ITEM NO. 04A IDOT LETTING: JUNE 10, 2016

CO062
TOTAL SHEETS = 69

100% SUBMITTAL
CONSTRUCTION PLANS

REMOVE AND REPLACE ALL TAXI GUIDANCE SIGNS ON THE AIRPORT

COLES COUNTY MEMORIAL AIRPORT (MTO)
MATTOON-CHARLESTON, COLES COUNTY, ILLINOIS

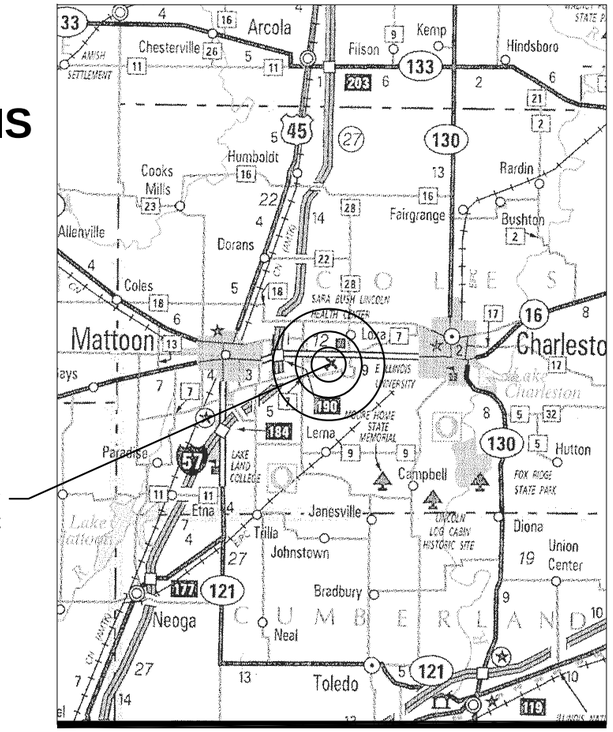
IDA PROJECT NO. MTO-4511
SBG PROJECT NO. 3-17-SBGP-XX

SCOPE OF WORK:

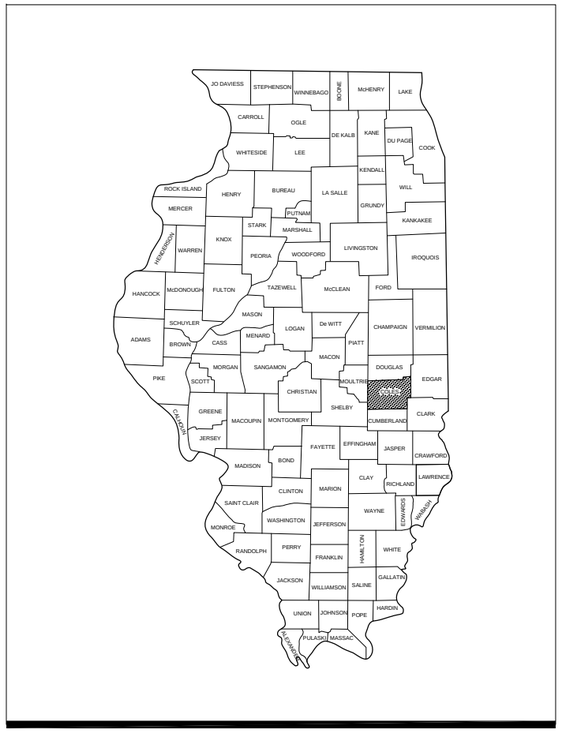
THIS PROJECT SHALL CONSIST OF THE REMOVAL AND REPLACEMENT OF THE TAXI GUIDANCE SIGNS ON THE AIRFIELD AND THE ASSOCIATED DUCTS, CABLING AND VAULT WORK.

NOTICE TO CONTRACTORS AND BIDDERS

THESE CONSTRUCTION PLANS RELY UPON THE SPECIAL PROVISIONS AND THE SPECIFICATIONS TO PROVIDE FOR A COMPLETE DESCRIPTION OF THE WORK AND CONSTRUCTION REQUIREMENTS. THE PLANS SHALL ONLY BE USED IN COMBINATION WITH ALL CONTRACT DOCUMENTS.



VICINITY MAP



LOCATION MAP

No.	Issue/Description	Sheets Changed	Date	By

Kevin N. Lightfoot, P.E.
Electrical Engineer
Lic. Exp. 11/30/2017

KEVIN N. LIGHTFOOT
062-047643
LICENSED PROFESSIONAL ENGINEER
STATE OF ILLINOIS

4/14/2016
Date

HANSON PROFESSIONAL SERVICES INC.
1525 S. Sixth St.
Springfield, Illinois 62703
Telephone: 217.788.2450
Fax: 217.788.2503

COLES COUNTY AIRPORT AUTHORITY
COLES COUNTY MEMORIAL AIRPORT

COLES COUNTY MEMORIAL AIRPORT
432 Airport Road
Mattoon, Illinois 61938
Telephone: 217.234.7120
Fax: 217.234.7116

Andrew J. Fearn
Airport Manager

4-11-16
Date

SUMMARY OF QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	TOTAL QUANTITY	AS-BUILT QUANTITY
AR108158	1/C #8 5 KV UG CABLE IN UD	L.F.	14,778	
AR109200	INSTALL ELECTRICAL EQUIPMENT	L.S.	1	
AR109902	REMOVE ELECTRICAL EQUIPMENT	L.S.	1	
AR110013	3" DIRECTIONAL BORE	L. F.	1,175	
AR125442	TAXI GUIDANCE SIGN, 2 CHARACTER	EACH	4	
AR125443	TAXI GUIDANCE SIGN, 3 CHARACTER	EACH	16	
AR125444	TAXI GUIDANCE SIGN, 4 CHARACTER	EACH	6	
AR125445	TAXI GUIDANCE SIGN, 5 CHARACTER	EACH	4	
AR125446	TAXI GUIDANCE SIGN, 6 CHARACTER	EACH	22	
AR125447	TAXI GUIDANCE SIGN, 7 CHARACTER	EACH	3	
AR125448	TAXI GUIDANCE SIGN, 8 CHARACTER	EACH	1	
AR125565	SPLICE CAN	EACH	4	
AR125904	REMOVE TAXI GUIDANCE SIGN	EACH	58	
AR150510	ENGINEER'S FIELD OFFICE	L.S.	1	
AR150520	MOBILIZATION	L.S.	1	
AR620520	PAVEMENT MARKING-WATERBORNE	S. F.	345	
AR620525	PAVEMENT MARKING-BLACK BORDER	S. F.	575	
AR800493	TAXI SIGN, 5 CHARACTER, UNLIGHTED	EACH	2	
AR800497	CONSTRUCTION SAFETY AND PHASING	L.S.	1	

INDEX TO SHEETS

HANSON
Engineering | Planning | Allied Services

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www.hanson-inc.com

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phone: 217-788-2450
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Illinois Licensed
Professional Service Corporation
#184-001084

COLES COUNTY AIRPORT AUTHORITY
COLES COUNTY MEMORIAL AIRPORT

REMOVE AND REPLACE ALL TAXI GUIDANCE SIGNS ON THE AIRPORT

IDA No: MTO-4511

SBG Project No: 3-17-SBGP-XX

Contract No. CO062

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

ISSUE: APRIL 15, 2016

PROJECT NO: 13A0121D

CAD FILE: C-002-SOQ.DWG

DESIGN BY: KNL 02/17/2016

DRAWN BY: MLH 02/26/2016

REVIEWED BY: LDH 03/08/2016

SHEET TITLE

SUMMARY OF QUANTITIES AND INDEX TO SHEETS

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PROPOSED SAFETY PLAN

1. **GENERAL** – THE COLES COUNTY MEMORIAL AIRPORT IS COMPRISED OF TWO PAVED RUNWAYS AND A STOL (SHORT TAKEOFF AND LANDING) TURF RUNWAY. THE PROPOSED CONSTRUCTION WILL NECESSITATE CLOSING BOTH PAVED RUNWAYS AND THE STOL TURF RUNWAY 18–36. ANY TIME THE CONTRACTOR IS WORKING WITHIN 250' OF A RUNWAY CENTERLINE (FOR RUNWAY 11–29 OR RUNWAY 6–24) THE RUNWAY WILL BE CLOSED. ANY TIME THE CONTRACTOR IS WORKING WITHIN 150' OF THE CENTERLINE OF THE STOL TURF RUNWAY 18–36, IT SHALL BE CLOSED. ANYTIME THE CONTRACTOR IS WORKING WITHIN 93' OF A TAXIWAY CENTERLINE, THE TAXIWAY SHALL BE CLOSED. RUNWAY AND TAXIWAY CLOSURES WILL BE IN ACCORDANCE WITH THE PROPOSED PHASING PLAN. WHEN THE CONTRACTOR RE–OPENS A RUNWAY ALL AREAS WITHIN THE SAFETY AREA WILL BE SMOOTH GRADED TO THE SATISFACTION OF THE RESIDENT ENGINEER. ALL WORK INCLUDED IN OPENING AND CLOSING A RUNWAY WILL BE PAID FOR UNDER ITEM AR800497 CONSTRUCTION SAFETY AND PHASING, PER LUMP SUM.

2. **IDENTIFICATION** – WHEN THE CONTRACTORS VEHICLES AND EQUIPMENT ARE ON THE AIRPORT THEY SHALL BE PROPERLY MARKED WITH THREE (3') FOOT SQUARE CHECKERED FLAGS (INTERNATIONAL ORANGE AND WHITE). THE CONTRACTOR WILL ALSO PROVIDE WORKERS WITH SOME TYPE OF TAG OR GARMENT TO IDENTIFY THE PERSON AS BEING PART OF THE CONSTRUCTION CREW.

3. **RADIO CONTROL** – THE CONTRACTOR WILL BE REQUIRED TO BE IN TWO–WAY RADIO CONTACT (122.70 MHz.) WITH THE AIRPORT UNICOM. THIS WILL KEEP THE CONTRACTOR IN CONSTANT CONTACT WITH THE COLES COUNTY MEMORIAL AIRPORT AND ENABLE THE AIRPORT TO IMMEDIATELY CONTACT THE CONTRACTOR IN CASE OF AN AERONAUTIC EMERGENCY THAT WOULD REQUIRE ACTION BY THE CONTRACTOR AND/OR HIS PERSONNEL.

4. **AIRFIELD SAFETY ASSURANCE** – AIRFIELD SAFETY SHALL BE THE NUMBER ONE PRIORITY AT ALL TIMES. ANY INDIVIDUALS RESPONSIBLE FOR INCURSIONS OR POTENTIAL INCURSIONS WITH AIR TRAFFIC DUE TO NON–COMPLIANCE WITH THE REQUIREMENTS SET FORTH IN THE THESE PLANS, SPECIFICATIONS, SPECIAL PROVISIONS, AND FAA ADVISORY CIRCULAR 150/5370–2F WILL BE SUBJECT TO AN IMMEDIATE SUSPENSION OF THEIR DRIVING PRIVILEGES ON THE AIRPORT OR A COMPLETE RESTRICTION FROM ENTERING THE ACTIVE AIRCRAFT OPERATION AREA ALTOGETHER. THE AIRPORT MANAGER OR AIRPORT REPRESENTATIVE MAY STOP THE WORK AT ANY TIME THEY BELIEVE AIRFIELD SAFETY IS BEING COMPROMISED.

BARRICADES AND TRAFFIC CONES

IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO PLACE AND MAINTAIN BARRICADES AND TRAFFIC CONES AS SHOWN ON THE PROPOSED PHASING PLANS AND/OR AS DIRECTED BY THE AIRPORT MANAGER. THE PLACEMENT, MAINTENANCE AND REMOVAL OF THE BARRICADES AND TRAFFIC CONES WILL BE PAID FOR UNDER ITEM AR800497 CONSTRUCTION SAFETY AND PHASING, PER LUMP SUM.

CONTRACTOR RESPONSIBILITIES

1. THE CONTRACTOR'S EQUIPMENT PARKING AND MATERIAL STORAGE AREAS WILL BE AS SHOWN ON THIS SHEET.

2. THE CONTRACTOR'S EMPLOYEES WILL PARK THEIR VEHICLES IN THESE AREAS. ONLY CONTRACTOR VEHICLES WILL BE ALLOWED OUTSIDE THESE AREAS.

3. THE CONTRACTOR AND HIS EMPLOYEES WILL BE RESTRICTED TO THE WORK AREA AND ALL OTHER AREAS OF THE AIRPORT ARE "OFF LIMITS" TO THEM.

4. THE COLES COUNTY MEMORIAL AIRPORT AUTHORITY REQUIRES PERSONNEL DRIVING ON THE AIRPORT TO ATTEND A DRIVERS TRAINING CLASS PRESENTED BY THE AIRPORT MANAGER. THE CONTRACTOR WILL ARRANGE WITH THE AIRPORT MANAGER FOR HIS PERSONNEL TO ATTEND THE DRIVING CLASS. ONLY THESE PERSONNEL WILL BE ALLOWED TO DRIVE ON THE AIRPORT OUTSIDE OF THE AREA RESTRICTED FOR THE PROPOSED CONSTRUCTION. THOSE DRIVERS NOT DRIVING OUTSIDE OF THE PROPOSED CONSTRUCTION AREA WILL NOT BE REQUIRED TO ATTEND THE DRIVING CLASS.

EROSION CONTROL

1. THIS PROJECT WILL NOT DISTURB MORE THAN 1 ACRE OF LAND, THEREFORE A N.P.D.E.S. PERMIT WILL NOT BE REQUIRED.

AIRCRAFT OPERATION LINE

1. THE CONTRACTOR WILL LOCATE THIS LINE AT THE START OF CONSTRUCTION AND WILL PLACE FLAGGED LATHE EVERY 150' ALONG IT. THIS LINE WILL BE THE LIMITS THAT ALL CONTRACTOR PERSONNEL MAY VENTURE WHEN A RUNWAY IS NOT CLOSED. THE CONTRACTOR WILL MAINTAIN THE LATHE LINE FOR RUNWAYS.

SCOPE OF WORK

1. THIS PROJECT SHALL CONSIST OF THE REMOVAL AND REPLACEMENT OF TAXI GUIDANCE SIGNS ON THE AIRFIELD AND THE ASSOCIATED DUCTS, CABLING AND VAULT WORK.

AIRPORT SECURITY NOTE

1. AIRPORT SECURITY WILL BE MAINTAINED AT ALL TIMES. THE CONTRACTOR WILL CLOSE AND LOCK THE EXISTING ACCESS GATES IN THE HAUL ROUTES AT THE END OF EACH WORKING DAY.

HEIGHT OF CONSTRUCTION EQUIPMENT

1. THE MAXIMUM ANTICIPATED HEIGHT OF THE CONSTRUCTION EQUIPMENT WILL BE 25 FEET. THE TALLEST EQUIPMENT IS EXPECTED TO BE A DUMP TRUCK, CONCRETE TRUCK, OR LINE TRUCK.

HAUL ROUTE AND VEHICLE PARKING

1. THE CONTRACTOR WILL USE THE DESIGNATED HAUL ROUTES AND PARKING AREAS AS SHOWN ON THIS SHEET. THE PROPOSED PARKING AREAS WILL BE APPROXIMATELY 100' X 200'. THE CONTRACTOR WILL BE REQUIRED TO MAINTAIN THE PROPOSED HAUL ROUTES AND PARKING AREAS THROUGHOUT THE COURSE OF THE PROJECT. ANY AREAS DAMAGED OUTSIDE OF THESE AREAS WILL BE REPAIRED BY THE CONTRACTOR AND AT THE CONTRACTOR'S OWN EXPENSE. AT THE CONCLUSION OF THE PROJECT THE CONTRACTOR SHALL RESTORE THE HAUL ROUTES AND PARKING AREAS AS NEEDED TO RESTORE THEM TO THEIR ORIGINAL STATE. RESTORATION OF THE HAUL ROUTES AND PARKING AREAS WILL BE CONSIDERED INCIDENTAL TO THE PROJECT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

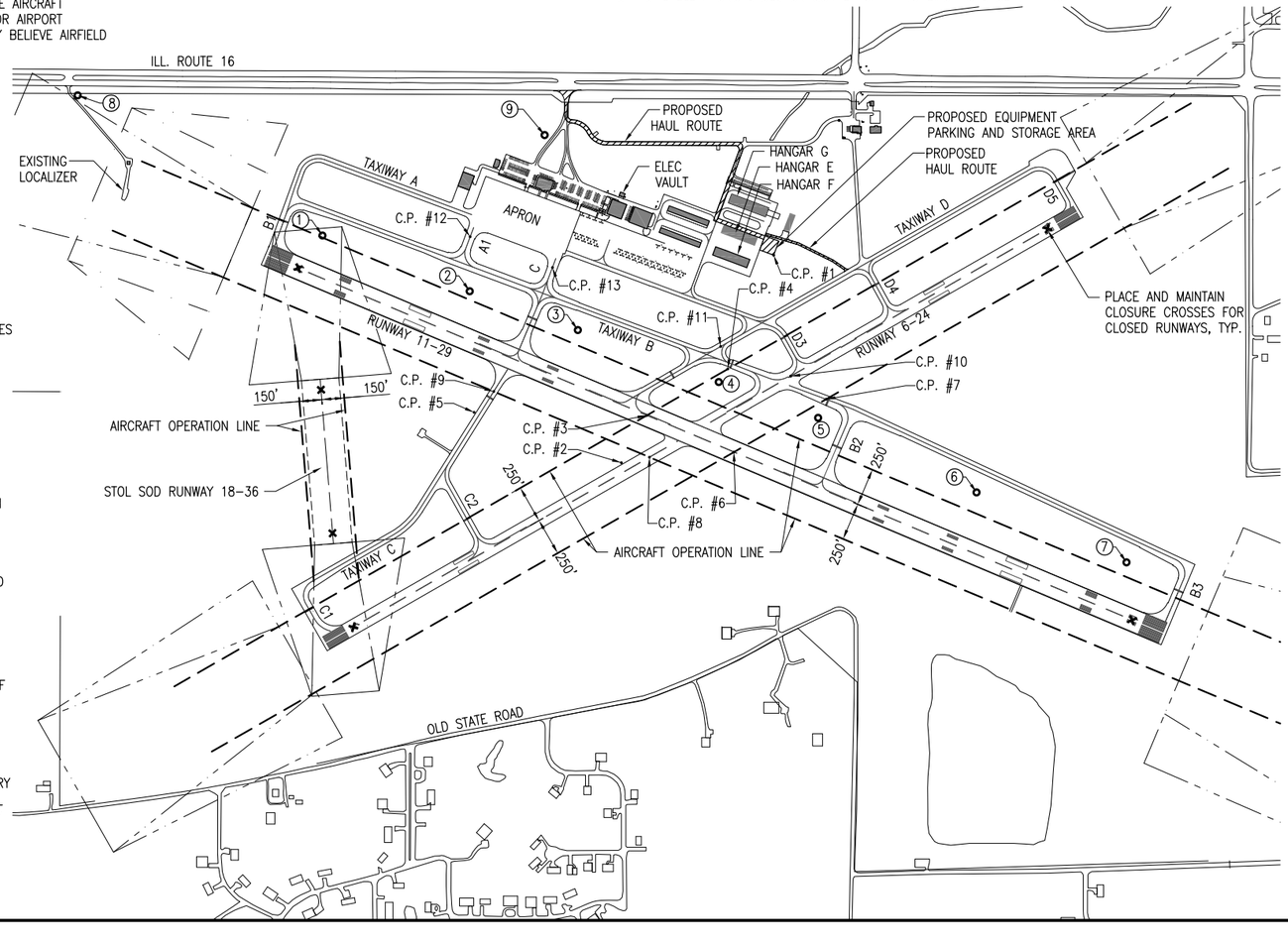
HORIZONTAL AND VERTICAL CONTROL DATA

NO.	DESCRIPTION	NORTHING	EASTING	ELEV.
1	BM 1 – CHISELED X NE CORNER OF INLET FRAME	1,025,082	996,948	707.85
2	BM 2 – CHISELED X NE CORNER OF INLET FRAME	1,024,711	997,928	708.84
3	BM 3 – CHISELED X NE CORNER OF INLET FRAME	1,024,453	998,648	707.22
4	BM 4 – CHISELED X NE CORNER OF INLET FRAME	1,024,108	999,586	712.33
5	BM 5 – CHISELED X NE CORNER OF INLET FRAME	1,023,869	1,000,247	711.49
6	BM 6 – CHISELED X NE CORNER OF INLET FRAME	1,023,373	1,001,301	708.64
7	BM 7 – CHISELED X NE CORNER OF INLET FRAME	1,022,907	1,002,299	708.72
8	NGS – "COLES AIRPORT AZ MK", BRASS DISK	1,026,015.02	995,319.32	–
9	NGS – "COLES AIRPORT", BRASS DISK	1,025,751.34	998,427.68	–

CRITICAL POINT DATA

POINT NUMBER	LATITUDE	LONGITUDE	SITE ELEVATION (MSL)	EQUIPMENT HEIGHT (AGL)	EQUIPMENT ELEVATION (MSL)	WORK AREA
C.P. #1	N039° 28' 52.4556"	W088° 16' 39.7699"	705.00'	25'	730.00'	ALL PHASES
C.P. #2	N039° 28' 38.8171"	W088° 16' 52.7118"	720.30'	25'	745.30'	PHASE 1
C.P. #3	N039° 28' 41.9286"	W088° 16' 50.5449"	717.85'	25'	742.85'	PHASE 2
C.P. #4	N039° 28' 44.9789"	W088° 16' 43.6719"	715.00'	25'	740.00'	PHASE 2
C.P. #5	N039° 28' 42.1332"	W088° 17' 05.2116"	715.00'	25'	740.00'	PHASE 2
C.P. #6	N039° 28' 39.5101"	W088° 16' 43.1628"	718.64'	25'	743.64'	PHASE 3
C.P. #7	N039° 28' 42.9808"	W088° 16' 35.3353"	715.00'	25'	740.00'	PHASE 3
C.P. #8	N039° 28' 39.1749"	W088° 16' 50.3279"	720.22'	25'	745.22'	PHASE 4
C.P. #9	N039° 28' 43.5038"	W088° 17' 03.5426"	714.50'	25'	739.50'	PHASE 4
C.P. #10	N039° 28' 44.5006"	W088° 16' 38.3269"	715.69'	25'	740.69'	PHASE 5
C.P. #11	N039° 28' 46.4513"	W088° 16' 44.2810"	713.00'	25'	738.00'	PHASE 5
C.P. #12	N039° 28' 53.6817"	W088° 17' 05.5363"	710.00'	25'	735.00'	PHASE 6
C.P. #13	N039° 28' 51.6521"	W088° 16' 58.5497"	709.00'	25'	734.00'	PHASE 6

1. SEE SAFETY AND PHASING PLAN FOR RESPECTIVE WORK AREA FOR ADDITIONAL INFORMATION.
2. COORDINATES SHOWN ARE NAD 83.
3. SITE ELEVATIONS BASED ON SURVEY DATA AND EXISTING BASE MAPPING.



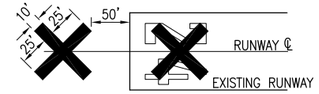
J.U.L.I.E. INFORMATION

COUNTY_____COLES
CITY_____MATTOON
TOWNSHIP_____LAFAYETTE
SECTION NO._____14, 15, 22 & 23
ADDRESS_____COLES COUNTY MEMORIAL AIRPORT
432 AIRPORT ROAD
MATTOON, ILLINOIS 61938

LEGEND

- EXISTING PAVEMENTS
- PROPOSED IMPROVEMENTS
- EXISTING BUILDINGS
- PROPOSED HAUL ROUTE AND EQUIPMENT PARKING AREA
- AIRCRAFT OPERATION LINE
- (1) SURVEY CONTROL MONUMENT

0' 250' 500' 1000'
HALF SIZE SCALE: 1"= 1000'
FULL SIZE SCALE: 1"= 500'



YELLOW IN COLOR

DETAIL OF CROSS FOR CLOSED RUNWAY

"NOT TO SCALE"

NOTE:

1. THE CROSSES WILL BE YELLOW IN COLOR AND SHALL BE MADE OF A SUITABLE MATERIAL AS APPROVED BY THE AIRPORT MANAGER. ON RUNWAY 6–24 THE CROSSES WILL BE PLACED OVER THE NUMERALS. ON RUNWAY 11–29 THE CROSSES WILL BE PLACED OVER THE NUMERALS UNLESS SHOWN OTHERWISE. THE CROSSES WILL BE SECURED IN A MANNER APPROVED BY THE AIRPORT MANAGER. THE PROPOSED CROSSES WILL BE PLACED EACH DAY THE RUNWAY IS CLOSED AND REMOVED WHEN THE RUNWAY IS RE–OPENED. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE PLACEMENT AND REMOVAL OF THE CROSSES. COST OF CONSTRUCTING, PLACING, MAINTAINING AND REMOVING CROSSES WILL BE PAID FOR UNDER ITEM AR800497 CONSTRUCTION SAFETY AND PHASING, PER LUMP SUM.

UTILITY NOTE

1. THE LOCATION, SIZE, AND TYPE OF MATERIAL OF EXISTING UNDERGROUND AND/OR ABOVEGROUND UTILITIES INDICATED ON THE PLANS ARE NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. NEITHER THE OWNER NOR THE ENGINEER ASSUMES ANY RESPONSIBILITY WHATEVER IN RESPECT TO THE ACCURACY, COMPLETENESS, OR SUFFICIENCY OF THE INFORMATION. THERE IS NO GUARANTEE, EITHER EXPRESSED OR IMPLIED, THAT THE LOCATIONS, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND UTILITIES INDICATED ARE REPRESENTATIVE OF THOSE TO BE ENCOUNTERED IN THE CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES OF HIS OPERATIONAL PLANS AND SHALL OBTAIN FROM THE RESPECTIVE UTILITY COMPANIES DETAILED INFORMATION AND ASSISTANCE RELATIVE TO THE LOCATION OF THEIR FACILITIES AND THE WORKING SCHEDULE OF THE COMPANIES FOR REMOVAL OR ADJUSTMENT WHERE REQUIRED. IN THE EVENT AN UNEXPECTED UTILITY INTERFERENCE IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY COMPANY OF JURISDICTION. THE OWNER'S REPRESENTATIVE AND/OR THE RESIDENT ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY DAMAGE TO SUCH MAINS AND SERVICES SHALL BE RESTORED TO SERVICE AT ONCE AND PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT. ALL UTILITY CABLES AND LINES SHALL BE LOCATED BY THE RESPECTIVE UTILITY. **CONTACT JULIE (JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS) FOR UTILITY INFORMATION, PHONE: 1–800–892–0123.** CONTACT THE FAA (FEDERAL AVIATION ADMINISTRATION) FOR ASSISTANCE IN LOCATING FAA CABLES AND UTILITIES. LOCATION OF FAA POWER, CONTROL, AND COMMUNICATION CABLES SHALL BE COORDINATED WITH AND/OR LOCATED BY THE FAA. ALSO CONTACT AIRPORT DIRECTOR/MANAGER AND AIRPORT PERSONNEL FOR ASSISTANCE IN LOCATING UNDERGROUND AIRPORT CABLES AND/OR UTILITIES. ALSO COORDINATE WORK WITH ALL ABOVEGROUND UTILITIES.

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COLES COUNTY AIRPORT AUTHORITY
COLES COUNTY MEMORIAL AIRPORT

REMOVE AND REPLACE ALL TAXI GUIDANCE SIGNS ON THE AIRPORT

IDA No: MTO-4511

SBG Project No: 3-17-SBGP-XX

Contract No. CO062

NO.	DATE	DESCRIPTION	DES	DWN	REV

ISSUE: APRIL 15, 2016
PROJECT NO: 13A0121D
CAD FILE: C-003-SFY.DWG
DESIGN BY: KNL 02/17/2016
DRAWN BY: MLH 02/26/2016
REVIEWED BY: LDH 03/08/2016

SHEET TITLE

PROPOSED SAFETY PLAN

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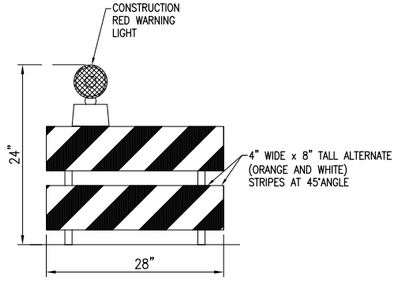
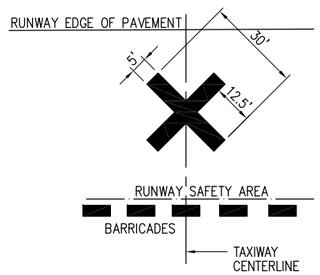


MODIFIED TYPE II BARRICADE

NOT TO SCALE

BARRICADE NOTES

1. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO PLACE AND MAINTAIN BARRICADES AS SHOWN ON THE PLANS AND AS DIRECTED BY THE AIRPORT MANAGER.
2. ALL CONSTRUCTION SIGNS AND TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES INCLUDING THE ILLINOIS SUPPLEMENT (LATEST EDITION) AND THE FAA ADVISORY CIRCULARS (LATEST EDITION) UNLESS NOTED OTHERWISE. THE FAA OR MORE STRINGENT SPECIFICATIONS SHALL GOVERN.
3. MODIFIED TYPE II BARRICADES SHALL BE SPACED END TO END THE WIDTH OF THE PAVEMENT IN 4' INCREMENTS AS DIRECTED BY THE ENGINEER. BARRICADES ARE TO BE SET BACK 93' FROM THE ACTIVE TAXIWAY CENTERLINE OR AS SHOWN ON THE PLANS.
4. CONSTRUCTION RED WARNING LIGHT: THESE ARE PORTABLE, LENS DIRECTED, ENCLOSED LIGHTS. THE COLOR OF THE LIGHT EMITTED SHALL BE RED. THEY MAY BE USED IN EITHER A STEADY BURN (TYPE C) OR LOW INTENSITY FLASHING MODE (TYPE A) UNLESS NOTED OTHERWISE.
5. THE LIGHTING SHALL BE MAINTAINED IN OPERATION DURING THE HOURS OF DARKNESS BETWEEN 1/2 HOUR AFTER SUNSET AND 1/2 HOUR BEFORE SUNRISE AND WHEN CONDITIONS EXIST WHICH TEND TO OBSCURE VISION.
6. BARRICADES SHALL BE SECURED TO THE GROUND BY APPROVED METHODS TO PREVENT MOVEMENT BY PROP WASH, JET BLAST OR OTHER WIND CURRENTS.
7. THE COLOR COMBINATION ON TYPE II BARRICADES IS ORANGE AND WHITE. THE ORANGE STRIPES SHALL BE ENCAPSULATED LENS REFLECTIVE SHEETING. THE WHITE STRIPES SHALL BE EITHER ENCAPSULATED OR ENCLOSED LENS REFLECTIVE SHEETING AND MUST BE IN ACCEPTABLE CONDITION.
8. COST FOR PLACING, MAINTAINING, AND REMOVING BARRICADES WILL BE PAID FOR UNDER ITEM AR800497 CONSTRUCTION SAFETY AND PHASING, PER LUMP SUM.



1. TEMPORARY "CLOSED TAXIWAY" MARKINGS SHALL BE "AVIATION YELLOW"
2. TEMPORARY "CLOSED TAXIWAY" MARKINGS SHALL BE CONSTRUCTED USING TEMPORARY PAINT SUCH AS SEYMOUR TEMPORARY MARKER, PART NO. 20-636, OR AN EQUIVALENT PAINT EASILY REMOVED WITH WATER WITHOUT DEFACING THE PAVEMENT.
3. TEMPORARY "CLOSED TAXIWAY" MARKINGS SHALL BE PLACED WHEN THE RUNWAY IS OPEN AND THE TAXIWAY IS CLOSED MORE THAN 72 HOURS. THE "CLOSED TAXIWAY" MARKINGS SHALL BE PLACED AS SHOWN ON THIS SHEET.
4. THE PROPOSED CROSSES WILL BE PLACED EACH DAY THE TAXIWAY IS CLOSED AND REMOVED WHEN THE TAXIWAY IS RE-OPENED. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE PLACEMENT AND REMOVAL OF THE CROSSES. "CLOSED TAXIWAY" MARKINGS SHALL NOT BE A PAY ITEM BUT WILL BE PAID FOR UNDER ITEM AR800497 CONSTRUCTION SAFETY AND PHASING, PER LUMP SUM.

TEMPORARY TAXIWAY CLOSURE CROSS DETAIL

NOT TO SCALE

GENERAL NOTES

1. THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIAL, EQUIPMENT, AND TRANSPORTATION NECESSARY TO CONSTRUCT ALL ELEMENTS OF THE PROJECT AS DESCRIBED IN THE CONSTRUCTION PLANS AND SPECIFICATIONS.
2. THE RULES, REGULATIONS, AND SPECIFICATIONS NOTED HEREIN SHALL BE CONSIDERED AS MINIMUM REQUIREMENTS. THEY SHALL NOT PROHIBIT THE CONTRACTOR FROM FURNISHING AND INSTALLING HIGHER GRADES OF MATERIAL THAN ARE SPECIFIED HEREIN.
3. THE CONSTRUCTION ENTRANCES AS SHOWN ON THE SAFETY PLAN SHALL BE USED FOR THE PROJECT. ACCESS TO THE PROJECT FOR ALL HAULING OF MATERIALS AND EQUIPMENT SHALL BE RESTRICTED TO THE DESIGNATED CONSTRUCTION ENTRANCES AND HAUL ROUTES. ACCESS TO THE WORK AREAS FROM THE STAGING AREA SHALL BE COORDINATED WITH THE RESIDENT ENGINEER/RESIDENT TECHNICIAN AND AIRPORT MANAGEMENT.
4. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT, PRESERVE AND REPAIR THE EXISTING AIRFIELD AND ROADWAY PAVEMENTS AT ALL TIMES. THE CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING ELECTRICAL, DRAINAGE, AND PAVEMENT STRUCTURES AT NO ADDITIONAL COST TO THE CONTRACT.
5. CONTRACTOR IS REQUIRED TO PROVIDE THEIR OWN RESTROOM FACILITIES.
6. UNLESS OTHERWISE NOTED, ALL DISTURBED AREAS OUTSIDE OF THE PROPOSED CONSTRUCTION LIMITS SHALL BE GRADED, SEEDED AND/OR HYDROMULCH SEEDED AT NO ADDITIONAL COST TO THE CONTRACT.
7. ALL WASTE MATERIAL SHALL BE HAULED FROM THE AIRPORT AND PROPERLY DISPOSED OF UNLESS OTHERWISE SPECIFIED HEREIN.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING PERMITS FOR HAULING ON PUBLIC ROADS, AS APPLICABLE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTING ANY DAMAGES TO ANY PAVEMENTS (PUBLIC OR PRIVATE) CAUSED BY HIS/HER CONSTRUCTION EQUIPMENT OR PERSONNEL.
9. THE OWNER SHALL HAVE THE RIGHT OF FIRST REFUSAL FOR ALL SALVAGEABLE MATERIAL REMOVED ON THE PROJECT.
10. THE CONTRACTOR SHALL PROVIDE ONE SET OF REDLINED RECORD DRAWINGS TO THE RESIDENT ENGINEER/RESIDENT TECHNICIAN AT THE COMPLETION OF THE PROJECT.
11. CONTRACTOR SHALL NOTE THAT ALL AREAS WITHIN THE AIRPORT PROPERTY LINE AND OUTSIDE THE CONSTRUCTION LIMITS MAY BE USED FOR AGRICULTURAL PURPOSES. THE CONSTRUCTION LIMITS SHALL BE RESTRICTED TO AREAS THAT ARE ABSOLUTELY NECESSARY TO DISTURB TO COMPLETE THE REQUIRED WORK ITEMS. LIMITS SHALL BE COORDINATED WITH THE RESIDENT ENGINEER PRIOR TO BEGINNING ANY WORK. ALL AREAS WHICH HAVE BEEN FARMED AND OR DESIGNATED TO BE FARMED AFTER THE PROJECT COMPLETION, AND HAVE BEEN DISTURBED BY CONSTRUCTION ACTIVITY, SHALL BE CHISEL PLOWED (36" MAX.) OR OTHERWISE SCARIFIED TO RETURN THE AREA TO A REASONABLE TILLABLE CONDITION (IF SO PERMITTED BY THE AIRPORT MANAGER.)
12. CONTRACTOR SHALL RESTORE TO ORIGINAL CONDITION ALL GRASS, STONE, OR PAVEMENT DISTURBED BY CONTRACTOR'S CONSTRUCTION OPERATIONS, STAGING, AND CONSTRUCTION ACCESS ROUTES. DISTURBED AREAS WILL BE REPAIRED, GRADED, MULCHED AND SEEDED UNLESS OTHERWISE NOTED. STAGING AREA AND SITE ACCESS RESTORATION SHALL BE INCLUDED IN THE COST OF THE PROJECT.
13. THE PROJECT PAY ITEMS ARE INTENDED TO BE INCLUSIVE OF ALL WORK TO BE PERFORMED AS SHOWN IN THESE PLANS. ALL INCIDENTAL WORK REQUIRED TO COMPLETE THE PROJECT TO THE SATISFACTION OF THE RESIDENT ENGINEER/RESIDENT TECHNICIAN IS TO BE INCLUDED IN THE COSTS OF PERFORMING THESE ITEMS.
14. APPROXIMATE LOCATIONS OF UNDERGROUND UTILITIES ARE SHOWN THROUGHOUT THESE PLANS. THE CONTRACTOR SHALL DETERMINE EXACT LOCATIONS AND PROTECT THESE UTILITIES DURING CONSTRUCTION. ANY UTILITIES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. CONTRACTOR SHALL COORDINATE WITH THE PROPER PERSONS FOR THE PURPOSE OF LOCATING AND PROTECTING EXISTING UNDERGROUND UTILITIES.
15. THE CONTRACTOR MUST AT ALL TIMES MAINTAIN PROPER DRAINAGE FOR ALL AREAS AFFECTED BY HIS WORK.

SAFETY NOTES

1. FOLLOWING ARE THE CONSTRUCTION SAFETY PROCEDURES THAT THE CONTRACTOR SHALL FOLLOW THROUGHOUT THIS PROJECT. ADDITIONAL REQUIREMENTS ARE SHOWN ON THE SAFETY AND PHASING NOTES AND DETAILS SHEET.
2. ALL PROVISIONS OF THE LATEST EDITION OF FAA ADVISORY CIRCULAR AC 150/5370-2 (CURRENT EDITION), "OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION", APPLY TO THIS CONTRACT, EXCEPT AS MODIFIED BY THIS SAFETY PLAN, OR AS MODIFIED BY THE OWNER THROUGH THE RESIDENT ENGINEER AT THE PRECONSTRUCTION CONFERENCE, OR DURING THE COURSE OF THE CONTRACT.
3. THE CONTRACTORS SHALL MINIMIZE DISRUPTION OF STANDARD OPERATING PROCEDURES FOR AERONAUTICAL ACTIVITY BY REMAINING WITHIN THE PRESCRIBED STAGING, CONSTRUCTION, AND PHASING AREAS PRESENTED ON THE PROJECT SAFETY AND PHASING PLANS.
4. NO UNAUTHORIZED PERSONNEL SHALL ENTER ANY AREA OF THE AIRPORT THAT COULD POTENTIALLY BE HAZARDOUS. THE ENGINEER, ENGINEER'S REPRESENTATIVE AND/OR AIRPORT MANAGER RESERVE THE RIGHT TO SUSPEND OPERATIONS IN ORDER TO MAINTAIN SAFETY AT THE AIRPORT.
5. CONTRACTOR EQUIPMENT, VEHICLES, AND PROJECT MATERIALS SHALL BE STORED AT THE STAGING AREA SHOWN ON THE PLAN VIEW, EXCEPT AS OTHERWISE PROVIDED FOR AT THE PRECONSTRUCTION CONFERENCE.
6. ALL CONSTRUCTION EQUIPMENT OPERATING IN THE PRESCRIBED CONSTRUCTION AREA IS REQUIRED TO DISPLAY A CHECKERBOARD FLAG PROPERLY LOCATED AND/OR A ROTATING BEACON (STROBE) AS SPECIFIED IN AC 150/5210-5, "PAINTING, MARKING, AND LIGHTING OF VEHICLES USED ON AN AIRPORT" LATEST EDITION.
7. NO CONSTRUCTION MATERIAL STOCKPILES SHALL BE LOCATED WITHIN 250' OF RUNWAYS 11-29 AND 6-24 CENTERLINE WHEN ACTIVE, WITHIN 93' OF AN ACTIVE TAXIWAY CENTERLINE, WITHIN 81' OF AN ACTIVE TAXI LANE CENTERLINE, OR PENETRATE A PART 77 IMAGINARY SURFACE (PROVIDED BY THE ENGINEER) EXTENDING OUT AND UPWARDS FROM ALL SIDES OF AN ACTIVE RUNWAY.
8. CLOSED AIRFIELD PHASING AREAS, OPEN TRENCHES, AND STOCKPILED MATERIALS AT THE CONSTRUCTION SITE SHALL BE PROMINENTLY MARKED WITH LIGHTED BARRICADES WITH STEADY BURNING OR FLASHING RED LIGHTS AS SPECIFIED IN 150/5370-2, "OPERATIONAL SAFETY ON AIRPORT DURING CONSTRUCTION, LATEST EDITION. LIGHTED BARRICADES MUST BE NO TALLER THAN 24" (EXCLUSIVE OF SUPPLEMENTARY LIGHTS) ON THE TAXIWAYS AND COMPLY WITH ADVISORY CIRCULAR 150/5370-2, LATEST EDITION. CONTRACTOR SHALL NIGHT CHECK BARRICADES DAILY FOR PROPER OPERATION.
9. NO OPEN TRENCHES WITHIN 250' OF RUNWAYS 11-29 AND 6-24 CENTERLINE WHEN ACTIVE, WITHIN 93' OF AN ACTIVE TAXIWAY CENTERLINE, OR WITHIN 81' OF AN ACTIVE TAXI LANE CENTERLINE, WILL BE PERMITTED. OTHER TRENCHES SHALL BE MAINTAINED SAFE, I.E., BARRICADED OR COVERED WITH STEEL PLATES IN ALL OTHER AREAS.
10. OPEN TRENCHES, EXCAVATIONS, AND STOCKPILED MATERIALS AT THE CONSTRUCTION SITE SHOULD BE PROMINENTLY MARKED WITH ORANGE FLAGS AND LIGHTED WITH FLASHING YELLOW LIGHTS DURING HOURS OF RESTRICTED VISIBILITY AND/OR DARKNESS.
11. NO OPEN FLAME WELDING OR TORCH CUTTING OPERATION IS PERMITTED UNLESS ADEQUATE FIRE AND SAFETY PRECAUTIONS ARE PROVIDED AND HAVE BEEN APPROVED BY THE AIRPORT MANAGER. NO FLARE POTS ARE ALLOWED ON THE PROJECT.
12. SOIL, DEBRIS, AND LOOSE MATERIAL DROPPED OR TRUCKED ONTO AIRPORT ROADS, TAXIWAYS, AND SOD SURFACES, OR WHICH CAN BE BLOWN ONTO SUCH SURFACES, SHALL BE IMMEDIATELY SWEPT, PICKED UP AND REMOVED, OR PLACED INTO CLOSED CONTAINERS. ANY DAMAGE TO AIRPORT PROPERTY SHALL BE REPAIRED IMMEDIATELY AT NO COST TO THE OWNER.
13. EACH CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND MAINTAINING AIRPORT LIGHTING AND NAVIGATIONAL ELECTRICAL SYSTEMS DURING CONSTRUCTION. A CONTACT PERSON AND TELEPHONE NUMBER FOR 24 HOUR EMERGENCY IMMEDIATE REPAIR SHALL BE SUBMITTED TO THE AIRPORT MANAGER AND ENGINEER. HAUL ROUTES CROSSING PAVEMENT, DRAINAGE, MISCELLANEOUS. STRUCTURES AND/OR AIRFIELD CABLES SHALL BE PROTECTED FROM DAMAGE.
14. ALL AIRCRAFT AND AIRPORT OPERATIONS HAVE THE RIGHT-OF-WAY. CONTRACTOR TO YIELD TO VEHICLES AND REMAIN CLEAR AT ALL TIMES.
15. CONTRACTOR SHALL PLACE, SECURE, AND MAINTAIN LIGHTED BARRICADES AND CLOSURE CROSSES WHEN A RUNWAY/TAXIWAY/APRON IS CLOSED OR AS REQUIRED BY THE PLANS AND DESIGNATED BY THE ENGINEER.
16. CONTRACTOR SHALL MARK HAZARDOUS AREA WITH STEADY-BURNING OR FLASHING RED AND YELLOW LIGHTS DURING PERIODS OF LOW VISIBILITY AS REQUIRED.
17. THE CONTRACTOR SHALL PERIODICALLY PERFORM ONSITE INSPECTIONS THROUGHOUT THE DURATION OF THE PROJECT WITH THE IMMEDIATE REMEDY OF ANY DIFFERENCES, WHETHER CAUSED BY NEGLIGENCE, OVERSIGHT, OR PROJECT SCOPE CHANGE.
18. CONTRACTOR SHALL MOVE MAINTENANCE OF TRAFFIC COMPONENTS AT THE DIRECTION OF THE AIRPORT MANAGER AND/OR THE RESIDENT ENGINEER/RESIDENT TECHNICIAN AT NO ADDITIONAL COST.
19. CONTRACTOR SHALL NOT REMOVE THE BARRICADES WITHOUT THE APPROVAL BY THE AIRPORT MANAGER AND/OR RESIDENT ENGINEER/RESIDENT TECHNICIAN.
20. CONTRACTOR SHALL MAINTAIN FLASHERS, SIGNS AND/OR BARRICADES AS REQUIRED BY THE PLANS, CITY OR COUNTY REGULATIONS OR CONTRACTOR ACTIVITIES. CONTRACTOR SHALL OBTAIN ANY AND ALL REQUIRED LOCAL PERMITS UNLESS SPECIFIED OTHERWISE.
21. THE CONTRACTOR SHALL UTILIZE WATER AND/OR CHEMICALS APPROVED BY THE ENGINEER AS NECESSARY TO CONTROL DUST.
22. CONSTRUCTION EQUIPMENT OR CONSTRUCTION ACTIVITY WILL NOT BE PERMITTED WITHIN THE RUNWAY SAFETY AREA OF ANY ACTIVE RUNWAY CENTERLINE OR WITHIN THE OBJECT FREE AREA OF AN ACTIVE TAXIWAY OR APRON.
23. UNLESS SPECIFIED OTHERWISE, COST FOR THE ABOVE WILL BE PAID FOR UNDER ITEM AR800497 CONSTRUCTION SAFETY AND PHASING, PER LUMP SUM.

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COLES COUNTY AIRPORT AUTHORITY
COLES COUNTY MEMORIAL AIRPORT

REMOVE AND REPLACE ALL TAXI GUIDANCE SIGNS ON THE AIRPORT

IDA No: MTO-4511

SBG Project No: 3-17-SBGP-XX

Contract No. CO062

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

ISSUE: APRIL 15, 2016
PROJECT NO: 13A0121D
CAD FILE: G-004-NOTES.DWG
DESIGN BY: KNL 02/17/2016
DRAWN BY: RAD 02/29/2016
REVIEWED BY: KNL 03/08/2016

SHEET TITLE

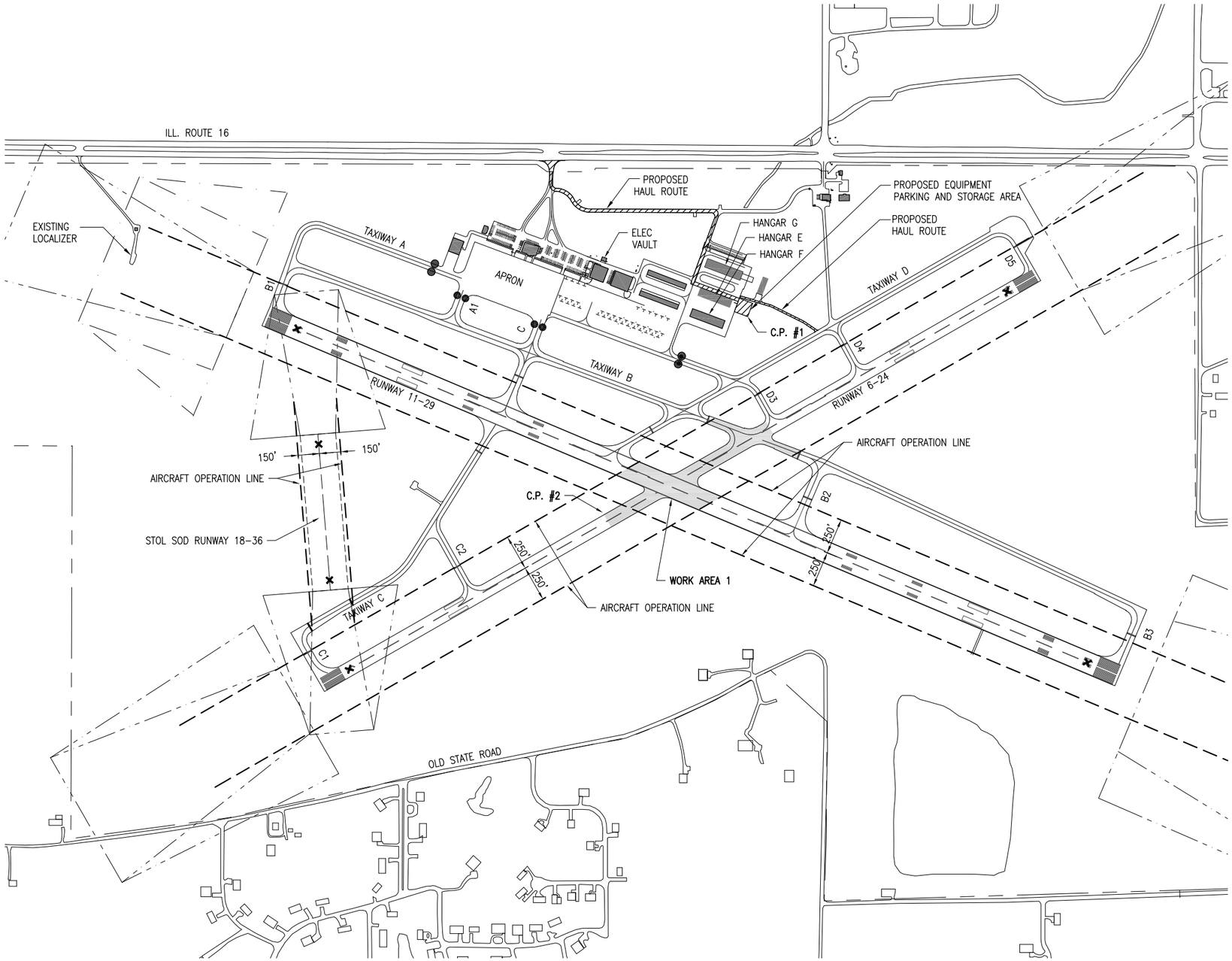
PROPOSED SAFETY PLAN NOTES

APR 19, 2016 10:35 AM HARRI01115
I:\13JOBS\13A0121\13A0121D\CAD\AIRPORT\SHEET\G-004-NOTES.DWG

RUNWAY/TAXIWAY CLOSURE DISTANCES	
LOCATION	DISTANCE FROM CENTERLINE
RUNWAY 11–29	250 FT.
RUNWAY 6–24	250 FT.
STOL SOD RUNWAY 18–36	150 FT.
ALL TAXIWAYS	93 FT.
ALL TAXI LANES	81 FT.

CRITICAL POINT DATA

1. SEE "PROPOSED SAFETY PLAN" FOR CRITICAL POINT DATA.



WORK AREA 1 NOTES

1. WORK AREA 1 INCLUDES REMOVAL AND INSTALLATION OF TAXI GUIDANCE SIGNS AND THE ASSOCIATED WORK AT THE INTERSECTION OF RUNWAY 11–29 AND RUNWAY 6–24, AND THE INTERSECTION OF TAXIWAY B AND RUNWAY 6–24. RUNWAY 11–29 AND THE ASSOCIATED TAXIWAYS WILL BE CLOSED DURING THE CONSTRUCTION WEEK AND REOPENED AT THE END OF EACH CONSTRUCTION WEEK. RUNWAY 6–24 WILL BE CLOSED FOR THE CONSTRUCTION WEEK OR THE RESPECTIVE CONSTRUCTION DURATION OF WORK AREA 1 WHICHEVER IS LESS. THE APRON WILL BE OPEN DURING THIS PHASE. RUNWAY 18–36 WILL BE CLOSED DURING THIS PHASE.
2. DURING THE TIME OF THE RUNWAY CLOSURES CONDUIT BORING INSTALLATION MAY BE DONE ON TAXIWAYS B1, B2, B3, C, C1, C2, D, D3, D4, AND D5 SIMULTANEOUSLY WITH THE WORK AT THE INTERSECTION OF RUNWAY 11–29 AND RUNWAY 6–24, AND THE INTERSECTION OF TAXIWAY B AND RUNWAY 6–24. TAXIWAYS WILL BE CLOSED ANY TIME WORK IS BEING PERFORMED WITHIN 93' OF A TAXIWAY CENTERLINE. PROVIDE BARRICADES FOR CLOSED TAXIWAYS.
3. IT IS ANTICIPATED THAT WORK IN THE ELECTRICAL VAULT WILL OCCUR CONCURRENTLY WITH WORK ON THE AIRFIELD. THEREFORE THE VAULT WORK SHALL BE COMPLETED WITHIN THE OVERALL PROJECT CONTRACT TIME.
4. CLOSURE CROSSES AND BARRICADES SHALL BE IN PLACE PRIOR TO BEGINNING CONSTRUCTION.
5. RUNWAY 11–29 WILL BE NOTAMED "CLOSED". THE CONTRACTOR SHALL COORDINATE WITH THE AIRPORT AT LEAST 48 HOURS BEFORE BEGINNING THIS PHASE SO THAT NOTAMS MAY BE COORDINATED.
6. RUNWAY 6–24 WILL BE NOTAMED "CLOSED". THE CONTRACTOR SHALL COORDINATE WITH THE AIRPORT AT LEAST 48 HOURS BEFORE BEGINNING THIS PHASE SO THAT NOTAMS MAY BE COORDINATED.

6. RUNWAY 18–36 WILL BE NOTAMED "CLOSED". THE CONTRACTOR SHALL COORDINATE WITH THE AIRPORT AT LEAST 48 HOURS BEFORE BEGINNING THIS PHASE SO THAT NOTAMS MAY BE COORDINATED.

7. AT ALL TIMES THE CONTRACTOR'S OPERATIONS SHALL BE SUCH AS TO MINIMIZE CLOSURES.
8. WHEN A RUNWAY IS CLOSED THE RESPECTIVE RUNWAY LIGHTING AND NAVAIDS FOR THAT RUNWAY SHALL BE SHUT OFF. COORDINATE SHUT OFF OF NAVAIDS WITH THE AIRPORT MANAGER.
9. THE AIRPORT WILL REMAIN OPEN DURING ALL CONSTRUCTION PHASES TO ACCOMMODATE AGRICULTURAL AIR OPERATIONS AND HELICOPTER OPERATIONS. THE AIRPORT MANAGER WILL RETAIN THE RIGHT TO OPEN TAXIWAY A OR TAXIWAY D WHERE NECESSARY TO ACCOMMODATE AGRICULTURAL AIR OPERATIONS.
10. WHERE CONTRACTOR HAS MULTIPLE CREWS, THEY MAY WORK IN WORK AREAS 1 & 6 SIMULTANEOUSLY.
11. MAINTAIN ARFF (AIRCRAFT RESCUE AND FIRE FIGHTING) FACILITY ACCESS TO THE AIRFIELD FOR ALL PHASES OF WORK. CONTRACTOR SHALL COORDINATE LOCATIONS AND SPACING OF BARRICADES WITH THE AIRPORT MANAGER TO MAINTAIN ARFF EMERGENCY ACCESS ROUTES TO THE AIRFIELD. THE MATTOON FIRE DEPARTMENT ARFF FACILITY PERSONNEL WILL COORDINATE WITH THE AIRPORT MANAGER THROUGHOUT THE TAXI SIGN REPLACEMENT PROJECT.

N

0' 200' 400' 800'

HALF SIZE SCALE: 1"= 800'
FULL SIZE SCALE: 1"= 400'

LEGEND

- EXISTING PAVEMENTS
- PROPOSED WORK AREA
- EXISTING BUILDINGS
- PROPOSED HAUL ROUTE AND EQUIPMENT PARKING AREA
- AIRCRAFT OPERATION LINE
- PROPOSED BARRICADES

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COLES COUNTY AIRPORT AUTHORITY
COLES COUNTY MEMORIAL AIRPORT

REMOVE AND REPLACE ALL TAXI GUIDANCE SIGNS ON THE AIRPORT

IDA No: MTO-4511

SBG Project No: 3-17-SBGP-XX

Contract No. CO062

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

ISSUE: APRIL 15, 2016
PROJECT NO: 13A0121D
CAD FILE: C-004-SFY1.DWG
DESIGN BY: KNL 02/17/2016
DRAWN BY: RAD 02/26/2016
REVIEWED BY: LDH 03/08/2016

SHEET TITLE

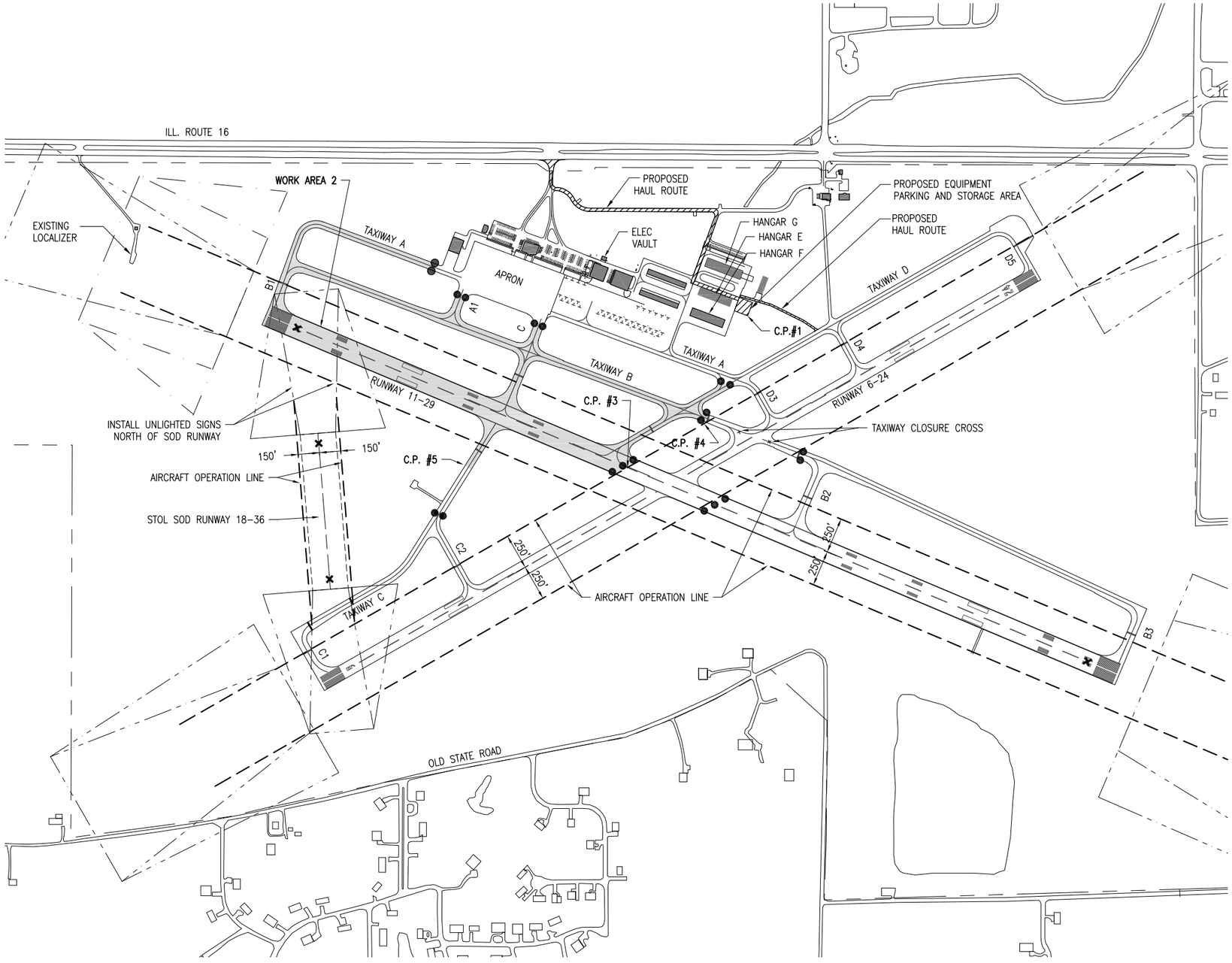
PROPOSED SAFETY AND PHASING PLAN WORK AREA 1

APR 19, 2016 10:36 AM HARRI01115
I:\13JOBS\13A0121\13A0121D\CAD\AIRPORT\SHEET\C-004-SFY1.DWG

RUNWAY/TAXIWAY CLOSURE DISTANCES	
LOCATION	DISTANCE FROM CENTERLINE
RUNWAY 11–29	250 FT.
RUNWAY 6–24	250 FT.
STOL SOD RUNWAY 18–36	150 FT.
ALL TAXIWAYS	93 FT.
ALL TAXI LANES	81 FT.

CRITICAL POINT DATA

1. SEE "PROPOSED SAFETY PLAN" FOR CRITICAL POINT DATA.



WORK AREA 2 NOTES

1. WORK AREA 2 INCLUDES REMOVAL AND INSTALLATION OF TAXI GUIDANCE SIGNS AND THE ASSOCIATED WORK ON RUNWAY 11–29 AND TAXIWAY B WEST OF RUNWAY 6–24 AND THE WEST PORTION OF TAXIWAY A WEST OF THE RURAL KING HANGAR. IT ALSO WILL INCLUDE REMOVAL AND INSTALLATION OF TAXI GUIDANCE SIGNS NORTH OF THE STOL (SHORT TAKE OFF AND LANDING) TURF RUNWAY 18–36. RUNWAY 11–29 AND THE ASSOCIATED TAXIWAYS WILL BE CLOSED DURING THE CONSTRUCTION WEEK AND REOPENED ON THE WEEKENDS OR AT THE END OF EACH CONSTRUCTION WEEK. RUNWAY 6–24 WILL BE OPEN DURING THIS PHASE. THE APRON AND TAXIWAY A EAST OF THE APRON WILL BE OPEN DURING THIS PHASE. RUNWAY 18–36 WILL BE CLOSED DURING THIS PHASE.
2. IT IS ANTICIPATED THAT WORK IN THE ELECTRICAL VAULT WILL OCCUR CONCURRENTLY WITH WORK ON THE AIRFIELD. THEREFORE THE VAULT WORK SHALL BE COMPLETED WITHIN THE OVERALL PROJECT CONTRACT TIME.
3. CLOSURE CROSSES AND BARRICADES SHALL BE IN PLACE PRIOR TO BEGINNING CONSTRUCTION.
4. RUNWAY 11–29 WILL BE NOTAMED "CLOSED". THE CONTRACTOR SHALL COORDINATE WITH THE AIRPORT AT LEAST 48 HOURS BEFORE BEGINNING THIS PHASE SO THAT NOTAMS MAY BE COORDINATED.
5. RUNWAY 18–36 WILL BE NOTAMED "CLOSED". THE CONTRACTOR SHALL COORDINATE WITH THE AIRPORT AT LEAST 48 HOURS BEFORE BEGINNING THIS PHASE SO THAT NOTAMS MAY BE COORDINATED.
6. AT ALL TIMES THE CONTRACTOR'S OPERATIONS SHALL BE SUCH AS TO MINIMIZE CLOSURES.
7. WHEN A RUNWAY IS CLOSED THE RESPECTIVE RUNWAY LIGHTING AND NAVAIDS FOR THAT RUNWAY SHALL BE SHUT OFF. COORDINATE SHUT OFF OF NAVAIDS WITH THE AIRPORT MANAGER.
8. THE AIRPORT WILL REMAIN OPEN DURING ALL CONSTRUCTION PHASES TO ACCOMMODATE AGRICULTURAL AIR OPERATIONS AND HELICOPTER OPERATIONS.
9. WHERE CONTRACTOR HAS MULTIPLE CREWS, THEY MAY WORK IN WORK AREAS 2 & 3 SIMULTANEOUSLY.
10. WHEN CROSSING AN ACTIVE RUNWAY, CONTRACTOR EMPLOYEES, STAFF, CONCRETE TRUCKS, ETC. SHALL BE ESCORTED ACROSS THE RUNWAY BY THE RESIDENT ENGINEER/RESIDENT TECHNICIAN OR OTHER AIRPORT DESIGNATED AUTHORIZED PERSONNEL.
11. MAINTAIN ARFF (AIRCRAFT RESCUE AND FIRE FIGHTING) FACILITY ACCESS TO THE AIRFIELD FOR ALL PHASES OF WORK. CONTRACTOR SHALL COORDINATE LOCATIONS AND SPACING OF BARRICADES WITH THE AIRPORT MANAGER TO MAINTAIN ARFF EMERGENCY ACCESS ROUTES TO THE AIRFIELD. THE MATTOON FIRE DEPARTMENT ARFF FACILITY PERSONNEL WILL COORDINATE WITH THE AIRPORT MANAGER THROUGHOUT THE TAXI SIGN REPLACEMENT PROJECT.

LEGEND

- EXISTING PAVEMENTS
- PROPOSED WORK AREA
- EXISTING BUILDINGS
- PROPOSED HAUL ROUTE AND EQUIPMENT PARKING AREA
- AIRCRAFT OPERATION LINE
- PROPOSED BARRICADES

N

0' 200' 400' 800'

HALF SIZE SCALE: 1"= 800'
FULL SIZE SCALE: 1"= 400'

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COLES COUNTY AIRPORT AUTHORITY
COLES COUNTY MEMORIAL AIRPORT

REMOVE AND REPLACE ALL TAXI GUIDANCE SIGNS ON THE AIRPORT

IDA No: MTO-4511

SBG Project No: 3-17-SBGP-XX

Contract No. CO062

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

ISSUE: APRIL 15, 2016
PROJECT NO: 13A0121D
CAD FILE: C-005-SFY1.DWG
DESIGN BY: KNL 02/17/2016
DRAWN BY: RAD 02/26/2016
REVIEWED BY: LDH 03/08/2016

SHEET TITLE

PROPOSED SAFETY AND PHASING PLAN WORK AREA 2

APR 19, 2016 10:37 AM HARRI01115
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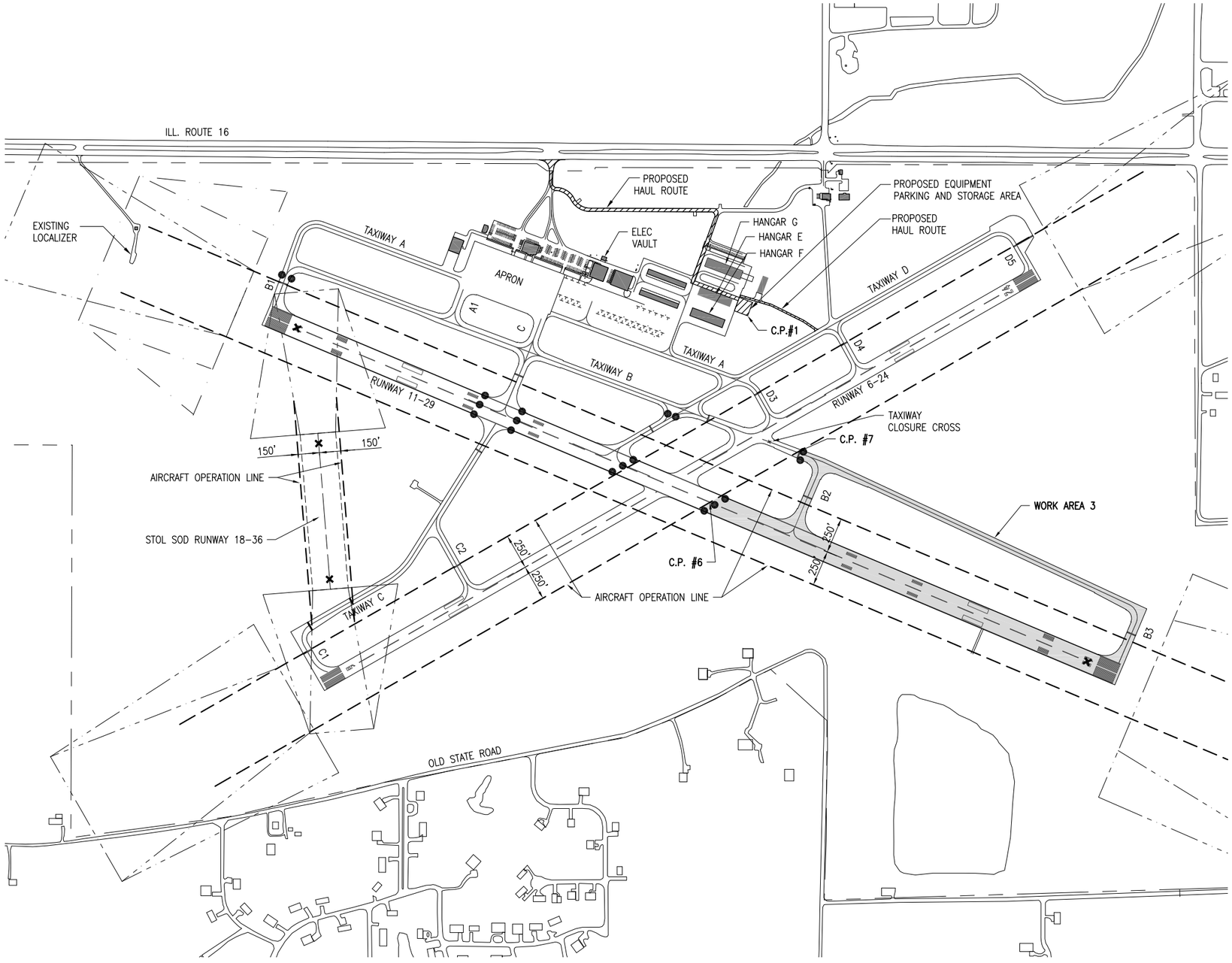
RUNWAY/TAXIWAY CLOSURE DISTANCES	
LOCATION	DISTANCE FROM CENTERLINE
RUNWAY 11–29	250 FT.
RUNWAY 6–24	250 FT.
STOL SOD RUNWAY 18–36	150 FT.
ALL TAXIWAYS	93 FT.
ALL TAXI LANES	81 FT.

CRITICAL POINT DATA

1. SEE "PROPOSED SAFETY PLAN" FOR CRITICAL POINT DATA.



WORK AREA 3 NOTES

1. WORK AREA 3 INCLUDES REMOVAL AND INSTALLATION OF TAXI GUIDANCE SIGNS AND THE ASSOCIATED WORK ON RUNWAY 11–29 AND TAXIWAY B EAST OF RUNWAY 6–24. RUNWAY 11–29 AND THE ASSOCIATED TAXIWAYS WILL BE CLOSED DURING THE CONSTRUCTION WEEK AND REOPENED ON THE WEEKENDS OR AT THE END OF EACH CONSTRUCTION WEEK. RUNWAY 6–24 WILL BE OPEN DURING THIS PHASE. THE APRON AND WILL BE OPEN DURING THIS PHASE. RUNWAY 18–36 WILL BE CLOSED DURING THIS PHASE.
2. IT IS ANTICIPATED THAT WORK IN THE ELECTRICAL VAULT WILL OCCUR CONCURRENTLY WITH WORK ON THE AIRFIELD. THEREFORE THE VAULT WORK SHALL BE COMPLETED WITHIN THE OVERALL PROJECT CONTRACT TIME.
3. CLOSURE CROSSES AND BARRICADES SHALL BE IN PLACE PRIOR TO BEGINNING CONSTRUCTION.
4. RUNWAY 11–29 WILL BE NOTAMED "CLOSED". THE CONTRACTOR SHALL COORDINATE WITH THE AIRPORT AT LEAST 48 HOURS BEFORE BEGINNING THIS PHASE SO THAT NOTAMS MAY BE COORDINATED.
5. RUNWAY 18–36 WILL BE NOTAMED "CLOSED". THE CONTRACTOR SHALL COORDINATE WITH THE AIRPORT AT LEAST 48 HOURS BEFORE BEGINNING THIS PHASE SO THAT NOTAMS MAY BE COORDINATED.
6. AT ALL TIMES THE CONTRACTOR'S OPERATIONS SHALL BE SUCH AS TO MINIMIZE CLOSURES.
7. WHEN A RUNWAY IS CLOSED THE RESPECTIVE RUNWAY LIGHTING AND NAVAIDS FOR THAT RUNWAY SHALL BE SHUT OFF. COORDINATE SHUT OFF OF NAVAIDS WITH THE AIRPORT MANAGER.
8. THE AIRPORT WILL REMAIN OPEN DURING ALL CONSTRUCTION PHASES TO ACCOMMODATE AGRICULTURAL AIR OPERATIONS AND HELICOPTER OPERATIONS.
9. WHERE CONTRACTOR HAS MULTIPLE CREWS, THEY MAY WORK IN WORK AREAS 2 & 3 SIMULTANEOUSLY.
10. WHEN CROSSING AN ACTIVE RUNWAY, CONTRACTOR EMPLOYEES, STAFF, CONCRETE TRUCKS, ETC. SHALL BE ESCORTED ACROSS THE RUNWAY BY THE RESIDENT ENGINEER/RESIDENT TECHNICIAN OR OTHER AIRPORT DESIGNATED AUTHORIZED PERSONNEL.
11. MAINTAIN ARFF (AIRCRAFT RESCUE AND FIRE FIGHTING) FACILITY ACCESS TO THE AIRFIELD FOR ALL PHASES OF WORK. CONTRACTOR SHALL COORDINATE LOCATIONS AND SPACING OF BARRICADES WITH THE AIRPORT MANAGER TO MAINTAIN ARFF EMERGENCY ACCESS ROUTES TO THE AIRFIELD. THE MATTOON FIRE DEPARTMENT ARFF FACILITY PERSONNEL WILL COORDINATE WITH THE AIRPORT MANAGER THROUGHOUT THE TAXI SIGN REPLACEMENT PROJECT.

LEGEND

- EXISTING PAVEMENTS
- PROPOSED WORK AREA
- EXISTING BUILDINGS
- PROPOSED HAUL ROUTE AND EQUIPMENT PARKING AREA
- AIRCRAFT OPERATION LINE
- PROPOSED BARRICADES

N

0' 200' 400' 800'

HALF SIZE SCALE: 1"= 800'
FULL SIZE SCALE: 1"= 400'

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COLES COUNTY AIRPORT AUTHORITY
COLES COUNTY MEMORIAL AIRPORT

REMOVE AND REPLACE ALL TAXI GUIDANCE SIGNS ON THE AIRPORT

IDA No: MTO-4511

SBG Project No: 3-17-SBGP-XX

Contract No. CO062

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

ISSUE: APRIL 15, 2016
PROJECT NO: 13A0121D
CAD FILE: C-006-SFY1.DWG
DESIGN BY: KNL 02/17/2016
DRAWN BY: RAD 02/26/2016
REVIEWED BY: LDH 03/08/2016

SHEET TITLE

PROPOSED SAFETY AND PHASING PLAN WORK AREA 3

APR 19, 2016 10:37 AM HARRI01115
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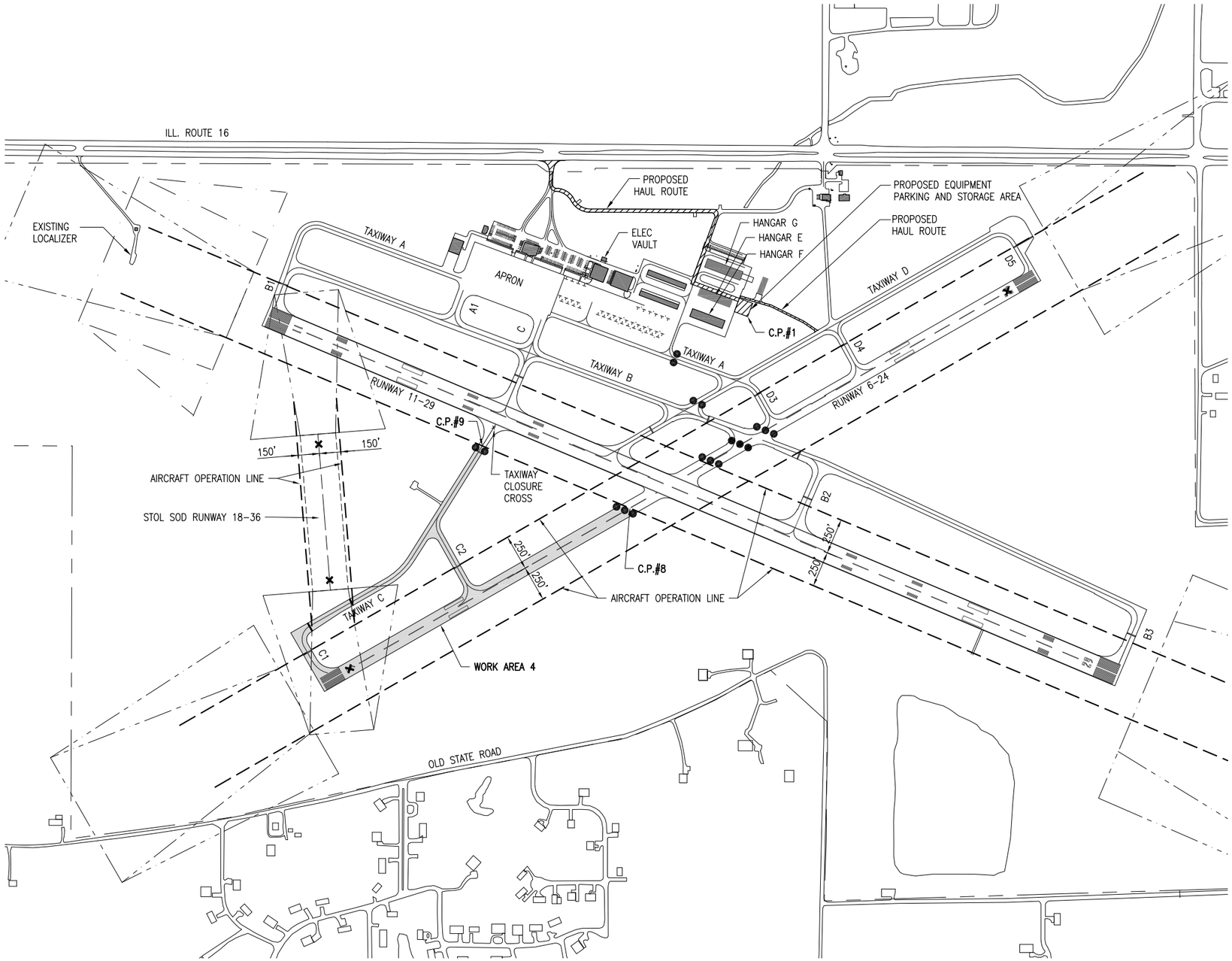
RUNWAY/TAXIWAY CLOSURE DISTANCES	
LOCATION	DISTANCE FROM CENTERLINE
RUNWAY 11–29	250 FT.
RUNWAY 6–24	250 FT.
STOL SOD RUNWAY 18–36	150 FT.
ALL TAXIWAYS	93 FT.
ALL TAXI LANES	81 FT.

CRITICAL POINT DATA

1. SEE "PROPOSED SAFETY PLAN" FOR CRITICAL POINT DATA.



WORK AREA 4 NOTES

1. WORK AREA 4 INCLUDES REMOVAL AND INSTALLATION OF TAXI GUIDANCE SIGNS AND THE ASSOCIATED WORK ON RUNWAY 6–24 AND TAXIWAY C SOUTH OF RUNWAY 11–29. RUNWAY 6–24 AND THE ASSOCIATED TAXIWAYS WILL BE CLOSED DURING THE CONSTRUCTION WEEK AND REOPENED ON THE WEEKENDS OR END OF THE CONSTRUCTION WEEK. RUNWAY 11–29 AND TAXIWAY B WILL BE OPEN DURING THIS PHASE. THE APRON AND WILL BE OPEN DURING THIS PHASE. RUNWAY 18–36 WILL BE CLOSED DURING THIS PHASE.
2. IT IS ANTICIPATED THAT WORK IN THE ELECTRICAL VAULT WILL OCCUR CONCURRENTLY WITH WORK ON THE AIRFIELD. THEREFORE THE VAULT WORK SHALL BE COMPLETED WITHIN THE OVERALL PROJECT CONTRACT TIME.
3. CLOSURE CROSSES AND BARRICADES SHALL BE IN PLACE PRIOR TO BEGINNING CONSTRUCTION.
4. RUNWAY 6–24 WILL BE NOTAMED "CLOSED". THE CONTRACTOR SHALL COORDINATE WITH THE AIRPORT AT LEAST 48 HOURS BEFORE BEGINNING THIS PHASE SO THAT NOTAMS MAY BE COORDINATED.
5. RUNWAY 18–36 WILL BE NOTAMED "CLOSED". THE CONTRACTOR SHALL COORDINATE WITH THE AIRPORT AT LEAST 48 HOURS BEFORE BEGINNING THIS PHASE SO THAT NOTAMS MAY BE COORDINATED.
6. AT ALL TIMES THE CONTRACTOR'S OPERATIONS SHALL BE SUCH AS TO MINIMIZE CLOSURES.
7. WHEN A RUNWAY IS CLOSED THE RESPECTIVE RUNWAY LIGHTING AND NAVAIDS FOR THAT RUNWAY SHALL BE SHUT OFF. COORDINATE SHUT OFF OF NAVAIDS WITH THE AIRPORT MANAGER.
8. THE AIRPORT WILL REMAIN OPEN DURING ALL CONSTRUCTION PHASES TO ACCOMMODATE AGRICULTURAL AIR OPERATIONS AND HELICOPTER OPERATIONS.
9. WHERE CONTRACTOR HAS MULTIPLE CREWS, THEY MAY WORK IN WORK AREAS 4 & 5 SIMULTANEOUSLY.
10. WHEN CROSSING AN ACTIVE RUNWAY, CONTRACTOR EMPLOYEES, STAFF, CONCRETE TRUCKS, ETC. SHALL BE ESCORTED ACROSS THE RUNWAY BY THE RESIDENT ENGINEER/RESIDENT TECHNICIAN OR OTHER AIRPORT DESIGNATED AUTHORIZED PERSONNEL.
11. MAINTAIN ARFF (AIRCRAFT RESCUE AND FIRE FIGHTING) FACILITY ACCESS TO THE AIRFIELD FOR ALL PHASES OF WORK. CONTRACTOR SHALL COORDINATE LOCATIONS AND SPACING OF BARRICADES WITH THE AIRPORT MANAGER TO MAINTAIN ARFF EMERGENCY ACCESS ROUTES TO THE AIRFIELD. THE MATTOON FIRE DEPARTMENT ARFF FACILITY PERSONNEL WILL COORDINATE WITH THE AIRPORT MANAGER THROUGHOUT THE TAXI SIGN REPLACEMENT PROJECT.

LEGEND

- EXISTING PAVEMENTS
- PROPOSED WORK AREA
- EXISTING BUILDINGS
- PROPOSED HAUL ROUTE AND EQUIPMENT PARKING AREA
- AIRCRAFT OPERATION LINE
- PROPOSED BARRICADES

N

0' 200' 400' 800'

HALF SIZE SCALE: 1"= 800'
FULL SIZE SCALE: 1"= 400'

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COLES COUNTY AIRPORT AUTHORITY
COLES COUNTY MEMORIAL AIRPORT

REMOVE AND REPLACE ALL TAXI GUIDANCE SIGNS ON THE AIRPORT

IDA No: MTO-4511

SBG Project No: 3-17-SBGP-XX

Contract No. CO062

NO.	DATE	DESCRIPTION	DES	DWN	REV

ISSUE: APRIL 15, 2016
PROJECT NO: 13A0121D
CAD FILE: C-007-SFY1.DWG
DESIGN BY: KNL 02/17/2016
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SHEET TITLE

PROPOSED SAFETY AND PHASING PLAN WORK AREA 4

APR 19, 2016 10:38 AM HARRI01115
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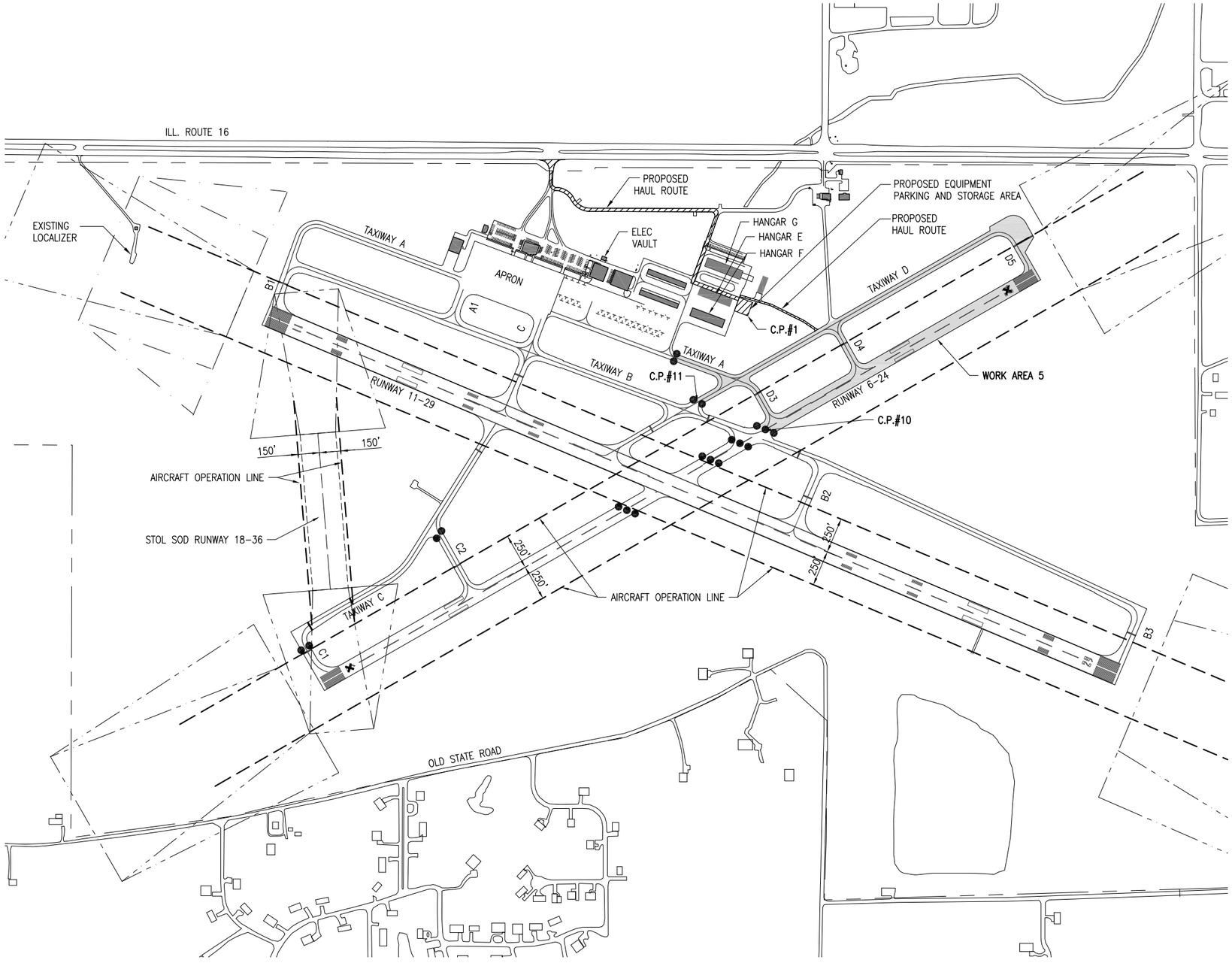
RUNWAY/TAXIWAY CLOSURE DISTANCES	
LOCATION	DISTANCE FROM CENTERLINE
RUNWAY 11–29	250 FT.
RUNWAY 6–24	250 FT.
STOL SOD RUNWAY 18–36	150 FT.
ALL TAXIWAYS	93 FT.
ALL TAXI LANES	81 FT.

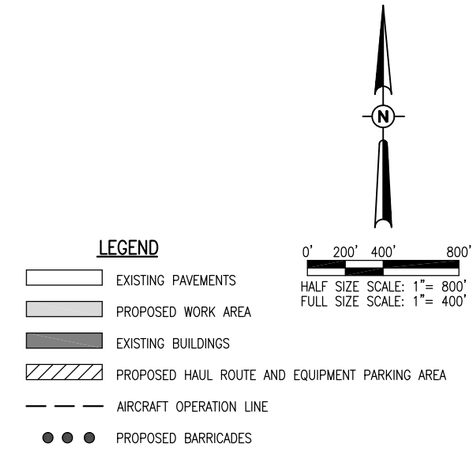
CRITICAL POINT DATA

1. SEE "PROPOSED SAFETY PLAN" FOR CRITICAL POINT DATA.

WORK AREA 5 NOTES

1. WORK AREA 5 INCLUDES REMOVAL AND INSTALLATION OF TAXI GUIDANCE SIGNS AND THE ASSOCIATED WORK ON RUNWAY 6–24 AND TAXIWAY D NORTH OF TAXIWAY B. RUNWAY 6–24 AND THE ASSOCIATED TAXIWAYS WILL BE CLOSED DURING THE CONSTRUCTION WEEK AND REOPENED ON THE WEEKENDS OR END OF THE CONSTRUCTION WEEK. RUNWAY 11–29 AND TAXIWAY B WILL BE OPEN DURING THIS PHASE. THE APRON AND WILL BE OPEN DURING THIS PHASE. RUNWAY 18–36 WILL BE OPEN DURING THIS PHASE.
2. IT IS ANTICIPATED THAT WORK IN THE ELECTRICAL VAULT WILL OCCUR CONCURRENTLY WITH WORK ON THE AIRFIELD. THEREFORE THE VAULT WORK SHALL BE COMPLETED WITHIN THE OVERALL PROJECT CONTRACT TIME.
3. CLOSURE CROSSES AND BARRICADES SHALL BE IN PLACE PRIOR TO BEGINNING CONSTRUCTION.
4. RUNWAY 6–24 WILL BE NOTAMED "CLOSED". THE CONTRACTOR SHALL COORDINATE WITH THE AIRPORT AT LEAST 48 HOURS BEFORE BEGINNING THIS PHASE SO THAT NOTAMS MAY BE COORDINATED.
5. AT ALL TIMES THE CONTRACTOR'S OPERATIONS SHALL BE SUCH AS TO MINIMIZE CLOSURES.
6. WHEN A RUNWAY IS CLOSED THE RESPECTIVE RUNWAY LIGHTING AND NAVAIDS FOR THAT RUNWAY SHALL BE SHUT OFF. COORDINATE SHUT OFF OF NAVAIDS WITH THE AIRPORT MANAGER.
7. THE AIRPORT WILL REMAIN OPEN DURING ALL CONSTRUCTION PHASES TO ACCOMMODATE AGRICULTURAL AIR OPERATIONS AND HELICOPTER OPERATIONS.
8. WHERE CONTRACTOR HAS MULTIPLE CREWS, THEY MAY WORK IN WORK AREAS 4 & 5 SIMULTANEOUSLY.
9. WHEN CROSSING AN ACTIVE RUNWAY, CONTRACTOR EMPLOYEES, STAFF, CONCRETE TRUCKS, ETC. SHALL BE ESCORTED ACROSS THE RUNWAY BY THE RESIDENT ENGINEER/RESIDENT TECHNICIAN OR OTHER AIRPORT DESIGNATED AUTHORIZED PERSONNEL.
10. MAINTAIN ARFF (AIRCRAFT RESCUE AND FIRE FIGHTING) FACILITY ACCESS TO THE AIRFIELD FOR ALL PHASES OF WORK. CONTRACTOR SHALL COORDINATE LOCATIONS AND SPACING OF BARRICADES WITH THE AIRPORT MANAGER TO MAINTAIN ARFF EMERGENCY ACCESS ROUTES TO THE AIRFIELD. THE MATTOON FIRE DEPARTMENT ARFF FACILITY PERSONNEL WILL COORDINATE WITH THE AIRPORT MANAGER THROUGHOUT THE TAXI SIGN REPLACEMENT PROJECT.





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COLES COUNTY AIRPORT AUTHORITY
COLES COUNTY MEMORIAL AIRPORT

REMOVE AND REPLACE ALL TAXI GUIDANCE SIGNS ON THE AIRPORT

IDA No: MTO-4511

SBG Project No: 3-17-SBGP-XX

Contract No. CO062

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

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SHEET TITLE

PROPOSED SAFETY AND PHASING PLAN WORK AREA 5

APR 19, 2016 10:39 AM HARRI01115
I:\13JOBS\13A0121\13A0121D\CAD\AIRPORT\SHEET\C-008-SFY1.DWG

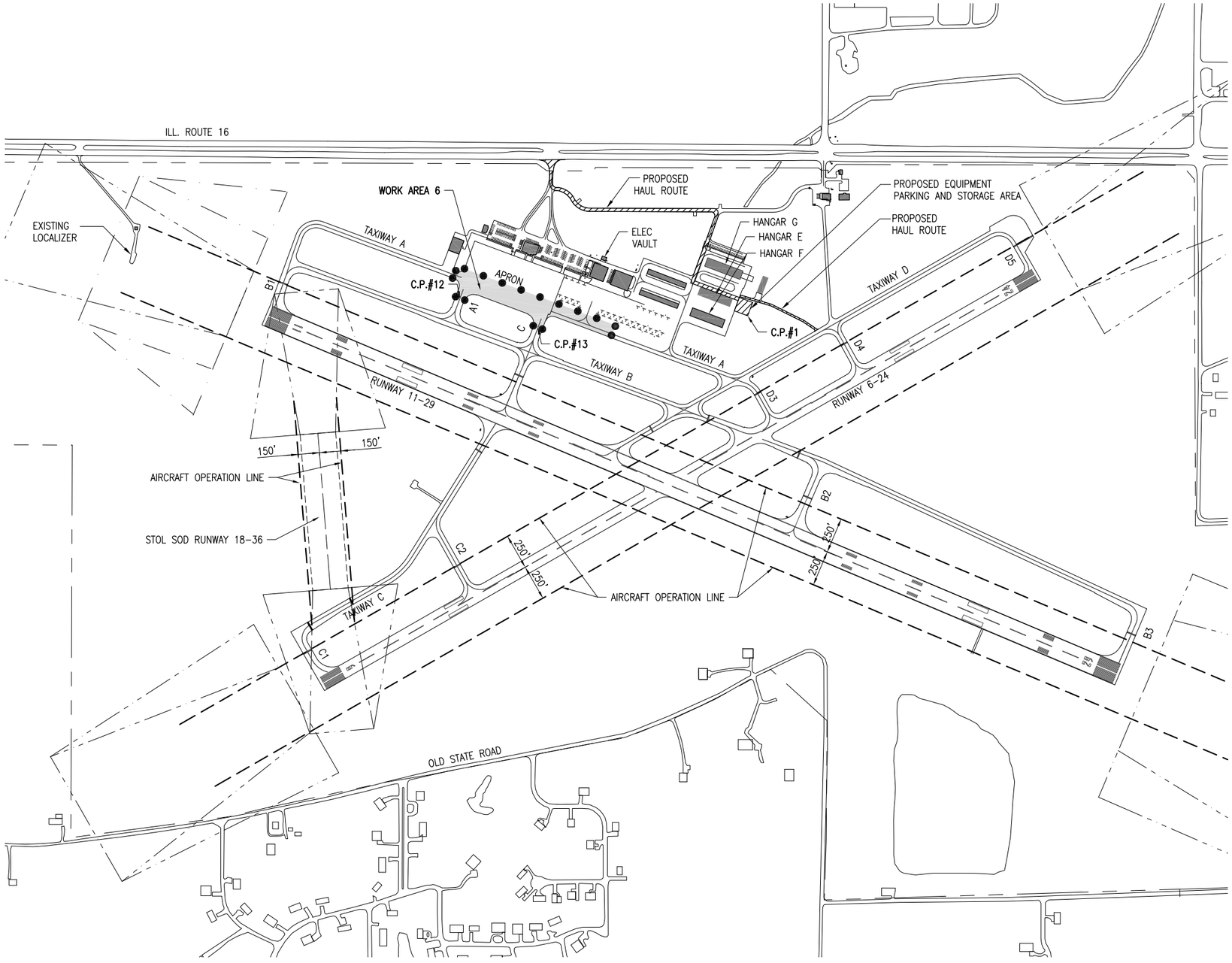
RUNWAY/TAXIWAY CLOSURE DISTANCES	
LOCATION	DISTANCE FROM CENTERLINE
RUNWAY 11–29	250 FT.
RUNWAY 6–24	250 FT.
STOL SOD RUNWAY 18–36	150 FT.
ALL TAXIWAYS	93 FT.
ALL TAXI LANES	81 FT.

CRITICAL POINT DATA

1. SEE "PROPOSED SAFETY PLAN" FOR CRITICAL POINT DATA.

WORK AREA 6 NOTES

1. WORK AREA 6 INCLUDES REMOVAL AND INSTALLATION OF TAXI GUIDANCE SIGNS AND THE ASSOCIATED WORK ON TAXIWAY A EAST OF THE RURAL KING HANGAR AND THE SOUTH SIDE PORTION OF THE APRON. THIS AREA WILL BE CLOSED DURING THE CONSTRUCTION WEEK AND REOPENED ON THE WEEKENDS OR END OF THE CONSTRUCTION WEEK. THE REMAINING PORTION OF THE APRON WILL BE OPEN DURING THIS PHASE. RUNWAY 11–29 AND TAXIWAY B WILL BE OPEN DURING THIS PHASE. RUNWAY 6–24 WILL BE OPEN DURING THIS PHASE. RUNWAY 18–36 WILL BE OPEN DURING THIS PHASE.
2. IT IS ANTICIPATED THAT WORK IN THE ELECTRICAL VAULT WILL OCCUR CONCURRENTLY WITH WORK ON THE AIRFIELD. THEREFORE THE VAULT WORK SHALL BE COMPLETED WITHIN THE OVERALL PROJECT CONTRACT TIME.
3. CLOSURE CROSSES AND BARRICADES SHALL BE IN PLACE PRIOR TO BEGINNING CONSTRUCTION.
4. THE RESPECTIVE TAXIWAY AND APRON AREAS WILL BE NOTAMED "CLOSED". THE CONTRACTOR SHALL COORDINATE WITH THE AIRPORT AT LEAST 48 HOURS BEFORE BEGINNING THIS PHASE SO THAT NOTAMS MAY BE COORDINATED.
5. AT ALL TIMES THE CONTRACTOR'S OPERATIONS SHALL BE SUCH AS TO MINIMIZE CLOSURES.
6. THE AIRPORT WILL REMAIN OPEN DURING ALL CONSTRUCTION PHASES TO ACCOMMODATE AGRICULTURAL AIR OPERATIONS AND HELICOPTER OPERATIONS.
9. WHEN CROSSING AN ACTIVE RUNWAY, CONTRACTOR EMPLOYEES, STAFF, CONCRETE TRUCKS, ETC. SHALL BE ESCORTED ACROSS THE RUNWAY BY THE RESIDENT ENGINEER/RESIDENT TECHNICIAN OR OTHER AIRPORT DESIGNATED AUTHORIZED PERSONNEL.
10. MAINTAIN ARFF (AIRCRAFT RESCUE AND FIRE FIGHTING) FACILITY ACCESS TO THE AIRFIELD FOR ALL PHASES OF WORK. CONTRACTOR SHALL COORDINATE LOCATIONS AND SPACING OF BARRICADES WITH THE AIRPORT MANAGER TO MAINTAIN ARFF EMERGENCY ACCESS ROUTES TO THE AIRFIELD. THE MATTOON FIRE DEPARTMENT ARFF FACILITY PERSONNEL WILL COORDINATE WITH THE AIRPORT MANAGER THROUGHOUT THE TAXI SIGN REPLACEMENT PROJECT.



LEGEND

- EXISTING PAVEMENTS
- PROPOSED WORK AREA
- EXISTING BUILDINGS
- PROPOSED HAUL ROUTE AND EQUIPMENT PARKING AREA
- AIRCRAFT OPERATION LINE
- PROPOSED BARRICADES

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COLES COUNTY MEMORIAL AIRPORT

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SBG Project No: 3-17-SBGP-XX

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SHEET TITLE

PROPOSED SAFETY AND PHASING PLAN WORK AREA 6

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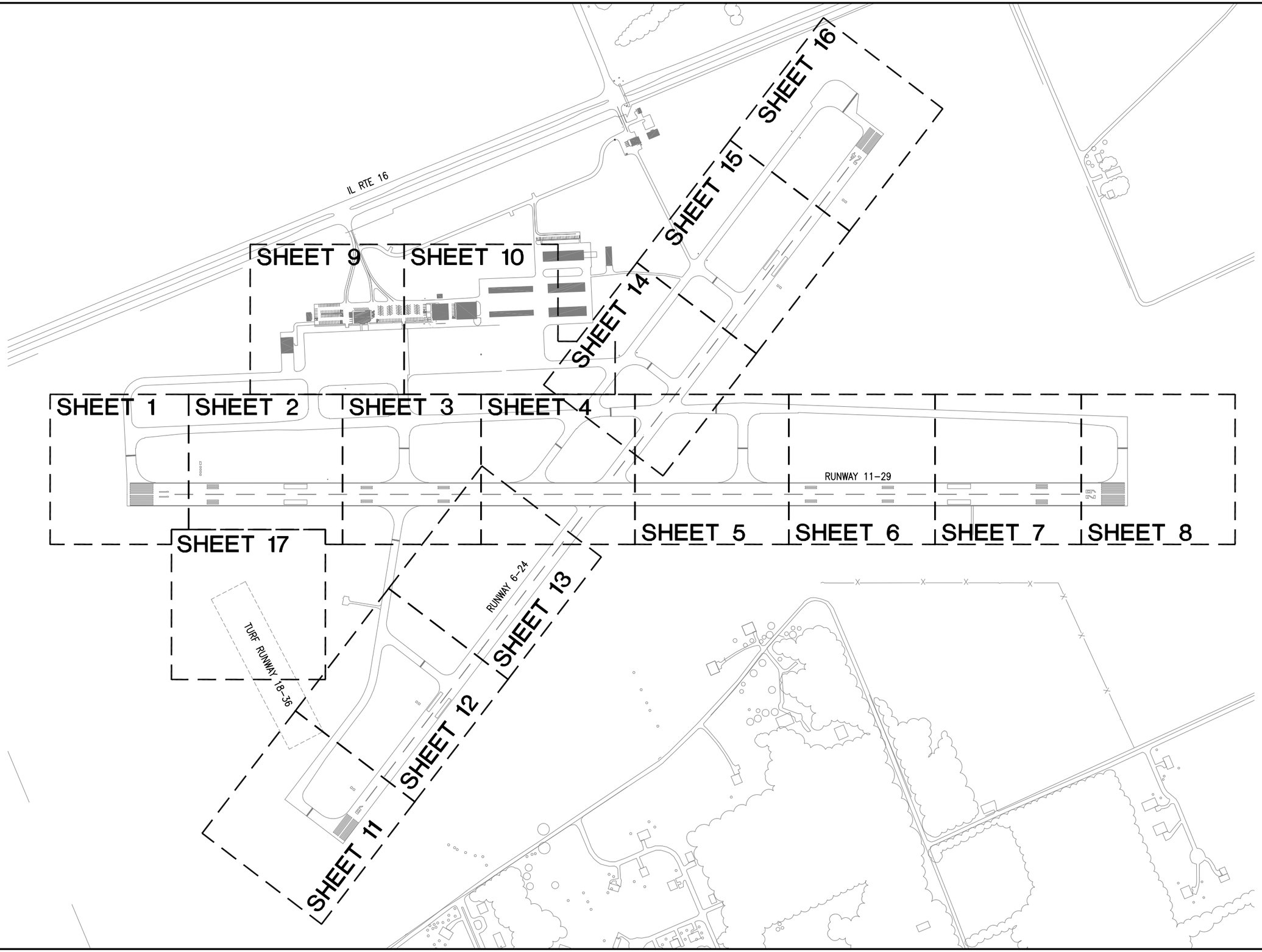

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IDA No: MTO-4511

SBG Project No:
3-17-SBGP-XX

Contract No. CO062

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

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SHEET TITLE

KEY PLAN

APR 19, 2016 10:42 AM HARRI01115
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AIRFIELD LIGHTING REMOVAL NOTES

1. ALL WORK, POWER OUTAGES, AND/OR SHUT DOWN OF EXISTING SYSTEMS SHALL BE COORDINATED WITH THE AIRPORT DIRECTOR/MANAGER. ONCE SHUT DOWN, THE CIRCUITS SHALL BE LABELED AS SUCH TO PREVENT ACCIDENTAL ENERGIZING OF THE RESPECTIVE CIRCUITS. ALL PERSONNEL SHALL FOLLOW U.S. DEPARTMENT OF LABOR OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION (OSHA) 29 CFR PART 1910 OCCUPATIONAL SAFETY & HEALTH STANDARDS FOR ELECTRICAL SAFETY AND LOCKOUT/TAGOUT PROCEDURES INCLUDING, BUT NOT LIMITED TO, 29 CFR SECTION 1910.147 THE CONTROL OF HAZARDOUS ENERGY (LOCKOUT/TAGOUT).

2. CONTRACTOR SHALL EXAMINE THE SITE TO DETERMINE THE EXTENT OF THE WORK. CONTRACTOR SHALL FIELD VERIFY EXISTING SITE CONDITIONS. EXISTING AIRFIELD CIRCUITS MIGHT VARY FROM THOSE SHOWN ON THE PLANS. CONTRACTOR SHALL FIELD VERIFY RESPECTIVE CIRCUITS AND POWER SOURCES PRIOR TO REMOVING OR DISCONNECTING THE RESPECTIVE AIRFIELD LIGHTING, TAXI SIGN, NAVAID, OR OTHER DEVICE.

3. CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF FAA AC NO. 150/5370-2F (OR MOST CURRENT ISSUE) "OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION".

4. CONTRACTOR SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS OF NFPA 70E – STANDARD FOR ELECTRICAL SAFETY IN THE WORKPLACE.

5. THE EXISTING TAXI GUIDANCE SIGNS, THEIR ISOLATED TRANSFORMERS, AND THE CONCRETE FOUNDATIONS DESIGNATED FOR REMOVAL SHALL BE REMOVED AND DISPOSED OF, OFF THE AIRPORT SITE IN A LEGAL MANNER. THE AIRPORT WILL RETAIN THE RIGHT OF FIRST REFUSAL REGARDING SALVAGE OF SIGNS, OR SIGN PARTS. SIGNS NOT SALVAGED BY THE AIRPORT SHALL BE REMOVED AND DISPOSED OF OFF THE AIRPORT SITE. REMOVAL OF THE EXISTING TAXI GUIDANCE SIGNS WILL BE PAID FOR UNDER ITEM AR125904 REMOVE TAXI GUIDANCE SIGN, PER EACH.

6. EXISTING RUNWAY EXIT SIGNS AND HOLDING POSITION SIGNS ARE UNDERSTOOD TO BE CONNECTED TO TAXIWAY LIGHTING CIRCUITS. REPLACEMENT RUNWAY EXIT SIGNS AND HOLDING POSITION SIGNS SHALL BE CONNECTED TO THE RESPECTIVE RUNWAY LIGHTING CIRCUIT. PROVIDE CABLE AND SPLICES TO MAINTAIN AIRFIELD LIGHTING SERIES CIRCUIT LOOPS. CABLE SHALL BE 1/C #8 AWG FAA L-824, 5000 VOLT TYPE C UG CABLE IN UNIT DUCT. SPLICES SHALL BE FAA L-823 SIZED FOR THE RESPECTIVE CABLE.

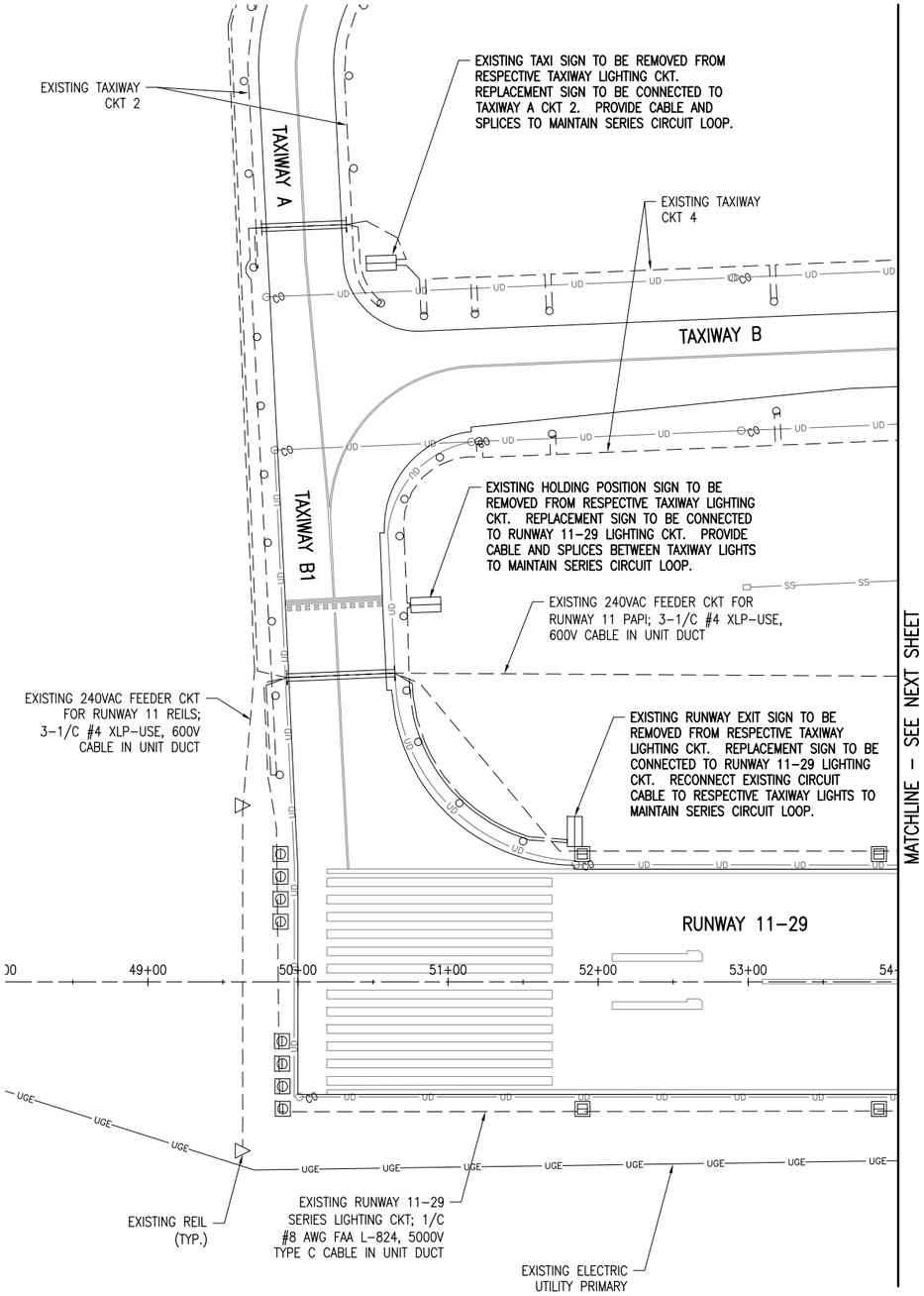
7. ALL ABOVEGROUND JUMPERS SHALL BE IN A DUCT WITH ALL CONNECTIONS SEALED. THE CONTRACTOR SHALL SECURE, IDENTIFY AND PLACE ALL TEMPORARY EXPOSED WIRING IN CONDUIT, DUCT, OR UNIT DUCT TO PREVENT ELECTROCUTION AND FIRE IGNITION SOURCES AS PER THE REQUIREMENTS OF FAA 150/5370-2F, OPERATION SAFETY ON AIRPORTS DURING CONSTRUCTION, SECTION 218, c.

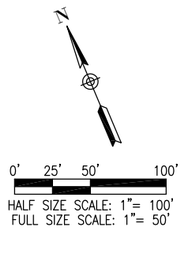
8. THE CONTRACTOR IS REQUIRED TO FILL IN ALL HOLES AND DEPRESSIONS RESULTING FROM THE LIGHT, AND/OR BASE REMOVAL WITH EARTH MATERIAL. THE AREAS SHALL BE COMPACTED TO PREVENT FUTURE SETTLEMENT AND FERTILIZED, SEEDED, AND MULCHED IN ACCORDANCE WITH ITEMS 901 AND 908 RESPECTIVELY.

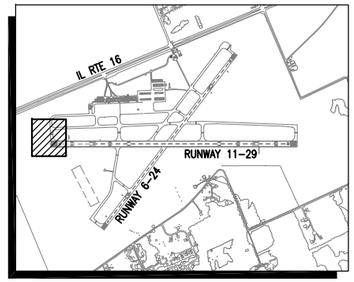
9. WHEN A RESPECTIVE RUNWAY IS CLOSED THE NAVAIDS FOR THAT RUNWAY SHALL BE SHUT OFF.

10. CONTRACTOR SHALL CONFIRM RESPECTIVE AIRFIELD LIGHTING CIRCUITS.

11. NO CONNECTION TO AN ACTIVE LIGHTING CIRCUIT SHALL BE BROKEN UNTIL THE CIRCUIT HAS BEEN TURNED OFF IN ACCORDANCE WITH THE ABOVE NOTE 1.







KEY MAP

LEGEND

- EXISTING PAVEMENT
- EXISTING BUILDING
- EXISTING ELECTRICAL DUCT
- EXISTING ELECTRICAL CABLE
- W — EXISTING WATER
- T — EXISTING TELEPHONE
- UD — EXISTING UNDERDRAIN
- SS — EXISTING STORM SEWER
- SAN — EXISTING SANITARY
- UGE — EXISTING UNDERGROUND ELECTRIC UTILITY PRIMARY
- EXISTING REIL
- EXISTING TAXI GUIDANCE SIGN (TO BE REMOVED)
- EXISTING STAKE MOUNTED TAXIWAY LIGHT
- EXISTING BASE MOUNTED TAXIWAY LIGHT
- EXISTING STAKE MOUNTED RUNWAY LIGHT
- EXISTING BASE MOUNTED RUNWAY LIGHT
- EXISTING STAKE MOUNTED THRESHOLD LIGHT
- EXISTING BASE MOUNTED THRESHOLD LIGHT
- EXISTING AIRPORT ROTATING BEACON
- ET — EXISTING UTILITY TRANSFORMER

THE LOCATION, SIZE, AND TYPE OF MATERIAL OF EXISTING UNDERGROUND AND/OR ABOVEGROUND UTILITIES INDICATED ON THE PLANS ARE NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. NEITHER THE OWNER NOR THE ENGINEER ASSUMES ANY RESPONSIBILITY WHATEVER IN RESPECT TO THE ACCURACY, COMPLETENESS, OR SUFFICIENCY OF THE INFORMATION. THERE IS NO GUARANTEE, EITHER EXPRESSED OR IMPLIED, THAT THE LOCATIONS, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND UTILITIES INDICATED ARE REPRESENTATIVE OF THOSE TO BE ENCOUNTERED IN THE CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES OF HIS OPERATIONAL PLANS AND SHALL OBTAIN FROM THE RESPECTIVE UTILITY COMPANIES DETAILED INFORMATION AND ASSISTANCE RELATIVE TO THE LOCATION OF THEIR FACILITIES AND THE WORKING SCHEDULE OF THE COMPANIES FOR REMOVAL OR ADJUSTMENT WHERE REQUIRED. IN THE EVENT AN UNEXPECTED UTILITY INTERFERENCE IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY COMPANY OF JURISDICTION. THE OWNER'S REPRESENTATIVE AND/OR THE RESIDENT ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY DAMAGE TO SUCH MAINS AND SERVICES SHALL BE RESTORED TO SERVICE AT ONCE AND PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT.

ALL UTILITY CABLES AND LINES SHALL BE LOCATED BY THE RESPECTIVE UTILITY. **CONTACT JULIE (JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS) FOR UTILITY INFORMATION, PHONE: 1-800-892-0123.** CONTACT THE FAA (FEDERAL AVIATION ADMINISTRATION) FOR ASSISTANCE IN LOCATING FAA CABLES AND UTILITIES. LOCATION OF FAA POWER, CONTROL, AND COMMUNICATION CABLES SHALL BE COORDINATED WITH AND/OR LOCATED BY THE FAA. ALSO CONTACT AIRPORT DIRECTOR/MANAGER AND AIRPORT PERSONNEL FOR ASSISTANCE IN LOCATING UNDERGROUND AIRPORT CABLES AND/OR UTILITIES. ALSO COORDINATE WORK WITH ALL ABOVEGROUND UTILITIES.

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SHEET TITLE

EXISTING TAXI GUIDANCE SIGN PLAN SHEET 1

APR 19, 2016 10:43 AM HARRI01115
I:\13JOBS\13A0121\13A0121D\CAD\AIRPORT\SHEET\C-141-1129.DWG

MATCHLINE – SEE EXISTING TAXI GUIDANCE SIGN PLAN SHEET 9

EXISTING TAXI SIGN TO BE REMOVED FROM RESPECTIVE TAXIWAY LIGHTING CKT. REPLACEMENT SIGN TO BE CONNECTED TO TAXIWAY CKT 4

EXISTING TAXIWAY CKT 4

TAXIWAY A1

EXISTING TAXIWAY CKT 5

TAXIWAY B

EXISTING TAXI SIGN TO BE REMOVED FROM RESPECTIVE TAXIWAY LIGHTING CKT. REPLACEMENT SIGN TO BE CONNECTED TO TAXIWAY CKT 5

EXISTING TAXIWAY CKT 6

EXISTING TAXI SIGN TO BE REMOVED AND REPLACED ON SAME CIRCUIT.

MATCHLINE – SEE PREVIOUS SHEET

EXISTING RUNWAY 11 PAPI

RUNWAY 11–29

55+00 56+00 57+00 58+00 59+00 60+00 61+00 62+00 63+00

MATCHLINE – SEE NEXT SHEET

EXISTING RUNWAY 11–29 SERIES LIGHTING CKT

TO RUNWAY 11 SUPPLEMENTAL WIND CONE

EXISTING ELECTRIC UTILITY PRIMARY

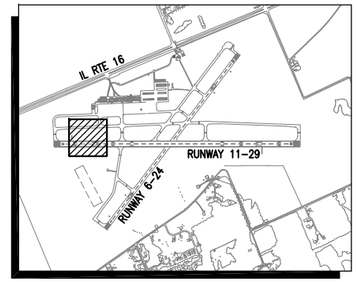
MATCHLINE – SEE EXISTING TAXI GUIDANCE SIGN PLAN SHEET 17

EXISTING UNLIGHTED HOLDING POSITION SIGN TO BE REMOVED AND REPLACED.

N

0' 25' 50' 100'

HALF SIZE SCALE: 1"= 100'
FULL SIZE SCALE: 1"= 50'



KEY MAP

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- EXISTING BUILDING
- EXISTING ELECTRICAL DUCT
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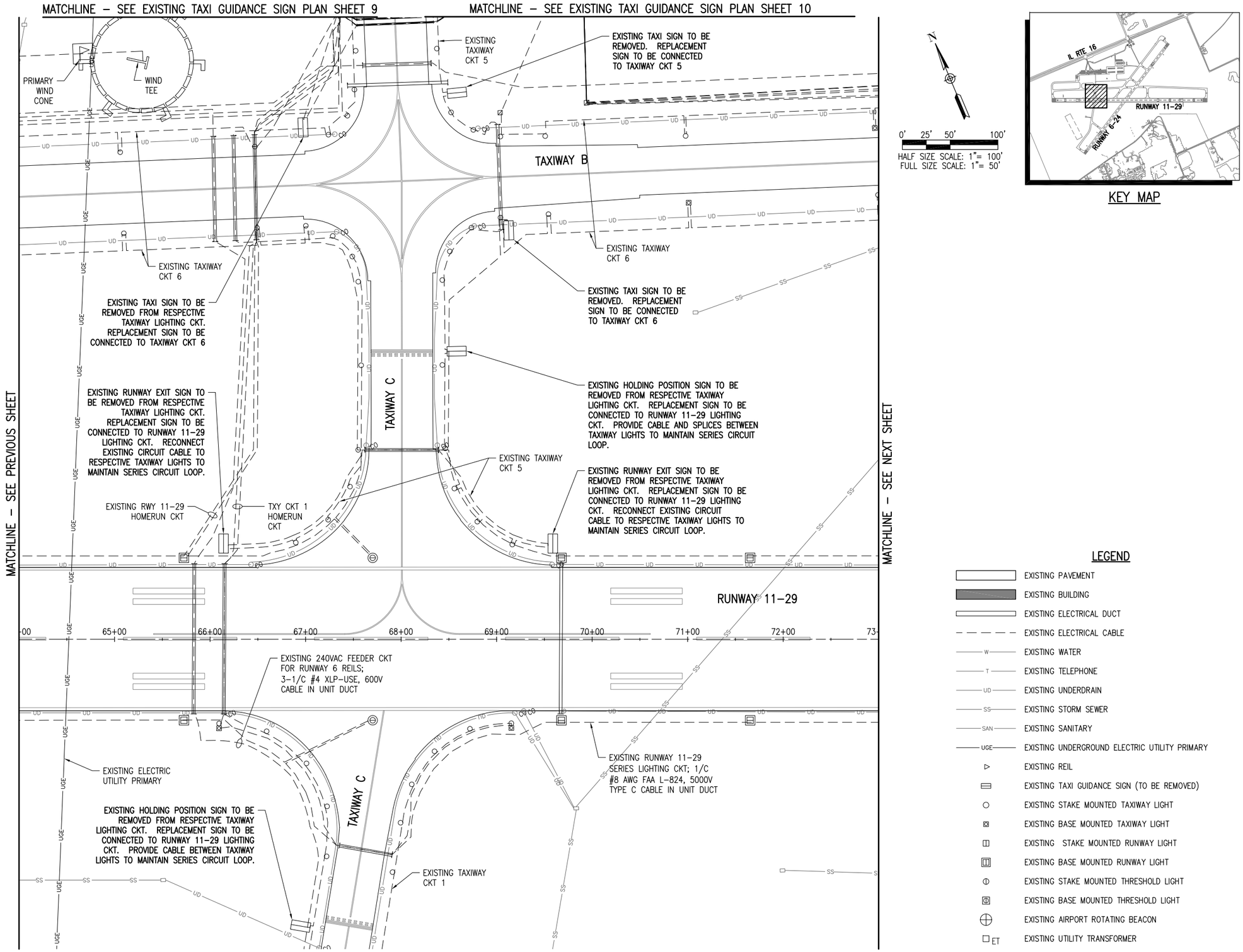
SHEET TITLE

EXISTING TAXI GUIDANCE SIGN PLAN SHEET 2

APR 19, 2016 10:44 AM HARRI01115
I:\13JOBS\13A0121\13A0121D\CAD\AIRPORT\SHEET\C-141-1129.DWG



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COLES COUNTY AIRPORT AUTHORITY
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REMOVE AND REPLACE ALL TAXI GUIDANCE SIGNS ON THE AIRPORT

IDA No: MTO-4511
SBG Project No: 3-17-SBGP-XX
Contract No. CO062

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

ISSUE: APRIL 15, 2016
PROJECT NO: 13A0121D
CAD FILE: C-141-1129.DWG
DESIGN BY: KNL 02/13/2016
DRAWN BY: MLH 02/17/2016
REVIEWED BY: LDH 03/08/2016

SHEET TITLE

EXISTING TAXI GUIDANCE SIGN PLAN SHEET 3

APR 19, 2016 10:44 AM HARRI01115
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MATCHLINE – SEE EXISTING TAXI GUIDANCE SIGN PLAN SHEET 10

MATCHLINE – SEE EXISTING TAXI GUIDANCE SIGN PLAN SHEET 14

MATCHLINE – SEE PREVIOUS SHEET

MATCHLINE – SEE NEXT SHEET

MATCHLINE – SEE EXISTING TAXI GUIDANCE SIGN SHEET 13

TAXIWAY B

TAXIWAY D

RUNWAY 11–29

RUNWAY 6–24

EXISTING TAXIWAY CKT 6

EXISTING TAXI SIGN TO BE REMOVED AND REPLACED ON SAME CIRCUIT.

EXISTING HOLDING POSITION SIGN TO BE REMOVED FROM RESPECTIVE TAXIWAY LIGHTING CKT. REPLACEMENT SIGN TO BE CONNECTED TO RUNWAY 6–24 LIGHTING CKT. PROVIDE CABLE AND SPLICES BETWEEN TAXIWAY LIGHTS TO MAINTAIN SERIES CIRCUIT LOOP.

EXISTING RUNWAY EXIT SIGN TO BE REMOVED FROM RESPECTIVE TAXIWAY LIGHTING CKT. REPLACEMENT SIGN TO BE CONNECTED TO RUNWAY 11–29 LIGHTING CKT. RECONNECT EXISTING CIRCUIT CABLE TO RESPECTIVE TAXIWAY LIGHTS TO MAINTAIN SERIES CIRCUIT LOOP.

EXISTING HOLDING POSITION SIGN TO BE REMOVED FROM RESPECTIVE TAXIWAY LIGHTING CKT. REPLACEMENT SIGN TO BE CONNECTED TO RUNWAY 11–29 LIGHTING CKT. PROVIDE CABLE AND SPLICES BETWEEN TAXIWAY LIGHTS TO MAINTAIN SERIES CIRCUIT LOOP.

EXISTING RUNWAY EXIT SIGN TO BE REMOVED FROM RESPECTIVE TAXIWAY LIGHTING CKT. REPLACEMENT SIGN TO BE CONNECTED TO RUNWAY 11–29 LIGHTING CKT. RECONNECT EXISTING CIRCUIT CABLE TO RESPECTIVE TAXIWAY LIGHTS TO MAINTAIN SERIES CIRCUIT LOOP.

EXISTING RUNWAY 11–29 SERIES LIGHTING CKT

EXISTING HOLDING POSITION SIGN FOR RUNWAY–RUNWAY INTERSECTION TO BE REMOVED AND REPLACED ON SAME CIRCUIT. (RWY 6–24 CKT)

EXISTING RUNWAY 6–24 SERIES LIGHTING CKT

74+00 75+00 76+00 77+00 78+00 79+00 80+00 81+00 82+00

42+00 41+00 40+00 39+00 38+00 37+00 36+00 35+00

0' 25' 50' 100'

HALF SIZE SCALE: 1"= 100'
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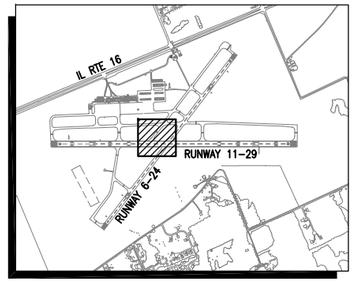

KEY MAP

LEGEND

- EXISTING PAVEMENT
- EXISTING BUILDING
- EXISTING ELECTRICAL DUCT
- EXISTING ELECTRICAL CABLE
- W — EXISTING WATER
- T — EXISTING TELEPHONE
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SHEET TITLE

EXISTING TAXI GUIDANCE SIGN PLAN SHEET 4

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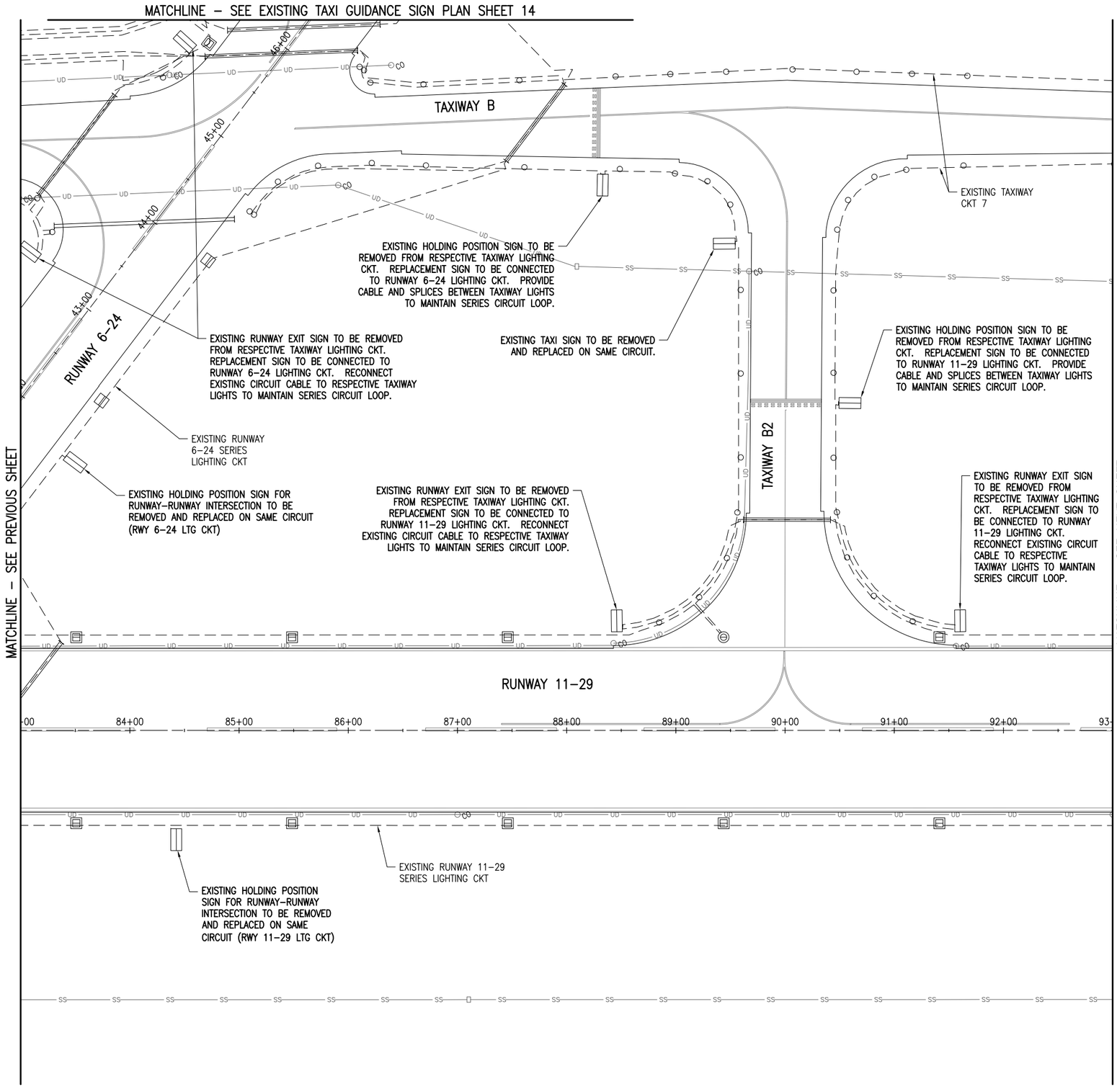

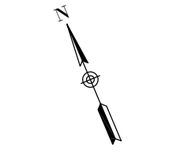

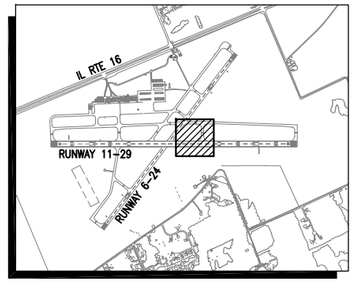

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EXISTING TAXI GUIDANCE SIGN PLAN SHEET 5

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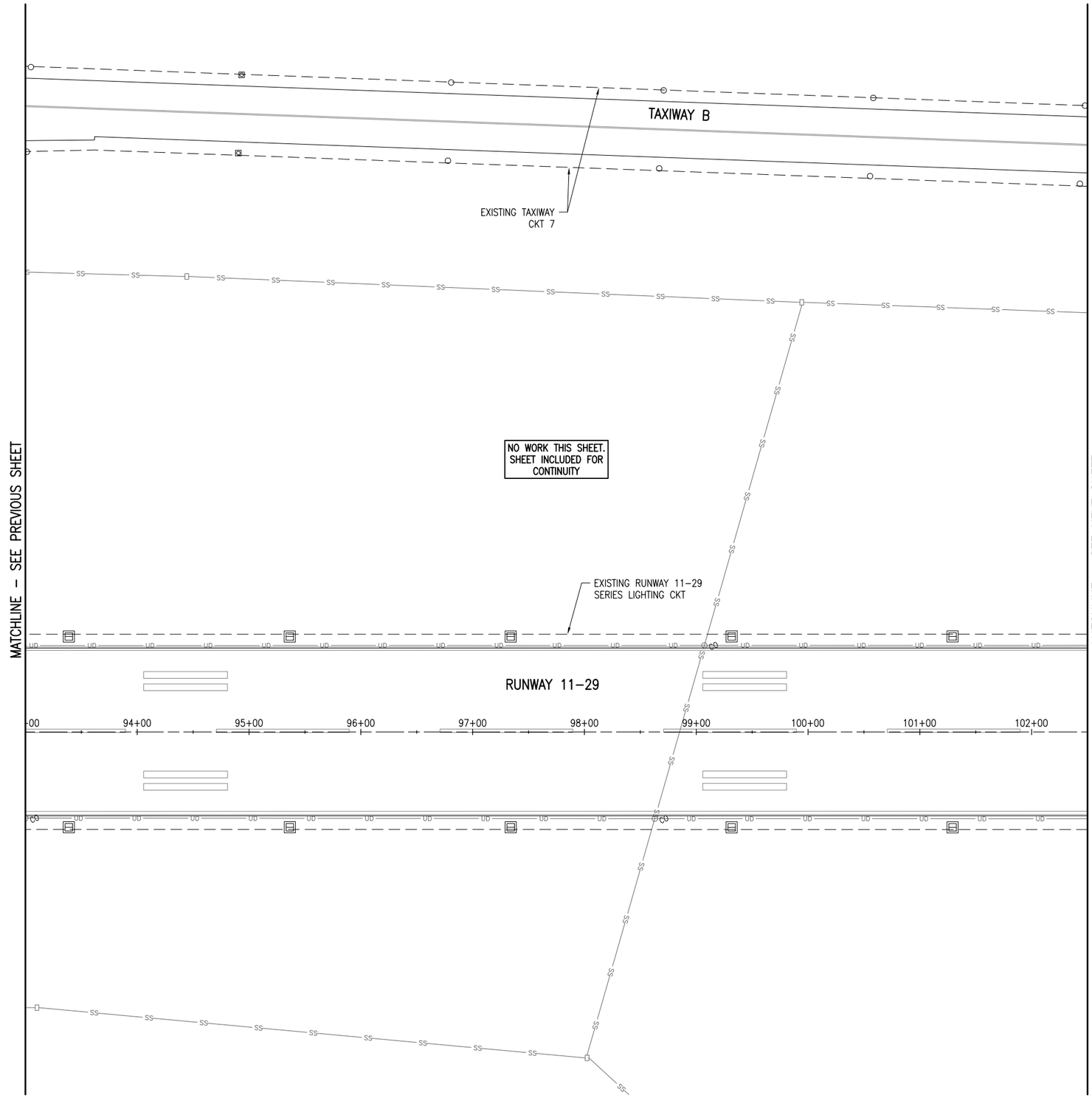

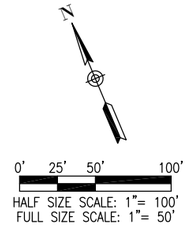

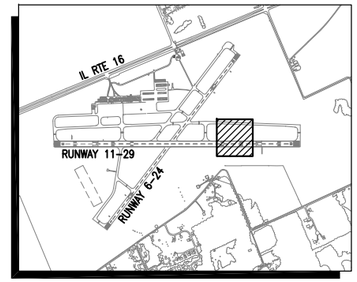

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EXISTING TAXI GUIDANCE SIGN PLAN SHEET 6

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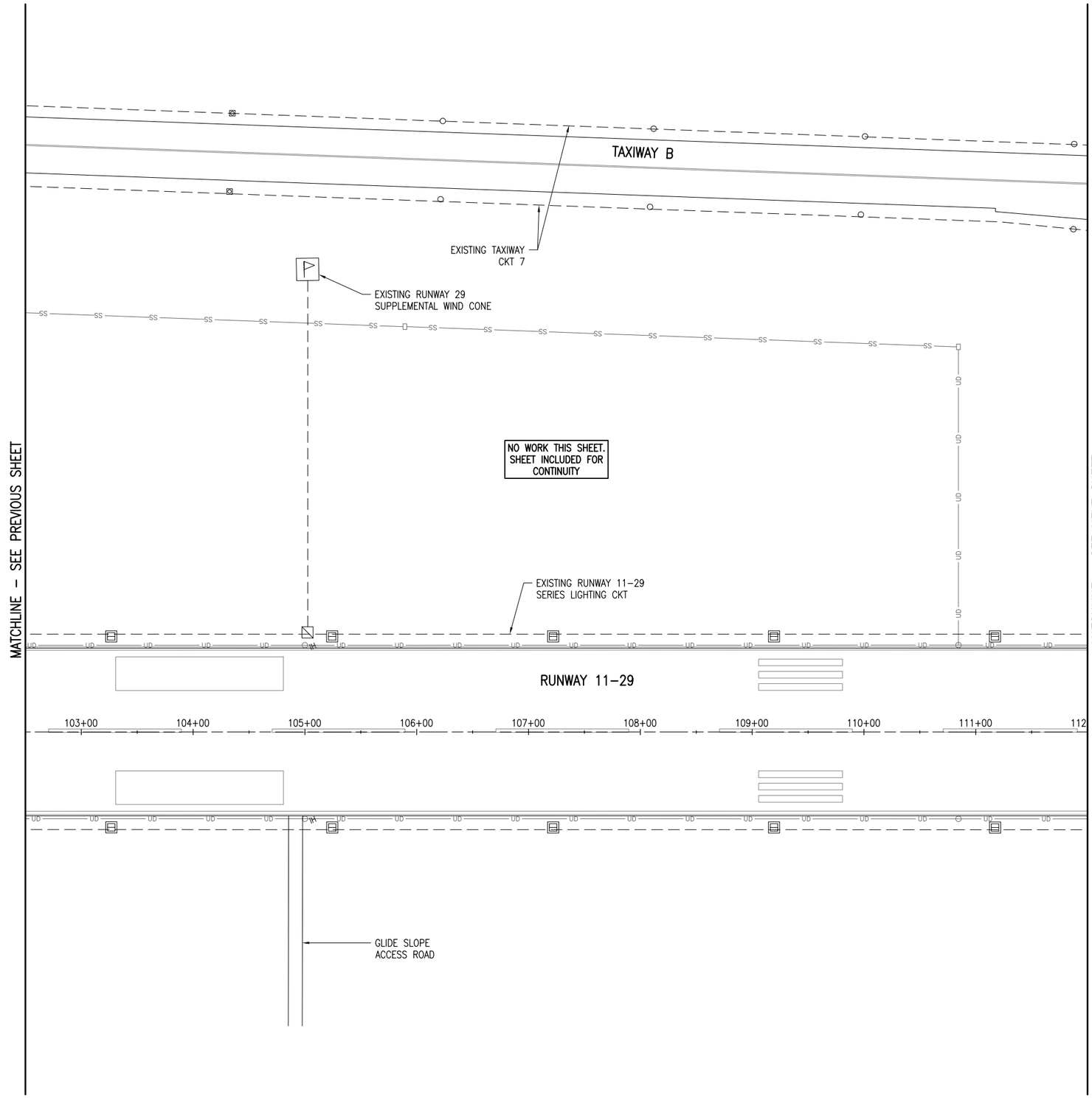

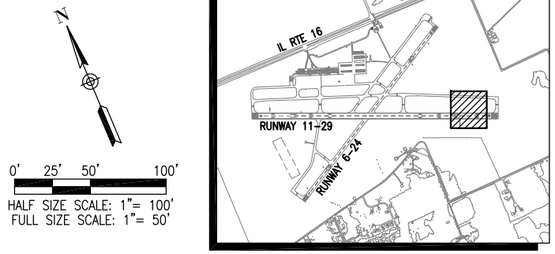

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EXISTING TAXI GUIDANCE SIGN PLAN SHEET 7

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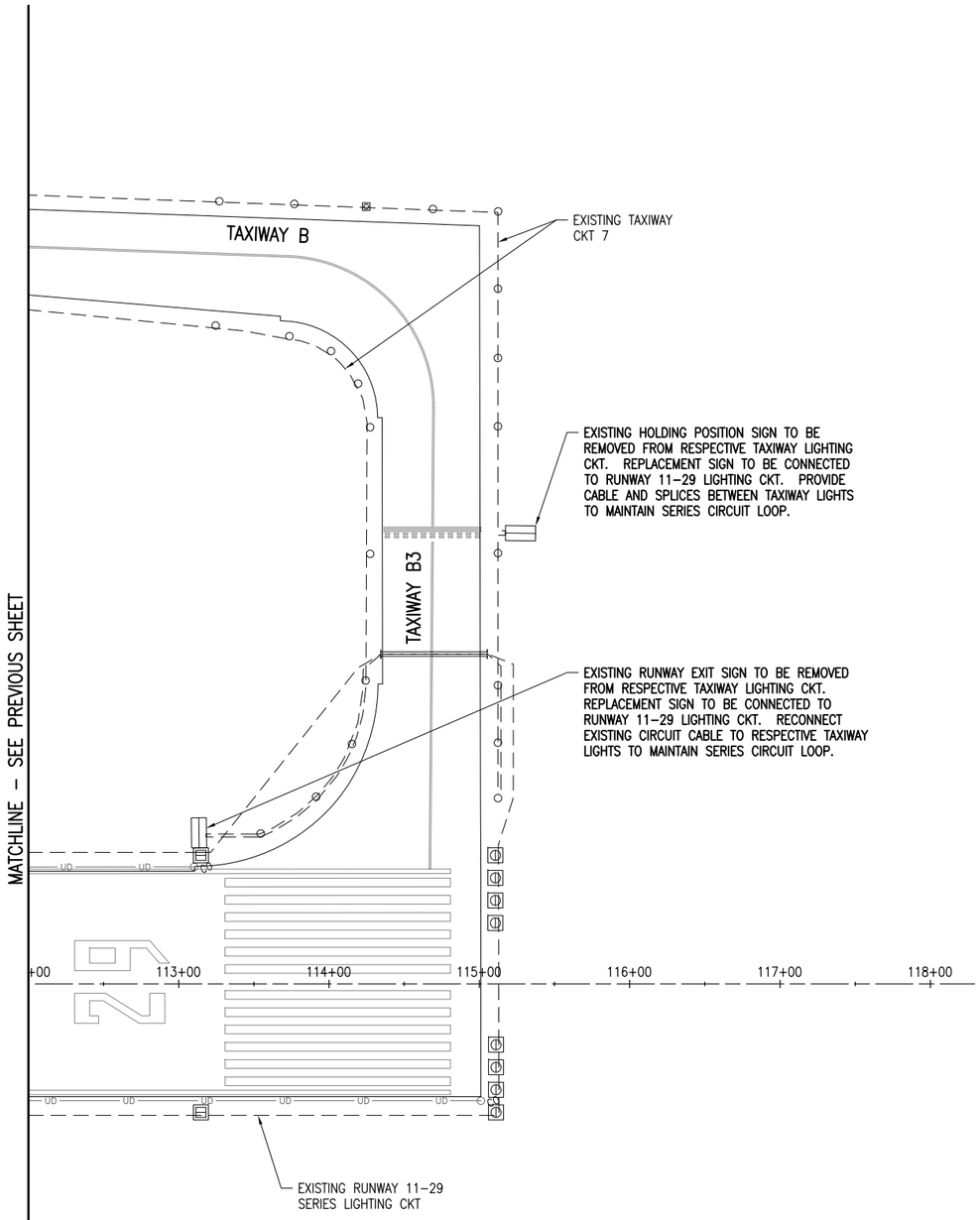

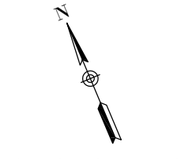

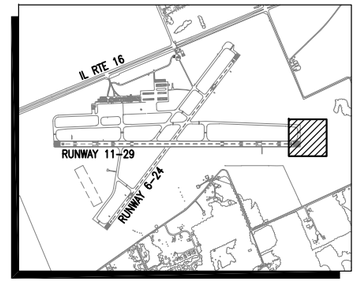

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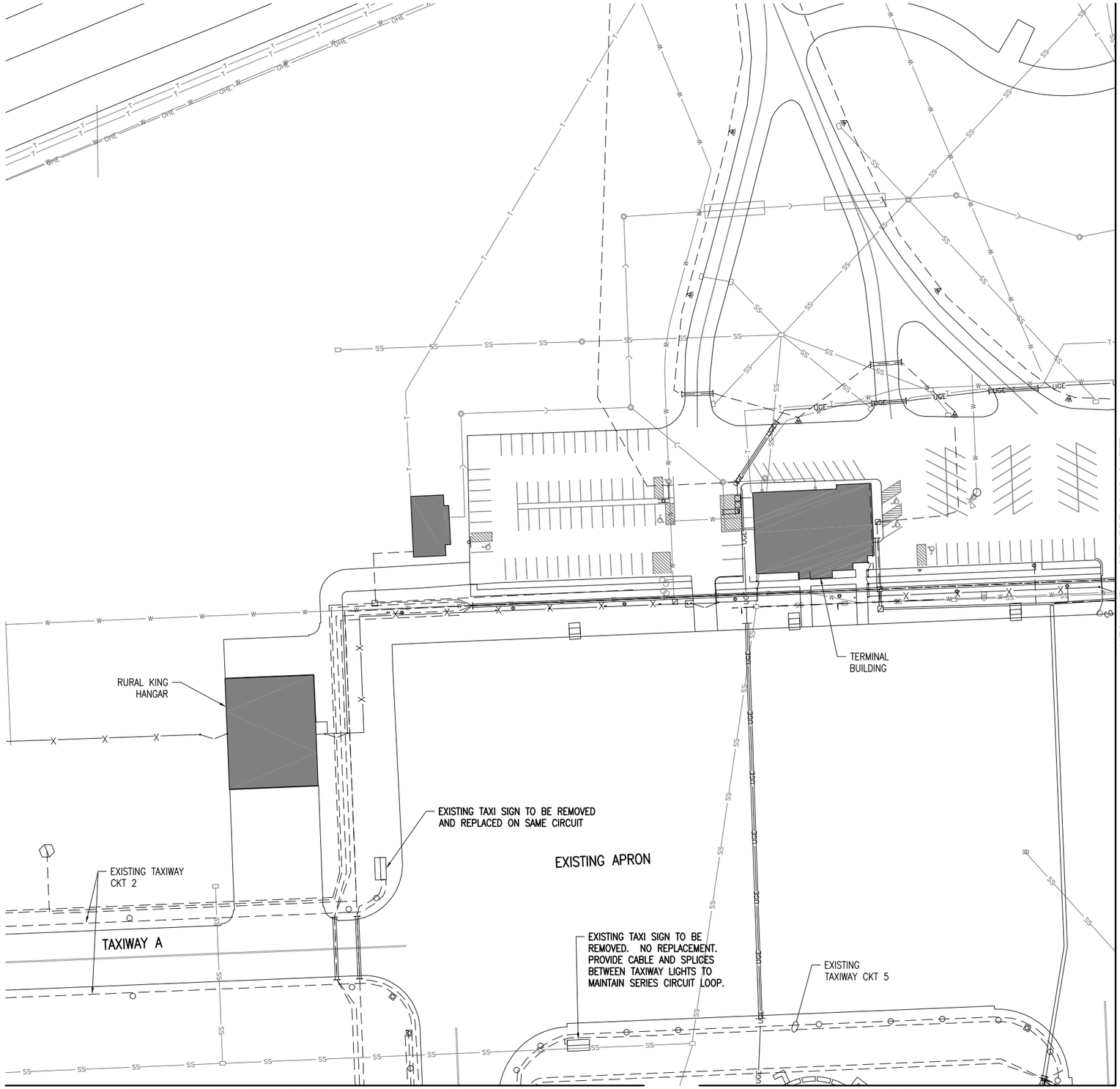

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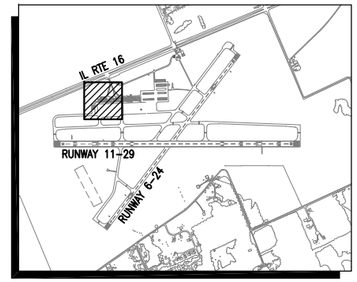

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EXISTING TAXI GUIDANCE SIGN PLAN SHEET 9

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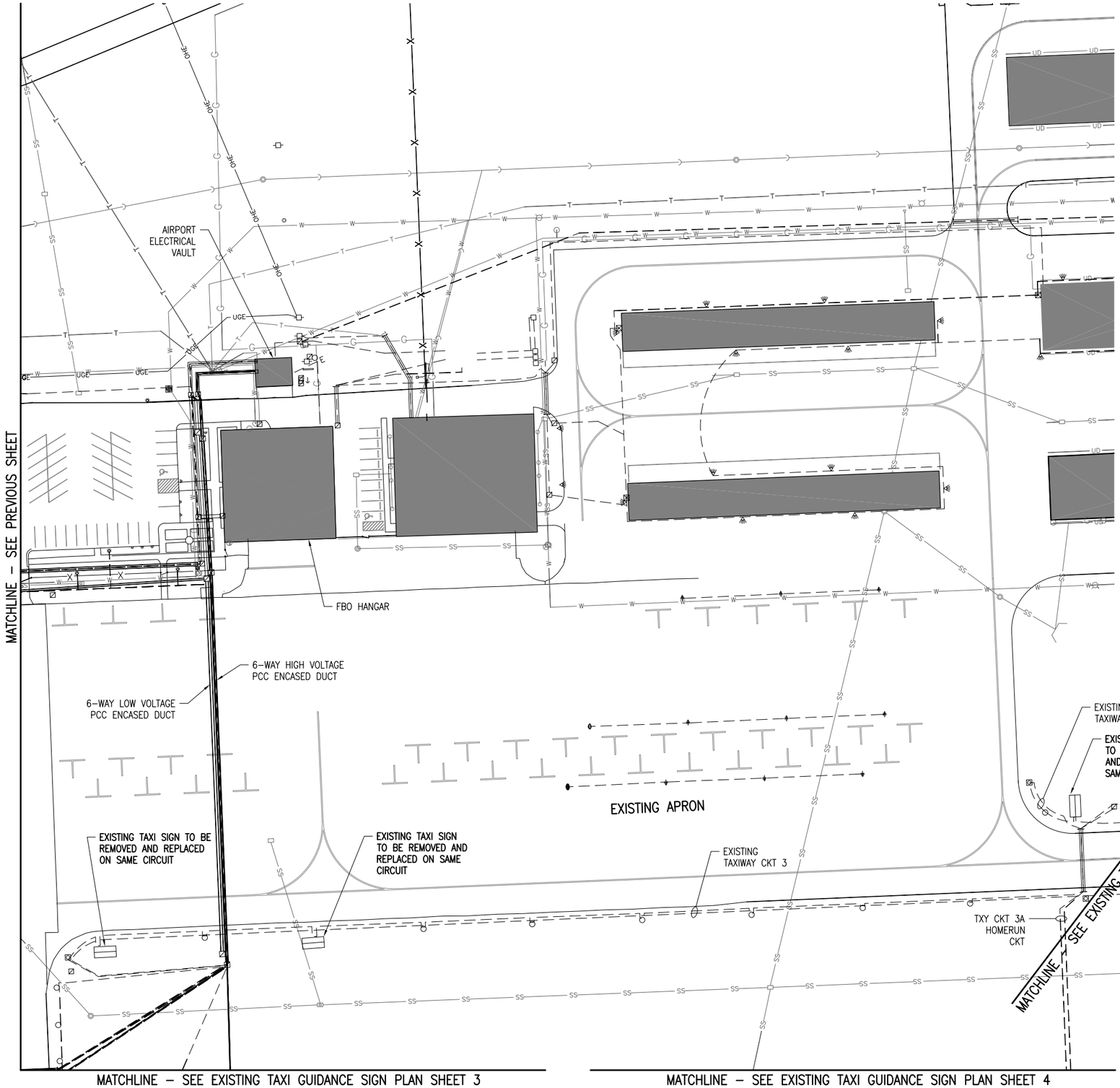

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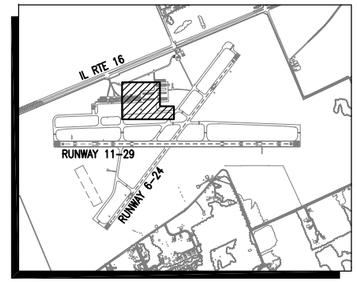

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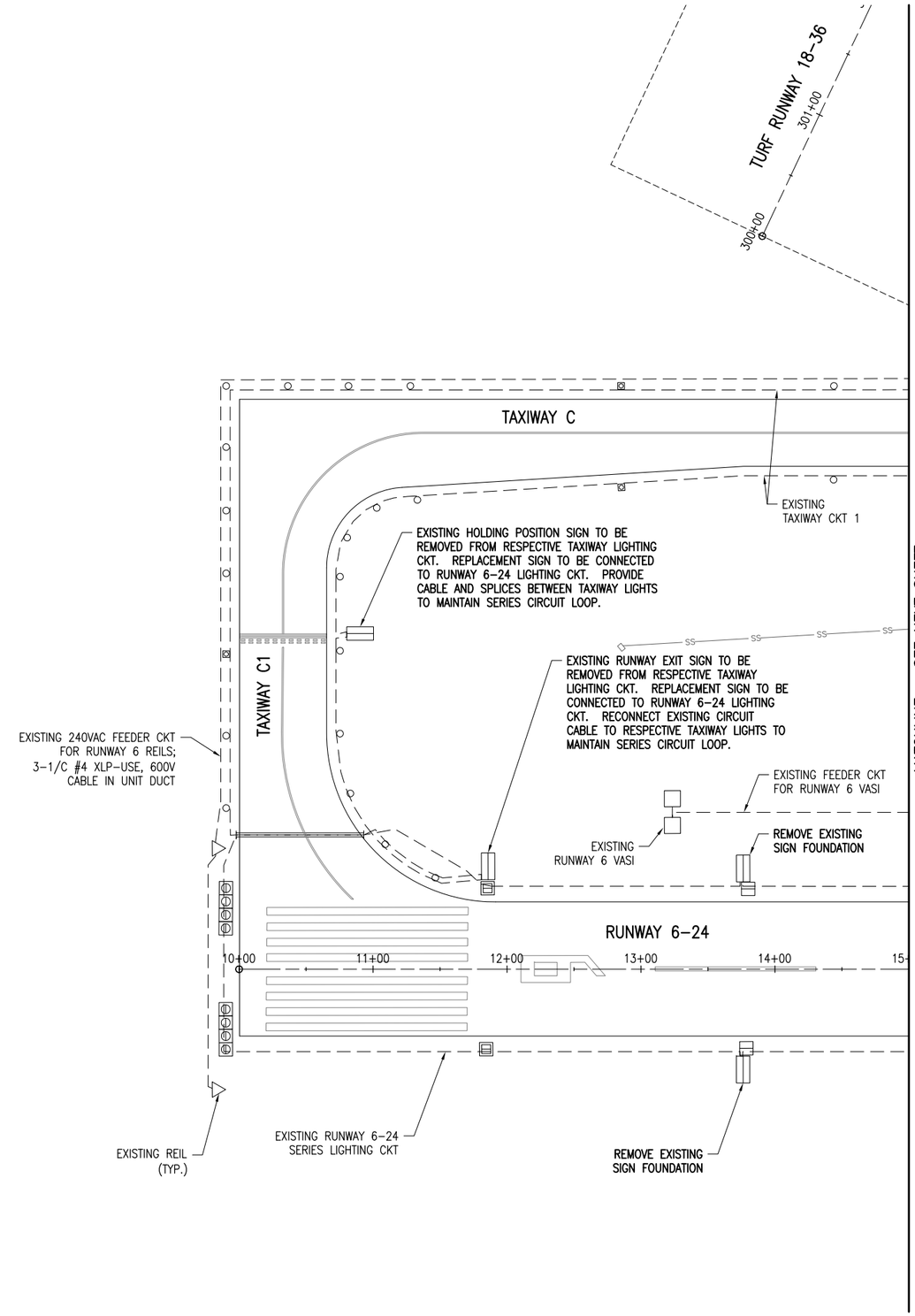

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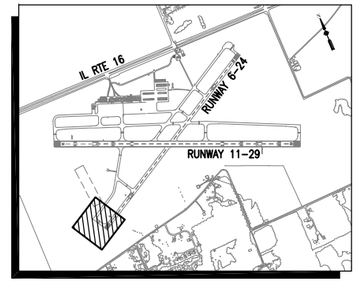

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IDA No: MTO-4511
SBG Project No: 3-17-SBGP-XX

Contract No. CO062

NO.	DATE	DESCRIPTION	DES	DWN	REV

ISSUE: APRIL 15, 2016
PROJECT NO: 13A0121D
CAD FILE: C-141-0624.DWG
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DRAWN BY: MLH 02/18/2016
REVIEWED BY: LDH 03/08/2016

SHEET TITLE

EXISTING TAXI GUIDANCE SIGN PLAN SHEET 11

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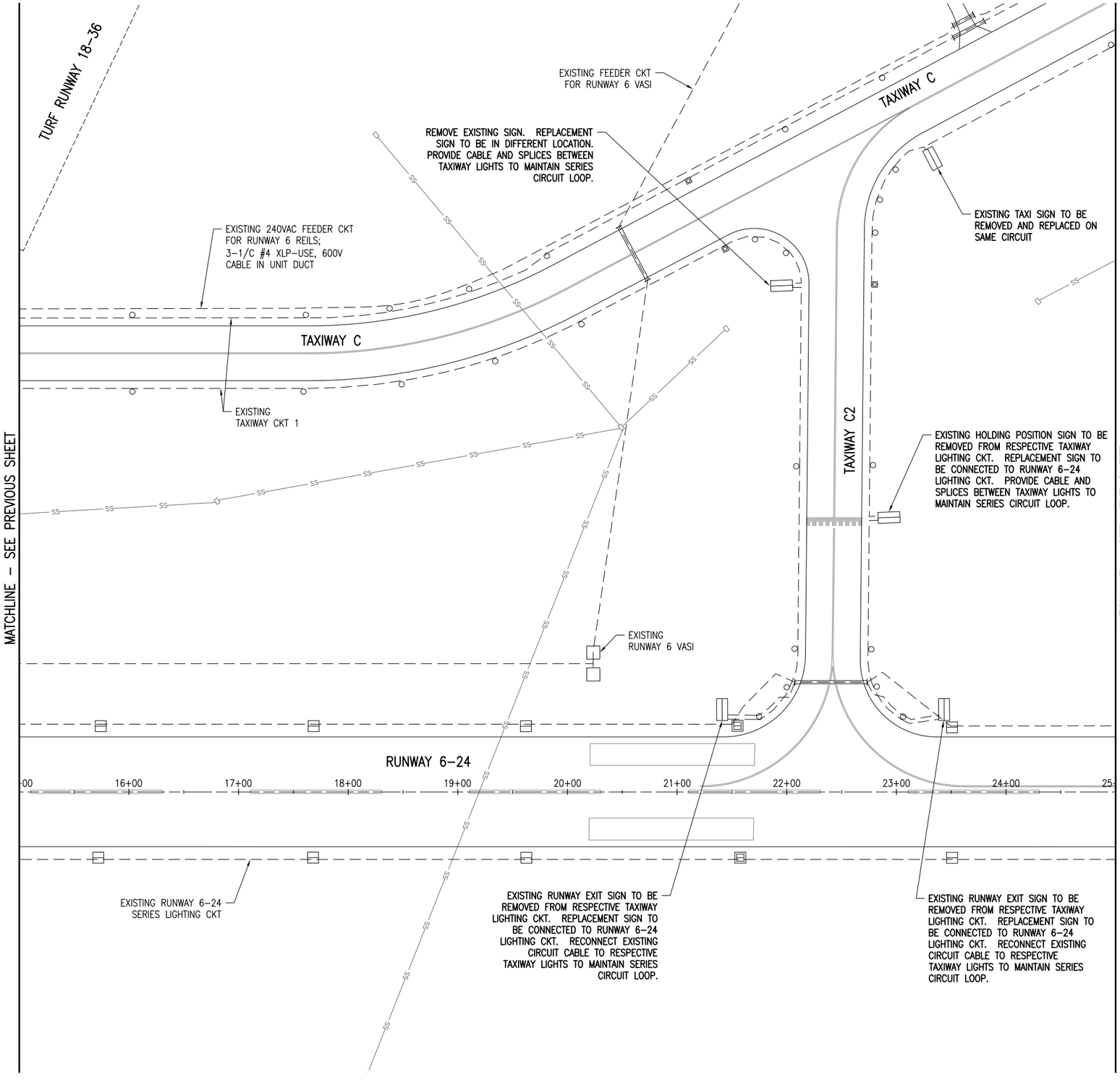

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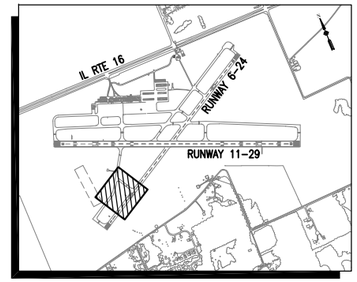
HALF SIZE SCALE: 1"= 100'
FULL SIZE SCALE: 1"= 50'



KEY MAP

LEGEND

- EXISTING PAVEMENT
- EXISTING BUILDING
- EXISTING ELECTRICAL DUCT
- EXISTING ELECTRICAL CABLE
- W — EXISTING WATER
- T — EXISTING TELEPHONE
- UD — EXISTING UNDERDRAIN
- SS — EXISTING STORM SEWER
- SAN — EXISTING SANITARY
- UGE — EXISTING UNDERGROUND ELECTRIC UTILITY PRIMARY
- EXISTING REIL
- EXISTING TAXI GUIDANCE SIGN (TO BE REMOVED)
- EXISTING STAKE MOUNTED TAXIWAY LIGHT
- EXISTING BASE MOUNTED TAXIWAY LIGHT
- EXISTING STAKE MOUNTED RUNWAY LIGHT
- EXISTING BASE MOUNTED RUNWAY LIGHT
- EXISTING STAKE MOUNTED THRESHOLD LIGHT
- EXISTING BASE MOUNTED THRESHOLD LIGHT
- EXISTING AIRPORT ROTATING BEACON
- ET EXISTING UTILITY TRANSFORMER

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SHEET TITLE

EXISTING TAXI GUIDANCE SIGN PLAN SHEET 12

APR 19, 2016 10:46 AM HARRI01115
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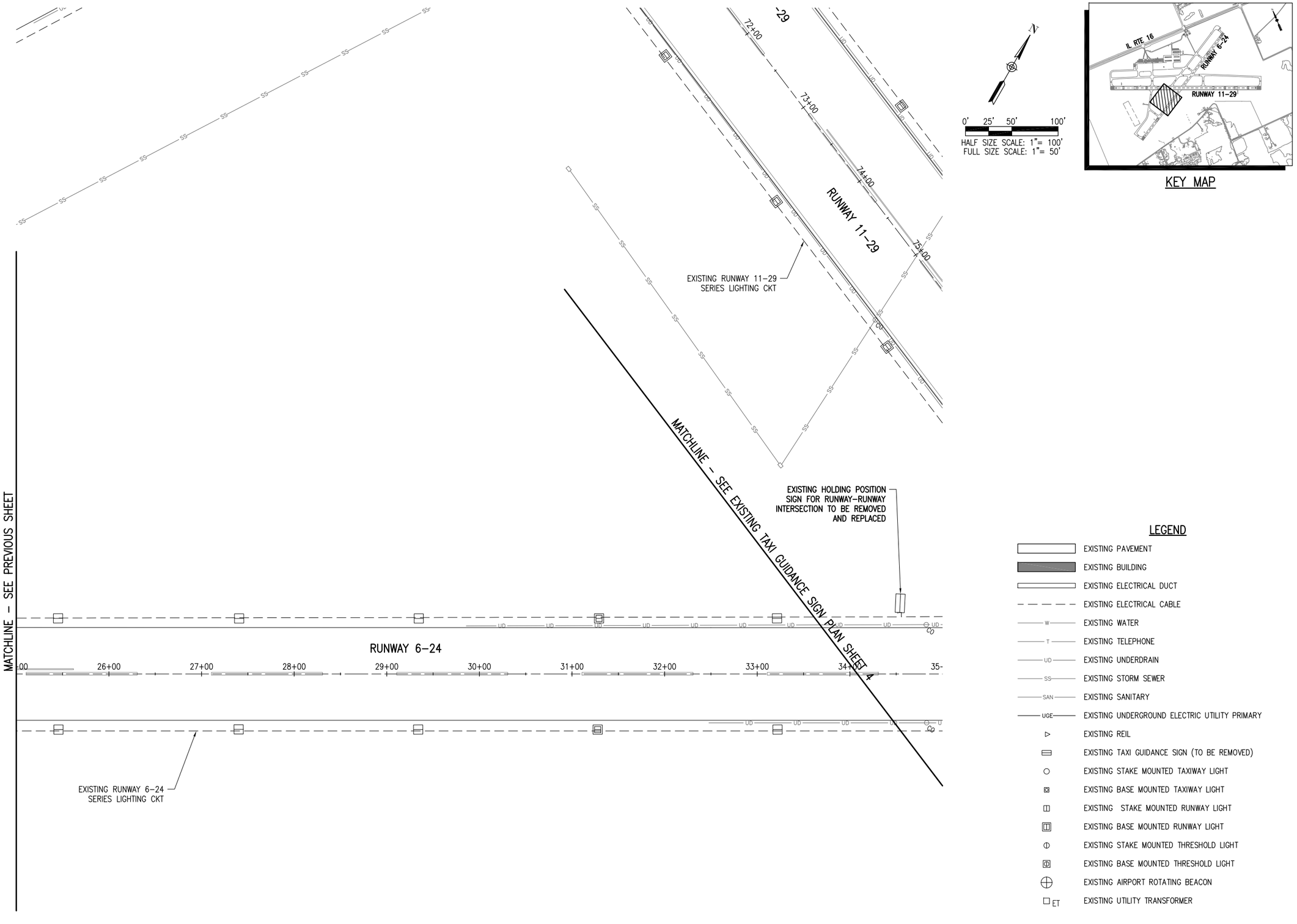

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EXISTING TAXI GUIDANCE SIGN PLAN SHEET 13

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MATCHLINE – SEE EXISTING TAXI GUIDANCE SIGN PLAN SHEET 10

TAXIWAY A

TXY CKT 3A
HOMERUN CKT

EXISTING TAXI SIGN TO BE REMOVED AND REPLACED ON THE SAME CIRCUIT

EXISTING
TAXIWAY CKT 3

EXISTING TAXI GUIDANCE SIGN TO BE REMOVED AND REPLACED. REPLACEMENT SIGN TO BE CONNECTED TO TAXIWAY CKT 3A.

EXISTING
TAXIWAY CKT 3A

MATCHLINE – SEE EXISTING TAXI GUIDANCE SIGN PLAN SHEET 4

TAXIWAY D

TAXIWAY D

EXISTING
TAXIWAY CKT 3

EXISTING HOLDING POSITION SIGN TO BE REMOVED FROM RESPECTIVE TAXIWAY LIGHTING CKT. REPLACEMENT SIGN TO BE CONNECTED TO RUNWAY 6–24 LIGHTING CKT. PROVIDE CABLE AND SPLICES BETWEEN TAXIWAY LIGHTS TO MAINTAIN SERIES CIRCUIT LOOP.

TAXIWAY B

TAXIWAY D3

EXISTING RUNWAY EXIT SIGN TO BE REMOVED FROM RESPECTIVE TAXIWAY LIGHTING CKT. REPLACEMENT SIGN TO BE CONNECTED TO RUNWAY 6–24 LIGHTING CKT. RECONNECT EXISTING CIRCUIT CABLE TO RESPECTIVE TAXIWAY LIGHTS TO MAINTAIN SERIES CIRCUIT LOOP.

MATCHLINE – SEE EXISTING TAXI GUIDANCE SIGN PLAN SHEET 5

RUNWAY 6–24

42+00 43+00 44+00 45+00 46+00 47+00 48+00 49+00 50+00 51+00

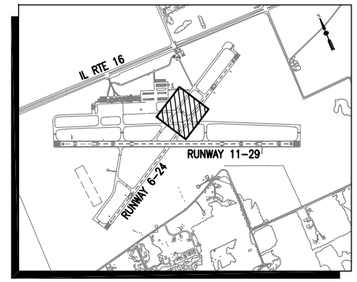
RUNWAY 6–24

EXISTING RUNWAY
6–24 SERIES
LIGHTING CKT

EXISTING 240VAC FEEDER CKT FOR RUNWAY 24 REILS; 3–1/C #4 XLP–USE, 600V CABLE IN UNIT DUCT

MATCHLINE – SEE NEXT SHEET

0' 25' 50' 100'
HALF SIZE SCALE: 1"= 100'
FULL SIZE SCALE: 1"= 50'



KEY MAP

LEGEND

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- EXISTING BUILDING
- EXISTING ELECTRICAL DUCT
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SHEET TITLE

EXISTING TAXI GUIDANCE SIGN PLAN SHEET 14

APR 19, 2016 10:46 AM HARRI0115
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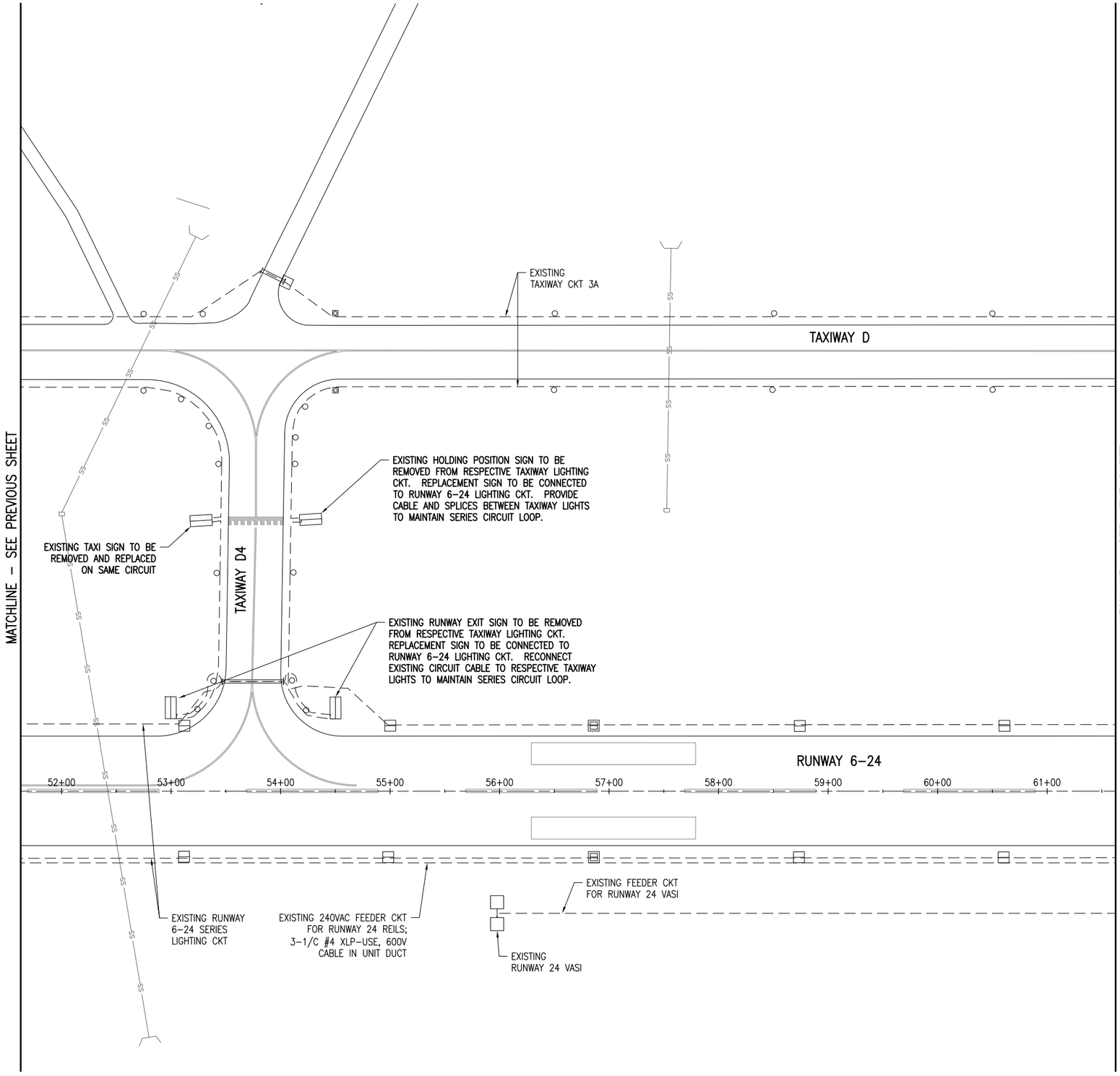

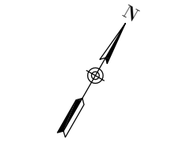

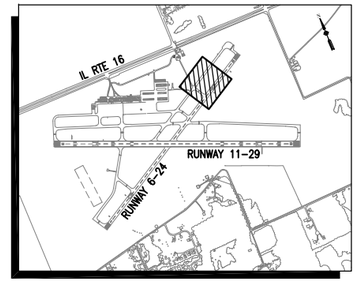

KEY MAP

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SHEET TITLE

EXISTING TAXI GUIDANCE SIGN PLAN SHEET 15

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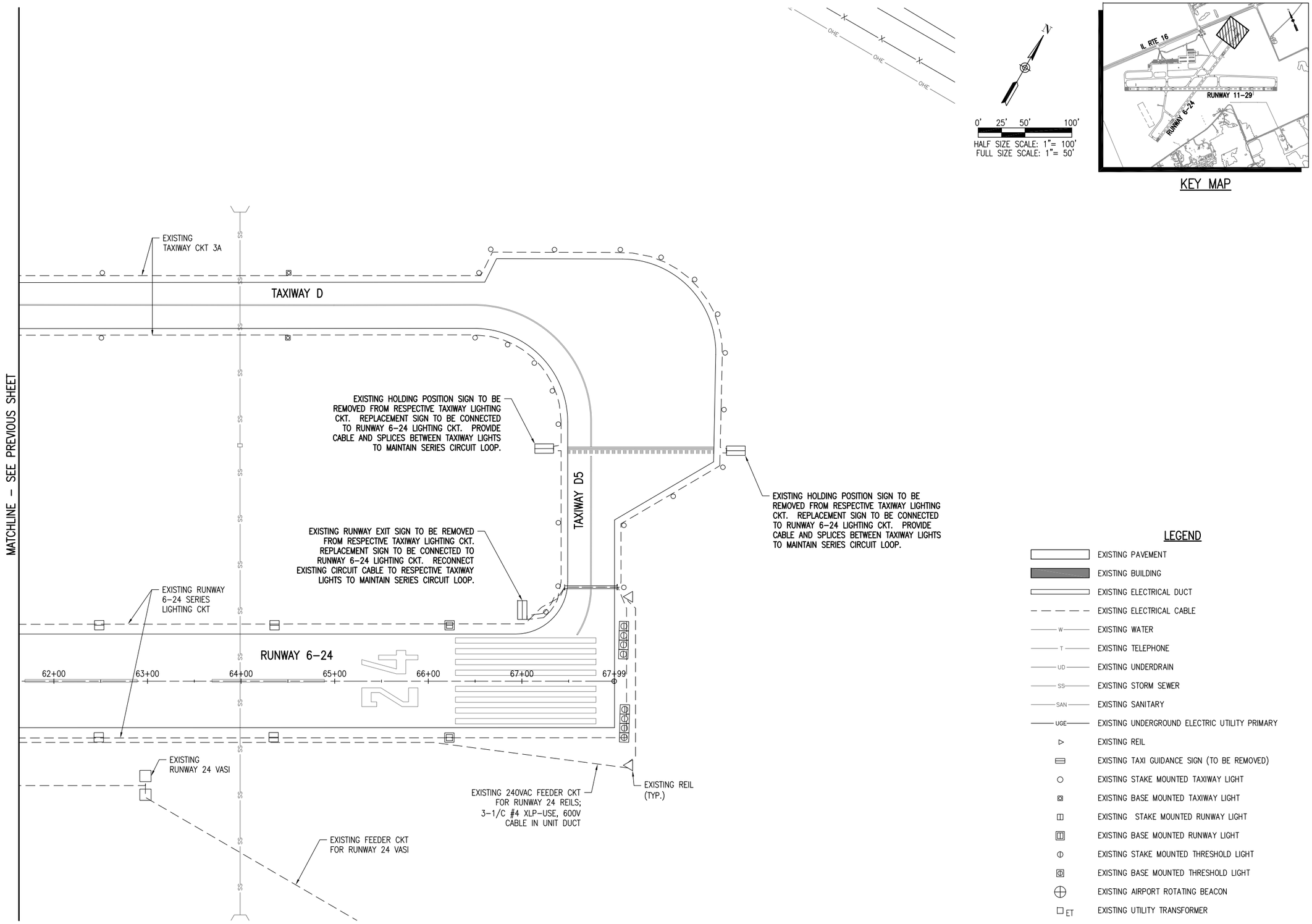

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SHEET TITLE

EXISTING TAXI GUIDANCE SIGN PLAN SHEET 16

APR 19, 2016 10:47 AM HARRI01115
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MATCHLINE – SEE TAXI GUIDANCE SIGN PLAN SHEET 2

EXISTING UNLIGHTED HOLDING POSITION SIGN TO BE REMOVED AND REPLACED.

EXISTING UNLIGHTED HOLDING POSITION SIGN TO BE REMOVED AND REPLACED.

EXISTING RUNWAY 11–29 SERIES LIGHTING CKT

RUNWAY 11 SUPPLEMENTAL WIND CONE

EXISTING ELECTRIC UTILITY UNDERGROUND PRIMARY

310+98

310+00

309+00

308+00

307+00

306+00

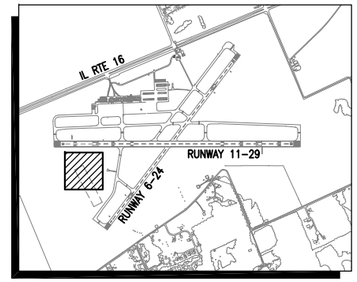
305+00

TURF RUNWAY 18–36

N

0' 25' 50' 100'

HALF SIZE SCALE: 1"= 100'
FULL SIZE SCALE: 1"= 50'



KEY MAP

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Contract No. CO062

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SHEET TITLE

EXISTING TAXI GUIDANCE SIGN PLAN SHEET 17

APR 19, 2016 10:48 AM HARRI01115
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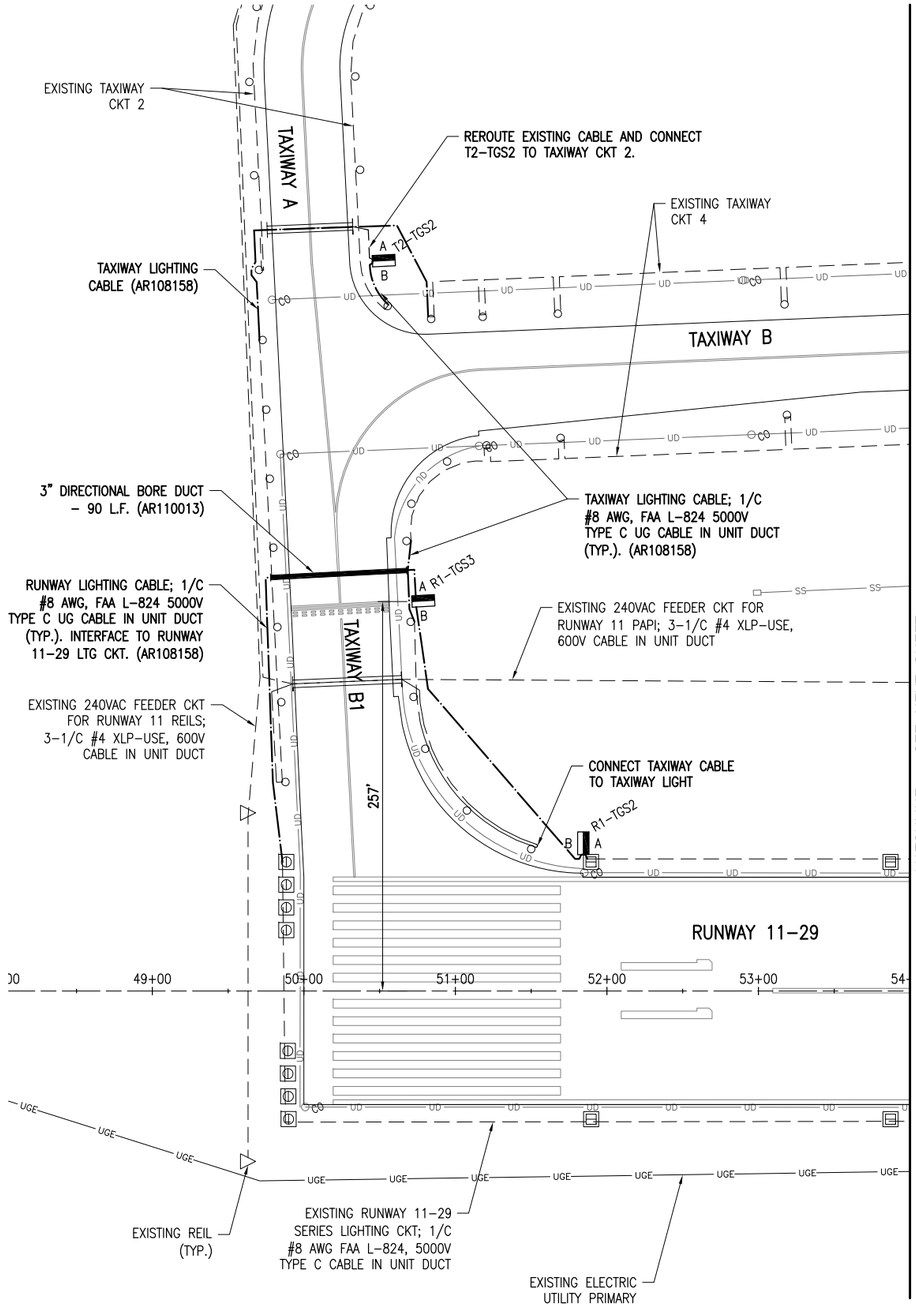
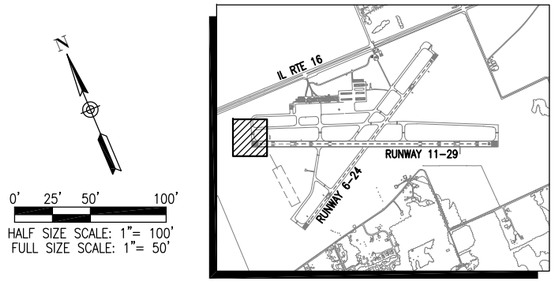
TAXI SIGN AND AIRFIELD LIGHTING NOTES

1. ALL WORK, POWER OUTAGES, AND/OR SHUT DOWN OF EXISTING SYSTEMS SHALL BE COORDINATED WITH THE AIRPORT DIRECTOR/MANAGER. ONCE SHUT DOWN, THE CIRCUITS SHALL BE LABELED AS SUCH TO PREVENT ACCIDENTAL ENERGIZING OF THE RESPECTIVE CIRCUITS. ALL PERSONNEL SHALL FOLLOW U.S. DEPARTMENT OF LABOR OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION (OSHA) 29 CFR PART 1910 OCCUPATIONAL SAFETY & HEALTH STANDARDS FOR ELECTRICAL SAFETY AND LOCKOUT/TAGOUT PROCEDURES INCLUDING, BUT NOT LIMITED TO 29 CFR SECTION 1910.147 THE CONTROL OF HAZARDOUS ENERGY (LOCKOUT/TAGOUT).
2. CONTRACTOR SHALL FIELD VERIFY EXISTING SITE CONDITIONS. CONTRACTOR SHALL FIELD VERIFY RESPECTIVE CIRCUITS AND POWER SOURCES PRIOR TO REMOVING OR DISCONNECTING THE RESPECTIVE AIRFIELD LIGHTING, TAXI SIGN, NAVAID, OR OTHER DEVICE.
3. PROPOSED AIRFIELD GUIDANCE SIGNS, OTHER AIRFIELD LIGHTING, SPLICE CANS, ELECTRICAL DUCTS, AND CABLE SHALL BE INSTALLED AT THE LOCATIONS SHOWN AND IN COMPLIANCE WITH THE SPECIFICATIONS, SPECIAL PROVISIONS, RESPECTIVE DETAILS, AND MANUFACTURER'S RECOMMENDATIONS.
4. PROPOSED TAXI GUIDANCE SIGNS SHALL BE LOCATED SUCH THAT THE CLOSEST SIDE OF THE SIGN IS 15' FROM THE PAVEMENT EDGE, UNLESS SHOWN OTHERWISE.
5. PROPOSED CABLE FOR RUNWAY AND TAXIWAY LIGHTING SHALL BE INSTALLED TO AVOID INTERFERENCES WITH OTHER CABLES, UTILITIES, DRAINAGE, DUCTS, AND STRUCTURES. CABLES SHALL BE PLACED A MINIMUM OF 18" BELOW FINISHED GRADE.
6. THE PROPOSED RUNWAY AND TAXIWAY LIGHTING CABLE SHALL BE 1/C, #8 AWG, FAA L-824, 5000 VOLT, TYPE C UNDERGROUND CABLE IN UNIT DUCT.
7. CONTRACTOR SHALL FURNISH AND INSTALL NEW ELECTRICAL CABLE FROM EACH PROPOSED TAXI GUIDANCE SIGN TO EACH RESPECTIVE RUNWAY/TAXIWAY LIGHT ON BOTH SIDES OF THE TAXI SIGN TO PLACE THE PROPOSED TAXI SIGN INTO THE SERIES CIRCUIT. WHERE EXISTING SIGNS ARE REMOVED FROM A RESPECTIVE CIRCUIT, CONTRACTOR SHALL FURNISH AND INSTALL CABLE, SPICES, AND/OR CONNECTIONS TO THE RESPECTIVE AIRFIELD LIGHTS TO MAINTAIN THE RESPECTIVE SERIES CIRCUIT LOOP.
8. IN AREAS WHERE THERE IS A CONGESTION OF CABLES OR WHERE THE PROPOSED CABLE CROSSES AN EXISTING CABLE, THE CONTRACTOR IS REQUIRED TO HAND DIG THE TRENCH NECESSARY FOR THE PROPOSED CABLE. AT OTHER LOCATIONS, THE PROPOSED CABLE MAY BE TRENCHED OR PLOWED INTO PLACE. HAND DIGGING, TRENCHING AND/OR PLOWING WILL BE CONSIDERED INCIDENTAL TO THE PROPOSED CABLES AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
9. ALL PROPOSED TAXI GUIDANCE SIGNS SHALL BE TAGGED BY THE CONTRACTOR IN ACCORDANCE WITH THE SIGN NUMBERS SHOWN ON THESE CONSTRUCTION DRAWINGS.
10. SEE "TAXI GUIDANCE SIGN SCHEDULE" FOR INFO ON SIGN LEGENDS.
11. RUNWAY EXIT/TAXIWAY ENTRANCE SIGNS (TAXIWAY GUIDANCE SIGNS TO DEFINE THE THROAT OR ENTRANCE INTO THE INTERSECTING TAXIING ROUTE) SHALL BE CONNECTED TO THE RESPECTIVE RUNWAY SERIES CIRCUIT TO BE ILLUMINATED WHEN THE RUNWAY EDGE LIGHTS ARE ON TO COMPLY WITH FAA AC 150/5340-18F, CHAPTER 1, PART 15 "SIGN OPERATION".
12. HOLDING POSITION SIGNS ARE TO BE LOCATED IN-LINE WITH THE HOLDING POSITION MARKING. A TOLERANCE OF UP TO 10 FEET FARTHER AWAY FROM THE RUNWAY CENTERLINE THAN THE HOLDING POSITION MARKING IS ALLOWED PER AC 150/5340-18F. CONFIRM LOCATIONS WITH RESIDENT ENGINEER/RESIDENT TECHNICIAN.
13. HOLDING POSITION SIGNS FOR RUNWAYS SHALL BE CONNECTED TO THE RESPECTIVE RUNWAY SERIES CIRCUIT TO BE ILLUMINATED WHEN THE ASSOCIATED RUNWAY LIGHTS ARE ILLUMINATED TO COMPLY WITH FAA AC 150/5340-18F, CHAPTER 1, PART 15 "SIGN OPERATION".
14. THE CONTRACTOR SHALL SECURE, IDENTIFY AND PLACE ALL TEMPORARY EXPOSED WIRING IN CONDUIT, DUCT OR UNIT DUCT TO PREVENT ELECTROCUTION AND FIRE IGNITION SOURCES AS PER THE REQUIREMENTS OF FAA AC 150/5370-2F, PART 218, PARAGRAPH C. ALL LABOR, MATERIALS, AND TIME NECESSARY TO COMPLY WITH THIS REQUIREMENT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
15. EXISTING AIRFIELD LIGHTING CABLES (SCHEDULED FOR REPLACEMENT) IN AREAS OF NEW WORK SHALL BE DISCONNECTED & REMOVED WHERE IN CONFLICT WITH NEW CONSTRUCTION. IN OTHER AREAS CABLES MAY BE ABANDONED IN PLACE.
16. THE CONTRACTOR IS REQUIRED TO FILL IN ALL HOLES AND DEPRESSIONS RESULTING FROM THE NEW WORK, WITH EARTH MATERIAL. THE AREAS SHALL BE COMPACTED TO PREVENT FUTURE SETTLEMENT AND FERTILIZED, SEEDED, AND MULCHED IN ACCORDANCE WITH ITEMS 901 AND 908 RESPECTIVELY.
17. IN THE EVENT THAT OTHER CONSTRUCTION PROJECTS ARE IN PROGRESS AT THE AIRPORT AT THE SAME TIME AS THIS PROJECT, THE CONTRACTOR WILL BE REQUIRED TO COOPERATE WITH ALL OTHER CONTRACTORS AND THE AIRPORT MANAGER IN THE COORDINATION OF THE WORK.
18. NO CONNECTION TO AN ACTIVE LIGHTING CIRCUIT WILL BE BROKEN UNTIL THE CIRCUIT HAS BEEN TURNED OFF IN ACCORDANCE WITH NOTE 1.





KEY MAP

THE LOCATION, SIZE, AND TYPE OF MATERIAL OF EXISTING UNDERGROUND AND/OR ABOVEGROUND UTILITIES INDICATED ON THE PLANS ARE NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. NEITHER THE OWNER NOR THE ENGINEER ASSUMES ANY RESPONSIBILITY WHATEVER IN RESPECT TO THE ACCURACY, COMPLETENESS, OR SUFFICIENCY OF THE INFORMATION. THERE IS NO GUARANTEE, EITHER EXPRESSED OR IMPLIED, THAT THE LOCATIONS, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND UTILITIES INDICATED ARE REPRESENTATIVE OF THOSE TO BE ENCOUNTERED IN THE CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES OF HIS OPERATIONAL PLANS AND SHALL OBTAIN FROM THE RESPECTIVE UTILITY COMPANIES DETAILED INFORMATION AND ASSISTANCE RELATIVE TO THE LOCATION OF THEIR FACILITIES AND THE WORKING SCHEDULE OF THE COMPANIES FOR REMOVAL OR ADJUSTMENT WHERE REQUIRED. IN THE EVENT AN UNEXPECTED UTILITY INTERFERENCE IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY COMPANY OF JURISDICTION. THE OWNER'S REPRESENTATIVE AND/OR THE RESIDENT ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY DAMAGE TO SUCH MAINS AND SERVICES SHALL BE RESTORED TO SERVICE AT ONCE AND PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT.

ALL UTILITY CABLES AND LINES SHALL BE LOCATED BY THE RESPECTIVE UTILITY. **CONTACT JULIE (JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS) FOR UTILITY INFORMATION, PHONE: 1-800-892-0123.** CONTACT THE FAA (FEDERAL AVIATION ADMINISTRATION) FOR ASSISTANCE IN LOCATING FAA CABLES AND UTILITIES. LOCATION OF FAA POWER, CONTROL, AND COMMUNICATION CABLES SHALL BE COORDINATED WITH AND/OR LOCATED BY THE FAA. ALSO CONTACT AIRPORT DIRECTOR/MANAGER AND AIRPORT PERSONNEL FOR ASSISTANCE IN LOCATING UNDERGROUND AIRPORT CABLES AND/OR UTILITIES. ALSO COORDINATE WORK WITH ALL ABOVEGROUND UTILITIES.

LEGEND

- EXISTING PAVEMENT
- EXISTING BUILDING
- EXISTING ELECTRICAL DUCT
- PROPOSED DIRECTIONAL BORE DUCT
- EXISTING ELECTRICAL CABLE
- PROPOSED 1/C #8AWG, FAA L-824, 5000 VOLT TYPE C UNDERGROUND CABLE UNIT IN DUCT
- W EXISTING WATER
- T EXISTING TELEPHONE
- UD EXISTING UNDERDRAIN
- SS EXISTING STORM SEWER
- SAN EXISTING SANITARY
- UGE EXISTING UNDERGROUND ELECTRIC UTILITY PRIMARY
- EXISTING REIL
- PROPOSED TAXI GUIDANCE SIGN
- SC PROPOSED SLICE CAN
- EXISTING STAKE MOUNTED TAXIWAY LIGHT
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- EXISTING STAKE MOUNTED THRESHOLD LIGHT
- EXISTING BASE MOUNTED THRESHOLD LIGHT
- EXISTING AIRPORT ROTATING BEACON
- ET EXISTING UTILITY TRANSFORMER

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COLES COUNTY AIRPORT AUTHORITY
COLES COUNTY MEMORIAL AIRPORT

REMOVE AND REPLACE ALL TAXI GUIDANCE SIGNS ON THE AIRPORT

IDA No: MTO-4511
SBG Project No: 3-17-SBGP-XX

Contract No. CO062

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

ISSUE: APRIL 15, 2016
PROJECT NO: 13A0121D
CAD FILE: C-142-1129.DWG
DESIGN BY: KNL 02/13/2016
DRAWN BY: MLH 02/17/2016
REVIEWED BY: LDH 03/08/2016

SHEET TITLE

PROPOSED TAXI GUIDANCE SIGN PLAN SHEET 1

APR 19, 2016 10:50 AM HARRI01115
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MATCHLINE – SEE PROPOSED TAXI GUIDANCE SIGN PLAN SHEET 9

TAXIWAY A1

TAXIWAY B

EXISTING TAXIWAY CKT 4

EXISTING TAXIWAY CKT 5

EXISTING TAXIWAY CKT 6

T4-TGS1

A15-TGS2

B16-TGS2

TAXIWAY LIGHTING CABLE; 1/C #8 AWG, FAA L-824 5000V TYPE C UG CABLE IN UNIT DUCT (TYP.). INTERFACE TO RESPECTIVE TAXIWAY LTG CKT. (AR108158)

MATCHLINE – SEE PREVIOUS SHEET

EXISTING RUNWAY 11 PAPI

RUNWAY 11–29

55+00 56+00 57+00 58+00 59+00 60+00 61+00 62+00 63+00

MATCHLINE – SEE NEXT SHEET

EXISTING RUNWAY 11–29 SERIES LIGHTING CKT

TO RUNWAY 11 SUPPLEMENTAL WIND CONE

EXISTING ELECTRIC UTILITY PRIMARY

257'

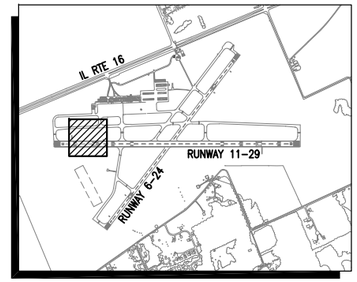
MATCHLINE – SEE PROPOSED TAXI GUIDANCE SIGN PLAN SHEET 17

RJ-TGS2

PROPOSED UNLIGHTED TAXI GUIDANCE SIGN

0' 25' 50' 100'

HALF SIZE SCALE: 1"= 100'
FULL SIZE SCALE: 1"= 50'



KEY MAP

LEGEND

- EXISTING PAVEMENT
- EXISTING BUILDING
- EXISTING ELECTRICAL DUCT
- PROPOSED DIRECTIONAL BORE DUCT
- EXISTING ELECTRICAL CABLE
- PROPOSED 1/C #8AWG, FAA L-824, 5000 VOLT TYPE C UNDERGROUND CABLE UNIT IN DUCT
- W EXISTING WATER
- T EXISTING TELEPHONE
- UD EXISTING UNDERDRAIN
- SS EXISTING STORM SEWER
- SAN EXISTING SANITARY
- UGE EXISTING UNDERGROUND ELECTRIC UTILITY PRIMARY
- EXISTING REIL
- PROPOSED TAXI GUIDANCE SIGN
- SC PROPOSED SLICE CAN
- EXISTING STAKE MOUNTED TAXIWAY LIGHT
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PROPOSED TAXI GUIDANCE SIGN PLAN SHEET 2

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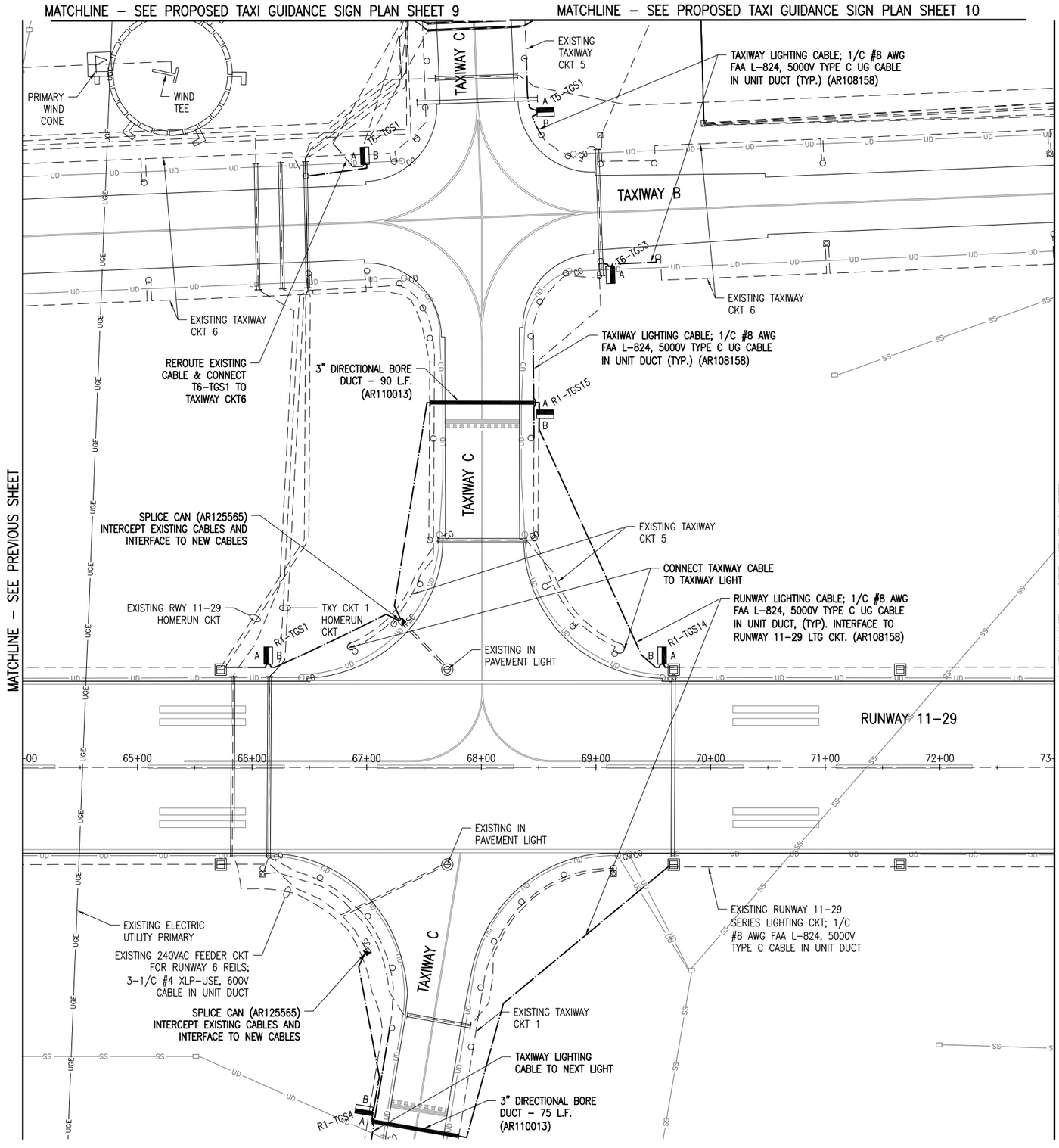
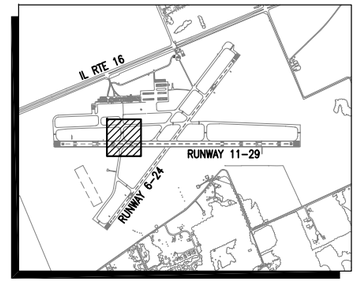


0' 25' 50' 100'

HALF SIZE SCALE: 1"= 100'
FULL SIZE SCALE: 1"= 50'



KEY MAP

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- EXISTING STAKE MOUNTED TAXIWAY LIGHT
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SHEET TITLE

PROPOSED TAXI GUIDANCE SIGN PLAN SHEET 3

MATCHLINE – SEE PROPOSED TAXI GUIDANCE SIGN PLAN SHEET 10

MATCHLINE – SEE PROPOSED TAXI GUIDANCE SIGN PLAN SHEET 14

MATCHLINE – SEE PREVIOUS SHEET

MATCHLINE – SEE NEXT SHEET

MATCHLINE – SEE PROPOSED TAXI GUIDANCE SIGN PLAN SHEET 13

TAXIWAY B

TAXIWAY D

RUNWAY 11–29

RUNWAY 6–24

CONNECT TO TAXIWAY LTG CKT 6

T6–TGS5

T3–TGS3; CONNECT TO TAXIWAY LTG CKT 3

T3–TGS3

R2–TGS2

3" DIRECTIONAL BORE DUCT – 80 L.F. (AR110013)

EXISTING TAXIWAY CKT 6

RUNWAY LIGHTING CABLE; 1/C #8 AWG FAA L–824, 5000V TYPE C UG CABLE IN UNIT DUCT. INTERFACE TO RUNWAY 6–24 LTG CKT. (AR108158)

CONNECT TO TAXIWAY LTG CKT 6

T6–TGS4

TAXIWAY LIGHTING CABLE; 1/C #8 AWG FAA L–824, 5000V TYPE C UG CABLE IN UNIT DUCT (TYP.) (AR108158)

3" DIRECTIONAL BORE DUCT – 75 L.F. (AR110013)

TAXIWAY LIGHTING CABLE

R1–TGS12

CONNECT TAXIWAY CABLE TO TAXIWAY LIGHT

R1–TGS13

R1–TGS11

RUNWAY LIGHTING CABLE; 1/C #8 AWG FAA L–824, 5000V TYPE C UG CABLE IN UNIT DUCT, (TYP). INTERFACE TO RUNWAY 11–29 LTG CKT. (AR108158)

EXISTING IN PAVEMENT LIGHT

EXISTING RUNWAY 11–29 SERIES LIGHTING CKT

CONNECT TO RUNWAY 6–24 LTG CKT

R2–TGS4

EXISTING RUNWAY 6–24 SERIES LIGHTING CKT

74+00 75+00 76+00 77+00 78+00 79+00 80+00 81+00 82+00

35+00 36+00 37+00 38+00 39+00 40+00 41+00 42+00

0' 25' 50' 100'

HALF SIZE SCALE: 1"= 100'
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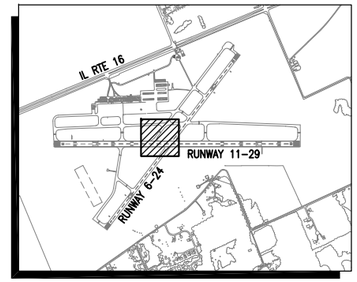

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Contract No. CO062

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SHEET TITLE

PROPOSED TAXI GUIDANCE SIGN PLAN SHEET 4

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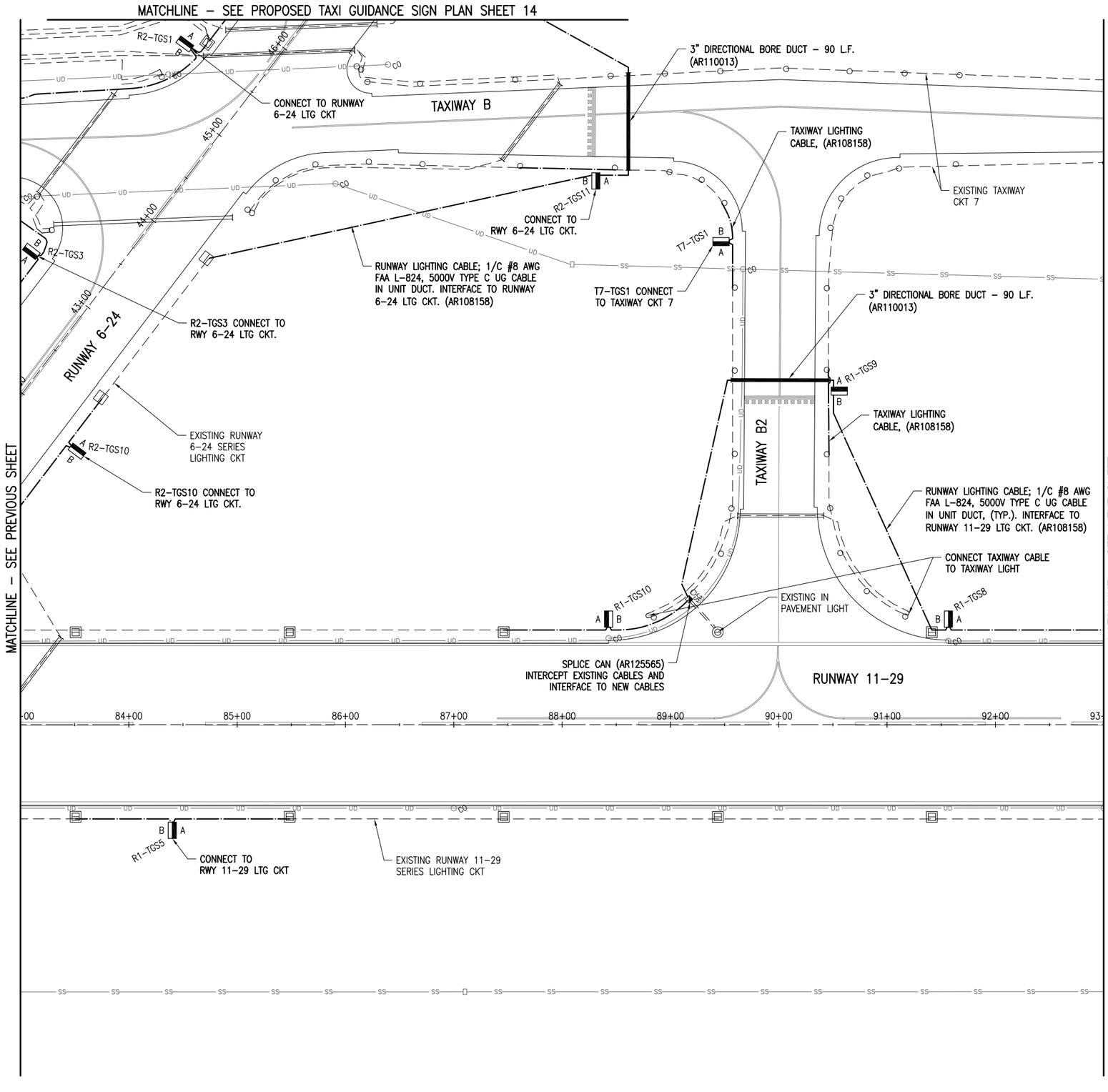

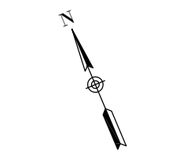

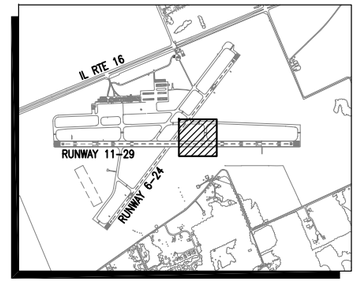

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SHEET TITLE

PROPOSED TAXI GUIDANCE SIGN PLAN SHEET 5

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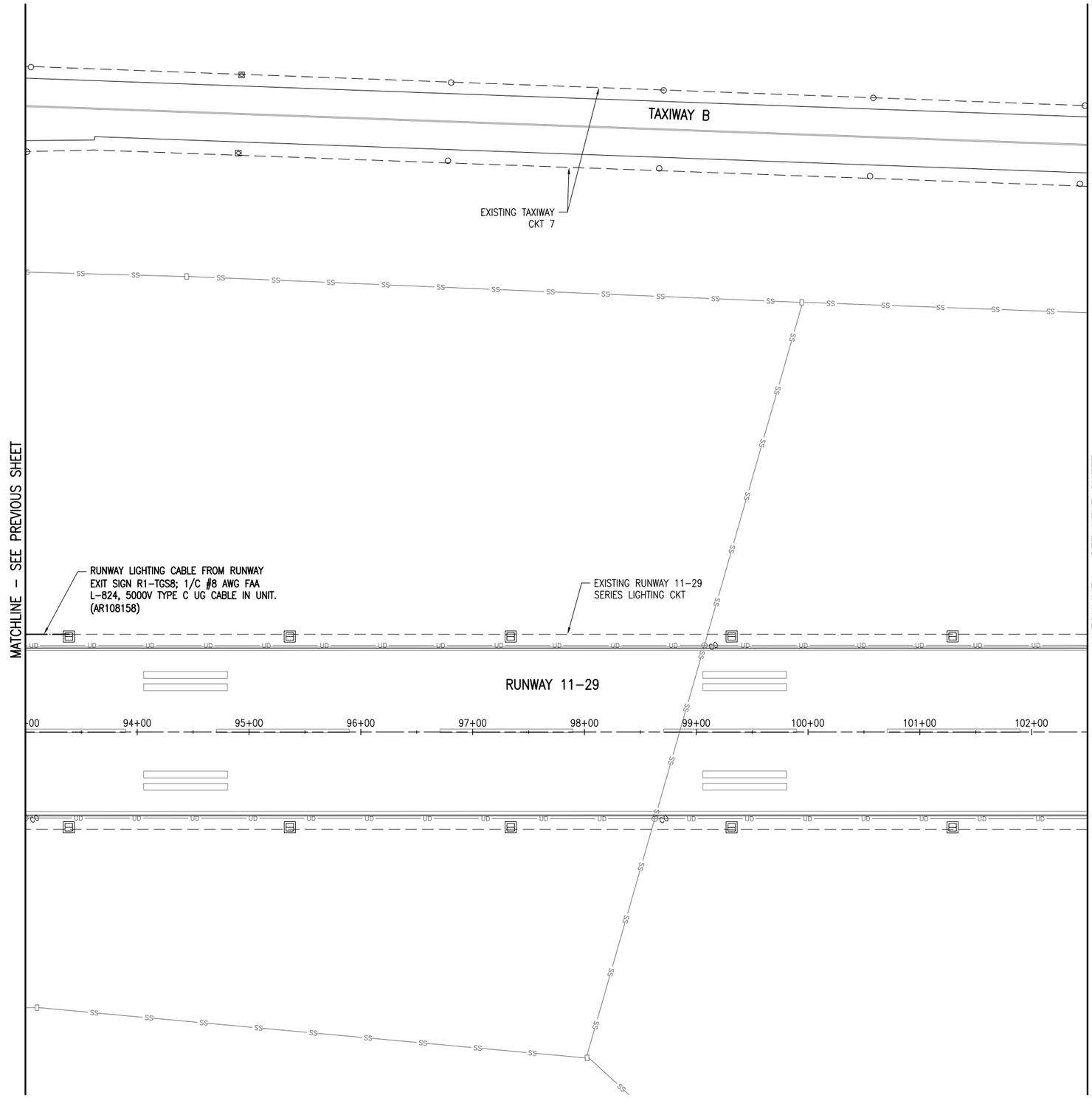

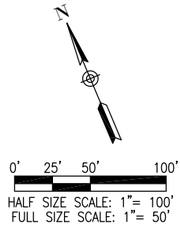

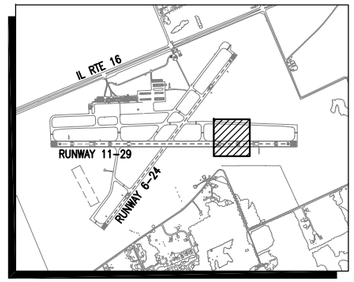

KEY MAP

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SHEET TITLE

PROPOSED TAXI GUIDANCE SIGN PLAN SHEET 6

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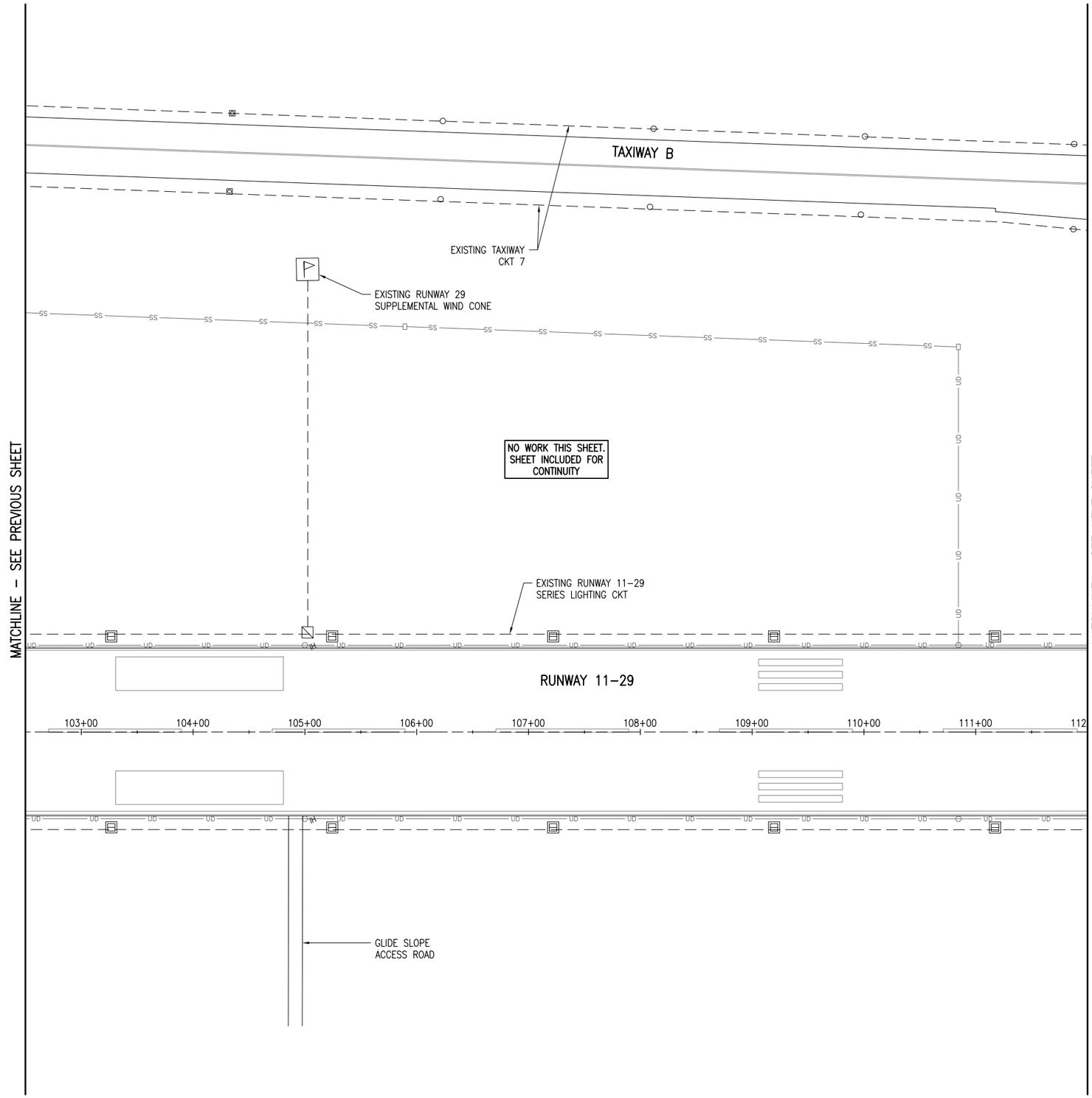

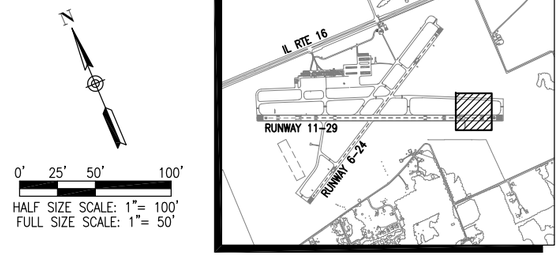

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SHEET TITLE

PROPOSED TAXI GUIDANCE SIGN PLAN SHEET 7

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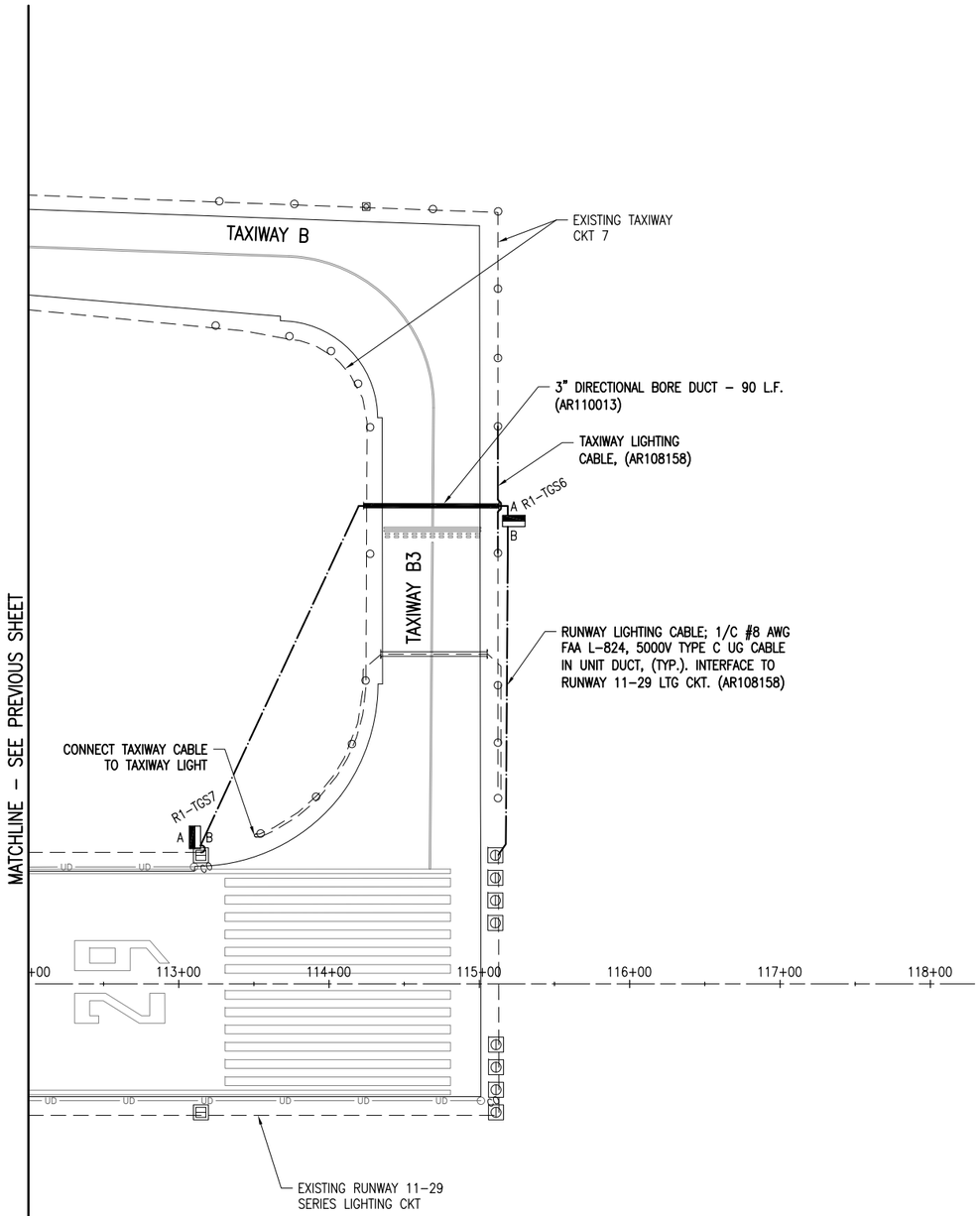

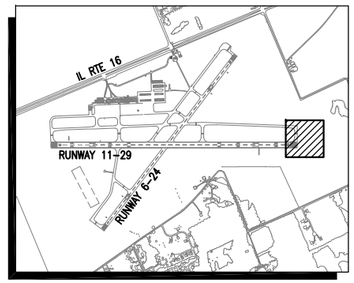

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SHEET TITLE

PROPOSED TAXI GUIDANCE SIGN PLAN SHEET 8

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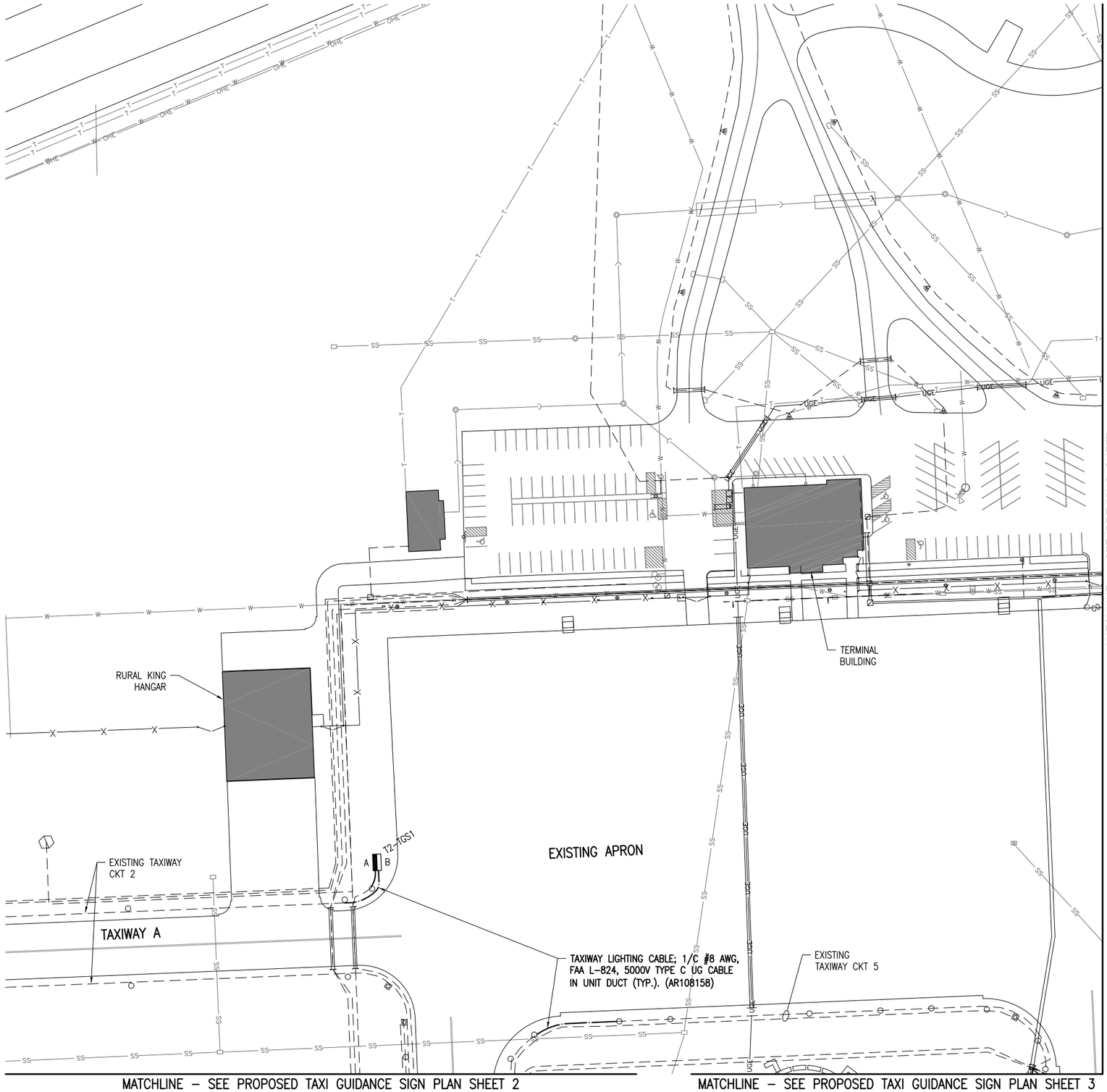
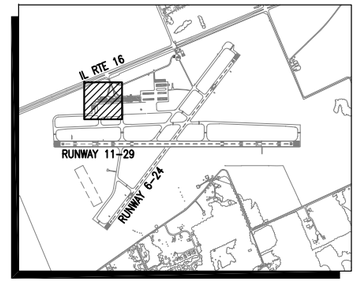


0' 25' 50' 100'
HALF SIZE SCALE: 1"= 100'
FULL SIZE SCALE: 1"= 50'



KEY MAP

LEGEND

- EXISTING PAVEMENT
- EXISTING BUILDING
- EXISTING ELECTRICAL DUCT
- PROPOSED DIRECTIONAL BORE DUCT
- EXISTING ELECTRICAL CABLE
- PROPOSED 1/C #8AWG, FAA L-824, 5000 VOLT TYPE C UNDERGROUND CABLE UNIT IN DUCT
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- UD — EXISTING UNDERDRAIN
- SS — EXISTING STORM SEWER
- SAN — EXISTING SANITARY
- UGE — EXISTING UNDERGROUND ELECTRIC UTILITY PRIMARY
- EXISTING REIL
- PROPOSED TAXI GUIDANCE SIGN
- SC — PROPOSED SLICE CAN
- EXISTING STAKE MOUNTED TAXIWAY LIGHT
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COLES COUNTY AIRPORT AUTHORITY
COLES COUNTY MEMORIAL AIRPORT

REMOVE AND REPLACE ALL TAXI GUIDANCE SIGNS ON THE AIRPORT

IDA No: MTO-4511
SBG Project No: 3-17-SBGP-XX

Contract No. CO062

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

ISSUE: APRIL 15, 2016
PROJECT NO: 13A0121D
CAD FILE: C-142-1129.DWG
DESIGN BY: KNL 02/13/2016
DRAWN BY: MLH 02/18/2016
REVIEWED BY: LDH 03/08/2016

SHEET TITLE

PROPOSED TAXI GUIDANCE SIGN PLAN SHEET 9

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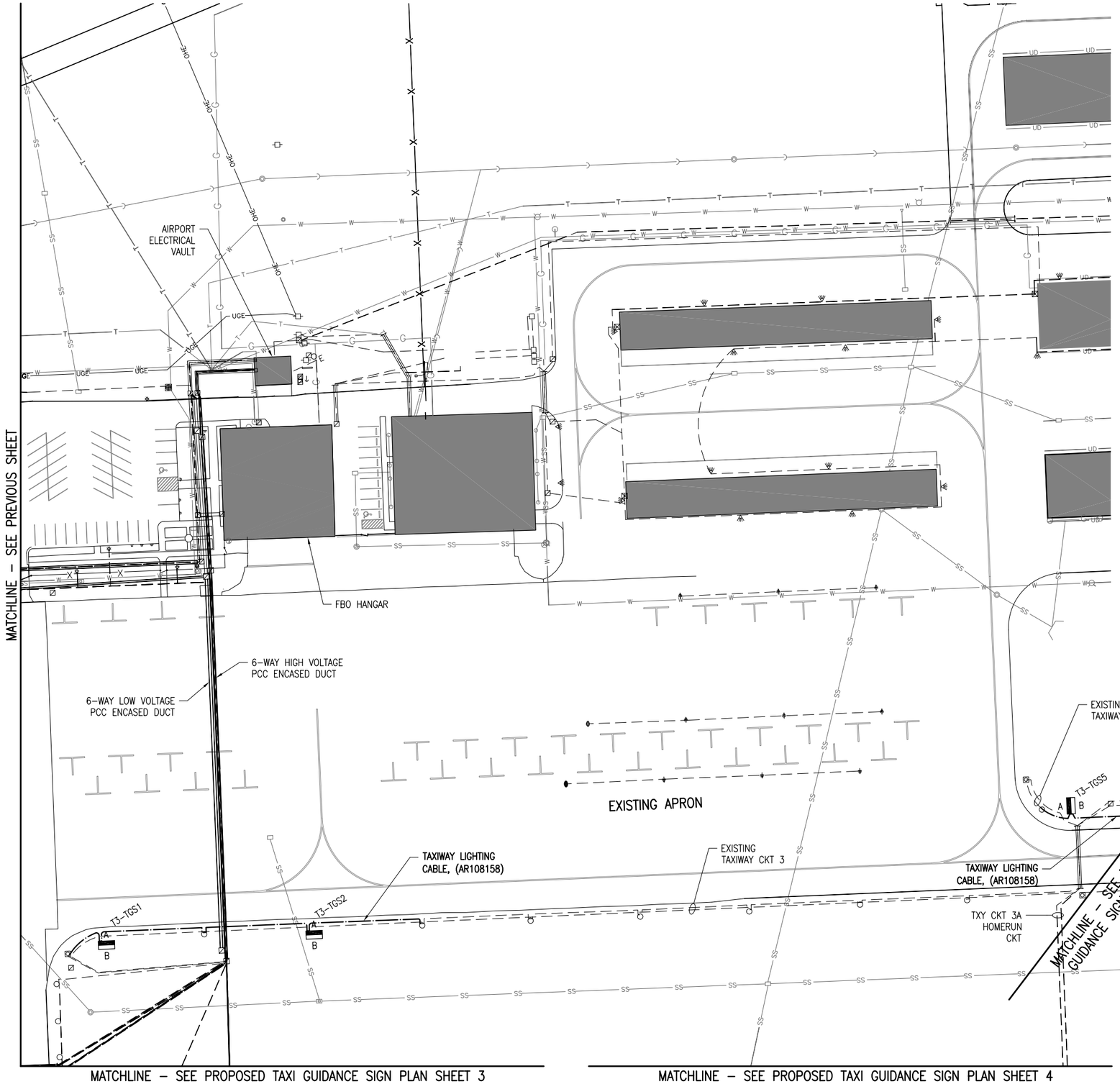

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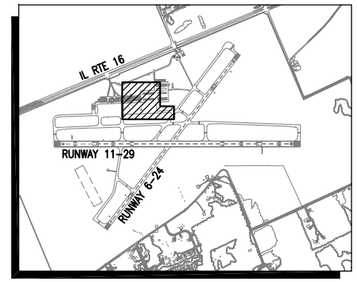

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SHEET TITLE

PROPOSED TAXI GUIDANCE SIGN PLAN SHEET 10

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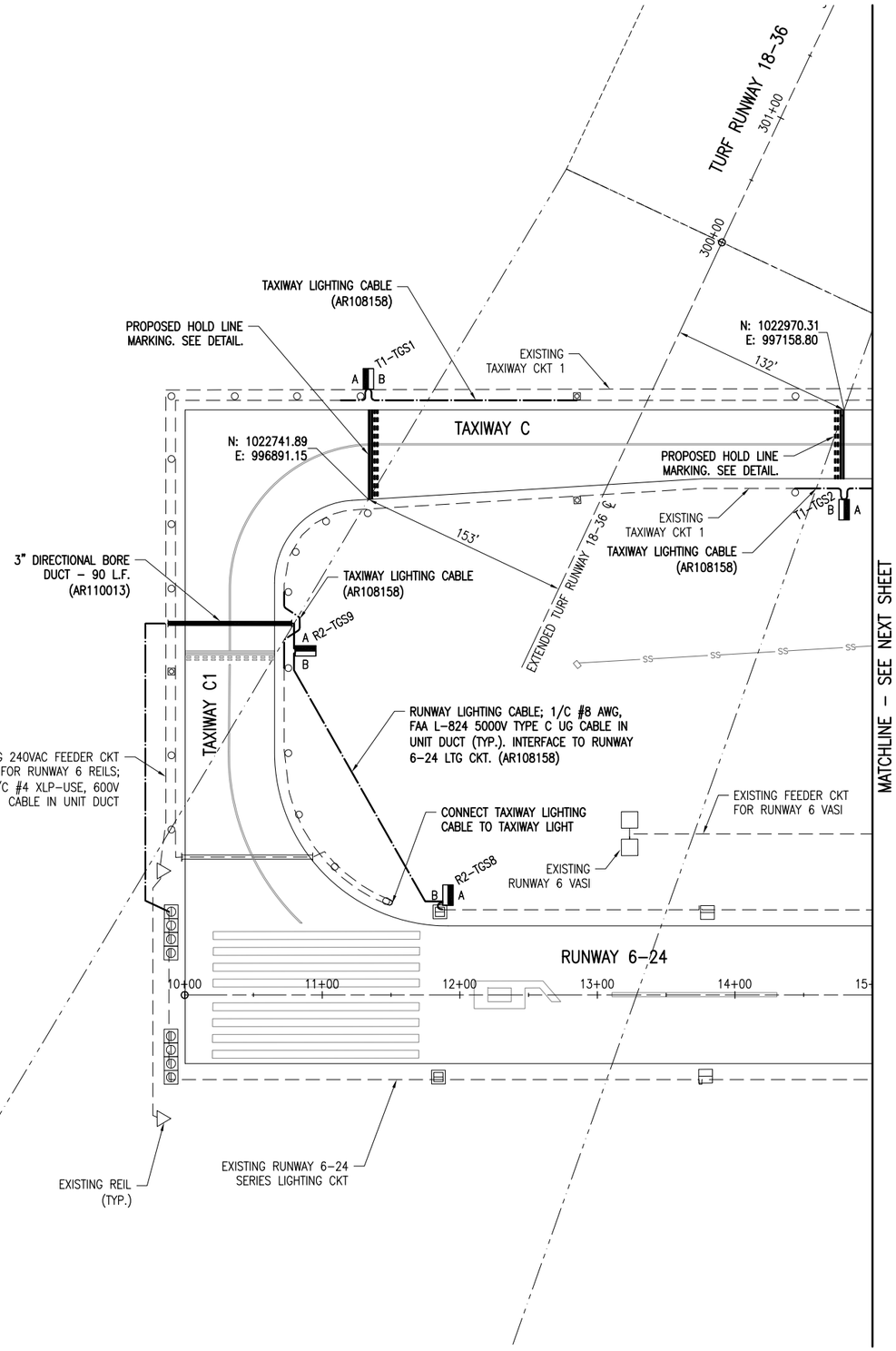

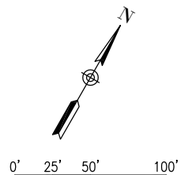

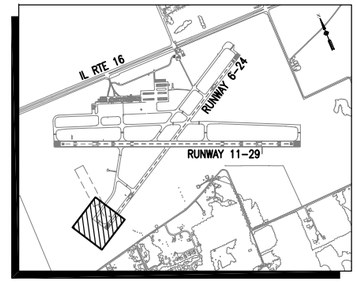

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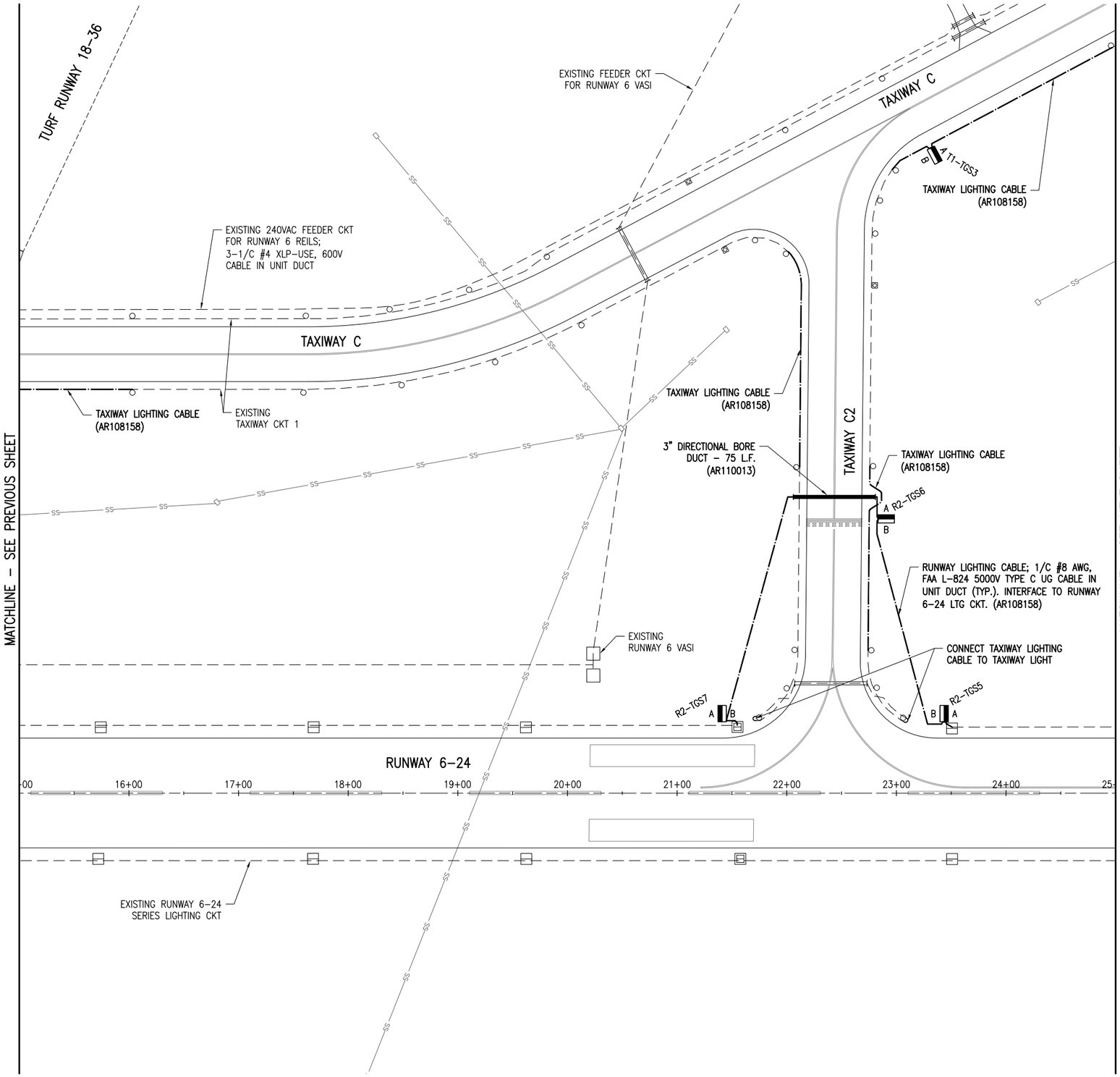
REVIEWED BY: LDH 03/08/2016

SHEET TITLE

PROPOSED TAXI GUIDANCE SIGN PLAN SHEET 11



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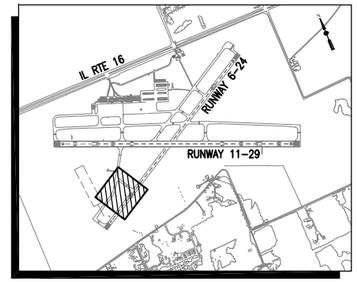

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PROPOSED TAXI GUIDANCE SIGN PLAN SHEET 12

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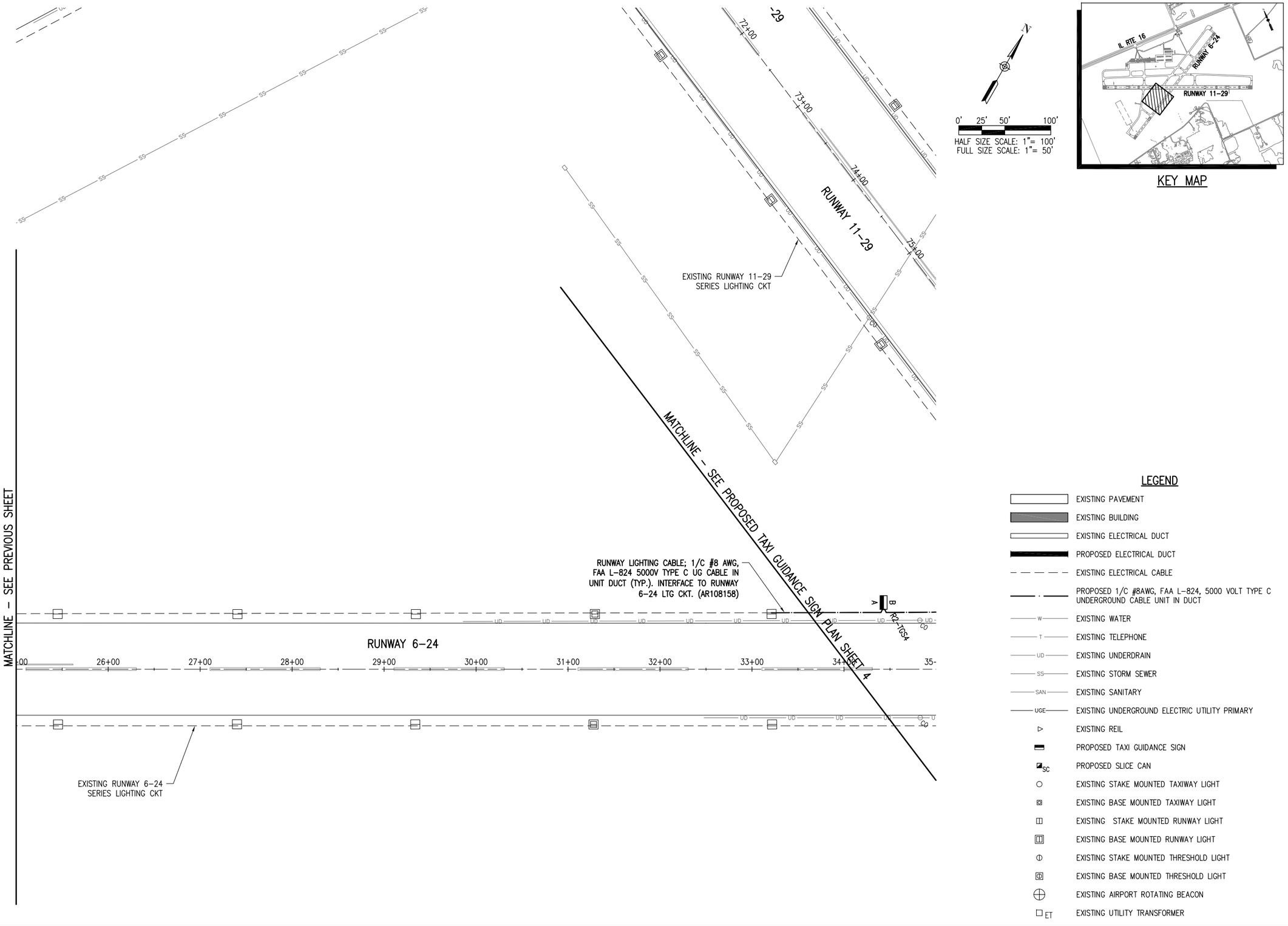

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MATCHLINE – SEE PROPOSED TAXI GUIDANCE SIGN PLAN SHEET 10

TAXIWAY A

TXY CKT 3A
HOMERUN CKT

T3-TGS4

TAXIWAY LIGHTING CABLE
(AR108158)

SPLICE CAN (AR125565)
INTERCEPT EXISTING
CABLES AND INTERFACE
TO NEW CABLES

T3A–TGS2 CONNECT TO
TAXIWAY CKT 3A

EXISTING
TAXIWAY CKT 3A

TAXIWAY D

TAXIWAY D

T3A–TGS2

TAXIWAY LIGHTING CABLE
(AR108158)

3" DIRECTIONAL BORE
DUCT – 75 L.F.
(AR110013)

EXISTING
TAXIWAY CKT 3

R2–TGS19

TAXIWAY LIGHTING CABLE
(AR108158)

RUNWAY LIGHTING CABLE; 1/C #8 AWG,
FAA L–824 5000V TYPE C UG CABLE IN
UNIT DUCT (TYP.). INTERFACE TO RUNWAY
6–24 LTG CKT. (AR108158)

TAXIWAY D3

CONNECT TAXIWAY CABLE
TO TAXIWAY LIGHT

MATCHLINE – SEE PROPOSED TAXI GUIDANCE SIGN PLAN SHEET 4

TAXIWAY B

R2–TGS2

R2–TGS1

R2–TGS20

R2–TGS18

R2–TGS3

RUNWAY 6–24

42+00 43+00 44+00 45+00 46+00 47+00 48+00 49+00 50+00 51+00

RUNWAY 6–24

MATCHLINE – SEE PROPOSED TAXI GUIDANCE SIGN PLAN SHEET 5

R2–TGS10

EXISTING RUNWAY
6–24 SERIES
LIGHTING CKT

EXISTING 240VAC FEEDER CKT
FOR RUNWAY 24 REILS;
3–1/C #4 XLP–USE, 600V
CABLE IN UNIT DUCT

RUNWAY LIGHTING CABLE; 1/C #8 AWG
FAA L–824, 5000V TYPE C UG CABLE IN
UNIT DUCT. INTERFACE TO RUNWAY 6–24
LTG CKT. (AR108158)

MATCHLINE – SEE NEXT SHEET

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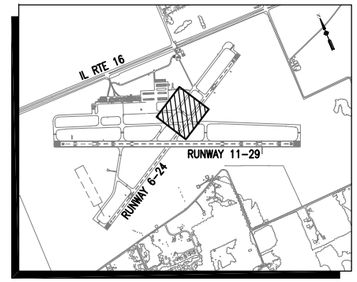
HALF SIZE SCALE: 1"= 100'
FULL SIZE SCALE: 1"= 50'



KEY MAP

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PROPOSED TAXI GUIDANCE SIGN PLAN SHEET 14

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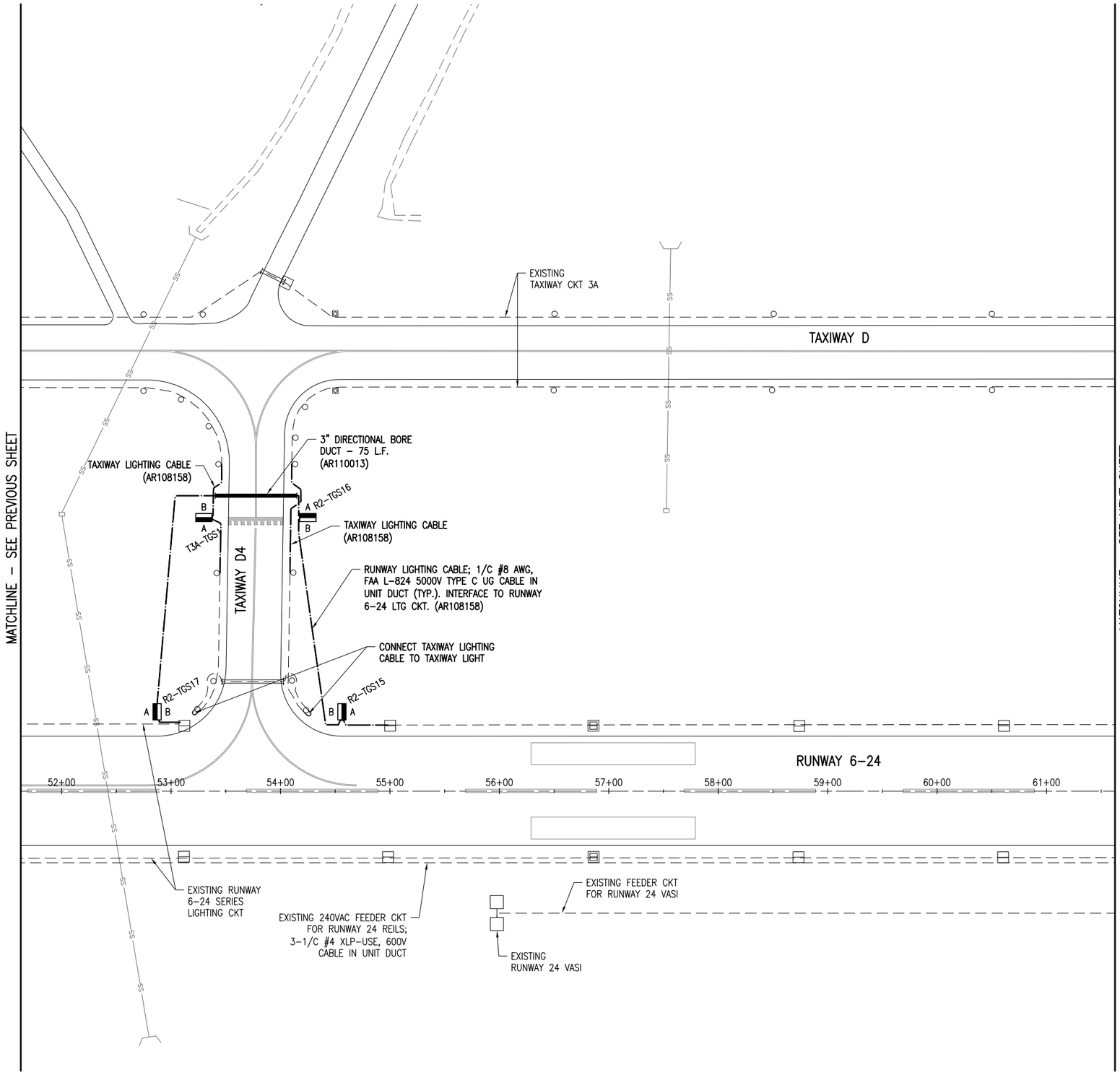

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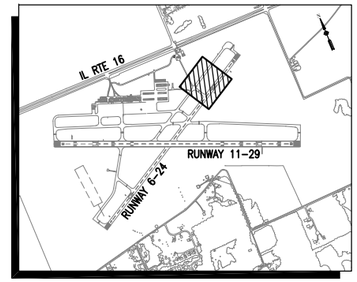

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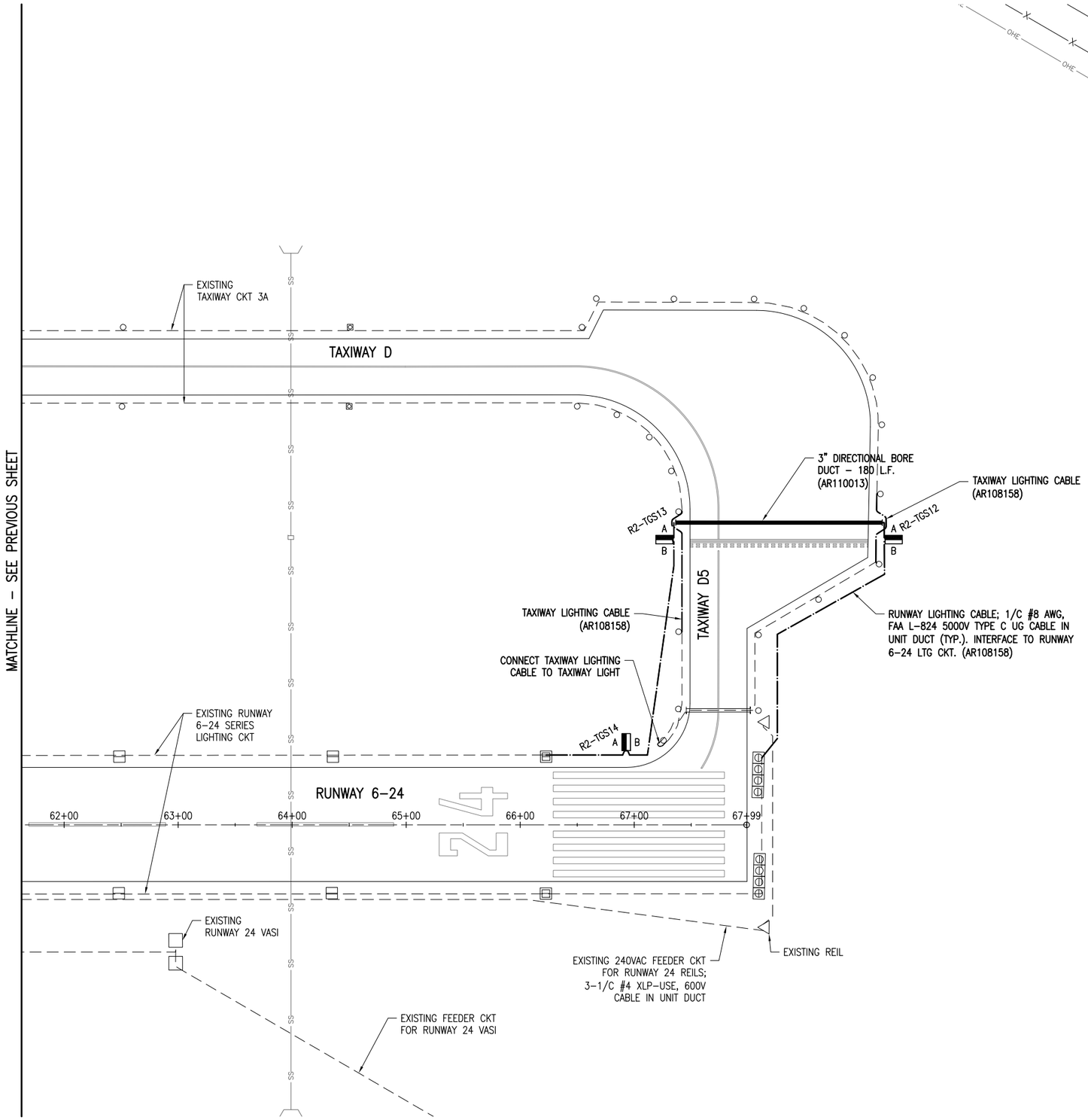

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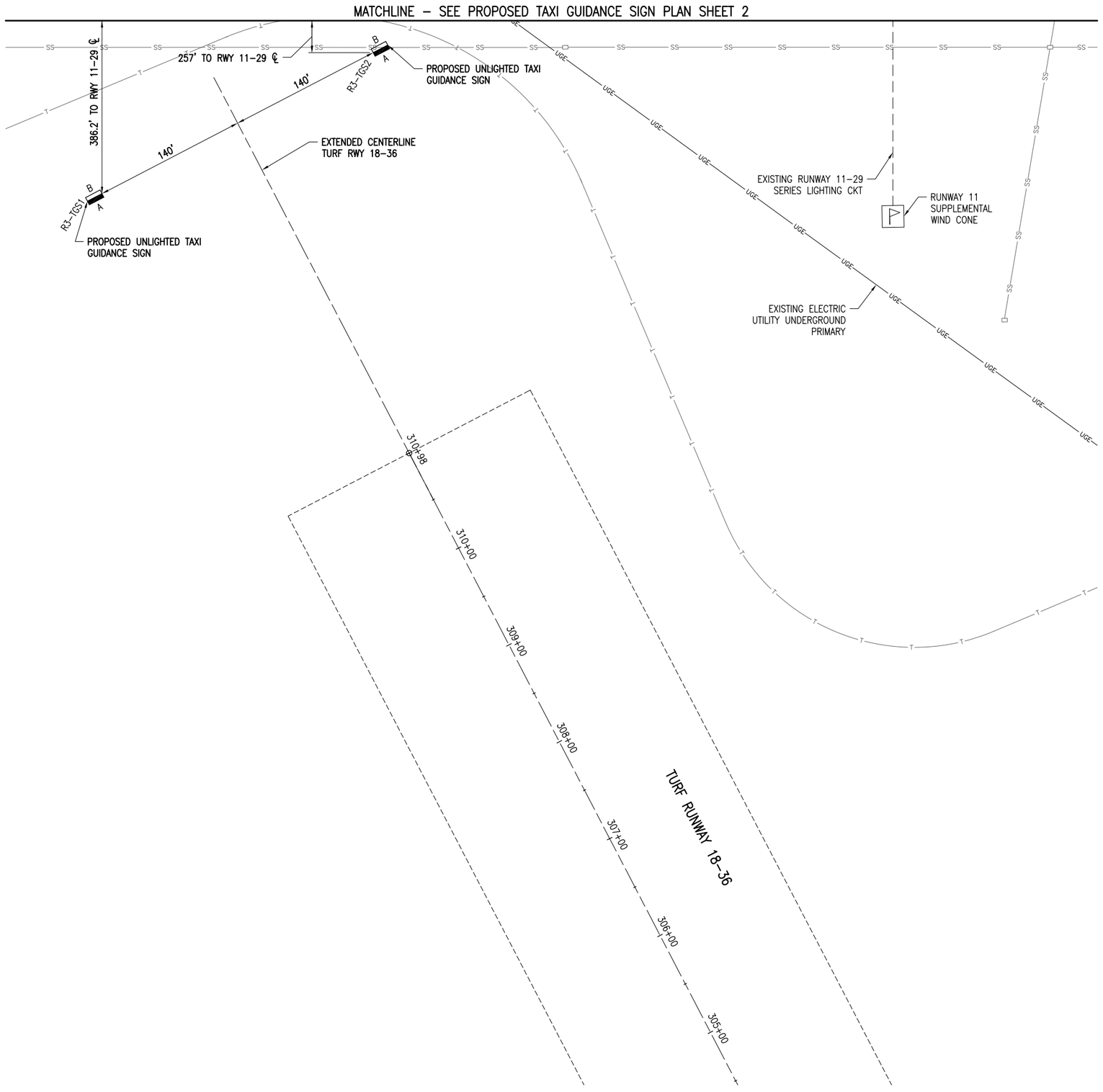

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PROPOSED TAXI GUIDANCE SIGN PLAN SHEET 17

TAXI GUIDANCE SIGN SCHEDULE

SIGN NUMBER	LOCATION	SIDE A	SIDE B	NORTHING	EASTING	REMARKS
R1-TGS1	RUNWAY 11 INTERSECTION WITH TAXIWAY C	←C		1024412.1668	998091.7115	
R1-TGS2	RUNWAY 29 INTERSECTION WITH TAXIWAY B1	B1 →	11	1024968.0612	996774.5488	
R1-TGS3	TAXIWAY B1 INTERSECTION WITH RUNWAY 11 AT HOLD LINE (257 FEET FROM RUNWAY CENTERLINE).	B1 11	B1	1025165.9023	996735.2694	
R1-TGS4	TAXIWAY C INTERSECTION WITH RUNWAY 11-29 AT HOLD LINE (300 FEET FROM RUNWAY CENTERLINE).	C 11-29	C	1024017.4967	998023.8500	
R1-TGS5	RUNWAY 29 INTERSECTION WITH RUNWAY 6-24	6-24		1023536.3120	999704.0752	
R1-TGS6	TAXIWAY B3 INTERSECTION WITH RUNWAY 29 AT HOLD LINE (308 FEET FROM RUNWAY CENTERLINE).	B3 29	B3	1022707.2333	1002692.1203	
R1-TGS7	RUNWAY 11 INTERSECTION WITH TAXIWAY B3	← B3	29	1022585.9715	1002418.7860	
R1-TGS8	RUNWAY 29 INTERSECTION WITH TAXIWAY B2	B2 →		1023423.5342	1000434.2248	
R1-TGS9	TAXIWAY B2 INTERSECTION WITH RUNWAY 29-11 AT HOLD LINE (308 FEET FROM RUNWAY CENTERLINE).	B2 29-11	B2	1023666.5014	1000419.1846	
R1-TGS10	RUNWAY 11 INTERSECTION WITH TAXIWAY B2	← B2		1023545.5414	1000145.1352	
R1-TGS11	RUNWAY 11 INTERSECTION WITH RUNWAY 24-6 & TXY D	24-6	D↘	1023960.6629	999161.5264	
R1-TGS12	TAXIWAY D INTERSECTION WITH RUNWAY 29-11 AT HOLD LINE (303 FEET FROM RUNWAY CENTERLINE).	D 29-11	D	1024130.0408	999307.9930	
R1-TGS13	RUNWAY 11 INTERSECTION WITH TAXIWAY D	↖D		1024071.9418	998897.8570	
R1-TGS14	RUNWAY 29 INTERSECTION WITH TAXIWAY C	C→		1024278.5761	998408.2478	
R1-TGS15	TAXIWAY C INTERSECTION WITH RUNWAY 29-11 AT HOLD LINE (308 FEET FROM RUNWAY CENTERLINE).	C 29-11	APRON↑	1024521.9612	998392.2173	
R2-TGS1	RUNWAY 24 INTERSECTION WITH TAXIWAY B, WEST SIDE OF RUNWAY 24	APRON↗		1024187.1974	999997.9878	
R2-TGS2	TAXIWAY B INTERSECTION WITH RUNWAY 24-6 AT HOLD LINE	B 24-6	B	1024269.4069	999684.5612	
R2-TGS3	RUNWAY 6 INTERSECTION WITH TAXIWAY B, WEST SIDE OF RUNWAY 6	↙APRON		1024065.8804	999792.8731	
R2-TGS4	RUNWAY 6 INTERSECTION WITH RUNWAY 11-29	11-29		1023634.6948	999041.4677	
R2-TGS5	RUNWAY 24 INTERSECTION WITH TAXIWAY C2	C2 →		1023087.7382	998087.6340	
R2-TGS6	TAXIWAY C2 INTERSECTION WITH RUNWAY 24-6 AT HOLD LINE	C2 24-6	C2	1023218.2460	997943.3266	
R2-TGS7	RUNWAY 6 INTERSECTION WITH TAXIWAY C2	← C2		1022987.0283	997912.0065	
R2-TGS8	RUNWAY 24 INTERSECTION WITH TAXIWAY C1	C1 →	6	1022514.6046	997088.1502	
R2-TGS9	TAXIWAY C1 INTERSECTION WITH RUNWAY 6 AT HOLD LINE	C1 6	C1	1022619.8638	996899.8119	
R2-TGS10	RUNWAY 24 INTERSECTION WITH RUNWAY 29-11	29-11		1023892.5347	999752.4474	
R2-TGS11	TAXIWAY B INTERSECTION WITH RUNWAY 6-24 AT HOLD LINE	B 6-24	B	1023936.6432	1000297.4532	
R2-TGS12	TAXIWAY D5 INTERSECTION WITH RUNWAY 24 AT HOLD LINE EAST SIDE OF TAXIWAY D5	D5 24	D5	1025524.8126	1001965.7323	
R2-TGS13	TAXIWAY D5 INTERSECTION WITH RUNWAY 24 AT HOLD LINE WEST SIDE OF TAXIWAY D5	24 D5	D5	1025432.1939	1001804.2152	
R2-TGS14	RUNWAY 6 INTERSECTION WITH TAXIWAY D5	← D5	24	1025251.3144	1001860.6795	
R2-TGS15	RUNWAY 24 INTERSECTION WITH TAXIWAY D4	D4 →		1024636.1254	1000787.8557	
R2-TGS16	TAXIWAY D4 INTERSECTION WITH RUNWAY 24-6 AT HOLD LINE	D4 24-6		1024777.3623	1000662.2589	
R2-TGS17	RUNWAY 6 INTERSECTION WITH TAXIWAY D4	← D4		1024552.0988	1000641.3223	
R2-TGS18	RUNWAY 24 INTERSECTION WITH TAXIWAY D3	D3 →		1024284.8796	1000175.3205	
R2-TGS19	TAXIWAY D3 INTERSECTION WITH RUNWAY 24-6 AT HOLD LINE	D3 24-6	D3	1024428.8847	1000054.5512	
R2-TGS20	RUNWAY 6 INTERSECTION WITH TAXIWAY D3	← D3		1024211.7275	1000047.7511	
R3-TGS1**	SOD RUNWAY 36 INTERSECTION WITH RUNWAY 11-29, WEST SIDE OF RUNWAY 36	11-29		1024454.6403	996766.4035	**UNLIGHTED SIGN
R3-TGS2**	SOD RUNWAY 36 INTERSECTION WITH RUNWAY 11-29, EAST SIDE OF RUNWAY 36	11-29		1024477.0700	997045.5037	**UNLIGHTED SIGN
T1-TGS1	TAXIWAY C INTERSECTION WITH RUNWAY 36 APPROACH AT WEST SIDE OF RUNWAY 36 APPROACH	36-APCH		1022811.2946	996851.3583	
T1-TGS2	TAXIWAY C INTERSECTION WITH RUNWAY 36 APPROACH AT EAST SIDE OF RUNWAY 36 APPROACH	36-APCH		1022913.9214	997191.1303	
T1-TGS3	TAXIWAY C EAST OF INTERSECTION WITH TAXIWAY C2	6↑	APRON↑	1023535.5814	997816.7746	
T2-TGS1	TAXIWAY A AT INTERSECTION OF WEST SIDE OF APRON	APRON↑	A	1025284.5347	997944.0594	
T2-TGS2	TAXIWAY A INTERSECTION WITH TAXIWAY B	←B A B1↑	APRON↑	1025382.8905	996798.5455	
T3-TGS1	SOUTH SIDE OF APRON NEAR INTERSECTION WITH TAXIWAY C	6·29↑ 11→		1024931.0030	998589.8352	
T3-TGS2	SOUTH SIDE OF APRON NEAR TAXI SIGN T3-TGS1	← 24		1024865.5978	998769.0219	
T3-TGS3	TAXIWAY D AT INTERSECTION WITH TAXIWAY B	↙ 29 11↗	D	1024332.7942	999659.7903	
T3-TGS4	TAXIWAY A AT INTERSECTION WITH TAXIWAY D	↖ 24	A	1024593.3727	999733.5140	
T3-TGS5	TAXIWAY A AT INTERSECTION OF EAST SIDE OF APRON	24 ↑	APRON↑	1024695.0556	999459.0086	
T3A-TGS1	TAXIWAY D4 AT INTERSECTION WITH TAXIWAY D	←APRON		1024737.5624	1000592.8520	
T3A-TGS2	TAXIWAY D AT INTERSECTION WITH TAXIWAY A AND TAXIWAY D3	APRON↗		1024527.2835	1000002.5034	
T4-TGS1	TAXIWAY B AT WEST SIDE OF ACCESS TAXIWAY A1 TO WEST SIDE OF APRON	←APRON	11↑	1024985.7678	997791.1330	
T5-TGS1	TAXIWAY C AT INTERSECTION WITH TAXIWAY B	← 29 6↑	APRON↑	1024764.1517	998494.7484	
T5-TGS2	ACCESS TAXIWAY A1 TO WEST SIDE OF APRON AT INTERSECTION WITH TAXIWAY B	11→		1024979.3959	997949.4420	
T6-TGS1	TAXIWAY B AT INTERSECTION WITH TAXIWAY C AT WEST SIDE OF TAXIWAY C	←APRON	B	1024780.7796	998339.0668	
T6-TGS2	TAXIWAY B AT EAST SIDE OF ACCESS TAXIWAY A1 TO WEST SIDE OF APRON	APRON→	B	1024824.8810	997941.4906	
T6-TGS3	TAXIWAY B AT INTERSECTION WITH TAXIWAY C AT EAST SIDE OF TAXIWAY C	APRON→	B	1024615.8413	998501.4050	
T6-TGS4	TAXIWAY D AT INTERSECTION WITH TAXIWAY B	↙B		1024231.1200	999321.3591	
T6-TGS5	TAXIWAY B AT INTERSECTION WITH TAXIWAY D	↖24 29↑	APRON↑	1024391.0700	999350.7936	
T7-TGS1	TAXIWAY B2 AT INTERSECTION WITH TAXIWAY B	←APRON		1023830.2123	1000386.1793	

TAXI GUIDANCE SIGN LEGEND

B — TYPE L-858L(L) LOCATION SIGN – YELLOW LEGEND AND BORDER ON A BLACK BACKGROUND

24 — TYPE L-858R(L) MANDATORY INSTRUCTION SIGN – BLACK OUTLINE ON OUTSIDE EDGE OF WHITE LEGEND ON A RED BACKGROUND

A→ — TYPE L-858Y(L) DIRECTION, DESTINATION, AND BOUNDARY SIGN – BLACK LEGEND ON A YELLOW BACKGROUND

BLANK – BLACK BACKGROUND

TAXI GUIDANCE SIGN NOTES

1. THE PROPOSED TAXI GUIDANCE SIGNS SHALL CONFORM TO ADVISORY CIRCULAR 150/5345 44K (OR LATEST ISSUE IN FORCE) AND BE FAA-APPROVED FOR TYPE L-858(L) TAXIWAY AND RUNWAY SIGNS WITH LED (LIGHT EMITTING DIODE) ILLUMINATION. THE SIGNS SHALL READ AS DESCRIBED ON THE CONSTRUCTION PLANS. THE PROPOSED TAXI GUIDANCE SIGNS SHALL BE TYPE L-858Y(L) DIRECTION, DESTINATION, AND BOUNDARY SIGNS (BLACK LEGEND ON YELLOW BACKGROUND); L-858R(L) MANDATORY INSTRUCTION SIGN (BLACK OUTLINE ON OUTSIDE EDGE OF WHITE LEGEND ON RED BACKGROUND); AND L-858L(L) LOCATION SIGN (YELLOW LEGEND AND BORDER ON BLACK BACKGROUND).
2. THE TAXI GUIDANCE SIGNS CONNECTED TO THE RUNWAY 11-29 LIGHTING CIRCUIT SHALL BE SIZE 1, 18-IN. SIGN FACE WITH A 12-IN. LEGEND; STYLE 3, POWERED FROM A 2.8 TO 6.6 AMP SERIES LIGHTING CIRCUIT; CLASS 2, FOR OPERATION FROM -40°F TO 131°F; MODE 2, TO WITHSTAND WIND LOADS OF 200 M.P.H., BASE-MOUNTED, DOUBLE-SIDED, AS SPECIFIED ON THE PLANS.
3. THE TAXI GUIDANCE SIGNS CONNECTED TO THE RUNWAY 6-24 LIGHTING CIRCUIT AND THE TAXIWAY LIGHTING CIRCUITS SHALL BE SIZE 1, 18-IN. SIGN FACE WITH A 12-IN. LEGEND; STYLE 2, POWERED FROM A 4.8 TO 6.6 AMP SERIES LIGHTING CIRCUIT; CLASS 2, FOR OPERATION FROM -40°F TO 131°F; MODE 2, TO WITHSTAND WIND LOADS OF 200 M.P.H., BASE-MOUNTED, DOUBLE-SIDED, AS SPECIFIED ON THE PLANS.
4. TAXI GUIDANCE SIGNS WITH LED (LIGHT EMITTING DIODE) ILLUMINATION SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF FAA ENGINEERING BRIEF NO. 67D LIGHT SOURCES OTHER THAN INCANDESCENT AND XENON FOR AIRPORT AND OBSTRUCTION LIGHTING FIXTURES.
5. THE PROPOSED UNLIGHTED TAXI GUIDANCE SIGNS SHALL CONFORM TO ADVISORY CIRCULAR 150/5345 44K (OR LATEST ISSUE IN FORCE) AND BE FAA-APPROVED FOR TYPE L-858 TAXIWAY AND RUNWAY SIGNS. THE SIGNS SHALL BE SIZE 1, 18-IN. SIGN FACE WITH A 12-IN. LEGEND; STYLE 4, UNLIGHTED SIGNS; MODE 2, TO WITHSTAND WIND LOADS OF 200 M.P.H., BASE-MOUNTED, AS SPECIFIED ON THE PLANS.
6. TAXI GUIDANCE SIGNS WITH R1 PREFIX SHALL BE CONNECTED TO THE RUNWAY 11-29 LIGHTING SERIES CIRCUIT.
7. TAXI GUIDANCE SIGNS WITH R2 PREFIX SHALL BE CONNECTED TO THE RUNWAY 6-24 LIGHTING SERIES CIRCUIT.
8. TAXI GUIDANCE SIGNS WITH R3 PREFIX ARE UNLIGHTED SIGNS TO BE LOCATED ON THE SHORT TAKE-OFF AND LANDING TURF RUNWAY 18-36.
9. TAXI GUIDANCE SIGNS WITH T1 PREFIX SHALL BE CONNECTED TO TAXIWAY LIGHTING SERIES CIRCUIT NUMBER 1. CIRCUIT 1 IS FOR TAXIWAY C SOUTH OF RUNWAY 11-29.
10. TAXI GUIDANCE SIGNS WITH T2 PREFIX SHALL BE CONNECTED TO TAXIWAY LIGHTING SERIES CIRCUIT NUMBER 2. CIRCUIT 2 IS FOR TAXIWAY A WEST OF THE APRON.
11. TAXI GUIDANCE SIGNS WITH T3 PREFIX SHALL BE CONNECTED TO TAXIWAY LIGHTING SERIES CIRCUIT NUMBER 3. CIRCUIT 3 IS FOR EAST HALF OF APRON, TAXIWAY A, TAXIWAY D3, AND PART OF TAXIWAY D.
12. TAXI GUIDANCE SIGNS WITH T3A PREFIX SHALL BE CONNECTED TO TAXIWAY LIGHTING SERIES CIRCUIT NUMBER 3A. CIRCUIT 3A IS FOR TAXIWAY D EAST OF TAXIWAY D3.
13. TAXI GUIDANCE SIGNS WITH T4 PREFIX SHALL BE CONNECTED TO TAXIWAY LIGHTING SERIES CIRCUIT NUMBER 4. CIRCUIT 4 IS FOR TAXIWAY B WEST OF APRON.
14. TAXI GUIDANCE SIGNS WITH T5 PREFIX SHALL BE CONNECTED TO TAXIWAY LIGHTING SERIES CIRCUIT NUMBER 5. CIRCUIT 5 IS FOR TAXIWAY C NORTH OF RUNWAY 11-29, AND AREA BY WEST HALF OF APRON.
15. TAXI GUIDANCE SIGNS WITH T6 PREFIX SHALL BE CONNECTED TO TAXIWAY LIGHTING SERIES CIRCUIT NUMBER 6. CIRCUIT 6 IS FOR TAXIWAY B WEST OF RUNWAY 6-24 TO WEST SIDE OF APRON.
16. TAXI GUIDANCE SIGNS WITH T7 PREFIX SHALL BE CONNECTED TO TAXIWAY LIGHTING SERIES CIRCUIT NUMBER 7. CIRCUIT 7 IS FOR TAXIWAY B EAST OF RUNWAY 6-24.
17. RUNWAY EXIT/TAXIWAY ENTRANCE SIGNS (TAXIWAY GUIDANCE SIGNS TO DEFINE THE THROAT OR ENTRANCE INTO THE INTERSECTING TAXIING ROUTE) SHALL BE CONNECTED TO THE RESPECTIVE RUNWAY SERIES CIRCUIT TO BE ILLUMINATED WHEN THE RUNWAY EDGE LIGHTS ARE ON TO COMPLY WITH FAA AC 150/5340-18F, CHAPTER 1, PART 15 "SIGN OPERATION"
18. HOLDING POSITION SIGNS FOR RUNWAYS SHALL BE CONNECTED TO THE RESPECTIVE RUNWAY SERIES CIRCUIT TO BE ILLUMINATED WHEN THE ASSOCIATED RUNWAY LIGHTS ARE ILLUMINATED TO COMPLY WITH FAA AC 150/5340-18F, CHAPTER 1, PART 15 "SIGN OPERATION".

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COLES COUNTY AIRPORT AUTHORITY
COLES COUNTY MEMORIAL AIRPORT

REMOVE AND REPLACE ALL TAXI GUIDANCE SIGNS ON THE AIRPORT

IDA No: MTO-4511

SBG Project No: 3-17-SBGP-XX

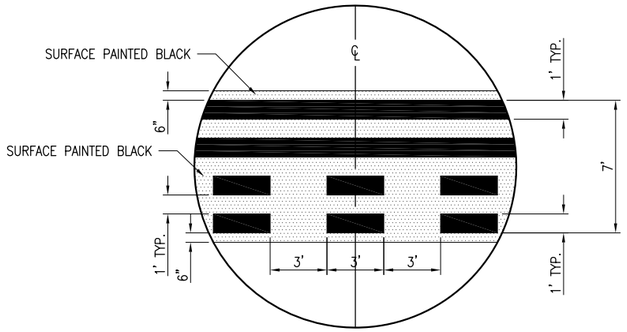
Contract No. CO062

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

ISSUE: APRIL 15, 2016
PROJECT NO: 13A0121D
CAD FILE: C-641-SCHD.DWG
DESIGN BY: KNL 02/13/2016
DRAWN BY: MLH 02/17/2016
REVIEWED BY: LDH 03/08/2016

SHEET TITLE

TAXI GUIDANCE SIGN SCHEDULE



PROPOSED HOLDING POSITION DETAIL

"NOT TO SCALE"

MARKING QUANTITIES			
DESCRIPTION	UNIT AREA	NO. REQUIRED	TOTAL AREA
HOLDING LINE (TAXIWAY "C" WEST OF RUNWAY 36 APPROACH)	195	1	195
HOLDING LINE (TAXIWAY "C" EAST OF RUNWAY 36 APPROACH)	150	1	150
		TOTAL YELLOW MARKING =	345
BLACK BORDER (TAXIWAY "C" WEST OF RUNWAY 36 APPROACH)	325	1	325
BLACK BORDER (TAXIWAY "C" EAST OF RUNWAY 36 APPROACH)	250	1	250
		TOTAL BLACK MARKING =	575

620–PAVEMENT MARKING–WATERBORNE NOTES

1. THE PAVEMENT MARKING–WATERBORNE (620) SHALL BE PLACED IN ACCORDANCE WITH ITEM 620 "PAVEMENT MARKING" AS STATED ON PAGE 277 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION OF AIRPORTS, ADOPTED APRIL 1, 2012.
2. THIS ITEM SHALL CONSIST OF HOLDING MARKING IN ACCORDANCE WITH THESE SPECIFICATIONS AND AT THE LOCATIONS SHOWN ON THE CONSTRUCTION PLANS. MARKING SHALL BE YELLOW IN COLOR. THE PROPOSED PAVEMENT MARKING SHALL BE APPLIED IN TWO APPLICATIONS.
3. ANY MATERIAL DELIVERED THAT FAILS TO MEET THE SPECIFICATIONS SHALL BE DISPOSED OF BY THE VENDOR AND IMMEDIATELY REPLACED WITH ACCEPTABLE MATERIAL ENTIRELY AT THE VENDOR'S EXPENSE, INCLUDING HANDLING AND TRANSPORTATION CHARGES.
4. ALL PROPOSED MARKING WILL BE COMPLETED IN ACCORDANCE WITH THE DETAILS SHOWN ON THE CONSTRUCTION PLANS.
5. GLASS BEADS SHALL BE REQUIRED ONLY ON THE SECOND APPLICATION OF YELLOW MARKING.
6. CUT–OFF SHEETS WILL BE REQUIRED TO INSURE STRAIGHT EDGES.
7. THE TAXIWAY HOLDING LINES WILL BE OUTLINED IN A BLACK BORDER. REFLECTIVE MEDIA WILL NOT BE REQUIRED FOR THE BLACK BORDER.
8. THE PROPOSED TAXIWAY HOLDING LINE MARKING WILL BE PAID FOR UNDER ITEM:
   AR620520 "PAVEMENT MARKING–WATERBORNE"___ PER SQ. FT.
9. THE PROPOSED BLACK BORDER AROUND THE TAXIWAY HOLDING LINES WILL BE PAID FOR UNDER ITEM:
   AR620525 "BLACK BORDER"_____ PER SQ. FT.

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COLES COUNTY AIRPORT AUTHORITY
COLES COUNTY MEMORIAL AIRPORT

REMOVE AND REPLACE ALL TAXI GUIDANCE SIGNS ON THE AIRPORT

IDA No: MTO-4511

SBG Project No: 3-17-SBGP-XX

Contract No. CO062

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

ISSUE: APRIL 15, 2016
PROJECT NO: 13A0121D
CAD FILE: C-551MRK.DWG
DESIGN BY: KNL 02/17/2016
DRAWN BY: RAD 02/18/2016
REVIEWED BY: LDH 03/08/2016

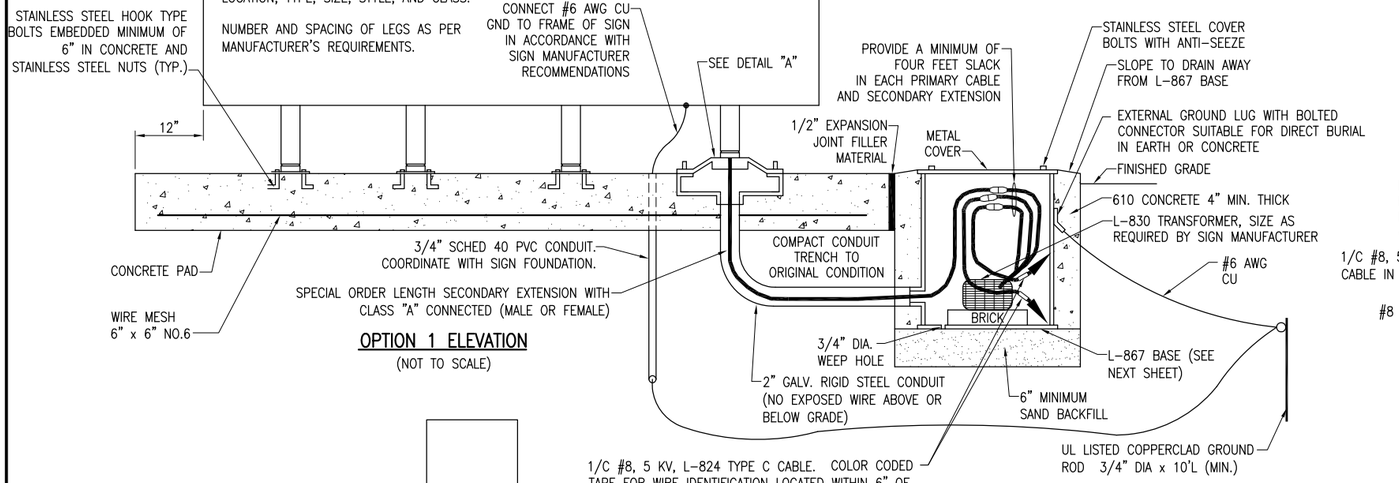
SHEET TITLE

PAVEMENT MARKING AND DETAILS

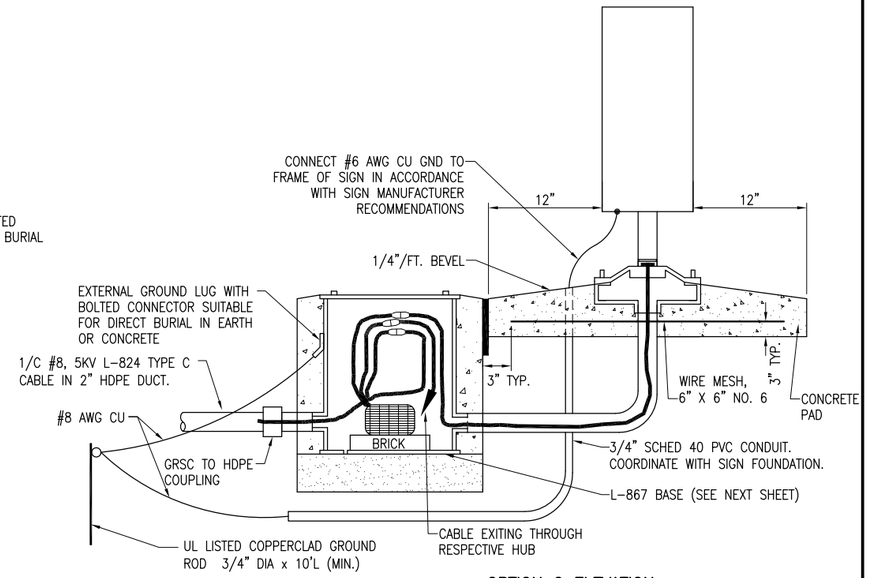
L-858 OR L-858(L) SIGN

NOTES:
SEE AIRFIELD LIGHTING NOTES AND SCHEDULES SHEET FOR SIGN LEGEND, LOCATION, TYPE, SIZE, STYLE, AND CLASS.

NUMBER AND SPACING OF LEGS AS PER MANUFACTURER'S REQUIREMENTS.

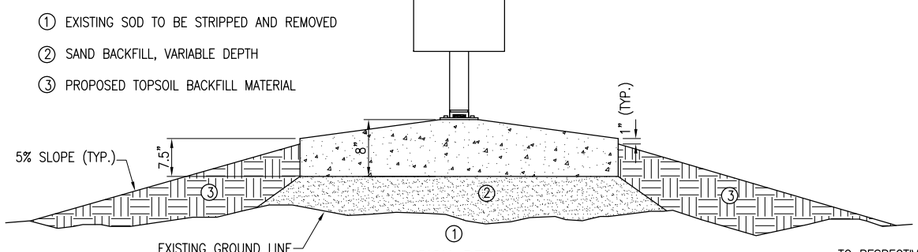


OPTION 1 ELEVATION
(NOT TO SCALE)

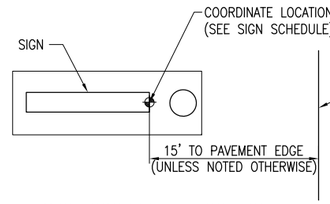


OPTION 2 ELEVATION
(NOT TO SCALE)

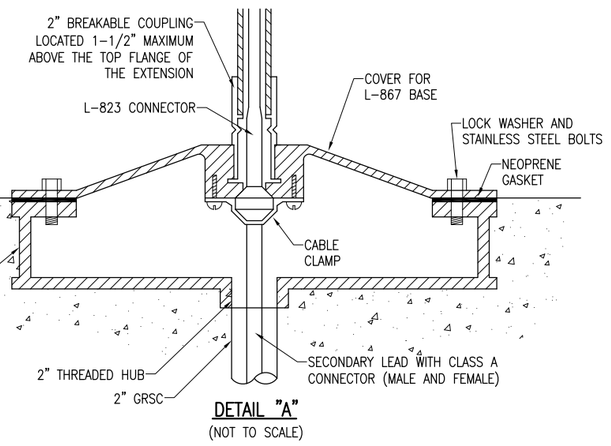
① EXISTING SOD TO BE STRIPPED AND REMOVED
② SAND BACKFILL, VARIABLE DEPTH
③ PROPOSED TOPSOIL BACKFILL MATERIAL



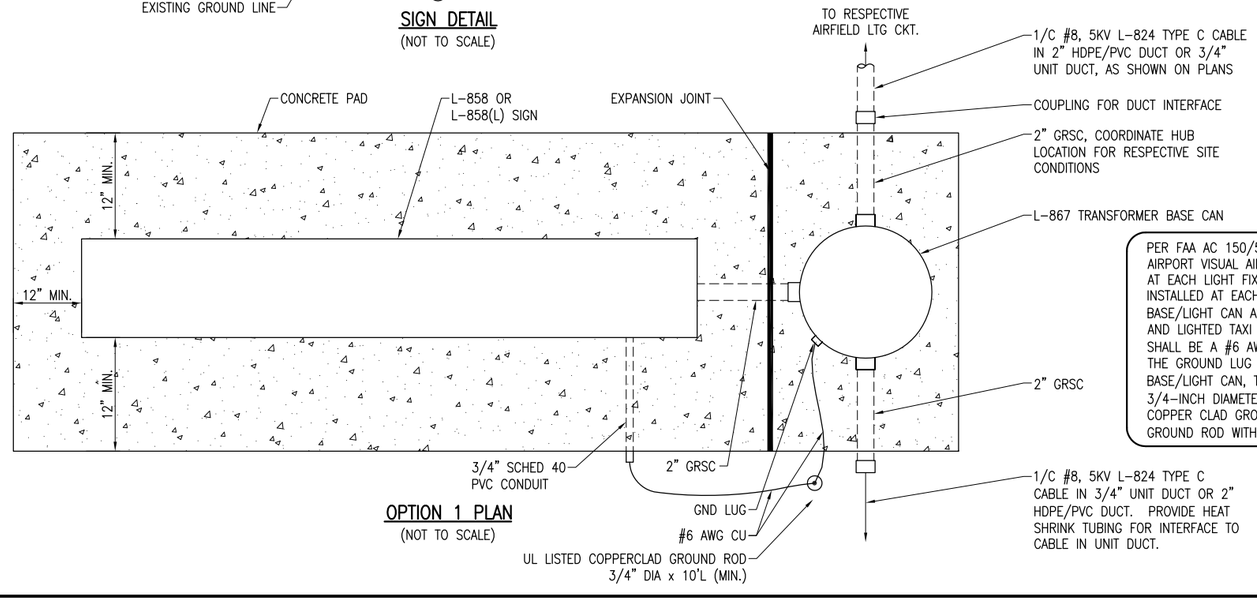
SIGN DETAIL
(NOT TO SCALE)



SIGN COORDINATE LOCATION
(NOT TO SCALE)



DETAIL "A"
(NOT TO SCALE)



OPTION 1 PLAN
(NOT TO SCALE)

PER FAA AC 150/5340-30H DESIGN AND INSTALLATION DETAILS FOR AIRPORT VISUAL AIDS, A LIGHT BASE GROUND MUST BE INSTALLED AT EACH LIGHT FIXTURE. A LIGHT BASE GROUND SHALL BE INSTALLED AT EACH STAKE MOUNTED LIGHT AND EACH TRANSFORMER BASE/LIGHT CAN ASSOCIATED WITH RUNWAY LIGHTS, TAXIWAY LIGHTS, AND LIGHTED TAXI GUIDANCE SIGNS. THE LIGHT BASE GROUND SHALL BE A #6 AWG BARE COPPER CONDUCTOR CONNECTED TO THE GROUND LUG ON THE RESPECTIVE L-867 TRANSFORMER BASE/LIGHT CAN, TAXI SIGN FRAME, OR MOUNTING STAKE AND A 3/4-INCH DIAMETER BY 10-FOOT LONG (MINIMUM) UL LISTED COPPER CLAD GROUND ROD. ALSO BOND THE SIGN FRAME TO THE GROUND ROD WITH A #6 AWG BARE COPPER CONDUCTOR.

GENERAL NOTES

1. SEE LIGHTING LAYOUT SHEETS, AIRFIELD LIGHTING NOTES AND TAXI GUIDANCE SIGN SCHEDULES FOR SIGN LEGEND, LOCATION, TYPE, SIZE, STYLE, AND CLASS.
2. SEE ELECTRICAL NOTES SHEETS.
3. HOLDING POSITION SIGNS FOR RUNWAYS SHALL BE CONNECTED TO THE RESPECTIVE RUNWAY SERIES CIRCUIT TO BE ILLUMINATED WHEN THE ASSOCIATED RUNWAY LIGHTS ARE ILLUMINATED TO COMPLY WITH FAA AC 150/5340-18F, CHAPTER 1, PART 15 "SIGN OPERATION".
4. RUNWAY EXIT SIGNS SHALL BE CONNECTED TO THE RESPECTIVE RUNWAY SERIES CIRCUIT TO BE ILLUMINATED WHEN THE ASSOCIATED RUNWAY LIGHTS ARE ILLUMINATED TO COMPLY WITH FAA AC 150/5340-18F, CHAPTER 1, PART 15 "SIGN OPERATION".

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COLES COUNTY MEMORIAL AIRPORT

REMOVE AND REPLACE ALL TAXI GUIDANCE SIGNS ON THE AIRPORT

IDA No: MTO-4511

SBG Project No: 3-17-SBGP-XX

Contract No. CO062

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

ISSUE: APRIL 15, 2016
PROJECT NO: 13A0121D
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DESIGN BY: KNL 02/05/2016
DRAWN BY: RAD 02/19/2016
REVIEWED BY: KNL 03/08/2016

SHEET TITLE

TAXI GUIDANCE SIGN DETAILS

APR 19, 2016 10:56 AM HARRI01115
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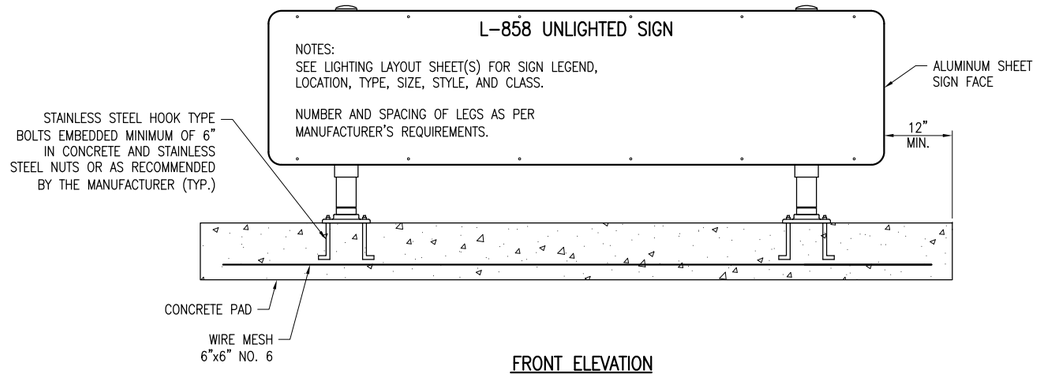
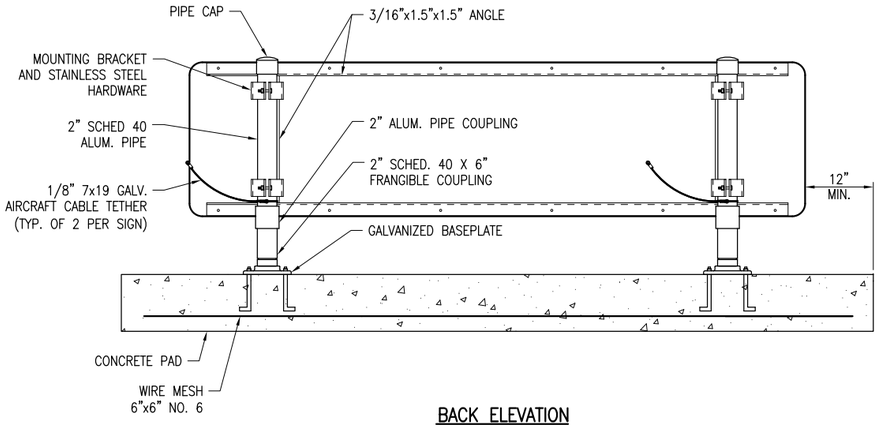
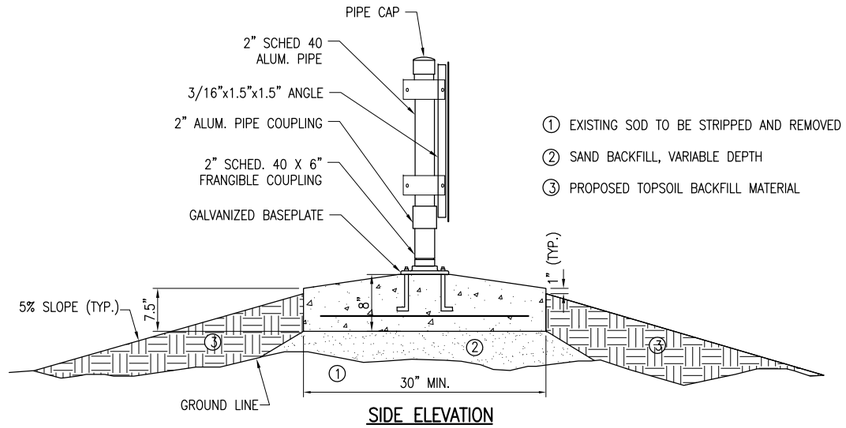


FRONT ELEVATION



BACK ELEVATION



SIDE ELEVATION

UNLIGHTED TAXI GUIDANCE SIGN NOTES

1. THE PROPOSED UNLIGHTED TAXI GUIDANCE SIGNS SHALL CONFORM TO ADVISORY CIRCULAR 150/5345-44J (OR LATEST ISSUE IN FORCE) AND BE FAA-APPROVED FOR TYPE L-858 TAXIWAY AND RUNWAY SIGNS. THE SIGNS SHALL BE SIZE 1, 18-IN. SIGN FACE WITH A 12-IN. LEGEND; STYLE 4, UNLIGHTED SIGNS; MODE 2, TO WITHSTAND WIND LOADS OF 200 M.P.H., BASE-MOUNTED.
2. THE SIGNS SHALL READ AS DESCRIBED ON THE TAXI GUIDANCE SIGN SCHEDULE. THE PROPOSED TAXI GUIDANCE SIGNS WILL BE TYPE L-858-Y DIRECTION, DESTINATION, AND BOUNDARY SIGNS (BLACK LEGEND ON YELLOW BACKGROUND); TYPE L-858-R MANDATORY INSTRUCTION SIGN (BLACK OUTLINE ON OUTSIDE EDGE OF WHITE LEGEND ON RED BACKGROUND); AND TYPE L-858-L LOCATION SIGN (YELLOW LEGEND AND BORDER ON BLACK BACKGROUND).
3. THE CONCRETE USED IN THE CONSTRUCTION OF THESE ITEMS SHALL BE IN ACCORDANCE WITH ITEM 610 STRUCTURAL PORTLAND CEMENT CONCRETE.

UNLIGHTED SIGN DETAILS

(NOT TO SCALE)

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COLES COUNTY AIRPORT AUTHORITY
COLES COUNTY MEMORIAL AIRPORT

REMOVE AND REPLACE ALL TAXI GUIDANCE SIGNS ON THE AIRPORT

IDA No: MTO-4511

SBG Project No: 3-17-SBGP-XX

Contract No. CO062

NO.	DATE	DESCRIPTION		
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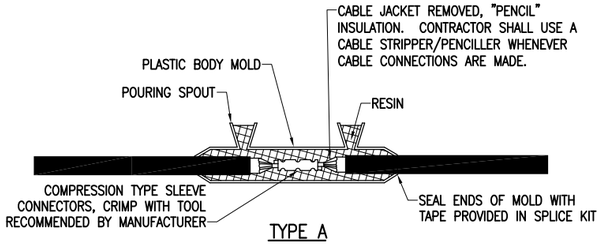
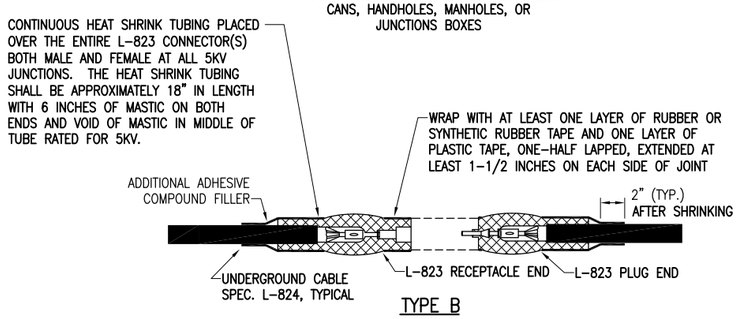
UNLIGHTED SIGN DETAILS



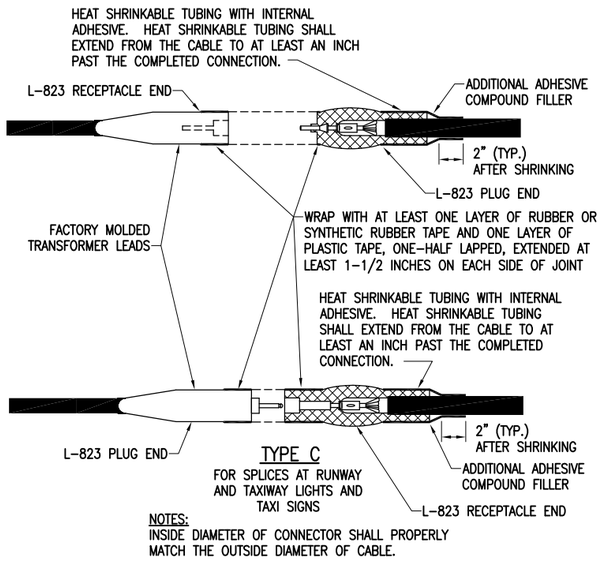
TYPE A

FOR SPLICES IN LOW VOLTAGE CABLE (600V) HOMERUNS FOR EXTENSIONS TO EXISTING LOW VOLTAGE CABLES ONLY. TYPE A SPLICES SHALL BE MADE IN SPLICE CANS, HANDHOLES, MANHOLES, OR JUNCTIONS BOXES



TYPE B

FOR SPLICES AT JUNCTION OF HOMERUN WITH LOOP CIRCUIT AND FOR SPLICES IN HOMERUNS TO EXISTING CABLES

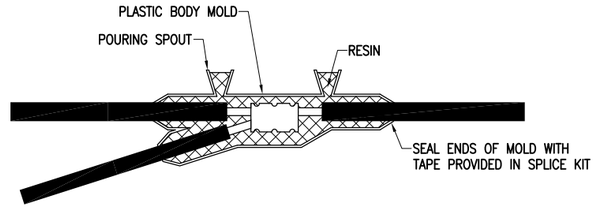


TYPE C

FOR SPLICES AT RUNWAY AND TAXIWAY LIGHTS AND TAXI SIGNS

NOTES:
INSIDE DIAMETER OF CONNECTOR SHALL PROPERLY MATCH THE OUTSIDE DIAMETER OF CABLE.

CABLE SPLICES
(NOT TO SCALE)

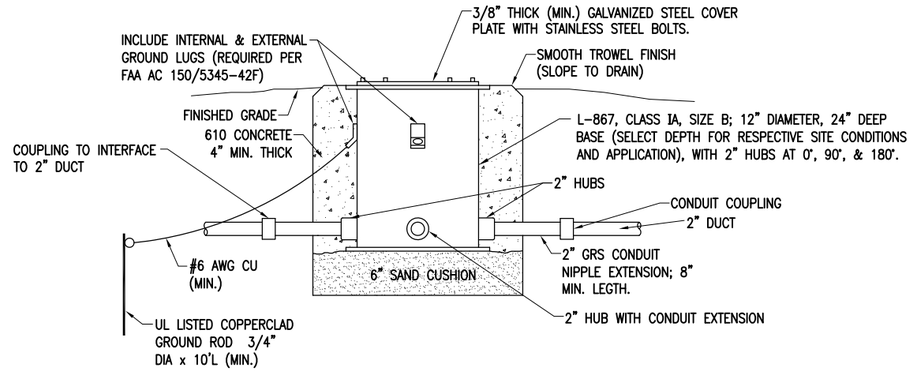


LOW VOLTAGE UNDERGROUND TAP SPLICE

FOR TAP SPLICES IN LOW VOLTAGE (600V) CABLE. SPLICES SHALL BE RATED AND LISTED SUITABLE FOR DIRECT BURIAL LOCATIONS. FOR SPLICES UP TO #2 AWG CONDUCTOR, SPLICES SHALL BE 3M SCOTCHCAST 82-B1 POWER CABLE TAP SPLICE KIT OR APPROVED EQUAL.

NOTES:

1. SPLICE DETAILS ARE PROVIDED FOR NEW WORK AND TO ASSIST IN REPAIRS OF ACCIDENTAL OR UNEXPECTED INTERRUPTIONS AND/OR CUTS TO AIRFIELD LIGHTING CABLES.
2. CONTRACTOR SHALL KEEP ON HAND A MINIMUM OF 10 SETS OF SPLICE KITS FOR L-823 CONNECTORS AND A MINIMUM OF 10 SETS OF TYPE A LOW VOLTAGE SPLICE KITS TO ACCOMMODATE REPAIRS.
3. EVERY AIRFIELD LIGHTING CABLE SPLICER SHALL BE QUALIFIED IN MAKING CABLE SPLICES AND TERMINATIONS ON CABLES RATED AT AND/OR ABOVE 5,000 VOLTS AC.
4. WHEN PREPARING CABLE FOR SPLICES, THE CONTRACTOR SHALL USE A CABLE STRIPPER/PENCILLER WHENEVER CABLE CONNECTIONS ARE MADE.
5. INSIDE DIAMETER OF RESPECTIVE CABLE CONNECTOR SHALL PROPERLY MATCH OUTSIDE DIAMETER OF CABLE.
6. WRAP ALL PRIMARY AND SECONDARY POWER CONNECTIONS WITH SUFFICIENT LAYERS OF INSULATING TAPE (3M SCOTCH 23 ALL-VOLTAGE SPLICING TAPE, 3M SCOTCH 130C LINERLESS RUBBER SPLICEING TAPE, OR APPROVED EQUAL) AND COVER WITH VINYL ELECTRICAL TAPE (3M SCOTCH 88 VINYL ELECTRICAL TAPE OR APPROVED EQUAL) FOR FULL VALUE OF CABLE INSULATION VOLTAGE.
7. PROVIDE CABLE TAGS TO IDENTIFY THE RESPECTIVE CIRCUITS ALL POINTS OF ACCESS INCLUDING L-867 BASES, L-868 BASES, HANDHOLES, MANHOLES, JUNCTION BOXES, AND WIREWAYS.



SPLICE CAN DETAIL
(NOT TO SCALE)

NOTES FOR SPLICE CAN DETAIL:

1. SPLICE CANS SHALL CONFORM TO THE REQUIREMENTS OF FAA AC 150/5345-42F, OR MOST CURRENT ISSUE IN FORCE, FOR TYPE L-867, CLASS IA, SIZE B, (12 IN. NOMINAL DIAMETER), AND 24 IN. DEEP AND/OR AS DETAILED ON THE PLANS. EACH SPLICE CAN SHALL INCLUDE INTERNAL AND EXTERNAL GROUND LUGS TO ACCOMMODATE THE RESPECTIVE APPLICATIONS. SPLICE CANS AND/OR JUNCTION CANS SHALL HAVE GALVANIZED STEEL COVERS, 3/8-INCH THICK (MINIMUM), WITH STAINLESS STEEL BOLTS.
2. FOR THE PURPOSE OF ENHANCING SAFETY, EACH BASE MUST HAVE INSTALLED, BY THE MANUFACTURER, AN INTERNAL AND EXTERNAL GROUND STRAP THAT IS AVAILABLE FOR THE PURPOSE OF ATTACHING A GROUND LUG THAT IS CONNECTED TO AN EARTH GROUND OR A SAFETY GROUND CONDUCTOR INSTALLED WITH THE RESPECTIVE CIRCUIT. FOR AIRPORT PROJECTS RECEIVING FEDERAL FUNDS THIS REQUIREMENT IS MANDATORY PER FAA AC 150/5345-42G.
3. APPLY AN OXIDE-INHIBITING, ANTI-SEIZING COMPOUND TO ALL SCREWS, NUTS, AND ALL PLACES WHERE METAL COMES INTO CONTACT WITH METAL.
4. THE CONCRETE USED IN THE CONSTRUCTION OF THE BASES FOR THE AIRFIELD LIGHTING CANS SHALL BE IN ACCORDANCE WITH ITEM 610 STRUCTURAL PORTLAND CEMENT CONCRETE.

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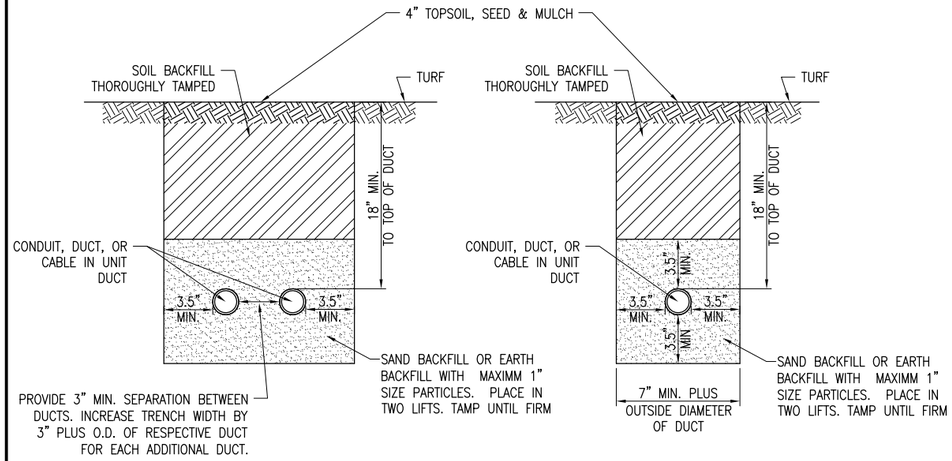
AIRFIELD LIGHTING CABLE SPLICE DETAILS

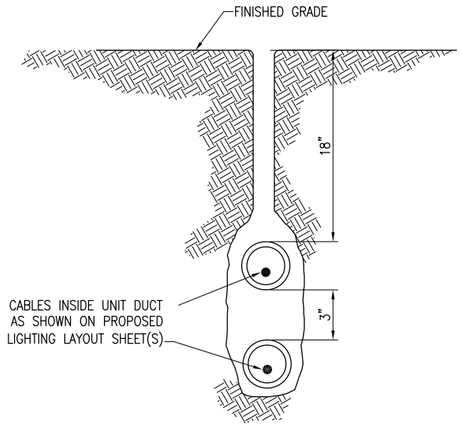


CONDUIT IN TRENCH – NON–PAVEMENT AREAS

"NOT TO SCALE"

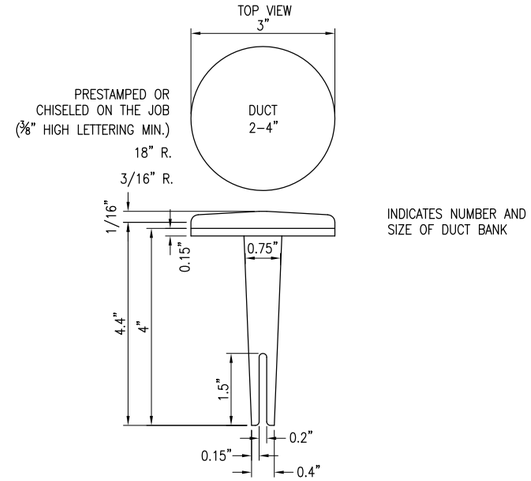
NOTES:

1. DIMENSIONS FOR COVERAGE AND SEPARATION BETWEEN DUCTS ARE MINIMUM.
2. TRENCHES WITH MORE THAN TWO DUCTS OR CABLE IN UNIT DUCTS SHALL BE INCREASED 3" IN WIDTH PLUS DIAMETER OF RESPECTIVE DUCT FOR EACH ADDITIONAL CONDUIT, DUCT, OR CABLE IN UNIT DUCT; IF SPECIFIED ON PLANS TWO PARALLEL TRENCHES MAY BE CONSTRUCTED.
3. DEPTH OF TRENCHES SHALL BE AS SHOWN ABOVE UNLESS OTHERWISE SPECIFIED ON THE PLANS. MINIMUM COVER REQUIREMENTS FOR CABLES AND DUCTS AT AIRPORT RUNWAYS AND ADJACENT AREAS WHERE TRESPASSING IS PROHIBITED IS 18 INCHES PER NEC 300.5 AND 300.50. COVER IS DEFINED AS THE SHORTEST DISTANCE IN INCHES MEASURED BETWEEN A POINT ON THE TOP SURFACE OF ANY DIRECT–BURIED CONDUCTOR, CABLE, CONDUIT, OR OTHER RACEWAY AND THE TOP SURFACE OF FINISHED GRADE, CONCRETE OR SIMILAR COVER.
4. HIGH VOLTAGE CIRCUITS (AIRFIELD LIGHTING 5000 VOLT SERIES CIRCUITS AND/OR OTHER CIRCUITS RATED ABOVE 600 VOLTS) AND LOW VOLTAGE CIRCUITS (RATED 600 VOLTS AND BELOW) SHALL NOT BE INSTALLED IN THE SAME RACEWAY, CONDUIT, DUCT, HANDHOLE, OR MANHOLE.
5. CONDUITS, DUCT, CABLE, AND/OR CABLE IN UNIT DUCT INTERFACE TO HANDHOLES, MANHOLES, SPLICE CANS, OR OTHER JUNCTION STRUCTURES WILL BE CONSIDERED INCIDENTAL TO THE RESPECTIVE CABLE PAY ITEM OR RESPECTIVE DUCT PAY ITEM.
6. ALL DISTURBED SURFACES SHALL BE RESTORED TO THEIR ORIGINAL CONDITION. COST IS INCIDENTAL TO TRENCH.



PLOWED CABLE

(NOT TO SCALE)

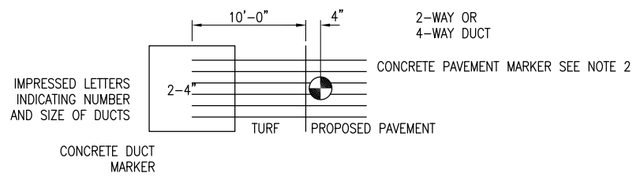


BITUMINOUS PAVEMENT DUCT MARKERS

"NOT TO SCALE"

NOTES:

1. TOP OF MARKER SHALL BE FLUSH WITH FINISHED PAVEMENT SURFACE. MARKER MAY BE INSTALLED IN A DRILLED HOLE AND SECURED WITH EPOXY GLUE.
2. BRASS DUCT MARKERS ARE AVAILABLE FROM G&S FOUNDRY & MANUFACTURING CO., INC., 210 KASKASKIA DRIVE, RED BUD, IL 62278, PHONE: (618)–282–4114

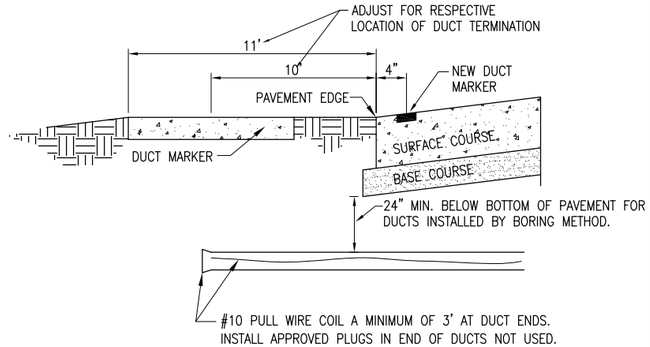


DUCT MARKER DETAIL

"NOT TO SCALE"

CABLE & DUCT MARKER NOTES:

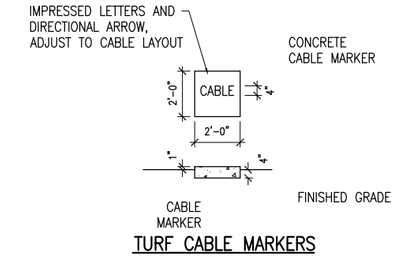
1. THE COST OF ALL TURF AND PAVEMENT DUCT MARKERS SHALL BE INCIDENTAL TO THE DUCT. THE COST OF ALL CABLE MARKERS SHALL BE INCIDENTAL TO THE CABLE.
2. BITUMINOUS PAVEMENT DUCT MARKER AND CONCRETE DUCT MARKER TO BE PROVIDED AT EACH END OF EACH DUCT AS SHOWN ON THE LOCATION PLAN. FOR CONCRETE PAVEMENT, THE LETTER "D" SHALL BE IMPRESSED IN THE PAVEMENT INSTEAD OF THE MARKER. THE LETTER SHALL BE FORMED AS DESCRIBED IN NOTE 4.
3. CABLE MARKERS SHALL BE PLACED AT CHANGES OF DIRECTION AND APPROXIMATELY EVERY 200' ALONG CABLE RUNS.
4. CONCRETE CABLE MARKERS AND DUCT MARKERS SHALL HAVE LETTERS 4" HIGH, 3" WIDE WITH WIDTH OF STROKE ½" AND ¼" DEEP. ALL LETTERS, NUMBERS AND ARROWS TO BE IMPRESSED.
5. EMPLOY THE FOLLOWING METHODS WERE ADDITIONAL SPACE TO FIT LEGEND IS REQUIRED:
   A. REDUCE LETTER SIZE TO 3" HIGH, 2" WIDE.
   B. INCREASE THE MARKER SIZE TO 30" X 30".
   C. PROVIDE ADDITIONAL MARKERS PLACED SIDE BY SIDE.



UNDERGROUND ELECTRICAL DUCT

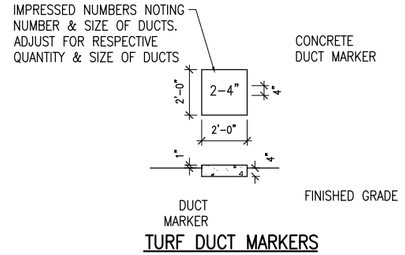
(NOT TO SCALE)

NOTE: DUCTS INSTALLED BY BORING METHOD SHALL NOT DISTURB THE RESPECTIVE PAVEMENT SURFACE.



TURF CABLE MARKERS

"NOT TO SCALE"



TURF DUCT MARKERS

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COLES COUNTY AIRPORT AUTHORITY
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REMOVE AND REPLACE ALL TAXI GUIDANCE SIGNS ON THE AIRPORT

IDA No: MTO-4511

SBG Project No: 3-17-SBGP-XX

Contract No. CO062

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CONDUIT TRENCH DETAILS

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GENERAL NOTES

1. ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN CONFORMANCE WITH NFPA 70 – NATIONAL ELECTRICAL CODE (NEC) MOST CURRENT ISSUE IN FORCE, THE RESPECTIVE EQUIPMENT MANUFACTURER'S DIRECTIONS AND ALL OTHER APPLICABLE LOCAL CODES, LAWS, ORDINANCES, AND REQUIREMENTS IN FORCE. ANY INSTALLATIONS WHICH VOID THE U.L. LISTING, ETL/INTERTEK TESTING SERVICES VERIFICATION/LISTING (OR OTHER THIRD PARTY LISTING) AND/OR THE MANUFACTURER'S WARRANTY OF A DEVICE WILL NOT BE PERMITTED.

2. CONTRACTOR SHALL KEEP A COPY OF THE LATEST NEC IN FORCE ON SITE AT ALL TIMES DURING CONSTRUCTION FOR USE AS A REFERENCE.

3. CONTRACTOR SHALL COORDINATE WORK AND ANY POWER OUTAGES AND/OR SHUT DOWN OF SYSTEMS WITH THE RESPECTIVE FACILITY OWNER PERSONNEL AND THE AIRPORT MANAGER/DIRECTOR. ONCE SHUT DOWN, THE CIRCUITS SHALL BE LABELED AS SUCH TO PREVENT ACCIDENTAL ENERGIZING OF THE RESPECTIVE CIRCUITS. ALL PERSONNEL SHALL FOLLOW U.S. DEPARTMENT OF LABOR OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION (OSHA) 29 CFR PART 1910 OCCUPATIONAL SAFETY & HEALTH STANDARDS FOR ELECTRICAL SAFETY AND LOCKOUT/TAGOUT PROCEDURES INCLUDING, BUT NOT LIMITED TO, 29 CFR SECTION 1910.147 THE CONTROL OF HAZARDOUS ENERGY (LOCKOUT/TAGOUT).

4. THE CONTRACTOR SHALL ASCERTAIN THAT ALL LIGHTING SYSTEM COMPONENTS FURNISHED BY HIM, INCLUDING FAA APPROVED EQUIPMENT, ARE COMPATIBLE IN ALL RESPECTS WITH EACH OTHER AND THE REMAINDER OF THE NEW/EXISTING SYSTEM. ANY NONCOMPATIBLE COMPONENTS FURNISHED BY THIS CONTRACTOR SHALL BE REPLACED BY HIM AT NO ADDITIONAL COST TO THE AIRPORT SPONSOR WITH A SIMILAR UNIT, APPROVED BY THE ENGINEER (DIFFERENT MODEL OR DIFFERENT MANUFACTURER) THAT IS COMPATIBLE WITH THE REMAINDER OF THE AIRPORT LIGHTING SYSTEM.

5. IN CASE THE CONTRACTOR ELECTS TO FURNISH AND INSTALL AIRPORT LIGHTING EQUIPMENT REQUIRING ADDITIONAL WIRING, TRANSFORMERS, ADAPTORS, MOUNTINGS, ETC., TO THOSE SHOWN ON THE DRAWINGS AND/OR LISTED IN THE SPECIFICATION, ANY COST FOR THESE ITEMS SHALL BE INCIDENTAL TO THE EQUIPMENT COST.

6. THE CONTRACTOR INSTALLED EQUIPMENT (INCLUDING FAA APPROVED) SHALL NOT GENERATE ANY ELECTROMAGNETIC INTERFERENCE IN THE EXISTING AND/OR NEW COMMUNICATIONS, WEATHER, AIR NAVIGATION, AND AIR TRAFFIC CONTROL EQUIPMENT. ANY EQUIPMENT GENERATING SUCH INTERFERENCE SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST WITH THE EQUIPMENT MEETING THE APPLICABLE SPECIFICATIONS AND NOT GENERATING ANY INTERFERENCE.

7. WHEN A SPECIFIC TYPE, STYLE, CLASS, ETC. OF FAA APPROVED EQUIPMENT IS SPECIFIED ONLY THAT TYPE, STYLE, CLASS, WILL BE ACCEPTABLE, EVEN THOUGH EQUIPMENT OF OTHER TYPES STYLES, CLASSES, ETC. MAY BE APPROVED.

8. ANY AND ALL INSTRUCTIONS FROM THE RESIDENT ENGINEER/RESIDENT TECHNICIAN TO THE CONTRACTOR REGARDING CHANGES IN OR DEVIATIONS FROM THE PLANS AND SPECIFICATIONS SHALL BE IN WRITING WITH COPIES SENT TO THE AIRPORT SPONSOR AND THE ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF AERONAUTICS. THE CONTRACTOR SHALL NOT ACCEPT ANY VERBAL INSTRUCTIONS FROM THE RESIDENT ENGINEER/RESIDENT TECHNICIAN REGARDING ANY CHANGES FROM THE PLANS AND SPECIFICATIONS.

9. A MINIMUM OF THREE COPIES OF THE INSTRUCTION BOOK SHALL BE SUPPLIED WITH EACH DIFFERENT TYPE OF EQUIPMENT. THE BOOKS DESCRIBING A MORE SOPHISTICATED TYPE OF EQUIPMENT, SUCH AS REGULATORS, PAPI, REIL, ETC. AS A MINIMUM SHALL CONTAIN THE FOLLOWING:

   A. A DETAILED DESCRIPTION OF THE OVERALL EQUIPMENT AND ITS INDIVIDUAL COMPONENTS.

   B. THEORY OF OPERATION INCLUDING THE FUNCTION OF EACH COMPONENT.

   C. INSTALLATION INSTRUCTION.

   D. START–UP INSTRUCTIONS.

   E. PREVENTATIVE MAINTENANCE REQUIREMENTS.

   F. CHART FOR TROUBLE–SHOOTING.

   G. COMPLETE POWER AND CONTROL DETAILED WIRING DIAGRAM(S), SHOWING EACH CONDUCTOR/CONNECTION/COMPONENT – "BLACK" BOXES ARE NOT ACCEPTABLE. THE DIAGRAM OF THE NARRATIVE SHALL SHOW VOLTAGE/CURRENTS/WAVE SHAPES AT STRATEGIC LOCATIONS TO BE USED WHEN CHECKING AND/OR TROUBLE–SHOOTING THE EQUIPMENT. WHEN THE EQUIPMENT HAS SEVERAL MODES OF OPERATION, SUCH AS SEVERAL BRIGHTNESS STEPS, THESE PARAMETERS SHALL BE INDICATED FOR ALL DIFFERENT MODES.

   H. PARTS LIST WHICH WILL INCLUDE ALL MAJOR AND MINOR COMPONENTS SUCH AS RESISTORS, DIODES, ETC. IT SHALL INCLUDE A COMPLETE NOMENCLATURE OF EACH COMPONENT AND, IF APPLICABLE, THE NAME OF ITS MANUFACTURER AND THE CATALOG NUMBER.

   I. SAFETY INSTRUCTIONS.

POWER AND CONTROL NOTES

1. PROVIDE LEGEND PLATES FOR ALL ELECTRICAL EQUIPMENT TO IDENTIFY FUNCTION, CIRCUIT VOLTAGE AND PHASE. WHERE THE EQUIPMENT CONTAINS FUSES, ALSO IDENTIFY THE FUSE OR FUSE LINK AMPERE RATING. WHERE THE EQUIPMENT DOES NOT HAVE SUFFICIENT AREA TO INSTALL LEGEND PLATES, THE LEGEND PLATES SHALL BE INSTALLED ON THE WALL NEXT TO THE UNIT. LEGEND PLATES SHALL BE WEATHERPROOF ENGRAVED PLASTIC OR PHENOLIC MATERIAL, 1/4" HIGH BLACK LETTERS ON A WHITE BACKGROUND UNLESS NOTED OTHERWISE. SECURE WITH WEATHERPROOF ADHESIVE AND MACHINE SCREWS. FURNISH ADDITIONAL LEGEND PLATES WHERE REQUIRED BY CODE, FOR ADDITIONAL EQUIPMENT, AS DETAILED HEREIN ON THE PLANS, AND AS NOTED IN THE SPECIAL PROVISION SPECIFICATIONS.

2. COLOR CODE ALL PHASE WIRING BY THE USE OF COLORED WIRE INSULATION AND/OR COLORED TAPE. WHERE TAPE IS USED, THE WIRE INSULATION SHALL BE BLACK. BLACK AND RED SHALL BE USED FOR PHASE CONDUCTORS ON 120/240VAC SINGLE–PHASE, THREE WIRE SYSTEMS AND BLACK, ORANGE (FOR HIGH LEG) AND BLUE SHALL BE USED FOR PHASE CONDUCTORS ON 240/120VAC THREE–PHASE, FOUR WIRE SYSTEMS. NEUTRAL CONDUCTORS, SIZE NO. 6 AWG OR SMALLER, SHALL BE IDENTIFIED BY A CONTINUOUS WHITE OR NATURAL GRAY OUTER FINISH ALONG ITS ENTIRE LENGTH. NEUTRAL CONDUCTORS LARGER THAN NO. 6 AWG SHALL BE IDENTIFIED EITHER BY A CONTINUOUS WHITE OR NATURAL GRAY OUTER FINISH ALONG ITS ENTIRE LENGTH OR BY THE USE OF WHITE TAPE AT ITS TERMINATIONS AND INSIDE ACCESSIBLE WIREWAYS. INSULATED GROUND CONDUCTORS SHALL HAVE GREEN COLORED INSULATION FOR ALL CONDUCTOR SIZES (AWG OR KCMIL).

3. ALL BRANCH CIRCUIT CONDUCTORS CONNECTED TO A PARTICULAR PHASE SHALL BE IDENTIFIED WITH THE SAME COLOR. THE COLOR CODING SHALL BE EXTENDED TO THE POINT OF UTILIZATION.

4. IN CONTROL WIRING THE SAME COLOR SHALL BE USED THROUGHOUT THE SYSTEM FOR THE SAME FUNCTION, SUCH AS 10%, 30%, 100% BRIGHTNESS CONTROL, ETC.

5. LOW VOLTAGE (600 V.) AND HIGH VOLTAGE (5000 V.) CONDUCTORS SHALL BE INSTALLED IN SEPARATE WIREWAYS.

6. NEATLY LACE WIRING IN DISTRIBUTION PANELS, WIREWAYS, SWITCHES AND JUNCTION/PULL BOXES.

7. THE MINIMUM SIZE OF PULL/JUNCTION BOXES, REGARDLESS OF THE QUANTITY AND SIZE OF THE CONDUCTORS SHOWN, SHALL BE AS FOLLOWS:

   A. IN STRAIGHT PULLS THE LENGTH OF THE BOX SHALL NOT BE LESS THAN EIGHT TIMES THE TRADE DIAMETER OF THE LARGER CONDUIT. THE TOTAL AREA (INCLUDING THE CONDUIT CROSS–SECTIONAL AREA) OF A BOX END SHALL BE AT LEAST 3 TIMES GREATER THAN THE TOTAL TRADE CROSS–SECTIONAL AREA OF THE CONDUITS TERMINATING AT THE END.

   B. IN ANGLE PULLS OR 'U' PULLS THE DISTANCE BETWEEN EACH CONDUIT ENTRY INSIDE THE BOX AND THE OPPOSITE WALL OF THE BOX SHALL NOT BE LESS THAN SIX (6) TIMES THE TRADE DIAMETER OF THE LARGEST CONDUIT. THIS DISTANCE SHALL BE INCREASED FOR ADDITIONAL ENTRIES BY THE AMOUNT OF THE SUM OF THE DIAMETERS OF ALL OTHER CONDUIT ENTRIES ON THE SAME WALL AS THE BOX. THE DISTANCE BETWEEN CONDUIT ENTRIES ENCLOSING THE SAME CONDUCTOR SHALL NOT BE LESS THAN SIX TIMES THE TRADE DIAMETER OF THE LARGEST CONDUIT.

8. A RUN OF CONDUIT BETWEEN TERMINATIONS AT EQUIPMENT ENCLOSURES, SQUARE DUCTS AND PULL/JUNCTION BOXES, SHALL NOT CONTAIN MORE THAN THE EQUIVALENT OF FOUR QUARTER BENDS (360 DEGREES TOTAL), INCLUDING THOSE BENDS LOCATED IMMEDIATELY AT THE TERMINATIONS, CAST, CONDUIT TYPE OUTLETS SHALL NOT BE TREATED AS PULL/JUNCTION BOXES.

9. EQUIPMENT CABINETS SHALL NOT BE USED AS PULL/JUNCTION BOXES. ONLY WIRING TERMINATING AT THE EQUIPMENT SHALL BE BROUGHT INTO THESE ENCLOSURES.

10. SPLICES AND JUNCTION POINTS SHALL BE PERMITTED ONLY IN JUNCTION BOXES, DUCTS EQUIPPED WITH REMOVABLE COVERS, AND AT EASILY ACCESSIBLE LOCATIONS.

11. CIRCUIT BREAKERS IN POWER DISTRIBUTION PANEL(S) SHALL BE THERMAL–MAGNETIC MOLDED CASE, PERMANENT TRIP WITH 100 AMPERE, MINIMUM FRAME.

12. DUAL LUGS SHALL BE USED WHERE TWO (2) WIRES, SIZE NO. 6 OR LARGER, ARE TO BE CONNECTED TO THE SAME TERMINAL.

13. ALL INTERIOR WALL MOUNTED EQUIPMENT ENCLOSURES SHALL BE MOUNTED ON HOT DIPPED GALVANIZED STEEL STRUT SUPPORT, OR STAINLESS STEEL STRUT SUPPORT, WITH CORROSION RESISTANT HARDWARE.

14. SUPPORT FOR EXTERIOR MOUNTED EQUIPMENT SHALL USE HOT DIPPED GALVANIZED STEEL STRUT SUPPORT OR STAINLESS STEEL STRUT SUPPORT WITH STAINLESS STEEL HARDWARE. PROVIDE ZINC RICH PAINT APPLIED TO FIELD CUTS OF GALVANIZED STEEL SUPPORT TO MINIMIZE THE POTENTIAL FOR CORROSION PER THE RESPECTIVE STRUT SUPPORT MANUFACTURER'S RECOMMENDATIONS.

15. CONDUITS FOR ELECTRIC SERVICE ENTRANCE AND FEEDERS SHALL BE AS DETAILED HEREIN ON THE PLANS. WHERE GALVANIZED RIGID STEEL CONDUIT IS SPECIFIED IT SHALL HAVE THREADED FITTINGS. SET SCREW TYPE FITTINGS WILL NOT BE ACCEPTABLE. CONDUITS FOR UNDERGROUND APPLICATIONS SHALL BE AS DETAILED HEREIN. CONDUITS FOR GROUNDING ELECTRODE CONDUCTORS OR INDIVIDUAL GROUNDING CONDUCTORS SHALL BE SCHEDULE 40 OR SCHEDULE 80 PVC.

16. PROVIDE LIQUID TIGHT FLEXIBLE METAL CONDUIT AT CONNECTIONS TO EQUIPMENT SUBJECT TO VIBRATION OR WHERE FLEXIBILITY IS REQUIRED. LIQUID TIGHT FLEXIBLE METAL CONDUIT AND ASSOCIATED FITTINGS SHALL BE U.L. LISTED TO MEET THE REQUIREMENTS OF NEC 350.6, SUITABLE FOR GROUNDING, SUNLIGHT RESISTANT, AND RESISTANT TO OIL, GASOLINE, AND GREASE. LIQUID TIGHT FLEXIBLE METAL CONDUIT THAT IS USED FOR FLEXIBILITY (INCLUDING CONNECTIONS TO MOTORS, TRANSFORMERS, & CONSTANT CURRENT REGULATORS) SHALL REQUIRE AN EXTERNAL BONDING JUMPER OR INTERNAL EQUIPMENT GROUNDING CONDUCTOR PER NEC 350.60. DO NOT INSTALL LIQUID TIGHT FLEXIBLE METAL CONDUIT THAT IS NOT UL. LISTED. CONFIRM LIQUID–TIGHT FLEXIBLE METAL CONDUIT BEARS THE UL LABEL PRIOR TO INSTALLING IT.

17. UNLESS OTHERWISE SHOWN, ALL EXPOSED CONDUITS SHALL BE RUN PARALLEL TO OR AT RIGHT ANGLES WITH THE LINES OF THE STRUCTURE.

18. ALL STEEL CONDUITS, FITTINGS, NUTS, BOLTS, ETC. SHALL BE GALVANIZED.

19. USE CONDUIT BUSHINGS AT EACH CONDUIT TERMINATION. WHERE NO. 4 AWG OR LARGER UNDERGROUND WIRE IS INSTALLED, USE INSULATED BUSHINGS.

20. USE DOUBLE LOCK NUTS AT EACH CONDUIT TERMINATION.

21. WRAP ALL PRIMARY AND SECONDARY POWER TRANSFORMER CONNECTIONS WITH SUFFICIENT LAYERS OF INSULATING TAPE (3M SCOTCH 23 ALL–VOLTAGE SPLICING TAPE, 3M SCOTCH 130C LINERLESS RUBBER SPLICING TAPE, OR APPROVED EQUAL) AND COVER WITH VINYL ELECTRICAL TAPE (3M SCOTCH 88 VINYL ELECTRICAL TAPE OR APPROVED EQUAL) FOR FULL VALUE OF CABLE INSULATION VOLTAGE.

22. UNLESS OTHERWISE NOTED, ALL SINGLE CONDUCTOR CONTROL WIRING SHALL BE NO. 12 AWG. COPPER MINUMUM.

23. THE FOLLOWING SHALL APPLY TO RELAY/CONTACTOR PANELS/ENCLOSURES:

   A. FOR INTERIOR LOCATIONS ALL COMPONENTS SHALL BE MOUNTED IN NEMA 12 (DUST TIGHT) ENCLOSURE(S) WITH VERTICALLY HINGED COVERS. FOR EXTERIOR/OUTDOOR LOCATIONS ALL COMPONENTS SHALL BE MOUNTED IN NEMA 4X STAINLESS STEEL ENCLOSURE(S) WITH VERTICALLY HINGED COVERS. ALL CONDUIT ENTRIES INTO NEMA 4, 4X ENCLOSURES SHALL HAVE NEMA 4 HUBS LISTED SUITABLE FOR THE RESPECTIVE ENCLOSURE TO MAINTAIN THE NEMA 4, 4X RATING OF THE ENCLOSURE.

   B. THE ENCLOSURE(S) SHALL HAVE AMPLE SPACE FOR THE CIRCUIT COMPONENTS, TERMINAL BLOCKS AND INCOMING AND INTERNAL WIRING.

   C. ALL CONTROL CONDUCTOR TERMINATIONS SHALL BE OF THE OPEN–EYE CONNECTOR/SCREW TYPE. SOLDERED CLOSED–EYE TERMINATIONS, OR TERMINATIONS WITHOUT CONNECTORS ARE NOT ACCEPTABLE.

   D. WHEN THE ENCLOSURE COVER IS OPENED, ALL CIRCUIT COMPONENTS, WIRING AND TERMINALS SHALL BE EXPOSED AND ACCESSIBLE WITHOUT REMOVAL OF ANY PANELS, COVERS, ETC., EXCEPT THOSE COVERING HIGH VOLTAGE COMPONENTS.

   E. ACCESS TO, OR REMOVAL OF A CIRCUIT COMPONENT OR TERMINAL BLOCK WILL NOT REQUIRE THE REMOVAL OF ANY OTHER CIRCUIT COMPONENT OR TERMINAL BLOCK.

   F. EACH CIRCUIT COMPONENT SHALL BE CLEARLY IDENTIFIED INDICATING ITS CORRESPONDING NUMBER SHOWN ON THE DRAWINGS AND ITS FUNCTION.

   G. A COMPLETE WIRING DIAGRAM SHALL BE MOUNTED ON THE INSIDE OF THE COVER. THE DIAGRAM SHALL REPRESENT EACH CONDUCTOR BY A SEPARATE LINE.

   H. THE DIAGRAM SHALL IDENTIFY EACH CIRCUIT COMPONENT AN NUMBERING AND COLOR OF EACH TERMINAL CONDUCTOR AND TERMINAL.

   I. ALL WIRING SHALL BE NEATLY TRAINED AND LACED.

   J. MINIMUM WIRE SIZE SHALL BE NO. 12 AWG.

24. FURNISH & INSTALL A WEATHERPROOF WARNING LABEL FOR EACH METER SOCKET, SERVICE DISCONNECT, SAFETY SWITCH, CUTOUT, PANELBOARD, & CONTROL PANEL TO WARN PERSONS OF POTENTIAL ELECTRIC ARC FLASH HAZARDS, PER THE REQUIREMENTS OF NEC 110.16 "ARC FLASH HAZARD WARNING".

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COLES COUNTY AIRPORT AUTHORITY
COLES COUNTY MEMORIAL AIRPORT

REMOVE AND REPLACE ALL TAXI GUIDANCE SIGNS ON THE AIRPORT

IDA No: MTO-4511

SBG Project No: 3-17-SBGP-XX

Contract No. CO062

NO.	DATE	DESCRIPTION		
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SHEET TITLE

ELECTRICAL NOTES SHEET 1

AIRFIELD LIGHTING NOTES

1. UNLESS OTHERWISE NOTED, ALL UNDERGROUND AIRFIELD LIGHTING SERIES CIRCUIT CONDUCTORS WHETHER DEB OR IN DUCT/CONDUIT SHALL BE FAA APPROVED 5000 VOLT L-824 TYPE. ALL UNDERGROUND FIELD POWER LOW VOLTAGE (600 VOLT & BELOW) CIRCUIT CONDUCTORS WHETHER DEB OR IN DUCT/CONDUIT SHALL BE UL LISTED 600 VOLT, TYPE XLP-USE-2 COPPER CONDUCTORS. CONDUCTOR SIZES SHALL BE AS SPECIFIED, HEREIN.

2. NO COMPONENTS OF PRIMARY CIRCUIT SUCH AS CABLE, CONNECTORS AND TRANSFORMERS SHALL BE BROUGHT ABOVE GROUND AT EDGE LIGHTS, SIGNS, REIL, PAPI, ETC.

3. THERE SHALL BE NO EXPOSED POWER/CONTROL CABLES BETWEEN THE POINT WHERE THEY LEAVE THE UNDERGROUND (DEB OR L-867 BASES) AND WHERE THEY ENTER THE EQUIPMENT (SUCH AS TAXIWAY SIGNS, PAPI, REIL, ETC.) ENCLOSURES. THESE CABLES SHALL BE ENCLOSED IN RIGID CONDUIT OR IN FLEXIBLE, WATERTIGHT CONDUIT WITH BREAKABLE COUPLING(S) AT THE GRADE OR THE HOUSING COVER, AS SHOWN IN APPLICABLE DETAILS.

4. THE JOINTS OF THE L-823 PRIMARY CONNECTORS SHALL BE WRAPPED WITH AT LEAST ONE LAYER OF RUBBER OR SYNTHETIC RUBBER TAPE AND ONE LAYER OF PLASTIC TAPE, ONE-HALF LAPPED, EXTENDING AT LEAST 1-1/2 INCHES ON EACH SIDE OF THE JOINT, AS SHOWN ON ELECTRICAL DETAILS SHEET 1.

5. THE CABLE ENTRANCE INTO THE FIELD-ATTACHED L-823 CONNECTORS SHALL BE ENCLOSED BY A HEAT-SHRINKABLE TUBING WITH CONTINUOUS INTERNAL ADHESIVE, AS SHOWN ON ELECTRICAL DETAILS SHEET 1.

6. L-823 TYPE II, TWO-CONDUCTOR SECONDARY CONNECTORS SHALL BE CLASS 'A' (FACTORY MOLDED).

7. THERE SHALL BE NO SPLICES IN THE SECONDARY CABLE(S) WITHIN THE STEMS OF A RUNWAY/TAXIWAY EDGE/THRESHOLD LIGHTING FIXTURE AND THE WIREWAYS LEADING TO TAXIWAY SIGNS AND PAPI/REIL EQUIPMENT.

8. ELECTRICAL INSULATING GREASE SHALL BE APPLIED WITHIN THE L-823, SECONDARY, TWO CONDUCTOR CONNECTORS TO PREVENT WATER ENTRANCE. THESE CONNECTORS SHALL NOT BE TAPED.

9. DEB ISOLATION TRANSFORMERS SHALL BE BURIED AT A DEPTH OF TEN (10") INCHES ON A LINE CROSSING THE LIGHT AND PERPENDICULAR TO THE RUNWAY/TAXIWAY CENTERLINE AT A LOCATION TWELVE (12") INCHES FROM THE LIGHT OPPOSITE FROM THE RUNWAY/TAXIWAY.

10. A SLACK OF THREE (3') FEET, MINIMUM, PLUS DEPTH OF BASE CAN (IF APPLICABLE), SHALL BE PROVIDED IN THE PRIMARY CABLE AT EACH TRANSFORMER/CONNECTOR TERMINATION. AT STAKE-MOUNTED LIGHTS, THE SLACK SHALL BE LOOSELY COILED IMMEDIATELY BELOW THE ISOLATION TRANSFORMER. THERE SHALL BE NO ADDITIONAL PAYMENT FOR CABLE SLACK AND THEREFORE THE QUANTITY OF PROPOSED CABLE SLACK HAS NOT BEEN INCLUDED IN THE RESPECTIVE CABLE PAY ITEMS.

11. DIRECTION OF PRIMARY CABLES SHALL BE IDENTIFIED BY COLOR CODING AS FOLLOWS: WHEN FACING LIGHT WITH BACK TO PAVEMENT, CABLE TO THE LEFT IS CODED RED AND CABLE TO RIGHT IS CODED BLUE. THIS APPLIES TO STAKE MOUNTED LIGHTS AND BASE MOUNTED LIGHTS WHERE THE BASE HAS ONLY ONE ENTRANCE.

12. L-867 BASES SHALL BE SIZE B, 24" DEEP, CLASS I, UNLESS OTHERWISE NOTED.

13. BASE MOUNTED BREAKABLE COUPLINGS SHALL NOT HAVE WEEP HOLES TO THE OUTSIDE. PLUGGED UP HOLES SHALL NOT BE ACCEPTABLE. IT SHALL BE A 1/4" DIAMETER, MINIMUM, OR EQUIVALENT OPENING FOR DRAINAGE FROM THE SPACE AROUND THE SECONDARY CONNECTOR INTO THE L-867 BASE.

14. THE ELEVATION OF THE BREAKABLE COUPLING GROOVE SHALL NOT EXCEED 1-1/2" ABOVE THE EDGE OF THE COVER IN CASE OF BASE MOUNTED COUPLINGS, OR THE TOP OF THE STAKE IN CASE OF STAKE MOUNTED COUPLINGS.

15. WHERE THE BREAKABLE COUPLING IS NOT AN INTEGRAL PART OF THE LIGHT FIXTURE STEM OR MOUNTING LEG, A BEAD OF SILICON SEAL SHALL BE APPLIED COMPLETELY AROUND LIGHT STEM OR WIREWAY AT BREAKABLE COUPLING TO PROVIDE A WATERTIGHT SEAL.

16. TOPS OF THE STAKES SUPPORTING LIGHT FIXTURES SHALL BE FLUSH WITH THE SURROUNDING GRADE.

17. PLASTIC LIGHTING FIXTURE COMPONENTS, SUCH AS LAMP HEADS, STEMS, BREAKABLE COUPLINGS, BASE COVERS, BRACKETS, STAKES, SHALL NOT BE ACCEPTABLE.

18. THE TOLERANCE FOR THE HEIGHT OF RUNWAY/TAXIWAY EDGE LIGHTS SHALL BE: ONE (1) INCH. IN CASE OF STAKE MOUNTED LIGHTS, THE SPECIFIED LIGHTING FIXTURE HEIGHT SHALL BE MEASURED BETWEEN THE TOP OF THE STAKE AND THE TOP OF THE LENS. IN CASE OF BASE MOUNTED LIGHTS, THE SPECIFIED LIGHTING FIXTURE HEIGHT SHALL BE MEASURED BETWEEN THE TOP OF THE BASE FLANGE AND THE TOP OF THE LENS, THUS INCLUDING THE BASE COVER, THE FRANGIBLE COUPLING, THE STEM, THE LAMP HOUSING AND THE LENS.

19. THE TOLERANCE FOR THE LATERAL SPACING (LIGHT LANE TO RUNWAY/TAXIWAY CENTERLINE) OF RUNWAY/TAXIWAY EDGE LIGHTS SHALL BE ONE (1) INCH. THIS ALSO APPLIES AT INTERSECTIONS TO LATERAL SPACING BETWEEN LIGHTS OF A RUNWAY/TAXIWAY AND THE INTERSECTING RUNWAY/TAXIWAY.

20. ENTRANCES INTO L-867 BASES SHALL HAVE CONDUIT COUPLINGS OR REDUCERS TO INTERFACE UNIT DUCT/CONDUIT TO L-867 BASE HUBS, OR SHALL BE SEALED WITH HEAT SHRINK AS SHOWN IN DETAIL "B" ON ELECTRICAL DETAILS SHEET 1.

21. GALVANIZED/PAINTED EQUIPMENT/COMPONENT SURFACES SHALL NOT BE DAMAGED BY DRILLING, FILING, ETC. DRAIN HOLES IN METAL TRANSFORMER HOUSINGS SHALL BE MADE BEFORE GALVANIZING.

22. EDGE LIGHT NUMBERING TAGS SHALL BE FACING THE PAVEMENT.

23. CABLE/SPLICE/DUCT MARKERS SHALL BE PRECAST CONCRETE OF THE SIZE SHOWN. LETTERS/NUMBERS/ARROWS FOR THE LEGEND TO BE IMPRESSED INTO THE TOPS OF THE MARKERS SHALL BE PRE-ASSEMBLED AND SECURED IN THE MOLD BEFORE THE CONCRETE IS POURED. LEGEND INSCRIBED BY HAND IN WET CONCRETE SHALL NOT BE ACCEPTABLE.

24. ALL UNDERGROUND CABLE RUNS SHALL BE IDENTIFIED BY CABLE MARKERS AT 200 FEET MAXIMUM SPACING, WITH AN ADDITIONAL MARKER AT EACH CHANGE OF DIRECTION OF THE CABLE RUN. CABLE MARKERS SHALL BE INSTALLED IMMEDIATELY ABOVE THE CABLES.

25. THERE SHALL BE NO SPLICES BETWEEN THE ISOLATION TRANSFORMERS. L-823 CONNECTORS ARE ALLOWED AT TRANSFORMER CONNECTIONS ONLY, UNLESS OTHERWISE SHOWN.

26. APPLY AN OXIDE INHIBITING, ANTI-SEIZING COMPOUND TO ALL SCREWS, NUTS AND BREAKAGE COUPLING THREADS.

27. LOCATIONS OF ENDS OF ALL UNDERGROUND DUCTS SHALL BE IDENTIFIED BY DUCT MARKERS.

28. WHERE A PARALLEL, CONSTANT VOLTAGE PAPI SYSTEM IS PROVIDED, THE "T" SPLICES SHALL BE OF THE CAST TYPE.

29. CONCRETE USED FOR SLABS, FOOTINGS, BACKFILL AROUND TRANSFORMER HOUSINGS, MARKINGS, ETC. SHALL BE 3500 PSI, AIR-ENTRAINED.

30. ALL POWER AND CONTROL CABLES IN MAN/HAND HOLES SHALL BE TAGGED. USE EMBOSSED COPPER STRIPS TO BE ATTACHED AT BOTH ENDS TO THE CABLE BY THE USE OF PLASTIC STRAPS. MINIMUM OF TWO TAGS SHALL BE PROVIDED ON EACH CABLE IN A MAN/HAND HOLE-ONE AT THE CABLE ENTRANCE AND ONE AT THE CABLE EXIT.

31. THE LOCATION, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND AND/OR ABOVEGROUND UTILITIES INDICATED ON THE PLANS IS NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. NEITHER THE OWNER NOR THE ENGINEER ASSUMES ANY RESPONSIBILITY WHATEVER IN RESPECT TO ACCURACY, COMPLETENESS, OR SUFFICIENCY OF THE INFORMATION. THERE IS NO GUARANTEE EITHER EXPRESSED OR IMPLIED, THAT THE LOCATIONS, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND UTILITIES INDICATED ARE REPRESENTATIVE OF THOSE TO BE ENCOUNTERED IN THE CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES OF HIS OPERATIONAL PLANS AND SHALL OBTAIN FROM THE RESPECTIVE UTILITY COMPANIES DETAILED INFORMATION AND ASSISTANCE RELATIVE TO THE LOCATION OF THEIR FACILITIES AND THE WORKING SCHEDULE OF THE COMPANIES FOR REMOVAL OR ADJUSTMENT WHERE REQUIRED. IN THE EVENT AN UNEXPECTED UTILITY INTERFERENCE IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY COMPANY OF JURISDICTION. THE OWNER'S REPRESENTATIVE AND/OR THE RESIDENT ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY DAMAGE TO SUCH MAINS AND SERVICES SHALL BE RESTORED TO SERVICE AT ONCE AND PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT. ALL UTILITY CABLES AND LINES SHALL BE LOCATED BY THE RESPECTIVE UTILITY. CONTACT JULIE (JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS) FOR UTILITY INFORMATION, PHONE: 1-800-892-0123. CONTACT THE FAA (FEDERAL AVIATION ADMINISTRATION) FOR ASSISTANCE IN LOCATING FAA CABLES AND UTILITIES. LOCATION OF FAA POWER, CONTROL AND COMMUNICATION CABLES SHALL BE COORDINATED WITH AND/OR LOCATED BY THE FAA. ALSO CONTACT AIRPORT DIRECTOR/MANAGER AND AIRPORT PERSONNEL FOR ASSISTANCE IN LOCATING UNDERGROUND AIRPORT CABLES AND/OR UTILITIES. ALSO COORDINATE WORK WITH ALL ABOVE GROUND UTILITIES.

32. WHEN PREPARING CABLE FOR SPLICES, THE CONTRACTOR SHALL USE A CABLE STRIPPER/PENCILLER WHENEVER CABLE CONNECTIONS ARE MADE.

GROUNDING NOTES FOR AIRFIELD LIGHTING

1. GROUNDING FOR RUNWAY LIGHTS, TAXIWAY LIGHTS, AND LIGHTED TAXI GUIDANCE SIGNS SHALL BE AS DETAILED ON THE PLANS AND AS SPECIFIED HEREIN. PER FAA AC 150/5340-30H DESIGN AND INSTALLATION DETAILS FOR AIRPORT VISUAL AIDS, CHAPTER 12, PART 12.6; A GROUND MUST BE INSTALLED AT EACH LIGHT FIXTURE. THE PURPOSE OF THE LIGHT BASE GROUND IS TO PROVIDE A DEGREE OF PROTECTION FOR MAINTENANCE PERSONNEL FROM POSSIBLE CONTACT WITH AN ENERGIZED LIGHT BASE OR MOUNTING STAKE THAT MAY RESULT FROM A SHORTED POWER CABLE OR ISOLATION TRANSFORMER. A LIGHT BASE GROUND SHALL BE INSTALLED AT EACH TRANSFORMER BASE/LIGHT CAN ASSOCIATED WITH RUNWAY LIGHTS, TAXIWAY LIGHTS, AND LIGHTED TAXI GUIDANCE SIGNS. A LIGHT BASE GROUND SHALL ALSO BE INSTALLED AT EACH STAKE MOUNTED LIGHT FIXTURE. A LIGHT BASE GROUND SHALL BE INSTALLED AND CONNECTED TO THE METAL FRAME OF EACH TAXI GUIDANCE SIGN AS DETAILED ON THE PLANS AND IN ACCORDANCE WITH THE RESPECTIVE TAXI GUIDANCE SIGN MANUFACTURER RECOMMENDATIONS. THE LIGHT BASE GROUND SHALL BE A #6 AWG BARE COPPER CONDUCTOR CONNECTED TO THE GROUND LUG ON THE RESPECTIVE L-867 TRANSFORMER BASE/LIGHT CAN OR MOUNTING STAKE AND A 3/4-INCH DIAMETER BY 10-FEET LONG (MINIMUM) UL LISTED COPPER CLAD GROUND ROD. CONNECTIONS TO GROUND LUGS ON THE L-867 TRANSFORMER BASE/LIGHT CAN OR MOUNTING STAKE SHALL BE WITH A UL LISTED GROUNDING CONNECTOR SUITABLE FOR DIRECT BURY IN EARTH OR CONCRETE. CONNECTIONS TO GROUND RODS SHALL BE MADE WITH EXOTHERMIC WELD TYPE CONNECTORS, CADWELD BY ERICO PRODUCTS, INC., SOLON, OHIO, (PHONE: 800-248-9353), THERMOWELD BY CONTINENTAL INDUSTRIES, INC., TULSA, OKLAHOMA (PHONE: 918-663-1440), ULTRAWELD BY HARGER, GRAYSLAKE, ILLINOIS (PHONE: 800-842-7437), OR APPROVED EQUAL. EXOTHERMIC WELD CONNECTIONS SHALL BE INSTALLED IN CONFORMANCE WITH THE RESPECTIVE MANUFACTURER'S DIRECTIONS USING MOLDS AS REQUIRED FOR EACH RESPECTIVE APPLICATION. BOLTED CONNECTIONS WILL NOT BE PERMITTED AT GROUND RODS. TOP OF GROUND RODS SHALL BE BURIED 12 INCHES MINIMUM BELOW GRADE, UNLESS SPECIFIED OTHERWISE HEREIN, FOR RESPECTIVE APPLICATIONS.

2. FOR BASE MOUNTED LIGHT FIXTURES THE LIGHT FIXTURE MUST BE BONDED TO THE LIGHT BASE INTERNAL GROUND LUG VIA A #6 AWG STRANDED COPPER WIRE RATED FOR 600 VOLTS WITH GREEN XHHW OR USE INSULATION. THE GROUND WIRE LENGTH MUST BE SUFFICIENT TO ALLOW THE REMOVAL OF THE LIGHT FIXTURE FROM THE LIGHT BASE FOR ROUTING MAINTENANCE. SEE THE LIGHT FIXTURE MANUFACTURER'S INSTRUCTIONS FOR PROPER METHODS OF ATTACHING BONDING WIRE.

3. CLEAN ALL METAL SURFACES BEFORE MAKING GROUND CONNECTIONS. METALLIC SURFACES TO BE JOINED SHALL BE PREPARED BY THE REMOVAL OF ALL NON-CONDUCTIVE MATERIAL PER 2014 NATIONAL ELECTRICAL CODE ARTICLE 250-12.

4. PER FAA 150/5340-30H THE RESISTANCE TO GROUND OF THE RESPECTIVE MOUNTING STAKE OR LIGHT BASE (WITH GROUND ROD CONNECTED) MUST BE 25 OHMS OR LESS.

5. FOR TAXIWAY LIGHTS THAT ARE SPACED WITH LESS THAN 10 FEET OF SEPARATION BETWEEN THEM, PROVIDE ONE 3/4-INCH DIAMETER BY 10 FEET LONG GROUND ROD PER TWO ADJACENT TAXIWAY LIGHTS. LOCATE GROUND ROD MIDWAY BETWEEN THE TWO TAXIWAY LIGHTS.

6. STEEL USED TO MANUFACTURE GROUND RODS SHALL BE 100% DOMESTIC STEEL.

7. FOR EACH AIRFIELD LIGHT FIXTURE, TAXI GUIDANCE SIGN, AND NAVAID THE CONTRACTOR SHALL TEST THE MADE ELECTRODE GROUND SYSTEM WITH AN INSTRUMENT SPECIFICALLY DESIGNED FOR TESTING GROUND SYSTEMS. TEST RESULTS SHALL BE RECORDED FOR EACH AIRFIELD LIGHT FIXTURE, TAXI GUIDANCE SIGN, AND NAVAIDS INSTALLATION. IF GROUND RESISTANCE EXCEEDS 25 OHMS, CONTACT THE PROJECT ENGINEER FOR FURTHER DIRECTION. COPIES OF THE GROUND SYSTEM TEST RESULTS SHALL BE FURNISHED TO THE RESIDENT ENGINEER/RESIDENT TECHNICIAN.

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COLES COUNTY AIRPORT AUTHORITY
COLES COUNTY MEMORIAL AIRPORT

REMOVE AND REPLACE ALL TAXI GUIDANCE SIGNS ON THE AIRPORT

IDA No: MTO-4511

SBG Project No: 3-17-SBGP-XX

Contract No. CO062

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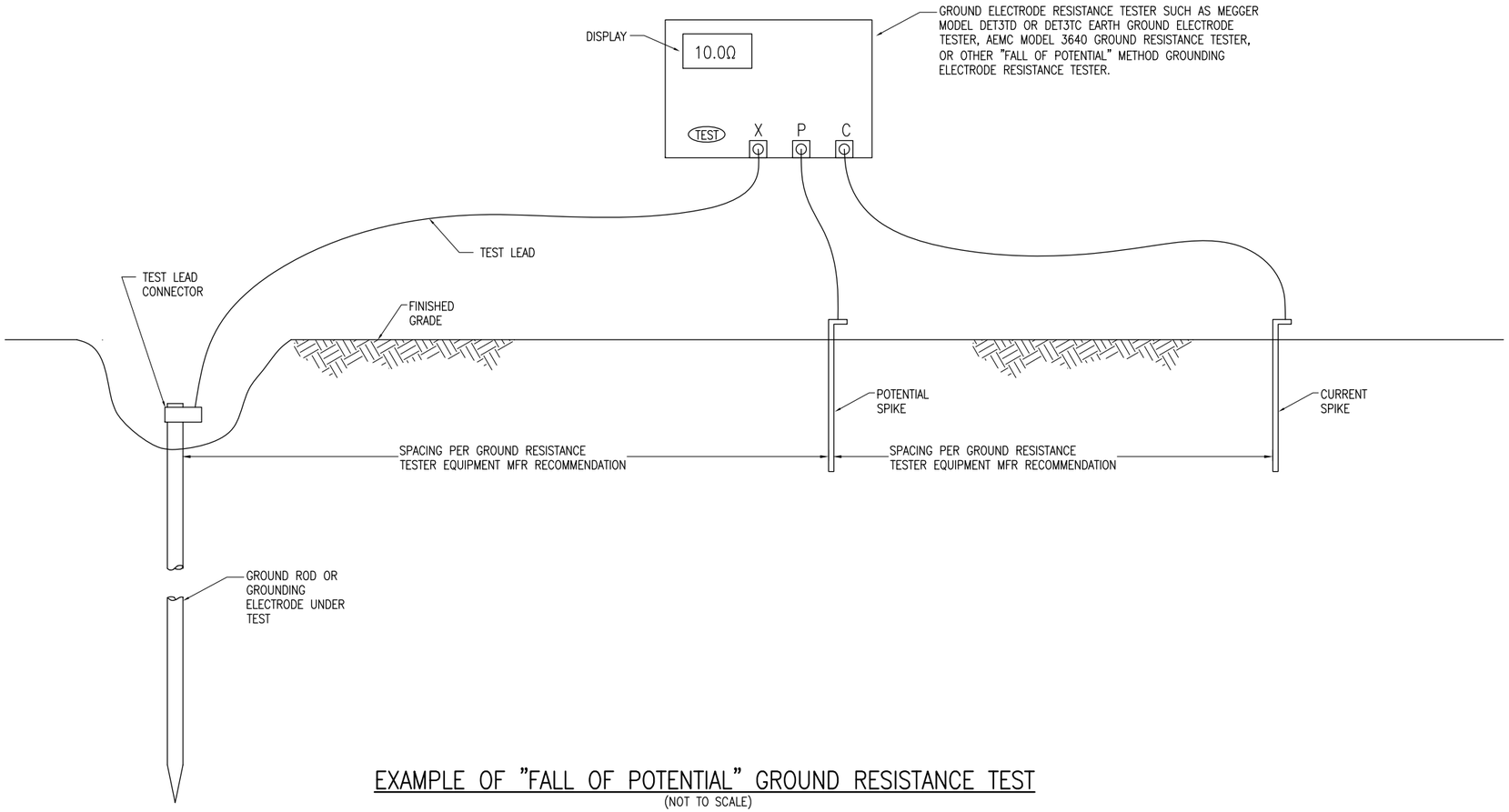
ELECTRICAL NOTES SHEET 2



EXAMPLE OF "FALL OF POTENTIAL" GROUND RESISTANCE TEST

(NOT TO SCALE)

NOTES

1. CONTRACTOR SHALL TEST AND RECORD THE RESISTANCE FOR EACH MADE ELECTRODE GROUND ROD/GROUND FIELD/GROUND RING WITH AN INSTRUMENT SPECIFICALLY DESIGNED FOR TESTING GROUNDING ELECTRODE SYSTEMS. IF GROUND RESISTANCE EXCEEDS 25 OHMS, CONTACT THE PROJECT ENGINEER FOR FURTHER DIRECTION. COPIES OF GROUND ROD TEST RESULTS SHALL BE FURNISHED TO THE RESIDENT ENGINEER/RESIDENT TECHNICIAN.

2. FOR EACH AIRFIELD LIGHT FIXTURE, TAXI GUIDANCE SIGN, AND NAVAID THE CONTRACTOR SHALL TEST THE MADE ELECTRODE GROUND SYSTEM WITH AN INSTRUMENT SPECIFICALLY DESIGNED FOR TESTING GROUND SYSTEMS. TEST RESULTS SHALL BE RECORDED FOR EACH AIRFIELD LIGHT FIXTURE, TAXI GUIDANCE SIGN, AND NAVAIDS INSTALLATION. IF GROUND RESISTANCE EXCEEDS 25 OHMS, CONTACT THE PROJECT ENGINEER FOR FURTHER DIRECTION. COPIES OF THE GROUND SYSTEM TEST RESULTS SHALL BE FURNISHED TO THE RESIDENT ENGINEER / RESIDENT TECHNICIAN.

3. GROUND RESISTANCE TEST SHALL BE CONDUCTED IN ACCORDANCE WITH THE RESPECTIVE GROUND ELECTRODE RESISTANCE TESTING EQUIPMENT MANUFACTURER'S INSTRUCTIONS.

4. RECORD SITE CONDITIONS DURING TESTS.

5. "FALL OF POTENTIAL" TYPE GROUND ELECTRODE RESISTANCE TESTER IS RECOMMENDED FOR TESTING INDIVIDUAL STAND ALONE GROUND RODS.

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GROUND RESISTANCE TESTING DETAILS

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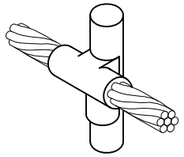

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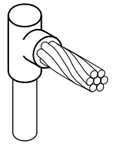

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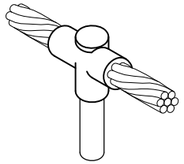

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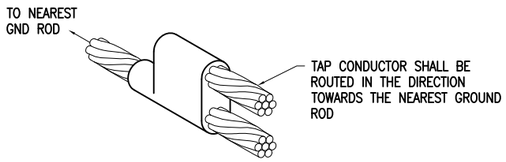
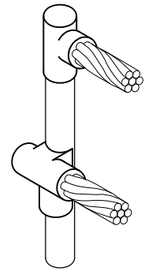


CABLE TO CABLE HORIZONTAL PARALLEL TAP

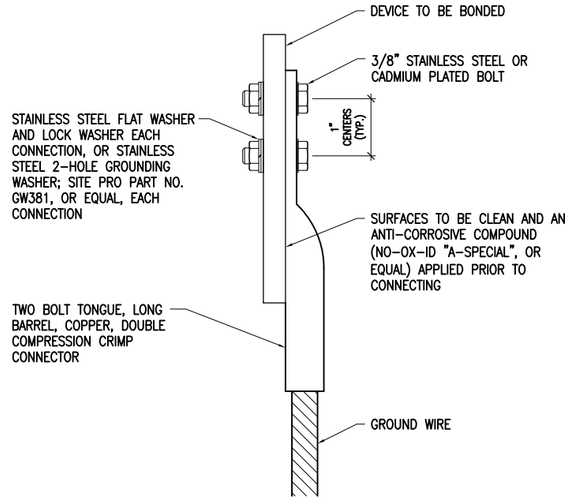


CABLES TO GROUND ROD

DETAIL NOTES

1. ALL BELOW GRADE CONNECTIONS TO GROUND RODS & GROUND RING CONDUCTORS SHALL BE EXOTHERMIC WELD TYPE CONNECTIONS. EXOTHERMIC WELDS SHALL BE CADWELD AS MANUFACTURED BY ERICO PRODUCTS, SOLON, OHIO, ULTRAWELD AS MANUFACTURED BY HARGER LIGHTNING PROTECTION & GROUNDING EQUIPMENT, GRAYSLAKE, IL, THERMOWELD AS MANUFACTURED BY CONTINENTAL INDUSTRIES, TULSA, OKLAHOMA, OR APPROVED EQUAL. VERIFY PROPER SIZES, MOLDS, TYPES, AND REQUIREMENTS FOR THE RESPECTIVE APPLICATION WITH THE MANUFACTURER, AND INSTALL PER THEIR DIRECTIONS.
2. FOR APPLICATIONS TO GALVANIZED STEEL OR PAINTED STEEL, REMOVE GALVANIZING AND/OR PAINT & CLEAN THE SURFACE TO EXPOSE BARE STEEL BEFORE MAKING EXOTHERMIC WELD CONNECTION.
3. INDIVIDUAL GROUNDING ELECTRODE CONDUCTORS SHALL NOT BE INSTALLED IN METAL CONDUIT. INSTALL GROUNDING ELECTRODE CONDUCTORS IN SCHED 40 PVC CONDUIT AS REQUIRED IN FOUNDATIONS, FOR PROTECTION, WHERE ENTERING ENCLOSURES, ETC. WHERE PLASTIC CONDUIT IS USED FOR INDIVIDUAL GROUND WIRES, DO NOT COMPLETELY ENCIRCLE THE CONDUIT WITH FERROUS AND/OR MAGNETIC MATERIALS. WHERE METAL CLAMPS ARE INSTALLED USE NYLON BOLTS, NUTS, WASHERS, & SPACERS TO INTERRUPT A COMPLETE METALLIC PATH FROM ENCIRCLING THE CONDUIT.

EXOTHERMIC WELD DETAILS

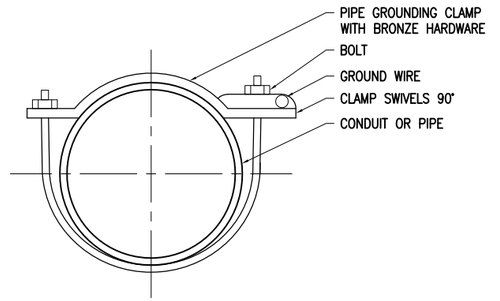


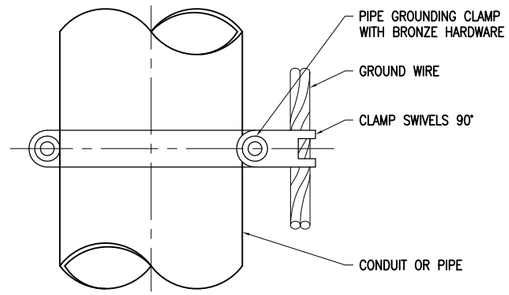
2 HOLE LONG BARREL COMPRESSION LUG TABLE			
WIRE SIZE	BURNDY CAT. NO.	THOMAS & BETTS CAT. NO.	PENN-UNION CAT. NO.
#8 AWG STRANDED	YA8C-2TC38	256-30695-1157	BBLU-8D-2TC38
#6 AWG SOLID	YA8C-2TC38 OR YGA6C-2TC38E2G1		
#6 AWG STRANDED	YA6C-2TC38	256-30695-1158	BBLU-6D-2TC38
#4 AWG STRANDED	YA4C-2TC38	256-30695-1159	BBLU-4D-2TC38
#2 AWG STRANDED	YA2C-2TC38	256-30695-1160	BBLU-2D-2TC38
#2 AWG SOLID	YA3C-2TC38	256-30695-1160	BBLU-3D-2TC38
#1/0 AWG STRANDED	YA25-2TC38	256-30695-1162	BBLU-1/0D-2TC38
#2/0 AWG STRANDED	YA26-2TC38	256-30695-1116	BBLU-2/0D-2TC38
#3/0 AWG STRANDED	YA27-2TC38	54816BE	BBLU-3/0D-2TC38
#4/0 AWG STRANDED	YA28-2TC38	256-30695-1117	BBLU-4/0D-2TC38

NOTES

1. ALL CONNECTIONS TO GROUND BUS BAR SHALL BE WITH 2 HOLE TONGUE LONG BARREL COMPRESSION LUGS BOLTED TO THE BUS BAR.
2. GROUND WIRE CONNECTIONS TO EQUIPMENT SHALL BE WITH 2 HOLE TONGUE LONG BARREL COMPRESSION LUGS BOLTED TO THE DEVICE OR WITH THE RESPECTIVE EQUIPT MANUFACTURER'S LUG OR TERMINAL WHERE APPLICABLE.
3. GROUNDING ELECTRODE CONDUCTORS, BONDING JUMPERS, & INDIVIDUAL GROUND WIRES SHALL NOT BE INSTALLED IN METAL CONDUIT. WHERE PLASTIC CONDUIT IS USED FOR INDIVIDUAL GROUND WIRES, DO NOT COMPLETELY ENCIRCLE THE CONDUIT WITH FERROUS AND/OR MAGNETIC MATERIALS. WHERE METAL CLAMPS ARE INSTALLED USE NYLON BOLTS, NUTS, WASHERS, & SPACERS TO INTERRUPT A COMPLETE METALLIC APTH FROM ENCIRCLING THE CONDUIT.
4. ALL CONNECTIONS SHALL BE COATED WITH A CORROSION PREVENTATIVE COMPOUND (SANCHEM INC. NO-OX-ID "A-SPECIAL", BURNDY PENETROX E, OR EQUAL) BEFORE JOINING. ALL COPPER BUS BARS SHALL BE CLEANED PRIOR TO MAKING CONNECTIONS TO REMOVE SURFACE OXIDATION. CLEAN SURFACES, OF RESPECTIVE DEVICES TO BE BONDED, TO BARE METAL, PER NEC 250-12.

GROUNDING LUG CONNECTION DETAIL





PIPE GROUNDING CLAMP TABLE	
BURNDY CAT. NO.	PIPE SIZE
GAR3902-BU	1/2" - 1"
GAR3903-BU	1 1/4" - 2"
GAR3904-BU	2 1/2" - 3 1/2"
GAR3905-BU	4" - 5"
GAR3906-BU	6"

NOTES

1. PIPE GROUNDING CLAMPS SHALL HAVE BRONZE HARDWARE, BE CORROSION RESISTANT, SUITABLE FOR DIRECT BURIAL IN EARTH OR CONCRETE, & UL467 LISTED.

PIPE/CONDUIT GROUNDING CLAMP DETAIL

HANSON
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fax: 217-788-2503

Illinois Licensed
Professional Service Corporation
#184-001084

COLES COUNTY AIRPORT AUTHORITY
COLES COUNTY MEMORIAL AIRPORT

REMOVE AND REPLACE ALL TAXI GUIDANCE SIGNS ON THE AIRPORT

IDA No: MTO-4511
SBG Project No: 3-17-SBGP-XX

Contract No. CO062

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

ISSUE: APRIL 15, 2016
PROJECT NO: 13A0121D
CAD FILE: E-505-DETL.DWG
DESIGN BY: KNL 02/05/2016
DRAWN BY: RAD 02/18/2016
REVIEWED BY: KNL 03/08/2016

SHEET TITLE

GROUNDING DETAILS

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GROUNDING NOTES

1. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL GROUNDING AS MAY BE NECESSARY OR REQUIRED TO MAKE A COMPLETE GROUNDING SYSTEM AS REQUIRED BY THE LATEST NATIONAL ELECTRICAL CODE (NFPA 70) IN FORCE AND FAA-STD-019e (LIGHTNING AND SURGE PROTECTION, GROUNDING, BONDING, AND SHIELDING REQUIREMENTS FOR FACILITIES AND ELECTRONIC EQUIPMENT). THE RELIABILITY OF THE GROUNDING SYSTEM IS DEPENDENT ON CAREFUL, PROPER INSTALLATION AND CHOICE OF MATERIALS. IMPROPER PREPARATION OF SURFACES TO BE JOINED TO MAKE AN ELECTRICAL PATH, LOOSE JOINTS OR CORROSION CAN INTRODUCE IMPEDANCE THAT WILL SERIOUSLY IMPAIR THE ABILITY OF THE GROUND PATH TO PROTECT PERSONNEL AND EQUIPMENT AND TO ABSORB TRANSIENTS THAT CAN CAUSE NOISE IN COMMUNICATIONS CIRCUITS. THE FOLLOWING FUNCTIONS ARE PARTICULARLY IMPORTANT TO ENSURE A RELIABLE GROUND SYSTEM:

2. FURNISH AND INSTALL GROUND RODS AS DETAILED HEREIN. GROUND RODS FOR AIRFIELD LIGHTING (RUNWAY LIGHTING, TAXIWAY LIGHTING, TAXI GUIDANCE SIGNS, AND SPLICE CANS SHALL BE MINIMUM 3/4-IN. DIAMETER BY 10-FT LONG, UL-LISTED COPPER CLAD WITH 10-MIL MINIMUM COPPER COATING. GROUND RODS FOR OTHER APPLICATIONS SHALL BE MINIMUM 3/4-IN. DIAMETER BY 10-FT LONG, UL-LISTED, COPPER CLAD WITH 10-MIL MINIMUM COPPER COATING. GROUND RODS SHALL BE SPACED OR AS DETAILED ON THE RESPECTIVE PLANS, AND IN NO CASE SPACED LESS THAN ONE ROD LENGTH APART. ALL CONNECTIONS TO GROUND RODS AND THE GROUND RING SHALL BE MADE WITH EXOTHERMIC WELD TYPE CONNECTORS, CADWELD BY ERICO PRODUCTS, INC., SOLON, OHIO, (PHONE 1-800-248-9353), THERMOWELD BY CONTINENTAL INDUSTRIES, INC., TULSA, OKLAHOMA (PHONE 918-663-1440) OR ULTRAWELD BY HARGER, GRAYSLAKE, ILLINOIS (PHONE 1-800-842-7437) OR APPROVED EQUAL. EXOTHERMIC WELD CONNECTIONS SHALL BE INSTALLED IN CONFORMANCE WITH THE RESPECTIVE MANUFACTURER'S DIRECTIONS USING MOLDS AS REQUIRED FOR EACH RESPECTIVE APPLICATION. BOLTED CONNECTIONS WILL NOT BE PERMITTED AT GROUND RODS OR AT BURIED GROUNDING ELECTRODE CONDUCTORS.

3. CONTRACTOR SHALL TEST EACH MADE ELECTRODE GROUND ROD/GROUND FIELD/GROUND RING WITH AN INSTRUMENT SPECIFICALLY DESIGNED FOR TESTING GROUND FIELD SYSTEMS. IF GROUND RESISTANCE EXCEEDS 25 OHMS, CONTACT THE PROJECT ENGINEER FOR FURTHER DIRECTION. COPIES OF GROUND ROD TEST RESULTS SHALL BE FURNISHED TO THE RESIDENT ENGINEER/RESIDENT TECHNICIAN REPRESENTATIVE.

4. ALL PRODUCTS ASSOCIATED WITH THE GROUNDING SYSTEM SHALL BE UL-LISTED AND LABELED.

5. ALL BOLTED OR MECHANICAL CONNECTIONS SHALL BE COATED WITH A CORROSION PREVENTATIVE COMPOUND BEFORE JOINING, SANCHEM INC. "NO-OX-ID "A-SPECIAL" COMPOUND, BURNDY PENETROX E, OR APPROVED EQUAL.

6. METALLIC SURFACES TO BE JOINED SHALL BE PREPARED BY THE REMOVAL OF ALL NON-CONDUCTIVE MATERIAL, PER 2014 NATIONAL ELECTRICAL CODE ARTICLE 250-12. ALL COPPER BUS BARS MUST BE CLEANED PRIOR TO MAKING CONNECTIONS TO REMOVE SURFACE OXIDATION.

7. METALLIC RACEWAY FITTINGS SHALL BE MADE UP TIGHT TO PROVIDE A PERMANENT LOW IMPEDANCE PATH FOR ALL CIRCUITS. METAL CONDUIT TERMINATIONS IN ENCLOSURES SHALL BE BONDED TO THE ENCLOSURE WITH UL-LISTED FITTINGS SUITABLE FOR GROUNDING. PROVIDE GROUNDING BUSHINGS WITH BONDING JUMPERS FOR ALL METAL CONDUITS ENTERING SERVICE EQUIPMENT (METER BASE, CT CABINET, MAIN SERVICE BREAKER ENCLOSURE, ETC.). PROVIDE GROUNDING BUSHINGS WITH BONDING JUMPERS FOR ALL METAL CONDUITS ENTERING AN ENCLOSURE THROUGH CONCENTRIC OR ECCENTRIC KNOCKOUTS THAT ARE PUNCHED OR OTHERWISE FORMED SO AS TO IMPAIR THE ELECTRICAL CONNECTION TO GROUND. STANDARD LOCKNUTS OR BUSHINGS SHALL NOT BE THE SOLE MEANS FOR BONDING WHERE A CONDUIT ENTERS AN ENCLOSURE THROUGH A CONCENTRIC OR ECCENTRIC KNOCKOUT

8. ALL CONNECTIONS, LOCATED ABOVE GRADE, BETWEEN THE DIFFERENT TYPES OF GROUNDING CONDUCTORS SHALL BE MADE USING UL-LISTED DOUBLE COMPRESSION CRIMP TYPE CONNECTORS OR UL-LISTED BOLTED GROUND CONNECTORS. FOR GROUND CONNECTIONS TO ENCLOSURES, CASES AND FRAMES OF ELECTRICAL EQUIPMENT NOT SUPPLIED WITH GROUND LUGS THE CONTRACTOR SHALL DRILL REQUIRED HOLES FOR MOUNTING A BOLTED GROUND CONNECTOR. ALL BOLTED GROUND CONNECTORS SHALL BE BURNDY, THOMAS AND BETTS, OR EQUAL. TIGHTEN CONNECTIONS TO COMPLY WITH TIGHTENING TORQUES IN UL STANDARD 486A TO ASSURE PERMANENT AND EFFECTIVE GROUNDING.

9. ALL METAL EQUIPMENT ENCLOSURES, CONDUITS, CABINETS, BOXES, RECEPTACLES, MOTORS, ETC. SHALL BE BONDED TO THE RESPECTIVE GROUNDING SYSTEM.

10. PROVIDE ALL BOXES FOR PROPOSED OUTLETS, SWITCHES, CIRCUIT BREAKERS, ETC. WITH GROUNDING SCREWS. PROVIDE ALL PANELBOARD, SWITCHGEAR, ETC., ENCLOSURES WITH GROUNDING BARS WITH INDIVIDUAL SCREWS, LUGS, CLAMPS, ETC., FOR EACH OF THE GROUNDING CONDUCTORS THAT ENTER THEIR RESPECTIVE ENCLOSURES.

11. EACH NEW FEEDER CIRCUIT AND/OR BRANCH CIRCUIT SHALL INCLUDE AN EQUIPMENT GROUND WIRE. METAL RACEWAY OR CONDUIT SHALL NOT MEET THIS REQUIREMENT. THE EQUIPMENT GROUND WIRE FROM EQUIPMENT SHALL NOT BE SMALLER THAN ALLOWED BY 2014 NEC TABLE 250-122 "MINIMUM SIZE CONDUCTORS OR GROUNDING RACEWAY AND EQUIPMENT." WHEN CONDUCTORS ARE ADJUSTED IN SIZE TO COMPENSATE FOR VOLTAGE DROP, EQUIPMENT-GROUNDING CONDUCTORS SHALL BE ADJUSTED PROPORTIONATELY ACCORDING TO CIRCULAR MIL AREA. ALL EQUIPMENT GROUND WIRES SHALL BE COPPER, EITHER BARE OR INSULATED GREEN IN COLOR. WHERE THE EQUIPMENT GROUNDING CONDUCTORS ARE INSULATED, THEY SHALL BE IDENTIFIED BY THE COLOR GREEN, AND SHALL BE THE SAME INSULATION TYPE AS THE PHASE CONDUCTORS.

12. ALL EXTERIOR METAL CONDUIT, WHERE NOT ELECTRICALLY CONTINUOUS BECAUSE OF MANHOLES, HANDHOLES, NON-METALLIC JUNCTION BOXES, ETC., SHALL BE BONDED TO ALL OTHER METAL CONDUIT IN THE RESPECTIVE DUCT RUN, AND AT EACH END, WITH A COPPER-BONDING JUMPER SIZED IN CONFORMANCE WITH 2014 NEC 250-102. WHERE METAL CONDUITS TERMINATE IN AN ENCLOSURE (SUCH AS A MOTOR CONTROL CENTER, SWITCHBOARD, ETC) WHERE THERE IS NOT ELECTRICAL CONTINUITY WITH THE CONDUIT AND THE RESPECTIVE ENCLOSURE, PROVIDE A BONDING JUMPER FROM THE RESPECTIVE ENCLOSURE GROUND BUS TO THE CONDUIT SIZED PER 2014 NEC 250-102.

13. IT IS THE INTENT OF THIS SPECIFICATION THAT ALL MOTOR FRAMES, PUMP BASES ELECTRICAL EQUIPMENT ENCLOSURES, PANEL HOUSINGS, CONDUITS, BOXES, ETC. HAVE A CONTINUOUS COPPER WIRE GROUND CONNECTION AND SHALL BE POSITIVELY BONDED TO THE RESPECTIVE GROUNDING SYSTEM. CONDUIT CONNECTORS WILL NOT BE CONSIDERED AS ADEQUATE GROUNDING.

14. PROVIDE A POSITIVE GROUND BOND FOR ALL OUTLET BOXES, ELECTRICAL EQUIPMENT ENCLOSURES, GROUNDING RECEPTACLES, TOGGLE SWITCHES, ETC. INSTALL A GROUNDING CONDUCTOR IN ALL WIRE AND CABLE RACEWAYS. GROUND CONDUCTOR TO HAVE 600-VOLT INSULATION AND BE IDENTIFIED BY A CONTINUOUS GREEN COLOR COATING. THEY SHALL BE USED SOLELY FOR GROUNDING PURPOSES AND BE ENTIRELY SEPARATE FROM WHITE GROUNDED NEUTRAL CONDUCTOR, EXCEPT AT SUPPLY SIDE OF SERVICE DISCONNECTING MEANS, WHERE GROUNDING AND NEUTRAL SYSTEMS ARE TO BE CONNECTED TO SERVICE GROUND.

15. EACH AND ALL GROUNDED CASED AND METAL PARTS ASSOCIATED WITH ELECTRICAL EQUIPMENT SHALL BE TESTED FOR CONTINUITY OF CONNECTION WITH GROUND BUS SYSTEM BY CONTRACTOR IN PRESENCE OF OWNER'S REPRESENTATIVE.

16. ALL CONNECTIONS BETWEEN THE DIFFERENT TYPES OF GROUNDING CONDUCTORS ABOVE GRADE SHALL BE MADE USING BOLTED GROUND CONNECTORS. GROUND LUGS SHALL BE PROVIDED IN ALL ENCLOSURES AND WIRING TERMINATION JUNCTION BOXES. EQUIPMENT GROUNDS AND GROUNDING CONDUCTOR SHALL BE CONNECTED TO THESE GROUND LUGS. FOR GROUND CONNECTIONS TO ENCLOSURES, CASES AND FRAMES OF ELECTRICAL EQUIPMENT NOT SUPPLIED WITH GROUND LUGS THE CONTRACTOR SHALL DRILL REQUIRED HOLES FOR MOUNTING A BOLTED GROUND CONNECTOR. ALL BOLTED GROUND CONNECTORS SHALL BE BURNDY, OR APPROVED EQUAL.

17. BOND ALL NONCURRENT-CARRYING PARTS OF METAL EQUIPMENT TO GROUND SYSTEM.

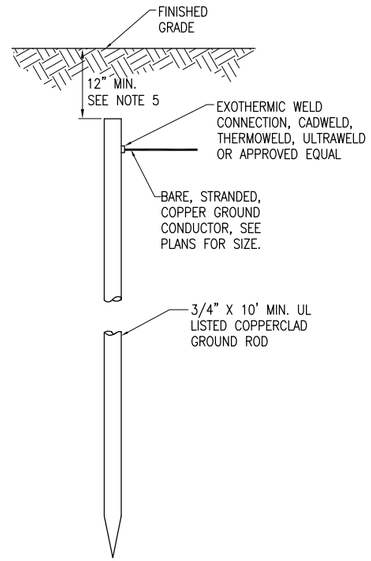
18. BUILDING STRUCTURAL STEEL SYSTEM SHALL BE BONDED TO ELECTRICAL GROUND SYSTEM.

19. INSTALL GROUNDING ELECTRODE CONDUCTORS, LIGHTNING PROTECTION DOWN CONDUCTORS AND SEPARATE GROUND CONDUCTORS IN SCHEDULE 40 OR SCHEDULE 80 PVC CONDUIT OR EXPOSED WHERE ACCEPTABLE TO LOCAL CODES. WHERE GROUNDING ELECTRODE CONDUCTORS, LIGHTNING PROTECTION DOWN CONDUCTORS OR INDIVIDUAL GROUND CONDUCTORS ARE RUN IN PVC CONDUIT, DO NOT COMPLETELY ENCIRCLE CONDUIT WITH FERROUS AND/OR MAGNETIC MATERIALS. USE NON-METALLIC REINFORCED FIBERGLASS STRUT SUPPORT. WHERE METAL CONDUIT CLAMPS ARE INSTALLED, USE NYLON BOLTS, NUTS, WASHERS AND SPACERS TO INTERRUPT A COMPLETE METALLIC PATH FROM ENCIRCLING THE CONDUIT. THIS IS REQUIRED TO AVOID GIRDLING OF GROUND CONDUCTORS. GIRDLING OF A GROUND CONDUCTOR IS THE RESULT OF PLACING THE CONDUCTOR IN A RING OF MAGNETIC MATERIAL. THIS RING COULD BE A METALLIC CONDUIT, U-BOLT OR STRUT SUPPORT PIPE CLAMP, OR OTHER SUPPORT HARDWARE. THE RESULT OF GIRDLING GROUND CONDUCTORS SIGNIFICANTLY INCREASES THE INDUCTIVE IMPEDANCE OF THE GROUND CONDUCTOR. INDUCTIVE AND CAPACITIVE IMPEDANCE IS A TYPE OF RESISTANCE THAT OPPOSES THE FLOW OF ALTERNATING CURRENT. ANY INCREASE IN THE IMPEDANCE OF A GROUND CONDUCTOR REDUCES ITS ABILITY TO EFFECTIVELY MITIGATE RADIO FREQUENCY NOISE IN THE GROUND SYSTEM. THE CONDITION WHERE A GROUND CONDUCTOR IS GIRDLED DURING A LIGHTNING STRIKE RESULTS IN PHENOMENA KNOWN AS SURGE IMPEDANCE LOADING. SURGE IMPEDANCE LOADING IS A RESULT OF VOLTAGE AND CURRENT REACHING 500,000 VOLTS AND 10,000 AMPS FOR A SHORT DURATION. GIRDLING FURTHER INCREASES THE IMPEDANCE AT LIGHTNING FREQUENCIES OF 100 KILOHERTZ TO 100 MEGAHERTZ. AT THESE POWER AND FREQUENCY LEVELS ANY INCREASE IN THE IMPEDANCE OF THE GROUND CONDUCTOR MUST BE CONTROLLED. DURING LIGHTNING DISCHARGE CONDITIONS A LOW INDUCTIVE IMPEDANCE PATH IS MORE IMPORTANT THAN A LOW DC RESISTANCE PATH.

20. IF LOCAL CODES DICTATE THAT INDIVIDUAL GROUNDING CONDUCTORS MUST BE RUN IN METAL CONDUIT OR RACEWAY, THEN THE CONDUIT OR RACEWAY MUST BE BONDED AT EACH END OF THE RUN WITH A BONDING JUMPER SIZED EQUAL TO THE INDIVIDUAL GROUNDING CONDUCTOR OR AS REQUIRED BY 2014 NEC 250-102. NOTE THIS DOES NOT APPLY TO AC EQUIPMENT GROUNDING CONDUCTORS RUN WITH AC CIRCUITS.

21. WHERE A CONFLICT IS DETERMINED WITH RESPECT TO GROUNDING REQUIREMENTS PER MANUFACTURER INSTALLATION INSTRUCTIONS, NEC, AND/OR THE CONTRACT DOCUMENTS, CONTACT THE RESIDENT ENGINEER OR PROJECT ENGINEER FOR FURTHER DIRECTIONS.

22. GROUND RODS SHALL BE MANUFACTURED IN THE UNITED STATES OF AMERICA FROM 100 PERCENT DOMESTIC STEEL TO COMPLY WITH THE AIRPORT IMPROVEMENT PROGRAM BUY AMERICAN REQUIREMENTS AND THE STEEL PRODUCTS PROCUREMENT ACT.



10 FT. GROUND ROD

NOTES

1. TYPE AND MINIMUM NUMBER OF GROUND RODS SHALL BE AS SPECIFIED ON THE PLAN.
2. THE RESISTANCE TO GROUND OF THE GROUNDING SYSTEM SHALL NOT EXCEED 25 OHMS.
3. COST OF GROUND RODS IS INCIDENTAL TO THE ASSOCIATED ITEMS REQUIRING GROUNDING UNLESS OTHERWISE SPECIFIED.
4. GROUND RODS SHALL BE SPACED AS DETAILED ON THE PLANS AND SHALL NOT BE SPACED LESS THAN ONE ROD LENGTH APART.
5. TOP OF GROUND RODS SHALL BE 12" MINIMUM BELOW GRADE UNLESS DETAILED OTHERWISE HEREIN.
6. GROUND RODS FOR SPLICE CANS AND AIRFIELD LIGHTING SHALL BE A MINIMUM 3/4-INCH DIAMETER BY 10-FT LONG UL LISTED COPPER CLAD.

GROUND RODS
(NOT TO SCALE)

HANSON
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Illinois Licensed
Professional Service Corporation
#184-001084

COLES COUNTY AIRPORT AUTHORITY
COLES COUNTY MEMORIAL AIRPORT

REMOVE AND REPLACE ALL TAXI GUIDANCE SIGNS ON THE AIRPORT

IDA No: MTO-4511

SBG Project No: 3-17-SBGP-XX

Contract No. CO062

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

ISSUE: APRIL 15, 2016
PROJECT NO: 13A0121D
CAD FILE: E-003-GND.DWG
DESIGN BY: KNL 02/05/2016
DRAWN BY: RAD 02/18/2016
REVIEWED BY: KNL 03/08/2016

SHEET TITLE

GROUNDING NOTES

APR 19, 2016 10:59 AM HARRI01115
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ELECTRICAL LEGEND – ONE–LINE DIAGRAM

	CABLE TERMINATOR/LUG
	TRANSFORMER
	DISCONNECT SWITCH
	FUSIBLE DISCONNECT SWITCH
	CIRCUIT BREAKER
	THERMAL MAGNETIC CIRCUIT BREAKER
	FUSE
	TRANSIENT VOLTAGE SURGE SUPPRESSOR OR SURGE PROTECTOR DEVICE
	GROUND – GROUND ROD, GROUNDING ELECTRODE, OR AT EARTH POTENTIAL
	INDICATING LIGHT
M	MOTOR
#	LOAD, MOTOR, # = HORSEPOWER
	ELECTRIC UTILITY METER BASE
	JUNCTION BOX WITH SPLICE
XXX	EQUIPMENT, XXX = DEVICE DESCRIPTION
GND	GROUND BUS OR TERMINAL
S/N	NEUTRAL BUS
	PANELBOARD WITH MAIN LUGS
	PANELBOARD WITH MAIN BREAKER
	FUSE PANEL WITH MAIN FUSE PULLOUT
	DUPLEX RECEPTACLE 120V SINGLE PHASE GROUNDING TYPE
	CONTROL STATION
N EM L	TRANSFER SWITCH
G	ENGINE GENERATOR SET

ELECTRICAL LEGEND – SCHEMATIC

	NORMALLY OPEN (N.O.) CONTACT
	NORMALLY CLOSED (N.C.) CONTACT
S*	STARTER COIL, * = STARTER NUMBER
OL	OVERLOAD RELAY CONTACT
CR*	CONTROL RELAY, * = CONTROL RELAY NUMBER
R*	RELAY, * = RELAY NUMBER
	TOGGLE SWITCH / 2 POSITION SWITCH
OFF AUTO OX	2–POSITION SELECTOR SWITCH
OFF HAND AUTO XOO OOX	3–POSITION SELECTOR SWITCH (H–O–A SHOWN)
	2 POLE DISCONNECT SWITCH
	3 POLE DISCONNECT SWITCH
	PHOTOCELL
	TERMINAL BLOCK, * = TERMINAL NUMBER
	DEVICE TERMINAL, * = DEVICE TERMINAL NUMBER
	INTERNAL PANEL WIRING
	FIELD WIRING
	FUSE
GND	GROUND BUS OR TERMINAL
S/N	NEUTRAL BUS
	GROUND, GROUND ROD, GROUND BUS
	INDUSTRIAL CONTROL RELAY OR LIGHTING CONTACTOR
P	S1 CUTOUT HANDLE REMOVED
I	S1 CUTOUT HANDLE INSERTED
	N.O. THERMAL SWITCH
	N.C. THERMAL SWITCH
	L–830 SERIES ISOLATION TRANSFORMER

ELECTRICAL ABBREVIATIONS

A.F.F.	ABOVE FINISHED FLOOR
A, AMP	AMPERES
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
BKR	BREAKER
C	CONDUIT
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CR	CONTROL RELAY
CU	COPPER
DPDT	DOUBLE POLE DOUBLE THROW
DPST	DOUBLE POLE SINGLE THROW
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
ENCL	ENCLOSURE
EP	EXPLOSION PROOF
ES	EMERGENCY STOP
ETL	INTERTEK – ELECTRICAL TESTING LABS
ETM	ELAPSE TIME METER
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFI	GROUND FAULT INTERRUPTER
GND	GROUND
GRSC	GALVANIZED RIGID STEEL CONDUIT
HID	HIGH INTENSITY DISCHARGE
HOA	HAND OFF AUTOMATIC
HP	HORSEPOWER
HPS	HIGH PRESSURE SODIUM
J	JUNCTION BOX
KVA	KILOVOLT AMPERE(S)
KW	KILOWATTS
LC	LIGHTING CONTACTOR
LTFMC	LIQUID TIGHT FLEXIBLE METAL CONDUIT (UL LISTED)
LTG	LIGHTING
LP	LIGHTING PANEL
MAX	MAXIMUM
MCB	MAIN CIRCUIT BREAKER
MCM	THOUSAND CIRCULAR MIL
MDP	MAIN DISTRIBUTION PANEL
MFR	MANUFACTURER
MH	METAL HALIDE
MIN	MINIMUM
MLO	MAIN LUGS ONLY
NEC	NATIONAL ELECTRICAL CODE (NFPA 70)
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OHE	OVERHEAD ELECTRIC
OL	OVERLOAD

ELECTRICAL ABBREVIATIONS (CONTINUED)

PB	PULL BOX
PC	PHOTO CELL
PDB	POWER DISTRIBUTION BLOCK
PNL	PANEL
RCPT	RECEPTACLE
R	RELAY
S	STARTER
SPD	SURGE PROTECTION DEVICE
SPST	SINGLE POLE SINGLE THROW
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
TYP	TYPICAL
UG	UNDERGROUND
UGE	UNDERGROUND ELECTRIC
UL	UNDERWRITER'S LABORATORIES
V	VOLTS
W/	WITH
W/O	WITHOUT
WP	WEATHER PROOF
XFER	TRANSFER
XFMR	TRANSFORMER

AIRPORT EQUIPMENT/FACILITY ABBREVIATIONS

ASOS	AUTOMATED SURFACE OBSERVING SYSTEM
ATCT	AIR TRAFFIC CONTROL TOWER
AWOS	AUTOMATED WEATHER OBSERVING SYSTEM
CCR	CONSTANT CURRENT REGULATOR
DME	DISTANCE MEASURING EQUIPMENT
FAR	FEDERAL AVIATION REGULATION
GS	GLIDE SLOPE FACILITY
HIRL	HIGH INTENSITY RUNWAY LIGHT
ILS	INSTRUMENT LANDING SYSTEM
IM	INNER MARKER
LIR	LOW IMPACT–RESISTANT
LOC	LOCALIZER FACILITY
MALS	MEDIUM INTENSITY APPROACH LIGHTING SYSTEM
MALSR	MEDIUM INTENSITY APPROACH LIGHTING SYSTEM WITH RUNWAY ALIGNMENT INDICATING LIGHTS
MIRL	MEDIUM INTENSITY RUNWAY LIGHT
MITL	MEDIUM INTENSITY TAXIWAY LIGHT
NDB	NON–DIRECTIONAL BEACON
PAPI	PRECISION APPROACH PATH INDICATOR
PLASI	PULSE LIGHT APPROACH SLOPE INDICATOR
RAIL	RUNWAY ALIGNMENT INDICATING LIGHTS
REIL	RUNWAY END IDENTIFIER LIGHT
RVR	RUNWAY VISUAL RANGE
VADI	VISUAL APPROACH DESCENT INDICATOR
VASI	VISUAL APPROACH SLOPE INDICATOR
VOR	VERY HIGH FREQUENCY OMNIDIRECTIONAL RANGE FACILITY
WC	WIND CONE

NOTES:

1. ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN CONFORMANCE WITH NFPA 70 – NATIONAL ELECTRICAL CODE (NEC) MOST CURRENT ISSUE IN FORCE, THE RESPECTIVE EQUIPMENT MANUFACTURER'S DIRECTIONS AND ALL OTHER APPLICABLE LOCAL CODES, LAWS, ORDINANCES, AND REQUIREMENTS IN FORCE. ANY INSTALLATIONS WHICH VOID THE U.L. LISTING, ETL/INTERTEK TESTING SERVICES VERIFICATION/LISTING (OR OTHER THIRD PARTY LISTING) AND/OR THE MANUFACTURER'S WARRANTY OF A DEVICE WILL NOT BE PERMITTED.
2. ALL VAULT WORK, POWER OUTAGES, AND/OR SHUT DOWN OF EXISTING SYSTEMS SHALL BE COORDINATED WITH THE AIRPORT MANAGER. ONCE SHUT DOWN, THE CIRCUITS SHALL BE LABELED AS SUCH TO PREVENT ACCIDENTAL ENERGIZING OF THE RESPECTIVE CIRCUITS. ALL PERSONNEL SHALL FOLLOW U.S. DEPARTMENT OF LABOR OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION (OSHA) 29 CFR PART 1910 OCCUPATIONAL SAFETY & HEALTH STANDARDS FOR ELECTRICAL SAFETY AND LOCKOUT/TAGOUT PROCEDURES INCLUDING, BUT NOT LIMITED TO, 29 CFR SECTION 1910.147 THE CONTROL OF HAZARDOUS ENERGY (LOCKOUT/TAGOUT).
3. COLOR CODE PHASE AND NEUTRAL CONDUCTOR INSULATION FOR NO. 6 AWG OR SMALLER. PROVIDE COLORED INSULATION OR COLORED MARKING TAPE FOR PHASE AND NEUTRAL CONDUCTORS FOR NO. 4 AWG AND LARGER. INSULATED GROUND CONDUCTORS SHALL HAVE GREEN COLORED INSULATION FOR ALL CONDUCTOR AWG AND/OR KCMIL TO COMPLY WITH NEC 250.119. NEUTRAL CONDUCTORS SHALL HAVE WHITE COLORED INSULATION FOR NO. 6 AWG AND SMALLER TO MEET THE REQUIREMENTS OF NEC 200.6. STANDARD COLORS FOR POWER WIRING AND BRANCH CIRCUITS SHALL BE AS FOLLOWS:

   120/240 VAC, 1 PHASE, 3 WIRE

PHASE A	BLACK
PHASE B	RED
NEUTRAL	WHITE
GROUND	GREEN

4. SEE RESPECTIVE SITE PLANS FOR SITE LEGEND INFORMATION.
5. LTFMC DENOTES LIQUID TIGHT FLEXIBLE METAL CONDUIT UL LISTED, SUNLIGHT RESISTANT, & SUITABLE FOR GROUNDING. LIQUID TIGHT FLEXIBLE METAL CONDUIT AND ASSOCIATED FITTINGS SHALL BE U.L. LISTED TO MEET THE REQUIREMENTS OF NEC 350.6. LIQUID TIGHT FLEXIBLE METAL CONDUIT THAT IS USED FOR FLEXIBILITY (INCLUDING CONNECTIONS TO CCR'S & TRANSFORMERS) SHALL REQUIRE AN EXTERNAL BONDING JUMPER OR INTERNAL EQUIPMENT GROUNDING CONDUCTOR PER NEC 350.60. EXTERNAL BONDING JUMPERS USED WITH CCR INSTALLATIONS SHALL BE #6 AWG COPPER (MINIMUM). DO NOT INSTALL LTFMC THAT IS NOT UL LISTED. CONFIRM LTFMC BEARS THE UL LABEL PRIOR TO INSTALLATION.
6. ALL ENCLOSURES RATED NEMA 4, 4X SHALL HAVE WATERTIGHT HUBS AT CONDUIT ENTRANCES UL LISTED NEMA 4, 4X FOR THE RESPECTIVE ENCLOSURE, TO MAINTAIN THE NEMA 4, 4X RATING.
7. HIGH VOLTAGE CIRCUITS (AIRFIELD LIGHTING 5000 VOLT SERIES CIRCUITS AND/OR OTHER CIRCUITS RATED ABOVE 600 VOLTS) AND LOW VOLTAGE CIRCUITS (RATED 600 VOLTS AND BELOW) SHALL NOT BE INSTALLED IN THE SAME WIREWAY, CONDUIT, DUCT, OR HANDHOLE.
8. CONTRACTOR SHALL EXAMINE THE SITE AND VAULT TO DETERMINE EXISTING SITE CONDITIONS.

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COLES COUNTY AIRPORT AUTHORITY
COLES COUNTY MEMORIAL AIRPORT

REMOVE AND REPLACE ALL TAXI GUIDANCE SIGNS ON THE AIRPORT

IDA No: MTO-4511

SBG Project No: 3-17-SBGP-XX

Contract No. CO062

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

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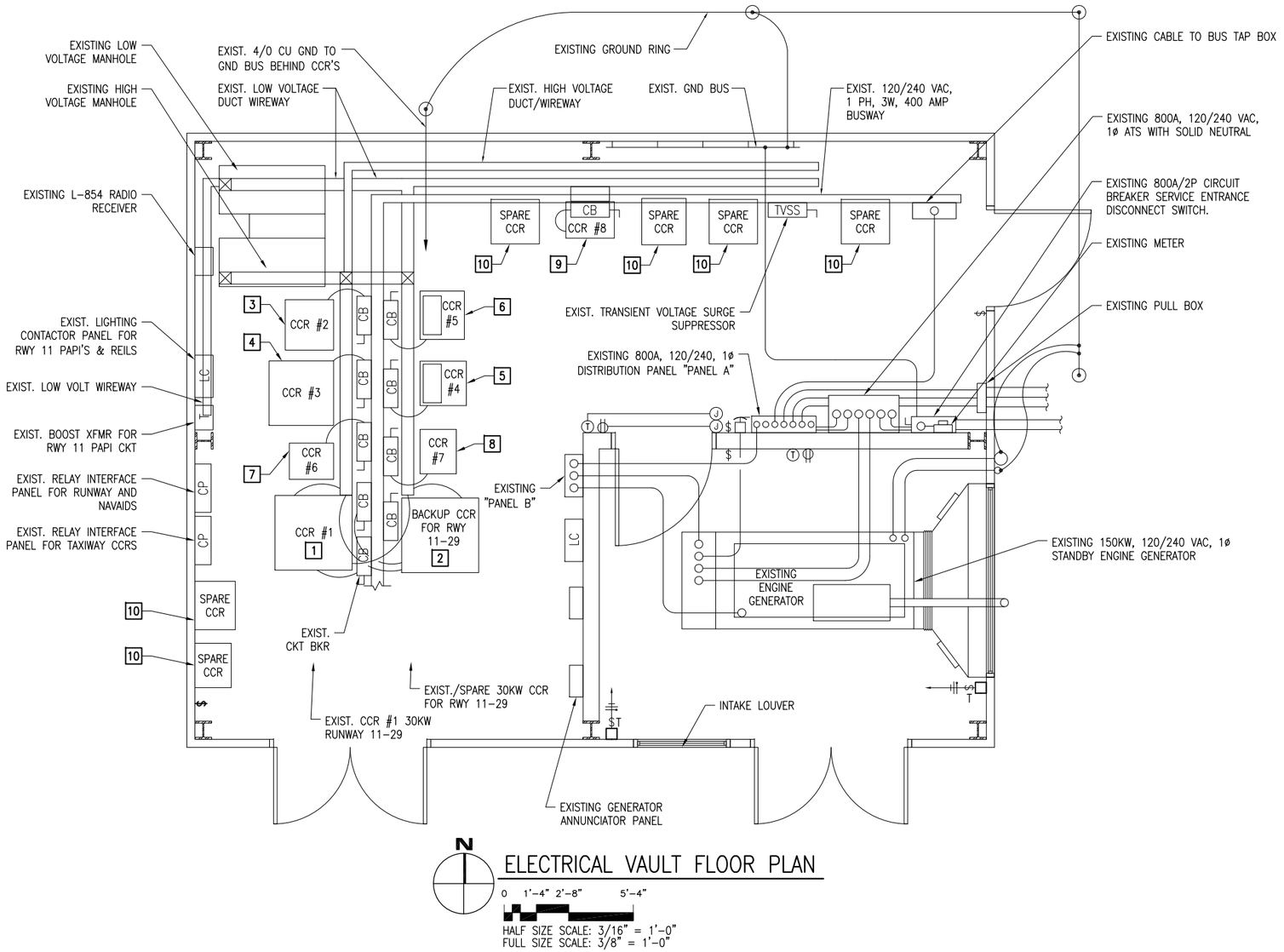
ELECTRICAL LEGEND AND ABBREVATIONS



ELECTRICAL VAULT FLOOR PLAN

GENERAL NOTES:

1. CONTRACTOR SHALL COORDINATE WORK, POWER OUTAGES, AND/OR SHUT DOWN OF EXISTING SYSTEMS WITH THE AIRPORT MANAGER AND THE RESIDENT ENGINEER/RESIDENT PROJECT REPRESENTATIVE. ANY SHUTDOWN OF EXISTING SYSTEMS SHALL BE SCHEDULED WITH AND APPROVED BY THE AIRPORT MANAGER PRIOR TO SHUTDOWN. ONCE SHUT DOWN, THE CIRCUITS SHALL BE LABELED AS SUCH TO PREVENT ACCIDENTAL ENERGIZING OF THE RESPECTIVE CIRCUITS. ALL PERSONNEL SHALL FOLLOW U.S. DEPARTMENT OF LABOR OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION (OSHA) 29 CFR PART 1910 OCCUPATIONAL SAFETY AND HEALTH STANDARDS FOR ELECTRICAL SAFETY AND LOCKOUT/TAGOUT PROCEDURES INCLUDING, BUT NOT LIMITED TO, 29 CFR SECTION 1910.147 THE CONTROL OF HAZARDOUS ENERGY (LOCKOUT/TAGOUT).
2. CONTRACTOR SHALL EXAMINE THE SITE TO CONFIRM AND FIELD VERIFY EXISTING SITE CONDITIONS.
3. THE RESPECTIVE PERSONNEL PERFORMING AIRFIELD LIGHTING WORK, VAULT WORK, AND/OR TESTS SHALL BE FAMILIAR WITH AND QUALIFIED TO WORK ON 5000 VOLT AIRFIELD LIGHTING SERIES CIRCUITS, CONSTANT CURRENT REGULATORS, AND ASSOCIATED AIRPORT ELECTRICAL VAULT EQUIPMENT.
4. CONTRACTOR SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS OF NFPA 70E – STANDARD FOR ELECTRICAL SAFETY IN THE WORKPLACE.
5. EACH ACTIVE CCR SHALL BE TESTED FOR PROPER OPERATION BEFORE REMOVAL WORK, MODIFICATIONS AND/OR ADDITIONS AND AFTER THE TAXI GUIDANCE SIGN REPLACEMENTS AND VAULT ADDITIONS HAVE BEEN COMPLETED. CONTRACTOR SHALL TEST AND RECORD THE INPUT CURRENT AND OUTPUT CURRENT FOR EACH CONSTANT CURRENT REGULATOR IN THE AUTOMATIC AND MANUAL MODES OF OPERATION. CONTRACTOR SHALL REPORT CONCERNS AND/OR DEFICIENCIES TO THE PROJECT ENGINEER.
6. REMOVAL AND DISPOSAL OF EXISTING DESIGNATED EQUIPMENT WILL BE PAID FOR UNDER ITEM AR109902 REMOVE ELECTRICAL EQUIPMENT, PER LUMP SUM.

KEYED NOTES:

1. EXISTING CCR NO. 1 FOR RUNWAY 11-29 TO REMAIN.
2. EXISTING BACKUP CCR FOR RUNWAY 11-29 TO REMAIN.
3. EXISTING CCR NO. 2 FOR RUNWAY 6-24, CUTOUT, AND ASSOCIATED WIRING TO BE REMOVED AND REPLACED WITH A NEW 10 KW UNIT. EXISTING RUNWAY 6-24 CCR TO BE TURNED OVER TO THE AIRPORT.
4. EXISTING CCR NO. 3 FOR TAXIWAY CIRCUIT 7, TO REMAIN. REPLACE EXISTING CUTOUT WITH NEW CUTOUT.
5. EXISTING CCR NO. 4 FOR TAXIWAY CIRCUITS 1 AND 4, CUTOUTS, AND ASSOCIATED WIRING TO BE REMOVED AND REPLACED WITH A NEW 10 KW UNIT. EXISTING CCR #4 TO BE TURNED OVER TO THE AIRPORT.
6. EXISTING CCR NO. 5 FOR TAXIWAY CIRCUITS 3 AND 3A, CUTOUTS, AND ASSOCIATED WIRING TO BE REMOVED AND REPLACED WITH A NEW 10 KW UNIT. EXISTING CCR NO. 5 TO BE DISPOSED OF OFF THE AIRPORT SITE.
7. EXISTING CCR NO. 6 FOR TAXIWAY CIRCUIT 5, CUTOUT, AND ASSOCIATED WIRING TO BE REMOVED AND REPLACED WITH A NEW 4 KW UNIT. EXISTING CCR NO. 6 TO BE DISPOSED OF OFF THE AIRPORT SITE.
8. EXISTING CCR NO. 7 FOR TAXIWAY CIRCUIT 6, CUTOUT, AND ASSOCIATED WIRING TO BE REMOVED AND REPLACED WITH A NEW 7.5 KW UNIT. EXISTING CCR NO. 7 TO BE DISPOSED OF OFF THE AIRPORT SITE.
9. EXISTING CCR NO. 8 FOR TAXIWAY CIRCUIT 2, CUTOUT, AND ASSOCIATED WIRING TO BE REMOVED AND REPLACED WITH A NEW 4 KW UNIT. EXISTING CCR NO. 8 TO BE DISPOSED OF OFF THE AIRPORT SITE.
10. THERE ARE SIX EXISTING SPARE JUNK CONSTANT CURRENT REGULATORS IN THE VAULT. THESE REGULATORS SHALL BE REMOVED AND DISPOSED OF OFF THE AIRPORT SITE. CONFIRM THE RESPECTIVE REGULATORS FOR REMOVAL AND DISPOSAL WITH THE AIRPORT MANAGER.

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COLES COUNTY AIRPORT AUTHORITY
COLES COUNTY MEMORIAL AIRPORT

REMOVE AND REPLACE ALL TAXI GUIDANCE SIGNS ON THE AIRPORT

IDA No: MTO-4511

SBG Project No: 3-17-SBGP-XX

Contract No. CO062

NO.	DATE	DESCRIPTION	DES	DWN	REV

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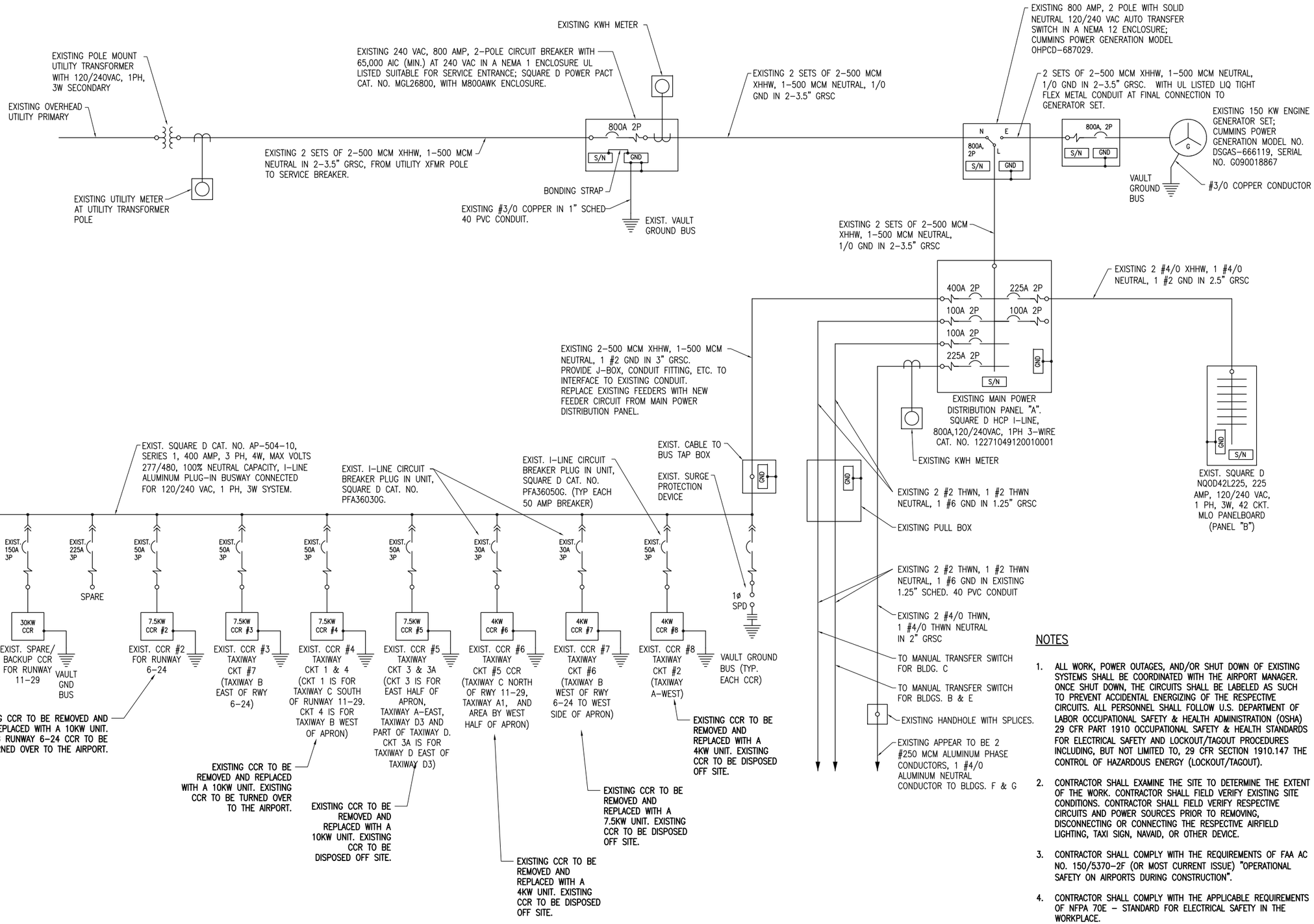
EXISTING FLOOR PLAN FOR VAULT



EXISTING ELECTRICAL ONE LINE DIAGRAM FOR VAULT

NOTES

1. ALL WORK, POWER OUTAGES, AND/OR SHUT DOWN OF EXISTING SYSTEMS SHALL BE COORDINATED WITH THE AIRPORT MANAGER. ONCE SHUT DOWN, THE CIRCUITS SHALL BE LABELED AS SUCH TO PREVENT ACCIDENTAL ENERGIZING OF THE RESPECTIVE CIRCUITS. ALL PERSONNEL SHALL FOLLOW U.S. DEPARTMENT OF LABOR OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION (OSHA) 29 CFR PART 1910 OCCUPATIONAL SAFETY & HEALTH STANDARDS FOR ELECTRICAL SAFETY AND LOCKOUT/TAGOUT PROCEDURES INCLUDING, BUT NOT LIMITED TO, 29 CFR SECTION 1910.147 THE CONTROL OF HAZARDOUS ENERGY (LOCKOUT/TAGOUT).
2. CONTRACTOR SHALL EXAMINE THE SITE TO DETERMINE THE EXTENT OF THE WORK. CONTRACTOR SHALL FIELD VERIFY EXISTING SITE CONDITIONS. CONTRACTOR SHALL FIELD VERIFY RESPECTIVE CIRCUITS AND POWER SOURCES PRIOR TO REMOVING, DISCONNECTING OR CONNECTING THE RESPECTIVE AIRFIELD LIGHTING, TAXI SIGN, NAVAID, OR OTHER DEVICE.
3. CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF FAA AC NO. 150/5370-2F (OR MOST CURRENT ISSUE) "OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION".
4. CONTRACTOR SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS OF NFPA 70E – STANDARD FOR ELECTRICAL SAFETY IN THE WORKPLACE.
5. WHEN A RUNWAY IS SHUT DOWN THE RUNWAY LIGHTING AND ASSOCIATED AIRFIELD NAVAIDS FOR THAT RUNWAY SHALL BE SHUT OFF.

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IDA No: MTO-4511

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Contract No. CO062

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EXISTING ELECTRICAL ONE LINE DIAGRAM FOR VAULT

APR 19, 2016 10:59 AM HARRI01115
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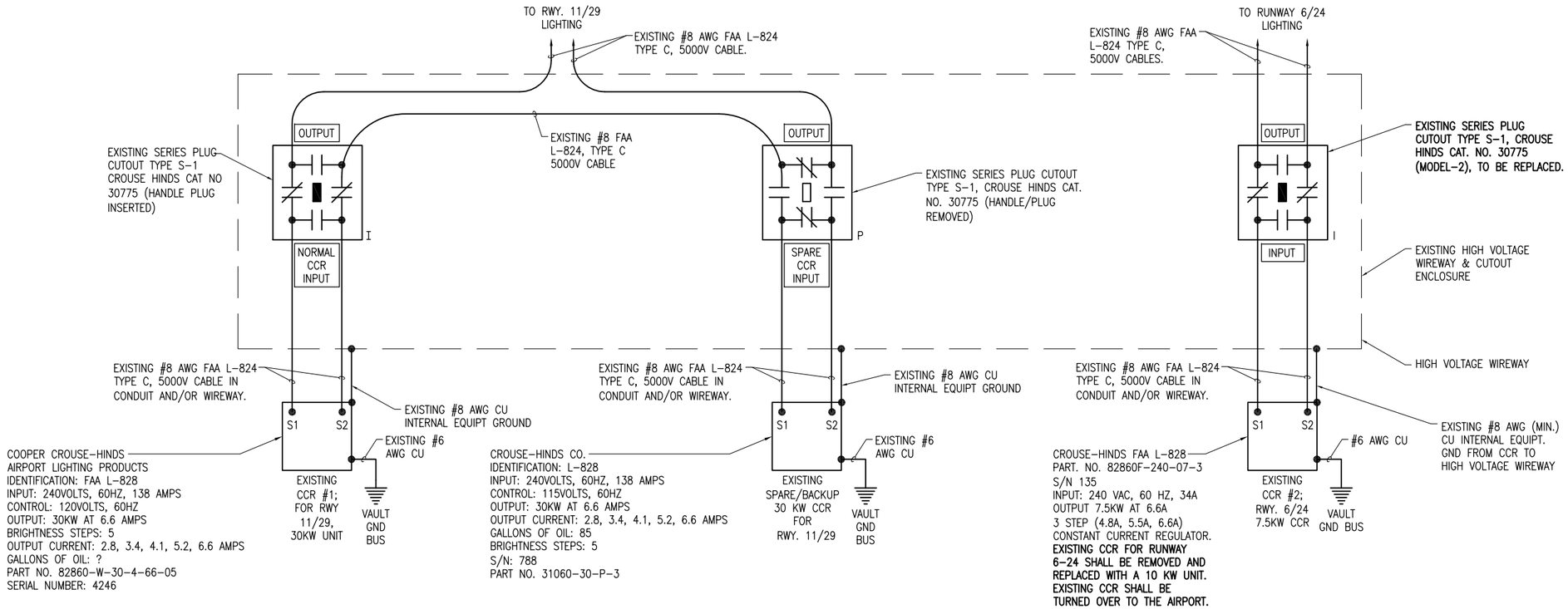

EXISTING HIGH VOLTAGE WIRING SCHEMATIC FOR RUNWAYS

NOTES:

1. ALL WORK, POWER OUTAGES, AND/OR SHUT DOWN OF EXISTING SYSTEMS SHALL BE COORDINATED WITH THE AIRPORT MANAGER/DIRECTOR AND RESIDENT ENGINEER/RESIDENT PROJECT REPRESENTATIVE. ONCE SHUT DOWN, THE CIRCUITS SHALL BE LABELED AS SUCH TO PREVENT ACCIDENTAL ENERGIZING OF THE RESPECTIVE CIRCUITS. ALL PERSONNEL SHALL FOLLOW U.S. DEPARTMENT OF LABOR OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION (OSHA) 29 CFR PART 1910 OCCUPATIONAL SAFETY & HEALTH STANDARDS FOR ELECTRICAL SAFETY AND LOCKOUT/TAGOUT PROCEDURES INCLUDING, BUT NOT LIMITED TO, 29 CFR SECTION 1910.147 THE CONTROL OF HAZARDOUS ENERGY (LOCKOUT/TAGOUT).
2. CONTRACTOR SHALL EXAMINE THE SITE TO CONFIRM AND FIELD VERIFY EXISTING SITE CONDITIONS.
3. THE RESPECTIVE PERSONNEL PERFORMING AIRFIELD LIGHTING WORK, VAULT WORK, AND/OR TESTS SHALL BE FAMILIAR WITH, AND QUALIFIED TO WORK ON, 5000 VOLT AIRFIELD LIGHTING SERIES CIRCUITS, CONSTANT CURRENT REGULATORS, AND ASSOCIATED AIRPORT ELECTRICAL VAULT EQUIPMENT.
4. CONTRACTOR SHALL EXERCISE CAUTION, PRACTICE SAFETY, AND DISCONNECT THE SERIES CIRCUITS FROM THE RESPECTIVE CONSTANT CURRENT REGULATORS, AS APPLICABLE WHEN PERFORMING WORK ON THE AIRFIELD LIGHTING OR WORK THAT MIGHT AFFECT THE AIRFIELD LIGHTING. CONTRACTOR SHALL MAKE NECESSARY ARRANGEMENTS TO DISCONNECT POWER AND LOCKOUT CIRCUITS FOR PROTECTION OF PERSONNEL.
5. MEGGER TEST AND RECORD EXISTING SERIES CIRCUITS PRIOR TO CABLE WORK AND AGAIN AFTER AIRFIELD LIGHTING MODIFICATIONS, ADDITIONS, AND/OR UPGRADES HAVE BEEN COMPLETED. ALSO TEST AND RECORD SERIES CIRCUIT LOOP RESISTANCE.
6. ALL CCR'S SHALL BE TESTED FOR PROPER OPERATION BEFORE REMOVAL WORK, MODIFICATIONS, AND/OR ADDITIONS AND AFTER THE NEW CABLES AND TAXI GUIDANCE SIGN REPLACEMENTS AND ADDITIONS HAVE BEEN COMPLETED. CONTRACTOR SHALL TEST AND RECORD THE INPUT CURRENT AND OUTPUT CURRENT FOR EACH CONSTANT CURRENT REGULATOR IN THE AUTOMATIC AND MANUAL MODES OF OPERATIONS. CONTRACTOR SHALL REPORT CONCERNS AND/OR DEFICIENCIES TO THE RESIDENT ENGINEER/RESIDENT TECHNICIAN. TEST RESULTS SHALL BE PROVIDED TO THE PROJECT ENGINEER AND RESIDENT ENGINEER/RESIDENT TECHNICIAN.

LEGEND

"I" DENOTES PLUG CUTOUT WITH PLUG INSERTED

"P" DENOTES PLUG CUTOUT WITH PLUG PULLED

"CCR" DENOTES CONSTANT CURRENT REGULATOR

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COLES COUNTY AIRPORT AUTHORITY
COLES COUNTY MEMORIAL AIRPORT

REMOVE AND REPLACE ALL TAXI GUIDANCE SIGNS ON THE AIRPORT

IDA No: MTO-4511

SBG Project No: 3-17-SBGP-XX

Contract No. CO062

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EXISTING HIGH VOLTAGE WIRING SCHEMATIC FOR RUNWAYS

APR 19, 2016 11:00 AM HARRI01115
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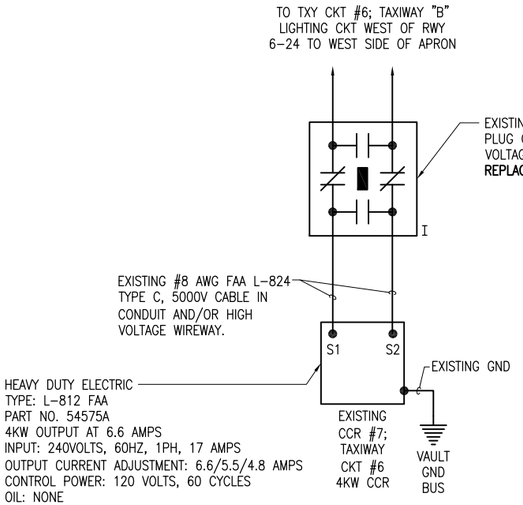

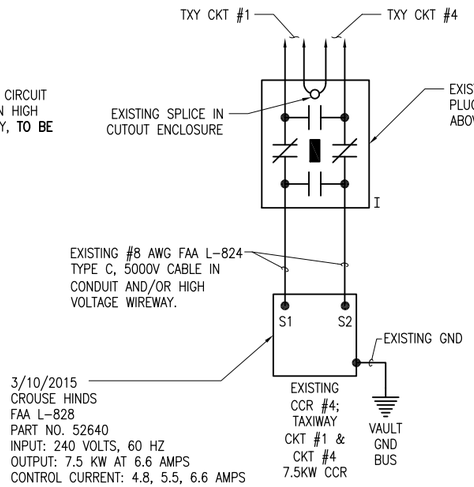

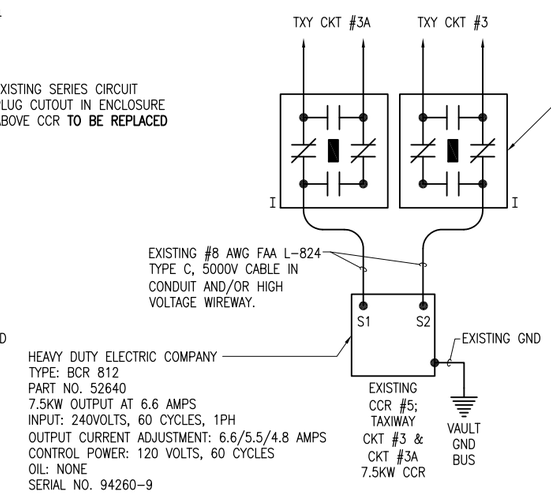

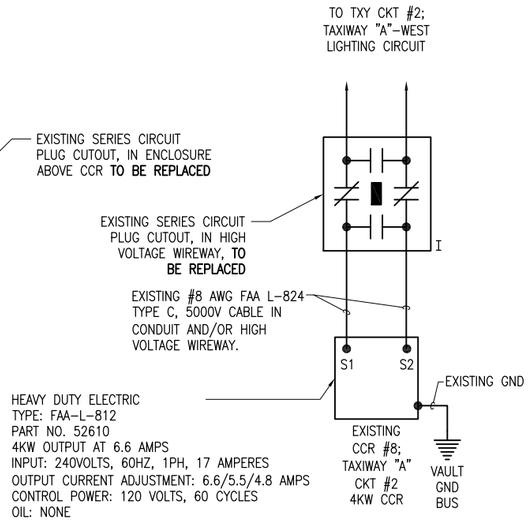

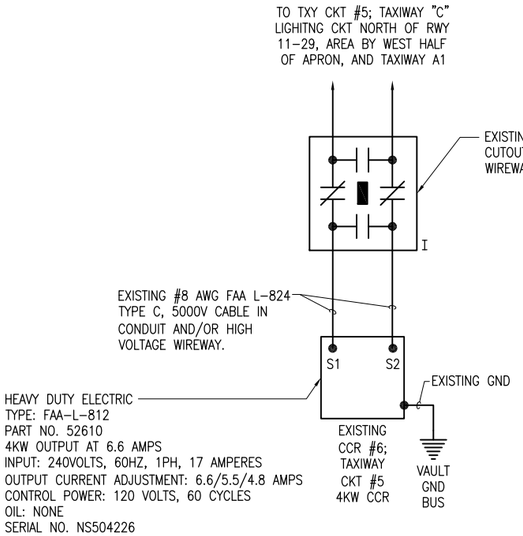

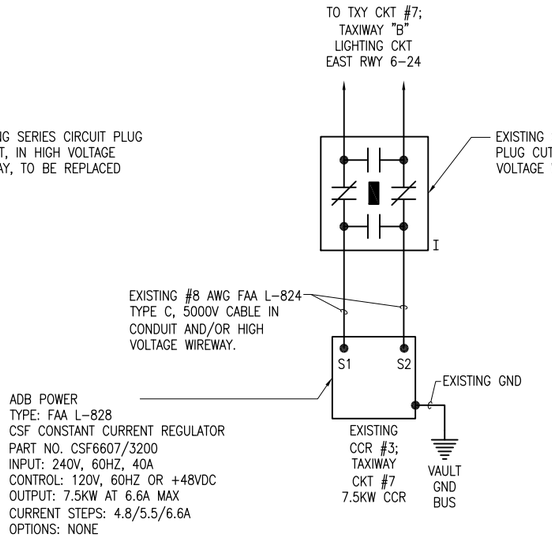

EXISTING HIGH VOLTAGE WIRING SCHEMATIC FOR TAXIWAYS

NOTES

1. ALL WORK, POWER OUTAGES, AND/OR SHUT DOWN OF EXISTING SYSTEMS SHALL BE COORDINATED WITH THE AIRPORT MANAGER/DIRECTOR AND THE RESPECTIVE FAA ATCT PERSONNEL. ONCE SHUT DOWN, THE CIRCUITS SHALL BE LABELED AS SUCH TO PREVENT ACCIDENTAL ENERGIZING OF THE RESPECTIVE CIRCUITS. ALL PERSONNEL SHALL FOLLOW U.S. DEPARTMENT OF LABOR OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION (OSHA) 29 CFR PART 1910 OCCUPATIONAL SAFETY & HEALTH STANDARDS FOR ELECTRICAL SAFETY AND LOCKOUT/TAGOUT PROCEDURES INCLUDING, BUT NOT LIMITED TO, 29 CFR SECTION 1910.147 THE CONTROL OF HAZARDOUS ENERGY (LOCKOUT/TAGOUT).
2. CONTRACTOR SHALL EXAMINE THE SITE TO CONFIRM AND FIELD VERIFY EXISTING SITE CONDITIONS.
3. THE RESPECTIVE PERSONNEL PERFORMING AIRFIELD LIGHTING WORK, VAULT WORK, AND/OR TESTS SHALL BE FAMILIAR WITH, AND QUALIFIED TO WORK ON, 5000 VOLT AIRFIELD LIGHTING SERIES CIRCUITS, CONSTANT CURRENT REGULATORS, AND ASSOCIATED AIRPORT ELECTRICAL VAULT EQUIPMENT.
4. NOTE THE EXISTING TAXIWAY CIRCUIT CUTOUTS ARE OLD AND SOME ARE IN POOR CONDITION. SOME CUTOUTS MIGHT NOT FUNCTION PROPERLY. CONTRACTOR SHALL EXERCISE CAUTION, PRACTICE SAFETY, AND DISCONNECT THE SERIES CIRCUITS FROM THE RESPECTIVE CONSTANT CURRENT REGULATORS, AS APPLICABLE WHEN PERFORMING WORK ON THE AIRFIELD LIGHTING OR WORK THAT MIGHT AFFECT THE AIRFIELD LIGHTING. CONTRACTOR SHALL MAKE NECESSARY ARRANGEMENTS TO DISCONNECT POWER AND LOCKOUT CIRCUITS FOR PROTECTION OF PERSONNEL.
5. MEGGER TEST AND RECORD EXISTING SERIES CIRCUITS PRIOR TO CABLE WORK AND AGAIN AFTER AIRFIELD LIGHTING MODIFICATIONS, ADDITIONS, AND/OR UPGRADES HAVE BEEN COMPLETED. ALSO TEST AND RECORD SERIES CIRCUIT LOOP RESISTANCE.
6. THE RESPECTIVE CCR'S SCHEDULED TO REMAIN SHALL BE TESTED FOR PROPER OPERATION BEFORE ANY AIRFIELD WORK THAT MIGHT AFFECT LIGHTING CIRCUITS, REMOVAL WORK, MODIFICATIONS, AND/OR ADDITIONS AND AFTER THE AIRFIELD WORK AND ADDITIONS HAVE BEEN COMPLETED. CONTRACTOR SHALL TEST AND RECORD THE INPUT CURRENT AND OUTPUT CURRENT FOR EACH CONSTANT CURRENT REGULATOR IN THE AUTOMATIC AND MANUAL MODES OF OPERATIONS. CONTRACTOR SHALL REPORT CONCERNS AND/OR DEFICIENCIES TO THE RESIDENT ENGINEER/RESIDENT TECHNICIAN.

LEGEND

"CCR" DENOTES CONSTANT CURRENT REGULATOR

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IDA No: MTO-4511

SBG Project No: 3-17-SBGP-XX

Contract No. CO062

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

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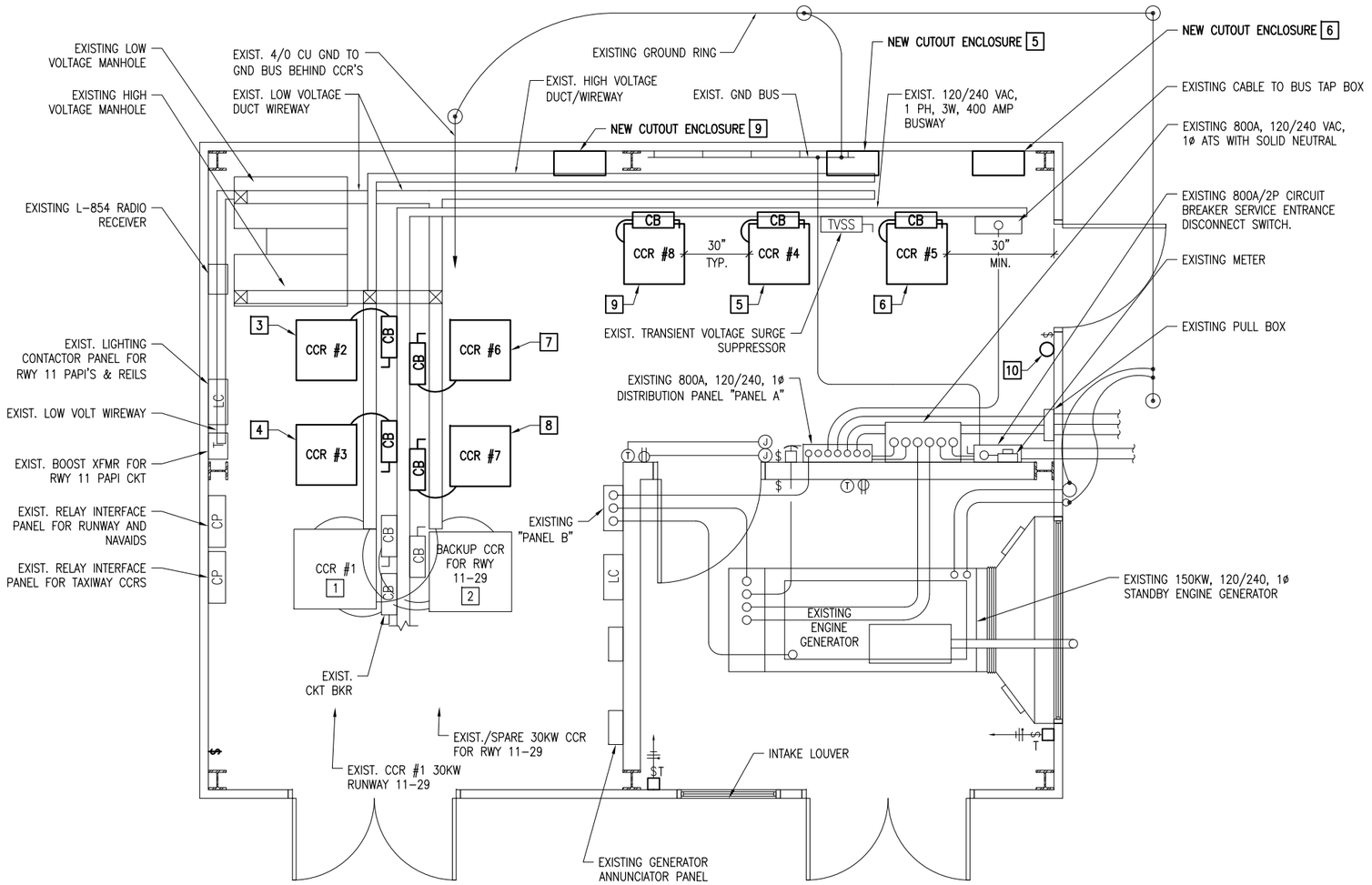
SHEET TITLE

EXISTING HIGH VOLTAGE WIRING SCHEMATIC FOR TAXIWAYS



ELECTRICAL VAULT FLOOR PLAN

GENERAL NOTES:

1. SEE "PROPOSED ELECTRICAL ONE LINE DIAGRAM FOR VAULT" FOR LOW VOLTAGE INPUT POWER WIRING REQUIREMENTS TO CCR'S. SEE PROPOSED HIGH VOLTAGE WIRING SCHEMATICS FOR CCR OUTPUT WIRING REQUIREMENTS. SEE AIRFIELD LIGHTING CONTROL WIRING SCHEMATICS FOR RUNWAY AND TAXIWAYS FOR CCR CONTROL WIRING REQUIREMENTS.
2. THE RESPECTIVE PERSONNEL PERFORMING AIRFIELD LIGHTING WORK, VAULT WORK, AND/OR TESTS SHALL BE FAMILIAR WITH AND QUALIFIED TO WORK ON 5000 VOLT AIRFIELD LIGHTING SERIES CIRCUITS, CONSTANT CURRENT REGULATORS, AND ASSOCIATED AIRPORT ELECTRICAL VAULT EQUIPMENT.
3. ALL ELECTRICAL EQUIPMENT AND MATERIALS SHALL BE INSTALLED IN CONFORMANCE WITH NFPA 70 – NATIONAL ELECTRICAL CODE (NEC) MOST CURRENT ISSUE IN FORCE, THE RESPECTIVE EQUIPMENT MANUFACTURER'S DIRECTIONS AND ALL OTHER APPLICABLE LOCAL CODES, LAWS, ORDINANCE, AND REQUIREMENTS IN FORCE. ANY INSTALLATIONS WHICH VOID THE U.L. LISTING, INTERTEK TESTING SERVICES VERIFICATION/ETL LISTING, (OR OTHER THIRD PARTY LISTING) AND/OR THE MANUFACTURER'S WARRANTY OF A DEVICE WILL NOT BE PERMITTED.
4. CONTRACTOR SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS OF NFPA 70E – STANDARD FOR ELECTRICAL SAFETY IN THE WORKPLACE.
5. EACH CCR SHALL BE TESTED FOR PROPER OPERATION. CONTRACTOR SHALL TEST AND RECORD THE INPUT CURRENT AND OUTPUT CURRENT FOR EACH CONSTANT CURRENT REGULATOR IN THE AUTOMATIC AND MANUAL MODES OF OPERATION. CONTRACTOR SHALL REPORT CONCERNS AND/OR DEFICIENCIES TO THE PROJECT ENGINEER.
6. CONTRACTOR SHALL FURNISH AND INSTALL LEGEND PLATES, WARNING LABELS AND SIGNS FOR THE VAULT AND VAULT EQUIPMENT AS DETAILED HEREIN. SEE "LEGEND PLATE SCHEDULES" SHEET.
7. MAINTAIN SEPARATION OF HIGH VOLTAGE WIRING (AIRFIELD LIGHTING 5000 VOLT SERIES CIRCUITS AND/OR OTHER CIRCUITS RATED ABOVE 600 VOLTS) FROM LOW VOLTAGE WIRING (RATED 600 VOLTS AND BELOW) TO COMPLY WITH NEC 300.3(C)(2). HIGH VOLTAGE AND LOW VOLTAGE WIRING SHALL NOT BE INSTALLED IN THE SAME RACEWAY, CONDUIT, WIREWAY, PULL BOX, SPLICE CAN, HANDHOLE, OR MANHOLE.
8. MAINTAIN SEPARATION OF HIGH VOLTAGE CIRCUIT WIRING (AIRFIELD LIGHTING 5000 VOLT SERIES CIRCUITS AND/OR OTHER CIRCUITS RATED ABOVE 600 VOLTS) AND LOW VOLTAGE CIRCUITS WIRING (RATED 600 VOLTS AND BELOW). LOW VOLTAGE WIRING SHALL ENTER THE RESPECTIVE CCR AT THE LOW VOLTAGE SECTION. HIGH VOLTAGE WIRING SHALL ENTER THE RESPECTIVE CCR AT THE HIGH VOLTAGE SECTION.
9. BOND EACH CCR FRAME/HOUSING TO VAULT GROUND BUS WITH #6 AWG COPPER BONDING JUMPER.
10. LOCATIONS OF CCR'S MAY BE ADJUSTED TO ACCOMMODATE SITE CONDITIONS. COORDIANTE WITH AIRPORT MANAGER AND PROJECT ENGINEER.

KEYED NOTES:

1. EXISTING CCR NO. 1 FOR RUNWAY 11-29 TO REMAIN.
2. EXISTING BACKUP CCR FOR RUNWAY 11-29 TO REMAIN.
3. NEW CCR NO. 2 FOR RUNWAY 6-24. FURNISH AND INSTALL NEW CIRCUIT BREAKER, CUTOUT, AND ASSOCIATED CONDUITS AND WIRING. SEE GENERAL NOTE 1.
4. EXISTING CCR NO. 3 FOR TAXIWAY CIRCUIT 7, TO REMAIN. FURNISH AND INSTALL NEW CUTOUT. SEE GENERAL NOTE 1.
5. NEW CCR NO. 4 FOR TAXIWAY CIRCUITS 1 AND 4. FURNISH AND INSTALL NEW CIRCUIT BREAKER, CUTOUTS, CUTOUT ENCLOSURE, AND ASSOCIATED CONDUITS AND WIRING. SEE GENERAL NOTE 1.
6. NEW CCR NO. 5 FOR TAXIWAY CIRCUITS 3 AND 3A. FURNISH AND INSTALL NEW CIRCUIT BREAKER, CUTOUTS, CUTOUT ENCLOSURE, AND ASSOCIATED CONDUITS AND WIRING. SEE GENERAL NOTE 1.
7. NEW CCR NO. 6 FOR TAXIWAY CIRCUIT 5. FURNISH AND INSTALL NEW CUTOUT AND ASSOCIATED CONDUITS AND WIRING. RELOCATE EXISTING CIRCUIT BREAKER AS APPLICABLE TO ACCOMMODATE LOCATION OF CCR. SEE GENERAL NOTE 1.
8. NEW CCR NO. 7 FOR TAXIWAY CIRCUIT 6. FURNISH AND INSTALL NEW CIRCUIT BREAKER, CUTOUTS, AND ASSOCIATED CONDUITS AND WIRING. SEE GENERAL NOTE 1.
9. NEW CCR NO. 8 FOR TAXIWAY CIRCUIT 2. FURNISH AND INSTALL NEW CIRCUIT BREAKER, CUTOUTS, CUTOUT ENCLOSURE, AND ASSOCIATED CONDUITS AND WIRING. SEE GENERAL NOTE 1.
10. FURNISH AND INSTALL ONE UL RATED, 10 POUND CARBON DIOXIDE FIRE EXTINGUISHER SUITABLE FOR USE ON CLASS C FIRES IN THE VAULT. PER NFPA 10 "PORTABLE FIRE EXTINGUISHERS" CLASS C ARE FOR FIRES THAT INVOLVE ENERGIZED ELECTRICAL EQUIPMENT. FIRE EXTINGUISHERS SHALL BE MADE IN THE UNITED STATES OF AMERICA TO COMPLY WITH THE AIRPORT IMPROVEMENT PROGRAM BUY AMERICAN REQUIREMENT. FIRE EXTINGUISHER TYPE CO2 SHALL BE AMEREX MODEL 330, OR APPROVED EQUAL.

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COLES COUNTY AIRPORT AUTHORITY
COLES COUNTY MEMORIAL AIRPORT

REMOVE AND REPLACE ALL TAXI GUIDANCE SIGNS ON THE AIRPORT

IDA No: MTO-4511

SBG Project No: 3-17-SBGP-XX

Contract No. CO062

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NEW FLOOR PLAN FOR VAULT

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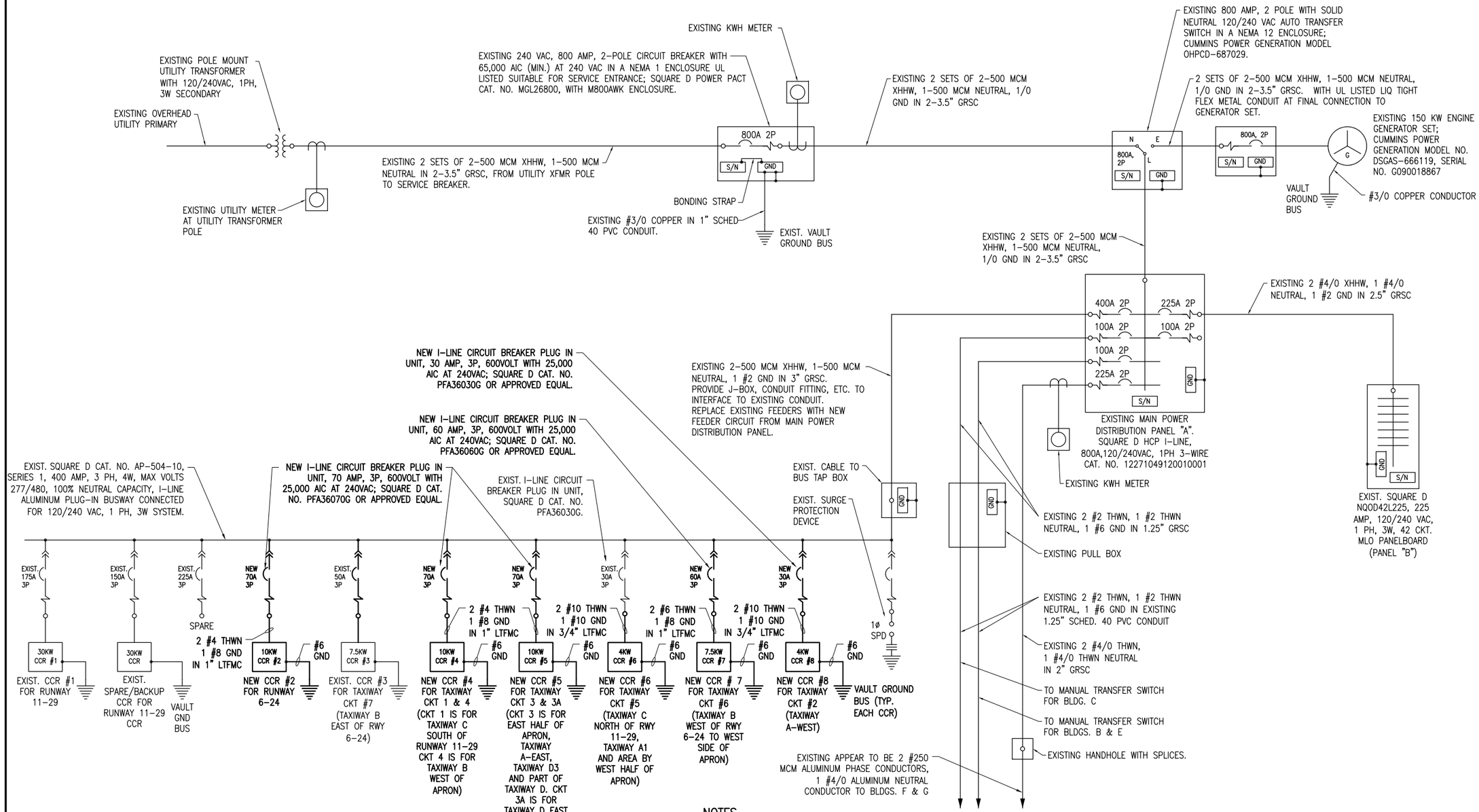

PROPOSED ELECTRICAL ONE LINE DIAGRAM FOR VAULT

NOTES

1. ALL VAULT WORK, POWER OUTAGES, AND/OR SHUT DOWN OF EXISTING SYSTEMS SHALL BE COORDINATED WITH THE AIRPORT MANAGER. ONCE SHUT DOWN, THE CIRCUITS SHALL BE LABELED AS SUCH TO PREVENT ACCIDENTAL ENERGIZING OF THE RESPECTIVE CIRCUITS. ALL PERSONNEL SHALL FOLLOW U.S. DEPARTMENT OF LABOR OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION (OSHA) 29 CFR PART 1910 OCCUPATIONAL SAFETY & HEALTH STANDARDS FOR ELECTRICAL SAFETY AND LOCKOUT/TAGOUT PROCEDURES INCLUDING, BUT NOT LIMITED TO, 29 CFR SECTION 1910.147 THE CONTROL OF HAZARDOUS ENERGY (LOCKOUT/TAGOUT).
2. ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN CONFORMANCE WITH NFPA 70 – NATIONAL ELECTRICAL CODE (NEC) MOST CURRENT ISSUE IN FORCE, THE RESPECTIVE EQUIPMENT MANUFACTURER'S DIRECTIONS AND ALL OTHER APPLICABLE LOCAL CODES, LAWS, ORDINANCES AND REQUIREMENTS IN FORCE. ANY INSTALLATIONS WHICH VOID THE U.L. LISTING, ETL LISTING, (OR OTHER THIRD PARTY LISTING) AND/OR THE MANUFACTURER'S WARRANTY OF A DEVICE WILL NOT BE PERMITTED.
3. ALL CONDUCTORS/WIRING SHALL BE COPPER.
4. CONTRACTOR SHALL CONFIRM POWER REQUIREMENTS WITH THE ACTUAL NAMEPLATE ON EACH CONSTANT CURRENT REGULATOR (OR OTHER RESPECTIVE EQUIPMENT) AND ADJUST CIRCUIT BREAKER, WIRE SIZES & CONDUIT SIZES TO CONFORM WITH NEC & MANUFACTURER'S RECOMMENDATIONS WHERE APPLICABLE. WIRE SIZES SHOWN ON THE PLANS ARE MINIMUM.
5. LTFMC DENOTES LIQUID TIGHT FLEXIBLE METAL CONDUIT UL LISTED, SUNLIGHT RESISTANT, & SUITABLE FOR GROUNDING. LIQUID TIGHT FLEXIBLE METAL CONDUIT AND ASSOCIATED FITTINGS SHALL BE U.L. LISTED TO MEET THE REQUIREMENTS OF NEC 350.6. LIQUID TIGHT FLEXIBLE METAL CONDUIT THAT IS USED FOR FLEXIBILITY (INCLUDING CONNECTIONS TO CCR'S & TRANSFORMERS) SHALL REQUIRE AN EXTERNAL BONDING JUMPER OR INTERNAL EQUIPMENT GROUNDING CONDUCTOR PER NEC 350.60. EXTERNAL BONDING JUMPERS USED WITH CCR INSTALLATIONS SHALL BE #6 AWG COPPER (MINIMUM). DO NOT INSTALL LTFMC THAT IS NOT UL LISTED. CONFIRM LTFMC BEARS THE UL LABEL PRIOR TO INSTALLATION.
6. EQUIPMENT AND MATERIALS NOT LABELED AS EXISTING ARE NEW.

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PROPOSED ELECTRICAL ONE LINE DIAGRAM FOR VAULT

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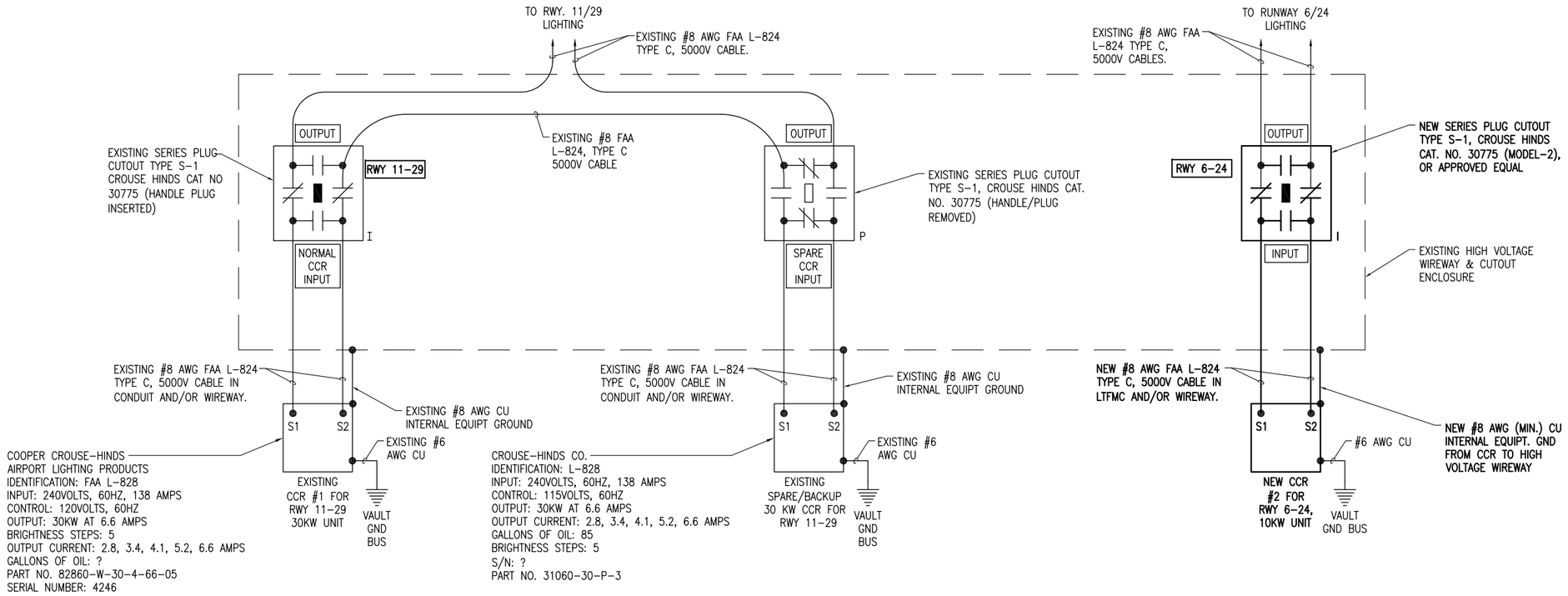

PROPOSED HIGH VOLTAGE WIRING SCHEMATIC FOR RUNWAYS

NOTES

1. PROVIDE PHENOLIC ENGRAVED LEGEND PLATES FOR EACH CONSTANT CURRENT REGULATOR (EXISTING & NEW) NOTING THE REGULATOR DESIGNATION AND THE RUNWAY AND/OR TAXIWAY SERVED.
2. EACH PLUG CUTOUT CABINET SHALL BE FURNISHED WITH A PHENOLIC ENGRAVED LEGEND PLATE THAT IDENTIFIES THE RESPECTIVE RUNWAY OR TAXIWAY CIRCUIT OR REGULATOR. INCLUDE AN ADDITIONAL LEGEND PLATE LABELED "CAUTION OPERATE CUTOUTS WITH CCR SHUT OFF".
3. PROVIDE PHENOLIC ENGRAVED LEGEND PLATES FOR THE CUTOUTS TO IDENTIFY THE RESPECTIVE REGULATOR OUTPUT CONNECTION AND THE RESPECTIVE CIRCUIT LOAD CONNECTION.
4. BOND REGULATOR FRAME TO VAULT GROUND BUS WITH A DEDICATED #6 AWG BONDING JUMPER.
5. PROVIDE ADEQUATE WORKING SPACE IN FRONT OF EACH CUTOUT ENCLOSURE TO MEET NEC CLEARANCE REQUIREMENTS.
6. LIQUID TIGHT FLEXIBLE METAL CONDUIT AND ASSOCIATED FITTINGS SHALL BE U.L. LISTED TO MEET THE REQUIREMENTS OF NEC 350.6, SUITABLE FOR GROUNDING AND SUNLIGHT RESISTANT. LIQUID TIGHT FLEXIBLE METAL CONDUIT THAT IS USED FOR FLEXIBILITY (INCLUDING CONNECTIONS TO CCR'S & TRANSFORMERS) SHALL REQUIRE AN EXTERNAL BONDING JUMPER OR INTERNAL EQUIPMENT GROUNDING CONDUCTOR PER NEC 350.60. EXTERNAL BONDING JUMPERS USED WITH CCR INSTALLATIONS SHALL BE #6 AWG COPPER (MINIMUM). DO NOT INSTALL LIQUID TIGHT FLEXIBLE METAL CONDUIT THAT IS NOT UL LISTED. CONFIRM LIQUID TIGHT FLEXIBLE METAL CONDUIT BEARS THE UL LABEL PRIOR TO INSTALLING IT.
7. SERIES PLUG CUTOUTS SHALL BE TYPE S-1, RATED 5000 VOLTS, 20-AMP, AND SHALL COMPLY WITH FAA AC 150/5340-4C. SERIES PLUG CUTOUTS SHALL BE RATED SUITABLE FOR NORMAL OPERATION WITH HANDLE REMOVED OR HANDLE INSERTED. CUTOUTS SHALL DISCONNECT THE INPUT FROM THE FROM THE OUTPUT, SHORT THE INPUT TERMINALS, AND SHORT THE OUTPUT TERMINALS WHEN THE HANDLE/PLUG IS REMOVED. CUTOUTS SHALL BE SUITABLE FOR MANUAL TRANSFER OPERATION (ONE SERIES CIRCUIT LOOP WITH THE CAPABILITY OF BEING POWERED FROM EITHER OF TWO CONSTANT CURRENT REGULATOR POWER SOURCES). SERIES PLUG CUTOUTS SHALL BE CROUSE-HINDS CAT. NO. 30775, OR APPROVED EQUAL. THE RESPECTIVE MANUFACTURER SHALL CERTIFY IN WRITING THAT THEIR CUTOUT IS SUITABLE AND RATED FOR THE RESPECTIVE APPLICATION.
8. HIGH VOLTAGE WIRING SHALL ENTER EACH RESPECTIVE REGULATOR AT THE HIGH-VOLTAGE/SERIES CIRCUIT OUTPUT SECTION OF THE REGULATOR.
9. DUE TO THE PHYSICAL DIMENSIONS OF THE NEW REGULATORS, SOME UNITS WILL REQUIRE RELOCATION IN THE VAULT TO AN AREA WITH ADEQUATE FLOOR SPACE

LEGEND

"I" DENOTES PLUG CUTOUT WITH PLUG INSERTED

"P" DENOTES PLUG CUTOUT WITH PLUG PULLED

"CCR" DENOTES CONSTANT CURRENT REGULATOR

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COLES COUNTY AIRPORT AUTHORITY
COLES COUNTY MEMORIAL AIRPORT

REMOVE AND REPLACE ALL TAXI GUIDANCE SIGNS ON THE AIRPORT

IDA No: MTO-4511

SBG Project No: 3-17-SBGP-XX

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PROPOSED HIGH VOLTAGE WIRING SCHEMATIC FOR RUNWAYS

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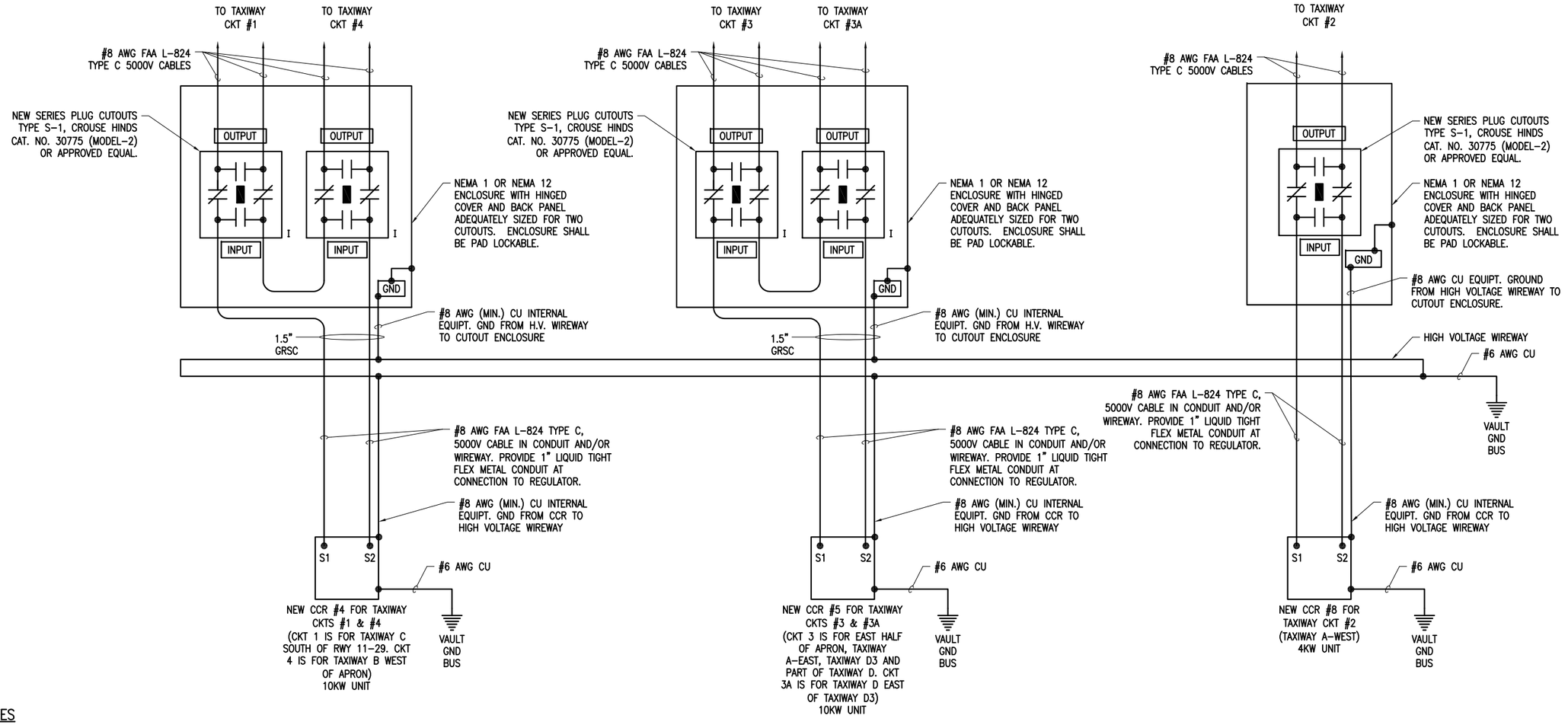

NOTES

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10. SPLICES FOR RUNWAY AND TAXIWAY SERIES CIRCUITS SHALL BE FAA APPROVED TYPE L-823 CONNECTORS AND SHALL BE INSTALLED IN HIGH VOLTAGE HANDHOLES, HIGH VOLTAGE MANHOLES, SPLICE CANS OR HIGH VOLTAGE ENCLOSURES.

LEGEND

"I"	DENOTES PLUG CUTOUT WITH PLUG INSERTED
"P"	DENOTES PLUG CUTOUT WITH PLUG PULLED
"CCR"	DENOTES CONSTANT CURRENT REGULATOR

PROPOSED HIGH VOLTAGE WIRING SCHEMATIC FOR TAXIWAY CKTS 1, 2, 3, 3A, & 4

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REMOVE AND REPLACE ALL TAXI GUIDANCE SIGNS ON THE AIRPORT

IDA No: MTO-4511

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PROPOSED HIGH VOLTAGE WIRING SCHEMATIC FOR TAXIWAY CKTS 1, 2, 3, 3A, & 4

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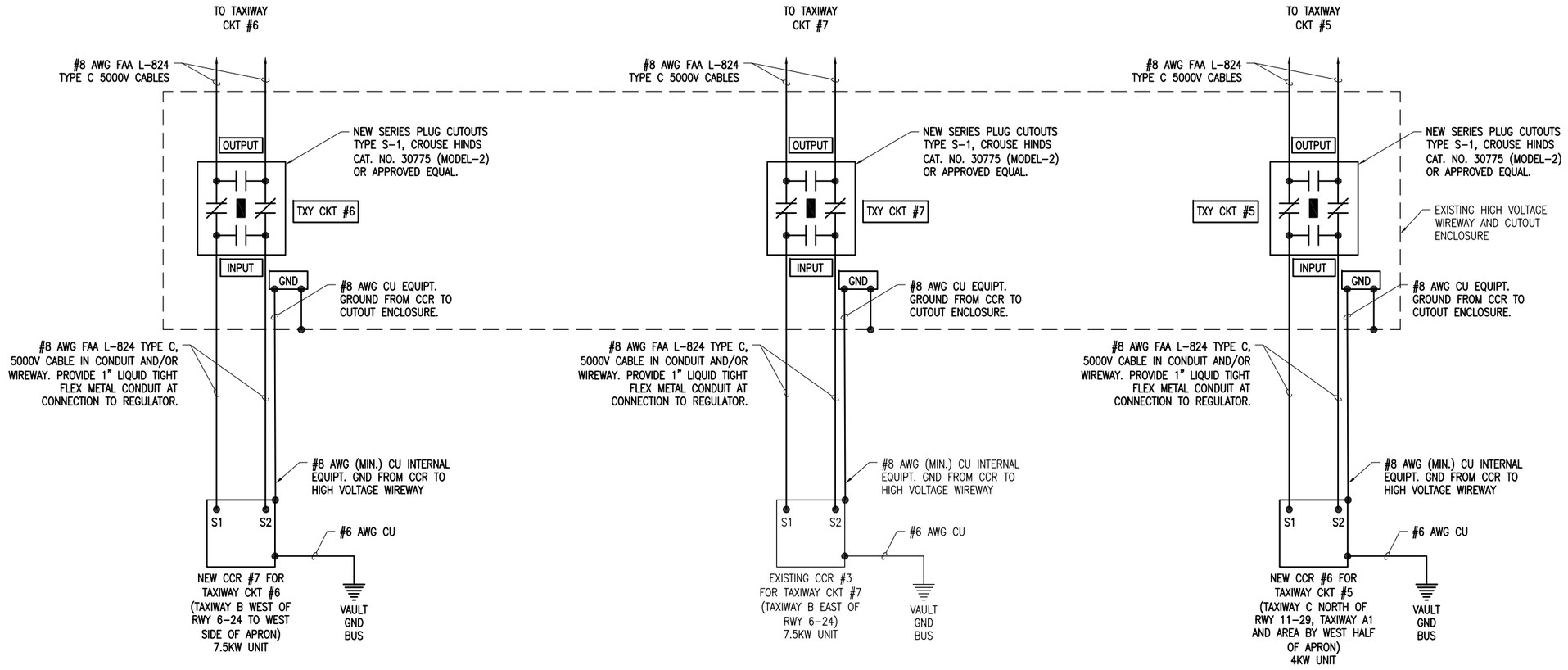

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10. SPLICES FOR RUNWAY AND TAXIWAY SERIES CIRCUITS SHALL BE FAA APPROVED TYPE L-823 CONNECTORS AND SHALL BE INSTALLED IN HIGH VOLTAGE HANDHOLES, HIGH VOLTAGE MANHOLES, SPLICE CANS OR HIGH VOLTAGE ENCLOSURES.

LEGEND

"I"	DENOTES PLUG CUTOUT WITH PLUG INSERTED
"P"	DENOTES PLUG CUTOUT WITH PLUG PULLED
"CCR"	DENOTES CONSTANT CURRENT REGULATOR

PROPOSED HIGH VOLTAGE WIRING SCHEMATIC FOR TAXIWAY CKTS 5, 6, & 7

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REMOVE AND REPLACE ALL TAXI GUIDANCE SIGNS ON THE AIRPORT

IDA No: MTO-4511

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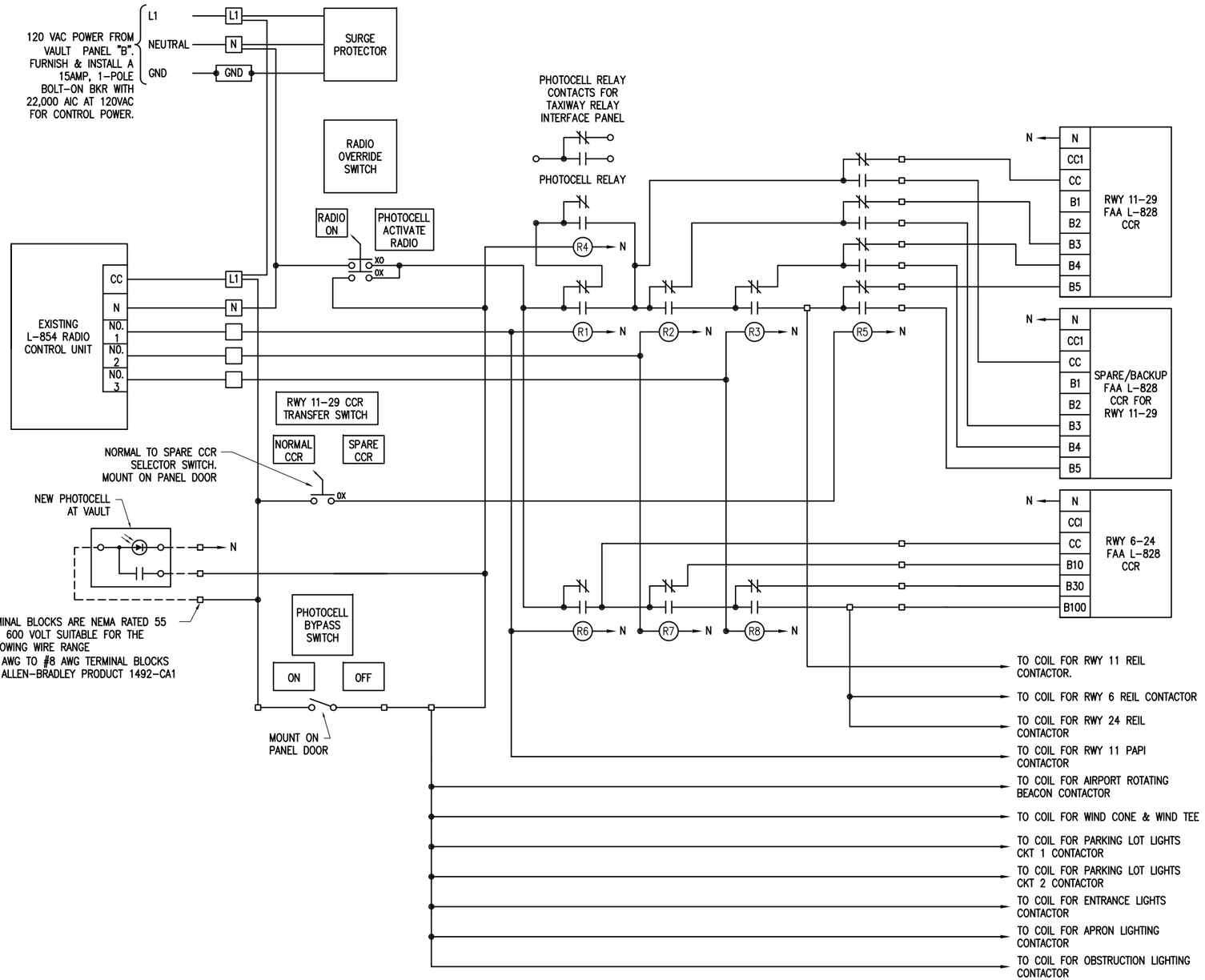
PROPOSED HIGH VOLTAGE WIRING SCHEMATIC FOR TAXIWAY CKTS 5, 6, & 7



AIRFIELD LIGHTING CONTROL WIRING SCHEMATIC FOR RUNWAYS & NAVAIDS

NOTES:

1. THE EXISTING RELAY INTERFACE PANEL NAMEPLATE DATA IS AS FOLLOWS:

   PRECISION CONTROL SYSTEMS OF INDIANAPOLIS
   7225 GIRL SCHOOL AV. INDIANAPOLIS, IN 46241,
   RUNWAY RELAY INTERFACE PANEL MODEL: P15016,
   TAG: RRIP, 120 VOLTS, 60HZ, 1 PHASE.

2. IN THE AUTOMATIC MODE OF OPERATION THE RUNWAY 11-29 CONSTANT CURRENT REGULATORS (PRIMARY UNIT & SPARE UNIT) IS CONTROLLED BY THE PHOTOCELL & THE L-854 RADIO CONTROL UNIT IN THE FOLLOWING MANNER:
   PHOTOCELL - B3-5% BRIGHTNESS AND ACTIVATE RADIO CONTROL
   3 CLICKS - B3-5% BRIGHTNESS
   5 CLICKS - B4-20% BRIGHTNESS
   7 CLICKS - B5-100% BRIGHTNESS

3. IN THE AUTOMATIC MODE OF OPERATION THE RUNWAY 6-24 CIRCUIT IS CONTROLLED BY THE PHOTOCELL & THE L-854 RADIO CONTROL UNIT IN THE FOLLOWING MANNER:
   PHOTOCELL -ACTIVATE RADIO CONTROL
   3 CLICKS -10% BRIGHTNESS
   5 CLICKS -30% BRIGHTNESS
   7 CLICKS -100% BRIGHTNESS

4. THE RUNWAY 11 PAPI CIRCUIT IS CONTROLLED IN THE AUTOMATIC MODE BY THE L-854 RADIO CONTROL UNIT IN THE FOLLOWING MANNER.
   3 CLICKS - ON
   5 CLICKS - REMAIN ON
   7 CLICKS - REMAIN ON

5. THE RUNWAY 11, 6 AND 24 REIL CIRCUITS ARE CONTROLLED IN THE AUTOMATIC MODE BY THE PHOTOCELL & THE L-854 RADIO CONTROL UNIT IN THE FOLLOWING MANNER.
   PHOTOCELL ACTIVATION ENABLES RADIO CONTROL
   3 CLICKS - OFF
   5 CLICKS - OFF
   7 CLICKS - ON

6. THE RADIO OVERRIDE SWITCH WILL ACTIVATE L-854 RADIO CONTROL 24 HOURS PER DAY IN THE "RADIO ON" POSITION. THE PHOTOCELL WILL ACTIVATE RADIO CONTROL IN THE "PHOTOCELL ACTIVATE RADIO" POSITION.

7. IN THE AUTOMATIC MODE OF OPERATION THE AIRPORT ROTATING BEACON WIND TEE, WIND CONE, APRON LIGHTING, PARKING LOT LIGHTING, ENTRANCE ROAD LIGHTING, AND OBSTRUCTION LIGHTING ARE ACTIVATED BY THE PHOTOCELL OR PHOTOCELL BYPASS SWITCH.

8. EXTERNAL CONTROL CABLE SHALL BE NO. 12 AWG COPPER 600 VOLT CONDUCTOR. EQUIPMENT GROUND WIRES SHALL BE INCLUDED WITH EACH BRANCH CIRCUIT & EACH CONTROL CIRCUIT.

9. COLOR CODING FOR THE CONTROL WIRING TO EACH CONSTANT CURRENT REGULATOR SHALL BE CONSISTENT FOR ALL REGULATORS. COLOR CODING SHALL BE AS FOLLOWS:

CC	-RED
10% OR B3	-ORANGE
30% OR B4	-YELLOW
100% OR B5	-BLUE
NEUTRAL	-WHITE
EQUIPT. GND	-GREEN

   ALSO TAG THE CONTROL WIRES WITH THE RESPECTIVE DESIGNATION (CC, 10%, 30%, 100%)

10. "N" DESIGNATES NEUTRAL CONNECTION OR NEUTRAL CONDUCTOR.

11. RUNWAY 6-24 CCR SHALL BE REPLACED WITH A NEW UNIT. FURNISH AND INSTALL CONTROL WIRING TO INTERFACE THE NEW CCR TO THE EXISTING RUNWAY RELAY INTERFACE PANEL.

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APR 19, 2016 11:02 AM HARRI01115
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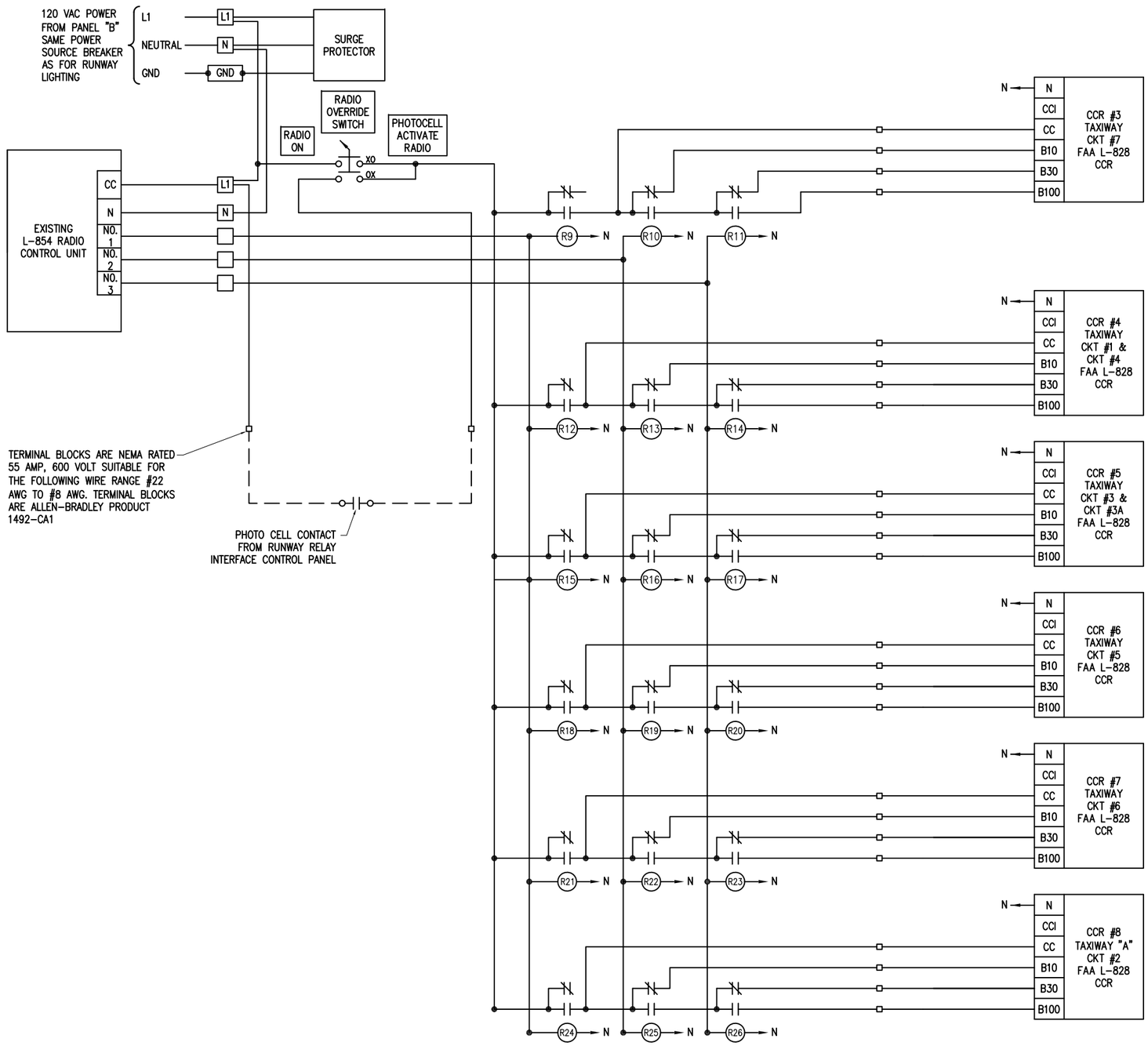

TAXIWAY LIGHTING CONTROL WIRING SCHEMATIC

NOTES:

1. THE EXISTING TAXIWAY RELAY INTERFACE PANEL NAMEPLATE DATA IS AS FOLLOWS: PRECISION CONTROL SYSTEMS OF INDIANAPOLIS, 7725 GIRL SCHOOL AV., INDIANAPOLIS IN 46241, TAXIWAY RELAY INTERFACE PANEL MODEL: P15016, TAG: TRIP, 120 VOLTS, 60HZ, 1 PHASE

2. IN THE AUTOMATIC MODE OF OPERATION THE TAXIWAY CCR'S ARE CONTROLLED BY THE PHOTOCELL & THE L-854 RADIO CONTROL UNIT IN THE FOLLOWING MANNER:
   PHOTOCELL —ACTIVATE RADIO CONTROL
   3 CLICKS —10% BRIGHTNESS
   5 CLICKS —30% BRIGHTNESS
   7 CLICKS —100% BRIGHTNESS

3. THE RADIO OVERRIDE SWITCH WILL ACTIVATE L-854 RADIO CONTROL 24 HOURS PER DAY IN THE "RADIO ON" POSITION. THE PHOTOCELL WILL ACTIVATE RADIO CONTROL IN THE "PHOTOCELL ACTIVATE RADIO" POSITION.

4. EXTERNAL CONTROL CABLE SHALL BE NO. 12 AWG COPPER, 600 VOLT CABLE. EQUIPMENT GROUND WIRES SHALL BE INCLUDED WITH EACH BRANCH CIRCUIT & EACH CONTROL CIRCUIT.

5. COLOR CODING FOR THE CONTROL WIRING TO EACH CONSTANT CURRENT REGULATOR SHALL BE CONSISTENT FOR ALL REGULATORS. COLOR CODING SHALL BE AS FOLLOWS:
   CC —RED
   10% —ORANGE
   30% —YELLOW
   100% —BLUE
   NEUTRAL —WHITE
   EQUIPT. GND —GREEN
   ALSO TAG THE CONTROL WIRES WITH THE RESPECTIVE DESIGNATION (CC, 10%, 30%, 100%)

6. "N" DESIGNATES NEUTRAL CONNECTION OR NEUTRAL CONDUCTOR.

7. THE RESPECTIVE TAXIWAY CONSTANT CURRENT REGULATORS DESIGNATED FOR REPLACEMENT WILL REQUIRE NEW CONTROL WIRING AND/OR INTERFACE TO EXISTING CONTROL WIRING. FURNISH AND INSTALL CONTROL WIRING TO INTERFACE EACH TAXIWAY CCR TO THE EXISTING TAXIWAY RELAY INTERFACE CONTROL PANEL.

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Professional Service Corporation
#184-001084

COLES COUNTY AIRPORT AUTHORITY
COLES COUNTY MEMORIAL AIRPORT

REMOVE AND REPLACE ALL TAXI GUIDANCE SIGNS ON THE AIRPORT

IDA No: MTO-4511

SBG Project No: 3-17-SBGP-XX

Contract No. CO062

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

ISSUE: APRIL 15, 2016
PROJECT NO: 13A0121D
CAD FILE: E-609.DWG
DESIGN BY: KNL 02/05/2016
DRAWN BY: RAD 02/19/2016
REVIEWED BY: KNL 03/08/2016

SHEET TITLE

AIRFIELD LIGHTING CONTROL WIRING SCHEMATIC FOR TAXIWAYS

LEGEND PLATE SCHEDULE	
CCR #1 FOR RUNWAY 11-29	CCR #1 RUNWAY 11-29
CIRCUIT BREAKER FOR CCR #1 FOR RUNWAY 11-29	CCR #1 RUNWAY 11-29
CUTOUT FOR CCR #1 FOR RUNWAY 11-29	CCR #1 RUNWAY 11-29
BACKUP CCR FOR RUNWAY 11-29	BACKUP CCR FOR RUNWAY 11-29
CIRCUIT BREAKER FOR BACKUP CCR FOR RUNWAY 11-29	BACKUP CCR FOR RUNWAY 11-29
CUTOUT FOR BACKUP CCR FOR RUNWAY 11-29	BACKUP CCR FOR RUNWAY 11-29
CCR #2 FOR RUNWAY 6-24	CCR #2 RUNWAY 6-24
CCR #2 FOR RUNWAY 6-24	CCR #2 RUNWAY 6-24
CUTOUT FOR CCR #2 FOR RUNWAY 6-24	CCR #2 RUNWAY 6-24
CCR #3	CCR #3 TAXIWAY CKT 7 TXY B-EAST
CIRCUIT BREAKER FOR CCR #3	CCR #3 TAXIWAY CKT 7 TXY B-EAST
CUTOUT FOR CCR #3	CCR #3 TAXIWAY CKT 7 TXY B-EAST
CCR #4	CCR #4 TAXIWAY CKTS 1 AND 4 CKT 1;TXY C-SOUTH CKT 4; TXY B-WEST OF APRON
CIRCUIT BREAKER FOR CCR #4	CCR #4 TAXIWAY CKTS 1 AND 4 CKT 1;TXY C-SOUTH CKT 4; TXY B-WEST OF APRON
CUTOUT ENCLOSURE FOR CCR #4	CCR #4 TAXIWAY CKTS 1 AND 4 CKT 1;TXY C-SOUTH CKT 4; TXY B-WEST OF APRON
CUTOUT FOR TAXIWAY CKT 1	TXY CKT 1 TXY C-SOUTH
CUTOUT FOR TAXIWAY CKT 4	TXY CKT 4 TXY B-WEST OF APRON
CCR #5	CCR #5 TAXIWAY CKTS 3 AND 3A CKT 3; APRON, TXY A-EAST, D3, D CKT 3A; TAXIWAY D-EAST
CIRCUIT BREAKER FOR CCR #5	CCR #5 TAXIWAY CKTS 3 AND 3A CKT 3; APRON, TXY A-EAST, D3, D CKT 3A; TAXIWAY D-EAST
CUTOUT ENCLOSURE FOR CCR #5	CCR #5 TAXIWAY CKTS 3 AND 3A CKT 3; APRON, TXY A-EAST, D3, D CKT 3A; TAXIWAY D-EAST
CUTOUT FOR TAXIWAY CKT 3	TXY CKT 3 APRON, TXY A-EAST, D3, D
CUTOUT FOR TAXIWAY CKT 3A	TXY CKT 3A TAXIWAY D-EAST

LEGEND PLATE SCHEDULE	
CCR #6	CCR #6 TAXIWAY CKT 5 TXY C-NORTH, WEST APRON, TXY A1
CIRCUIT BREAKER FOR CCR #6	CCR #6 TAXIWAY CKT 5 TXY C-NORTH, WEST APRON, TXY A1
CUTOUT FOR CCR #6	CCR #6 TAXIWAY CKT 5 TXY C-NORTH, WEST APRON, TXY A1
CCR #7	CCR #7 TAXIWAY CKT 6 TXY B-WEST
CIRCUIT BREAKER CCR #7	CCR #7 TAXIWAY CKT 6 TXY B-WEST
CUTOUT FOR CCR #7	CCR #7 TAXIWAY CKT 6 TXY B-WEST
CCR #8	CCR #8 TAXIWAY CKT 2 TAXIWAY A-WEST
CIRCUIT BREAKER CCR #8	CCR #8 TAXIWAY CKT 2 TAXIWAY A-WEST
CUTOUT ENCLOSURE FOR CCR #8	CCR #8 TAXIWAY CKT 2 TAXIWAY A-WEST
CUTOUT FOR CCR #8	CCR #8 TAXIWAY CKT 2 TAXIWAY A-WEST
EACH CUTOUT ENCLOSURE (PROVIDE 6 LEGEND PLATES)	CAUTION OPERATE CUTOUTS WITH CCR SHUT OFF
EACH CUTOUT INPUT SIDE CONNECTION (PROVIDE 11 LEGEND PLATES)	INPUT
EACH CUTOUT OUTPUT SIDE CONNECTION PROVIDE 11 LEGEND PLATES)	OUTPUT

NOTES:

1. LEGEND PLATES SHALL BE WEATHERPROOF ENGRAVED PLASTIC OR PHENOLIC MATERIAL, 1/4" HIGH WHITE LETTERS ON A RED BACKGROUND UNLESS NOTED OTHERWISE. SECURE WITH WEATHERPROOF ADHESIVE AND MACHINE SCREWS. FURNISH ADDITIONAL LEGEND PLATES WHERE REQUIRED BY CODE, FOR ADDITIONAL EQUIPMENT, AS DETAILED HEREIN ON THE PLANS, AND AS NOTED IN THE SPECIAL PROVISION SPECIFICATIONS.
2. FURNISH & INSTALL A WEATHERPROOF WARNING LABEL FOR EACH SAFETY SWITCH, PANELBOARD, LOAD CENTER, CUTOUT, & CONTROL PANEL TO WARN PERSONS OF POTENTIAL ELECTRIC ARC FLASH HAZARDS, PER THE REQUIREMENTS OF NEC 110.16 "ARC-FLASH HAZARD WARNING". LABELS SHALL BE HAZARD COMMUNICATION SYSTEMS, LLC (190 OLD MILFORD RD., BOX 1174, MILFORD, PA 18337, PHONE: 1-877-748-0244) PART NO. H6010-9VWHBJ OR APPROVED EQUAL.
3. ALL POWER AND CONTROL CABLES IN HANDHOLES, MANHOLES, AND JUNCTION BOXES SHALL BE TAGGED TO IDENTIFY THE RESPECTIVE CABLE. A MINIMUM OF TWO TAGS SHALL BE PROVIDED ON EACH CABLE IN A MANHOLE; ONE AT THE CABLE ENTRANCE AND ONE AT THE CABLE EXIT. CABLE TAGS SHALL BE STAMPED BRASS TAGS OR OTHER WEATHERPROOF/WATERPROOF CORROSION RESISTANT MATERIAL.

"DANGER – HIGH VOLTAGE KEEP OUT" LABEL

FURNISH AND INSTALL "DANGER – HIGH VOLTAGE KEEP OUT" LABELS/SIGNS FOR EACH CUTOUT ENCLOSURE, EACH CONSTANT CURRENT REGULATOR, AND THE HIGH VOLTAGE WIREWAY, TO COMPLY WITH FAA AC 150/5340-26B "MAINTENANCE OF AIRPORT VISUAL AID FACILITIES" AND 2014 NEC ARTICLE 300.45 "WARNING SIGNS". LABELS SHALL BE APPROXIMATELY 4" x 6"

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SBG Project No:
3-17-SBGP-XX

Contract No. CO062

NO.	DATE	DESCRIPTION		
		DES	DWN	REV

ISSUE: APRIL 15, 2016
PROJECT NO: 13A0121D
CAD FILE: E-610-SCHD.DWG
DESIGN BY: KNL 02/19/2016
DRAWN BY: RAD 02/22/2016
REVIEWED BY: KNL 03/08/2016

SHEET TITLE

LEGEND PLATES SCHEDULES

APR 19, 2016 11:03 AM HARRI01115
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