

CONSTRUCTION PLANS

REMOVE TAXIWAY D

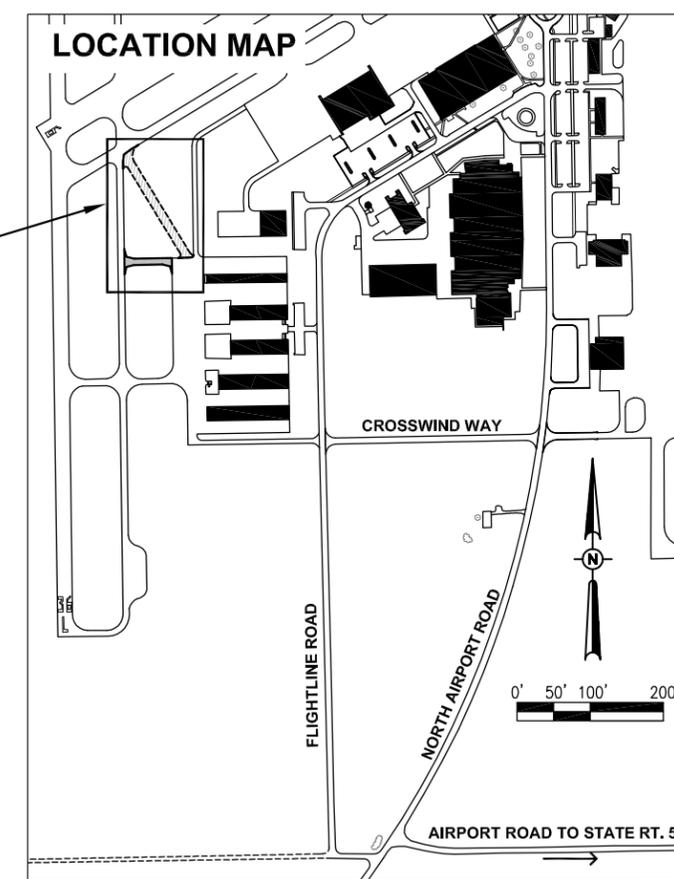
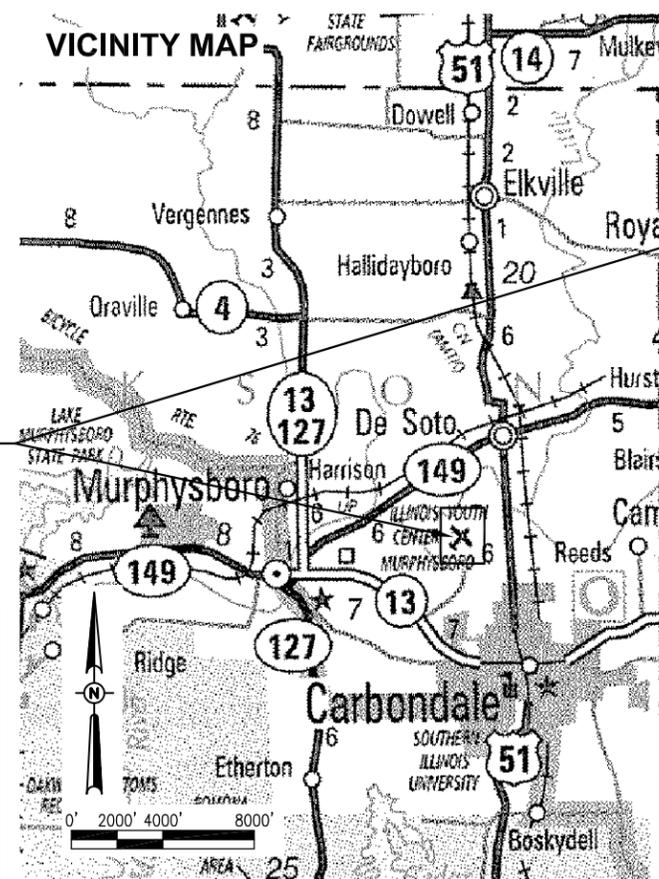
SOUTHERN ILLINOIS AIRPORT AUTHORITY
MURPHYSBORO/CARBONDALE,
JACKSON COUNTY, ILLINOIS

SBG PROJECT NO. 3-17-SBGP-TBD
IDA PROJECT NO. MDH-4304

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.

PROJECT LOCATION



No.	Issue/Description	Sheets Changed	Date	By



Seal (Sheets 13-26 covering electrical design.) Date of Plans MARCH 07, 2014

Kevin N. Lightfoot 11/30/2015 3/6/2014
Kevin N. Lightfoot, P.E. Exp. Date
Project Engineer

Seal (Sheet 2) Date of Plans MARCH 07, 2014

Jeffery S. Litherland 11/30/15 3-5-14
Jeffery S. Litherland, P.E. Exp. Date
Project Engineer

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HANSON PROFESSIONAL SERVICES INC.
3125 New Era Road
Murphysboro, Illinois 62966
Telephone: 618.549.0240
Fax: 618.549.0242
Jeffery S. Litherland 3-5-14
Jeffery S. Litherland, P.E. Date
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SOUTHERN ILLINOIS AIRPORT
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Murphysboro, Illinois 62966
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Michael J. Phipps 3-5-14
Southern Illinois Airport Authority Date
Airport Manager

FILENAME:LONG

**SOUTHERN ILLINOIS
AIRPORT**

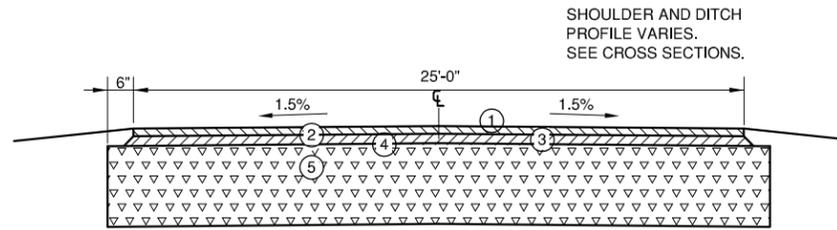
**MURPHYSBORO /
CARBONDALE,
ILLINOIS**

SUMMARY OF QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	TOTAL QUANTITIES	AS BUILT QUANTITIES
AR108158	1/C #8 5KV UG CABLE IN UD	L.F.	2085	
AR110204	4" PVC DUCT, DIRECT BURY	L.F.	70	
AR125410	MITL-STAKE MOUNTED	E.A.	1	
AR125415	MITL-BASE MOUNTED	E.A.	1	
AR125443	TAXI GUIDANCE SIGN 3 CHARACTER	E.A.	1	
AR125444	TAXI GUIDANCE SIGN 4 CHARACTER	E.A.	1	
AR125470	MODIFY EXISTING SIGN PANEL	E.A.	3	
AR125904	REMOVE TAXI GUIDANCE SIGN	E.A.	2	
AR125961	RELOCATE STAKE MOUNTED LIGHT	E.A.	14	
AR125962	RELOCATE BASE MOUNTED LIGHT	E.A.	1	
AR152411	UNCLASSIFIED EXCAVATION	L.S.	1	
AR156520	INLET PROTECTION	E.A.	3	
AR401613	BIT. SURF. CSE. - METHOD I, SUPERPAVE	TON	125	
AR401650	BITUMINOUS PAVEMENT MILLING	S.Y.	115	
AR401900	REMOVE BITUMINOUS PAVEMENT	S.Y.	1880	
AR602510	BITUMINOUS PRIME COAT	GAL.	190	
AR603510	BITUMINOUS TACK COAT	GAL.	70	
AR620520	PAVEMENT MARKING - WATERBORNE	S.F.	416	
AR620525	PAVEMENT MARKING - BLACK BORDER	S.F.	670	
AR620900	PAVEMENT MARKING REMOVAL	S.F.	390	
AR752846	INLET BOX STANDARD 542546	EA.	1	
AR800450	BIT. MILLINGS SUBBASE 15"	S.Y.	650	
AR901510	SEEDING	ACRE	1.5	
AR908510	MULCHING	ACRE	1.5	

INDEX TO SHEETS

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	SUMMARY OF QUANTITIES, INDEX TO SHEETS AND PROPOSED TYPICAL SECTIONS
3	PROPOSED SAFETY PLAN
4	PROPOSED SEQUENCING PLAN
5	PROPOSED CONSTRUCTION PLAN
6	PROPOSED STORMWATER POLLUTION PREVENTION PLAN AND DETAILS
7	PROPOSED TAXIWAY D PLAN & PROFILE
8	PROPOSED DRAINAGE PLAN & DETAILS
9	PROPOSED STAKING PLAN
10	PROPOSED MARKING PLAN
11	PROPOSED CROSS SECTIONS
12	PROPOSED CROSS SECTIONS
13	EXISTING ELECTRICAL CONDITIONS UTILITY PLAN
14	PROPOSED LIGHTING LAYOUT FOR TAXIWAY D
15	AIRFIELD LIGHTING NOTES & SCHEDULES
16	ELECTRICAL DETAILS SHEET 1
17	ELECTRICAL DETAILS SHEET 2
18	ELECTRICAL DETAILS SHEET 3
19	ELECTRICAL & DUCT DETAILS
20	ELECTRICAL NOTES SHEET 1
21	ELECTRICAL NOTES SHEET 2
22	GROUNDING NOTES & DETAIL
23	GROUNDING DETAILS
24	ELECTRICAL LEGEND & ABBREVIATIONS
25	ELECTRICAL ONE LINE VAULT
26	HIGH VOLTAGE WIRING SCHEMATICS



PROPOSED TAXIWAY D

1. PROPOSED 1 1/2" BITUMINOUS SURFACE COURSE
2. PROPOSED BITUMINOUS TACK COAT
3. PROPOSED 1 1/2" BITUMINOUS SURFACE COURSE
4. PROPOSED BITUMINOUS PRIME COAT
5. PROPOSED 15" BITUMINOUS MILLINGS BASE COURSE



REMOVE TAXIWAY D

IDA No: MDH-4304

Contract No:

SBG No: SBG-TBD

NO.	DATE	DESCRIPTION		
		LAY	DWN	REV

ISSUE: MARCH 07, 2014

PROJECT NO: 13A0083D

CAD FILE: 02-G-002-TYP.DWG

LAYOUT BY: CWS 02/06/2014

DRAWN BY: CWS 02/06/2014

REVIEWED BY: JSL 03/05/2014

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SHEET TITLE

**SUMMARY OF
QUANTITIES INDEX
TO SHEETS AND
PROPOSED TYPICAL
SECTIONS**

SCOPE OF WORK

THIS PROJECT CONSISTS OF THE REMOVAL OF A BITUMINOUS TAXIWAY AND CONSTRUCTING A BITUMINOUS TAXIWAY. ASSOCIATED WORK ITEMS INCLUDE GRADING, ELECTRICAL, DRAINAGE, PAVEMENT MARKING, AND SEEDING.

UTILITY NOTE

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 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.

J.U.L.I.E. INFORMATION

COUNTY _____ JACKSON
 CITY _____ CARBONDALE
 TOWNSHIP _____ 8 SOUTH
 RANGE _____ 1 WEST
 SECTION NO. _____ 31 & 32
 ADDRESS _____ P.O. BOX 1086
 CARBONDALE, ILLINOIS 62903-1086

CONTRACTOR RESPONSIBILITIES

THE CONTRACTOR'S EQUIPMENT PARKING AND STORAGE AREA WILL BE AS SHOWN. THE CONTRACTOR'S EMPLOYEES WILL PARK THEIR VEHICLES IN THIS AREA. ONLY CONTRACTOR VEHICLES WILL BE ALLOWED OUTSIDE THIS AREA.

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

THE CONTRACTOR SHALL MAINTAIN CONTINUOUS TAXIWAY ACCESS TO ALL HANGARS AND ADMINISTRATIVE AREAS.

ALL WORK PERFORMED SHALL BE DONE IN A ORDERLY AND EFFECTIVE MANNER TO MINIMIZE THE INTERNAL TAXIWAY CLOSURE.

NO TRENCHES OR HOLES WILL REMAIN OPEN OVERNIGHT WITHOUT PROPER PROTECTION. ANY HOLES LEFT OPEN WILL BE BARRICADED WITH APPROVED LIGHTED BARRICADES.

BARRICADES AND TRAFFIC CONES

IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO PLACE AND MAINTAIN BARRICADES, TRAFFIC CONES, SIGNS AND OTHER TEMPORARY BARRIERS TO SEPARATE AIRCRAFT TRAFFIC AND CONSTRUCTION TRAFFIC. BARRICADES USED ON THE AIRFIELD WILL BE EQUIPPED WITH 20" SQUARE ORANGE FLAGS AND RED FLASHING LIGHTS. THE RESPONSIBILITY OF AND COST OF ERECTION, MAINTENANCE AND REMOVAL OF ALL TRAFFIC CONTROL MEASURES USED BY THE CONTRACTOR SHALL BE CONSIDERED AS PART OF PAY ITEM AR150530 TRAFFIC MAINTENANCE. COORDINATE ALL CLOSURES WITH RESIDENT ENGINEER.

AIRCRAFT OPERATION LINE

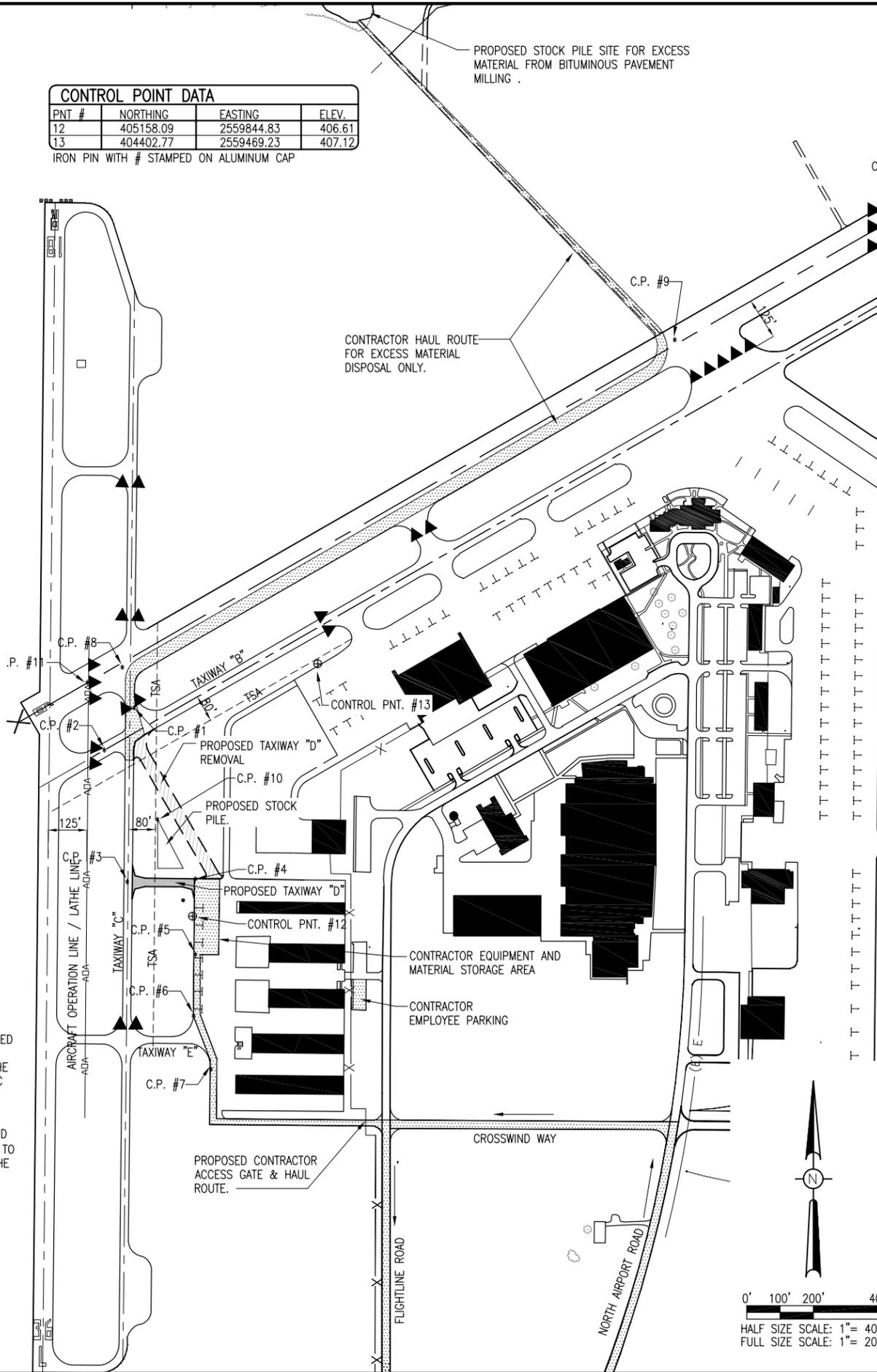
THE CONTRACTOR WILL LOCATE THIS LINE AT THE START OF CONSTRUCTION AND WILL PLACE FLAGGED LATHE EVERY 150' ALONG IT. THIS LINE WILL BE USED TO IDENTIFY THE RUNWAY SAFETY AREA. THE CONTRACTOR WILL MAINTAIN THE LATHE LINE FOR RUNWAYS.

LEGEND

- EXISTING IMPROVEMENTS
- PROPOSED IMPROVEMENTS
- EXISTING BUILDINGS
- PROPOSED HAUL ROUTE AND EQUIPMENT PARKING AREA
- PROPOSED BARRICADES

CONTROL POINT DATA			
PNT #	NORTHING	EASTING	ELEV.
12	405158.09	2559844.83	406.61
13	404402.77	2559469.23	407.12

IRON PIN WITH # STAMPED ON ALUMINUM CAP



NOTE:

COST OF CONSTRUCTING, PLACING, MAINTAINING AND REMOVING CROSSES WILL BE CONSIDERED INCIDENTAL TO THE PAY ITEM AR150530 TRAFFIC MAINTENANCE. THE CROSSES WILL BE YELLOW IN COLOR AND SHALL BE MADE OF A SUITABLE MATERIAL AS APPROVED BY THE AIRPORT MANAGER. THE CROSSES WILL BE PLACED OVER THE NUMERALS AND SECURED IN A MANNER APPROVED BY THE MANAGER. THE PROPOSED CROSSES WILL BE PLACED WHEN 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.

HEIGHT OF CONSTRUCTION EQUIPMENT

THE MAXIMUM ANTICIPATED HEIGHT OF THE CONSTRUCTION EQUIPMENT WILL BE 25 FEET. THE TALLEST EQUIPMENT IS EXPECTED TO BE A DUMP TRUCK.

CERTIFIED PAYROLLS

THE RESIDENT ENGINEER CANNOT FORWARD CONSTRUCTION REPORTS TO THE OWNER FOR PROCESSING UNTIL ALL CERTIFIED PAYROLLS FOR THE PERIOD HAVE BEEN RECEIVED.

MATERIAL CERTIFICATION

MATERIALS TO BE INCORPORATED INTO THE PROJECT CANNOT BE USED WITHOUT PRIOR APPROVAL. ALL MATERIALS TO BE USED IN THE PROJECT MUST BE SUBMITTED TO THE RESIDENT ENGINEER FOR APPROVAL. USE OF MATERIALS WITHOUT PRIOR APPROVAL AND ULTIMATELY DETERMINED TO BE UNACCEPTABLE BY THE ILLINOIS DIVISION OF AERONAUTICS ARE SUBJECT TO REMOVAL AND/OR NON-PAYMENT.

PROPOSED SAFETY PLAN

GENERAL - THE SOUTHERN ILLINOIS AIRPORT IS COMPRISED OF THREE RUNWAYS. THE PROPOSED CONSTRUCTION WILL REQUIRE THE CLOSING OF RUNWAY 6-24 DURING HAULING OPERATIONS. THE INTERNAL TAXIWAYS SHOWN ON THIS SHEET WILL BE CLOSED WHEN THE CONTRACTOR IS WITHIN THE TAXIWAY SAFETY AREA.

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.

THE CONTRACTOR SHALL BE REQUIRED TO RECEIVE FAR PART 139 TRAINING FOR ALL PERSONNEL WHO DRIVE VEHICLES INSIDE THE FENCED AREA OF THE AIRPORT. SEE SPECIAL PROVISIONS FOR ADDITIONAL INFORMATION.

RADIO CONTROL - THE CONTRACTOR WILL BE REQUIRED TO BE IN TWO-WAY RADIO CONTACT (121.8 MHZ.) WITH THE AIRPORT GROUND CONTROL. THIS WILL KEEP THE CONTRACTOR IN CONSTANT CONTACT WITH THE SOUTHERN ILLINOIS AIRPORT'S AIR TRAFFIC CONTROL TOWER (ATCT) AND ENABLE THE ATCT TO IMMEDIATELY CONTACT THE CONTRACTOR IN CASE OF AN AERONAUTICAL EMERGENCY THAT WOULD REQUIRE ACTION BY THE CONTRACTOR AND/OR HIS PERSONNEL.

EROSION CONTROL

THIS PROJECT WILL DISTURB MORE THAN 1 ACRE OF LAND, THEREFORE A N.P.D.E.S. PERMIT WILL BE REQUIRED.

HAUL ROUTE AND VEHICLE PARKING

THE CONTRACTOR WILL USE THE DESIGNATED HAUL ROUTE AND PARKING AREA AS SHOWN ON THIS SHEET. THE PROPOSED EQUIPMENT PARKING AREA WILL BE 220' X 60'. THE CONTRACTOR WILL BE REQUIRED TO PROTECT AND MAINTAIN THE PROPOSED HAUL ROUTE AND PARKING AREA 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. CLEANING AND MAINTENANCE OF THE HAUL ROUTE AND PARKING AREA WILL BE CONSIDERED INCIDENTAL TO THE PROJECT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED. THE CONTRACTOR SHALL EXERCISE CARE SO AS TO NOT MAR EXISTING PAVEMENTS. ANY DAMAGE DONE BY THE CONTRACTOR SHALL BE REPAIRED AT NO EXPENSE TO THE CONTRACT.

CRITICAL POINT DATA				
NO.	DESCRIPTION	LAT.	LONG.	ELEV.
1	HOLD SHORT RWY 6 @ C	37° 46' 32.14"	89° 15' 27.87"	409'
2	HOLD SHORT RWY 36L @ B	37° 46' 30.61"	89° 15' 39.50"	409'
3	INT TXY C & NEW TXY D	37° 46' 26.92"	89° 15' 28.13"	410'
4	CONTRACTOR EQP. PARKING	37° 46' 27.01"	89° 15' 25.53"	410'
5	CONTRACTOR EQP. PARKING	37° 46' 24.79"	89° 15' 25.59"	410'
6	CONTRACTOR HAUL RT.	37° 46' 22.98"	89° 15' 25.60"	410'
7	CONTRACTOR HAUL RT.	37° 46' 21.54"	89° 15' 24.99"	410'
8	CONTRACTOR HAUL RT.	37° 46' 33.41"	89° 15' 28.16"	408'
9	CONTRACTOR HAUL RT.	37° 46' 42.80"	89° 15' 07.17"	409'
10	STOCK PILE	37° 46' 28.73"	89° 15' 27.00"	410'
11	INT RWY 6 & RWY 18R	37° 46' 32.89"	89° 15' 29.35"	409'
12	INT RWY 6 & TXY A	37° 46' 47.58"	89° 14' 56.45"	405'
13	INT RWY 6 & RWY 18L	37° 46' 50.39"	89° 14' 50.14"	402'

DETAIL OF CROSS FOR CLOSED RUNWAY
 "NOT TO SCALE"



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 fax: 618-549-0242

Illinois Licensed
 Professional Service Corporation
 #184-001084

**SOUTHERN ILLINOIS
 AIRPORT**

**MURPHYSBORO /
 CARBONDALE,
 ILLINOIS**

REMOVE TAXIWAY D

IDA No: MDH-4304

Contract No:

SBG No: SBG-TBD

NO.	DATE	DESCRIPTION		
		LAY	DWN	REV

ISSUE: MARCH 07, 2014

PROJECT NO: 13A0083D

CAD FILE: 03-G-003-SFY.DWG

LAYOUT BY: CWS 02/06/2014

DRAWN BY: CWS 02/06/2014

REVIEWED BY: JSL 03/05/2014

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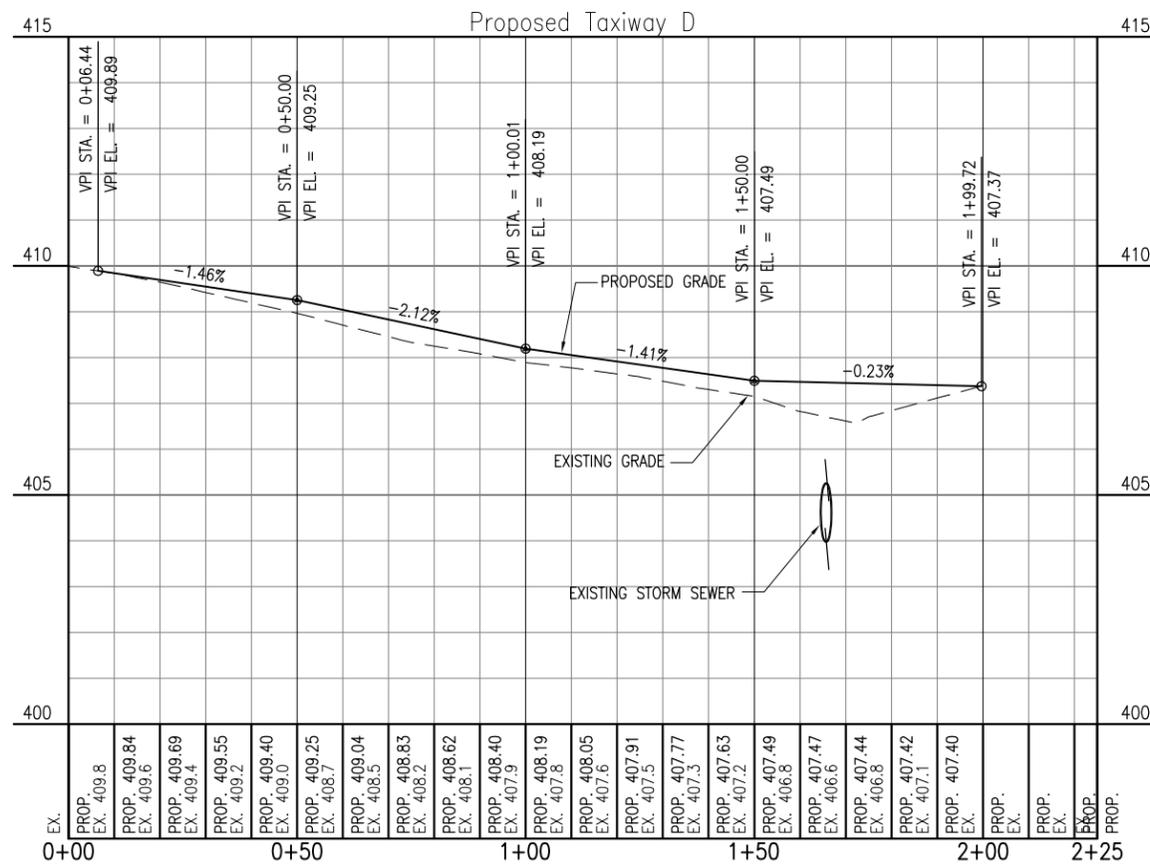
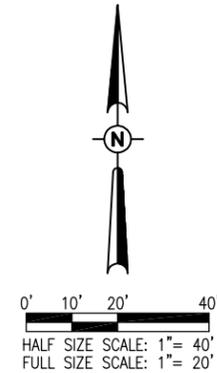
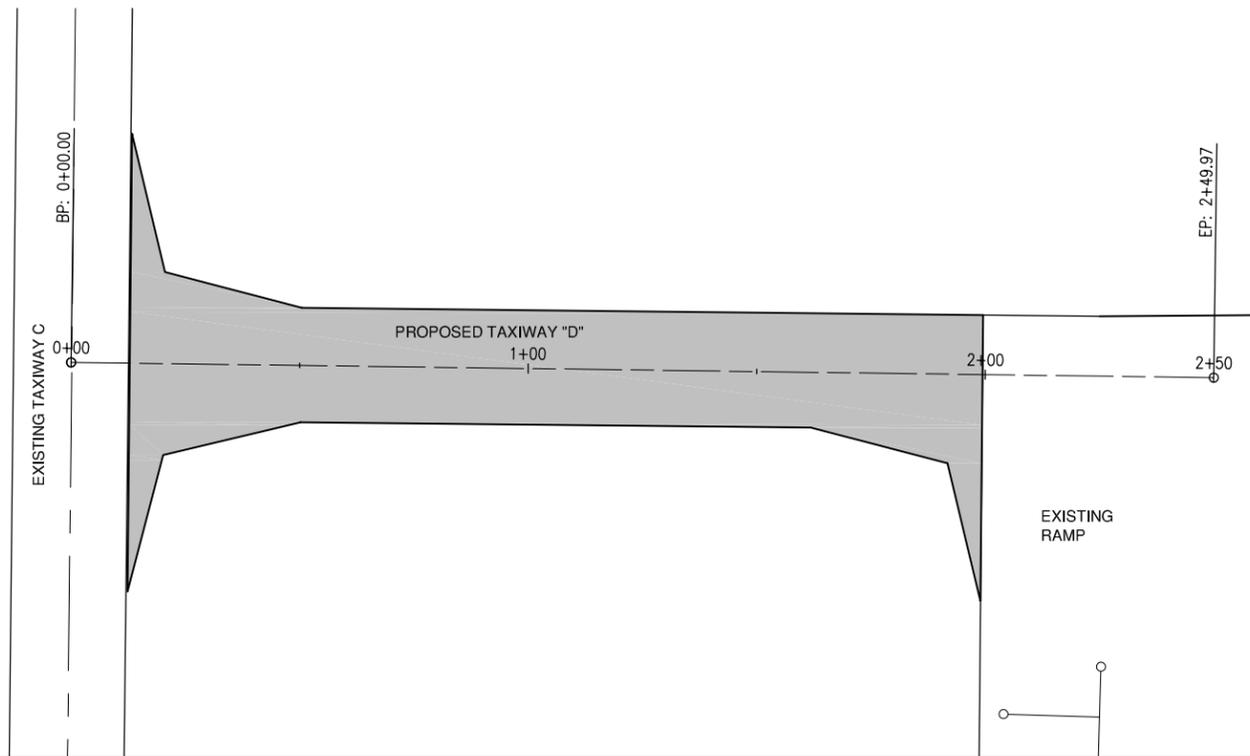
SHEET TITLE

**PROPOSED
 SAFETY PLAN**

MAR 13, 2014 10:57 AM SCHUB01446 pwr:\ps\svr\306.hanson.dom\Hanson\Projects\Documents\13\jobs\13A0083D\CAD\Airport\SheetR-003-SFY

**SOUTHERN ILLINOIS
AIRPORT**

**MURPHYSBORO /
CARBONDALE,
ILLINOIS**



EX.	PROP.										
409.8	409.84	409.6	409.69	409.4	409.55	409.2	409.40	409.0	409.25	408.7	409.04
408.5	408.83	408.2	408.62	408.1	408.40	407.9	408.19	407.8	408.05	407.6	407.91
407.5	407.77	407.3	407.63	407.2	407.49	406.8	407.47	406.6	407.44	407.1	407.42
407.0	407.40	406.8	407.0	406.6	406.8	406.6	406.6	406.6	406.6	406.6	406.6

REMOVE TAXIWAY D

IDA No: MDH-4304

Contract No:

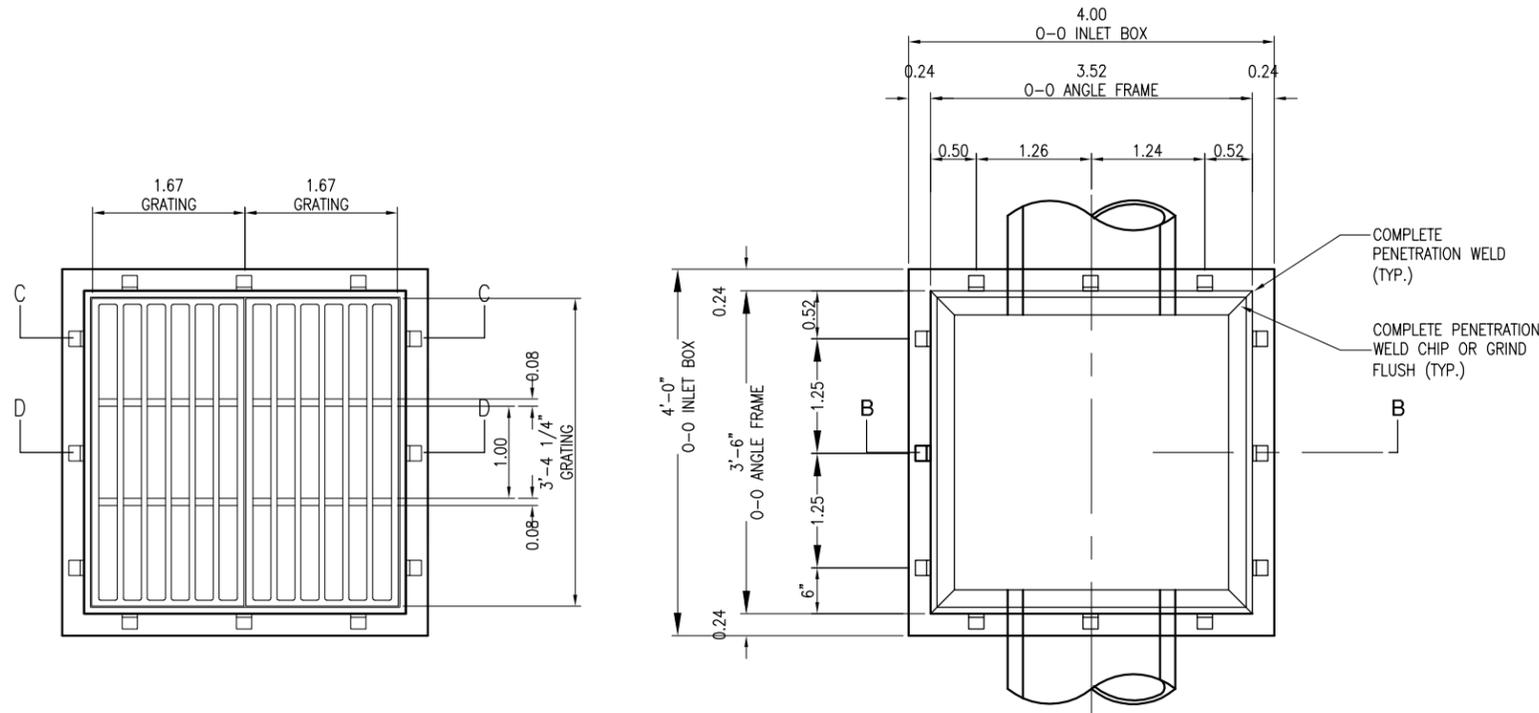
SBG No: SBG-TBD

NO.	DATE	DESCRIPTION		
		LAY	DWN	REV

ISSUE: MARCH 07, 2014
PROJECT NO: 13A0083D
CAD FILE: GRADES-E.DWG
LAYOUT BY: JSL 02/27/2012
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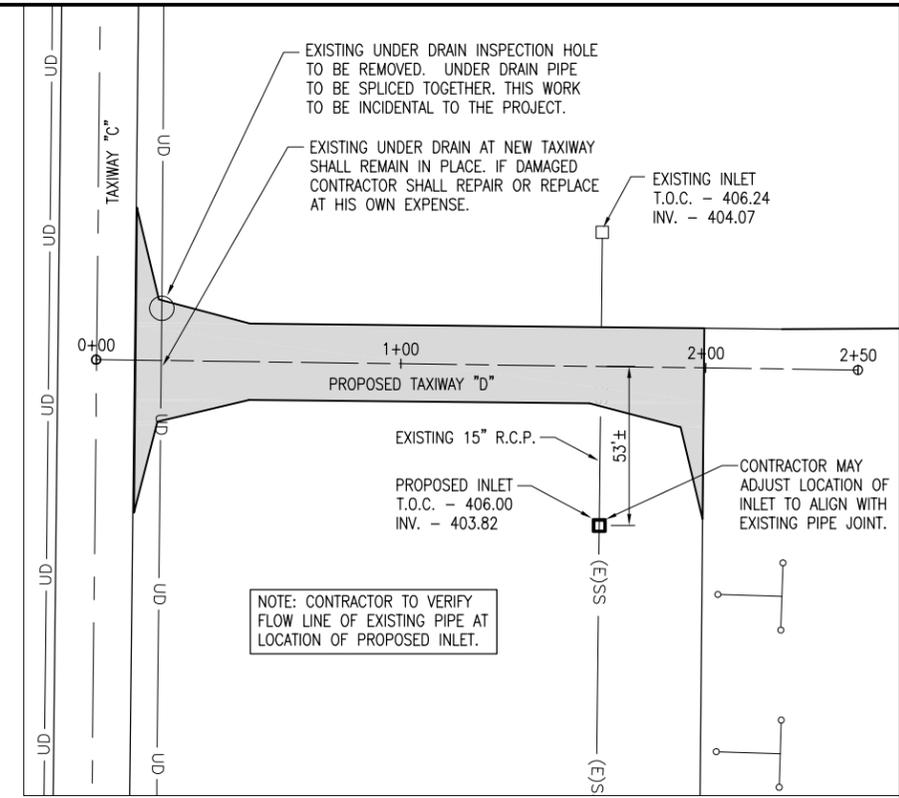
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SHEET TITLE

**PROPOSED
TAXIWAY D PLAN &
PROFILE SHEET**



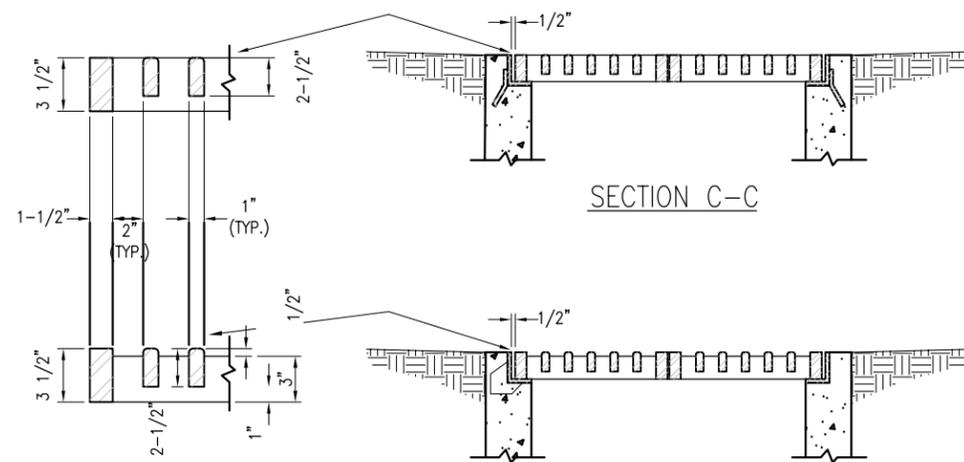
PLAN
(GRATING OMITTED FOR CLARITY)

INLET BOX STANDARD 542546



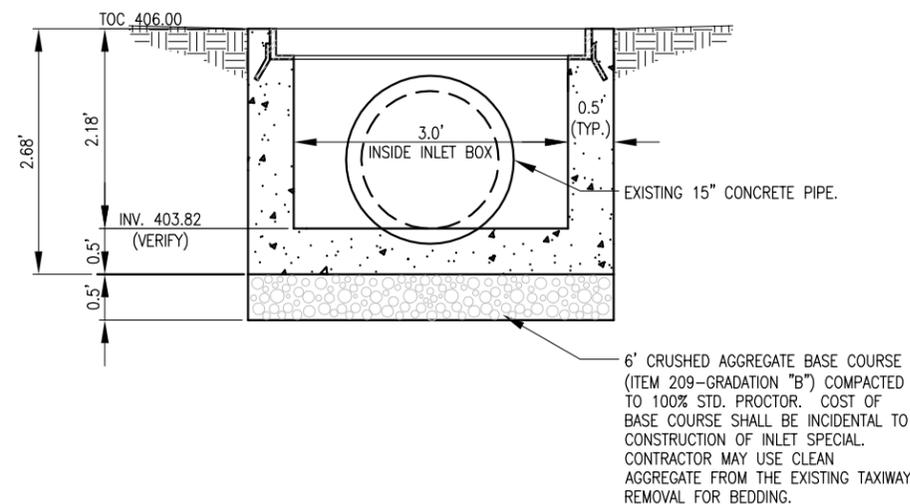
LEGEND

- EXISTING PAVEMENT
- PROPOSED IMPROVEMENTS
- PROPOSED INLET
- EXISTING INLET
- EXISTING UNDERDRAIN
- EXISTING STORM SEWER



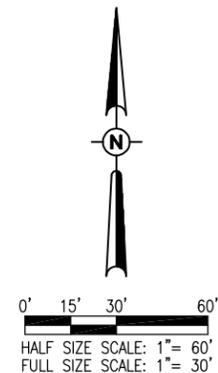
SECTION C-C
SECTION D-D
CAST FRAME & GRATE

(NEENAH R-3807, OR APPROVED EQUAL)



SECTION B-B

INLET DETAILS
NOT TO SCALE



REMOVE TAXIWAY D

IDA No: MDH-4304

Contract No:

SBG No: SBG-TBD

NO.	DATE	DESCRIPTION		
		LAY	DWN	REV

ISSUE: MARCH 07, 2014
PROJECT NO: 13A0083D
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REVIEWED BY: JSL 03/05/2014

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SHEET TITLE

PROPOSED
DRAINAGE PLAN
& DETAILS

**SOUTHERN ILLINOIS
AIRPORT**

**MURPHYSBORO /
CARBONDALE,
ILLINOIS**

REMOVE TAXIWAY D

IDA No: MDH-4304

Contract No:

SBG No: SBG-TBD

NO.	DATE	DESCRIPTION		
		LAY	DWN	REV

ISSUE: MARCH 07, 2014

PROJECT NO: 13A0083D

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LAYOUT BY: JSL 02/06/2012

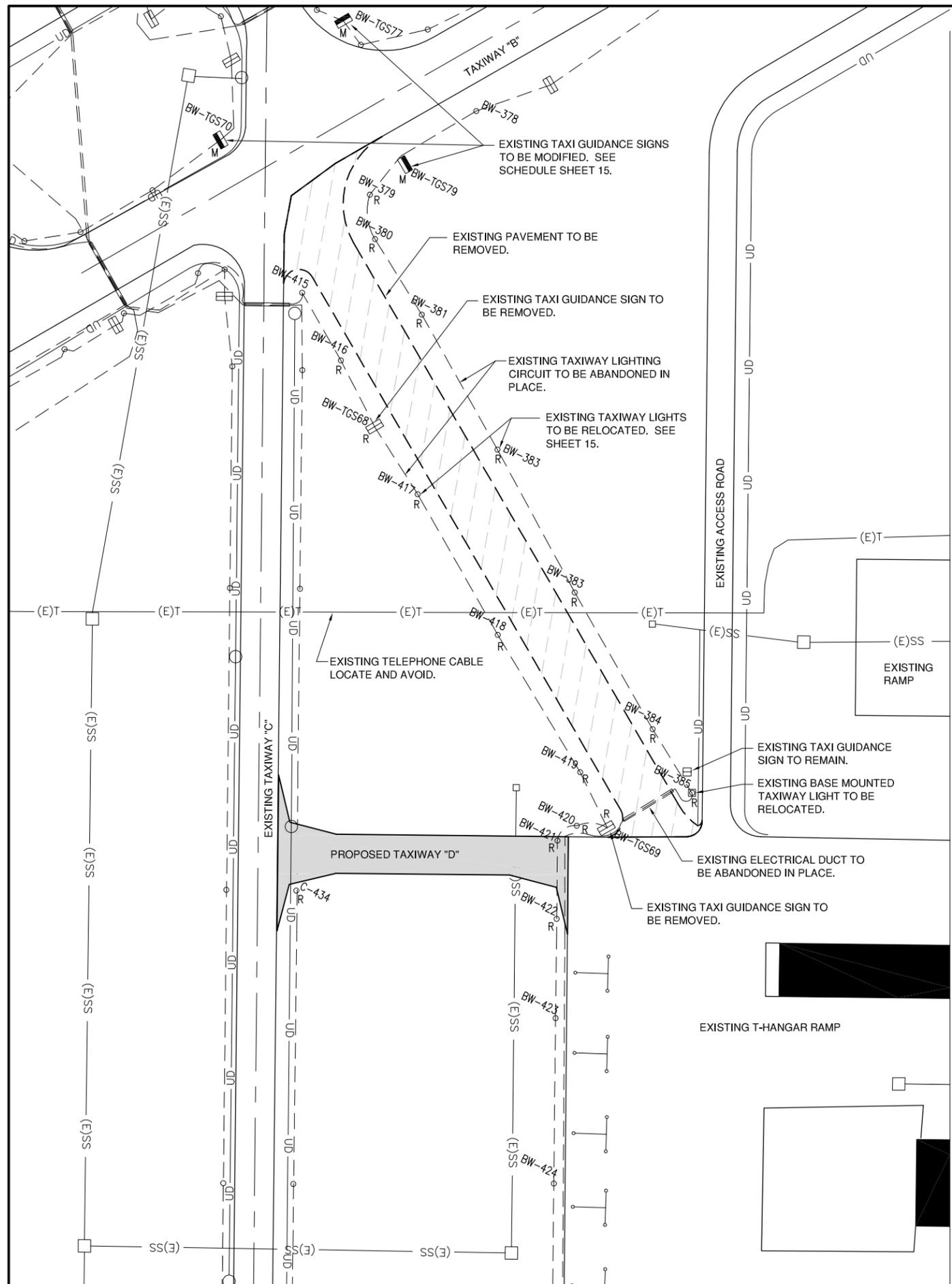
DRAWN BY: CWS 02/06/2012

REVIEWED BY: JSL 03/05/2014

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SHEET TITLE

**EXISTING
CONDITIONS /
UTILITIES PLAN**

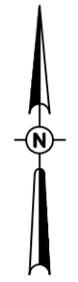


LIGHT REMOVAL/RELOCATION NOTES

- 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).
- 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 OR DISCONNECTING THE RESPECTIVE AIRFIELD LIGHTING, NAVAIDS, OR OTHER DEVICE.
- CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF FAA AC NO. 150/5370-2F (OR MOST CURRENT ISSUE) "OPERATIONAL SAFETY ON AIRPORT DURING CONSTRUCTION".
- CONTRACTOR SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS OF NFPA 70E - STANDARD FOR ELECTRICAL SAFETY IN THE WORKPLACE.
- EXISTING AIRFIELD LIGHTS THAT ARE DESIGNATED FOR RELOCATION SHALL BE DISCONNECTED AND CAREFULLY REMOVED BY THE CONTRACTOR AS NOT TO DAMAGE THE LIGHT. THE LIGHT ASSEMBLY AND ISOLATION TRANSFORMERS SHALL BE RELOCATED AND INSTALLED IN THE LOCATIONS SHOWN. WHERE THE EXISTING LIGHT FIXTURE HAS A GROUND ROD, THE GROUND ROD MAY BE RELOCATED WHERE DETERMINED THAT IT IS SUITABLE FOR USE.
- EXISTING AIRFIELD LIGHTS THAT ARE DESIGNATED FOR REMOVAL SHALL BE DISCONNECTED AND CAREFULLY REMOVED BY THE CONTRACTOR AS NOT TO DAMAGE THE LIGHT. THE LIGHT ASSEMBLY AND ISOLATION TRANSFORMERS SHALL BE TURNED OVER TO THE AIRPORT MANAGEMENT. THE METAL STAKE AND GROUND ROD, IF PRESENT, WILL BE DISPOSED OF OFF THE AIRPORT SITE AT THE EXPENSE OF THE CONTRACTOR.
- EXISTING TAXI GUIDANCE SIGNS THAT ARE DESIGNATED FOR REMOVAL SHALL BE DISCONNECTED AND CAREFULLY REMOVED BY THE CONTRACTOR AS NOT TO DAMAGE THE SIGN. THE SIGN ASSEMBLY AND ISOLATION TRANSFORMERS SHALL BE TURNED OVER TO THE AIRPORT MANAGEMENT. EXISTING SIGN FOUNDATION SHALL BE REMOVED AND LEGALLY DISPOSED OFF THE AIRPORT SITE. EXISTING CABLES ASSOCIATED WITH THE SIGN REMOVAL SHALL BE DISCONNECTED AND REMOVED.
- THE CONTRACTOR IS ENCOURAGED TO INSPECT EACH EXISTING LIGHT PRIOR TO RELOCATION AND IDENTIFY TO THE RESIDENT ENGINEER ANY DAMAGED OR INOPERATING PARTS. ONCE THE EXISTING LIGHT IS REMOVED, THE CONTRACTOR IS RESPONSIBLE FOR ALL FIXTURES DAMAGED DURING THE RELOCATION. ALL LIGHTS WILL BE REINSTALLED IN PROPER WORKING ORDER, OR REPLACED AT THE CONTRACTOR'S EXPENSE.
- THE EXISTING DUCTS AND CABLES ASSOCIATED WITH AIRFIELD LIGHTING REMOVALS, RELOCATIONS, AND/OR CABLE OR DUCT REPLACEMENTS SHALL BE ABANDONED IN PLACE UNLESS IT CONFLICTS WITH THE INSTALLATION OF THE AIRFIELD LIGHT, SIGN, DUCT, CABLE, SPLICE CANS, SITE WORK, PAVEMENT OR OTHER WORK, THEN IT SHALL BE DISCONNECTED, REMOVED AND DISPOSED OF OFF SITE AT NO ADDITIONAL COST TO THE CONTRACTOR. CONTRACTOR MAY REMOVE ABANDONED CABLES AT NO ADDITIONAL COST TO THE CONTRACT AND SHALL HAVE THE SALVAGE RIGHTS TO ABANDONED CABLES
- THE CONTRACTOR IS REQUIRED TO FILL IN ALL HOLES AND DEPRESSIONS RESULTING FROM THE LIGHT REMOVAL, SIGN REMOVAL, OR OTHER REMOVAL WITH EARTH FROM WITHIN THE CONSTRUCTION LIMITS. THE AREAS SHALL BE COMPACTED TO PREVENT FUTURE SETTLEMENT AND FERTILIZED, SEEDDED, AND MULCHED IN ACCORDANCE WITH ITEMS 901 AND 908 RESPECTIVELY.
- TAXIWAY LIGHTING CIRCUITS SHALL BE ACTIVE AT THE END OF EACH CONSTRUCTION DAY FOR AN OPEN TAXIWAY. THE CONTRACTOR SHALL PROVIDE TEMPORARY CABLE & CONNECTIONS WHERE NECESSARY TO MAINTAIN A TAXIWAY LIGHTING SYSTEM. TEMPORARY CABLE SHALL BE 1/8 #8 FAA L-824 5KV UG CABLE IN DUCT OR UNIT DUCT.
- ALL ABOVE GROUND 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, - OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION, PART 218, PARAGRAPH c.
- NO CONNECTION TO AN ACTIVE LIGHTING CIRCUIT WILL BE BROKEN UNTIL THE CIRCUIT HAS BEEN TURNED OFF IN ACCORDANCE WITH NOTE 1.

LEGEND

- EXISTING PAVEMENT
- EXISTING PAVEMENT (TO BE REMOVED)
- PROPOSED IMPROVEMENTS
- EXISTING ELECTRICAL DUCT (TO BE REMOVED)
- EXISTING ELECTRICAL CABLES (TO BE REMOVED OR ABANDONED)
- EXISTING ELECTRICAL CABLES
- EXISTING TELEPHONE CABLE
- EXISTING UNDERDRAIN
- EXISTING STORM SEWER
- EXISTING STAKE MOUNTED TAXIWAY LIGHT (TO BE RELOCATED)
- EXISTING BASE MOUNTED TAXIWAY LIGHT (TO BE RELOCATED)
- EXISTING TAXI GUIDANCE SIGN (TO BE REMOVED)
- EXISTING TAXI GUIDANCE SIGN (TO BE MODIFIED)



0' 20' 40' 80'
HALF SIZE SCALE: 1" = 80'
FULL SIZE SCALE: 1" = 40'

**SOUTHERN ILLINOIS
AIRPORT**

**MURPHYSBORO /
CARBONDALE,
ILLINOIS**

AIRFIELD LIGHTING NOTES

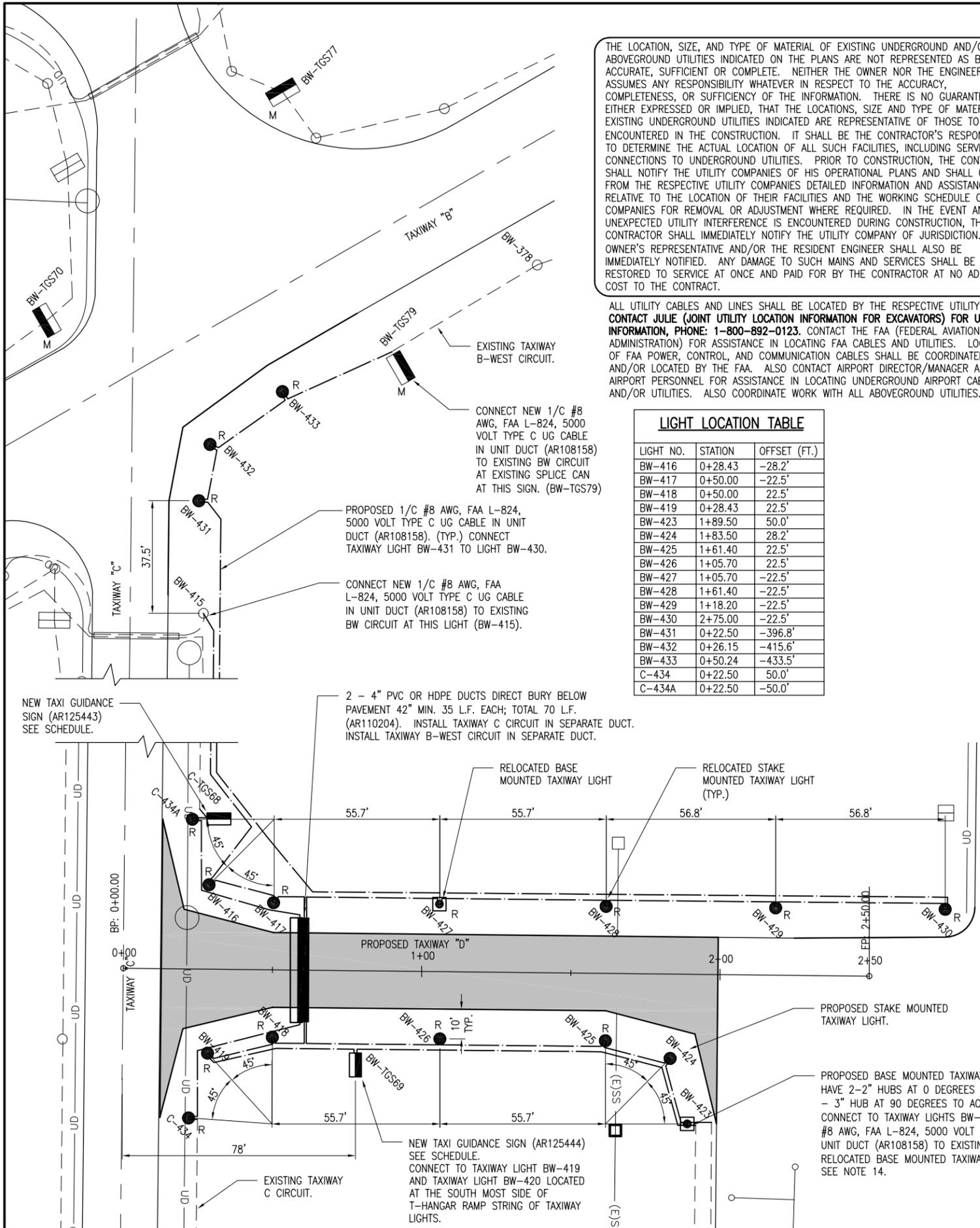
1. ALL WORK, POWER OUTAGES, AND/OR SHUT DOWN OF EXISTING SYSTEMS SHALL BE COORDINATED WITH THE AIRPORT MANAGER. ONCE SHUT DOWN, THE CIRCUITS SHALL BE LABELED AS SUCH TO PREVENT ACCIDENTAL ENERGIZING OF THE RESPECTIVE CIRCUITS. ALL PERSONNEL SHALL FOLLOW U.S. DEPARTMENT OF LABOR OCCUPATIONAL SAFETY & 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 FIELD VERIFY EXISTING SITE CONDITIONS. CONTRACTOR SHALL FIELD VERIFY RESPECTIVE CIRCUITS AND POWER SOURCES PRIOR TO REMOVING OR DISCONNECTING THE RESPECTIVE AIRFIELD LIGHTING, NAVAID, OR OTHER DEVICE.
3. TAXIWAY LIGHTS SHALL BE PLACED 10' (FT.) FROM THE PAVEMENT EDGE UNLESS SHOWN OTHERWISE ON THESE CONSTRUCTION DRAWINGS. TAXIWAY LIGHTS SHALL BE LOCATED SUCH THAT THE CLOSEST SIDE OF THE SIGN IS 15' FROM THE PAVEMENT EDGE, UNLESS SHOWN OTHERWISE.
4. TAXIWAY LIGHTS, GUIDANCE SIGNS, OTHER AIRFIELD LIGHTING, SPLICE CANS, HANDHOLES, MANHOLES, 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.
5. PROPOSED CABLE FOR TAXIWAY LIGHTING SHALL BE INSTALLED APPROXIMATELY 12' FROM THE PAVEMENT EDGE WITH HOMERUNS ROUTED AS DETAILS ON THE RESPECTIVE PLANS. CABLES SHALL BE PLACED A MINIMUM OF 18" BELOW FINISHED GRADE.
6. THE PROPOSED TAXIWAY LIGHTING CABLE SHALL BE 1/C, #8 AWG, FAA L-824, 5000 VOLT, TYPE C UNDERGROUND CABLE IN UNIT DUCT (AR108158), OR DUCT AS DETAILED HEREIN.
7. 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.
8. TAXIWAY LIGHTS SHALL BE TAGGED BY THE CONTRACTOR IN ACCORDANCE WITH THE LIGHT NUMBERS SHOWN ON THESE CONSTRUCTION DRAWINGS. PROVIDE NEW TAGS FOR EXISTING LIGHTS WHERE NOTED HEREIN. IDENTIFICATION TAGS WILL BE CONSIDERED INCIDENTAL TO THE AIRFIELD LIGHTING WORK.
9. 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.
10. HOMERUN CABLES FOR A RESPECTIVE CIRCUIT THAT ARE INSTALLED IN CONDUIT OR DUCT SHALL BE RUN TOGETHER IN THE SAME RACEWAY OR DUCT.
11. EXISTING AIRFIELD LIGHTING CABLES IN AREAS OF NEW WORK SHALL BE DISCONNECTED & REMOVED WHERE IN CONFLICT WITH NEW CONSTRUCTION. IN OTHER AREAS CABLES MAY BE ABANDONED IN PLACE.
12. 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. THIS WORK WILL BE CONSIDERED AS AN INCIDENTAL ITEM AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
13. 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 COORDINATION OF THE WORK.
14. EXISTING TAXIWAY LIGHT BW-425 SHALL BE RENUMBERED TO BW-420. EXISTING TAXIWAY LIGHT BW-424 SHALL BE RENUMBERED TO BW-421. EXISTING TAXIWAY LIGHT BW-423 SHALL BE RENUMBERED TO BW-422.
15. NO CONNECTION TO AN ACTIVE LIGHTING CIRCUIT WILL BE BROKEN UNTIL THE CIRCUIT HAS BEEN TURNED OFF IN ACCORDANCE WITH 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.

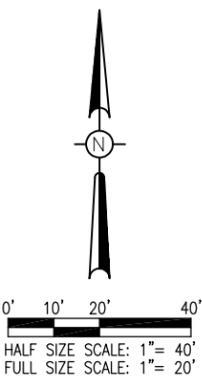
LIGHT LOCATION TABLE

LIGHT NO.	STATION	OFFSET (FT.)
BW-416	0+28.43	-28.2'
BW-417	0+50.00	-22.5'
BW-418	0+50.00	22.5'
BW-419	0+28.43	22.5'
BW-423	1+89.50	50.0'
BW-424	1+83.50	28.2'
BW-425	1+61.40	22.5'
BW-426	1+05.70	22.5'
BW-427	1+05.70	-22.5'
BW-428	1+61.40	-22.5'
BW-429	1+18.20	-22.5'
BW-430	2+75.00	-22.5'
BW-431	0+22.50	-396.8'
BW-432	0+26.15	-415.6'
BW-433	0+50.24	-433.5'
C-434	0+22.50	50.0'
C-434A	0+22.50	-50.0'



LEGEND

- [Hatched Box] EXISTING PAVEMENT
- [Solid Grey Box] PROPOSED IMPROVEMENTS
- [Dashed Line] EXISTING ELECTRICAL DUCT
- [Thick Solid Line] PROPOSED ELECTRICAL DUCT
- [Thin Solid Line] PROPOSED 1/C #8 AWG, FAA L-824, 5000 V TYPE C UNDERGROUND CABLE IN UNIT DUCT
- [Line with 'UD'] EXISTING UNDERDRAIN
- [Line with 'SS'] EXISTING STORM SEWER
- [Circle with 'R'] RELOCATED BASE MOUNTED TAXIWAY LIGHT
- [Circle with 'R'] RELOCATED STAKE MOUNTED TAXIWAY LIGHT
- [Circle with 'R'] PROPOSED BASE MOUNTED TAXIWAY LIGHT
- [Circle with 'R'] PROPOSED STAKE MOUNTED TAXIWAY LIGHT
- [Rectangle with 'M'] PROPOSED TAXI GUIDANCE SIGN
- [Rectangle with 'M'] EXISTING TAXI GUIDANCE SIGN W/ MODIFIED PANELS
- [Square] PROPOSED INLET



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		LAY	DWN	REV

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**PROPOSED LIGHTING
LAYOUT PLAN**

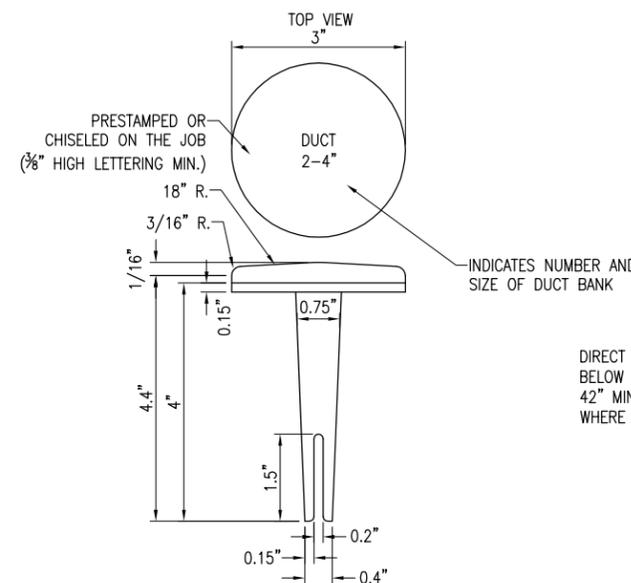
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**SOUTHERN ILLINOIS
AIRPORT**

**MURPHYSBORO /
CARBONDALE,
ILLINOIS**

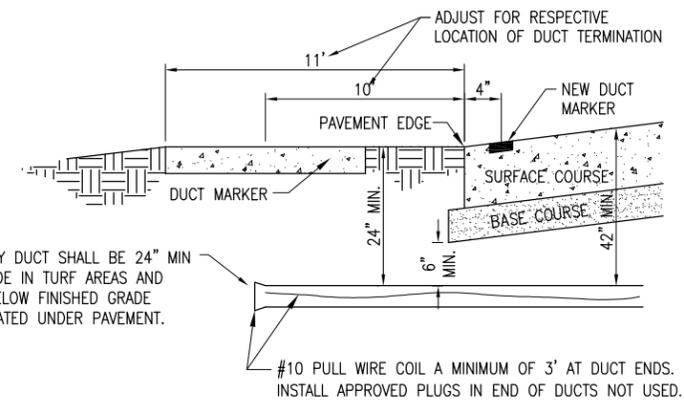
CABLE & DUCT MARKER NOTES:

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 1/2" AND 1/4" DEEP. ALL LETTERS, NUMBERS AND ARROWS TO BE IMPRESSED.
5. EMPLOY THE FOLLOWING METHODS WHERE ADDITIONAL SPACE TO FIT THE 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.

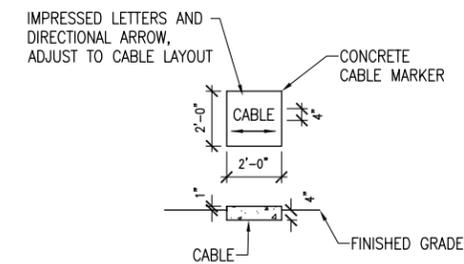


BITUMINOUS PAVEMENT DUCT MARKERS
"NOT TO SCALE"

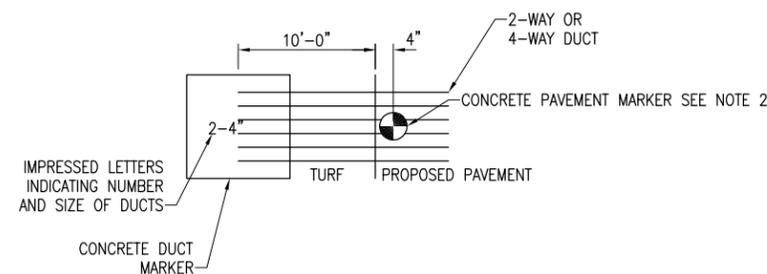
- NOTES:**
1. TOP OF MARKER SHALL BE FLUSH WITH FINISHED PAVEMENT SURFACE. MARKER MAY BE INSTALLED IN A DRILLED HOLE AND SECURED WITH EPOXY GLUE.



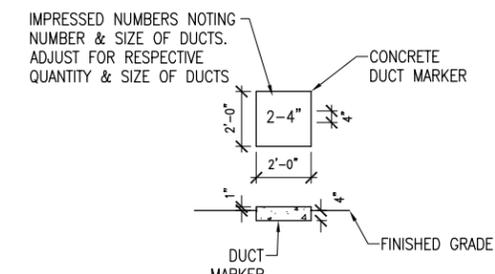
UNDERGROUND ELECTRICAL DUCT
(NOT TO SCALE)



TURF CABLE MARKERS
"NOT TO SCALE"



DUCT MARKER DETAIL
"NOT TO SCALE"



TURF DUCT MARKERS
"NOT TO SCALE"

REMOVE TAXIWAY D

IDA No: MDH-4304

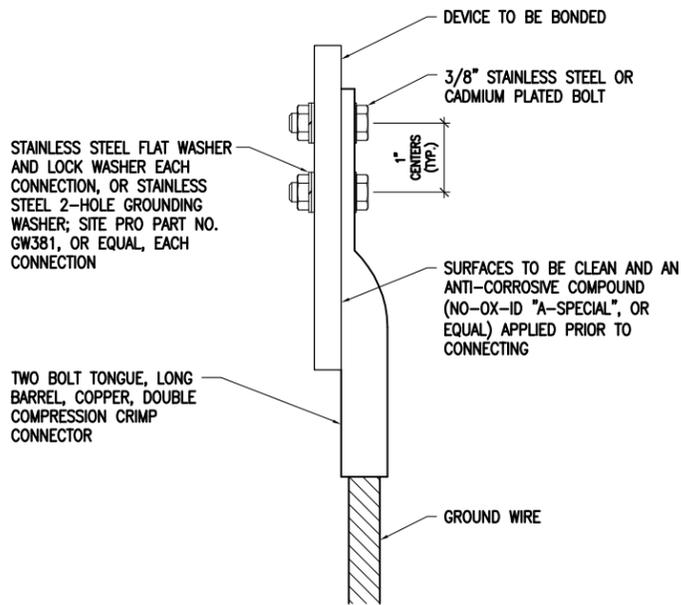
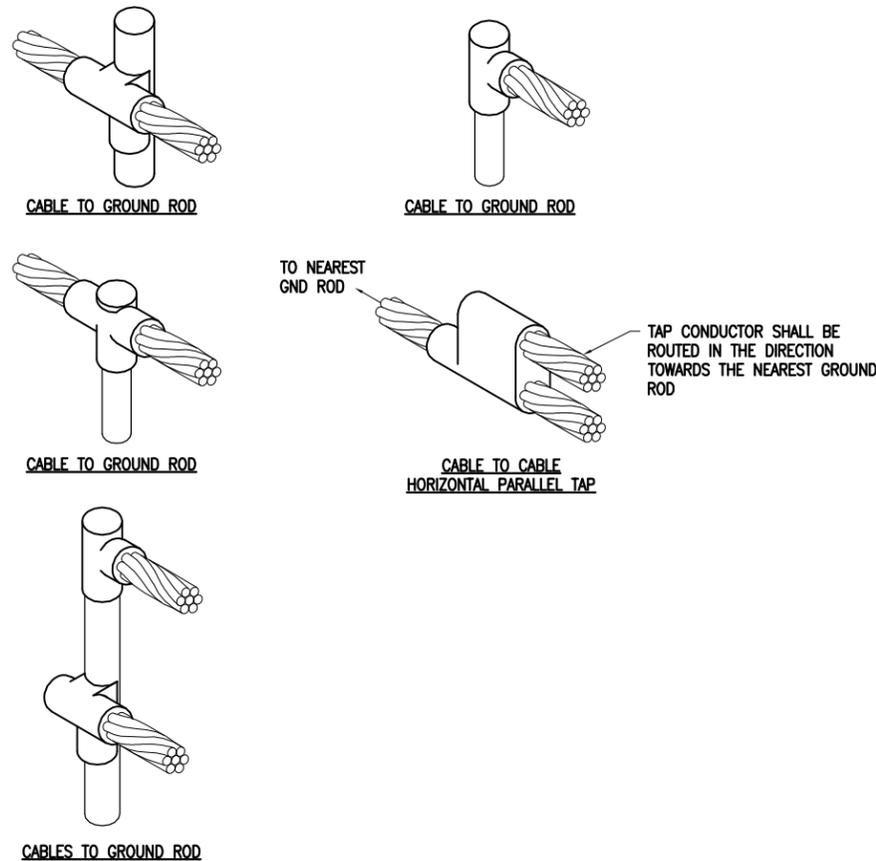
Contract No:

SBG No: SBG-TBD

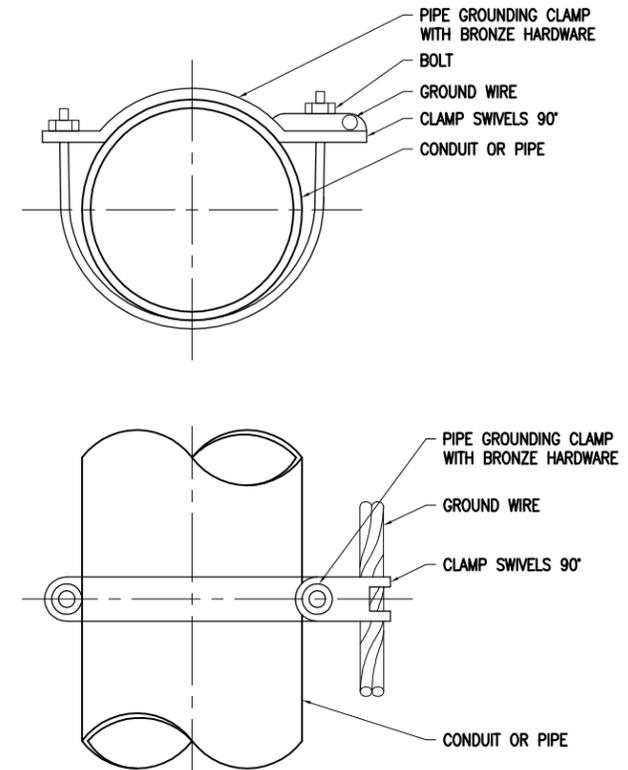
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**ELECTRICAL AND
DUCT DETAILS**



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



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"

DETAIL NOTES

- ALL BELOW GRADE CONNECTIONS TO GROUND RODS & GROUND RING CONDUCTORS SHALL BE EXOTHERMIC WELD TYPE CONNECTIONS. EXOTHERMIC WELDS SHALL BE CADWELDED 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.
- 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 ENIRCLE 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

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 EQUIPT 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 ENIRCLE 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 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

NOTES

- 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

REMOVE TAXIWAY D

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Contract No:

SBG No: SBG-TBD

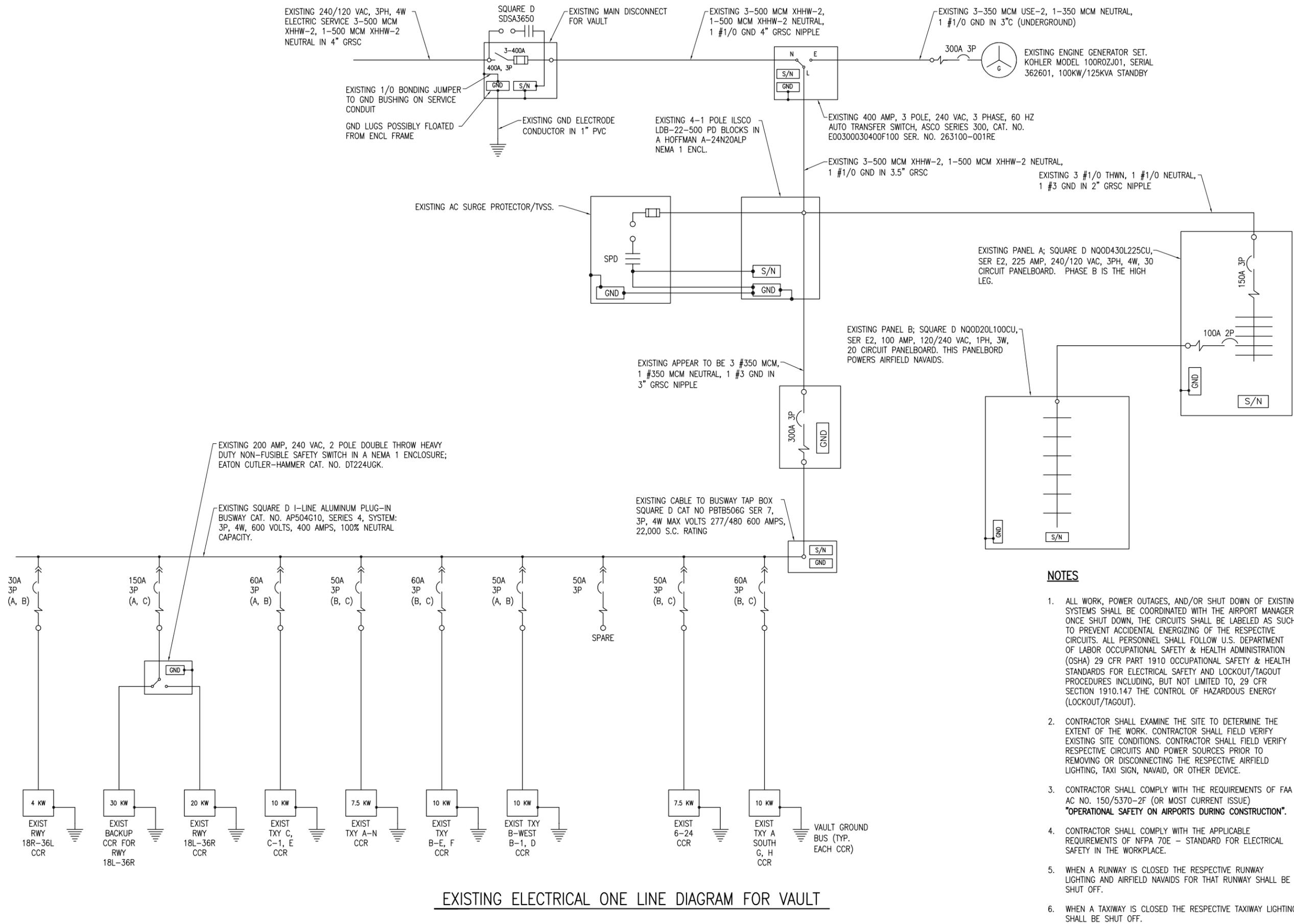
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GROUNDING DETAILS

**SOUTHERN ILLINOIS
AIRPORT**

**MURPHYSBORO /
CARBONDALE,
ILLINOIS**



NOTES

- 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).
- 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 OR DISCONNECTING THE RESPECTIVE AIRFIELD LIGHTING, TAXI SIGN, NAVAID, OR OTHER DEVICE.
- CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF FAA AC NO. 150/5370-2F (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.
- WHEN A RUNWAY IS CLOSED THE RESPECTIVE RUNWAY LIGHTING AND AIRFIELD NAVAIDS FOR THAT RUNWAY SHALL BE SHUT OFF.
- WHEN A TAXIWAY IS CLOSED THE RESPECTIVE TAXIWAY LIGHTING SHALL BE SHUT OFF.

REMOVE TAXIWAY D

IDA No: MDH-4304

Contract No:

SBG No: SBG-TBD

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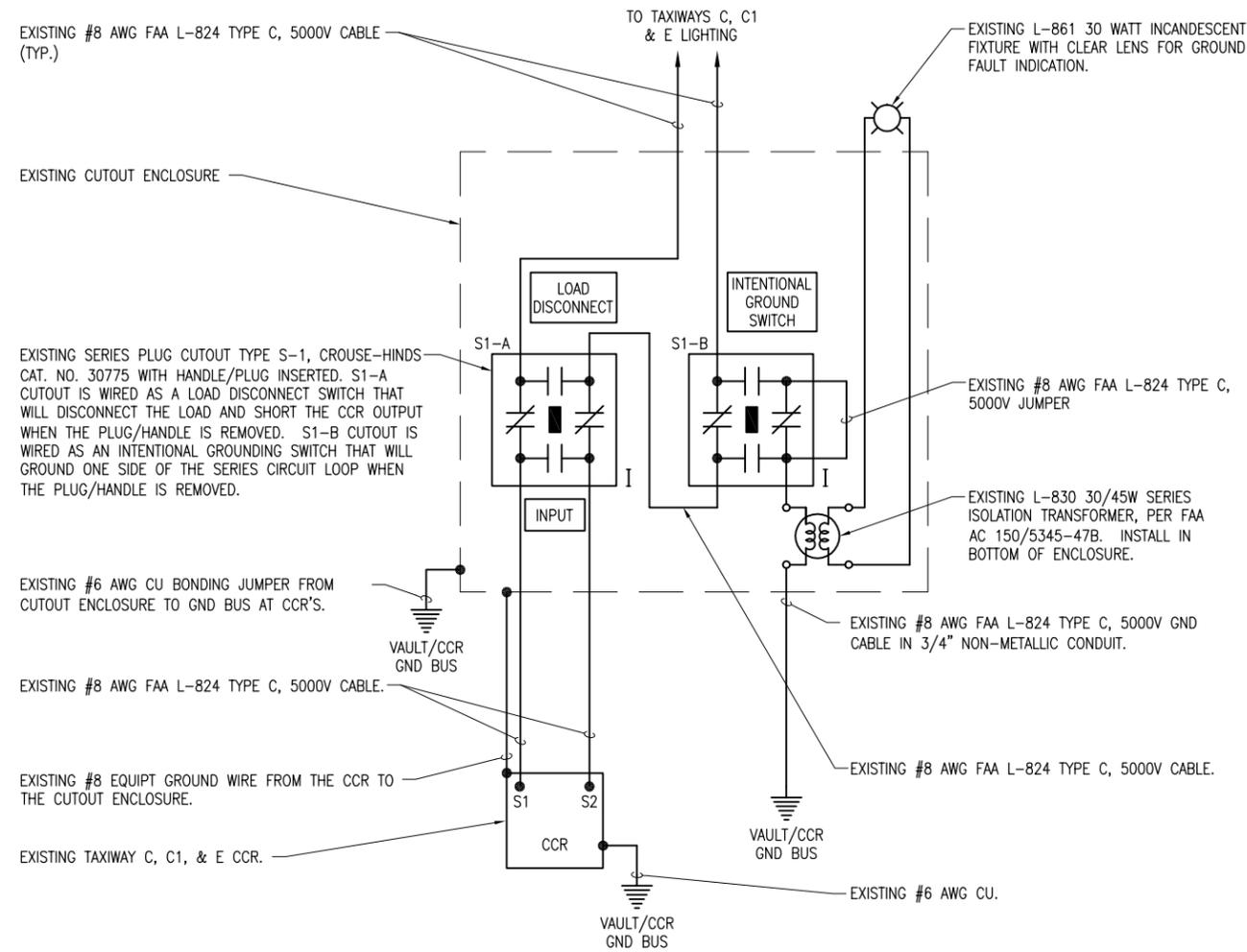
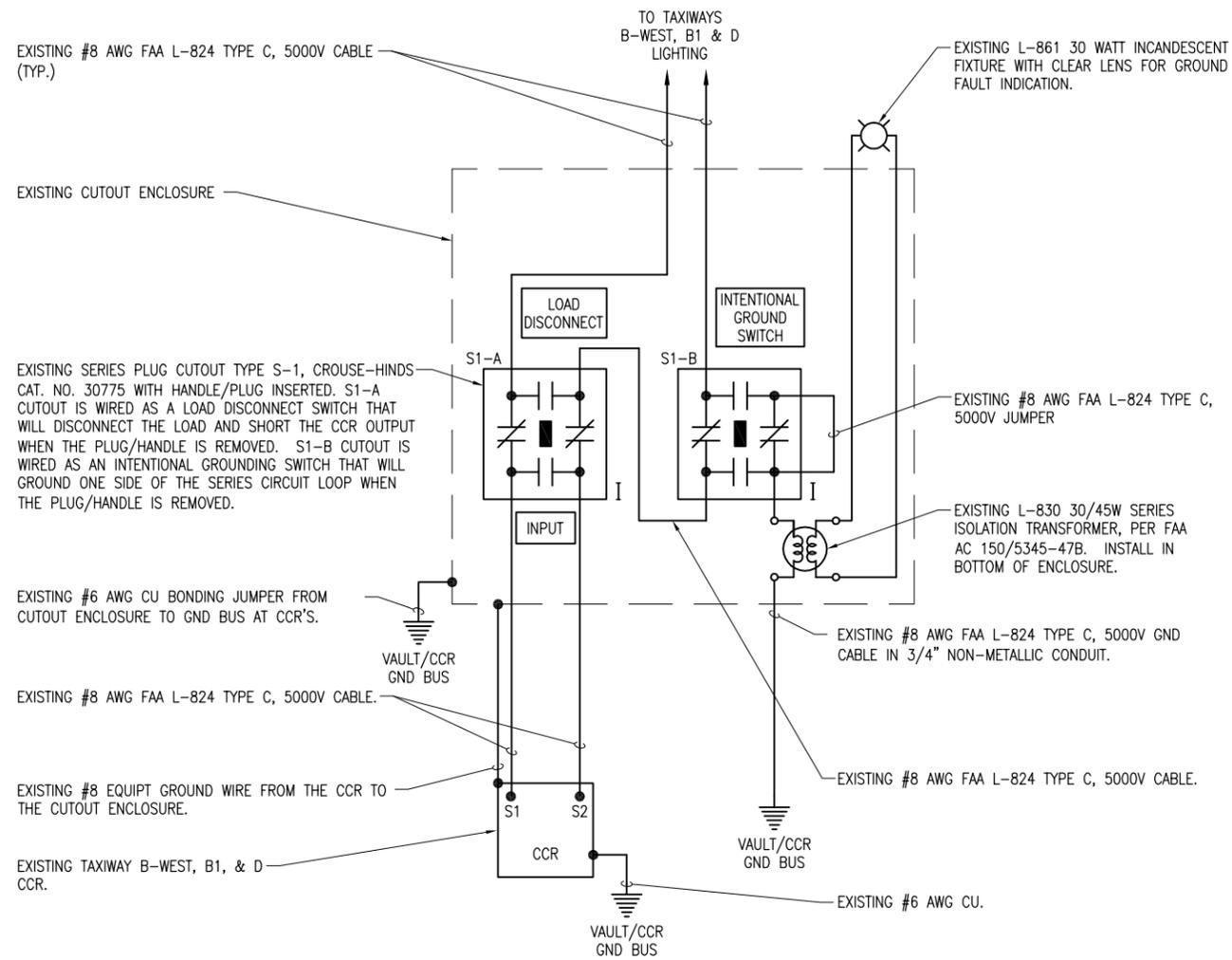
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**EXISTING
ELECTRICAL ONE
LINE DIAGRAM FOR
VAULT**

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**SOUTHERN ILLINOIS
AIRPORT**

**MURPHYSBORO /
CARBONDALE,
ILLINOIS**



**EXISTING HIGH VOLTAGE WIRING SCHEMATIC
FOR TXY B-WEST, B1 & D AND TXY C, C1 & E.**
(NOT TO SCALE)

DIRECTIONS TO TEST FOR AIRFIELD GROUND FAULTS IN LIGHTING CIRCUITS.

- COORDINATE TESTS WITH THE AIRPORT MAINTENANCE SUPERVISOR.
- TURN OFF RESPECTIVE CCR.
- PULL INTENTIONAL GROUND SWITCH CUTOUT.
- TURN ON RESPECTIVE CCR TO 100%.
- IF GROUND FAULT LIGHT IS DIM CHECK AIRFIELD CIRCUIT FOR LOCATION OF BRIGHT TO DIM LIGHTS TO ASSIST IN LOCATING AREA OF GROUND FAULT.

LEGEND

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

NOTES

- ALL WORK, POWER OUTAGES, AND/OR SHUT DOWN OF EXISTING SYSTEMS SHALL BE COORDINATED WITH THE AIRPORT MAINTENANCE SUPERVISOR AND / OR AIRPORT MANAGER AND THE RESPECTIVE FAA ATCT PERSONEL. ONCE SHUT DOWN, THE CIRCUITS SHALL BE LABELED AS SUCH OF LABOR OCCUPATIONAL SAFETY & HEALTH ADMINSTRATION (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.
- MEGGER TEST AND RECORD EXISTING SERIES CIRCUITS PRIOR TO CABLE WORK AND AFTER UPGRADES ARE COMPLETED. ALSO TEST AND RECORD SERIES CIRCUIT LOOP RESISTANCE. TEST FOR GROUND FAULTS IN LIGHTING CIRCUITS.
- TAXIWAY B-WEST, B1, & D CCR, TAXIWAY C, C1 & E CCR AND ASSOCIATED CUTOUTS ARE EXISTING.
- THE RESPECTIVE TAXIWAY LIGHTING CCR'S (FOR THE AREAS OF WORK ON THIS PROJECT) SHALL BE TESTED FOR PROPER OPERATION BEFORE REMOVAL WORK, 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 PROJECT REPRESENTATIVE/RESIDENT ENGINEER. CONTRACTOR SHALL PROVIDE COPIES OF TEST RESULTS TO THE RESIDENT PROJECT REPRESENTATIVE / RESIDENT ENGINEER AND THE PROJECT ENGINEER.
- WHERE OTHER CIRCUITS ARE AFFECTED BY THE WORK ON THIS PROJECT, THOSE CIRCUITS AND CCR'S SHALL ALSO BE TESTED, AS DESCRIBED ABOVE.

REMOVE TAXIWAY D

IDA No: MDH-4304

Contract No:

SBG No: SBG-TBD

NO.	DATE	DESCRIPTION		
		LAY	DWN	REV

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SHEET TITLE

**HIGH VOLTAGE
WIRING SCHEMATICS**