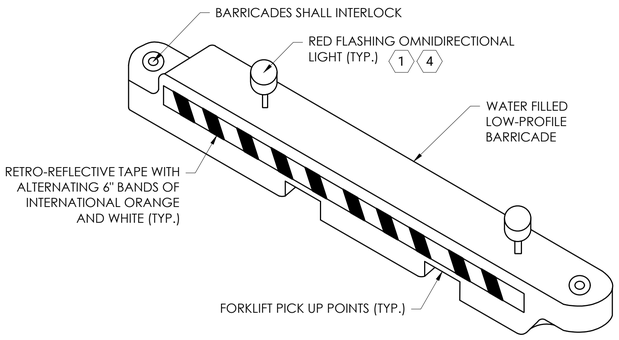


GENERAL NOTES:

1. CONSTRUCTION EQUIPMENT MUST DISPLAY AIRCRAFT WARNING FLAGS DURING ALL PHASES OF CONSTRUCTION. COLOR OF FLAG SHALL BE INTERNATIONAL ORANGE AND WHITE. WARNING FLAG IS ONLY REQUIRED DURING DAY OPERATIONS.

01 G-GN-101 AIRCRAFT WARNING FLAG
SCALE: N.T.S.





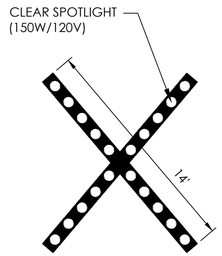
03 G-GN-101 CONSTRUCTION BARRICADE
SCALE: N.T.S.

GENERAL NOTES:

1. ENGINEER APPROVED LOW-PROFILE, LOW MASS IMPACT BARRICADES SHALL BE USED FOR ALL AIRFIELD PAVEMENT CLOSURES.
2. LOW-PROFILE BARRICADES ARE TO BE PROVIDED BY THE CONTRACTOR AND INSTALLED AT TOFA OR RSA LIMITS WHICH ARE ADJACENT TO CLOSED PAVEMENTS, OR AS DIRECTED BY THE MSCAA PROJECT ENGINEER. SEE G-PH-102 FOR TOFA AND RSA DIMENSIONS.
3. THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE MSCAA PROJECT ENGINEER FOR THE FIELD PLACEMENT OF ALL BARRICADES. LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE.
4. IF THE CONTRACTOR DEVIATES FROM THE SAFETY AND PHASING PLAN, ADDITIONAL BARRICADES MAY BE NEEDED. THE CONTRACTOR SHALL GAIN APPROVAL FROM THE MSCAA PROJECT ENGINEER ON NEW BARRICADE LOCATIONS.
5. BARRICADES ARE TO BE INTERLOCKING AND CONTINUOUS, EXTENDING ACROSS THE RUNWAY OR TAXIWAY, INCLUDING SHOULDERS.
6. THE CONTRACTOR SHALL SECURE BARRICADES BY FILLING WITH WATER.
7. LOW-PROFILE BARRICADES SHALL BE PROPERLY WEIGHTED TO PREVENT MOVEMENT BY WIND, PROP BLAST, OR JET BLAST OF UP TO 74 M.P.H.
8. THE CONTRACTOR SHALL INSPECT BARRICADE LOCATIONS AND LIGHTS DAILY. THE CONTRACTOR SHALL RELOCATE AND REPLACE LIGHTS AS NEEDED FOR PROPER PLACEMENT AND FUNCTION ACCORDING TO THE PROJECT PLANS AND SPECIFICATIONS.
9. BARRICADES SHALL BE LOCATED OUTSIDE OF THE SAFETY AREAS OF OPEN TAXIWAYS AND RUNWAYS.
10. BARRICADES SHALL BE IN PLACE PRIOR TO WORK COMMENCEMENT.
11. ALL COSTS FOR BARRICADE PLACEMENT, MAINTENANCE, RELOCATION, AND REMOVAL SHALL BE INCLUDED IN THE CONSTRUCTION ACCESS AND TRAFFIC CONTROL BID ITEM.

REFERENCED NOTES:

1. LIGHTS SHALL BE SECURELY ANCHORED TO THE LOW-PROFILE BARRICADE.
2. LOW-PROFILE BARRICADES TO BE SET AT A 0-FOOT SPACING ADJACENT TO ALL WORK AREAS. LOW-PROFILE BARRICADES ON HAUL ROUTES MAY BE SPACED UP TO 4-FEET.
3. EXTEND TYPICAL PATTERN AS REQUIRED FOR PAVEMENT WIDTH TO WITHIN 4-FEET OF PAVEMENT EDGE. SPACING MAY BE VARIED (MADE SIMILAR) TO FIT PAVEMENT WIDTH, BUT NOT TO EXCEED DIMENSIONS SHOWN UNLESS OTHERWISE NOTED IN THE PLANS OR APPROVED BY THE PROJECT ENGINEER.
4. LIGHTS SHALL BE OMNIDIRECTIONAL. IF LIGHTS ARE NOT OMNIDIRECTIONAL, EVERY OTHER LIGHT SHALL BE TURNED 90-DEGREES.



NOTES

1. LIGHTED X SHALL BE A PORTABLE UNIT THAT CAN QUICKLY BE TOWED TO AND FROM THE RUNWAY.
2. LIGHTED RUNWAY CLOSURE X'S TO BE PROVIDED BY THE AIRPORT AND INSTALLED AT ALL CLOSED RUNWAY DESIGNATORS AS SHOWN ON THE SAFETY AND PHASING PLANS OR AS DIRECTED BY THE MSCAA PROJECT ENGINEER.
3. LIGHTED X SHALL BE ENERGIZED BY A PORTABLE POWER SUPPLY CAPABLE OF A MINIMUM OF 24 HOURS CONTINUOUS OPERATION. THE LIGHT UNIT MUST ALSO ACCEPT 120 VOLTS ALTERNATING CURRENT EXTERNAL POWER WHEN AVAILABLE ON THE AIRFIELD.
4. IN ADDITION TO ITEMS 1 AND 2, REFER TO FAA ADVISORY CIRCULAR 150/5345-55A - SPECIFICATION FOR L-893 - LIGHTED VISUAL AID TO INDICATE TEMPORARY RUNWAY CLOSURES FOR OTHER REQUIREMENTS REGARDING THE LIGHTED CLOSURE X.
5. ALL COSTS FOR LIGHTED RUNWAY CLOSURE X PLACEMENT, MAINTENANCE, FUELING, RELOCATION, AND REMOVAL SHALL BE INCLUDED IN THE CONSTRUCTION ACCESS AND TRAFFIC CONTROL BID ITEM.

04 G-GN-101 LIGHTED RUNWAY CLOSURE "X"
SCALE: N.T.S.

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MARK	DATE	DESCRIPTION
0	12/11/2025	ISSUED FOR BID

MSCAA PROJ. NO. 16-1408-01

PROJECT: RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE: CONSTRUCTION SAFETY AND PHASING NOTES AND DETAILS

DWG. FILE NAME 161408-G-GN-101.DWG
DATE 12/11/2025
SCALE N.T.S.
SHEET NO. G-GN-101

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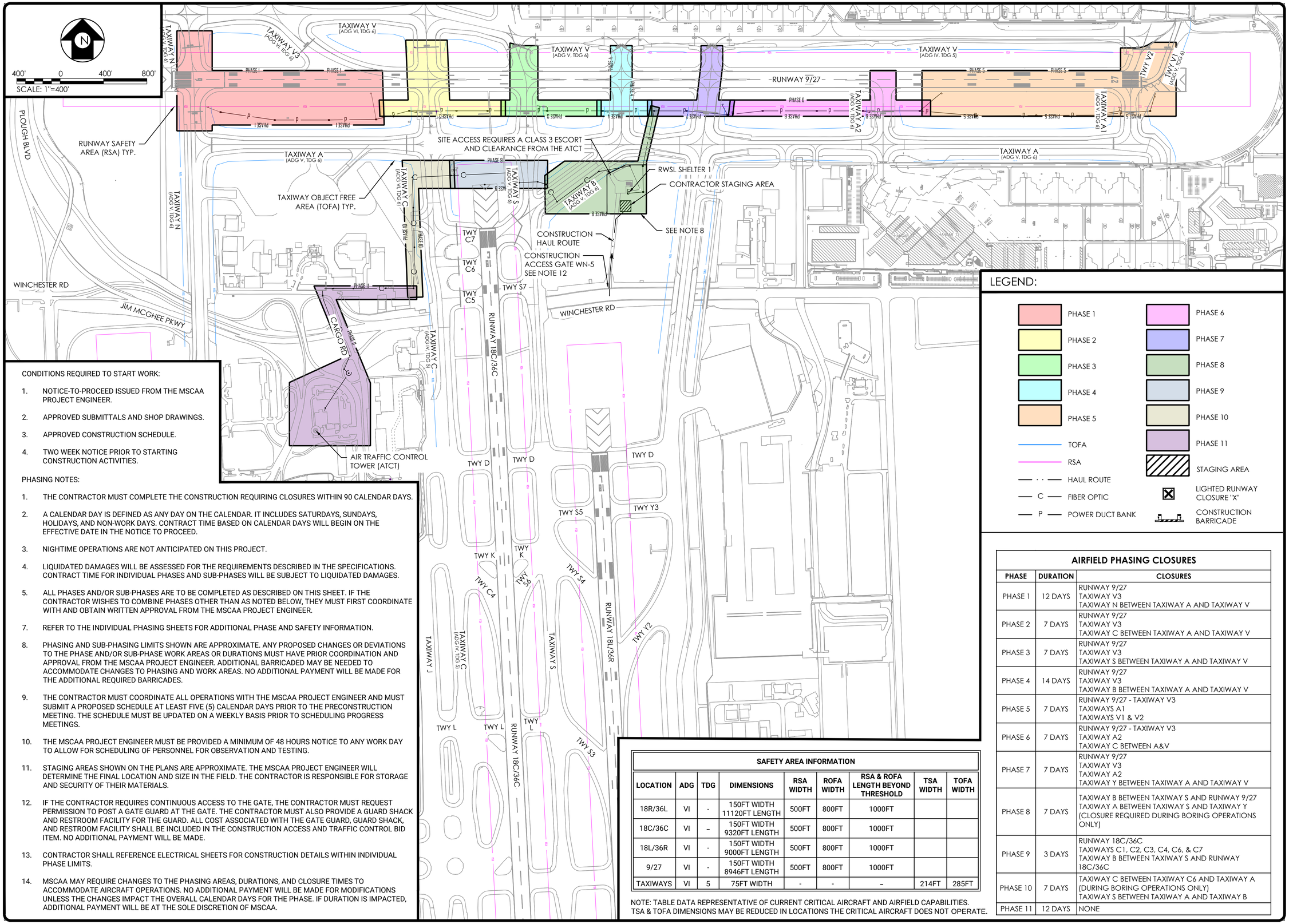

CONDITIONS REQUIRED TO START WORK:

1. NOTICE-TO-PROCEED ISSUED FROM THE MSCAA PROJECT ENGINEER.
2. APPROVED SUBMITTALS AND SHOP DRAWINGS.
3. APPROVED CONSTRUCTION SCHEDULE.
4. TWO WEEK NOTICE PRIOR TO STARTING CONSTRUCTION ACTIVITIES.

PHASING NOTES:

1. THE CONTRACTOR MUST COMPLETE THE CONSTRUCTION REQUIRING CLOSURES WITHIN 90 CALENDAR DAYS.
2. A CALENDAR DAY IS DEFINED AS ANY DAY ON THE CALENDAR. IT INCLUDES SATURDAYS, SUNDAYS, HOLIDAYS, AND NON-WORK DAYS. CONTRACT TIME BASED ON CALENDAR DAYS WILL BEGIN ON THE EFFECTIVE DATE IN THE NOTICE TO PROCEED.
3. NIGHTIME OPERATIONS ARE NOT ANTICIPATED ON THIS PROJECT.
4. LIQUIDATED DAMAGES WILL BE ASSESSED FOR THE REQUIREMENTS DESCRIBED IN THE SPECIFICATIONS. CONTRACT TIME FOR INDIVIDUAL PHASES AND SUB-PHASES WILL BE SUBJECT TO LIQUIDATED DAMAGES.
5. ALL PHASES AND/OR SUB-PHASES ARE TO BE COMPLETED AS DESCRIBED ON THIS SHEET. IF THE CONTRACTOR WISHES TO COMBINE PHASES OTHER THAN AS NOTED BELOW, THEY MUST FIRST COORDINATE WITH AND OBTAIN WRITTEN APPROVAL FROM THE MSCAA PROJECT ENGINEER.
7. REFER TO THE INDIVIDUAL PHASING SHEETS FOR ADDITIONAL PHASE AND SAFETY INFORMATION.
8. PHASING AND SUB-PHASING LIMITS SHOWN ARE APPROXIMATE. ANY PROPOSED CHANGES OR DEVIATIONS TO THE PHASE AND/OR SUB-PHASE WORK AREAS OR DURATIONS MUST HAVE PRIOR COORDINATION AND APPROVAL FROM THE MSCAA PROJECT ENGINEER. ADDITIONAL BARRICADED MAY BE NEEDED TO ACCOMMODATE CHANGES TO PHASING AND WORK AREAS. NO ADDITIONAL PAYMENT WILL BE MADE FOR THE ADDITIONAL REQUIRED BARRICADES.
9. THE CONTRACTOR MUST COORDINATE ALL OPERATIONS WITH THE MSCAA PROJECT ENGINEER AND MUST SUBMIT A PROPOSED SCHEDULE AT LEAST FIVE (5) CALENDAR DAYS PRIOR TO THE PRECONSTRUCTION MEETING. THE SCHEDULE MUST BE UPDATED ON A WEEKLY BASIS PRIOR TO SCHEDULING PROGRESS MEETINGS.
10. THE MSCAA PROJECT ENGINEER MUST BE PROVIDED A MINIMUM OF 48 HOURS NOTICE TO ANY WORK DAY TO ALLOW FOR SCHEDULING OF PERSONNEL FOR OBSERVATION AND TESTING.
11. STAGING AREAS SHOWN ON THE PLANS ARE APPROXIMATE. THE MSCAA PROJECT ENGINEER WILL DETERMINE THE FINAL LOCATION AND SIZE IN THE FIELD. THE CONTRACTOR IS RESPONSIBLE FOR STORAGE AND SECURITY OF THEIR MATERIALS.
12. IF THE CONTRACTOR REQUIRES CONTINUOUS ACCESS TO THE GATE, THE CONTRACTOR MUST REQUEST PERMISSION TO POST A GATE GUARD AT THE GATE. THE CONTRACTOR MUST ALSO PROVIDE A GUARD SHACK AND RESTROOM FACILITY FOR THE GUARD. ALL COST ASSOCIATED WITH THE GATE GUARD, GUARD SHACK, AND RESTROOM FACILITY SHALL BE INCLUDED IN THE CONSTRUCTION ACCESS AND TRAFFIC CONTROL BID ITEM. NO ADDITIONAL PAYMENT WILL BE MADE.
13. CONTRACTOR SHALL REFERENCE ELECTRICAL SHEETS FOR CONSTRUCTION DETAILS WITHIN INDIVIDUAL PHASE LIMITS.
14. MSCAA MAY REQUIRE CHANGES TO THE PHASING AREAS, DURATIONS, AND CLOSURE TIMES TO ACCOMMODATE AIRCRAFT OPERATIONS. NO ADDITIONAL PAYMENT WILL BE MADE FOR MODIFICATIONS UNLESS THE CHANGES IMPACT THE OVERALL CALENDAR DAYS FOR THE PHASE. IF DURATION IS IMPACTED, ADDITIONAL PAYMENT WILL BE AT THE SOLE DISCRETION OF MSCAA.

LEGEND:

- PHASE 1
- PHASE 2
- PHASE 3
- PHASE 4
- PHASE 5
- PHASE 6
- PHASE 7
- PHASE 8
- PHASE 9
- PHASE 10
- PHASE 11
- TOFA
- RSA
- HAUL ROUTE
- C FIBER OPTIC
- P POWER DUCT BANK
- STAGING AREA
- LIGHTED RUNWAY CLOSURE "X"
- CONSTRUCTION BARRICADE

AIRFIELD PHASING CLOSURES

PHASE	DURATION	CLOSURES
PHASE 1	12 DAYS	RUNWAY 9/27 TAXIWAY V3 TAXIWAY N BETWEEN TAXIWAY A AND TAXIWAY V
PHASE 2	7 DAYS	RUNWAY 9/27 TAXIWAY V3 TAXIWAY C BETWEEN TAXIWAY A AND TAXIWAY V
PHASE 3	7 DAYS	RUNWAY 9/27 TAXIWAY V3 TAXIWAY S BETWEEN TAXIWAY A AND TAXIWAY V
PHASE 4	14 DAYS	RUNWAY 9/27 TAXIWAY V3 TAXIWAY B BETWEEN TAXIWAY A AND TAXIWAY V
PHASE 5	7 DAYS	RUNWAY 9/27 - TAXIWAY V3 TAXIWAYS A1 TAXIWAYS V1 & V2
PHASE 6	7 DAYS	RUNWAY 9/27 - TAXIWAY V3 TAXIWAY A2 TAXIWAY C BETWEEN A&V
PHASE 7	7 DAYS	RUNWAY 9/27 TAXIWAY V3 TAXIWAY A2 TAXIWAY Y BETWEEN TAXIWAY A AND TAXIWAY V
PHASE 8	7 DAYS	TAXIWAY B BETWEEN TAXIWAY S AND RUNWAY 9/27 TAXIWAY A BETWEEN TAXIWAY S AND TAXIWAY Y (CLOSURE REQUIRED DURING BORING OPERATIONS ONLY)
PHASE 9	3 DAYS	RUNWAY 18C/36C TAXIWAYS C1, C2, C3, C4, C6, & C7 TAXIWAY B BETWEEN TAXIWAY S AND RUNWAY 18C/36C
PHASE 10	7 DAYS	TAXIWAY C BETWEEN TAXIWAY C6 AND TAXIWAY A (DURING BORING OPERATIONS ONLY) TAXIWAY S BETWEEN TAXIWAY A AND TAXIWAY B
PHASE 11	12 DAYS	NONE

SAFETY AREA INFORMATION

LOCATION	ADG	TDG	DIMENSIONS	RSA WIDTH	ROFA WIDTH	RSA & ROFA LENGTH BEYOND THRESHOLD	TSA WIDTH	TOFA WIDTH
18R/36L	VI	-	150FT WIDTH 11120FT LENGTH	500FT	800FT	1000FT		
18C/36C	VI	–	150FT WIDTH 9320FT LENGTH	500FT	800FT	1000FT		
18L/36R	VI	-	150FT WIDTH 9000FT LENGTH	500FT	800FT	1000FT		
9/27	VI	-	150FT WIDTH 8946FT LENGTH	500FT	800FT	1000FT		
TAXIWAYS	VI	5	75FT WIDTH	-	-	–	214FT	285FT

NOTE: TABLE DATA REPRESENTATIVE OF CURRENT CRITICAL AIRCRAFT AND AIRFIELD CAPABILITIES.
TSA & TOFA DIMENSIONS MAY BE REDUCED IN LOCATIONS THE CRITICAL AIRCRAFT DOES NOT OPERATE.

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MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
CONSTRUCTION SAFETY AND PHASING - OVERALL PLAN

DWG. FILE NAME
161408-G-PH-102.DWG

DATE
12/11/2025

SHEET NO.
G-PH-102

SCALE
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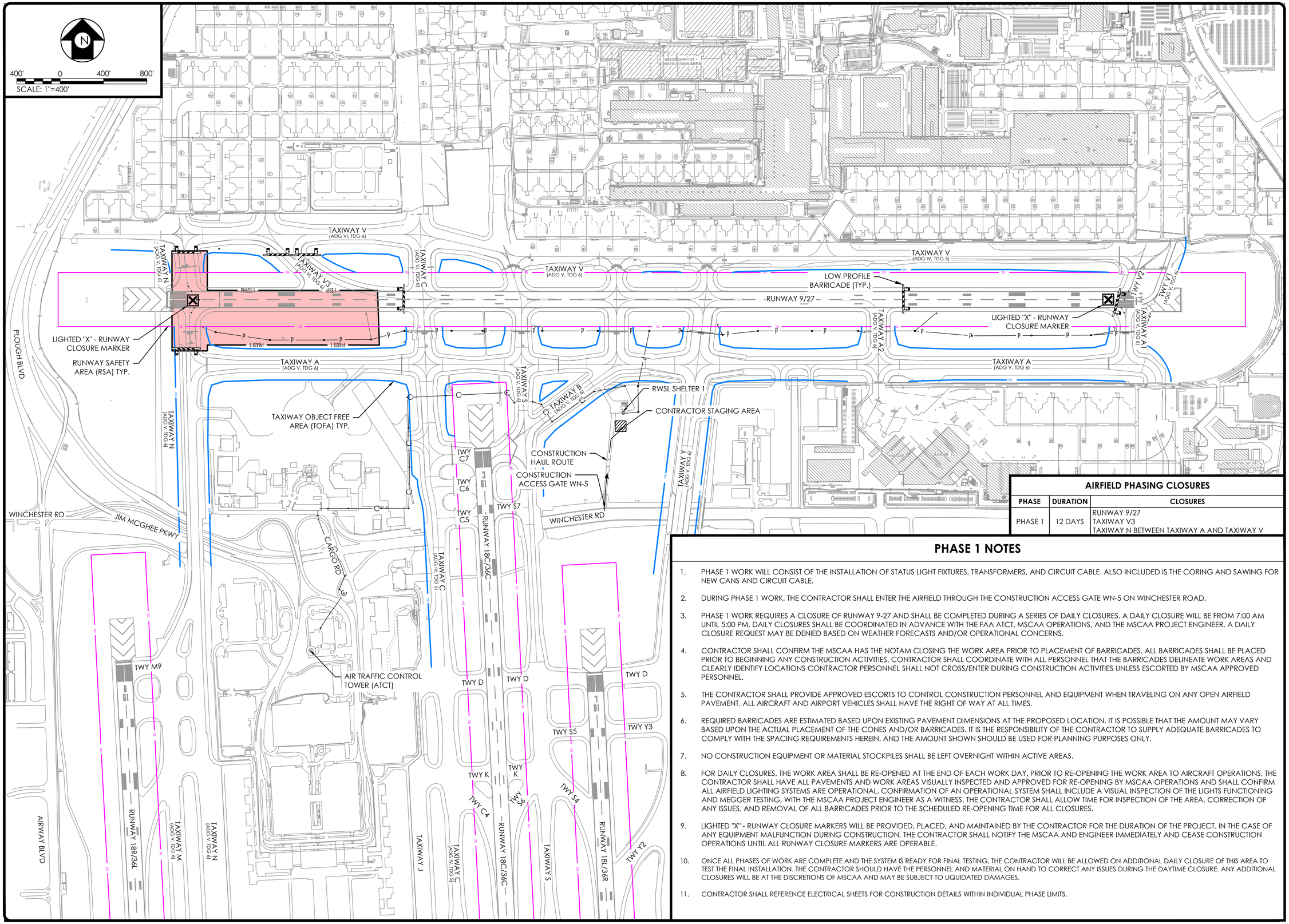

AIRFIELD PHASING CLOSURES

PHASE	DURATION	CLOSURES
PHASE 1	12 DAYS	RUNWAY 9/27 TAXIWAY V3 TAXIWAY N BETWEEN TAXIWAY A AND TAXIWAY V

PHASE 1 NOTES

1. PHASE 1 WORK WILL CONSIST OF THE INSTALLATION OF STATUS LIGHT FIXTURES, TRANSFORMERS, AND CIRCUIT CABLE. ALSO INCLUDED IS THE CORING AND SAWING FOR NEW CANS AND CIRCUIT CABLE.
2. DURING PHASE 1 WORK, THE CONTRACTOR SHALL ENTER THE AIRFIELD THROUGH THE CONSTRUCTION ACCESS GATE WN-5 ON WINCHESTER ROAD.
3. PHASE 1 WORK REQUIRES A CLOSURE OF RUNWAY 9-27 AND SHALL BE COMPLETED DURING A SERIES OF DAILY CLOSURES. A DAILY CLOSURE WILL BE FROM 7:00 AM UNTIL 5:00 PM. DAILY CLOSURES SHALL BE COORDINATED IN ADVANCE WITH THE FAA ATCT, MSCAA OPERATIONS, AND THE MSCAA PROJECT ENGINEER. A DAILY CLOSURE REQUEST MAY BE DENIED BASED ON WEATHER FORECASTS AND/OR OPERATIONAL CONCERNS.
4. CONTRACTOR SHALL CONFIRM THE MSCAA HAS THE NOTAM CLOSING THE WORK AREA PRIOR TO PLACEMENT OF BARRICADES. ALL BARRICADES SHALL BE PLACED PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITIES. CONTRACTOR SHALL COORDINATE WITH ALL PERSONNEL THAT THE BARRICADES DELINEATE WORK AREAS AND CLEARLY IDENTIFY LOCATIONS CONTRACTOR PERSONNEL SHALL NOT CROSS/ENTER DURING CONSTRUCTION ACTIVITIES UNLESS ESCORTED BY MSCAA APPROVED PERSONNEL.
5. THE CONTRACTOR SHALL PROVIDE APPROVED ESCORTS TO CONTROL CONSTRUCTION PERSONNEL AND EQUIPMENT WHEN TRAVELING ON ANY OPEN AIRFIELD PAVEMENT. ALL AIRCRAFT AND AIRPORT VEHICLES SHALL HAVE THE RIGHT OF WAY AT ALL TIMES.
6. REQUIRED BARRICADES ARE ESTIMATED BASED UPON EXISTING PAVEMENT DIMENSIONS AT THE PROPOSED LOCATION. IT IS POSSIBLE THAT THE AMOUNT MAY VARY BASED UPON THE ACTUAL PLACEMENT OF THE CONES AND/OR BARRICADES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SUPPLY ADEQUATE BARRICADES TO COMPLY WITH THE SPACING REQUIREMENTS HEREIN, AND THE AMOUNT SHOWN SHOULD BE USED FOR PLANNING PURPOSES ONLY.
7. NO CONSTRUCTION EQUIPMENT OR MATERIAL STOCKPILES SHALL BE LEFT OVERNIGHT WITHIN ACTIVE AREAS.
8. FOR DAILY CLOSURES, THE WORK AREA SHALL BE RE-OPENED AT THE END OF EACH WORK DAY. PRIOR TO RE-OPENING THE WORK AREA TO AIRCRAFT OPERATIONS, THE CONTRACTOR SHALL HAVE ALL PAVEMENTS AND WORK AREAS VISUALLY INSPECTED AND APPROVED FOR RE-OPENING BY MSCAA OPERATIONS AND SHALL CONFIRM ALL AIRFIELD LIGHTING SYSTEMS ARE OPERATIONAL. CONFIRMATION OF AN OPERATIONAL SYSTEM SHALL INCLUDE A VISUAL INSPECTION OF THE LIGHTS FUNCTIONING AND MEGGER TESTING, WITH THE MSCAA PROJECT ENGINEER AS A WITNESS. THE CONTRACTOR SHALL ALLOW TIME FOR INSPECTION OF THE AREA, CORRECTION OF ANY ISSUES, AND REMOVAL OF ALL BARRICADES PRIOR TO THE SCHEDULED RE-OPENING TIME FOR ALL CLOSURES.
9. LIGHTED "X" - RUNWAY CLOSURE MARKERS WILL BE PROVIDED, PLACED, AND MAINTAINED BY THE CONTRACTOR FOR THE DURATION OF THE PROJECT, IN THE CASE OF ANY EQUIPMENT MALFUNCTION DURING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE MSCAA AND ENGINEER IMMEDIATELY AND CEASE CONSTRUCTION OPERATIONS UNTIL ALL RUNWAY CLOSURE MARKERS ARE OPERABLE.
10. ONCE ALL PHASES OF WORK ARE COMPLETE AND THE SYSTEM IS READY FOR FINAL TESTING, THE CONTRACTOR WILL BE ALLOWED ON ADDITIONAL DAILY CLOSURE OF THIS AREA TO TEST THE FINAL INSTALLATION. THE CONTRACTOR SHOULD HAVE THE PERSONNEL AND MATERIAL ON HAND TO CORRECT ANY ISSUES DURING THE DAYTIME CLOSURE. ANY ADDITIONAL CLOSURES WILL BE AT THE DISCRETIONS OF MSCAA AND MAY BE SUBJECT TO LIQUIDATED DAMAGES.
11. CONTRACTOR SHALL REFERENCE ELECTRICAL SHEETS FOR CONSTRUCTION DETAILS WITHIN INDIVIDUAL PHASE LIMITS.

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JOB NO. 23M302.00

REVISIONS

MARK	DATE	DESCRIPTION
0	12/11/2025	ISSUED FOR BID

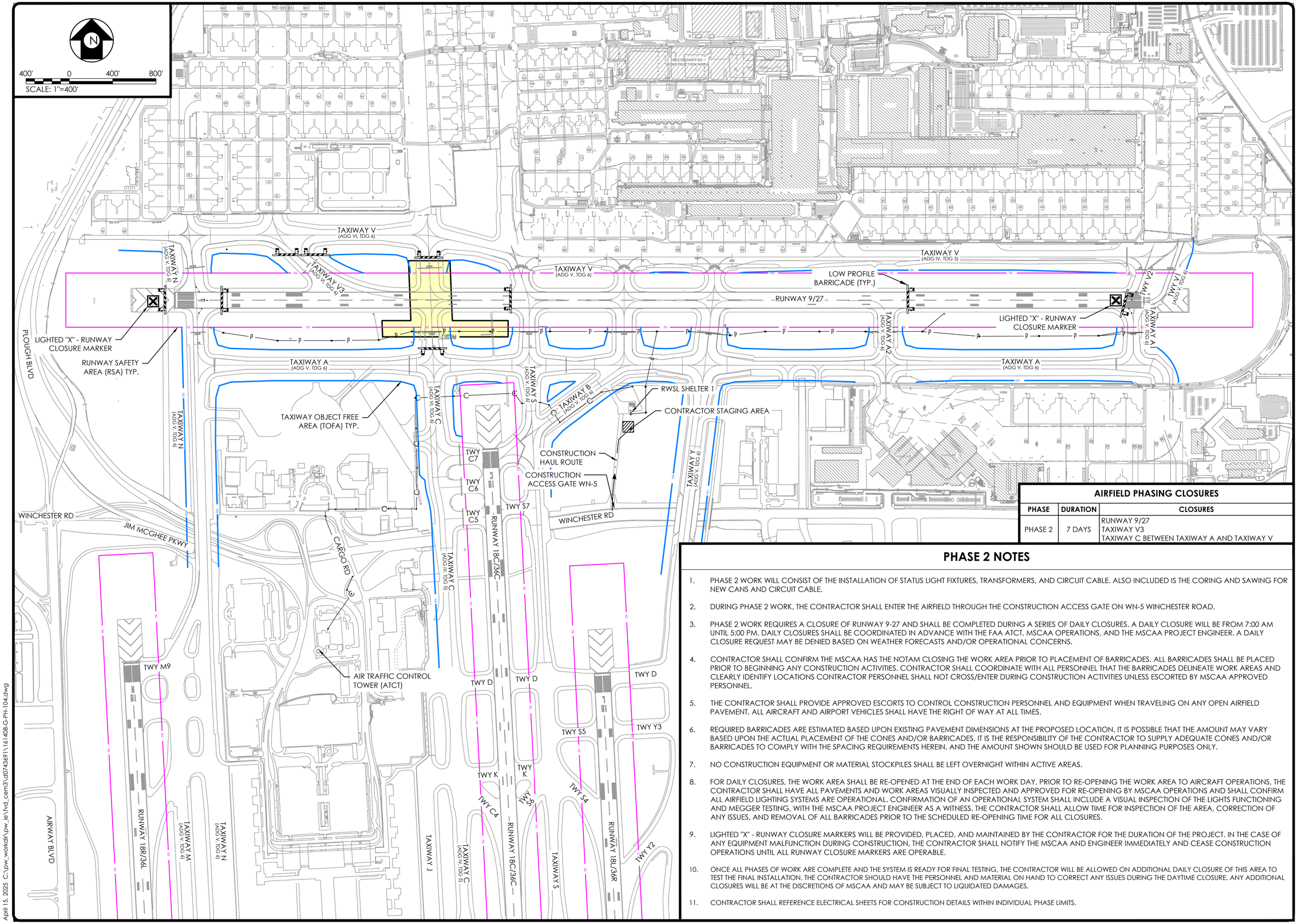
MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
CONSTRUCTION SAFETY AND PHASING - PHASE 1 PLAN

DWG. FILE NAME: 161408-G-PH-103.DWG
DATE: 12/11/2025
SCALE: 1" = 400'
SHEET NO.: G-PH-103

April 15, 2025 C:\pw_workdir\pw_ie\tvd_cem3\d0743691\161408-G-PH-103.dwg



AIRFIELD PHASING CLOSURES

PHASE	DURATION	CLOSURES
PHASE 2	7 DAYS	RUNWAY 9/27 TAXIWAY V3 TAXIWAY C BETWEEN TAXIWAY A AND TAXIWAY V

PHASE 2 NOTES

1. PHASE 2 WORK WILL CONSIST OF THE INSTALLATION OF STATUS LIGHT FIXTURES, TRANSFORMERS, AND CIRCUIT CABLE. ALSO INCLUDED IS THE CORING AND SAWING FOR NEW CANS AND CIRCUIT CABLE.
2. DURING PHASE 2 WORK, THE CONTRACTOR SHALL ENTER THE AIRFIELD THROUGH THE CONSTRUCTION ACCESS GATE ON WN-5 WINCHESTER ROAD.
3. PHASE 2 WORK REQUIRES A CLOSURE OF RUNWAY 9-27 AND SHALL BE COMPLETED DURING A SERIES OF DAILY CLOSURES. A DAILY CLOSURE WILL BE FROM 7:00 AM UNTIL 5:00 PM. DAILY CLOSURES SHALL BE COORDINATED IN ADVANCE WITH THE FAA ATCT, MSCAA OPERATIONS, AND THE MSCAA PROJECT ENGINEER. A DAILY CLOSURE REQUEST MAY BE DENIED BASED ON WEATHER FORECASTS AND/OR OPERATIONAL CONCERNS.
4. CONTRACTOR SHALL CONFIRM THE MSCAA HAS THE NOTAM CLOSING THE WORK AREA PRIOR TO PLACEMENT OF BARRICADES. ALL BARRICADES SHALL BE PLACED PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITIES. CONTRACTOR SHALL COORDINATE WITH ALL PERSONNEL THAT THE BARRICADES DELINEATE WORK AREAS AND CLEARLY IDENTIFY LOCATIONS CONTRACTOR PERSONNEL SHALL NOT CROSS/ENTER DURING CONSTRUCTION ACTIVITIES UNLESS ESCORTED BY MSCAA APPROVED PERSONNEL.
5. THE CONTRACTOR SHALL PROVIDE APPROVED ESCORTS TO CONTROL CONSTRUCTION PERSONNEL AND EQUIPMENT WHEN TRAVELING ON ANY OPEN AIRFIELD PAVEMENT. ALL AIRCRAFT AND AIRPORT VEHICLES SHALL HAVE THE RIGHT OF WAY AT ALL TIMES.
6. REQUIRED BARRICADES ARE ESTIMATED BASED UPON EXISTING PAVEMENT DIMENSIONS AT THE PROPOSED LOCATION. IT IS POSSIBLE THAT THE AMOUNT MAY VARY BASED UPON THE ACTUAL PLACEMENT OF THE CONES AND/OR BARRICADES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SUPPLY ADEQUATE CONES AND/OR BARRICADES TO COMPLY WITH THE SPACING REQUIREMENTS HEREIN, AND THE AMOUNT SHOWN SHOULD BE USED FOR PLANNING PURPOSES ONLY.
7. NO CONSTRUCTION EQUIPMENT OR MATERIAL STOCKPILES SHALL BE LEFT OVERNIGHT WITHIN ACTIVE AREAS.
8. FOR DAILY CLOSURES, THE WORK AREA SHALL BE RE-OPENED AT THE END OF EACH WORK DAY. PRIOR TO RE-OPENING THE WORK AREA TO AIRCRAFT OPERATIONS, THE CONTRACTOR SHALL HAVE ALL PAVEMENTS AND WORK AREAS VISUALLY INSPECTED AND APPROVED FOR RE-OPENING BY MSCAA OPERATIONS AND SHALL CONFIRM ALL AIRFIELD LIGHTING SYSTEMS ARE OPERATIONAL. CONFIRMATION OF AN OPERATIONAL SYSTEM SHALL INCLUDE A VISUAL INSPECTION OF THE LIGHTS FUNCTIONING AND MEGGER TESTING, WITH THE MSCAA PROJECT ENGINEER AS A WITNESS. THE CONTRACTOR SHALL ALLOW TIME FOR INSPECTION OF THE AREA, CORRECTION OF ANY ISSUES, AND REMOVAL OF ALL BARRICADES PRIOR TO THE SCHEDULED RE-OPENING TIME FOR ALL CLOSURES.
9. LIGHTED "X" - RUNWAY CLOSURE MARKERS WILL BE PROVIDED, PLACED, AND MAINTAINED BY THE CONTRACTOR FOR THE DURATION OF THE PROJECT. IN THE CASE OF ANY EQUIPMENT MALFUNCTION DURING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE MSCAA AND ENGINEER IMMEDIATELY AND CEASE CONSTRUCTION OPERATIONS UNTIL ALL RUNWAY CLOSURE MARKERS ARE OPERABLE.
10. ONCE ALL PHASES OF WORK ARE COMPLETE AND THE SYSTEM IS READY FOR FINAL TESTING, THE CONTRACTOR WILL BE ALLOWED ON ADDITIONAL DAILY CLOSURE OF THIS AREA TO TEST THE FINAL INSTALLATION. THE CONTRACTOR SHOULD HAVE THE PERSONNEL AND MATERIAL ON HAND TO CORRECT ANY ISSUES DURING THE DAYTIME CLOSURE. ANY ADDITIONAL CLOSURES WILL BE AT THE DISCRETIONS OF MSCAA AND MAY BE SUBJECT TO LIQUIDATED DAMAGES.
11. CONTRACTOR SHALL REFERENCE ELECTRICAL SHEETS FOR CONSTRUCTION DETAILS WITHIN INDIVIDUAL PHASE LIMITS.

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REVISIONS

MARK	DATE	DESCRIPTION
0	12/11/2025	ISSUED FOR BID

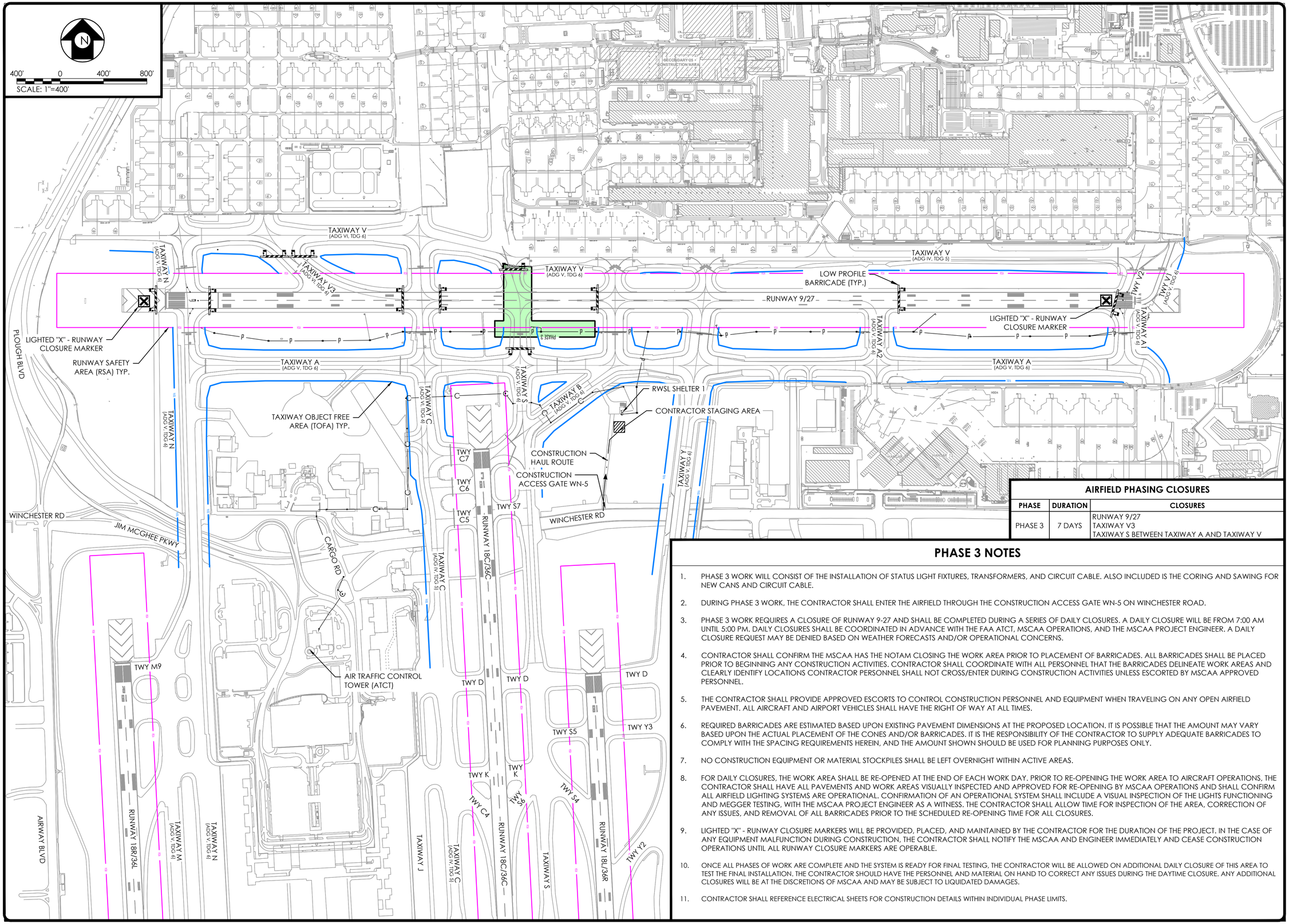
MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
CONSTRUCTION SAFETY AND PHASING - PHASE 2 PLAN

DWG. FILE NAME
161408-G-PH-104.DWG
DATE 12/11/2025
SCALE 1" = 400'
SHEET NO. G-PH-104

April 15, 2025 C:\p\w_workdir\pw_ie\1\vd_cem3\d07436911\161408-G-PH-104.dwg



AIRFIELD PHASING CLOSURES

PHASE	DURATION	CLOSURES
PHASE 3	7 DAYS	RUNWAY 9/27 TAXIWAY V3 TAXIWAY S BETWEEN TAXIWAY A AND TAXIWAY V

PHASE 3 NOTES

1. PHASE 3 WORK WILL CONSIST OF THE INSTALLATION OF STATUS LIGHT FIXTURES, TRANSFORMERS, AND CIRCUIT CABLE. ALSO INCLUDED IS THE CORING AND SAWING FOR NEW CANS AND CIRCUIT CABLE.
2. DURING PHASE 3 WORK, THE CONTRACTOR SHALL ENTER THE AIRFIELD THROUGH THE CONSTRUCTION ACCESS GATE WN-5 ON WINCHESTER ROAD.
3. PHASE 3 WORK REQUIRES A CLOSURE OF RUNWAY 9-27 AND SHALL BE COMPLETED DURING A SERIES OF DAILY CLOSURES. A DAILY CLOSURE WILL BE FROM 7:00 AM UNTIL 5:00 PM. DAILY CLOSURES SHALL BE COORDINATED IN ADVANCE WITH THE FAA ATCT, MSCAA OPERATIONS, AND THE MSCAA PROJECT ENGINEER. A DAILY CLOSURE REQUEST MAY BE DENIED BASED ON WEATHER FORECASTS AND/OR OPERATIONAL CONCERNS.
4. CONTRACTOR SHALL CONFIRM THE MSCAA HAS THE NOTAM CLOSING THE WORK AREA PRIOR TO PLACEMENT OF BARRICADES. ALL BARRICADES SHALL BE PLACED PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITIES. CONTRACTOR SHALL COORDINATE WITH ALL PERSONNEL THAT THE BARRICADES DELINEATE WORK AREAS AND CLEARLY IDENTIFY LOCATIONS CONTRACTOR PERSONNEL SHALL NOT CROSS/ENTER DURING CONSTRUCTION ACTIVITIES UNLESS ESCORTED BY MSCAA APPROVED PERSONNEL.
5. THE CONTRACTOR SHALL PROVIDE APPROVED ESCORTS TO CONTROL CONSTRUCTION PERSONNEL AND EQUIPMENT WHEN TRAVELING ON ANY OPEN AIRFIELD PAVEMENT. ALL AIRCRAFT AND AIRPORT VEHICLES SHALL HAVE THE RIGHT OF WAY AT ALL TIMES.
6. REQUIRED BARRICADES ARE ESTIMATED BASED UPON EXISTING PAVEMENT DIMENSIONS AT THE PROPOSED LOCATION. IT IS POSSIBLE THAT THE AMOUNT MAY VARY BASED UPON THE ACTUAL PLACEMENT OF THE CONES AND/OR BARRICADES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SUPPLY ADEQUATE BARRICADES TO COMPLY WITH THE SPACING REQUIREMENTS HEREIN, AND THE AMOUNT SHOWN SHOULD BE USED FOR PLANNING PURPOSES ONLY.
7. NO CONSTRUCTION EQUIPMENT OR MATERIAL STOCKPILES SHALL BE LEFT OVERNIGHT WITHIN ACTIVE AREAS.
8. FOR DAILY CLOSURES, THE WORK AREA SHALL BE RE-OPENED AT THE END OF EACH WORK DAY. PRIOR TO RE-OPENING THE WORK AREA TO AIRCRAFT OPERATIONS, THE CONTRACTOR SHALL HAVE ALL PAVEMENTS AND WORK AREAS VISUALLY INSPECTED AND APPROVED FOR RE-OPENING BY MSCAA OPERATIONS AND SHALL CONFIRM ALL AIRFIELD LIGHTING SYSTEMS ARE OPERATIONAL. CONFIRMATION OF AN OPERATIONAL SYSTEM SHALL INCLUDE A VISUAL INSPECTION OF THE LIGHTS FUNCTIONING AND MEGGER TESTING, WITH THE MSCAA PROJECT ENGINEER AS A WITNESS. THE CONTRACTOR SHALL ALLOW TIME FOR INSPECTION OF THE AREA, CORRECTION OF ANY ISSUES, AND REMOVAL OF ALL BARRICADES PRIOR TO THE SCHEDULED RE-OPENING TIME FOR ALL CLOSURES.
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REVISIONS

MARK	DATE	DESCRIPTION
0	12/11/2025	ISSUED FOR BID

MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
CONSTRUCTION SAFETY AND PHASING - PHASE 3 PLAN

DWG. FILE NAME
161408-G-PH-105.DWG
DATE 12/11/2025
SCALE 1" = 400'
SHEET NO. G-PH-105

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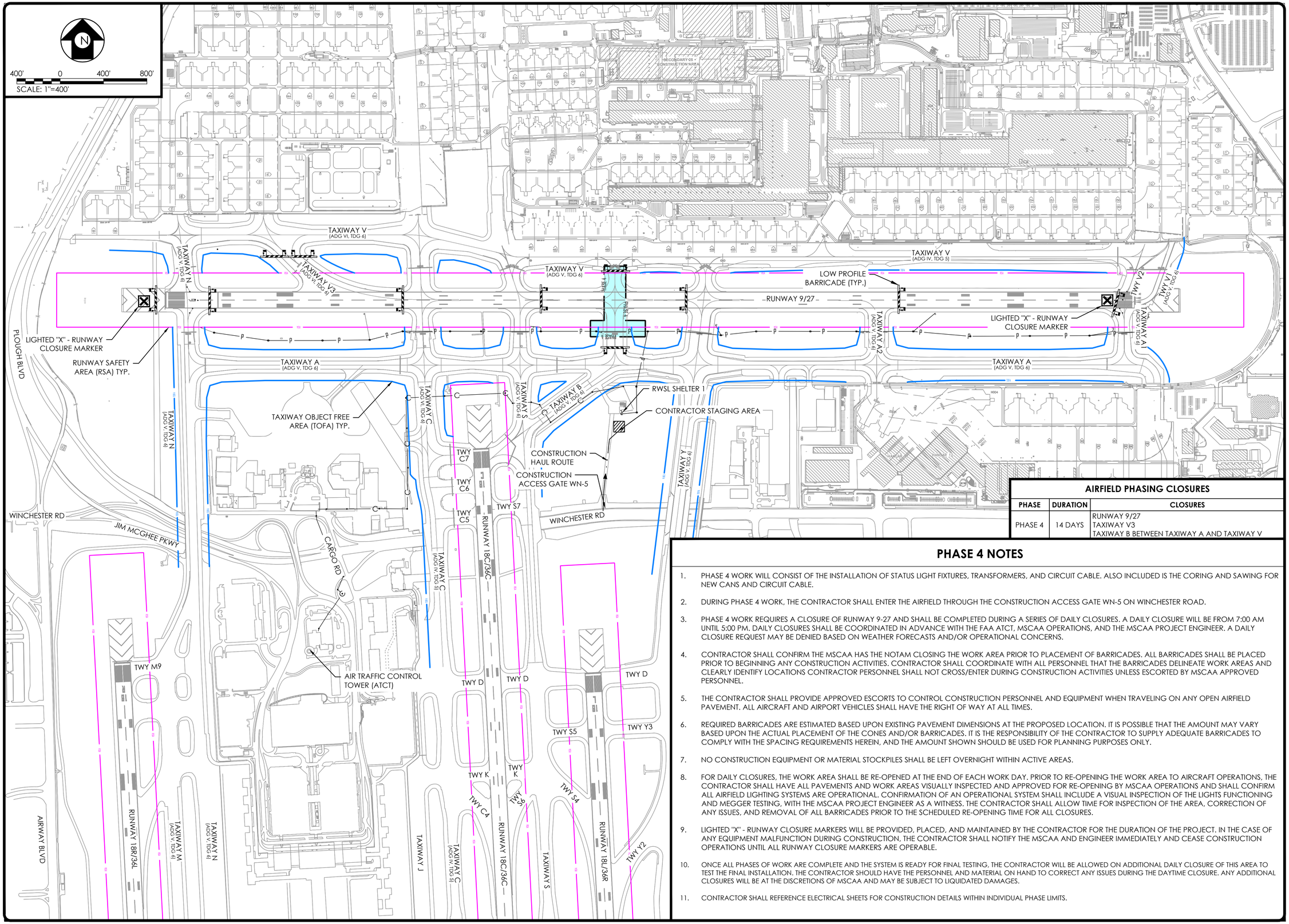

AIRFIELD PHASING CLOSURES

PHASE	DURATION	CLOSURES
PHASE 4	14 DAYS	RUNWAY 9/27 TAXIWAY V3 TAXIWAY B BETWEEN TAXIWAY A AND TAXIWAY V

PHASE 4 NOTES

1. PHASE 4 WORK WILL CONSIST OF THE INSTALLATION OF STATUS LIGHT FIXTURES, TRANSFORMERS, AND CIRCUIT CABLE. ALSO INCLUDED IS THE CORING AND SAWING FOR NEW CANS AND CIRCUIT CABLE.
2. DURING PHASE 4 WORK, THE CONTRACTOR SHALL ENTER THE AIRFIELD THROUGH THE CONSTRUCTION ACCESS GATE WN-5 ON WINCHESTER ROAD.
3. PHASE 4 WORK REQUIRES A CLOSURE OF RUNWAY 9-27 AND SHALL BE COMPLETED DURING A SERIES OF DAILY CLOSURES. A DAILY CLOSURE WILL BE FROM 7:00 AM UNTIL 5:00 PM. DAILY CLOSURES SHALL BE COORDINATED IN ADVANCE WITH THE FAA ATCT, MSCAA OPERATIONS, AND THE MSCAA PROJECT ENGINEER. A DAILY CLOSURE REQUEST MAY BE DENIED BASED ON WEATHER FORECASTS AND/OR OPERATIONAL CONCERNS.
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REVISIONS

MARK	DATE	DESCRIPTION
0	12/11/2025	ISSUED FOR BID

MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
CONSTRUCTION SAFETY AND PHASING - PHASE 4 PLAN

DWG. FILE NAME
161408-G-PH-106.DWG
DATE 12/11/2025
SCALE 1" = 400'
SHEET NO. G-PH-106

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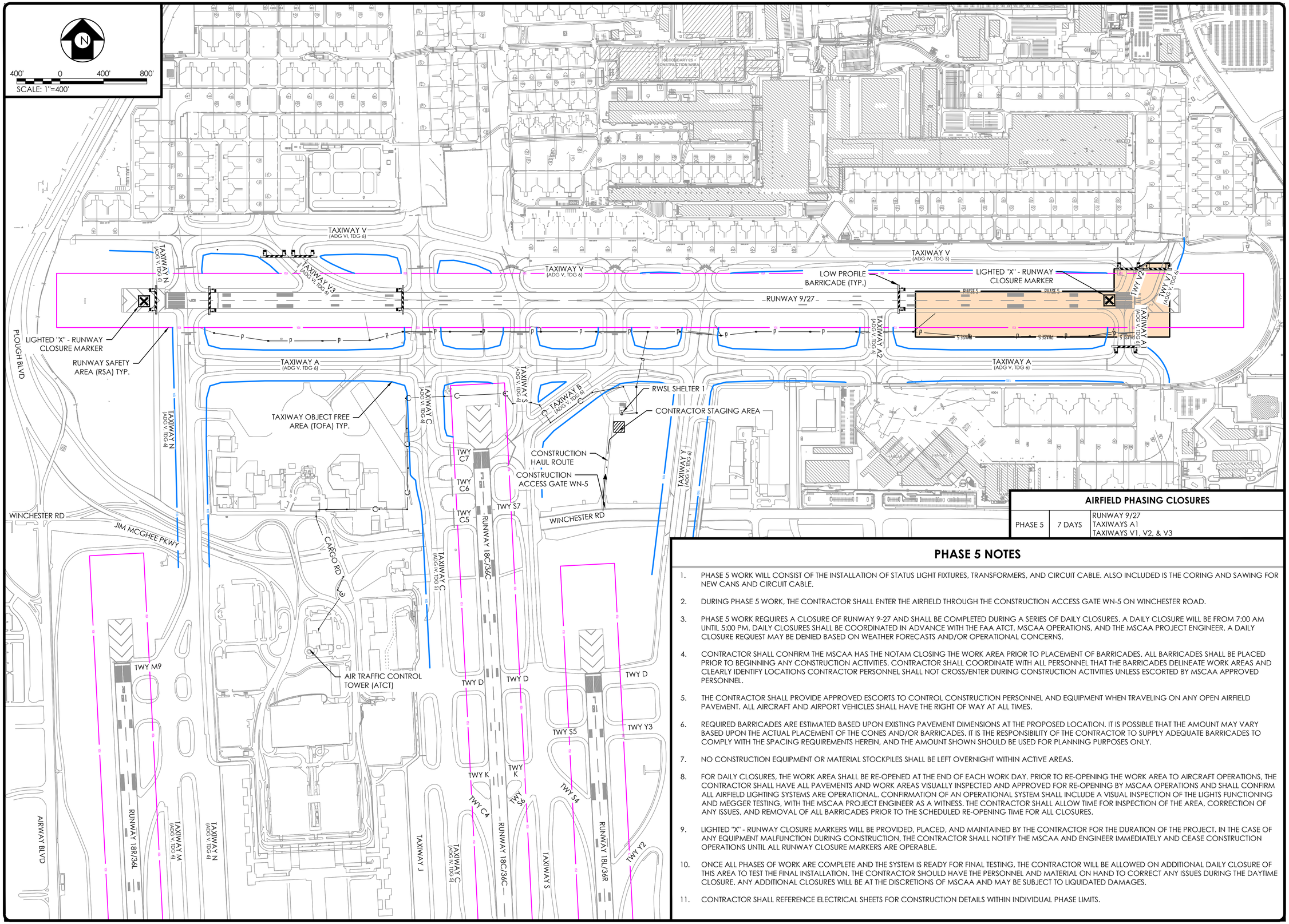

AIRFIELD PHASING CLOSURES		
PHASE 5	7 DAYS	RUNWAY 9/27 TAXIWAYS A1 TAXIWAYS V1, V2, & V3

PHASE 5 NOTES

1. PHASE 5 WORK WILL CONSIST OF THE INSTALLATION OF STATUS LIGHT FIXTURES, TRANSFORMERS, AND CIRCUIT CABLE. ALSO INCLUDED IS THE CORING AND SAWING FOR NEW CANS AND CIRCUIT CABLE.
2. DURING PHASE 5 WORK, THE CONTRACTOR SHALL ENTER THE AIRFIELD THROUGH THE CONSTRUCTION ACCESS GATE WN-5 ON WINCHESTER ROAD.
3. PHASE 5 WORK REQUIRES A CLOSURE OF RUNWAY 9-27 AND SHALL BE COMPLETED DURING A SERIES OF DAILY CLOSURES. A DAILY CLOSURE WILL BE FROM 7:00 AM UNTIL 5:00 PM. DAILY CLOSURES SHALL BE COORDINATED IN ADVANCE WITH THE FAA ATCT, MSCAA OPERATIONS, AND THE MSCAA PROJECT ENGINEER. A DAILY CLOSURE REQUEST MAY BE DENIED BASED ON WEATHER FORECASTS AND/OR OPERATIONAL CONCERNS.
4. CONTRACTOR SHALL CONFIRM THE MSCAA HAS THE NOTAM CLOSING THE WORK AREA PRIOR TO PLACEMENT OF BARRICADES. ALL BARRICADES SHALL BE PLACED PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITIES. CONTRACTOR SHALL COORDINATE WITH ALL PERSONNEL THAT THE BARRICADES DELINEATE WORK AREAS AND CLEARLY IDENTIFY LOCATIONS CONTRACTOR PERSONNEL SHALL NOT CROSS/ENTER DURING CONSTRUCTION ACTIVITIES UNLESS ESCORTED BY MSCAA APPROVED PERSONNEL.
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7. NO CONSTRUCTION EQUIPMENT OR MATERIAL STOCKPILES SHALL BE LEFT OVERNIGHT WITHIN ACTIVE AREAS.
8. FOR DAILY CLOSURES, THE WORK AREA SHALL BE RE-OPENED AT THE END OF EACH WORK DAY. PRIOR TO RE-OPENING THE WORK AREA TO AIRCRAFT OPERATIONS, THE CONTRACTOR SHALL HAVE ALL PAVEMENTS AND WORK AREAS VISUALLY INSPECTED AND APPROVED FOR RE-OPENING BY MSCAA OPERATIONS AND SHALL CONFIRM ALL AIRFIELD LIGHTING SYSTEMS ARE OPERATIONAL. CONFIRMATION OF AN OPERATIONAL SYSTEM SHALL INCLUDE A VISUAL INSPECTION OF THE LIGHTS FUNCTIONING AND MEGGER TESTING, WITH THE MSCAA PROJECT ENGINEER AS A WITNESS. THE CONTRACTOR SHALL ALLOW TIME FOR INSPECTION OF THE AREA, CORRECTION OF ANY ISSUES, AND REMOVAL OF ALL BARRICADES PRIOR TO THE SCHEDULED RE-OPENING TIME FOR ALL CLOSURES.
9. LIGHTED "X" - RUNWAY CLOSURE MARKERS WILL BE PROVIDED, PLACED, AND MAINTAINED BY THE CONTRACTOR FOR THE DURATION OF THE PROJECT. IN THE CASE OF ANY EQUIPMENT MALFUNCTION DURING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE MSCAA AND ENGINEER IMMEDIATELY AND CEASE CONSTRUCTION OPERATIONS UNTIL ALL RUNWAY CLOSURE MARKERS ARE OPERABLE.
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JOSHUA T. MANN — REGISTERED ENGINEER — AGRICULTURE — No. 123332 — STATE OF TENNESSEE — 12/11/2025

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MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
CONSTRUCTION SAFETY AND PHASING - PHASE 5 PLAN

DWG. FILE NAME
161408-G-PH-107.DWG
DATE 12/11/2025
SHEET NO. G-PH-107
SCALE 1" = 400'

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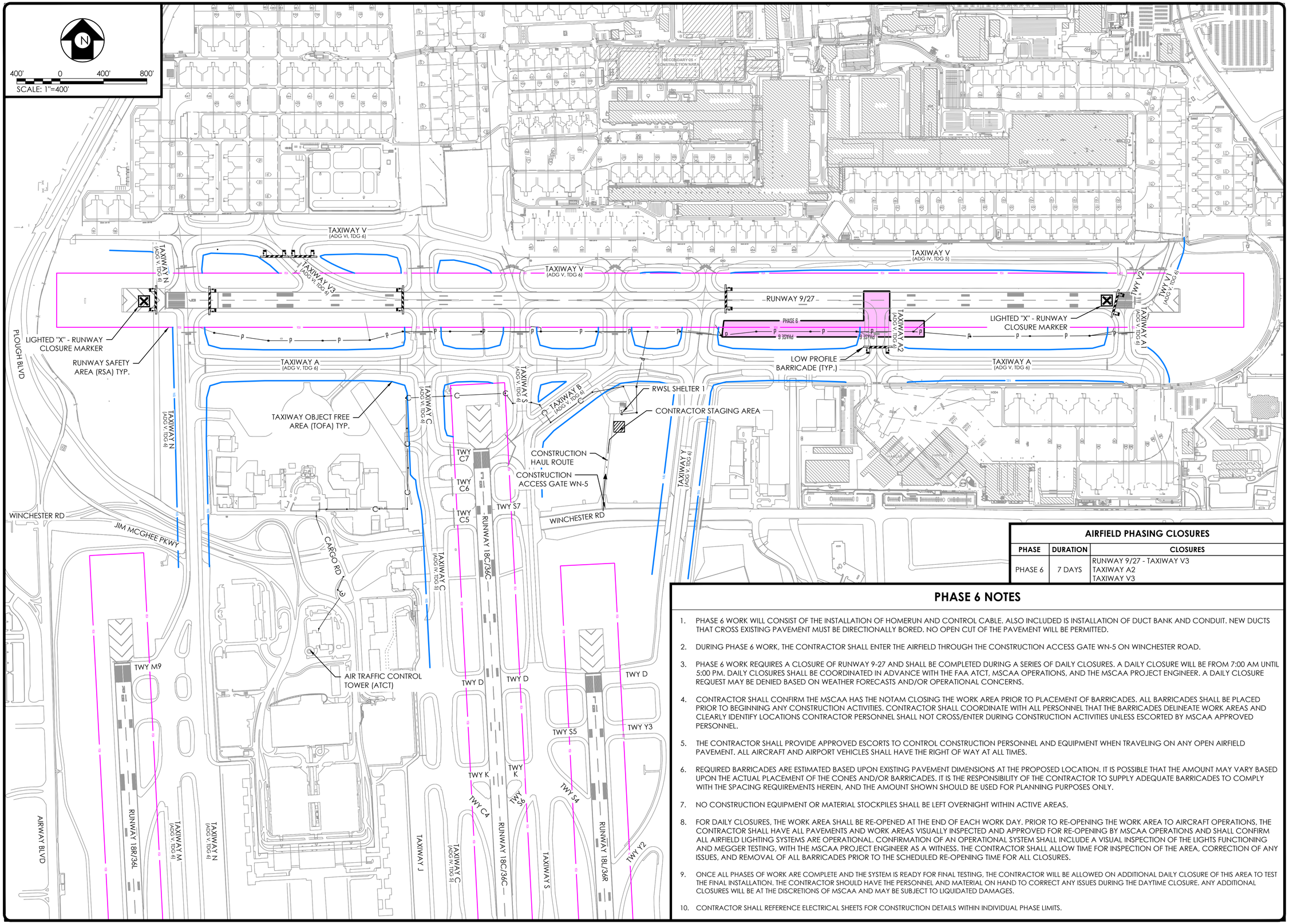

AIRFIELD PHASING CLOSURES

PHASE	DURATION	CLOSURES
PHASE 6	7 DAYS	RUNWAY 9/27 - TAXIWAY V3 TAXIWAY A2 TAXIWAY V3

PHASE 6 NOTES

1. PHASE 6 WORK WILL CONSIST OF THE INSTALLATION OF HOMERUN AND CONTROL CABLE. ALSO INCLUDED IS INSTALLATION OF DUCT BANK AND CONDUIT. NEW DUCTS THAT CROSS EXISTING PAVEMENT MUST BE DIRECTIONALLY BORED. NO OPEN CUT OF THE PAVEMENT WILL BE PERMITTED.
2. DURING PHASE 6 WORK, THE CONTRACTOR SHALL ENTER THE AIRFIELD THROUGH THE CONSTRUCTION ACCESS GATE WN-5 ON WINCHESTER ROAD.
3. PHASE 6 WORK REQUIRES A CLOSURE OF RUNWAY 9-27 AND SHALL BE COMPLETED DURING A SERIES OF DAILY CLOSURES. A DAILY CLOSURE WILL BE FROM 7:00 AM UNTIL 5:00 PM. DAILY CLOSURES SHALL BE COORDINATED IN ADVANCE WITH THE FAA ATCT, MSCAA OPERATIONS, AND THE MSCAA PROJECT ENGINEER. A DAILY CLOSURE REQUEST MAY BE DENIED BASED ON WEATHER FORECASTS AND/OR OPERATIONAL CONCERNS.
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6. REQUIRED BARRICADES ARE ESTIMATED BASED UPON EXISTING PAVEMENT DIMENSIONS AT THE PROPOSED LOCATION. IT IS POSSIBLE THAT THE AMOUNT MAY VARY BASED UPON THE ACTUAL PLACEMENT OF THE CONES AND/OR BARRICADES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SUPPLY ADEQUATE BARRICADES TO COMPLY WITH THE SPACING REQUIREMENTS HEREIN, AND THE AMOUNT SHOWN SHOULD BE USED FOR PLANNING PURPOSES ONLY.
7. NO CONSTRUCTION EQUIPMENT OR MATERIAL STOCKPILES SHALL BE LEFT OVERNIGHT WITHIN ACTIVE AREAS.
8. FOR DAILY CLOSURES, THE WORK AREA SHALL BE RE-OPENED AT THE END OF EACH WORK DAY. PRIOR TO RE-OPENING THE WORK AREA TO AIRCRAFT OPERATIONS, THE CONTRACTOR SHALL HAVE ALL PAVEMENTS AND WORK AREAS VISUALLY INSPECTED AND APPROVED FOR RE-OPENING BY MSCAA OPERATIONS AND SHALL CONFIRM ALL AIRFIELD LIGHTING SYSTEMS ARE OPERATIONAL. CONFIRMATION OF AN OPERATIONAL SYSTEM SHALL INCLUDE A VISUAL INSPECTION OF THE LIGHTS FUNCTIONING AND MEGGER TESTING, WITH THE MSCAA PROJECT ENGINEER AS A WITNESS. THE CONTRACTOR SHALL ALLOW TIME FOR INSPECTION OF THE AREA, CORRECTION OF ANY ISSUES, AND REMOVAL OF ALL BARRICADES PRIOR TO THE SCHEDULED RE-OPENING TIME FOR ALL CLOSURES.
9. ONCE ALL PHASES OF WORK ARE COMPLETE AND THE SYSTEM IS READY FOR FINAL TESTING, THE CONTRACTOR WILL BE ALLOWED ON ADDITIONAL DAILY CLOSURE OF THIS AREA TO TEST THE FINAL INSTALLATION. THE CONTRACTOR SHOULD HAVE THE PERSONNEL AND MATERIAL ON HAND TO CORRECT ANY ISSUES DURING THE DAYTIME CLOSURE. ANY ADDITIONAL CLOSURES WILL BE AT THE DISCRETIONS OF MSCAA AND MAY BE SUBJECT TO LIQUIDATED DAMAGES.
10. CONTRACTOR SHALL REFERENCE ELECTRICAL SHEETS FOR CONSTRUCTION DETAILS WITHIN INDIVIDUAL PHASE LIMITS.

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REVISIONS

MARK	DATE	DESCRIPTION
0	12/11/2025	ISSUED FOR BID

MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
CONSTRUCTION SAFETY AND PHASING - PHASE 6 PLAN

DWG. FILE NAME
161408-G-PH-108.DWG
DATE 12/11/2025
SCALE 1" = 400'
SHEET NO. G-PH-108

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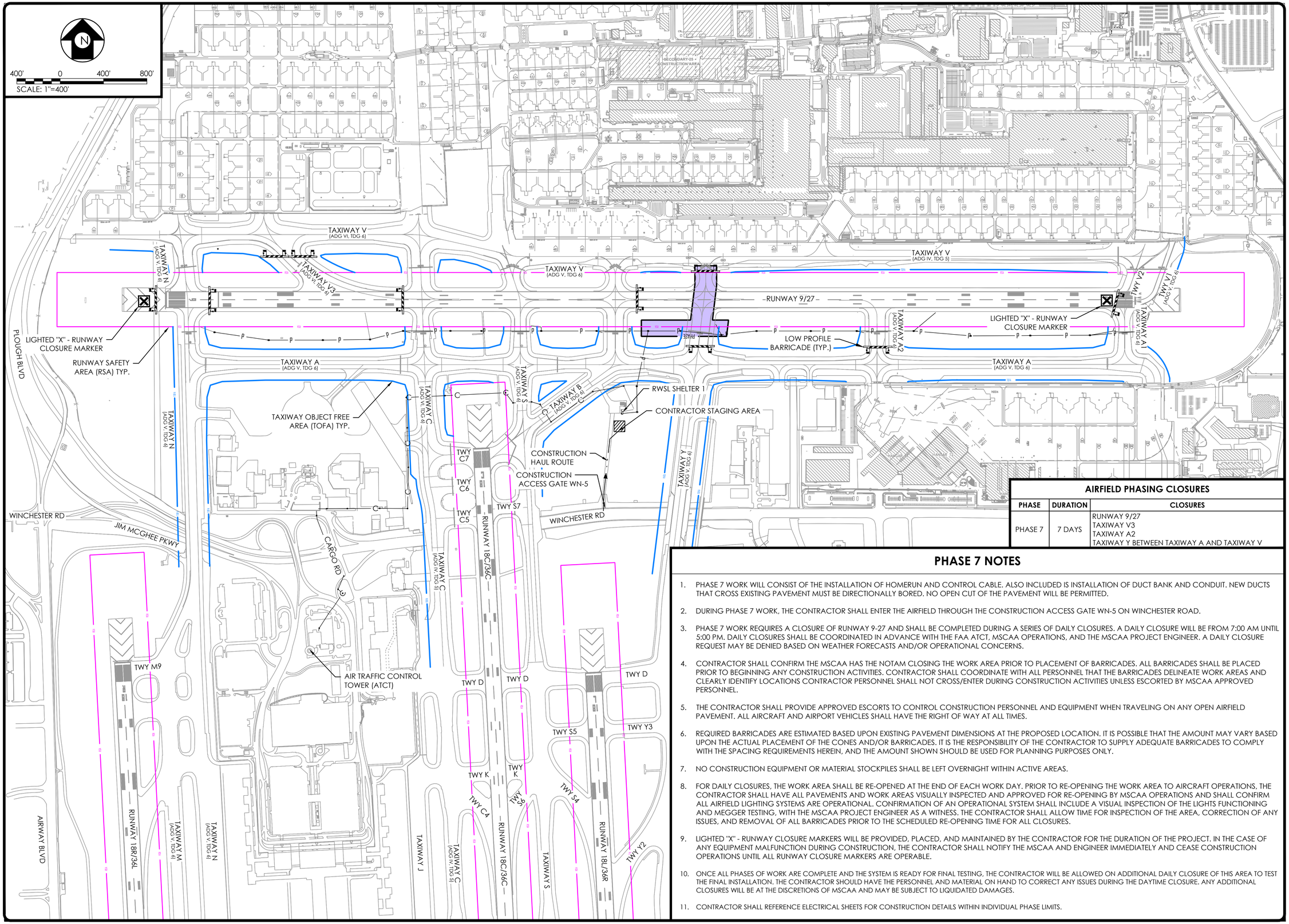

AIRFIELD PHASING CLOSURES

PHASE	DURATION	CLOSURES
PHASE 7	7 DAYS	RUNWAY 9/27 TAXIWAY V3 TAXIWAY A2 TAXIWAY Y BETWEEN TAXIWAY A AND TAXIWAY V

PHASE 7 NOTES

1. PHASE 7 WORK WILL CONSIST OF THE INSTALLATION OF HOMERUN AND CONTROL CABLE. ALSO INCLUDED IS INSTALLATION OF DUCT BANK AND CONDUIT. NEW DUCTS THAT CROSS EXISTING PAVEMENT MUST BE DIRECTIONALLY BORED. NO OPEN CUT OF THE PAVEMENT WILL BE PERMITTED.
2. DURING PHASE 7 WORK, THE CONTRACTOR SHALL ENTER THE AIRFIELD THROUGH THE CONSTRUCTION ACCESS GATE WN-5 ON WINCHESTER ROAD.
3. PHASE 7 WORK REQUIRES A CLOSURE OF RUNWAY 9-27 AND SHALL BE COMPLETED DURING A SERIES OF DAILY CLOSURES. A DAILY CLOSURE WILL BE FROM 7:00 AM UNTIL 5:00 PM. DAILY CLOSURES SHALL BE COORDINATED IN ADVANCE WITH THE FAA ATCT, MSCAA OPERATIONS, AND THE MSCAA PROJECT ENGINEER. A DAILY CLOSURE REQUEST MAY BE DENIED BASED ON WEATHER FORECASTS AND/OR OPERATIONAL CONCERNS.
4. CONTRACTOR SHALL CONFIRM THE MSCAA HAS THE NOTAM CLOSING THE WORK AREA PRIOR TO PLACEMENT OF BARRICADES. ALL BARRICADES SHALL BE PLACED PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITIES. CONTRACTOR SHALL COORDINATE WITH ALL PERSONNEL THAT THE BARRICADES DELINEATE WORK AREAS AND CLEARLY IDENTIFY LOCATIONS CONTRACTOR PERSONNEL SHALL NOT CROSS/ENTER DURING CONSTRUCTION ACTIVITIES UNLESS ESCORTED BY MSCAA APPROVED PERSONNEL.
5. THE CONTRACTOR SHALL PROVIDE APPROVED ESCORTS TO CONTROL CONSTRUCTION PERSONNEL AND EQUIPMENT WHEN TRAVELING ON ANY OPEN AIRFIELD PAVEMENT. ALL AIRCRAFT AND AIRPORT VEHICLES SHALL HAVE THE RIGHT OF WAY AT ALL TIMES.
6. REQUIRED BARRICADES ARE ESTIMATED BASED UPON EXISTING PAVEMENT DIMENSIONS AT THE PROPOSED LOCATION. IT IS POSSIBLE THAT THE AMOUNT MAY VARY BASED UPON THE ACTUAL PLACEMENT OF THE CONES AND/OR BARRICADES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SUPPLY ADEQUATE BARRICADES TO COMPLY WITH THE SPACING REQUIREMENTS HEREIN, AND THE AMOUNT SHOWN SHOULD BE USED FOR PLANNING PURPOSES ONLY.
7. NO CONSTRUCTION EQUIPMENT OR MATERIAL STOCKPILES SHALL BE LEFT OVERNIGHT WITHIN ACTIVE AREAS.
8. FOR DAILY CLOSURES, THE WORK AREA SHALL BE RE-OPENED AT THE END OF EACH WORK DAY. PRIOR TO RE-OPENING THE WORK AREA TO AIRCRAFT OPERATIONS, THE CONTRACTOR SHALL HAVE ALL PAVEMENTS AND WORK AREAS VISUALLY INSPECTED AND APPROVED FOR RE-OPENING BY MSCAA OPERATIONS AND SHALL CONFIRM ALL AIRFIELD LIGHTING SYSTEMS ARE OPERATIONAL. CONFIRMATION OF AN OPERATIONAL SYSTEM SHALL INCLUDE A VISUAL INSPECTION OF THE LIGHTS FUNCTIONING AND MEGGER TESTING, WITH THE MSCAA PROJECT ENGINEER AS A WITNESS. THE CONTRACTOR SHALL ALLOW TIME FOR INSPECTION OF THE AREA, CORRECTION OF ANY ISSUES, AND REMOVAL OF ALL BARRICADES PRIOR TO THE SCHEDULED RE-OPENING TIME FOR ALL CLOSURES.
9. LIGHTED "X" - RUNWAY CLOSURE MARKERS WILL BE PROVIDED, PLACED, AND MAINTAINED BY THE CONTRACTOR FOR THE DURATION OF THE PROJECT. IN THE CASE OF ANY EQUIPMENT MALFUNCTION DURING CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE MSCAA AND ENGINEER IMMEDIATELY AND CEASE CONSTRUCTION OPERATIONS UNTIL ALL RUNWAY CLOSURE MARKERS ARE OPERABLE.
10. ONCE ALL PHASES OF WORK ARE COMPLETE AND THE SYSTEM IS READY FOR FINAL TESTING, THE CONTRACTOR WILL BE ALLOWED ON ADDITIONAL DAILY CLOSURE OF THIS AREA TO TEST THE FINAL INSTALLATION. THE CONTRACTOR SHOULD HAVE THE PERSONNEL AND MATERIAL ON HAND TO CORRECT ANY ISSUES DURING THE DAYTIME CLOSURE. ANY ADDITIONAL CLOSURES WILL BE AT THE DISCRETIONS OF MSCAA AND MAY BE SUBJECT TO LIQUIDATED DAMAGES.
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MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
CONSTRUCTION SAFETY AND PHASING - PHASE 7 PLAN

DWG. FILE NAME
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DATE
12/11/2025
SHEET NO.
G-PH-109
SCALE
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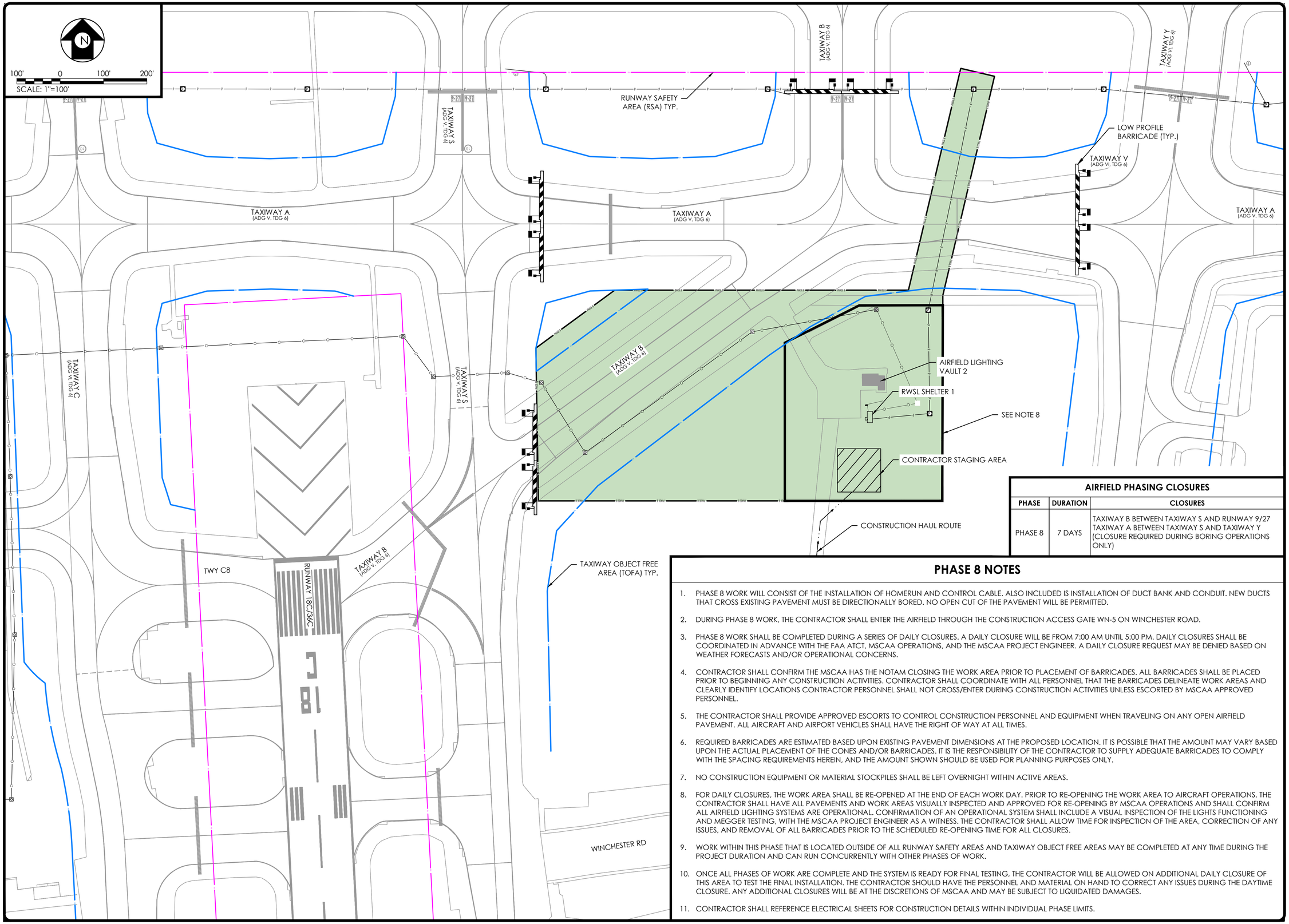

AIRFIELD PHASING CLOSURES

PHASE	DURATION	CLOSURES
PHASE 8	7 DAYS	TAXIWAY B BETWEEN TAXIWAY S AND RUNWAY 9/27 TAXIWAY A BETWEEN TAXIWAY S AND TAXIWAY Y (CLOSURE REQUIRED DURING BORING OPERATIONS ONLY)

PHASE 8 NOTES

1. PHASE 8 WORK WILL CONSIST OF THE INSTALLATION OF HOMERUN AND CONTROL CABLE. ALSO INCLUDED IS INSTALLATION OF DUCT BANK AND CONDUIT. NEW DUCTS THAT CROSS EXISTING PAVEMENT MUST BE DIRECTIONALLY BORED. NO OPEN CUT OF THE PAVEMENT WILL BE PERMITTED.
2. DURING PHASE 8 WORK, THE CONTRACTOR SHALL ENTER THE AIRFIELD THROUGH THE CONSTRUCTION ACCESS GATE WN-5 ON WINCHESTER ROAD.
3. PHASE 8 WORK SHALL BE COMPLETED DURING A SERIES OF DAILY CLOSURES. A DAILY CLOSURE WILL BE FROM 7:00 AM UNTIL 5:00 PM. DAILY CLOSURES SHALL BE COORDINATED IN ADVANCE WITH THE FAA ATCT, MSCAA OPERATIONS, AND THE MSCAA PROJECT ENGINEER. A DAILY CLOSURE REQUEST MAY BE DENIED BASED ON WEATHER FORECASTS AND/OR OPERATIONAL CONCERNS.
4. CONTRACTOR SHALL CONFIRM THE MSCAA HAS THE NOTAM CLOSING THE WORK AREA PRIOR TO PLACEMENT OF BARRICADES. ALL BARRICADES SHALL BE PLACED PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITIES. CONTRACTOR SHALL COORDINATE WITH ALL PERSONNEL THAT THE BARRICADES DELINEATE WORK AREAS AND CLEARLY IDENTIFY LOCATIONS CONTRACTOR PERSONNEL SHALL NOT CROSS/ENTER DURING CONSTRUCTION ACTIVITIES UNLESS ESCORTED BY MSCAA APPROVED PERSONNEL.
5. THE CONTRACTOR SHALL PROVIDE APPROVED ESCORTS TO CONTROL CONSTRUCTION PERSONNEL AND EQUIPMENT WHEN TRAVELING ON ANY OPEN AIRFIELD PAVEMENT. ALL AIRCRAFT AND AIRPORT VEHICLES SHALL HAVE THE RIGHT OF WAY AT ALL TIMES.
6. REQUIRED BARRICADES ARE ESTIMATED BASED UPON EXISTING PAVEMENT DIMENSIONS AT THE PROPOSED LOCATION. IT IS POSSIBLE THAT THE AMOUNT MAY VARY BASED UPON THE ACTUAL PLACEMENT OF THE CONES AND/OR BARRICADES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SUPPLY ADEQUATE BARRICADES TO COMPLY WITH THE SPACING REQUIREMENTS HEREIN, AND THE AMOUNT SHOWN SHOULD BE USED FOR PLANNING PURPOSES ONLY.
7. NO CONSTRUCTION EQUIPMENT OR MATERIAL STOCKPILES SHALL BE LEFT OVERNIGHT WITHIN ACTIVE AREAS.
8. FOR DAILY CLOSURES, THE WORK AREA SHALL BE RE-OPENED AT THE END OF EACH WORK DAY. PRIOR TO RE-OPENING THE WORK AREA TO AIRCRAFT OPERATIONS, THE CONTRACTOR SHALL HAVE ALL PAVEMENTS AND WORK AREAS VISUALLY INSPECTED AND APPROVED FOR RE-OPENING BY MSCAA OPERATIONS AND SHALL CONFIRM ALL AIRFIELD LIGHTING SYSTEMS ARE OPERATIONAL. CONFIRMATION OF AN OPERATIONAL SYSTEM SHALL INCLUDE A VISUAL INSPECTION OF THE LIGHTS FUNCTIONING AND MEGGER TESTING, WITH THE MSCAA PROJECT ENGINEER AS A WITNESS. THE CONTRACTOR SHALL ALLOW TIME FOR INSPECTION OF THE AREA, CORRECTION OF ANY ISSUES, AND REMOVAL OF ALL BARRICADES PRIOR TO THE SCHEDULED RE-OPENING TIME FOR ALL CLOSURES.
9. WORK WITHIN THIS PHASE THAT IS LOCATED OUTSIDE OF ALL RUNWAY SAFETY AREAS AND TAXIWAY OBJECT FREE AREAS MAY BE COMPLETED AT ANY TIME DURING THE PROJECT DURATION AND CAN RUN CONCURRENTLY WITH OTHER PHASES OF WORK.
10. ONCE ALL PHASES OF WORK ARE COMPLETE AND THE SYSTEM IS READY FOR FINAL TESTING, THE CONTRACTOR WILL BE ALLOWED ON ADDITIONAL DAILY CLOSURE OF THIS AREA TO TEST THE FINAL INSTALLATION. THE CONTRACTOR SHOULD HAVE THE PERSONNEL AND MATERIAL ON HAND TO CORRECT ANY ISSUES DURING THE DAYTIME CLOSURE. ANY ADDITIONAL CLOSURES WILL BE AT THE DISCRETIONS OF MSCAA AND MAY BE SUBJECT TO LIQUIDATED DAMAGES.
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JOSHUA T. MANN — REGISTERED ENGINEER — AGRICULTURE — No. 123333 — STATE OF TENNESSEE — 12/11/2025

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MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
CONSTRUCTION SAFETY AND PHASING - PHASE 8 PLAN

DWG. FILE NAME
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DATE 12/11/2025
SCALE 1" = 100'
SHEET NO. G-PH-110

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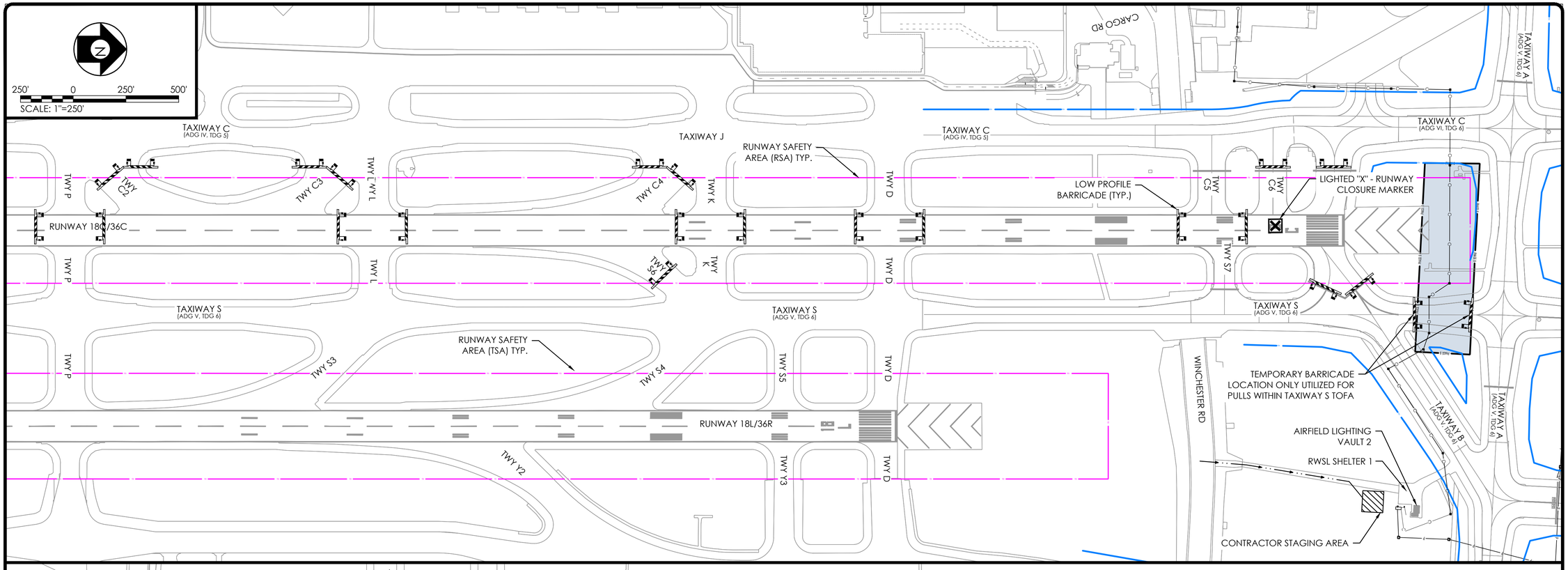

AIRFIELD PHASING CLOSURES

PHASE	DURATION	CLOSURES
PHASE 9	3 DAYS	RUNWAY 18C/36C TAXIWAYS C1, C2, C3, C4, C6, & C7 TAXIWAY B BETWEEN TAXIWAY S AND RUNWAY 18C/36C TAXIWAY S BETWEEN TAXIWAY B AND TAXIWAY A

PHASE 9 NOTES

1. PHASE 9 WORK WILL CONSIST OF THE INSTALLATION OF HOMERUN AND CONTROL CABLE. ALSO INCLUDED IS INSTALLATION OF DUCT BANK AND CONDUIT. NEW DUCTS THAT CROSS EXISTING PAVEMENT MUST BE DIRECTIONALLY BORED. NO OPEN CUT OF THE PAVEMENT WILL BE PERMITTED.
2. DURING PHASE 9 WORK, THE CONTRACTOR SHALL ENTER THE AIRFIELD THROUGH THE CONSTRUCTION ACCESS GATE WN-5 ON WINCHESTER ROAD.
3. PHASE 9 WORK REQUIRES A CLOSURE OF RUNWAY 18C-36C AND TW S AND SHALL BE COMPLETED DURING A SERIES OF DAILY CLOSURES OF RUNWAY ONLY REQUIRED FOR WORK WITHIN THE RSA. A DAILY CLOSURE WILL BE FROM 7:00 AM UNTIL 2:30 PM. DAILY CLOSURES SHALL BE COORDINATED IN ADVANCE WITH THE FAA ATCT, MSCAA OPERATIONS, AND THE MSCAA PROJECT ENGINEER. A DAILY CLOSURE REQUEST MAY BE DENIED BASED ON WEATHER FORECASTS AND/OR OPERATIONAL CONCERNS.
4. CONTRACTOR SHALL CONFIRM THE MSCAA HAS THE NOTAM CLOSING THE WORK AREA PRIOR TO PLACEMENT OF BARRICADES. ALL BARRICADES SHALL BE PLACED PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITIES. CONTRACTOR SHALL COORDINATE WITH ALL PERSONNEL THAT THE BARRICADES DELINEATE WORK AREAS AND CLEARLY IDENTIFY LOCATIONS CONTRACTOR PERSONNEL SHALL NOT CROSS/ENTER DURING CONSTRUCTION ACTIVITIES UNLESS ESCORTED BY MSCAA APPROVED PERSONNEL.
5. THE CONTRACTOR SHALL PROVIDE APPROVED ESCORTS TO CONTROL CONSTRUCTION PERSONNEL AND EQUIPMENT WHEN TRAVELING ON ANY OPEN AIRFIELD PAVEMENT. ALL AIRCRAFT AND AIRPORT VEHICLES SHALL HAVE THE RIGHT OF WAY AT ALL TIMES.
6. REQUIRED BARRICADES ARE ESTIMATED BASED UPON EXISTING PAVEMENT DIMENSIONS AT THE PROPOSED LOCATION. IT IS POSSIBLE THAT THE AMOUNT MAY VARY BASED UPON THE ACTUAL PLACEMENT OF THE CONES AND/OR BARRICADES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SUPPLY ADEQUATE BARRICADES TO COMPLY WITH THE SPACING REQUIREMENTS HEREIN, AND THE AMOUNT SHOWN SHOULD BE USED FOR PLANNING PURPOSES ONLY.
7. NO CONSTRUCTION EQUIPMENT OR MATERIAL STOCKPILES SHALL BE LEFT OVERNIGHT WITHIN ACTIVE AREAS.
8. FOR DAILY CLOSURES, THE WORK AREA SHALL BE RE-OPENED AT THE END OF EACH WORK DAY. PRIOR TO RE-OPENING THE WORK AREA TO AIRCRAFT OPERATIONS, THE CONTRACTOR SHALL HAVE ALL PAVEMENTS AND WORK AREAS VISUALLY INSPECTED AND APPROVED FOR RE-OPENING BY MSCAA OPERATIONS AND SHALL CONFIRM ALL AIRFIELD LIGHTING SYSTEMS ARE OPERATIONAL. CONFIRMATION OF AN OPERATIONAL SYSTEM SHALL INCLUDE A VISUAL INSPECTION OF THE LIGHTS FUNCTIONING AND MEGGER TESTING, WITH THE MSCAA PROJECT ENGINEER AS A WITNESS. THE CONTRACTOR SHALL ALLOW TIME FOR INSPECTION OF THE AREA, CORRECTION OF ANY ISSUES, AND REMOVAL OF ALL BARRICADES PRIOR TO THE SCHEDULED RE-OPENING TIME FOR ALL CLOSURES.
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10. ONCE ALL PHASES OF WORK ARE COMPLETE AND THE SYSTEM IS READY FOR FINAL TESTING, THE CONTRACTOR WILL BE ALLOWED ON ADDITIONAL DAILY CLOSURE OF THIS AREA TO TEST THE FINAL INSTALLATION. THE CONTRACTOR SHOULD HAVE THE PERSONNEL AND MATERIAL ON HAND TO CORRECT ANY ISSUES DURING THE DAYTIME CLOSURE. ANY ADDITIONAL CLOSURES WILL BE AT THE DISCRETIONS OF MSCAA AND MAY BE SUBJECT TO LIQUIDATED DAMAGES.
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MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
CONSTRUCTION SAFETY AND PHASING - PHASE 9 PLAN

DWG. FILE NAME
161408-G-PH-111.DWG
DATE
12/11/2025
SHEET NO.
G-PH-111
SCALE
1" = 250'

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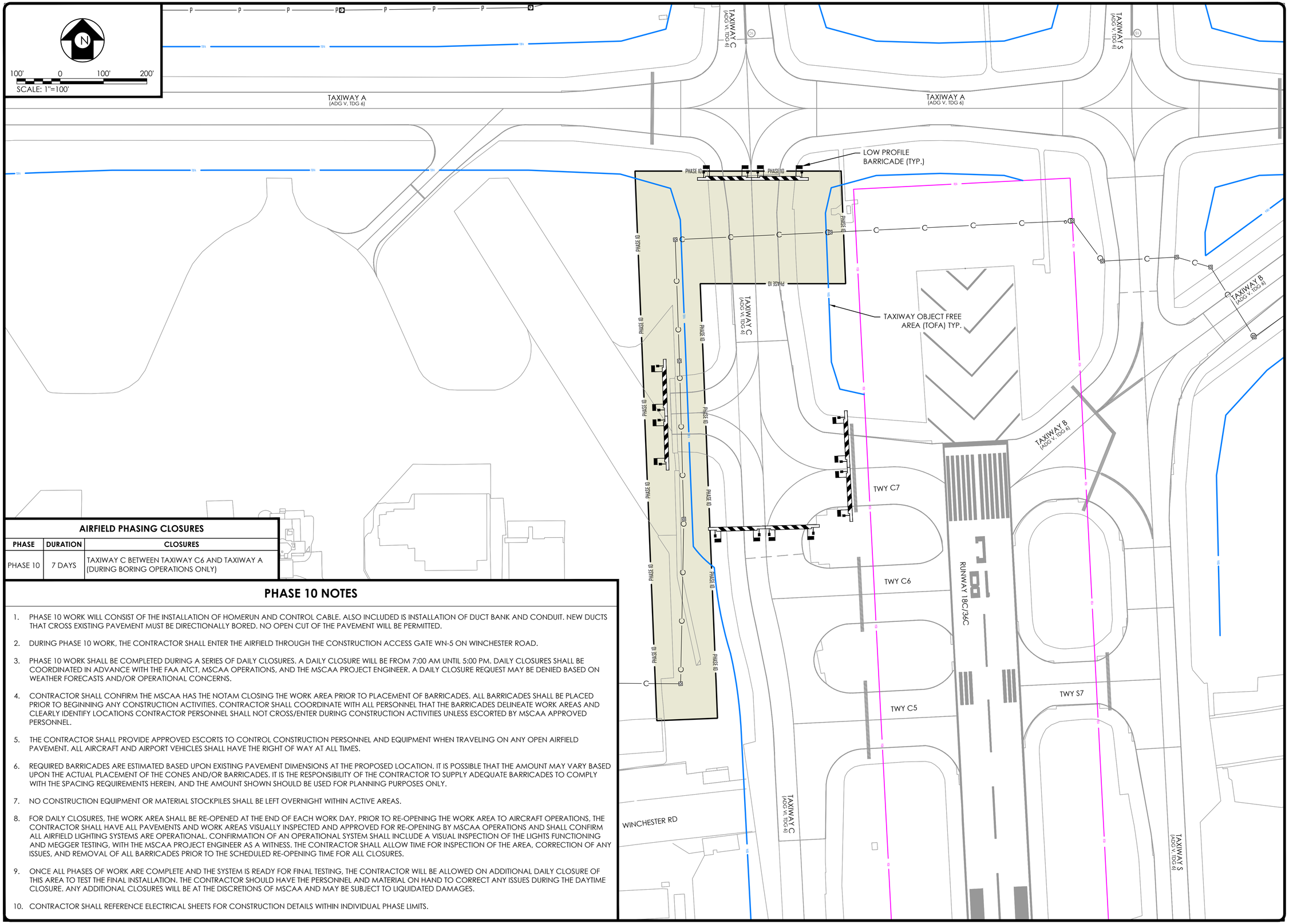

AIRFIELD PHASING CLOSURES

PHASE	DURATION	CLOSURES
PHASE 10	7 DAYS	TAXIWAY C BETWEEN TAXIWAY C6 AND TAXIWAY A (DURING BORING OPERATIONS ONLY)

PHASE 10 NOTES

1. PHASE 10 WORK WILL CONSIST OF THE INSTALLATION OF HOMERUN AND CONTROL CABLE. ALSO INCLUDED IS INSTALLATION OF DUCT BANK AND CONDUIT. NEW DUCTS THAT CROSS EXISTING PAVEMENT MUST BE DIRECTIONALLY BORED. NO OPEN CUT OF THE PAVEMENT WILL BE PERMITTED.
2. DURING PHASE 10 WORK, THE CONTRACTOR SHALL ENTER THE AIRFIELD THROUGH THE CONSTRUCTION ACCESS GATE WN-5 ON WINCHESTER ROAD.
3. PHASE 10 WORK SHALL BE COMPLETED DURING A SERIES OF DAILY CLOSURES. A DAILY CLOSURE WILL BE FROM 7:00 AM UNTIL 5:00 PM. DAILY CLOSURES SHALL BE COORDINATED IN ADVANCE WITH THE FAA ATCT, MSCAA OPERATIONS, AND THE MSCAA PROJECT ENGINEER. A DAILY CLOSURE REQUEST MAY BE DENIED BASED ON WEATHER FORECASTS AND/OR OPERATIONAL CONCERNS.
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7. NO CONSTRUCTION EQUIPMENT OR MATERIAL STOCKPILES SHALL BE LEFT OVERNIGHT WITHIN ACTIVE AREAS.
8. FOR DAILY CLOSURES, THE WORK AREA SHALL BE RE-OPENED AT THE END OF EACH WORK DAY. PRIOR TO RE-OPENING THE WORK AREA TO AIRCRAFT OPERATIONS, THE CONTRACTOR SHALL HAVE ALL PAVEMENTS AND WORK AREAS VISUALLY INSPECTED AND APPROVED FOR RE-OPENING BY MSCAA OPERATIONS AND SHALL CONFIRM ALL AIRFIELD LIGHTING SYSTEMS ARE OPERATIONAL. CONFIRMATION OF AN OPERATIONAL SYSTEM SHALL INCLUDE A VISUAL INSPECTION OF THE LIGHTS FUNCTIONING AND MEGGER TESTING, WITH THE MSCAA PROJECT ENGINEER AS A WITNESS. THE CONTRACTOR SHALL ALLOW TIME FOR INSPECTION OF THE AREA, CORRECTION OF ANY ISSUES, AND REMOVAL OF ALL BARRICADES PRIOR TO THE SCHEDULED RE-OPENING TIME FOR ALL CLOSURES.
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MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
CONSTRUCTION SAFETY AND PHASING - PHASE 10 PLAN

DWG. FILE NAME
161408-G-PH-112.DWG
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SCALE 1" = 100'

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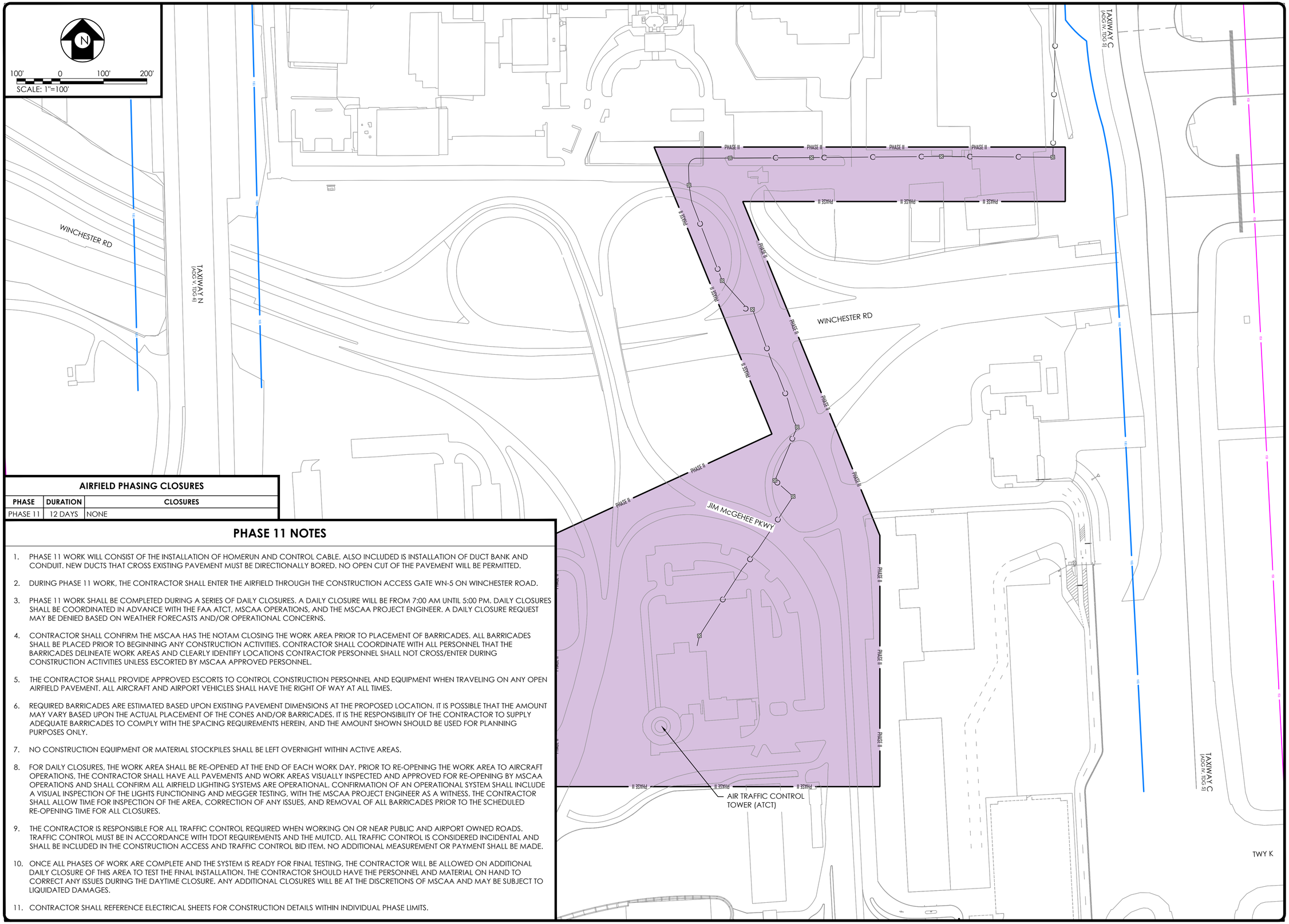

AIRFIELD PHASING CLOSURES		
PHASE	DURATION	CLOSURES
PHASE 11	12 DAYS	NONE

PHASE 11 NOTES

1. PHASE 11 WORK WILL CONSIST OF THE INSTALLATION OF HOMERUN AND CONTROL CABLE. ALSO INCLUDED IS INSTALLATION OF DUCT BANK AND CONDUIT. NEW DUCTS THAT CROSS EXISTING PAVEMENT MUST BE DIRECTIONALLY BORED. NO OPEN CUT OF THE PAVEMENT WILL BE PERMITTED.
2. DURING PHASE 11 WORK, THE CONTRACTOR SHALL ENTER THE AIRFIELD THROUGH THE CONSTRUCTION ACCESS GATE WN-5 ON WINCHESTER ROAD.
3. PHASE 11 WORK SHALL BE COMPLETED DURING A SERIES OF DAILY CLOSURES. A DAILY CLOSURE WILL BE FROM 7:00 AM UNTIL 5:00 PM. DAILY CLOSURES SHALL BE COORDINATED IN ADVANCE WITH THE FAA ATCT, MSCAA OPERATIONS, AND THE MSCAA PROJECT ENGINEER. A DAILY CLOSURE REQUEST MAY BE DENIED BASED ON WEATHER FORECASTS AND/OR OPERATIONAL CONCERNS.
4. CONTRACTOR SHALL CONFIRM THE MSCAA HAS THE NOTAM CLOSING THE WORK AREA PRIOR TO PLACEMENT OF BARRICADES. ALL BARRICADES SHALL BE PLACED PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITIES. CONTRACTOR SHALL COORDINATE WITH ALL PERSONNEL THAT THE BARRICADES DELINEATE WORK AREAS AND CLEARLY IDENTIFY LOCATIONS CONTRACTOR PERSONNEL SHALL NOT CROSS/ENTER DURING CONSTRUCTION ACTIVITIES UNLESS ESCORTED BY MSCAA APPROVED PERSONNEL.
5. THE CONTRACTOR SHALL PROVIDE APPROVED ESCORTS TO CONTROL CONSTRUCTION PERSONNEL AND EQUIPMENT WHEN TRAVELING ON ANY OPEN AIRFIELD PAVEMENT. ALL AIRCRAFT AND AIRPORT VEHICLES SHALL HAVE THE RIGHT OF WAY AT ALL TIMES.
6. REQUIRED BARRICADES ARE ESTIMATED BASED UPON EXISTING PAVEMENT DIMENSIONS AT THE PROPOSED LOCATION. IT IS POSSIBLE THAT THE AMOUNT MAY VARY BASED UPON THE ACTUAL PLACEMENT OF THE CONES AND/OR BARRICADES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SUPPLY ADEQUATE BARRICADES TO COMPLY WITH THE SPACING REQUIREMENTS HEREIN, AND THE AMOUNT SHOWN SHOULD BE USED FOR PLANNING PURPOSES ONLY.
7. NO CONSTRUCTION EQUIPMENT OR MATERIAL STOCKPILES SHALL BE LEFT OVERNIGHT WITHIN ACTIVE AREAS.
8. FOR DAILY CLOSURES, THE WORK AREA SHALL BE RE-OPENED AT THE END OF EACH WORK DAY. PRIOR TO RE-OPENING THE WORK AREA TO AIRCRAFT OPERATIONS, THE CONTRACTOR SHALL HAVE ALL PAVEMENTS AND WORK AREAS VISUALLY INSPECTED AND APPROVED FOR RE-OPENING BY MSCAA OPERATIONS AND SHALL CONFIRM ALL AIRFIELD LIGHTING SYSTEMS ARE OPERATIONAL. CONFIRMATION OF AN OPERATIONAL SYSTEM SHALL INCLUDE A VISUAL INSPECTION OF THE LIGHTS FUNCTIONING AND MEGGER TESTING, WITH THE MSCAA PROJECT ENGINEER AS A WITNESS. THE CONTRACTOR SHALL ALLOW TIME FOR INSPECTION OF THE AREA, CORRECTION OF ANY ISSUES, AND REMOVAL OF ALL BARRICADES PRIOR TO THE SCHEDULED RE-OPENING TIME FOR ALL CLOSURES.
9. THE CONTRACTOR IS RESPONSIBLE FOR ALL TRAFFIC CONTROL REQUIRED WHEN WORKING ON OR NEAR PUBLIC AND AIRPORT OWNED ROADS. TRAFFIC CONTROL MUST BE IN ACCORDANCE WITH TDOT REQUIREMENTS AND THE MUTCD. ALL TRAFFIC CONTROL IS CONSIDERED INCIDENTAL AND SHALL BE INCLUDED IN THE CONSTRUCTION ACCESS AND TRAFFIC CONTROL BID ITEM. NO ADDITIONAL MEASUREMENT OR PAYMENT SHALL BE MADE.
10. ONCE ALL PHASES OF WORK ARE COMPLETE AND THE SYSTEM IS READY FOR FINAL TESTING, THE CONTRACTOR WILL BE ALLOWED ON ADDITIONAL DAILY CLOSURE OF THIS AREA TO TEST THE FINAL INSTALLATION. THE CONTRACTOR SHOULD HAVE THE PERSONNEL AND MATERIAL ON HAND TO CORRECT ANY ISSUES DURING THE DAYTIME CLOSURE. ANY ADDITIONAL CLOSURES WILL BE AT THE DISCRETIONS OF MSCAA AND MAY BE SUBJECT TO LIQUIDATED DAMAGES.
11. CONTRACTOR SHALL REFERENCE ELECTRICAL SHEETS FOR CONSTRUCTION DETAILS WITHIN INDIVIDUAL PHASE LIMITS.

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23M302.00

REVISIONS

MARK	DATE	DESCRIPTION
0	12/11/2025	ISSUED FOR BID

MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
CONSTRUCTION SAFETY AND PHASING - PHASE 11 PLAN

DWG. FILE NAME
161408-G-PH-113.DWG

DATE
12/11/2025

SHEET NO.
G-PH-113

SCALE
1" = 100'

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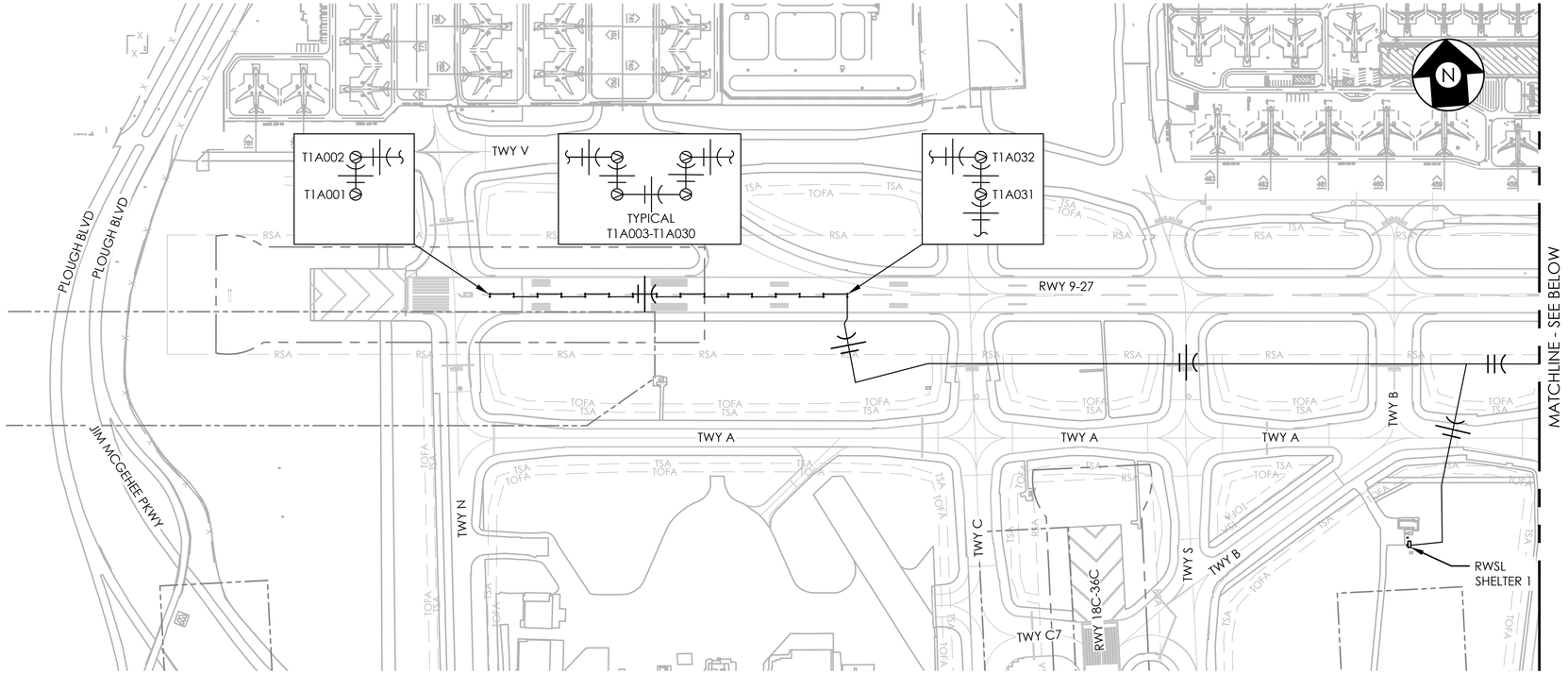

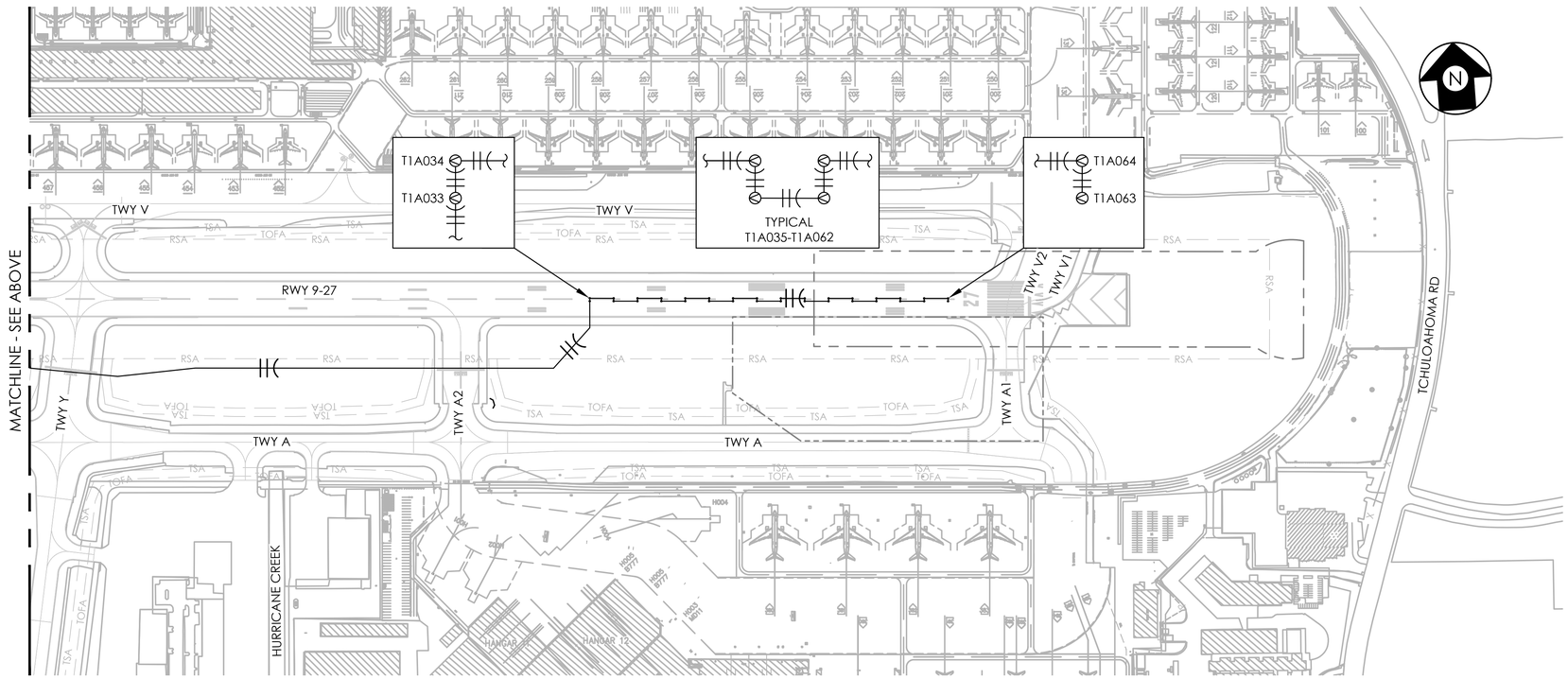

CIRCUIT OVERVIEW - T1A
SCALE: 1" = 300'

LEGEND:

(2) - RED L-824 CONDUCTORS
(1) - SOLID #6 THHW GREEN GROUND WIRE

(1) - RED L-824 CONDUCTOR
(1) - BLACK L-824 CONDUCTOR
(1) - SOLID #6 THHW GREEN GROUND WIRE

PROPOSED T1A CIRCUIT DATA	
CIRCUIT LENGTH -RED L-824 CONDUCTOR -BLACK L-824 CONDUCTOR	22,610 FEET 16,390 FEET 6,220 FEET
NUMBER OF FIXTURES	64
FIXTURE ID'S	T1A001 THRU T1A064

300' 0 300' 600'
SCALE: 1"=300'

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12/11/2025

ENGINEER—SUBCONSULTANT

JOB NO.

REVISIONS

MARK	DATE	DESCRIPTION
0	12/11/2025	ISSUED FOR BID

MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
CIRCUIT OVERVIEW - T1A

DWG. FILE NAME
161408-E-PV-001.DWG
DATE 12/11/2025
SCALE 1" = 300'
SHEET NO. E-PV-001

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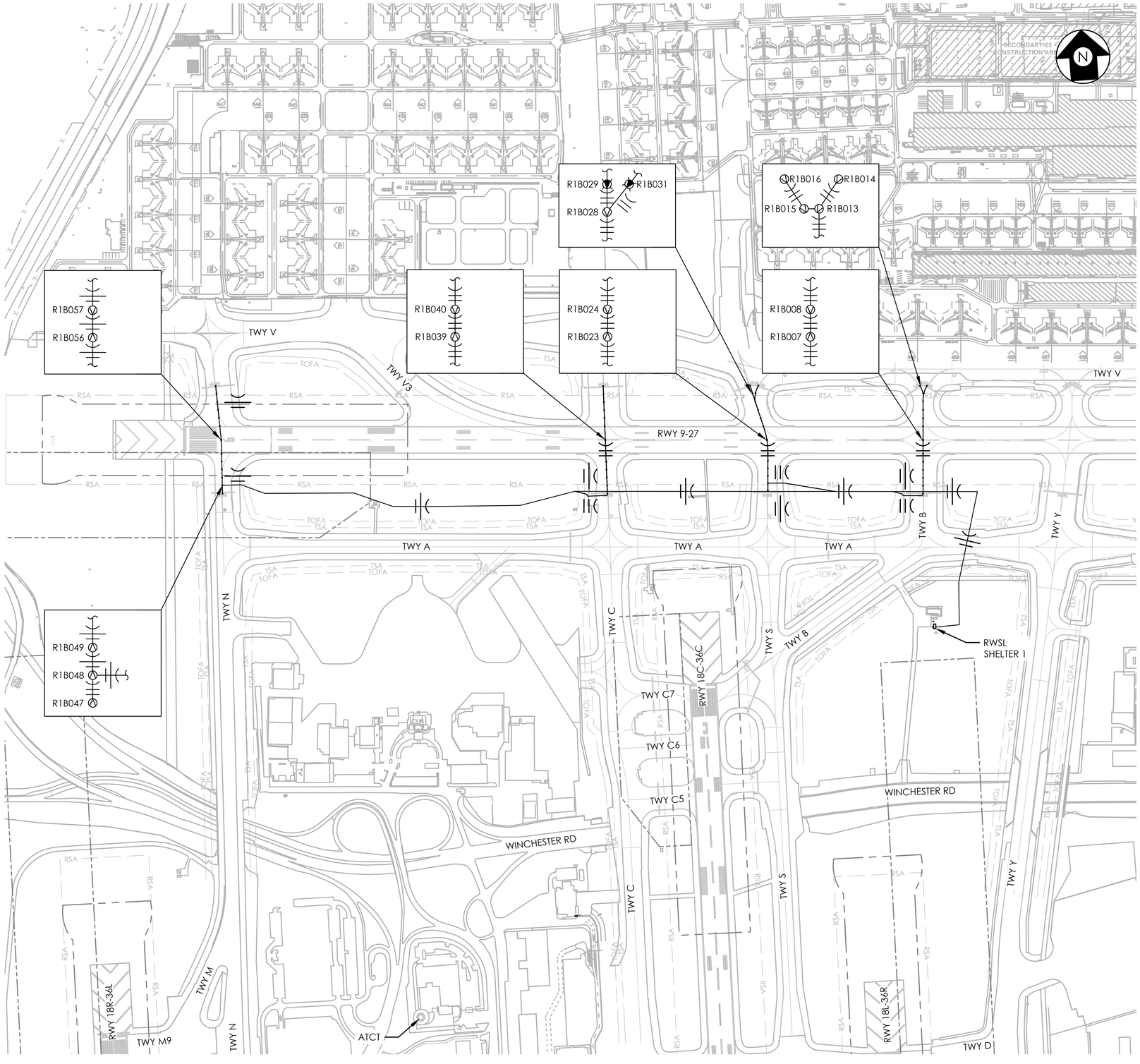

CIRCUIT OVERVIEW - R1B
SCALE: 1" = 300'

LEGEND:

(2) - RED L-824 CONDUCTORS
(1) - SOLID #6 THHW GREEN GROUND WIRE

(1) - RED L-824 CONDUCTOR
(1) - BLACK L-824 CONDUCTOR
(1) - SOLID #6 THHW GREEN GROUND WIRE

PROPOSED R1B CIRCUIT DATA	
CIRCUIT LENGTH -RED L-824 CONDUCTOR -BLACK L-824 CONDUCTOR	19,180 FEET 12,660 FEET 6,520 FEET
NUMBER OF FIXTURES	60
FIXTURE ID'S	R1B001 THRU R1B060

300' 0 300' 600'
SCALE: 1"=300'

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12/11/2025

ENGINEER—SUBCONSULTANT

JOB NO.

REVISIONS

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MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
CIRCUIT OVERVIEW - R1B

DWG. FILE NAME
161408-E-PV-002.DWG
DATE 12/11/2025
SCALE 1" = 300'
SHEET NO. E-PV-002

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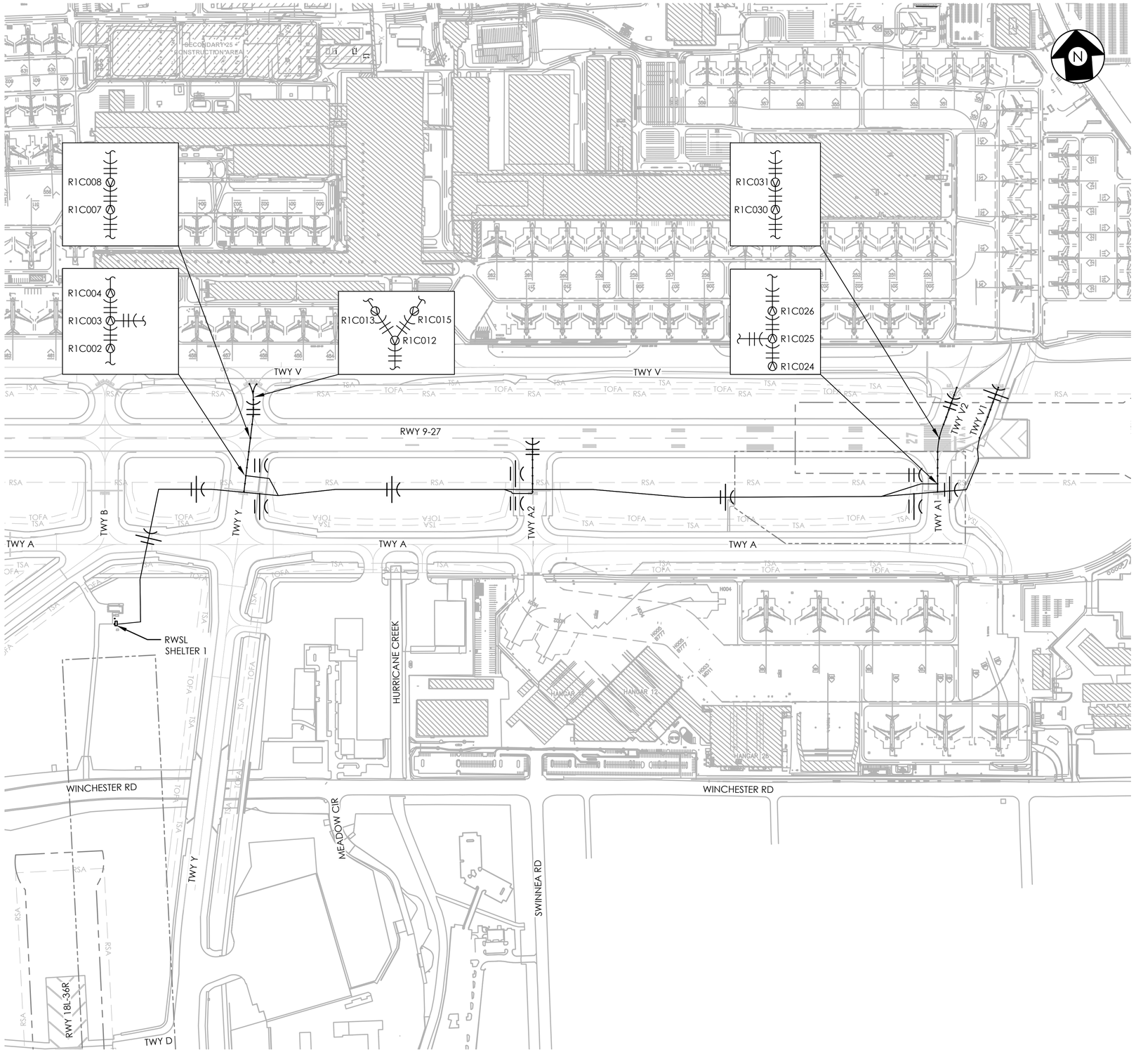

CIRCUIT OVERVIEW - R1C
SCALE: 1" = 300'

LEGEND:

(2) - RED L-824 CONDUCTORS
(1) - SOLID #6 THHW GREEN GROUND WIRE

(1) - RED L-824 CONDUCTOR
(1) - BLACK L-824 CONDUCTOR
(1) - SOLID #6 THHW GREEN GROUND WIRE

PROPOSED R1C CIRCUIT DATA	
CIRCUIT LENGTH -RED L-824 CONDUCTOR -BLACK L-824 CONDUCTOR	18,970 FEET 12,130 FEET 6,840 FEET
NUMBER OF FIXTURES	44
FIXTURE ID'S	R1C001 THRU R1C044

300' 0 300' 600'
SCALE: 1"=300'

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12/11/2025

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JOB NO.

REVISIONS

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MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
CIRCUIT OVERVIEW - R1C

DWG. FILE NAME
161408-E-PV-003.DWG
DATE 12/11/2025
SCALE 1" = 300'
SHEET NO. E-PV-003

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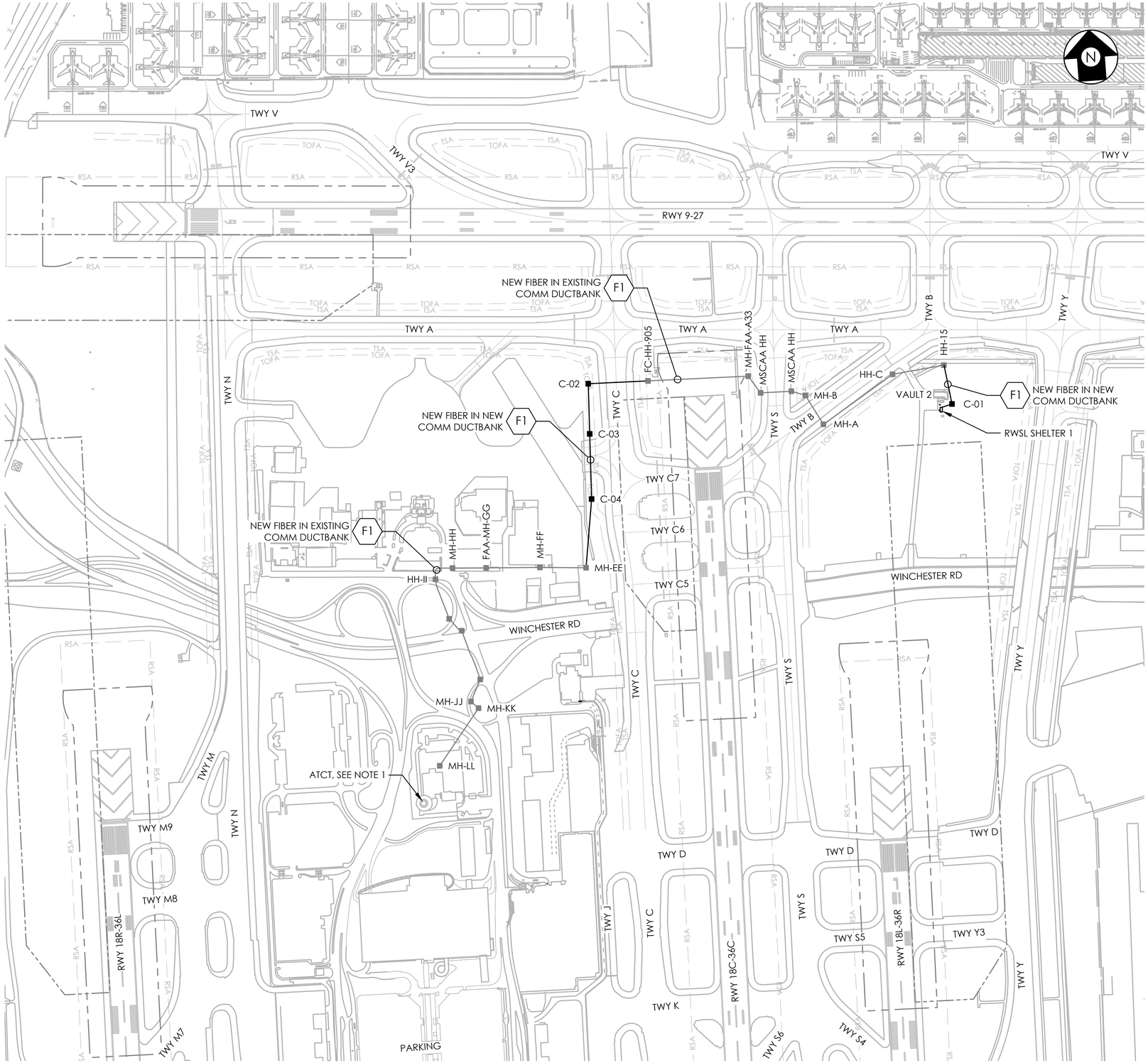

COMMUNICATION OVERVIEW
SCALE: 1" = 300'

GENERAL NOTES:

1. ALL FIBER SHOWN ON THIS DRAWING IS "F1". SEE DRAWING E-SP-301 FOR INSTALLATION AT RWSL SHELTER 1 AND DRAWING E-EL-501 FOR COMM SCHEDULE AND INSTALLATION AT ATCT.
2. ALL FIBER OPTIC PULLS ARE TO BE MADE PER THE CONTRACTOR'S SUBMITTED AND APPROVED PULLING PLAN.
3. ALL MANHOLES AND HANDHOLES SHOWN ARE EXISTING, UNLESS OTHERWISE NOTED.
4. THE CONTRACTOR SHALL SURVEY THE ENTIRE PROPOSED FIBER ROUTE PRIOR TO THE PULLING PLAN BEING SUBMITTED AND ANY FIBER BEING INSTALLED. ANY CHANGES IN THE PROPOSED ROUTE SHALL BE REVIEWED AND APPROVED BY THE ENGINEER PRIOR TO ITS INCLUSION IN THE PULLING PLAN.
5. CONTRACTOR TO COORDINATE WITH RESIDENT PROJECT REPRESENTATIVE (RPR) FOR ACCESS TO FAA PROPERTY AND FACILITIES.

LEGEND:

F1 — 1-24 STRAND SINGLE-MODE (SM) FIBER OPTIC CABLE, PULLED BETWEEN RWSL FLS SHELTER 1 AND ATCT.

COMMUNICATION CABLE SCHEDULE

ITEM	DESCRIPTION	LENGTH
F1	1-24 STRAND SINGLE MODE (SM) FIBER OPTIC CABLE (PRYSMIAN P/N FAACD-12-HB-024-E3 OR APPROVED EQUAL)	6,570'

300' 0 300' 600'
SCALE: 1"=300'

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12/11/2025

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MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
COMMUNICATION OVERVIEW

DWG. FILE NAME
161408-E-PV-004.DWG

DATE 12/11/2025
SCALE 1" = 300'
SHEET NO. E-PV-004

December 10, 2025 c:\cadd\lb\pw\pwwestcoast\kmills\d0273326\161408-E-PV-004.dwg

SYSTEM LAYOUT PLAN OVERVIEW
SCALE: 1" = 400'

400' 0 400' 800'
SCALE: 1"=400'

December 10, 2025 c:\caddlib\pw\pwwestcoast\kmills\d0273326\161408-E-SP-100.dwg

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MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

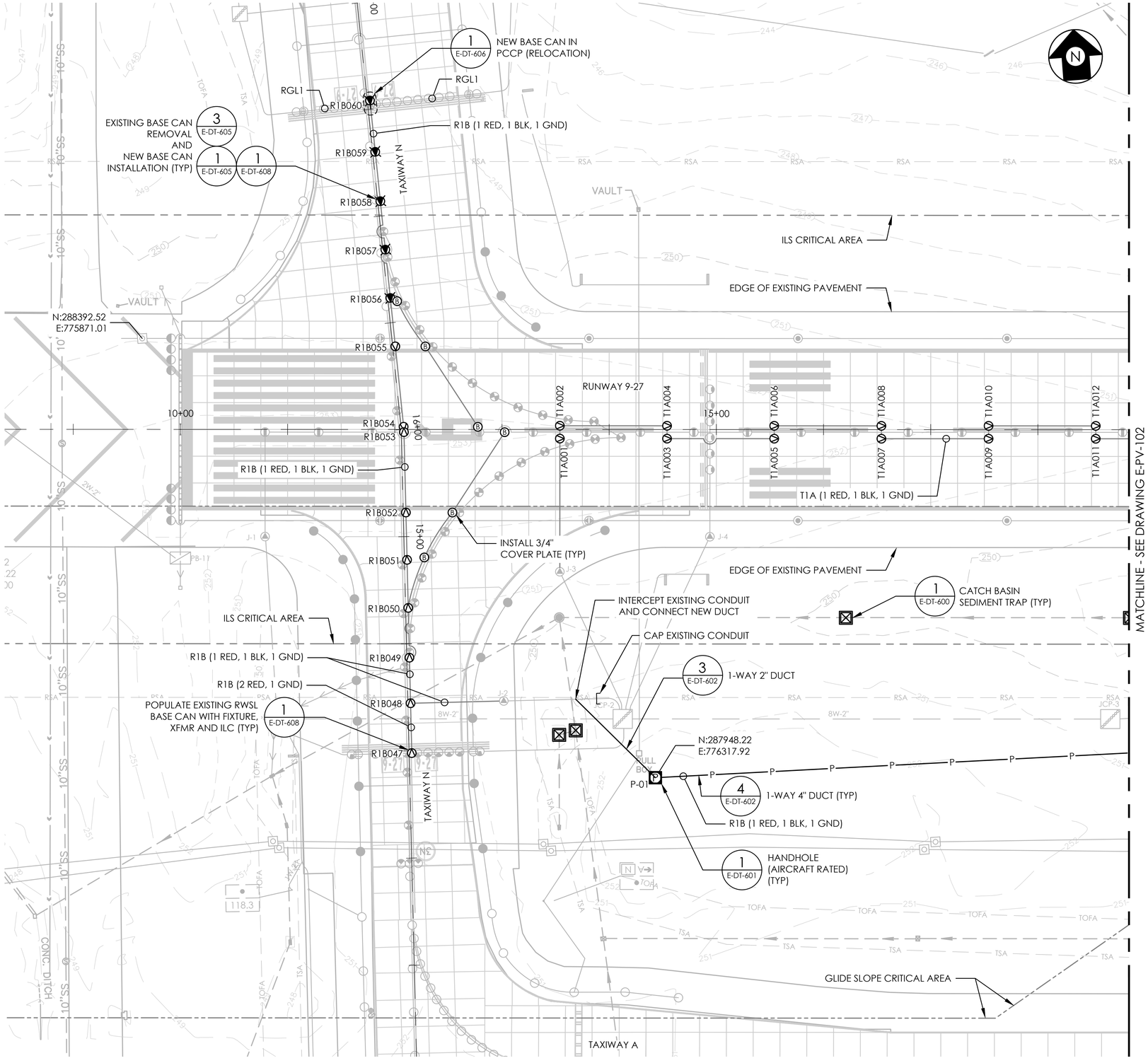
SHEET TITLE:
SYSTEM LAYOUT PLAN OVERVIEW

DWG. FILE NAME
161408-E-SP-100.DWG

DATE
12/11/2025

SHEET NO.
E-SP-100

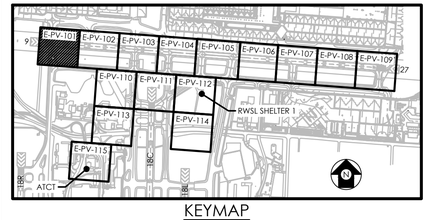
SCALE
1" = 400'



SYSTEM LAYOUT PLAN
SCALE: 1" = 50'

GENERAL NOTES:

1. THE MAXIMUM WIDTH OF THE DUCTBANK TRENCH DISTURBANCE SHALL BE 10 FEET EACH SIDE OF THE DUCTBANK. THE CONTRACTOR IS RESPONSIBLE FOR FURNISHING AND INSTALLING TRENCH SHORING AS NECESSARY TO MAINTAIN SAFETY IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL SAFETY CODES.
2. TYPE AND LOCATION OF EXISTING UTILITIES SHOWN HERE ARE BASED ON THE BEST AVAILABLE INFORMATION. UTILITIES MAY BE DIFFERENT FROM SHOWN, AND SOME EXISTING UTILITIES MAY NOT BE SHOWN. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UTILITIES THAT ARE WITHIN THE PROJECT AREA.
3. EXISTING UTILITIES IN THE PROJECT AREA INCLUDE CRITICAL WATER, SANITARY SEWER, STORM DRAINAGE, NATURAL GAS, POWER, FUEL AND COMMUNICATIONS SYSTEMS. THE CONTRACTOR SHALL PROTECT AND MAINTAIN ALL EXISTING UTILITIES NOT SHOWN TO BE REMOVED OR OTHERWISE MODIFIED.
4. IN AREAS OF OPEN TRENCHING, CAREFULLY HAND DIG AROUND EXISTING UTILITIES TO EXPOSE THE UTILITIES, THEN ADEQUATELY SUPPORT UTILITIES WHILE THE TRENCH IS EXCAVATED AND THROUGHOUT THE DURATION OF CONSTRUCTION.
5. ALL UTILITIES, NOT SHOWN TO BE REMOVED, THAT ARE DAMAGED BY THE CONTRACTOR SHALL BE REPLACED TO ITS ORIGINAL CONDITION IMMEDIATELY BY THE CONTRACTOR, TO THE ENGINEER'S SATISFACTION, AT THE CONTRACTOR'S OWN EXPENSE.
6. ALL PROPOSED CONDUIT UNDER OR WITHIN 10' OF EXISTING PAVEMENTS SHALL BE HDPE, AND SHALL BE INSTALLED BY HORIZONTAL DIRECTIONAL DRILLING, UNLESS OTHERWISE NOTED. SEE DETAIL 1, DRAWING E-DT-604 FOR TYPICAL TAXIWAY CONNECTOR SECTION.
7. HANDHOLE COORDINATES ARE TO THE CENTER OF THE HANDHOLE.
8. THE CONTRACTOR SHALL CLEAN AND TRANSPORT ALL COVER PLATES REMOVED FROM EXISTING BASE CANS TO DESIGNATED AIRPORT MAINTENANCE STORAGE AREA.
9. EXISTING AIRFIELD CIRCUIT IDENTIFICATION IS BASED ON BEST INFORMATION AVAILABLE. CONTRACTOR SHALL NOTIFY AIRPORT OF ANY DISCREPANCIES.



KEYMAP

50' 0 50' 100'
SCALE: 1"=50'

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REVISIONS

MARK	DATE	DESCRIPTION
0	12/11/2025	ISSUED FOR BID

MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
SYSTEM LAYOUT PLAN

DWG. FILE NAME
161408-E-PV-101.DWG

DATE
12/11/2025

SHEET NO.
E-PV-101

SCALE
1" = 50'

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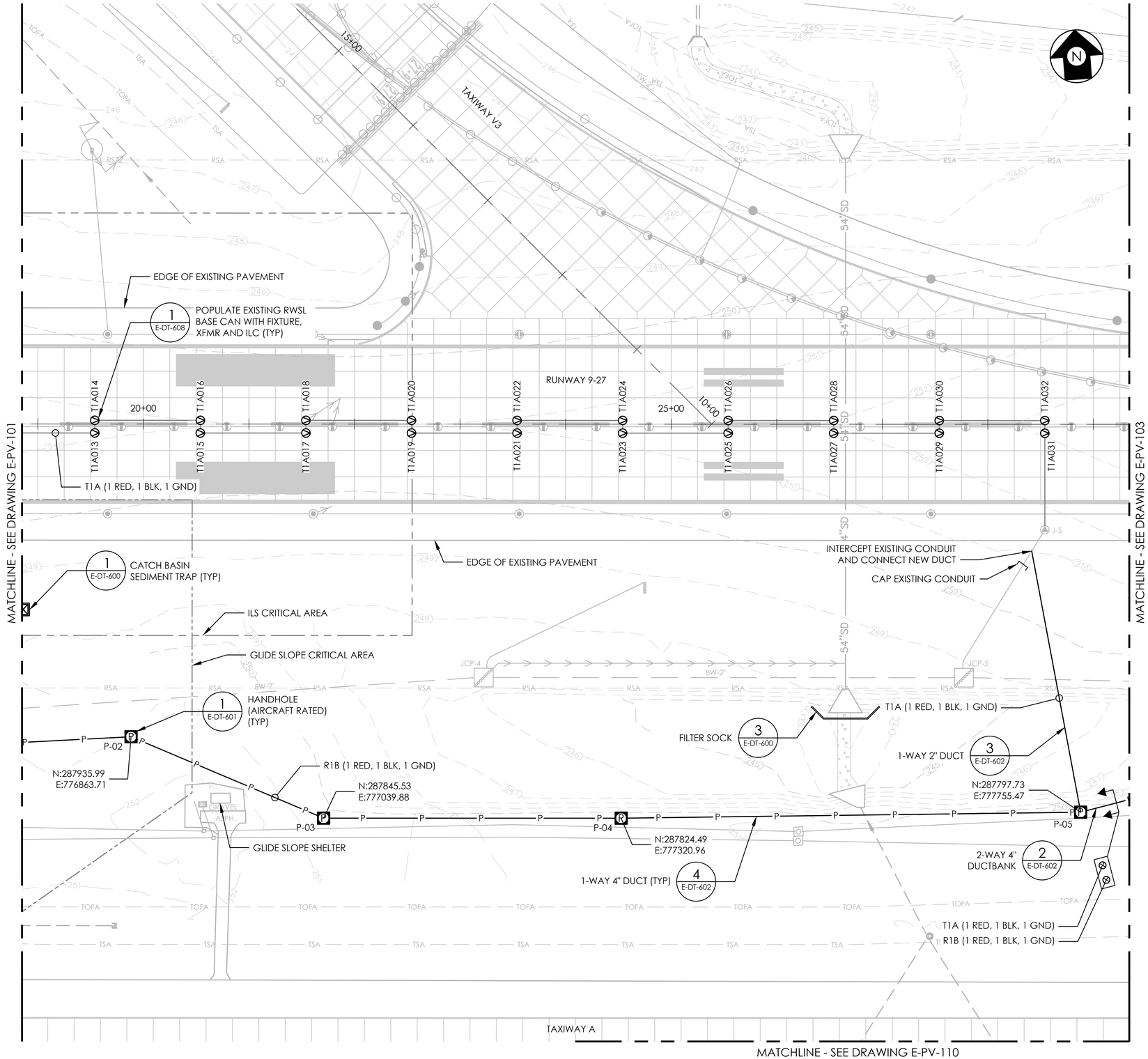

SYSTEM LAYOUT PLAN
SCALE: 1" = 50'

GENERAL NOTES:

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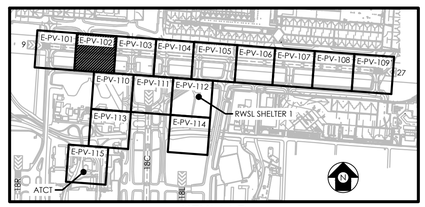

KEYMAP

50' 0 50' 100'
SCALE: 1"=50'

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JOB NO.

REVISIONS

MARK	DATE	DESCRIPTION
0	12/11/2025	ISSUED FOR BID

MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
SYSTEM LAYOUT PLAN

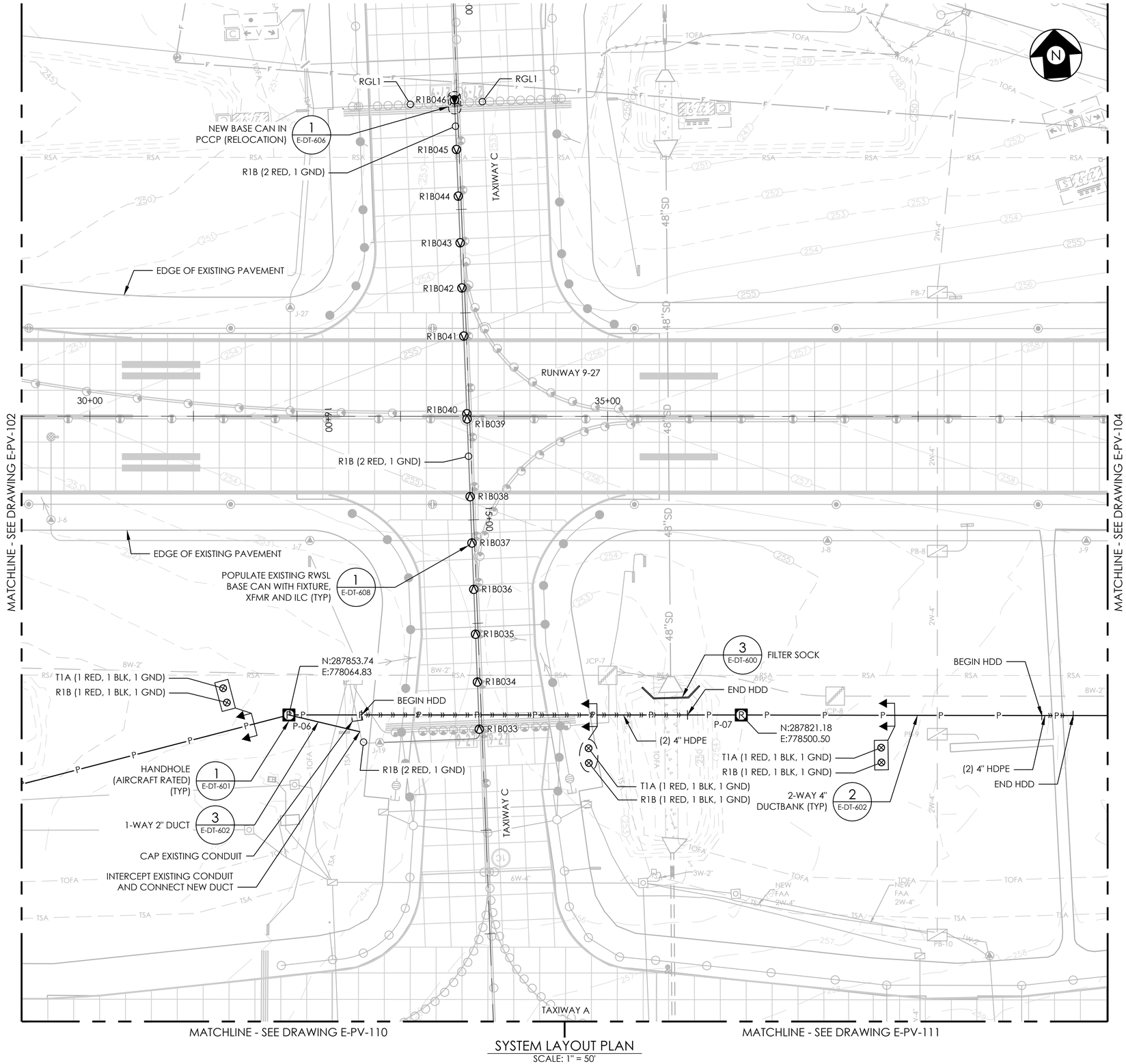
DWG. FILE NAME
161408-E-PV-102.DWG

DATE
12/11/2025

SCALE
1" = 50'

SHEET NO.
E-PV-102

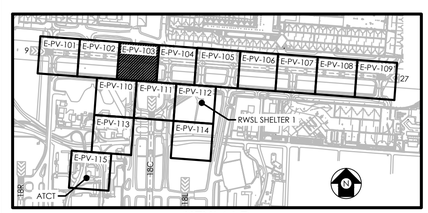
December 10, 2025 c:\caddlib\pw\pwwestcoast\kmills\d0273326\161408-E-PV-102.dwg



SYSTEM LAYOUT PLAN
SCALE: 1" = 50'

GENERAL NOTES:

1. THE MAXIMUM WIDTH OF THE DUCTBANK TRENCH DISTURBANCE SHALL BE 10 FEET EACH SIDE OF THE DUCTBANK. THE CONTRACTOR IS RESPONSIBLE FOR FURNISHING AND INSTALLING TRENCH SHORING AS NECESSARY TO MAINTAIN SAFETY IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL SAFETY CODES.
2. TYPE AND LOCATION OF EXISTING UTILITIES SHOWN HERE ARE BASED ON THE BEST AVAILABLE INFORMATION. UTILITIES MAY BE DIFFERENT FROM SHOWN, AND SOME EXISTING UTILITIES MAY NOT BE SHOWN. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UTILITIES THAT ARE WITHIN THE PROJECT AREA.
3. EXISTING UTILITIES IN THE PROJECT AREA INCLUDE CRITICAL WATER, SANITARY SEWER, STORM DRAINAGE, NATURAL GAS, POWER, FUEL AND COMMUNICATIONS SYSTEMS. THE CONTRACTOR SHALL PROTECT AND MAINTAIN ALL EXISTING UTILITIES NOT SHOWN TO BE REMOVED OR OTHERWISE MODIFIED.
4. IN AREAS OF OPEN TRENCHING, CAREFULLY HAND DIG AROUND EXISTING UTILITIES TO EXPOSE THE UTILITIES, THEN ADEQUATELY SUPPORT UTILITIES WHILE THE TRENCH IS EXCAVATED AND THROUGHOUT THE DURATION OF CONSTRUCTION.
5. ALL UTILITIES, NOT SHOWN TO BE REMOVED, THAT ARE DAMAGED BY THE CONTRACTOR SHALL BE REPLACED TO ITS ORIGINAL CONDITION IMMEDIATELY BY THE CONTRACTOR, TO THE ENGINEER'S SATISFACTION, AT THE CONTRACTOR'S OWN EXPENSE.
6. ALL PROPOSED CONDUIT UNDER OR WITHIN 10' OF EXISTING PAVEMENTS SHALL BE HDPE, AND SHALL BE INSTALLED BY HORIZONTAL DIRECTIONAL DRILLING, UNLESS OTHERWISE NOTED. SEE DETAIL 1, DRAWING E-DT-604 FOR TYPICAL TAXIWAY CONNECTOR SECTION.
7. HANDHOLE COORDINATES ARE TO THE CENTER OF THE HANDHOLE.
8. THE CONTRACTOR SHALL CLEAN AND TRANSPORT ALL COVER PLATES REMOVED FROM EXISTING BASE CANS TO DESIGNATED AIRPORT MAINTENANCE STORAGE AREA.
9. EXISTING AIRFIELD CIRCUIT IDENTIFICATION IS BASED ON BEST INFORMATION AVAILABLE. CONTRACTOR SHALL NOTIFY AIRPORT OF ANY DISCREPANCIES.



KEYMAP

50' 0 50' 100'
SCALE: 1"=50'

TAKE OF WITH US Memphis INTERNATIONAL AIRPORT

PROGRAM MANAGER
PARSONS
Program Management Consultant
Parsons Transportation Group Inc.
Project Office:
4225 Airways Blvd.
Memphis TN, 38116

ENGINEER
HNTB
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WWW.HNTB.COM

JOB NO.
85091

DRAWN BY: KLM
CHECKED BY: CTX
APPROVED BY: CBD

CHARLES B. DEMONT
REGISTERED ENGINEER
AGRICULTURE
NO. 115628
STATE OF TENNESSEE
12/11/2025

ENGINEER—SUBCONSULTANT

JOB NO.

REVISIONS

MARK	DATE	DESCRIPTION
0	12/11/2025	ISSUED FOR BID

MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
SYSTEM LAYOUT PLAN

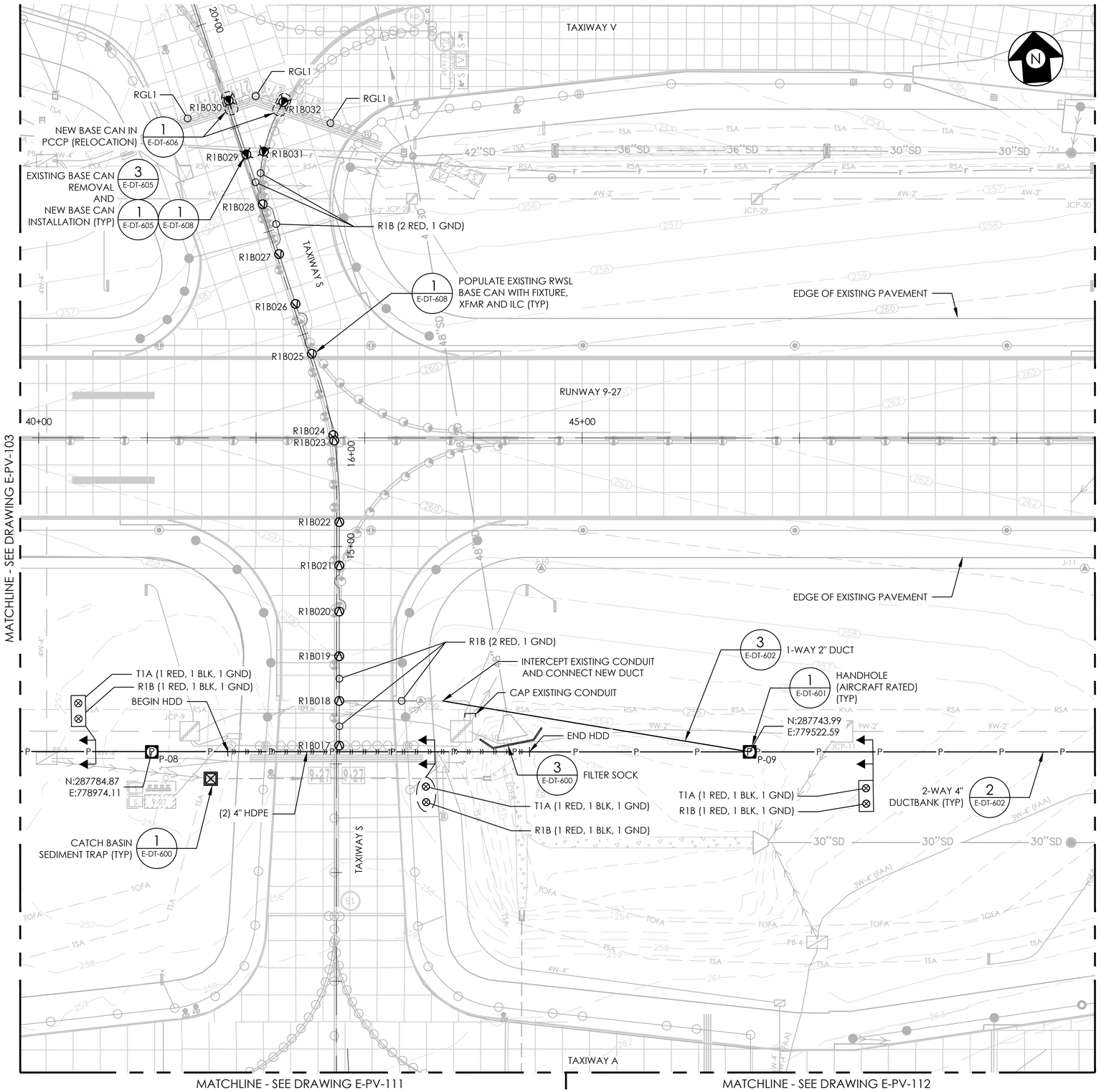
DWG. FILE NAME
161408-E-PV-103.DWG

DATE
12/11/2025

SHEET NO.
E-PV-103

SCALE
1" = 50'

December 10, 2025 c:\coddlib\pw\pwwestcoast\kmills\d0273326\161408-E-PV-103.dwg



SYSTEM LAYOUT PLAN
SCALE: 1" = 50'

GENERAL NOTES:

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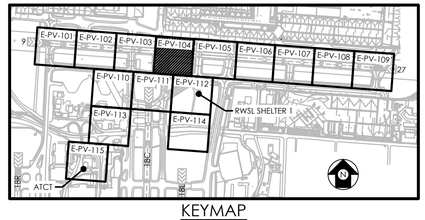
6. ALL PROPOSED CONDUIT UNDER OR WITHIN 10' OF EXISTING PAVEMENTS SHALL BE HDPE, AND SHALL BE INSTALLED BY HORIZONTAL DIRECTIONAL DRILLING, UNLESS OTHERWISE NOTED. SEE DETAIL 1, DRAWING E-DT-604 FOR TYPICAL TAXIWAY CONNECTOR SECTION.
7. HANDHOLE COORDINATES ARE TO THE CENTER OF THE HANDHOLE.
8. THE CONTRACTOR SHALL CLEAN AND TRANSPORT ALL COVER PLATES REMOVED FROM EXISTING BASE CANS TO DESIGNATED AIRPORT MAINTENANCE STORAGE AREA.
9. EXISTING AIRFIELD CIRCUIT IDENTIFICATION IS BASED ON BEST INFORMATION AVAILABLE. CONTRACTOR SHALL NOTIFY AIRPORT OF ANY DISCREPANCIES.



KEYMAP

50' 0 50' 100'
SCALE: 1"=50'

TAKE OF WITH US Memphis INTERNATIONAL AIRPORT

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JOB NO.
85091

DRAWN BY: KLM
CHECKED BY: CTX
APPROVED BY: CBD

CHARLES B. DEMONT
REGISTERED ENGINEER
AGRICULTURE
No. 115626
STATE OF TENNESSEE
12/11/2025

ENGINEER–SUBCONSULTANT

JOB NO.

REVISIONS

MARK	DATE	DESCRIPTION
0	12/11/2025	ISSUED FOR BID

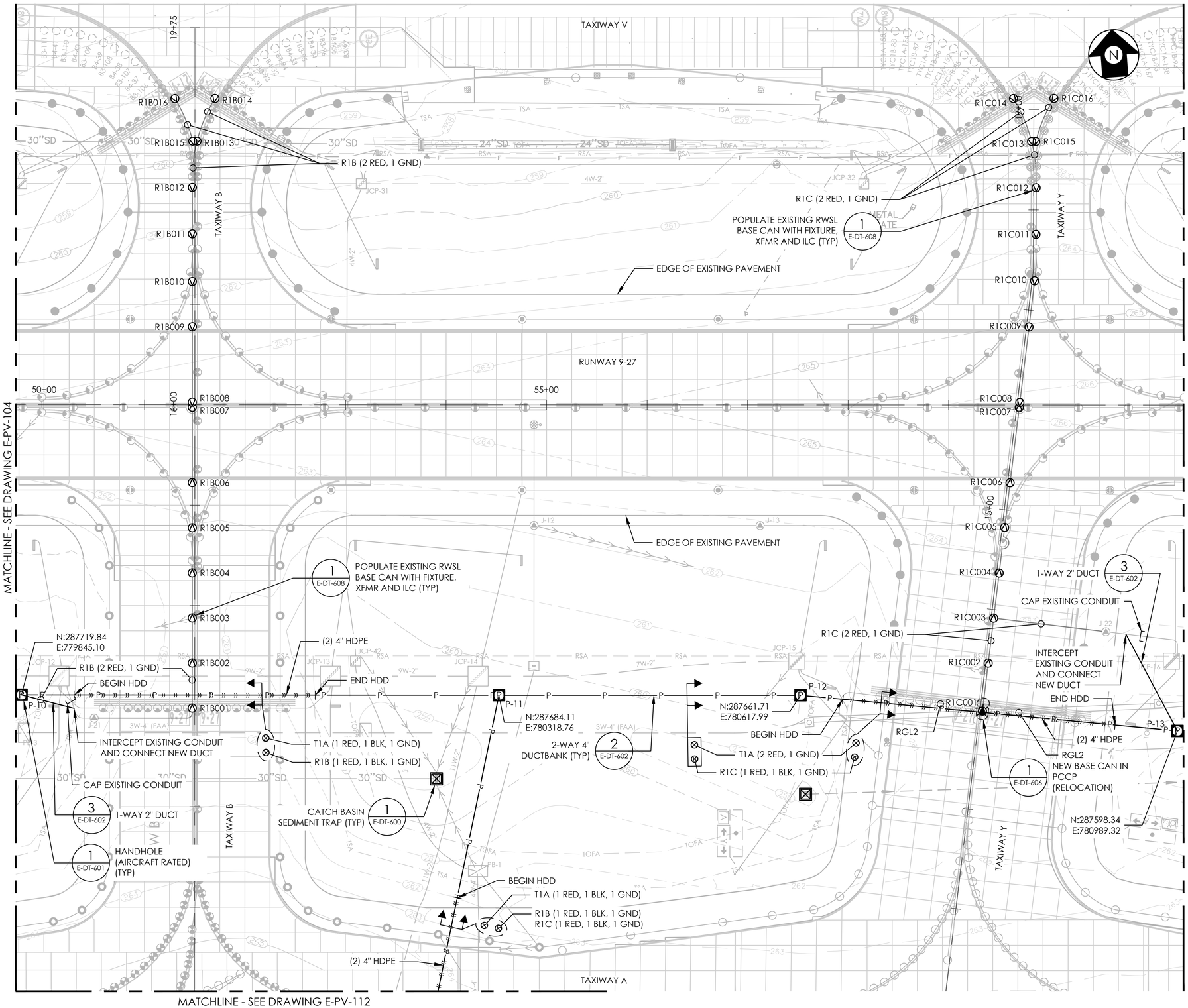
MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
SYSTEM LAYOUT PLAN

DWG. FILE NAME
161408-E-PV-104.DWG
DATE 12/11/2025
SCALE 1" = 50'
SHEET NO. E-PV-104

December 10, 2025 c:\coddlib\pw\pwwestcoast\kmilk\d027332k\161408-E-PV-104.dwg



SYSTEM LAYOUT PLAN
SCALE: 1" = 50'

GENERAL NOTES:

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8. THE CONTRACTOR SHALL CLEAN AND TRANSPORT ALL COVER PLATES REMOVED FROM EXISTING BASE CANS TO DESIGNATED AIRPORT MAINTENANCE STORAGE AREA.
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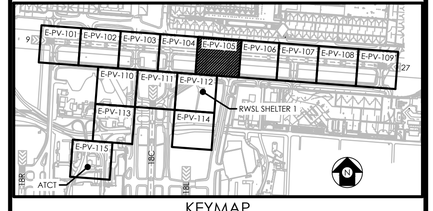

KEYMAP

50' 0 50' 100'
SCALE: 1"=50'

TAKE OF WITH US
Memphis INTERNATIONAL AIRPORT

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85091

DRAWN BY: KLM
CHECKED BY: CTX
APPROVED BY: CBD

CHARLES B. DEDMON
REGISTERED ENGINEER
AGRICULTURE
NUMBER 115628
STATE OF TENNESSEE
12/11/2025

ENGINEER–SUBCONSULTANT

JOB NO.

REVISIONS

MARK	DATE	DESCRIPTION
0	12/11/2025	ISSUED FOR BID

MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
SYSTEM LAYOUT PLAN

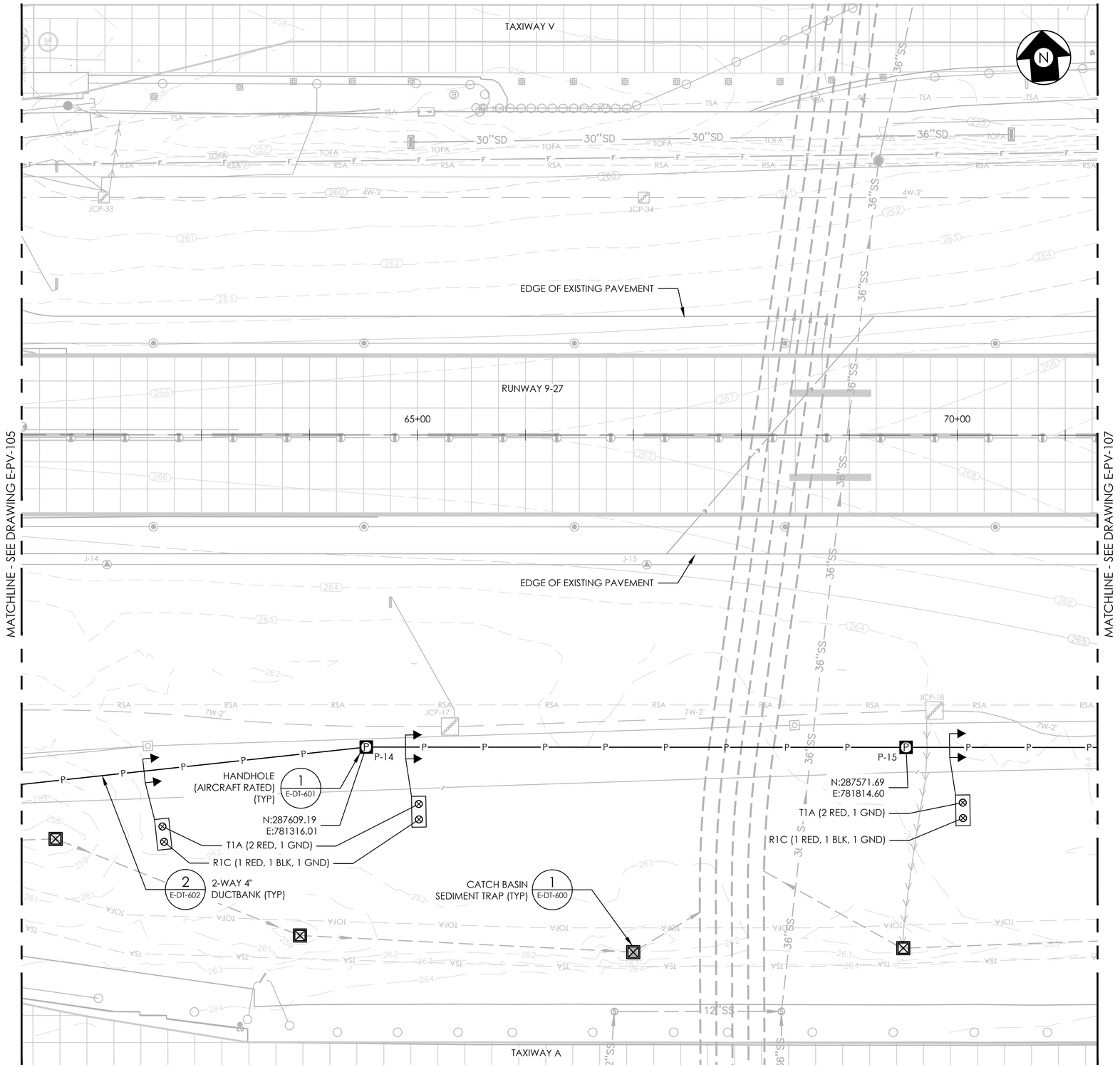
DWG. FILE NAME
161408-E-PV-105.DWG

DATE
12/11/2025

SCALE
1" = 50'

SHEET NO.
E-PV-105

December 10, 2025 c:\coddlib\pw\pwwestcoast\kmills\d0273326\161408-E-PV-105.dwg



SYSTEM LAYOUT PLAN
SCALE: 1" = 50'

GENERAL NOTES:

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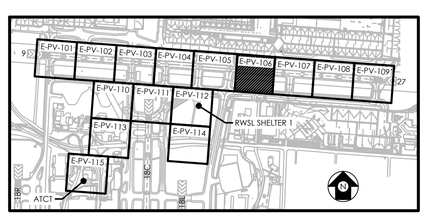

KEYMAP

50' 0 50' 100'
SCALE: 1"=50'

TAKE OFF WITH US
Memphis INTERNATIONAL AIRPORT

PROGRAM MANAGER
PARSONS
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JOB NO.
85091

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CHECKED BY: CTX
APPROVED BY: CBD

CHARLES B. DEDMON
REGISTERED ENGINEER
AGRICULTURE
STATE OF TENNESSEE
12/11/2025

ENGINEER—SUBCONSULTANT

JOB NO.

REVISIONS

MARK	DATE	DESCRIPTION
0	12/11/2025	ISSUED FOR BID

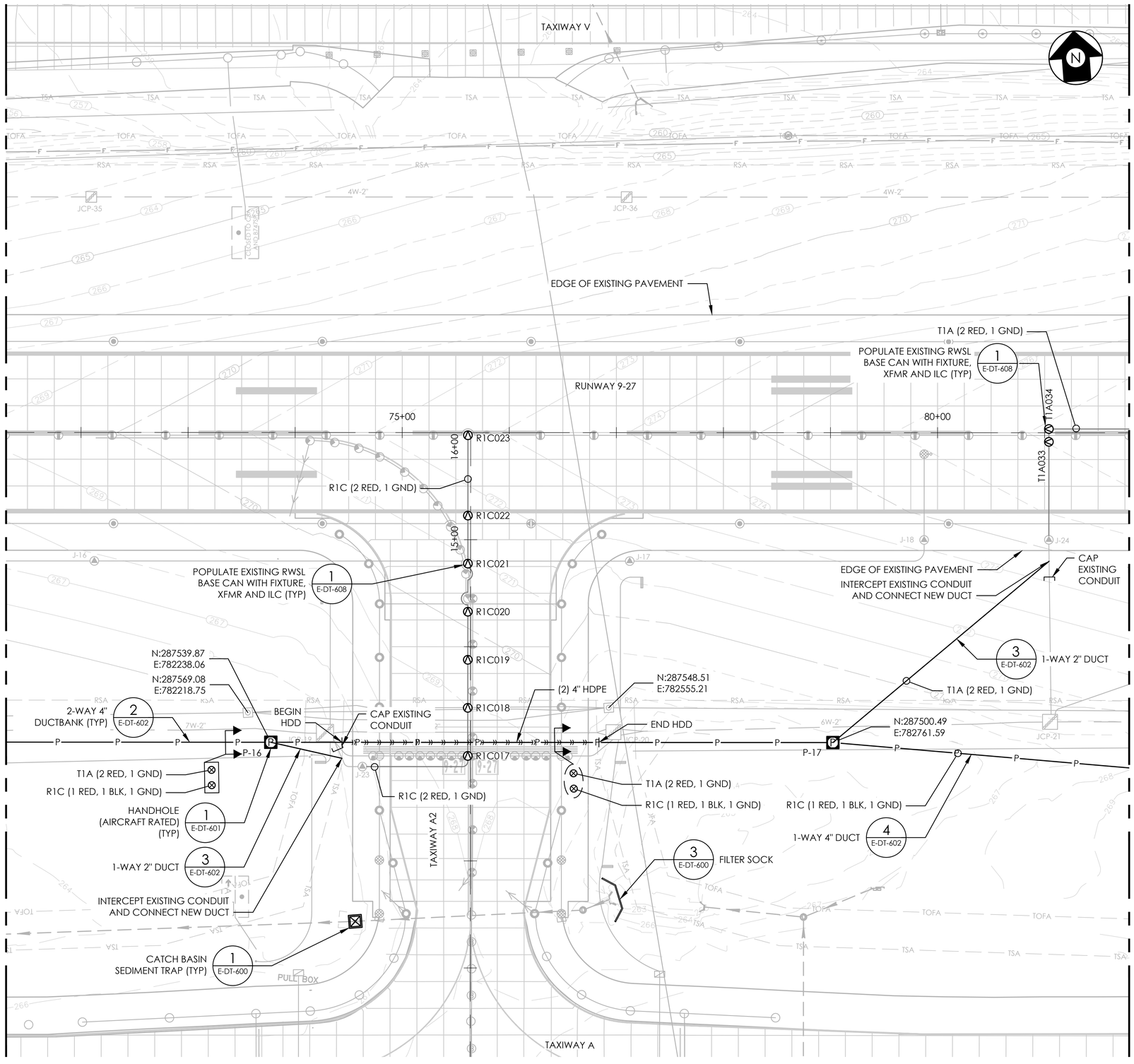
MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
SYSTEM LAYOUT PLAN

DWG. FILE NAME
161408-E-PV-106.DWG
DATE 12/11/2025
SCALE 1" = 50'
SHEET NO. E-PV-106

December 10, 2025 c:\caddlib\pw\pwwestcoast\kmills\d0273326\161408-E-PV-106.dwg



SYSTEM LAYOUT PLAN
SCALE: 1" = 50'

GENERAL NOTES:

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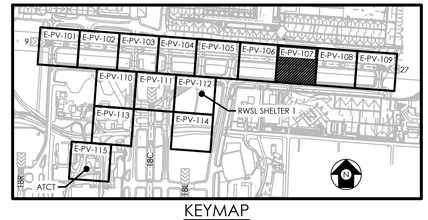

KEYMAP

50' 0 50' 100'
SCALE: 1"=50'

TAKE OF WITH US
Memphis INTERNATIONAL AIRPORT

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JOB NO.
85091

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CHECKED BY: CTX
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CHARLES B. DEMOTT
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AGRICULTURE
No. 115626
STATE OF TENNESSEE
12/11/2025

ENGINEER–SUBCONSULTANT

JOB NO.

REVISIONS

MARK	DATE	DESCRIPTION
0	12/11/2025	ISSUED FOR BID

MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
SYSTEM LAYOUT PLAN

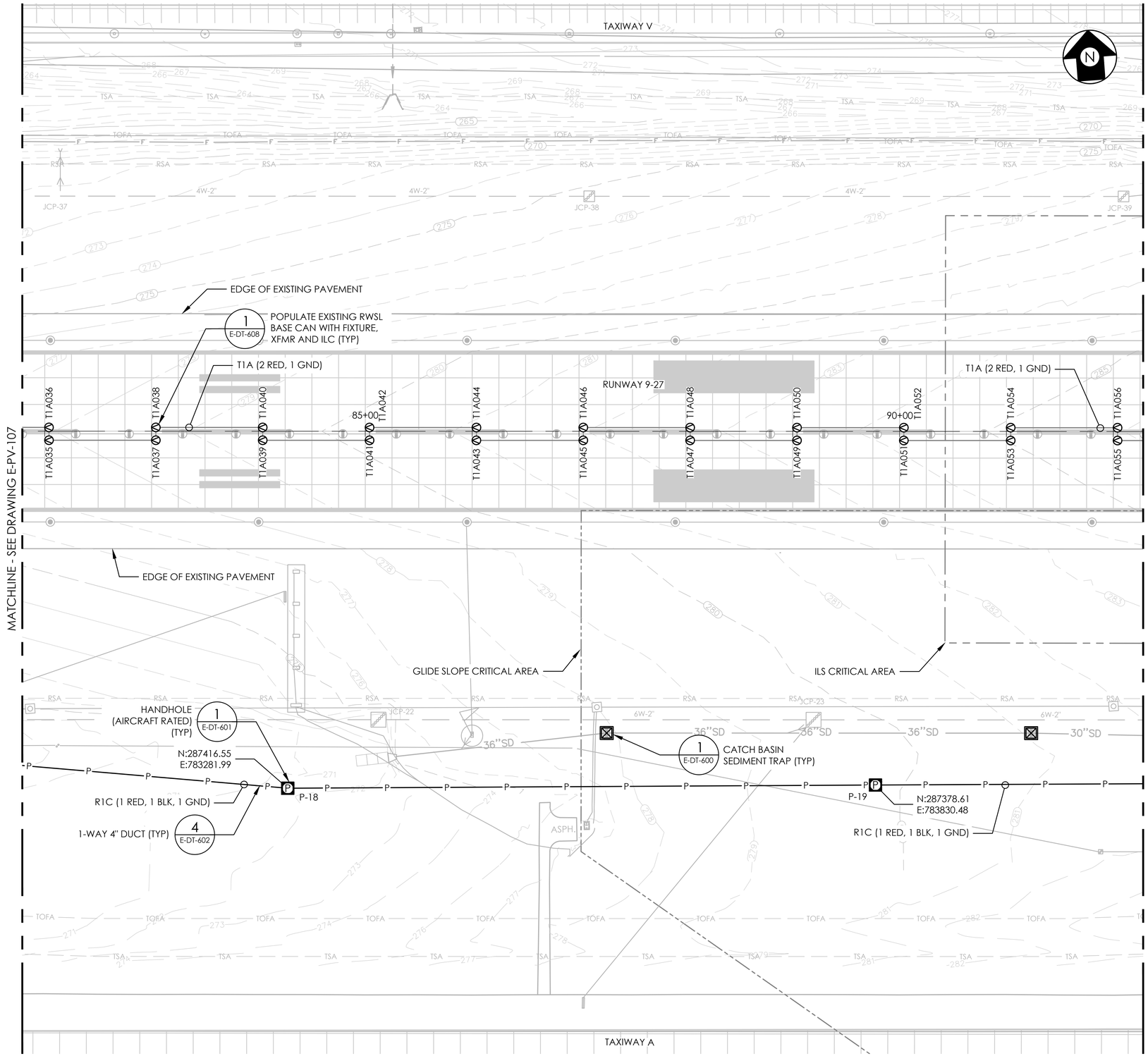
DWG. FILE NAME
161408-E-PV-107.DWG

DATE
12/11/2025

SHEET NO.
E-PV-107

SCALE
1" = 50'

December 10, 2025 c:\cadd\lib\pw\pwwestcoast\kmill\d0273326\161408-E-PV-107.dwg



SYSTEM LAYOUT PLAN
SCALE: 1" = 50'

GENERAL NOTES:

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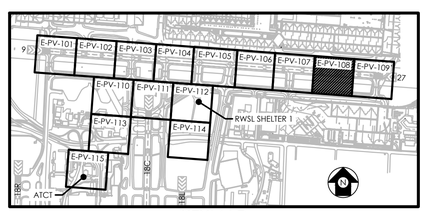

KEYMAP

50' 0 50' 100'
SCALE: 1"=50'

TAKE OF WITH US
Memphis
INTERNATIONAL AIRPORT

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REVISIONS

MARK	DATE	DESCRIPTION
0	12/11/2025	ISSUED FOR BID

MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
SYSTEM LAYOUT PLAN

DWG. FILE NAME
161408-E-PV-108.DWG

DATE
12/11/2025

SHEET NO.
E-PV-108

SCALE
1" = 50'

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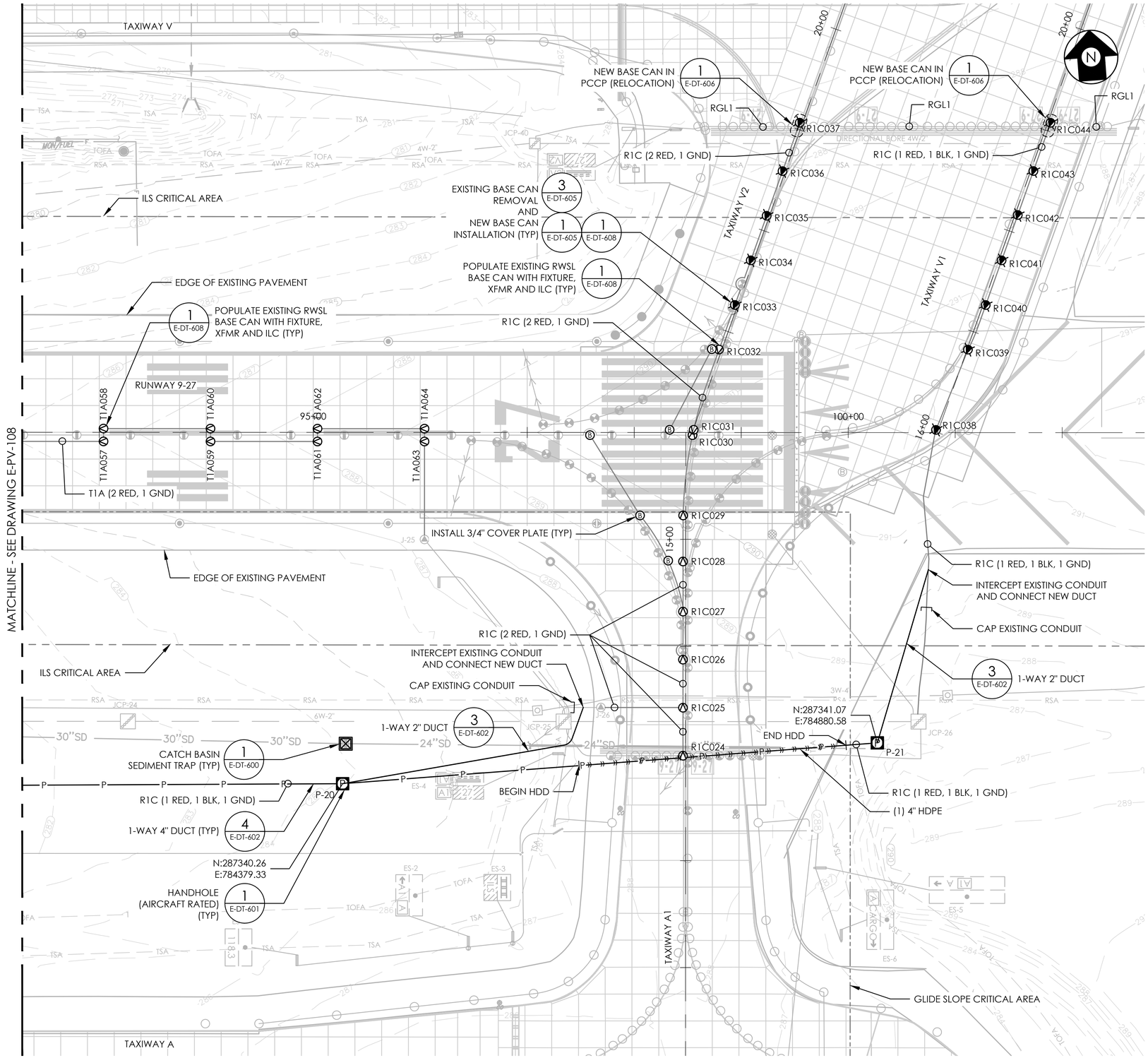

SYSTEM LAYOUT PLAN
SCALE: 1" = 50'

GENERAL NOTES:

1. THE MAXIMUM WIDTH OF THE DUCTBANK TRENCH DISTURBANCE SHALL BE 10 FEET EACH SIDE OF THE DUCTBANK. THE CONTRACTOR IS RESPONSIBLE FOR FURNISHING AND INSTALLING TRENCH SHORING AS NECESSARY TO MAINTAIN SAFETY IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL SAFETY CODES.
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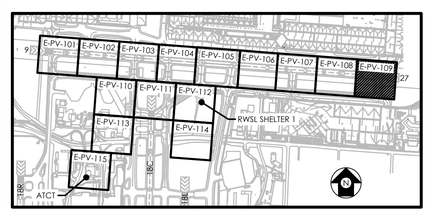
6. ALL PROPOSED CONDUIT UNDER OR WITHIN 10' OF EXISTING PAVEMENTS SHALL BE HDPE, AND SHALL BE INSTALLED BY HORIZONTAL DIRECTIONAL DRILLING, UNLESS OTHERWISE NOTED. SEE DETAIL 1, DRAWING E-DT-604 FOR TYPICAL TAXIWAY CONNECTOR SECTION.
7. HANDHOLE COORDINATES ARE TO THE CENTER OF THE HANDHOLE.
8. THE CONTRACTOR SHALL CLEAN AND TRANSPORT ALL COVER PLATES REMOVED FROM EXISTING BASE CANS TO DESIGNATED AIRPORT MAINTENANCE STORAGE AREA.
9. EXISTING AIRFIELD CIRCUIT IDENTIFICATION IS BASED ON BEST INFORMATION AVAILABLE. CONTRACTOR SHALL NOTIFY AIRPORT OF ANY DISCREPANCIES.



KEYMAP

50' 0 50' 100'
SCALE: 1"=50'

TAKE OF WITH US Memphis INTERNATIONAL AIRPORT

PROGRAM MANAGER
PARSONS
Program Management Consultant
Parsons Transportation Group Inc.
Project Office:
4225 Airways Blvd.
Memphis TN, 38116

ENGINEER
HNTB
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SUITE 1000
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(425) 455-3555
WWW.HNTB.COM

JOB NO.
85091

DRAWN BY: KLM
CHECKED BY: CTX
APPROVED BY: CBD

CHARLES B. DEDMON
REGISTERED ENGINEER
AGRICULTURE
NUMBER 115181
STATE OF TENNESSEE
12/11/2025

ENGINEER—SUBCONSULTANT

JOB NO.

REVISIONS

MARK	DATE	DESCRIPTION
0	12/11/2025	ISSUED FOR BID

MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
SYSTEM LAYOUT PLAN

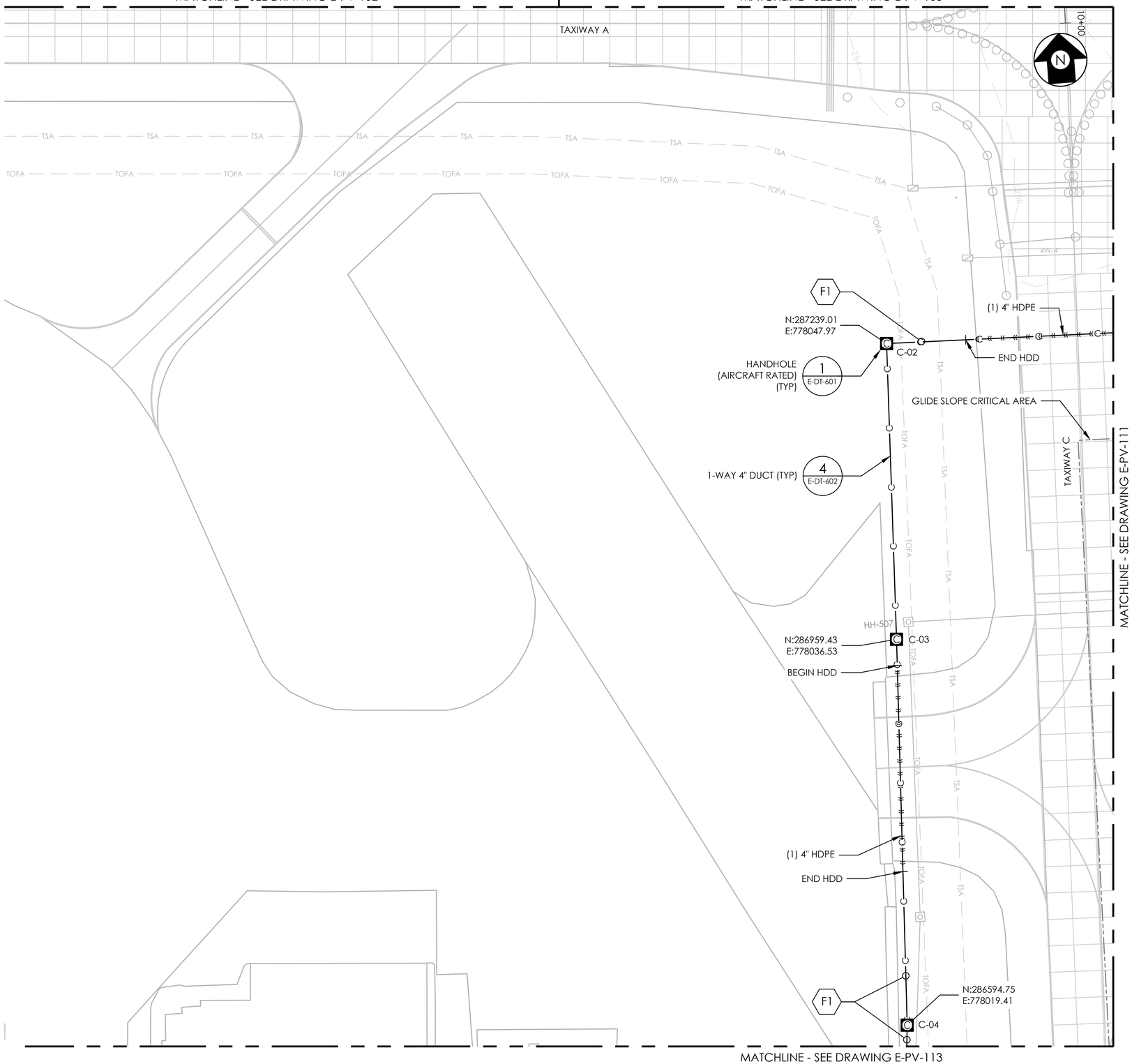
DWG. FILE NAME
161408-E-PV-109.DWG

DATE
12/11/2025

SHEET NO.
E-PV-109

SCALE
1" = 50'

December 10, 2025 c:\caddlib\pw\pwwestcoast\kmills\d0273326\161408-E-PV-109.dwg



SYSTEM LAYOUT PLAN
SCALE: 1" = 50'

GENERAL NOTES:

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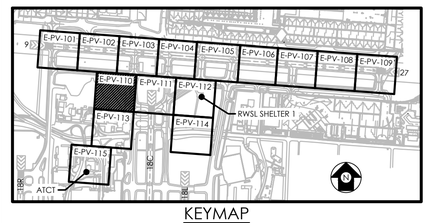

KEYMAP

50' 0 50' 100'
SCALE: 1"=50'

TAKE OFF WITH US
Memphis INTERNATIONAL AIRPORT

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JOB NO.
85091

DRAWN BY: KLM
CHECKED BY: CTX
APPROVED BY: CBD

CHARLES B. DEDMON
REGISTERED ENGINEER
AGRICULTURE
STATE OF TENNESSEE
12/11/2025

ENGINEER–SUBCONSULTANT

JOB NO.

REVISIONS

MARK	DATE	DESCRIPTION
0	12/11/2025	ISSUED FOR BID

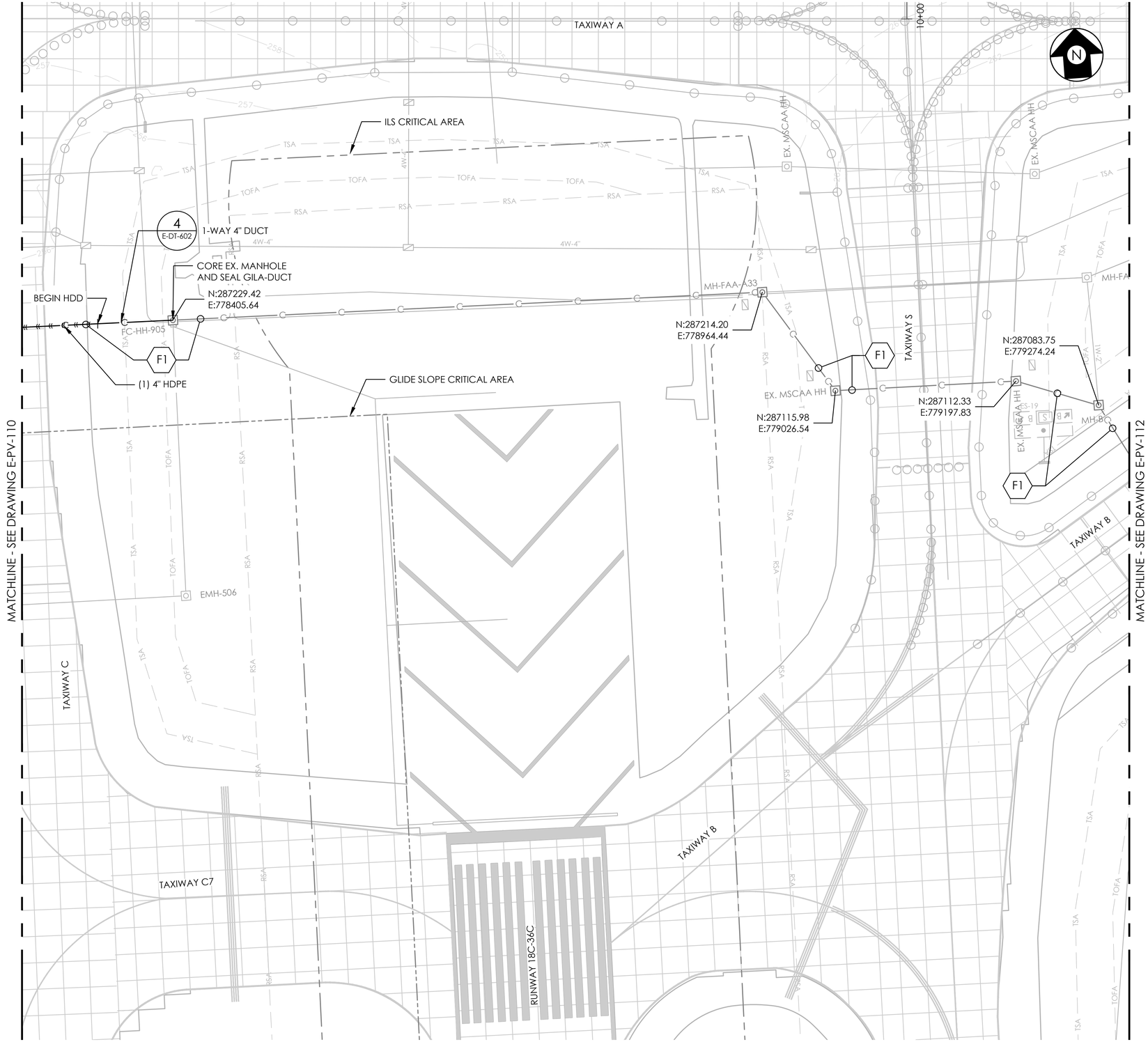
MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
SYSTEM LAYOUT PLAN

DWG. FILE NAME
161408-E-PV-110.DWG
DATE 12/11/2025
SCALE 1" = 50'
SHEET NO. E-PV-110

December 10, 2025 c:\caddlib\pw\pwwestcoast\kmills\d027332a\161408-E-PV-110.dwg



SYSTEM LAYOUT PLAN
SCALE: 1" = 50'

GENERAL NOTES:

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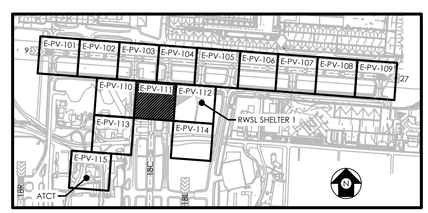

KEYMAP

50' 0 50' 100'
SCALE: 1"=50'

TAKE OFF WITH US
Memphis INTERNATIONAL AIRPORT

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JOB NO.
85091

DRAWN BY: KLM
CHECKED BY: CTX
APPROVED BY: CBD

CHARLES B. DEDMON
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AGRICULTURE
STATE OF TENNESSEE
12/11/2025

ENGINEER—SUBCONSULTANT

JOB NO.

REVISIONS

MARK	DATE	DESCRIPTION
0	12/11/2025	ISSUED FOR BID

MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
SYSTEM LAYOUT PLAN

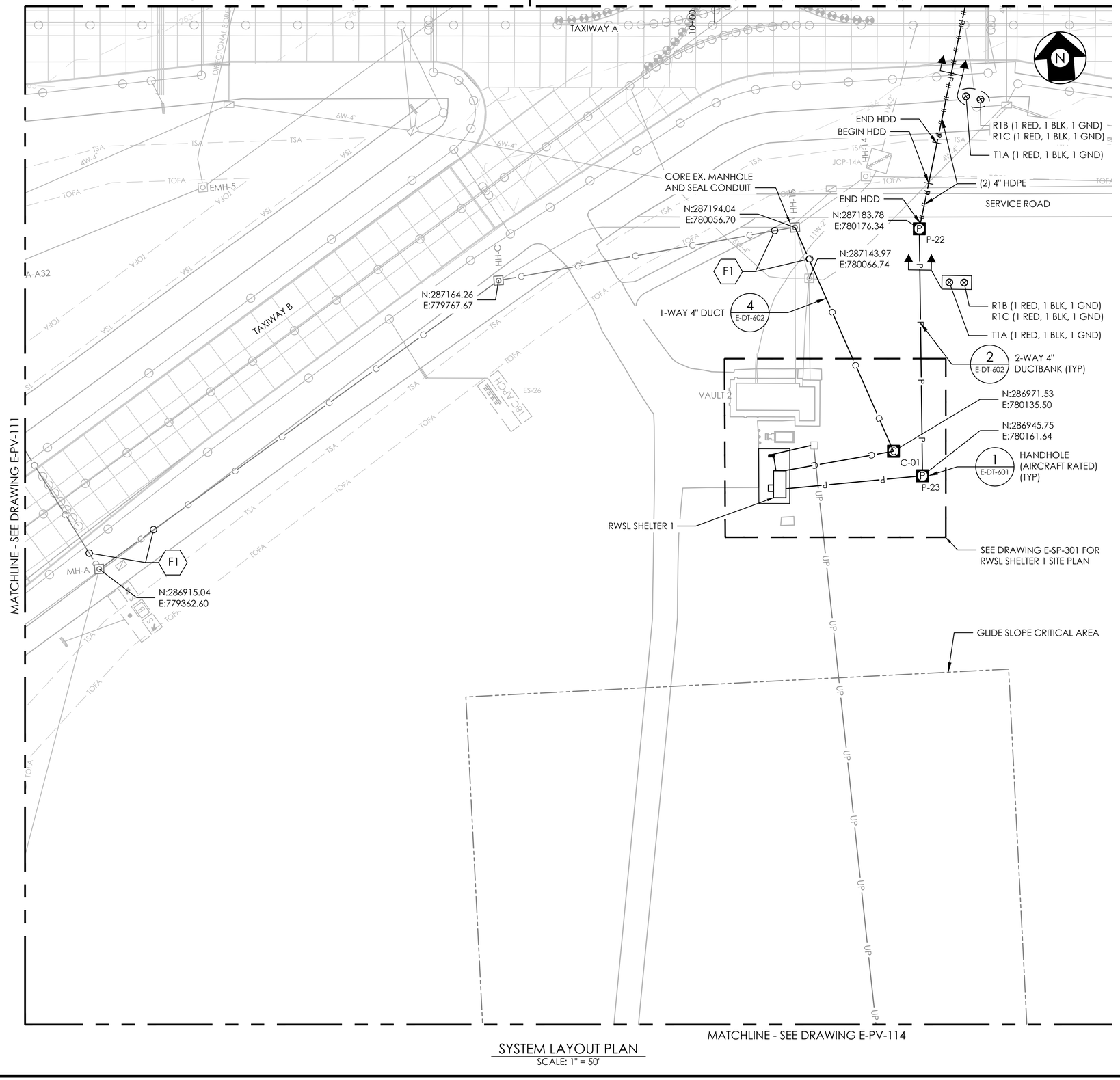
DWG. FILE NAME
161408-E-PV-111.DWG

DATE
12/11/2025

SCALE
1" = 50'

SHEET NO.
E-PV-111

December 10, 2025 c:\coddlib\pw\pwwestcoast\kmills\d0273326\161408-E-PV-111.dwg



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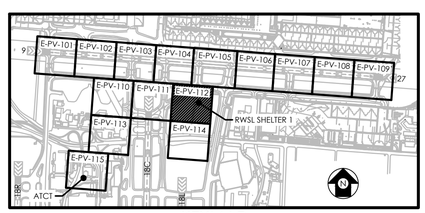


KEYMAP

50' 0 50' 100'
SCALE: 1"=50'

TAKE OFF WITH US Memphis INTERNATIONAL AIRPORT

PROGRAM MANAGER
PARSONS
Program Management Consultant
Parsons Transportation Group Inc.
Project Office:
4225 Airways Blvd.
Memphis TN, 38116

ENGINEER
HNTB
777 108TH AVE NE
SUITE 1000
BELLEVUE, WA 98004
(425) 455-3555
WWW.HNTB.COM

JOB NO.
85091

DRAWN BY: KLM
CHECKED BY: CTX
APPROVED BY: CBD

CHARLES B. DEDMON
REGISTERED ENGINEER
AGRICULTURE
STATE OF TENNESSEE
12/11/2025

ENGINEER—SUBCONSULTANT

JOB NO.

REVISIONS

MARK	DATE	DESCRIPTION
0	12/11/2025	ISSUED FOR BID

MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
SYSTEM LAYOUT PLAN

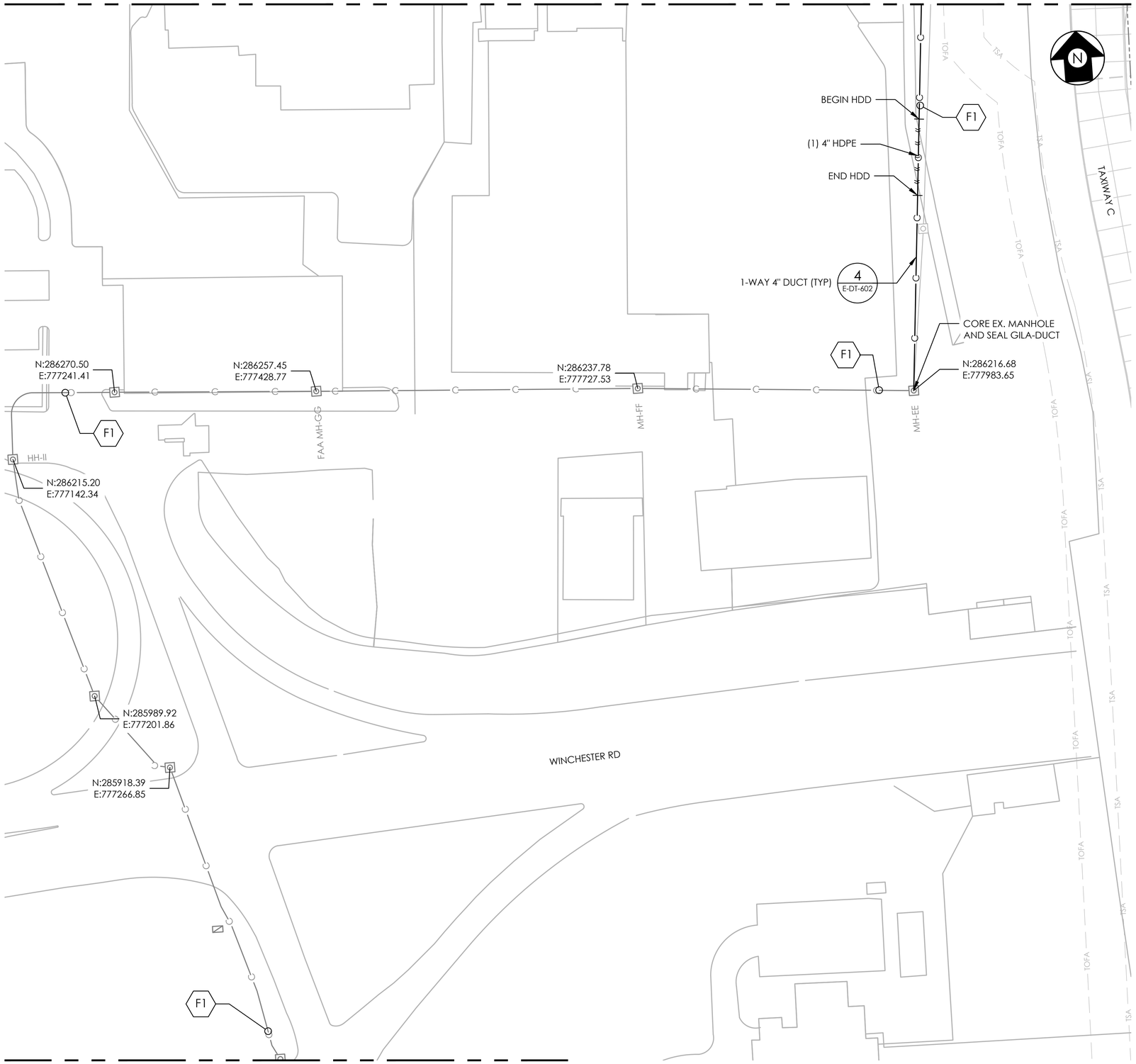
DWG. FILE NAME
161408-E-PV-112.DWG

DATE
12/11/2025

SHEET NO.
E-PV-112

SCALE
1" = 50'

December 10, 2025 c:\caddlib\pw\pwwestcoast\kmills\d0273326\161408-E-PV-112.dwg



SYSTEM LAYOUT PLAN
SCALE: 1" = 50'

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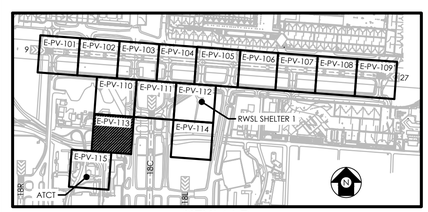

KEYMAP

50' 0 50' 100'
SCALE: 1"=50'

TAKE OFF WITH US Memphis INTERNATIONAL AIRPORT

PROGRAM MANAGER
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JOB NO.
85091

DRAWN BY: KLM
CHECKED BY: CTX
APPROVED BY: CBD

CHARLES B. DEMONT
REGISTERED ENGINEER
AGRICULTURE
NUMBER 115628
STATE OF TENNESSEE
12/11/2025

ENGINEER–SUBCONSULTANT

JOB NO.

REVISIONS

MARK	DATE	DESCRIPTION
0	12/11/2025	ISSUED FOR BID

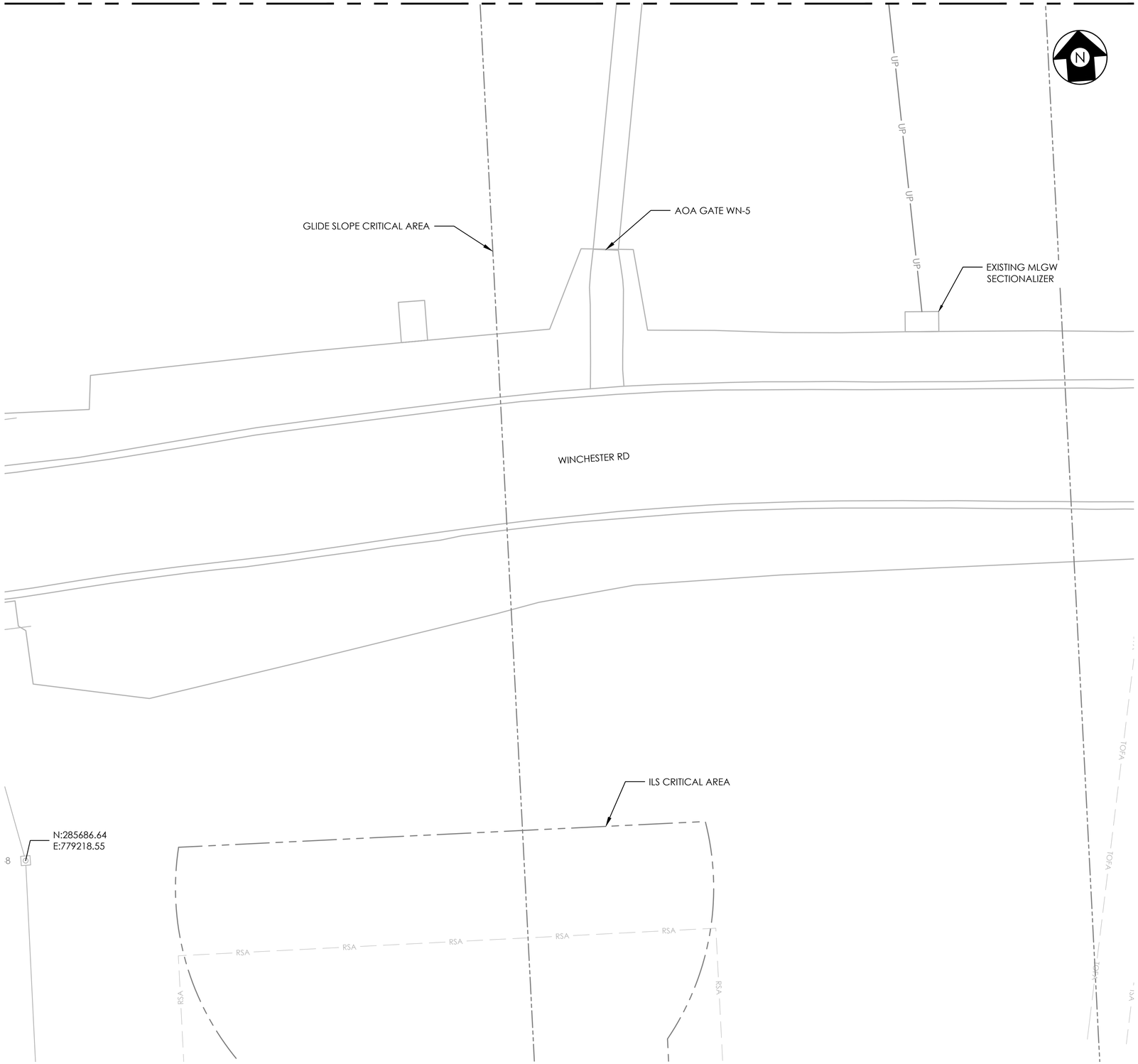
MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
SYSTEM LAYOUT PLAN

DWG. FILE NAME
161408-E-PV-113.DWG
DATE 12/11/2025
SCALE 1" = 50'
SHEET NO. E-PV-113

December 10, 2025 c:\caddlib\pw\pwwestcoast\kmills\d0273326\161408-E-PV-113.dwg



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SCALE: 1" = 50'

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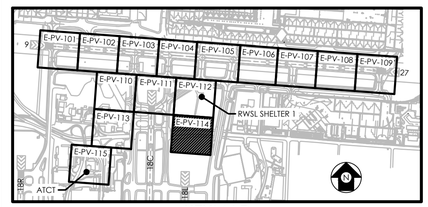

KEYMAP

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12/11/2025

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REVISIONS

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MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

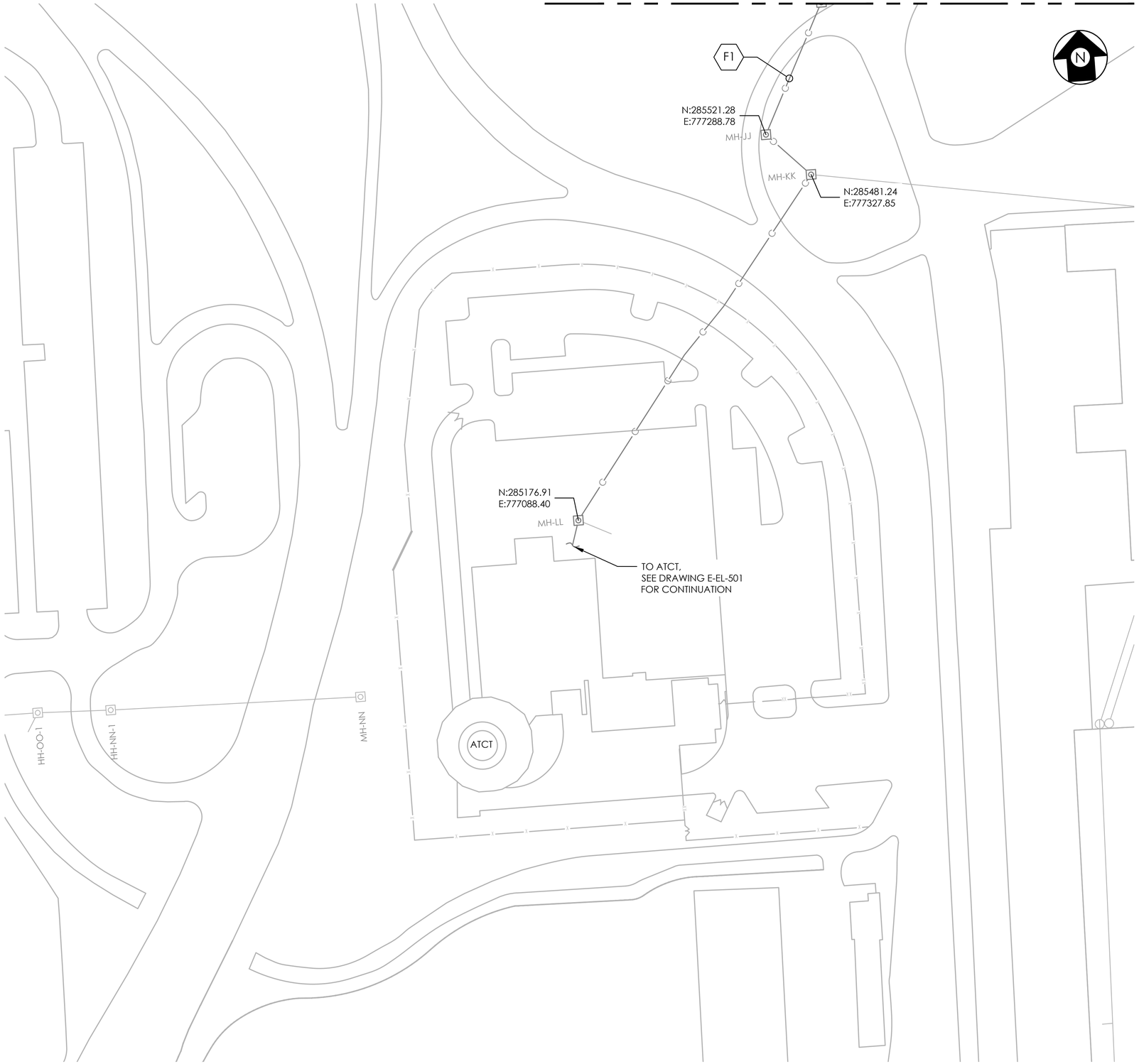
SHEET TITLE:
SYSTEM LAYOUT PLAN

DWG. FILE NAME
161408-E-PV-114.DWG

DATE **12/11/2025**
SCALE **1" = 50'**
SHEET NO. **E-PV-114**

December 10, 2025 c:\caddlib\pw\pwwestcoast\kmills\d0273326\161408-E-PV-114.dwg

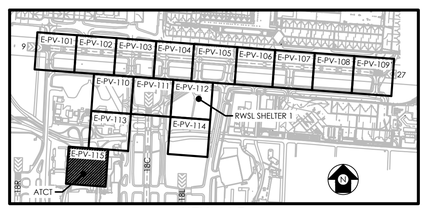
MATCHLINE - SEE DRAWING E-PV-113



SYSTEM LAYOUT PLAN
SCALE: 1" = 50'

GENERAL NOTES:

1. THE MAXIMUM WIDTH OF THE DUCTBANK TRENCH DISTURBANCE SHALL BE 10 FEET EACH SIDE OF THE DUCTBANK. THE CONTRACTOR IS RESPONSIBLE FOR FURNISHING AND INSTALLING TRENCH SHORING AS NECESSARY TO MAINTAIN SAFETY IN ACCORDANCE WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL SAFETY CODES.
2. TYPE AND LOCATION OF EXISTING UTILITIES SHOWN HERE ARE BASED ON THE BEST AVAILABLE INFORMATION. UTILITIES MAY BE DIFFERENT FROM SHOWN, AND SOME EXISTING UTILITIES MAY NOT BE SHOWN. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL UTILITIES THAT ARE WITHIN THE PROJECT AREA.
3. EXISTING UTILITIES IN THE PROJECT AREA INCLUDE CRITICAL WATER, SANITARY SEWER, STORM DRAINAGE, NATURAL GAS, POWER, FUEL AND COMMUNICATIONS SYSTEMS. THE CONTRACTOR SHALL PROTECT AND MAINTAIN ALL EXISTING UTILITIES NOT SHOWN TO BE REMOVED OR OTHERWISE MODIFIED.
4. IN AREAS OF OPEN TRENCHING, CAREFULLY HAND DIG AROUND EXISTING UTILITIES TO EXPOSE THE UTILITIES, THEN ADEQUATELY SUPPORT UTILITIES WHILE THE TRENCH IS EXCAVATED AND THROUGHOUT THE DURATION OF CONSTRUCTION.
5. ALL UTILITIES, NOT SHOWN TO BE REMOVED, THAT ARE DAMAGED BY THE CONTRACTOR SHALL BE REPLACED TO ITS ORIGINAL CONDITION IMMEDIATELY BY THE CONTRACTOR, TO THE ENGINEER'S SATISFACTION, AT THE CONTRACTOR'S OWN EXPENSE.
6. ALL PROPOSED CONDUIT UNDER OR WITHIN 10' OF EXISTING PAVEMENTS SHALL BE HDPE, AND SHALL BE INSTALLED BY HORIZONTAL DIRECTIONAL DRILLING, UNLESS OTHERWISE NOTED. SEE DETAIL 1, DRAWING E-DT-604 FOR TYPICAL TAXIWAY CONNECTOR SECTION.
7. HANDHOLE COORDINATES ARE TO THE CENTER OF THE HANDHOLE.
8. THE CONTRACTOR SHALL CLEAN AND TRANSPORT ALL COVER PLATES REMOVED FROM EXISTING BASE CANS TO DESIGNATED AIRPORT MAINTENANCE STORAGE AREA.
9. EXISTING AIRFIELD CIRCUIT IDENTIFICATION IS BASED ON BEST INFORMATION AVAILABLE. CONTRACTOR SHALL NOTIFY AIRPORT OF ANY DISCREPANCIES.



KEYMAP

50' 0 50' 100'
SCALE: 1"=50'

TAKE OFF WITH US Memphis INTERNATIONAL AIRPORT

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12/11/2025

ENGINEER—SUBCONSULTANT

JOB NO.

REVISIONS

MARK	DATE	DESCRIPTION
0	12/11/2025	ISSUED FOR BID

MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
SYSTEM LAYOUT PLAN

DWG. FILE NAME
161408-E-PV-115.DWG

DATE
12/11/2025

SCALE
1" = 50'

SHEET NO.
E-PV-115

December 10, 2025 C:\caddlib\pw\pwwestcoast\kmills\d0273326\161408-E-PV-115.dwg

GOVERNMENT FURNISHED MATERIAL (GFM) LIST

ITEM#	QTY	VENDOR/PART#	DESCRIPTION	GOV FURNISHED/ INSTALLED	GOV FURNISHED/ CONTRACTOR INSTALLED	CONTRACTOR FURNISHED/ INSTALLED
1	1	DUPONT 12'x26'x8'	SHELTER		X	
2	1	BARD MC-4000BC	9.25"Wx13.5"Hx3"D DUAL UNIT LEAD-LAG CONTROLLER. OPERATE UNITS USING LEAD-LEAD-LAG-LAG SEQUENCE. ADJUSTABLE CHANGOVER TIME, INTER-STAGE AND ON-OFF DIFFERENTIAL, TEMP SET POINTS, AND DEAD-BAND. LCD DISPLAY FOR TEMPERATURE, LED LIGHTS FOR OPERATING STAGE. +/- 1°F TEMP ACCURACY. CHANGEOVER LEAD UNIT EVERY 7 DAYS. SET INTER-STAGE DIFFERENTIAL SO 1ST STAGE IS ON AT 80°F AND 4TH STAGE IS ON AT 88°F.	X		
3	2	#CBS20	120V LIGHT SWITCH, 20 AMP, COMMERCIAL GRADE	X		
4	6	GENERIC	4' 2-BULB FLUORESCENT LIGHTS MOUNTED ON UNISTRUT WITH RFI SUPPRESSOR	X		
5	1	DUPONT	4'-0" X 6'-8" RIGHT HAND HEAVY DUTY DOOR WITH A DOOR CLOSURE, THREE-POINT LATCH, BEST CORE, YALE LOCKSET, 24" DEEP FIBERGLASS DOOR SHIELD, PADLOCK EYES, PAINTED WHITE, TOP HINGE KEY COVER WITH (2) KEYS AND (1) CORE KEY	X		
6	6	#BR20	125V RATED QUAD RECEPTACLES, 20 AMP, BROWN, COMMERCIAL GRADE	X		
7	2	CUSTOM	1" PVC EXITS THROUGH FLOOR	X		
8	2	CUSTOM	1" GRAY PVC EXIT AT 45° WITH SQUARE CUT EXTERIOR END 3" CLEAR OF FIBERGLASS FOR FIELD CONNECTION	X		
9	1	SQ. D #H365NR/ WITH BUSSMANN LPJ-300 SP FUSE	50.31"H x 27.76"W x 9.53"D 400 AMP FUSIBLE NEMA 3R DISCONNECT (SAFETY DISCONNECT SWITCH), 4" ENTRANCE WITH PLATE AND EXTRA SET OF FUSES. 6 FUSES SHIPPED LOOSE	X		
10	2	BARD #WA4S2	WALL MOUNT AIR CONDITIONING, 4 TON, R-410A REFRIGERANT, 2-STAGE SCROLL COMPRESSOR, 240V, 1-PHASE, EER OF 11.2, 5 KW FACTORY INSTALLED HEATER, HIGH/LOW PRESSURE SWITCHES, COMPRESSOR TIME DELAY RELAY, LOW AMBIENT CONTROL, CRANKCASE HEATERS, ELECTRONICALLY COMMUTATED MOTOR (ECM) WITH OVERLOAD PROTECTION, TWIN BLOWERS, 2" PLEATED AIR FILTER, SUPPLY AND RETURN AIR GRILLES. PROVIDE PHENOLIC COATED EVAPORATOR, CONDENSER COIL AND STAINLESS STEEL EXTERNAL CABINET, FAN SHROUD, AND BOTTOM BASE FOR THE FOLLOWING SITES: IAH, BWI, IAD, SFO, PHL, EWR, LGA, JFK, SAN, LAX, BOS, DTW.	X		
11	1	SQ. D NQ PANELBOARD	120/240V DISTRIBUTION PANEL (225A), ENCLOSURE NEMA 2 OR BETTER [PREFERRED NEMA 1 (MH44) WITH NEMA 2 DRIP HOOD (MHT2DH20) AND DOOR (NC44SHR); ACCEPTABLE ALTERNATE NEMA 3R (MH44WP, DOOR INCLUDED)], INTERIOR (NQ30L2C), 200A MCB (NQMB2Q KIT & QBL22200 CB)	X		
12	1	RAYVOS #277-3Y-N1-3-06-C-H	19.69"H x 16.44"W x 8.05"D 277 - 480V THREE PHASE SURGE ARRESTOR	X		
13	1	SQ.D NF PANELBOARD	480V DISTRIBUTION PANEL (400A), ENCOSURE NEMA 2 OR BETTER [PREFERRED NEMA 1 (MH56) WITH NEMA 2 DRIP HOOD (MHT2DH20) AND DOOR (NC56VSHR); ACCEPTABLE ALTERNATE NEMA 3R (MH56WP, DOOR INCLUDED)], INTERIOR (NF442L4C), MLO.	X		
14	1	CUSTOM	1" PVC CONDUIT FOR HVOC GROUNDING	X		
15	1	CUSTOM	1" CONDUIT TO TRANSFORMER	X		
16			NOT USED			
17	1	#BXVP-10-DGC	EXTERIOR LIGHT WITH PHOTOCELL WITH 4 11/16 x 2 1/4 J-BOX	X		
18	1	EXIT/EM-SF-R-OWHT- SDT HE WILLIAMS	EMERGENCY LIGHT/LED EXIT	X		
19	1	#Q0B120GFI	GFI BREAKER FOR DUPLEX RECEPTACLE	X		
20	2	1 MGP 1 SGP	6" x 12" x 1/4" GROUND BAR W/ RED INSULATORS & STAND OFFS ON INTERIOR WITH PLASTIC COVER. MAIN GROUND PLATE TO CONNECT TO SUPPLEMENTAL GROUND PLATE USING 4/0 GREEN WITH ORANGE TRACER	X		
21	3	GENERIC	4-11/16" x 4-11/16" x 2-1/4" J-BOX FOR HVAC POWER (240 VAC)	X		
22	2	CUSTOM	2" PVC EXITS THROUGH FLOOR	X		
23	5	GENERIC	4" X 4" X 2.25" J-BOX	X		
24	1 1	6624G, L060690	6" x 6" x 64.5" WIREWAY 6X8 WIREWAY ELBOW	X		
25	1	DUPONT	DOOR GROUNDING	X		
26	*	CUSTOM	FOR GROUNDING #2 THHW GREEN IN 1" PVC CONDUIT FROM WIREWAY TO GROUND	X		
27	2	CUSTOM	2" PVC CONDUIT FOR GROUNDING	X		
28	1	6636G	6" x 6" x 15" WIREWAY	X		
29	1	CUSTOM	1" CONDUIT FOR DOOR GROUNDING	X		
30	1	GENERIC	4" X 6" X 4" J-BOX	X		
31	1	HPS NMF037LEC	28.75"H x 23.9"W x 25"D HAMMOND POWER SOLUTIONS INC. 37.5KVA 480- 240/120 TRANSFORMER. SEE NOTE 22	X		
32	1	RMTC 72"H x 24"W x 36"D	19" EQUIPMENT RACK	X		
33	1 2	WCH-04P CCH-CP12-59	CORNING LANDSCAPE FIBER OPTIC PATCH PANEL CORNING LANDSCAPE CCH PATCH PANEL INSERT WITH 6 SC DUPLEX ADAPTERS, SINGLE MODE, CERAMIC INSERT	X		
34	1	HOFFMAN CSD483612LG/AL2CCCW	BREAKOUT BOX, 48"H x 36"W x 12"D NEMA 12 WITH LOCKING HANDLE AND BACK PANEL.	X		
35-37	3	ADB	20KW CONSTANT CURRENT REGULATOR L-829 FERO		X	
39-41	3	ADB	MASTER LIGHT CONTROLLER WITH ENCLOSURE		X	
43-45	3	CROUSE-HINDS TYPE (MODEL 2)	SERIES CUTOUT 9.25"H X 4.25"W X 6.38"D (SCO)	X		
47	1	FAA-DE-E-3489	LIGHTNING PROTECTION PACKAGE. SEE DRAWINGS E-DT-307 AND E-DT-311		X	
48	1	CUSTOM	ASSEMBLY INTERFACE BOX NEMA 4X 30"x36"x12", OUTPUT POWER		X	
49	1		ASSEMBLY INTERFACE LB SHELTER POWER			X
50	1	CUSTOM	HOFFMAN A16H120X8ALLP SF ALUMINUM NEMA 4X		X	
51	1	DUPONT	CONDUIT ENTRY 4-2". ENTRY IS USED WITH OUTPUT POWER	X		
52	1	DUPONT	CONDUIT ENTRY 4". ENTRY IS USED WITH SHELTER POWER	X		
53	1	GENERIC	WORK STATION 60"W x 30"D x 55H"	X		
54	2	#4712BRY	125V RATED L5-15R TWIST-LOCK RECEPTACLE	X		
55	1	GENERIC	STORAGE CABINET 22.5"W x 28"D x 59"H	X		
56	1 4 2 8 3 1	CABLE TRAY 06-4D09-0012-12 06-4A10-2012-12 A-0393-19-ZN 4A1-0403-12CD A-0253-09-ZN	CABLE TRAY PACKAGE, SEE DRAWING E-DT-321. 4" HIGH LADDER 6" RUNG SPACING, 12' LONG, 12" WIDE NEMA 12B FLANGE OUT HORIZONTAL TEE, 12" RADIUS, 12" WIDE ALUMINUM SINGLE HANGER CHANNEL KIT, 19" W/ZINC PI TROUGH TO BOX CONN. 12"W W/CAD-PLATED STEEL HWD. 3/4" R DROPOUT 09"W W/ZINC PLATED STEEL HWD.	X		
57	4	DU221RB	SQUARE D 30A, NON-FUSED, 2-POLE SAFETY SWITCH, NEMA 3R	X		
58	1 1	HOFFMAN A24N24ALP	24" x 24" x 6.62" NEMA 1 HINGED ENCLOSURE	X		
59	3	ADB 32A0114	SURGE ARRESTOR ASSEMBLY	X		

* QUANTITY AS DICTATED BY FAA

ABBREVIATIONS

AWG	AMERICAN WIRE GAUGE
BC	BARE COPPER
BGL	BELOW GRADE LEVEL
BLD	BUILDING
CND	CONDUIT
CO	CONTRACTING OFFICER
DEB	DIRECT EARTH BURIED
E/G	ENGINE GENERATOR
EES	EARTH ELECTRODE SYSTEM
EMT	ELECTRICAL METAL TUBING
EST	ESTIMATED
FAA	FEDERAL AVIATION ADMINISTRATION
FLS	FIELD LIGHTING SYSTEM
GFM	GOVERNMENT FURNISHED MATERIAL
GND	GROUND
GOV	GOVERNMENT
GRS	GALVANIZED RIGID STEEL
GRSC	GALVANIZED RIGID STEEL CONDUIT
KCMIL	THOUSAND CIRCULAR MILS
LTFMC	LIQUID TIGHT FLEXIBLE METAL CONDUIT
LTG	LIGHTING
MGP	MAIN GROUND PLATE
MLO	MAIN LUG ONLY
OB	OBSTRUCTION
RE	RESIDENT ENGINEER
RGS	RIGID GALVANIZED STEEL
RH	RIGHT HINGE
RMTC	REMOTE MAINTENANCE TERMINAL RACK
RWY	RUNWAY
RWSL	RUNWAY STATUS LIGHTS
RSA	RUNWAY SAFETY AREA
SCO	SERIES CUT OUT
SGP	SUPPLEMENTAL GROUND PLATE
SS	STAINLESS STEEL
V	VOLT
W	WITH
XFMR	TRANSFORMER

SHELTER SYMBOLS LEGEND

- ENCLOSED TO HOUSE GFM EQUIPMENT
- L-824 CABLE W/ L-823 CONNECTOR (MALE)
- L-824 CABLE W/ L-823 CONNECTOR (FEMALE)
- FUSE
- SINGLE POLE BREAKER
- DOUBLE POLE BREAKER
- EARTH ELECTRODE SYSTEM GROUNDING
- GROUNDING TO MGP SYSTEM
- X X X — TERMINAL BLOCK
- IEC-320-C13 CONNECTOR
- IEC-320-C14 CONNECTOR
- GROUND ROD
- GROUND WELL/ROD
- # — MATERIAL LISTING. ITEM DESCRIPTION TO THE LEFT
- SF — SILT FENCE
- BOLLARD

TYPICAL LOCATION	UNIT IDENTIFICATION	UNIT SIZE HEIGHT" X WIDTH" X DEPTH" (INCHES)	UNIT WEIGHT (POUNDS)	THERMAL LOAD (BTU/HR)
FLS SHELTER	ITEM 9 SERVICE DISCONNECT SWITCH	50.3125 X 27.875 X 10.125	186	N/A
	ITEM 11 240/120VAC PANEL BOARD	44.00 X 20.125 X 6	90.21	N/A
	ITEM 12 SURGE ARRESTOR	16.44 X 16.69 X 8.05	45 (EST)	N/A
	ITEM 13 480/277VAC PANEL BOARD	56 X 20 X 5.75	146	N/A
	ITEM 31 37.5 kVA TRANSFORMER	28.75 X 23.875 X 25	335	5120
	ITEM 32 RMTC	72 X 24 X 36	339	2100
	ITEM 33 FIBER OPTIC PATCH PANEL	13.4 X 16.1 X 4.1	6 (EST)	N/A
	ITEM 34 CCR OUTPUT BOX	48 X 36 X 12	25 (EST)	N/A
	ITEMS 35 - 38* 20 KW REGULATOR	40 X 33 X 34	1097	27300
	ITEMS 39 - 42* MLC	8.55 X 19 X 19.19	30	N/A
ATCT EQUIPMENT ROOM (EQUIPMENT ROOM CABINET)	RWSL PROCESSOR (RP)	72 X 24 X 36	641	2455
	SYSMON PROCESSOR			2455
	RECORDER PROCESSOR			1705
	KVM			341
	DATA MEDIA CONVERTER CHASSIS			750
	DISCRETE MEDIA CONVERTER CHASSIS			341
	FLS SWITCH POWER SUPPLY			341
	RWSL ROUTER			859
	LIGHTING COMPUTER			1705
	3 KVA POWER CONDITIONER			283
	RWSL TIME SERVER			205
ATCT TOWER CAB CONTROL ASSEMBLY	MEDIA CONVERTERS	24 X 24 X 12	45	68
	100 W POWER CONDITIONER			10
ATCT CAB LEVEL	CAB CONTROL PANEL	5.35 X 7.12 X 2.23	2.5	102
	KILL SWITCH ASSEMBLY	4.95 X 6.28 X 5.44	2	N/A
ATCT GPS TVSS ASSEMBLY	GPS TVSS	16 X 7 X 20	25	N/A

*WEIGHTS AND THERMAL LOADS ARE BASED ON A FULLY-POPULATED SHELTER.

GENERAL NOTES

1. THE CONTRACTOR SHALL FURNISH AND INSTALL MATERIAL INDICATED. THE CONTRACTOR SHALL PROVIDE ALL LABOR AND EQUIPMENT UNLESS OTHERWISE INDICATED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PERMITS, COORDINATION AND SCHEDULED SHUTDOWNS.
2. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL EXISTING UNDERGROUND UTILITIES IN THE WORK AREA PRIOR TO EXCAVATING. THE RE WILL COORDINATE WITH FAA AND AIRPORT PERSONNEL TO LOCATE THEIR UTILITIES. HAND DIG IN AREAS WHERE NEW CONDUIT RUNS OVER EXISTING UTILITIES.
3. ALL UNDERGROUND CABLE SHALL BE IN CONDUIT EXCEPT FOR BARE COPPER GROUND CABLE, GUARDWIRE AND WHERE STATED OTHERWISE. UNDERGROUND CONDUIT SHALL BE 36" (MIN) BELOW GRADE TO TOP OF CONDUIT EXCEPT WHEN INTERFACING HANDHOLE ENTRANCES OR EXISTING CONDUIT AT OTHER DEPTHS.
4. CONTRACTOR SHALL TEST ALL EQUIPMENT AND CABLES AS REQUIRED.
5. ALL GROUND RODS SHALL BE 3/4" DIA. X 10' LONG (MIN.) COPPER CLAD STEEL, DRIVEN SUCH THAT THE TOP OF THE ROD IS NO LESS THAN 18" BELOW GRADE. ALL GROUND CONNECTIONS SHALL BE EXOTHERMICALLY WELDED AND INTEGRITY VERIFIED BY A RESISTANCE TEST. THE RESISTANCE ACROSS THE EXOTHERMIC WELD SHALL NOT EXCEED ONE MILLIOHM. ALL BUILDING EES SHALL BE 24" BELOW GRADE (MINIMUM). WHENEVER A NEW EARTH ELECTRODE SYSTEM (EES) OR GUARD WIRE CROSSES AN EXISTING EES OR GUARD WIRE, THE TWO SHALL BE EXOTHERMICALLY WELDED TOGETHER.
6. THE CONTRACTOR SHALL LEGALLY DISPOSE OF ALL MATERIAL AND EQUIPMENT NOT RETURNED TO OR RETAINED BY THE FAA.
7. GROUND RESISTANCE TESTS SHALL BE PERFORMED ON ALL NEW UNDERGROUND EES AND GUARD WIRE. RESULTS RECORDED IN WRITING IN PRESENCE OF FAA RE AND GIVEN TO THE RE.
8. TESTS SHALL BE PERFORMED ON ALL NEW POWER CABLES. RESULTS RECORDED IN WRITING IN PRESENCE OF FAA RE AND FORWARDED TO THE FAA.
9. CONTRACTOR SHALL IMMEDIATELY REPAIR ALL DAMAGED CABLE, AT SUBCONTRACTOR'S EXPENSE.
10. ALL INSULATED POWER CABLES SHALL BE PROPERLY AND PERMANENTLY IDENTIFIED AND COLOR CODED AT EACH END AND IN EACH HANDHOLE AND PULL BOX.
11. THE GOVERNMENT FURNISHED MATERIAL LIST INCLUDES SPARES FOR SOME ITEMS. ALL SPARES SHALL BE TURNED OVER TO THE FAA AT THE END OF CONSTRUCTION BY THE CONTRACTOR.
12. CONTRACTOR SHALL INSTALL DUCT SEAL IN ALL CONDUITS ENTERING JUNCTION BOXES OR SHELTERS DIRECTLY FROM UNDERGROUND AND IN CONDUIT BETWEEN SURGE ARRESTOR AND SERVICE ENTRANCE SWITCH.
13. THE CONTRACTOR SHALL OBSERVE THE PROVISIONS OF FAA-STD-019F, LIGHTNING AND SURGE PROTECTION, GROUNDING, BONDING AND SHIELDING REQUIREMENTS FOR FACILITIES AND ELECTRONIC EQUIPMENT.
14. ALL EXTERIOR JUNCTION BOXES SHALL BE NEMA 4X.
15. POWER AND CONTROL CONDUIT CROSSINGS SHALL BE SEPARATED AT LEAST 12".
16. NO SHARING OF GROUNDS & NEUTRALS SHALL BE ALLOWED.
17. PANELBOARD SHALL BE A DOOR-IN-DOOR TYPE HINGE FOR ACCESS INTO PANEL INTERIOR.
18. CONTRACTOR SHALL PLACE A LABEL ON ALL EQUIPMENT WITH BREAKER & PANEL INFORMATION.
19. APPLY ANTI-SEIZE COMPOUND TO ALL THREADED EXTERIOR CONNECTIONS.
20. EARTH ELECTRODE SYSTEM (EES) TO BE PROVIDED AND INSTALLED BY CONTRACTOR AS SHOWN ON DRAWINGS E-DT-307 AND E-DT-312.
21. CONTRACTOR SHALL PULL, TERMINATE (SC CONNECTORS), MARK AND TEST FIBER OPTIC CABLE WITHIN ITEM 33.
22. ITEM 31 MUST BE ORDERED WITH CONDUIT KNOCKOUTS LOCATED 2" FROM BACK OF TRANSFORMER AND TERMINALS LOCATED NEAR KNOCKOUTS.
23. ALL POWER AND COMMUNICATIONS CONDUITS ENTERING THE SHELTER SHALL BE GRS AND PROVIDED BY THE CONTRACTOR.

TAKE OFF WITH US Memphis INTERNATIONAL AIRPORT

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ENGINEER—SUBCONSULTANT

JOB NO.

REVISIONS

MARK	DATE	DESCRIPTION
0	12/11/2025	ISSUED FOR BID

MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
SHELTER 1 MATERIAL LIST, ABBREVIATIONS, SYMBOLS & NOTES

DWG. FILE NAME
161408-E-GN-300.DWG

DATE
12/11/2025

SHEET NO.
E-GN-300

SCALE
N.T.S.

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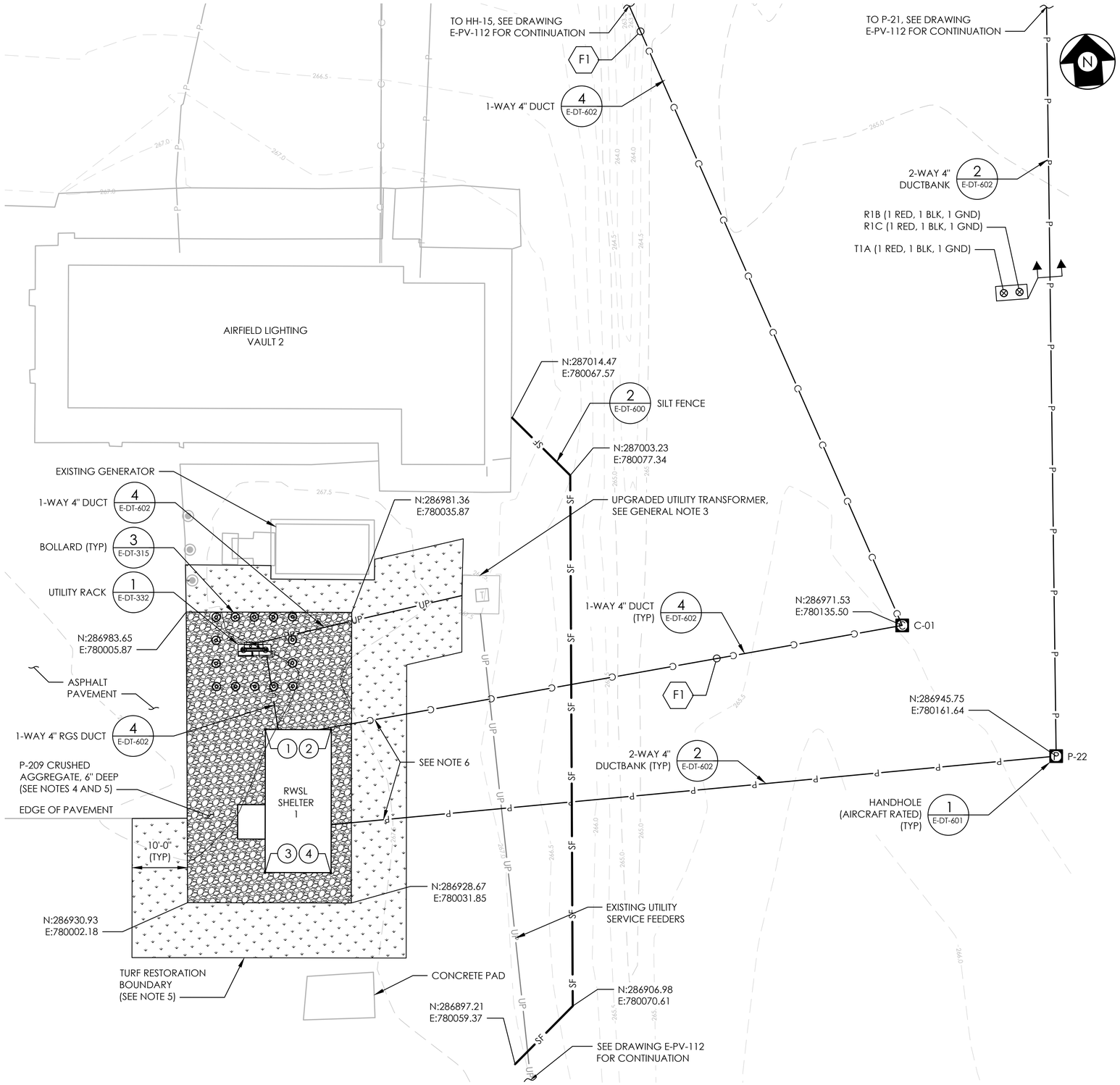


SHELTER 1 SITE PLAN
SCALE: 1" = 10'

GENERAL NOTES:

1. SEE DRAWING E-DT-312 FOR EES.
2. ALL RGS DUCTS ARE TO BE GROUNDED AT BOTH ENDS WITH #2 BARE COPPER WIRE TO THE EES.
3. EXISTING TRANSFORMER UPGRADES BY MEMPHIS LIGHT, GAS AND WATER (MLGW). CONTRACTOR SHALL COORDINATE WITH MLGW, MSCAA, AND FAA FOR SHUTDOWN AND CONNECTION AT TRANSFORMER.
4. PROVIDE GROUND STABILIZATION FABRIC PRIOR TO PLACEMENT OF P-209 CRUSHED AGGREGATE.
5. PROVIDE P-151 CLEARING AND GRUBBING IN AREAS DESIGNATED FOR SHELTER FOUNDATION. CRUSHED AGGREGATE AND TURF RESTORATION.
6. TRANSITION CONDUIT TYPE TO RGS A MINIMUM OF 10' BEYOND THE EXTERIOR FACE OF THE SHELTER.

LEGEND:

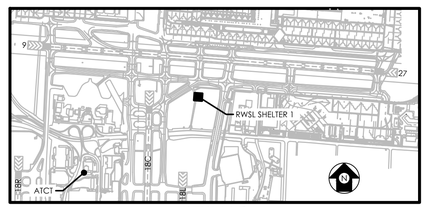
- F1 — 24 STRAND SINGLE-MODE FIBER OPTIC CABLE, SEE DRAWING E-EL-501 FOR COMM CABLE SCHEDULE
- P-209 CRUSHED AGGREGATE
- TURF RESTORATION, 4" T-905 TOPSOIL WITH T-904 SOD
- SF — SILT FENCE, SEE DETAIL 2, DRAWING E-DT-600

RWSL SHELTER CONTROL TABLE

POINT	DESCRIPTION	*NORTHING	*EASTING	**TOP OF SLAB EL.	*LATITUDE	*LONGITUDE
1	SHELTER CORNER	286961.27	780018.62	268.50'	35°03'19.43"	-89°58'18.52"
2	SHELTER CORNER	286960.36	780030.58		35°03'19.43"	-89°58'18.37"
3	SHELTER CORNER	286935.35	780016.64		35°03'19.17"	-89°58'18.53"
4	SHELTER CORNER	286934.43	780028.60		35°03'19.17"	-89°58'18.39"

* COORDINATES SHOWN ARE FOR THE OUTER LIMITS OF THE SHELTER STRUCTURE. SEE DRAWING E-DT-303 FOR RELATIONSHIP BETWEEN THE SHELTER AND THE FOUNDATION.

** HIGHEST POINT ON SHELTER (LIGHTNING AIR TERMINAL) IS 10.5' ABOVE TOP OF SLAB.



KEYMAP

10' 0 10' 20'
SCALE: 1"=10'

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ENGINEER—SUBCONSULTANT

JOB NO.

REVISIONS

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0	12/11/2025	ISSUED FOR BID

MSCAA PROJ. NO. 16-1408-01

PROJECT: RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE: SHELTER 1 SITE PLAN

DWG. FILE NAME 161408-E-SP-301.DWG
DATE 12/11/2025
SCALE 1" = 10'
SHEET NO. E-SP-301

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STRUCTURAL NOTES FOR SHELTER 1 FOUNDATION

GENERAL:

1. THE DRAWINGS REPRESENT THE COMPLETED SHELTER FOUNDATION. THEY DO NOT INDICATE THE MEANS AND METHODS OF CONSTRUCTION.
2. CONSTRUCTION PROCEDURES SHALL CONFORM TO THE REQUIREMENTS OF THE CODES AND REFERENCES LISTED BELOW.
3. COORDINATE ALL DIMENSIONS AND DETAILS BETWEEN THIS DRAWING AND THE DRAWINGS OF THE OTHER DISCIPLINES BEFORE BEGINNING WORK. IF ANY CONFLICTS EXIST, NOTIFY THE OWNER'S REPRESENTATIVE FOR CLARIFICATION.

CODES AND REFERENCES:

1. 2021 INTERNATIONAL BUILDING CODE.
2. ACI 301-16 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS"
3. ASCE/SEI 7-16 "MINIMUM DESIGN LOADS FOR BUILDING AND OTHER STRUCTURES"
4. ACI 318-19 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE"

LOADS:

1. LIVE:

FLOOR	100 PSF
ROOF	20 PSF

2. WIND:

ULTIMATE WIND SPEED (3-SECOND)	117 MPH
RISK CATEGORY	IV
EXPOSURE CATEGORY	C

3. EARTHQUAKE:

0.2 SEC SPECTRAL RESPONSE ACC (Ss)	0.882 G
1.0 SEC SPECTRAL RESPONSE ACC (S1)	0.298 G
Sds	0.675
Sd1	0.398
SITE CLASS	D
SEISMIC DESIGN CATEGORY	D
SEISMIC IMPORTANCE FACTOR (Ie)	1.50
SEISMIC RESPONSE COEFFICIENT (Cs)	0.51
SEISMIC FORCE RESISTING SYSTEM	LIGHT-FRAMED WALLS WITH SHEAR PANELS OF ALL OTHER MATERIALS
DESIGN BASE SHEAR (V)	15.3 kips
RESPONSE MODIFIER (R)	2.0
OVERSTRENGTH FACTOR (Ωo)	2.5
ANALYSIS PROCEDURE USED	EQUIVALENT LATERAL FORCE PROCEDURE

4. SNOW:

FLAT ROOF SNOW (Pf)	9.3 PSF
GROUND SNOW (Pg)	10 PSF
SNOW EXPOSURE FACTOR (Ce)	1.0
SNOW IMPORTANCE FACTOR (Is)	1.2
SNOW THERMAL FACTOR (Ct)	1.1

EARTHWORK:

1. GEOTECHNICAL REPORT: GEOTECHNOLOGY, LLC, DBA UES. GEOTECHNICAL EXPLORATION - MEM RUNWAY 9/27 STATUS LIGHTS, DATED OCTOBER 23, 2024 FOR SOIL EARTHWORK RECOMMENDATIONS AND SUPPLEMENTAL INFORMATION.
2. EARTHWORK SHALL BE PER SPECIFICATION P-152 "EXCAVATION, SUBGRADE, AND EMBANKMENT" EXCEPT AS NOTED BELOW.
3. TEST MOISTURE CONTENT OF UPPER 12 INCHES OF SOIL AND VERIFY CONSISTENCY WITH GEOTECHNICAL REPORT DATA PRIOR TO EXCAVATION. LIMIT EXTREME WETTING AND DRYING OF SUBSURFACE SOILS.
4. EXCAVATION: SLOPED EXCAVATIONS FOR SHORT-TERM EXCAVATIONS SHALL MEET OSHA EXCAVATION STANDARDS FOR SOILS CLASSIFIED AS TYPE B, WITH MAXIMUM SLOPE OF 1:1 HORIZONTAL TO VERTICAL. SHORED EXCAVATION SHALL BE DESIGNED FOR 65 PCF EQUIVALENT FLUID PRESSURE ABOVE GROUND WATER TABLE PLUS SURFACE SURCHARGE PRESSURE WITH LATERAL EARTH COEFFICIENT OF 0.5. UNSHORED EXCAVATION SHALL NOT REMAIN OPEN FOR LONGER THAN 24 HOURS.
5. PROOFROLL AREAS TO BE FILLED PRIOR TO FILL PLACEMENT. REMOVE AND REPLACE AREAS OF LOOSE OR SOFT SUBGRADE ENCOUNTERED WITH SELECT FILL, MOISTURE CONDITIONED, AND COMPACTED. SUBGRADE TO RECEIVE FILL SHALL BE SCARIFIED TO 6 INCHES AND COMPACTED TO AT LEAST 98 PERCENT MAXIMUM DRY DENSITY (ASTM D-698).
6. SELECT FILL: SOIL WITH A MAX LIQUID LIMIT OF 45 AND A MAXPLASTICITY INDEX OF 20. PLACE IN LIFTS NOT EXCEEDING 8 INCHES AND COMPACTED TO AT LEAST 95 PERCENT MAXIMUM DRY DENSITY (ASTM D-698) AND A MOISTURE CONTENT 2 PERCENT OF OPTIMUM PER ASTM D698. FILL SHALL NOT CONTAIN MATERIAL GREATER THAN 2 INCHES, ORGANIC MATTER, DEBRIS, ENVIRONMENTALLY CONTAMINATED, OR UNSUITABLE MATERIAL.
7. UNSUITABLE MATERIAL: MATERIAL UNSUITABLE FOR USE AS SELECT FILL INCLUDE LOW AND HIGH PLASTICITY SILT (ML AND MH), SILTY CLAY (CL-ML), ORGANIC CLAY AND SILT (OH AND OL) AND HIGHLY ORGANIC SOILS SUCH AS PEAT (PT). THESE SOIL TYPES ARE AS DEFINED BY THE UNIFIED SOIL CLASSIFICATION SYSTEM.
8. SLAB SUBGRADE: SLABS SHALL BE UNDERLAIN BY A MIN 4 INCH THICK LAYER OF CRUSHED ROCK. SUBGRADE SHALL NOT BE ALLOWED TO BECOME DESICCATED OR SATURATED DURING CONSTRUCTION.
9. FOUNDATION HAS BEEN DESIGNED FOR A MAXIMUM ALLOWABLE SOIL BEARING PRESSURE OF 2000 PSF.

CONCRETE CONSTRUCTION:

1. ALL CONCRETE MATERIAL AND WORK SHALL BE PER SPECIFICATION P-610 "CONCRETE FOR MISCELLANEOUS STRUCTURES" AND PER ACI 301-16.
2. PROVIDE CEMENT PER ASTM C150, TYPE I/II OR III. PROVIDE AIR-ENTRAINED CONCRETE HAVING TOTAL AIR CONTENT OF 5 TO 8 PERCENT BY VOLUME. PROVIDE WATER FOR MIXING AND CURING WHICH COMPLIES WITH SPECIFICATION SECTION 610-2.6. PROVIDE THE PROPORTION OF AGGREGATE TO CEMENT SO AS TO PRODUCE A DENSE, WORKABLE MIX THAT CAN BE PLACED WITHOUT SEGREGATION OR EXCESS FREE SURFACE WATER. LIMIT THE WATER-CEMENT RATIO TO 0.42 MAXIMUM. SUBMIT MIX DESIGN FOR APPROVAL TO OWNER'S REPRESENTATIVE BEFORE USE.
3. PREPARE SHOP DRAWINGS FOR REINFORCING STEEL PER ACI DETAILING MANUAL 2020 AND SUBMIT FOR APPROVAL TO OWNER'S REPRESENTATIVE.
4. SUPPORT AND WIRE TOGETHER ALL REINFORCEMENT SO AS TO PREVENT DISPLACEMENT OR REINFORCEMENT DURING PLACEMENT OF CONCRETE.
5. PROVIDE CONCRETE WITH 28-DAY COMPRESSIVE STRENGTH OF 4000 PSI. PROVIDE REINFORCEMENT BARS WITH YIELD STRENGTH OF 60,000 PSI PER ASTM A615, GRADE 60.
6. PROVIDE CONCRETE COVER OVER ALL REINFORCEMENT:
   A. CONCRETE CAST AGAINST AND EXPOSED TO EARTH: 3 INCHES
   B. CONCRETE EXPOSED TO EARTH OR WEATHER: 2 INCHES
7. CONFLICTS OR INTERFERENCES SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE BEFORE PLACING CONCRETE.
8. COORDINATE PLACEMENT OF REINFORCING SUCH THAT IT WILL NOT CONFLICT WITH INSTALLATION OF DRILLED-IN ANCHORS.

ANCHOR CONNECTION ASSEMBLY:

1. FABRICATE ANCHOR CONNECTION ASSEMBLY FROM STEEL CHANNELS THAT CONFORM TO ASTM A36. HOT-DIP GALVANIZE AFTER FABRICATION PER ASTM A123. REPAIR ALL DAMAGED GALVANIZED COATINGS PER ASTM A780.
2. INSTALL ALL DRILLED-IN ANCHORS PER MANUFACTURER'S WRITTEN INSTRUCTIONS AND PER THEIR ICC-ES EVALUATION REPORTS. DO NOT DAMAGE REINFORCING BARS WHEN DRILLING HOLES FOR ANCHORS. IF REINFORCING IS ENCOUNTERED DURING DRILLING, THE HOLE SHALL BE MOVED HORIZONTAL.
3. EXPANSION ANCHORS SHALL BE HILTI KWIK BOLT TZ STAINLESS STEEL OR SIMPSON STRONG-TIE STRONG BOLT 2 STAINLESS STEEL WEDGE ANCHOR OR APPROVED EQUAL. PROVIDE MINIMUM EMBEDMENT OF 4 3/4 INCHES FOR 3/4 INCH DIAMETER BOLTS.

QUALITY ASSURANCE PLAN - SPECIAL INSPECTIONS:

THE SUBCONTRACTOR WILL RETAIN A QUALIFIED INDEPENDENT TESTING AGENCY - AS ALLOWED BY IBC SECTION 1704.2 EXCEPTION 1 FOR "WORK OF A MINOR NATURE" - TO PROVIDE CONSTRUCTION OBSERVATION AND TESTING PER THE 2021 IBC, FOR THE FOLLOWING ITEMS:

1. EXISTING SITE SOIL CONDITIONS FOR LOAD-BEARING REQUIREMENTS AT FOUNDATION BEARING ELEVATION.
2. REINFORCING STEEL, INCLUDING PLACEMENT.
3. EXPANSION ANCHORS INTO CONCRETE, INCLUDING INSTALLATION.
4. CONCRETE, INCLUDING VERIFYING USE OF REQUIRED CONCRETE DESIGN MIX, TAKING TEST SPECIMENS, PERFORMING COMPRESSION TESTS, VERIFYING PROPER CONCRETE PLACEMENT TECHNIQUES, PROPERTIES OF FRESH CONCRETE, AIR CONTENT AND VERIFYING MAINTENANCE OF SPECIFIED CURING TECHNIQUES.
5. EXCAVATION, CLASSIFICATION, PLACEMENT AND COMPACTION OF EXISTING SOILS, AND FILL MATERIAL. TEST COMPACTION OF EACH FILL LIFT. INSPECT AND TEST FILL MATERIALS DAILY.

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12/11/2025

ENGINEER—SUBCONSULTANT

JOB NO.

REVISIONS

MARK	DATE	DESCRIPTION
0	12/11/2025	ISSUED FOR BID

MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
SHELTER 1 FOUNDATION NOTES

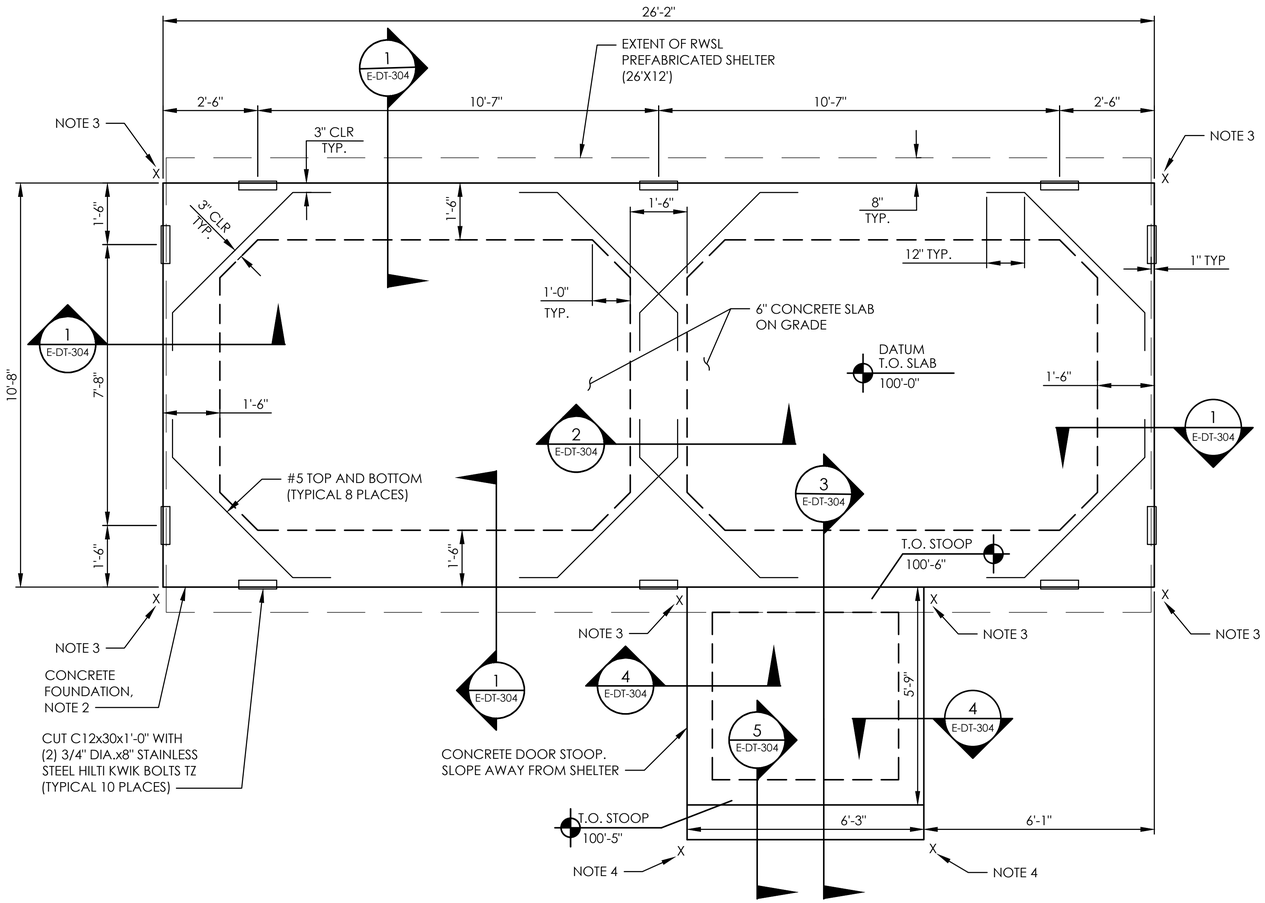
DWG. FILE NAME
161408-E-GN-302.DWG

DATE
12/11/2025

SCALE
N.T.S.

SHEET NO.
E-GN-302

December 10, 2025 c:\coddillb\pw\pwwestcoast\kmills\d0273326\161408-E-GN-302.dwg



1 E-DT-303 SHELTER FOUNDATION PLAN
SCALE: 1/2"=1'-0"

NOTES:

1. SEE DRAWING E-GN-302 FOR STRUCTURAL NOTES.
2. SEE DRAWING E-SP-301 FOR COORDINATES OF SHELTER CORNERS AND FOR ELEVATION OF TOP OF SLAB OF SHELTER FOUNDATION. TOP OF SLAB DATUM ELEVATION EQUALS 100'-0".
3. ELEVATION AT FINISHED GRADE EQUALS 99'-2" (FROM DATUM).
4. ELEVATION AT FINISHED GRADE EQUALS 99'-3" (FROM DATUM).

2' 0 2' 4'
SCALE: 1/2"=1'-0"

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REVISIONS

MARK	DATE	DESCRIPTION
0	12/11/2025	ISSUED FOR BID

MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
SHELTER 1 FOUNDATION PLAN

DWG. FILE NAME
161408-E-DT-303.DWG
DATE 12/11/2025
SCALE 1/2" = 1'-0"
SHEET NO. E-DT-303

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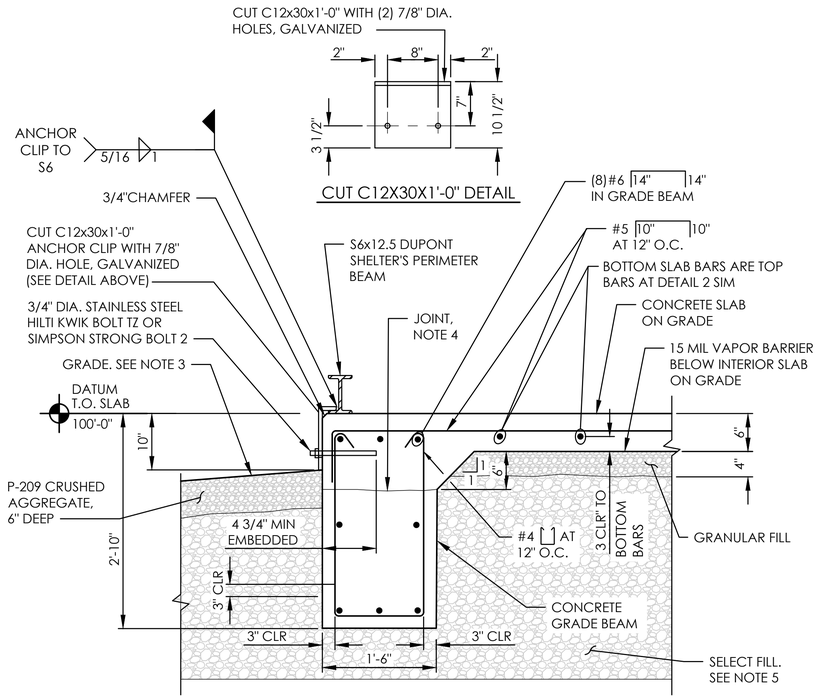
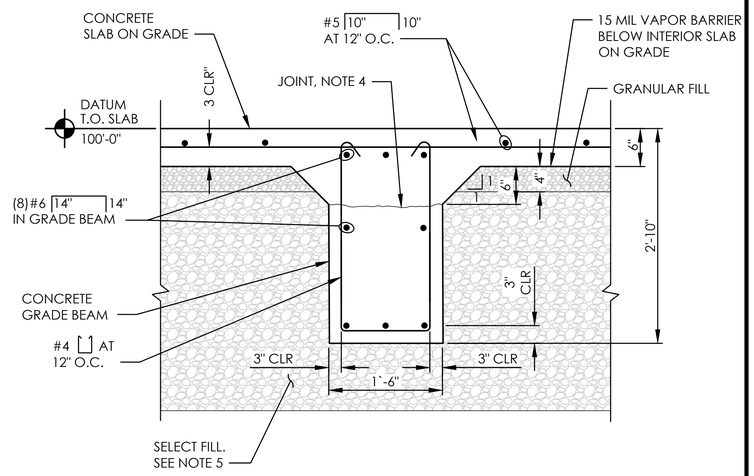


1 E-DT-304 FOUNDATION SECTION
SCALE: 1"=1'-0"

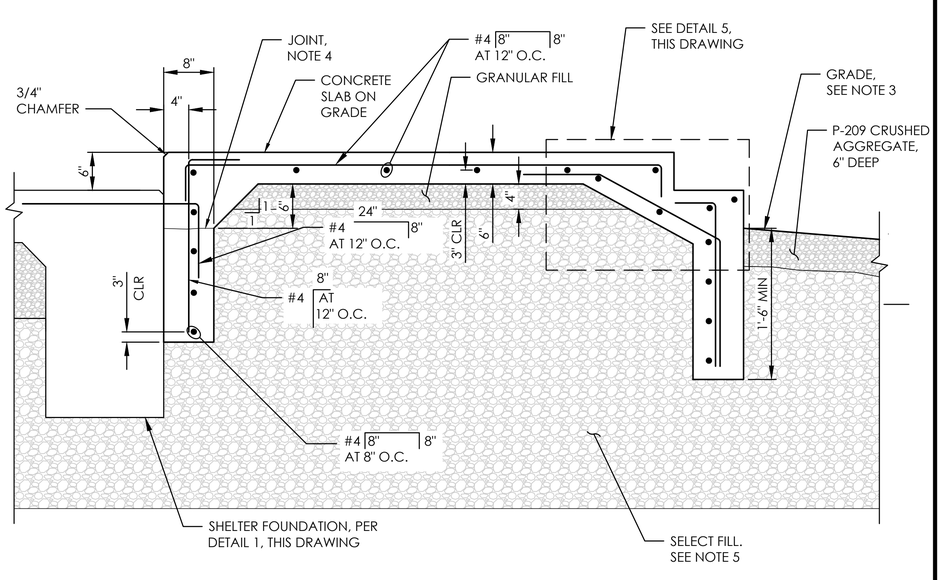


2 E-DT-304 FOUNDATION SECTION
SCALE: 1"=1'-0"

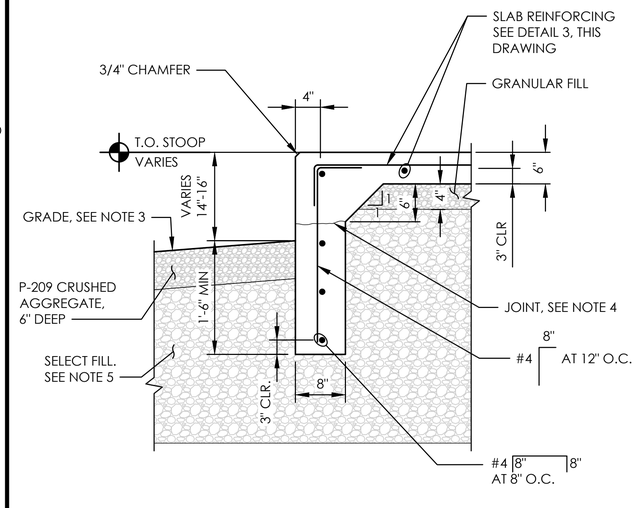
NOTES:

1. SEE DRAWING E-GN-302 FOR STRUCTURAL NOTES.
2. SEE DRAWING E-SP-301 FOR COORDINATES OF SHELTER CORNERS AND FOR ELEVATION OF TOP OF SLAB OF SHELTER FOUNDATION. TOP OF SLAB DATUM ELEVATION EQUALS 100'-0".
3. SLOPE FINISHED GRADE DOWNWARD AWAY FROM FOUNDATION FOR A MINIMUM OF 6 FEET.
4. OPTIONAL CONSTRUCTION JOINT ROUGHENED TO 1/4" AMPLITUDE.
5. SELECT FILL 3'-0" MINIMUM TOTAL SOIL REPLACEMENT DEPTH BELOW BASE OF FOOTINGS SHALL EXTEND 5'-0" MIN. BEYOND FOUNDATION AND STOOP.

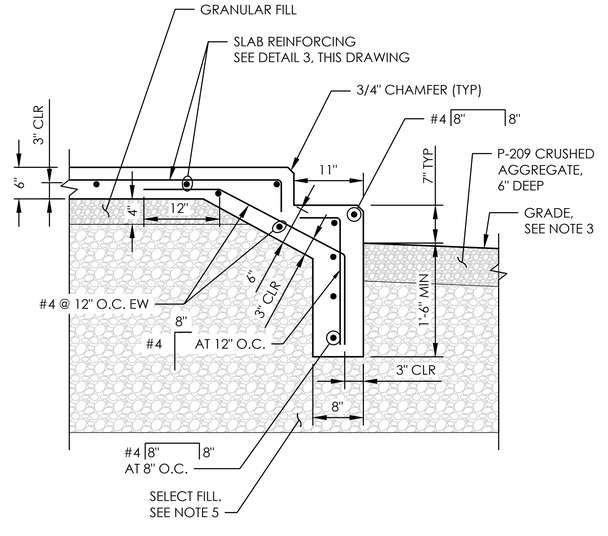
1' 0 1' 2'
SCALE: 1"=1'-0"



3 E-DT-304 DOOR STOOP SECTION
SCALE: 1"=1'-0"



4 E-DT-304 DOOR STOOP SECTION
SCALE: 1"=1'-0"



5 E-DT-304 DOOR STOOP SECTION AT STEPS
SCALE: 1"=1'-0"

PAY ITEM: L-125-5.1

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REVISIONS

MARK	DATE	DESCRIPTION
0	12/11/2025	ISSUED FOR BID

MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
SHELTER 1 FOUNDATION SECTIONS

DWG. FILE NAME
161408-E-DT-304.DWG
DATE
12/11/2025
SCALE
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E-DT-304

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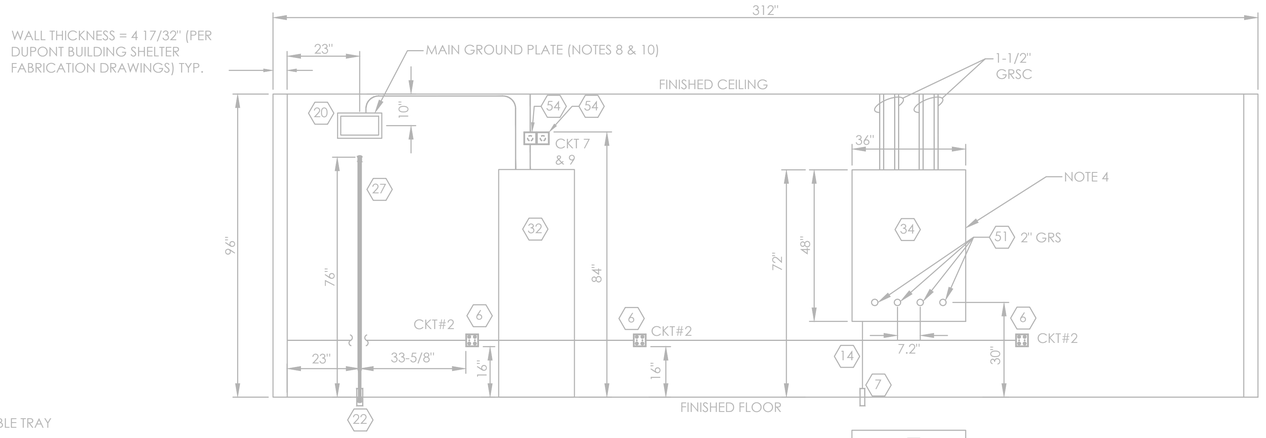

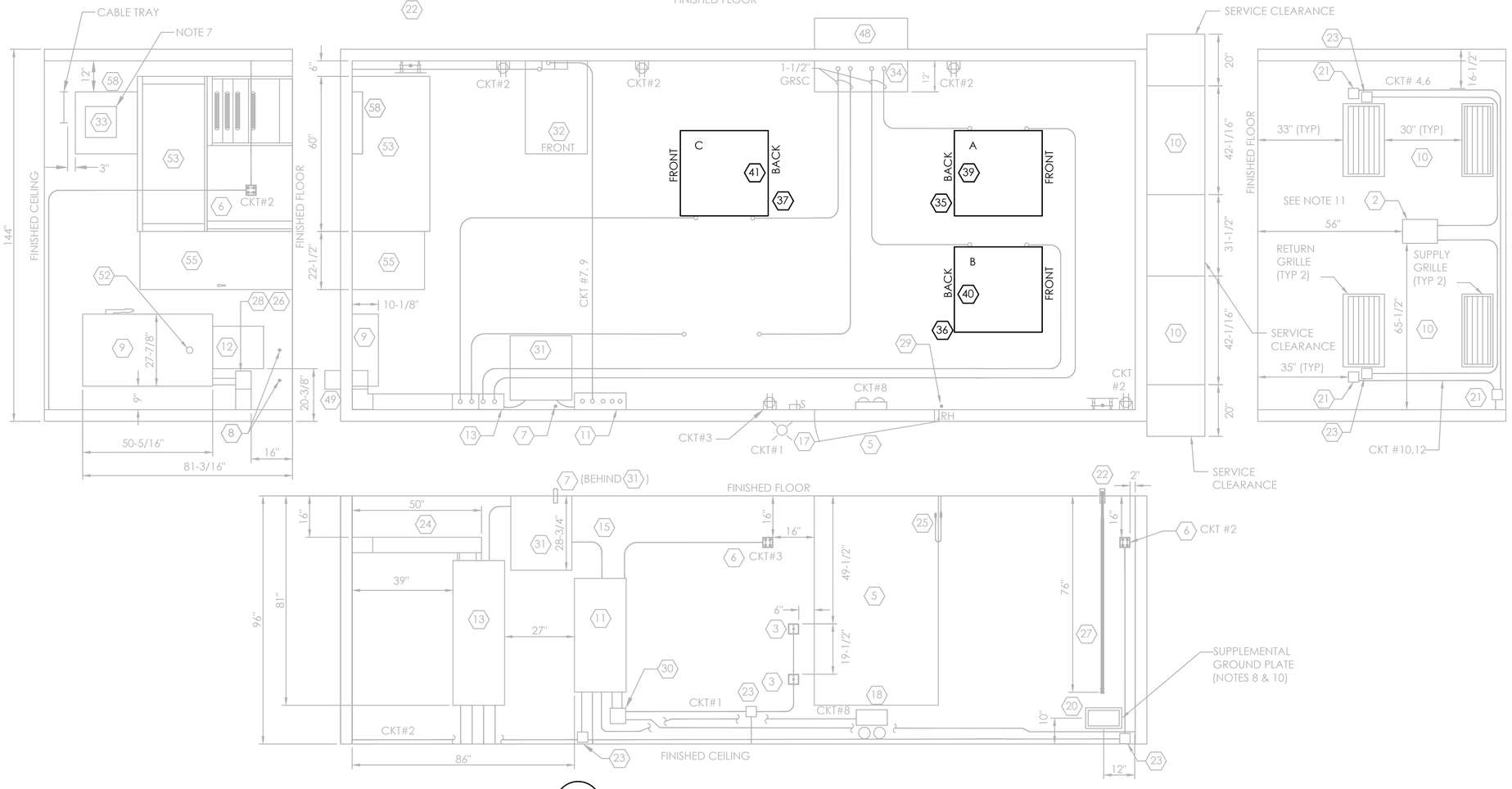

1 E-DT-305 SHELTER 1 INTERIOR LAYOUT - FLOOR PLAN
SCALE: 1/2"=1'-0"

NOTES:

1. ⬡ = MATERIAL LISTING. ITEM DESCRIPTION FOUND ON DRAWING E-GN-300.
2. ALL DIMENSIONS SHOWN ARE IN INCHES.
3. SEE WIRING DIAGRAMS FOR CONDUIT SIZE AND TYPE. CONDUIT IS 3/4" EMT UNLESS OTHERWISE SPECIFIED.
4. ITEM 34 CONTAINS ITEMS 43-45 AND 59 (QTY 3). SEE DRAWING E-DT-316.
5. CONTRACTOR TO PROTECT FLOOR FROM DAMAGE DURING INSTALLATION OF SHELTER EQUIPMENT.
6. CONDUITS FOR ITEMS 35-41 SHALL TURN DOWN FROM THE CEILING AND DEAD END 78" FROM THE FLOOR. FLEXIBLE METALLIC CONDUIT AND FITTINGS SHALL BE FURNISHED FOR EACH CCR/MLC RGS CONDUIT POWER CONDUIT:
   a. AT OCCUPIED CCR/MLC LOCATIONS, THE FLEX CONDUIT SHALL BE INSTALLED ON THE RGS CONDUIT (TOP) END, LEAVING 72" UNFINISHED, AND AN ADDITIONAL 36" SLACK WIRING. A 90° FITTING SHALL BE PROVIDED FOR EACH UNFINISHED FLEX CONDUIT END.
   b. AT UNOCCUPIED CCR/MLC LOCATION, THE FLEX CONDUIT SHALL NOT BE INSTALLED.
7. CONTRACTOR TO PROVIDE 4 DUPLEX PATCH CABLES WITH SC/SC CONNECTORS AND 1 SIMPLEX PATCH CABLE WITH FC/SC CONNECTORS TO ITEM 32 VIA CABLE TRAY.
8. CONTRACTOR TO INSTALL 500 KCMIL FROM EACH GROUND PLATE TO EES.
9. CONTRACTOR TO TERMINATE CCR CONDUIT (EMT & FLEXIBLE METAL LIQUID TIGHT) AND TERMINATE CIRCUITS.
10. GROUND WIRE CONNECTION BETWEEN MAIN GROUND PLATE AND SUPPLEMENTAL GROUND PLATE SHALL BE A 4/0 GREEN WITH ORANGE TRACER.
11. MOUNT HVAC CONTROLLER ACROSS FROM AND CENTERED ON THE CABLE TRAY VERTICAL LADDER.

NOTE: SCREENED LINEWORK IS PROVIDED / INSTALLED BY THE FAA AND IS SHOWN FOR INFORMATION ONLY

2' 0 2' 4'
SCALE: 1/2"=1'-0"

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MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
SHELTER 1 INTERIOR LAYOUT (1 OF 2)

DWG. FILE NAME
161408-E-DT-305.DWG
DATE 12/11/2025
SCALE 1/2" = 1'-0"
SHEET NO. E-DT-305

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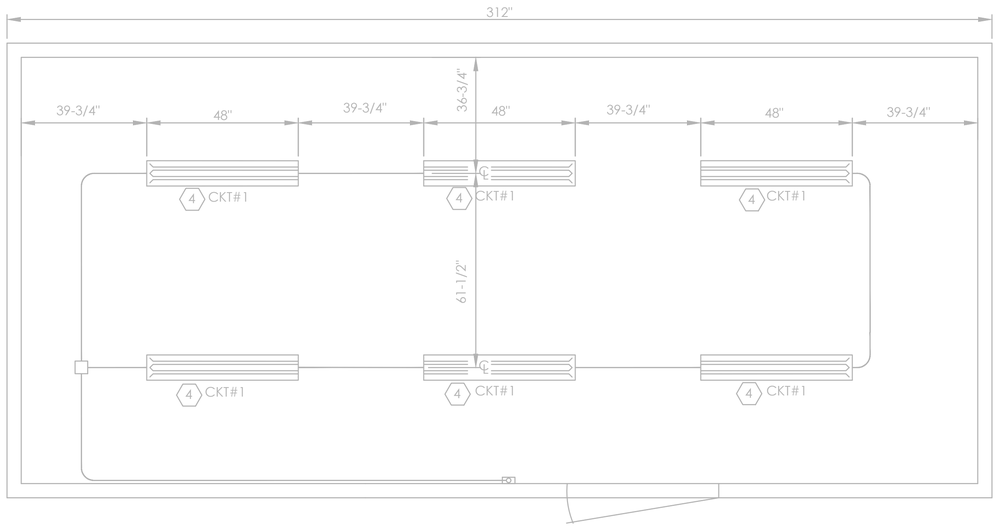

1 E-DT-306 SHELTER 1 INTERIOR LAYOUT - LIGHTING PLAN
SCALE: 1/2"=1'-0"

NOTES:

1. ⬡ = MATERIAL LISTING. ITEM DESCRIPTION FOUND ON DRAWING E-GN-300.
2. ALL DIMENSIONS SHOWN ARE IN INCHES.
3. SEE WIRING DIAGRAMS FOR CONDUIT SIZE AND TYPE. CONDUIT IS 3/4" EMT UNLESS OTHERWISE SPECIFIED.

NOTE: SCREENED LINEWORK IS PROVIDED / INSTALLED BY THE FAA AND IS SHOWN FOR INFORMATION ONLY

2' 0 2' 4'
SCALE: 1/2"=1'-0"

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12/11/2025

ENGINEER–SUBCONSULTANT

JOB NO.

REVISIONS

MARK	DATE	DESCRIPTION
0	12/11/2025	ISSUED FOR BID

MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
SHELTER 1 INTERIOR LAYOUT (2 OF 2)

DWG. FILE NAME
161408-E-DT-306.DWG

DATE
12/11/2025

SCALE
1/2" = 1'-0"

SHEET NO.
E-DT-306

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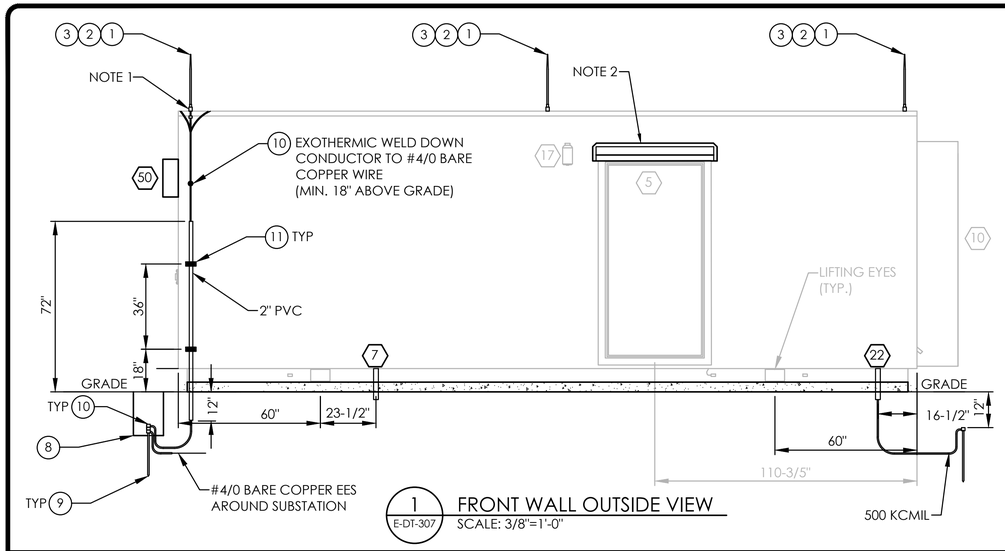
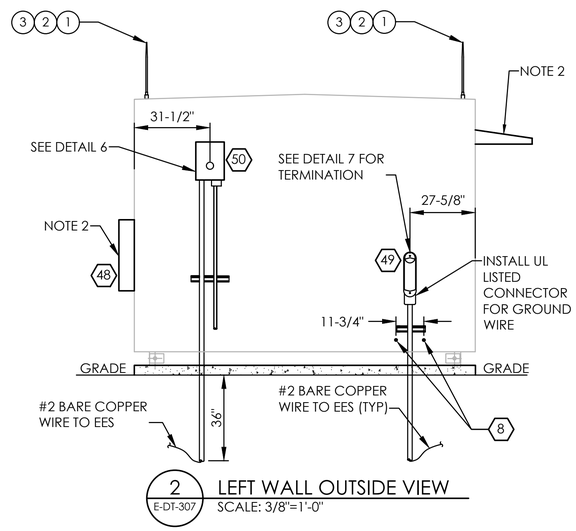
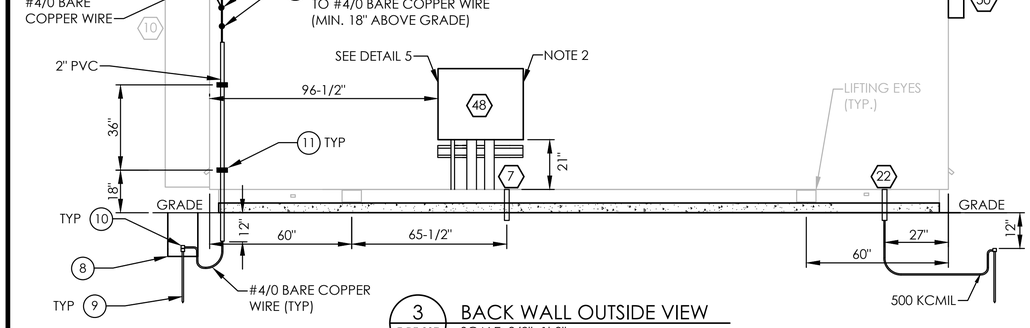


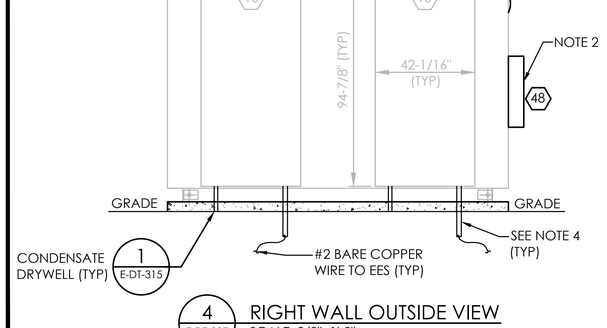
1 E-DT-307 FRONT WALL OUTSIDE VIEW
SCALE: 3/8"=1'-0"



2 E-DT-307 LEFT WALL OUTSIDE VIEW
SCALE: 3/8"=1'-0"

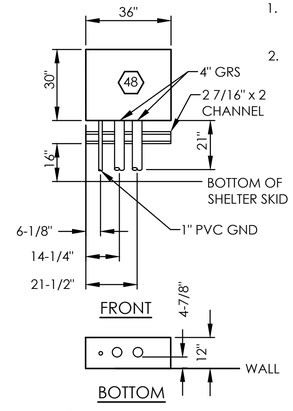


3 E-DT-307 BACK WALL OUTSIDE VIEW
SCALE: 3/8"=1'-0"



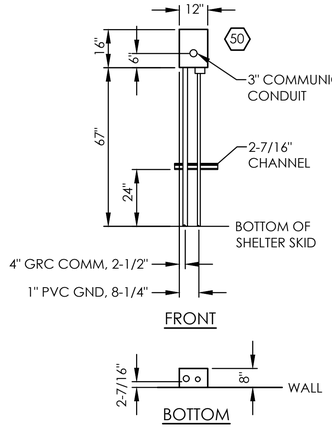
4 E-DT-307 RIGHT WALL OUTSIDE VIEW
SCALE: 3/8"=1'-0"

NOTES:
1. HUBS TO BE INSTALLED BY CONTRACTOR.
2. SEE NOTE 6.



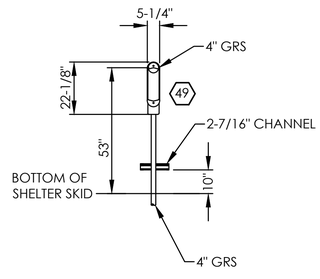
5 E-DT-307 OUTPUT POWER J-BOX
SCALE: 3/8"=1'-0"

NOTES:
1. HUBS TO BE INSTALLED BY CONTRACTOR.
2. SEE NOTE 6.
3. COMMUNICATION J-BOX TO BE INSTALLED BY CONTRACTOR.



6 E-DT-307 COMMUNICATION J-BOX
SCALE: 3/8"=1'-0"
(SHOWN WITH DOORS REMOVED)

NOTES:
1. HUBS TO BE INSTALLED BY CONTRACTOR.



7 E-DT-307 INPUT POWER LB
SCALE: 3/8"=1'-0"

NOTES:
1. CONTRACTOR TO PROVIDE SWEEPS IN DOWN CONDUCTORS TO PREVENT SHARP BENDS.
2. CONTRACTOR TO INSTALL THE PROVIDED GFM. ITEMS WILL NOT BE INSTALLED BY FAA DUE TO SHIPPING WIDTH OF SHELTER.
3. SEE DRAWING E-DT-311 FOR LIGHTNING PROTECTION PACKAGE INSTALLATION.
4. CONTRACTOR TO INSTALL 1" PVC CONDUIT FROM ITEM 10 TO A MINIMUM OF 12" BELOW GRADE FOR BARE COPPER WIRE.
5. MOUNT TRANSITION BOX (ITEM 48) ONTO EXISTING CONDUITS (4 AT 2") THAT PENETRATE THE WALL.
6. SILICONE SEALANT IS TO BE APPLIED TO THE BACK OF THE BOX ON LIP EDGE PRIOR TO MOUNTING TO THE SHELTER. SECOND BEAD OF SEALANT IS TO BE APPLIED ON TOP AND SIDES OF BOX AND ADJACENT WALL.
7. SEAL ALL PENETRATIONS THROUGH THE SHELTER WALL WITH SILICONE SEALANT, I.E. BOLTS, SCREWS, CONDUIT, UNISTRUT, ETC TO PREVENT WATER PENETRATION.

ITEM 47 LIGHTNING PROTECTION PACKAGE

ITEM NO	QTY REQ'D	UNIT OF MEASURE	PART NUMBER	PART DESCRIPTION	NOTE
1	6	EA.	CUSTOM	1/2" X 24" COPPER AIR TERMINAL WITH PIGTAIL ASSEMBLY	1
2	6	EA.	HGR-CUBU12I	1/2" CU UNIVERSAL BASE	
3	6	EA.	HGR-158	BRASS 1/2" VERTICAL BASE AND STAINLESS STEEL ALL-THREAD	
4	18	EA.	HGR-260	COPPER ADHESIVE CABLE HOLDER	2
5	64	FT.	28 STRAND	14 AWG COPPER CONDUCTOR ROPE FOR EQUALIZING RING	
6				NOT USED.	
7	2	EA.	162483	250ML PRO-POXY KIT 300 FAST EPOXY	

CONTRACTOR FURNISHED

ITEM NO	QTY REQ'D	UNIT OF MEASURE	PART NUMBER	PART DESCRIPTION	NOTE
8	2	EA.		24" X 2' GROUND ACCESS WELL	1
9	2	EA.		EES GROUND ROD	
10	A/R	EA.		EXOTHERMIC WELD	3
11	4	EA.		ONE HOLE 2" CONDUIT CLAMP. MFR. CADDY, P/N 0070200EG OR EQUAL	2

LIGHTNING PROTECTION NOTES:
1. PER FAA-STD-019F, ONE TERMINAL REQUIRED PER CORNER + MAXIMUM OF 25' SPACING BETWEEN TERMINALS.
2. USED TO SECURE HALO RING ON TOP OF SHELTER. SPACED NOT GREATER THAN 36" APART BETWEEN AIR TERMINALS.
3. CONNECTION OF THE LIGHTNING PROTECTION DOWN CONDUCTOR TO THE #4/0 BARE COPPER (TO EES) MUST BE A MINIMUM OF 18" ABOVE GRADE.

CONTRACTOR FURNISHED NOTES:
1. CONTRACTOR TO PROVIDE SWEEPS IN DOWN CONDUCTORS TO PREVENT SHARP BENDS.
2. CONTRACTOR TO INSTALL THE PROVIDED GFM. ITEMS WILL NOT BE INSTALLED BY FAA DUE TO SHIPPING HEIGHT OF SHELTER.
3. SEE DRAWING E-DT-311 FOR LIGHTNING PROTECTION PACKAGE INSTALLATION.
4. CONTRACTOR SHALL PROVIDE/INSTALL ALL CONDUIT OUTSIDE SHELTER.

NOTE: SCREENED LINEWORK IS PROVIDED / INSTALLED BY THE FAA AND IS SHOWN FOR INFORMATION ONLY

1' 0 1' 2' 3' 4' 5' 6' 7'
SCALE: 3/8"=1'-0"

TAKE OFF WITH US Memphis INTERNATIONAL AIRPORT

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PARSONS
Program Management Consultant
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JOB NO.
85091

DRAWN BY: KLM
CHECKED BY: CTX
APPROVED BY: CBD

CHARLES B. DEMONT
REGISTERED ENGINEER
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STATE OF TENNESSEE
12/11/2025

ENGINEER—SUBCONSULTANT

JOB NO.

REVISIONS

MARK	DATE	DESCRIPTION
0	12/11/2025	ISSUED FOR BID

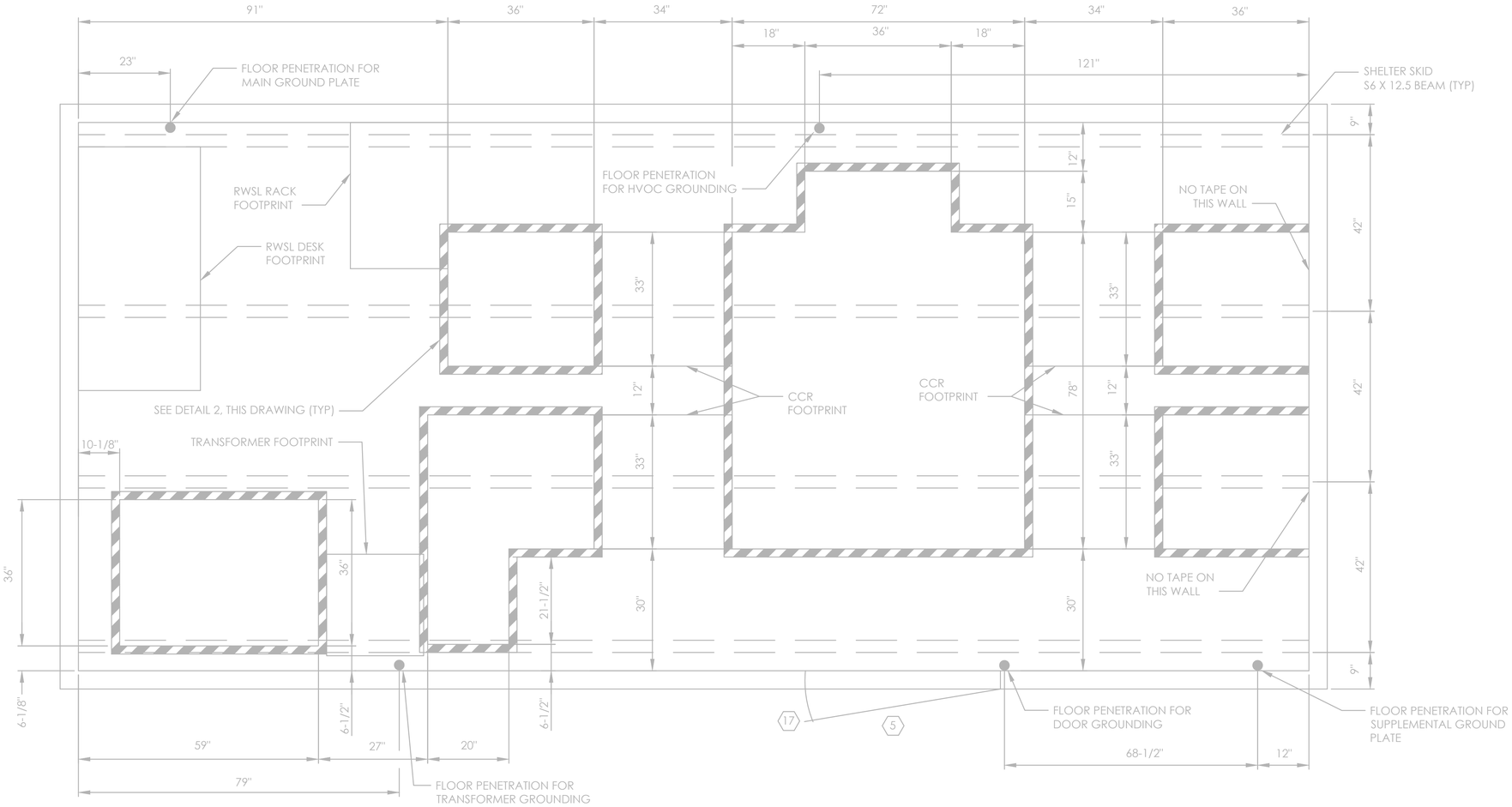
MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

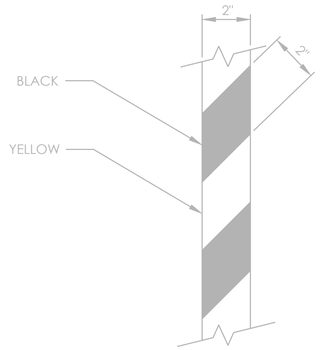
SHEET TITLE:
SHELTER 1 EXTERIOR LAYOUT

DWG. FILE NAME
161408-E-DT-307.DWG
DATE 12/11/2025
SCALE 3/8" = 1'-0"
SHEET NO. E-DT-307

December 10, 2025 c:\cadd\lib\pw\pwwestcoast.kmlk\d0273326\161408-E-DT-307.dwg



1 E-DT-308 CLEARANCE TAPE FLOOR PLAN
SCALE: 3/4"=1'-0"



2 E-DT-308 BLACK AND YELLOW CLEARANCE TAPE
SCALE: N.T.S.

NOTES:

1. ALL MEASUREMENTS ARE TO THE INSIDE OF THE TAPE.
2. TAPE IS 6 MIL, 2" WIDE, STRIPED VINYL, ADHESIVE-BACKED TAPE. RESISTANT TO MOST SOLVENTS.
3. CLEARANCE TAPE IS TO BE INSTALLED PRIOR TO EQUIPMENT BEING PLACED ON FLOOR.
4. COVER FLOOR AFTER TAPE INSTALLATION AND PRIOR TO SHIPPING.

NOTE: SCREENED LINEWORK IS PROVIDED / INSTALLED BY THE FAA AND IS SHOWN FOR INFORMATION ONLY

1' 0 1' 2' 3'
SCALE: 3/4"=1'-0"

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MARK	DATE	DESCRIPTION
0	12/11/2025	ISSUED FOR BID

MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
SHELTER 1 CLEARANCE TAPE STRIPING

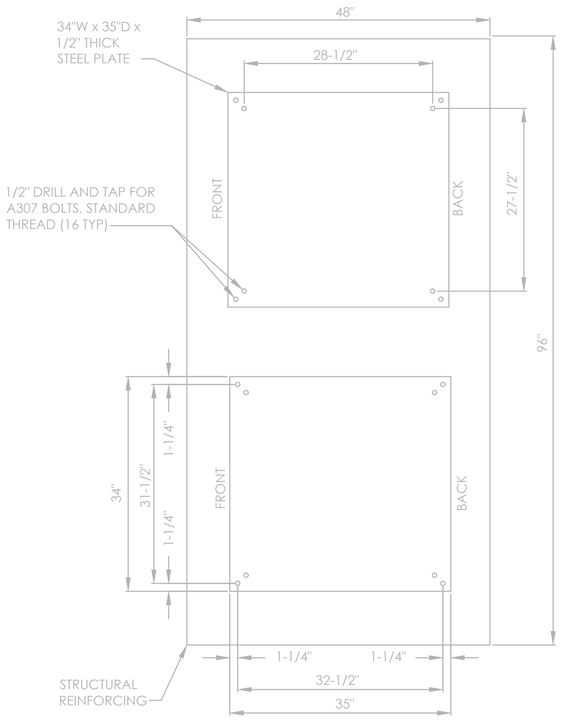
DWG. FILE NAME
161408-E-DT-308.DWG

DATE
12/11/2025

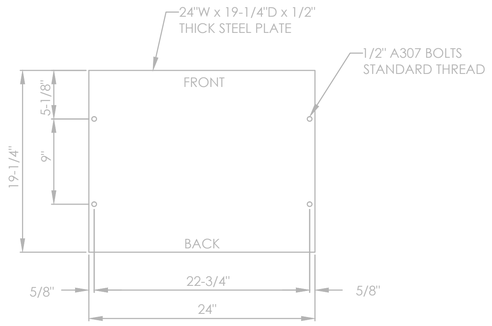
SCALE
3/4"=1'-0"; N.T.S.

SHEET NO.
E-DT-308

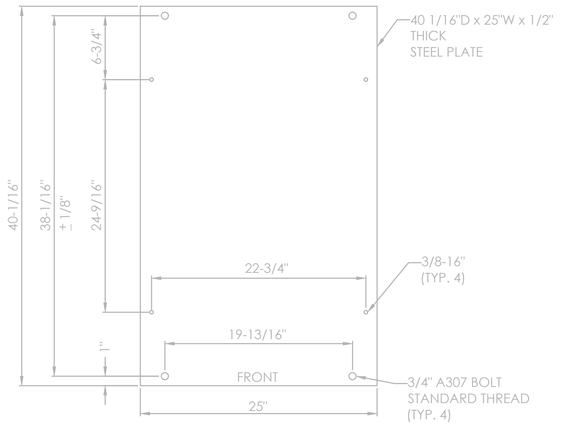
December 10, 2025 c:\caddlib\pw\pwwestcoast\kmills\d0273326\161408-E-DT-308.dwg



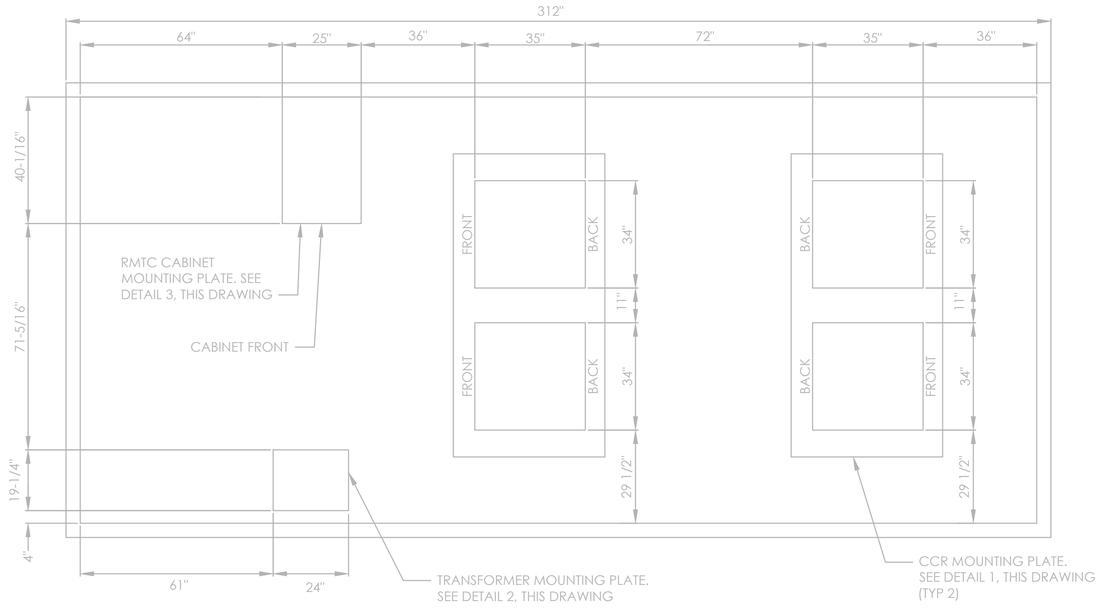
1 E-DT-309 CCR MOUNTING PLATE
SCALE: 1" = 1'-0"



2 E-DT-309 TRANSFORMER MOUNTING PLATE
SCALE: 1-1/2" = 1'-0"



3 E-DT-309 RMTC CABINET MOUNTING PLATE
SCALE: 1-1/2" = 1'-0"

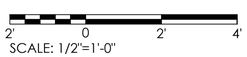


4 E-DT-309 EQUIPMENT MOUNTING PLATE PLAN
SCALE: 1/2" = 1'-0"

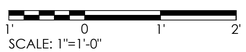
NOTES:

1. SEE DRAWING E-DT-310 FOR EQUIPMENT PANEL SCHEDULES.
2. ALL DIMENSIONS ARE SHOWN IN INCHES.
3. ALL INTERIOR ELECTRICAL WORK IS SURFACE MOUNT, IN EMT CONDUIT. CONDUIT SIZE IS 3/4" UNLESS OTHERWISE SPECIFIED.
4. ALL 120 VOLT CIRCUITS SHALL HAVE A MINIMUM OF #12 THHN WIRING.
5. EXTERIOR GROUNDING SYSTEM METER AND SERVICE BY THE ELECTRICAL CONTRACTOR.
6. PANEL BOARD ENCLOSURE GROUNDING BAR AND SERVICE ENTRANCE RACEWAY SHALL BE BONDED TOGETHER.
7. PROVIDE LABELING FOR ALL CIRCUITS AND ITEMS. ALL CONDUCTORS AND GROUNDING SHALL BE LABELED ON BOTH ENDS SHOWING "TO" AND "FROM" DESTINATIONS.
8. FLEXIBLE NONMETALLIC CONDUIT SHALL NOT BE USED. USE FLEXIBLE METAL LIQUID TIGHT CONDUIT AS IDENTIFIED.
9. ALL FEEDER AND BRANCH CIRCUITS SHALL INCLUDE NEUTRAL CONDUCTORS AND BE IDENTIFIED AT BOTH ENDS OF CONDUCTOR W/ PANEL AND CIRCUIT NUMBER.
10. PANEL BOARD AND DISCONNECT SHALL HAVE NAME PLATES SHOWING PERTINENT INFORMATION MADE OF RIGID PLASTIC, AND ENGRAVED WITH 3/8" TEXT ATTACHED WITH WEATHER PROOF BONDING MATERIAL.
11. CRIMP ALL GROUND LUGS PER FAA-STD-019G (PARAGRAPH 4.2.3.2). CRIMP CONNECTORS USED ON CONDUCTORS #6 AWG AND LARGER SHALL BE CONCENTRICALLY APPLIED (CIRCULAR OR HEX CROSS-SECTION) USING A HYDRAULIC TOOL THAT APPLIES A MINIMUM FORCE OF 12 TONS.
12. BOLTED CONNECTIONS PER FAA-STD-019G (PARAGRAPH 4.2.3.4.2). IN DRY LOCATIONS, BOLTED CONNECTIONS 1/4" DIAMETER AND GREATER SHALL USE BOLTS, NUTS, AND LOAD DISTRIBUTION WASHERS TO MEED THE CORROSION INHIBITED REQUIREMENTS OF SAE STANDARD J429 GRADE 5. DISC SPRING WASHERS (BELLEVILLE SPRING WASHERS) SHALL BE INSTALLED ON ALL BOLTED CONNECTIONS 1/4" DIAMETER AND GREATER. BOLTED CONNECTIONS SHALL BE ASSEMBLED AS SHOWN ON DRAWINGS E-DT-609 AND E-DT-610.
13. ALL 120 VAC CIRCUIT WIRING ON LINE #1 TO BE BLACK AND LINE #2 TO BE RED. NEUTRAL TO BE WHITE.
14. 480 VAC PHASING COLOR SCHEME SHALL BE: A-YELLOW, B-BROWN, C-ORANGE, NEUTRAL-GRAY.
15. CONTRACTOR TO PROVIDE PANEL SCHEDULES AS SHOWN ON PLANS.
16. ALL FLEXIBLE CONDUITS SHALL HAVE BOTH EXTERNAL AND INTERNAL GROUNDING BUSHINGS.
17. ALL METAL CONDUITS SHALL HAVE INTERNAL GROUNDING BUSHINGS.

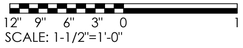
NOTE: SCREENED LINEWORK IS PROVIDED / INSTALLED BY THE FAA AND IS SHOWN FOR INFORMATION ONLY



SCALE: 1/2"=1'-0"



SCALE: 1"=1'-0"



SCALE: 1-1/2"=1'-0"

TAKE OFF WITH US Memphis INTERNATIONAL AIRPORT

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12/11/2025

ENGINEER—SUBCONSULTANT

JOB NO.

REVISIONS

MARK	DATE	DESCRIPTION
0	12/11/2025	ISSUED FOR BID

MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
SHELTER 1 EQUIPMENT MOUNTING PLATE DETAILS

DWG. FILE NAME
161408-E-DT-309.DWG

DATE
12/11/2025

SHEET NO.
E-DT-309

SCALE
AS SHOWN

December 10, 2025 c:\coddlib\pw\pwwestcoast\kmills\d0273326\161408-E-DT-309.dwg

PANEL NO. Unit 11	SECTION 1 OF 1	Bus: 240 /120 Volts	[X] Main C.B., 200 AMP
Location: RWSL Shelter	Serving: Normal	1 PH, 3 Wire, 225 AMP	[ ] Main Lugs Only

Fully Rated SC Rating: 10,000 RMS SYM AMPS	[ ] Feed Thru Lugs [X] SubFeed Lugs	[X] Neutral [X] Gnd. Bus	[X] S.U.S.E [ ] I.G. Bus	[ ] Flush Mnt. [X] Surface Mnt.	[ ] Top Feed [X] Bot. Feed

Load Type	Circuit Description	CONN KVA	C.B. AMP	C.B. Pole	C.B. CKT	PH	C.B. CKT	C.B. Pole	C.B. AMP	CONN KVA	Circuit Description	Load Type
L	Lights	0.82	20	1	1	L1	2	1	20	1.44	Receptacles	R
R	GFI Breaker-Protected Receptacle, Item 19	0.18	20	1	3	L2	4	2	45	4.50	HVAC #1	H
	Spare		20	1	5	L1	6	-	-	4.50	-	H
L	RMTC	1.20	15	1	7	L2	8	1	20	0.09	Emergency Light	L
L	RMTC	1.20	15	1	9	L1	10	2	45	4.50	HVAC #2	H
	Spare		20	1	11	L2	12	-	-	4.50	-	H
	Spare		20	1	13	L1	14	1	20		Spare	
	Space			1	15	L2	16	1			Space	
	Space			1	17	L1	18	1			Space	
	Space			1	19	L2	20	1			Space	
	Space			1	21	L1	22	1			Space	
	Space			1	23	L2	24	1			Space	
	Space			1	25	L1	26	1			Space	
	Space			1	27	L2	28	1			Space	
	Space			1	29	L1	30	1			Space	

Total Receptacle (R) Load @ 180VA/ea., 100% for first 10,000VA, & 50% for remainder: 1.62 KVA

Total Noncoincident (E) Load 0.00 KVA (Not included in demand load) — Total HVAC (H) Load: 18.00 KVA
Total Continuous (L) Load @ 1.25%: 4.14 KVA — Total Non-Continuous (N) Load: 0.00 KVA
Total Motor (M) Load: 0.00 KVA — Largest Motor (LM) @ 2 0 HP 0.00 KVA

TOTAL CONNECTED LOAD:	CONNECTED AMP	L1	L2	MINIMUM FEEDER CAPACITY	
22.93 KVA	Total / Phase	52	44	23.76 KVA	99.0 A

Unit 13	SECTION: 1 OF 1	Bus: 480 /277 Volts	[ ] Main C.B., AMP
Location: RWSL Shelter	Serving: Normal	3 PH, 4 Wire, 400 AMP	[X] Main Lugs Only

Fully Rated SC Rating: 25,000 RMS SYM AMPS	[ ] Feed Thru Lugs [ ] SubFeed Lugs	[X] Neutral [X] Gnd. Bus	[X] S.U.S.E [ ] I.G. Bus	[ ] Flush Mnt. [X] Surface Mnt.	[ ] Top Feed [X] Bot. Feed

Load Type	Circuit Description	CONN KVA	C.B. AMP	C.B. Pole	C.B. CKT	PH	C.B. CKT	C.B. Pole	C.B. AMP	CONN KVA	Circuit Description	Load Type
L	**CCR A, Item 35 (Circuit T1A)**	**10.10**	**60**	**2**	**1**	A	**2**	**2**	**60**	**10.10**	**CCR B, Item 36 (Circuit R1B)**	**L**
L	-	10.10	-	-	3	B	4	-	-	10.10	-	L
	Space				5	C	6	2	125	18.75	37.5 KVA Transformer, Item 31	N
	Space				7	A	8	-	-	18.75	-	N
L	**CCR C, Item 37 (Circuit R1C)**	**10.10**	**60**	**2**	**9**	B	10	2	60		Spare	
L	-	10.10	-	-	11	C	12	-	-		-	
	Space				13	A	14				Space	
	Space				15	B	16				Space	
	Space				17	C	18				Space	
	Space				19	A	20				Space	
	Space				21	B	22				Space	
	Space				23	C	24				Space	
	Space				25	A	26				Space	
	Space				27	B	28				Space	
	Space				29	C	30				Space	
	Space				31	A	32				Space	
	Space				33	B	34				Space	
	Space				35	C	36				Space	
	Space				37	A	38				Space	
	Space				39	B	40				Space	
	Space				41	C	42				Space	

Total Receptacle (R) Load @ 180VA/ea., 100% for first 10,000VA, & 50% for remainder: 0.00 KVA

Total Noncoincident (E) Load 0.00 KVA (Not included in demand load) — Total HVAC (H) Load: 0.00 KVA
Total Lighting (L) Load @ 125%: 75.75 KVA — Total Continuous (N) Load: 37.50 KVA
Total Motor (M) Load: 0.00 KVA — Largest Motor (LM) @ 125 0 HP 0.00 KVA

TOTAL CONNECTED LOAD:	CONNECTED AMP	A	B	C	MINIMUM FEEDER CAPACITY	
98.10 KVA	Total /Phase	47	37	35	113.25 KVA	136.2 A

V. Source: 277/480V	Phase: 3 Phase	Date: Month/Day/Year	
1	T1A, CCR	2	R1B, CCR
3		4	
5		6	37.5 KVA TRANSFORMER
7		8	
9	R1C, CCR	10	FUTURE, CCR
11		12	
13		14	
15		16	
17		18	
19		20	
21		22	
23		24	
25		26	
27		28	
29		30	
31		32	
33		34	
35		36	
37		38	
39		40	
41		42	

EXAMPLE PANELBOARD SCHEDULE

NOTE: SCREENED LINEWORK IS PROVIDED / INSTALLED BY THE FAA AND IS SHOWN FOR INFORMATION ONLY

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PROGRAM MANAGER
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12/11/2025

ENGINEER—SUBCONSULTANT

JOB NO.

REVISIONS

MARK	DATE	DESCRIPTION
0	12/11/2025	ISSUED FOR BID

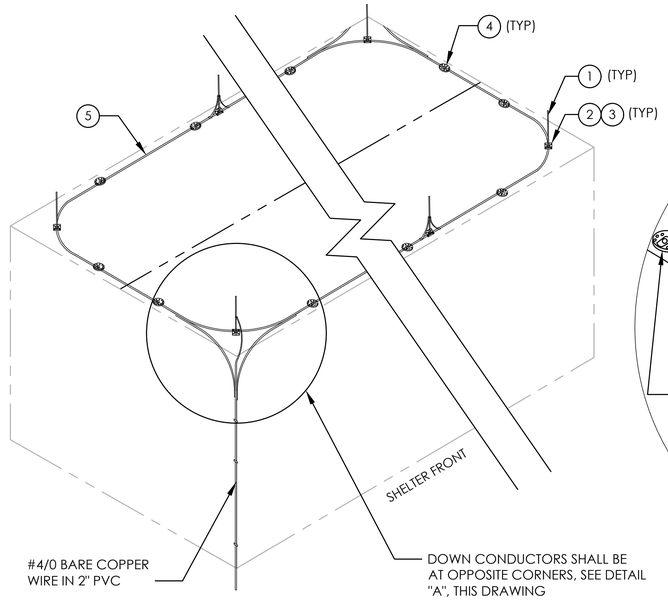
MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

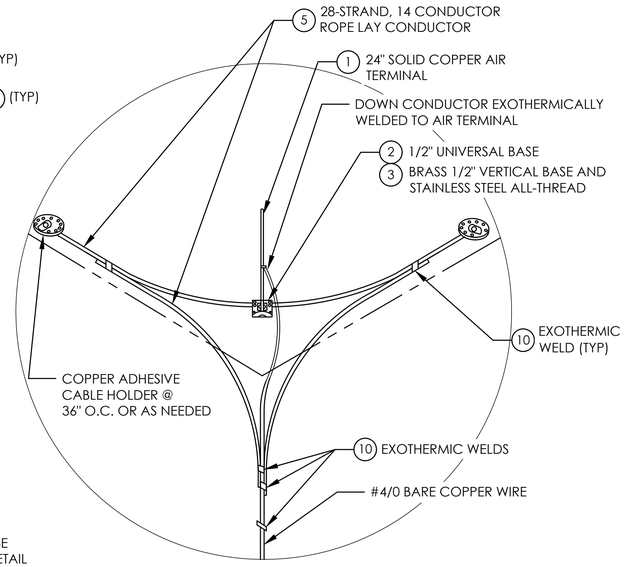
SHEET TITLE:
SHELTER 1 EQUIPMENT MOUNTING PLATE PANEL SCHEDULES

DWG. FILE NAME
161408-E-DT-310.DWG
DATE 12/11/2025
SCALE N.T.S.
SHEET NO.
E-DT-310

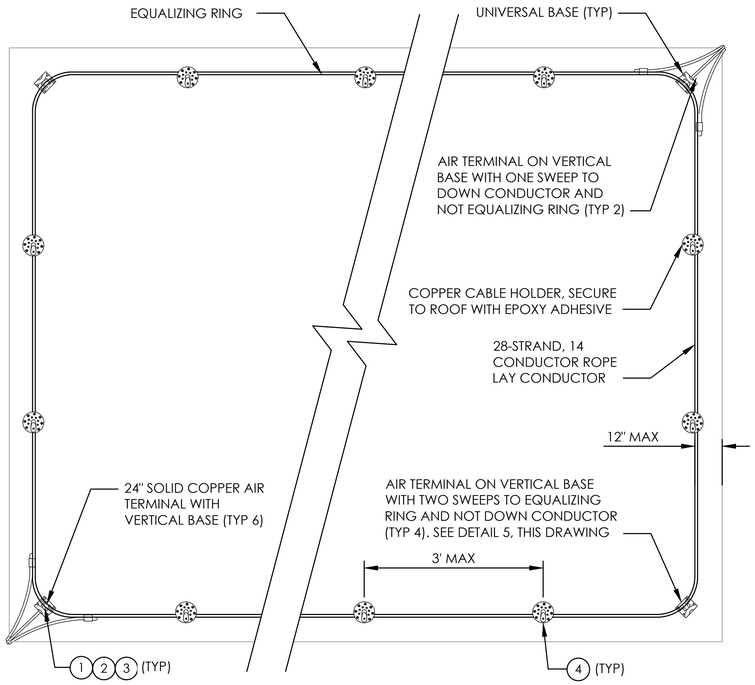
December 10, 2025 C:\caddlib\pw\pwwestcoast\kmills\d0273326\161408-E-DT-310.dwg



ISOMETRIC VIEW

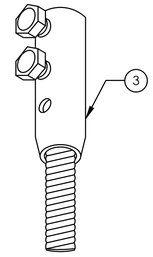


DETAIL "A"

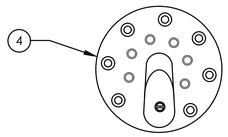


TOP OUTSIDE VIEW

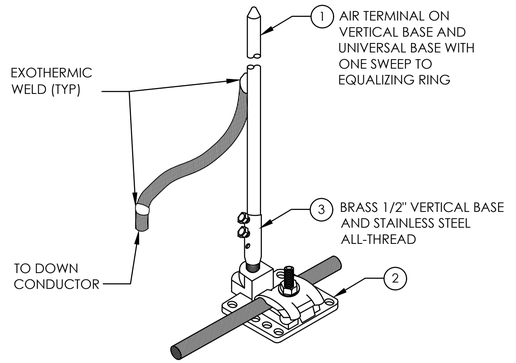
1 E-DT-311 ITEM 47: LIGHTNING PROTECTION PACKAGE
SCALE: N.T.S.



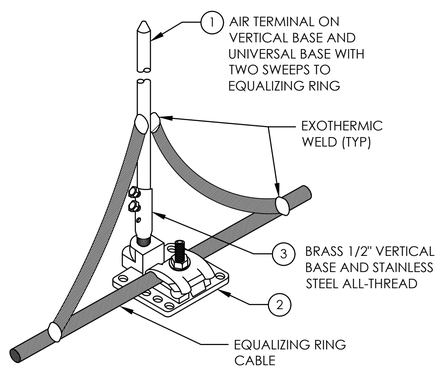
2 E-DT-311 BRASS 1/2" VERTICAL BASE AND STAINLESS STEEL ALL-THREAD
SCALE: N.T.S.



3 E-DT-311 COPPER ADHESIVE CABLE HOLDER
SCALE: N.T.S.



4 E-DT-311 CORNER ASSEMBLY FOR DOWN CONDUCTOR
SCALE: N.T.S.



5 E-DT-311 SIDE ASSEMBLY AND CORNER ASSEMBLY WITHOUT DOWN CONDUCTOR (TYP 4)
SCALE: N.T.S.

NOTES:

1. MINIMUM BEND RADIUS ON CONDUCTORS SHALL BE 8 INCHES.
2. ALL CABLE CONNECTIONS SHALL BE EXOTHERMICALLY WELDED.
3. ALL OTHER CONNECTIONS SHALL BE EXOTHERMICALLY WELDED TO THE EXTENT POSSIBLE.
4. ALL METAL COMPONENTS WITHIN 6 FT. OF A DOWN CONDUCTOR SHALL BE CONNECTED TO THE DOWN CONDUCTOR AS WELL.
5. FOR LEVEL INSTALLATION, USE EPOXY MATERIAL TO BUILD UP TO LEVEL POSITION.
6. INFORMATION IS SUBJECT TO PROTOTYPE VERIFICATION.
7. USE DAB OF SEALANT IN SCREW HOLE BEHIND CLIP TO PREVENT MOISTURE ENTERING THROUGH SCREWHOLE.
8. LIGHTNING PROTECTION PACKAGE PROVIDED BY GOVERNMENT AND THIS DRAWING SHOWS INSTALLATION FOR INFORMATION ONLY.
9. (#): SEE ITEM NUMBERS ON DRAWING E-DT-307.

BEST PRACTICES FOR INSTALLING LIGHTNING PROTECTION EQUIPMENT:

AIR TERMINALS: INSTALL AIR TERMINALS ON THE TOP OF THE SHELTER AT THE CORNERS NO MORE THAN 12" FROM THE ROOF EDGE (TWO SIDES). SECURE AIR TERMINAL BASE TO ROOF WITH EPOXY. SURFACE SHOULD BE MECHANICALLY SCUFFED DIRECTLY BELOW TERMINAL BASE BEFORE APPLICATION OF EPOXY TO ENSURE PROPER ADHESION. EXERCISE CARE NOT TO PENETRATE GEL COATING.

PERIMETER CABLE: INSTALL "EQUALIZING RING" CABLE AROUND THE PERIMETER OF THE ROOF WITHIN 12" OF ROOF EDGE. SECURE CABLE TO THE AIR TERMINAL BASE FOR CONVENIENCE. SECURE TO THE ROOF USING CABLE HOLDERS EPOXIED TO THE ROOF. SPACING BETWEEN ROOF ATTACHMENT POINTS (CABLE HOLDER OR AIR TERMINAL BASE) IS 36" MAXIMUM. ENSURE THAT CABLE BENDING RADIUS IS 8" OR GREATER AT CORNERS. OVERLAP ENDS OF PERIMETER CABLE AND EXOTHERMIC WELD OVERLAP. NOTE, CONNECTING PERIMETER CABLE TO AIR TERMINAL BASE IS FOR MECHANICAL CONVENIENCE, NOT FOR LIGHTNING PROTECTION ELECTRICAL PURPOSES. PROTECT SHELTER ROOF SURFACE FROM DAMAGE FROM EXOTHERMIC WELDING. MECHANICALLY CLAMP EQUALIZING HALO RING FOR FITTING, THEN EXOTHERMICALLY WELD ON THE GROUND OFF THE SHELTER SURFACE.

DOWN CONDUCTOR: USE THE PRE-WELDED GFM 3-PIGTAIL AIR TERMINALS ON CORNERS WHERE THE DOWN CONDUCTORS ARE INSTALLED. EXOTHERMICALLY WELD THE LONGEST PIGTAIL DIRECTLY TO THE #4/0 GROUNDING CONDUCTOR. A CABLE IS NOT NEEDED BETWEEN THE AIR TERMINAL BASE AND THE DOWN CONDUCTOR.

SWEEP CABLES: AT AIR TERMINALS WITH A DOWN CONDUCTOR, USE THE PRE-WELDED GFM 3-PIGTAIL AIR TERMINALS. EXOTHERMICALLY WELD SWEEP PIGTAILS (36") TO EQUALIZING HALO RING ON EITHER SIDE OF THE AIR TERMINAL. AT AIR TERMINALS WITHOUT THE DOWN CONDUCTOR, USE THE PRE-WELDED GFM 2-PIGTAIL AIR TERMINALS. EXOTHERMICALLY WELD SWEEP PIGTAILS (36") TO EQUALIZING HALO RING ON EITHER SIDE OF THE AIR TERMINAL. ENSURE THAT THE CABLE BENDING RADIUS IS 8" OR GREATER ON SWEEPS AND DOWN CONDUCTORS.

GROUNDING CABLE: EXOTHERMIC WELD THE DOWN CONDUCTOR TO THE #4/0 GROUNDING CABLE (TO THE EES) AT LEAST 18" ABOVE GRADE. ENCLOSE WELD JOINT INTO THE 2" PVC. THE PVC SHALL EXTEND FROM 12" BELOW GRADE TO 6' ABOVE GRADE.

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REVISIONS

MARK	DATE	DESCRIPTION
0	12/11/2025	ISSUED FOR BID

MSCAA PROJ. NO.
16-1408-01

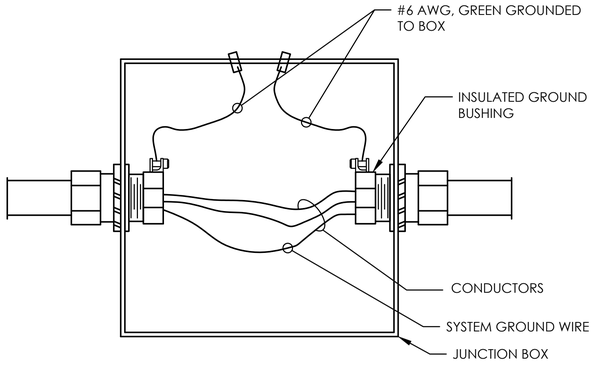
PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
SHELTER 1 LIGHTNING PROTECTION PACKAGE

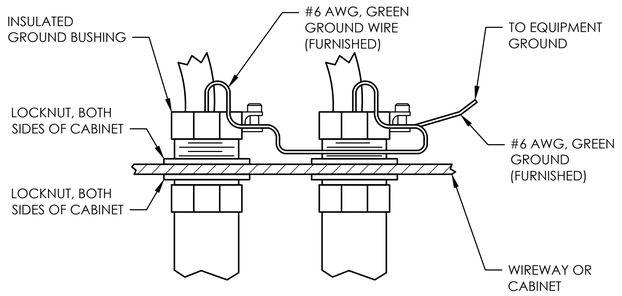
DWG. FILE NAME
161408-E-DT-311.DWG

DATE 12/11/2025
SCALE N.T.S.
SHEET NO. E-DT-311

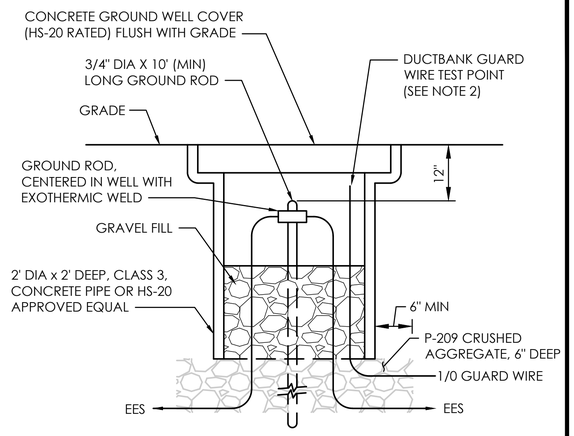
December 10, 2025 c:\caddlib\pw\pwwestcoast\kmills\d0273326\161408-E-DT-311.dwg



1 E-DT-312 TYPICAL CONDUIT AND J-BOX GROUNDING DETAIL
SCALE: N.T.S.



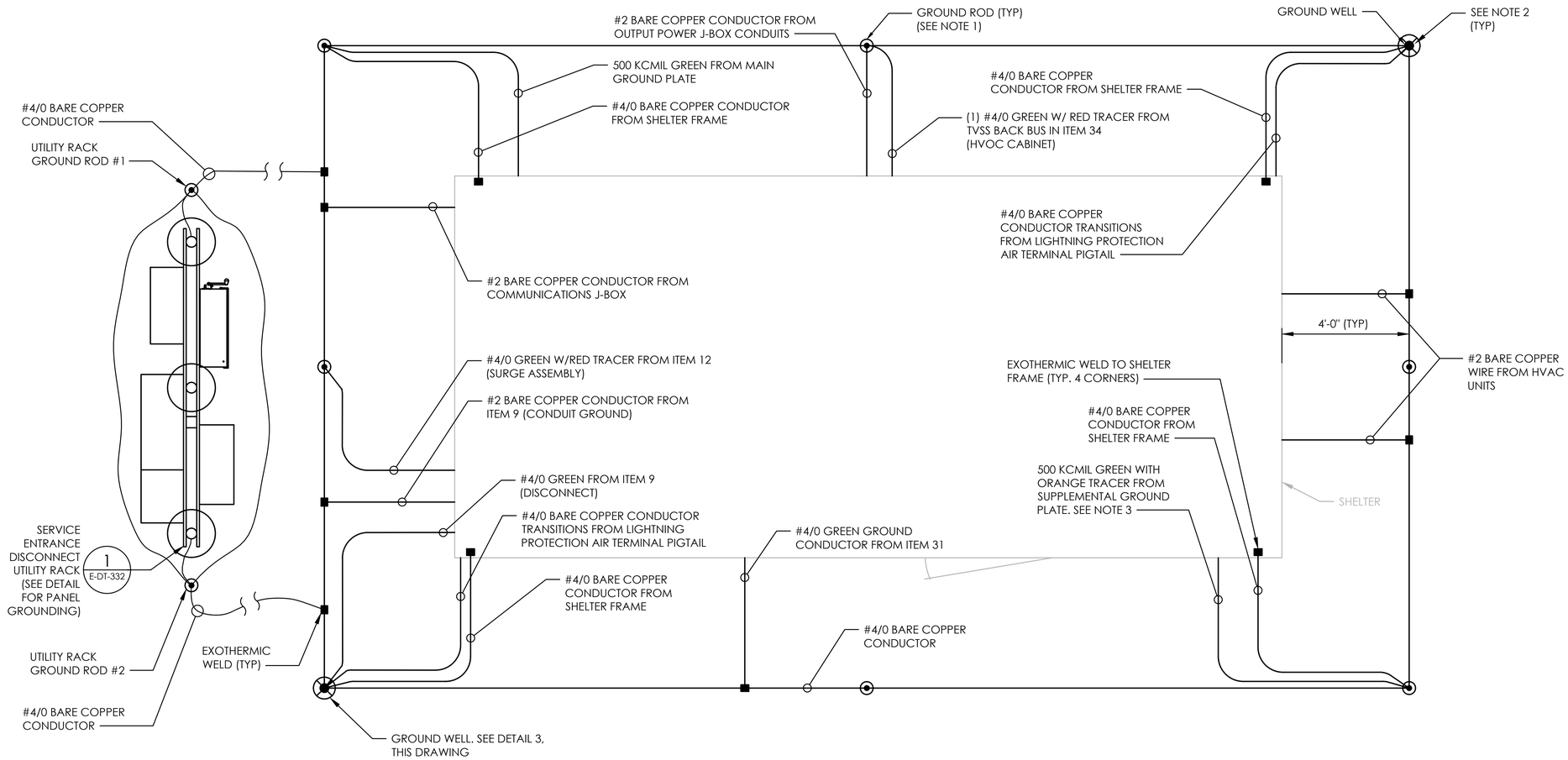
2 E-DT-312 CONDUIT AND GROUNDING WALL MOUNT UNITS
SCALE: N.T.S.



3 E-DT-312 GROUNDING WELL INSTALLATION
SCALE: N.T.S.

NOTES:

1. ALL GROUND RODS AT EES FOR SHELTER 1 SHALL BE 10' LONG. (LENGTH DETERMINED TO ACHIEVE GROUND RESISTANCE OF LESS THAN 10 OHMS FOR GROUNDING SYSTEM. MINIMUM GROUND ROD LENGTH IS 10 FEET.)
2. EXOTHERMIC WELD DUCTBANK GUARD WIRE SYSTEM TO GROUND ROD AT GROUNDING WELL UPON COMPLETION OF EACH SYSTEM TEST.
3. CONDUCTOR FROM SUPPLEMENTAL GROUND PLATE SHALL BE 30% LONGER THAN CONDUCTOR FROM MAIN GROUND PLATE.
4. INSTALL GROUND ROD SO THAT ROD IS CENTERED IN WELL.



4 E-DT-312 EARTH ELECTRODE SYSTEM (EES)
SCALE: 1/2" = 1'-0"

NOTE: SCREENED LINEWORK IS PROVIDED / INSTALLED BY THE FAA AND IS SHOWN FOR INFORMATION ONLY

2' 0 2' 4'
SCALE: 1/2"=1'-0"

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MARK	DATE	DESCRIPTION
0	12/11/2025	ISSUED FOR BID

MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

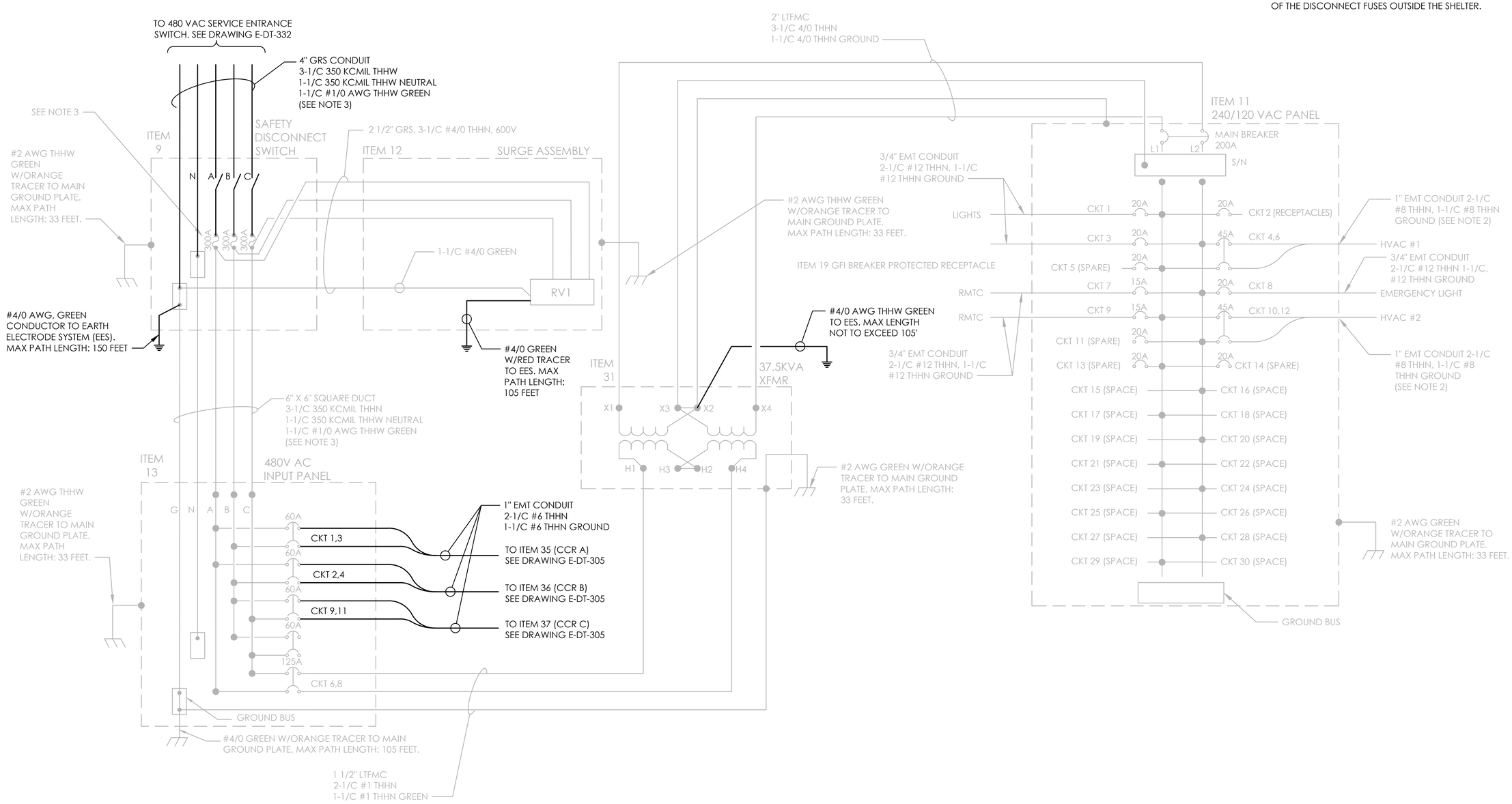
SHEET TITLE:
SHELTER 1 GROUNDING PLAN AND DETAILS

DWG. FILE NAME
161408-E-DT-312.DWG
DATE
12/11/2025
SHEET NO.
E-DT-312
SCALE
1/2"=1'-0"; N.T.S.

December 10, 2025 c:\caddlib\pw\pwwestcoast\kmills\d0273326\161408-E-DT-312.dwg

NOTES:

1. DO NOT BOND GROUND TO NEUTRAL IN ITEMS 9, 11, AND 13.
2. ROUTE POWER AND CONTROL WIRING FOR THE HVAC UNITS IN SEPERATE CONDUITS. SEE DRAWING E-DT-315.
3. SERVICE ENTRANCE CONDUCTOR AND FUSE SIZES SHOWN ARE BASED ON A THEORETICAL FACILITY. AN ARC FLASH HAZARD STUDY AND SHORT CIRCUIT COORDINATION ANALYSIS BASED ON SITE SPECIFIC CONDITIONS IS REQUIRED TO CONFIRM SERVICE CONDUCTORS AND FUSE SIZES AT EACH INSTALLATION SUCH THAT THE ARC FLASH ENERGY LEVEL IS LIMITED TO 1.2 cal/cm² ON THE LOAD SIDE OF THE DISCONNECT FUSES OUTSIDE THE SHELTER.



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REVISIONS

MARK	DATE	DESCRIPTION
0	12/11/2025	ISSUED FOR BID

MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
SHELTER 1 WIRING DIAGRAM ITEMS 9, 11, 13 & 31

DWG. FILE NAME
161408-E-DT-313.DWG

DATE
12/11/2025

SHEET NO.
E-DT-313

SCALE
N.T.S.

December 10, 2025 c:\cadd\lib\pw\pwwestcoast\kmill\d0273326\161408-E-DT-313.dwg

SHIELDED TWISTED PAIR TO ITEM 32 VIA CABLE TRAY
SHIELDED SERIAL CABLE TO ITEM 32 VIA CABLE TRAY
TC CABLE TO ITEM 32 RMTC I/O VIA CABLE TRAY
RMTC N50A1J1
RMTC N50A1J2
RMTC N50A1J3
RMTC N50J1
RMTC N50J7
RMTC N52J1
RMTC N52J2
RMTC N52J3
SEE NOTE 1
SEE NOTE 5
SEE NOTE 3 (TYP)
GND
XCP
N
TB-1
J8
J8
J9
J9
PC BOARD
TB2
TB-3
F1
F2
ITEM 37 (CCR C)
ITEM 36 (CCR B)
ITEM 35 (CCR A)
TO ITEM 13
SEE DRAWING E-DT-313
PHENOLIC STANDOFFS (TYP)
#8 AWG L-824 SOLID BLACK (TYP)
120 VAC POWER TO BE ROUTED INTERNALLY TO MLC (TYP)
RMTC N50J5
RMTC N50J6
TO ITEM 32
SEE DRAWING E-DT-305
RMTC N50J11
ITEM 41 (MLC C)
ITEM 40 (MLC B)
ITEM 39 (MLC A)
NOTE CONTROL UNIT ON FRONT OF MLC (TYP)
J1
X14
X15
X13
X16
X17
#6 AWG GREEN W/ ORANGE TRACER (TYP)
#6 AWG STRANDED GREEN, GROUND (TYP)
#8 AWG L-824 SOLID RED (TYP)
#8 AWG L-824 SOLID BLACK (TYP)
NOTE 6 (TYP)
ITEM 34
BACK PANEL
ITEM 43
ITEM 44
ITEM 45
TERMINATE L-824 CABLES WITH #6 GAUGE 3/8" HIGH VOLTAGE RING LUG ON SURGE ARRESTOR ASSEMBLIES (TYP). COVER TERMINAL CRIMPS AND CABLE WITH HIGH VOLTAGE HEAT SHRINK
ITEM 59
SURGE ARRESTOR ASSEMBLY (TYP)
NOTE 2
#6 AWG GREEN BETWEEN BOX AND DOOR
#4/0 GREEN W/ RED TRACER TO EES
NOTE 7(TYP)
SOLID #6 AWG GREEN (TYP)
TO BE ROUTED THROUGH 2" CONDUITS TO DUCTBANK. SEE NOTE 4 (TYP)

NOTE: SCREENED LINEWORK IS PROVIDED / INSTALLED BY THE FAA AND IS SHOWN FOR INFORMATION ONLY

NOTES:

1. #2 AWG GREEN W/ORANGE TRACER TO MAIN GROUND PLATE. MAX LENGTH NOT TO EXCEED 33'.
2. TERMINATE 4/0 GREEN W/RED TRACER CONDUCTOR TO BACK BUS, SURGE ARRESTORS MOUNTED TO BACK BUS. SEE DETAIL 1, DRAWING E-DT-316.
3. ITEM 57, 30 AMP NON-FUSED SAFETY SWITCH.
4. WHEN SHIELDED CABLE IS USED, OUTER SHIELD SHALL BE TERMINATED TO BACK BUS, SEE DETAIL 2, DRAWING E-DT-315.
5. #2 AWG GREEN W/ORANGE TRACER TO SUPPLEMENTAL GROUND PLATE. MAX LENGTH NOT TO EXCEED 33'.
6. THE EQUIPMENT GROUND CONDUCTOR (#6 GREEN STRANDED) MUST BE CONNECTED TO THE CABINET GROUND BUS AT EACH END. THE CONDUIT GROUNDING BUSHING INSIDE EACH CABINET MUST BE CONNECTED TO THE CABINET GROUND BUS USING A BONDING JUMPER (#6 GREEN STRANDED). USING ONE CABLE OR TWO CABLES INSIDE EACH CABINET (CCR AND BREAKOUT BOX) IS PERMISSIBLE.
7. ALL SOLID GROUND WIRES FROM FIELD LIGHTING CIRCUITS ARE TO BE GROUNDED TO THE SURGE ARRESTOR BACK BUS.
8. ALL CABLES SHALL BE INSTALLED SUCH THAT THEY HAVE A MINIMUM RADIUS OF TEN TIMES THE DIAMETER OF THE CABLE.

December 10, 2025 c:\caddlib\pw\pwwestcoast\kmills\d0273326\161408-E-DT-314.dwg

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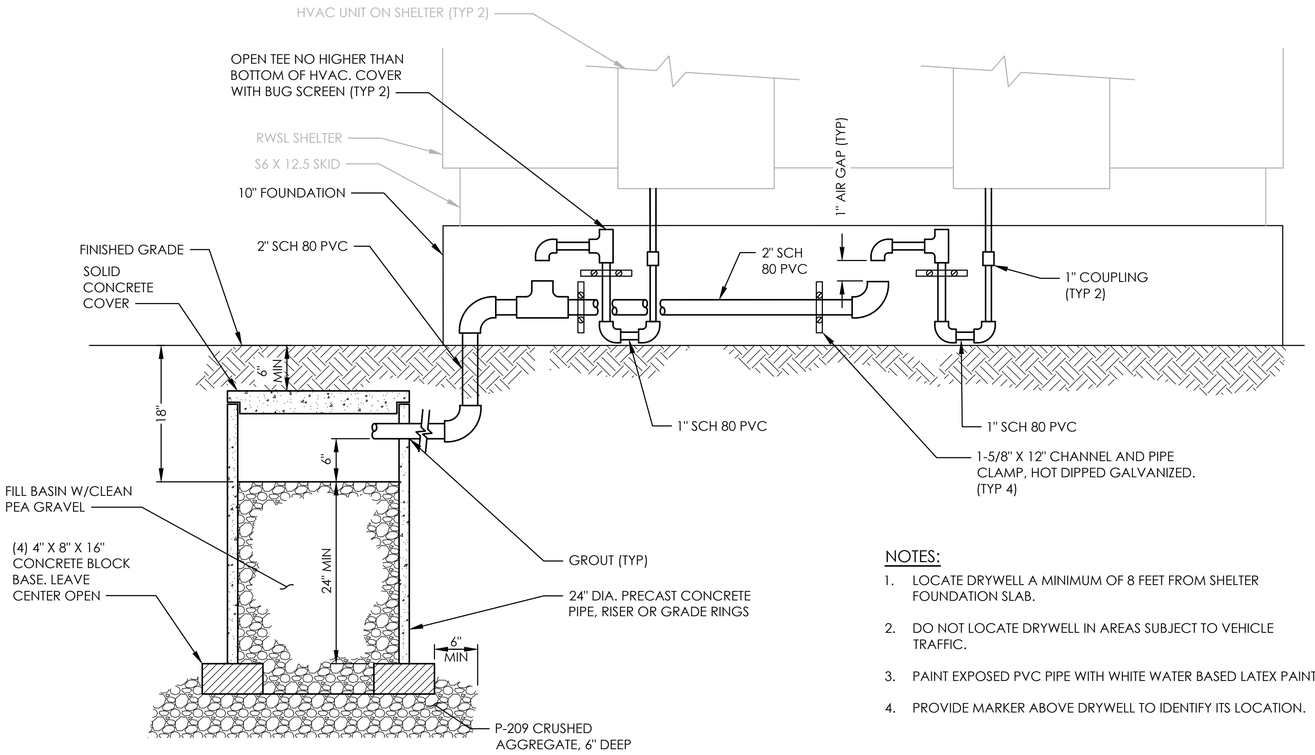
MARK	DATE	DESCRIPTION
0	12/11/2025	ISSUED FOR BID

MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
SHELTER 1 WIRING DIAGRAM ITEMS 35-46 AND 59

DWG. FILE NAME
161408-E-DT-314.DWG
DATE 12/11/2025
SCALE N.T.S.
SHEET NO. E-DT-314



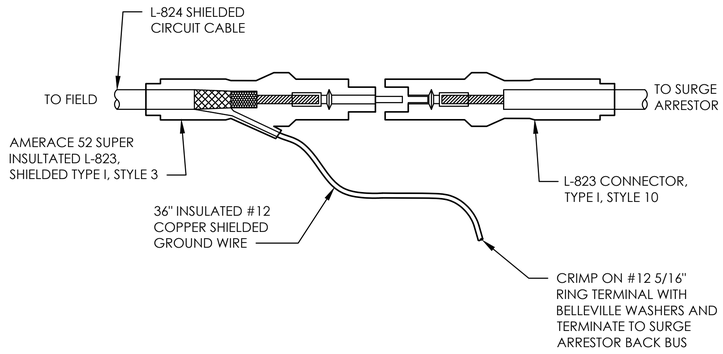
NOTES:

1. LOCATE DRYWELL A MINIMUM OF 8 FEET FROM SHELTER FOUNDATION SLAB.
2. DO NOT LOCATE DRYWELL IN AREAS SUBJECT TO VEHICLE TRAFFIC.
3. PAINT EXPOSED PVC PIPE WITH WHITE WATER BASED LATEX PAINT.
4. PROVIDE MARKER ABOVE DRYWELL TO IDENTIFY ITS LOCATION.

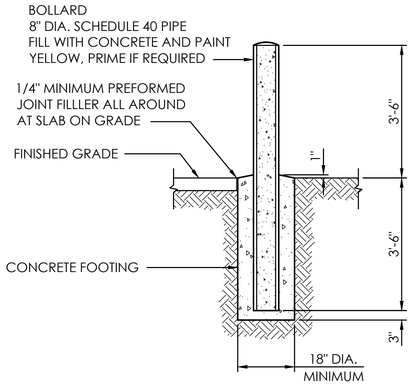
1 E-DT-315 CONDENSATE DRYWELL DETAIL
SCALE: N.T.S.

NOTES:

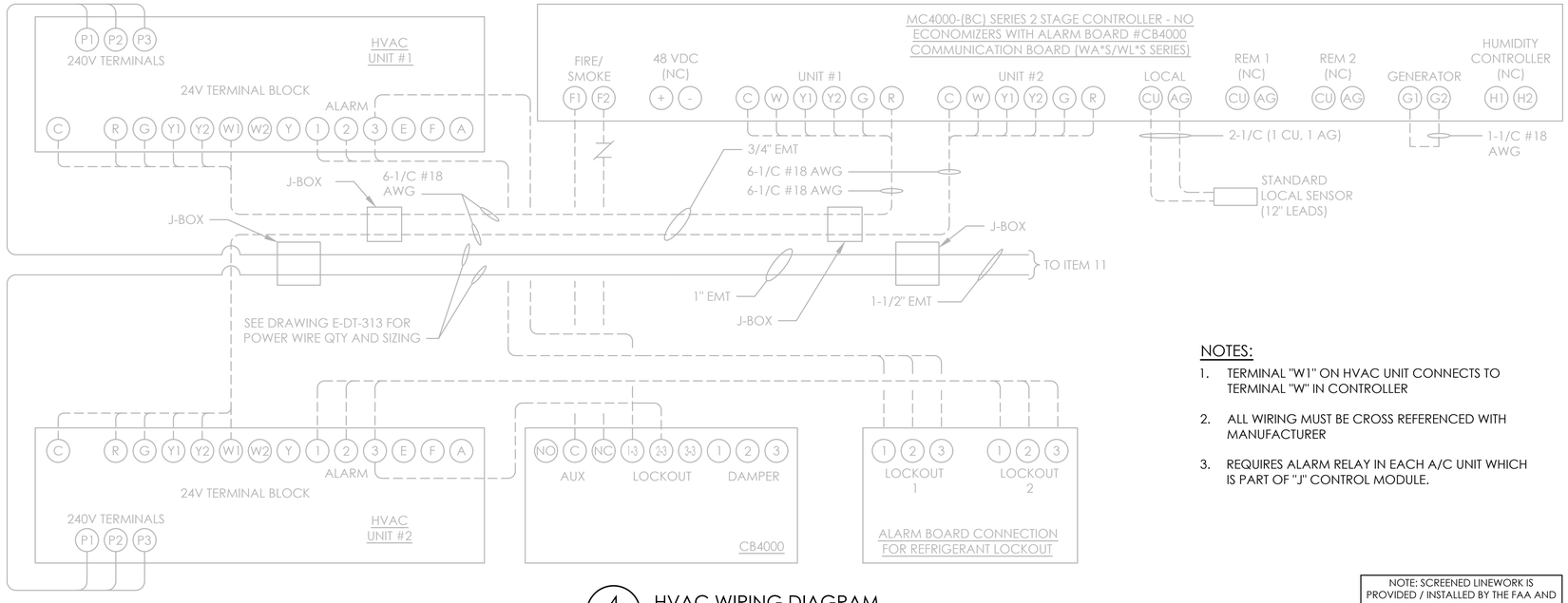
1. WHEN SHIELDED CABLE IS USED IN FIELD LIGHTING CIRCUITS, OUTER SHIELD SHALL BE TERMINATED TO BACK BUS IN HVOC.



2 E-DT-315 SHIELDED CABLE CONNECTOR DETAIL (SHELTER ONLY)
SCALE: N.T.S.



3 E-DT-315 BOLLARD DETAIL
SCALE: N.T.S.



NOTES:

1. TERMINAL "W1" ON HVAC UNIT CONNECTS TO TERMINAL "W" IN CONTROLLER
2. ALL WIRING MUST BE CROSS REFERENCED WITH MANUFACTURER
3. REQUIRES ALARM RELAY IN EACH A/C UNIT WHICH IS PART OF "J" CONTROL MODULE.

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4 E-DT-315 HVAC WIRING DIAGRAM
SCALE: N.T.S.

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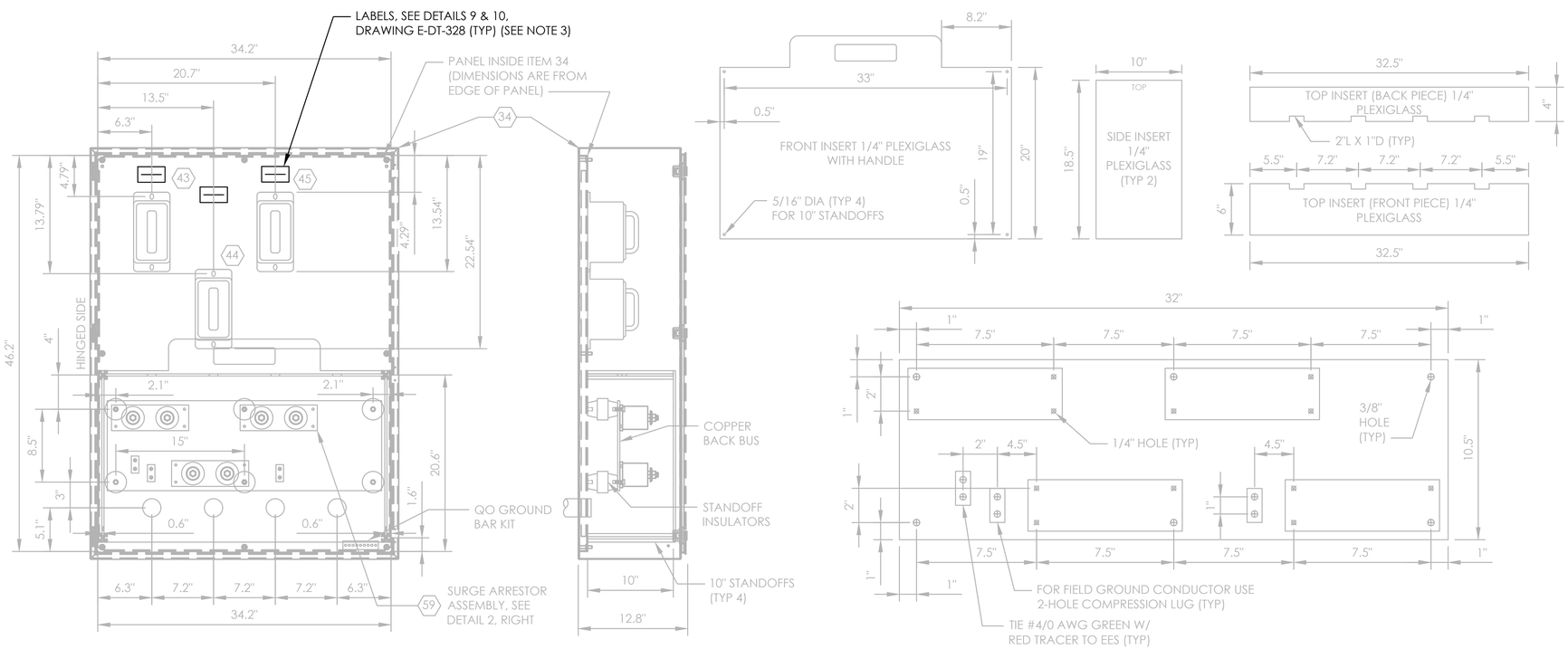
MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
SHELTER 1 EQUIPMENT DETAILS (1 OF 4)

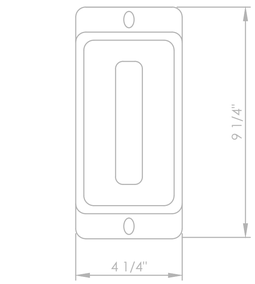
DWG. FILE NAME
161408-E-DT-315.DWG
DATE 12/11/2025
SCALE N.T.S.
SHEET NO. E-DT-315

December 10, 2025 c:\cadd\lib\pw\pwwestcoast\kmills\d0273326\161408-E-DT-315.dwg



NOTES:

1. "THIS CABINET AS CONFIGURED MEETS THE REQUIREMENTS OF NEC (2008) PARAGRAPH 490.24 AND TABLE 490.24 FOR MINIMUM SPACING OF BARE LIVE PARTS FOR NOMINAL VOLTAGES OF UP TO 7.2KV AND THEREFORE IS SUITABLE FOR THIS INSTALLATION WITH NOMINAL VOLTAGES OF 5.3KV PHASE TO PHASE AND 3.03KV PHASE TO GROUND."
2. GROUND WIRES FROM THE FIELD ARE TO BE MOUNTED ON FRONT AND BACK OF THE COPPER BACK BUS BY TWO-HOLE COMPRESSION LUGS.
3. LABEL SERIES CUTOUT A-C FROM LEFT TO RIGHT REGARDLESS OF CCR INSTALLATIONS.



STANDOFF 1" SQUARE 10" LONG EXTRUDED T-SLOT WITH 0.26" SLOT (TYPICAL 4)

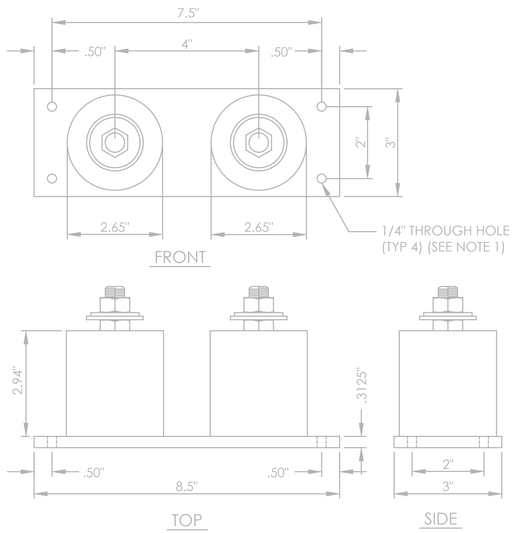
ROCHLING GLASTIC COMPOSITES, PART NO.-1872-1E (TYP 6) (3-1/2" TALL)

SQUARE D QO GROUND BAR KIT

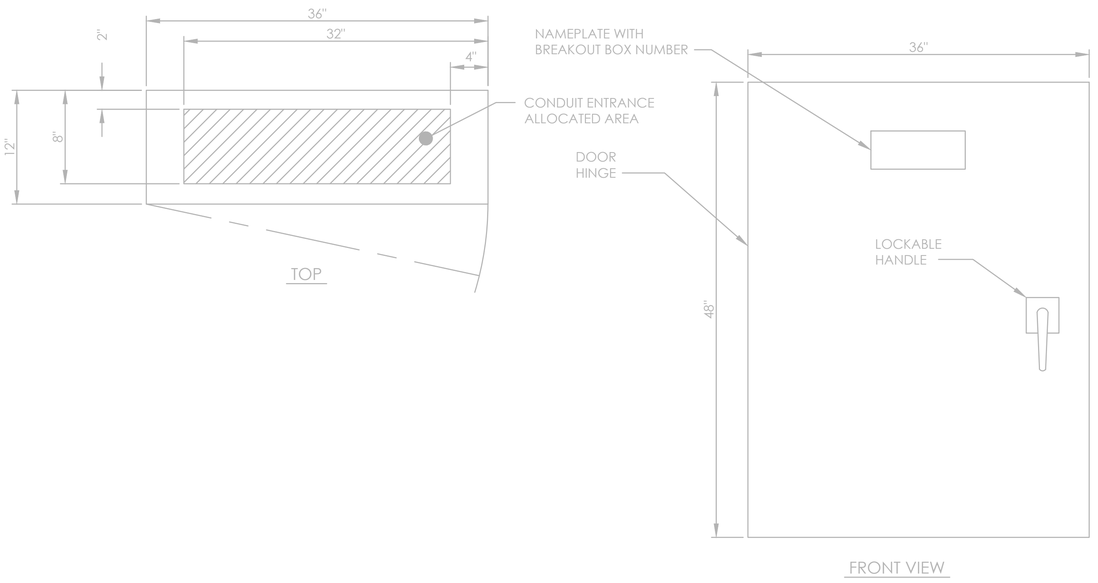
1 E-DT-316 ITEMS 43 THRU 45: SERIES CUTOUT
SCALE: N.T.S.

NOTES:

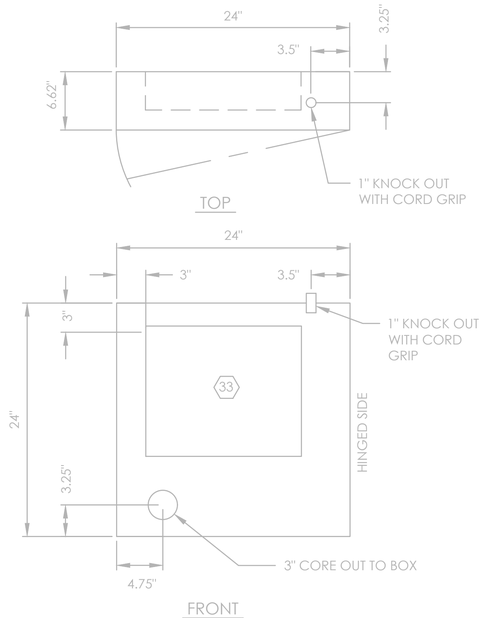
1. ONE (1) HOLE (UPPER LEFT) SHALL BE DRILLED OUT TO 3/8" TO FIT BOLT FOR STANDOFF INSULATOR



2 E-DT-316 ITEM 59: SURGE ARRESTOR ASSEMBLY
SCALE: N.T.S.



3 E-DT-316 ITEM 34: BREAKOUT BOX
SCALE: N.T.S.



4 E-DT-316 ITEM 58 & 33: COMM. ENCLOSURE
SCALE: N.T.S.

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CHECKED BY: CTX
APPROVED BY: CBD

CHARLES B. DEMONT
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AGRICULTURE
No. 115626
STATE OF TENNESSEE
12/11/2025

ENGINEER–SUBCONSULTANT

JOB NO.

REVISIONS

MARK	DATE	DESCRIPTION
0	12/11/2025	ISSUED FOR BID

MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
SHELTER 1 EQUIPMENT DETAILS (2 OF 4)

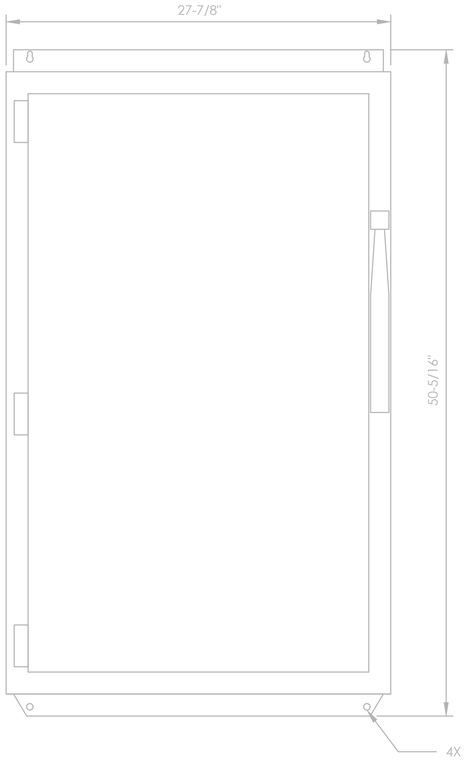
DWG. FILE NAME
161408-E-DT-316.DWG

DATE
12/11/2025

SHEET NO.
E-DT-316

SCALE
N.T.S.

December 10, 2025 c:\caddlib\pw\pwwestcoast\kmills\d0273326\161408-E-DT-316.dwg



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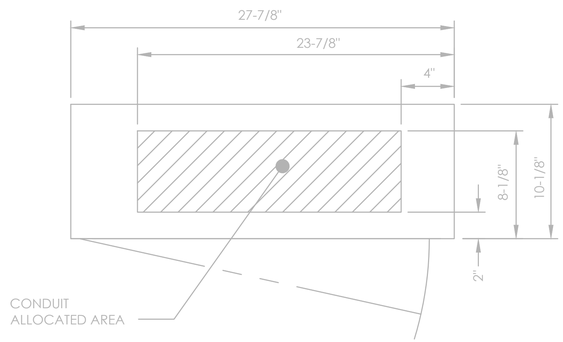
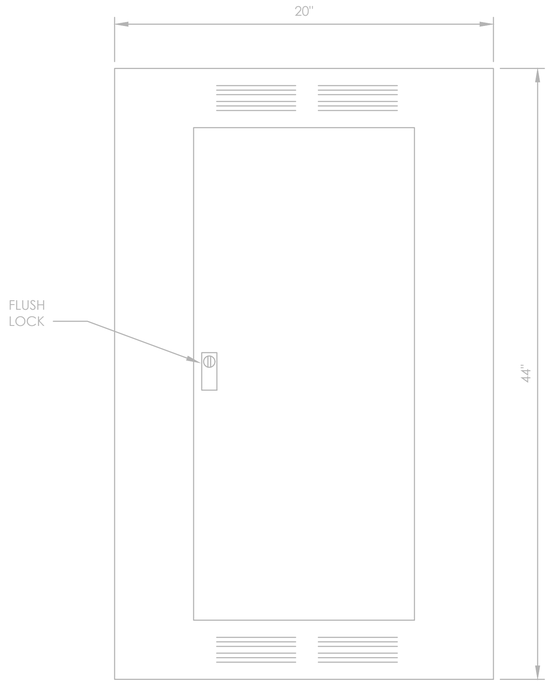


TOP

1 E-DT-317 ITEM 9: SAFETY DISCONNECT SWITCH
SCALE: N.T.S.



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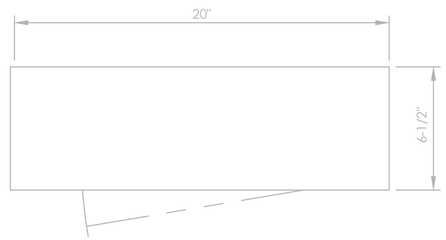
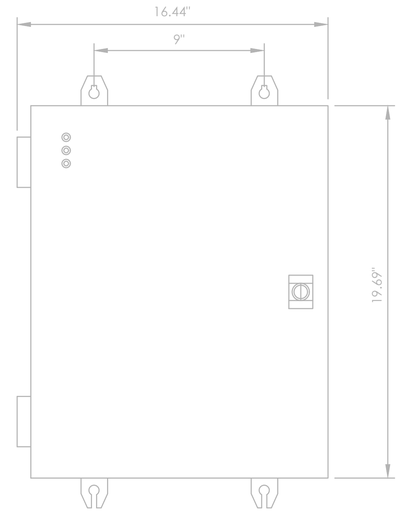


TOP

2 E-DT-317 ITEM 11: 120/240V PANEL
SCALE: N.T.S.



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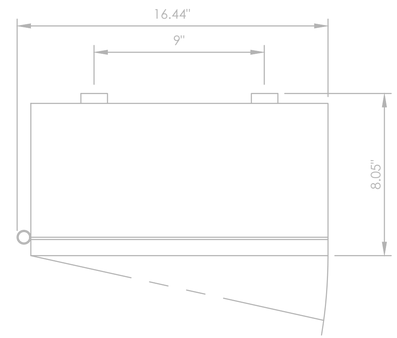

TOP

3 E-DT-317 ITEM 12: SURGE ARRESTOR
SCALE: N.T.S.

NOTES:

1. SEE DRAWING E-GN-300 FOR WEIGHT AND THERMAL LOAD.

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STATE OF TENNESSEE
12/11/2025

ENGINEER–SUBCONSULTANT

JOB NO.

REVISIONS

MARK	DATE	DESCRIPTION
0	12/11/2025	ISSUED FOR BID

MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
SHELTER 1 EQUIPMENT DETAILS (3 OF 4)

DWG. FILE NAME
161408-E-DT-317.DWG

DATE
12/11/2025

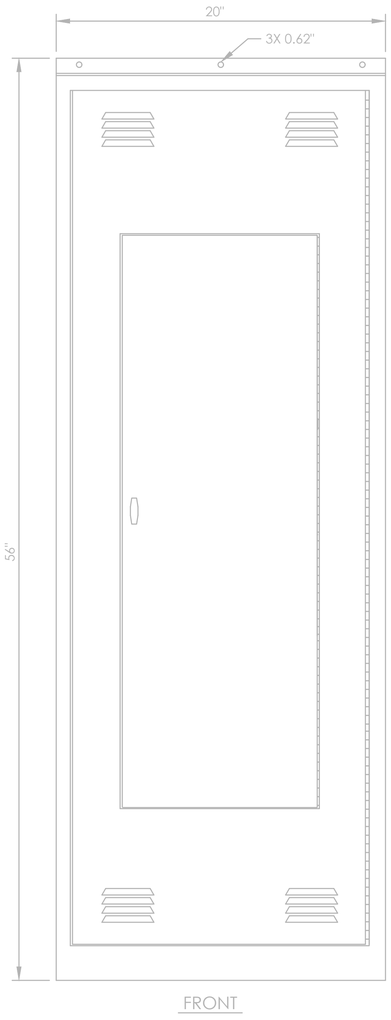
SCALE
N.T.S.

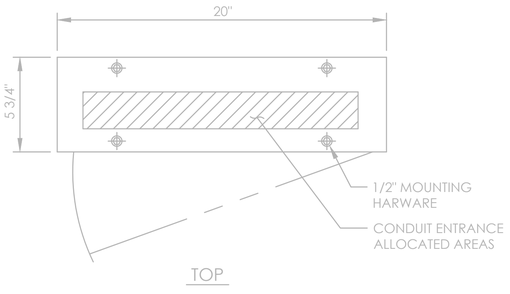
SHEET NO.
E-DT-317

December 10, 2025 c:\cadd\lib\pw\pwwestcoast\kmill\d0273326\161408-E-DT-317.dwg

NOTES:

1. SEE DRAWING E-GN-300 FOR WEIGHT AND THERMAL LOAD.

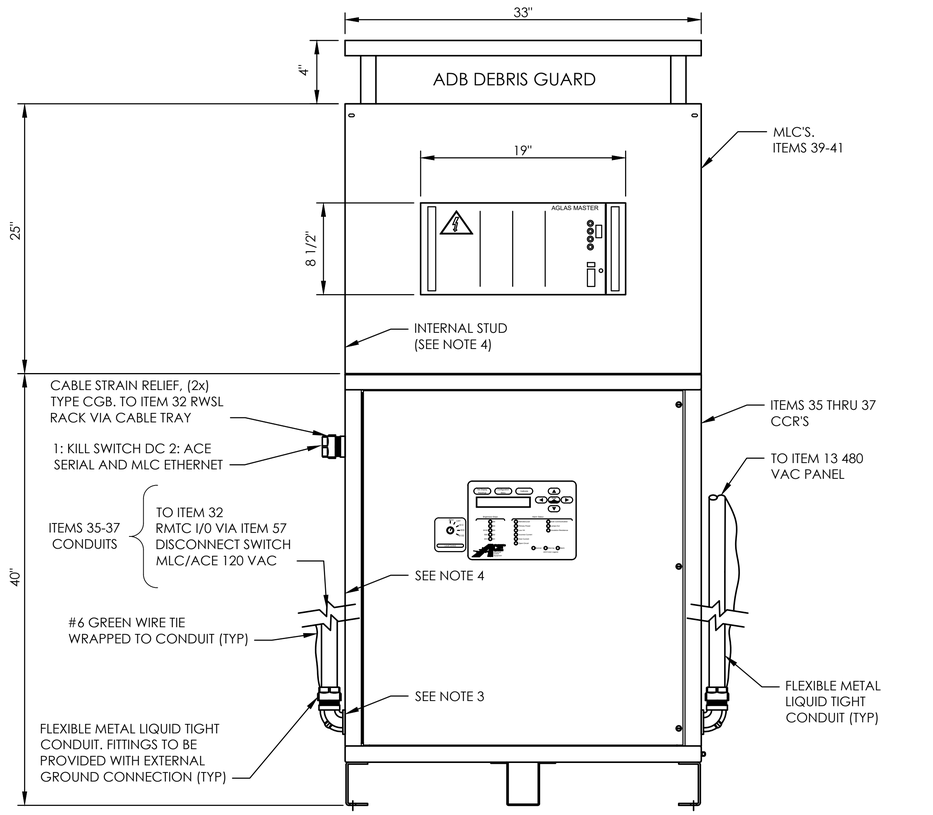


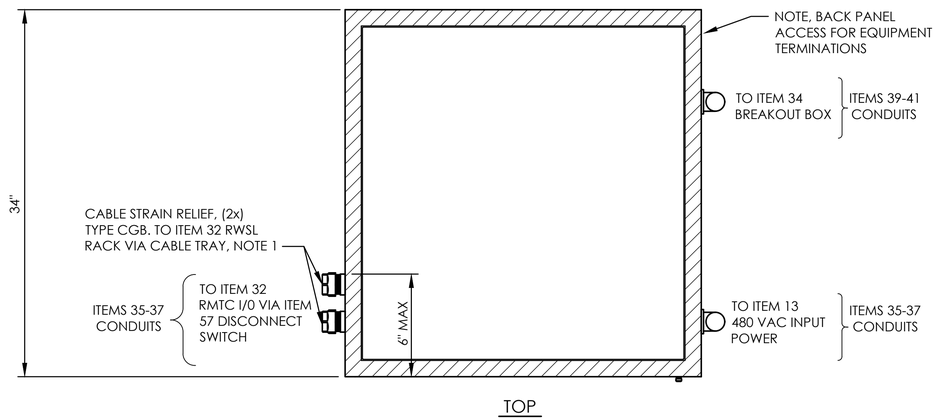


1 E-DT-318 ITEM 13: 480 VAC PANEL
SCALE: N.T.S.

NOTES:

1. DATA KNOCKOUTS TO BE INSTALLED BY FAA. KNOCKOUTS WILL BE ON THE SIDE OF THE CCR NEAREST THE VERTICAL CABLE LADDER.
   FRONT LEFT ON CCR A/D
   FRONT RIGHT ON CCR B/C
2. SEE DRAWING E-GN-300 FOR WEIGHT AND THERMAL LOAD.
3. ELBOW FITTING SHALL HAVE GROUNDING BUSHING (LUG TYP) INTERNAL TO CCR.
4. TWO INTERNAL STUDS, ONE TO CONNECT GROUNDING BUSHING (LUG TYP) WITH #6 GREEN WIRE, ONE TO INTERNAL STUD OF MLC WITH #6 GREEN WIRE. WIRE SHALL BE SECURED OUT OF WAY OF EQUIPMENT.

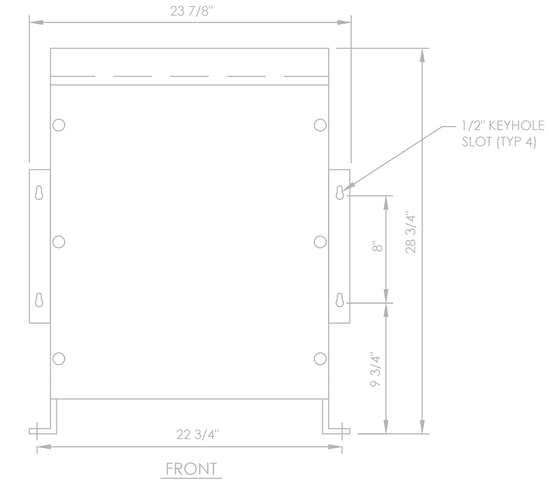


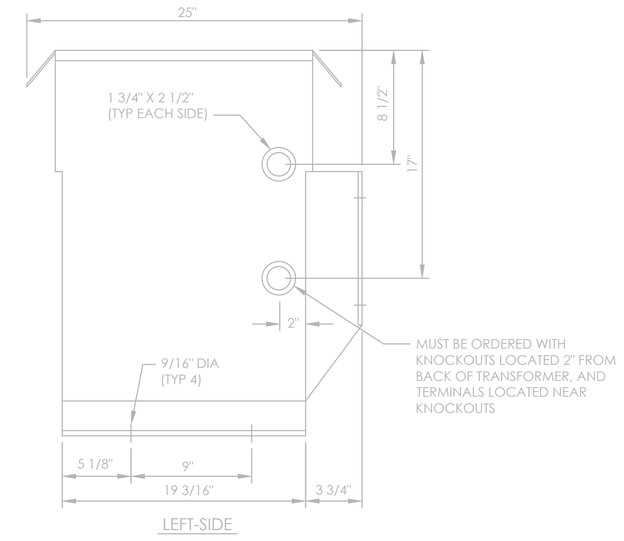


2 E-DT-318 ITEMS 35 THRU 41
SCALE: N.T.S.

NOTES:

1. SEE DRAWING E-GN-300 FOR WEIGHT AND THERMAL LOAD.





3 E-DT-318 ITEM 31: 37.5KVA TRANSFORMER, 480V-120/2540V
SCALE: N.T.S.

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APPROVED BY: CBD

CHARLES B. DEMONT REGISTERED ENGINEER AGRICULTURE 115626 STATE OF TENNESSEE 12/11/2025

ENGINEER—SUBCONSULTANT

JOB NO.

REVISIONS

MARK	DATE	DESCRIPTION
0	12/11/2025	ISSUED FOR BID

MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
SHELTER 1 EQUIPMENT DETAILS (4 OF 4)

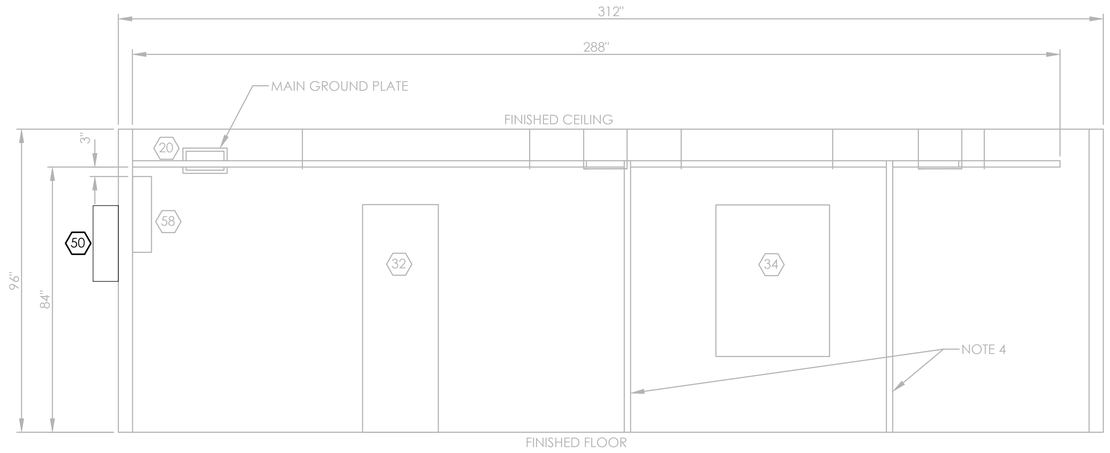
DWG. FILE NAME
161408-E-DT-318.DWG

DATE
12/11/2025

SCALE
N.T.S.

SHEET NO.
E-DT-318

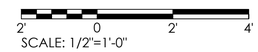
December 10, 2025 c:\cadd\lib\pw\pwwestcoast\kmill\d0273326\161408-E-DT-318.dwg



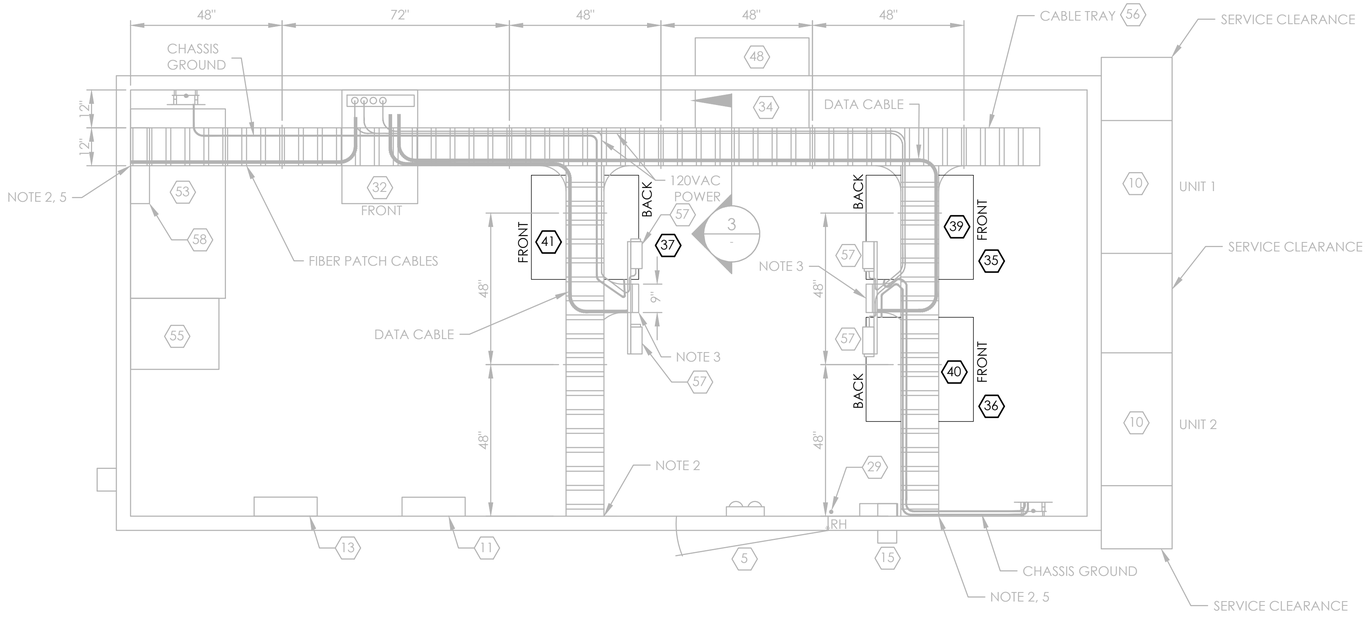
1 E-DT-321 CABLE TRAY ELEVATION
SCALE: 1/2" = 1'-0"

NOTES:

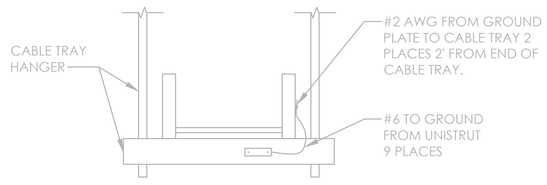
1. ⬡ = MATERIAL LISTING. ITEM DESCRIPTION FOUND ON DRAWING E-GN-300.
2. ATTACH HORIZONTAL CABLE TRAY TO WALL FOR STABILITY.
3. ATTACH VERTICAL CABLE TRAY TO FLOOR FOR STABILITY.
4. BOND INDIVIDUAL SECTIONS OF CABLE TRAY TOGETHER WITH #6 AWG GREEN.
5. BOND WITHIN 2 FEET OF CABLE TRAY END TO MAIN AND SUPPLEMENTAL GROUND PLATES WITH #2 GREEN W/ORANGE TRACER.
6. ALL CHASSIS GROUND AND 120VAC POWER CABLES ARE TO BE SEPARATED FROM DATA AND FIELD FIBER CABLES BY A MINIMUM OF 5" PER FAA-STD-019F, TABLE III.
7. GROUNDING THE CABLE TRAY AT ONLY TWO POINTS AS SHOWN IS BASED ON THE RWSL SHELTER ASSESSMENT. IT IS NOT APPROVED AT OTHER INSTALLATIONS OR AT OTHER FACILITIES.



SCALE: 1/2"=1'-0"



2 E-DT-321 CABLE TRAY PLAN
SCALE: 1/2" = 1'-0"



3 E-DT-321 CABLE TRAY SECTION
SCALE: N.T.S.

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12/11/2025

ENGINEER—SUBCONSULTANT

JOB NO.

REVISIONS

MARK	DATE	DESCRIPTION
0	12/11/2025	ISSUED FOR BID

MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
SHELTER 1 CABLE TRAY PLAN

DWG. FILE NAME
161408-E-DT-321.DWG

DATE
12/11/2025

SCALE
1/2"=1'-0"; N.T.S.

SHEET NO.
E-DT-321

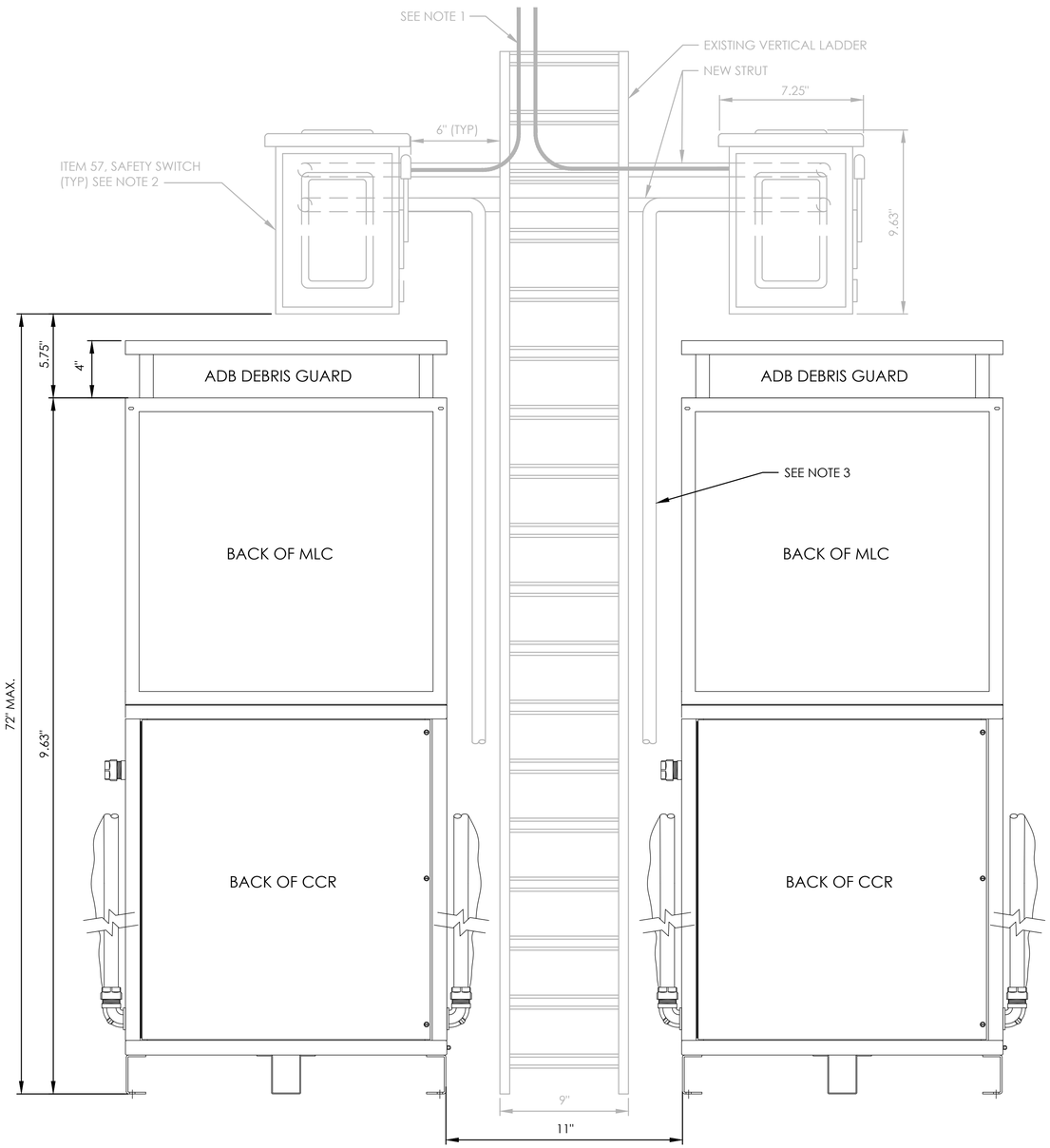
December 10, 2025 c:\coddlib\pw\pwwestcoast\kmill\d0273326\161408-E-DT-321.dwg

NOTES:

1. LINE SIDE. TC TYPE POWER CABLE FROM RMTC I/0 PANEL. ROUTE POWER CABLES WITH EQUIPMENT CHASSIS GROUND CABLES TO ONE SIDE OF CABLE TRAY, MAINTAINING MAXIMUM POSSIBLE SEPARATION FROM DATA CABLING.

2. SQUARE-D DU221RB SAFETY SWITCH (ITEM 57) 30A, NON-FUSED 2-POLE GENERAL PURPOSE (NEMA 3R - INDOOR/OUTDOOR) 1 PER CCR/MLC. SWITCHES ARE GENERAL DUTY NOT HEAVY DUTY DUE TO INTEGRATION ISSUES.

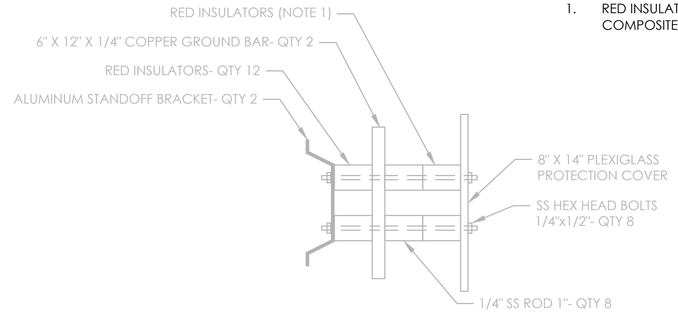
3. LOAD SIDE. 1" FLEXIBLE METAL CONDUIT REPLACING 1" CONDUIT FORMERLY ROUTED FROM ITEM 11. SAFETY SWITCHES ARE GFM. TC TYPE POWER CABLE ASSEMBLIES ARE FAA SUPPLIED. ALL OTHER MATERIALS ARE CONTRACTOR SUPPLIED.



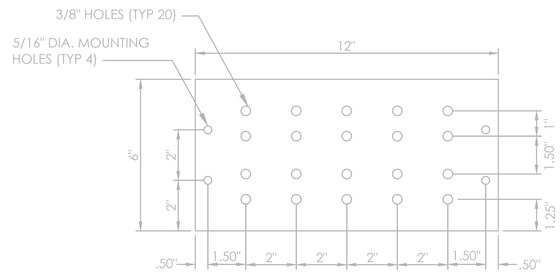
1 E-DT-322 VERTICAL CABLE LADDER
SCALE: N.T.S.

NOTES:

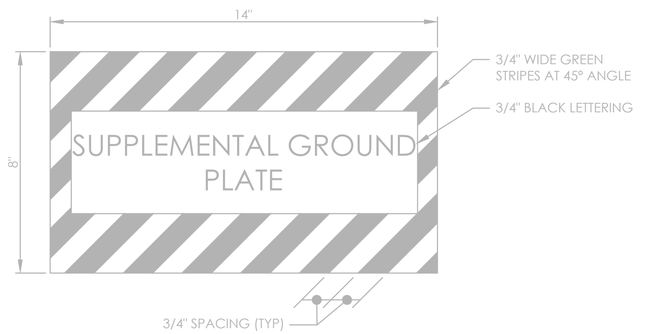
1. RED INSULATORS ARE ROCHLING GLASTIC COMPOSITES PART NO. SERIES 2165-1A.



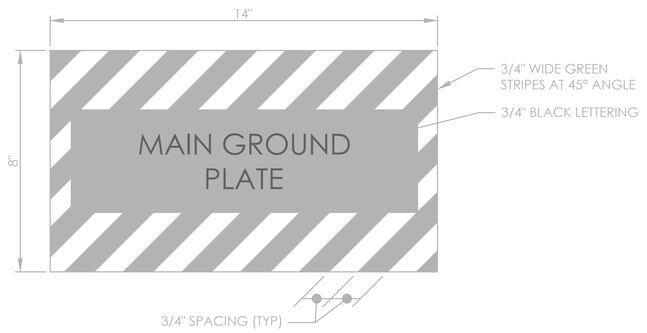
SIDE VIEW



DB1561-GROUND BAR FRONT VIEW



PLEXIGLASS



PLEXIGLASS

2 E-DT-322 GROUND BAR DETAILS
SCALE: N.T.S.

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REGISTERED ENGINEER
AGRICULTURE
STATE OF TENNESSEE
12/11/2025

ENGINEER—SUBCONSULTANT

JOB NO.

REVISIONS

MARK	DATE	DESCRIPTION
0	12/11/2025	ISSUED FOR BID

MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
SHELTER 1 VERTICAL CABLE TRAY AND GROUND PLATE DETAILS

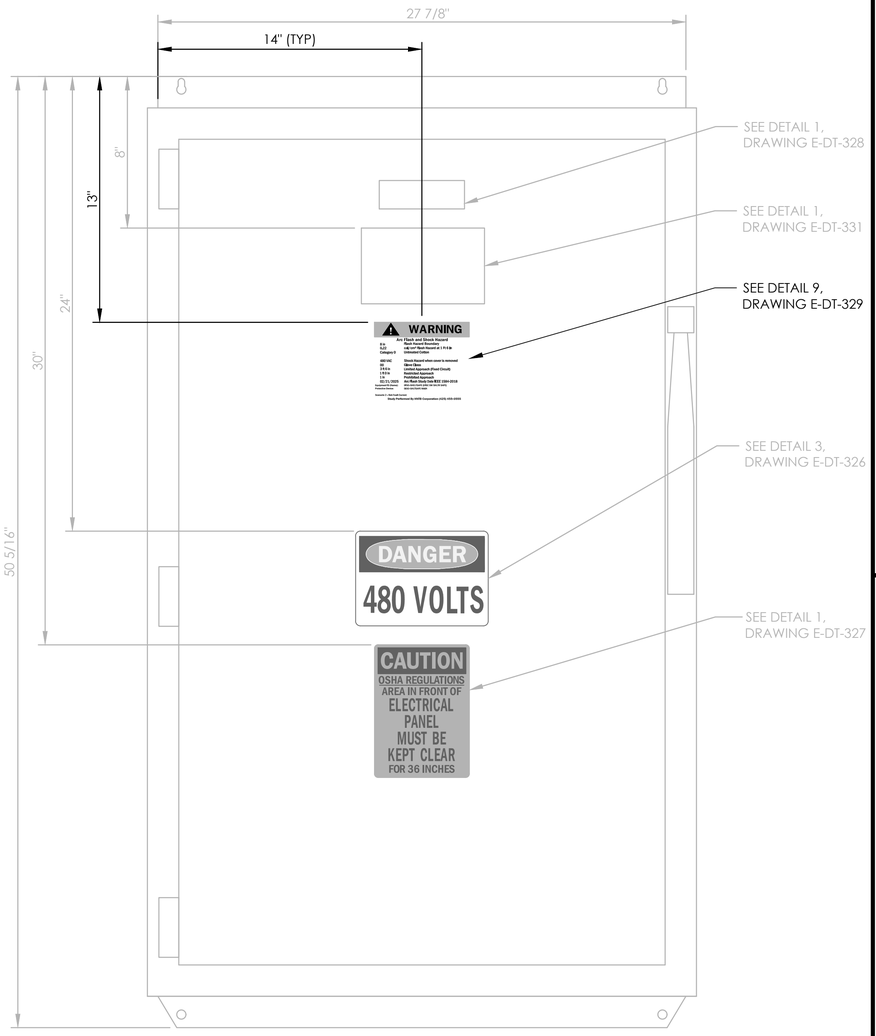
DWG. FILE NAME
161408-E-DT-322.DWG

DATE
12/11/2025

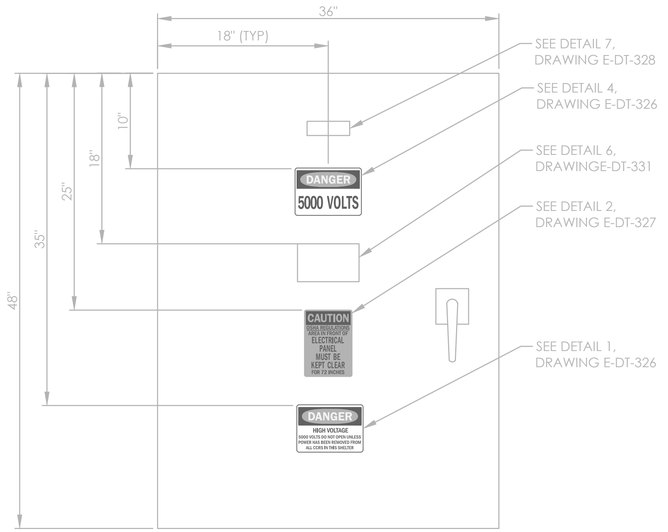
SCALE
N.T.S.

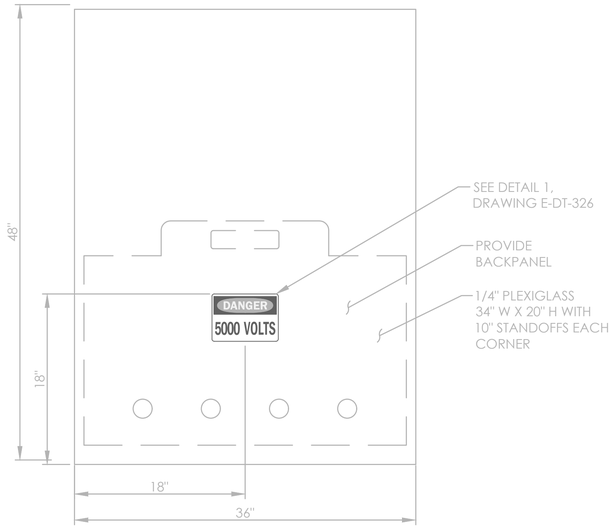
SHEET NO.
E-DT-322

December 10, 2025 c:\caddlib\pw\pwwestcoast\kmills\d0273326\161408-E-DT-322.dwg

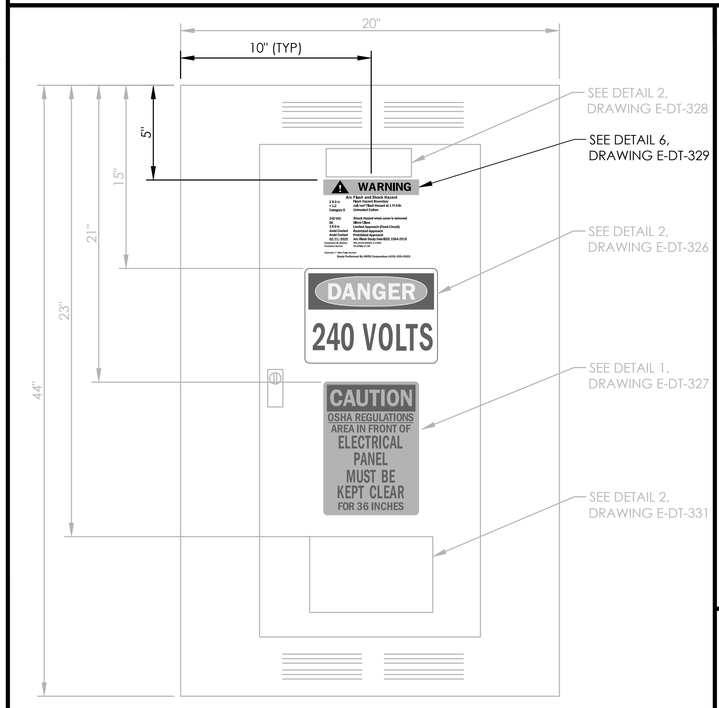


1 E-DT-323 ITEM 9: SIGN PLACEMENT
SCALE: 3" = 1'-0"

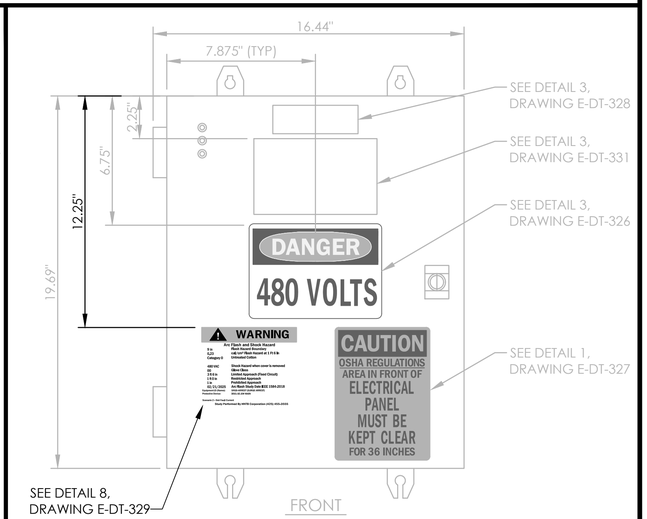




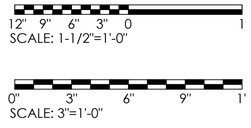
2 E-DT-323 ITEM 34: SIGN PLACEMENT
SCALE: 1-1/2" = 1'-0"



3 E-DT-323 ITEM 11: SIGN PLACEMENT
SCALE: 3" = 1'-0"



4 E-DT-323 ITEM 12: SIGN PLACEMENT
SCALE: 3" = 1'-0"



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JOB NO.
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CHECKED BY: CTX
APPROVED BY: CBD

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AGRICULTURE
STATE OF TENNESSEE
12/11/2025

ENGINEER—SUBCONSULTANT

JOB NO.

REVISIONS

MARK	DATE	DESCRIPTION
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MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
SHELTER 1 SIGN PLACEMENT DETAILS (1 OF 3)

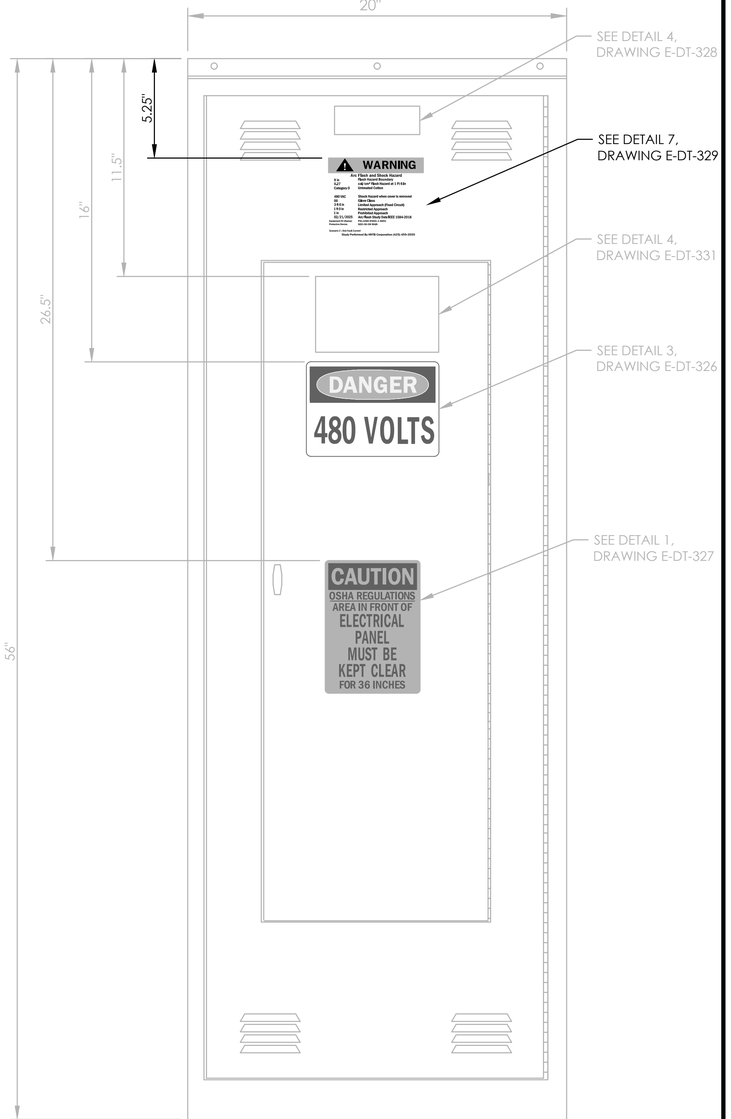
DWG. FILE NAME
161408-E-DT-323.DWG

DATE
12/11/2025

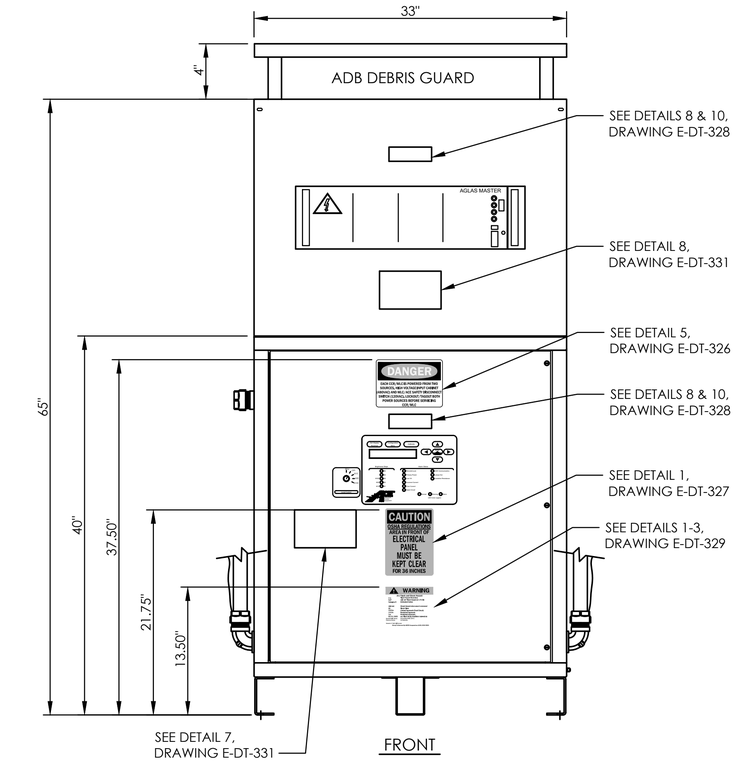
SCALE
AS SHOWN

SHEET NO.
E-DT-323

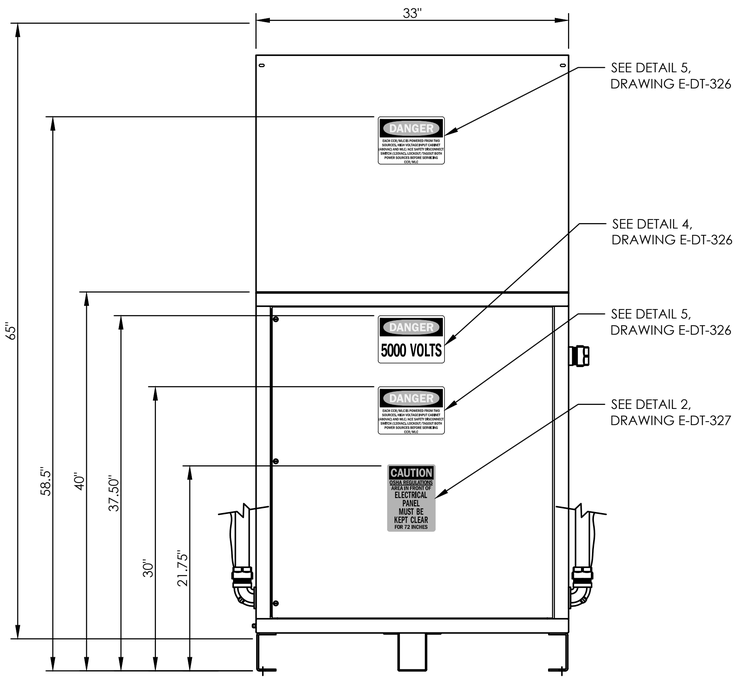
December 10, 2025 c:\cadd\lib\pw\pwwestcoast\kmills\d0273326\161408-E-DT-323.dwg



1 E-DT-324 ITEM 13 SIGN PLACEMENT
SCALE: 3" = 1'-0"

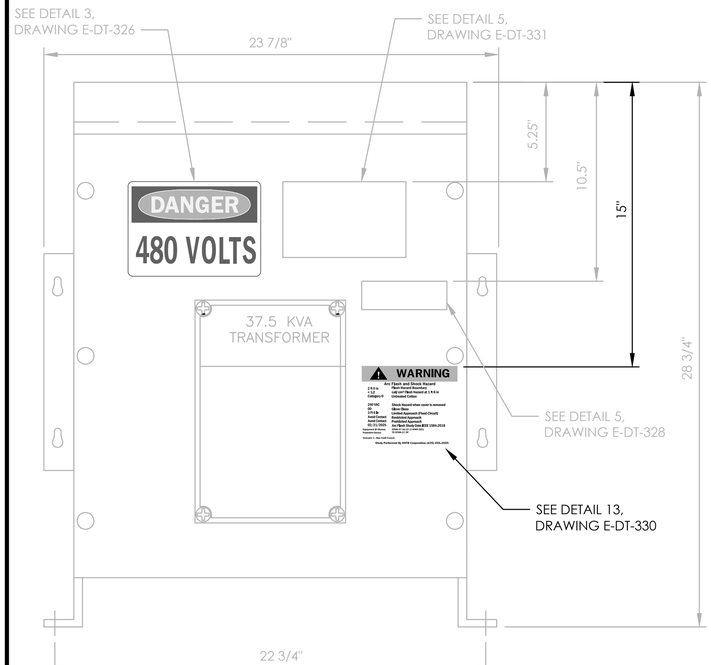


FRONT

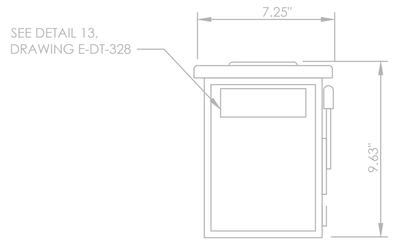


BACK

2 E-DT-324 ITEM 35-41 SIGN PLACEMENT
SCALE: 1-1/2" = 1'-0"



3 E-DT-324 ITEM 31 SIGN PLACEMENT
SCALE: 3" = 1'-0"



4 E-DT-324 120 VAC DISCONNECT SWITCH
SCALE: 3" = 1'-0"

12" 9" 6" 3" 0 1
SCALE: 1-1/2"=1'-0"

0" 3" 6" 9" 1'
SCALE: 3"=1'-0"

NOTE: SCREENED LINEWORK IS PROVIDED / INSTALLED BY THE FAA AND IS SHOWN FOR INFORMATION ONLY

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JOB NO.
85091

DRAWN BY: KLM
CHECKED BY: CTX
APPROVED BY: CBD

CHARLES B. DEDMON
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AGRICULTURE
NUMBER 115628
STATE OF TENNESSEE
12/11/2025

ENGINEER–SUBCONSULTANT

JOB NO.

REVISIONS

MARK	DATE	DESCRIPTION
0	12/11/2025	ISSUED FOR BID

MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
SHELTER 1 SIGN PLACEMENT DETAILS (2 OF 3)

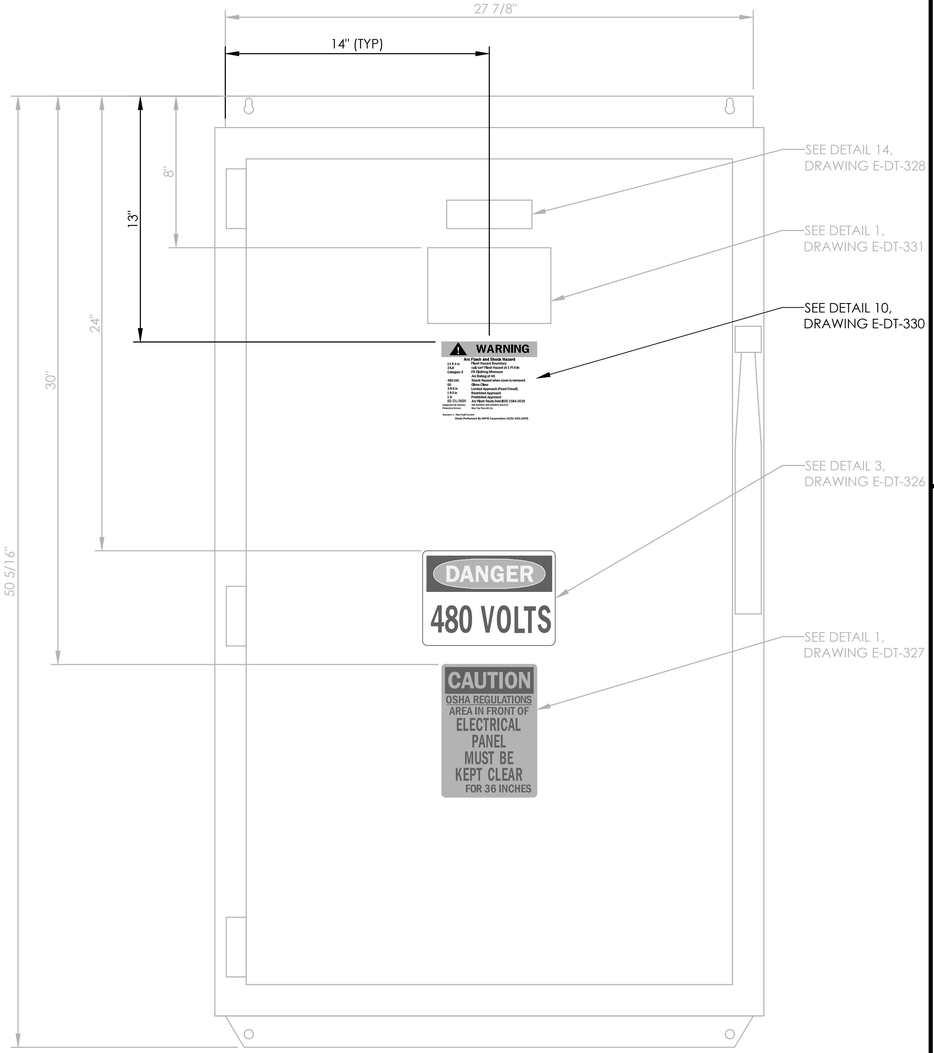
DWG. FILE NAME
161408-E-DT-324.DWG

DATE
12/11/2025

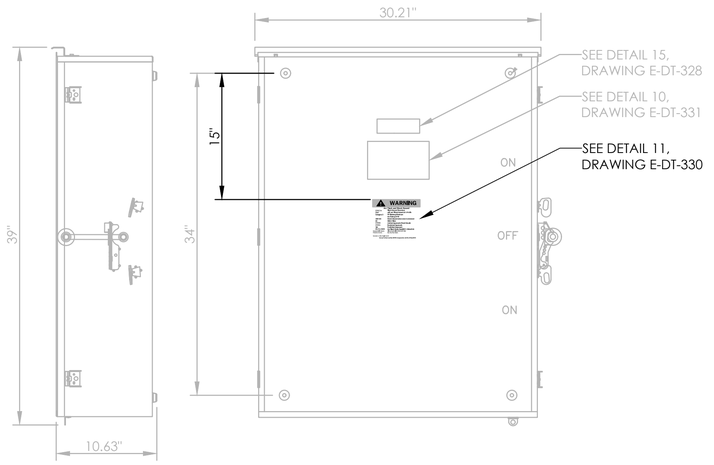
SHEET NO.
E-DT-324

SCALE
AS SHOWN

December 10, 2025 c:\caddlib\pw\pwwestcoast\kmills\d0273326\161408-E-DT-324.dwg



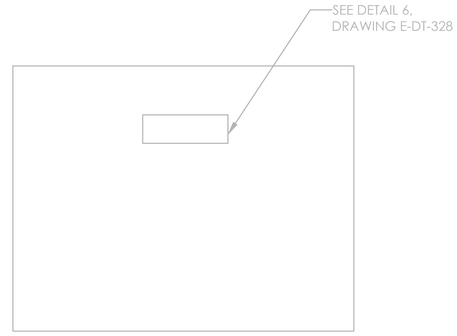
1 E-DT-325 480 VOLT DISCONNECT
SCALE: 3" = 1'-0"



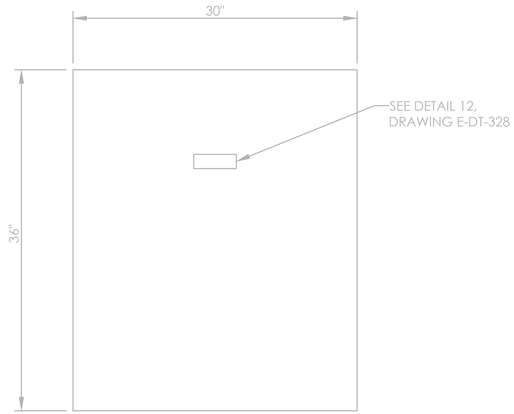
2 E-DT-325 480 VOLT 4-POLE DOUBLE THROW SWITCH
SCALE: 1-1/2" = 1'-0"

NOT USED

4 E-DT-325 480 VOLT 4-POLE DOUBLE THROW SWITCH- 100KA RATED
SCALE: 1-1/2" = 1'-0"



3 E-DT-325 RWSL FIBER OPTIC PATCH PANEL - ERC AND TCCA
SCALE: N.T.S.



5 E-DT-325 STANDBY POWER CONNECTION BOX
SCALE: 1-1/2" = 1'-0"

12" 9" 6" 3" 0 1
SCALE: 1-1/2"=1'-0"

0" 3" 6" 9" 1'
SCALE: 3"=1'-0"

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12/11/2025

ENGINEER—SUBCONSULTANT

JOB NO.

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MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
SHELTER 1 SIGN PLACEMENT DETAILS (3 OF 3)

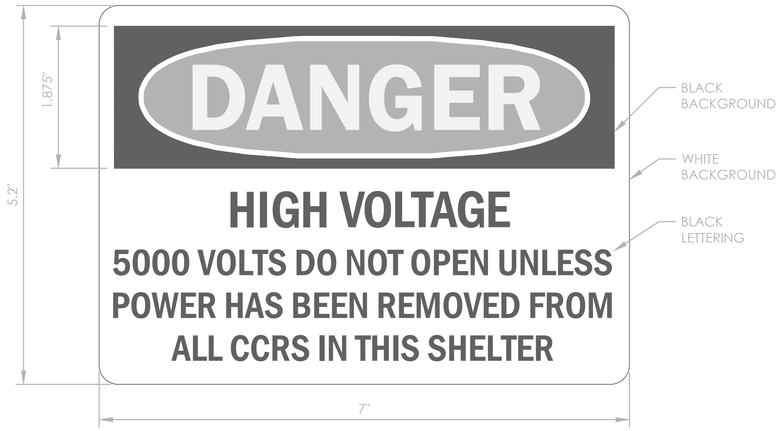
DWG. FILE NAME
161408-E-DT-325.DWG

DATE
12/11/2025

SCALE
AS SHOWN

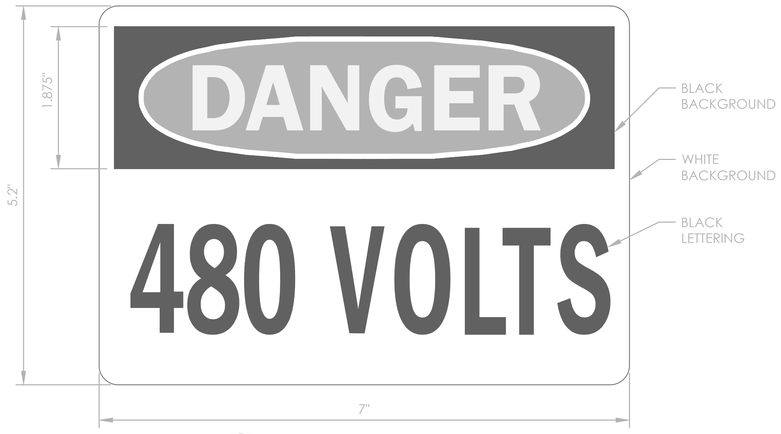
SHEET NO.
E-DT-325

December 10, 2025 c:\caddlib\pw\pwwestcoast\kmills.d0273326\161408-E-DT-325.dwg

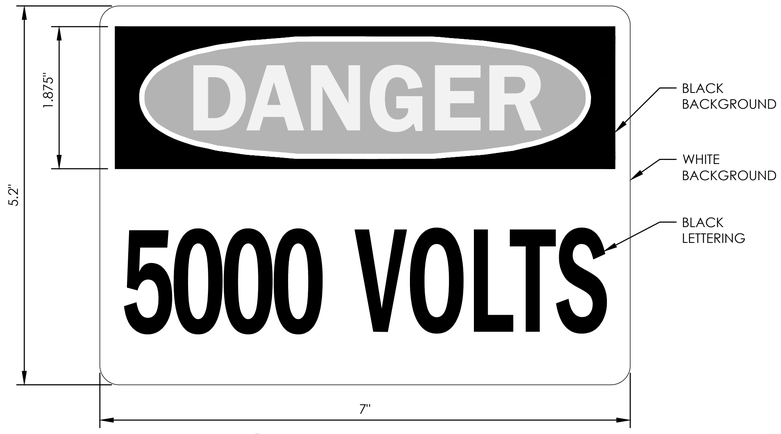


1 E-DT-326 HIGH VOLTAGE SIGN
SCALE: 1" = 1"

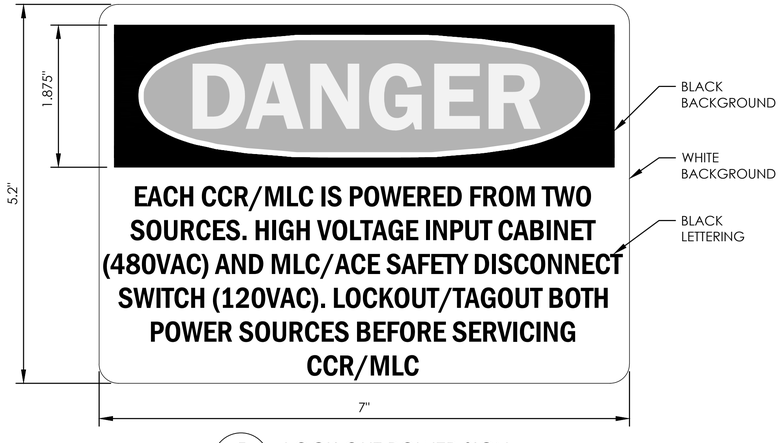
2 E-DT-326 240 VOLT SIGN
SCALE: 1" = 1"



3 E-DT-326 480 VOLT SIGN
SCALE: 1" = 1"



4 E-DT-326 5000 VOLT SIGN
SCALE: 1" = 1"



5 E-DT-326 LOCK OUT POWER SIGN
SCALE: 1" = 1"

NOTES:

1. "DANGER" LETTERING IS WHITE ON RED OVAL BACKGROUND.
2. ALL LABELS AND SIGNS ON THIS DRAWING FOR GOVERNMENT-INSTALLED EQUIPMENT SHALL BE SUPPLIED AND INSTALLED BY THE GOVERNMENT. ALL LABELS AND SIGNS ON THIS DRAWING FOR CONTRACTOR-INSTALLED EQUIPMENT SHALL BE SUPPLIED AND INSTALLED BY THE CONTRACTOR.
3. MATERIAL AND MOUNTING METHODS FOR ALL LABELS AND SIGNS SHALL COMPLY WITH THE REQUIREMENTS CONTAINED WITHIN FAA SPECIFICATION FAA-C-1217H.

NOTE: SCREENED LINEWORK IS PROVIDED / INSTALLED BY THE FAA AND IS SHOWN FOR INFORMATION ONLY

1" 0 1" 2"
SCALE: 1"=1"

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JOB NO.
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DRAWN BY: KLM
CHECKED BY: CTX
APPROVED BY: CBD

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12/11/2025

ENGINEER—SUBCONSULTANT

JOB NO.

REVISIONS

MARK	DATE	DESCRIPTION
0	12/11/2025	ISSUED FOR BID

MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
SHELTER 1 DANGER SIGN DETAILS

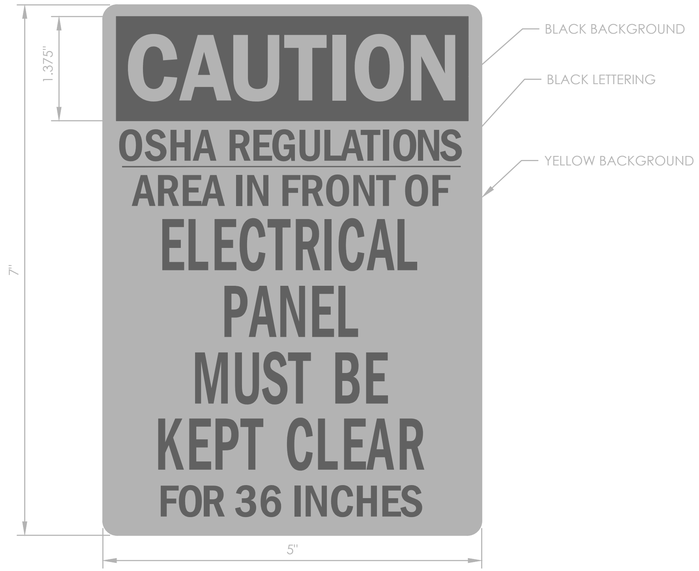
DWG. FILE NAME
161408-E-DT-326.DWG

DATE
12/11/2025

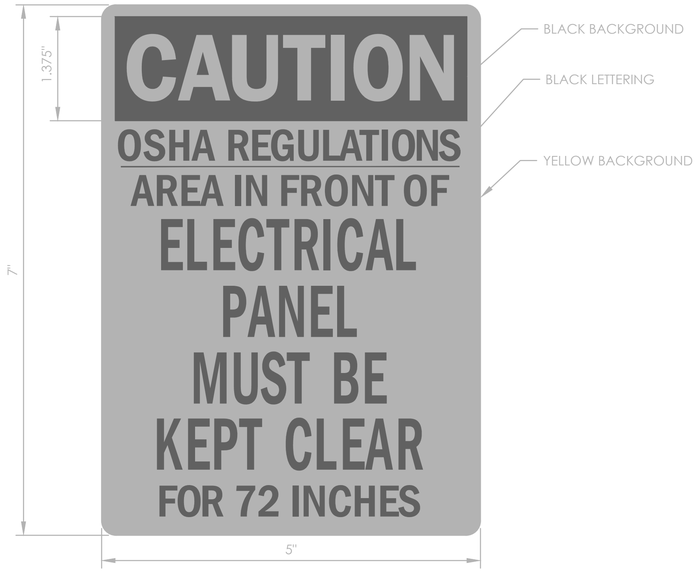
SCALE
1" = 1"

SHEET NO.
E-DT-326

December 10, 2025 c:\cadd\lib\pw\pwwestcoast\kmill\d0273326\161408-E-DT-326.dwg



1 E-DT-327 36" CLEARANCE OSHA SIGN
SCALE: 1" = 1"



2 E-DT-327 72" CLEARANCE OSHA SIGN
SCALE: 1" = 1"

NOTES:

1. "CAUTION" LETTERING IS YELLOW ON A BLACK BACKGROUND.
2. ALL LABELS AND SIGNS ON THIS DRAWING FOR GOVERNMENT-INSTALLED EQUIPMENT SHALL BE SUPPLIED AND INSTALLED BY THE GOVERNMENT. ALL LABELS AND SIGNS ON THIS DRAWING FOR CONTRACTOR-INSTALLED EQUIPMENT SHALL BE SUPPLIED AND INSTALLED BY THE CONTRACTOR.
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1" 0 1" 2"
SCALE: 1"=1"

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12/11/2025

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JOB NO.

REVISIONS

MARK	DATE	DESCRIPTION
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MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
SHELTER 1 CAUTION SIGN DETAILS

DWG. FILE NAME
161408-E-DT-327.DWG

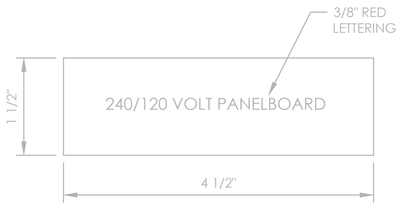
DATE
12/11/2025

SCALE
1" = 1"

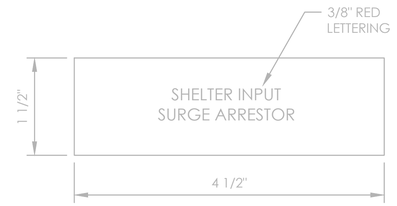
SHEET NO.
E-DT-327

December 10, 2025 c:\coddlib\pw\pwwestcoast\kmill\d0273326\161408-E-DT-327.dwg

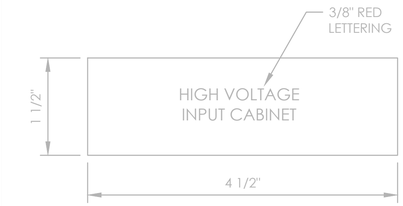
1 E-DT-328 ITEM 9
SCALE: N.T.S.



2 E-DT-328 ITEM 11
SCALE: N.T.S.



3 E-DT-328 ITEM 12
SCALE: N.T.S.



4 E-DT-328 ITEM 13
SCALE: N.T.S.

NOTES:

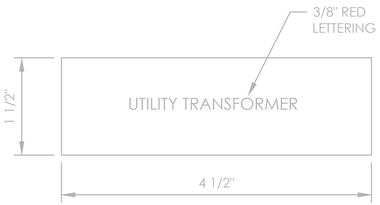
1. ALL LABELS AND SIGNS ON THIS DRAWING FOR GOVERNMENT-INSTALLED EQUIPMENT SHALL BE SUPPLIED AND INSTALLED BY THE GOVERNMENT. ALL LABELS AND SIGNS ON THIS DRAWING FOR CONTRACTOR-INSTALLED EQUIPMENT SHALL BE SUPPLIED AND INSTALLED BY THE CONTRACTOR.
2. MATERIAL AND MOUNTING METHODS FOR ALL LABELS AND SIGNS SHALL COMPLY WITH THE REQUIREMENTS CONTAINED WITHIN FAA SPECIFICATION FAA-C-1217H.

NAMING CONVENTIONS:

- CIRCUITS: (TAKEN DIRECTLY FROM DRAWINGS)
- XXX= <TYPE><SHELTER NUMBER><CCR LOCATION IN SHELTER>

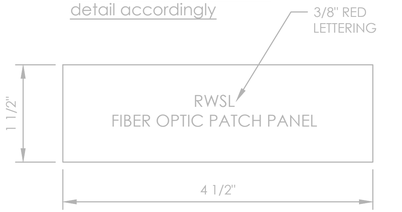
WHERE:

- <TYPE> IS "R" FOR REL ARRAYS AND "T" FOR THL ARRAYS
- <SHELTER NUMBER> IS THE SHELTER NUMBER (1-8) GIVEN IN THE DRAWINGS
- <CCR LOCATION IN SHELTER> IS THE DESIGNATOR FOR THE CCR IN THE SPECIFIED SHELTER (A, B, C, OR D)



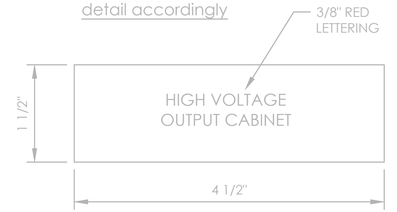
5 E-DT-328 ITEM 31
SCALE: N.T.S.

this detail has been renumbered from 7 to 6. update references to this detail accordingly



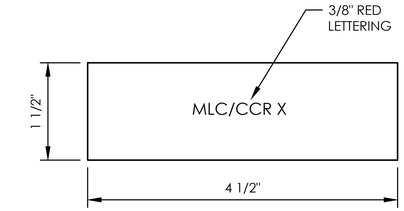
6 E-DT-328 ITEM 33
SCALE: N.T.S.

this detail has been renumbered from 8 to 7. update references to this detail accordingly



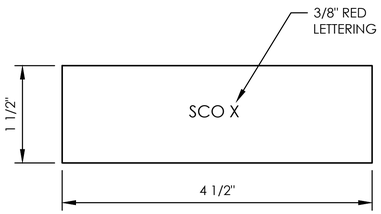
7 E-DT-328 ITEM 34
SCALE: N.T.S.

NOTE:
X = "A", "B", "C", OR "D" - REGULATOR IN SHELTER



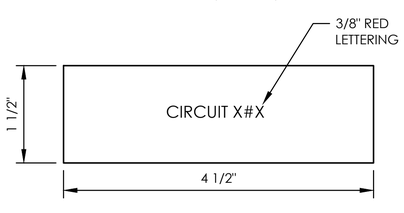
8 E-DT-328 ITEM 35-41
SCALE: N.T.S.

NOTE:
X = "A", "B", "C", OR "D" - REGULATOR IN SHELTER



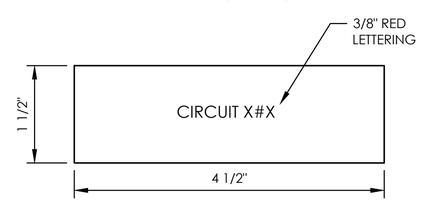
9 E-DT-328 ITEM 43-45
SCALE: N.T.S.

NOTE:
X # X - CIRCUIT NUMBER
("A"-"D") REGULATOR IN SHELTER
SHELTER #
("T" OR "R") LIGHT ARRAY TYPE

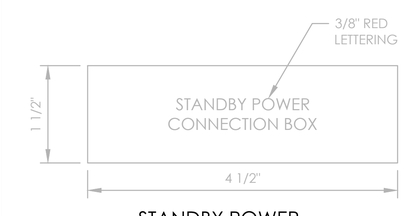


10 E-DT-328 ITEM 35-41
SCALE: N.T.S.

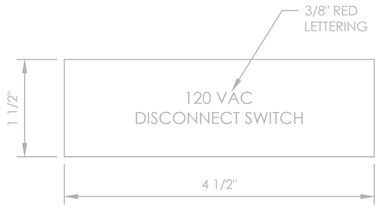
NOTE:
X # X - CIRCUIT NUMBER
("A"-"D") REGULATOR IN SHELTER
SHELTER #
("T" OR "R") LIGHT ARRAY TYPE



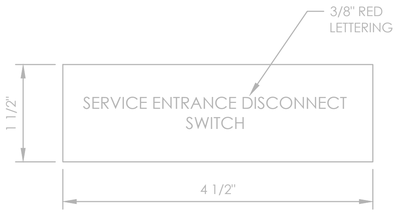
11 E-DT-328 ITEM 43-45
SCALE: N.T.S.



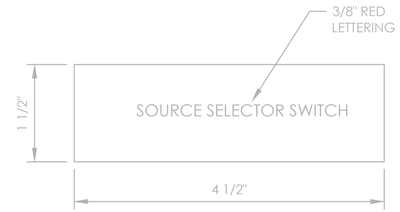
12 E-DT-328 STANDBY POWER CONNECTION BOX
SCALE: N.T.S.



13 E-DT-328 ITEM 57
SCALE: N.T.S.



14 E-DT-328 SERVICE ENTRANCE DISCONNECT SWITCH
SCALE: N.T.S.



15 E-DT-328 MANUAL TRANSFER SWITCH
SCALE: N.T.S.

NOTE: SCREENED LINEWORK IS PROVIDED / INSTALLED BY THE FAA AND IS SHOWN FOR INFORMATION ONLY

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ENGINEER—SUBCONSULTANT

JOB NO.

REVISIONS

MARK	DATE	DESCRIPTION
0	12/11/2025	ISSUED FOR BID

MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
SHELTER 1 EQUIPMENT LABELS

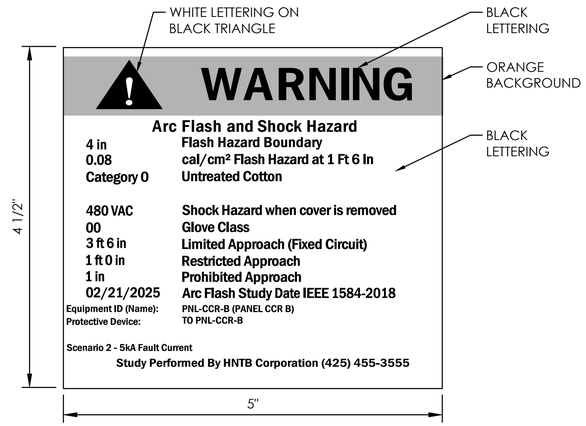
DWG. FILE NAME
161408-E-DT-328.DWG

DATE
12/11/2025

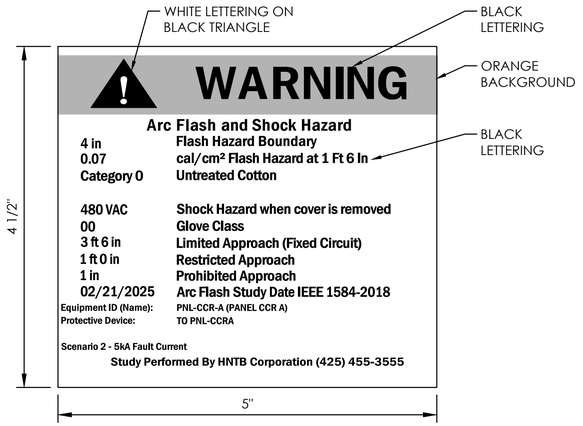
SHEET NO.
E-DT-328

SCALE
N.T.S.

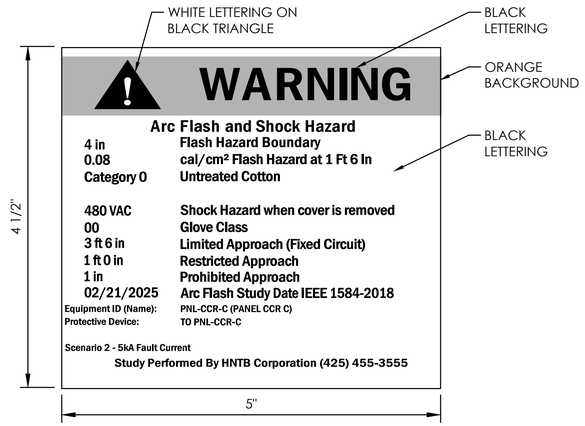
December 10, 2025 c:\coddlib\pw\pwwestcoast\kmill\d0273326\161408-E-DT-328.dwg



1 E-DT-329 LABEL #1
SCALE: 1" = 1"



2 E-DT-329 LABEL #2
SCALE: 1" = 1"



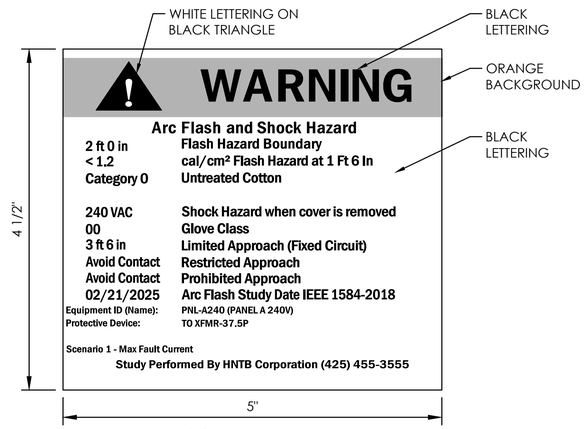
3 E-DT-329 LABEL #3
SCALE: 1" = 1"

NOT USED

4 E-DT-329 LABEL #4
SCALE: 1" = 1"

NOT USED

5 E-DT-329 LABEL #5
SCALE: 1" = 1"



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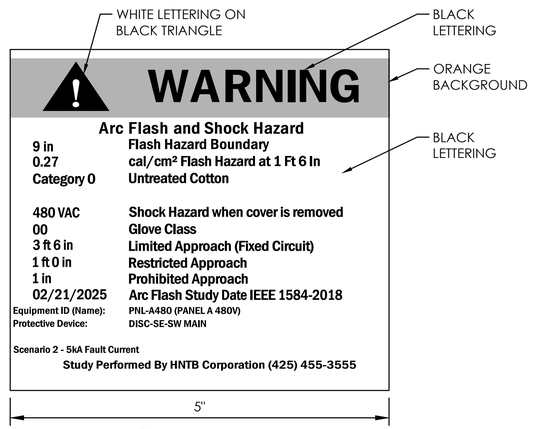
SCALE: 1" = 1"



7 E-DT-329 LABEL #7
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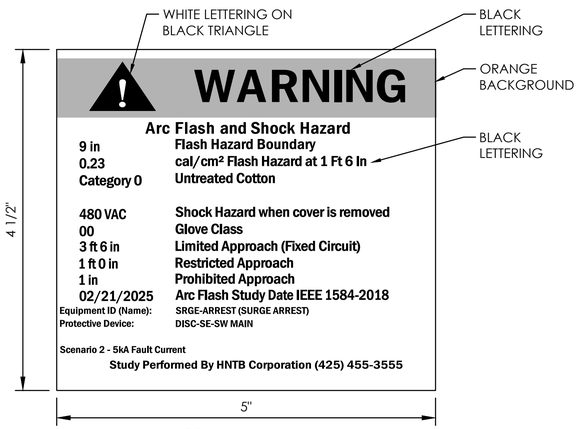

8 E-DT-329 LABEL #8
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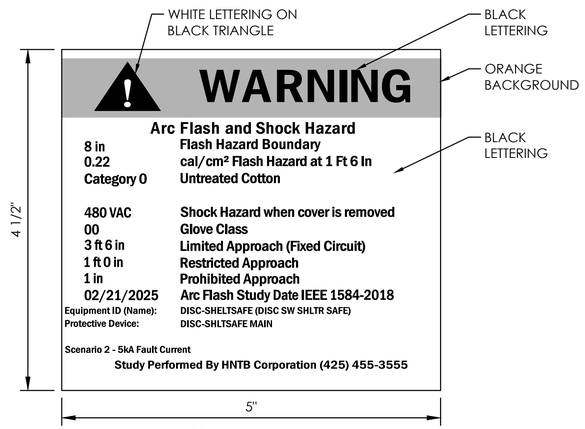

9 E-DT-329 LABEL #9
SCALE: 1" = 1"

NOTES:

1. MATERIAL AND MOUNTING METHODS FOR ALL LABELS AND SIGNS SHALL COMPLY WITH THE REQUIREMENTS CONTAINED WITHIN FAA SPECIFICATION FAA-C-1217H.

1" 0 1" 2"
SCALE: 1"=1"

TAKE OFF WITH US Memphis INTERNATIONAL AIRPORT

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JOB NO.
85091

DRAWN BY: KLM
CHECKED BY: CTX
APPROVED BY: CBD

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STATE OF TENNESSEE
12/11/2025

ENGINEER—SUBCONSULTANT

JOB NO.

REVISIONS

MARK	DATE	DESCRIPTION
0	12/11/2025	ISSUED FOR BID

MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
SHELTER 1 ARC FLASH LABELS (1 OF 2)

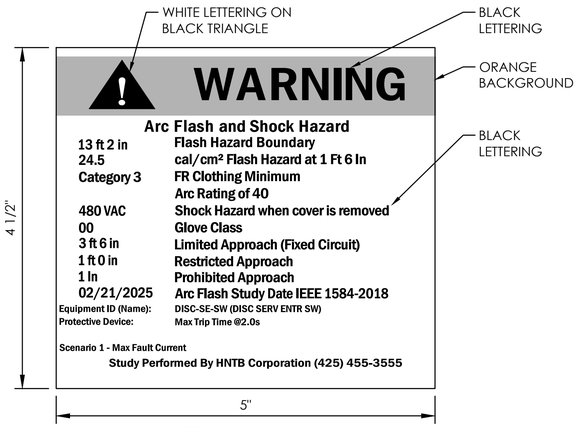
DWG. FILE NAME
161408-E-DT-329.DWG

DATE
12/11/2025

SHEET NO.
E-DT-329

SCALE
1" = 1"

December 10, 2025 c:\coddillo\pw\pwwestcoast\kmills\d0273326\161408-E-DT-329.dwg



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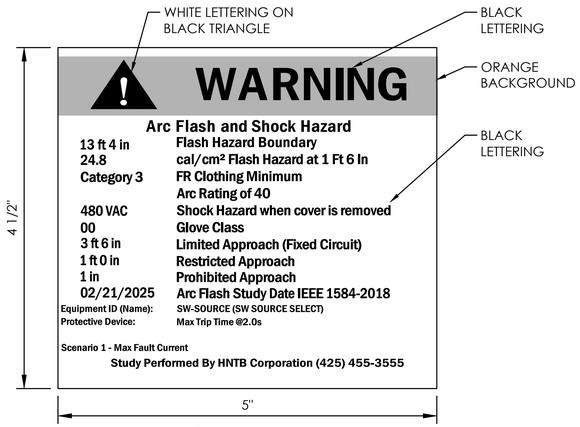
SCALE: 1" = 1"



11 E-DT-330 LABEL #11
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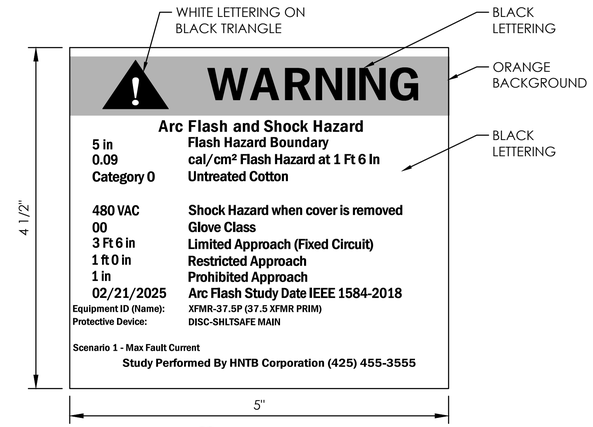
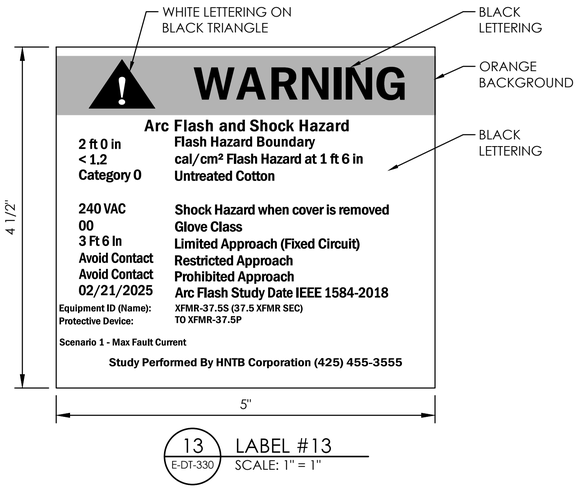


12 E-DT-330 LABEL #12
SCALE: 1" = 1"



13 E-DT-330 LABEL #13
SCALE: 1" = 1"

NOTES:

1. MATERIAL AND MOUNTING METHODS FOR ALL LABELS AND SIGNS SHALL COMPLY WITH THE REQUIREMENTS CONTAINED WITHIN FAA SPECIFICATION FAA-C-1217H.

1" 0 1" 2"
SCALE: 1"=1"

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12/11/2025

ENGINEER—SUBCONSULTANT

JOB NO.

REVISIONS

MARK	DATE	DESCRIPTION
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MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
SHELTER 1 ARC FLASH LABELS (2 OF 2)

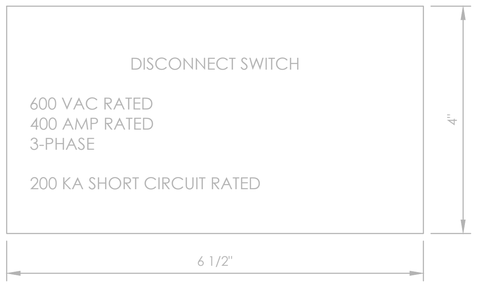
DWG. FILE NAME
161408-E-DT-330.DWG

DATE
12/11/2025

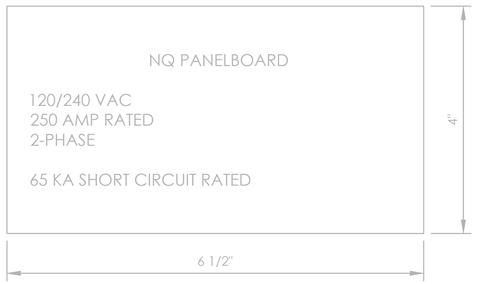
SCALE
1" = 1"

SHEET NO.
E-DT-330

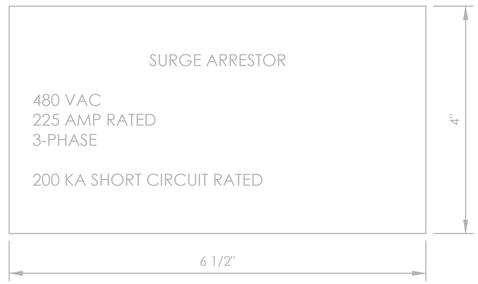
December 10, 2025 c:\coddlib\pw\pwwestcoast\kmills\d0273326\161408-E-DT-330.dwg



1 E-DT-331 ITEM 9
SCALE: N.T.S.



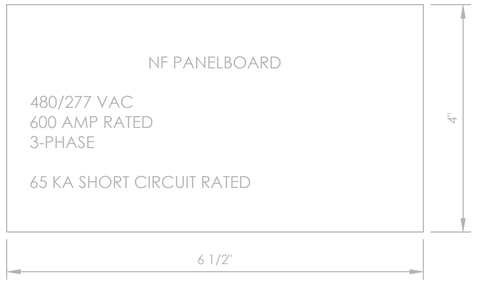
2 E-DT-331 ITEM 11
SCALE: N.T.S.



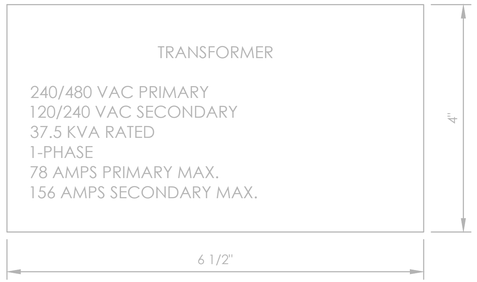
3 E-DT-331 ITEM 12
SCALE: N.T.S.

NOTES:

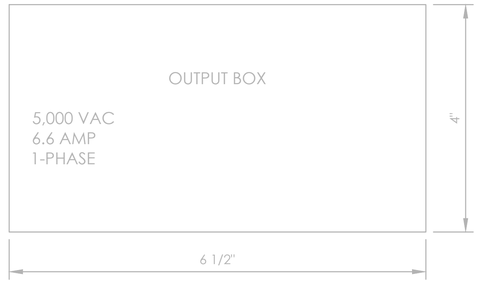
1. ALL LABELS AND SIGNS ON THIS DRAWING FOR GOVERNMENT-INSTALLED EQUIPMENT SHALL BE SUPPLIED AND INSTALLED BY THE GOVERNMENT. ALL LABELS AND SIGNS ON THIS DRAWING FOR CONTRACTOR-INSTALLED EQUIPMENT SHALL BE SUPPLIED AND INSTALLED BY THE CONTRACTOR.
2. MATERIAL AND MOUNTING METHODS FOR ALL LABELS AND SIGNS SHALL COMPLY WITH THE REQUIREMENTS CONTAINED WITHIN FAA SPECIFICATION FAA-C-1217H.



4 E-DT-331 ITEM 13
SCALE: N.T.S.



5 E-DT-331 ITEM 31
SCALE: N.T.S.



6 E-DT-331 ITEM 34
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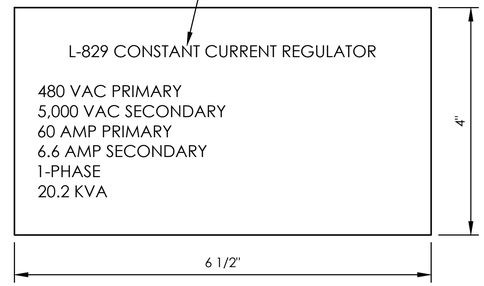
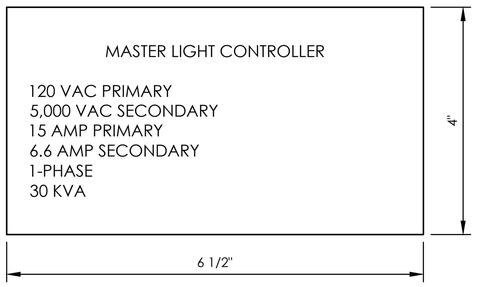
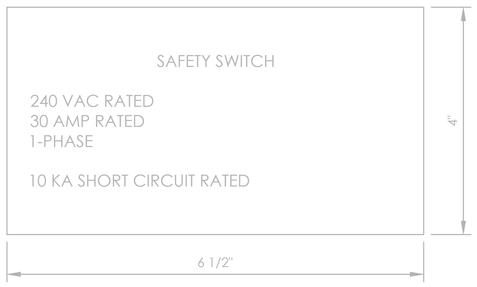


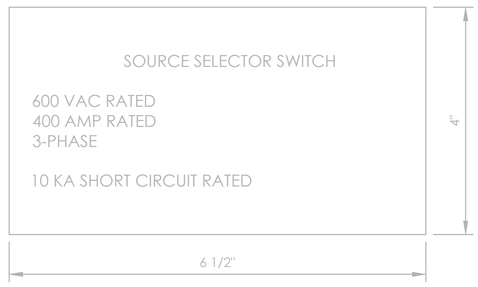
7 E-DT-331 ITEMS 35-38
SCALE: N.T.S.



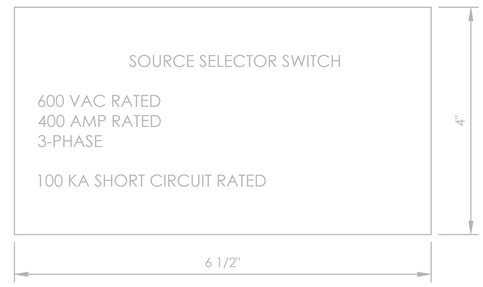
8 E-DT-331 ITEMS 39-42
SCALE: N.T.S.



9 E-DT-331 ITEM 57
SCALE: N.T.S.



10 E-DT-331 480 VOLT DOUBLE THROW SWITCH- 10KA
SCALE: N.T.S.



11 E-DT-331 480 VOLT DOUBLE THROW SWITCH- 100KA
SCALE: N.T.S.

NOTE: SCREENED LINEWORK IS PROVIDED / INSTALLED BY THE FAA AND IS SHOWN FOR INFORMATION ONLY

TAKE OFF WITH US
Memphis INTERNATIONAL AIRPORT

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12/11/2025

ENGINEER—SUBCONSULTANT

JOB NO.

REVISIONS

MARK	DATE	DESCRIPTION
0	12/11/2025	ISSUED FOR BID

MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
SHELTER 1 ELECTRICAL CHARACTERISTICS LABELS

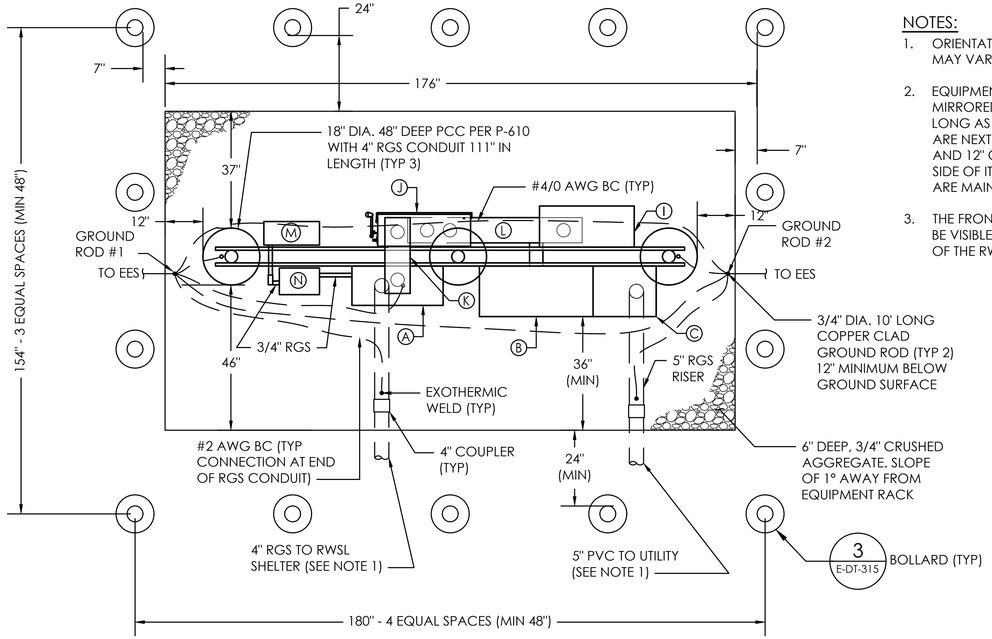
DWG. FILE NAME
161408-E-DT-331.DWG

DATE
12/11/2025

SCALE
N.T.S.

SHEET NO.
E-DT-331

December 10, 2025 c:\coddlib\pw\pwwestcoast\kmills\d0273326\161408-E-DT-331.dwg



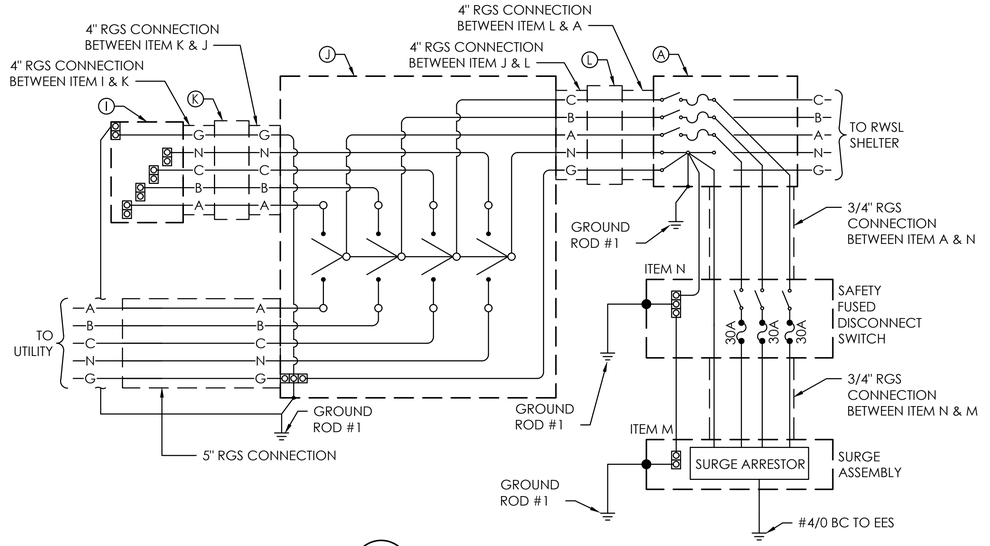
PLAN VIEW

NOTES:

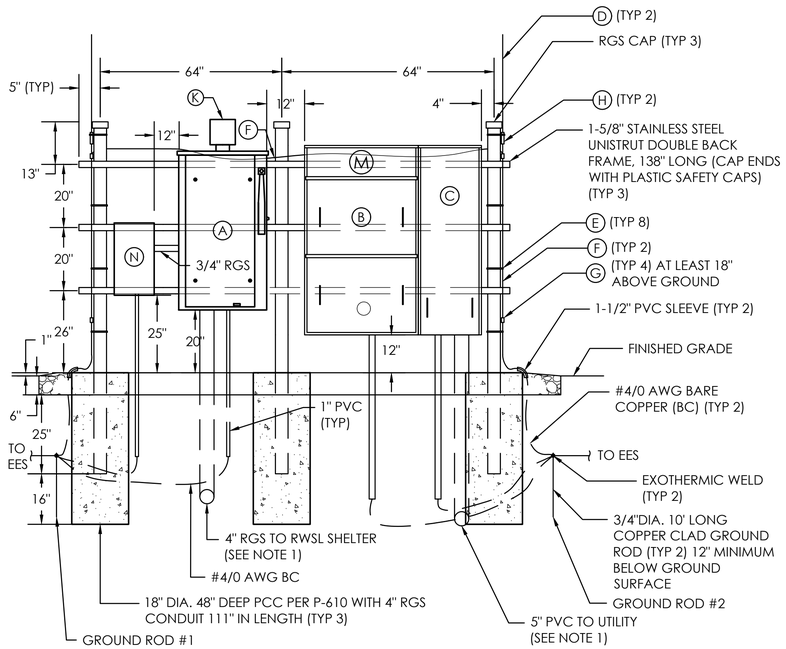
1. ORIENTATION OF CONDUIT MAY VARY.
2. EQUIPMENT CAN BE MIRRORED IF NEEDED AS LONG AS ITEMS "B" AND "C" ARE NEXT TO EACH OTHER AND 12" OF SPACE ON EACH SIDE OF ITEMS "A" AND "J" ARE MAINTAINED.
3. THE FRONT OF ITEM "A" SHALL BE VISIBLE FROM THE DOOR OF THE RWSL SHELTER.

NOTES:

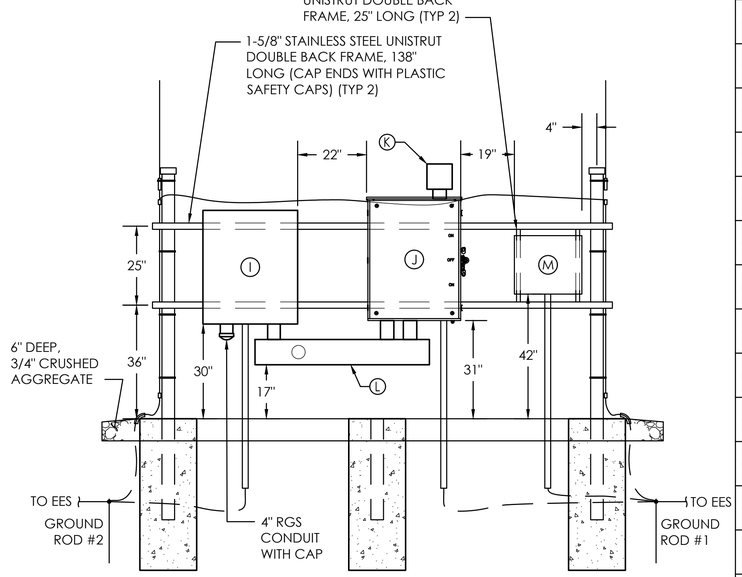
1. ALL BOXES AND SQUARE DUCT ARE TO BE BONDED TOGETHER WITH #2 AWG GREEN COPPER CONDUCTOR.
2. SEE DRAWING E-DG-802 FOR WIRE SIZES.



2 E-DT-332 WIRING OVERVIEW
SCALE: N.T.S.



FRONT ELEVATION VIEW



BACK ELEVATION VIEW

ITEM	DESCRIPTION	BASIS OF DESIGN	
		MANUFACTURER	PART NO.
(A)	SERVICE ENTRANCE DISCONNECT SWITCH (SEE NOTE 2)	SQUARE D	H365NDS
(B)	CURRENT TRANSFORMER (CT)/METER CABINET	MYERS/RYCO	W36CTML400-4D-NP
(C)	UTILITY PULL SECTION	MYERS/RYCO	PB400-4
(D)	AIR TERMINAL	TLP INC	572BT
(E)	U-BOLT TYPE PIPE BONDING CLAMP	TLP INC	805
(F)	COPPER CONDUCTORS (TO LENGTH)	TLP INC	29X
(G)	PARALLEL CLAMP	TLP INC	141
(H)	AIR TERMINAL BASES	TLP INC	690
(I)	STANDBY POWER CONNECTION NEMA 4X	ESL	DT0400-480-311-SW4X
(J)	480V 4 POLE DOUBLE THROW SWITCH RATED 400 AMP	EATON	4XDT465NF
(K)	2' OF 8"X8" SQUARE DUCT NEMA 4X TROUGH	HUBBELL	T8824CHSS
(L)	5' OF 8"X8" SQUARE DUCT NEMA 4X TROUGH	HUBBELL	T8860CHSS
(M)	SURGE PROTECTION DEVICE WITH NEMA 4X ENCLOSURE	EATON	BSPA050480Y1P
(N)	NEMA 4X FUSED DISCONNECT SWITCH, 30A	EATON	DH361FWK316

ABBREVIATIONS:
TLP INC - THOMPSON LIGHTNING PROTECTION INC

EQUIPMENT NOTES:
1. ALL EQUIPMENT SHALL BE AS SPECIFIED OR ENGINEER APPROVED EQUAL

2. SERVICE DISCONNECT SWITCH FUSED WITH (3) 300 AMP FUSES. CONTRACTOR SHALL PROVIDE 3 SPARE FUSES AND THEY SHALL BE STORED AND LABELED IN THE SHELTER.

1 E-DT-332 SERVICE ENTRANCE DISCONNECT UTILITY RACK
SCALE: N.T.S.

TAKE OFF WITH US Memphis INTERNATIONAL AIRPORT

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JOB NO.
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CHARLES B. DEMONT — REGISTERED ENGINEER — AGRICULTURE — STATE OF TENNESSEE — 12/11/2025

ENGINEER—SUBCONSULTANT

JOB NO.

REVISIONS

MARK	DATE	DESCRIPTION
0	12/11/2025	ISSUED FOR BID

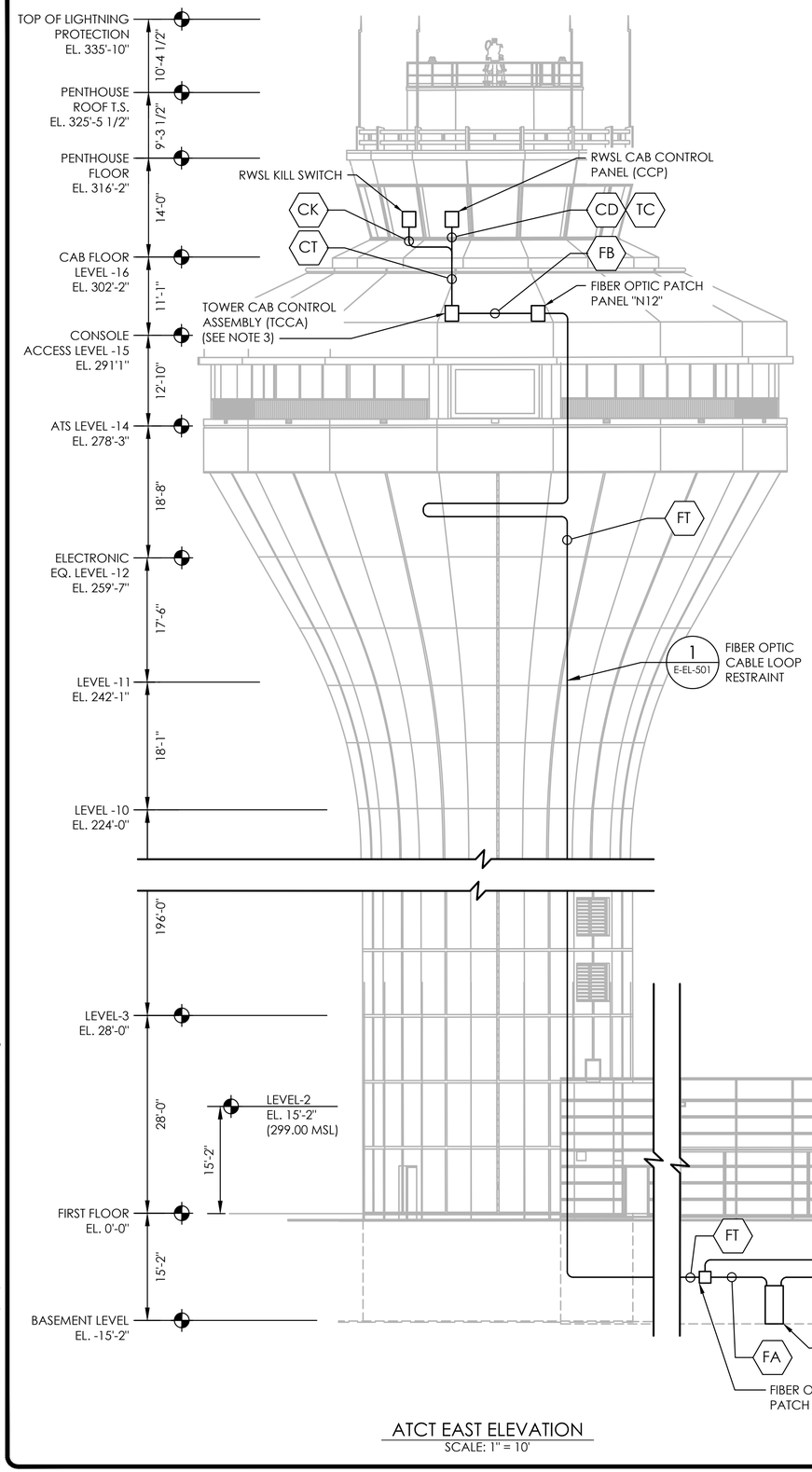
MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
SHELTER 1 SERVICE ENTRANCE DISCONNECT RACK

DWG. FILE NAME
161408-E-DT-332.DWG
DATE 12/11/2025
SHEET NO. E-DT-332
SCALE N.T.S.

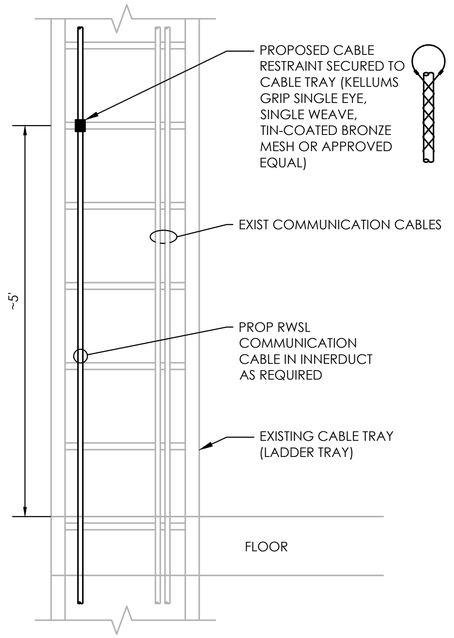
December 10, 2025 c:\cadd\lv\pw\pwwestcoast\kmills\d0273326\161408-E-DT-332.dwg



ATCT EAST ELEVATION
SCALE: 1" = 10'

DETAIL NOTES:

1. CABLES SHALL BE RESTRAINED WITH LOOP RESTRAINTS AT TOP FLOOR OF RUNS AND EVENLY THROUGH THE ATCT NOT EXCEEDING MANUFACTURER'S SPECIFIED BENDING RADIUS LIMITS AND MAXIMUM ALLOWABLE TENSILE FORCE/HANGING WEIGHT.



1 / E-EL-501 FIBER OPTIC CABLE LOOP RESTRAINT ON CABLE TRAY
SCALE: N.T.S.

GENERAL NOTES:

1. SEE THIS DRAWING FOR COMMUNICATION CABLE SCHEDULE.
2. UNLESS OTHERWISE NOTED, FAA SHALL FURNISH AND INSTALL ALL EQUIPMENT NOTED INSIDE THE ATCT.
3. THE TCCA WAS LOCATED SUCH THAT THE CABLE ROUTE TO THE CCP/KILL SWITCH DOES NOT EXCEED 75'.
4. N2 PATCH PANEL SHALL BE FURNISHED AND INSTALLED BY FAA. CONTRACTOR SHALL TERMINATE FIBER CABLE "F1" WITH "SC" CONNECTORS. CONTRACTOR SHALL TEST, IDENTIFY AND LABEL FIBERS.
5. N2 PATCH PANEL SHALL BE INSTALLED SUCH THAT COMMUNICATION CABLE "F1" ROUTE INSIDE THE BUILDING DOES NOT EXCEED 50'.
6. DIMENSIONS OF ALL EQUIPMENT INSTALLED IN THE ATCT CAN BE FOUND IN THE FAA FACILITY STANDARD DRAWINGS (FSD) FOR THE RWSL PROGRAM.
7. CONTRACTOR TO COORDINATE WITH RESIDENT PROJECT REPRESENTATIVE (RPR) FOR ACCESS TO FAA PROPERTY AND FACILITIES.

COMMUNICATION CABLE SCHEDULE

		DESCRIPTION	LENGTH	FURNISHED/ INSTALLED
F1		24 STRAND SINGLE-MODE FIBER OPTIC CABLE FROM RWSL SHELTER 1	6,490'	CONTRACTOR
FR		24 STRAND SINGLE MODE PLENUM AND RISER RATED FIBER OPTIC CABLE	150'	FAA
FT		6 STRAND PLENUM AND RISER RATED SINGLE-MODE FIBER OPTIC CABLE	500'	FAA
FA		PATCH COMMUNICATION CABLES	15'	FAA
FB		PATCH COMMUNICATION CABLES	10'	FAA
CD		SHIELDED CATEGORY 5 CABLE	110'	FAA
CT	CD	1-SHIELDED CATEGORY 5E CABLE	60'	FAA
	TC	1-#20-2 TC POWER CABLE SOJW		FAA
	CK	1-SHIELDED TWISTED PAIR COMMUNICATION CABLE		FAA

COMMUNICATION CABLE SCHEDULE NOTES:

1. FAA SHALL TERMINATE COMMUNICATION CABLES UNLESS OTHERWISE NOTED.
2. ALL FIBER OPTIC COMMUNICATION CABLES SHALL BE INSTALLED IN INNER DUCT IN ATCT, EXCEPT FOR CABLE "FB".
3. ALL CABLE ROUTING SHALL PATCH AND REPLACE/REPAIR FIRE STOPS AS REQUIRED.
4. ALLOWABLE LOSS OF SINGLE-MODE (SM) FIBER OPTIC CABLE IS 0.5DB/KM AT 1310 NM.

10' 0 10' 20'
SCALE: 1"=10'

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12/11/2025

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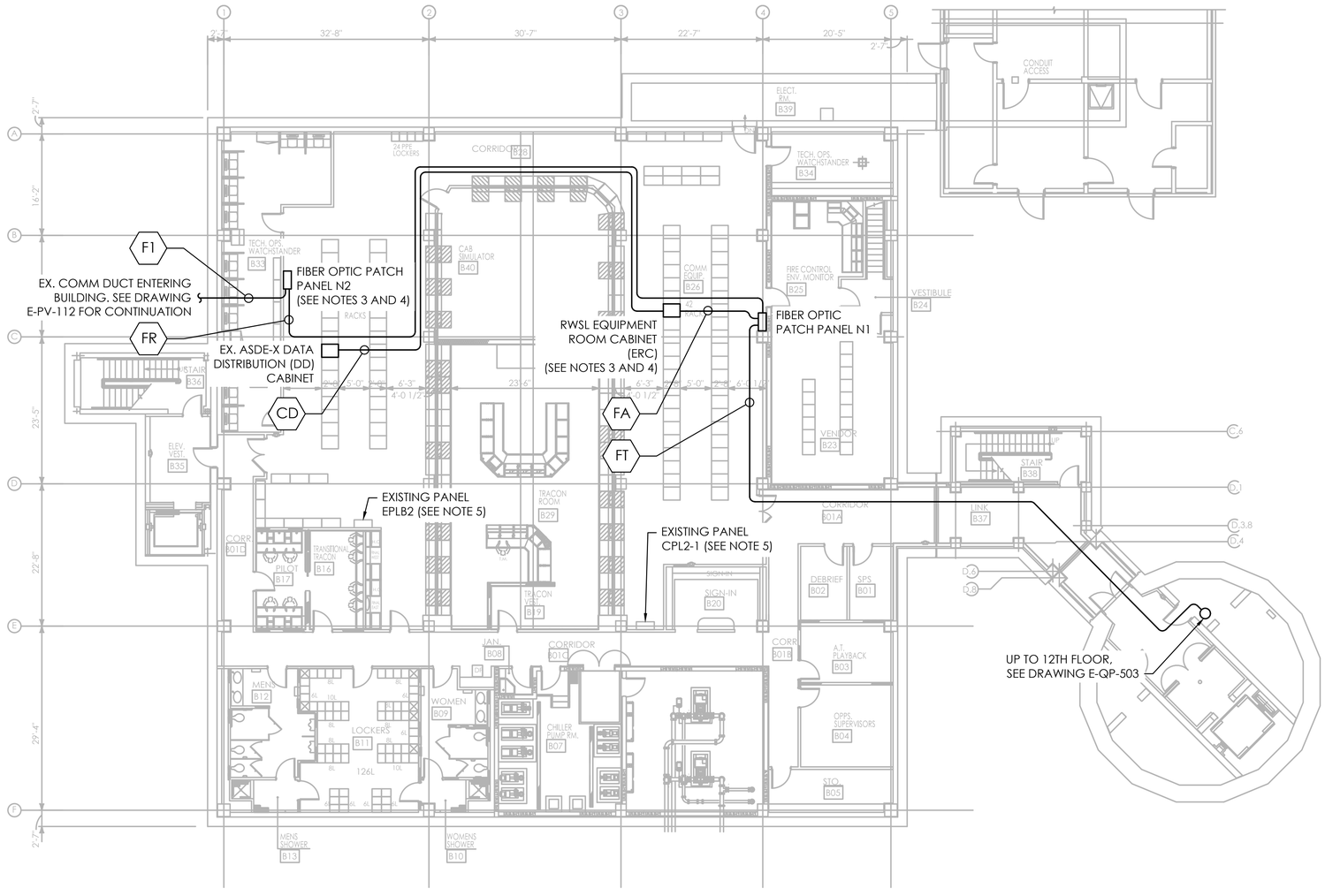
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
ATCT ELEVATION

DWG. FILE NAME
161408-E-EL-501.DWG
DATE 12/11/2025
SCALE 1" = 10'
SHEET NO.
E-EL-501

December 10, 2025 c:\coddlib\pw\pwwestcoast\kmills\d0273326\161408-E-EL-501.dwg

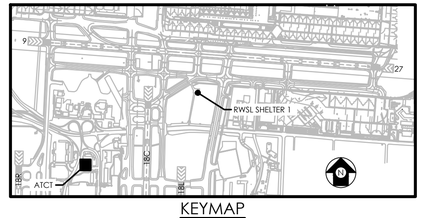


ATCT RWSL EQUIPMENT PLAN - BASEMENT LEVEL

SCALE: 3/32" = 1'-0"

GENERAL NOTES:

1. ALL CONTRACTOR PERSONNEL WORKING WITHIN THE ATCT SHALL OBTAIN AN ESCORT FROM THE FAA.
2. SEE DRAWING E-EL-501 FOR COMMUNICATION CABLE SCHEDULE.
3. FAA TO FURNISH AND INSTALL. CONTRACTOR SHALL TERMINATE COMMUNICATION CABLE "F1" WITH "ST" CONNECTORS. CONTRACTOR SHALL TEST, IDENTIFY AND LABEL ALL FIBERS.
4. N2 PATCH PANEL SHALL BE INSTALLED SUCH THAT COMMUNICATION CABLE "F1" ROUTE INSIDE THE BUILDING DOES NOT EXCEED 50'.
5. INSTALL NEW CIRCUITS TO:
   NEW 15 AMP BREAKER, PANEL EPLB2, SLOT 10
   NEW 30 AMP BREAKER, PANEL CPL2-1, SLOT 21
6. 4"X4" GALVANIZED BOX MOUNTED TO EXISTING SQUARE DUCT WITH 15 AMP NEMA L5-20R TWIST-LOCK RECEPTACLE FROM CIRCUIT 10 FROM PANELBOARD "EPLB2".
7. 4"X4" GALVANIZED BOX MOUNTED TO EXISTING SQUARE DUCT WITH 30 AMP NEMA L5-30R TWIST-LOCK RECEPTACLE FROM CIRCUIT 21 FROM PANELBOARD "CPL2-1".
8. ERC SHALL BE GROUNDED WITH #2 AWG GREEN WITH ORANGE TRACER THHN (RUN SHALL NOT EXCEED 33'), IN ACCORDANCE WITH FAA-STD-019F TABLE IX.



KEYMAP

5' 0 5' 10' 15' 20' 25' 30'

SCALE: 3/32"=1'-0"

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JOB NO.
85091

DRAWN BY: KLM
CHECKED BY: CTX
APPROVED BY: CBD

CHARLES B. DEMONT — REGISTERED ENGINEER — AGRICULTURE — STATE OF TENNESSEE — 12/11/2025

ENGINEER—SUBCONSULTANT

JOB NO.

REVISIONS

MARK	DATE	DESCRIPTION
0	12/11/2025	ISSUED FOR BID

MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
ATCT RWSL EQUIPMENT PLAN - BASEMENT LEVEL

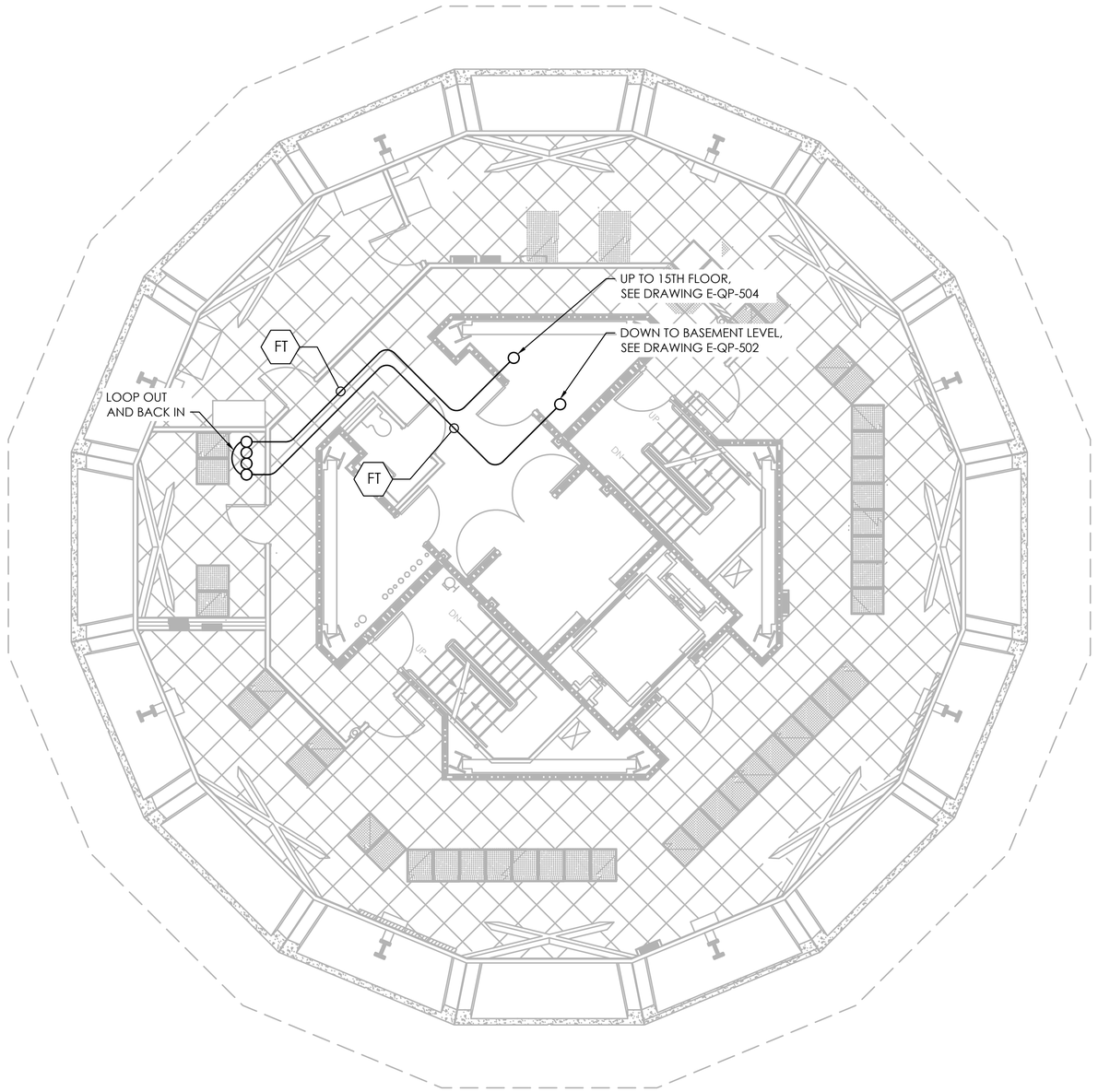
DWG. FILE NAME
161408-E-QP-502.DWG

DATE
12/11/2025

SCALE
3/32" = 1'-0"

SHEET NO.
E-QP-502

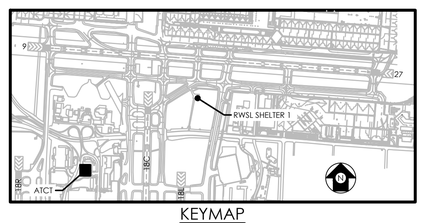
December 10, 2025 C:\caddlib\pw\pwwestcoast\kmills.d0273326\161408-E-QP-502.dwg



ATCT RWSL EQUIPMENT PLAN - 12TH FLOOR
SCALE: 3/16" = 1'-0"

GENERAL NOTES:

1. SEE DRAWING E-EL-501 FOR COMMUNICATION CABLE SCHEDULE.
2. ALL WORK ON THIS DRAWING TO BE PERFORMED BY THE FAA.



KEYMAP

2' 0 2' 4' 6' 8' 10' 12' 14'
SCALE: 3/16"=1'-0"

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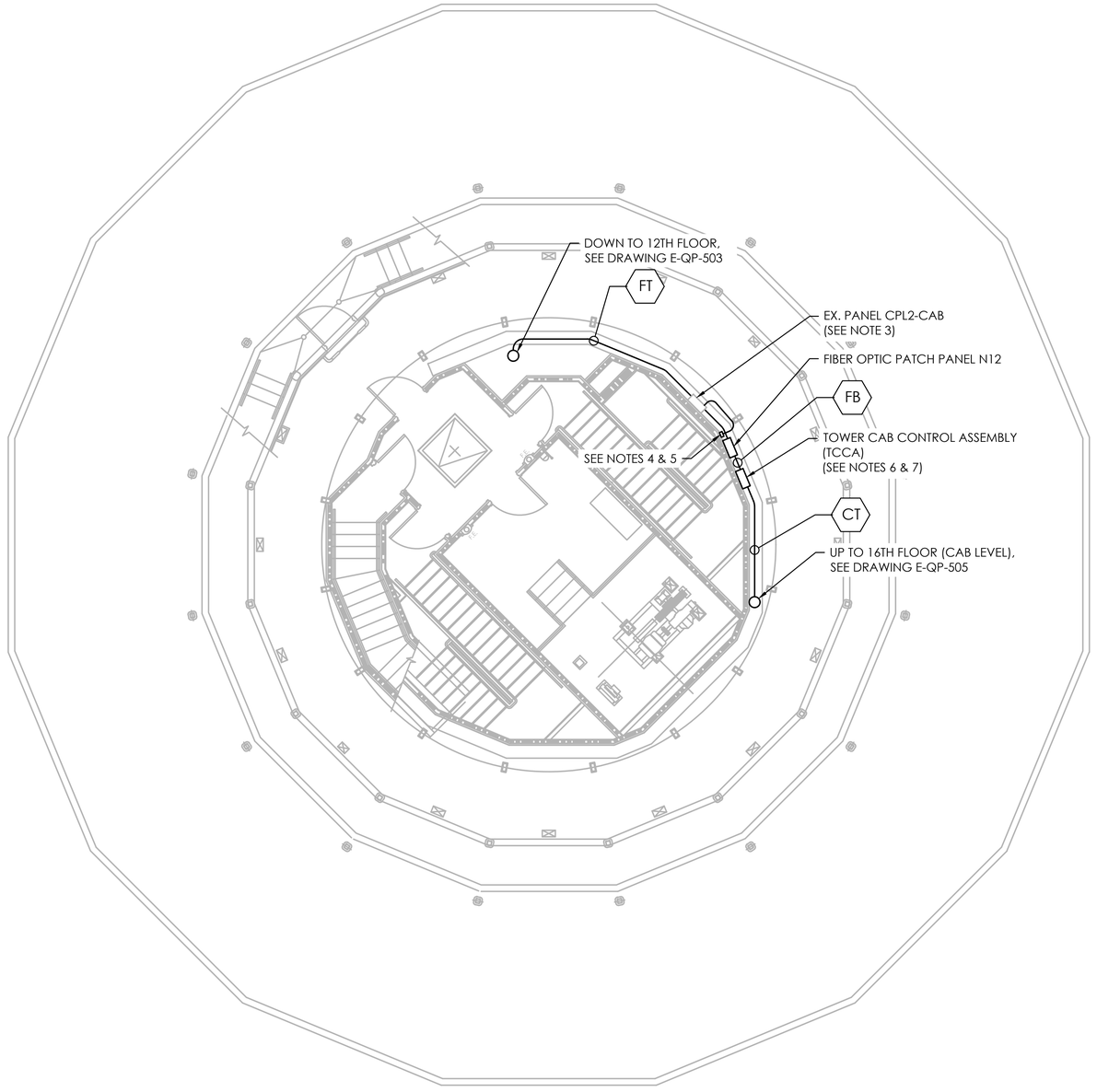
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
ATCT RWSL EQUIPMENT PLAN - 12TH FLOOR

DWG. FILE NAME
161408-E-QP-503.DWG
DATE
12/11/2025
SCALE
3/16" = 1'-0"
SHEET NO.
E-QP-503

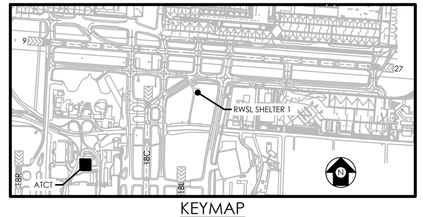
December 10, 2025 c:\caddlib\pw\pwwestcoast\kmills\d0273326\161408-E-QP-503.dwg



ATCT RWSL EQUIPMENT PLAN - 15TH FLOOR
SCALE: 3/16" = 1'-0"

GENERAL NOTES:

1. SEE DRAWING E-EL-501 FOR COMMUNICATION CABLE SCHEDULE.
2. ALL WORK ON THIS DRAWING TO BE PERFORMED BY THE FAA.
3. FURNISH AND INSTALL 15 AMP BREAKER IN BAY 15.
4. 3/4" EMT WITH 2-1/C #12 AWG THHN AND 1/C #12 AWG GREEN THHN FED FROM PANEL "CPL2-CAB" BREAKER IN BAY 15.
5. 4"X4" GALVANIZED BOX WITH 15 AMP NEMA L5-15 TWIST LOCK RECEPTACLE.
6. GROUND TCCA WITH #6 AWG GREEN WITH ORANGE TRACER THHN (RUN SHALL NOT EXCEED 13') IN ACCORDANCE WITH TABLE IX OF FAA-STD-019F.
7. TCCA SHALL BE INSTALLED SUCH THAT THE CABLE ROUTE TO THE CAB CONTROL PANEL AND KILL SWITCH DOES NOT EXCEED 75'.



KEYMAP

2' 0 2' 4' 6' 8' 10' 12' 14'
SCALE: 3/16"=1'-0"

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12/11/2025

ENGINEER—SUBCONSULTANT

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MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
ATCT RWSL EQUIPMENT PLAN - 15TH FLOOR

DWG. FILE NAME
161408-E-QP-504.DWG
DATE 12/11/2025
SCALE 3/16" = 1'-0"
SHEET NO. E-QP-504

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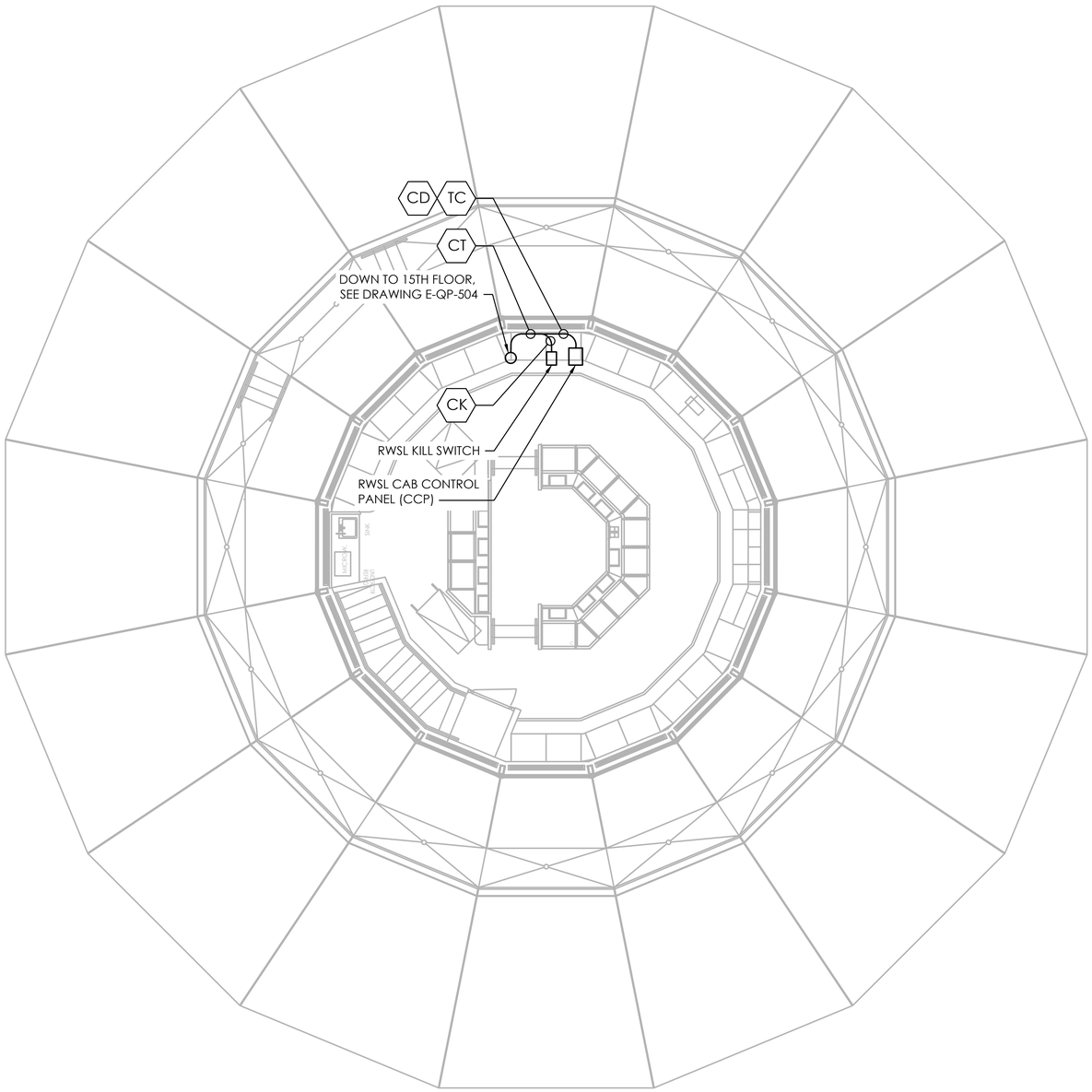
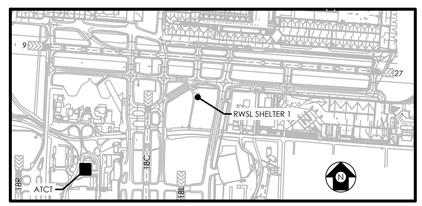


ATCT RWSL EQUIPMENT PLAN - 16TH FLOOR (CAB)

SCALE: 3/16" = 1'-0"

GENERAL NOTES:

1. SEE DRAWING E-EL-501 FOR COMMUNICATION CABLE SCHEDULE.
2. ALL WORK ON THIS DRAWING TO BE PERFORMED BY THE FAA.



KEYMAP

2' 0 2' 4' 6' 8' 10' 12' 14'

SCALE: 3/16"=1'-0"

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MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
ATCT RWSL EQUIPMENT PLAN - 16TH FLOOR (CAB)

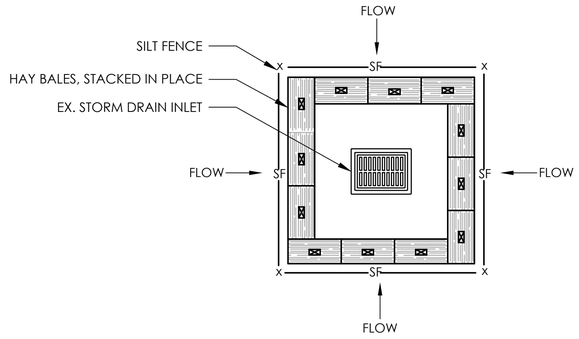
DWG. FILE NAME
161408-E-QP-505.DWG

DATE
12/11/2025

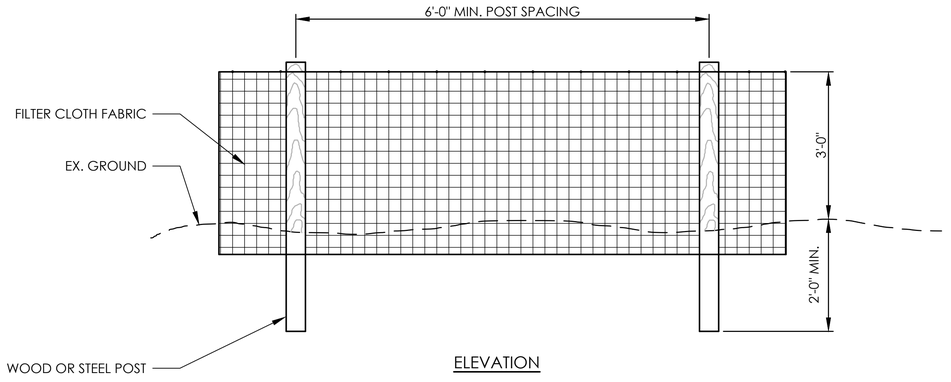
SCALE
3/16" = 1'-0"

SHEET NO.
E-QP-505

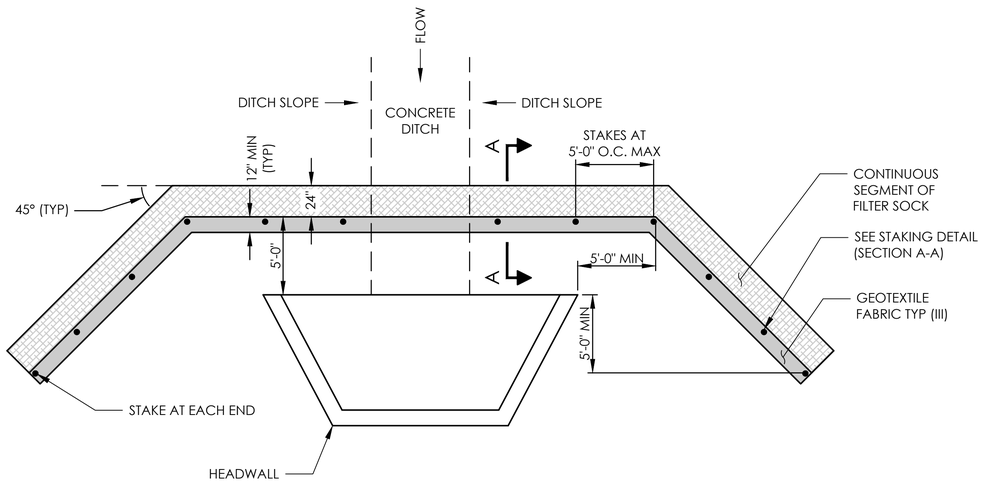
December 10, 2025 c:\coddlib\pw\pwwestcoast\kmills\d0273326\161408-E-QP-505.dwg

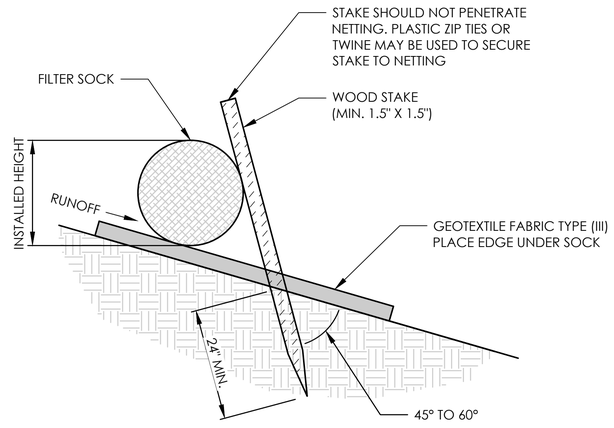


1 E-DT-600 CATCH BASIN SEDIMENT TRAP
SCALE: N.T.S.
PAY ITEM: C-102-5.2



2 E-DT-600 TEMPORARY SILT FENCE
SCALE: N.T.S.
PAY ITEM: C-102-5.1





3 E-DT-600 FILTER SOCK
SCALE: N.T.S.
PAY ITEM: C-102-5.3

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MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
TESC DETAILS

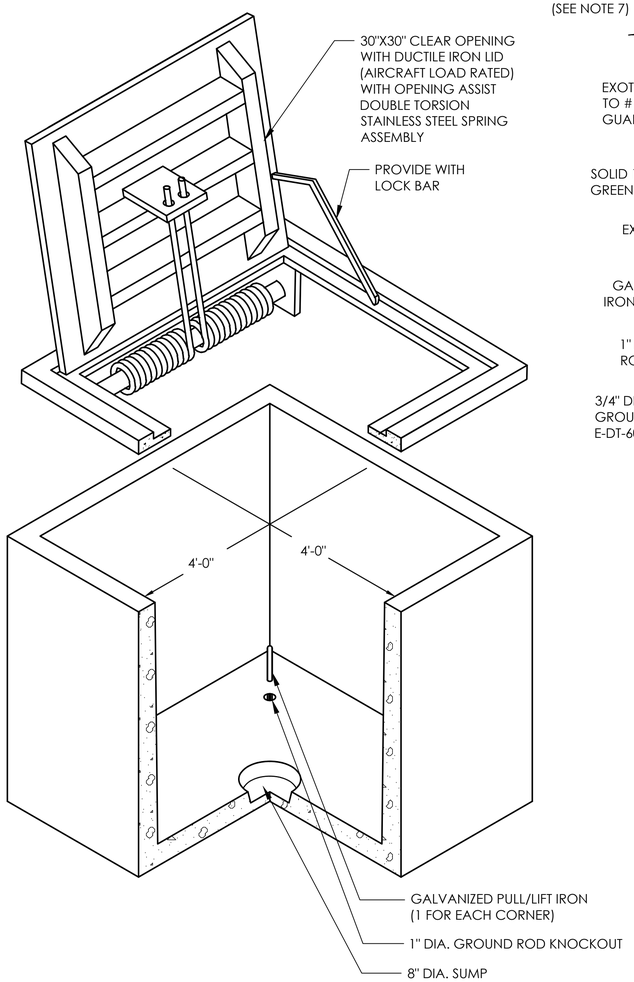
DWG. FILE NAME
161408-E-DT-600.DWG

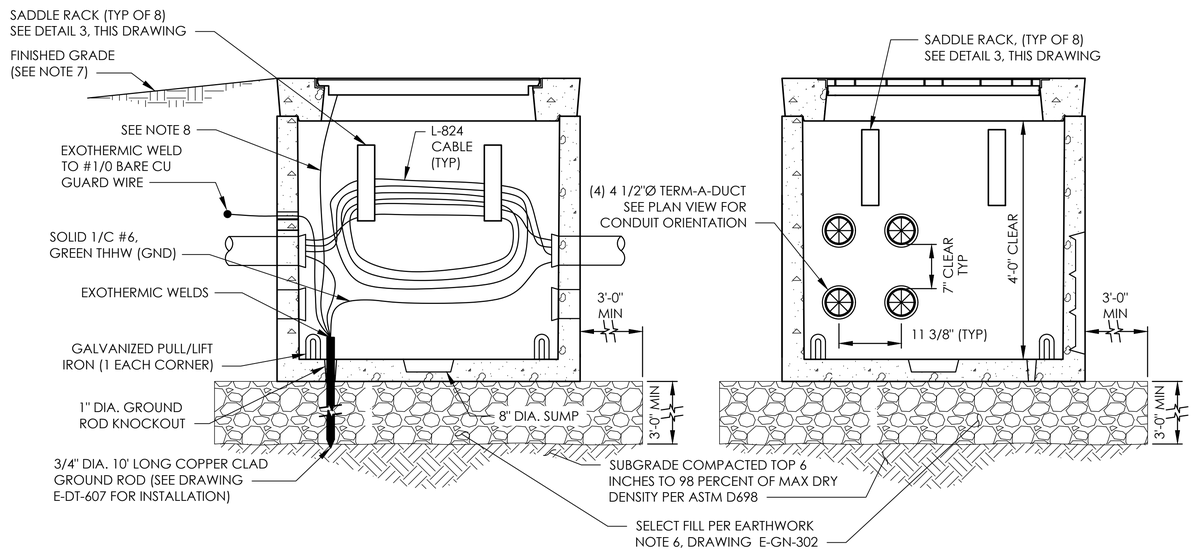
DATE
12/11/2025

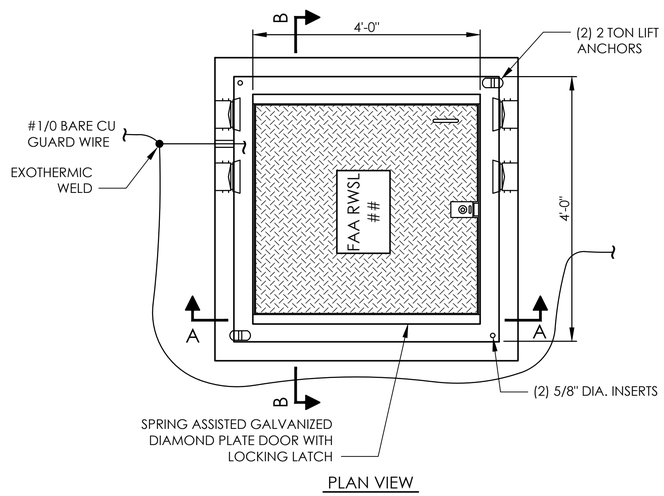
SHEET NO.
E-DT-600

SCALE
N.T.S.

December 10, 2025 c:\caddlib\pw\pwwestcoast\kmills\d0273326\161408-E-DT-600.dwg







PLAN VIEW

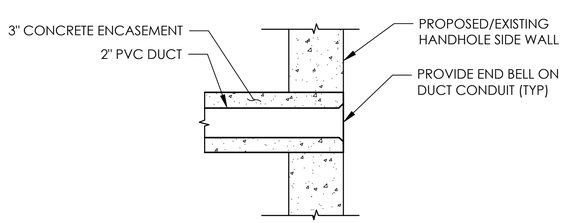
1 E-DT-601 HANDHOLE (AIRCRAFT RATED)
SCALE: N.T.S.
PAY ITEM: L-110-5.7

HANDHOLE NOTES:

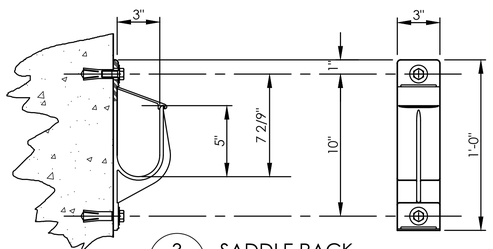
1. ALL HANDHOLE COVERS SHALL HAVE "FAA RWSL ##" WHERE "##" IS THE RESPECTIVE HAND HOLE IDENTIFICATION NUMBER.
2. SADDLE RACK SHALL BE INSTALLED ON EACH WALL OF THE HANDHOLE. WHEN POSSIBLE, L-824 CABLE FROM AN INDIVIDUAL CIRCUIT SHALL NOT BE SADDLED WITH CABLES FROM A CIRCUIT OF A DIFFERENT RWSL SHELTER OR OF ANOTHER AIRPORT SYSTEM. L-824 CABLE SHALL BE COILED TO PROVIDE 20' OF SLACK IN EACH HANDHOLE AND WITH A MINIMUM BENDING RADIUS OF 10 TIMES THE DIAMETER OF THE CABLE.
3. CONTRACTOR SHALL I.D. EACH CABLE ENTERING & EXITING HANDHOLE. SEE DETAIL 1 ON DRAWING E-DT-609 FOR CIRCUIT I.D. TAG DETAILS.
4. CONTRACTOR SHALL INSTALL A 3/4" DIA. 10' LONG COPPER CLAD GROUND ROD IN ALL NEW HANDHOLES.
5. HANDHOLE MUST BE AIRCRAFT RATED AND MAY BE INSTALLED INSIDE AIRCRAFT SAFETY AREAS, IF SHOWN ON PLANS.
6. CONTRACTOR SHALL GROUT AROUND ALL DUCTS ENTERING THE HANDHOLE
7. HANDHOLE SHALL BE SET 6" ABOVE SURROUNDING GROUND WITH BACKFILL MATCHING THE TOP OF THE COVER, SLOPING AWAY FROM THE HANDHOLE.
8. INSTALL #1/0 BARE COPPER WIRE FOR GROUNDING TO COVER FRAME AND GROUND ROD. DRILL AND TAP HANDHOLE COVER FRAME FOR 5/16" X 1-1/2" BOLT (ITEM E), OR LONGER IF REQUIRED, AND INSTALL USING BELLEVILLE WASHERS (ITEM D) IN THE SAME APPROACH AS ILLUSTRATED ON DRAWING E-DT-610. EXOTHERMIC WELD TO GROUND ROD.
9. BOX DESIGN FOR 150,000 LB DUAL WHEEL AIRCRAFT LOAD. HANDHOLE SHOWN IS MANUFACTURED BY OLD CASTLE, INC. INSIDE DIMENSIONS SHOWN WILL BE MET REGARDLESS OF WHICH PRECAST STRUCTURE MANUFACTURER IS PROPOSED BY THE CONTRACTOR.
10. SOLID #6 AWG INSULATED EQUIPMENT GROUND WIRE FROM EACH CIRCUIT SHALL BE CONNECTED T0 GROUND ROD IN HANDHOLE.
11. ALL BACKFILL AROUND HANDHOLES SHALL BE IN ACCORDANCE WITH ITEM P-152.
12. WHEN THE CONDUIT ENTERING THE HANDHOLE IS RGS, GROUND CONDUIT WITH #1/0 BARE CU WIRE TO GROUND ROD INSIDE HANDHOLE.

STRUCTURAL NOTES:

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: ACI-318 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
5. LOADS: 120.00 kip
   ASTM C-857 "MINIMUM STRUCTURAL DESIGN LOADING FOR UNDERGROUND PRECAST CONCRETE UTILITY STRUCTURES"
   30% IMPACT FOR LESS THAN 2'-0" SOIL COVER
   SOIL DENSITY 120 pcf
   40 pcf E.F.P. LATERAL SOIL PRESSURE ABOVE WATERTABLE
   80 pcf E.F.P. LATERAL SOIL PRESSURE BELOW WATERTABLE
   80 psf LIVE LOAD SURCHARGE
   WATERTABLE 5'-0" BELOW FINISHED GRADE (ASSUMED)
   REQUIRES 2,000 PSF ALLOWABLE SOIL BEARING PRESSURE



2 E-DT-601 1-WAY 2" DUCT ENTRY
SCALE: N.T.S.



3 E-DT-601 SADDLE RACK
SCALE: N.T.S.

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.

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MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
HANDHOLE DETAILS (AIRCRAFT RATED)

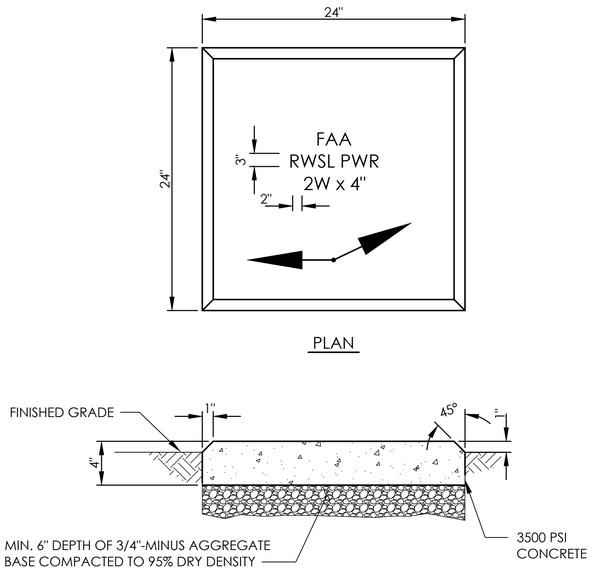
DWG. FILE NAME
161408-E-DT-601.DWG

DATE
12/11/2025

SHEET NO.
E-DT-601

SCALE
N.T.S.

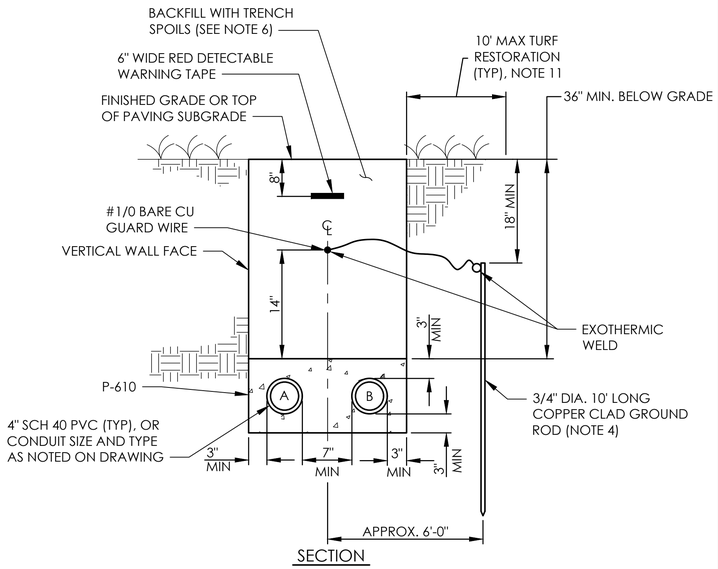
December 10, 2025 c:\caddlib\pw\pwwestcoast\kmills\d0273326\161408-E-DT-601.dwg



NOTES:

1. LETTERS SHALL BE 3" HIGH AND 2" WIDE. THE WIDTH OF STROKE SHALL BE 1/2" AND THE DEPTH 1/4" FOR LETTERING AND GRAPHICS.
2. DESIGNATION SHALL BE AS SHOWN ON PLANS OR AS DIRECTED BY THE LOCAL AIRPORT AUTHORITY.
3. MARKERS SHALL BE PROFESSIONALLY FABRICATED USING CASTING IMPRINT DEVICE OR SAND BLASTING.
4. 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.
5. PAINT MARKERS WITH TWO COATS AVIATION ORANGE PAINT.
6. DUCT MARKERS SHALL BE CONSIDERED INCIDENTAL TO THE DUCTBANK INSTALLATION.
7. COORDINATE LOCATION OF DUCT MARKERS WITH ON SITE ENGINEER.

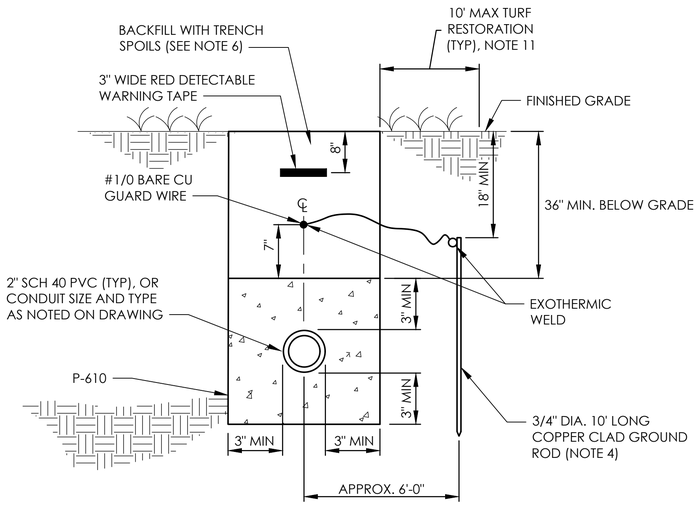
1 E-DT-602 — DUCT MARKER
SCALE: N.T.S.



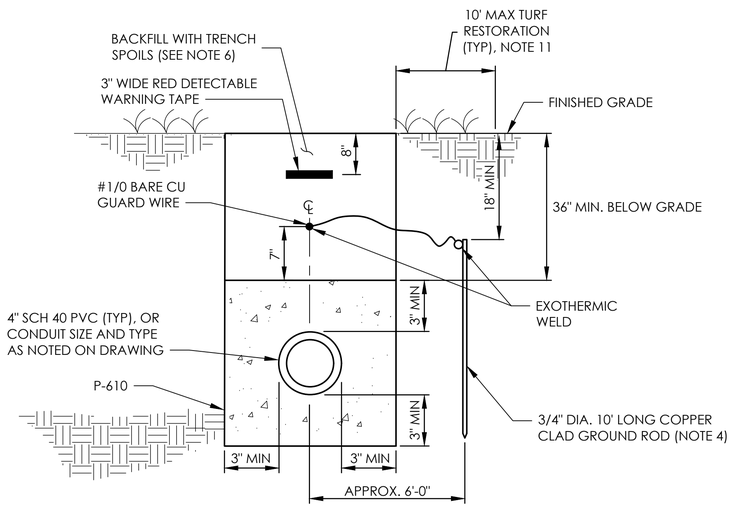
2 E-DT-602 — 2-WAY 4" DUCTBANK - CONCRETE ENCASED
SCALE: N.T.S.
PAY ITEM: L-110-5.5

DUCTBANK NOTES:

1. INSTALL PULLROPE IN ALL CONDUITS.
2. 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.
3. 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.
4. GROUNDING RODS SHALL BE INSTALLED AT APPROXIMATELY 90-FOOT INTERVALS TO ACHIEVE GROUND RESISTANCE OF LESS THAN 10 OHMS (FAA-STD-019F, PARAGRAPH 4.4.3). 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. CONNECT GROUND RODS TO GUARD WIRE WITH A #1/0 BARE CU BONDING JUMPER, UTILIZING EXOTHERMIC WELDS AT BOTH ENDS OF BONDING JUMPER.
5. CONTRACTOR SHALL ENSURE THAT DUCTS DO NOT FLOAT DURING CONCRETE BACKFILL.
6. COMPACT BACKFILL TO DENSITY AS SPECIFIED IN SECTION P-152.
7. SEPARATION BETWEEN DUCTBANKS SHALL BE A MINIMUM OF 12" UNLESS PRIOR APPROVAL OF THE ENGINEER IS RECEIVED.
8. GUARD WIRES AND GROUND RODS ARE NOT REQUIRED BETWEEN HANDHOLES/MANHOLES FOR (A) FERROUS CONDUIT OR (B) COMMUNICATION CONDUIT AND DUCTS WITH ONLY FIBER OPTIC CABLE.
9. SEE DRAWING E-DT-607 FOR GROUND ROD AND GROUND PLATE INSTALLATION DETAILS.
10. SEE SECTION L-109 FOR INNERDUCT AND TRACER WIRE REQUIREMENTS FOR DUCTBANKS WITH FIBER OPTIC CABLE INSTALLATIONS.
11. TURF RESTORATION SHALL CONSIST OF 4" T-905 TOPSOIL WITH T-904 SOD UP TO 10' MAXIMUM ON EITHER SIDE OF DUCTBANK EXCAVATION LIMITS.



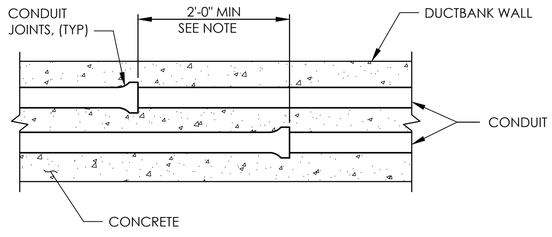
3 E-DT-602 — 1-WAY 2" DUCT - CONCRETE ENCASED
SCALE: N.T.S.
PAY ITEM: L-110-5.1



4 E-DT-602 — 1-WAY 4" DUCT - CONCRETE ENCASED
SCALE: N.T.S.
PAY ITEM: L-110-5.3

NOTES:

1. SEPARATE CONDUIT JOINTS BY A MINIMUM LONGITUDINAL DISTANCE OF 2 FEET.



5 E-DT-602 — DUCTBANK CONDUIT JOINT LAYOUT
SCALE: N.T.S.

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ENGINEER—SUBCONSULTANT

JOB NO.

REVISIONS

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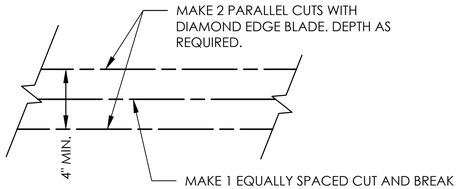
MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
DUCTBANK DETAILS

DWG. FILE NAME
161408-E-DT-602.DWG
DATE
12/11/2025
SHEET NO.
E-DT-602
SCALE
N.T.S.

December 10, 2025 c:\coddlib\pw\pwwestcoast\kmills\d027332k\161408-E-DT-602.dwg



PLAN

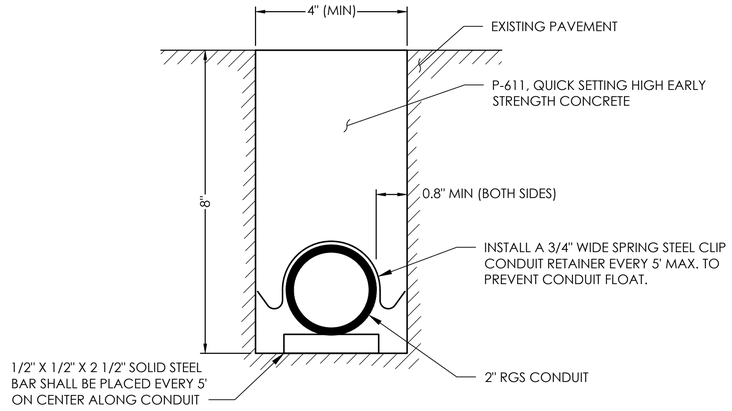
1 E-DT-603 — IN-PAVEMENT TRENCH FORMATION-CONCRETE
SCALE: N.T.S.

SEQUENCE OF INSTALLATION IN CONCRETE:

1. TRENCH EXISTING PAVEMENT. SEE DETAIL 1, THIS DRAWING.
2. WATER BLAST EXPOSED SURFACES.
3. INSTALL STEEL, CONDUIT AND RETAINERS.
4. APPLY BONDING AGENT.
5. BACKFILL WITH CONCRETE.

NOTES:

1. CONTRACTOR SHALL INSTALL 1/4" MASONITE FULL DEPTH OF THE IN-PAVEMENT TRENCH AT ALL CONSTRUCTION/CONTRACTION JOINT INTERSECTIONS. SEE DETAIL 4, THIS DRAWING.
2. CONTRACTOR SHALL INSTALL 3/4" MASONITE FULL DEPTH OF THE IN-PAVEMENT TRENCH AT ALL EXPANSION JOINT INTERSECTIONS. SEE DETAIL 3, THIS DRAWING.



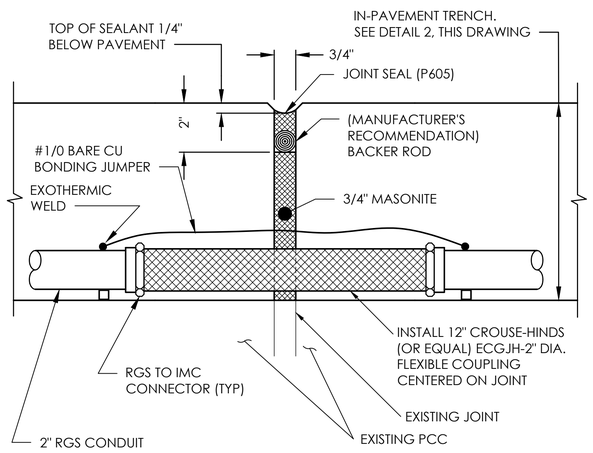
ELEVATION

2 E-DT-603 — 2" CONDUIT INSTALLATION IN IN-PAVEMENT TRENCH
SCALE: N.T.S.

PAY ITEM: L-110-5.2

NOTES:

1. THIS DETAIL APPLIES ONLY TO INSTALLATION OF NEW CONDUIT IN EXISTING PCC THRU EXPANSION JOINTS.
2. CONTRACTOR SHALL RE-ESTABLISH AND REPAIR ALL EXISTING PAVEMENT JOINTS DAMAGED DURING CONDUIT INSTALLATION.
3. WIDEN TRENCH LOCALLY TO MAINTAIN MINIMUM LATERAL CLEARANCE AROUND COUPLING.

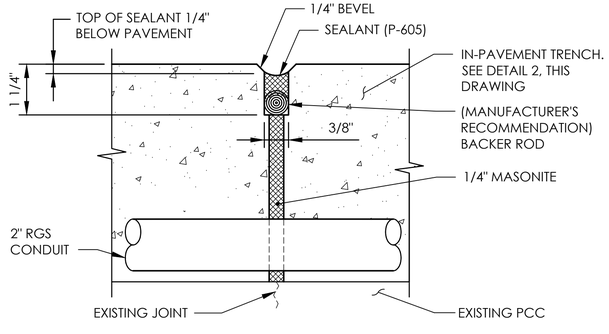


ELEVATION

3 E-DT-603 — EXPANSION JOINT COUPLING
SCALE: N.T.S.

NOTES:

1. CONTRACTOR SHALL RE-ESTABLISH AND REPAIR ALL EXISTING PAVEMENT JOINTS DAMAGED DURING CONDUIT INSTALLATION.



ELEVATION

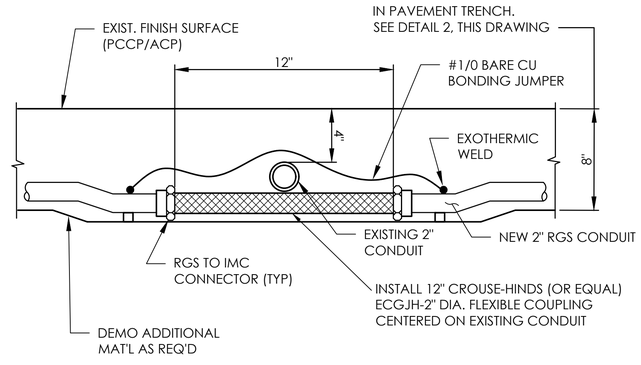
4 E-DT-603 — PAVEMENT JOINT AT IN-PAVEMENT TRENCH
SCALE: N.T.S.

NOT USED

5 E-DT-603 — CONDUIT TRANSITION FROM IN-PAVEMENT TRENCH TO CONCRETE ENCASED DUCT
SCALE: N.T.S.

NOTES:

1. CONTRACTOR TO NOTIFY AIRPORT OPERATIONS 48 HOURS PRIOR TO CROSSING UNDER EXISTING CONDUITS. AIRPORT OPERATIONS TO TEST EXISTING CIRCUIT PRIOR TO CONTRACTOR BACK FILLING THE TRENCH.



ELEVATION

6 E-DT-603 — FLEXIBLE INSTALLATION UNDER EXISTING CONDUIT IN PCCP/ACP PAVEMENT
SCALE: N.T.S.

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0	12/11/2025	ISSUED FOR BID

MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
IN-PAVEMENT CONDUIT TRENCH DETAILS

DWG. FILE NAME
161408-E-DT-603.DWG

DATE
12/11/2025

SCALE
N.T.S.

SHEET NO.
E-DT-603

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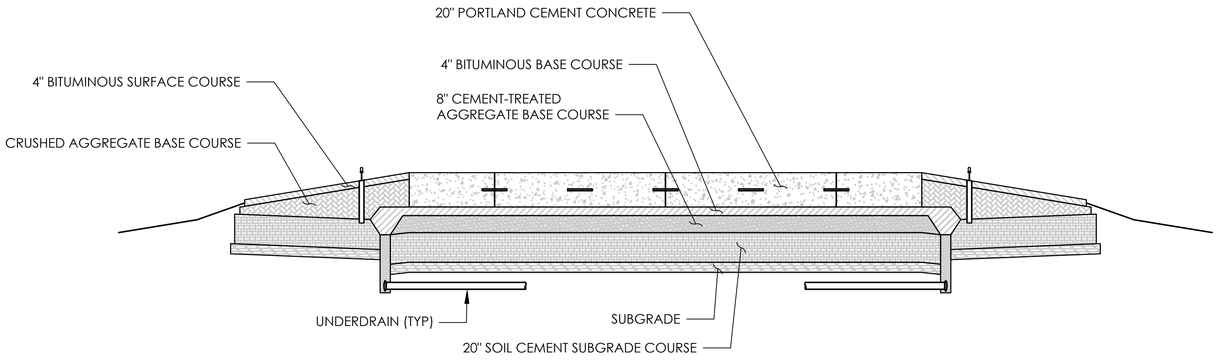

1
E-DT-604

TYPICAL EXISTING TAXIWAY CONNECTOR SECTION

SCALE: N.T.S.

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16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
EXISTING TAXIWAY SECTION DETAILS

DWG. FILE NAME
161408-E-DT-604.DWG
DATE
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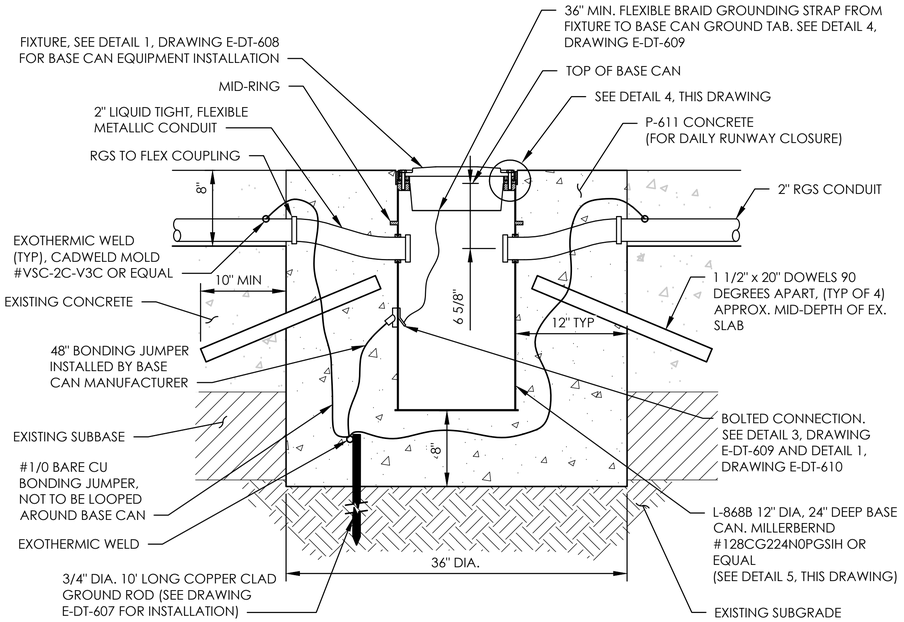
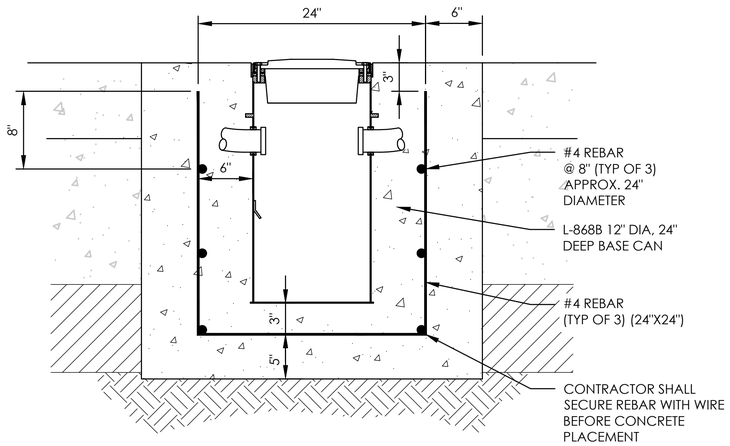


1 E-DT-605 BASE CAN INSTALLATION - IN EXISTING PAVEMENT
SCALE: N.T.S.

PAY ITEM: L-125-5.1



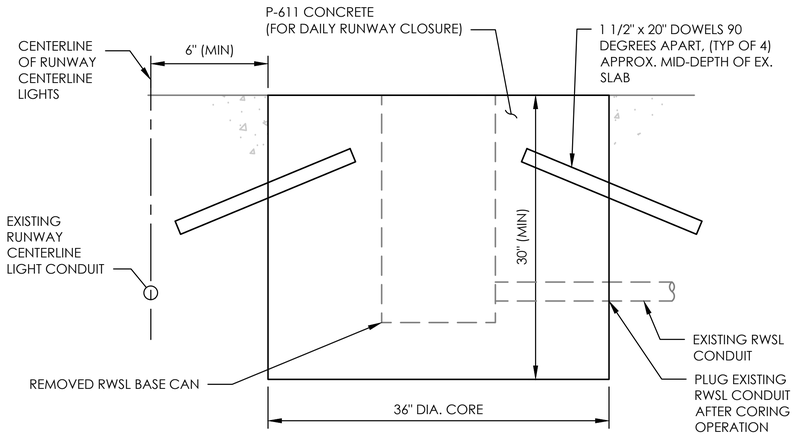
2 E-DT-605 REBAR INSTALLATION
SCALE: N.T.S.

SUGGESTED BASE CAN REMOVAL SEQUENCE NOTES:

1. CORE 36" DIAMETER HOLE THROUGH THE EXISTING CONCRETE PAVEMENT AND OF SUFFICIENT DEPTH TO FREE THE EXISTING RWSL BASE CAN. CORE HOLE SHOULD BE LOCATED TO AVOID DAMAGING EXISTING LIGHTING CONDUITS TO REMAIN. REMOVE PAVEMENT CORE AND BASE CAN CAREFULLY SO AS NOT TO DAMAGE/SPALL REMAINING CONCRETE EDGE.

SUGGESTED BACKFILL NOTES (FOR LOCATIONS WITHOUT BASE CAN INSTALLATION):

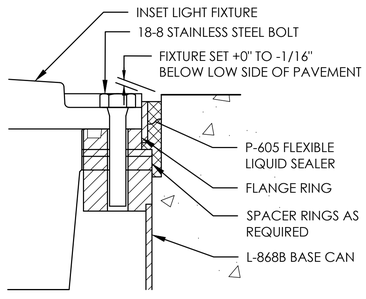
1. INSTALL DOWELS WITH EPOXY.
2. SAND BLAST THE SURFACE OF THE CONCRETE TO EXPOSE ROUGH AGGREGATE, COAT SURFACE WITH BONDING AGENT AND PLACE P-501 CONCRETE.
3. PLACE CONCRETE FLUSH WITH THE ADJACENT SURFACE. COMPLETELY CONSOLIDATE CONCRETE, FILL ALL VOIDS BY VIBRATING, AND CURE SUFFICIENTLY PRIOR TO OPENING TO TRAFFIC.



3 E-DT-605 EXISTING BASE CAN REMOVAL AND BACKFILL
SCALE: N.T.S.

NOTES:

1. THE BASIC PACKAGE TO BE USED FOR PLANNING THE INSTALLATION OF ALL BASE CANS SHALL BE: (1) 3/4" FIXTURE, (1) 3/8" FLANGE RING, (1) 1/4" SPACER RING AND (1) 1/8" SPACER RING ON TOP OF THE L-868 BASE CAN. THE BASIC SPACER RING PACKAGE, AS DENOTED ABOVE, SHALL BE CONSIDERED INCIDENTAL TO THE BASE CAN.
2. TO MEET FINAL GRADE REQUIREMENTS SHOWN ON THIS DETAIL, CONTRACTOR (AT CONTRACTOR'S EXPENSE) WILL BE REQUIRED TO PROVIDE ALTERNATE SPACER RINGS (MAXIMUM 3/8" THICKNESS, MINIMUM 1/16" THICKNESS). THE FINAL INSTALLATION SHALL USE NOT MORE THAN 3 SPACER RINGS UNDER THE FLANGE RING.
3. FINAL FIXTURE HEIGHT (OR SNOW PLOW RING, WHEN USED), RELATIVE TO THE PAVEMENT, SHALL BE CHECKED ON THE LOW SIDE OF PAVEMENT.



4 E-DT-605 FLUSH MOUNTED FIXTURE INSTALLATION
SCALE: N.T.S.

NOTES:

1. WHEN ORDERING NEW BASE CANS FROM MILLERBERND, SPECIFY EACH BASE CAN SHOULD HAVE 48" #1/0 AWG GROUNDING CABLE.

MILLERBERND CG 2 24 N0 P GSI H

- CAN HEIGHT IN INCHES: 24 = 24 INCHES
- CLASS 1B OPTIONS: P = GALVANIZED CAN WITH BARE COPPER GROUNDING CABLE
- INTERIOR GROUND TAB
- BOLTED CONNECTION HARDWARE (TO INTERIOR GROUND TAB ONLY)

5 E-DT-605 BASE CAN PART NUMBER BREAKOUT
SCALE: N.T.S.

SUGGESTED FIXTURE INSTALLATION SEQUENCE NOTES:

1. CONTRACTOR SHALL LAY OUT FIXTURE ARRAY AS SPECIFIED IN THESE DOCUMENTS. PRIOR TO INITIATING INSTALLATION, THE CONTRACTOR SHALL RECEIVE LAYOUT APPROVAL FROM THE ENGINEER VERIFYING THAT ALL BASE CANS HAVE THE PROPER CLEARANCE FROM EXISTING PAVEMENT JOINTS.
2. CORE 3' DIAMETER HOLES THROUGH THE EXISTING CONCRETE PAVEMENT AT THE PRECISE FIXTURE LOCATIONS. REMOVE PAVEMENT CORE CAREFULLY SO AS NOT TO DAMAGE/SPALL REMAINING CONCRETE EDGE.
3. EXCAVATE SOIL TO THE REQUIRED DEPTH. REMOVE ALL DISTURBED MATERIAL UNTIL A FIRM FOUNDATION IS ACHIEVED.
4. INSTALL 2" CONDUIT IN IN-PAVEMENT TRENCH USING SAW CUT, TAKING CARE NOT TO DAMAGE EXISTING PAVEMENT FEATURES.
5. INSTALL THE GROUND ROD IN THE CORE HOLE AND CONNECT TO THE BASE CAN WITH #1/0 BARE CU.
6. INSTALL DOWELS WITH EPOXY AND SET REBAR. SUPPORT L-868B BASE CANS LEVEL IN THE LOCATION SPECIFIED, WITH AN APPROPRIATE JIG. INSTALL NEOPRENE GROMMET, EXTEND CONDUIT 1 1/2" INTO BASE CAN AND INSTALL BUSHING.
7. SAND BLAST THE SURFACE OF THE CONCRETE TO EXPOSE ROUGH AGGREGATE. COAT SURFACE WITH BONDING AGENT AND PLACE HIGH EARLY STRENGTH CONCRETE.
8. PLACE CONCRETE FLUSH WITH THE ADJACENT SURFACE. COMPLETELY CONSOLIDATE CONCRETE, FILL ALL VOIDS BY VIBRATING.
9. SET FIXTURE AT CORRECT ELEVATION, AZIMUTH AND ROTATION. BOLT IN PLACE WITH STAINLESS STEEL BOLTS AND CEC LOCKWASHERS, TORQUED PER SPECIFICATION L-125. APPLY ANTI-SIEZE TO ALL THREADED BOLTS AND CONNECTORS IN ACCORDANCE WITH FIXTURE MANUFACTURER'S RECOMMENDATIONS.
10. FOR WELDS AT LIGHT FIXTURE BASE CANS, ALL GALVANIZED COATED SURFACE AREAS AND "MELT" AREAS, BOTH INSIDE AND OUTSIDE OF BASE CANS, DAMAGED BY EXOTHERMIC BOND PROCESS SHALL BE RESTORED BY COATING WITH A LIQUID COLD-GALVANIZING COMPOUND CONFORMING TO U.S. NAVY GALVANIZED REPAIR COATING MEETING MIL. SPEC. MIL-P-21035. SURFACES TO BE COATED SHALL BE PREPARED AND COMPOUND APPLIED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

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16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
LIGHT BASE INSTALLATION DETAILS

DWG. FILE NAME
161408-E-DT-605.DWG

DATE 12/11/2025
SCALE N.T.S.
SHEET NO. E-DT-605

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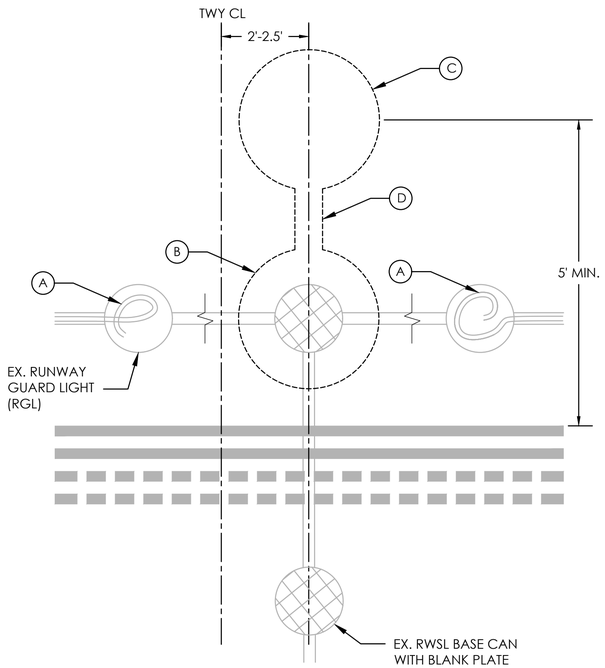
KEYNOTES:

(A) DISCONNECT AND PULL BACK RUNWAY GUARD LIGHT CONDUCTORS TO NEAREST REMAINING CAN. SEE SYSTEM LAYOUT PLANS FOR EXISTING CIRCUIT INFORMATION.

(B) CORE OUT EXISTING BASE CAN, CUTTING EXISTING RUNWAY GUARD LIGHT CONDUIT. SEE DETAIL 3, SHEET E-DT-605.

(C) CORE FOR NEW REL BASE CAN. SEE DETAIL 1, SHEET E-DT-605.

(D) TRENCH EXISTING PAVEMENT FOR REL CONDUIT EXTENSION. SEE DETAIL 2, SHEET E-DT-603.



STEP 1: REMOVE EXISTING BASE CAN

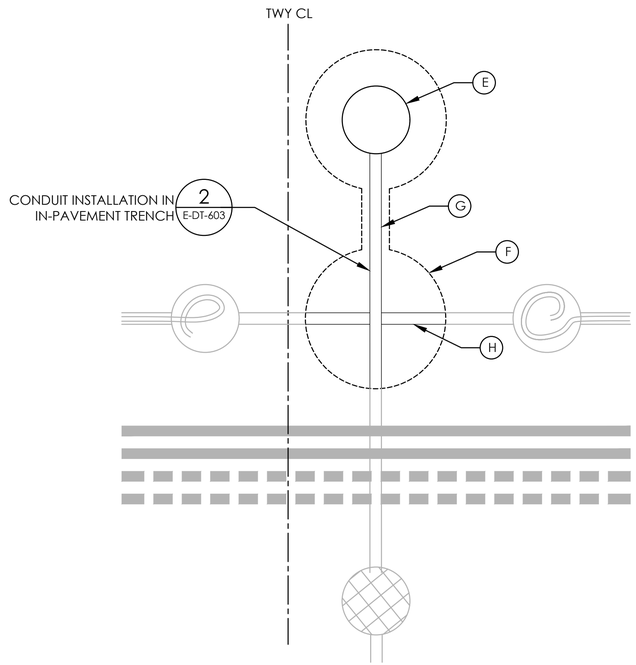
KEYNOTES:

(E) INSTALL DOWELS, SET REBAR, AND SUPPORT NEW 24" BASE CAN. SEE DETAIL 1, SHEET E-DT-605.

(F) INSTALL DOWELS IN CORE OF EXISTING BASE CAN REMOVED. SEE DETAIL 3, SHEET E-DT-605.

(G) INSTALL REL CONDUIT EXTENSION AND CONNECT TO EXISTING CONDUIT, UTILIZING 2" LIQUID TIGHT, FLEXIBLE METALLIC CONDUIT, AS NECESSARY.

(H) INSTALL 2" PVC CONDUIT FOR RUNWAY GUARD LIGHTS AND CONNECT TO EXISTING CONDUIT, UTILIZING 2" PVC SLIP COUPLINGS, AS NECESSARY.



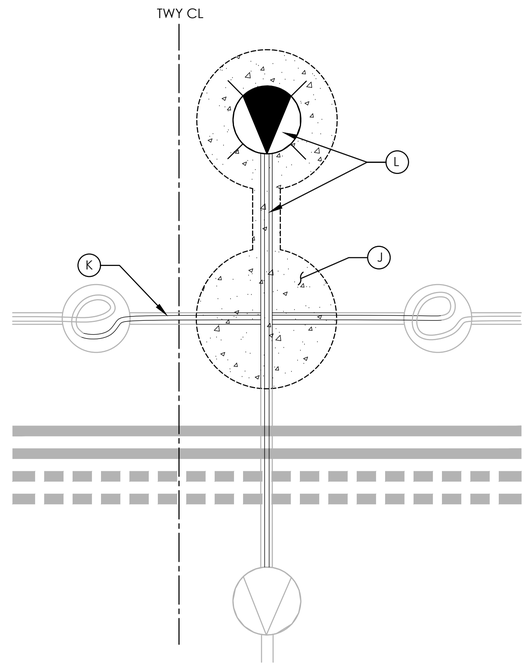
STEP 2: SET NEW BASE CAN AND CONDUITS

KEYNOTES:

(J) BACKFILL BASE CAN AND TRENCH WITH CONCRETE. SEE DETAIL 2, SHEET E-DT-603 AND DETAILS 1 AND 3, SHEET E-DT-605.

(K) PULL RUNWAY GUARD LIGHT CONDUCTORS THROUGH NEW CONDUIT AND RECONNECT.

(L) INSTALL RWSL BASE CAN EQUIPMENT AND CIRCUIT CONDUCTORS. SEE DETAIL 1, SHEET E-DT-608.



STEP 3: BACKFILL

1 E-DT-606 NEW BASE CAN IN PCCP (RELOCATION)
SCALE: N.T.S.
PAY ITEM: L-125-5.1

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16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

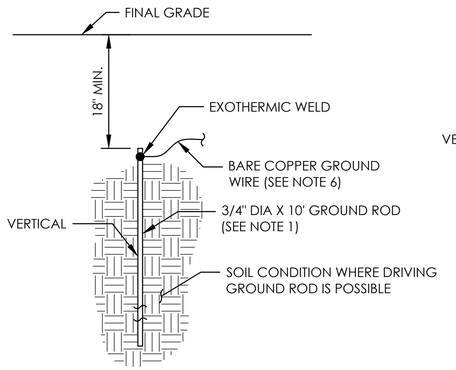
SHEET TITLE:
EXISTING BASE CAN RELOCATION DETAILS

DWG. FILE NAME
161408-E-DT-606.DWG

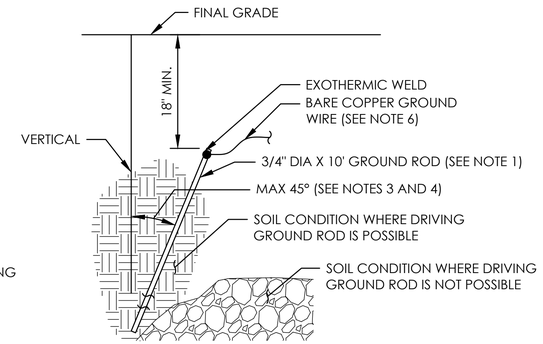
DATE
12/11/2025

SCALE
N.T.S.

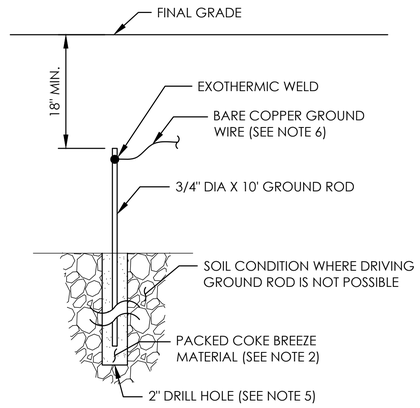
SHEET NO.
E-DT-606



GROUND ROD INSTALLATION - PREFERED (VERTICAL)



GROUND ROD INSTALLATION - AT AN ANGLE



GROUND ROD INSTALLATION - IN 2" HOLE

1 E-DT-607 GROUND ROD INSTALLATION
SCALE: N.T.S.

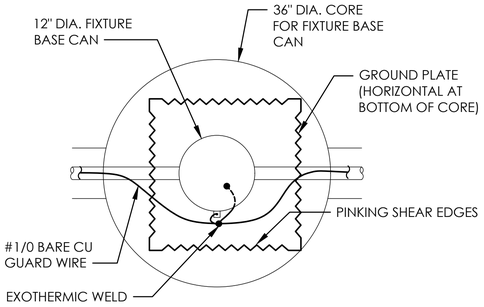
NOTES:

1. GROUND ROD SHALL BE 10' MINIMUM IN LENGTH AND SHALL BE SIZED LONGER IF NEEDED PER ENGINEER. ANY GROUND ROD LENGTH LONGER THAN 20' MUST HAVE PRIOR APPROVAL OF THE POWER SERVICES GROUP (LPGBS).
2. COKE BREEZE SHALL BE USED PER ENGINEER AS REQUIRED TO ENHANCE EARTHING OF RESPECTIVE SYSTEMS.
3. WHEN GROUND ROD IS NOT ABLE TO BE INSTALLED VERTICAL IT MAY BE INSTALLED AT AN ANGLE NOT GREATER THAN 45° FROM VERTICAL.
4. IF THE GROUND ROD CANNOT BE DRIVEN INTO NATIVE SOIL, A 2" DRILL SHALL BE USED, MAINTAINING AN ALIGNMENT WITHIN 45-DEGREES OF VERTICAL TO CREATE A HOLE FOR THE GROUND ROD. MIN HOLE DEPTH WILL BE 3" PLUS THE GROUND ROD LENGTH AND THE REQUIRED COVER OF THE GROUND ROD. THE 2" HOLE SHALL BE PACKED WITH COKE BREEZE AND GROUND ROD INSTALLED CENTERED INSIDE THE HOLE.
5. IF A 2" DRILL IS NOT FEASIBLE, A GROUND PLATE MAY BE INSTALLED PER DETAIL 2 UNDER THE FOLLOWING CONDITIONS:

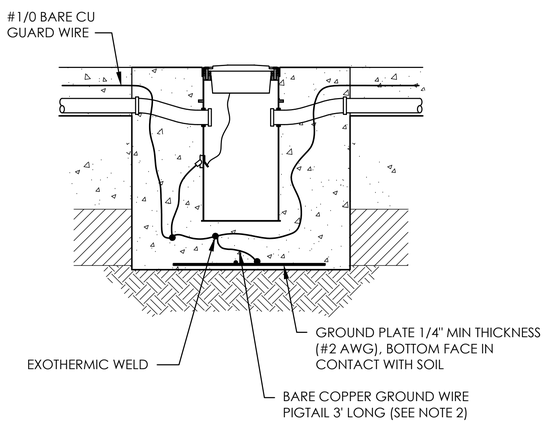
   INSTALLATION OF A GROUND PLATE IN LIEU OF A GROUND ROD IS NOT AUTHORIZED UNLESS ALL OF THE FOLLOWING CONDITIONS ARE MET:

   A. DRILLING WITH AN AUGER WILL NOT PENETRATE NATIVE SOIL TO THE NECESSARY DEPTH FOR GROUND ROD INSTALLATION
   B. A REQUEST FOR INFORMATION (RFI) IS SUBMITTED DOCUMENTING THAT DRILLING WITH A SIMPLE AUGER WILL NOT PENETRATE NATIVE SOIL TO A DEPTH OF 10' (WITH INFORMATION AS TO ACTUAL AUGER SIZE AND ACTUAL DEPTH OF PENETRATION INCLUDED)
   C. THE RFI INCLUDES A RECOMMENDATION TO INSTALL A GROUND PLATE (PER DETAIL 2) IN LIEU OF A GROUND ROD
   D. THE RFI IS APPROVED BY FAA AUTHORITY AT THE RWSL PROGRAM OFFICE LEVEL (FAA HQ). APPROVAL OF THE RFI REQUESTING INSTALLATION OF A GROUND PLATE IN LIEU OF A GROUND ROD WILL BE ON A SITE-BY-SITE BASIS

6. BARE COPPER GROUND WIRE CONNECTION TO GROUND ROD SHALL BE:
   #4/0 FOR EARTH ELECTRODE SYSTEM (EES),
   #1/0 FOR GUARD WIRE.

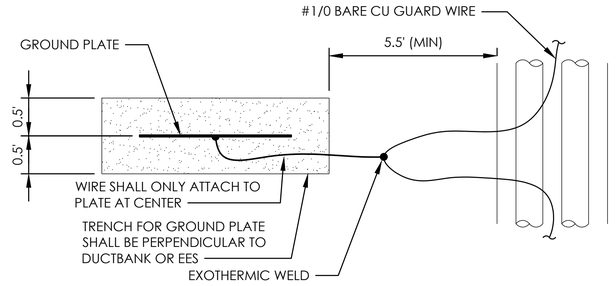


PLAN VIEW

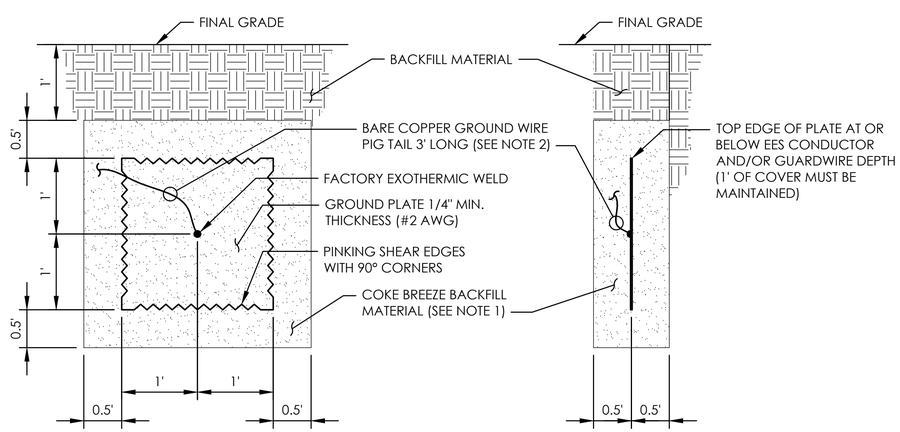


ELEVATION VIEW

GROUND PLATES IN BASE CANS



PLAN VIEW



ELEVATION VIEW - FRONT

ELEVATION VIEW - SIDE

GROUND PLATES IN DUCTBANK

2 E-DT-607 GROUND PLATE INSTALLATION
SCALE: N.T.S.

NOTES:

1. COKE BREEZE SHALL BE USED PER ENGINEER AS REQUIRED TO ENHANCE EARTHING OF RESPECTIVE SYSTEMS.
2. BARE COPPER GROUND WIRE CONNECTION TO GROUND PLATE SHALL BE:
   #4/0 FOR EARTH ELECTRODE SYSTEM (EES),
   #1/0 FOR GUARD WIRE.

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12/11/2025

ENGINEER–SUBCONSULTANT

JOB NO.

REVISIONS

MARK	DATE	DESCRIPTION
0	12/11/2025	ISSUED FOR BID

MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
GROUNDING DETAILS

DWG. FILE NAME
161408-E-DT-607.DWG

DATE
12/11/2025

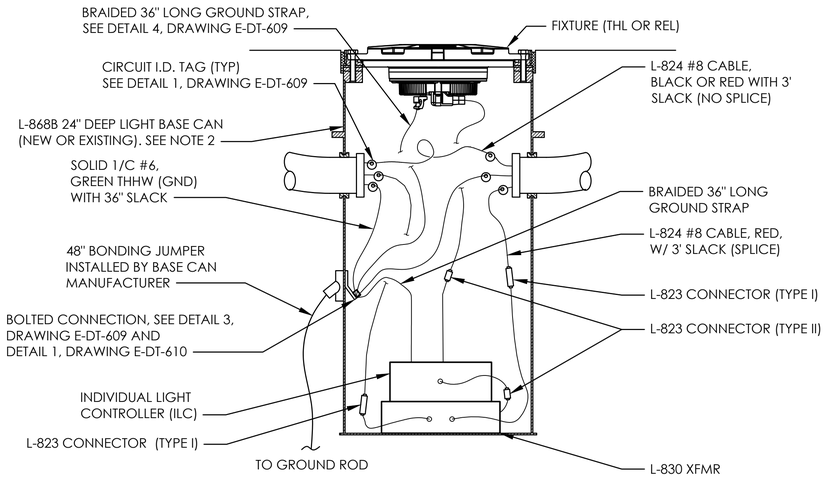
SHEET NO.
E-DT-607

SCALE
N.T.S.

December 10, 2025 c:\caddlib\pw\pwwestcoast\kmills\d0273326\161408-E-DT-607.dwg

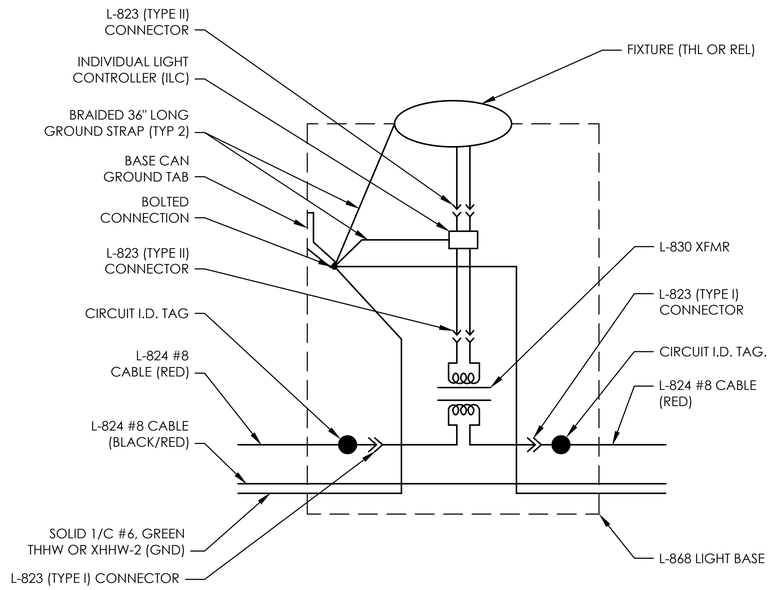
NOTES:

1. IF ELEVATION OR LEVEL OF A NEW BASE CAN INSTALLATION IS INCORRECT WITH PAVEMENT SURFACE, OR AZIMUTH IS INCORRECT WITH CENTERLINE OR EDGE OF PAVEMENT, CORRECTIONS SHALL BE MADE AS DIRECTED BY THE ENGINEER, AT CONTRACTOR'S OWN EXPENSE.
2. LIGHT BASE CAN SHALL BE GALVANIZED METAL UNLESS OTHERWISE APPROVED BY THE FAA.
3. BLACK L-824 #8 CABLE SHALL BE USED FOR THE CIRCUIT "HOME RUN" BETWEEN THE SHELTER AND THE FURTHEST FIXTURE. RED L-824 #8 CABLE SHALL BE USED TO COMPLETE THE CIRCUIT AND FOR ALL REMAINING FIXTURE CONNECTIONS ON THE CIRCUIT.
4. CONDUIT ENTRY POINT INTO BASE CAN VARIES DEPENDING ON BASE CAN LOCATION AND INSTALLATION APPROACH.
5. EXISTING STEEL PLATES REMOVED FROM EXISTING BASE CANS PRIOR TO NEW INSTALLATIONS SHALL BE CLEANED AND RETURNED TO MSCAA.
6. NEW BOLTS AND WASHERS SHALL BE USED EACH TIME A STEEL PLATE OR A FIXTURE IS INSTALLED ON THE BASE CAN



1 E-DT-608 TYPICAL BASE CAN EQUIPMENT INSTALLATION
SCALE: N.T.S.

PAY ITEM: L-125-5.3/5.4

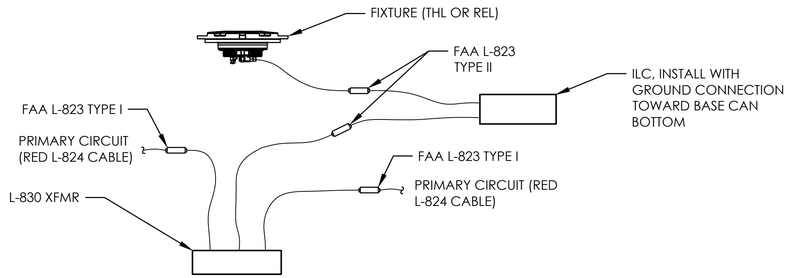


2 E-DT-608 BASE CAN EQUIPMENT ONE-LINE DIAGRAM
SCALE: N.T.S.

NOTES:

1. ANY CHANGE IN THE FIXTURE TYPE UTILIZED AT A RWSL SITE SHOULD INCLUDE UPDATED RESULTS OF THE ADB AIRFIELD SOLUTIONS "CIRCUIT RISK ANALYSIS TOOL" TO VERIFY THAT RWSL REQUIREMENTS FOR SYSTEM PERFORMANCE ARE STILL MET.

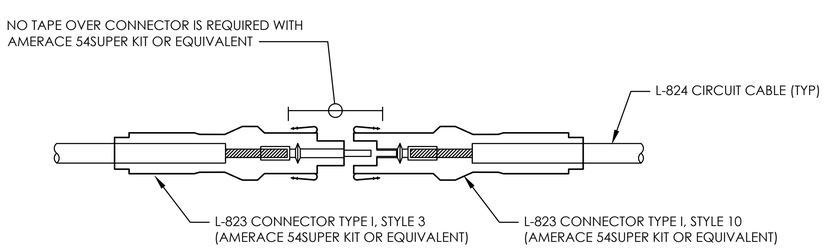
TRANSFORMER SCHEDULE			
FIXTURE TYPE		TRANSFORMER	
		TYPE	CAPACITY
LED (WITHOUT HEATER)	L-852S (REL)	L-830-3	65 W
	L-850T (THL)		



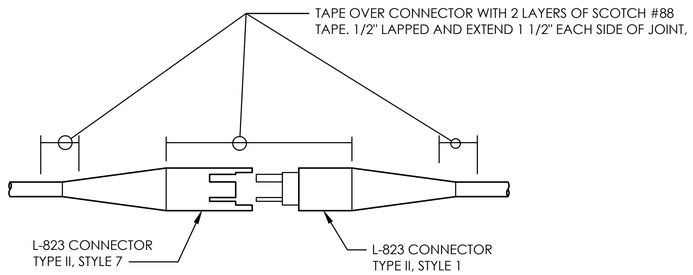
3 E-DT-608 FIXTURE CABLE HARNESS INSTALLATION
SCALE: N.T.S.

NOT USED

4 E-DT-608 "Y" CABLE HARNESS
SCALE: N.T.S.



5 E-DT-608 L-823 (TYPE I) CONNECTOR, NON-SHIELDED CABLE INSULATION DETAIL
SCALE: N.T.S.



6 E-DT-608 L-823 (TYPE II) CONNECTOR INSULATION DETAIL
SCALE: N.T.S.

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ENGINEER—SUBCONSULTANT

JOB NO.

REVISIONS

MARK	DATE	DESCRIPTION
0	12/11/2025	ISSUED FOR BID

MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
LIGHT INSTALLATION DETAILS

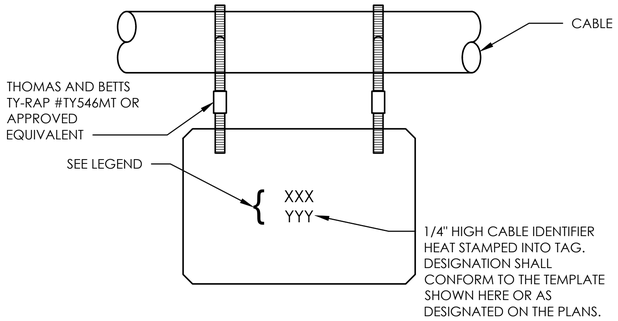
DWG. FILE NAME
161408-E-DT-608.DWG

DATE
12/11/2025

SHEET NO.
E-DT-608

SCALE
N.T.S.

December 10, 2025 c:\caddlib\pw\pwwestcoast\kmills\d027332\161408-E-DT-608.dwg



NOTES:

1. INSTALL CABLE TAGS ON ALL CABLES IN MANHOLES, PULLBOXES, JUNCTION BOXES, AND HANDHOLES AND ON BOTH SIDES OF ANY SPLICE OR CONNECTION.

LEGEND:

AIRFIELD LIGHTING TAG:

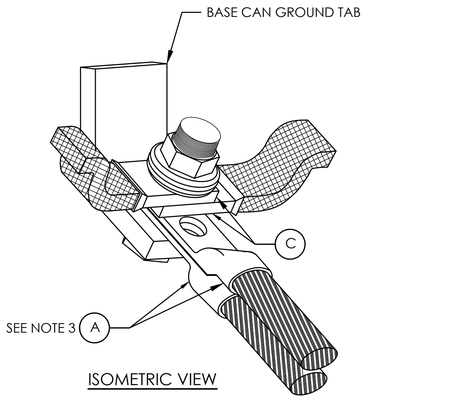
XXX = RWSL
YYY = X # X

- (A-D) REGULATOR IN SHELTER
- SHELTER #
- ("T" OR "R") RESPECTIVE LIGHT ARRAY TYPE

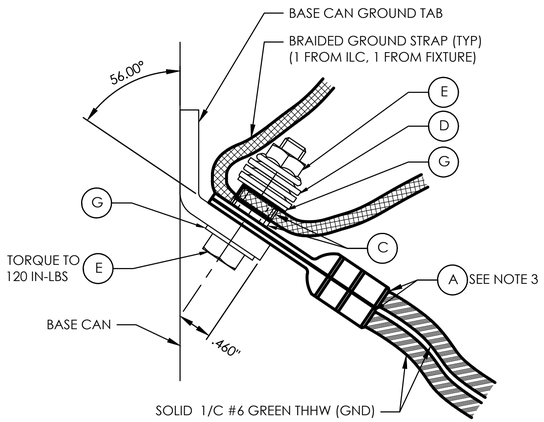
RWSL COMMUNICATION TAG:

XXX = RWSL
YYY = SHELTER #

1 E-DT-609 — CIRCUIT I.D. TAGS
SCALE: N.T.S.



ISOMETRIC VIEW



SIDE VIEW

BONDING PROCESS TO BASE CAN GROUND TAB:

FOR GALVANIZED CAN TAB:

1. GRIND OFF GALVANIZED COATING DOWN TO BARE METAL IN ALL AREAS OF CONTACT SURFACES.
2. ASSEMBLE AND TORQUE ALL CONNECTIONS. NO GROUND CONNECTIONS MAY BE INSTALLED BELOW THE GROUND TAB.
3. APPLY 3M SCOTCHKOTE ELECTRICAL COATING FD (BRUSH-ON APPLICATION).
4. GENEROUSLY COAT ENTIRE GROUND CONNECTION ASSEMBLY.
5. ALLOW TO DRY.

FOR STAINLESS STEEL CAN TAB:

1. THOROUGHLY CLEAN CONTACT SURFACES.
2. ASSEMBLE AND TORQUE ALL CONNECTIONS. COMPRESSION LUGS MAY BE INSTALLED BELOW THE GROUND TAB, IF NECESSARY.
3. APPLY 3M SCOTCHKOTE ELECTRICAL COATING FD (BRUSH-ON APPLICATION).
4. GENEROUSLY COAT ENTIRE GROUND CONNECTION ASSEMBLY.
5. ALLOW TO DRY.

NOTES:

1. SEE DRAWING E-DT-608 FOR LOCATION OF BOLTED CONNECTIONS IN LIGHT BASE CAN AND DRAWING E-DT-610 FOR BOLTED CONNECTION DETAIL WITH 5 TO 10 CONNECTIONS.
2. FOR DETAILS ON BOLTING HARDWARE ITEM ID AND ELECTRICAL GROUND CONNECTIONS, SEE TABLES ON DRAWING E-DT-610.
3. WHEN ATTACHING A COMPRESSION LUG, USE A HYDRAULIC TOOL APPLYING A MINIMUM FORCE OF 12 TONS CONCENTRICALLY APPLIED. CONCENTRIC CROSS-SECTION CAN BE EITHER CIRCULAR OR HEXAGONAL.
4. THE BOLTING HARDWARE CAN BE INSTALLED FROM THE TOP OR FROM THE BOTTOM OF THE GROUND TAB, PROVIDED THAT THE SEQUENCE OF HARDWARE STAYS THE SAME.

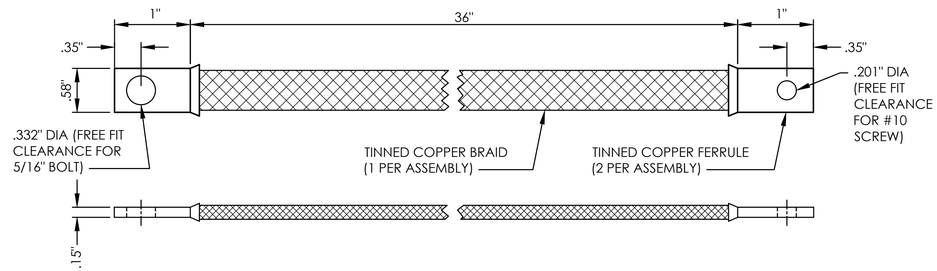
3 E-DT-609 — BOLTED CONNECTION INSIDE LIGHT BASE CAN, 4 OR FEWER CONNECTIONS
SCALE: N.T.S.

NOT USED

2 E-DT-609 — FIXTURE ID MARKER
SCALE: N.T.S.

NOTES:

1. APPROXIMATE AMP RATING: 93.A. THIS RATING MAY VARY WITH AMBIENT CONDITIONS, ORIENTATION OF THE BRAID, AND OTHER SERVICE CONDITIONS.
2. (2) INSTALLED IN EACH BASE CAN, (1) ON ILC, (1) ON FIXTURE.
3. SEE TABLE ON DETAIL 1, DRAWING E-DT-610 FOR PART NUMBER OF BRAIDED GROUND STRAP ASSEMBLY.



4 E-DT-609 — BRAIDED GROUND STRAP
SCALE: N.T.S.

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APPROVED BY: CBD

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STATE OF TENNESSEE
12/11/2025

ENGINEER—SUBCONSULTANT

JOB NO.

REVISIONS

MARK	DATE	DESCRIPTION
0	12/11/2025	ISSUED FOR BID

MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
MISCELLANEOUS BASE CAN DETAILS (1 OF 2)

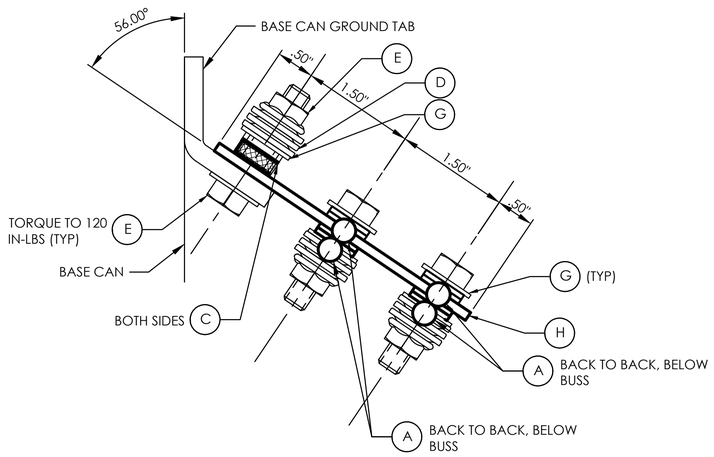
DWG. FILE NAME
161408-E-DT-609.DWG

DATE
12/11/2025

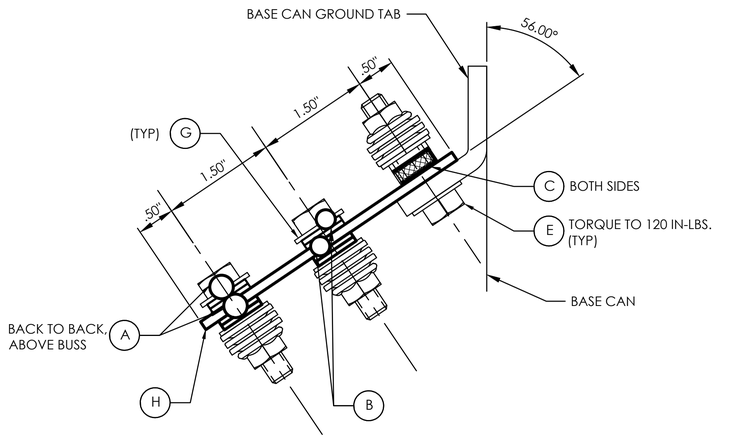
SHEET NO.
E-DT-609

SCALE
N.T.S.

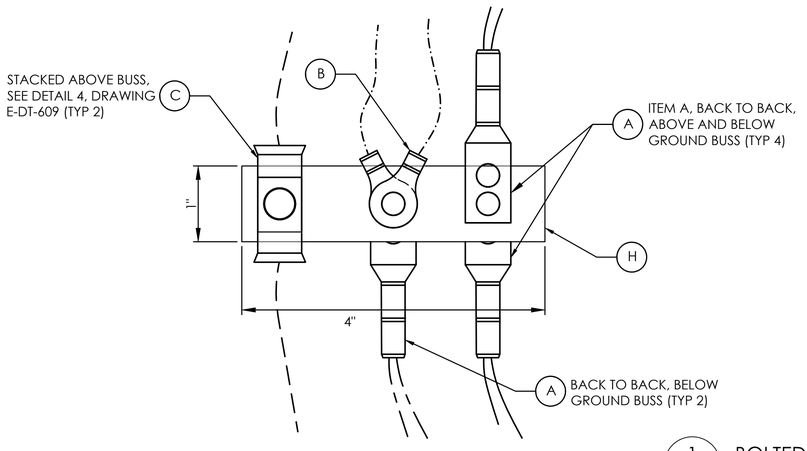
December 10, 2025 c:\cadd\b\pw\pwwestcoast\kmills\d0273326\161408-E-DT-609.dwg



LEFT SIDE VIEW



RIGHT SIDE VIEW

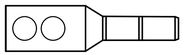
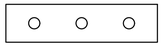


TOP VIEW (COPPER BUSS ONLY)

BOLTING HARDWARE (ALL HARDWARE STAINLESS STEEL)

ITEM ID	ITEM ILLUSTRATION	DESCRIPTION
D		BELLEVILLE WASHER, GRAINGER PART NO. 1NEE4 OR EQUAL. BELLEVILLE WASHERS MUST PROVIDE 2500 LBS OF BOLT LOAD. USING GRAINGER PART NO. 1NEE4, THIS CAN BE ACCOMPLISHED WITH ONLY TWO WASHERS. SUBSTITUTE SOURCES MAY REQUIRE THREE WASHERS TO ACHIEVE REQUIRED BOLT LOAD
E		BOLT, 5/16" X 1-1/2", FULL THREAD, HEX HEAD AND FLANGE NUT. SEE ITEM D FOR TORQUE REQUIREMENTS
G		FLAT WASHER, 5/16" X 3/4" OD

ELECTRICAL GROUND CONNECTIONS (ALL COPPER TIN-PLATED)

ITEM ID	ITEM ILLUSTRATION	DESCRIPTION
A		COMPRESSION LUG, T&B PART NO. 54852BE0516 OR EQUAL
B		#12 AWG RING TERMINAL, T&B PART NO. RC707
C		BRAIDED COPPER STRAP WITH FERRULES, STORM COPPER PART NO. E161DETAIL4 OR EQUAL
H		STORM COPPER GROUND BUSS (1" X 4")

NOTES:

1. SEE RELATED DRAWING E-DT-608 FOR LOCATION OF BOLTED CONNECTIONS IN LIGHT BASE CAN AND DRAWING E-DT-609 FOR BOLTED CONNECTION DETAIL WITH 4 OR FEWER CONNECTIONS.
2. WHEN ATTACHING A COMPRESSION LUG, USE A HYDRAULIC TOOL APPLYING A MINIMUM FORCE OF 12 TONS CONCENTRICALLY APPLIED. CONCENTRIC CROSS-SECTION CAN BE EITHER CIRCULAR OR HEXAGONAL.
3. THE EXACT ORIENTATION OF ELECTRICAL GROUND CONNECTIONS (COMPRESSION LUGS, RING TERMINALS AND COPPER BRAID) ON THE COPPER BUSS CAN BE ADJUSTED TO MEET THE PRACTICAL NEEDS OF FIELD INSTALLATION. ORIENTATION MAY BE ADJUSTED TO FACILITATE CONVENIENT ASSEMBLY AND APPLICATION OF THE PROTECTIVE COATING ON THE ENTIRE ASSEMBLY. THE FOLLOWING RESTRICTIONS APPLY:
   A. FULL CONTACT OF THE CLEAN MATING SURFACES MUST BE MAINTAINED.
   B. NO GROUND CONNECTIONS CAN BE PLACED BELOW THE CAN GROUND TAB OR BETWEEN THE CAN GROUND TAB AND THE COPPER BUSS.
   C. A MAXIMUM OF TWO GROUND CONNECTIONS CAN BE PLACED ABOVE THE COPPER BUSS ON THE BOLT SECURING THE BUSS TO THE BASE CAN GROUND TAB.
   D. A MAXIMUM OF TWO GROUND CONNECTIONS CAN BE PLACED BELOW THE COPPER BUSS EXCEPT AS NOTED IN SUB-NOTE "B" ABOVE.
4. THE ORDER OF ASSEMBLY OF THE BOLTING HARDWARE MUST BE MAINTAINED WITH THE FOLLOWING RESTRICTIONS:
   A. BOLTING HARDWARE ORDER OF ASSEMBLY IS: (E) BOLT, (G) FLAT WASHER, GROUND CONNECTIONS WITH (H) GROUND BUSS AND/OR BASE CAN GROUND TAB, (G) FLAT WASHER, (D) BELLEVILLE WASHERS, AND (E) FLANGE NUT.
   B. THE BOLT MAY BE INSERTED FROM ABOVE OR BELOW THE BUSS.
5. IF THERE ARE MORE THAN 10 GROUNDING CONNECTIONS TO BE MADE IN A SINGLE LIGHT BASE CAN, CONTACT THE FAA RWSL PROGRAM OFFICE FOR WRITTEN GUIDANCE BEFORE PROCEEDING.

BONDING PROCESS TO BASE CAN GROUND BUSS:

FOR GALVANIZED CAN TAB:

1. GRIND OFF GALVANIZED COATING DOWN TO BARE METAL IN ALL AREAS OF CONTACT SURFACES.
2. ASSEMBLE AND TORQUE ALL CONNECTIONS.
3. APPLY 3M SCOTCHKOTE ELECTRICAL COATING FD (BRUSH-ON APPLICATION).
4. GENEROUSLY COAT ENTIRE GROUND CONNECTION ASSEMBLY.
5. ALLOW TO DRY.

FOR STAINLESS STEEL CAN TAB:

1. THOROUGHLY CLEAN CONTACT SURFACES.
2. ASSEMBLE AND TORQUE ALL CONNECTIONS.
3. APPLY 3M SCOTCHKOTE ELECTRICAL COATING FD (BRUSH-ON APPLICATION).
4. GENEROUSLY COAT ENTIRE GROUND CONNECTION ASSEMBLY.
5. ALLOW TO DRY.

WIRE LEGEND:

- BRAIDED GROUND STRAP (1 FROM ILC, 1 FROM FIXTURE)
- GROUND WIRES FROM CONDUCTOR SHIELD #12 AWG WITH RING TERMINALS (IF REQUIRED)
- GROUND WIRES FROM CIRCUIT SOLID 1/C #6 AWG GREEN THHW (GND) WITH COMPRESSION LUGS.
- GROUND WIRES FROM RGS BUSHING #6 AWG WITH COMPRESSION LUGS (IF REQUIRED)

1 / E-DT-610 BOLTED CONNECTION INSIDE LIGHT BASE CAN, 5 TO 10 CONNECTIONS
SCALE: N.T.S.

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AGRICULTURE
No. 113628
STATE OF TENNESSEE
12/11/2025

ENGINEER—SUBCONSULTANT

JOB NO.

REVISIONS

MARK	DATE	DESCRIPTION
0	12/11/2025	ISSUED FOR BID

MSCAA PROJ. NO.
16-1408-01

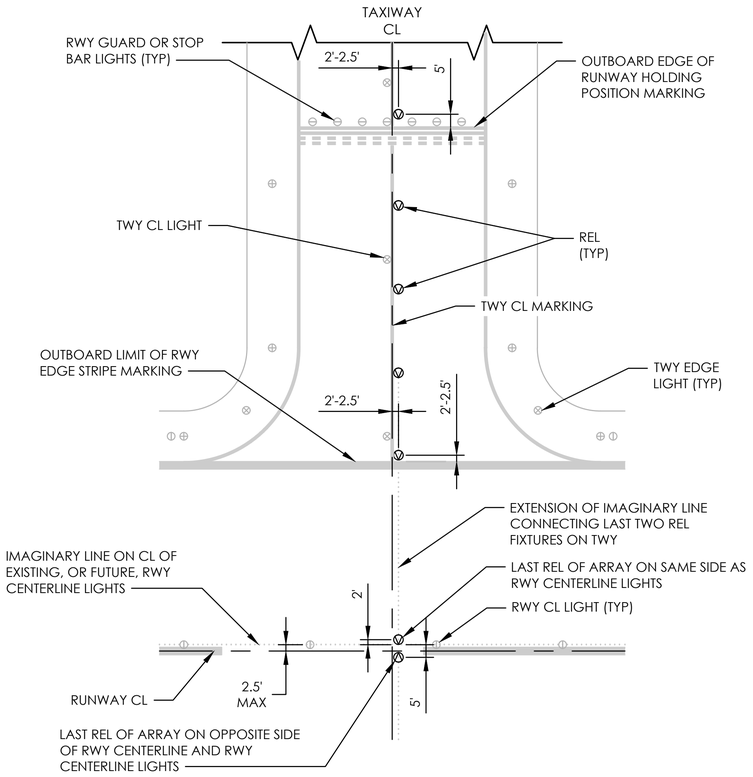
PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
MISCELLANEOUS BASE CAN DETAILS (2 OF 2)

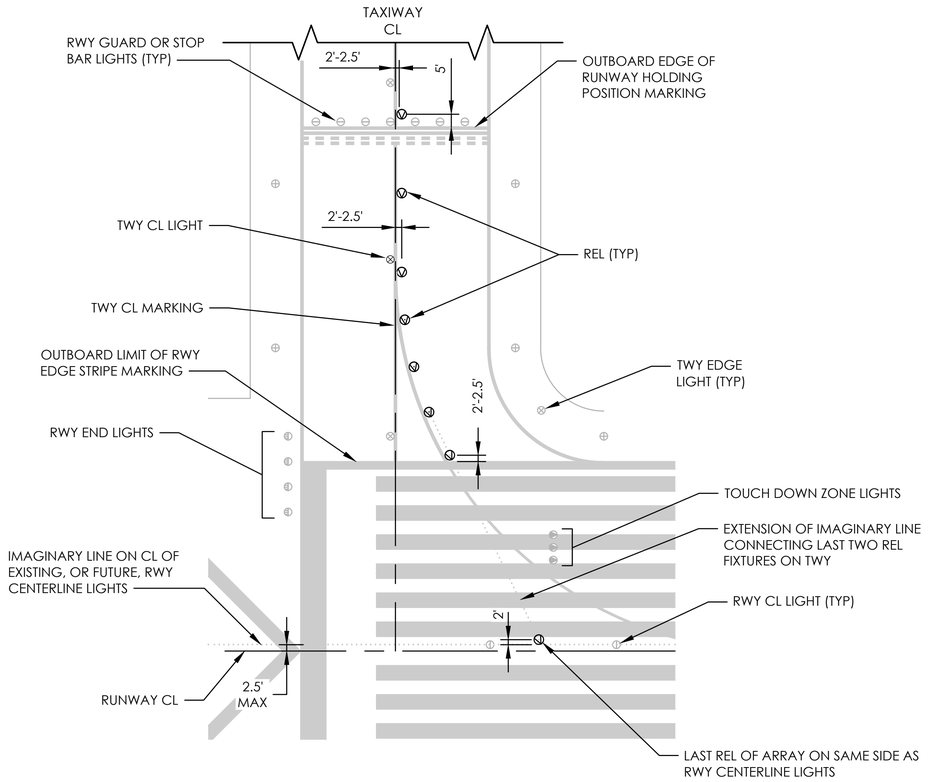
DWG. FILE NAME
161408-E-DT-610.DWG

DATE 12/11/2025
SCALE N.T.S.
SHEET NO. E-DT-610

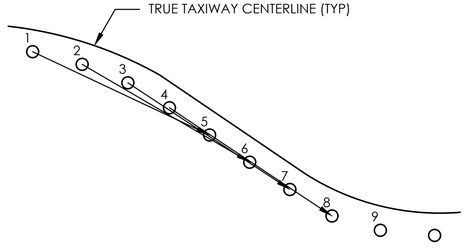
December 10, 2025 c:\caddlib\pw\pwwestcoast\kmills.d0273326\161408-E-DT-610.dwg



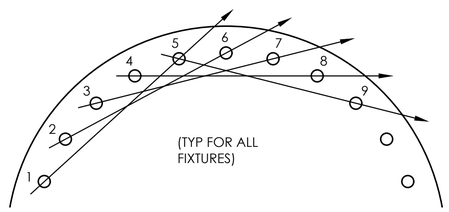
1 E-DT-611 REL ARRAY PLACEMENT (STRAIGHT CONFIGURATION)
SCALE: N.T.S.



2 E-DT-611 REL ARRAY PLACEMENT (CURVED CONFIGURATION)
SCALE: N.T.S.



UNIDIRECTIONAL LIGHT ON SPIRAL CURVE



UNIDIRECTIONAL LIGHT ON CIRCULAR CURVE

3 E-DT-611 FIXTURE AIMING DETAIL
SCALE: N.T.S.

NOTES:

1. THE REL FIXTURE AT THE RUNWAY CENTERLINE SHALL BE AIMED ALONG THE EXTENSION OF THE IMAGINARY LINE CONNECTING THE LAST TWO REL FIXTURES ON THE TAXIWAY.
2. REL FIXTURES ADJACENT TO THE TAXIWAY CENTERLINE SHALL BE AIMED SUCH THAT THE BEAM AXIS IS "TOED IN" TO INTERSECT THE CENTERLINE AT A POINT APPROXIMATELY EQUAL TO FOUR TIMES THE SPACING OF LIGHTS (EVERY FOURTH LIGHT) ON THE CURVE PORTION.
3. RWSL FIXTURES ARE UNIDIRECTIONAL. REL FIXTURES SHALL BE INSTALLED SUCH THAT THEY ARE VISIBLE FROM THE TAXIWAY CENTERLINE AT A POSITION JUST OUTSIDE THE RUNWAY SAFETY AREA DEFINED BY THE HOLD POSITION MARKING.

NOTES:

1. SEE DRAWING G-LG-002 FOR GENERAL ABBREVIATIONS AND SYMBOLS.
2. THE LIGHT FIXTURE LAYOUT ON THIS PLAN IS FOR INFORMATION ONLY. THE PURPOSE OF THE DETAILS ON THIS PLAN IS TO SHOW THE TYPICAL LAYOUT OF REL ARRAYS. FINAL LOCATIONS FOR ALL FIXTURES ARE DETERMINED BASED ON VARIOUS EXISTING CONDITIONS INCLUDING PAVEMENT JOINTS, PAVEMENT MARKINGS, AND OTHER FIXTURES.
3. LOCATION OF THE REL FIXTURES COMPLY WITH FAA PERFORMANCE SPECIFICATION RUNWAY STATUS LIGHTS (RWSL) FIELD LIGHTING SYSTEM (FLS), FAA-E-3002, DATED SEPTEMBER 24, 2009, FAA ADVISORY CIRCULAR 150/5340-30D, DESIGN AND INSTALLATION DETAILS FOR AIRPORT VISUAL AIDS, AND FAA ENGINEERING BRIEF #64D.
4. ALL DIMENSIONS AND REFERENCES TO LIGHT FIXTURES ARE TAKEN FROM THE CENTER OF THE FIXTURE, UNLESS OTHERWISE NOTED.
5. ALL DIMENSIONS AND REFERENCES TO A RUNWAY OR TAXIWAY CENTERLINE MARKING ARE TAKEN FROM THE CENTER OF THE MARKING. ALL DIMENSIONS AND REFERENCES TO RUNWAY OR TAXIWAY MARKINGS OTHER THAN CENTERLINE MARKINGS ARE TAKEN FROM AN EDGE OF MARKING AS SHOWN IN THE DETAIL.
6. PER FAA ADVISORY CIRCULAR 150/5340-30J, THE MINIMUM CLEARANCE BETWEEN AN EXISTING PAVEMENT JOINT OR EDGE OF AN EXISTING CAN AND THE EDGE OF A RWSL LIGHT FIXTURE SHALL BE 2 FEET.
7. THE FIRST REL IS LOCATED TO AVOID EXISTING OR FUTURE RUNWAY GUARD OR STOP BAR LIGHTS.
8. REL ARRAY CONSISTS OF A MINIMUM OF 6 FIXTURES. ADDITIONAL FIXTURES CAN BE ADDED BASED ON TAXIWAY ALIGNMENT, TAXIWAY LENGTH OR EXISTING CONDITIONS.
9. SEE TABLE BELOW FOR MAXIMUM REL LONGITUDINAL SPACING FOR CURVED CENTERLINE.

REL LONGITUDINAL DIMENSIONS	LONGITUDINAL SPACING	
	1,200 FT (365 m) RVR AND ABOVE	BELOW 1,200' (365 m) RVR
RADIUS OF CURVED CENTERLINES		
75 FT (23 m) TO 399 FT (121 m)	25 FT (7.6 m)	25 FT (7.6 m)
400 FT (122 m) TO 1199 FT (364 m)	50 FT (15 m)	25 FT (7.6 m)
GREATER THAN 1,200 FT (365 m)	50 FT (15 m)	50 FT (15 m)
LONGITUDINAL TOLERANCE IS ±10% OF ACTUAL CAN TO CAN SPACING, MEASURED FROM THE CENTER OF THE FIXTURE. MAXIMUM SPACING CANNOT BE EXCEEDED.		

TAKE OF WITH US
Memphis INTERNATIONAL AIRPORT

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CHECKED BY: CTX
APPROVED BY: CBD

CHARLES B. DEMONT
REGISTERED ENGINEER
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STATE OF TENNESSEE
12/11/2025

ENGINEER—SUBCONSULTANT

JOB NO.

REVISIONS

MARK	DATE	DESCRIPTION
0	12/11/2025	ISSUED FOR BID

MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
TYPICAL REL CONFIGURATION DETAILS

DWG. FILE NAME
161408-E-DT-611.DWG

DATE
12/11/2025

SCALE
N.T.S.

SHEET NO.
E-DT-611

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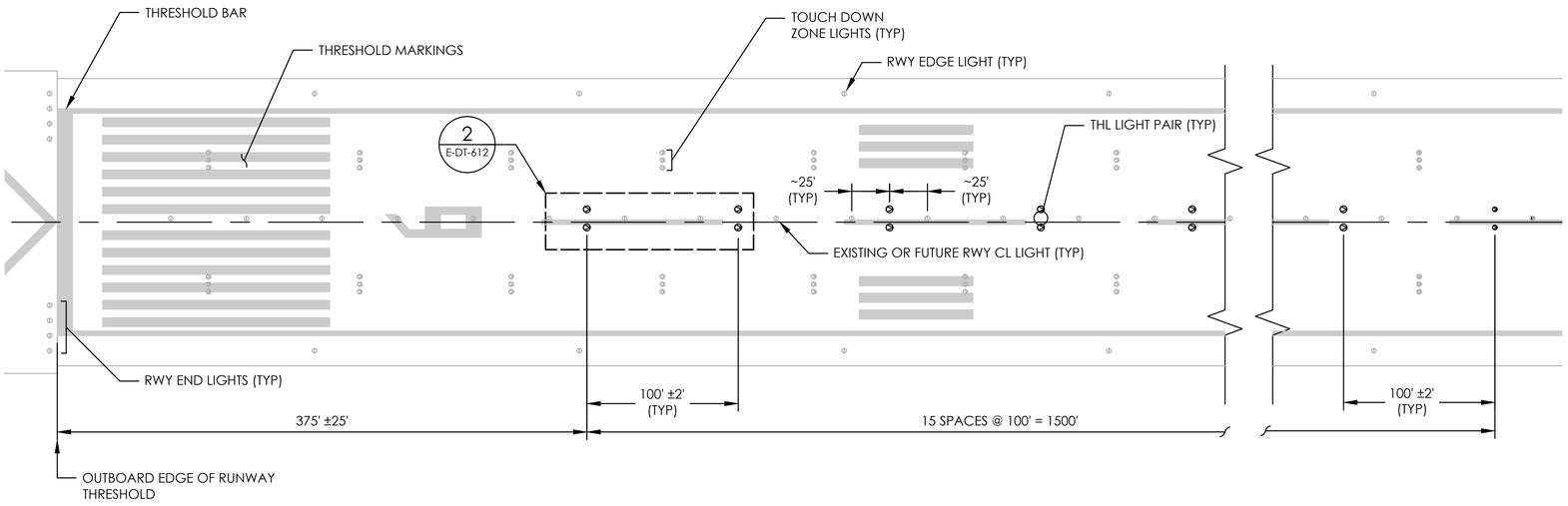
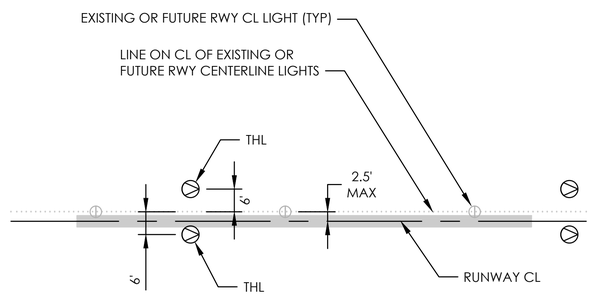


1 E-DT-612 THL ARRAY - LONGITUDINAL PLACEMENT
SCALE: N.T.S.



2 E-DT-612 THL ARRAY - LATERAL PLACEMENT
SCALE: N.T.S.

NOTES:

1. SEE DRAWING G-LG-002 FOR GENERAL ABBREVIATIONS AND SYMBOLS.
2. THE LIGHT FIXTURE LAYOUT ON THIS PLAN IS FOR INFORMATION ONLY. THE PURPOSE OF THE DETAILS ON THIS PLAN IS TO SHOW THE TYPICAL LAYOUT OF THL AND REL ARRAYS. FINAL LOCATIONS FOR ALL FIXTURES ARE INDICATED ON THE FIXTURE LAYOUT PLANS AND ARE DETERMINED BASED ON VARIOUS EXISTING CONDITIONS INCLUDING PAVEMENT JOINTS, PAVEMENT MARKINGS, AND OTHER FIXTURES.
3. LOCATION OF THE THL FIXTURES COMPLY WITH FAA PERFORMANCE SPECIFICATION RUNWAY STATUS LIGHTS (RWSL) FIELD LIGHTING SYSTEM (FLS), FAA-E-3002, DATED SEPTEMBER 24, 2009, FAA ADVISORY CIRCULAR 150/5340-30J, DESIGN AND INSTALLATION DETAILS FOR AIRPORT VISUAL AIDS, AND FAA ENGINEERING BRIEF #64D. THL SPACING TOLERANCES COMPLY WITH FAA ENGINEERING BRIEF #64D.
4. THL FIXTURES ARE LOCATED 6 FEET OFFSET FROM LINE CONNECTING RUNWAY CENTERLINE LIGHTS.
5. ALL DIMENSIONS AND REFERENCES TO LIGHT FIXTURES ARE TAKEN FROM THE CENTER OF THE FIXTURE, UNLESS OTHERWISE NOTED.
6. ALL DIMENSIONS AND REFERENCES TO A RUNWAY OR TAXIWAY CENTERLINE MARKING ARE TAKEN FROM THE CENTER OF THE MARKING. ALL DIMENSIONS AND REFERENCES TO RUNWAY OR TAXIWAY MARKINGS OTHER THAN CENTERLINE MARKINGS ARE TAKEN FROM AN EDGE OF MARKING AS SHOWN IN THE DETAIL.
7. PER FAA ADVISORY CIRCULAR 150/5340-30J, THE MINIMUM CLEARANCE BETWEEN AN EXISTING PAVEMENT JOINT OR EDGE OF AN EXISTING CAN AND THE EDGE OF A RWSL LIGHT FIXTURE SHALL BE 2 FEET.
8. THL LIGHT PAIRS SHALL BE PLACED BETWEEN THE CENTERLINE LIGHTS IN EVERY OTHER SPACE OF RUNWAY CENTERLINE LIGHTS.
9. RWSL FIXTURES ARE UNIDIRECTIONAL. THL FIXTURES SHALL BE INSTALLED SUCH THAT THE FIXTURE BEAM IS PARALLEL TO THE RUNWAY CENTERLINE AND DIRECTED TOWARD THE NEAREST RUNWAY END.

TAKE OFF WITH US Memphis INTERNATIONAL AIRPORT

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APPROVED BY: CBD

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AVIATION
No. 113525
STATE OF TENNESSEE
12/11/2025

ENGINEER—SUBCONSULTANT

JOB NO.

REVISIONS

MARK	DATE	DESCRIPTION
0	12/11/2025	ISSUED FOR BID

MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
TYPICAL THL CONFIGURATION DETAILS

DWG. FILE NAME
161408-E-DT-612.DWG
DATE 12/11/2025
SCALE N.T.S.
SHEET NO. E-DT-612

December 10, 2025 c:\coddle\pw\pwwestcoast\kmills\d0273326\161408-E-DT-612.dwg

LIGHTING FIXTURE SCHEDULE - T1A

CIRCUIT	FIXTURE ID	Northing	Easting	BASE CAN	LIGHT FIXTURE	DESCRIPTION OF WORK
T1A	T1A001	288270.30	776252.50	N/A	L-850T	POPULATE EXISTING BASE CAN
T1A	T1A002	288282.20	776253.50	N/A	L-850T	POPULATE EXISTING BASE CAN
T1A	T1A003	288262.80	776352.30	N/A	L-850T	POPULATE EXISTING BASE CAN
T1A	T1A004	288274.70	776353.20	N/A	L-850T	POPULATE EXISTING BASE CAN
T1A	T1A005	288255.30	776452.00	N/A	L-850T	POPULATE EXISTING BASE CAN
T1A	T1A006	288267.30	776452.90	N/A	L-850T	POPULATE EXISTING BASE CAN
T1A	T1A007	288247.80	776551.70	N/A	L-850T	POPULATE EXISTING BASE CAN
T1A	T1A008	288259.80	776552.60	N/A	L-850T	POPULATE EXISTING BASE CAN
T1A	T1A009	288240.30	776651.40	N/A	L-850T	POPULATE EXISTING BASE CAN
T1A	T1A010	288252.30	776652.30	N/A	L-850T	POPULATE EXISTING BASE CAN
T1A	T1A011	288232.90	776751.20	N/A	L-850T	POPULATE EXISTING BASE CAN
T1A	T1A012	288244.80	776752.10	N/A	L-850T	POPULATE EXISTING BASE CAN
T1A	T1A013	288225.40	776850.90	N/A	L-850T	POPULATE EXISTING BASE CAN
T1A	T1A014	288237.40	776851.80	N/A	L-850T	POPULATE EXISTING BASE CAN
T1A	T1A015	288217.90	776950.60	N/A	L-850T	POPULATE EXISTING BASE CAN
T1A	T1A016	288229.90	776951.50	N/A	L-850T	POPULATE EXISTING BASE CAN
T1A	T1A017	288210.40	777050.30	N/A	L-850T	POPULATE EXISTING BASE CAN
T1A	T1A018	288222.40	777051.20	N/A	L-850T	POPULATE EXISTING BASE CAN
T1A	T1A019	288203.00	777150.00	N/A	L-850T	POPULATE EXISTING BASE CAN
T1A	T1A020	288214.90	777150.90	N/A	L-850T	POPULATE EXISTING BASE CAN
T1A	T1A021	288195.50	777249.70	N/A	L-850T	POPULATE EXISTING BASE CAN
T1A	T1A022	288207.40	777250.60	N/A	L-850T	POPULATE EXISTING BASE CAN
T1A	T1A023	288188.00	777349.50	N/A	L-850T	POPULATE EXISTING BASE CAN
T1A	T1A024	288200.00	777350.40	N/A	L-850T	POPULATE EXISTING BASE CAN
T1A	T1A025	288180.50	777449.20	N/A	L-850T	POPULATE EXISTING BASE CAN

LIGHTING FIXTURE SCHEDULE - T1A

CIRCUIT	FIXTURE ID	Northing	Easting	BASE CAN	LIGHT FIXTURE	DESCRIPTION OF WORK
T1A	T1A026	288192.50	777450.10	N/A	L-850T	POPULATE EXISTING BASE CAN
T1A	T1A027	288173.00	777548.90	N/A	L-850T	POPULATE EXISTING BASE CAN
T1A	T1A028	288185.00	777549.80	N/A	L-850T	POPULATE EXISTING BASE CAN
T1A	T1A029	288165.60	777648.60	N/A	L-850T	POPULATE EXISTING BASE CAN
T1A	T1A030	288177.50	777649.50	N/A	L-850T	POPULATE EXISTING BASE CAN
T1A	T1A031	288158.10	777748.30	N/A	L-850T	POPULATE EXISTING BASE CAN
T1A	T1A032	288170.00	777749.30	N/A	L-850T	POPULATE EXISTING BASE CAN
T1A	T1A033	287765.50	782983.60	N/A	L-850T	POPULATE EXISTING BASE CAN
T1A	T1A034	287777.40	782984.50	N/A	L-850T	POPULATE EXISTING BASE CAN
T1A	T1A035	287758.00	783083.40	N/A	L-850T	POPULATE EXISTING BASE CAN
T1A	T1A036	287769.90	783084.30	N/A	L-850T	POPULATE EXISTING BASE CAN
T1A	T1A037	287750.50	783183.10	N/A	L-850T	POPULATE EXISTING BASE CAN
T1A	T1A038	287762.50	783184.00	N/A	L-850T	POPULATE EXISTING BASE CAN
T1A	T1A039	287743.00	783282.80	N/A	L-850T	POPULATE EXISTING BASE CAN
T1A	T1A040	287755.00	783283.70	N/A	L-850T	POPULATE EXISTING BASE CAN
T1A	T1A041	287735.50	783382.50	N/A	L-850T	POPULATE EXISTING BASE CAN
T1A	T1A042	287747.50	783383.40	N/A	L-850T	POPULATE EXISTING BASE CAN
T1A	T1A043	287728.10	783482.20	N/A	L-850T	POPULATE EXISTING BASE CAN
T1A	T1A044	287740.00	783483.10	N/A	L-850T	POPULATE EXISTING BASE CAN
T1A	T1A045	287720.60	783582.00	N/A	L-850T	POPULATE EXISTING BASE CAN
T1A	T1A046	287732.60	783582.90	N/A	L-850T	POPULATE EXISTING BASE CAN
T1A	T1A047	287713.10	783681.70	N/A	L-850T	POPULATE EXISTING BASE CAN
T1A	T1A048	287725.10	783682.60	N/A	L-850T	POPULATE EXISTING BASE CAN
T1A	T1A049	287705.60	783781.40	N/A	L-850T	POPULATE EXISTING BASE CAN
T1A	T1A050	287717.60	783782.30	N/A	L-850T	POPULATE EXISTING BASE CAN

LIGHTING FIXTURE SCHEDULE - T1A

CIRCUIT	FIXTURE ID	Northing	Easting	BASE CAN	LIGHT FIXTURE	DESCRIPTION OF WORK
T1A	T1A051	287698.20	783881.10	N/A	L-850T	POPULATE EXISTING BASE CAN
T1A	T1A052	287710.10	783882.00	N/A	L-850T	POPULATE EXISTING BASE CAN
T1A	T1A053	287690.70	783980.80	N/A	L-850T	POPULATE EXISTING BASE CAN
T1A	T1A054	287702.60	783981.70	N/A	L-850T	POPULATE EXISTING BASE CAN
T1A	T1A055	287683.20	784080.60	N/A	L-850T	POPULATE EXISTING BASE CAN
T1A	T1A056	287695.20	784081.50	N/A	L-850T	POPULATE EXISTING BASE CAN
T1A	T1A057	287675.70	784180.30	N/A	L-850T	POPULATE EXISTING BASE CAN
T1A	T1A058	287687.70	784181.20	N/A	L-850T	POPULATE EXISTING BASE CAN
T1A	T1A059	287668.20	784280.00	N/A	L-850T	POPULATE EXISTING BASE CAN
T1A	T1A060	287680.20	784280.90	N/A	L-850T	POPULATE EXISTING BASE CAN
T1A	T1A061	287660.80	784379.70	N/A	L-850T	POPULATE EXISTING BASE CAN
T1A	T1A062	287672.70	784380.60	N/A	L-850T	POPULATE EXISTING BASE CAN
T1A	T1A063	287653.30	784479.40	N/A	L-850T	POPULATE EXISTING BASE CAN
T1A	T1A064	287665.20	784480.30	N/A	L-850T	POPULATE EXISTING BASE CAN

LIGHTING FIXTURE SCHEDULE - R1B

CIRCUIT	FIXTURE ID	Northing	Easting	BASE CAN	LIGHT FIXTURE	DESCRIPTION OF WORK
R1B	R1B001	287693.90	780013.50	N/A	L-852S	POPULATE EXISTING BASE CAN
R1B	R1B002	287738.60	780016.80	N/A	L-852S	POPULATE EXISTING BASE CAN
R1B	R1B003	287783.40	780020.20	N/A	L-852S	POPULATE EXISTING BASE CAN
R1B	R1B004	287828.20	780023.50	N/A	L-852S	POPULATE EXISTING BASE CAN
R1B	R1B005	287872.90	780026.90	N/A	L-852S	POPULATE EXISTING BASE CAN
R1B	R1B006	287917.70	780030.30	N/A	L-852S	POPULATE EXISTING BASE CAN
R1B	R1B007	287992.60	780035.90	N/A	L-852S	POPULATE EXISTING BASE CAN
R1B	R1B008	287997.50	780036.20	N/A	L-852S	POPULATE EXISTING BASE CAN
R1B	R1B009	288072.30	780041.90	N/A	L-852S	POPULATE EXISTING BASE CAN
R1B	R1B010	288117.20	780045.20	N/A	L-852S	POPULATE EXISTING BASE CAN
R1B	R1B011	288164.60	780048.80	N/A	L-852S	POPULATE EXISTING BASE CAN
R1B	R1B012	288210.70	780052.20	N/A	L-852S	POPULATE EXISTING BASE CAN
R1B	R1B013	288256.10	780060.30	N/A	L-852S	POPULATE EXISTING BASE CAN
R1B	R1B014	288297.20	780081.30	N/A	L-852S	POPULATE EXISTING BASE CAN
R1B	R1B015	288256.50	780056.10	N/A	L-852S	POPULATE EXISTING BASE CAN
R1B	R1B016	288300.10	780041.50	N/A	L-852S	POPULATE EXISTING BASE CAN
R1B	R1B017	287777.70	779146.40	N/A	L-852S	POPULATE EXISTING BASE CAN
R1B	R1B018	287818.80	779149.50	N/A	L-852S	POPULATE EXISTING BASE CAN
R1B	R1B019	287859.80	779152.60	N/A	L-852S	POPULATE EXISTING BASE CAN
R1B	R1B020	287900.80	779155.70	N/A	L-852S	POPULATE EXISTING BASE CAN

LIGHTING FIXTURE SCHEDULE - R1B

CIRCUIT	FIXTURE ID	Northing	Easting	BASE CAN	LIGHT FIXTURE	DESCRIPTION OF WORK
R1B	R1B021	287943.00	779158.80	N/A	L-852S	POPULATE EXISTING BASE CAN
R1B	R1B022	287982.90	779161.80	N/A	L-852S	POPULATE EXISTING BASE CAN
R1B	R1B023	288058.00	779162.70	N/A	L-852S	POPULATE EXISTING BASE CAN
R1B	R1B024	288063.10	779162.30	N/A	L-852S	POPULATE EXISTING BASE CAN
R1B	R1B025	288139.30	779148.20	N/A	L-852S	POPULATE EXISTING BASE CAN
R1B	R1B026	288186.10	779136.60	N/A	L-852S	POPULATE EXISTING BASE CAN
R1B	R1B027	288232.90	779125.00	N/A	L-852S	POPULATE EXISTING BASE CAN
R1B	R1B028	288279.80	779113.40	N/A	L-852S	POPULATE EXISTING BASE CAN
R1B	R1B029	288326.60	779101.80	L-868B	L-852S	NEW BASE CAN
R1B	R1B030	288377.30	779089.20	L-868B	L-852S	NEW BASE CAN (RELOCATION)
R1B	R1B031	288328.10	779118.00	L-868B	L-852S	NEW BASE CAN
R1B	R1B032	288372.20	779139.30	L-868B	L-852S	NEW BASE CAN (RELOCATION)
R1B	R1B033	287826.30	778247.10	N/A	L-852S	POPULATE EXISTING BASE CAN
R1B	R1B034	287871.80	778248.70	N/A	L-852S	POPULATE EXISTING BASE CAN
R1B	R1B035	287918.00	778250.30	N/A	L-852S	POPULATE EXISTING BASE CAN
R1B	R1B036	287961.30	778251.90	N/A	L-852S	POPULATE EXISTING BASE CAN
R1B	R1B037	288006.10	778253.40	N/A	L-852S	POPULATE EXISTING BASE CAN
R1B	R1B038	288050.80	778255.00	N/A	L-852S	POPULATE EXISTING BASE CAN
R1B	R1B039	288125.90	778257.60	N/A	L-852S	POPULATE EXISTING BASE CAN
R1B	R1B040	288130.90	778257.80	N/A	L-852S	POPULATE EXISTING BASE CAN

LIGHTING FIXTURE SCHEDULE - R1B

CIRCUIT	FIXTURE ID	Northing	Easting	BASE CAN	LIGHT FIXTURE	DESCRIPTION OF WORK
R1B	R1B041	288205.90	778260.50	N/A	L-852S	POPULATE EXISTING BASE CAN
R1B	R1B042	288252.30	778262.10	N/A	L-852S	POPULATE EXISTING BASE CAN
R1B	R1B043	288296.00	778263.60	N/A	L-852S	POPULATE EXISTING BASE CAN
R1B	R1B044	288341.00	778265.20	N/A	L-852S	POPULATE EXISTING BASE CAN
R1B	R1B045	288386.10	778266.80	N/A	L-852S	POPULATE EXISTING BASE CAN
R1B	R1B046	288434.10	778268.50	L-868B	L-852S	NEW BASE CAN (RELOCATION)
R1B	R1B047	287988.00	776092.90	N/A	L-852S	POPULATE EXISTING BASE CAN
R1B	R1B048	288034.40	776095.30	N/A	L-852S	POPULATE EXISTING BASE CAN
R1B	R1B049	288076.90	776097.40	N/A	L-852S	POPULATE EXISTING BASE CAN
R1B	R1B050	288123.30	776099.70	N/A	L-852S	POPULATE EXISTING BASE CAN
R1B	R1B051	288168.10	776102.00	N/A	L-852S	POPULATE EXISTING BASE CAN
R1B	R1B052	288212.20	776104.20	N/A	L-852S	POPULATE EXISTING BASE CAN
R1B	R1B053	288287.10	776108.00	N/A	L-852S	POPULATE EXISTING BASE CAN
R1B	R1B054	288292.10	776108.00	N/A	L-852S	POPULATE EXISTING BASE CAN
R1B	R1B055	288367.50	776105.90	N/A	L-852S	POPULATE EXISTING BASE CAN
R1B	R1B056	288412.90	776104.60	L-868B	L-852S	NEW BASE CAN
R1B	R1B057	288458.20	776103.30	L-868B	L-852S	NEW BASE CAN
R1B	R1B058	288503.60	776102.00	L-868B	L-852S	NEW BASE CAN
R1B	R1B059	288549.90	776100.70	L-868B	L-852S	NEW BASE CAN
R1B	R1B060	288598.00	776099.40	L-868B	L-852S	NEW BASE CAN (RELOCATION)

LIGHTING FIXTURE SCHEDULE - R1C

CIRCUIT	FIXTURE ID	Northing	Easting	BASE CAN	LIGHT FIXTURE	DESCRIPTION OF WORK
R1C	R1C001	287632.30	780797.30	L-868B	L-852S	NEW BASE CAN (RELOCATION)
R1C	R1C002	287679.60	780806.60	N/A	L-852S	POPULATE EXISTING BASE CAN
R1C	R1C003	287723.90	780815.30	N/A	L-852S	POPULATE EXISTING BASE CAN
R1C	R1C004	287768.20	780824.10	N/A	L-852S	POPULATE EXISTING BASE CAN
R1C	R1C005	287813.10	780833.00	N/A	L-852S	POPULATE EXISTING BASE CAN
R1C	R1C006	287856.90	780841.60	N/A	L-852S	POPULATE EXISTING BASE CAN
R1C	R1C007	287931.00	780856.30	N/A	L-852S	POPULATE EXISTING BASE CAN
R1C	R1C008	287936.00	780857.30	N/A	L-852S	POPULATE EXISTING BASE CAN
R1C	R1C009	288010.10	780871.90	N/A	L-852S	POPULATE EXISTING BASE CAN
R1C	R1C010	288055.60	780880.90	N/A	L-852S	POPULATE EXISTING BASE CAN
R1C	R1C011	288101.60	780885.70	N/A	L-852S	POPULATE EXISTING BASE CAN
R1C	R1C012	288147.80	780889.30	N/A	L-852S	POPULATE EXISTING BASE CAN
R1C	R1C013	288194.00	780888.20	N/A	L-852S	POPULATE EXISTING BASE CAN
R1C	R1C014	288237.90	780873.50	N/A	L-852S	POPULATE EXISTING BASE CAN
R1C	R1C015	288193.70	780892.40	N/A	L-852S	POPULATE EXISTING BASE CAN
R1C	R1C016	288235.00	780913.60	N/A	L-852S	POPULATE EXISTING BASE CAN
R1C	R1C017	287513.40	782420.50	N/A	L-852S	POPULATE EXISTING BASE CAN
R1C	R1C018	287558.50	782423.90	N/A	L-852S	POPULATE EXISTING BASE CAN
R1C	R1C019	287602.90	782427.30	N/A	L-852S	POPULATE EXISTING BASE CAN
R1C	R1C020	287647.70	782430.70	N/A	L-852S	POPULATE EXISTING BASE CAN

LIGHTING FIXTURE SCHEDULE - R1C

CIRCUIT	FIXTURE ID	Northing	Easting	BASE CAN	LIGHT FIXTURE	DESCRIPTION OF WORK
R1C	R1C021	287692.50	782434.00	N/A	L-852S	POPULATE EXISTING BASE CAN
R1C	R1C022	287737.20	782437.40	N/A	L-852S	POPULATE EXISTING BASE CAN
R1C	R1C023	287812.00	782443.00	N/A	L-852S	POPULATE EXISTING BASE CAN
R1C	R1C024	287342.50	784698.50	N/A	L-852S	POPULATE EXISTING BASE CAN
R1C	R1C025	287387.30	784701.80	N/A	L-852S	POPULATE EXISTING BASE CAN
R1C	R1C026	287432.10	784705.20	N/A	L-852S	POPULATE EXISTING BASE CAN
R1C	R1C027	287476.80	784708.60	N/A	L-852S	POPULATE EXISTING BASE CAN
R1C	R1C028	287523.50	784712.10	N/A	L-852S	POPULATE EXISTING BASE CAN
R1C	R1C029	287566.40	784715.40	N/A	L-852S	POPULATE EXISTING BASE CAN
R1C	R1C030	287640.50	784729.70	N/A	L-852S	POPULATE EXISTING BASE CAN
R1C	R1C031	287645.40	784731.10	N/A	L-852S	POPULATE EXISTING BASE CAN
R1C	R1C032	287718.50	784760.30	N/A	L-852S	POPULATE EXISTING BASE CAN
R1C	R1C033	287758.90	784778.20	L-868B	L-852S	NEW BASE CAN
R1C	R1C034	287799.40	784796.10	L-868B	L-852S	NEW BASE CAN
R1C	R1C035	287839.80	784814.00	L-868B	L-852S	NEW BASE CAN
R1C	R1C036	287880.30	784831.90	L-868B	L-852S	NEW BASE CAN
R1C	R1C037	287924.20	784851.40	L-868B	L-852S	NEW BASE CAN (RELOCATION)
R1C	R1C038	287628.50	784957.00	L-868B	L-852S	NEW BASE CAN
R1C	R1C039	287701.10	784992.40	L-868B	L-852S	NEW BASE CAN
R1C	R1C040	287741.40	785012.00	L-868B	L-852S	NEW BASE CAN

LIGHTING FIXTURE SCHEDULE - R1C

CIRCUIT	FIXTURE ID	Northing	Easting	BASE CAN	LIGHT FIXTURE	DESCRIPTION OF WORK
R1C	R1C041	287781.90	785030.00	L-868B	L-852S	NEW BASE CAN
R1C	R1C042	287823.00	785048.20	L-868B	L-852S	NEW BASE CAN
R1C	R1C043	287862.90	785065.80	L-868B	L-852S	NEW BASE CAN
R1C	R1C044	287906.70	785085.20	L-868B	L-852S	NEW BASE CAN (RELOCATION)

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12/11/2025

ENGINEER—SUBCONSULTANT

JOB NO.

REVISIONS

MARK	DATE	DESCRIPTION
0	12/11/2025	ISSUED FOR BID

MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
FIXTURE SCHEDULES

DWG. FILE NAME
161408-E-DT-613.DWG
DATE 12/11/2025
SCALE N.T.S.
SHEET NO. E-DT-613

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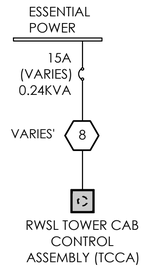

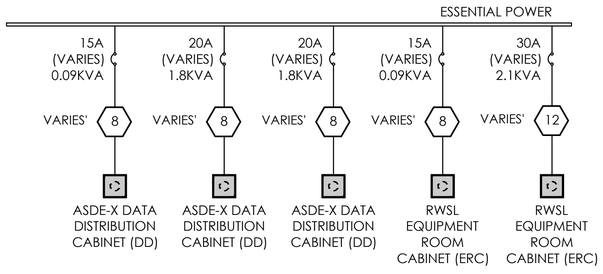

1 E-DG-801 AIRPORT TRAFFIC CONTROL TOWER (ATCT) POWER ONE-LINE DIAGRAM
SCALE: N.T.S.

CABLE SCHEDULE	
8	2-1/C #12 AWG 1-1/C #12 AWG (GREEN GROUND)
12	2-1/C #10 AWG 1-1/C #10 AWG (GREEN GROUND)

CONNECTOR END SCHEDULE	
	NEMA L5 TWIST LOCK RECEPTACLE

LIST OF ABBREVIATIONS

A	AMPERE
DD	DATA DISTRIBUTION CABINET
ERC	EQUIPMENT ROOM CABINET
KVA	1000'S OF VOLT AMPERE
TCCA	TOWER CAB CONTROL ASSEMBLY

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REVISIONS

MARK	DATE	DESCRIPTION
0	12/11/2025	ISSUED FOR BID

MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
ATCT SINGLE LINE DIAGRAM - POWER

DWG. FILE NAME
161408-E-DG-801.DWG
DATE
12/11/2025
SCALE
N.T.S.
SHEET NO.
E-DG-801

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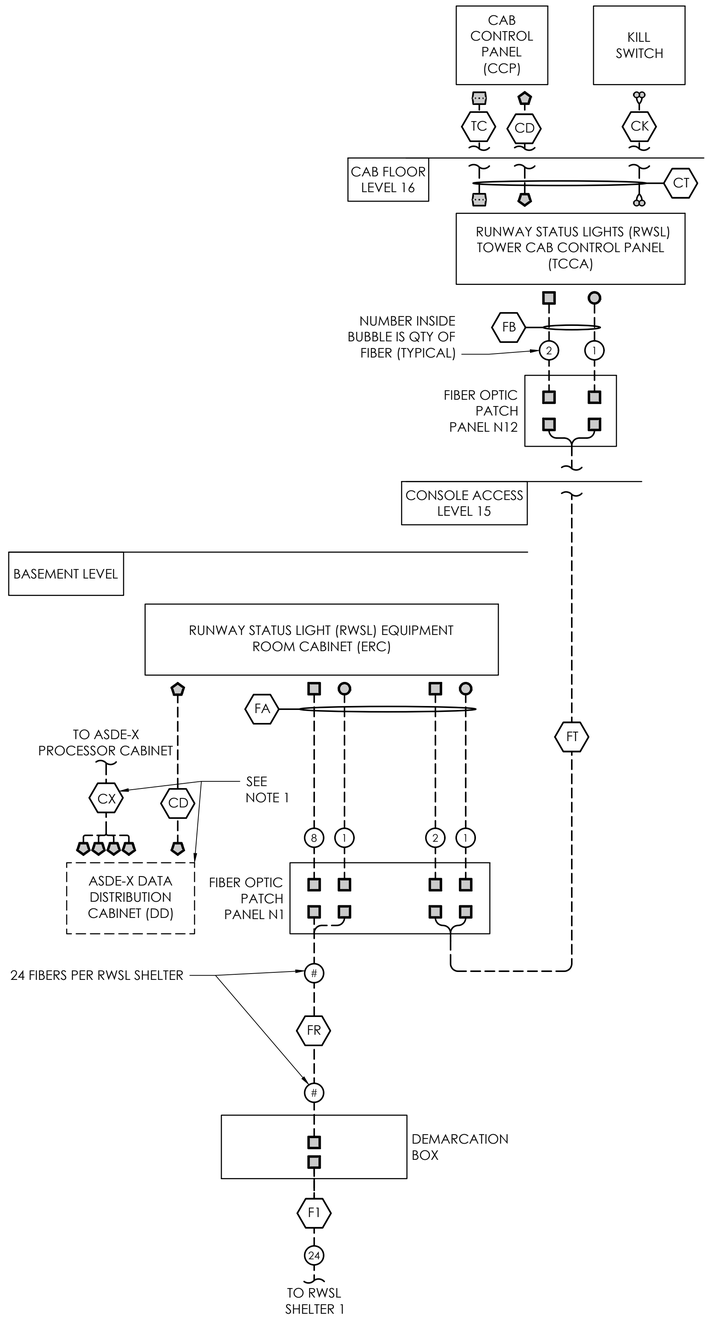

1 E-DG-802 AIRPORT TRAFFIC CONTROL TOWER (ATCT) COMMUNICATION ONE-LINE DIAGRAM
SCALE: N.T.S.

NOTES:

1. ASDE-X DATA DISTRIBUTION CABINET (DD) AND ASSOCIATED POWER AND CABLES "CX" ARE EXISTING AS INSTALLED AS PART OF THE ASDE-X PROGRAM.

COMMUNICATION CABLE ALLOWABLE LOSS:

SINGLE MODE (SM) FIBER OPTIC CABLE .5dB/km AT 1310 NM

ATCT:

ERC-CCP SYSTEM MONITOR COMMS = DUPLEX 7dB MAX
ERC-KILL SWITCH = SIMPLEX 13dB MAX

FIELD:

ERC-RMTC SYSTEM MONITOR COMMS = DUPLEX 10dB MAX
ERC-MLC COMMS = DUPLEX 8dB MAX
ERC-CCR ACE (2X) = DUPLEX 10dB MAX
ERC-KILL SWITCH = SIMPLEX 7dB MAX

CABLE SCHEDULE

ITEM	CABLE TYPE	DESCRIPTION
F1	1-24 STRAND SINGLE MODE (SM) FIBER OPTIC CABLE	FIBER OPTIC COMMUNICATION FROM RUNWAY STATUS LIGHT (RWSL) EQUIPMENT ROOM CABINET (ERC) TO RWSL SHELTER 1
FA	1-SIMPLEX SM SC-TYPE/FC-TYPE (PER FLS SHELTER) 4-DUPLEX SM SC-TYPE/SC-TYPE (PER FLS SHELTER) 1-DUPLEX SM SC-TYPE/SC-TYPE (PER TCCA) 1-SIMPLE SM SC-TYPE/FC-TYPE (PER TCCA)	PATCH FIBER OPTIC CABLES FROM FIBER OPTIC PATCH PANEL AT LOCATION OF RWSL ERC TO ERC
FB	1-DUPLEX SM SC-TYPE/SC-TYPE 1-SIMPLEX SM SC-TYPE/FC-TYPE	PATCH FIBER OPTIC CABLES FROM FIBER OPTIC PATCH PANEL AT LOCATION OF TCCA TO TCCA
FR	24 STRANDS PER EACH ENTERING FIELD LIGHTING SYSTEM SHELTERS REMOTE MAINTENANCE TERMINAL CABINET CABLE. PLENUM AND RISER RATED SM FIBER OPTIC CABLE	FIBER OPTIC COMMUNICATION FROM DEMARCATION BOX TO FIBER OPTIC PATCH PANEL AT LOCATION OF ERC
FT	1-6 STRAND SM PLENUM AND RISER RATED SM FIBER OPTIC CABLE	FIBER OPTIC COMMUNICATION FROM RWSL ERC TO CAB CONTROL PANEL (CCP) AND KILL SWITCH (VIA TCCA)
CD	1-SHIELDED CATEGORY 5E CABLE	COMMUNICATION FROM ASDE-X DD TO RWSL ERC
CT / CD	1-SHIELDED CATEGORY 5E CABLE	COMMUNICATION AND POWER FROM TCCA TO CCP (MAXIMUM DISTANCE OF 75')
CT / TC	1-#20-2 TC POWER CABLE SOJW	
CT / CK	1-SHIELDED TWISTED PAIR COMMUNICATION CABLE	COMMUNICATION FROM TCCA TO KILL SWITCH (MAXIMUM DISTANCE OF 75')
CX	4-SHIELDED CATEGORY 5E CABLE	COMMUNICATION FROM ASDE-X PROCESSOR TO ASDE-X DD (SEE NOTE 1)

CONNECTOR END SCHEDULE

▢	FIBER OPTIC MALE END "SC-TYPE"
○	FIBER OPTIC MALE END "FC-TYPE"
⬡	CATEGORY 5E CABLE MALE END "RJ-45"
CP	CABLE CONTROL PANEL POWER END
▽	GPS CO-AXIAL CABLE MALE END "TNC"
⁂	TWISTED PAIR COMMUNICATION END

LIST OF ABBREVIATIONS

A	AMPERE
CCR	CONSTANT CURRENT REGULATOR
DD	DATA DISTRIBUTION CABINET
ERC	EQUIPMENT ROOM CABINET
GFI	GROUND FAULT INTERRUPTER
ILC	INDIVIDUAL LIGHT CONTROLLER
KVA	1000'S OF VOLT AMPERE
MLC	MASTER LIGHT CONTROLLER
REL	RUNWAY ENTRANCE LIGHT
RMTC	REMOTE MAINTENANCE TERMINAL CABINET
RWSL	RUNWAY STATUS LIGHTS
TCCA	TOWER CAB CONTROL ASSEMBLY
THL	TAKEOFF HOLD LIGHT
V	VOLTS
XFMR	TRANSFORMER
'	FEET (FOOT)

TAKE OFF WITH US Memphis INTERNATIONAL AIRPORT

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12/11/2025

ENGINEER—SUBCONSULTANT

JOB NO.

REVISIONS

MARK	DATE	DESCRIPTION
0	12/11/2025	ISSUED FOR BID

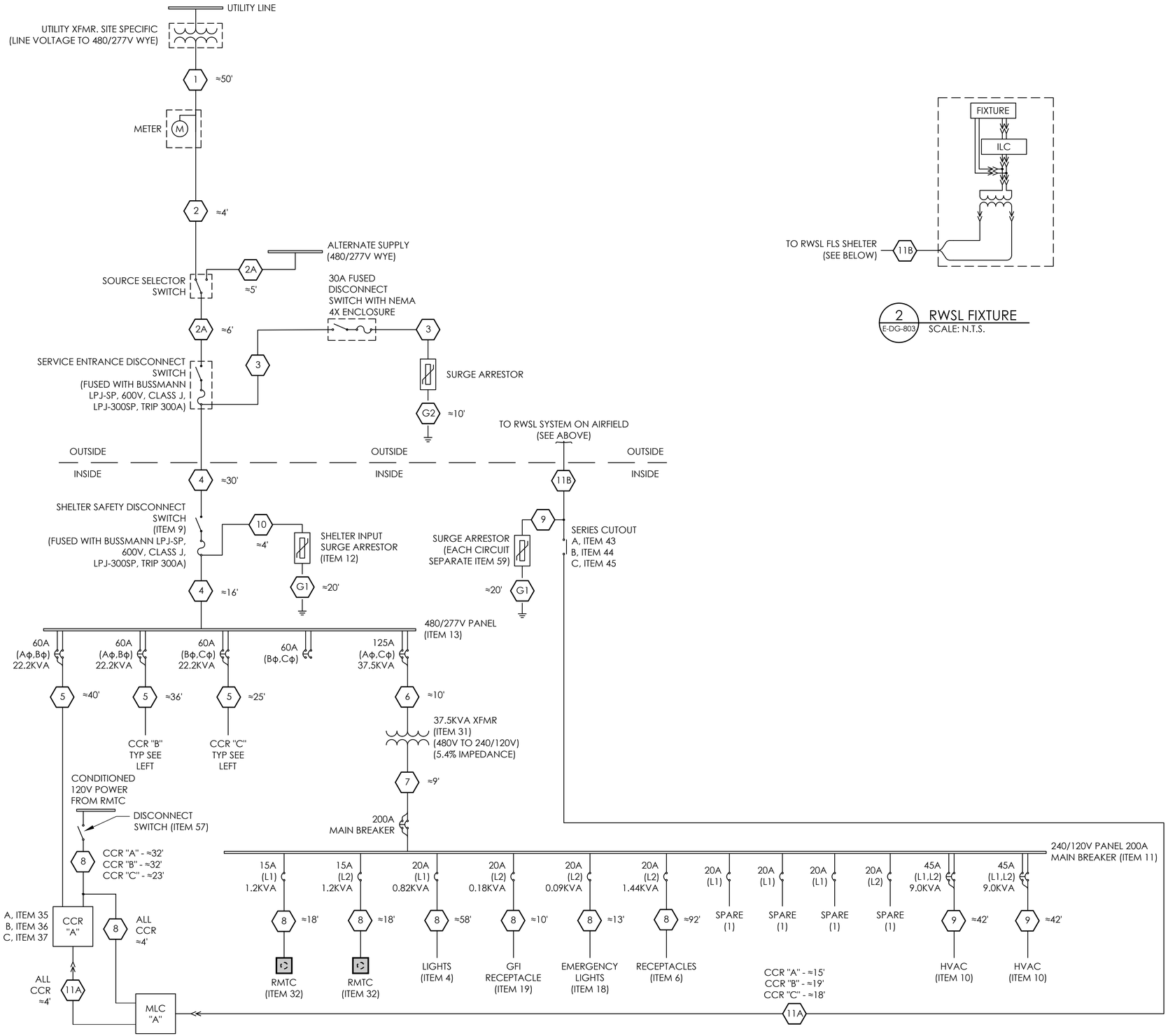
MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
ATCT SINGLE LINE DIAGRAM - COMMUNICATIONS

DWG. FILE NAME
161408-E-DG-802.DWG
DATE 12/11/2025
SHEET NO. E-DG-802
SCALE N.T.S.

December 10, 2025 c:\caddlib\pw\pwwestcoast\kmills\d0273326\161408-E-DG-802.dwg



1 E-DG-803 FIELD LIGHTING SYSTEM (FLS) SHELTER POWER ONE-LINE DIAGRAM
SCALE: N.T.S.

2 E-DG-803 RWSL FIXTURE
SCALE: N.T.S.

NOTES:

1. ALL ITEM NUMBERS REFER TO DRAWING E-GN-300 FOR ITEM LIST.
2. IN CASE OF DIFFICULTY OR UNAVAILABILITY OF FAULT CURRENT FROM THE UTILITY COMPANY, ENGINEER SHALL ESTIMATE FAULT CURRENT AND SHALL REFER TO TABLES D.9.1. AND D.9.2 OF THE NFPA 70E, STANDARD FOR ELECTRICAL SAFETY IN THE WORKPLACE, TO ESTIMATE THE HAZARD RISK CATEGORY (HRC) AT THE DISCONNECT SWITCH FEEDING THE RWSL FACILITY.

POWER CABLE SCHEDULE	
1	3-1/C 350 KCMIL THHW 1-1/C 350 KCMIL THHW (NEUTRAL) 1-1/C 1/0 AWG THHW (GREEN GROUND)
2	3-1/C 350 KCMIL THHW 1-1/C 350 KCMIL THHW (NEUTRAL) 1-1/C 1/0 AWG THHW (GREEN GROUND)
2A	3-1/C 350 KCMIL THHW 1-1/C 350 KCMIL THHW (NEUTRAL) 1-1/C 1/0 AWG THHW (GREEN GROUND)
3	3 -1/C #10 AWG THHW 1-1/C #10 AWG THHW (GREEN GROUND)
4	3-1/C 350 KCMIL THHW 1-1/C 350 KCMIL THHW (NEUTRAL) 1-1/C 1/0 AWG THHW (GREEN GROUND)
5	2-1/C #6 AWG THHN 1-1/C #6 AWG THHN (GREEN GROUND)
6	2-1/C #1 AWG THHN 1-1/C #1 AWG THHN (GREEN GROUND)
7	3-1/C #4/0 AWG THHN 1-1/C #4/0 AWG THHN (GREEN GROUND)
8	2-1/C #12 AWG 1-1/C #12 AWG (GREEN GROUND)
9	2-1/C #8 AWG 1-1/C #8 AWG (GREEN GROUND)
10	3-1/C #4/0 AWG THHN 1-1/C #4/0 AWG THHN (GREEN GROUND)
11A	1-1/C #8 AWG L-824 (BLACK) 1-1/C #8 AWG L-824 (RED) 1-1/C STRANDED #6 AWG (GREEN GROUND)
11B	1-1/C #8 AWG L-824 (BLACK) 1-1/C #8 AWG L-824 (RED) 1-1/C SOLID #6 AWG (GREEN GROUND)
G1	SURGE ARRESTOR BACK BUS 1-1/C #4/0 AWG GREEN W/ RED TRACER
G2	1-1/C #4/0 BC

LIST OF ABBREVIATIONS

A	AMPERE
CCR	CONSTANT CURRENT REGULATOR
ERC	EQUIPMENT ROOM CABINET
GFI	GROUND FAULT INTERRUPTER
ILC	INDIVIDUAL LIGHT CONTROLLER
KVA	1000'S OF VOLT AMPERE
MLC	MASTER LIGHT CONTROLLER
REL	RUNWAY ENTRANCE LIGHT
RMTC	REMOTE MAINTENANCE TERMINAL CABINET
RWSL	RUNWAY STATUS LIGHTS
THL	TAKEOFF HOLD LIGHT
V	VOLTS
XFMR	TRANSFORMER
'	FEET (FOOT)

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12/11/2025

ENGINEER—SUBCONSULTANT

JOB NO.

REVISIONS

MARK	DATE	DESCRIPTION
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MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
SHELTER 1 SINGLE LINE DIAGRAM - POWER

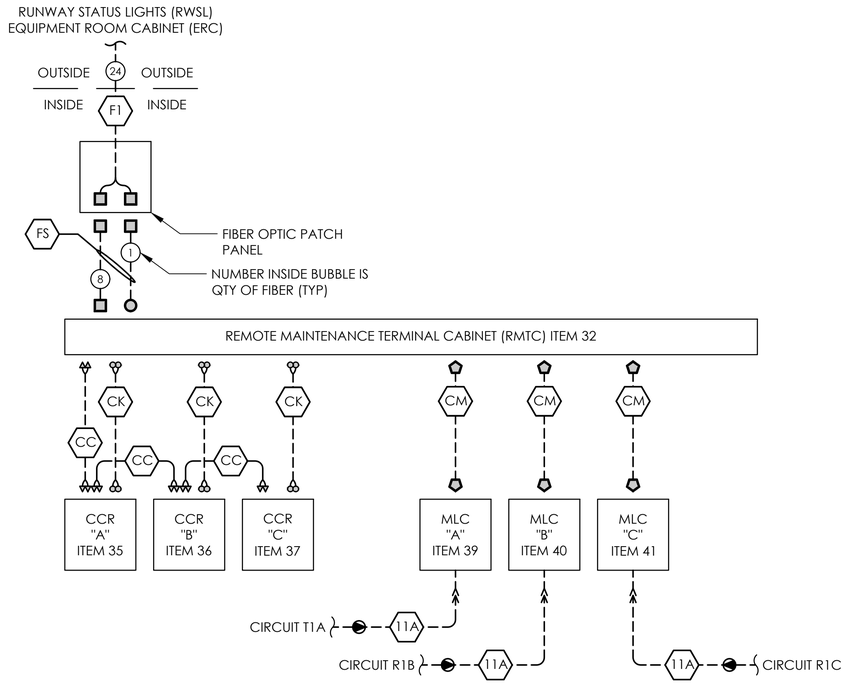
DWG. FILE NAME
161408-E-DG-803.DWG

DATE
12/11/2025

SHEET NO.
E-DG-803

SCALE
N.T.S.

December 10, 2025 c:\cadd\lib\pw\pwwestcoast\kmills\d0273326\161408-E-DG-803.dwg



1 E-DG-804 FIELD LIGHTING SYSTEM (FLS) SHELTER COMMUNICATION ONE-LINE DIAGRAM
SCALE: N.T.S.

NOTES:

1. ALL ITEM NUMBERS REFER TO DRAWING E-GN-300 FOR ITEM LIST.
2. IN CASE OF DIFFICULTY OR UNAVAILABILITY OF PROSPECTED FAULT CURRENT FROM THE UTILITY COMPANY, ENGINEER SHALL ESTIMATE PROSPECTED FAULT CURRENT AND SHALL REFER TO TABLES D.9.1. AND D.9.2 OF THE NFPA 70E, STANDARD FOR ELECTRICAL SAFETY IN THE WORKPLACE, TO ESTIMATE THE HAZARD RISK CATEGORY (HRC) AT THE DISCONNECT SWITCH FEEDING THE RWSL FACILITY.

COMM CABLE SCHEDULE		
ITEM	CABLE TYPE	DESCRIPTION
F1	1-24 STRAND SINGLEMODE (SM) FIBER OPTIC CABLE (PER FLS SHELTER)	FIBER OPTIC COMMUNICATION FROM RUNWAY STATUS LIGHT (RWSL) EQUIPMENT ROOM CABINET (ERC) TO FLS SHELTER 1
FS	1-SIMPLEX SM SC-TYPE/FC-TYPE PATCH CABLES 4-DUPLEX SM SC-TYPE/SC-TYPE PATCH CABLES	PATCH FIBERS TO REMOTE MAINTENANCE TERMINAL CABINET (RMTC) FROM FIELD FIBER OPTIC PATCH PANEL
CC	2-SHIELDED RS-422 SERIAL COMM (ACE COMMUNICATION)	COMMUNICATION FROM REMOTE MAINTENANCE TERMINAL CABINET (RMTC) TO CONSTANT CURRENT REGULATOR (CCR)
CK	1-SHIELDED TWISTED PAIR (KILL SWITCH)	COMMUNICATION FOR REMOTE HARD SHUT DOWN OF CONSTANT CURRENT REGULATORS (CCR)
CM	1-SHIELDED CATEGORY 5E CABLE	COMMUNICATION FOR MASTER LIGHT CONTROLLER (MLC)
11A	1-1/C #8 AWG L-824 (BLACK) 1-1/C #8 AWG L-824 (RED) 1-1/C STRANDED #6 AWG (GREEN GROUND)	

CONNECTOR END SCHEDULE	
	FIBER OPTIC MALE END "SC-TYPE"
	FIBER OPTIC MALE END "FC-TYPE"
	CATEGORY 5E CABLE MALE END "RJ-45"
	RS-422 COMM CABLE END
	TWISTED PAIR COMM END

LIST OF ABBREVIATIONS

A	AMPERE
CCR	CONSTANT CURRENT REGULATOR
ERC	EQUIPMENT ROOM CABINET
GFI	GROUND FAULT INTERRUPTER
ILC	INDIVIDUAL LIGHT CONTROLLER
KVA	1000'S OF VOLT AMPERE
MLC	MASTER LIGHT CONTROLLER
REL	RUNWAY ENTRANCE LIGHT
RMTC	REMOTE MAINTENANCE TERMINAL CABINET
RWSL	RUNWAY STATUS LIGHTS
THL	TAKEOFF HOLD LIGHT
V	VOLTS
XFMR	TRANSFORMER
'	FEET (FOOT)

TAKE OF WITH US Memphis INTERNATIONAL AIRPORT

PROGRAM MANAGER
PARSONS
Program Management Consultant
Parsons Transportation Group Inc.
Project Office:
4225 Airways Blvd.
Memphis TN, 38116

ENGINEER
HNTB
777 108TH AVE NE
SUITE 1000
BELLEVUE, WA 98004
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JOB NO.
85091

DRAWN BY: KLM
CHECKED BY: CTX
APPROVED BY: CBD

CHARLES B. DEMONT
REGISTERED ENGINEER
AGRICULTURE
STATE OF TENNESSEE
12/11/2025

ENGINEER–SUBCONSULTANT

JOB NO.

REVISIONS		
MARK	DATE	DESCRIPTION
0	12/11/2025	ISSUED FOR BID

MSCAA PROJ. NO.
16-1408-01

PROJECT:
RW 9/27 RUNWAY STATUS LIGHTS - DESIGN

SHEET TITLE:
SHELTER 1 SINGLE LINE DIAGRAM - COMMUNICATIONS

DWG. FILE NAME
161408-E-DG-804.DWG

DATE
12/11/2025

SCALE
N.T.S.

SHEET NO.
E-DG-804

December 10, 2025 c:\coddlib\pw\pwwestcoast\kmills\d0273326\161408-E-DG-804.dwg