5A

FR041
TOTAL SHEETS: 16

CITY OF FREEPORT
FREEPORT, ILLINOIS

CONSTRUCTION PLANS FOR
FREEPORT-ALBERTUS AIRPORT

CONSTRUCTION OF NEW ELECTRICAL VAULT

ILLINOIS PROJECT: FEP-4203
SBG PROJECT: 3-17-SBGP-120/133/139

APRIL 20, 2018

DESIGN INFORMATION

TOWNSHIP: 26 NORTH
RANGE: 8 EAST
SECTION: 21

COUNTY: STEPHENSON
SILVER CREEK TOWNSHIP

DESIGN AIRCRAFT APPROACH CATEGORY: B
DESIGN AIRCRAFT GROUP: II

(MAXIMUM EQUIPMENT HEIGHT = 25')

811 Know what's below. Call before you dig.

CMT
CRAWFORD, MURPHY & TILLY, INC.
CONSULTING ENGINEERS
License No. 184-000613

ASAD BAJWA 062-055662 LICENSED PROFESSIONAL ENGINEER STATE OF ILLINOIS expires: 11-30-19

SUBMITTED BY Asad Bajwa
ASAD BAJWA, PE

DATE APRIL 20, 2018

CMT
CRAWFORD, MURPHY & TILLY, INC.
CONSULTING ENGINEERS
License No. 184-000613

DOUGLAS J. KLONOWSKI 062-050464 LICENSED PROFESSIONAL ENGINEER STATE OF ILLINOIS expires: 11-30-19

SUBMITTED BY
DOUGLAS J. KLONOWSKI, PE

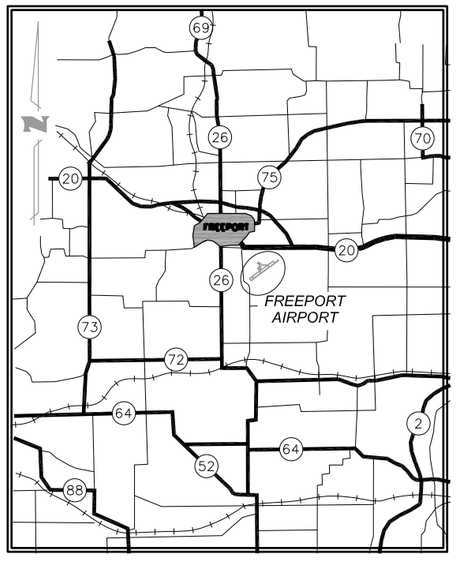
DATE APRIL 20, 2018

FREEPORT-ALBERTUS AIRPORT
FREEPORT, ILLINOIS

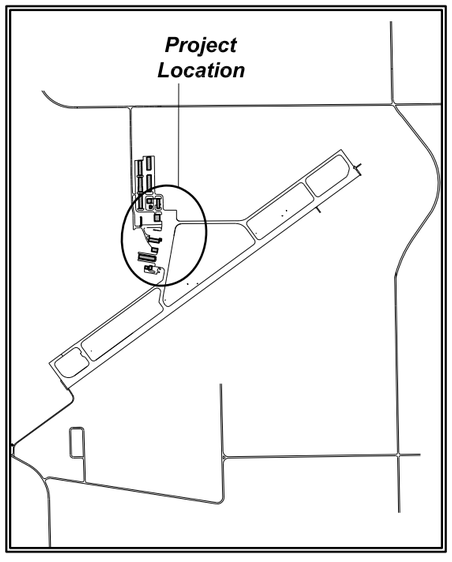
APPROVED BY
LOWELL D. CROW, CITY MANAGER

DATE APRIL 20, 2018

17294-03-00



LOCATION MAP



SITE PLAN

INDEX TO SHEETS

SUMMARY OF QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	ESTIMATED QUANTITY	RECORD QUANTITY
AR108158	1/C #8 5 KV UG CABLE IN UD	LF	4,590	
AR108402	1/C #2 600 V UG CABLE	LF	570	
AR108658	3/C #8 600 V UG CABLE IN UD	LF	1,110	
AR109110	ERECT PREFABRICATED VAULT	LS	1	
AR109331	15 KW REGULATOR, STYLE 1	EACH	2	
AR109400	POWER DISTRIBUTION SYSTEM	LS	1	
AR109610	L - 854 PCAL SYSTEM	LS	1	
AR109910	REMOVE ELECTRICAL TRANSCLOSURE	LS	1	
AR109963	RELOCATE REGULATOR	EACH	2	
AR110014	4" DIRECTIONAL BORE	LF	525	
AR110218	2 1/2" STEEL DUCT, DIRECT BURY	LF	430	
AR110508	8-WAY CONCRETE ENCASED DUCT	LF	580	
AR110610	ELECTRICAL HANDHOLE	EACH	3	
AR110615	ELECTRICAL HANDHOLE, HIGH VOLTAGE	EACH	2	
AR150510	ENGINEER'S FIELD OFFICE	LS	1	
AR150520	MOBILIZATION	LS	1	
AR152410	UNCLASSIFIED EXCAVATION	CY	55	
AR156510	SILT FENCE	LF	260	
AR156520	INLET PROTECTION	EACH	2	
AR209608	CRUSHED AGG. BASE COURSE - 8"	SY	230	
AR401610	BITUMINOUS SURFACE COURSE	TON	30	
AR401900	REMOVE BITUMINOUS PAVEMENT	SY	120	
AR501605	5" PCC SIDEWALK	SF	125	
AR603510	BITUMINOUS TACK COAT	GAL	20	
AR800054	REMOVE AND REPLACE FENCE	LF	125	
AR800056	VAULT FOUNDATION AND FLOOR	LS	1	
AR800105	1/C #4/0 600V UG CABLE	LF	1,700	
AR800119	2 1/2" DIRECTIONAL BORE	LF	70	
AR800178	FIBER OPTIC CABLE	LF	1,340	
AR800192	INSTALL ALCMS L-890	LS	1	
AR901510	SEEDING	ACRE	2.0	
AR908510	MULCHING	ACRE	2.0	

IL. CONTRACT: **FR041**
IL. LETTING ITEM: **5A**
IL. PROJECT: **FEP-4203**
S.B.G. PROJECT: **3-17-SBGP-120/133/139**

SURVEY BOOK #

REVISIONS		
NUMBER	BY	DATE

0 1 2
THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22).

FREEPORT-ALBERTUS AIRPORT
FREEPORT, ILLINOIS
CONSTRUCTION OF NEW ELECTRICAL VAULT

SUMMARY OF QUANTITIES

CMT
CRAWFORD, MURPHY & TILLY, INC.
CONSULTING ENGINEERS
License No. 184-000613

DESIGN BY:	ABM
DRAWN BY:	JRO
CHECKED BY:	DJK
APPROVED BY:	DJK
DATE:	4/20/2018
JOB No:	17294-03

SHEET 2 OF 16 SHEETS

XREF DWG: CMT NCS TB.dwg
IMAGE FILES:
UPDATE BY: Jim Ohse
LAYOUT: Stephan
DATE: Monday, April 23, 2018 4:51:17 PM
FILE: K:\Freeport\17294-03_Electric Vault\Dwg\Sheet\02 Vault - Quantities.dwg

XREF DWG: CMT NCS TB.dwg
base drawing.dwg

IMAGE FILES:

UPDATE BY: Jim Ohse
LAYOUT: Siteplan

DATE: Monday, April 23, 2018 4:48:26 PM
FILE: K:\Freeport\Ap\17294-03_Electrical\Vault\Draw\Sheets\03 Vault - Site Plan.dwg

LEGEND

- NEW ELECTRICAL VAULT
- NEW ELECTRICAL HANDHOLE
- E — NEW ELECTRIC SERVICE CABLES IN CONDUIT
- RW — NEW RUNWAY HOMERUN CABLES IN CONDUIT
- TW — NEW TAXIWAY HOMERUN CABLES IN CONDUIT
- WT — NEW WIND TEE CIRCUIT CABLES IN CONDUIT
- FO — NEW FIBER OPTIC CABLE IN CONDUIT
- NEW CONCRETE ENCASED DUCT / GRS DUCT
- NEW DIRECTIONAL BORE
- NEW ACCESS ROAD 8" CRUSHED AGGREGATE BASE COURSE
- EXISTING TAXIWAY CIRCUIT
- EXISTING RUNWAY CIRCUIT
- G — EXISTING GAS MAIN
- ST — EXISTING STORM SEWER
- X — EXISTING FENCE
- EXISTING INLET/MANHOLE
- EXISTING CONDUIT/DUCT BANK
- EXISTING BUILDING
- AIRPORT PROPERTY LINE

NORTH
0 100 200
SCALE IN FEET

AIRPORT DRIVE

NEW ELECTRICAL HANDHOLE (TYPICAL)

NEW ELECTRICAL VAULT

NEW ACCESS ROAD FOR NEW ELECTRICAL VAULT

CONTRACTOR STAGING AREA

EXISTING FAA RTR FACILITY

NEW RUNWAY AND TAXIWAY HOMERUN CABLES AND FIBER OPTIC CABLE IN NEW 8-WAY CONCRETE ENCASED DUCT

RUNWAY 18/36 (TURF)

RUNWAY 13/31 (TURF)

CONNECT NEW TAXIWAY HOMERUN CONDUCTORS TO THE NEAREST EXISTING TAXIWAY EDGE LIGHT

NEW 4" DIRECTIONAL BORE

EXISTING TERMINAL BUILDING

EXISTING ELECTRICAL TRANSCLOSURE

EXISTING CONCRETE ENCASED DUCT

FUTURE ROAD (BY OTHERS)

TAXIWAY D

TAXIWAY E

NEW RUNWAY HOMERUN CABLES IN UNIT DUCT

TAXIWAY A

CONNECT NEW RUNWAY HOMERUN CONDUCTORS TO EXISTING RUNWAY HOMERUN CONDUCTORS AT EXISTING HANDHOLE

TAXIWAY F

RUNWAY 6/24

IL. CONTRACT: **FR041**
IL. LETTING ITEM: **5A**
IL. PROJECT: **FEP-4203**
S.B.G. PROJECT: **3-17-SBGP-120/133/139**

SURVEY BOOK #

REVISIONS

NUMBER	BY	DATE

0 1 2
THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22).

FREEPORT-ALBERTUS AIRPORT
FREEPORT, ILLINOIS
CONSTRUCTION OF NEW ELECTRICAL VAULT

SITE PLAN

CMT
CRAWFORD, MURPHY & TILLY, INC.
CONSULTING ENGINEERS
License No. 184-000613

DESIGN BY:	ABM
DRAWN BY:	JRO
CHECKED BY:	DJK
APPROVED BY:	DJK
DATE:	4/20/2018
JOB No:	17294-03

XREF DWG: CMT NCS TB.dwg
base drawing.dwg

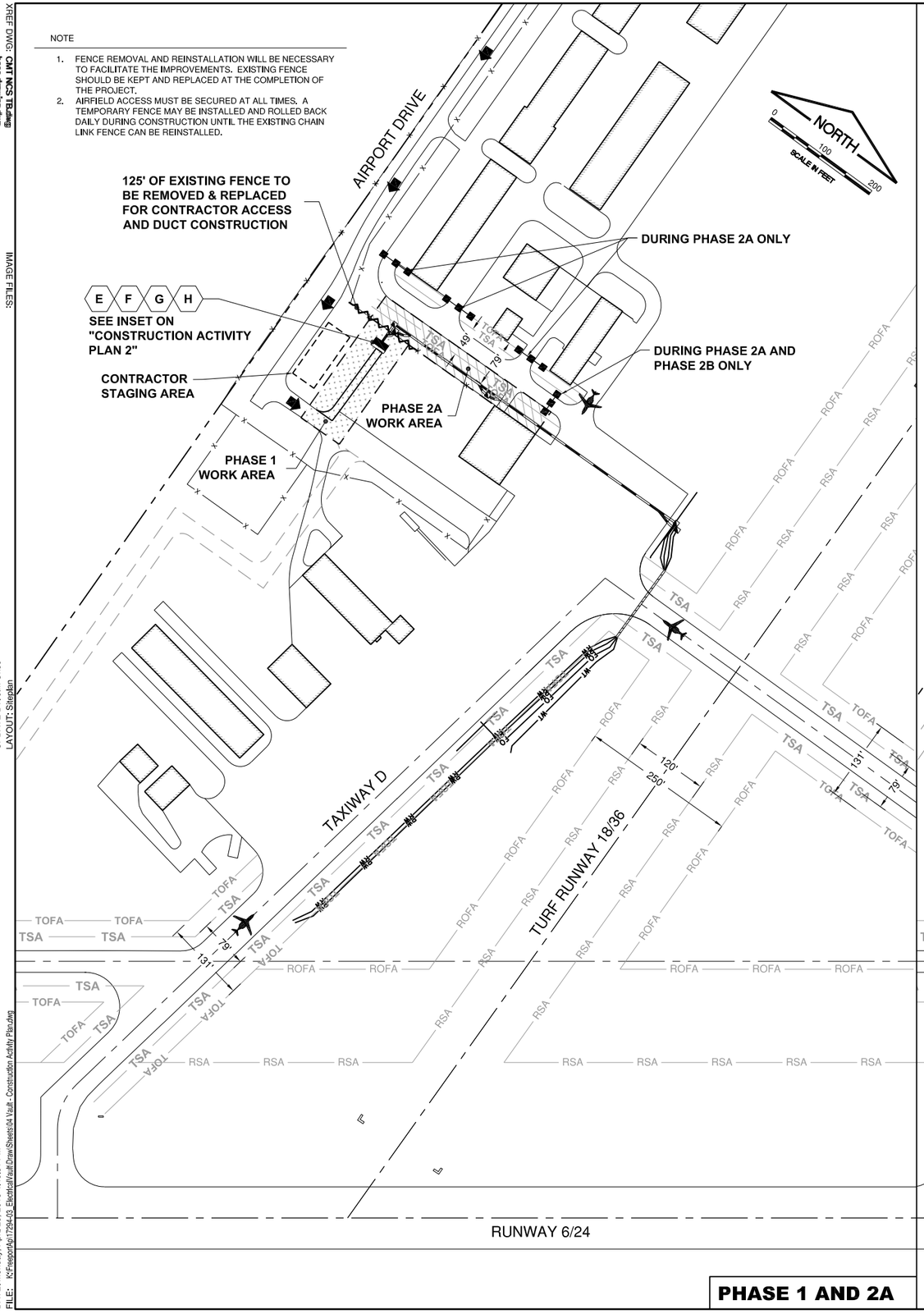
IMAGE FILES:

UPDATE BY: Jim Ohse
LAYOUT: Siteplan

DATE: Monday, April 23, 2018 4:48:31 PM
FILE: K:\Freeport\Ap\17294-03_Electical\Vault\Draw\Sheets\04 Vault - Construction Activity Plan.dwg

NOTE

1. FENCE REMOVAL AND REINSTALLATION WILL BE NECESSARY TO FACILITATE THE IMPROVEMENTS. EXISTING FENCE SHOULD BE KEPT AND REPLACED AT THE COMPLETION OF THE PROJECT.
2. AIRFIELD ACCESS MUST BE SECURED AT ALL TIMES. A TEMPORARY FENCE MAY BE INSTALLED AND ROLLED BACK DAILY DURING CONSTRUCTION UNTIL THE EXISTING CHAIN LINK FENCE CAN BE REINSTALLED.



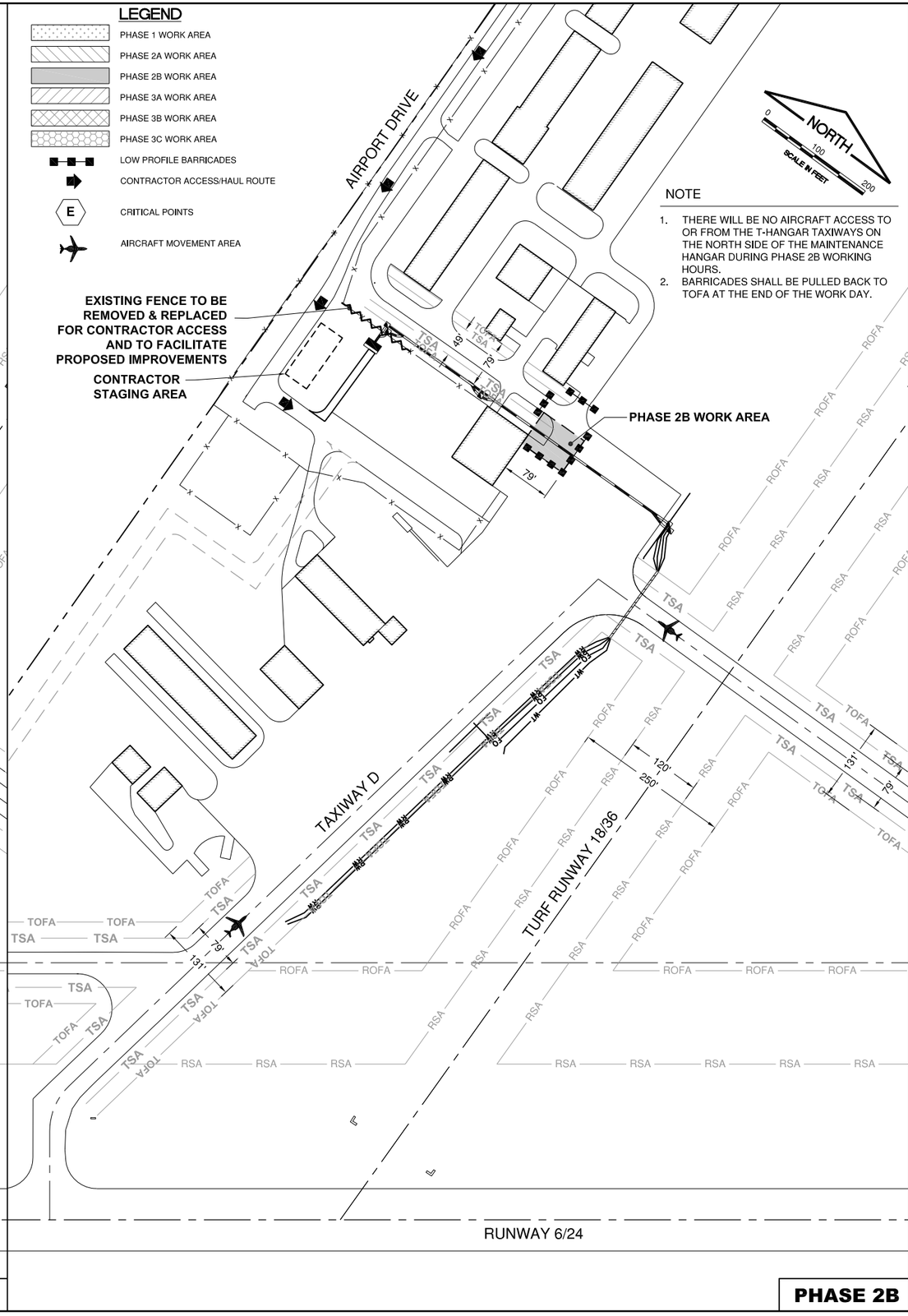
PHASE 1 AND 2A

LEGEND

- PHASE 1 WORK AREA
- PHASE 2A WORK AREA
- PHASE 2B WORK AREA
- PHASE 3A WORK AREA
- PHASE 3B WORK AREA
- PHASE 3C WORK AREA
- LOW PROFILE BARRICADES
- CONTRACTOR ACCESS/HAUL ROUTE
- E — CRITICAL POINTS
- AIRCRAFT MOVEMENT AREA

NOTE

1. THERE WILL BE NO AIRCRAFT ACCESS TO OR FROM THE T-HANGAR TAXIWAYS ON THE NORTH SIDE OF THE MAINTENANCE HANGAR DURING PHASE 2B WORKING HOURS.
2. BARRICADES SHALL BE PULLED BACK TO TOFA AT THE END OF THE WORK DAY.



PHASE 2B

IL. CONTRACT: **FR041**
IL. LETTING ITEM: **5A**
IL. PROJECT: **FEP-4203**
S.B.G. PROJECT: **3-17-SBGP-120/133/139**

SURVEY BOOK #

REVISIONS

NUMBER	BY	DATE

0 1 2
THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22).

FREEPORT-ALBERTUS AIRPORT
FREEPORT, ILLINOIS
CONSTRUCTION OF NEW ELECTRICAL VAULT

CONSTRUCTION ACTIVITY PLAN 1

CMT
CRAWFORD, MURPHY & TILLY, INC.
CONSULTING ENGINEERS
License No. 184-000613

DESIGN BY:	ABM
DRAWN BY:	JRO
CHECKED BY:	DJK
APPROVED BY:	DJK
DATE:	4/20/2018
JOB No:	17294-03

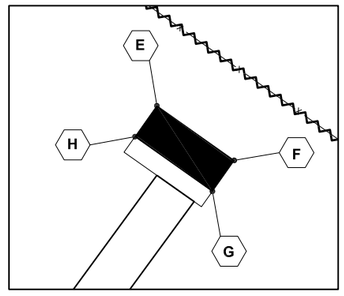
SHEET 4 OF 16 SHEETS

PHASING NOTES

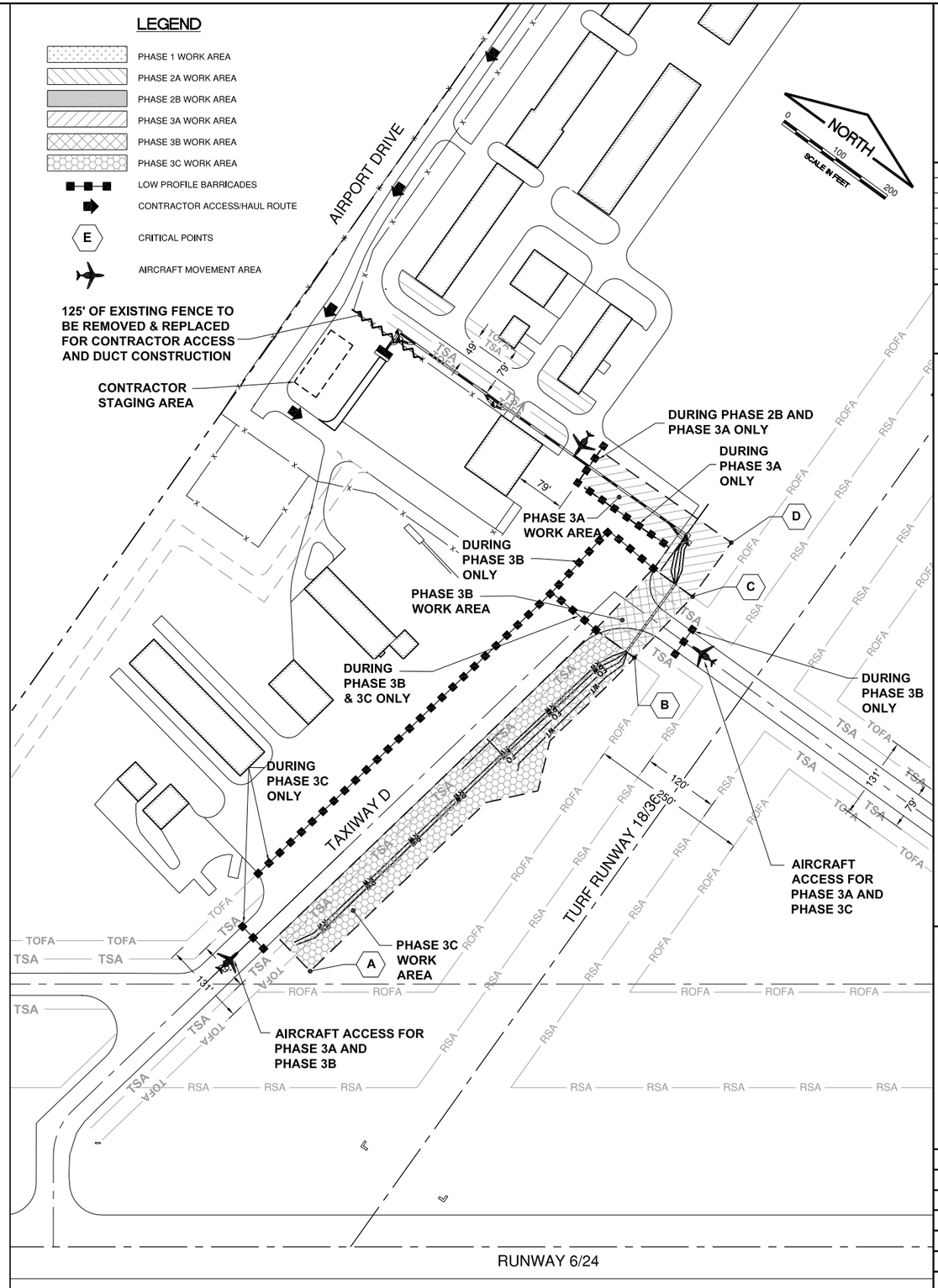
1. ANYTIME CONSTRUCTION ACTIVITY OR TRAFFIC ARE ALLOWED TO USE OR CROSS EXISTING AIRPORT PAVEMENT, THE PAVEMENT SHALL BE SWEPT AND CLEANED AS REQUIRED TO THE SATISFACTION OF THE AIRPORT AND/OR RESIDENT ENGINEER.
2. ACCESS TO EXISTING HANGARS AND TENANTS MUST BE MAINTAINED AT ALL TIMES EXCEPT AS NOTED. AIRCRAFT WILL BE ALLOWED TO TOW/TUG THROUGH A DESIGNATED ROUTE, INSIDE THE CONSTRUCTION LIMITS, APPROVED BY THE RESIDENT ENGINEER AND AIRPORT MANAGER.
3. ONLY DAILY TAXIWAY AND TAXILANE CLOSURES WILL BE ALLOWED. NO OVERNIGHT CLOSURES WILL BE ALLOWED.
4. EXISTING AIRFIELD LIGHTING AND VAULT TRANSCLOSURE SHALL REMAIN OPERATIONAL DURING CONSTRUCTION OF NEW VAULT. EXISTING AIRFIELD LIGHTING CIRCUITS SHALL BE SWITCHED OVER TO NEW VAULT AFTER NEW VAULT IS COMPLETELY OPERATIONAL AND TESTED.

CRITICAL POINTS

WORK AREA	POINT	APPROXIMATE ELEVATION OF GROUND (1988 DATUM)	ANTICIPATED EQUIPMENT AND HEIGHT	APPROXIMATE ELEVATION OF EQUIPMENT (1988 DATUM)	LATITUDE (NAD 83)	LONGITUDE (NAD 83)
3C	A	843'	SEMI/DUMP TRUCK - 25'	868'	42°14'40.71"	89°35'02.65"
3B	B	840'	SEMI/DUMP TRUCK - 25'	865'	42°14'47.60"	89°35'02.65"
3A	C	840'	SEMI/DUMP TRUCK - 25'	865'	42°14'48.89"	89°35'00.75"
3A	D	841'	SEMI/DUMP TRUCK - 25'	866'	42°14'49.93"	89°35'00.75"
1	E	846'	VAULT BUILDING	857'	42°14'49.22"	89°35'09.12"
1	F	846'	VAULT BUILDING	857'	42°14'49.23"	89°35'08.78"
1	G	846'	VAULT BUILDING	857'	42°14'49.13"	89°35'08.78"
1	H	846'	VAULT BUILDING	857'	42°14'49.13"	89°35'09.12"



INSET - NEW ELECTRICAL VAULT
1" = 20'



PHASE 3A, 3B AND 3C

IL. CONTRACT: **FR041**
IL. LETTING ITEM: **5A**
IL. PROJECT: **FEP-4203**
S.B.G. PROJECT: **3-17-SBGP-120/133/139**

SURVEY BOOK #

REVISIONS

NUMBER	BY	DATE

0 1 2
THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22).

FREEPORT-ALBERTUS AIRPORT
FREEPORT, ILLINOIS
CONSTRUCTION OF NEW ELECTRICAL VAULT

CONSTRUCTION ACTIVITY PLAN 2

CMT
CRAWFORD, MURPHY & TILLY, INC.
CONSULTING ENGINEERS
License No. 184-000613

DESIGN BY:	ABM
DRAWN BY:	JRO
CHECKED BY:	DJK
APPROVED BY:	DJK
DATE:	4/20/2018
JOB No:	17294-03

SHEET 5 OF 16 SHEETS

GENERAL

1. THE CONTRACTOR AND ALL SUBCONTRACTORS SHALL FOLLOW THE REQUIREMENTS OF THE AIRPORT'S APPROVED CONSTRUCTION SAFETY AND PHASING PLAN (CSPP), FAA AC 150/5370-2, AND ALL AIRPORT SAFETY AND SECURITY REQUIREMENTS.
2. PRIOR TO THE START OF CONSTRUCTION THE CONTRACTOR SHALL SUBMIT TO THE AIRPORT FOR APPROVAL A SAFETY PLAN COMPLIANCE DOCUMENT (SPCD) IN ACCORDANCE WITH FAA AC 150/5370-2. NO CONSTRUCTION ACTIVITY SHALL BEGIN UNTIL THE AIRPORT HAS APPROVED THE SPCD.
3. THE CSPP COVERS OPERATIONAL SAFETY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INDIVIDUAL SAFETY OF HIS/HER PERSONNEL AND MEETING SAFETY REQUIREMENTS.
4. A MINIMUM OF 10 DAYS PRIOR TO THE PRECONSTRUCTION MEETING THE CONTRACTOR SHALL PROVIDE A LIST OF SUBCONTRACTORS AND MATERIAL SUPPLIERS.
5. A MINIMUM OF 10 DAYS PRIOR TO THE NOTICE TO PROCEED THE CONTRACTOR SHALL SUBMIT THE SPCD FOR APPROVAL.
6. PRIOR TO THE START OF CONSTRUCTION THE CONTRACTOR SHALL SIGN THE SWPPP CERTIFICATION STATEMENT.
7. THE SUGGESTED SEQUENCE OF CONSTRUCTION SHOWN IS INTENDED TO ALLOW FOR THE ORDERLY CONSTRUCTION OF THE NEW IMPROVEMENTS WHILE MAINTAINING AIRCRAFT ACCESS AT ALL TIMES. THE PHASING SHOWN IS A SUGGESTED SEQUENCE OF CONSTRUCTION ONLY. THIS SEQUENCE MAY BE MODIFIED WITH THE APPROVAL OF THE RESIDENT ENGINEER. HOWEVER, ALTERNATE STAGING PLANS MUST MAINTAIN AIRPORT OPERATIONS TO THE SATISFACTION OF THE AIRPORT.
8. ALL EXISTING TAXIWAY AND RUNWAY AIRFIELD LIGHTING CIRCUITS, FAA CABLES AND OTHER AIRPORT ELECTRICAL CABLES SHALL REMAIN IN SERVICE UNTIL REPLACED AS ACCEPTABLE TO THE RESIDENT ENGINEER AND AIRPORT FOR ALL PHASES. ALL TEMPORARY CABLING AND SPLICING NECESSARY TO KEEP THE CIRCUITS IN OPERATION SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
9. ALL EXISTING AND PROPOSED FENCE LINES, EXCEPT AS OTHERWISE NOTED, SHALL BE MAINTAINED AND SHALL SERVE AS CONSTRUCTION AROUND THE PERIMETER OF THE PROJECT. ALL EXISTING GATES SHALL BE MAINTAINED , CLOSED AND LOCKED AS DIRECTED BY THE AIRPORT OWNER'S REPRESENTATIVE. SHOULD THE CONTRACTOR CHOOSE TO KEEP A GATE OPEN FOR CONSTRUCTION OPERATIONS, A COMPETENT SECURITY GUARD SHALL MONITOR THE OPEN GATE. ANY COST SHALL NOT BE PAID FOR SEPARATELY, BUT WILL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
10. THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE DUST CONTROL AT ALL TIMES DURING THE PROJECT DURATION. A WATER TRUCK SHALL BE REQUIRED TO BE ONSITE DURING ALL CONSTRUCTION OPERATION WORKING HOURS, UNLESS WAIVED BY THE AIRPORT. PAYMENT FOR DUST CONTROL SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
11. PAYMENT FOR ALL AIRSIDE AND ROADWAY TRAFFIC CONTROL INCLUDING BUT NOT LIMITED TO, TEMPORARY CONSTRUCTION FENCING, BARRICADES, SIGNING, AIR OPERATIONS AREA (A.O.A) LATH AND RIBBON, ETC. SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
12. ALL CONTRACTOR COSTS ASSOCIATED WITH THE REQUIREMENTS LISTED ON THIS SHEET SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT UNLESS A SPECIFIC PAY ITEM IS PROVIDED.

1. COORDINATION

1. PRIOR TO THE START OF CONSTRUCTION THE CONTRACTOR SHALL ATTEND A PRECONSTRUCTION CONFERENCE WITH THE AIRPORT, RESIDENT ENGINEER, AND ILLINOIS DIVISION OF AERONAUTICS (IDA). THE COST OF PREPARING FOR AND ATTENDING THE PRECONSTRUCTION CONFERENCE SHALL BE INCIDENTAL TO THE CONTRACT.
2. ON OR BEFORE THE PRECONSTRUCTION CONFERENCE, THE CONTRACTOR SHALL SUBMIT A PROPOSED SCHEDULE FOR THE PROJECT. THE SCHEDULE SHALL INCLUDE A START AND COMPLETION DATE FOR EACH ITEM OF WORK. THE SCHEDULE SHALL BE UPDATED ON A WEEKLY BASIS. ALL COSTS ASSOCIATED WITH THE SCHEDULE SHALL BE INCIDENTAL TO THE CONTRACT.
3. THE CONTRACTOR SHALL BE REQUIRED TO ESTABLISH A COORDINATION PLAN WITH THE AIRPORT OR HIS/HER DESIGNATED REPRESENTATIVE, REGARDING DE-ENERGIZING AND ENERGIZING OF THE AIRFIELD CIRCUITS IMPACTED BY CONSTRUCTION ACTIVITY.

2. PHASING

1. TOTAL BASE BID CONTRACT TIME SHALL BE 83 CALENDAR DAYS.
2. PHASING SHALL BE AS SHOWN ON THE CONSTRUCTION SAFETY AND PHASING PLAN SHEET.

3. AREAS AND OPERATIONS AFFECTED BY THE CONSTRUCTION ACTIVITY

1. ALL RUNWAYS, TAXIWAYS AND APRONS SHALL BE KEPT OPEN TO AIRCRAFT TRAFFIC DURING CONSTRUCTION EXCEPT AS NOTED ON THE CONSTRUCTION SAFETY AND PHASING PLAN SHEET.
2. WHEN CONFLICTS ARISE BETWEEN CONSTRUCTION ACTIVITIES AND AIRCRAFT OPERATIONS AND SAFETY, AIRCRAFT OPERATIONS AND SAFETY SHALL TAKE PRECEDENCE AND SHALL GOVERN. FINAL AUTHORITY IN THE APPROVAL OF CONSTRUCTION SEQUENCING LIES WITH THE AIRPORT.
3. AIRCRAFT OPERATIONS HAVE THE RIGHT-OF-WAY ON THE AIRFIELD. ALL CONSTRUCTION TRAFFIC SHALL IMMEDIATELY YIELD TO ONCOMING AIRCRAFT AT ALL TIMES.
4. SHOULD IT BE NECESSARY FOR THE CONTRACTOR TO TEMPORARY RELOCATE EQUIPMENT AT ANY TIME TO ALLOW AN AIRCRAFT TO PASS, THE CONTRACTOR SHALL DO SO IMMEDIATELY AT NO EXTRA COST TO THE OWNER.

4. PROTECTION OF NAVIGATION AIDS (NAVAIDS)

1. THE CONTRACTOR SHALL REMAIN CLEAR OF THE ILS CRITICAL AREAS AND OTHER NAVAIDS FACILITIES AT ALL TIMES.

5. CONTRACTOR ACCESS

1. CONTRACTOR ACCESS SHALL BE AS NOTED BELOW AND AS SHOWN ON THE SITE PLAN AND CONSTRUCTION SAFETY AND PHASING PLAN SHEETS.
2. THE CONTRACTOR IS TO ACCESS THE SITE USING THE EXISTING GATE SHOWN. THE ENTRANCE SHALL BE SIGNED ACCORDINGLY AS TO ALLOW ONLY CONSTRUCTION VEHICLES ACCESS AND WILL ONLY BE ACCESSIBLE DURING THE CONTRACTOR'S SCHEDULED WORK DAY. ALL SIGNAGE SHALL CONFORM TO IDOT CONSTRUCTION STANDARDS FOR VEHICLES ENTERING AND LEAVING THE SITE.
3. SUPERVISORY PERSONNEL SHALL DEMONSTRATE IN THE PRESENCE OF THE AIRPORT MANAGER THAT THEY ARE FAMILIAR WITH AIRPORT RADIO AND AIRPORT DRIVING PROCEDURES IN ORDER TO PERFORM WORK. OTHER CONSTRUCTION PERSONNEL CAN BE WITHIN THE AIRFIELD LIMITS PROVIDED THAT THEY ARE UNDER ESCORT AND IN THE PRESENCE OF AN AUTHORIZED SUPERVISOR. KNOWLEDGE OF THE AIRPORTS PROCEDURE'S BY THE SUPERVISORY PERSONNEL MUST BE DEMONSTRATED PRIOR TO THE START OF CONSTRUCTION.
4. DRIVERS OF TRUCKS CONTAINING MATERIAL DELIVERIES (AGGREGATE, CONCRETE, ETC.) NEED NOT OBTAIN AN AIRPORT ID BADGE BUT SHALL BE REQUIRED TO SUBMIT THEIR NAME, DRIVER'S LICENSE NUMBER, TRUCK LICENSE PLATE NUMBER AND NAME OF TRUCKING COMPANY TO THE PRIME CONTRACTOR PRIOR TO ENTERING THE JOBSITE.
5. THE CONTRACTOR'S STORAGE AND STAGING AREA WILL BE AS SHOWN IN THE SITE PLAN AND CONSTRUCTION PHASING PLAN.
6. THE CONTRACTOR SHALL KEEP A RECORD OF THE NAMES OF ALL EMPLOYEES ENTERING THE JOB SITE ON A DAILY BASIS. A RECORD OF EACH SUBCONTRACTOR ENTERING THE JOB SITE SHALL ALSO BE KEPT BY THE CONTRACTOR.
7. THE CONTRACTOR'S MATERIAL AND EQUIPMENT, WHEN NOT IN USE, SHALL BE STORED IN THE CONTRACTOR'S STAGING AREA. ALL DELIVERIES, EQUIPMENT REFUELING, EQUIPMENT MAINTENANCE AND EQUIPMENT TRANSFER SHALL TAKE PLACE WITHIN THE CONTRACTOR'S STAGING AREA.
8. THE CONTRACTOR WILL BE PERMITTED TO STORE EQUIPMENT AND MATERIALS ONLY AT THE LOCATIONS SHOWN. PARKED EQUIPMENT AND MATERIAL STOCKPILES SHALL NOT PENETRATE SURFACES DEFINED BY F.A.R. TITLE 14 PART 77 - OBJECTS AFFECTING NAVIGABLE AIRSPACE.
9. ALL CONSTRUCTION TRAFFIC OPERATING ON, OR CROSSING RUNWAYS, TAXIWAYS AND APRONS OPEN TO AIRCRAFT TRAFFIC SHALL BE UNDER CONTROL BY A FLAGMAN OR ESCORT IN RADIO CONTACT WITH THE ATCT. THE CONTRACTOR SHALL PROVIDE HIS OWN FLAGMEN.
10. ALL PAVEMENTS, DRIVES OR ANY OTHER AREAS UTILIZED BY THE CONTRACTOR FOR HAUL ROADS, STORAGE AREAS AND/OR STAGING AREAS SHALL BE MAINTAINED AND REPAIRED TO THE SAME CONDITION OR BETTER THAN THEY WERE PRIOR TO BEGINNING CONSTRUCTION. NO ADDITIONAL COMPENSATION WILL BE MADE TO THE CONTRACTOR FOR THIS WORK.
11. ALL VEHICLE AND EQUIPMENT OPERATORS USED BY THE CONTRACTOR SHALL BE PROPERLY TRAINED BY THE CONTRACTOR.

6. WILDLIFE MANAGEMENT

1. THE CONTRACTOR SHALL NOTIFY AIRPORT OPERATIONS OR THE RESIDENT ENGINEER IF ANY WILDLIFE IS SEEN ENTERING THE AIRPORT.
2. CONTRACTOR ACCESS GATES SHALL REMAIN CLOSED WHEN THE CONTRACTOR IS NOT WORKING.
3. THE CONTRACTOR SHALL DISPOSE OF ALL TRASH INCLUDING FOOD SCRAPS IN APPROVED CONTRACTOR PROVIDED CONTAINERS.

7. FOREIGN OBJECT DEBRIS (FOD) MANAGEMENT

1. THE CONTRACTOR SHALL PICK UP ANY FOREIGN OBJECT DEBRIS (FOD) SEEN ON THE AIRFIELD PAVEMENTS.
2. THE CONTRACTOR SHALL SECURE ALL LOOSE ITEMS FROM VEHICLES PRIOR TO DRIVING ON AIRFIELD PAVEMENTS.

8. HAZARDOUS MATERIALS (HAZMAT) MANAGEMENT

1. THE CONTRACTOR SHALL DEVELOP A HAZMAT MANAGEMENT PLAN AND KEEP COPIES ON THE JOBSITE OF MATERIAL SAFETY DATA SHEETS (MSDS) FOR ALL MATERIALS HANDLED ON THE JOBSITE.

9. NOTIFICATION OF CONSTRUCTION ACTIVITIES

1. THE CONTRACTOR SHALL PROVIDE A 24 HOUR EMERGENCY CONTACT PERSON AND PHONE NUMBER.
2. THE CONTRACTOR SHALL GIVE A MINIMUM OF 72 HOURS NOTICE TO AIRPORT OPERATIONS PRIOR TO CLOSING ANY PAVEMENTS SO THAT PROPER NOTAMS MAY BE ISSUED BY THE AIRPORT.
3. FOR ANY EQUIPMENT USED BY THE CONTRACTOR WITH A HEIGHT GREATER THAN 25', THE CONTRACTOR SHALL PROVIDE TO THE AIRPORT THE TYPE OF EQUIPMENT, TOTAL HEIGHT, AND LOCATION WHERE THE EQUIPMENT WILL BE USED. THE AIRPORT WILL SUBMIT FAA FORM 7460-1 TO THE FAA FOR AN AIRSPACE STUDY. NO EQUIPMENT WITH A HEIGHT GREATER THAN 25' SHALL BE USED UNTIL A DETERMINATION FROM FAA IS RECEIVED.
4. IN THE EVENT OF AN EMERGENCY, THE CONTRACTOR SHALL CALL 911.
5. CONTACTS FOR THIS PROJECT WILL BE DETERMINED AT THE PRECONSTRUCTION MEETING PRIOR TO THE PROJECT START.

10. INSPECTION REQUIREMENTS

1. THE CONTRACTOR SHALL INSPECT THE JOBSITE DAILY TO ENSURE COMPLIANCE WITH THE CSPP. THE CHECKLIST FOUND IN APPENDIX 3 OF FAA AC 150/5370-2 MAY BE USED TO AID IN THE INSPECTIONS.
2. THE CONTRACTOR SHALL ATTEND AN INSPECTION OF EACH PHASE WORK AREA PRIOR TO OPENING THE AREA TO AIRPORT OPERATIONS.

11. UNDERGROUND UTILITIES

1. IT WILL BE NECESSARY FOR THE CONTRACTOR TO MAKE HIS OWN FIELD INVESTIGATION TO DETERMINE THE EXACT LOCATION OF THE UNDERGROURD UTILITIES AT CRITICAL POINTS. SEE SECTION 70-17 OF THE STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS FOR SPECIFIC REQUIREMENTS. THE LOCATION OF UNDERGROUND UTILITIES AS INDICATED ON THE PLANS HAS BEEN OBTAINED FROM EXISTING RECORDS. NEITHER THE OWNER NOR THE ENGINEER ASSUMES ANY RESPONSIBILITY 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 AS INDICATED ARE REPRESENTATIVE OF THOSE TO BE ENCOUNTERED DURING 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 COMPANY/OWNER OF HIS OPERATIONAL PLANS. THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR DETAILED INFORMATION AND ASSISTANCE IN LOCATING UTILITIES. IN THE EVENT AN UNEXPECTED UTILITY INTERFERENCE IS ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY COMPANY, THE OWNER AND THE ENGINEER. ANY SUCH MAINS AND/OR SERVICES DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED IMMEDIATELY AT HIS EXPENSE TO THE SATISFACTION OF THE OWNER AND THE ENGINEER.
2. BEFORE INITIATING ANY DIGGING, DRILLING OR EXCAVATING ON THE AIRPORT PROPERTY, THE CONTRACTOR SHALL CALL J.U.L.I.E. AND CONTACT THE LOCAL FAA OFFICE TO ARRANGE FOR UTILITY LOCATES. SEE SECTION 70-17 OF THE SPECIAL PROVISIONS FOR UTILITY CONTACT INFORMATION.
3. SHOULD A UTILITY COMPANY OR GOVERNMENT AGENCY BE UNABLE TO LOCATE FACILITIES, THE CONTRACTOR SHALL LOCATE THESE FACILITIES. PAYMENT FOR THIS LOCATION SHALL BE INCIDENTAL TO THE IMPROVEMENTS REQUIRING THE LOCATE.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL AIRPORT OWNED UTILITIES AND SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

12. PENALTIES

1. NONCOMPLIANCE BY THE CONTRACTOR WITH AIRPORT RULES AND REGULATIONS OR FAILURE TO COMPLY WITH THE AIRPORT'S APPROVED CSPP AND THE CONTRACTOR'S APPROVED SPCD MAY RESULT IN FINES AS ALLOWED BY LAW.

13. SPECIAL CONDITIONS

1. ADJACENT CONSTRUCTION MAY IMPACT THE OPERATIONS OF THE CONTRACTOR.

14. RUNWAY AND TAXIWAY VISUAL AIDS

1. RUNWAY OR TAXIWAY CLOSURES ARE AS DETAILED IN THE CONSTRUCTION SAFETY AND PHASING PLAN FOR THIS PROJECT. IF ANY RUNWAY OR TAXIWAY CLOSURES ARE REQUESTED BY THE CONTRACTOR AND APPROVED BY THE AIRPORT, THE CONTRACTOR SHALL USE MARKING, LIGHTING AND SIGNS THAT FOLLOW THE REQUIREMENTS OF FAA AC 150/5370-2.

15. MARKING AND SIGNS FOR ACCESS ROUTES

1. MARKING AND SIGNAGE FOR THE ACCESS ROUTE SHALL BE AS SHOWN ON THE CONSTRUCTION SAFETY AND PHASING PLAN OR AS DIRECTED BY THE RESIDENT ENGINEER.

16. HAZARD MARKING AND LIGHTING

1. THE CONTRACTOR SHALL FURNISH, ERECT, AND MAINTAIN MARKINGS AND ASSOCIATED LIGHTING OF OPEN TRENCHES, EXCAVATIONS, TEMPORARY STOCKPILES, AND HIS/HER CONSTRUCTION EQUIPMENT.
2. ALL CONSTRUCTION EQUIPMENT SHALL BE FLAGGED AND/OR LIGHTED IN ACCORDANCE WITH FAA ADVISORY CIRCULAR 150/5370-2 AND 150/5210-5 AT ALL TIMES WHILE OPERATING ON AIRPORT PROPERTY. THE MAXIMUM EQUIPMENT HEIGHT IS 25'.
3. BARRICADES SHALL BE PLACED AT THE LOCATIONS SHOWN ON THE CONSTRUCTION SAFETY AND PHASING PLAN SHEET OR AS DIRECTED BY THE RESIDENT ENGINEER. THE CONTRACTOR SHALL PLACE ALL BARRICADES AND CONSTRUCTION SETBACK LINES ITEMS AS SHOWN PRIOR TO INITIATING WORK IN EACH PHASE. ALL COSTS TO FURNISH, INSTALL, REPOSITION, AND MAINTAIN THESE ITEMS SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.
4. THE CONTRACTOR SHALL INSPECT THE BARRICADES ONCE DURING EACH WORK DAY TO INSURE PROPER PLACEMENT AND PROPER OPERATION OF THE RED LIGHTS AND FLAG PLACEMENT.
5. ACCESS TO ACTIVE RUNWAY AND TAXIWAY PAVEMENTS SHALL BE SIGNED WITH STOP SIGNS MOUNTED ON TYPE II BARRICADES (2 EACH, RIGHT AND LEFT). IN ADDITION TO THE STOP SIGNS, WARNING SIGNS (2 EACH, RIGHT AND LEFT) SHALL BE MOUNTED. WARNING SIGNS SHALL STATE "UNAUTHORIZED ACCESS NOT ALLOWED".

17. PROTECTION

1. CONTRACTOR PERSONNEL, VEHICLES, EQUIPMENT AND BARRICADES SHALL NOT BE ALLOWED WITHIN THE TAXIWAY OBJECT FREE AREA (TOFA) OF ACTIVE TAXIWAYS AND THE RUNWAY SAFETY AREA (RSA) OF ACTIVE RUNWAYS.

18. OTHER LIMITATIONS ON CONSTRUCTION

1. IF, DURING CONSTRUCTION, AN EMERGENCY IS DECLARED BY THE AIRPORT, THE CONTRACTOR SHALL IMMEDIATELY CLEAR THE PAVEMENT OF ALL VEHICLES, PERSONNEL AND EQUIPMENT.
2. THE CONTRACTOR SHALL KEEP ALL TRUCKS, EQUIPMENT AND MATERIALS OFF OF THE EXISTING RUNWAYS AND TAXIWAYS OUTSIDE OF THE PROJECT LIMITS EXCEPT AS SHOWN OR WITH THE PRIOR PERMISSION OF THE RESIDENT ENGINEER. SHOULD THE CONTRACTOR TRACK ANY DEBRIS ONTO EXISTING PAVEMENTS, THIS DEBRIS SHALL BE REMOVED IMMEDIATELY WITH A PICK UP SWEEPER. A PICK UP SWEEPER SHALL BE REQUIRED TO BE ON SITE AND OPERATE DURING ALL CONSTRUCTION OPERATION WORKING HOURS.
3. THE CONTRACTOR SHALL PROVIDE WASTE RECEPTACLES THROUGHOUT THE WORK ZONE AND MAINTAIN SANITARY FACILITIES FOR EMPLOYEES TO USE. FACILITIES WITHIN THE HANGARS/AIRPORT BUILDINGS SHALL NOT BE USED.
4. WORK PERFORMED BY THE CONTRACTOR OUTSIDE OF DAYLIGHT HOURS SHALL BE DONE UNDER SUFFICIENT ARTIFICAL AREA LIGHTING TO ALLOW FOR PROPER CONSTRUCTION METHODS AND INSPECTIONS. LIGHT SHALL CONSIST OF MOVEABLE POLE MOUNTED FLOODLIGHTS AND/OR SPOTLIGHTS OF SUFFICIENT NUMBER TO ILLUMINATE WORK AREA. VEHICLE HEADLIGHTS WILL BE ALLOWED ONLY IN ADDITION TO OTHER LIGHTS MENTIONED ABOVE. LIGHTING SHALL BE APPROVED BY THE ENGINEER AND SHALL NOT BE USED IF THEY AFFECT FLIGHT SAFETY.
5. THE CONTRACTOR SHALL SUPPLY AND HAVE IN THEIR POSSESSION AT ALL TIMES AT LEAST ONE AIRPORT RADIO. IN THE EVENT THAT THE AIRPORT MANAGER NEEDS TO CONTACT THE CONTRACTOR DIRECTLY, THE OPERATOR OF SAID RADIO SHALL BE FAMILIAR WITH AIRPORT RADIO PROCEDURES AND TUNED INTO THE GROUND CONTROL FREQUENCY.
6. BROKEN CONCRETE, BROKEN ASPHALT, AND OTHER MISCELLANEOUS DEBRIS SHALL BE DISPOSED OF OFF AIRPORT PROPERTY, UNLESS OTHERWISE SPECIFIED.

IL. CONTRACT: **FR041**
IL. LETTING ITEM: **5A**
IL. PROJECT: **FEP-4203**
S.B.G. PROJECT: **3-17-SBGP-120/133/139**

SURVEY BOOK #

REVISIONS

NUMBER	BY	DATE

0 1 2
THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22).

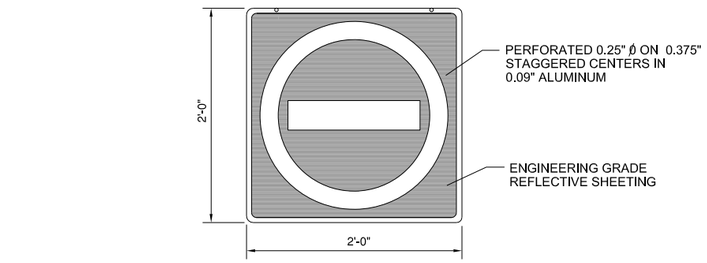
FREEPORT-ALBERTUS AIRPORT
FREEPORT, ILLINOIS
CONSTRUCTION OF NEW ELECTRICAL VAULT

CONSTRUCTION ACTIVITY PLAN NOTES

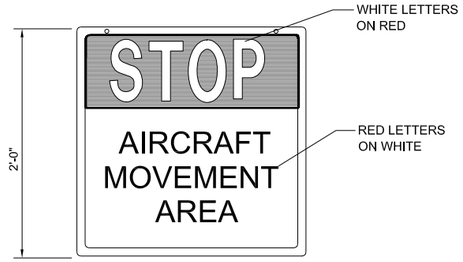
CMT
CRAWFORD, MURPHY & TILLY, INC.
CONSULTING ENGINEERS
License No. 184-000613

DESIGN BY:	ABM
DRAWN BY:	JRO
CHECKED BY:	DJK
APPROVED BY:	DJK
DATE:	4/20/2018
JOB No:	17294-03

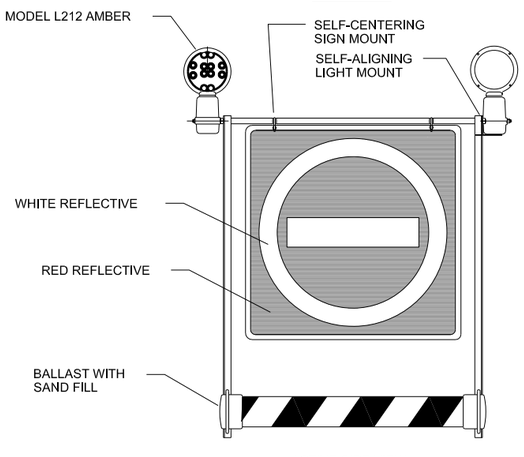
SHEET 6 OF 16 SHEETS



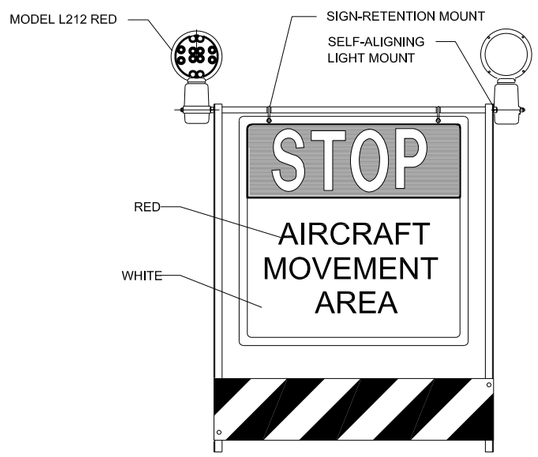
ACTIVE SIDE



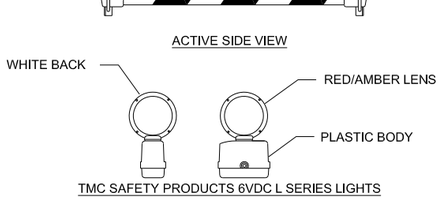
NON-ACTIVE SIDE



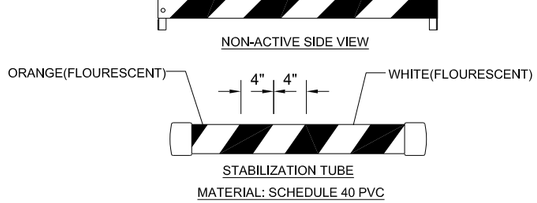
ACTIVE SIDE VIEW



NON-ACTIVE SIDE VIEW



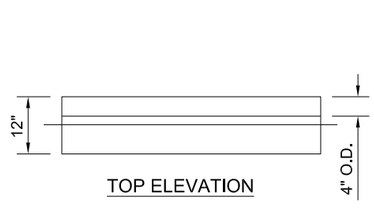
TMC SAFETY PRODUCTS 6VDC L SERIES LIGHTS



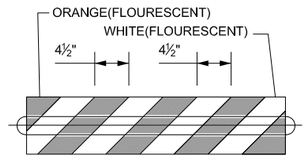
STABILIZATION TUBE
MATERIAL: SCHEDULE 40 PVC

TYPE II BARRICADE DETAILS

NOT TO SCALE

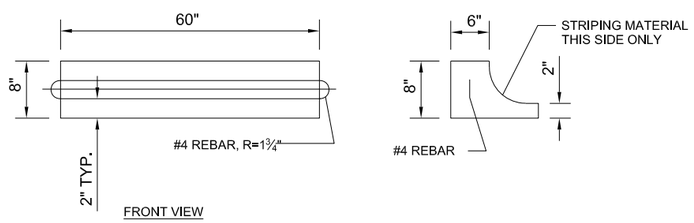


TOP ELEVATION



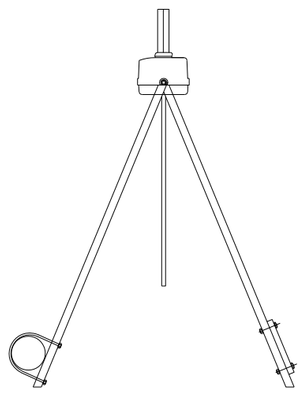
FRONT VIEW STRIPING

STRIPING ON FRONT FACE ONLY
NO STRIPING ON TOP



FRONT VIEW

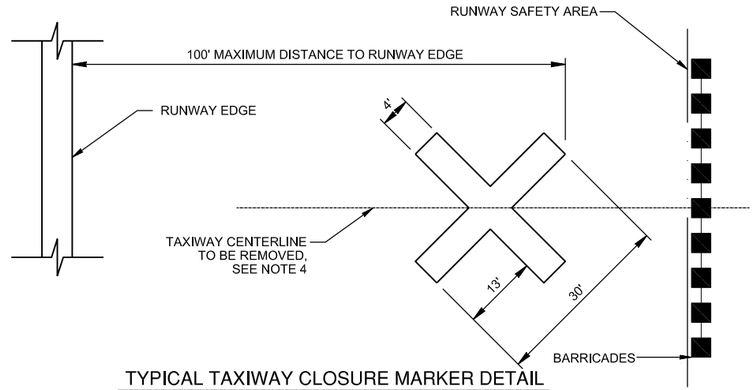
LOW SLUNG BARRICADE DETAIL



ELEVATED PROFILE CLASS "A" BARRICADE

TYPE II BARRICADE DETAILS

NOT TO SCALE

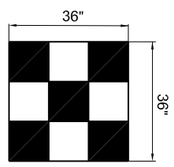


TYPICAL TAXIWAY CLOSURE MARKER DETAIL

NOT TO SCALE

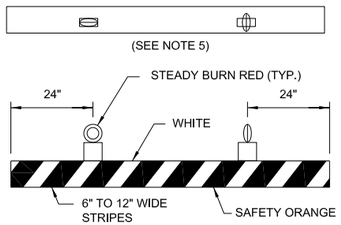
TAXIWAY CLOSURE MARKER NOTES

1. THE TAXIWAY CLOSURE MARKER CAN BE PAINTED WITH TEMPORARY MARKING CAPABLE OF BEING REMOVED WITH LOW PRESSURE WATER BLASTING, OR CAN BE ANOTHER MATERIAL THAT DOES NOT VIOLATE THE OFA CRITERIA AND IS APPROVED BY THE ENGINEER AND THE AIRPORT.
2. THE TAXIWAY CLOSURE MARKER SHALL BE YELLOW AND ADEQUATELY SECURED TO WITHSTAND JET BLAST OF 100 MPH.
3. THE MARKER SHALL BE PLACED OVER THE TAXIWAY CENTERLINE.
4. THE TAXIWAY LEAD-IN LINES AND CENTERLINE WITHIN THE RUNWAY SAFETY AREA (R.S.A.) SHALL BE REMOVED. THE REMOVAL OF THESE MARKINGS WILL NOT BE PAID FOR BUT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
5. THE INSTALLATION AND REMOVAL OF THE TAXIWAY CLOSURE MARKERS SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
6. TAXIWAY CLOSURE MARKERS ARE ONLY REQUIRED FOR CLOSURES EXCEEDING 72 HOURS IN DURATION.



CONSTRUCTION EQUIPMENT AND TRUCK SIGNAL FLAG

NOT TO SCALE



INTERLOCKING LOW PROFILE BARRICADES

ON PAVEMENT - NO SCALE

1. LOW PROFILE BARRICADES SHALL BE PLACED AT LOCATIONS SHOWN ON THE PLANS OR AS DIRECTED BY THE RESIDENT ENGINEER. THE BARRICADES SHALL BE INTERLOCKED WITH NO GAPS BETWEEN BARRICADES. BARRICADES SHALL BE WEIGHTED WITH A MINIMUM OF 6 SAND BAGS TO PREVENT THEM FROM BEING BLOWN OVER.
2. THE BARRICADE LINE SHALL EXTEND ONE BARRICADE PAST THE EDGE OF PAVEMENT INTO THE TURF.
3. LIGHTS SHALL BE BATTERY OPERATED. LENS SHALL BE RED AND BE ABLE TO ROTATE 90°.
4. FACING OF BARRICADE SHALL BE COVERED WITH REFLECTIVE TAPE OR PAINT.
5. ALTERNATE LENSES SO THAT EVERY OTHER LENS IS ROTATED 90°.
6. BARRICADES SHALL BE OF LOW MASS, EASILY COLLAPSIBLE UPON CONTACT WITH AN AIRCRAFT OR ANY OF IT'S COMPONENTS, AND WEIGHTED OR STURDILY ATTACHED TO THE SURFACE. IF AFFIXED TO THE SURFACE, THE BARRICADE MUST BE FRANGIBLE AT GRADE LEVEL OR AS LOW POSSIBLE, BUT NOT TO EXCEED 3 INCHES ABOVE THE GROUND.
7. ALL COST ASSOCIATED WITH THE LOW PROFILE BARRICADES SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

IL. CONTRACT: **FR041**
IL. LETTING ITEM: **5A**
IL. PROJECT: **FEP-4203**
S.B.G. PROJECT: **3-17-SBGP-120/133/139**

SURVEY BOOK #

REVISIONS

NUMBER	BY	DATE

0 1 2
THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22).

FREEPORT-ALBERTUS AIRPORT
FREEPORT, ILLINOIS
CONSTRUCTION OF NEW ELECTRICAL VAULT

CONSTRUCTION ACTIVITY PLAN DETAILS

CMT
CRAWFORD, MURPHY & TILLY, INC.
CONSULTING ENGINEERS
License No. 184-000613

DESIGN BY:	ABM
DRAWN BY:	JRO
CHECKED BY:	DJK
APPROVED BY:	DJK
DATE:	4/20/2018
JOB No:	17294-03

SHEET 7 OF 16 SHEETS

XREF DWG: CMT NCS TB.dwg
IMAGE FILES:
UPDATE BY: Jim Ohse
LAYOUT: Siteplan
DATE: Monday, April 23, 2018 4:49:01 PM
FILE: K:\Freeport\Ap\17294-03_Electrical\Vault\Draw\Sheets\06 Vault - Construction Activity Plan Details.dwg

XREF DWG: CMT NCS TB.dwg base drawing.dwg

IMAGE FILES:

UPDATE BY: Jim Ohse
LAYOUT: Siteplan

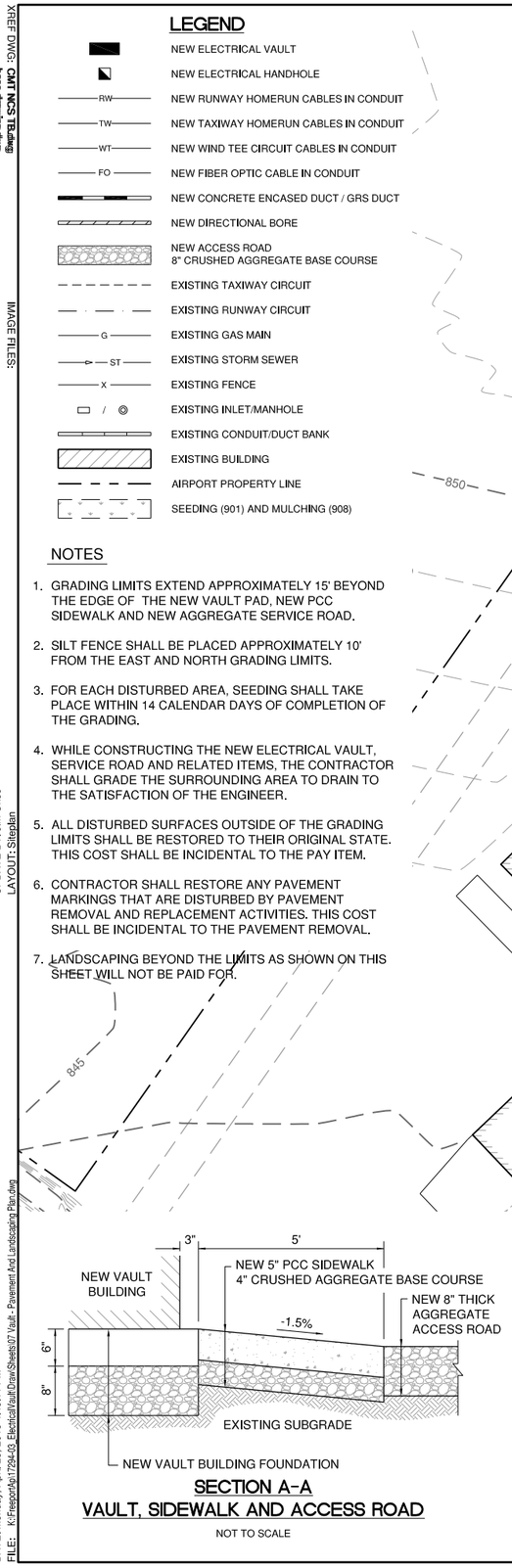
DATE: Monday, April 23, 2018 4:49:11 PM
FILE: K:\Freeport\ap\17294-03_ElectricalVault\Draw\Sheets\07 Vault - Pavement And Landscaping Plan.dwg

LEGEND

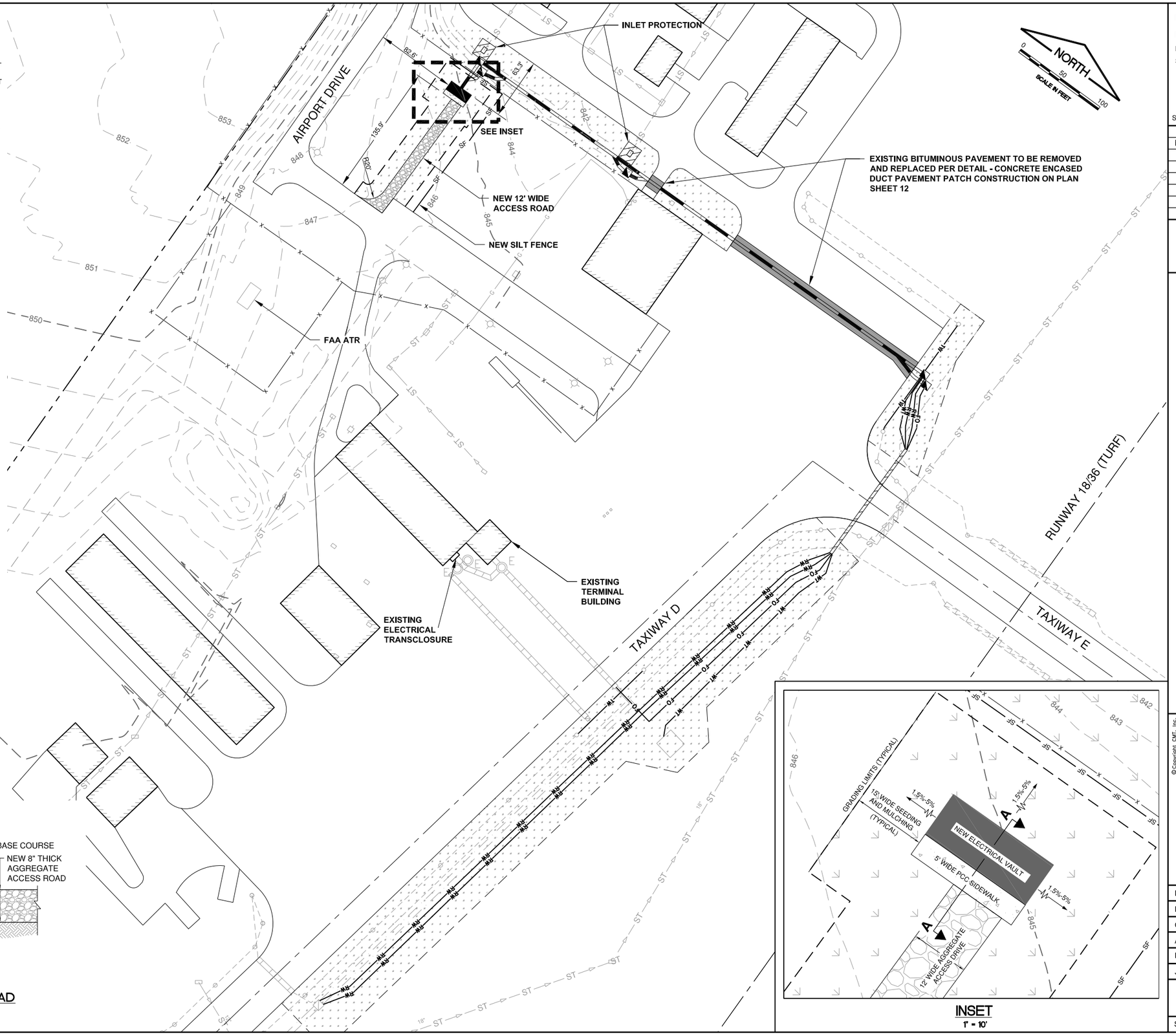
- NEW ELECTRICAL VAULT
- NEW ELECTRICAL HANDHOLE
- RW — NEW RUNWAY HOMERUN CABLES IN CONDUIT
- TW — NEW TAXIWAY HOMERUN CABLES IN CONDUIT
- WT — NEW WIND TEE CIRCUIT CABLES IN CONDUIT
- FO — NEW FIBER OPTIC CABLE IN CONDUIT
- NEW CONCRETE ENCASED DUCT / GRS DUCT
- NEW DIRECTIONAL BORE
- NEW ACCESS ROAD 8" CRUSHED AGGREGATE BASE COURSE
- EXISTING TAXIWAY CIRCUIT
- EXISTING RUNWAY CIRCUIT
- G — EXISTING GAS MAIN
- ST — EXISTING STORM SEWER
- X — EXISTING FENCE
- EXISTING INLET/MANHOLE
- EXISTING CONDUIT/DUCT BANK
- EXISTING BUILDING
- AIRPORT PROPERTY LINE
- SEEDING (901) AND MULCHING (908)

NOTES

1. GRADING LIMITS EXTEND APPROXIMATELY 15' BEYOND THE EDGE OF THE NEW VAULT PAD, NEW PCC SIDEWALK AND NEW AGGREGATE SERVICE ROAD.
2. SILT FENCE SHALL BE PLACED APPROXIMATELY 10' FROM THE EAST AND NORTH GRADING LIMITS.
3. FOR EACH DISTURBED AREA, SEEDING SHALL TAKE PLACE WITHIN 14 CALENDAR DAYS OF COMPLETION OF THE GRADING.
4. WHILE CONSTRUCTING THE NEW ELECTRICAL VAULT, SERVICE ROAD AND RELATED ITEMS, THE CONTRACTOR SHALL GRADE THE SURROUNDING AREA TO DRAIN TO THE SATISFACTION OF THE ENGINEER.
5. ALL DISTURBED SURFACES OUTSIDE OF THE GRADING LIMITS SHALL BE RESTORED TO THEIR ORIGINAL STATE. THIS COST SHALL BE INCIDENTAL TO THE PAY ITEM.
6. CONTRACTOR SHALL RESTORE ANY PAVEMENT MARKINGS THAT ARE DISTURBED BY PAVEMENT REMOVAL AND REPLACEMENT ACTIVITIES. THIS COST SHALL BE INCIDENTAL TO THE PAVEMENT REMOVAL.
7. LANDSCAPING BEYOND THE LIMITS AS SHOWN ON THIS SHEET WILL NOT BE PAID FOR.



SECTION A-A
VAULT, SIDEWALK AND ACCESS ROAD
NOT TO SCALE



INSET
1" = 10'

IL. CONTRACT: **FR041**
IL. LETTING ITEM: **5A**
IL. PROJECT: **FEP-4203**
S.B.G. PROJECT: **3-17-SBGP-120/133/139**

SURVEY BOOK #

REVISIONS

NUMBER	BY	DATE

0 1 2
THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22).

FREEPORT-ALBERTUS AIRPORT
FREEPORT, ILLINOIS
CONSTRUCTION OF NEW ELECTRICAL VAULT

PAVEMENT AND LANDSCAPING PLAN

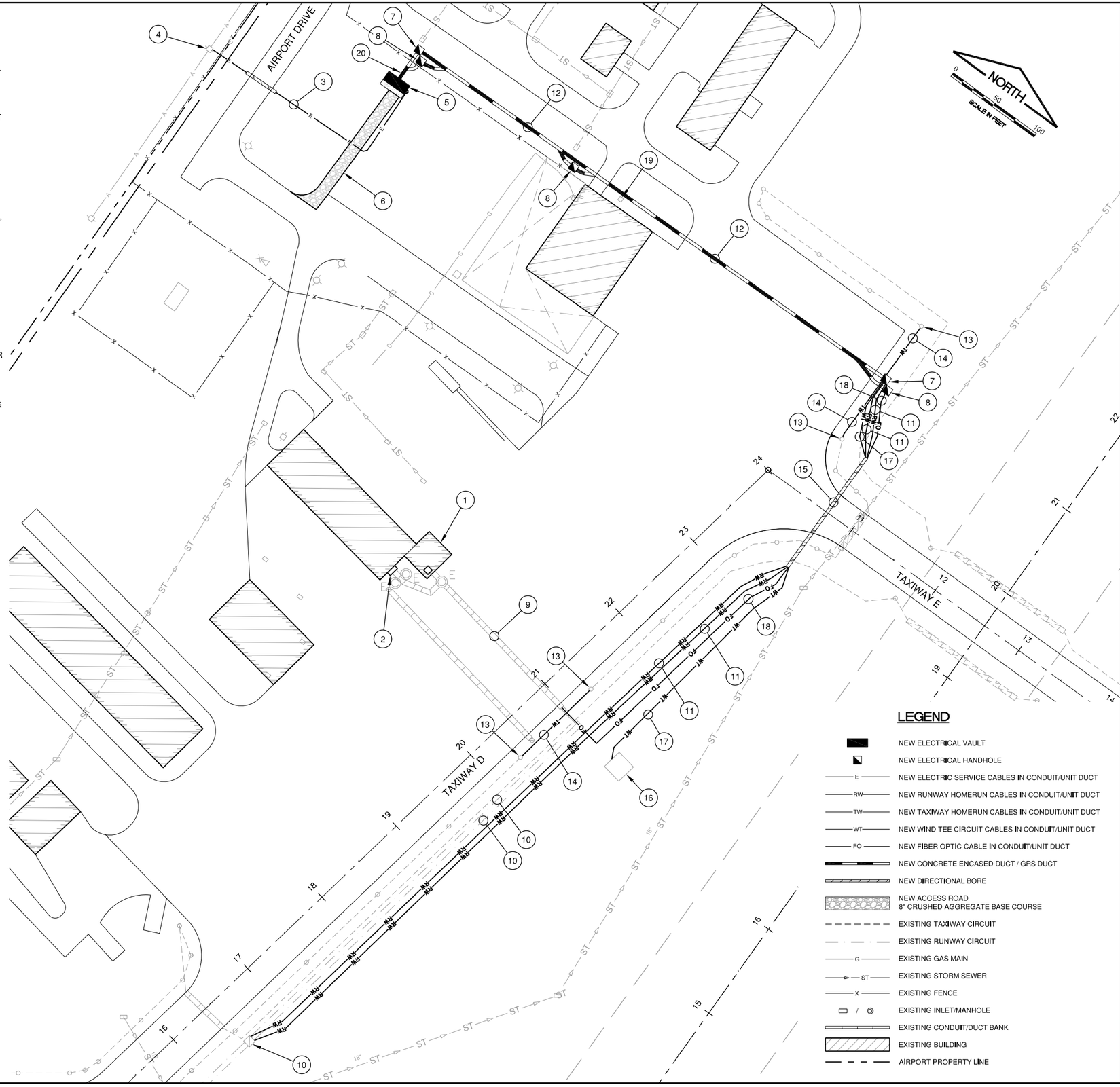
CMT
CRAWFORD, MURPHY & TILLY, INC.
CONSULTING ENGINEERS
License No. 184-000613

DESIGN BY:	ABM
DRAWN BY:	JRO
CHECKED BY:	DJK
APPROVED BY:	DJK
DATE:	4/20/2018
JOB No:	17294-03

SHEET 8 OF 16 SHEETS

KEYED NOTES

1. EXISTING AIRPORT OFFICE/TERMINAL, FOR INFORMATION ON REMOVAL OF EXISTING ITEMS, EQUIPMENT, CONDUIT AND WIRING IN THIS BUILDING, SEE AIRPORT OFFICE PLAN.
2. EXISTING ELECTRICAL TRANSCLOSURE. FOR INFORMATION ON REMOVAL AND RELOCATION OF EXISTING ITEMS, EQUIPMENT, CONDUIT AND WIRING, SEE TRANSCLOSURE PLAN.
3. NEW 400A, 120/240V, 1-PHASE, 3-WIRE SERVICE TO NEW ELECTRICAL VAULT: 2 SETS OF 3 #4/0 XLP-USE, 1 #2 GND. IN 2 1/2" GRS CONDUITS.
4. EXISTING UTILITY POLE, CONTRACTOR SHALL INSTALL 2 - 2 1/2" GRS CONDUIT RISERS WITH WEATHERHEADS. COORDINATE NEW ELECTRIC SERVICE DROP WITH COMED.
5. NEW PRE-FABRICATED CONCRETE EQUIPMENT SHELTER, 25' X 10' X 9'H, DELIVERED TO JOB SITE AND PLACED ON A CONCRETE SLAB. FOR ADDITIONAL INFORMATION ON THIS BUILDING, SEE THE SPECIFICATIONS AND VARIOUS PLAN SHEETS. DO NOT INSTALL NEW VAULT CLOSER THAN 20 FEET FROM FENCES.
6. NEW 12' WIDE, 8" THICK CRUSHED AGGREGATE ACCESS ROAD.
7. NEW HIGH VOLTAGE 4'X4' CONCRETE HANDHOLE, COVER LABELED "HIGH VOLTAGE", SEE HIGH VOLTAGE HANDHOLE DETAIL.
8. NEW LOW VOLTAGE 2'X2' CONCRETE HANDHOLE, COVER LABELED "LOW VOLTAGE", SEE LOW VOLTAGE HANDHOLE DETAIL.
9. EXISTING RUNWAY 06/24 AND TAXIWAY CONCRETE ENCASED DUCT FOR EXISTING HOMERUN CABLES. REMOVE CABLES FROM CONDUIT AND RE-USE CONDUIT FOR FIBER-OPTIC CABLE INSTALLATION TO AIRPORT OFFICE.
10. LOCATE AND SPLICE NEW RUNWAY 6/24 HOMERUN CABLES IN EXISTING HANDHOLE. ONCE NEW RUNWAY 06/24 HOMERUN CABLES ARE INSTALLED AND OPERATIONAL. PULL EXISTING CABLES FROM CONDUIT/UNIT DUCT AND ABANDON CONDUIT/UNIT DUCT IN PLACE
11. 1 #8 L-824 5KV CABLE IN 3/4 UNIT DUCT. RUNWAY 06/24 HOMERUN.
12. NEW 8-WAY CONCRETE ENCASED DUCT:
    - LOW VOLTAGE:
      1-4" WITH 12-STRAND MULTI-MODE FIBER OPTIC CABLE,
      1-4" SPARE WITH PULL STRING.
    - HIGH VOLTAGE:
      1-4" WITH (2) #8 L-824, 5KV CABLE IN 3/4" UNIT DUCT (RUNWAY),
      1-4" WITH (2) #8 L-824, 5KV CABLE IN 3/4" UNIT DUCT (TAXIWAY),
      1-4" WITH 2 #8 XLP-USE, 1 #8 GND. IN 1" UNIT DUCT (WIND TEE),
      3-4" SPARES WITH PULL STRING.
13. EXISTING TAXIWAY STAKE MOUNTED EDGE LIGHT.
14. DISCONNECT EXISTING SERIES CIRCUIT WIRING FROM TAXIWAY EDGE LIGHT AND REMOVE CABLES FROM EXISTING UNIT DUCT. INSTALL NEW 1 #8 L-824 5KV CABLE IN NEW 3/4" UNIT DUCT AND CONNECT NEW TAXIWAY EDGE LIGHT HOMERUN CABLES TO EDGE LIGHT ISOLATION TRANSFORMER. SEE CIRCUIT CONNECTION DETAIL.
15. NEW 4-4" PVC SCH. 80 CONDUIT, BORE UNDER EXISTING PAVEMENT:
    1-4" WITH 12-STRAND MULTI-MODE FIBER OPTIC IN 1" UNIT DUCT,
    1-4" WITH (2) 1 #8 L-824, 5KV CABLE IN 3/4" UNIT DUCT (RUNWAY)
    1 - 4" WITH 2 #8 XLP-USE, 1 #8 GND. IN 1" UNIT DUCT (WIND TEE),
    1-4" SPARES WITH PULL STRING.
16. EXISTING WIND TEE. CONNECT NEW WIND TEE CIRCUIT TO WIND TEE.
17. NEW 2 #8 XLP-USE 1 #8 GND. IN 1" UNIT DUCT, DIRECT BURIED.
18. NEW 12-STRAND MULTI-MODE FIBER OPTIC CABLE IN 1" UNIT DUCT, DIRECT BURIED.
19. EXISTING TRANSFORMER TO REMAIN. TRANSFORMER SHALL NOT BE DISTURBED DURING CONSTRUCTION.
20. GRS DUCT FROM LOW VOLTAGE AND HIGH VOLTAGE CABLE TRAYS INSIDE ELECTRICAL VAULT. SEE ELECTRICAL DETAILS - 1 FOR CABLE AND CONDUIT INFORMATION.



IL. CONTRACT: **FR041**
IL. LETTING ITEM: **5A**
IL. PROJECT: **FEP-4203**
S.B.G. PROJECT: **3-17-SBGP-120/133/139**

SURVEY BOOK #

REVISIONS

NUMBER	BY	DATE

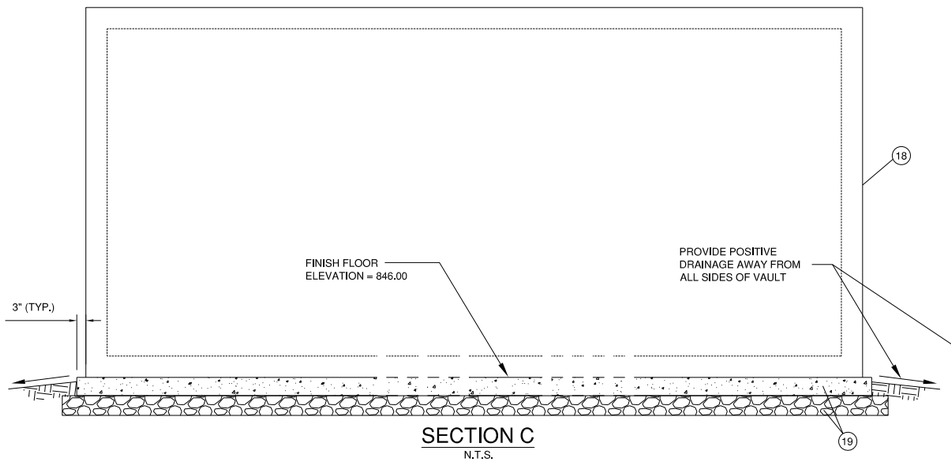
0 1 2
THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22).

FREEPORT-ALBERTUS AIRPORT
FREEPORT, ILLINOIS
CONSTRUCTION OF NEW ELECTRICAL VAULT

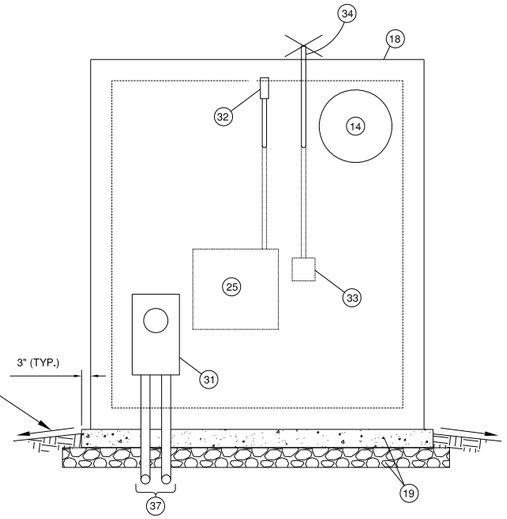
ELECTRICAL SITE PLAN

CMT
CRAWFORD, MURPHY & TILLY, INC.
CONSULTING ENGINEERS
License No. 184-000613

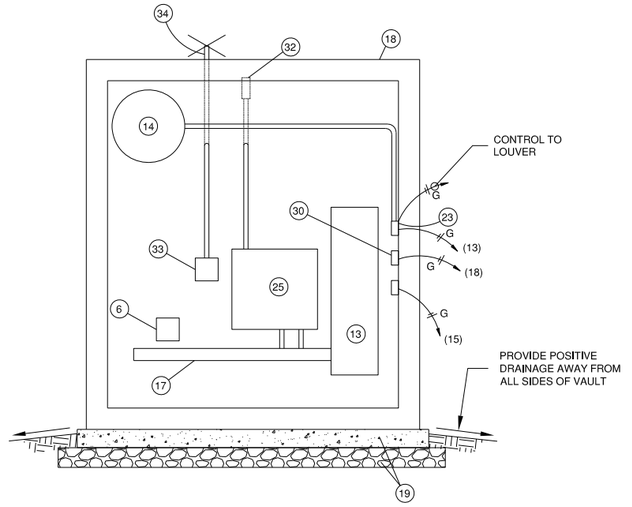
DESIGN BY:	CT
DRAWN BY:	CT
CHECKED BY:	AB
APPROVED BY:	AB
DATE:	4/20/2018
JOB No:	17294-03



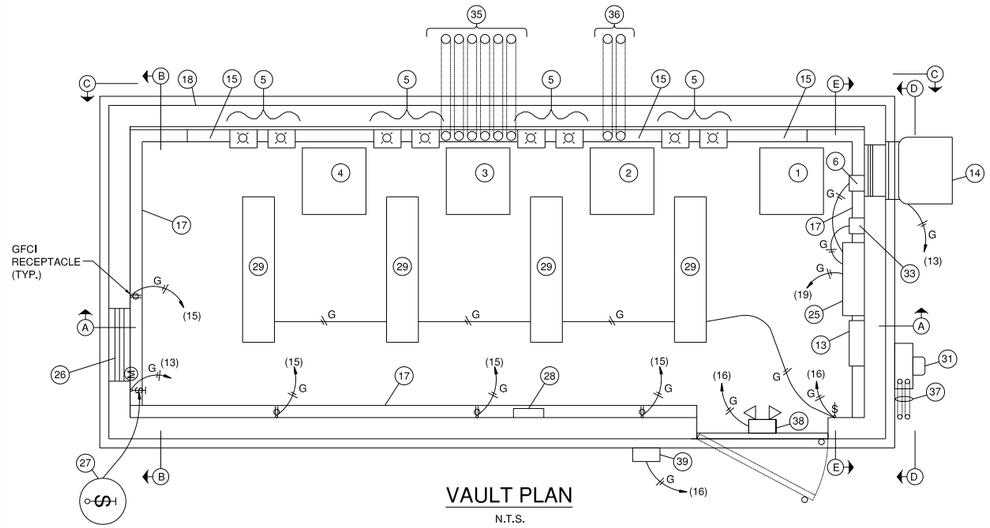
SECTION C
N.T.S.



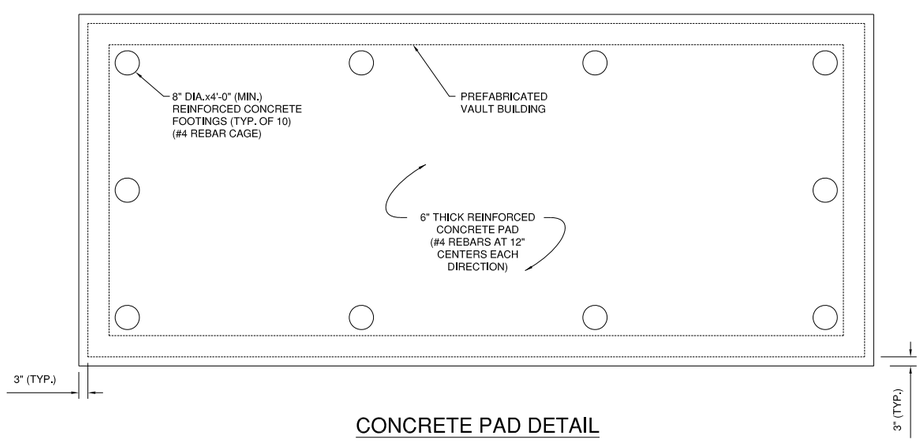
SECTION D
N.T.S.



SECTION E
N.T.S.



VAULT PLAN
N.T.S.



CONCRETE PAD DETAIL
N.T.S.

○ VAULT DETAILS KEYED NOTES

1. NEW 15 KW REGULATOR, 240V INPUT, 3-STEP 6.6A OUTPUT. PROVIDE ENGRAVED NAMEPLATE READING "RUNWAY 6/24".
2. NEW 15 KW REGULATOR, 240V INPUT, 3-STEP 6.6A OUTPUT. PROVIDE ENGRAVED NAMEPLATE READING "TAXIWAY".
3. RELOCATED 15 KW REGULATOR, 240V INPUT, 5-STEP 6.6A OUTPUT (CROUSE-HINDS). PROVIDE ENGRAVED NAMEPLATE READING "EMERGENCY REGULATOR".
4. RELOCATED 15 KW REGULATOR, 240V INPUT, 5-STEP 6.6A OUTPUT (ADB). PROVIDE ENGRAVED NAMEPLATE READING "EMERGENCY REGULATOR.
5. REGULATOR INDICATING LIGHTS ASSEMBLY. FOR ADDITIONAL INFORMATION, SEE ELECTRICAL VAULT DETAILS SHEET.
6. 20A, 1-POLE LIGHTING CONTACTOR IN NEMA 1 ENCLOSURE FOR WIND TEE. CONNECT WIND TEE CONTROLS TO ALCMS INTERFACE.
13. POWER DISTRIBUTION PANELBOARD, 30-POLE, 400A, 120/240V, 1-PHASE, 3-WIRE, WITH 400A, 2P MAIN CIRCUIT BREAKER AND TVSS, SQUARE D NQ, OR EQUIVALENT.
14. EXHAUST FAN, GREENHECK MODEL CWB-300-7, 120V, 3/4 HP, 6,200 CFM, WITH MOTORIZED BACKDRAFT DAMPER AND MOTOR STARTER MS1P-1, OR EQUIVALENT.
15. 4"x4" NEMA 1 HIGH VOLTAGE WIREWAY, INSTALLED ABOVE LOW VOLTAGE WIREWAY. INSTALL A MINIMUM OF TWO ADHESIVE WARNING LABELS ON HINGED DOOR, READING "CAUTION: HIGH VOLTAGE".
17. 4"x4" LOW VOLTAGE WIREWAY.
18. PRE-FABRICATED CONCRETE EQUIPMENT SHELTER, 25'x10'x9'H. SEE SPECIFICATIONS. PROVIDE WARNING SIGN ON DOOR READING "CAUTION: HIGH VOLTAGE".
19. "NEW" 6" REINFORCED (#4 REBARS AT 12" CENTERS EACH DIRECTION) CONCRETE PAD ON A 8" CRUSHED AGG. BASE PAD COMPACTED TO 95% STD PROCTOR.
23. EXHAUST FAN THERMOSTAT, LINE VOLTAGE, HONEYWELL T6051A WITH HONEYWELL Q651A1009 AUTO-OFF-ON SUBBASE. PROVIDE ENGRAVED NAMEPLATE READING "EXHAUST FAN".
25. AIRFIELD LIGHTING CONTROL AND MONITORING SYSTEM (ALCMS) CABINET AND TOUCHSCREEN.
26. INTAKE LOUVER, RUSKIN ELF375DXH, 48"Wx42"H, MIN. FREE AREA 7.10 SQ.FT. WITH EXTENDED SILL, BIRD SCREEN, KYNAR FINISH TO MATCH SHELTER COLOR (OR AS DIRECTED BY OWNER), CD 35 MOTORIZED DAMPER (POWER-OPEN/SPRING-CLOSE), OR EQUIVALENT. NOTE: CONTRACTOR SHALL PROVIDE AN INTERIOR FILTER RACK WITH A REPLACEABLE FILTER.
27. FRACTIONAL HORSEPOWER STARTER WITH OVERLOADS SIZED FOR LOUVER MOTOR. CONTRACTOR SHALL COORDINATE WITH MANUFACTURER.
28. ARCHITECTURAL WALL HEATER, 4.8KW, 240V, SINGLE-PHASE, INDEECO WAI SERIES, CAT. #933U04800C, WITH SURFACE MOUNT FRAME, OR EQUIVALENT. WIRING TO PANELBOARD SHALL BE (2) #10 THWN, (1) #10 GROUND, IN 3/4" CONDUIT (CKT. 9).
29. SURFACE MOUNT NON-METALLIC LED LIGHT FIXTURE, LITHONIA FEM-L48-4000LM-LPAFL-MD-MVOLT-40K, OR EQUIVALENT.
30. TOGGLE SWITCH.
31. C.T. CABINET AND UTILITY METER BASE.
32. PHOTOCELL TORK 2100, OR EQUIVALENT
33. L-854 RADIO CONTROLLER. PROVIDE ENGRAVED NAMEPLATE READING "L-854 RADIO CONTROLLER (PILOT CONTROL)".
34. L-854 RADIO CONTROLLER ANTENNA. MOUNT TO VAULT WALL, AS NEEDED FOR PROPER RECEPTION FROM ALL AIRPLANES IN THE AIR (CONTRACTOR SHALL FIELD VERIFY). THE COAXIAL CABLE SHALL EXIT THROUGH WALL THROUGH SEALED OPENING. PROVIDE DRIP LOOP IN EXTERIOR SIGNAL CABLE.
35. 6-4" GRS CONDUITS TO MIN. 30" BELOW GRADE TO HIGH VOLTAGE HANDHOLE. INSTALL THE FOLLOWING CIRCUITS:
    - (2) 1-#8, L-824, 5KV CABLES IN 3/4" UNIT DUCT (RUNWAY 6/24 EDGE LIGHTS)
    - (2) 1-#8, L-824, 5KV CABLE IN 3/4" UNIT DUCT (TAXIWAY EDGE LIGHTS)
    - 4-4" CONDUIT SPARES WITH PULL STRING.
36. 2-4" GRS CONDUITS TO MIN. 30" BELOW GRADE TO LOW VOLTAGE HANDHOLE. INSTALL THE FOLLOWING CIRCUITS:
    - 12 STRAND MULTI-MODE FIBER OPTIC CABLE IN 1" UNIT DUCT.
    - 2-#8, 1-#8 GND. IN 1" UNIT DUCT (WIND TEE).

    NOTE:
    WHEN MAKING TRANSITIONS FROM UNIT DUCT TO 4" GRS CONDUIT, THE CONTRACTOR SHALL SEAL AROUND CABLES AT ENDS OF CONDUIT AND UNIT DUCT TO MAKE WATERTIGHT, USING "HYDROBLOCK" BY WATERGUARD TECHNOLOGY PRODUCTS, POLYWATER DUCT SEALANT FST-250 SERIES, O-Z/GEDNEY TYPE DUX WATER SEALING COMPOUND, OR EQUIVALENT.
37. 2 SETS OF (3) #4/0 XLP-USE, (1) #2 GND. IN $2\frac{1}{2}$" GRS CONDUITS TO UTILITY POLE.
38. EMERGENCY LIGHT / EXIT SIGN COMBO. LED LITHONIA, MODEL LHQM-LED-R-HO.
39. WALL PACK EXTERIOR LIGHT WITH PHOTOCELL, LED LITHOINA, MODEL DSXW1 LED-10C-700-40K-T2M-240-PE.

IL. CONTRACT: **FR041**
IL. LETTING ITEM: **5A**
IL. PROJECT: **FEP-4203**
S.B.G. PROJECT: **3-17-SBGP-120/133/139**

SURVEY BOOK #

REVISIONS

NUMBER	BY	DATE

0 1 2
THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22).

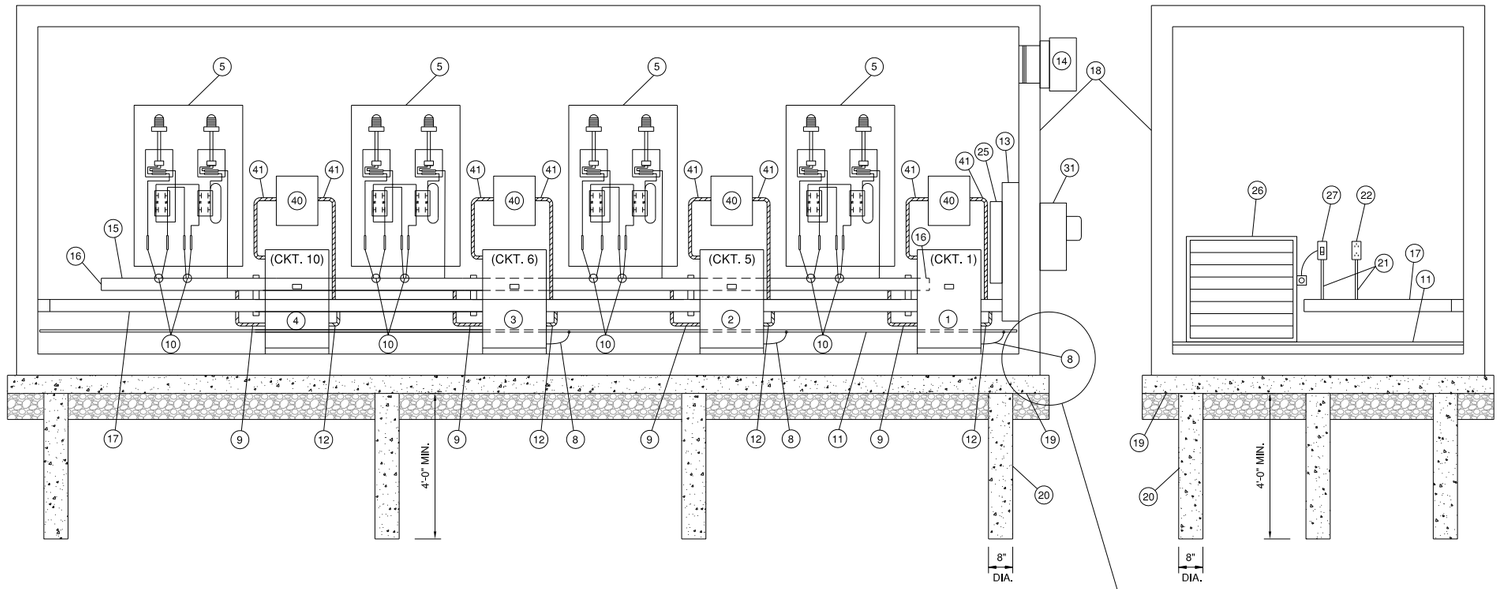
FREEPORT-ALBERTUS AIRPORT
FREEPORT, ILLINOIS
CONSTRUCTION OF NEW ELECTRICAL VAULT

ELECTRICAL DETAILS - 1

CMT
CRAWFORD, MURPHY & TILLY, INC.
CONSULTING ENGINEERS
License No. 184-000613

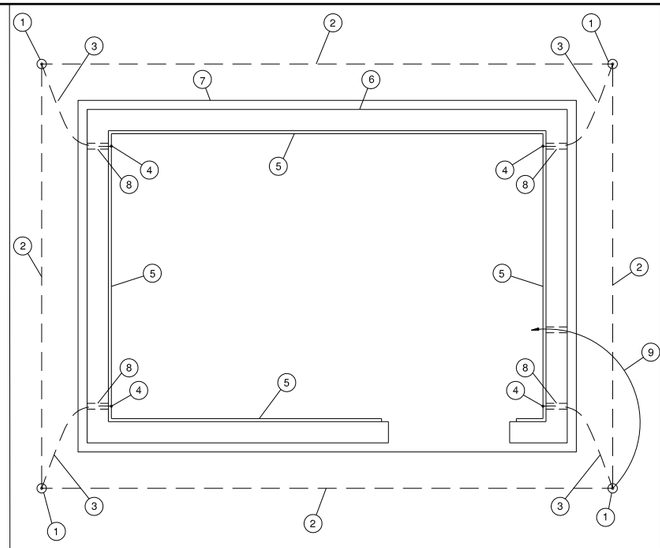
DESIGN BY:	CT
DRAWN BY:	CT
CHECKED BY:	AB
APPROVED BY:	AB
DATE:	4/20/2018
JOB No:	17294-03

SHEET 10 OF 16 SHEETS



SECTION A
N.T.S.

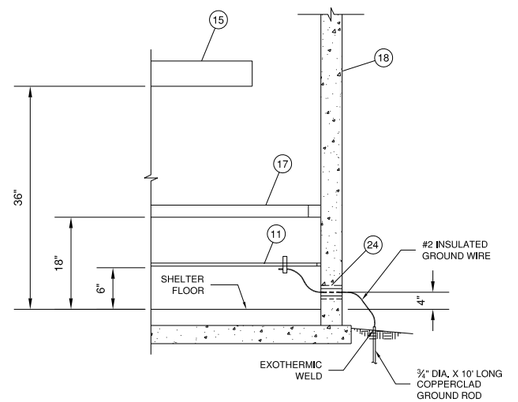
SECTION B
N.T.S.



VAULT GROUND RING KEYED PLAN
N.T.S.

○ VAULT GROUNDING & BONDING NOTES

1. 3/4" DIAMETER x 10' LONG COPPERCLAD GROUND ROD. BOND GROUND WIRES TO GROUND ROD USING EXOTHERMIC WELD, CADWELD, OR EQUIVALENT. CLAMPED CONNECTIONS SHALL NOT BE ACCEPTABLE.
2. #2/0 BARE COPPER GROUND WIRE.
3. #2 INSULATED GROUND WIRE.
4. CLAMP #2 INSULATED GROUND WIRE TO VAULT GROUND BUS.
5. VAULT GROUND BUS, 1/8"x3/4" COPPER BUS BAR. STAND-OFF MOUNT, 6" MINIMUM ABOVE VAULT FLOOR ON ALL SIDES.
6. PRE-FABRICATED EQUIPMENT SHELTER.
7. 6" THICK REINFORCED CONCRETE VAULT PAD.
8. PRE-FABRICATED EQUIPMENT SHELTER TO BE DELIVERED WITH 1/2" HOLES AT EACH CORNER AS SHOWN.
9. #2/0 BARE COPPER GROUND WIRE TO GROUND BAR OF POWER DISTRIBUTION PANEL BOARD, DELIVER WITH PROVIDED 1/2" HOLE IN EQUIPMENT SHELTER.



DETAIL "F"
N.T.S.

○ VAULT DETAILS KEYED NOTES

1. NEW 15 KW REGULATOR, 240V INPUT, 3-STEP 6.6A OUTPUT. PROVIDE ENGRAVED NAMEPLATE READING "RUNWAY 6/24".
2. NEW 15 KW REGULATOR, 240V INPUT, 3-STEP 6.6A OUTPUT. PROVIDE ENGRAVED NAMEPLATE READING "TAXIWAY".
3. RELOCATED 15 KW REGULATOR, 240V INPUT, 5-STEP 6.6A OUTPUT (CROUSE-HINDS). PROVIDE ENGRAVED NAMEPLATE READING "EMERGENCY REGULATOR".
4. RELOCATED 15 KW REGULATOR, 240V INPUT, 5-STEP 6.6A OUTPUT (ADB). PROVIDE ENGRAVED NAMEPLATE READING "EMERGENCY REGULATOR.
5. REGULATOR INDICATING LIGHTS ASSEMBLY. FOR ADDITIONAL INFORMATION, SEE ELECTRICAL VAULT DETAILS SHEET.
8. #6 INSULATED GROUND WIRE FROM REGULATOR. CLAMP TO GROUND BUS.
9. (2) 1-#8, L-824, TYPE C, 5 KV CABLES IN 1" FLEXIBLE METALLIC CONDUIT. ROUTE TO INDICATING LIGHT EQUIPMENT.
10. (2) 2-#8, L-824, TYPE C, 5 KV CABLES (ONE SET TO REGULATOR, ONE SET TO EDGE LIGHTS). WHERE CABLES ENTER TOP OF HIGH VOLTAGE WIREWAY, CONTRACTOR SHALL INSTALL GROMMETS TO SEAL AROUND CABLES.
11. 1/8" x 3/4" COPPER GROUND BUS, ALL AROUND INSIDE OF VAULT. STAND-OFF MOUNT A MINIMUM OF 1/4" FROM WALL.
12. (2) 1-#2 THWN (240V TO REGULATOR), 1 #8 GND. IN 1" FLEXIBLE METALLIC CONDUIT.
13. POWER DISTRIBUTION PANELBOARD, 30-POLE, 400A, 120/240V, 1-PHASE, 3-WIRE, WITH 400A, 2P MAIN CIRCUIT BREAKER AND TVSS, SQUARE D NQ, OR EQUIVALENT.
14. EXHAUST FAN, GREENHECK MODEL CWB-300-7, 120V, 3/4 HP, 6,200 CFM, WITH MOTORIZED BACKDRAFT DAMPER AND MOTOR STARTER MS1P-1, OR EQUIVALENT.
15. 4"x4" NEMA 1 HIGH VOLTAGE WIREWAY. INSTALL A MINIMUM OF TWO ADHESIVE WARNING LABELS ON HINGED DOOR, READING "CAUTION: HIGH VOLTAGE".
16. END OF HIGH VOLTAGE WIREWAY.
17. 4"x4" LOW VOLTAGE WIREWAY.
18. PRE-FABRICATED CONCRETE EQUIPMENT SHELTER, 25'x10'x9'H. SEE SPECIFICATIONS. PROVIDE WARNING SIGN ON DOOR READING "CAUTION: HIGH VOLTAGE".
19. "NEW" 6" REINFORCED CONCRETE PAD (#4 REBAR AT 12" CENTERS EACH DIRECTION) ON A 8" CRUSHED AGG. BASE PAD COMPACTED TO 95% STD PROCTOR.
20. "NEW" CONCRETE PAD FOOTINGS REINFORCED WITH #4 REBAR CAGE, TYPICAL OF 10.
21. 2-#12 THWN, 1-#12 GND. IN 3/4" CONDUIT.
22. GFCI RECEPTACLE.
24. 1/2" PVC CONDUIT NIPPLE THROUGH SHELTER WALL (BY SHELTER MFR.) AFTER INSTALLATION OF #2 INSULATED GROUND WIRE, SEAL OPENING TO MAKE WATER TIGHT.
25. L-890 AIRFIELD LIGHTING CONTROL AND MONITORING SYSTEM (ALCMS) CABINET AND TOUCHSREEN. REFER TO SPECIFICATIONS FOR THE SYSTEM.
26. INTAKE LOUVER, RUSKIN ELF375DXH, 48"WX42"H, MIN. FREE AREA 7.10 SQ.FT. WITH EXTENDED SILL, BIRD SCREEN, KYNAR FINISH TO MATCH SHELTER COLOR (OR AS DIRECTED BY OWNER), CD 35 MOTORIZED DAMPER (POWER-OPEN/SPRING-CLOSE), OR EQUIVALENT. NOTE: CONTRACTOR SHALL PROVIDE AN INTERIOR FILTER RACK WITH A REPLACEABLE FILTER.
27. FRACTIONAL HORSEPOWER STARTER WITH OVERLOADS SIZED FOR LOUVER MOTOR. CONTRACTOR SHALL COORDINATE WITH MANUFACTURER.
31. C.T. CABINET AND UTILITY METER BASE.
40. WALL MOUNTED INTERFACE UNIT FOR ALCMS, AS RECOMMENDED BY ALCMS MANUFACTURER.
41. CONTROL/COMMUNICATION CABLES IN 1" FLEXIBLE CONDUIT, AS RECOMMENDED BY ALCMS MANUFACTURER.

IL. CONTRACT: **FR041**
IL. LETTING ITEM: **5A**
IL. PROJECT: **FEP-4203**
S.B.G. PROJECT: **3-17-SBGP-120/133/139**

SURVEY BOOK #

REVISIONS		
NUMBER	BY	DATE

0 1 2
THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22).

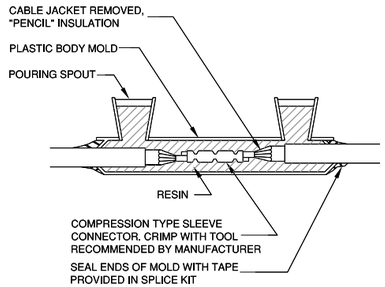
FREEPORT-ALBERTUS AIRPORT
FREEPORT, ILLINOIS
CONSTRUCTION OF NEW ELECTRICAL VAULT

ELECTRICAL DETAILS - 2

CMT
CRAWFORD, MURPHY & TILLY, INC.
CONSULTING ENGINEERS
License No. 184-000613

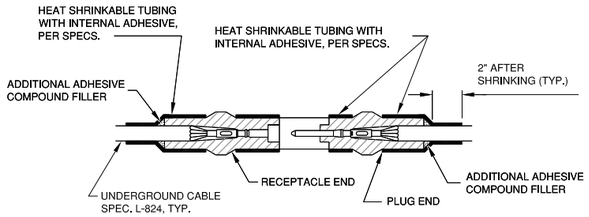
DESIGN BY:	CT
DRAWN BY:	CT
CHECKED BY:	AB
APPROVED BY:	AB
DATE:	4/20/2018
JOB No:	17294-03

SHEET 11 OF 16 SHEETS



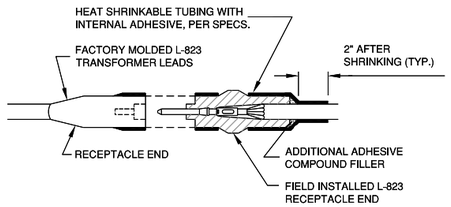
FOR IN-LINE CONNECTIONS OF EXISTING CABLES CUT DURING CONSTRUCTIONS.

TYPE A



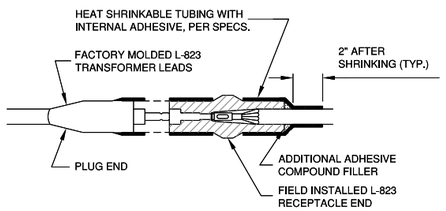
NOT TO BE USED IN THIS PROJECT UNLESS OTHERWISE DIRECTED BY ENGINEER

TYPE B



FOR SPLICES AT TAXIWAY LIGHTS AND SIGNS.

TYPE C



FOR SPLICES AT TAXIWAY LIGHTS AND SIGNS.

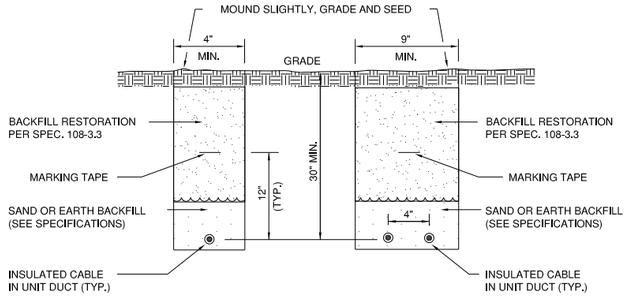
TYPE D

CABLE SPLICES

N.T.S.

NOTES

1. INSIDE DIAMETER OF CONNECTOR SHALL PROPERLY MATCH THE OUTSIDE DIAMETER OF CABLE.
2. THE COST OF FURNISHING AND INSTALLING ALL SPLICE MATERIALS SHALL BE INCIDENTAL TO THE ASSOCIATED CABLE ITEMS.
3. THE CONTRACTOR SHALL HAVE A MINIMUM OF TWO (2) TYPE A SPLICE KITS ON THE JOB SITE AT ALL TIMES FOR EMERGENCY REPAIRS.

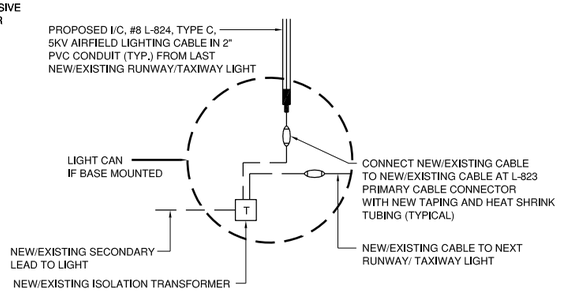


TRENCH DETAIL FOR CABLE IN UNIT DUCT

NOT TO SCALE

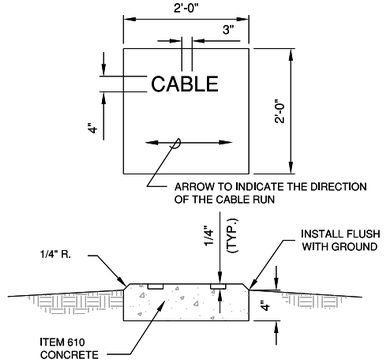
NOTES

1. TRENCHES WITH MORE THAN 2 CABLES SHALL BE INCREASED 3" IN WIDTH FOR EACH ADDITIONAL CABLE. IF SPECIFIED ON PLANS, TWO PARALLEL TRENCHES MAY BE CONSTRUCTED.
2. DEPTH OF TRENCHES FOR AIRFIELD LIGHTING SHALL BE AS SHOWN ABOVE UNLESS OTHERWISE SPECIFIED ON THE PLANS. DEPTH OF FAA CABLES SHALL BE 36" UNLESS OTHERWISE SHOWN.
3. SAND BACKFILL SHALL BE USED IF THE EXISTING SOIL DOES NOT MEET THE BACKFILL REQUIREMENTS.
4. ALL DISTURBED SURFACES SHALL BE RESTORED TO THEIR ORIGINAL CONDITION. COST IS INCIDENTAL TO TRENCH RETURFING MATERIALS.
5. THE CONTRACTOR SHALL HAVE THE OPTION TO TRENCH OR PLOW UNIT DUCT. NO ADDITIONAL PAYMENT SHALL BE MADE FOR TRENCHING.



RUNWAY/TAXIWAY LIGHTING CIRCUIT CONNECTION DETAIL

NOT TO SCALE

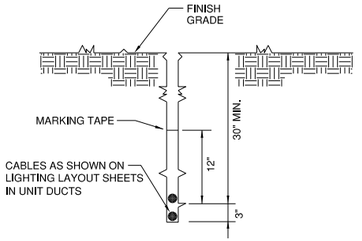


TURF CABLE / SPLICE MARKER

N.T.S.

NOTES

1. CABLE MARKERS SHALL BE INSTALLED AT ALL BENDS AND EVERY 200' ALONG THE HOMERUN.
2. ITEM 610 CONCRETE SHALL BE USED.
3. ALL EXPOSED EDGES SHALL BE EDGED WITH A ¼" RADIUS TOOL.
4. THE COST OF FURNISHING AND INSTALLING NEW MARKERS SHALL BE INCIDENTAL TO THE ASSOCIATED ITEMS.
5. 0.049 CU. YD. CONCRETE PER MARKER.
6. A MARKER CONFORMING TO THIS DETAIL MARKED "SPLICE" SHALL BE INSTALLED AT ALL SPLICE LOCATIONS NOT IN LIGHT CANS OR MANHOLES.

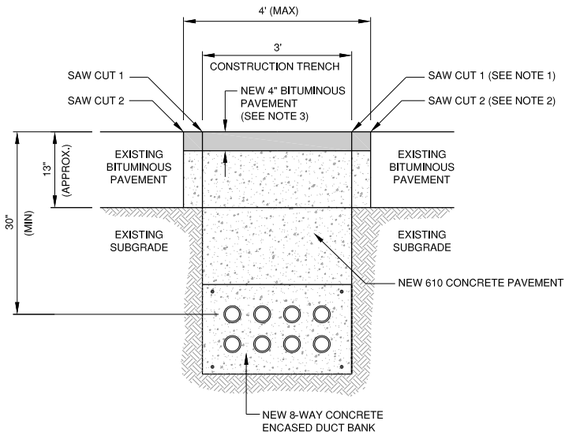


PLOWED CABLE IN UNIT DUCT

NOT TO SCALE

NOTES

1. ONLY CABLES OF THE SAME CIRCUIT WILL BE ALLOWED TO BE PLOWED IN TOGETHER.
2. THE CONTRACTOR SHALL HAVE THE OPTION TO TRENCH OR PLOW UNIT DUCT. NO ADDITIONAL PAYMENT SHALL BE MADE FOR TRENCHING.

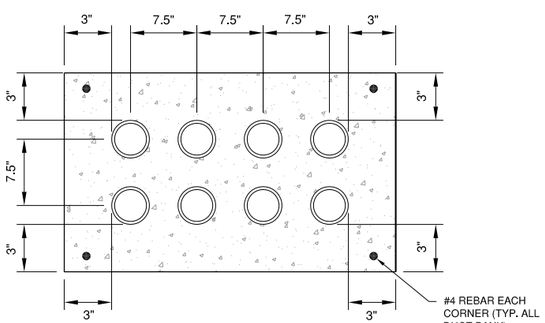


CONCRETE ENCASED DUCT PAVEMENT PATCH CONSTRUCTION

NOT TO SCALE

NOTES

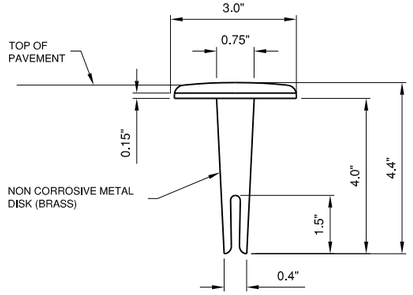
1. SAW CUT 1 WILL BE PERFORMED PRIOR TO ANY EXCAVATION OF THE BITUMINOUS PAVEMENT AT THE LOCATION OF THE PROPOSED CONCRETE ENCASED DUCT BANK.
2. SAW CUT 2 WILL BE PERFORMED IF NECESSARY AFTER ALL WORK INCLUDING BUT NOT LIMITED TO: EXCAVATION OF TRENCH, PLACEMENT OF NEW DUCT BANK AND PLACEMENT OF NEW DUCT BANK AND PLACEMENT OF NEW 610 CONCRETE PAVEMENT.
3. PROPOSED BITUMINOUS PATCH SHALL BE CONSTRUCTED IN 2 LIFTS OF 2" WITH TACK COAT BETWEEN EACH LIFT.



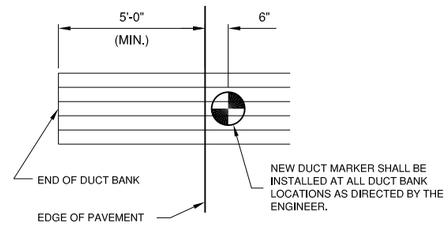
8-WAY DUCT BANK DETAIL

N.T.S.

PLAN



SECTION



MARKER PLACEMENT

DUCT MARKERS SHALL BE RECESSED AND GROUTED INTO THE PAVEMENTS.

DUCT MARKER DETAILS

N.T.S.

NOTES

1. DIMENSIONS SHOWN ARE MINIMUM.
2. TOP OF CONCRETE ENCASEMENT SHALL BE NOT LESS THAN 24" BELOW FINISHED SUBGRADE BELOW PAVEMENTS AND NOT LESS THAN 24" BELOW FINISHED GRADE IN UNPAVED AREAS, EXCEPT WHERE DIRECTED OTHERWISE BY ENGINEER. AVOID ALL CONFLICTS WITH OTHER UTILITIES (UNDERDRAINS, WATER LINES, SEWER LINES, TELEPHONE, ELECTRICAL) OR OTHER OBSTACLES, ADJUSTING DEPTH AS NECESSARY.
3. CONCRETE SHALL BE ITEM 610.
4. CONDUIT FOR CONCRETE ENCASEMENT SHALL BE SCHEDULE 40 PVC, 4" NOMINAL DIAMETER, OR AS INDICATED ON THE PLANS.
5. CONCRETE ENCASEMENT SHALL EXTEND A MINIMUM OF 5'-0" BEYOND EDGES OF PAVEMENT, OR AS SHOWN ON THE PLANS OR DIRECTED BY THE ENGINEER.
6. #4 REBAR SHALL BE INSTALLED CONTINUOUS THE LENGTH OF THE CONCRETE ENCASEMENT.
7. DUCT BANK SHALL BE STACKED NO MORE THAN THREE CONDUITS HIGH UNLESS DIRECTED OTHERWISE BY THE ENGINEER.
8. AT ENDS OF DUCT BANKS, INSTALL A PVC COUPLING FLUSH WITH END OF CONCRETE FOR CONNECTING FUTURE CONDUIT. INSTALL POLYETHELENE PULL STRING, GREENLEE, OR EQUIVALENT. PLUG THE ENDS OF UNUSED SPARE CONDUITS WITH WOODEN PLUGS.
9. HIGH VOLTAGE WIRING, RUNWAY & TAXIWAY SERIES CIRCUIT WIRING, ETC., AND POWER WIRING OVER 480V SHALL BE INSTALLED IN SEPARATE CONDUITS FROM LOW VOLTAGE WIRING, 480V OR LESS.
10. IF POSSIBLE, INSTALL FIBER OPTIC CABLES AND COMMUNICATION CABLES (FAA, ETC.) IN THEIR OWN CONDUITS; OTHERWISE, INSTALL THEM IN THE CONDUITS WITH LOW VOLTAGE WIRING.

IL. CONTRACT: **FR041**
IL. LETTING ITEM: **5A**
IL. PROJECT: **FEP-4203**
S.B.G. PROJECT: **3-17-SBGP-120/133/139**

SURVEY BOOK #

REVISIONS

NUMBER	BY	DATE

0 1 2
THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22).

FREEPORT-ALBERTUS AIRPORT
FREEPORT, ILLINOIS
CONSTRUCTION OF NEW ELECTRICAL VAULT

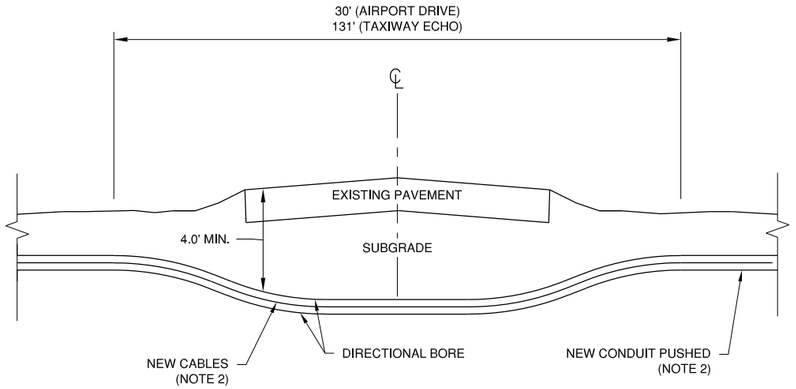
ELECTRICAL DETAILS - 3

CMT
CRAWFORD, MURPHY & TILLY, INC.
CONSULTING ENGINEERS
License No. 184-000613

DESIGN BY:	CT
DRAWN BY:	JRO
CHECKED BY:	AB
APPROVED BY:	AB
DATE:	4/20/2018
JOB No:	17294-03

SHEET 12 OF 16 SHEETS

XREF DWG: CMT NCS TB.dwg
IMAGE FILES:
UPDATE BY: Jim Ohse
LAYOUT: 11 Vault - Electrical Details 3
DATE: Monday, April 23, 2018 4:49:50 PM
FILE: K:\Freeport\ap\17294-03_Electrical\Vault\Draw\Sheets\11 Vault - Electrical Details 3.dwg

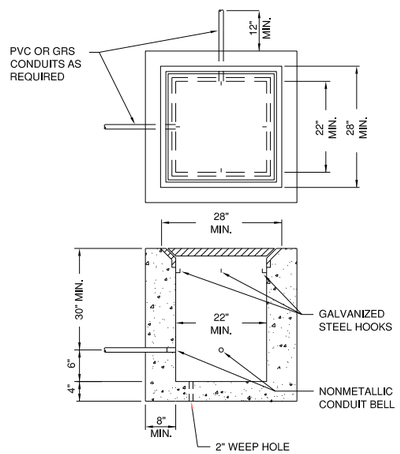


DIRECTIONAL BORE DETAIL

N.T.S.

NOTES

1. THE DEPTH OF THE DIRECTIONAL BORE SHALL BE NO LESS THAN 4.0' FROM THE PAVEMENT SURFACE AND SHALL NOT DISTURB EXISTING UNDERDRAINS OR NEW LIGHTS/CABLING.
2. REFER TO ELECTRICAL SITE PLAN FOR CABLE AND CONDUIT INFORMATION.

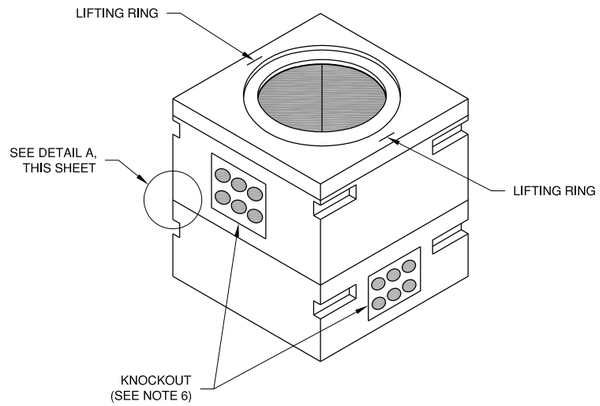


ELECTRICAL HANDHOLE DETAIL (LOW VOLTAGE)

NOT TO SCALE

NOTES:

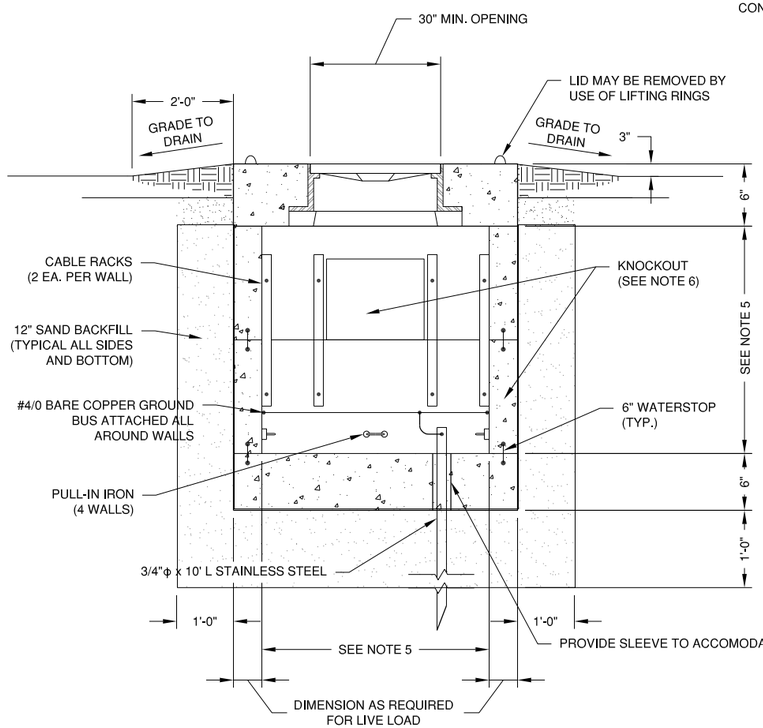
1. PROVIDE 2 - 4" CONDUIT ENTRANCES IN ALL DIRECTIONS. THE NORTH/SOUTH WALLS SHALL BE PLACED AT HIGHER OR LOWER ELEVATIONS THAN THE WALL KNOCKOUTS FOR THE EAST/WEST WALLS TO ALLOW THE DUCTS TO CROSS. KNOCKOUTS SHALL BE SIZED AS REQUIRED FOR PROPOSED DUCT BANK.
2. FRAME AND LID SHALL BE SUITABLE FOR H-20 LOADING.
3. COVER SHALL BE STAMPED "LOW VOLTAGE".



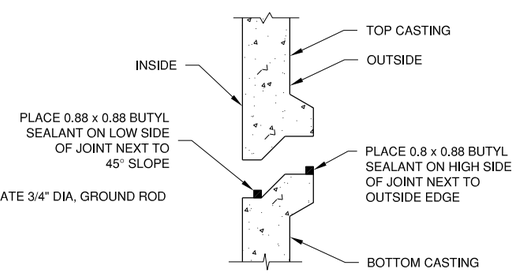
ELEVATION VIEW

NOTES

1. THE HANDHOLE/GRADE RING/HANDHOLE LID ASSEMBLY SHALL BE CONSTRUCTED TO MEET OR EXCEED THE FOLLOWING LOADINGS:
   A. EARTHLOAD = 2 FEET FILL AT 130 LBS/FT .
   B. SURCHARGE = 2 FEET FILL AT 130 LBS/FT .
   C. LIVE LOAD = A.A.S.H.T.O. HS-20 TRUCK WITH 20% IMPACT
   D. f'c = 4,500 P.S.I.
   E. fy = 60,000 P.S.I.
   F. ULTIMATE STRENGTH DESIGN METHOD
   THE SUPPLIER SHALL PROVIDE CERTIFICATION THAT THE HANDHOLES MEET OR EXCEED THESE REQUIREMENTS PRIOR TO INSTALLATION.
2. THE HANDHOLE CONSTRUCTION AND INSTALLATION SHALL BE WATERTIGHT. ALL CONSTRUCTION JOINTS AND DUCTS SHALL BE SEALED TO PREVENT WATER ENTRY. ALL UNUSED DUCT BANK OPENINGS IN HANDHOLE SHALL BE SEALED WITH METAL PLATES TREATED FOR CORROSION RESISTANCE AND BOLTED INTO PLACE. MATING SURFACES SHALL BE SEALED USING BUTYL SEALANT.
3. THE HANDHOLE LID ASSEMBLY SHALL BE INSTALLED SLIGHTLY ABOVE THE SURROUNDING FINAL GRADE AND THE EARTH SHALL BE GRADED TO IT.
4. THE HANDHOLE COVER SHALL BE LOCKABLE UTILIZING A PENTAGON BOLT ASSEMBLY.
5. PROPOSED ELECTRICAL HANDHOLE SHALL BE THE FOLLOWING INTERIOR DIMENSIONS: 4' L x 4' W x 4' H
6. SINGLE HANDHOLES: KNOCKOUTS SHALL BE CENTERED IN THE HANDHOLE WALL AND SHALL BE PROVIDED FOR IN EACH DIRECTION. WHERE KNOWN, SIZE SHALL BE AS REQUIRED FOR PROPOSED ENTRANCE, OTHERWISE 6 - 4" OPENINGS (MINIMUM) SHALL BE PROVIDED AND CAPPED FOR FUTURE USE.
7. HANDHOLES THAT MAKE UP A HANDHOLE PLAZA: THE WALL KNOCKOUTS FOR THE NORTH/SOUTH WALLS SHALL BE PLACED AT HIGHER OR LOWER ELEVATIONS THAN THE WALL KNOCKOUTS FOR THE EAST/WEST WALLS TO ALLOW THE DUCTS TO CROSS. KNOCKOUTS SHALL BE SIZED AS REQUIRED FOR PROPOSED DUCT BANK.
8. THE HANDHOLE CONCRETE TOP LID SHALL BE SET THAT IF DESIRED, THE CONCRETE TOP LID MAY BE REMOVED BY USE OF THE LIFTING RINGS.



SECTION VIEW



DETAIL A

HIGH VOLTAGE HANDHOLE DETAILS

N.T.S.

IL. CONTRACT: **FR041**
IL. LETTING ITEM: **5A**
IL. PROJECT: **FEP-4203**
S.B.G. PROJECT: **3-17-SBGP-120/133/139**

SURVEY BOOK #

REVISIONS

NUMBER	BY	DATE

0 1 2
THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22).

FREEPORT-ALBERTUS AIRPORT
FREEPORT, ILLINOIS
CONSTRUCTION OF NEW ELECTRICAL VAULT

ELECTRICAL DETAILS - 4

CMT
CRAWFORD, MURPHY & TILLY, INC.
CONSULTING ENGINEERS
License No. 184-000613

DESIGN BY:	CT
DRAWN BY:	CT
CHECKED BY:	AB
APPROVED BY:	AB
DATE:	4/20/2018
JOB No:	17294-03

SHEET 13 OF 16 SHEETS

PANELBOARD SCHEDULE

PANEL DESIGNATION: **MDP** | BOND NEUTRAL AND GROUND BAR: **NO** | POLE: **30**
LOCATION: **ELECTRICAL VAULT** | NEUTRAL BUS RATING: **100%** | SHORT CIRCUIT RATING: **30KA**
MFR & TYPE: **SQUARE D NQ, OR EQUIV.** | SERVICE ENTRANCE RATED: **YES** | SERIES OR FULLY RATED: **SERIES**
TVSS & DISCONNECT REQUIRED: **YES**

VOLTS: **120/240V** | MOUNTING: **SURFACE** | BUS RATING (AMPS): **400**
PHASE: **1** | ENCL RATING: **NEMA 1** | BUS: **COPPER**
WIRE: **3** | MAIN CIRCUIT BREAKER: AMP/POLE **400/2**

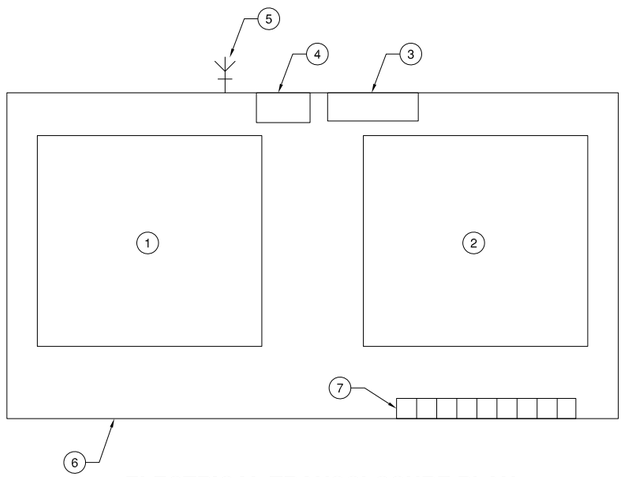
CKT NO.	LOAD	BREAKER SIZE	LOAD AMPS	USAGE FACTOR	PHASE AMPS A	PHASE AMPS B	POLE NO.		PHASE AMPS A	PHASE AMPS B	USAGE FACTOR	LOAD AMPS	BREAKER SIZE		CKT NO.
1	RUNWAY 6/24 REGULATOR 15 KW	100A/2P	62.5	0.5	31.25		1	2	0		-----	-----	20A/2P	TVSS	2
3			62.5	0.5		31.25	3	4		0	-----	-----			4
5	TAXIWAY REGULATOR 15 KW	100A/2P	62.5	0.5	31.25		5	6	0		-----	62.5	100A/2P	EMERGENCY SPARE REGULATOR 15 KW	6
7			62.5	0.5		31.25	7	8		0	-----	62.5			8
9	WALL HEATER 4.8 KW	30A/2P	20	0.2	4		9	10	0		-----	62.5	100A/2P	EMERGENCY SPARE REGULATOR 15 KW	10
11			20	0.2		4	11	12		0	-----	62.5			12
13	EXHAUST FAN	20A/1P	5	0.25	1.25		13	14	2		1	2	20A/1P	WIND TEE	14
15	RECEPTACLES	20A/1P	7.2	0.1		0.72	15	16		0.75	0.25	3	20A/1P	LIGHTING	16
17	SPARE	20A/1P	-----	-----	0		17	18	0		-----	-----	20A/1P	SPARE	18
19	ALCMS	20A/1P	8	1		8	19	20		0	-----	-----	20A/1P	SPARE	20
21	SPARE	20A/1P	-----	-----	0		21	22	0		-----	-----	-----	-----	22
23	SPARE	20A/1P	-----	-----		0	23	24		0	-----	-----	-----	-----	24
25	-----	-----	-----	-----	0		25	26	0		-----	-----	-----	-----	26
27	-----	-----	-----	-----		0	27	28		0	-----	-----	-----	-----	28
29	-----	-----	-----	-----	0		29	30	0		-----	-----	-----	-----	30
	SECTION TOTAL:				67.75	75.22			2	0.75					
									A	B				TOTAL USAGE LOAD:	
					PHASE TOTAL AMPS:				69.75	75.97				17486.4 VA	
									A	B					
					PHASE TOTAL VA:				8370	9116.4					

NOTES:

1.) PROVIDE 120 KA SURGE PROTECTIVE DVICE INSIDE PANELBOARD.
2.) AFTER INSTALLATION OF ALL CIRCUIT, TURN ON ALL CIRCUITS AND PHYSICALLY BALANCE ALL PHASES, MOVING CIRCUITS AS NEEDED.
3.) PROVIDE A TYPED PANELBOARD SCHEDULE. (HAND WRITTEN SCHDUELES ARE NOT ACCEPTABLE.)
4.) PROVIDE ENGRAVED NAMEPLATE READING:

MDP
120/240V, 1-PHASE, 3-WIRE

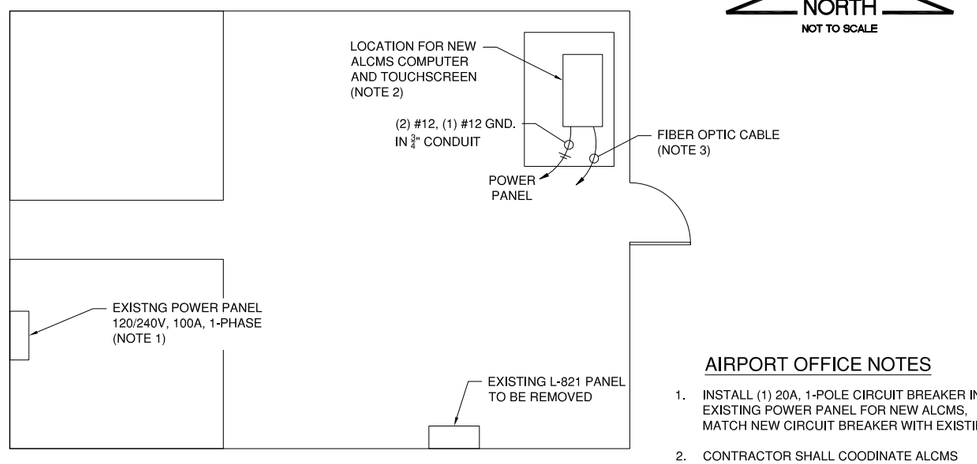
PANELBOARD SCHEDULE
NOT TO SCALE



ELECTRICAL TRANSCLOSURE PLAN
NOT TO SCALE

TRANSCLOSURE KEYED NOTES

1. EXISTING 15KW, 5-STEP, 240V REGULATOR (CROUSE-HINDS) TO BE RELOCATED TO NEW ELECTRICAL VAULT.
2. EXISTING 15KW, 5-STEP, 240V REGULATOR (ADB) TO BE RELOCATED TO NEW ELECTRICAL VAULT.
3. EXISTING POWER PANEL TO BE REMOVED AND DISPOSED OF OFF-SITE.
4. EXISTING L-854 RADIO CONTROLLER TO BE REMOVED AND SALVAGED. COORDINATE LOCATION TO STORE RADIO CONTROLLER WITH AIRPORT AUTHORITY.
5. EXISTING ANTENNA CABLE AND ANTENNA TO BE REMOVED AND SALVAGED. COORDINATE LOCATION TO STORE ANTENNA AND CABLE WITH AIRPORT AUTHORITY.
6. EXISTING ELECTRICAL TRANSCLOSURE TO BE REMOVED AND DISPOSED OF OFF-SITE.
7. EXISTING S-1 CUTOUTS AND GROUNDING SWITCHES TO BE REMOVED AND DISPOSED OF OFF-SITE.



AIRPORT OFFICE PLAN
NOT TO SCALE

NORTH
NOT TO SCALE

AIRPORT OFFICE NOTES

1. INSTALL (1) 20A, 1-POLE CIRCUIT BREAKER IN EXISTING POWER PANEL FOR NEW ALCMS, MATCH NEW CIRCUIT BREAKER WITH EXISTING.
2. CONTRACTOR SHALL COODINATE ALCMS LOCATION WITH THE AIRPORT AUTHORITY. INSTALL ALCMS COMPUTER, TOUCHSCREEN, UPS AND FIBER OPTIC PATCH PANEL.
3. INSTALL NEW FIBER OPTIC CABLE IN CABLE DUCT ABOVE SUSPENDED CEILING.

IL. CONTRACT: **FR041**
IL. LETTING ITEM: **5A**
IL. PROJECT: **FEP-4203**
S.B.G. PROJECT: **3-17-SBGP-120/133/139**

SURVEY BOOK #

REVISIONS

NUMBER	BY	DATE

0 1 2
THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22).

FREEPORT-ALBERTUS AIRPORT
FREEPORT, ILLINOIS
CONSTRUCTION OF NEW ELECTRICAL VAULT

PANELBOARD SCHEDULE, ELECTRICAL TRANSCLOSURE PLAN AND AIRPORT OFFICE PLAN

CMT
CRAWFORD, MURPHY & TILLY, INC.
CONSULTING ENGINEERS
License No. 184-000613

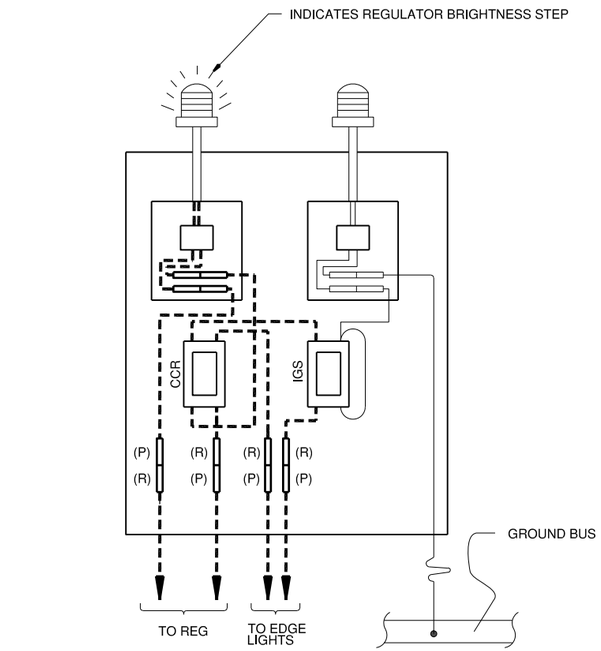
DESIGN BY:	CT
DRAWN BY:	CT
CHECKED BY:	AB
APPROVED BY:	AB
DATE:	4/20/2018
JOB No:	17294-03

SHEET 14 OF 16 SHEETS

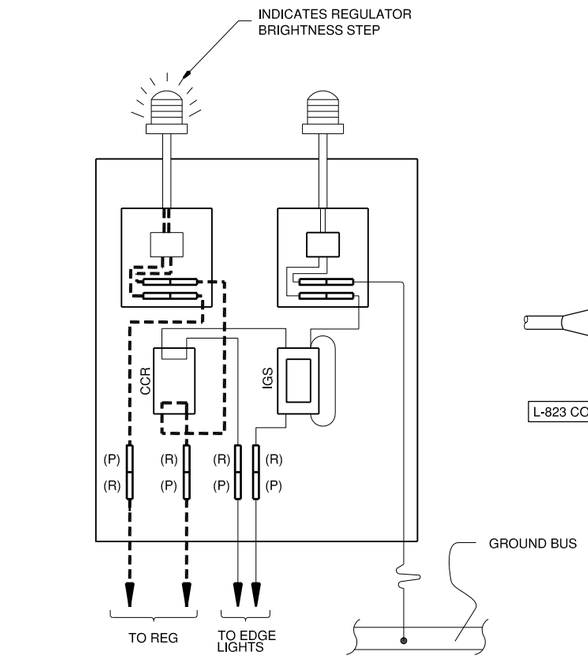
TESTING

1. TO TEST FOR A GROUND FAULT ON EDGE LIGHT SERIES CIRCUIT:
   A. TURN OFF REGULATOR
   B. REMOVE "IGS" S1 CUTOUT FROM SOCKET
   C. TURN REGULATOR ON
   D. VERIFY THAT REGULATOR OUTPUT INDICATION LAMP IS ILLUMINATED AND INDICATES REGULATOR BRIGHTNESS STEP
   E. GROUND FAULT INDICATION LAMP WILL ILLUMINATE IF A GROUND FAULT EXISTS ON THE LIGHTING CIRCUIT

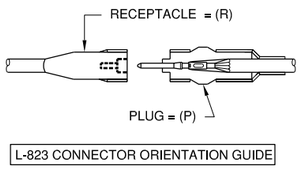
2. TO ISOLATE REGULATOR FROM EDGE LIGHT SERIES CIRCUIT HOMERUN AND GROUND FAULT INDICATION CIRCUIT FOR TESTING JUST THE REGULATOR:
   A. TURN OFF REGULATOR
   B. REMOVE "CCR" S1 CUTOUT FROM SOCKET.
   C. TURN REGULATOR ON
   D. THE CCR OUTPUT INDICATION LAMP AT MOUNTING PANEL WILL STILL ILLUMINATE FOR TESTING REGULATOR



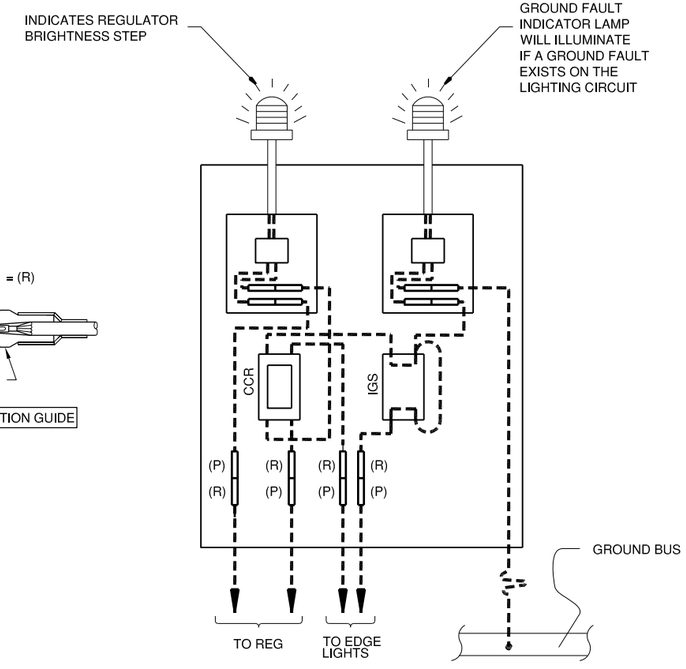
NORMAL OPERATION
NTS
(BOTH PLUG CUTOUTS ARE IN)



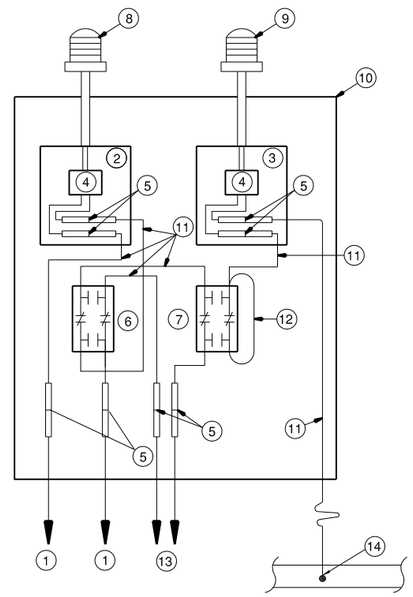
REGULATOR TESTING
NTS
"CCR" PLUG CUTOUT IS OUT
"IGS" CUTOUT IS IN



L-823 CONNECTOR ORIENTATION GUIDE



GROUND FAULT TESTING
NTS
"CCR" PLUG CUTOUT IS IN
"IGS" PLUG CUTOUT IS OUT



REGULATOR INDICATING LIGHT NOTES

1 5KV L-824 CABLES TO REGULATOR.

2 HINGED COVER NEMA 1 ENCLOSURE SIZED AS REQUIRED TO HOUSE EQUIPMENT, WITH ENGRAVED NAMEPLATE READING: "CIRCUIT INDICATOR".

3 HINGED COVER NEMA 1 ENCLOSURE SIZED AS REQUIRED TO HOUSE EQUIPMENT, WITH ENGRAVED NAMEPLATE READING: "GROUND INDICATOR".

4 L-830 ISOLATION TRANSFORMER.

5 L-823 CONNECTOR. (SEE CONNECTOR ORIENTATION GUIDE)

6 "CCR" TYPE S-1 PLUG CUTOUT FOR ISOLATING REGULATOR OUTPUT TO TEST REGULATOR.

7 "IGS" TYPE S-1 PLUG CUTOUT FOR INTENTIONAL GROUNDING OF SERIES CIRCUIT TO TEST FOR GROUND FAULTS.

8 REGULATOR OUTPUT INDICATION EDGE LIGHT (RUNWAY OR TAXIWAY EDGE LIGHT).

9 GROUND FAULT INDICATION EDGE LIGHT WITH WHITE GLOBE.

10 EQUIPMENT MOUNTING PANEL.

11 5KV L-824 CABLE.

12 5KV L-824 CABLE USED AS A JUMPER.

13 REGULATOR SERIES CIRCUIT HOMERUN CABLES TO EDGE LIGHTS.

14 CLAMP TO GROUND BUS.

IL. CONTRACT: **FR041**
IL. LETTING ITEM: **5A**
IL. PROJECT: **FEP-4203**
S.B.G. PROJECT: **3-17-SBGP-120/133/139**

SURVEY BOOK #

REVISIONS

NUMBER	BY	DATE

0 1 2
THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22).

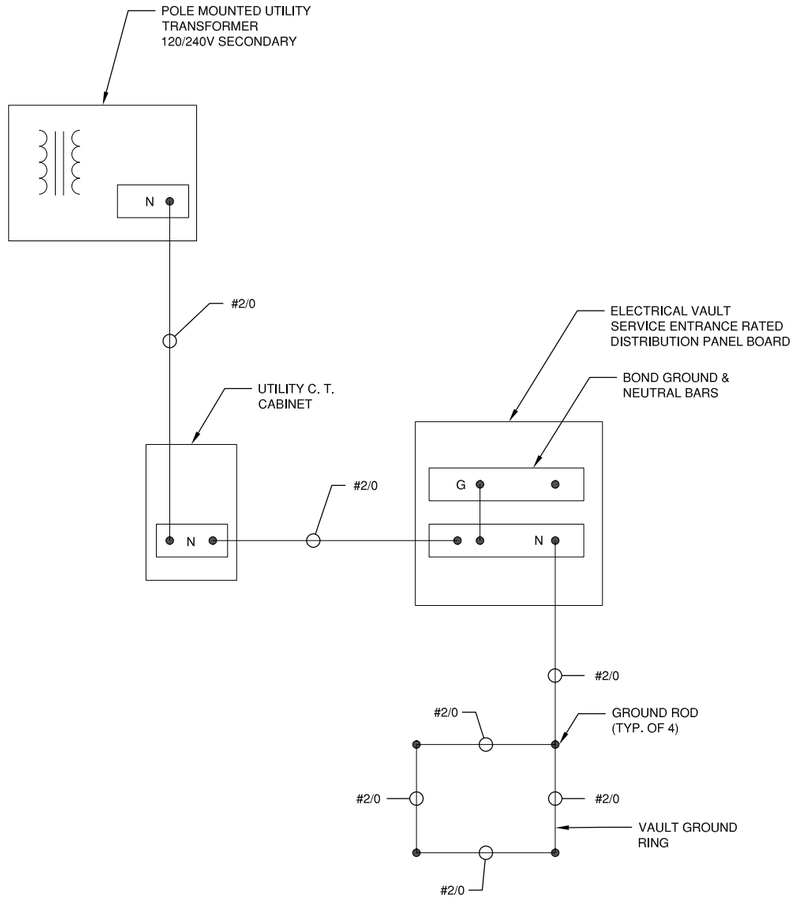
FREEPORT-ALBERTUS AIRPORT
FREEPORT, ILLINOIS
CONSTRUCTION OF NEW ELECTRICAL VAULT

ELECTRICAL VAULT DETAILS

CMT
CRAWFORD, MURPHY & TILLY, INC.
CONSULTING ENGINEERS
License No. 184-000613

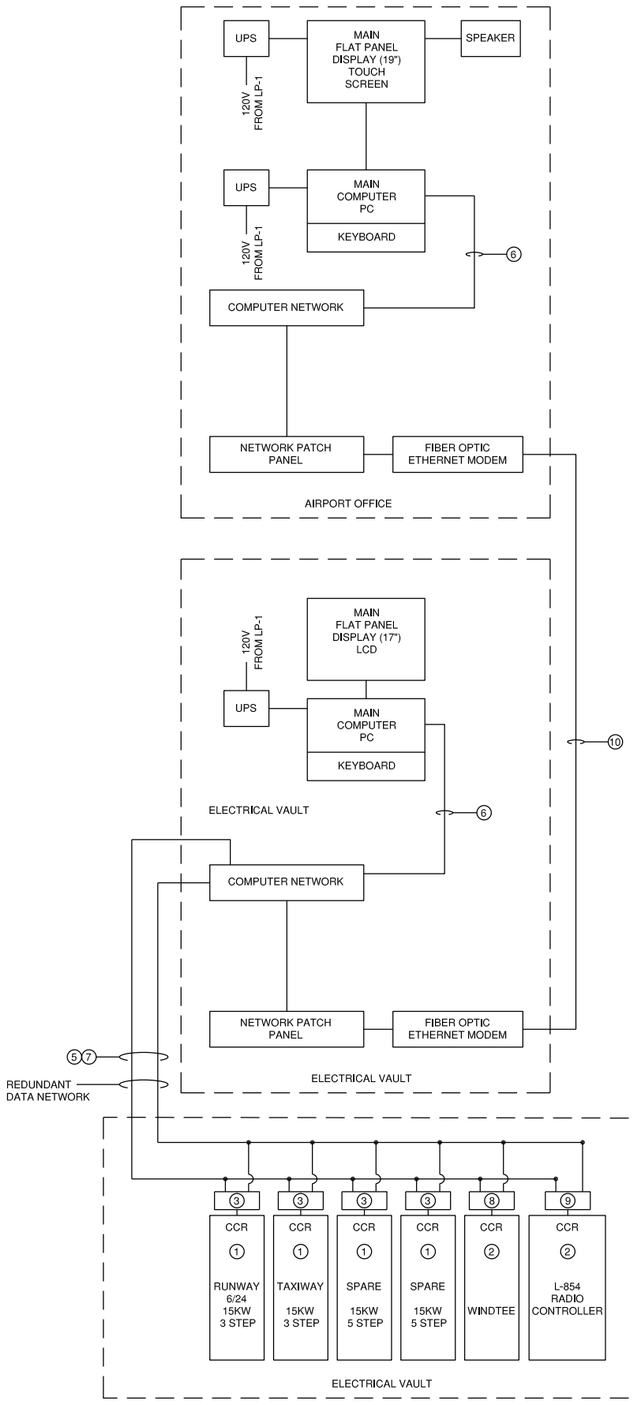
DESIGN BY:	CT
DRAWN BY:	CT
CHECKED BY:	AB
APPROVED BY:	AB
DATE:	4/20/2018
JOB No:	17294-03

SHEET 15 OF 16 SHEETS



SYSTEM BONDING AND EARTHING

NOT TO SCALE



AIRFIELD LIGHTING AND EQUIPMENT CONTROL DIAGRAM

NOT TO SCALE

NOTES

1. NEW AND RELOCATED CONSTANT CURRENT REGULATOR. ALCMS MANUFACTURER AND CONTRACTOR SHALL PROVIDE ALL REQUIRED CT'S AND INTERFACE MODULES FOR COMPLETE L-829 AND L-890 SYSTEM. RELOCATED REGULATORS ARE CROUSE-HINDS AND ADB.
2. PROVIDE ALL REQUIRED TRANSCEIVER AND INTERFACING PANEL FOR WIND TEE AND RADIO CONTROLLER CONTROL EQUIPMENT.
3. CONSTANT CURRENT REGULATOR CCR MICROPROCESSOR BASED CONTROL/MONITOR PANEL WITH REMOTE AND LOCAL CONTROL FOR CCR STATUS, DIMMING CONTROL AND CABLE INSULATION MONITOR.
4. COORDINATE ALL RADIO INTERFACING EQUIPMENT WITH OWNER. PROVIDE ALL NETWORK INTERFACING HARDWARE AND EQUIPMENT. INCLUDING SOFTWARE AND PROGRAMMING.
5. PROVIDE UPS POWER FOR DCME UNITS.
6. CAT 6 DATA LINE IN CONDUIT TYPICAL U.O.N. COORDINATE ALL WORK WITH ALCMS MANUFACTURER (CONSTANT CURRENT REGULATOR MANUFACTURER). PROVIDE ALL REQUIRED DATA CONNECTION LINKS.
7. 24 AWG. SHIELDED TWISTED PAIR WITH A COMMON, MEETING EIARS-485 APPLICATIONS (BELDEN 9842) OR AS REQUIRED BY ALCMS MANUFACTURER.
8. MICROPROCESSOR BASED CONTROL/MONITOR PANEL WITH REMOTE AND LOCAL CONTROL (DCME) FOR WIND TEE (6 CKTS).
9. MICROPROCESSOR BASED CONTROL/MONITOR PANEL WITH REMOTE AND LOCAL CONTROL (DCME) FOR L-854 RADIO CONTROLLER.
10. (1) 12 STRAND MULTI-MODE FIBER OPTIC CABLE. USE EACH STRAND FOR PRIMARY AND REDUNDANT COMMUNICATION BETWEEN VAULT AND AIRPORT TERMINAL BUILDING.

IL. CONTRACT: **FR041**
IL. LETTING ITEM: **5A**
IL. PROJECT: **FEP-4203**
S.B.G. PROJECT: **3-17-SBGP-120/133/139**

SURVEY BOOK #

REVISIONS		
NUMBER	BY	DATE

0 1 2
THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22).

FREEPORT-ALBERTUS AIRPORT
FREEPORT, ILLINOIS
CONSTRUCTION OF NEW ELECTRICAL VAULT

SYSTEM BONDING AND EARTHING DIAGRAM AND ALCMS BLOCK DIAGRAM

CMT
CRAWFORD, MURPHY & TILLY, INC.
CONSULTING ENGINEERS
License No. 184-000613

DESIGN BY:	CT
DRAWN BY:	CT
CHECKED BY:	AB
APPROVED BY:	AB
DATE:	4/20/2018
JOB No:	17294-03

SHEET 16 OF 16 SHEETS