

PRG CTAF/UNICOM FREQUENCY = 123.00 MHz

WORK AREA 1 NOTES

1. RUNWAY 18/36 SHALL BE CLOSED FOR THE DURATION OF WORK AREA 1.
2. BARRICADES SHALL BE IN PLACE PRIOR TO BEGINNING CONSTRUCTION. CONTRACTOR MAY WORK IN ALL WORK AREAS SIMULTANEOUSLY, HOWEVER THE MAINTENANCE OF TRAFFIC DEVICES AND HAUL ROUTES SHALL REMAIN CONSISTENT WITH THOSE DEPICTED ON THESE SAFETY PLANS.
3. 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.
4. AT ALL TIMES, THE CONTRACTOR'S OPERATIONS SHALL BE SUCH AS TO MINIMIZE DISRUPTION TO AIRCRAFT OPERATIONS.
5. ALL AIRCRAFT AND AIRPORT OPERATIONS HAVE THE RIGHT-OF-WAY. CONTRACTOR TO YIELD TO AIRPORT VEHICLES AND REMAIN CLEAR AT ALL TIMES.
6. ALL ACTIVE AIRFIELD PAVEMENTS SHALL BE KEPT CLEAN AND FREE OF DEBRIS AT ALL TIMES DURING CONSTRUCTION.
7. AT THE COMPLETION OF ALL WORK AREA CONSTRUCTION, THE HAUL ROUTE AND CONSTRUCTION EQUIPMENT PARKING AREA SHALL BE RESTORED TO PRE-CONSTRUCTION CONDITIONS PER THE SPECIFICATIONS.
8. WHENEVER CONSTRUCTION ACTIVITY NECESSITATES CLOSURE OF A RUNWAY OR TAXIWAY, THE AIRFIELD LIGHTING ASSOCIATED WITH THE CLOSED PAVEMENT SHALL BE TURNED OFF OR COMPLETELY COVERED, INCLUDING THE EDGE LIGHTS, SIGNAGE AND RUNWAY NAVAIDS. IF NECESSARY, CONTRACTOR SHALL PROVIDE TEMPORARY AIRFIELD LIGHTING CIRCUIT JUMPER CABLES, CONDUIT ENCASED ABOVE GROUND, DURING CONSTRUCTION TO MAINTAIN EXISTING LIGHTING CIRCUITS, UNLESS OTHERWISE APPROVED BY THE AIRPORT MANAGER. CONTRACTOR SHALL COORDINATE CLOSURES WITH THE AIRPORT MANAGER AT LEAST 7 DAYS IN ADVANCE SO NOTAMS CAN BE COORDINATED. IT IS THE RESPONSIBILITY OF THE AIRPORT MANAGER TO ISSUE ALL REQUIRED NOTAMS.
9. THE COSTS FOR PROVISION, PLACEMENT, MAINTENANCE AND REMOVAL OF BARRICADES/CLOSURE CROSSES ON THE AIRFIELD AND ALL ASSOCIATED INCIDENTALS SHALL BE PAID FOR UNDER ITEM AR150520 MOBILIZATION.
10. THE COSTS FOR CONSTRUCTION/MAINTENANCE OF HAUL ROUTE AND EQUIPMENT STAGING AREA AND ALL ASSOCIATED INCIDENTALS SHALL BE PAID FOR UNDER ITEM AR150540 HAUL ROUTE.

SAFETY PLAN COMPLIANCE DOCUMENT

PRIOR TO THE ISSUANCE OF A CONSTRUCTION NOTICE-TO-PROCEED (NTP), THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARING AND SUBMITTING A SAFETY PLAN COMPLIANCE DOCUMENT IN ACCORDANCE WITH FAA ADVISORY CIRCULAR 150/5370-2G, PARAGRAPH 2.4.2, OR EQUIVALENT SECTION IN SUBSEQUENT/CURRENT ISSUE. THE AIRPORT DIRECTOR SHALL APPROVE THIS DOCUMENT AND SUBMIT TO THE AIRPORT AUTHORITY FOR APPROVAL PRIOR TO THE NTP ISSUANCE.

EAST AIRCRAFT
PARKING RAMP
EXPANSION &
REHABILITATE PARTIAL
PARALLEL TAXIWAY TO
RUNWAY 9/27

IDA No: PRG-4558

Contract No. ED019

NO.	DATE	DESCRIPTION		
		LAY	DWN	REV

ISSUE: NOVEMBER 15, 2019

PROJECT NO: 17A0016D

CAD FILE: G-004-SFY.DWG

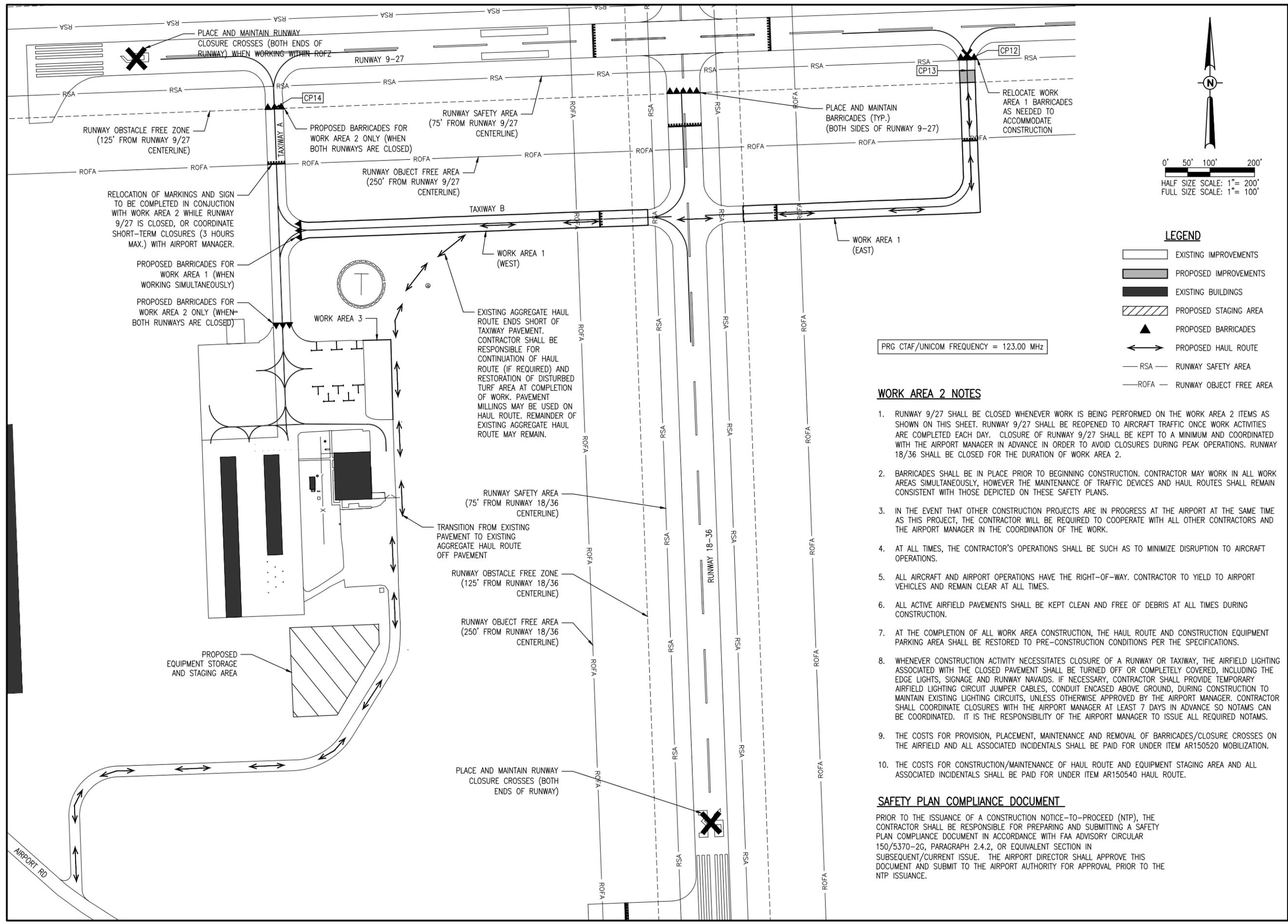
LAYOUT BY: JRH 11/29/2018

DRAWN BY: JRH 11/29/2018

REVIEWED BY: BSS 11/15/2019

SHEET TITLE

PROPOSED SAFETY
PLAN - WORK AREA 1



LEGEND

- EXISTING IMPROVEMENTS
- PROPOSED IMPROVEMENTS
- EXISTING BUILDINGS
- PROPOSED STAGING AREA
- PROPOSED BARRICADES
- PROPOSED HAUL ROUTE
- RSA - RUNWAY SAFETY AREA
- ROFA - RUNWAY OBJECT FREE AREA

PRG CTAF/UNICOM FREQUENCY = 123.00 MHZ

WORK AREA 2 NOTES

1. RUNWAY 9/27 SHALL BE CLOSED WHENEVER WORK IS BEING PERFORMED ON THE WORK AREA 2 ITEMS AS SHOWN ON THIS SHEET. RUNWAY 9/27 SHALL BE REOPENED TO AIRCRAFT TRAFFIC ONCE WORK ACTIVITIES ARE COMPLETED EACH DAY. CLOSURE OF RUNWAY 9/27 SHALL BE KEPT TO A MINIMUM AND COORDINATED WITH THE AIRPORT MANAGER IN ADVANCE IN ORDER TO AVOID CLOSURES DURING PEAK OPERATIONS. RUNWAY 18/36 SHALL BE CLOSED FOR THE DURATION OF WORK AREA 2.
2. BARRICADES SHALL BE IN PLACE PRIOR TO BEGINNING CONSTRUCTION. CONTRACTOR MAY WORK IN ALL WORK AREAS SIMULTANEOUSLY, HOWEVER THE MAINTENANCE OF TRAFFIC DEVICES AND HAUL ROUTES SHALL REMAIN CONSISTENT WITH THOSE DEPICTED ON THESE SAFETY PLANS.
3. 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.
4. AT ALL TIMES, THE CONTRACTOR'S OPERATIONS SHALL BE SUCH AS TO MINIMIZE DISRUPTION TO AIRCRAFT OPERATIONS.
5. ALL AIRCRAFT AND AIRPORT OPERATIONS HAVE THE RIGHT-OF-WAY. CONTRACTOR TO YIELD TO AIRPORT VEHICLES AND REMAIN CLEAR AT ALL TIMES.
6. ALL ACTIVE AIRFIELD PAVEMENTS SHALL BE KEPT CLEAN AND FREE OF DEBRIS AT ALL TIMES DURING CONSTRUCTION.
7. AT THE COMPLETION OF ALL WORK AREA CONSTRUCTION, THE HAUL ROUTE AND CONSTRUCTION EQUIPMENT PARKING AREA SHALL BE RESTORED TO PRE-CONSTRUCTION CONDITIONS PER THE SPECIFICATIONS.
8. WHENEVER CONSTRUCTION ACTIVITY NECESSITATES CLOSURE OF A RUNWAY OR TAXIWAY, THE AIRFIELD LIGHTING ASSOCIATED WITH THE CLOSED PAVEMENT SHALL BE TURNED OFF OR COMPLETELY COVERED, INCLUDING THE EDGE LIGHTS, SIGNAGE AND RUNWAY NAVAIDS. IF NECESSARY, CONTRACTOR SHALL PROVIDE TEMPORARY AIRFIELD LIGHTING CIRCUIT JUMPER CABLES, CONDUIT ENCASED ABOVE GROUND, DURING CONSTRUCTION TO MAINTAIN EXISTING LIGHTING CIRCUITS, UNLESS OTHERWISE APPROVED BY THE AIRPORT MANAGER. CONTRACTOR SHALL COORDINATE CLOSURES WITH THE AIRPORT MANAGER AT LEAST 7 DAYS IN ADVANCE SO NOTAMS CAN BE COORDINATED. IT IS THE RESPONSIBILITY OF THE AIRPORT MANAGER TO ISSUE ALL REQUIRED NOTAMS.
9. THE COSTS FOR PROVISION, PLACEMENT, MAINTENANCE AND REMOVAL OF BARRICADES/CLOSURE CROSSES ON THE AIRFIELD AND ALL ASSOCIATED INCIDENTALS SHALL BE PAID FOR UNDER ITEM AR150520 MOBILIZATION.
10. THE COSTS FOR CONSTRUCTION/MAINTENANCE OF HAUL ROUTE AND EQUIPMENT STAGING AREA AND ALL ASSOCIATED INCIDENTALS SHALL BE PAID FOR UNDER ITEM AR150540 HAUL ROUTE.

SAFETY PLAN COMPLIANCE DOCUMENT

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EAST AIRCRAFT PARKING RAMP EXPANSION & REHABILITATE PARTIAL PARALLEL TAXIWAY TO RUNWAY 9/27

IDA No: PRG-4558

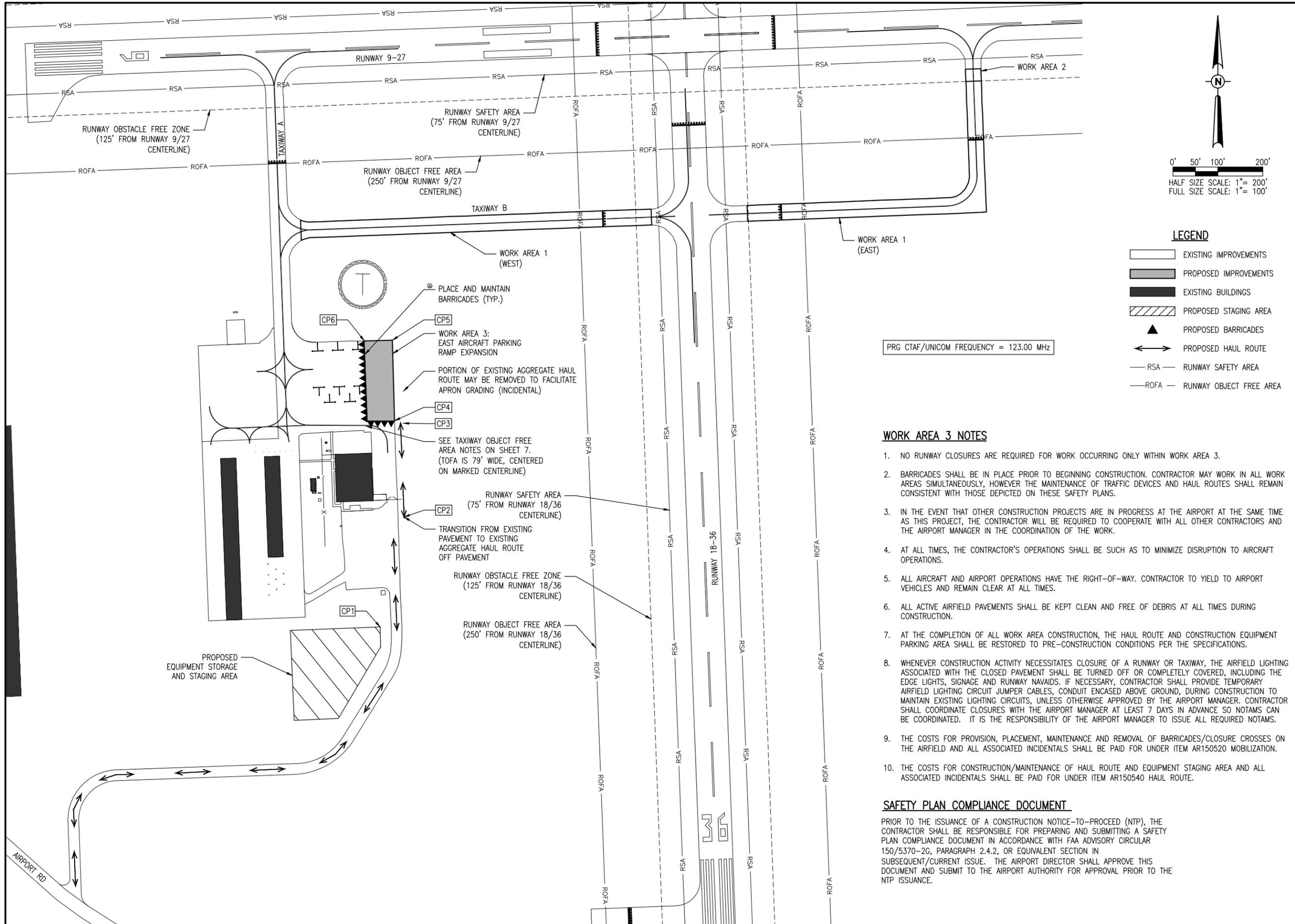
Contract No. ED019

NO.	DATE	DESCRIPTION		
		LAY	DWN	REV

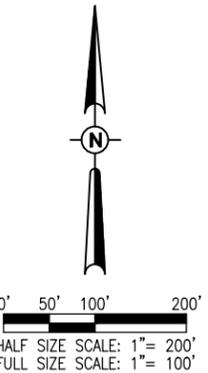
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DRAWN BY: JRH 11/29/2018
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PROPOSED SAFETY PLAN - WORK AREA 2

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PRG CTAF/UNICOM FREQUENCY = 123.00 MHz



LEGEND

- EXISTING IMPROVEMENTS
- PROPOSED IMPROVEMENTS
- EXISTING BUILDINGS
- PROPOSED STAGING AREA
- PROPOSED BARRICADES
- PROPOSED HAUL ROUTE
- RSA - RUNWAY SAFETY AREA
- ROFA - RUNWAY OBJECT FREE AREA

WORK AREA 3 NOTES

1. NO RUNWAY CLOSURES ARE REQUIRED FOR WORK OCCURRING ONLY WITHIN WORK AREA 3.
2. BARRICADES SHALL BE IN PLACE PRIOR TO BEGINNING CONSTRUCTION. CONTRACTOR MAY WORK IN ALL WORK AREAS SIMULTANEOUSLY, HOWEVER THE MAINTENANCE OF TRAFFIC DEVICES AND HAUL ROUTES SHALL REMAIN CONSISTENT WITH THOSE DEPICTED ON THESE SAFETY PLANS.
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SAFETY PLAN COMPLIANCE DOCUMENT

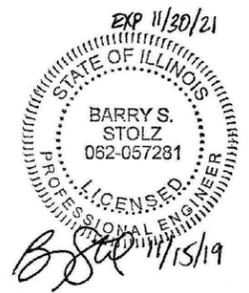
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 Board of Edgar County
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 Paris, IL 61944-8474
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EAST AIRCRAFT
 PARKING RAMP
 EXPANSION &
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 PARALLEL TAXIWAY TO
 RUNWAY 9/27

IDA No: PRG-4558

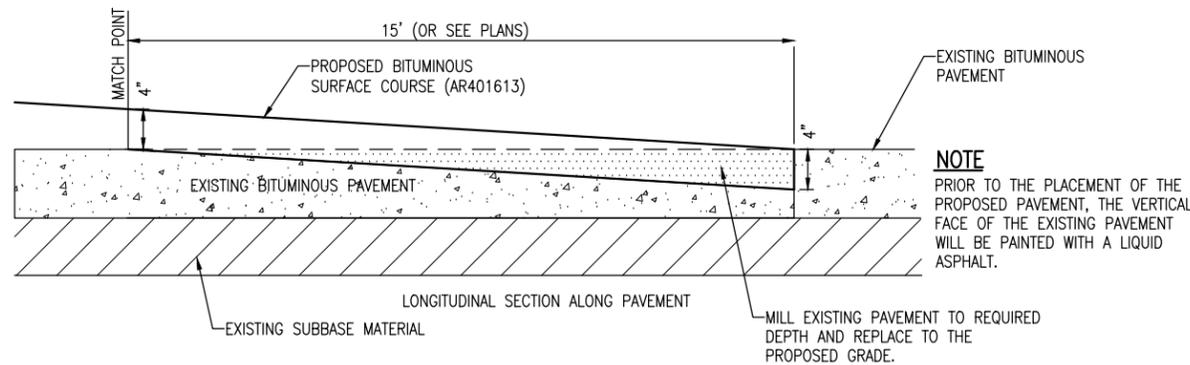
Contract No. ED019

NO.	DATE	DESCRIPTION		
		LAY	DWN	REV

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 PROJECT NO: 17A0016D
 CAD FILE: G-004-SFY.DWG
 LAYOUT BY: JRH 11/29/2018
 DRAWN BY: JRH 11/29/2018
 REVIEWED BY: BSS 11/15/2019

SHEET TITLE

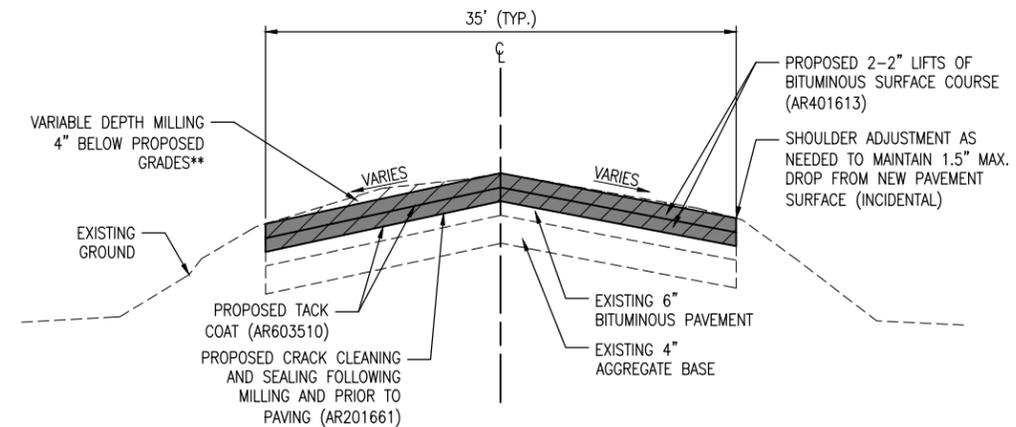
PROPOSED SAFETY
 PLAN - WORK AREA 3



PROPOSED BUTT JOINT TRANSITION DETAIL
NOT TO SCALE

AR401655 BUTT JOINT CONSTRUCTION NOTES

1. THE PROPOSED BUTT JOINTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH ITEM AR401655 "BUTT JOINT CONSTRUCTION" AS STATED IN THE STANDARD SPECIFICATIONS, ADOPTED APRIL 1, 2012.
2. THIS ITEM SHALL CONSIST OF REMOVING THE EXISTING BITUMINOUS PAVEMENT SURFACE BY MILLING IN ORDER TO CONSTRUCT A BUTT JOINT FOR THE TRANSITION OF THE PROPOSED BITUMINOUS OVERLAY AT THE LOCATIONS AS SHOWN ON THE PLANS.
3. THE PAVEMENT SURFACE WILL THEN BE MILLED TO A DEPTH OF 4" AT THE BUTT END AND WILL TAPER TO 0 IN. AT THE OPPOSITE END. THE PLANER MUST BE CAPABLE OF MILLING THE SURFACE TO THE DESIRED ELEVATIONS AND GRADES.
4. ANY ADJACENT PAVEMENT DAMAGED BY THE MILLING OPERATIONS WILL BE REPAIRED AT THE CONTRACTOR'S OWN EXPENSE.
5. ALL BITUMINOUS PAVEMENT MILLING AREAS WILL BE LOCATED AND MARKED BY THE CONTRACTOR AND ACCEPTED BY THE RESIDENT ENGINEER.
6. THE PAVEMENT MILLING WILL BE PAID FOR UNDER ITEM: AR401655 "BUTT JOINT CONSTRUCTION", PER S.Y.



PROPOSED TAXIWAY B/B1 - TYPICAL SECTION B-B
NOT TO SCALE

** PROPOSED MILLING SHALL ACCOMMODATE 4" OF PROPOSED BITUMINOUS PAVEMENT SUCH THAT THE PROPOSED CENTERLINE ELEVATION AND THE PROPOSED EDGE OF PAVEMENT ELEVATIONS MATCH THE RESPECTIVE EXISTING PAVEMENT ELEVATIONS. THE INTENT IS TO ESTABLISH A STRAIGHT GRADE FROM CENTERLINE TO EDGE OF PAVEMENT. SEE CROSS SECTION SHEETS FOR ADDITIONAL INFORMATION.



EAST AIRCRAFT
PARKING RAMP
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RUNWAY 9/27

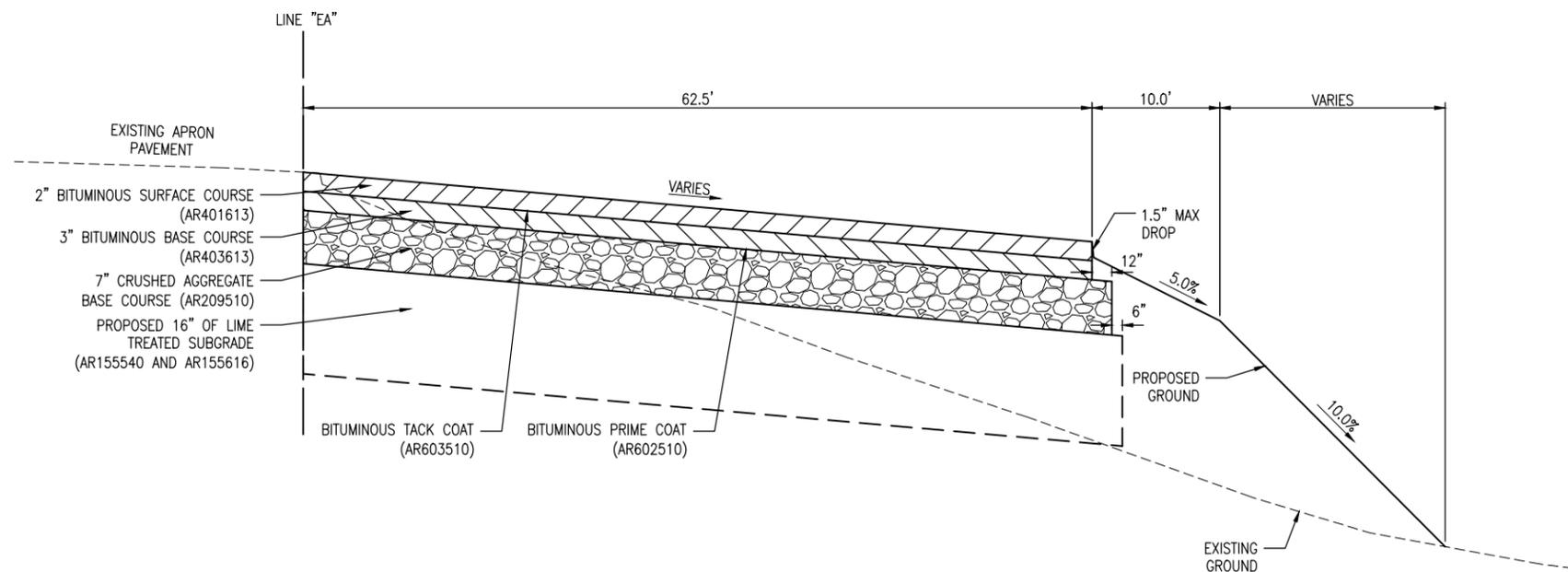
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Contract No. ED019

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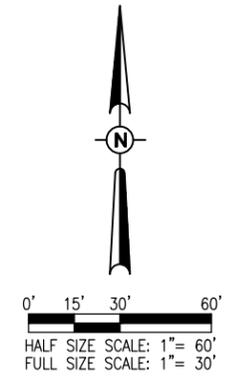
ISSUE: NOVEMBER 15, 2019
PROJECT NO: 17A0016D
CAD FILE: C-301-TYP.DWG
LAYOUT BY: JRH 12/07/2018
DRAWN BY: JRH 12/07/2018
REVIEWED BY: BSS 11/15/2019

SHEET TITLE



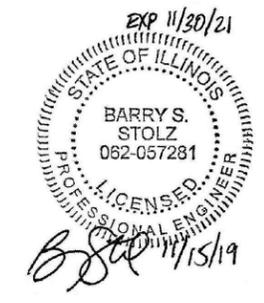
PROPOSED EAST APRON - TYPICAL SECTION A-A
NOT TO SCALE

PROPOSED TYPICAL
SECTIONS



LEGEND

	EXISTING IMPROVEMENTS
	PROPOSED IMPROVEMENTS
	EXISTING BUILDINGS
	PROPOSED PAVEMENT REMOVAL
	EXISTING ELECTRICAL DUCT
	PROPOSED ELECTRICAL DUCT (BY OTHERS)
	EXISTING LIGHTING CIRCUIT
	EXISTING STAKE MOUNTED TAXIWAY LIGHT
	EXISTING BASE MOUNTED TAXIWAY LIGHT
	EXISTING SPLICE CAN
	EXISTING ELECTRICAL MANHOLE
	EXISTING ELECTRICAL HANDHOLE



EAST AIRCRAFT PARKING RAMP EXPANSION & REHABILITATE PARTIAL PARALLEL TAXIWAY TO RUNWAY 9/27

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Contract No. ED019

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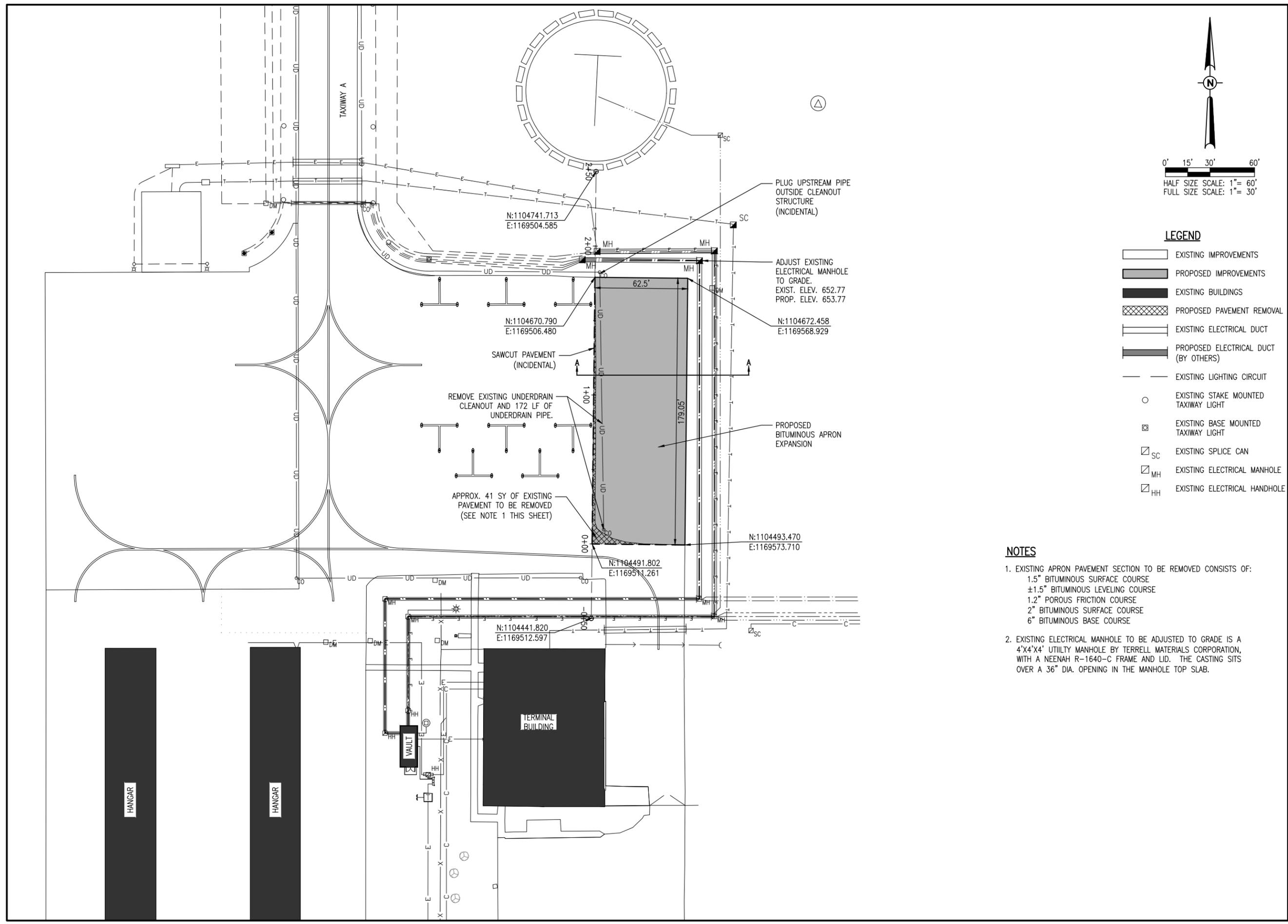
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SHEET TITLE

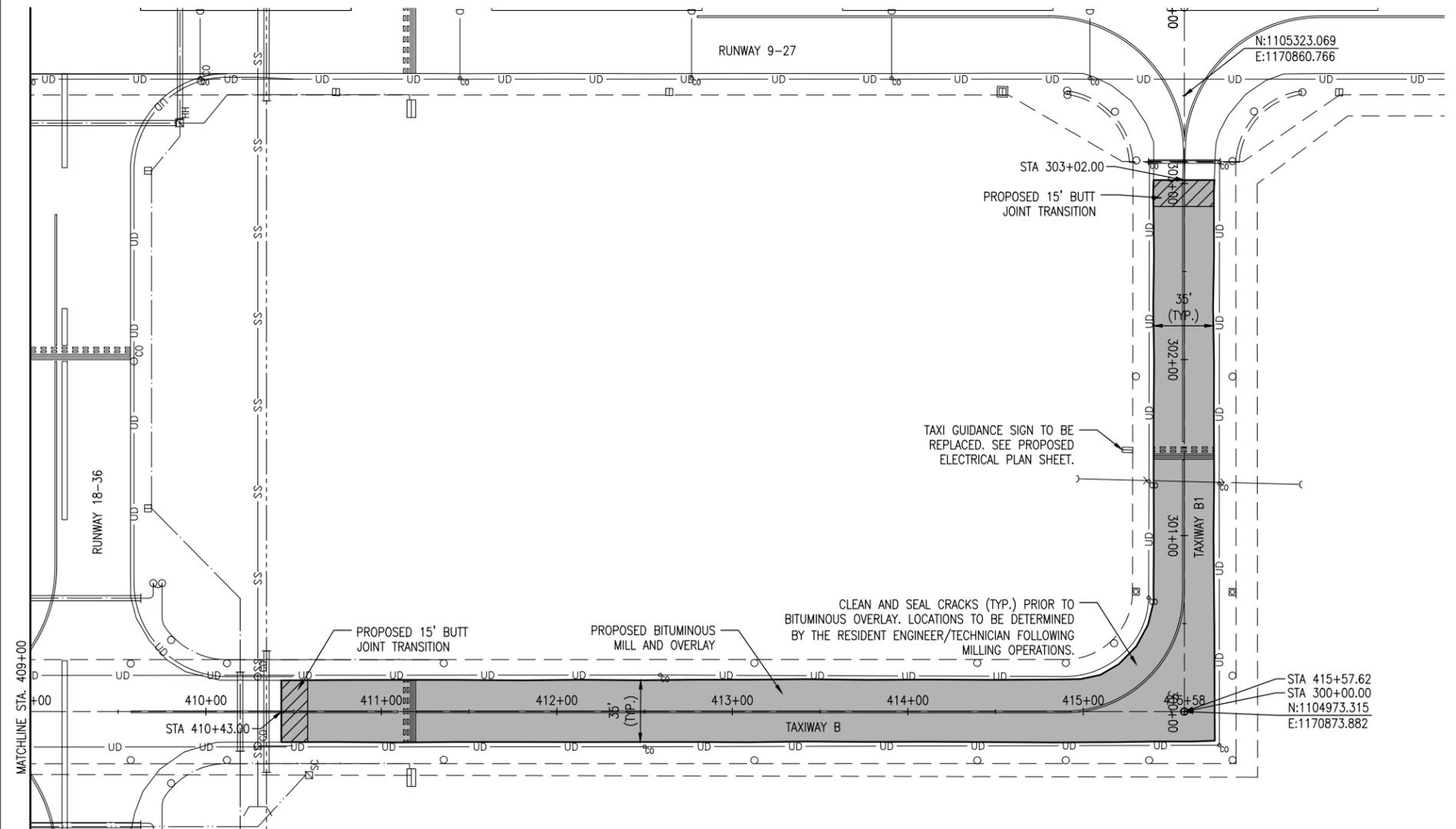
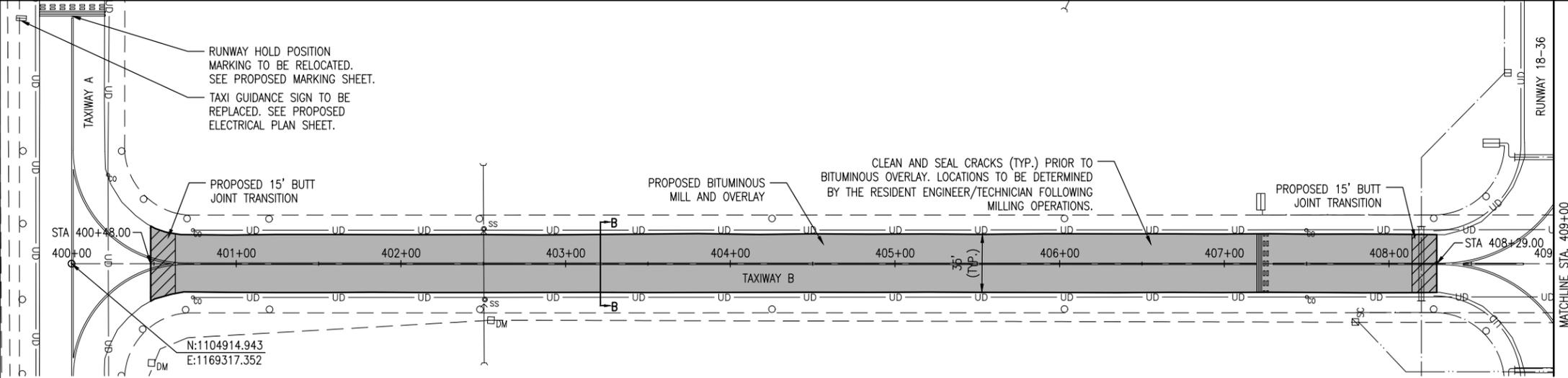
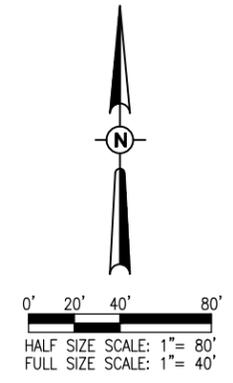
PROPOSED CONSTRUCTION PLAN - EAST APRON

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NOTES

- EXISTING APRON PAVEMENT SECTION TO BE REMOVED CONSISTS OF:
1.5" BITUMINOUS SURFACE COURSE
±1.5" BITUMINOUS LEVELING COURSE
1.2" POROUS FRICTION COURSE
2" BITUMINOUS SURFACE COURSE
6" BITUMINOUS BASE COURSE
- EXISTING ELECTRICAL MANHOLE TO BE ADJUSTED TO GRADE IS A 4'X4'X4' UTILITY MANHOLE BY TERRELL MATERIALS CORPORATION, WITH A NEENAH R-1640-C FRAME AND LID. THE CASTING SITS OVER A 36" DIA. OPENING IN THE MANHOLE TOP SLAB.



- LEGEND**
- EXISTING IMPROVEMENTS
 - PROPOSED IMPROVEMENTS
 - EXISTING BUILDINGS
 - PROPOSED BUTT JOINT
 - EXISTING ELECTRICAL DUCT
 - EXISTING LIGHTING CIRCUIT
 - EXISTING STAKE MOUNTED TAXIWAY LIGHT
 - EXISTING BASE MOUNTED TAXIWAY LIGHT
 - EXISTING STAKE MOUNTED RUNWAY LIGHT
 - EXISTING BASE MOUNTED RUNWAY LIGHT
 - EXISTING TAXI GUIDANCE SIGN
 - EXISTING SPLICE CAN
 - EXISTING ELECTRICAL MANHOLE
 - EXISTING ELECTRICAL HANDHOLE



**EAST AIRCRAFT
PARKING RAMP
EXPANSION &
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PARALLEL TAXIWAY TO
RUNWAY 9/27**

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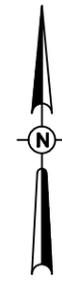
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SHEET TITLE

**PROPOSED
CONSTRUCTION
PLAN - PARALLEL
TAXIWAY**

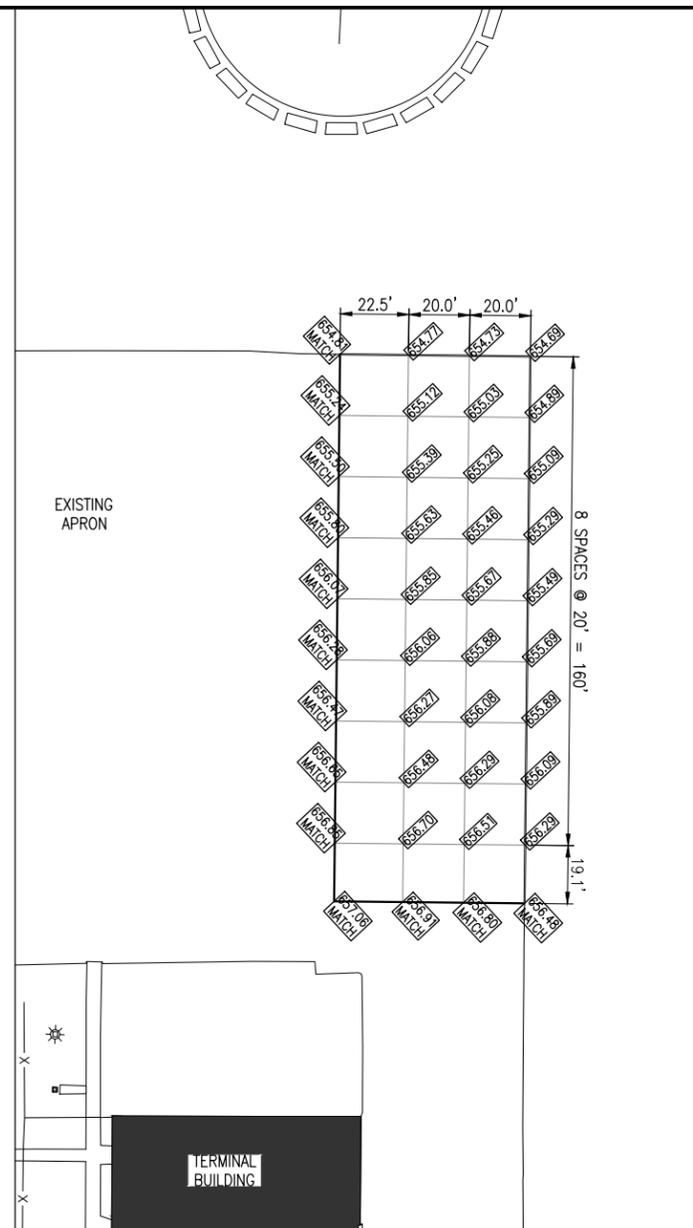
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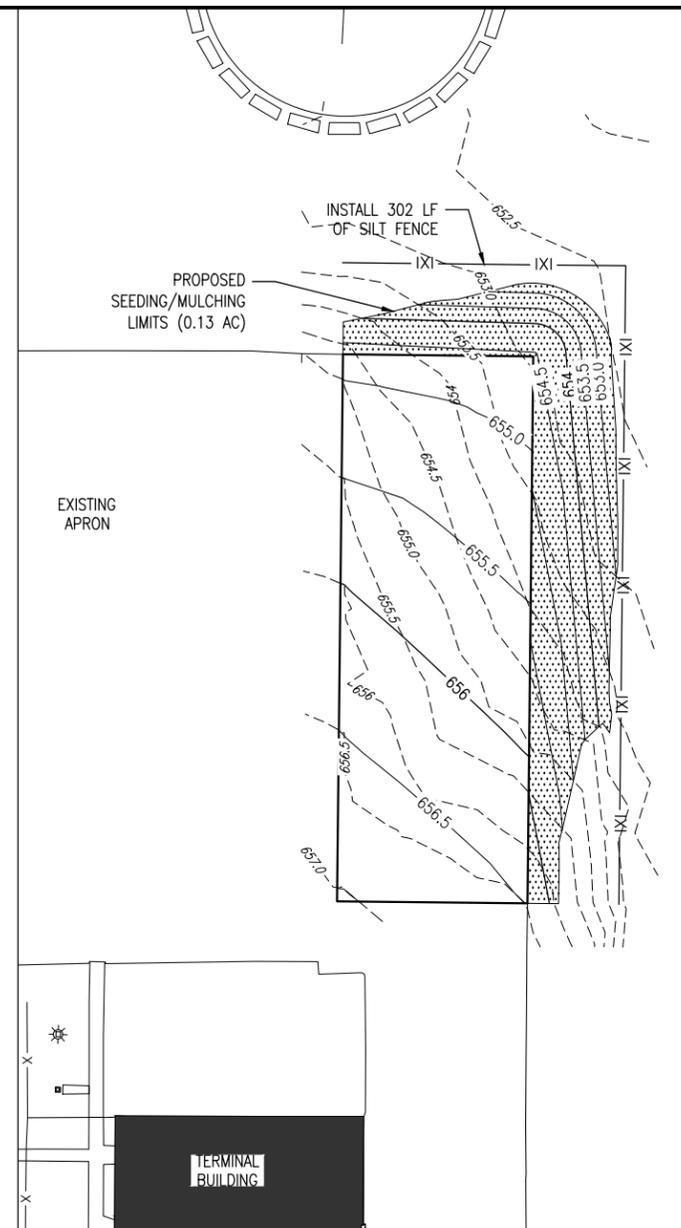
0' 15' 30' 60'
HALF SIZE SCALE: 1" = 60'
FULL SIZE SCALE: 1" = 30'

LEGEND

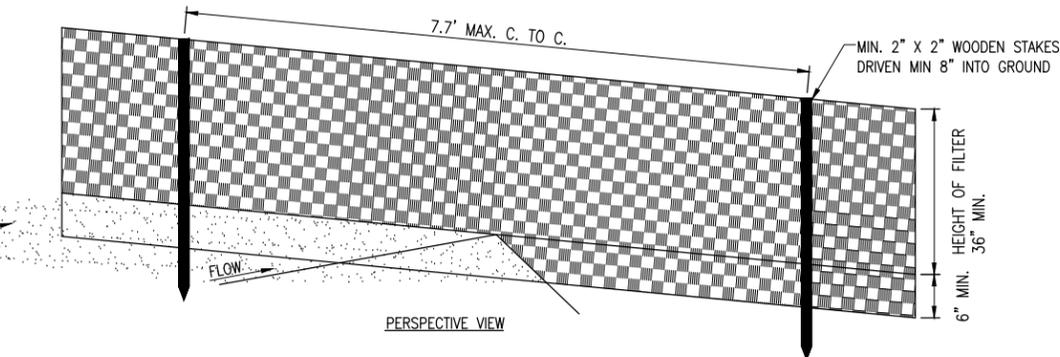
- EXISTING IMPROVEMENTS
- PROPOSED IMPROVEMENTS
- EXISTING BUILDINGS
- PROPOSED SPOT ELEVATION
- PROPOSED SEEDING/MULCHING
- PROPOSED SILT FENCE



PROPOSED STAKING PLAN

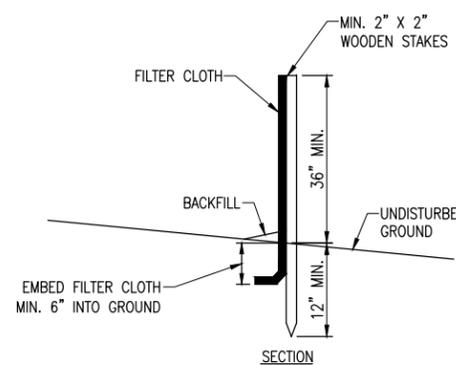


PROPOSED SWPP PLAN



SILT FENCE DETAIL

NO SCALE



SECTION

STORM WATER POLLUTION PREVENTION NOTES

1. THE CONTRACTOR SHALL IMPLEMENT ALL PROVISIONS OF THE CONTRACT DOCUMENTS TO ASSURE THAT STORM WATER POLLUTION PREVENTION ITEMS ARE CONSTRUCTED AND MAINTAINED IN A TIMELY MANNER. SEDIMENTATION MUST NOT BE TRANSPORTED OFF THE CONSTRUCTION SITE. PERMANENT DRAINAGE FEATURES AND VEGETATIVE MEASURES SHALL BE PROVIDED AS SOON AS POSSIBLE.
2. THE CONTRACTOR SHALL BE REQUIRED TO IMPLEMENT AND MAINTAIN STORM WATER POLLUTION PREVENTION PRACTICES AND MEASURES PRIOR TO THE STRIPPING OF EXISTING VEGETATION WHERE EVER POSSIBLE AND AS SOON AS CONSTRUCTION PERMITS IN OTHER AREAS. POLLUTION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, INCLUDING THESE CONSTRUCTION PLANS, AND WITH STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, ILLINOIS ENVIRONMENTAL PROTECTION AGENCY, CURRENT ISSUE. THE CONTRACTOR SHALL ADJUST HIS OPERATIONS AND IMPLEMENT POLLUTION CONTROL MEASURES SO THAT NO RUNOFF FROM STRIPPED AREAS WILL LEAVE THE CONSTRUCTION SITE OTHER THAN THROUGH SEDIMENT TRAPS OR OTHER SUITABLE CONTROL MEASURES.
3. POLLUTION CONTROL ITEMS SHALL BE PROVIDED AS NOTED ON THE STORM WATER POLLUTION PREVENTION PLAN AND IN THE STORM WATER POLLUTION PREVENTION DETAILS AND AS DIRECTED BY THE ENGINEER. THE LIMITS OF SUCH MEASURES SHALL BE STAKED BY THE CONTRACTOR PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. SUCH LIMITS MAY BE ADJUSTED BY THE ENGINEER TO ACCOUNT FOR ACTUAL SITE CONDITIONS EXPERIENCED DURING CONSTRUCTION. ADDITIONAL COMPENSATION FOR MEASURES EXCEEDING THE PLAN QUANTITIES WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR EACH ITEM.
4. THE CONTRACTOR IS TO MAINTAIN AND ADJUST, REPAIR OR REPLACE ALL POLLUTION PREVENTION MEASURES AS REQUIRED OR AS DIRECTED BY THE ENGINEER UNTIL PERMANENT VEGETATION HAS BEEN ESTABLISHED. MAINTENANCE OF POLLUTION CONTROL MEASURES IS TO BE PROVIDED AT NO ADDITIONAL COST TO THE CONTRACT.



EAST AIRCRAFT
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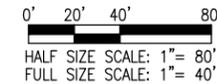
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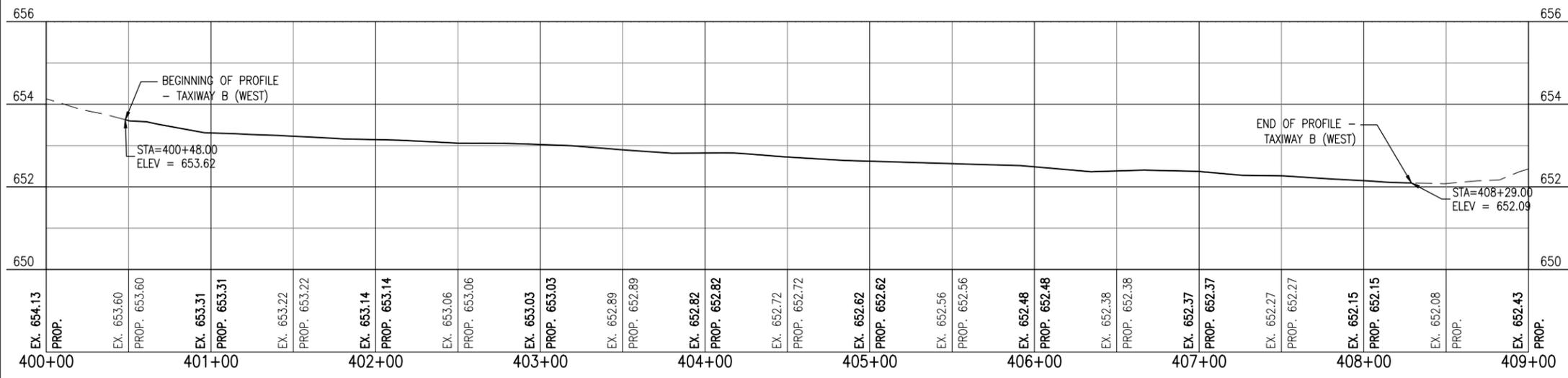
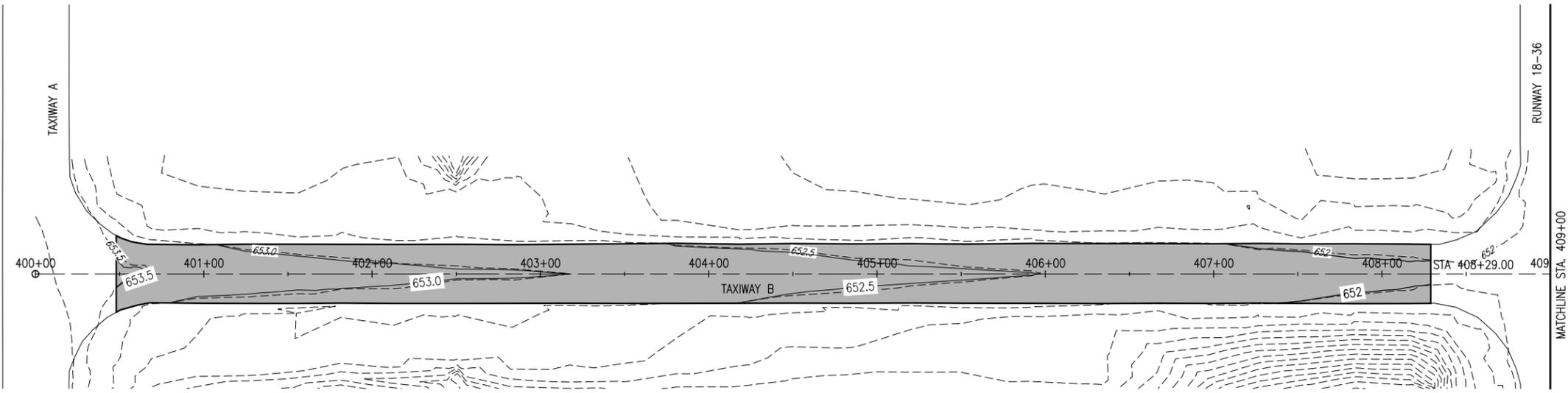
SHEET TITLE

**PROPOSED STAKING
& SWPP PLAN - EAST
APRON**



LEGEND

- EXISTING IMPROVEMENTS
- PROPOSED IMPROVEMENTS
- EXISTING BUILDINGS



PROFILE - TAXIWAY B (WEST)

400+00	EX. 654.13 PROP.	401+00	EX. 653.60 PROP. 653.60	402+00	EX. 653.14 PROP. 653.14	403+00	EX. 653.06 PROP. 653.06	404+00	EX. 652.82 PROP. 652.82	405+00	EX. 652.62 PROP. 652.62	406+00	EX. 652.48 PROP. 652.48	407+00	EX. 652.37 PROP. 652.37	408+00	EX. 652.15 PROP. 652.15	409+00	EX. 652.08 PROP.
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**EAST AIRCRAFT
PARKING RAMP
EXPANSION &
REHABILITATE PARTIAL
PARALLEL TAXIWAY TO
RUNWAY 9/27**

IDA No: PRG-4558

Contract No. ED019

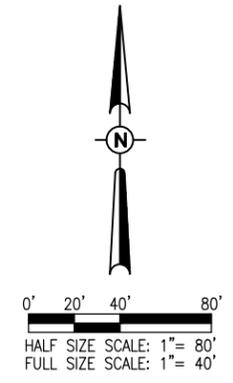
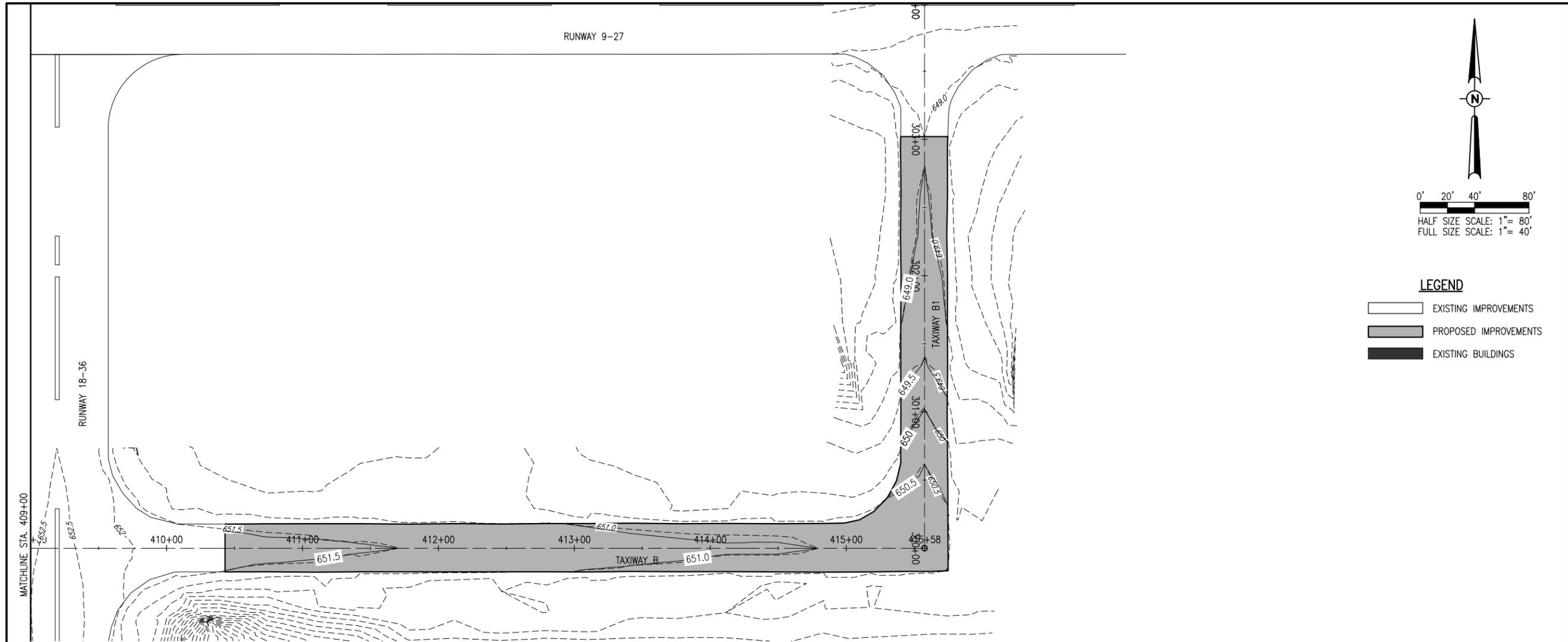
NO.	DATE	DESCRIPTION		
		LAY	DWN	REV

ISSUE: NOVEMBER 15, 2019
PROJECT NO: 17A0016D
CAD FILE: C-701-PNP.DWG
LAYOUT BY: JRH 11/30/2018
DRAWN BY: JRH 11/30/2018
REVIEWED BY: BSS 11/15/2019

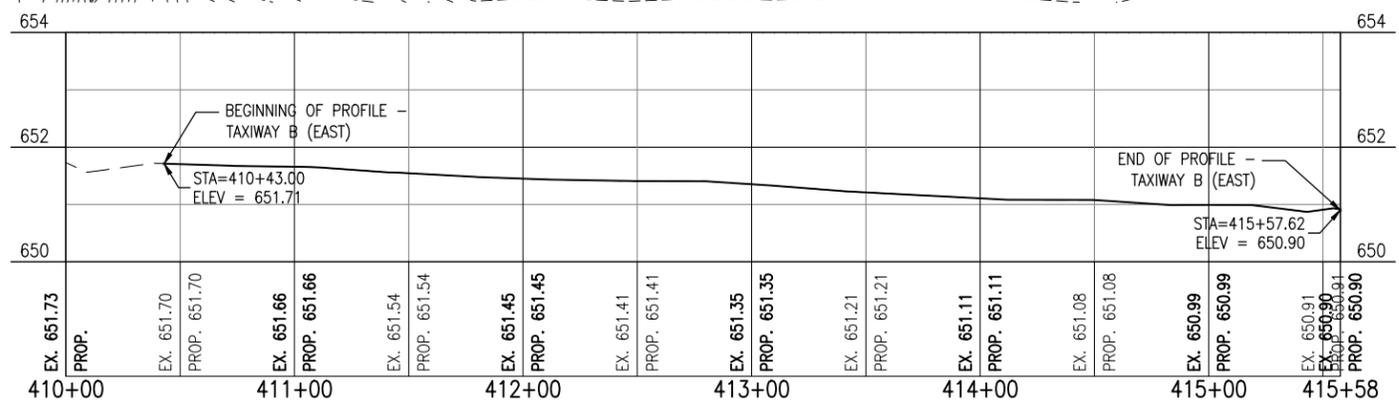
SHEET TITLE

**PROPOSED PLAN
AND PROFILE -
PARALLEL TAXIWAY
(WEST)**

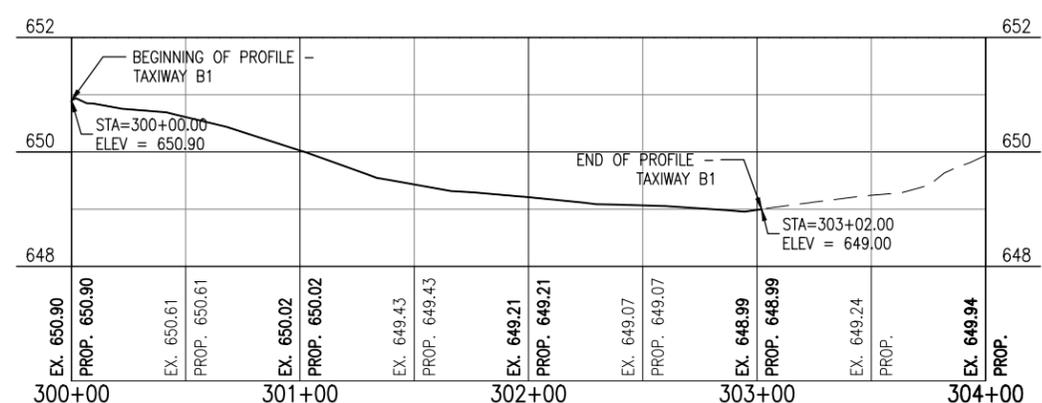
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- LEGEND**
- EXISTING IMPROVEMENTS
 - PROPOSED IMPROVEMENTS
 - EXISTING BUILDINGS



PROFILE - TAXIWAY B (EAST)



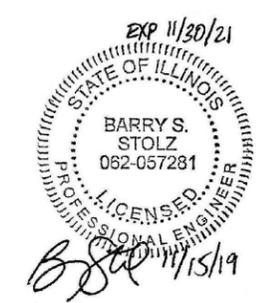
PROFILE - TAXIWAY B1



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 www.hanson-inc.com
 Hanson Professional Services Inc.
 1525 S. 6th Street
 Springfield, IL 62703
 phone: 217-788-2450
 fax: 217-788-2503

Illinois Licensed
 Professional Service Corporation
 #184-001084

Edgar County Airport
 Board of Edgar County
 15551 Airport Rd.
 Paris, IL 61944-8474
 Telephone: 217.465.4151



EAST AIRCRAFT
 PARKING RAMP
 EXPANSION &
 REHABILITATE PARTIAL
 PARALLEL TAXIWAY TO
 RUNWAY 9/27

IDA No: PRG-4558

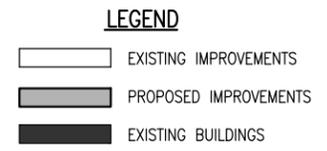
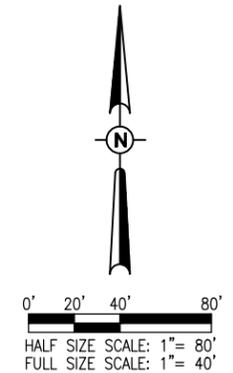
Contract No. ED019

NO.	DATE	DESCRIPTION		
		LAY	DWN	REV

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SHEET TITLE

PROPOSED PLAN
 AND PROFILE -
 PARALLEL TAXIWAY
 (EAST)



EAST AIRCRAFT
PARKING RAMP
EXPANSION &
REHABILITATE PARTIAL
PARALLEL TAXIWAY TO
RUNWAY 9/27

IDA No: PRG-4558

Contract No. ED019

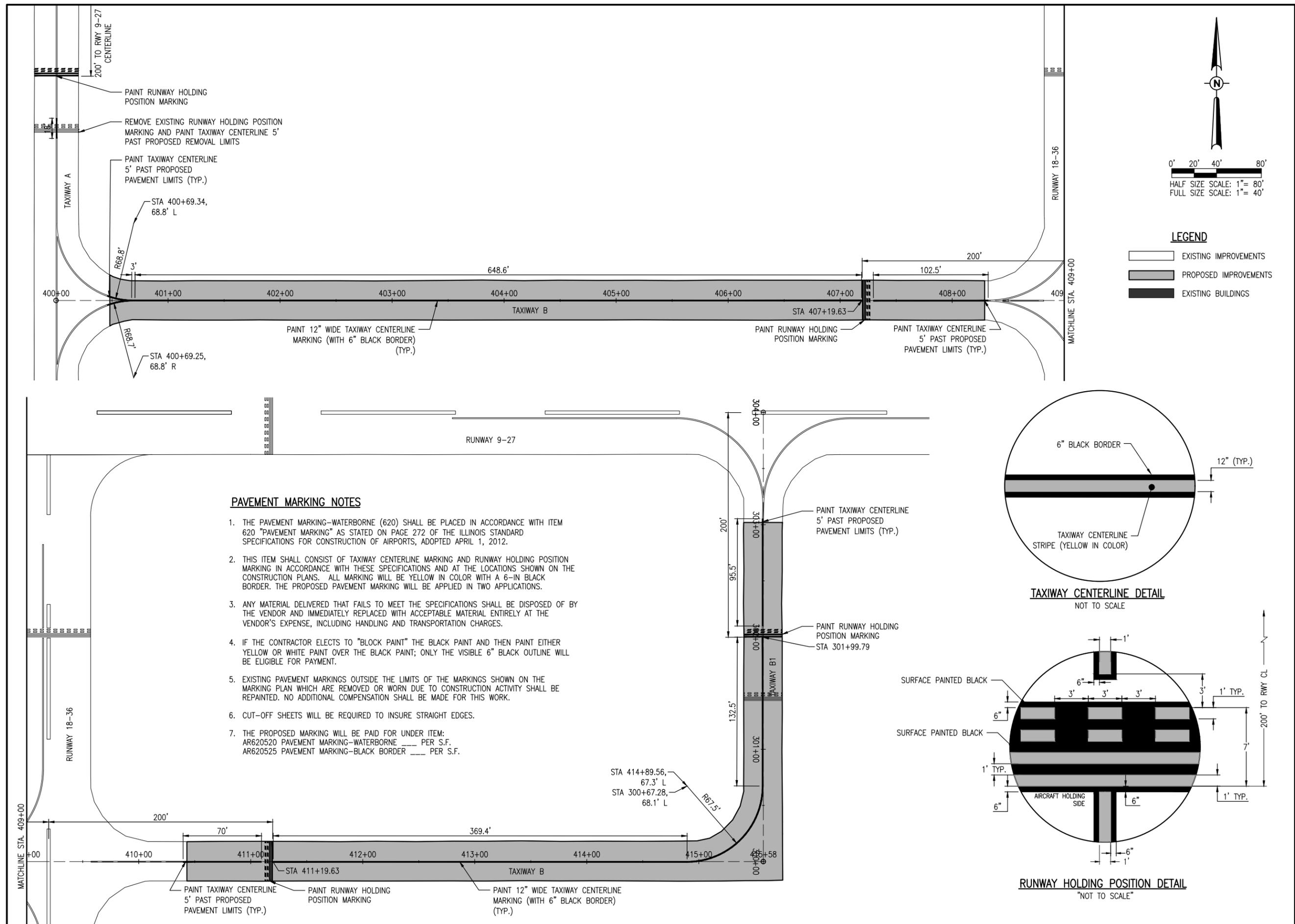
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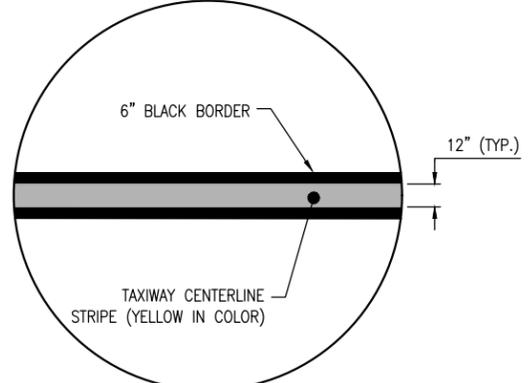
PROPOSED MARKING
PLAN

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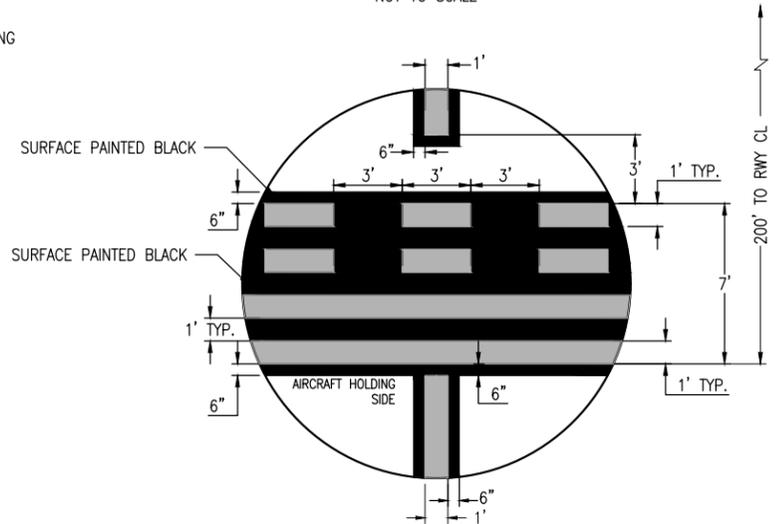


PAVEMENT MARKING NOTES

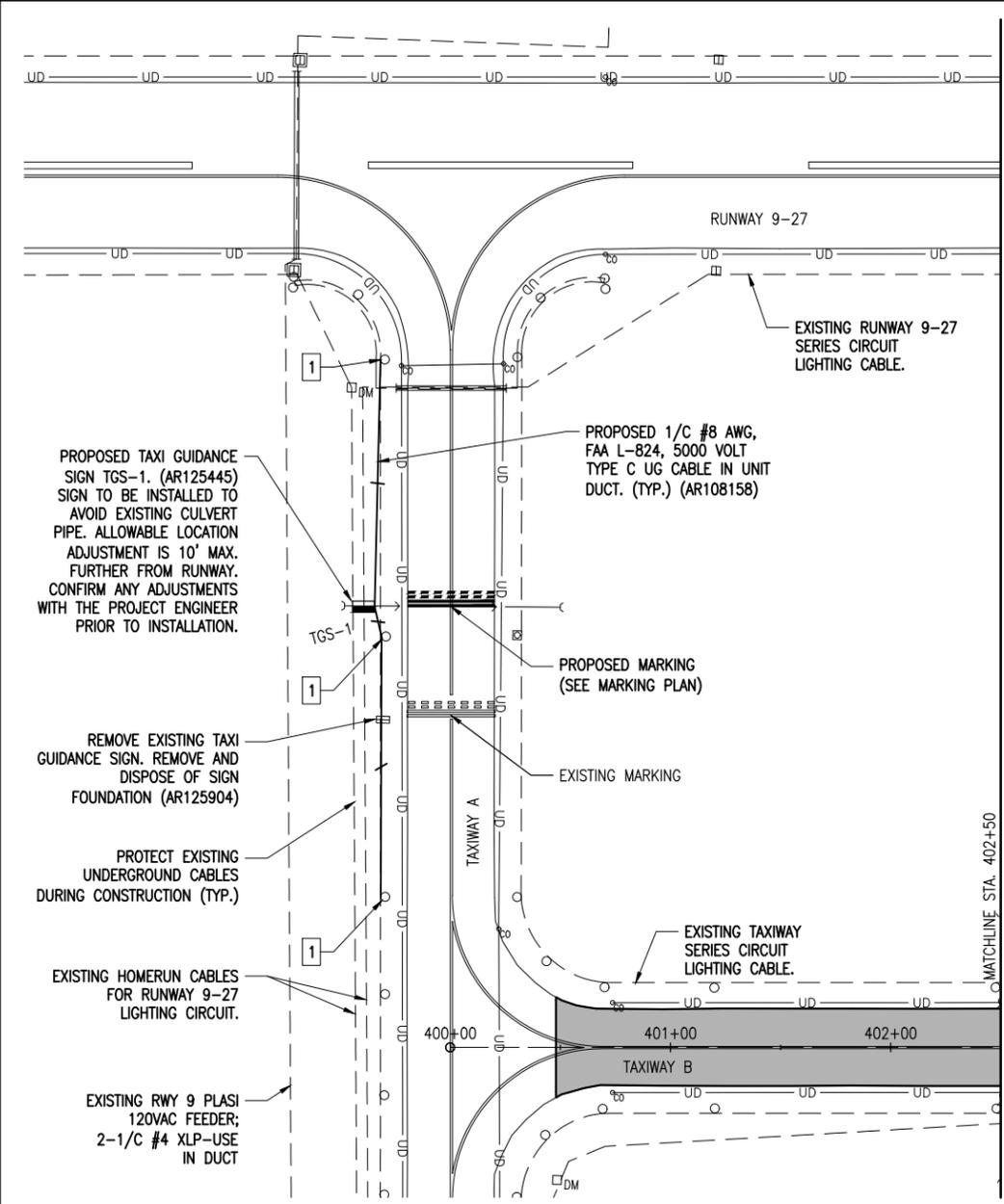
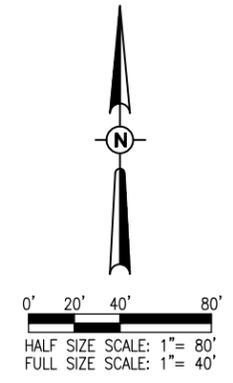
1. THE PAVEMENT MARKING-WATERBORNE (620) SHALL BE PLACED IN ACCORDANCE WITH ITEM 620 "PAVEMENT MARKING" AS STATED ON PAGE 272 OF THE ILLINOIS STANDARD SPECIFICATIONS FOR CONSTRUCTION OF AIRPORTS, ADOPTED APRIL 1, 2012.
2. THIS ITEM SHALL CONSIST OF TAXIWAY CENTERLINE MARKING AND RUNWAY HOLDING POSITION MARKING IN ACCORDANCE WITH THESE SPECIFICATIONS AND AT THE LOCATIONS SHOWN ON THE CONSTRUCTION PLANS. ALL MARKING WILL BE YELLOW IN COLOR WITH A 6-IN BLACK BORDER. THE PROPOSED PAVEMENT MARKING WILL 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. IF THE CONTRACTOR ELECTS TO "BLOCK PAINT" THE BLACK PAINT AND THEN PAINT EITHER YELLOW OR WHITE PAINT OVER THE BLACK PAINT; ONLY THE VISIBLE 6" BLACK OUTLINE WILL BE ELIGIBLE FOR PAYMENT.
5. EXISTING PAVEMENT MARKINGS OUTSIDE THE LIMITS OF THE MARKINGS SHOWN ON THE MARKING PLAN WHICH ARE REMOVED OR WORN DUE TO CONSTRUCTION ACTIVITY SHALL BE REPAINTED. NO ADDITIONAL COMPENSATION SHALL BE MADE FOR THIS WORK.
6. CUT-OFF SHEETS WILL BE REQUIRED TO INSURE STRAIGHT EDGES.
7. THE PROPOSED MARKING WILL BE PAID FOR UNDER ITEM:
AR620520 PAVEMENT MARKING-WATERBORNE ___ PER S.F.
AR620525 PAVEMENT MARKING-BLACK BORDER ___ PER S.F.



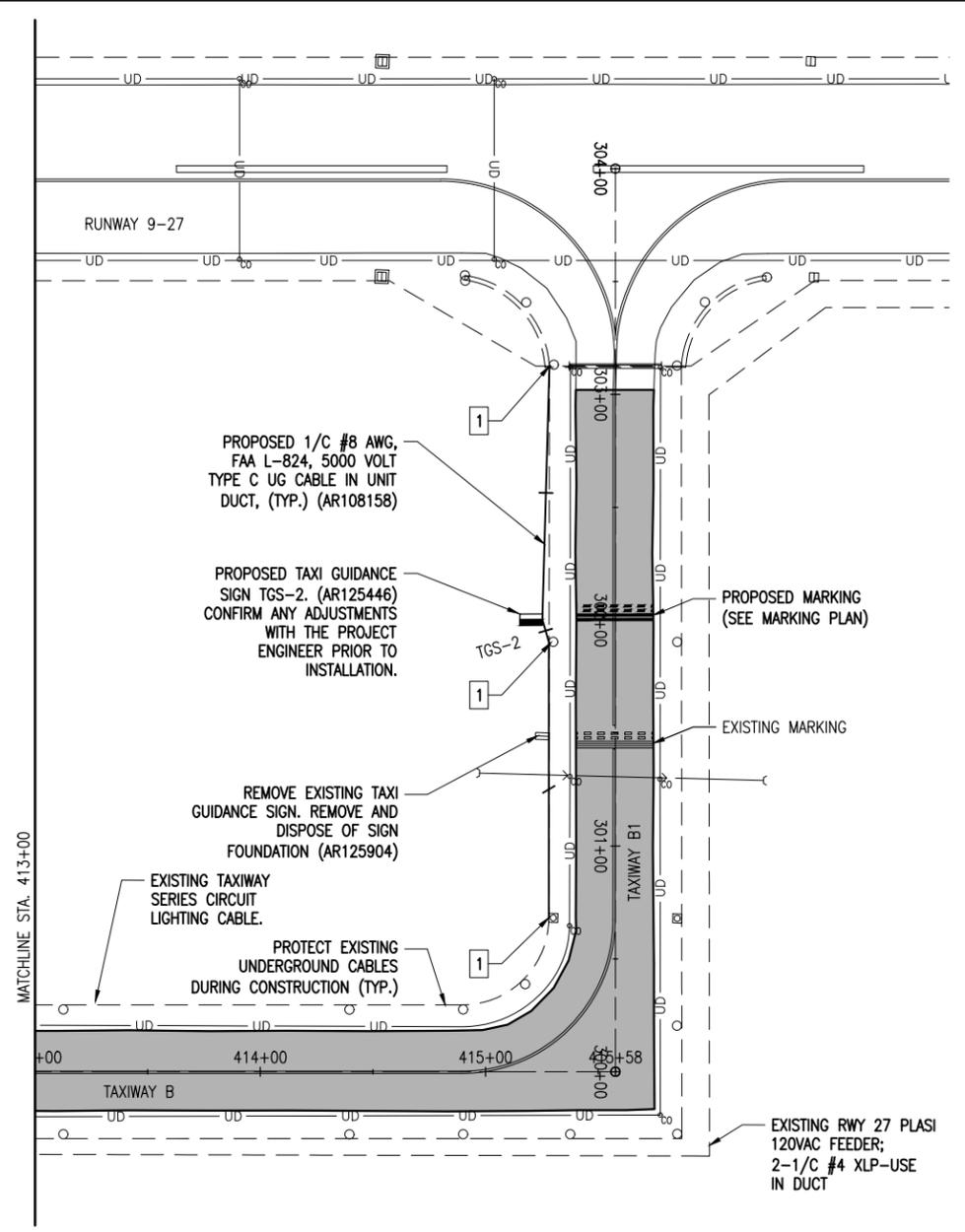
TAXIWAY CENTERLINE DETAIL
NOT TO SCALE



RUNWAY HOLDING POSITION DETAIL
"NOT TO SCALE"



GUIDANCE SIGN PLAN - TAXIWAY A



GUIDANCE SIGN PLAN - TAXIWAY B1

LEGEND

- EXISTING PAVEMENT
- PROPOSED IMPROVEMENTS
- EXISTING ELECTRICAL DUCT
- EXISTING UNDERDRAIN
- EXISTING RUNWAY/TAXIWAY CIRCUIT
- PROPOSED 1/C #8 AWG, FAA L-824, 5000 VOLT TYPE C UNDERGROUND CABLE IN UNIT DUCT
- EXISTING STAKE MOUNTED TAXIWAY LIGHT
- EXISTING BASE MOUNTED TAXIWAY LIGHT
- EXISTING STAKE MOUNTED RUNWAY LIGHT
- EXISTING BASE MOUNTED RUNWAY LIGHT
- EXISTING TAXI GUIDANCE SIGN
- PROPOSED TAXI GUIDANCE SIGN

NOTES

1. SEE AIRFIELD LIGHTING NOTES SHEET.
2. CONTRACTOR SHALL FIELD VERIFY RESPECTIVE CIRCUITS AND POWER SOURCES PRIOR TO REMOVING, DISCONNECTING, RELOCATING, WORKING ON, INSTALLING, AND/OR CONNECTING THE RESPECTIVE AIRFIELD LIGHTING, TAXI SIGN, NAVIAD, OR OTHER DEVICE.
3. CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF FAA AC NO. 150/5370-2G (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.

KEYED NOTES

- 1** INTERFACE/CONNECT NEW CABLES TO EXISTING LIGHT (INCIDENTAL)

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 WHATSOEVER 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/TECHNICIAN 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.



EAST AIRCRAFT
PARKING RAMP
EXPANSION &
REHABILITATE PARTIAL
PARALLEL TAXIWAY TO
RUNWAY 9/27

IDA No: PRG-4558

Contract No. ED019

NO.	DATE	DESCRIPTION		
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SHEET TITLE

PROPOSED
ELECTRICAL PLAN



EAST AIRCRAFT
PARKING RAMP
EXPANSION &
REHABILITATE PARTIAL
PARALLEL TAXIWAY TO
RUNWAY 9/27

IDA No: PRG-4558

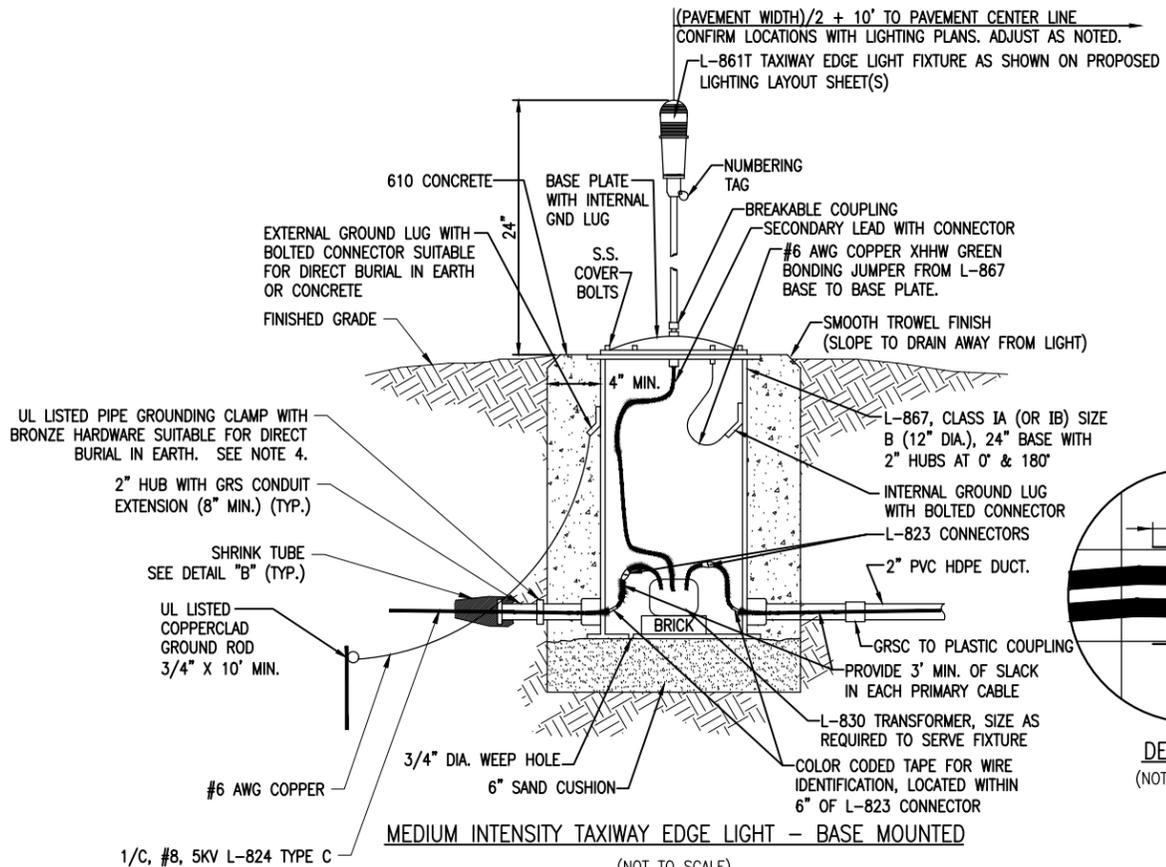
Contract No. ED019

NO.	DATE	DESCRIPTION		
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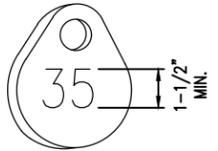
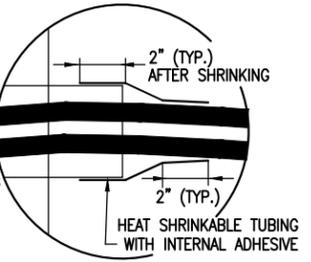
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TAXIWAY LIGHT
DETAILS (FOR
REFERENCE)

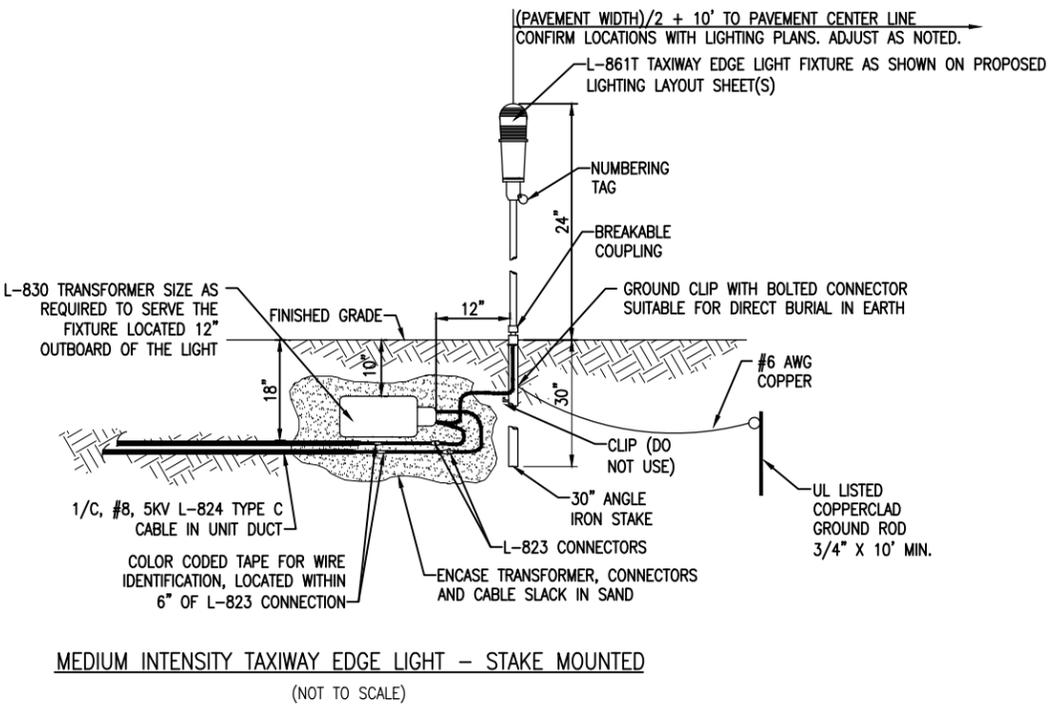


MEDIUM INTENSITY TAXIWAY EDGE LIGHT - BASE MOUNTED
(NOT TO SCALE)

L-867 BASE WITH 1-3" HUB IS ALSO ACCEPTABLE, FOR INTERFACE TO CABLE IN 3/4" UNIT DUCT. L-867 BASES WITH 3" HUBS MAY WORK BETTER FOR TAXIWAY LIGHTS INSTALLED ON TAXIWAY B-WEST DUE TO SITE CONDITIONS AND CABLE ROUTING. FOR INTERFACE TO 2" DUCT 2" HUBS LOCATED AT 0°, 180° ARE REQUIRED. ADDITIONAL HUBS WILL BE REQUIRED TO ACCOMMODATE MORE THAN TWO DUCT INTERFACES



NOTE:
AFFIX NON-CORROSIVE TAG TO FIXTURE FACING RUNWAY WITH SET SCREW, WIRE TIE, OR METAL BAND. NUMERALS SHALL BE ENGRAVED FOR PERMANENT READABILITY.

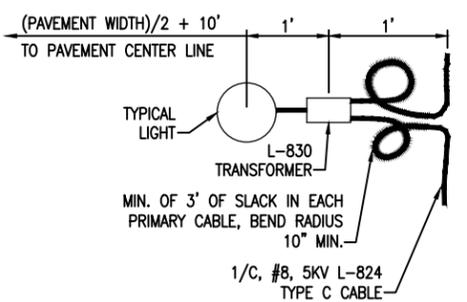
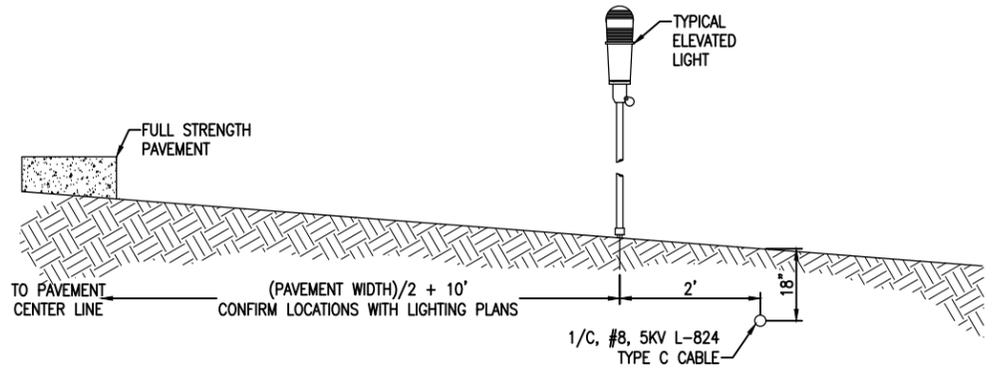


MEDIUM INTENSITY TAXIWAY EDGE LIGHT - STAKE MOUNTED
(NOT TO SCALE)

- NOTES:**
- SEE ELECTRICAL NOTES SHEETS.
 - SEE "ELECTRICAL NOTES SHEET 2" AND "GROUNDING NOTES" SHEET FOR GROUNDING NOTES FOR AIRFIELD LIGHTING.
 - SEE PROPOSED LIGHTING LAYOUT SHEET(S) FOR LIGHT LOCATIONS
 - WHERE GROUND LUGS ARE NOT ACCESSIBLE ON BASE CANS, PROVIDE A UL LISTED PIPE GROUND CLAMP RATED FOR DIRECT BURIAL IN EARTH AND BOND TO THE METAL CONDUIT EXTENSION TO PROVIDE GROUND PATH TO LIGHT BASE.

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 OR MOUNTING STAKE AND A 3/4-INCH DIAMETER BY 10-FEET LONG (MINIMUM) UL LISTED COPPER CLAD GROUND ROD.

THIS DETAILS SHEET IS PROVIDED FOR CONTRACTOR REFERENCE ONLY. CONTRACTOR WILL BE INTERFACING WITH EXISTING EDGE LIGHTS. NO PROPOSED LIGHTS ARE INCLUDED ON THE PROJECT.



LIGHT AND CABLE INSTALLATION DETAIL
(NOT TO SCALE)

NOTES:
SEE PROPOSED LIGHTING LAYOUT SHEET FOR LIGHT LOCATIONS.



EAST AIRCRAFT
PARKING RAMP
EXPANSION &
REHABILITATE PARTIAL
PARALLEL TAXIWAY TO
RUNWAY 9/27

IDA No: PRG-4558

Contract No. ED019

NO.	DATE	DESCRIPTION		
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SHEET TITLE

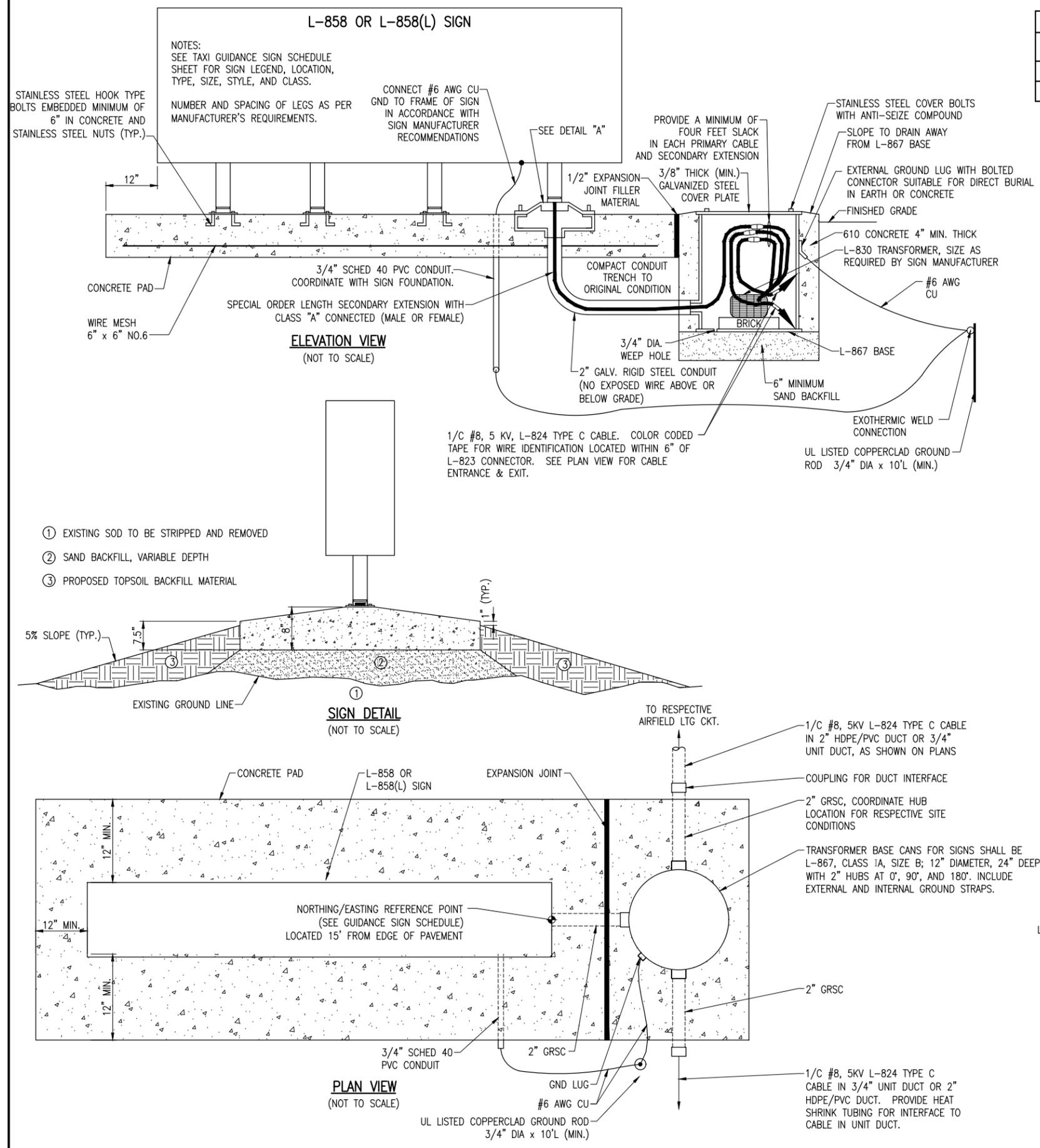
TAXI GUIDANCE SIGN
DETAILS

SIGN NUMBER	LOCATION	SIDE A	SIDE B	NORTHING	EASTING
TGS-1	TAXIWAY A AT RUNWAY 9-27 HOLD POSITION	A 9-27	RAMP ↑	1105113.26	1169275.57
TGS-2	TAXIWAY B1 AT RUNWAY 9-27 HOLD POSITION	B1 9-27	RAMP →	1105172.28	1170834.00

- A** TYPE L-858(L) LOCATION SIGN - YELLOW LEGEND AND BORDER ON A BLACK BACKGROUND
- 9-27** TYPE L-858R(L) MANDATORY INSTRUCTION SIGN - BLACK OUTLINE ON OUTSIDE EDGE OF WHITE LEGEND ON A RED BACKGROUND
- RAMP ↑** TYPE L-858Y(L) DIRECTION, DESTINATION, AND BOUNDARY SIGN - BLACK LEGEND ON A YELLOW BACKGROUND

THE PROPOSED TAXI GUIDANCE SIGNS SHALL CONFORM TO ADVISORY CIRCULAR 150/5345 44 (CURRENT ISSUE IN EFFECT) AND BE FAA-APPROVED FOR TYPE L-858Y(L) DIRECTION, DESTINATION, AND BOUNDARY SIGNS (BLACK LEGEND ON YELLOW BACKGROUND); TYPE L-858R(L) MANDATORY INSTRUCTION SIGN (BLACK OUTLINE ON OUTSIDE EDGE OF WHITE LEGEND ON RED BACKGROUND); AND/OR TYPE L-858L(L) LOCATION SIGN (YELLOW LEGEND AND BORDER ON BLACK BACKGROUND). THE SIGNS 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 DEGREES F TO 131 DEGREES F; MODE 2, TO WITHSTAND WIND LOADS OF 200 M.P.H., BASE-MOUNTED, DOUBLE-SIDED, AS SPECIFIED ON THE PLANS. THE PROPOSED TAXI GUIDANCE SIGNS SHALL USE LED (LIGHT EMITTING DIODE) TYPE ILLUMINATION. ALSO SEE FAA ENGINEERING BRIEF 67 (MOST CURRENT ISSUE) "LIGHT SOURCES OTHER THAN INCANDESCENT AND XENON FOR AIRPORT AND OBSTRUCTION LIGHTING FIXTURES".

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 OR MOUNTING STAKE AND A 3/4-INCH DIAMETER BY 10-FEET LONG (MINIMUM) UL LISTED COPPER CLAD GROUND ROD.



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EAST AIRCRAFT
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RUNWAY 9/27

IDA No: PRG-4558

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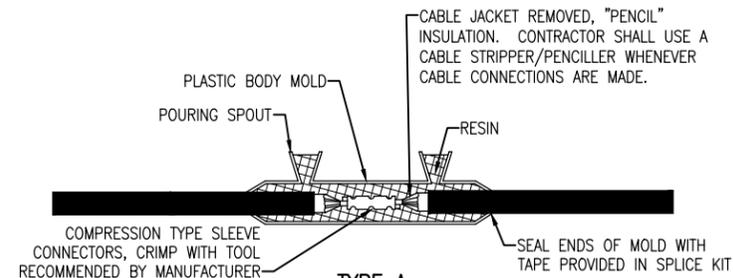
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SHEET TITLE

AIRFIELD LIGHTING
CABLE SPLICE
DETAILS

NOTES:

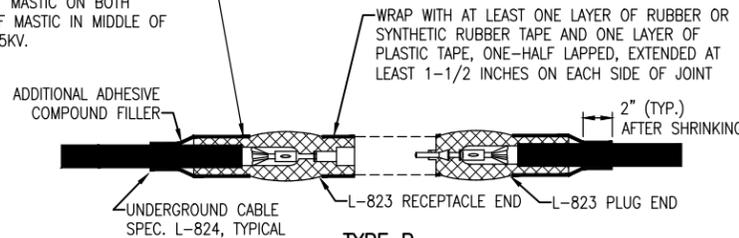
1. SPLICE DETAILS ARE PROVIDED FOR NEW WORK AND TO ASSIST IN REPAIRS OF ACCIDENTAL OR UNEXPECTED INTERRUPTIONS AND/OR CUTS TO AIRFIELD LIGHTING CABLES.
2. KEEP ON HAND A MINIMUM OF 10 SETS OF SPLICE KITS FOR L-823 CONNECTORS AND A MINIMUM OF 10 SETS OF TYPE A LOW VOLTAGE SPLICE KITS TO ACCOMMODATE REPAIRS.
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 TO COMPLY WITH THE REQUIREMENTS OF FAA AC 150/5370-10G ITEM L-108.
4. INSIDE DIAMETER OF RESPECTIVE CABLE CONNECTOR SHALL PROPERLY MATCH OUTSIDE DIAMETER OF CABLE.
5. WHEN PREPARING CABLE FOR SPLICES, THE CONTRACTOR SHALL USE A CABLE STRIPPER/PENCILLER WHENEVER CABLE CONNECTIONS ARE MADE.
6. WRAP ALL PRIMARY AND SECONDARY POWER CONNECTIONS WITH SUFFICIENT LAYERS OF HIGH VOLTAGE ELECTRICAL INSULATING TAPE (RUBBER SPLICING TAPE SUITABLE FOR PRIMARY ELECTRICAL INSULATION FOR SPLICING CABLE FROM 600 VOLTS TO 69,000 VOLTS) AND COVER WITH VINYL ELECTRICAL TAPE (ALL-WEATHER VINYL INSULATING TAPE SUITABLE FOR PROTECTIVE JACKETING FOR HIGH-VOLTAGE CABLE SPLICES AND REPAIRS) FOR FULL VALUE OF CABLE INSULATION VOLTAGE. PER ILLINOIS STANDARD SPECIFICATIONS FOR CONSTRUCTION OF AIRPORTS ITEM 108, ITEM 125, AND FAA AC 150/5370-10G ITEM L-108, HIGH VOLTAGE ELECTRICAL INSULATING TAPE SHALL BE 3M SCOTCH 23, 3M SCOTCH 130C OR APPROVED EQUIVALENT, AND VINYL ELECTRICAL TAPE SHALL BE 3M SCOTCH 88 OR APPROVED EQUIVALENT. TAPES MUST BE RATED SUITABLE FOR THE APPLICATION.
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.
8. CONNECTION OF CONDUCTORS MUST BE MADE BY USING CRIMP CONNECTORS AND A CRIMPING TOOL APPROVED BY THE CONNECTOR/LUG MANUFACTURER. THE TOOL MUST PRODUCE A COMPLETE CRIMP BEFORE IT CAN BE REMOVED. FOR THE L-823 CONNECTORS, THE CRIMPING TOOL USED MUST BE LISTED BY THE L-823 KIT MANUFACTURER. MAKE THE NUMBER AND TYPE OF CRIMPS PER THE KIT MANUFACTURER'S INSTRUCTIONS.



TYPE A

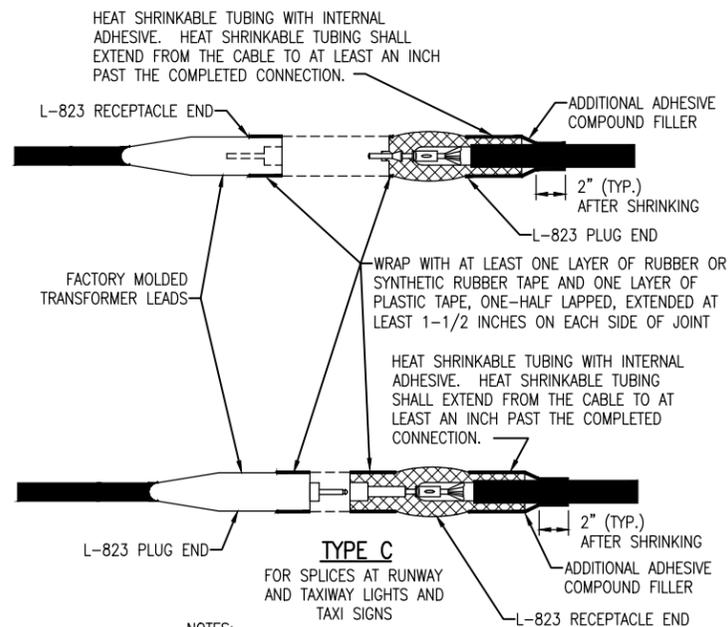
FOR SPLICES IN LOW VOLTAGE CABLE (600V) HOMERUNS FOR EXTENSIONS TO EXISTING LOW VOLTAGE CABLES ONLY. TYPE A SPLICES SHALL BE MADE IN SPLICE CANS, HANDHOLES, MANHOLES, OR JUNCTION BOXES

CONTINUOUS HEAT SHRINK TUBING PLACED OVER THE ENTIRE L-823 CONNECTOR(S) BOTH MALE AND FEMALE AT ALL 5KV JUNCTIONS. THE HEAT SHRINK TUBING SHALL BE APPROXIMATELY 18" IN LENGTH WITH 6 INCHES OF MASTIC ON BOTH ENDS AND VOID OF MASTIC IN MIDDLE OF TUBE RATED FOR 5KV.



TYPE B

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

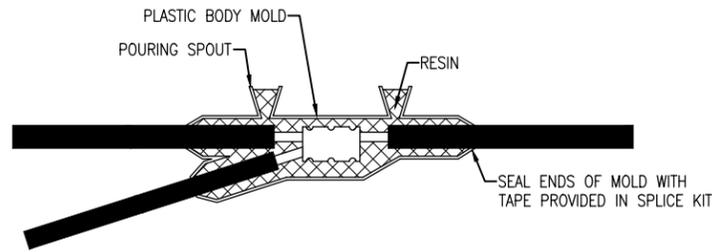


TYPE C

FOR SPLICES AT RUNWAY AND TAXIWAY LIGHTS AND TAXI SIGNS

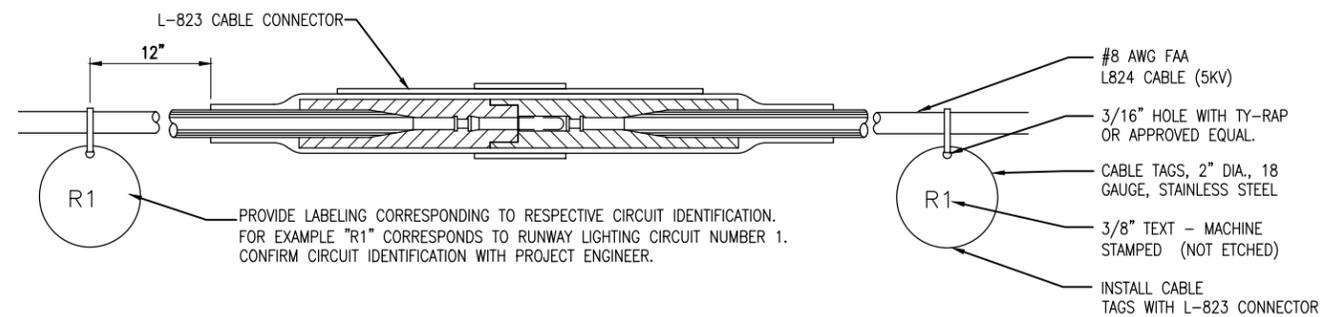
NOTES:
INSIDE DIAMETER OF CONNECTOR SHALL PROPERLY MATCH THE OUTSIDE DIAMETER OF CABLE.

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 WYE RESIN TYPE POWER CABLE TAP SPLICE KIT SUITABLE FOR THE RESPECTIVE CABLES AND RESPECTIVE APPLICATION.



1. CONTRACTOR SHALL PROVIDE CABLE CIRCUIT IDENTIFICATION MARKERS ATTACHED TO BOTH SIDES OF EACH CABLE CONNECTION.
2. CABLE IDENTIFICATION TAGS SHALL BE STAINLESS STEEL OR BRASS.
3. THE CABLE SHALL THOROUGHLY BE CLEANED PRIOR TO THE INSTALLATION OF THE L-823 CONNECTOR KIT.
4. ATTACH EACH CABLE TIE ENOUGH TO HOLD IN PLACE WITHOUT COMPRESSING EDGE OF CABLE TAG INTO CONDUCTOR. TRIM OFF EXCESS CABLE TIE.
5. CABLE TAGS SHALL BE PROVIDED AT ALL POINTS OF ACCESS INCLUDING L-867 BASES, L-868 BASES, HANDHOLES, MANHOLES, JUNCTION BOXES, AND WIREWAYS.
6. R1 CORRESPONDS TO EDGAR CO. AIRPORT RUNWAY 9-27 LIGHTING CIRCUIT. R2 CORRESPONDS TO EDGAR CO. AIRPORT RUNWAY 18-36 LIGHTING CIRCUIT. T1 CORRESPONDS TO EDGAR CO. AIRPORT TAXIWAY LIGHTING CIRCUIT 1.

CABLE TAG DETAIL
"NOT TO SCALE"



EAST AIRCRAFT
PARKING RAMP
EXPANSION &
REHABILITATE PARTIAL
PARALLEL TAXIWAY TO
RUNWAY 9/27

IDA No: PRG-4558

Contract No. ED019

NO.	DATE	DESCRIPTION		
		LAY	DWN	REV

ISSUE: NOVEMBER 15, 2019

PROJECT NO: 17A0016D

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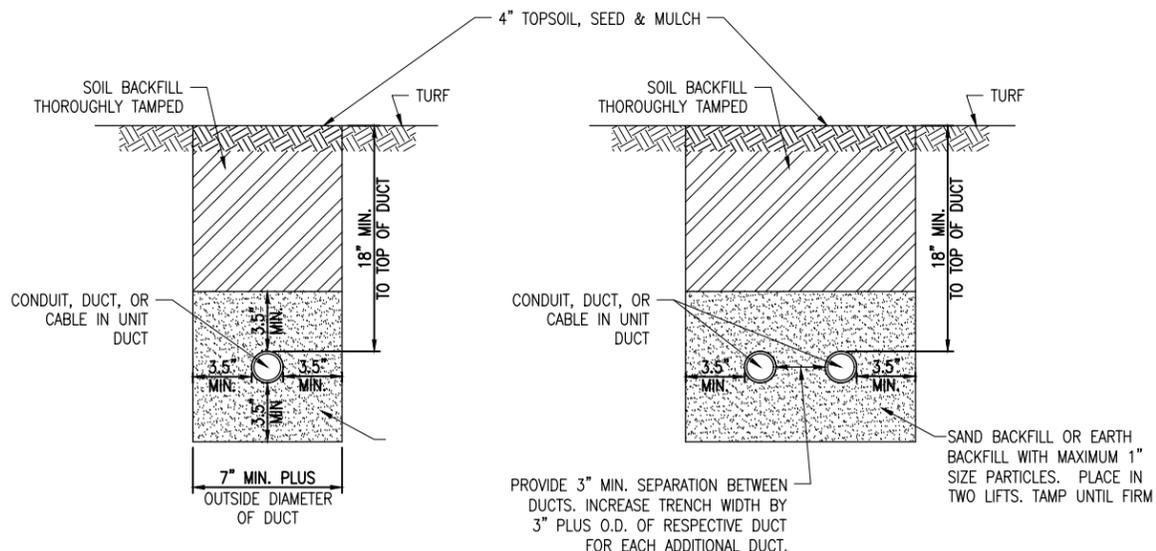
LAYOUT BY: KNL 12/10/2018

DRAWN BY: CWS 12/10/2018

REVIEWED BY: BSS 11/15/2019

SHEET TITLE

CONDUIT TRENCH
DETAILS

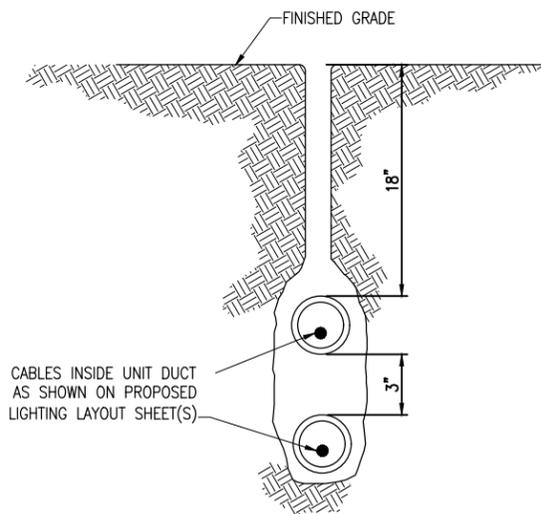


CONDUIT IN TRENCH – NON-PAVEMENT AREAS

"NOT TO SCALE"

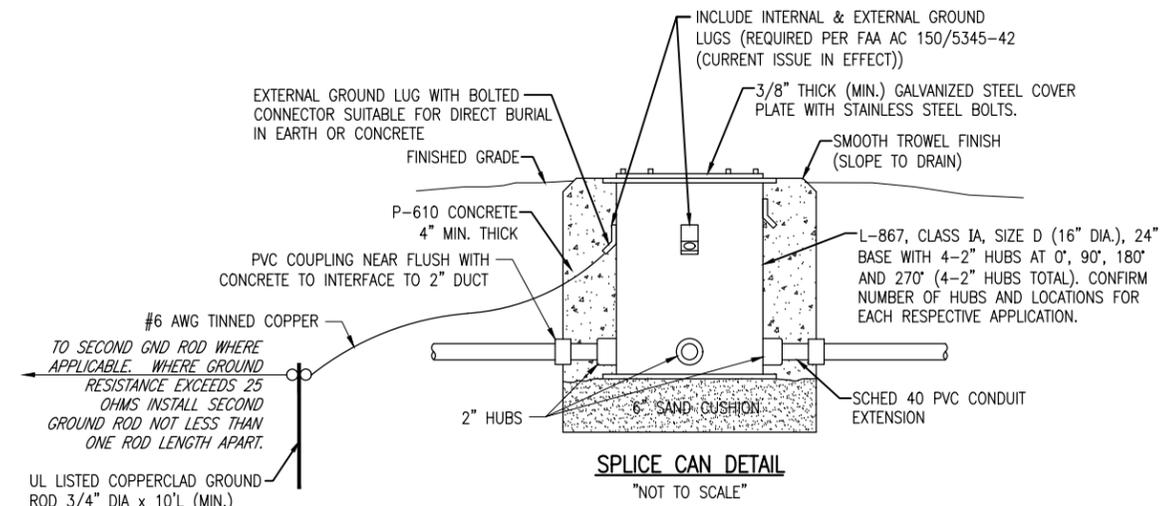
NOTES:

- DIMENSIONS FOR COVERAGE AND SEPARATION BETWEEN DUCTS ARE MINIMUM.
- 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.
- 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. MINIMUM COVER REQUIREMENTS FOR DUCTS LOCATED BELOW PAVEMENT OR ROADWAYS IS 30". MINIMUM COVER REQUIREMENTS FOR DUCTS LOCATED IN AREAS SUBJECT TO FARMING IS 42". ADJUST/INCREASE BURIAL DEPTHS TO ACCOMMODATE SITE CONDITIONS, DRAINAGE AND/OR OBSTRUCTIONS. 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.
- 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.
- CONDUIT, 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.
- ALL DISTURBED SURFACES SHALL BE RESTORED TO THEIR ORIGINAL CONDITION. COST IS INCIDENTAL TO TRENCH.



PLOWED CABLE

"NOT TO SCALE"



SPLICE CAN DETAIL

"NOT TO SCALE"

NOTES FOR SPLICE CAN DETAIL:

- 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 D, (16 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.
- 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 150/5345-42 (CURRENT ISSUE IN EFFECT).
- APPLY AN OXIDE-INHIBITING, ANTI-SEIZING COMPOUND TO ALL SCREWS, NUTS, AND ALL PLACES WHERE METAL COMES INTO CONTACT WITH METAL.
- THE CONCRETE USED IN THE CONSTRUCTION OF THE BASES FOR THE AIRFIELD LIGHTING CANS SHALL BE IN ACCORDANCE WITH ITEM 610.
- LIDS FOR THE SPLICE CANS CONTAINING HIGH VOLTAGE AIRFIELD LIGHTING CABLES SHALL INCLUDE MINIMUM 1/2-INCH HIGH LETTERING LABELED "DANGER HIGH VOLTAGE KEEP OUT" TO COMPLY WITH NEC ARTICLE 300.45 "WARNING SIGNS" AND NEC ARTICLE 314.71(E) "SUITABLE COVERS". THIS WILL NEED TO BE COORDINATED WITH THE SPLICE CAN MANUFACTURER.
- LIDS FOR THE SPLICE CANS CONTAINING LOW VOLTAGE CABLES (RATED 600 VOLTS AND BELOW) WILL BE ACCEPTABLE TO USE BLANK COVERS.
- LIDS FOR SPLICE CANS CONTAINING COMMUNICATIONS OR TELEPHONE CABLES SHALL INCLUDE MINIMUM 1/2 - HIGH LETTERING LABELED "COMM".



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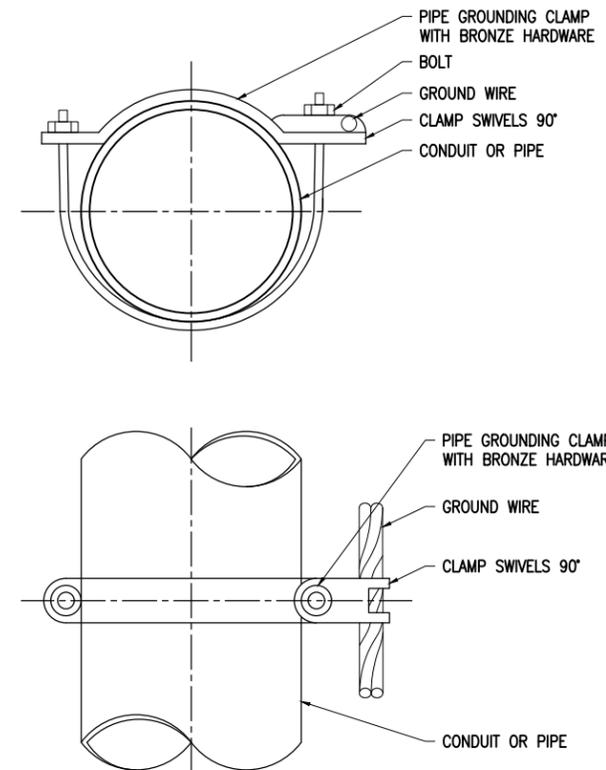
LAYOUT BY: KNL 12/10/2018

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REVIEWED BY: BSS 11/15/2019

SHEET TITLE

GROUNDING DETAILS

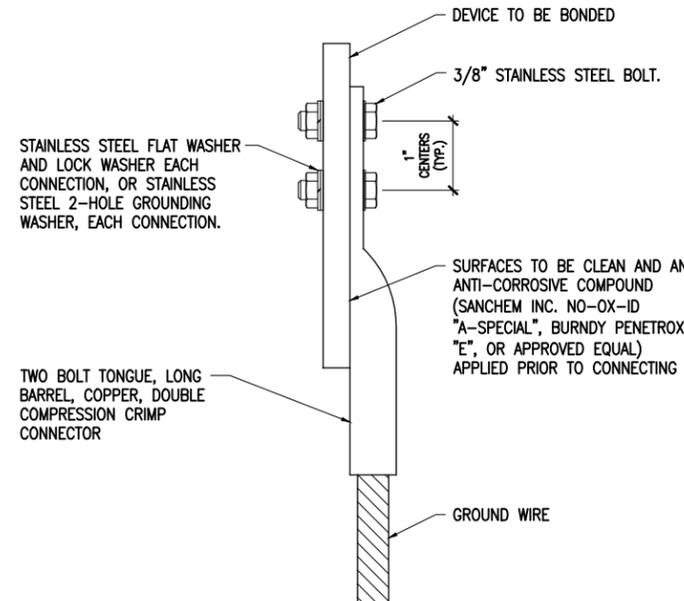


BURNDY CAT. NO.	THOMAS & BETTS CAT. NO.	PIPE SIZE
GAR3902-BU	3902BU	1/2" - 1"
GAR3903-BU	3903BU	1 1/4" - 2"
GAR3904-BU	3904BU	2 1/2" - 3 1/2"
GAR3905-BU	3905BU	4" - 5"
GAR3906-BU	3906BU	6"

NOTES

- PIPE GROUNDING CLAMPS SHALL HAVE BRONZE HARDWARE, BE CORROSION RESISTANT, SUITABLE FOR DIRECT BURIAL IN EARTH OR CONCRETE, & UL 467 LISTED.

PIPE/CONDUIT GROUNDING CLAMP DETAIL

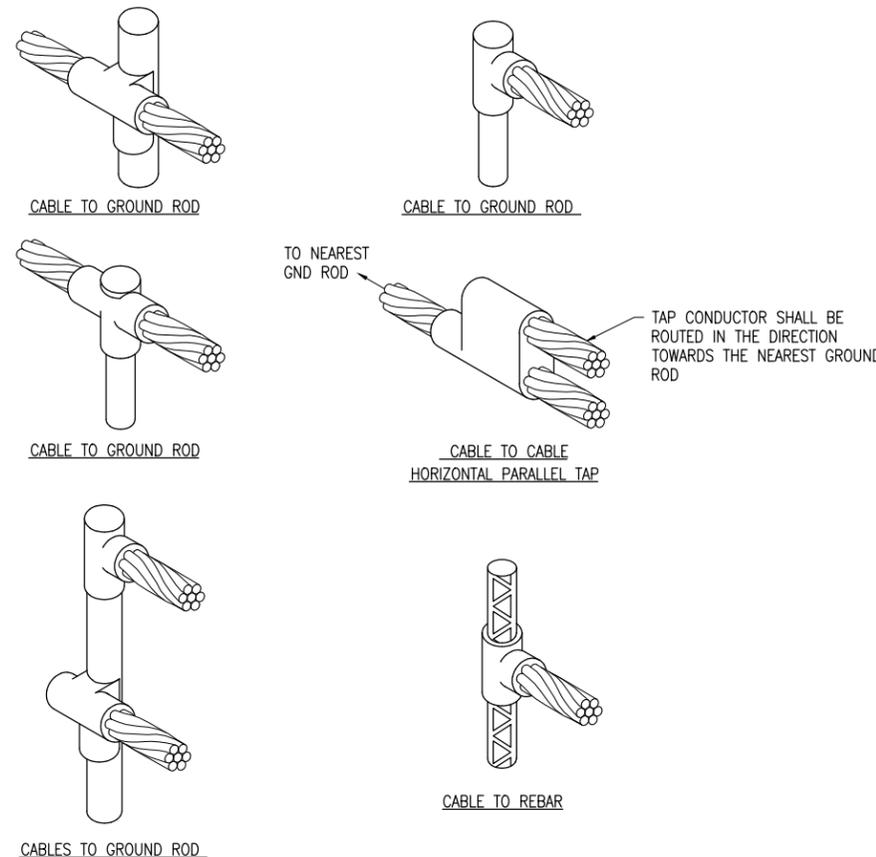


WIRE SIZE	BURNDY CAT. NO.	THOMAS & BETTS CAT. NO.	PENN-UNION CAT. NO.
#8 AWG STRANDED	YA8C-2TC38	256-30695-1157	BBLU-8D-2TC38
#6 AWG SOLID	YA8C-2TC38 OR YGA6C-2TC38E2G1		
#6 AWG STRANDED	YA6C-2TC38	256-30695-1158	BBLU-6D-2TC38
#4 AWG STRANDED	YA4C-2TC38	256-30695-1159	BBLU-4D-2TC38
#2 AWG STRANDED	YA2C-2TC38	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

- ALL CONNECTIONS TO GROUND BUS BAR SHALL BE WITH 2 HOLE TONGUE LONG BARREL COMPRESSION LUGS BOLTED TO THE BUS BAR.
- GROUND WIRE CONNECTIONS TO EQUIPMENT SHALL BE WITH 2 HOLE TONGUE LONG BARREL COMPRESSION LUGS BOLTED TO THE DEVICE OR WITH THE RESPECTIVE EQUIP MANUFACTURER'S LUG OR TERMINAL WHERE APPLICABLE.
- 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.
- ALL CONNECTIONS SHALL BE COATED WITH A CORROSION PREVENTATIVE COMPOUND (SANCHEM INC. NO-OX-ID "A-SPECIAL", BURNDY PENETROX E, OR APPROVED 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



DETAIL NOTES

- ALL BELOW GRADE CONNECTIONS TO GROUND RODS & GROUND RING CONDUCTORS SHALL BE EXOTHERMIC WELD TYPE CONNECTIONS. EXOTHERMIC WELDS SHALL BE CADWELD AS MANUFACTURED BY PENTAIR ERICO PRODUCTS, ULTRAWELD AS MANUFACTURED BY HARGER LIGHTNING PROTECTION & GROUNDING EQUIPMENT, OR THERMOWELD AS MANUFACTURED BY CONTINENTAL INDUSTRIES OR APPROVED EQUAL. VERIFY PROPER SIZES, MOLDS, TYPES, AND REQUIREMENTS FOR THE RESPECTIVE APPLICATION WITH THE MANUFACTURER, AND INSTALL PER THEIR DIRECTIONS.
- 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.
- 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.

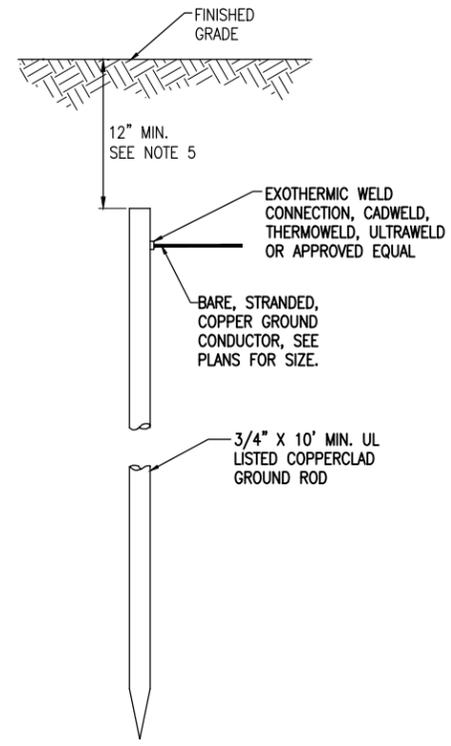
EXOTHERMIC WELD DETAILS

GROUNDING NOTES

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:

- FURNISH AND INSTALL GROUND RODS AS DETAILED HEREIN. GROUND RODS SHALL BE MINIMUM 3/4-IN. DIAMETER BY 10-FT LONG, UL-LISTED, COPPER CLAD WITH 10-MIL MINIMUM COPPER COATING (UNLESS DETAILED OTHERWISE HEREIN). 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 PENTAIR ERICO PRODUCTS, INC., THERMOWELD BY CONTINENTAL INDUSTRIES, INC., ULTRAWELD BY HARGER, 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.
- 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. ALSO REFER TO EOR-47643 FOR ADDITIONAL INFORMATION ON GROUNDING REQUIREMENTS WHERE APPLICABLE. COPIES OF GROUND ROD TEST RESULTS SHALL BE FURNISHED TO THE RESIDENT ENGINEER/RESIDENT TECHNICIAN AND THE PROJECT ENGINEER.
- ALL PRODUCTS ASSOCIATED WITH THE GROUNDING SYSTEM SHALL BE UL-LISTED AND LABELED.
- ALL BOLTED OR MECHANICAL CONNECTIONS SHALL BE COATED WITH A CORROSION PREVENTATIVE COMPOUND BEFORE JOINING, SANICHEM INC. "NO-OX-ID "A-SPECIAL" COMPOUND, BURNDY PENETROX E, OR APPROVED EQUAL.
- METALLIC SURFACES TO BE JOINED SHALL BE PREPARED BY THE REMOVAL OF ALL NON-CONDUCTIVE MATERIAL, PER 2017 NATIONAL ELECTRICAL CODE ARTICLE 250-12. ALL COPPER BUS BARS MUST BE CLEANED PRIOR TO MAKING CONNECTIONS TO REMOVE SURFACE OXIDATION.
- 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
- 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, DOSSERT CORPORATION, ILSCO CORPORATION, PENN-UNION CORPORATION, THOMAS & BETTS, OR APPROVED EQUAL. TIGHTEN CONNECTIONS TO COMPLY WITH TIGHTENING TORQUES IN UL STANDARD 486A TO ASSURE PERMANENT AND EFFECTIVE GROUNDING.
- ALL METAL EQUIPMENT ENCLOSURES, CONDUITS, CABINETS, BOXES, RECEPTACLES, MOTORS, ETC. SHALL BE BONDED TO THE RESPECTIVE GROUNDING SYSTEM.
- 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.
- 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 2017 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.

- 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 2017 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 2017 NEC 250-102.
- 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.
- 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 WHITE DISCONNECTING MEANS, WHERE GROUNDING AND NEUTRAL SYSTEMS ARE TO BE CONNECTED TO SERVICE GROUND.
- 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.
- 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, DOSSERT CORPORATION, ILSCO CORPORATION, PENN-UNION CORPORATION, THOMAS & BETTS, OR APPROVED EQUAL.
- BOND ALL NONCURRENT-CARRYING PARTS OF METAL EQUIPMENT TO GROUND SYSTEM.
- BUILDING STRUCTURAL STEEL SYSTEM SHALL BE BONDED TO ELECTRICAL GROUND SYSTEM.
- 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 ENIRCLE 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 ENCLICLING 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.
- 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 2017 NEC 250-102. NOTE THIS DOES NOT APPLY TO AC EQUIPMENT GROUNDING CONDUCTORS RUN WITH AC CIRCUITS.
- NEVER REMOVE, ALTER, OR ATTEMPT TO REPAIR CONDUCTORS OR CONDUIT SYSTEMS PROVIDING GROUNDING OR ELECTRICAL BONDING FOR ANY ELECTRICAL EQUIPMENT UNTIL ALL POWER IS REMOVED FROM EQUIPMENT. WARN ALL PERSONNEL OF THE UNGROUNDED CONDITION OF THE EQUIPMENT. DISPLAY APPROPRIATE WARNING SIGNS, SUCH AS DANGER TAGS, TO WARN PERSONNEL OF THE POSSIBLE HAZARDS.
- 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.
- 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

GROUND RODS
NOT TO SCALE

NOTES

- TYPE AND MINIMUM NUMBER OF GROUND RODS SHALL BE AS SPECIFIED ON THE PLAN.
- THE RESISTANCE TO GROUND OF THE GROUNDING SYSTEM SHALL NOT EXCEED 25 OHMS.
- COST OF GROUND RODS IS INCIDENTAL TO THE ASSOCIATED ITEMS REQUIRING GROUNDING UNLESS OTHERWISE SPECIFIED.
- GROUND RODS SHALL BE SPACED AS DETAILED ON THE PLANS AND SHALL NOT BE SPACED LESS THAN ONE ROD LENGTH APART.
- TOP OF GROUND RODS FOR AIRFIELD LIGHT FIXTURES AND TAXI GUIDANCE SIGNS, SHALL BE 12" MINIMUM BELOW GRADE UNLESS DETAILED OTHERWISE HEREIN. GROUND RING CONDUCTORS SHALL BE 40" MINIMUM BELOW GRADE TO BE BELOW FROST LINE (FOR EDGAR COUNTY, ILLINOIS).

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EAST AIRCRAFT
PARKING RAMP
EXPANSION &
REHABILITATE PARTIAL
PARALLEL TAXIWAY TO
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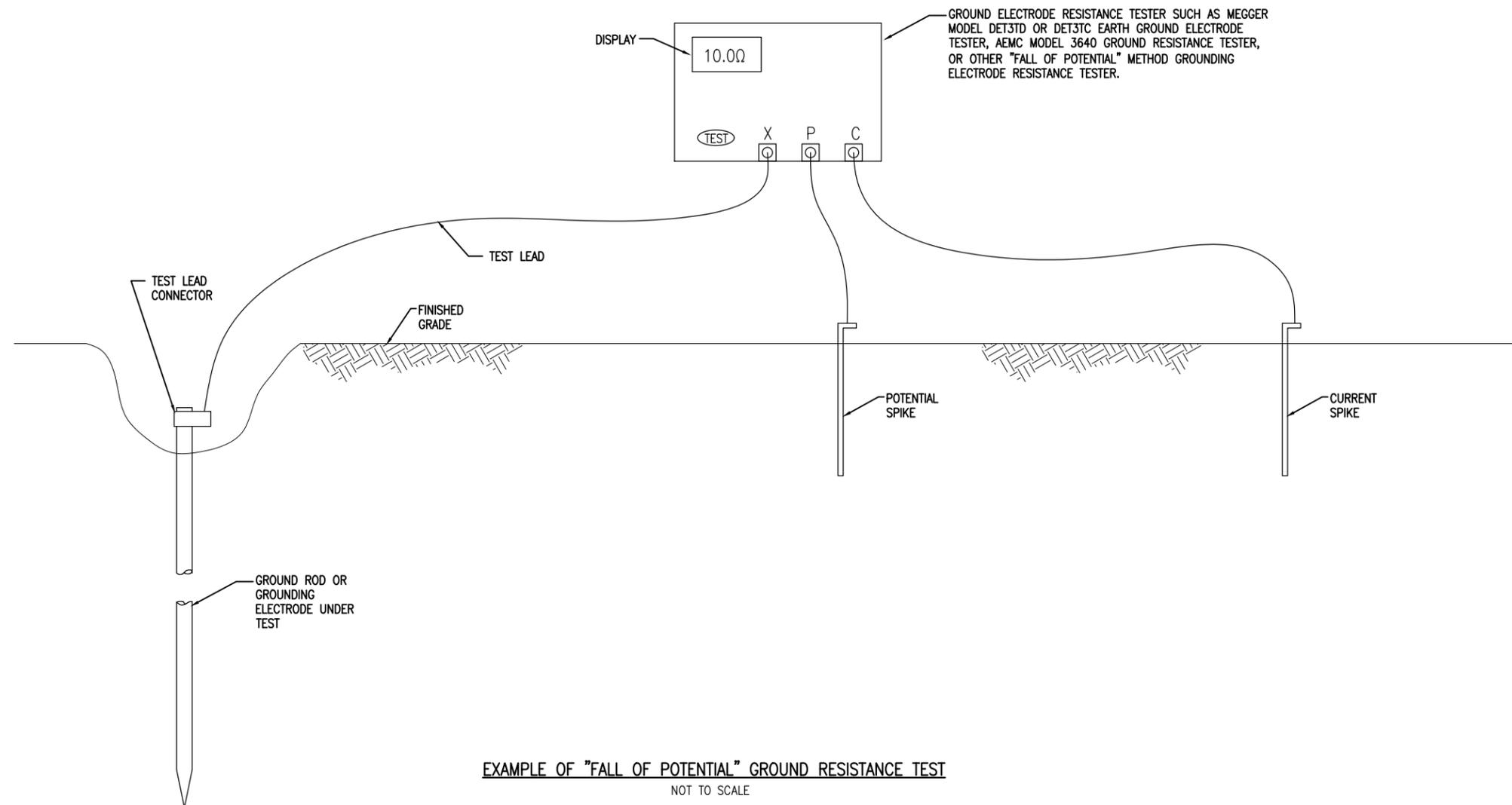
Contract No. ED019

NO.	DATE	DESCRIPTION		
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SHEET TITLE

GROUNDING NOTES



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, AND THE PROJECT ENGINEER.
2. FOR EACH AIRFIELD LIGHT FIXTURE, TAXI GUIDANCE SIGN, SPLICE CAN 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. ALSO REFER TO EOR-47643 FOR ADDITIONAL INFORMATION ON GROUNDING REQUIREMENTS WHERE APPLICABLE. COPIES OF THE GROUND SYSTEM TEST RESULTS SHALL BE FURNISHED TO THE RESIDENT ENGINEER / RESIDENT TECHNICIAN, AND THE PROJECT ENGINEER.
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.

EAST AIRCRAFT
PARKING RAMP
EXPANSION &
REHABILITATE PARTIAL
PARALLEL TAXIWAY TO
RUNWAY 9/27

IDA No: PRG-4558

Contract No. ED019

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SHEET TITLE

**GROUND
RESISTANCE
TESTING DETAILS**



EAST AIRCRAFT
PARKING RAMP
EXPANSION &
REHABILITATE PARTIAL
PARALLEL TAXIWAY TO
RUNWAY 9/27

IDA No: PRG-4558

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SHEET TITLE

ELECTRICAL LEGEND
AND ABBREVIATIONS

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
	MOTOR
	LOAD, MOTOR, # = HORSEPOWER
	ELECTRIC UTILITY METER BASE
	JUNCTION BOX WITH SPLICE
	EQUIPMENT, XXX = DEVICE DESCRIPTION
	GROUND BUS OR TERMINAL
	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
	TRANSFER SWITCH
	ENGINE GENERATOR SET

ELECTRICAL LEGEND – SCHEMATIC	
	NORMALLY OPEN (N.O.) CONTACT
	NORMALLY CLOSED (N.C.) CONTACT
	STARTER COIL, * = STARTER NUMBER
	OVERLOAD RELAY CONTACT
	CONTROL RELAY, * = CONTROL RELAY NUMBER
	RELAY, * = RELAY NUMBER
	TOGGLE SWITCH / 2 POSITION SWITCH
	2-POSITION SELECTOR SWITCH
	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
	GROUND BUS OR TERMINAL
	NEUTRAL BUS
	GROUND, GROUND ROD, GROUND BUS
	INDUSTRIAL CONTROL RELAY OR LIGHTING CONTACTOR
	S1 CUTOUT HANDLE REMOVED
	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
EOR	ENGINEER OF RECORD
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:

- 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, ORDINANCES, 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.
- KEEP A COPY OF THE LATEST NEC IN FORCE ON SITE AT ALL TIMES DURING CONSTRUCTION FOR USE AS A REFERENCE.
- VAULT WORK, POWER OUTAGES, AND/OR SHUT DOWN OF EXISTING SYSTEMS SHALL BE COORDINATED WITH THE AIRPORT MANAGER AND MAINTENANCE SUPERVISOR. 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).
- IN THE EVENT A CONFLICT IS DETERMINED WITH RESPECT TO MANUFACTURER INSTALLATION INSTRUCTIONS, NEC, AND/OR THE CONTRACT DOCUMENTS, CONTACT THE PROJECT ENGINEER FOR FURTHER DIRECTIONS.
- 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:

<u>120/240 VAC, 1 PHASE, 3 WIRE</u>	
PHASE A	BLACK
PHASE B	RED
NEUTRAL	WHITE
GROUND	GREEN
- SEE RESPECTIVE SITE PLANS FOR SITE LEGEND INFORMATION.
- 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.
- 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.
- CONTRACTOR SHALL FIELD VERIFY EXISTING SITE CONDITIONS. CONTRACTOR SHALL FIELD VERIFY RESPECTIVE CIRCUITS AND POWER SOURCES PRIOR TO REMOVING, DISCONNECTING, ADJUSTING, CONNECTING, OR WORKING ON THE RESPECTIVE AIRFIELD LIGHTING, TAXI SIGN, NAVIAD, OR OTHER DEVICE.
- HIGH VOLTAGE CIRCUITS (AIRFIELD LIGHTING 5000 VOLT SERIES CIRCUITS AND 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, RACEWAY, JUNCTION STRUCTURE OR HANDHOLE.



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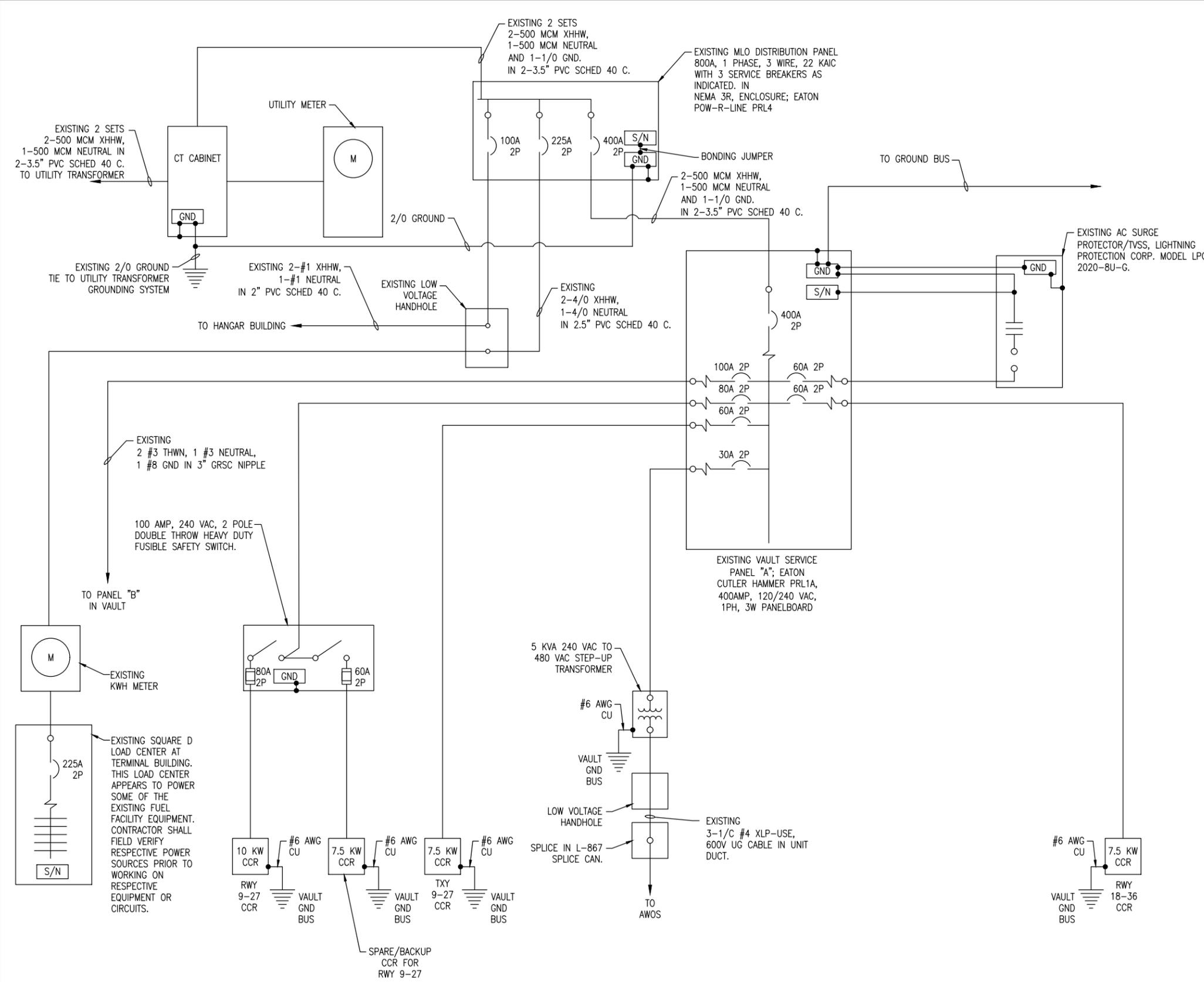
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SHEET TITLE

EXISTING
ELECTRICAL
ONE-LINE DIAGRAM -
VAULT & AIRFIELD

NOTES:

- CONTRACTOR SHALL EXAMINE THE SITE TO DETERMINE EXISTING CONDITIONS. CONTRACTOR SHALL FIELD VERIFY RESPECTIVE CIRCUITS AND POWER SOURCES PRIOR TO REMOVING, DISCONNECTING, CONNECTING, OR WORKING ON THE RESPECTIVE AIRFIELD LIGHTING, TAXI SIGN, NAVAID, OR OTHER DEVICE.
- ALL POWER OUTAGES, AND/OR SHUT DOWN OF EXISTING AIRFIELD LIGHTING OR OTHER SYSTEMS SHALL BE COORDINATED WITH THE AIRPORT MANAGER AND/OR AIRPORT 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).
- CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF FAA AC NO. 150/5370-2G (OR MOST CURRENT ISSUE) "OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION".
- CONTRACTOR SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS OF NFPA 70E - STANDARD FOR ELECTRICAL SAFETY IN THE WORKPLACE.
- 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.
- MEGGER TEST AND RECORD EXISTING SERIES CIRCUITS PRIOR TO CABLE WORK AND AGAIN AFTER PAVEMENT WORK, AIRFIELD WORK, ADDITIONS, AND/OR UPGRADES HAVE BEEN COMPLETED. ALSO TEST AND RECORD SERIES CIRCUIT LOOP RESISTANCE.
- EACH CCR SHALL BE TESTED FOR PROPER OPERATION BEFORE AIRFIELD AND/OR APRON WORK BEGINS AND AGAIN AFTER AIRFIELD WORK, APRON WORK AND FUEL SYSTEM WORK IS COMPLETED.
- ALL EXISTING AIRFIELD LIGHTING SYSTEMS, NAVAIDS, APRON LIGHTING, AND/OR OTHER AIRPORT FACILITIES (THAT ARE NOT SCHEDULED FOR REMOVAL OR REPLACEMENT) SHALL BE OPERABLE DURING NIGHTFALL WHEN THE RESPECTIVE RUNWAY IS OPEN FOR OPERATION UNLESS OTHERWISE APPROVED BY THE AIRPORT MANAGER AND/OR OTHERWISE DETAILED HEREIN. CONTRACTOR SHALL PROVIDE ALL TEMPORARY WORK AS NECESSARY TO MAINTAIN OPERATION OF THE AIRFIELD LIGHTING SYSTEMS AT NIGHTFALL. CONTRACTOR SHALL COORDINATE TRANSFER OF EXISTING AIRFIELD CIRCUITS TO MINIMIZE DOWNTIME.
- OTHER PROJECTS MIGHT BE UNDER CONSTRUCTION PRIOR TO OR DURING THIS PROJECT. COORDINATE WORK WITH OTHER CONTRACTORS.



**EXISTING ELECTRICAL ONE-LINE
DIAGRAM FOR VAULT AND AIRFIELD**



EAST AIRCRAFT
PARKING RAMP
EXPANSION &
REHABILITATE PARTIAL
PARALLEL TAXIWAY TO
RUNWAY 9/27

IDA No: PRG-4558

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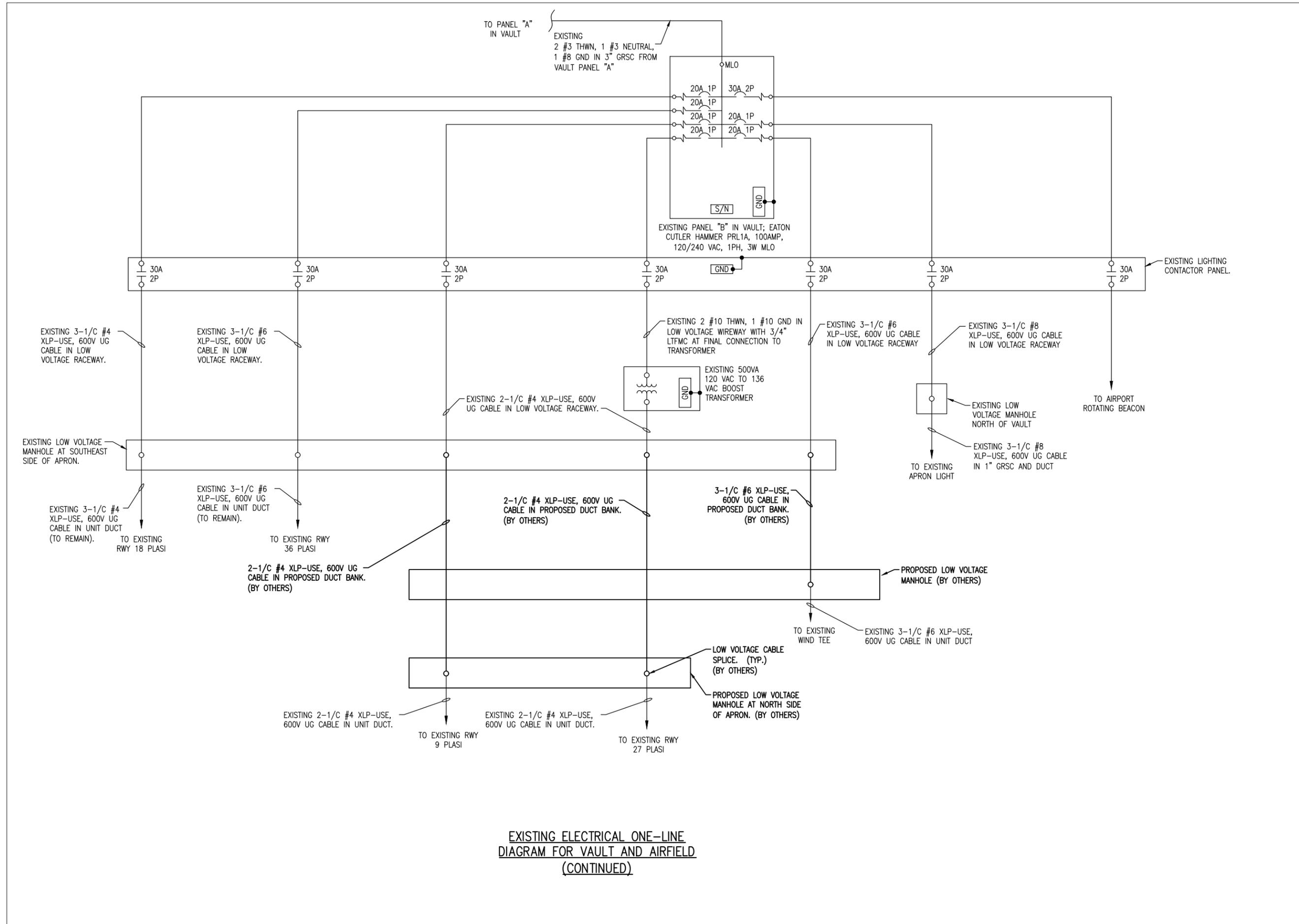
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SHEET TITLE

EXISTING
ELECTRICAL
ONE-LINE DIAGRAM -
VAULT & AIRFIELD
(CONT.)



EXISTING ELECTRICAL ONE-LINE
DIAGRAM FOR VAULT AND AIRFIELD
(CONTINUED)



EAST AIRCRAFT
PARKING RAMP
EXPANSION &
REHABILITATE PARTIAL
PARALLEL TAXIWAY TO
RUNWAY 9/27

IDA No: PRG-4558

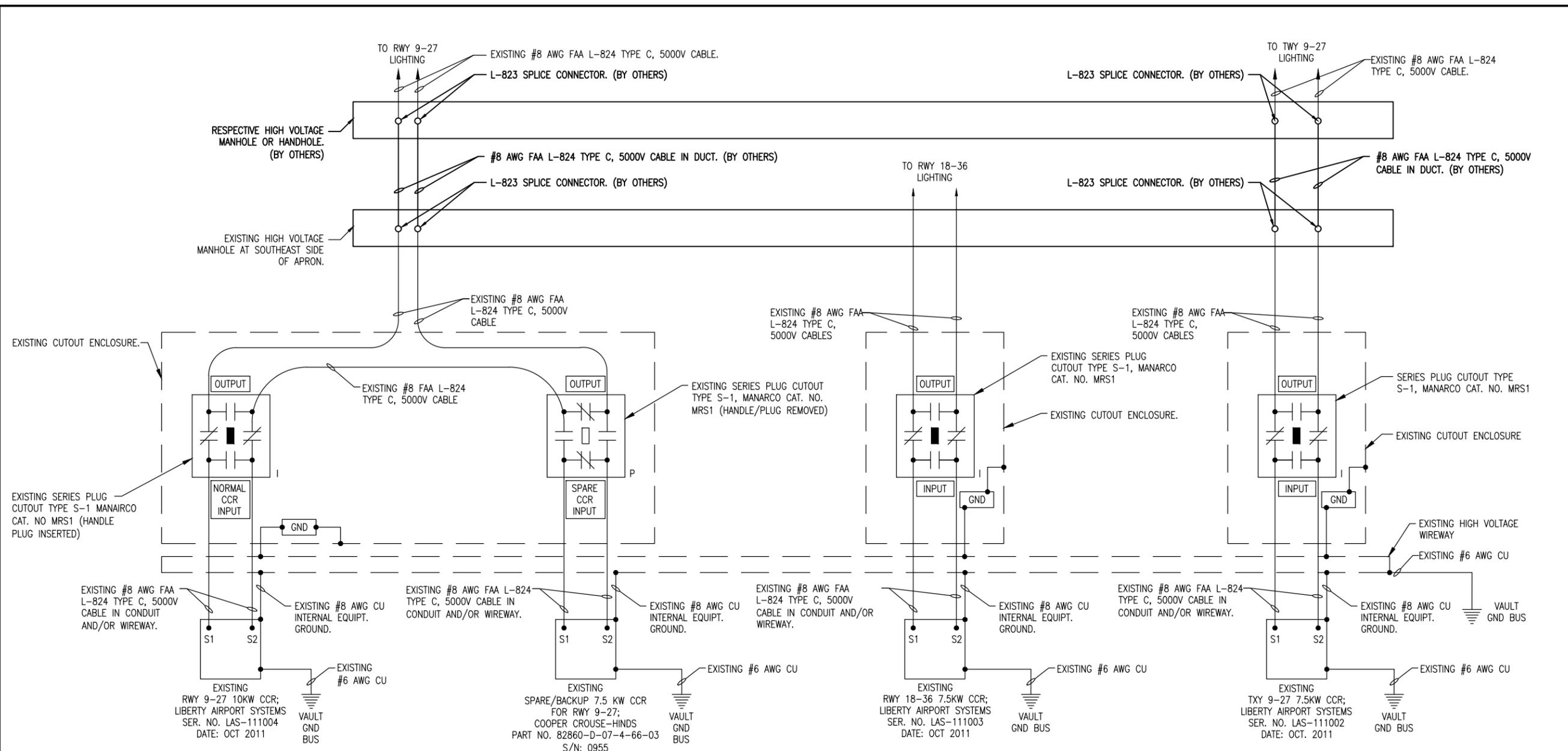
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SHEET TITLE

HIGH VOLTAGE
WIRING SCHEMATIC



HIGH VOLTAGE WIRING SCHEMATIC

NOTES:

- ALL WORK, POWER OUTAGES, AND/OR SHUT DOWN OF EXISTING SYSTEMS SHALL BE COORDINATED WITH THE AIRPORT MANAGER/DIRECTOR AND RESIDENT ENGINEER/TECHNICIAN. 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).
- CONTRACTOR SHALL EXAMINE THE SITE TO CONFIRM AND FIELD VERIFY EXISTING SITE CONDITIONS. CONTRACTOR SHALL FIELD VERIFY RESPECTIVE CIRCUITS AND POWER SOURCES PRIOR TO REMOVING, DISCONNECTING, WORKING ON, RELOCATING, RECONNECTING, AND/OR INSTALLING THE RESPECTIVE AIRFIELD LIGHTING, TAXI SIGN, NAVAID, OR OTHER DEVICES. CONTRACTOR SHALL REPORT ANY VARIATIONS, DEFICIENCIES, AND/OR APPARENT SAFETY CONCERNS TO THE RESIDENT ENGINEER/TECHNICIAN.
- 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.
- 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.

- MEGGER TEST (WITH AN INSULATION RESISTANCE TESTER) AND RECORD EXISTING SERIES CIRCUITS PRIOR TO CABLE WORK OR ANY OTHER WORK THAT MIGHT POSSIBLY AFFECT AIRFIELD LIGHTING, AND AGAIN AFTER AIRFIELD LIGHTING MODIFICATIONS, ADDITIONS, AND/OR UPGRADES HAVE BEEN COMPLETED. ALSO TEST AND RECORD SERIES CIRCUIT LOOP RESISTANCE (WITH AN OHMMETER). THESE ARE REQUIRED TEST IN ACCORDANCE WITH IDOT DIVISION OF AERONAUTICS STANDARD SPECIFICATIONS FOR CONSTRUCTION OF AIRPORTS. PROVIDE TEST RESULTS TO THE PROJECT ENGINEER WITHIN 5 BUSINESS DAYS OF CONDUCTING TESTS
- RUNWAY 9-27 CCR, BACKUP CCR FOR RUNWAY 9-27, RUNWAY 18-36 CCR, TAXIWAY CCR, AND THE ASSOCIATED CUTOUTS ARE EXISTING.
- ALL CCR'S SHALL BE TESTED FOR PROPER OPERATION BEFORE REMOVAL WORK, MODIFICATIONS, AND/OR ADDITIONS AND AFTER THE NEW CABLES AND LIGHTING SYSTEM MODIFICATIONS 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/TECHNICIAN. TEST RESULTS SHALL BE PROVIDED TO THE PROJECT ENGINEER AND RESIDENT ENGINEER/TECHNICIAN, WITHIN 5 BUSINESS DAYS OF CONDUCTING TESTS.
- HIGH VOLTAGE CIRCUITS (AIRFIELD LIGHTING 5000 VOLT SERIES CIRCUITS AND/OR OTHER CIRCUITS RATED ABOVE 600 VOLTS) & LOW VOLTAGE CIRCUITS (RATED 600 VOLTS AND BELOW) SHALL NOT BE INSTALLED IN THE SAME RACEWAY, WIREWAY, HANDHOLE, OR MANHOLE.
- 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, HIGH VOLTAGE ENCLOSURES, OR AT THE RESPECTIVE AIRFIELD LIGHT OR TAXI GUIDANCE SIGN.

LEGEND

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



EAST AIRCRAFT
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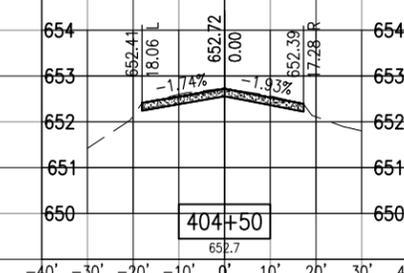
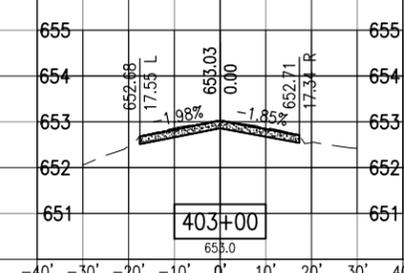
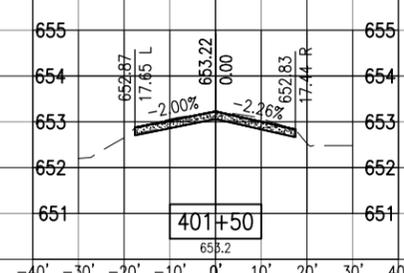
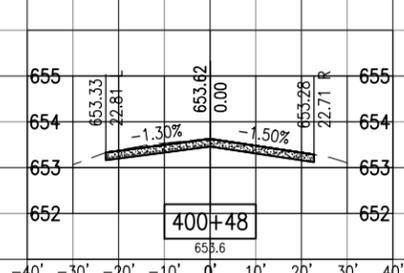
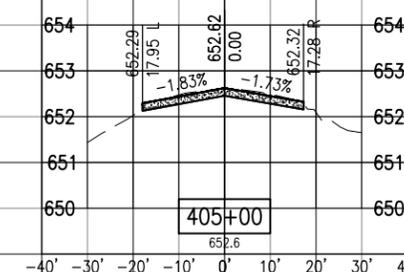
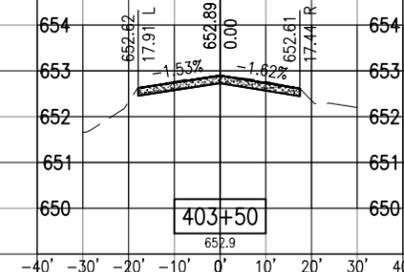
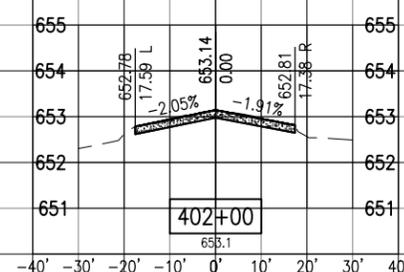
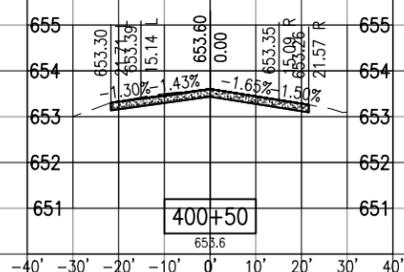
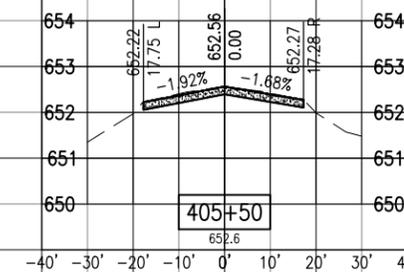
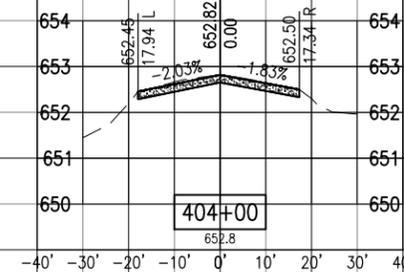
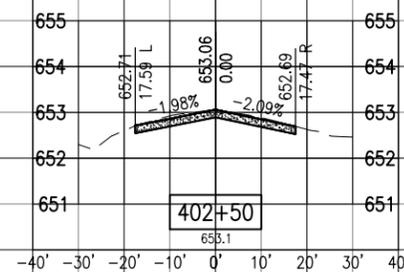
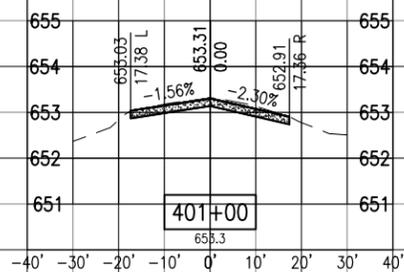
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SHEET TITLE

CROSS SECTIONS
STA. 400+48 TO
STA. 405+50 - LINE B



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Edgar County Airport

Board of Edgar County
15551 Airport Rd.
Paris, IL 61944-8474
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EAST AIRCRAFT
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PARALLEL TAXIWAY TO
RUNWAY 9/27

IDA No: PRG-4558

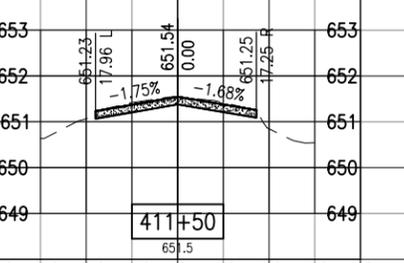
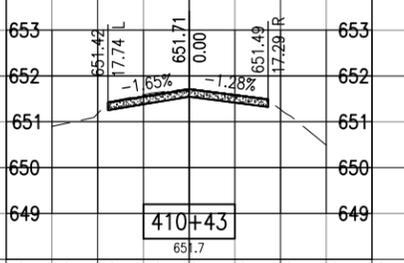
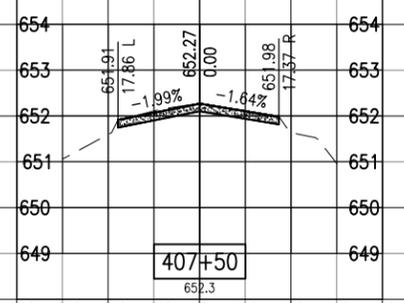
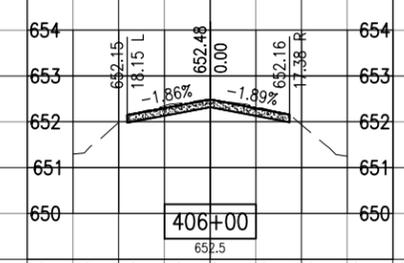
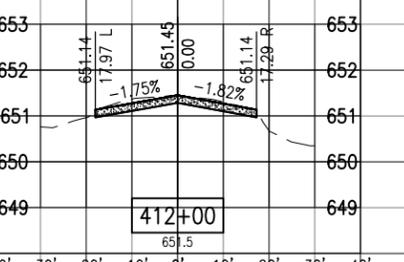
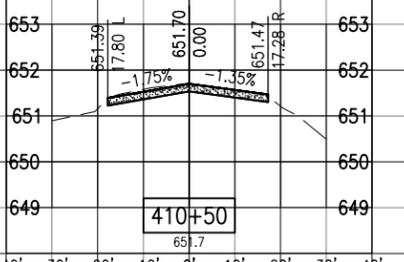
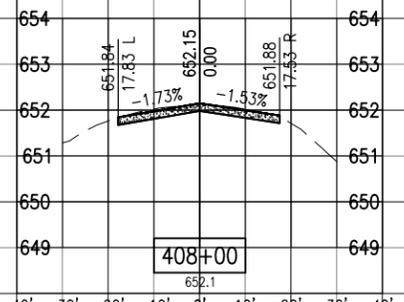
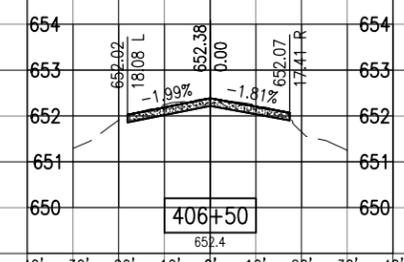
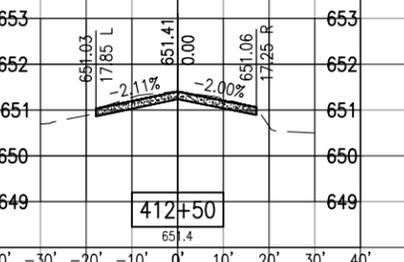
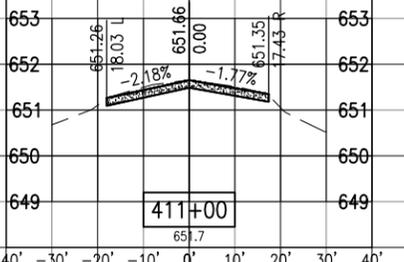
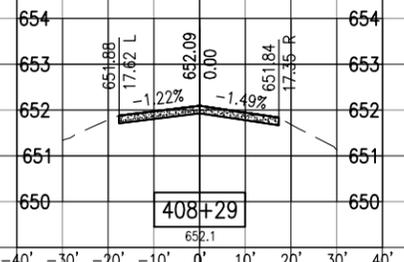
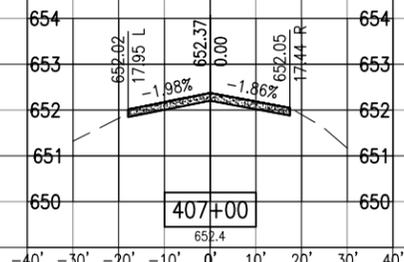
Contract No. ED019

NO.	DATE	DESCRIPTION		
		LAY	DWN	REV

ISSUE: NOVEMBER 15, 2019
PROJECT NO: 17A0016D
CAD FILE: C-301-XS.DWG
LAYOUT BY: JRH 12/12/2018
DRAWN BY: JRH 12/12/2018
REVIEWED BY: BSS 11/15/2019

SHEET TITLE

CROSS SECTIONS
STA. 406+00 TO
STA. 412+50 - LINE B



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EAST AIRCRAFT
PARKING RAMP
EXPANSION &
REHABILITATE PARTIAL
PARALLEL TAXIWAY TO
RUNWAY 9/27

IDA No: PRG-4558

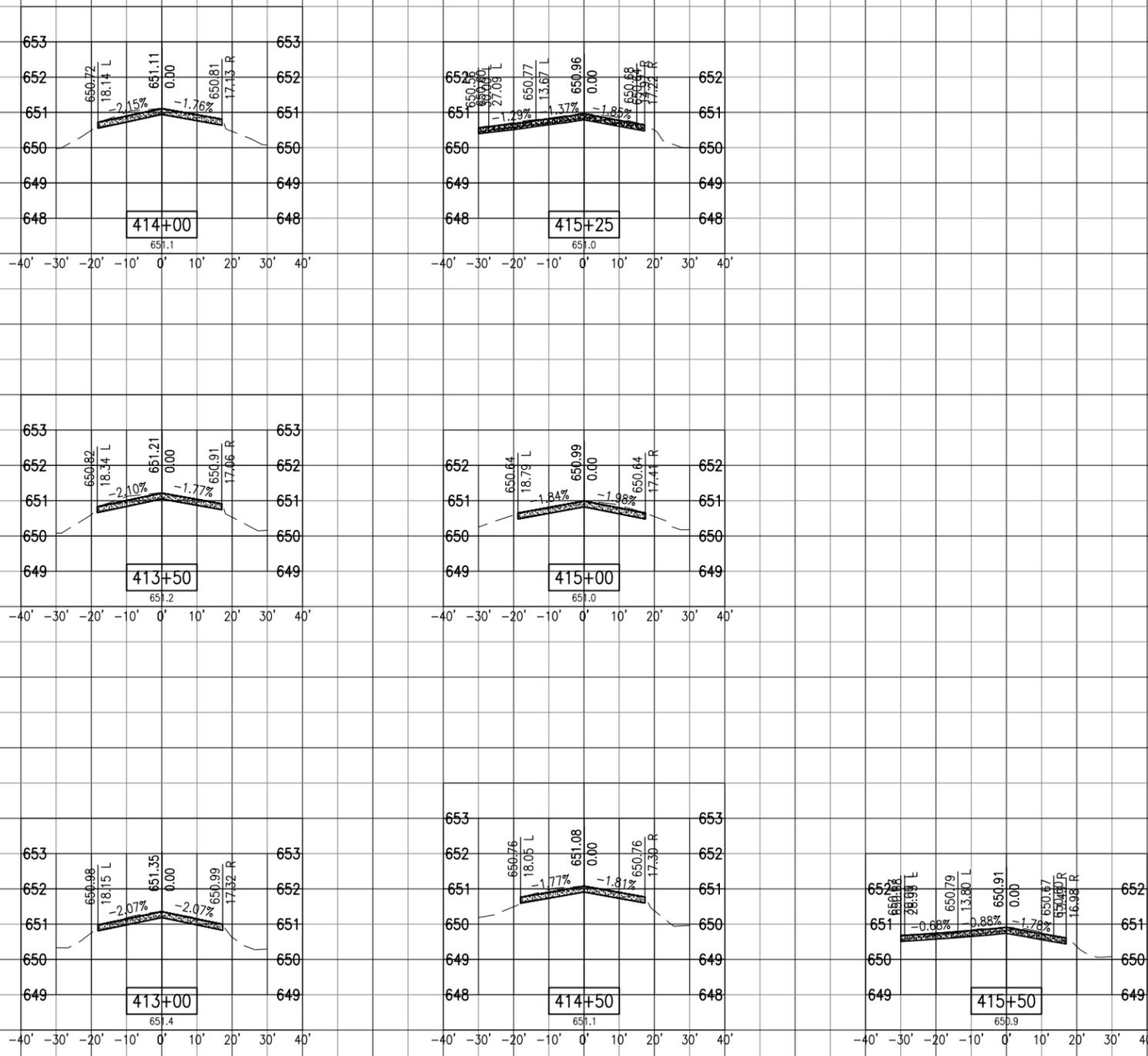
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NO.	DATE	DESCRIPTION		
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LAYOUT BY: JRH 12/12/2018
DRAWN BY: JRH 12/12/2018
REVIEWED BY: BSS 11/15/2019

SHEET TITLE

CROSS SECTIONS
STA. 413+00 TO
STA. 415+50 - LINE B



Edgar County Airport

Board of Edgar County
15551 Airport Rd.
Paris, IL 61944-8474
Telephone: 217.465.4151



EAST AIRCRAFT
PARKING RAMP
EXPANSION &
REHABILITATE PARTIAL
PARALLEL TAXIWAY TO
RUNWAY 9/27

IDA No: PRG-4558

Contract No. ED019

NO.	DATE	DESCRIPTION		
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ISSUE: NOVEMBER 15, 2019

PROJECT NO: 17A0016D
CAD FILE: C-301-XS.DWG

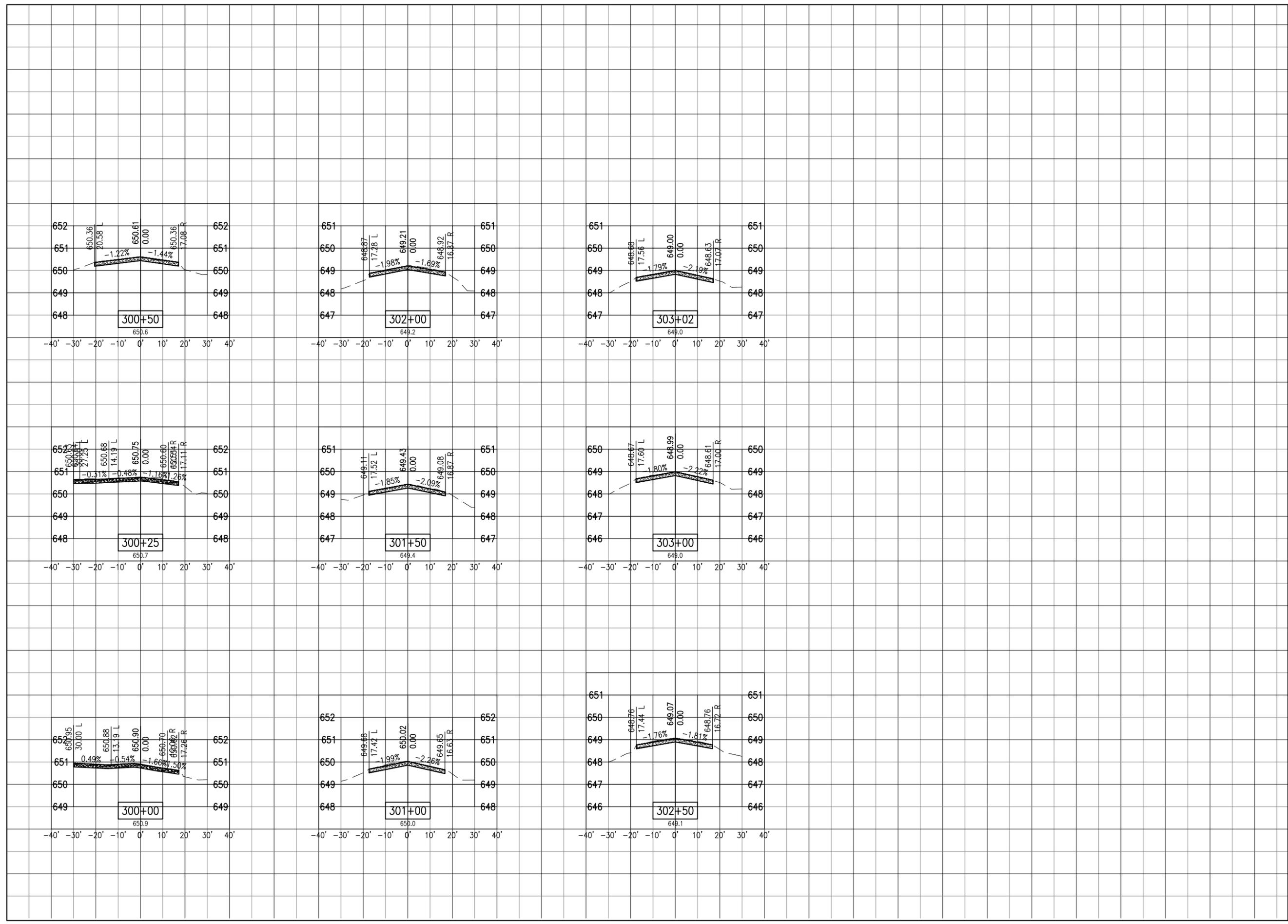
LAYOUT BY: JRH 12/12/2018
DRAWN BY: JRH 12/12/2018

REVIEWED BY: BSS 11/15/2019

SHEET TITLE

CROSS SECTIONS
STA. 300+00 TO
STA. 303+02 - LINE
B1

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EAST AIRCRAFT
PARKING RAMP
EXPANSION &
REHABILITATE PARTIAL
PARALLEL TAXIWAY TO
RUNWAY 9/27

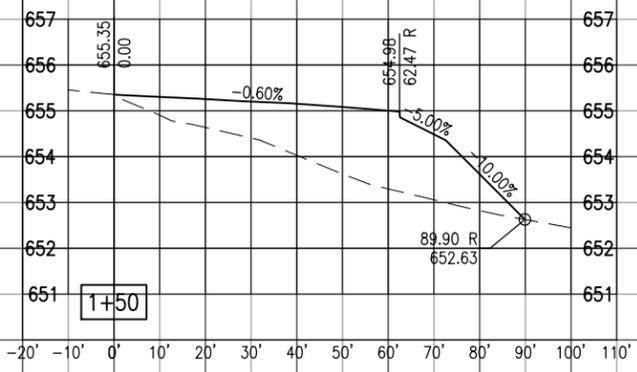
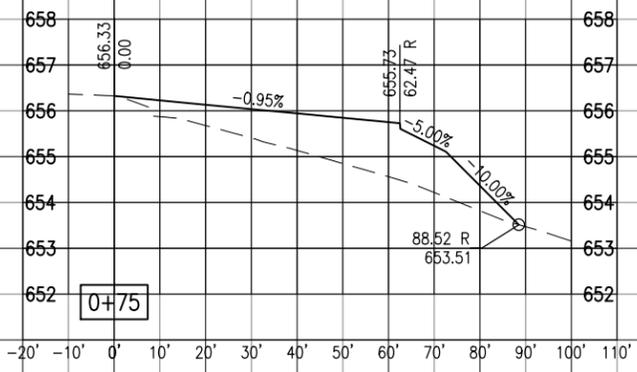
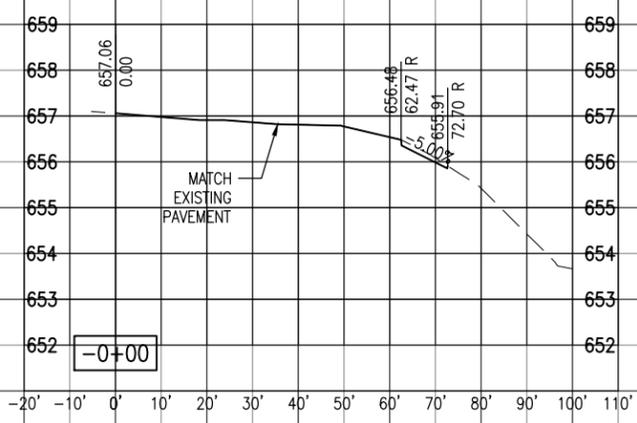
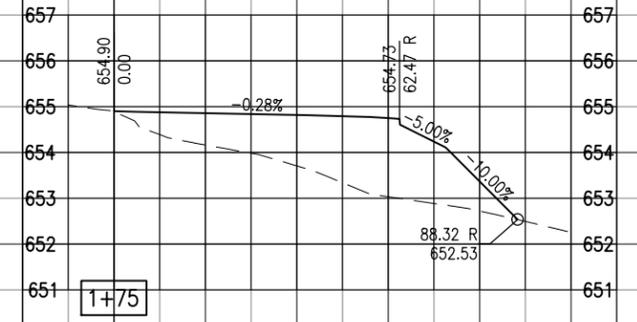
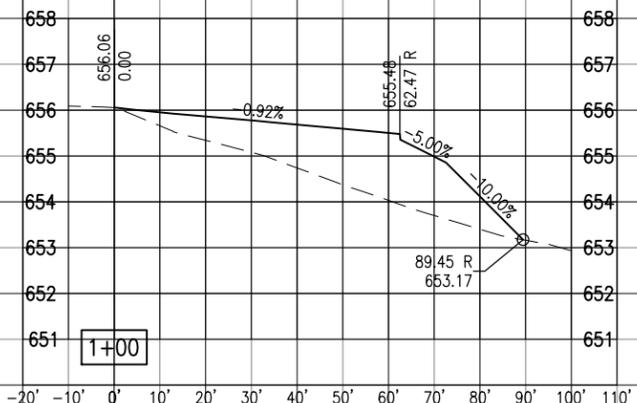
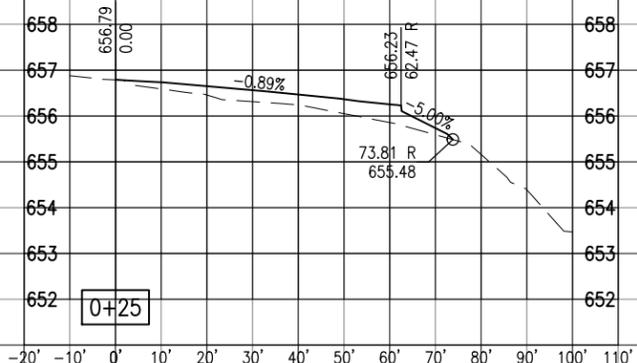
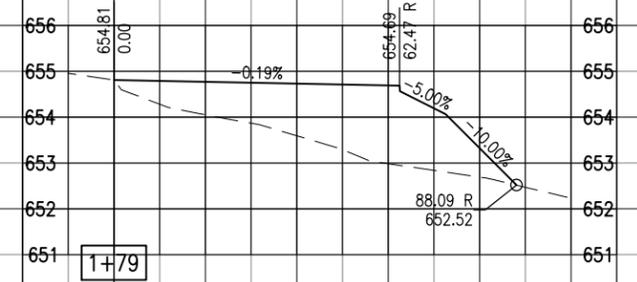
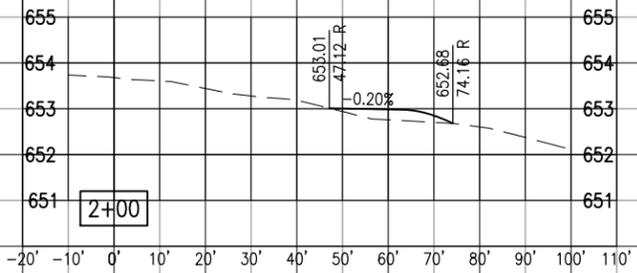
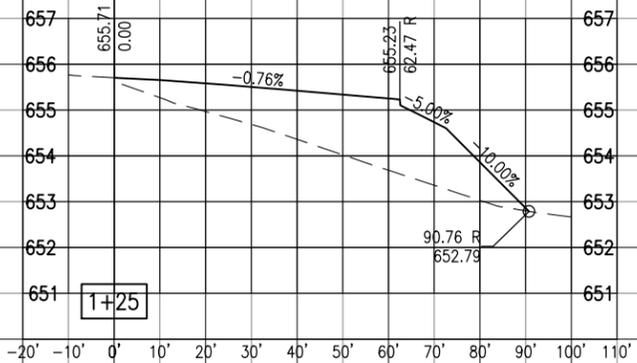
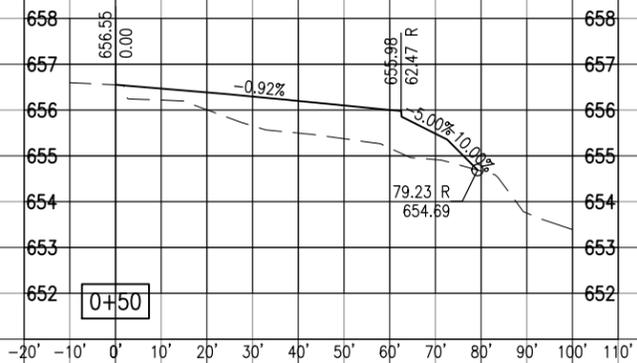
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DRAWN BY: JRH 01/10/2019				
REVIEWED BY: BSS 11/15/2019				

SHEET TITLE

CROSS SECTIONS
STA. 0+00 TO STA.
1+25 - LINE EA



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