

# CONSTRUCTION PLANS FOR MT. VERNON AIRPORT

## MT. VERNON, JEFFERSON COUNTY, ILLINOIS

### REHABILITATE TAXIWAYS "C" AND "D" INSTALL ELECTRICAL EQUIPMENT

#### SCOPE OF WORK

BASE BID: INCLUDES REHABILITATION OF TAXIWAYS "C" AND "D" BY MILLING AND REPLACEMENT OF THE BITUMINOUS SURFACE. ASSOCIATED WORK INCLUDES CLEANING AND SEALING OF CRACKS, BITUMINOUS CRACK REPAIR, REMOVAL AND REPLACEMENT OF BITUMINOUS PAVEMENT, MARKING, AND SHOULDER ADJUSTMENT. ADDITIONALLY GROUNDING IMPROVEMENTS WILL BE INSTALLED IN THE AIRPORTS ELECTRICAL VAULT.

ADDITIVE ALTERNATE NO. 1: INCLUDES THE INSTALLATION OF A LIGHTNING PROTECTION SYSTEM TO THE AIRPORT'S ELECTRICAL VAULT.

ADDITIVE ALTERNATE NO. 2: INCLUDES THE INSTALLATION OF ELECTRICAL EQUIPMENT TO FENCE GATES AND IN THE TERMINAL BUILDING, INCLUDING GROUNDING UPGRADES AND ADDITION OF SURGE PROTECTION.

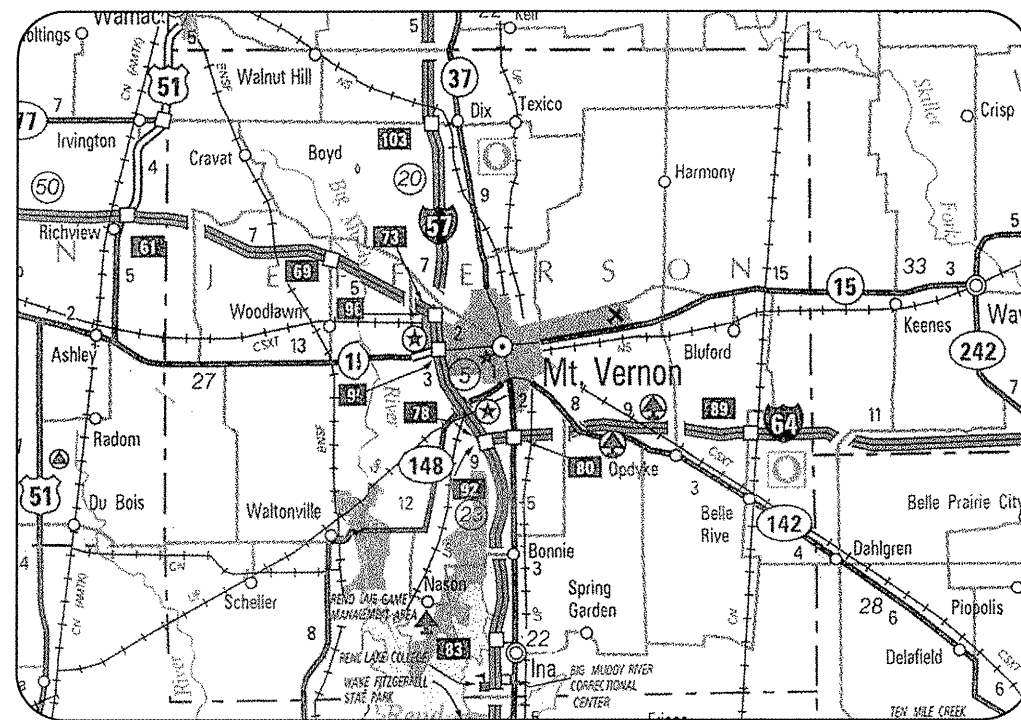
ADDITIVE ALTERNATE NO. 3: INCLUDES THE PLACEMENT OF ENHANCED TAXIWAY CENTERLINE MARKING ON THE AIRPORTS TAXIWAY PAVEMENTS.

ILL. PROJ.: MVN-3818  
A.I.P. PROJ.: 3-17-0074-B18  
LATITUDE: 38° 19' 24"  
LONGITUDE: 88° 51' 30"  
ELEVATION: 480.0' M.S.L.  
DATE: JUNE 27, 2008

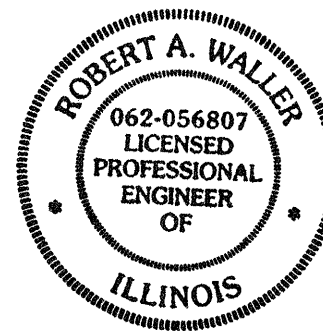
ADDITIVE ALTERNATE NO. 3: INCLUDES THE PLACEMENT OF ENHANCED TAXIWAY CENTERLINE MARKING ON THE AIRPORTS TAXIWAY PAVEMENTS.



LOCATION OF COUNTY



LOCATION



COVERING ELECTRICAL  
& LIGHTNING PROTECTION  
DESIGN

MT. VERNON AIRPORT AUTHORITY  
Approved: *[Signature]* CHAIRMAN  
Date: JUNE 25, 2008  
Approved: *[Signature]* SECRETARY  
Date: JUNE 25, 2008

**HANSON**  
Hanson Professional Services Inc.  
AIRPORT ENGINEER  
Submitted by: *[Signature]* ENG'R  
Date Submitted: 6/30/2008  
Lic. Exp. Date: 11/30/2009

**HANSON**  
Hanson Professional Services Inc.  
ELECTRICAL ENGINEER  
Submitted by: *[Signature]* ENG'R  
Date Submitted: 6/30/2008  
Lic. Exp. Date: 11/30/2009

DATE	REVISION

MT. VERNON AIRPORT  
**HANSON**  
MT. VERNON, ILLINOIS  
A.I.P. PROJ.: 3-17-0074-B18  
ILL. PROJ.: MVN-3818

FILENAME	SCALE	DATE	LAYOUT	DRAWN	REVIEWED
08A00030 R-001CVR.DWG	N/A	06/16/08	MLH	MLH	RAW

**HANSON**  
Hanson Professional Services Inc.  
1525 South Sixth Street  
Springfield, Illinois 62703-2886  
Offices Nationwide

REHABILITATE TAXIWAYS  
"C" AND "D"  
INSTALL ELECTRICAL  
EQUIPMENT

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I:\AIRPORTS\MV\VERNON\08A0003\DESIGN\CAD\SHEETS\R-001CVR.DWG - COVER



**SCOPE OF WORK**

BASE BID: INCLUDES REHABILITATION OF TAXIWAYS "C" AND "D" BY MILLING AND REPLACEMENT OF THE BITUMINOUS SURFACE. ASSOCIATED WORK INCLUDES CLEANING AND SEALING OF CRACKS, BITUMINOUS CRACK REPAIR, REMOVAL AND REPLACEMENT OF BITUMINOUS PAVEMENT, MARKING, AND SHOULDER ADJUSTMENT. ADDITIONALLY GROUNDING IMPROVEMENTS WILL BE INSTALLED IN THE AIRPORT'S ELECTRICAL VAULT.

ADDITIVE ALTERNATE NO. 1: INCLUDES THE INSTALLATION OF A LIGHTNING PROTECTION SYSTEM TO THE AIRPORT'S ELECTRICAL VAULT.

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ADDITIVE ALTERNATE NO. 3: INCLUDES THE PLACEMENT OF ENHANCED TAXIWAY CENTERLINE MARKING ON THE AIRPORTS TAXIWAY PAVEMENTS.

**HAUL ROUTE AND VEHICLE PARKING**

THE CONTRACTOR WILL USE THE EXISTING DESIGNATED PAVED/TURF HAUL ROUTE AND PARKING AREA AS SHOWN ON THIS SHEET. THE PROPOSED PARKING AREA WILL BE 150' X 200'. THE CONTRACTOR WILL BE REQUIRED TO 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. AT THE CONCLUSION OF THE PROJECT THE CONTRACTOR WILL GRADE, FERTILIZE, SEED AND MULCH ALL TURF AREAS DISTURBED OUTSIDE OF THE CONSTRUCTION LIMITS, INCLUDING AREAS WITHIN THE HAUL ROUTE OR EQUIPMENT PARKING AREA, TO RESTORE THEM TO THEIR ORIGINAL STATE IN ACCORDANCE TO ITEMS 901 AND 908, RESPECTIVELY. EXISTING PAVEMENTS WITHIN THE LIMITS OF THE HAUL ROUTE AND EQUIPMENT PARKING AREA SHALL ALSO BE REPAIRED TO THEIR ORIGINAL STATE. THE COST OF ALL REPAIRS, MAINTENANCE, AND RESTORATION OF THE HAUL ROUTE AND PARKING AREA WILL BE CONSIDERED INCIDENTAL TO THE PROJECT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED. SEE ITEM AR150540 - HAUL ROUTE IN THE SPECIAL PROVISIONS FOR ADDITIONAL CLARIFICATION.

**CONTRACTOR RESPONSIBILITIES**

THE CONTRACTOR'S EQUIPMENT PARKING AND STORAGE AREA WILL BE AS SHOWN ON THIS SHEET. 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 WILL BE REQUIRED TO LIMIT THE USE OF CONSTRUCTION EQUIPMENT ON ANY EXISTING PAVEMENTS. ONLY THAT EQUIPMENT NEEDED TO COMPLETE THE SPECIFIC WORK ON EXISTING PAVEMENTS WILL BE ALLOWED. NO EXCESSIVE TRAFFIC ACROSS THESE PAVEMENTS WILL BE PERMITTED. ANY DAMAGE TO THE EXISTING PAVEMENTS WILL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER AT NO ADDITIONAL COST TO THE CONTRACT.

THE CONTRACTOR SHALL KEEP RUNWAY 5-23 OPEN AT ALL TIMES OTHER THAN WHEN WORKING WITHIN 200' OF THE RUNWAY 5-23 CENTERLINE.

ALL WORK PERFORMED SHALL BE DONE IN A ORDERLY AND EFFECTIVE MANNER TO MINIMIZE ANY RUNWAY OR TAXIWAY CLOSURE.

**150-ENGINEER'S FIELD OFFICE NOTES**

THE PROPOSED ENGINEER'S FIELD OFFICE WILL BE FURNISHED, MAINTAINED, AND REMOVED IN ACCORDANCE WITH ITEM AR150510 "ENGINEER'S FIELD OFFICE" AS STATED ON PAGE 168 OF THE SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS, ADOPTED JULY 1, 2004.

THE LOCATION OF THE PROPOSED ENGINEER'S FIELD OFFICE WILL BE DETERMINED AT THE PRE-CONSTRUCTION MEETING.

THE ENGINEERING FIRM WILL MAKE PAYMENT FOR ALL LONG DISTANCE TELEPHONE CALLS IN EXCESS OF ONE HUNDRED DOLLARS (\$100.00) PER MONTH.

THE CONTRACTOR WILL FURNISH A CELL PHONE TO THE RESIDENT ENGINEER FOR HIS EXCLUSIVE USE FOR THE DURATION OF THIS PROJECT. THE RESIDENT ENGINEER WILL USE THIS PHONE FOR PROJECT BUSINESS ONLY. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL CHARGES ASSOCIATED WITH THIS CELL PHONE.

THE PROPOSED ENGINEER'S FIELD OFFICE WILL BE PAID FOR UNDER ITEMS: AR150510 ENGINEER'S FIELD OFFICE 1 L.S.

CRITICAL POINT DATA			
NO.	LATITUDE	LONGITUDE	ELEVATION
CP 1	38° 19' 36.85"	88° 51' 41.20"	±477'
CP 2	38° 19' 10.31"	88° 51' 21.76"	±458'
CP 3	38° 19' 25.35"	88° 51' 32.05"	±467'
CP 4	38° 19' 21.87"	88° 51' 29.51"	±465'

**FLAG PERSONS**

WHENEVER THE NE-SW (5-23) RUNWAY IS OPEN AND THE CONTRACTOR IS CONDUCTING CONTINUOUS HAULING OPERATIONS ON TAXIWAY A, B, C, OR D, AND/OR CROSSING RUNWAY 5-23, THE CONTRACTOR WILL FURNISH TWO FLAG PERSONS TO CONTROL THE VEHICLES CROSSING RUNWAY 5-23 AND UTILIZING TAXIWAY A AND B. ALL VEHICLES MUST COME TO A COMPLETE HALT PRIOR TO BEING DIRECTED ACROSS THE INTERSECTION, OR ONTO THE ACTIVE TAXIWAY, BY THE FLAG PERSONNEL. THE AIRPORT WILL PROVIDE ONE FLAGPERSON (3RD OF 3) TO ASSIST IN TRAFFIC MAINTENANCE.

RUNWAY 15-33 WILL BE CLOSED ANY TIME HAULING OPERATIONS REQUIRE CROSSING RUNWAY 15-33.

THE FLAG PERSONS WILL BE EQUIPPED WITH TWO-WAY RADIOS (CHANNEL 123.0 MHz.) FOR MONITORING THE AIRPORT RADIO FREQUENCY AND BE FAMILIAR WITH THEIR USE. EACH SHALL ALSO BE EQUIPPED WITH A SECOND TWO-WAY RADIO FOR COMMUNICATION BETWEEN FLAGGERS. THE CONTRACTOR SHALL PROVIDE HIS RADIOS FOR AIRCRAFT MONITORING. THE AIRPORT SHALL PROVIDE THEIR OWN. THE CONTRACTOR SHALL PROVIDE ALL THREE OF THE SECOND SET OF RADIOS TO ENSURE COMPATIBILITY OF EACH USED FOR INTER-FLAGPERSON COMMUNICATION. EACH SHALL HAVE A STOP AND GO SIGN. THE CONTRACTOR SHALL PROVIDE THE STOP AND GO SIGN TO EQUIP THE AIRPORT PROVIDED FLAGGER. EACH FLAGPERSON SHALL BE LOCATED AS SHOWN ON THIS SHEET. THE FLAGGER SHOWN AS "2 OF 3" SHALL BE UTILIZED ON TAXIWAY B DURING HAULING OF MILLINGS TO THE WASTE AREA, AND UTILIZED ON TAXIWAY A (IN THE AREA OF THE MAINTENANCE BUILDING) DURING TIMES OF ACTIVE HAULING WHICH ACCESSES THE AIRPORT VIA THE CONSTRUCTION ENTRANCE AND HAUL ROUTE.

**AIRPORT SECURITY NOTE**

AIRPORT SECURITY WILL BE MAINTAINED AT ALL TIMES. THE CONTRACTOR WILL CLOSE AND LOCK THE EXISTING GATE IN THE HAUL ROUTE AT THE END OF EACH WORKING DAY.

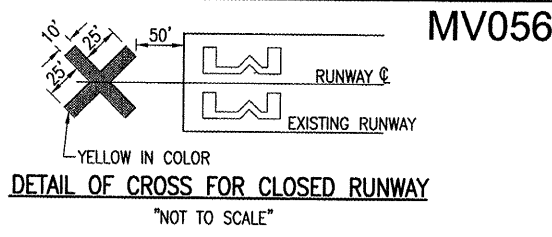
**HEIGHT OF CONSTRUCTION EQUIPMENT**

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

THE LOCATION, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND UTILITIES INDICATED ON THE PLANS IS NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. 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 ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY SUCH MAINS AND SERVICES SHALL BE RESTORED TO SERVICE AT ONCE AND PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT.

CALL J.U.L.I.E. FOR UTILITY INFORMATION AT 1-800-892-0123.

- LEGEND**
- EXISTING IMPROVEMENTS
  - PROPOSED IMPROVEMENTS
  - EXISTING BUILDINGS
  - PROPOSED HAUL ROUTE AND EQUIPMENT PARKING AREA
  - PROPOSED BARRICADES OR TRAFFIC CONES
  - FLAG
  - PROPOSED FLAGGER



**NOTE:**

COST OF CONSTRUCTING, PLACING, MAINTAINING AND REMOVING CROSSES WILL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED. 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 EACH DAY THE RUNWAY IS CLOSED AND REMOVED WHEN THE RUNWAY IS RE-OPENED. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE PLACEMENT AND REMOVAL OF THE CROSSES. NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

**PROPOSED SAFETY PLAN**

GENERAL - THE MT. VERNON AIRPORT IS COMPRISED OF TWO RUNWAYS. THE PROPOSED CONSTRUCTION WILL NECESSITATE CLOSING BOTH RUNWAYS AT VARIOUS TIMES. ANY TIME THE CONTRACTOR IS WORKING WITHIN 200' OF THE RUNWAY CENTERLINE OR 100' OF A TAXIWAY CENTERLINE, THE RUNWAY OR TAXIWAY WILL BE CLOSED. RUNWAY 15-33 SHALL BE CLOSED WHEN CONTINUOUS HAULING OPERATIONS THAT CROSS RUNWAY 15-33 ARE NECESSARY. WHEN CONSTRUCTION ACTIVITY REQUIRES THE CLOSURE OF RUNWAY 5-23 CONSTRUCTION TRAFFIC SHALL BE CONTROLLED THROUGH USE OF FLAG PERSONNEL STATIONED AS SHOWN. CLOSURE OF EITHER RUNWAY WILL BE ONLY DURING THE CONSTRUCTION DAY AND SHALL BE MINIMIZED AT ALL TIMES. THE CLOSURE OF EACH TAXIWAY ADJACENT TO THE WORK AREA WILL BE NECESSARY AT SOME TIME THROUGHOUT THE PROJECT. CLOSURE OF TAXIWAYS A AND B SHALL BE MINIMIZED THROUGH THE USE OF THE FLAGGERS SHOWN. TAXIWAYS C AND D WILL BE ALLOWED TO REMAIN CLOSED THROUGHOUT THE PROJECT. THE REMAINING TAXIWAYS SHALL NOT BE CLOSED OVERNIGHT, AND ALL LENGTHS OF CLOSURE SHALL BE MINIMIZED. ALL PAVEMENTS THAT ARE OPEN SHALL BE BROOMED CLEAN OF ALL DEBRIS WITHIN THE WORK AREA. ALL WORK INCLUDED IN OPENING AND CLOSING A RUNWAY OR TAXIWAY, INCLUDING BARRICADES, LABOR, OTHER NECESSARY ITEMS SHALL BE INCLUDED IN ITEM AR150540 - TRAFFIC MAINTENANCE, AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

TRAFFIC MAINTENANCE AND DEVICES NECESSARY TO COMPLETE THE WORK OF ADDITIVE ALTERNATE NO. 3 SHALL BE CONSIDERED INCIDENTAL TO ITEMS AU620520 AND AU620525, RESPECTIVELY. ALL WORK INCLUDED IN OPENING AND CLOSING A RUNWAY OR TAXIWAY TO COMPLETE THESE ITEMS, INCLUDING BARRICADES, TRAFFIC CONES, LABOR, AND OTHER NECESSARY ITEMS SHALL BE INCLUDED IN THESE ITEMS, AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

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.

RADIO CONTROL - THE CONTRACTOR WILL BE REQUIRED TO BE IN TWO-WAY RADIO CONTACT (123.00 MHz.) WITH THE AIRPORT UNICOM. THIS WILL KEEP THE CONTRACTOR IN CONSTANT CONTACT WITH THE MT. VERNON AIRPORT AND ENABLE THE AIRPORT TO IMMEDIATELY CONTACT THE CONTRACTOR IN CASE OF AN AERONAUTIC EMERGENCY THAT WOULD REQUIRE ACTION BY THE CONTRACTOR AND/OR HIS PERSONNEL.

**AIRCRAFT OPERATION LINE**

THE CONTRACTOR WILL LOCATE THIS LINE 200' PARALLEL FROM EACH RUNWAY CENTERLINE WITHIN THE PROJECT AREA AT THE START OF CONSTRUCTION AND WILL PLACE FLAGGED LATHE EVERY 150' ALONG IT. THIS LINE WILL REPRESENT THE LIMITS THAT ALL CONTRACTOR PERSONNEL MAY VENTURE WHEN A RUNWAY IS NOT CLOSED. THE CONTRACTOR WILL MAINTAIN THE LATHE LINE FOR RUNWAYS 5-23 AND 15-33 FOR THE DURATION OF THE PROJECT.

**BARRICADES AND TRAFFIC CONES**

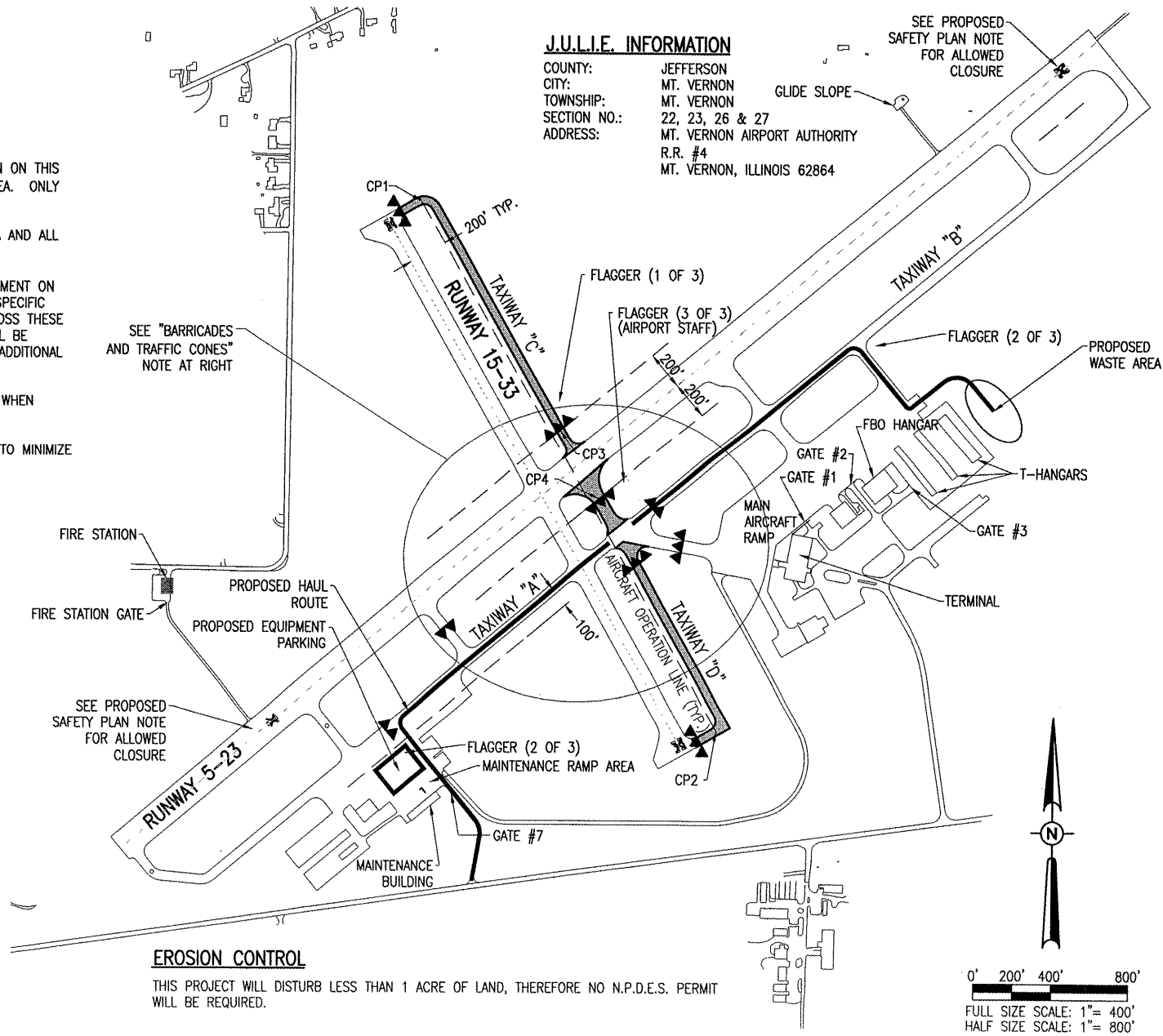
IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO PLACE AND MAINTAIN BARRICADES AND TRAFFIC CONES AS DIRECTED BY THE AIRPORT DIRECTOR. THE BARRICADES WILL BE EQUIPPED WITH RED FLASHING OR STEADY BURN LIGHTS AND 20" SQUARE ORANGE FLAGS. THE BARRICADES, THEIR MAINTENANCE, PLACEMENT AND REMOVAL WILL BE PAID FOR UNDER ITEM AR150540 - TRAFFIC MAINTENANCE, PER L.S., AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED. BARRICADES ARE DEPICTED FOR EACH POINT OF ANTICIPATED CLOSURE DUE TO THE ANTICIPATED CONSTRUCTION STAGING. THE NUMBER OF BARRICADES REQUIRED WILL VARY BY THE LOCATION OF THE WORK AND THE DEPICTION IS NOT INTENDED TO SUGGEST BARRICADES WILL BE LOCATED AT THE POINTS SHOWN THROUGHOUT THE PROJECT.

**UTILITY NOTE**

THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES AND AGENCIES WHICH HAVE LINES OR CONDUITS IN THE PROPOSED WORK AREA. ALL LINES AND CONDUITS SHALL BE LOCATED AND IDENTIFIED FOR DEPTH BEFORE ANY EXCAVATION BEGINS. THE CONTRACTOR SHALL CALL J.U.L.I.E. (1-800-892-0123) TO ACCOMPLISH THE ABOVE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO IDENTIFY ALL UNDERGROUND NON-JULIE UTILITIES LOCATED WITHIN THE PROPOSED CONSTRUCTION LIMITS. THESE UNDERGROUND IMPROVEMENTS WILL BE LOCATED AT THE CONTRACTOR'S OWN EXPENSE PRIOR TO THE START OF CONSTRUCTION ACTIVITIES.

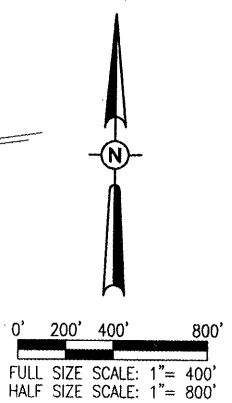
**J.U.L.I.E. INFORMATION**

COUNTY: JEFFERSON  
 CITY: MT. VERNON  
 TOWNSHIP: MT. VERNON  
 SECTION NO.: 22, 23, 26 & 27  
 ADDRESS: MT. VERNON AIRPORT AUTHORITY  
 R.R. #4  
 MT. VERNON, ILLINOIS 62864



**EROSION CONTROL**

THIS PROJECT WILL DISTURB LESS THAN 1 ACRE OF LAND, THEREFORE NO N.P.D.E.S. PERMIT WILL BE REQUIRED.



**MV056**

BY		REVISION		DATE	
<b>MT. VERNON, ILLINOIS</b>					
A.I.P. PROJ.: 3-17-0074-B18 I.L. PROJ.: MW-3818					
Hansen Project No. 08A0003D Filename R-003SFY.DWG Scale 1" = 400' Date 06/16/08		LAYOUT RAW 06/24/08 DRAWN RAW 06/24/08 REVIEWED CAH 06/25/08			
Hanson Professional Services Inc. 1525 South Sixth Street Springfield, Illinois 62703-2986 Offices Nationwide					
REHABILITATE TAXIWAYS "C" AND "D" INSTALL ELECTRICAL EQUIPMENT		PROPOSED SAFETY PLAN			
<b>3</b>					
3 of 30 sheets					

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 I:\AIRPORTS\MTVERNON\08A0003\DESIGN\CAD\SHEETS\R-003SFY.DWG - SAFETY PLAN





**CLEAN & SEAL BITUMINOUS CRACKS (AR201661)**

A PAVEMENT CONDITION AND CRACK SURVEY OF THE EXISTING TAXIWAY PAVEMENT WAS PERFORMED IN THE SPRING OF 2008, AND THE PLAN QUANTITY IS BASED UPON THE CONDITIONS PRESENT AT THE TIME OF THE SURVEY, AND THE ANTICIPATED CONDITIONS FOLLOWING THE MILLING OPERATIONS. THE EXACT AMOUNT OF CRACKS TO BE CLEANED AND SEALED WILL BE THE NUMBER OF LINEAR FEET OF CRACKS MARKED BY THE RESIDENT ENGINEER AT THE TIME OF CONSTRUCTION, AND FOLLOWING THE MILLING OPERATIONS.

ALL CRACKS DESIGNATED BY THE RESIDENT ENGINEER FOR CLEANING AND SEALING WILL BE DONE SO AS STATED IN THE SPECIAL PROVISIONS.

THIS ITEM OF WORK SHALL BE PAID FOR UNDER ITEM:  
AR201661 CLEAN & SEAL BITUMINOUS CRACKS - PER L.F.

**BITUMINOUS CRACK REPAIR (AR201660)**

SEE SHEET 7 FOR NOTES REGARDING THIS ITEM.

**REMOVE & REPLACE BIT. PAVEMENT (AR401910)**

ITEM AR401910 REMOVE AND REPLACE BITUMINOUS PAVEMENT WILL BE UTILIZED TO PERFORM LARGE CRACK REPAIR AND SHALL BE COMPLETED BEFORE THE EXISTING SURFACE IS MILLED.

THE QUANTITY OF CRACKS TO BE REPAIRED WAS ESTABLISHED BY THE COMPLETION OF A PAVEMENT CONDITION AND CRACK SURVEY PERFORMED IN THE SPRING OF 2008, AND CONSISTS OF THOSE CRACKS FOUND TO BE GREATER THAN ONE INCH IN WIDTH AT THE TIME OF THE SURVEY, AND EXHIBITING ROLLED EDGES. ALL CRACKS TO RECEIVE REPAIR SHALL BE LOCATED AND MARKED BY THE RESIDENT ENGINEER.

THE CRACKS SHALL BE REMOVED FROM THE PAVEMENT BY ONE OF TWO METHODS, OR A COMBINATION OF THE TWO. THE FIRST ALTERNATIVE IS TO SAWCUT THE WIDTH OF THE AREA TO BE REPAIRED BY USING A WHEEL SAW AND REMOVE THE PAVEMENT TO THE SPECIFIED DEPTH USING A BACKHOE OR OTHER MECHANICAL MEANS. THE SECOND ALTERNATIVE IS TO USE A SKID STEER (OR EQUIVALENT) MOUNTED MILLING HEAD TO REMOVE THE PAVEMENT TO THE REQUIRED DEPTH. REGARDLESS OF THE METHOD USED TO REMOVE THE PAVEMENT, THE EDGE OF THE TRENCH FORMED WILL HAVE A VERTICAL FACE PRIOR TO THE PLACEMENT OF THE BITUMINOUS MATERIAL. THE WIDTH OF REPAIR WILL BE 3' WIDE, CENTERED ON THE CRACK. THE DEPTH OF REPAIR WILL BE THE FULL DEPTH OF THE EXISTING PAVEMENT. SEE THE TYPICAL SECTIONS, SHEET 4, FOR THE EXISTING PAVEMENT DEPTHS (BASED ON RECORD AS-BUILT CONSTRUCTION PLANS).

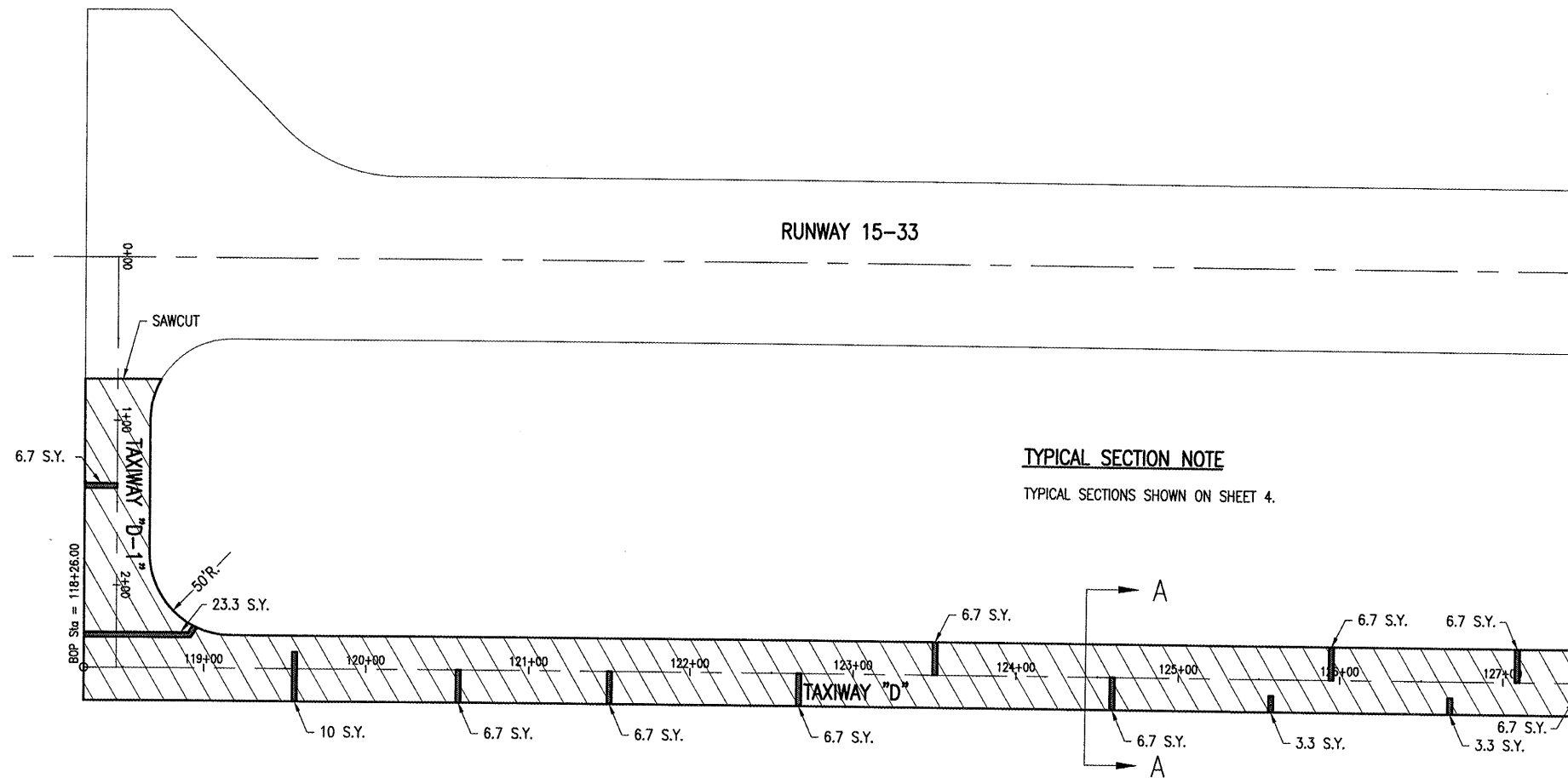
THE CONTRACTOR WILL DISPOSE OF THE EXCAVATED MATERIAL OFF THE AIRPORT SITE AT NO ADDITIONAL COST TO THE CONTRACT.

THE BOTTOM OF THE TRENCH WILL BE CLEANED AND COMPACTED TO PREVENT FUTURE SETTLEMENT, AND ACCEPTED BY THE RESIDENT ENGINEER. ONCE THE TRENCH IS CLEANED, THE BASE AGGREGATE COMPACTED, AND ACCEPTED, AN APPLICATION OF BITUMINOUS TACK MATERIAL WILL BE APPLIED TO THE VERTICAL BITUMINOUS FACE AND THE AGGREGATE BASE. THE REPAIR TRENCH WILL BE BACKFILLED WITH BITUMINOUS SURFACE COURSE MATERIAL (401), IN LIFTS NOT TO EXCEED 3 INCHES IN DEPTH. THE FINAL LIFT SHALL BE FLUSH WITH THE SURFACE OF THE EXISTING BITUMINOUS PAVEMENT. EACH LIFT SHALL BE COMPACTED AND ACCEPTED BY THE RESIDENT ENGINEER.

ANY DAMAGE TO THE EXISTING ADJACENT PAVEMENT WILL BE REPAIRED BY THE CONTRACTOR AT HIS EXPENSE. THE QUANTITY OF PAVEMENT REMOVAL, MILLING AND/OR SAWCUTS, IF UTILIZED, TACK MATERIAL, AND BITUMINOUS SURFACE COURSE MATERIAL (401) NECESSARY TO COMPLETE THIS TASK WILL BE CONSIDERED INCIDENTAL TO THE TASK, AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

THE QUANTITY OF BITUMINOUS CRACK REPAIR TO BE PAID FOR SHALL BE THE NUMBER OF SQUARE YARDS OF PAVEMENT REMOVED AND REPLACED, IN ACCORDANCE WITH THE SPECIAL PROVISIONS, CONSTRUCTION DRAWINGS, AND ACCEPTED BY THE ENGINEER.

THIS ITEM OF WORK SHALL BE PAID FOR UNDER ITEM:  
AR401910 REMOVE AND REPLACE BITUMINOUS PAVEMENT - PER S.Y.



**TYPICAL SECTION NOTE**

TYPICAL SECTIONS SHOWN ON SHEET 4.

**BITUMINOUS PAVEMENT MILLING (AR401650)**

THE AREAS DESIGNATED AS [Hatched Pattern] ON THIS SHEET SHALL BE REMOVED USING A ROTO-MILLING EQUIPMENT. THE TOLERANCE OF THE MILLING WILL BE AS STATED IN THE STANDARD SPECIFICATIONS.

IF A SQUARE STRAIGHT EDGE IS NOT OBTAINED FROM THE MILLING OPERATIONS, THE EXISTING PAVEMENT WILL BE SAWED AS SHOWN ON THIS SHEET. SAWING WILL BE CONSIDERED AS AN INCIDENTAL ITEM TO THE PROPOSED PAVEMENT MILLING AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

ALL MILLED MATERIAL WILL BE DISPOSED OF ON THE AIRPORT SITE. SEE SHEET 3, PROPOSED SAFETY PLAN, FOR LOCATION OF WASTE AREA.

PRIOR TO APPLYING THE BITUMINOUS OVERLAY ALL MILLED MATERIAL WILL BE BROOMED AND BLOWN CLEAN AND A BITUMINOUS TACK COAT APPLIED. THE VERTICAL FACE OF ALL SAW CUTS WILL BE PAINTED WITH A LIQUID ASPHALT.

ANY ADJACENT PAVEMENT DAMAGED BY THE MILLING OPERATIONS WILL BE REPAIRED AT THE CONTRACTOR'S OWN EXPENSE.

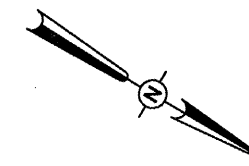
ALL BITUMINOUS PAVEMENT MILLING AREAS WILL BE LOCATED AND MARKED BY THE RESIDENT ENGINEER.

ALL WORK PROPOSED WITHIN ITEM AR401910 REMOVE & REPLACE BIT. PAVEMENT SHALL BE ACCOMPLISHED BEFORE ANY MILLING OPERATIONS ARE CONDUCTED.

THIS ITEM OF WORK SHALL BE PAID FOR UNDER ITEM:  
AR401650 BITUMINOUS PAVEMENT MILLING - PER S.Y.

**LEGEND**

- [Solid Line] EXISTING PAVEMENT
- [Hatched Pattern] PROPOSED REMOVE & REPLACE BIT. PAVEMENT
- [Dotted Pattern] PROPOSED MILLING



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

DATE	REVISION	BY

MT. VERNON AIRPORT  
  
 MT. VERNON, ILLINOIS  
 A.I.P. PROJ.: 3-17-0074-B18  
 IL PROJ.: MW-3818

Revision No. 08A0003D	02/15/08
Filename R-111PRP.DWG	02/26/08
Scale 1" = 50'	06/24/08
Date 08/18/08	
LAYOUT	MLH
DRAWN	MLH
REVIEWED	RAW

**HANSON**  
  
 Hanson Professional Services, Inc.  
 1525 South Sixth Street  
 Springfield, Illinois 62703-2886  
 Offices Nationwide

REHABILITATE TAXIWAYS  
 "C" AND "D"  
 INSTALL ELECTRICAL  
 EQUIPMENT  
 PROPOSED PAVEMENT  
 PREPARATION PLAN  
 STA. 118+26 TO STA. 127+50

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**PAVEMENT MARKING-WATERBORNE (AR620520) AND PAVEMENT MARKING-BLACK BORDER (AR620525)**

BASE BID MARKING QUANTITIES SHALL ONLY INCLUDE THE TAXIWAY CENTERLINE AND HOLDING LINE MARKINGS AFFECTED BY THE PROPOSED PAVEMENT RECONSTRUCTION. THE REMAINDER OF THE MARKING, WHICH CONSISTS OF ENHANCED TAXIWAY CENTERLINE MARKING, SHALL BE INCLUDED IN ADDITIVE ALTERNATE NO. 3, AND SHALL BE BID AND PAID FOR SEPARATELY.

THE PAVEMENT MARKING-WATERBORNE (620) SHALL BE PLACED IN ACCORDANCE WITH ITEM 620 "PAVEMENT MARKING" AS STATED ON PAGE 77 OF THE SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS, ADOPTED JULY 1, 2004.

ANY MATERIAL DELIVERED THAT FAILS TO MEET THE SPECIFICATIONS SHALL BE DISPOSED OF BY THE CONTRACTOR AND IMMEDIATELY REPLACED WITH ACCEPTABLE MATERIAL ENTIRELY AT THE CONTRACTOR'S EXPENSE, INCLUDING HANDLING AND TRANSPORTATION CHARGES.

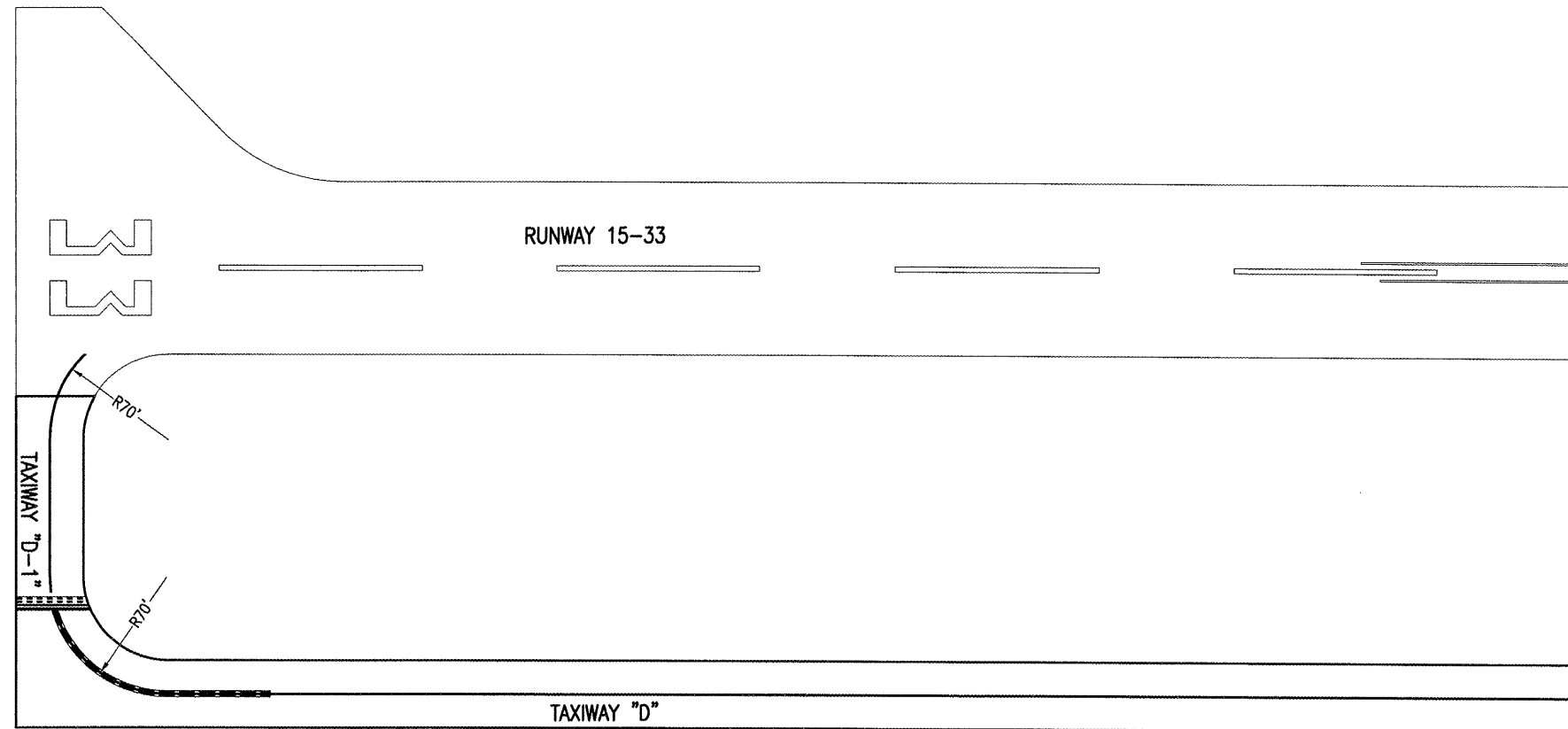
RUNWAY MARKING SHALL BE WHITE IN COLOR, SOLID AND BE 3 FOOT IN WIDTH. TAXIWAY CENTERLINE MARKING SHALL BE SOLID AND YELLOW IN COLOR AND BE 1 FOOT IN WIDTH. THE HOLDING POSITION MARKINGS WILL BE AS SPECIFIED IN THE DETAILS SHOWN ON SHEET 13.

ALL PROPOSED MARKING WILL BE COMPLETED IN ACCORDANCE WITH THE DETAILS SHOWN ON THE CONSTRUCTION PLANS.

THE PROPOSED PAVEMENT MARKING WILL BE APPLIED IN TWO APPLICATIONS. ALL YELLOW & WHITE PROPOSED MARKING WILL HAVE A REFLECTIVE MEDIA APPLIED IN ACCORDANCE WITH THE SPECIFICATIONS. GLASS BEADS SHALL BE REQUIRED IN THE SECOND APPLICATION ONLY. BLACK BORDER WILL NOT REQUIRE REFLECTIVE MEDIA.

CUT-OFF SHEETS WILL BE REQUIRED TO INSURE STRAIGHT EDGES.

PROPOSED MARKING ITEMS WILL BE PAID FOR AS FOLLOWS:  
AR620520 PAVEMENT MARKING-WATERBORNE - PER S.F.  
AR620525 PAVEMENT MARKING-BLACK BORDER - PER S.F.



**PAVEMENT MARKING-WATERBORNE (AU620520) AND PAVEMENT MARKING-BLACK BORDER (AU620525)**

ADDITIVE ALTERNATE NO. 3 MARKING QUANTITIES SHALL ONLY INCLUDE THE ENHANCED TAXIWAY CENTERLINE MARKING SHOWN ON SHEETS 11 THROUGH 15.

THE ENHANCED TAXIWAY MARKING WILL BE CONSTRUCTED TO THE DIMENSIONS AND COLORS AS SHOWN ON THE ENHANCED TAXIWAY MARKING DETAILS AS SHOWN ON SHEETS 13, 14, AND 15. MARKING ITEMS SHALL INCLUDE CENTERLINES (IN AREAS OUTSIDE OF THE AREAS AFFECTED BY THE PAVING), DASHES, AND THE BLACK BORDER.

THE ENHANCED TAXIWAY CENTERLINE MARKING SHALL BE INCLUDED IN ADDITIVE ALTERNATE NO. 3 ONLY, AND SHALL BE BID AND PAID FOR SEPARATELY.

THE PAVEMENT MARKING-WATERBORNE (620) SHALL BE PLACED IN ACCORDANCE WITH ITEM 620 "PAVEMENT MARKING" AS STATED ON PAGE 77 OF THE SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS, ADOPTED JULY 1, 2004.

ANY MATERIAL DELIVERED THAT FAILS TO MEET THE SPECIFICATIONS SHALL BE DISPOSED OF BY THE CONTRACTOR AND IMMEDIATELY REPLACED WITH ACCEPTABLE MATERIAL ENTIRELY AT THE CONTRACTOR'S EXPENSE, INCLUDING HANDLING AND TRANSPORTATION CHARGES.

THE ENHANCED TAXIWAY MARKING WILL START AT THE EDGE OF THE ASSOCIATED HOLDING LINE BLACK BORDER. THE ENHANCED MARKING WILL EXTEND FOR 150' FROM THIS POINT.

IN THE CASE WHERE THE TAXIWAY CENTERLINE FOLLOWS A RADIUS, THE ENHANCED MARKING WILL FOLLOW THE RADIUS AS SHOWN ON THE CORRESPONDING DETAILS. THE 150' LENGTH WILL BE MEASURED ALONG THE CENTER OF THE TAXIWAY CENTER LINE AND WILL EXTEND FOR AN OVERALL LENGTH OF 150'

IF THE ENHANCED TAXIWAY CENTERLINE CONTINUES THROUGH A TAXIWAY INTERSECTION THAT IS LOCATED WITHIN 150' OF A RUNWAY HOLD POSITION MARKING, THE TAXIWAY CENTERLINE ENHANCEMENT MUST BE TERMINATED 5' PRIOR TO THE POINT WHERE THE INTERSECTING TAXIWAY CENTERLINE CROSSES THE ENHANCED TAXIWAY CENTERLINE.

THE PROPOSED ENHANCED TAXIWAY CENTERLINE PAVEMENT MARKING WILL BE APPLIED IN TWO APPLICATIONS. ALL YELLOW PROPOSED MARKING WILL HAVE A REFLECTIVE MEDIA APPLIED IN ACCORDANCE WITH THE SPECIFICATIONS. GLASS BEADS SHALL BE REQUIRED IN THE SECOND APPLICATION ONLY. BLACK BORDER WILL NOT REQUIRE REFLECTIVE MEDIA.

CUT-OFF SHEETS WILL BE REQUIRED TO INSURE STRAIGHT EDGES.

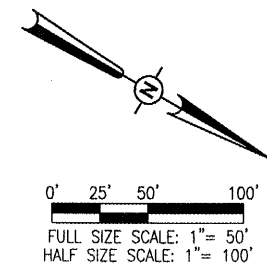
PROPOSED MARKING ITEMS WILL BE PAID FOR AS FOLLOWS:  
AU620520 PAVEMENT MARKING-WATERBORNE - PER S.F.  
AU620525 PAVEMENT MARKING-BLACK BORDER - PER S.F.

BASE BID - MARKING QUANTITIES				
ITEM NO.	DESCRIPTION	UNIT	QUANTITY	AS BUILT QUANTITY
AR620520	PAVEMENT MARKING - WATERBORNE	S.F.	6,259	
AR620525	PAVEMENT MARKING - BLACK BORDER	S.F.	938	

BID ALTERNATE NO. 3 - MARKING QUANTITIES				
ITEM NO.	DESCRIPTION	UNIT	QUANTITY	AS BUILT QUANTITY
AU620520	PAVEMENT MARKING - WATERBORNE	S.F.	3,379	
AU620525	PAVEMENT MARKING - BLACK BORDER	S.F.	4,059	

WORK SHOWN ON THIS SHEET INCLUDES ITEMS FOR BOTH THE BASE BID AND ADDITIVE ALTERNATE NO. 3.

- LEGEND**
- EXISTING PAVEMENT
  - PROPOSED PAVEMENT
  - EXISTING PAVEMENT MARKING
  - PROPOSED PAVEMENT MARKING



DATE	REVISION	BY

MT. VERNON AIRPORT  
  
 MT. VERNON, ILLINOIS  
 I.L. PROJ.: MVN-3818 A.I.P. PROJ.: 3-17-0074-B18

Hanson Project No. 08A0003D	MLH	02/15/08
Filename: R-151MRK.DWG	MLH	02/26/08
Scale: 1" = 50'	RAW	05/24/08
Date: 08/18/08		
LAYOUT		
DRAWN		
REVIEWED		

**HANSON**  
  
 Hanson Professional Services Inc.  
 1025 South State Street  
 Springfield, IL 62766  
 Offices Nationwide

REHABILITATE TAXIWAYS "C" AND "D"  
 INSTALL ELECTRICAL EQUIPMENT  
 PROPOSED PAVEMENT MARKING PLAN  
 STA. 118+26 TO STA. 127+50

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

	NORMALLY OPEN (N.O.) CONTACT
	NORMALLY CLOSED (N.C.) CONTACT
	STARTER COIL, * = STARTER NUMBER
	OVERLOAD RELAY CONTACT
	CONTROL RELAY, * = CONTROL RELAY NUMBER
	RELAY, * = RELAY NUMBER
	TOGGLE SWITCH / 2 POSITION SWITCH
	2-POSITION SELECTOR SWITCH
	3-POSITION SELECTOR SWITCH (H-O-A SHOWN)
	2 POLE DISCONNECT SWITCH
	3 POLE DISCONNECT SWITCH
	PHOTOCELL
	TERMINAL BLOCK, * = TERMINAL NUMBER
	DEVICE TERMINAL, * = DEVICE TERMINAL NUMBER
	INTERNAL PANEL WIRING
	FIELD WIRING
	FUSE
	GROUND BUS OR TERMINAL
	NEUTRAL BUS
	GROUND, GROUND ROD, GROUND BUS
	INDUSTRIAL CONTROL RELAY OR LIGHTING CONTACTOR
	S1 CUTOUT HANDLE REMOVED
	S1 CUTOUT HANDLE INSERTED
	N.O. THERMAL SWITCH
	N.C. THERMAL SWITCH
	L-830 SERIES ISOLATION TRANSFORMER

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

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

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

	CONDUIT (EXPOSED)
	CONDUIT OR UNIT DUCT (CONCEALED OR BURIED)
	POLE OR CONDUIT MOUNTED LIGHT FIXTURE
	WALL OR CEILING MTD. JUNCTION BOX. CONFIGURATION VARIES WITH USE
	SINGLE THROW DISCONNECT SWITCH
	ENCLOSED CIRCUIT BREAKER
	DOUBLE THROW SAFETY SWITCH, MANUAL TRANSFER SWITCH
	CONTROL PANEL
	TRANSFORMER
	ELECTRIC UTILITY METER
	ENCLOSURE
	CIRCUIT BREAKER PANEL-SEE SCHEDULES
	GROUND ROD
	#12 AWG TWIN COPPER UNLESS NOTED OTHERWISE. LONG SLASHES INDICATE NEUTRAL. SHORT SLASHES INDICATE HOT OR SWITCHED LEG. SLASHES WITH DOT INDICATE SEPARATE GROUND WIRE.
	HOMERUN TO PANEL. PNL A INDICATES PANEL. 1,3,5 INDICATES CIRCUIT NUMBERS
	PHOTO-ELECTRIC CELL

NOTES:

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

120/240 VAC, 1 PHASE, 3 WIRE  
 PHASE A BLACK  
 PHASE B RED  
 NEUTRAL WHITE  
 GROUND GREEN

120/208 VAC, 1 PHASE, 3 WIRE  
 PHASE A BLACK  
 PHASE B RED  
 NEUTRAL WHITE  
 GROUND GREEN

208/120 VAC, 3 PHASE, 4 WIRE  
 PHASE A BLACK  
 PHASE B RED  
 PHASE C BLUE  
 NEUTRAL WHITE  
 GROUND GREEN

INFORMATION SHOWN ON THIS SHEET IS FOR BASE BID, ADDITIVE ALTERNATE NO. 1 & ADDITIVE ALTERNATE NO. 2.

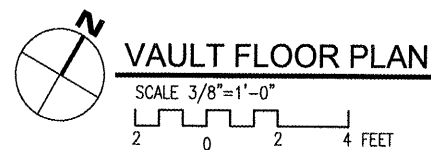
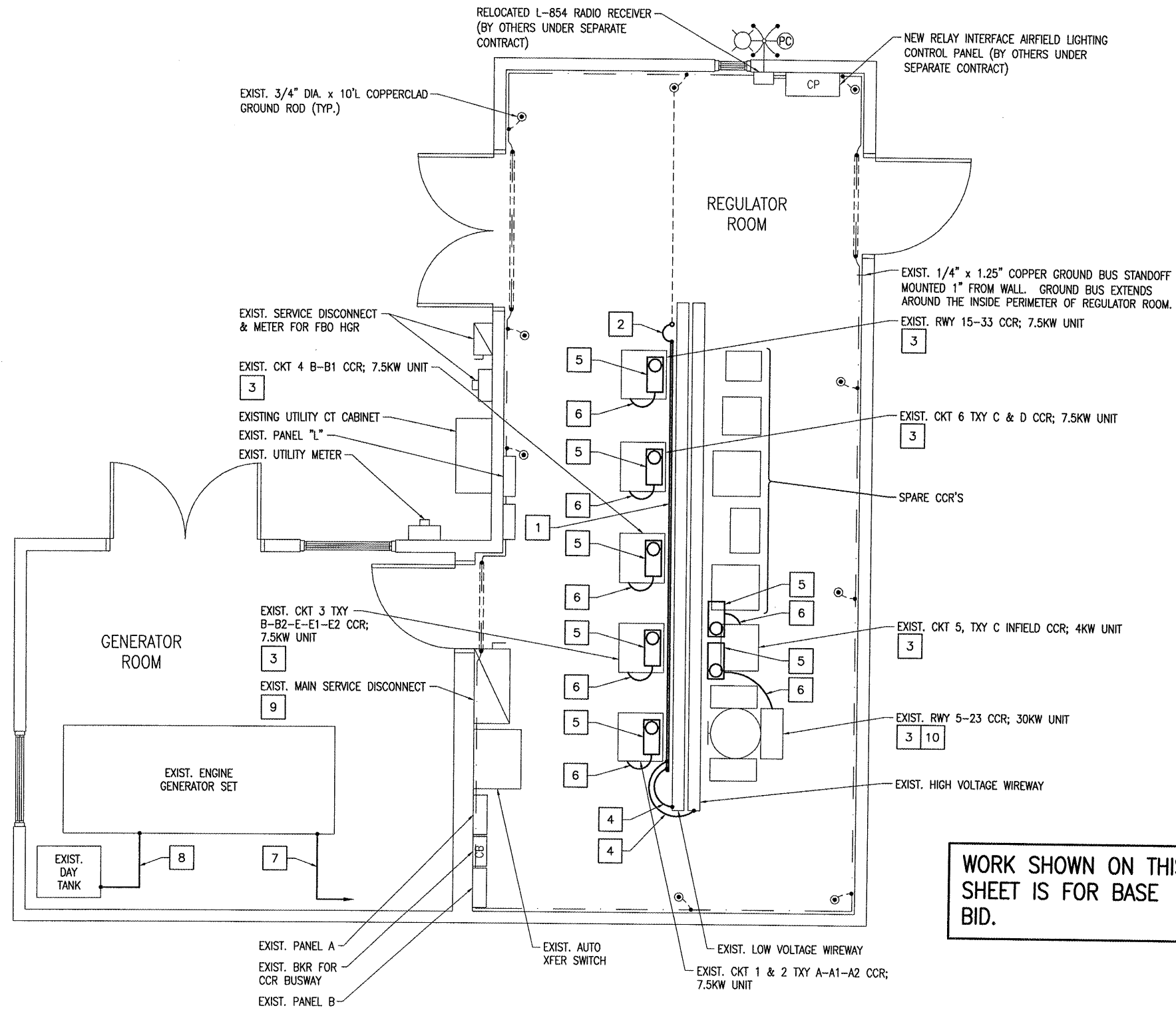
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REHABILITATE TAXIWAYS "C" AND "D" INSTALL ELECTRICAL EQUIPMENT ELECTRICAL LEGEND AND ABBREVIATIONS	DATE	REVISION	BY
	DATE	REVISION	BY
<p><b>HANSON</b>                  Hanson Professional Services Inc.                  1525 South Sixth Street                  Springfield, Illinois 62703-2886                  Offices Nationwide</p>			
Project No. 08A0003D Estimate E-001.DWG Scale NONE Date 06/18/08		LAYOUT KNL 02/05/08 DRAWN MV 02/05/08 REVIEWED CAH 06/11/08	
MT. VERNON AIRPORT  MT. VERNON, ILLINOIS A.I.P. PROJ.: 3-17-0074-B18 I.L. PROJ.: MW-3818			
16 16 of 30 sheets			



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MV056



THE LOCATION, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND UTILITIES INDICATED ON THE PLANS IS NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. 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 ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY SUCH MAINS AND SERVICES SHALL BE RESTORED TO SERVICE AT ONCE AND PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT.

CALL J.U.L.I.E. FOR UTILITY INFORMATION AT 1-800-892-0123.

**WORK SHOWN ON THIS SHEET IS FOR BASE BID.**

**NOTES**

- ALL VAULT WORK AND/OR POWER OUTAGES SHALL BE COORDINATED WITH THE AIRPORT DIRECTOR AND AIRPORT MAINTENANCE STAFF.
- ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN CONFORMANCE WITH NFPA 70 (NEC) MOST CURRENT ISSUE IN FORCE, THE RESPECTIVE EQUIPMENT MANUFACTURER'S DIRECTIONS AND ALL OTHER APPLICABLE LOCAL CODES, LAWS, ORDINANCES AND REQUIREMENTS IN FORCE. ANY INSTALLATIONS WHICH VOID THE UL LISTING, ETL LISTING, OR OTHER THIRD PARTY LISTING AND/OR THE MANUFACTURER'S WARRANTY OF A DEVICE WILL NOT BE PERMITTED.
- SEE "CCR GROUND BUS RISER AND GROUNDING DETAILS" SHEET FOR ADDITIONAL INFO ON THE NEW GROUND BAR FOR CCR'S.
- SEE HIGH VOLTAGE WIRING SCHEMATICS FOR REQUIREMENTS ON CUTOUT WIRING.
- HIGH VOLTAGE & LOW VOLTAGE CIRCUITS SHALL NOT BE INSTALLED IN THE SAME RACEWAY.
- LIQUID TIGHT FLEXIBLE METAL CONDUIT AND ASSOCIATED FITTINGS SHALL BE UL LISTED TO MEET THE REQUIREMENTS OF NEC 350.6, SUITABLE FOR GROUNDING AND SUNLIGHT RESISTANT. LIQUID TIGHT FLEXIBLE METAL CONDUIT THAT IS USED FOR FLEXIBILITY (INCLUDING CONNECTIONS TO CCR'S & TRANSFORMERS) SHALL REQUIRE AN EXTERNAL BONDING JUMPER OR INTERNAL EQUIPMENT GROUNDING CONDUCTOR PER NEC 350.60. INTERNAL EQUIPMENT GROUND WIRES FOR CCR SERIES CIRCUITS SHALL BE #8 AWG COPPER (MINIMUM). EXTERNAL BONDING JUMPERS USED WITH CCR INSTALLATIONS SHALL BE #6 AWG COPPER (MINIMUM). DO NOT INSTALL LIQUID TIGHT FLEXIBLE METAL CONDUIT THAT IS NOT UL LISTED.
- ALL CONNECTIONS TO GROUND BUS BAR SHALL BE WITH 2 HOLE TONGUE LONG BARREL COMPRESSION LUGS BOLTED TO THE BUS BAR.
- GROUND WIRE CONNECTIONS TO EQUIPMENT SHALL BE WITH 2 HOLE TONGUE LONG BARREL COMPRESSION LUGS BOLTED TO THE DEVICE OR WITH THE RESPECTIVE EQUIP MANUFACTURER'S LUG OR TERMINAL WHERE APPLICABLE.
- GROUNDING ELECTRODE CONDUCTORS, BONDING JUMPERS, & INDIVIDUAL GROUND WIRES SHALL NOT BE INSTALLED IN METAL CONDUIT.
- ALL CONNECTIONS SHALL BE COATED WITH A CORROSION PREVENTATIVE COMPOUND (SANCHEM NO-OX-ID "A-SPECIAL", OR EQUAL) BEFORE JOINING. ALL COPPER BUS BARS SHALL BE CLEANED PRIOR TO MAKING CONNECTION TO REMOVE SURFACE OXIDATION. CLEAN SURFACES, OF RESPECTIVE DEVICES TO BE BONDED, TO BARE METAL, PER NEC 250-12.

**KEYED NOTES**

- NEW GROUND BAR FOR CCR'S; 1/4" THICK BY 2" WIDE BY 17'-10" LONG COPPER BUS BAR WITH STANDOFF INSULATORS AND MOUNTING HARDWARE. NEW GROUND BAR SHALL REPLACE EXISTING 1/4" THICK BY 1.25" WIDE GROUND BAR AT CCR'S. MOUNT TO EXISTING STRUT SUPPORT STRUCTURE. SEE NOTE 3.
- CONNECT EXISTING #1/0 GROUNDING ELECTRODE CONDUCTOR TO NEW GROUND BAR.
- BOND EACH CCR FRAME TO NEW GROUND BAR WITH #6 AWG (MIN.) STRANDED COPPER CONDUCTOR. SEE NOTE 3.
- BOND HIGH VOLTAGE & LOW VOLTAGE WIREWAYS TO NEW GROUND BAR WITH #6 AWG (MIN.) STRANDED COPPER CONDUCTOR. ALSO BOND STRUT SUPPORT RACK TO NEW GROUND BAR WITH #6 AWG (MIN.) STRANDED COPPER CONDUCTOR.
- BOND EACH CUTOUT ENCLOSURE TO NEW GROUND BAR WITH #6 AWG (MIN.) STRANDED COPPER CONDUCTOR. FURNISH AND INSTALL AN L-861 LIGHT FIXTURE, ON EACH CUTOUT CABINET, FOR GROUND FAULT INDICATION. SEE NOTES 3 & 4.
- REPLACE EXISTING 3/4" LTFMC BETWEEN EACH CCR AND CUTOUT ENCLOSURE WITH 1" LTFMC. REINSTALL EXISTING 5000V SERIES CIRCUIT CONDUCTORS BETWEEN CCR & CUTOUT. INCLUDE #8 EQUIPT. GND WITH SERIES CIRCUIT CONDUCTORS FROM CCR TO CUTOUT ENCLOSURE. SEE NOTE 6.
- #1/0 AWG COPPER BONDING JUMPER FROM ENGINE GENERATOR FRAME TO GROUND BUS IN REGULATOR ROOM. PROVIDE 3/4" SCHED 40 PVC FOR SUPPORT OF GROUND CONDUCTOR AND AT WALL PENETRATION. CORE DRILL WALL BETWEEN ENGINE ROOM AND REGULATOR ROOM. SEAL WALL SLEEVE WITH DUCT SEAL.
- #6 AWG COPPER FROM DAY TANK FRAME/SUPPORT TO ENGINE GENERATOR FRAME.
- REPLACE THE EXISTING 1000 AMP FUSES IN THE SERVICE DISCONNECT WITH 3-800 AMP, CLASS L LOW PEAK TIME-DELAY, 600V FUSES, BUSSMANN CAT. NO KRP-C-800SP, OR APPROVED EQUAL. PROVIDE ONE SPARE FUSE OF SAME TYPE, SIZE, AND MANUFACTURER. EXISTING FUSES SHALL BE TURNED OVER TO THE AIRPORT.
- FURNISH & INSTALL AN AC POWER SURGE ARRESTER AT THE INCOMING POWER TERMINALS OF THE RWY 5-23 CCR. SURGE ARRESTER SHALL BE SUITABLE FOR 208VAC, 3 PHASE WITH GND, WITH 45KA MAX SINGLE PULSE RATING, 8/20 MICROSECOND PER LINE, LIGHTNING PROTECTION CORP MODEL LPC 11765U-13 OR APPROVED EQUAL.

DATE	REVISION	BY

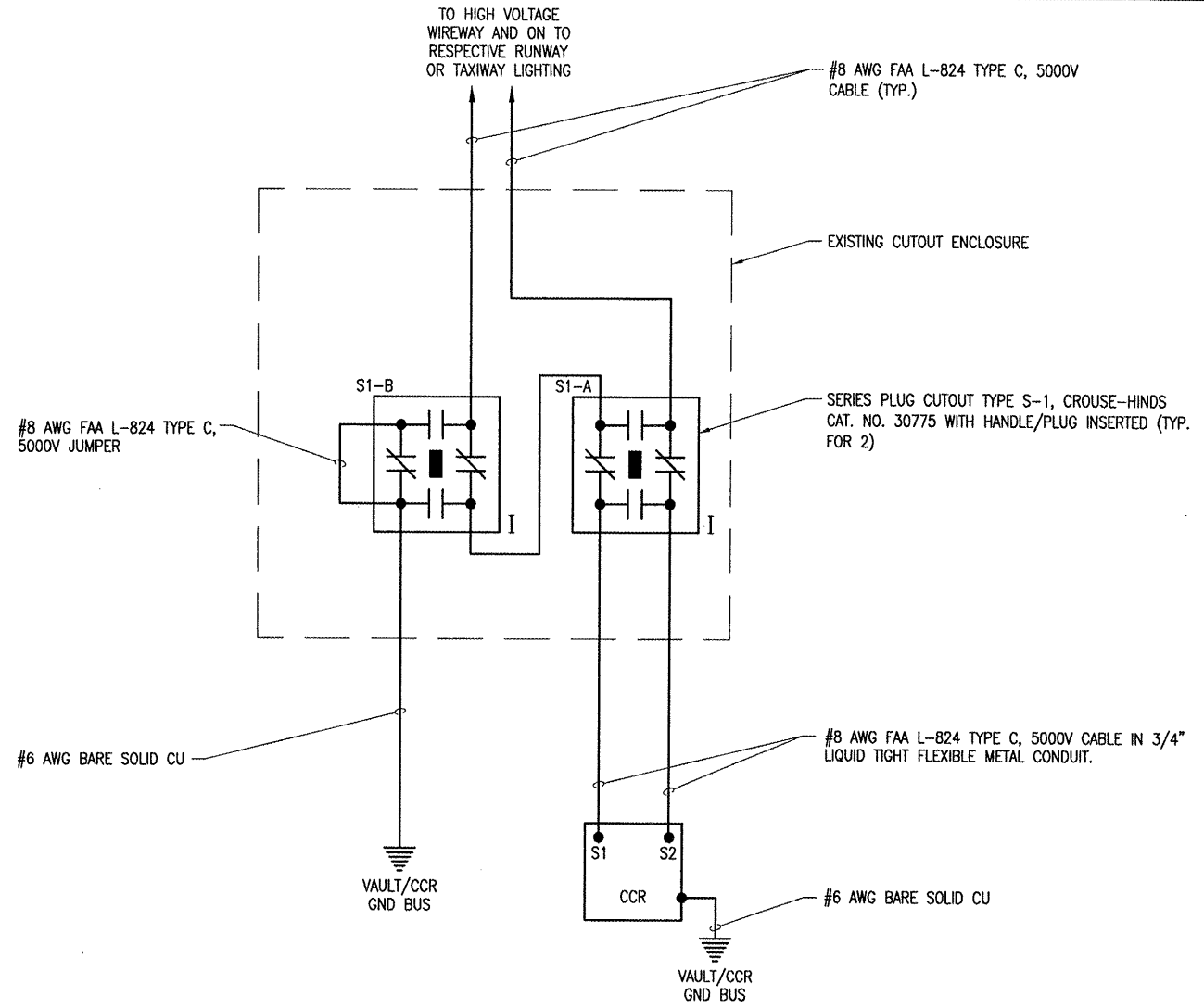
MT. VERNON AIRPORT  
  
 MT. VERNON, ILLINOIS  
 A.I.P. PROJ.: 3-17-0074-818  
 I.L. PROJ.: MW-3818

Hanson Project No. 08A0003D	DATE 06/18/08
Electron E-101.DWG	SCALE 3/8" = 1'-0"
Scale	DATE 06/18/08
LAYOUT	KNL 02/08/08
DRAWN	MV 02/08/08
REVIEWED	CAH 06/11/08

**HANSON**  
  
 Hanson Professional Services Inc.  
 1525 South Sixth Street  
 Springfield, Illinois 62703-2886  
 Offices Nationwide

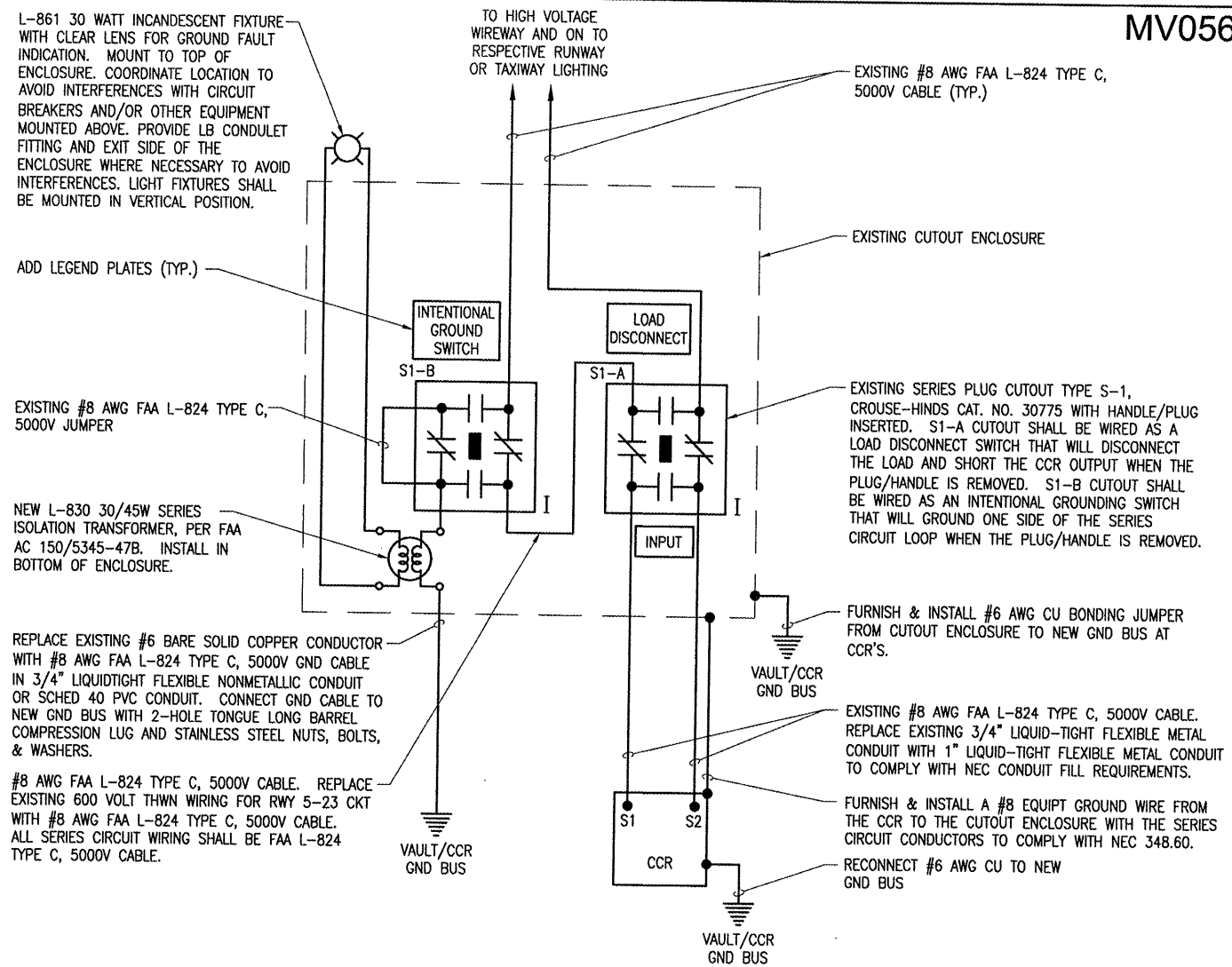
REHABILITATE TAXIWAYS  
 "C" AND "D"  
 INSTALL ELECTRICAL  
 EQUIPMENT  
 VAULT FLOOR  
 PLAN

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**EXISTING HIGH VOLTAGE WIRING SCHEMATIC**  
 (TYP. FOR EACH CCR)

**WORK SHOWN ON THIS SHEET IS FOR BASE BID.**



**PROPOSED HIGH VOLTAGE WIRING SCHEMATIC**  
 (TYP. FOR EACH CCR)

- NOTES**
- REFER TO COOPER CROUSE-HINDS "TROUBLESHOOTING AIRFIELD SERIES CIRCUITS" GUIDE FOR INFORMATION ON INTENTIONAL GROUNDING METHOD TO ASSIST IN LOCATING GROUND FAULTS ON AIRFIELD LIGHTING CIRCUITS.
  - EACH PLUG CUTOUT CABINET SHALL BE FURNISHED WITH A PHENOLIC ENGRAVED LEGEND PLATE LABELED "CAUTION OPERATE CUTOUTS WITH CCR SHUT OFF".
  - PROVIDE PHENOLIC ENGRAVED LEGEND PLATES FOR EACH CUTOUT TO IDENTIFY THE FUNCTION OF EACH RESPECTIVE CUTOUT.
  - LIQUID TIGHT FLEXIBLE METAL CONDUIT AND ASSOCIATED FITTINGS SHALL BE U.L. LISTED TO MEET THE REQUIREMENTS OF NEC 350.6, SUITABLE FOR GROUNDING AND SUNLIGHT RESISTANT. LIQUID TIGHT FLEXIBLE METAL CONDUIT THAT IS USED FOR FLEXIBILITY (INCLUDING CONNECTIONS TO CCR'S & TRANSFORMERS) SHALL REQUIRE AN EXTERNAL BONDING JUMPER OR INTERNAL EQUIPMENT GROUNDING CONDUCTOR PER NEC 350.60. INTERNAL EQUIPMENT GROUNDING CONDUCTOR SHALL BE #8 AWG COPPER (MINIMUM). EXTERNAL BONDING JUMPERS USED WITH CCR INSTALLATIONS SHALL BE #6 AWG COPPER (MINIMUM). DO NOT INSTALL LIQUID TIGHT FLEXIBLE METAL CONDUIT THAT IS NOT UL LISTED.
  - FURNISH & INSTALL A WARNING LABEL FOR EACH CUTOUT ENCLOSURE TO WARN PERSONS OF POTENTIAL ARC FLASH HAZARDS, PER THE REQUIREMENTS OF NEC 110.16 "FLASH PROTECTION".

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

MV056

BY	REVISION	DATE

MT. VERNON AIRPORT  
  
 MT. VERNON, ILLINOIS  
 A.I.P. PROJ.: 3-17-0074-B18  
 I.L. PROJ.: MW-3818

Revision Project No. 08A0003D	File Name E-607.DWG	Scale NONE	Date 06/18/08
LAYOUT	KNL	02/15/08	
DRAWN	MV	02/15/08	
REVIEWED	CAH	06/11/08	

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 1525 South Sixth Street  
 Springfield, Illinois 62703-2886  
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REHABILITATE TAXIWAYS  
 "C" AND "D"  
 INSTALL ELECTRICAL  
 EQUIPMENT  
 HIGH VOLTAGE  
 WIRING SCHEMATICS



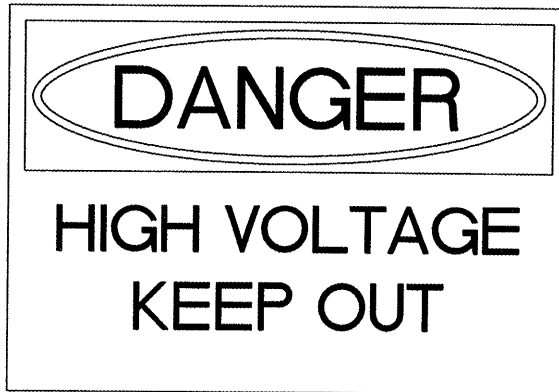


VAULT LEGEND PLATE SCHEDULE	
DEVICE	LABEL
EACH CCR LOAD DISCONNECT CUTOUT INPUT SIDE (TYP. FOR 7)	INPUT
EACH CCR LOAD DISCONNECT CUTOUT (TYP. FOR 7)	LOAD DISCONNECT
EACH INTENTIONAL GROUND SWITCH CUTOUT (TYP. FOR 7)	INTENTIONAL GROUND SWITCH
EACH CUTOUT ENCLOSURE (TYP. FOR 7)	CAUTION OPERATE CUTOUTS WITH CCR SHUT OFF
EACH GROUND FAULT INDICATOR LIGHT (TYP. FOR 7)	GROUND FAULT
HIGH VOLTAGE WIREWAY (TYP. FOR 4)	HIGH VOLTAGE
LOW VOLTAGE WIREWAY (TYP. FOR 4)	LOW VOLTAGE

LEGEND PLATES SHALL BE WEATHERPROOF ENGRAVED PLASTIC OR PHENOLIC MATERIAL, 1/4" HIGH WHITE LETTERS ON A RED BACKGROUND UNLESS NOTED OTHERWISE. SECURE WITH WEATHERPROOF ADHESIVE AND MACHINE SCREWS, FURNISH ADDITIONAL LEGEND PLATES WHERE REQUIRED BY CODE, FOR ADDITIONAL EQUIPMENT AS DETAILED HEREIN ON THE PLANS, AND AS NOTED IN THE SPECIAL PROVISION SPECIFICATIONS.

- DIRECTIONS TO TEST FOR AIRFIELD GROUND FAULTS IN LIGHTING CIRCUITS.
1. TURN OFF RESPECTIVE CCR.
  2. PULL INTENTIONAL GROUND SWITCH CUTOUT.
  3. TURN ON RESPECTIVE CCR.
  4. IF GROUND FAULT LIGHT IS DIM CHECK AIRFIELD CIRCUIT FOR LOCATION OF BRIGHT TO DIM LIGHTS TO ASSIST IN LOCATING AREA OF GROUND FAULT.

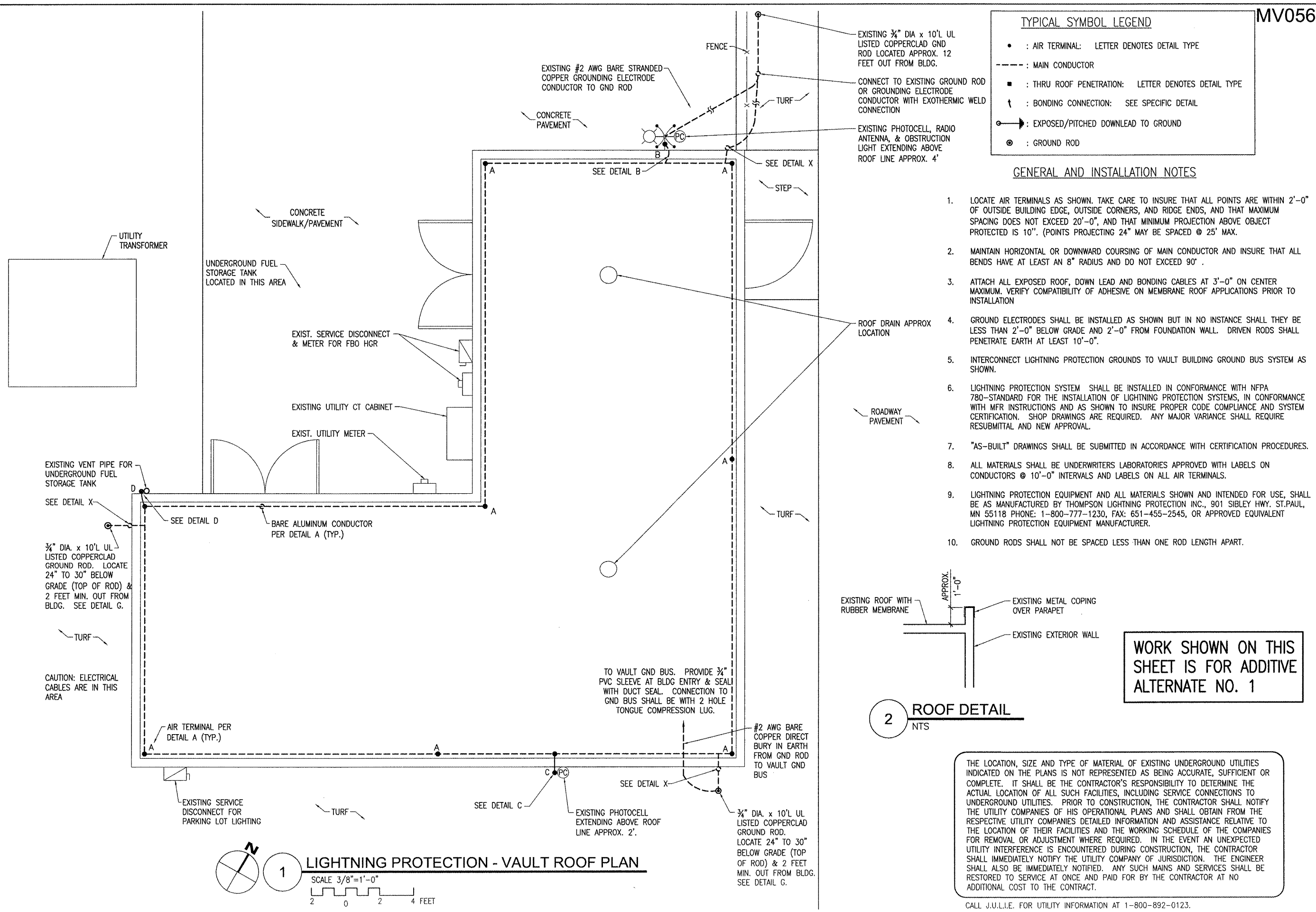
PROVIDE PLACARD OR LEGEND PLATE FOR GROUND FAULT TESTING PROCEDURE. LETTERING TO BE MIN. 1/4" HIGH BLACK ON WHITE BACKGROUND. LOCATE PLACARD IN REGULATOR ROOM, COORDINATED WITH AIRPORT MAINTENANCE STAFF AND RESIDENT ENGINEER.



PROVIDE WARNING SIGN ON VAULT EXTERIOR DOORS LABELED "DANGER - HIGH VOLTAGE - KEEP OUT" PER THE REQUIREMENTS OF NEC 110.34 (C). PROVIDE THREE SIGNS (ONE FOR EACH DOOR).

WORK SHOWN ON THIS SHEET IS FOR BASE BID

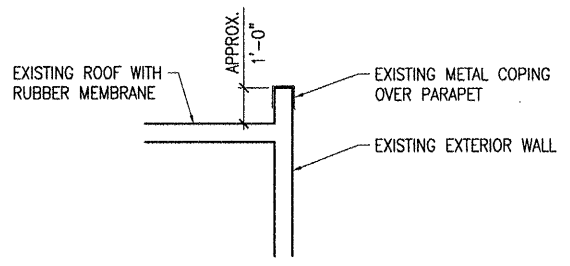
REHABILITATE TAXIWAYS "C" AND "D" INSTALL ELECTRICAL EQUIPMENT LEGEND PLATE SCHEDULE	<p>Hanson Professional Services Inc. 1525 South Sixth Street Springfield, Illinois 62703-2886 Offices Nationwide</p>	Revision: _____ Date: _____	BY: _____ REVISION: _____ DATE: _____
		Project No. 08A0003D Filename E-609.DWG Scale NONE Date 06/18/08	LAYOUT KNL 02/15/08 DRAWN MV 02/15/08 REVIEWED CAH 06/11/08
MT. VERNON AIRPORT  MT. VERNON, ILLINOIS I.L. PROJ.: MVN-3818 A.I.P. PROJ.: 3-17-0074-818		21 21 of 30 sheets	



**TYPICAL SYMBOL LEGEND**

- : AIR TERMINAL: LETTER DENOTES DETAIL TYPE
- : MAIN CONDUCTOR
- : THRU ROOF PENETRATION: LETTER DENOTES DETAIL TYPE
- ↑ : BONDING CONNECTION: SEE SPECIFIC DETAIL
- ⊙ : EXPOSED/PITCHED DOWNLEAD TO GROUND
- ⊙ : GROUND ROD

- GENERAL AND INSTALLATION NOTES**
- LOCATE AIR TERMINALS AS SHOWN. TAKE CARE TO INSURE THAT ALL POINTS ARE WITHIN 2'-0" OF OUTSIDE BUILDING EDGE, OUTSIDE CORNERS, AND RIDGE ENDS, AND THAT MAXIMUM SPACING DOES NOT EXCEED 20'-0", AND THAT MINIMUM PROJECTION ABOVE OBJECT PROTECTED IS 10". (POINTS PROJECTING 24" MAY BE SPACED @ 25' MAX.)
  - MAINTAIN HORIZONTAL OR DOWNWARD COURSING OF MAIN CONDUCTOR AND INSURE THAT ALL BENDS HAVE AT LEAST AN 8" RADIUS AND DO NOT EXCEED 90°.
  - ATTACH ALL EXPOSED ROOF, DOWN LEAD AND BONDING CABLES AT 3'-0" ON CENTER MAXIMUM. VERIFY COMPATIBILITY OF ADHESIVE ON MEMBRANE ROOF APPLICATIONS PRIOR TO INSTALLATION
  - GROUND ELECTRODES SHALL BE INSTALLED AS SHOWN BUT IN NO INSTANCE SHALL THEY BE LESS THAN 2'-0" BELOW GRADE AND 2'-0" FROM FOUNDATION WALL. DRIVEN RODS SHALL PENETRATE EARTH AT LEAST 10'-0".
  - INTERCONNECT LIGHTNING PROTECTION GROUNDS TO VAULT BUILDING GROUND BUS SYSTEM AS SHOWN.
  - LIGHTNING PROTECTION SYSTEM SHALL BE INSTALLED IN CONFORMANCE WITH NFPA 780-STANDARD FOR THE INSTALLATION OF LIGHTNING PROTECTION SYSTEMS, IN CONFORMANCE WITH MFR INSTRUCTIONS AND AS SHOWN TO INSURE PROPER CODE COMPLIANCE AND SYSTEM CERTIFICATION. SHOP DRAWINGS ARE REQUIRED. ANY MAJOR VARIANCE SHALL REQUIRE RESUBMITTAL AND NEW APPROVAL.
  - "AS-BUILT" DRAWINGS SHALL BE SUBMITTED IN ACCORDANCE WITH CERTIFICATION PROCEDURES.
  - ALL MATERIALS SHALL BE UNDERWRITERS LABORATORIES APPROVED WITH LABELS ON CONDUCTORS @ 10'-0" INTERVALS AND LABELS ON ALL AIR TERMINALS.
  - LIGHTNING PROTECTION EQUIPMENT AND ALL MATERIALS SHOWN AND INTENDED FOR USE, SHALL BE AS MANUFACTURED BY THOMPSON LIGHTNING PROTECTION INC., 901 SIBLEY HWY. ST. PAUL, MN 55118 PHONE: 1-800-777-1230, FAX: 651-455-2545, OR APPROVED EQUIVALENT LIGHTNING PROTECTION EQUIPMENT MANUFACTURER.
  - GROUND RODS SHALL NOT BE SPACED LESS THAN ONE ROD LENGTH APART.



**WORK SHOWN ON THIS SHEET IS FOR ADDITIVE ALTERNATE NO. 1**

THE LOCATION, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND UTILITIES INDICATED ON THE PLANS IS NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. 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 ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY SUCH MAINS AND SERVICES SHALL BE RESTORED TO SERVICE AT ONCE AND PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT.

CALL J.U.L.I.E. FOR UTILITY INFORMATION AT 1-800-892-0123.

**1 LIGHTNING PROTECTION - VAULT ROOF PLAN**  
 SCALE 3/8"=1'-0"  
 2 0 2 4 FEET

MV056

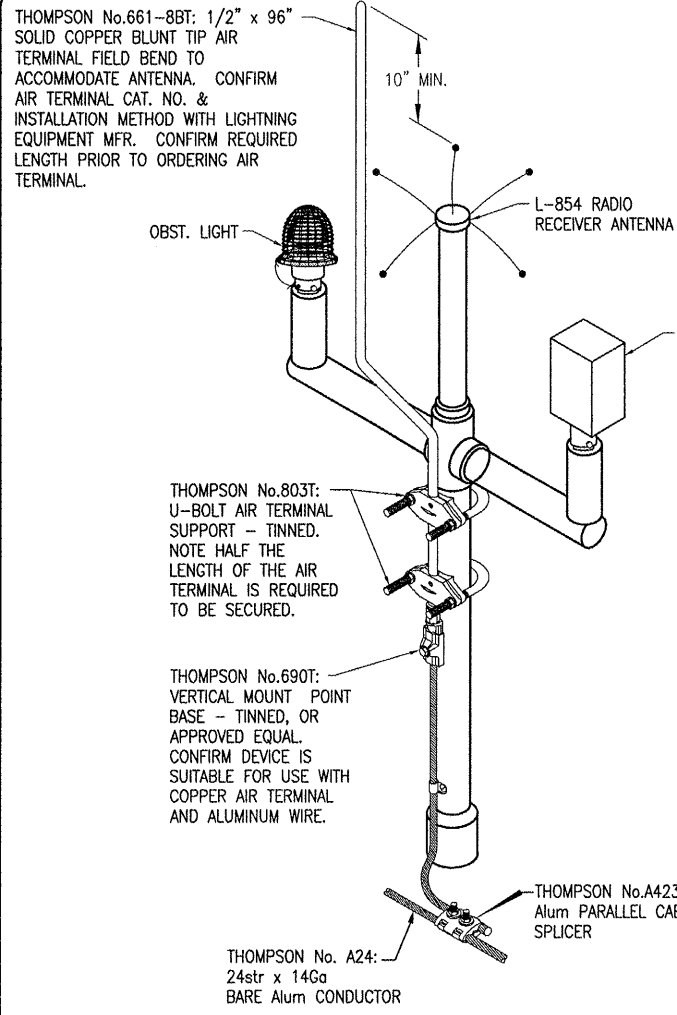
DATE	REVISION	BY

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**MT. VERNON, ILLINOIS**

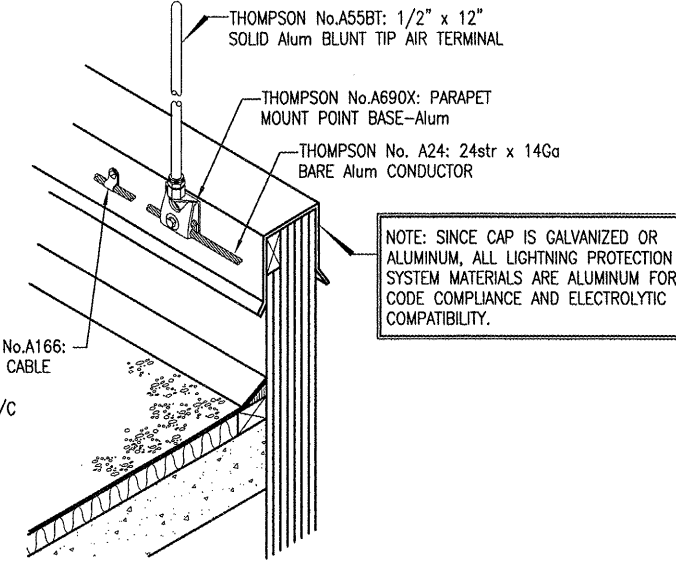
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LAYOUT	KNL	02/08/08	02/08/08
DRAWN	MV	02/08/08	02/08/08
REVIEWED	CAH	06/11/08	06/11/08

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REHABILITATE TAXIWAYS  
 "C" AND "D"  
 INSTALL ELECTRICAL EQUIPMENT  
 LIGHTNING PROTECTION  
 VAULT ROOF PLAN



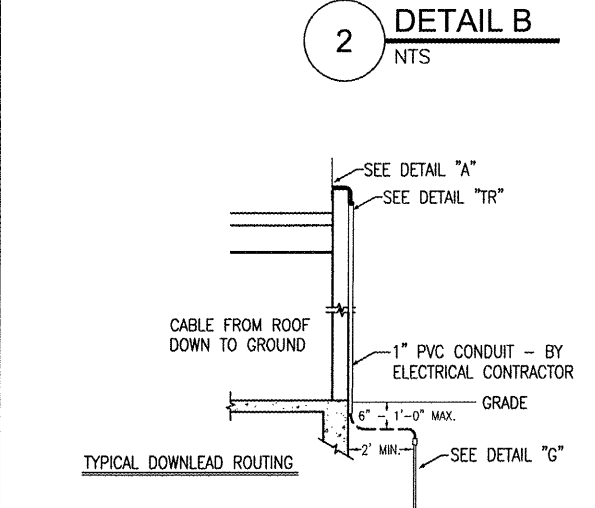
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NTS



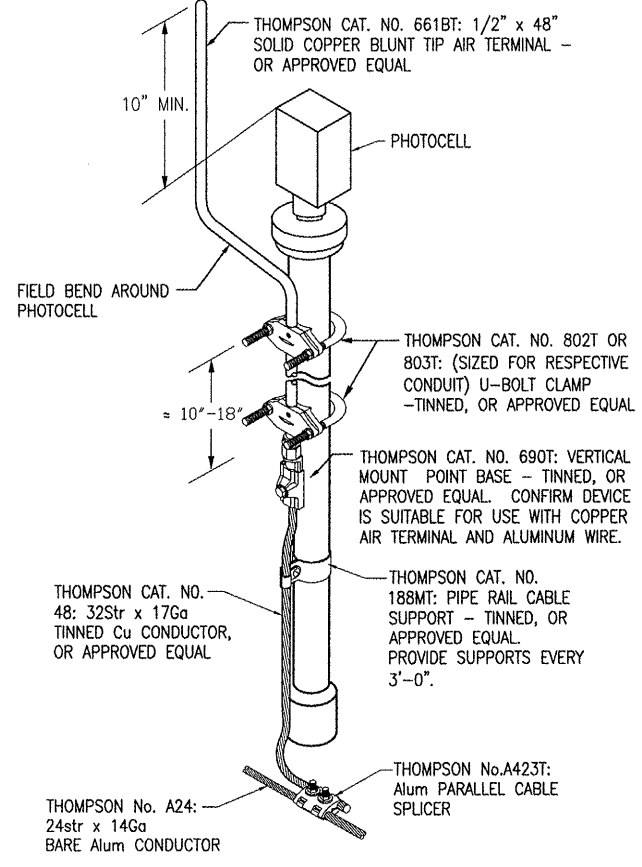
6 **DETAIL TR**  
NTS

- NOTES**
1. REFERENCES TO THOMPSON ARE THOMPSON LIGHTNING PROTECTION INC., 901 SIBLEY MEMORIAL HWY, ST. PAUL, MN 55118, PHONE: 651-455-7661, 800-777-1230, FAX: 651-455-2545.
  2. VERIFY LIGHTNING PROTECTION COMPONENTS AND CATALOG NUMBERS WITH THE RESPECTIVE LIGHTNING PROTECTION EQUIPMENT MANUFACTURER.

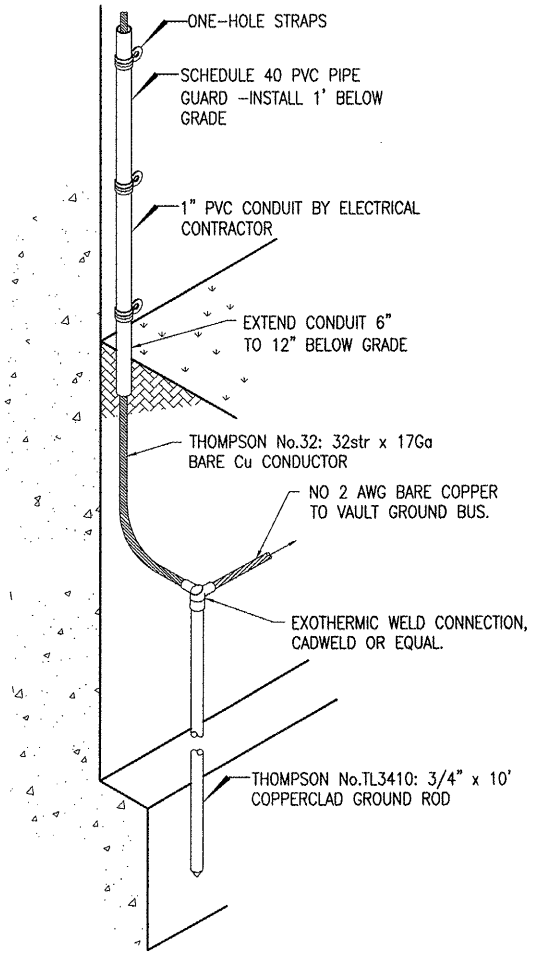
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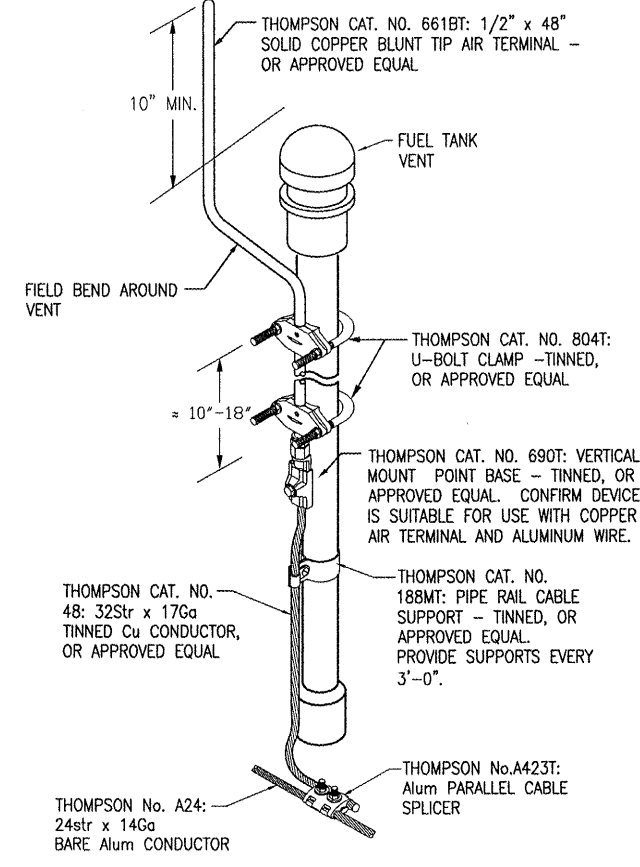
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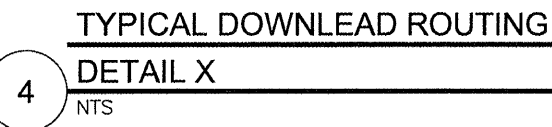
3 **DETAIL C**  
NTS



5 **DETAIL G**  
NTS



7 **DETAIL D**  
NTS



4 **DETAIL X**  
NTS

DATE	REVISION	BY

MT. VERNON AIRPORT  
  
 MT. VERNON, ILLINOIS  
 A.I.P. PROJ.: 3-17-0074-B18  
 I.L. PROJ.: MW-3818

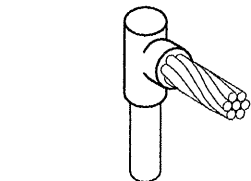
Hanson Project No.	08A00003D
Filename	E-501.DWG
Scale	NONE
Date	06/18/08
LAYOUT	KNL 06/05/08
DRAWN	MV 06/05/08
REVIEWED	CAH 06/11/08

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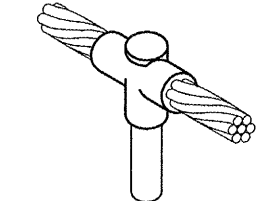
REHABILITATE TAXIWAYS  
 "C" AND "D"  
 INSTALL ELECTRICAL  
 EQUIPMENT  
 LIGHTNING PROTECTION  
 DETAILS



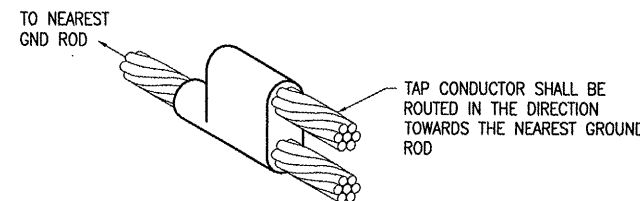
**CABLE TO GROUND ROD**



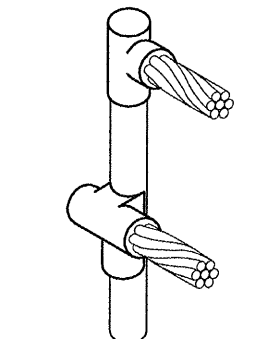
**CABLE TO GROUND ROD**



**CABLE TO GROUND ROD**



**CABLE TO CABLE HORIZONTAL PARALLEL TAP**

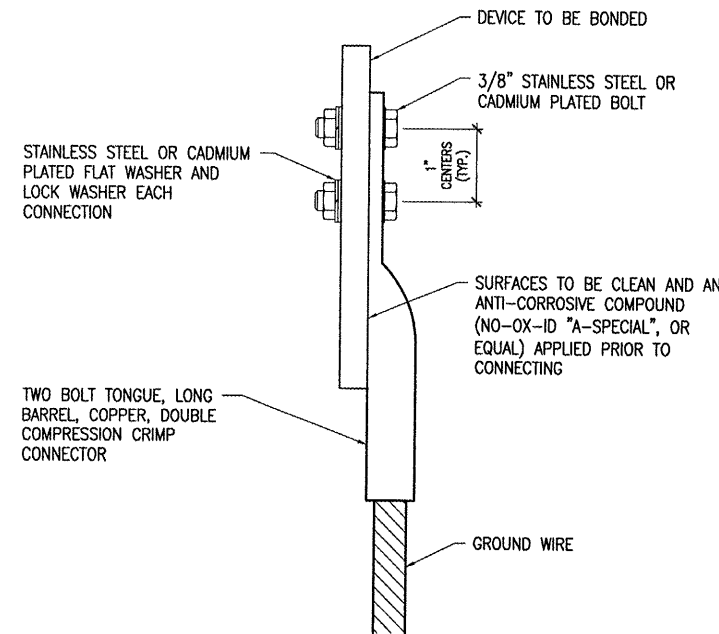


**CABLES TO GROUND ROD**

**DETAIL NOTES**

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

**EXOTHERMIC WELD DETAILS**

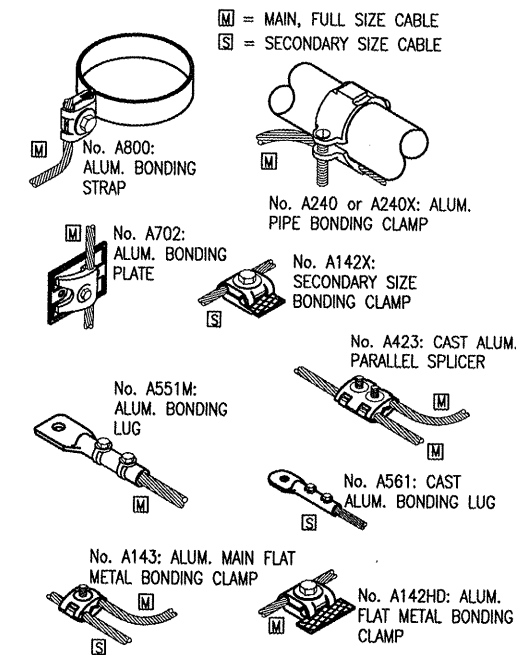


2 HOLE LONG BARREL COMPRESSION LUG TABLE			
WIRE SIZE	BURNDY CAT. NO.	THOMAS & BETTS CAT. NO.	PENN-UNION CAT. NO.
#6 AWG STRANDED	YA6C-2TC38	256-30695-1158	BBLU-6D-2TC38
#4 AWG STRANDED	YA4C-2TC38	256-30695-1159	BBLU-4D-2TC38
#2 AWG STRANDED	YA2C-2TC38	256-30695-1160	BBLU-2D-2TC38
#2 AWG SOLID	YA3C-2TC38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

**NOTES**

- ALL CONNECTIONS TO GROUND BUS BAR SHALL BE WITH 2 HOLE TONGUE LONG BARREL COMPRESSION LUGS BOLTED TO THE BUS BAR.
- GROUND WIRE CONNECTIONS TO EQUIPMENT SHALL BE WITH 2 HOLE TONGUE LONG BARREL COMPRESSION LUGS BOLTED TO THE DEVICE OR WITH THE RESPECTIVE 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 ENCIRCLE THE CONDUIT WITH FERROUS AND/OR MAGNETIC MATERIALS. WHERE METAL CLAMPS ARE INSTALLED USE NYLON BOLTS, NUTS, WASHERS, & SPACERS TO INTERRUPT A COMPLETE METALLIC APTH FROM ENCIRCLING THE CONDUIT.
- ALL CONNECTIONS SHALL BE COATED WITH A CORROSION PREVENTATIVE COMPOUND (SANCHEM INC. NO-OX-ID "A-SPECIAL", BURNDY PENETROX E, OR 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**

- CATALOG NUMBERS SHOWN ARE THOMPSON LIGHTNING PRITECTION INC., 901 SIBLEY MEMORIAL HWY, ST. PAUL, MN 55118, PHONE: 651-455-7661, FAX: 651-455-2545.

**LIGHTNING PROTECTION  
TYPICAL BONDING & SPLICING DETAILS**

**WORK & DETAILS SHOWN ON THIS SHEET IS FOR ADDITIVE ALTERNATE NO. 1 & ADDITIVE ALTERNATE NO. 2**

BY	
REVISION	
DATE	

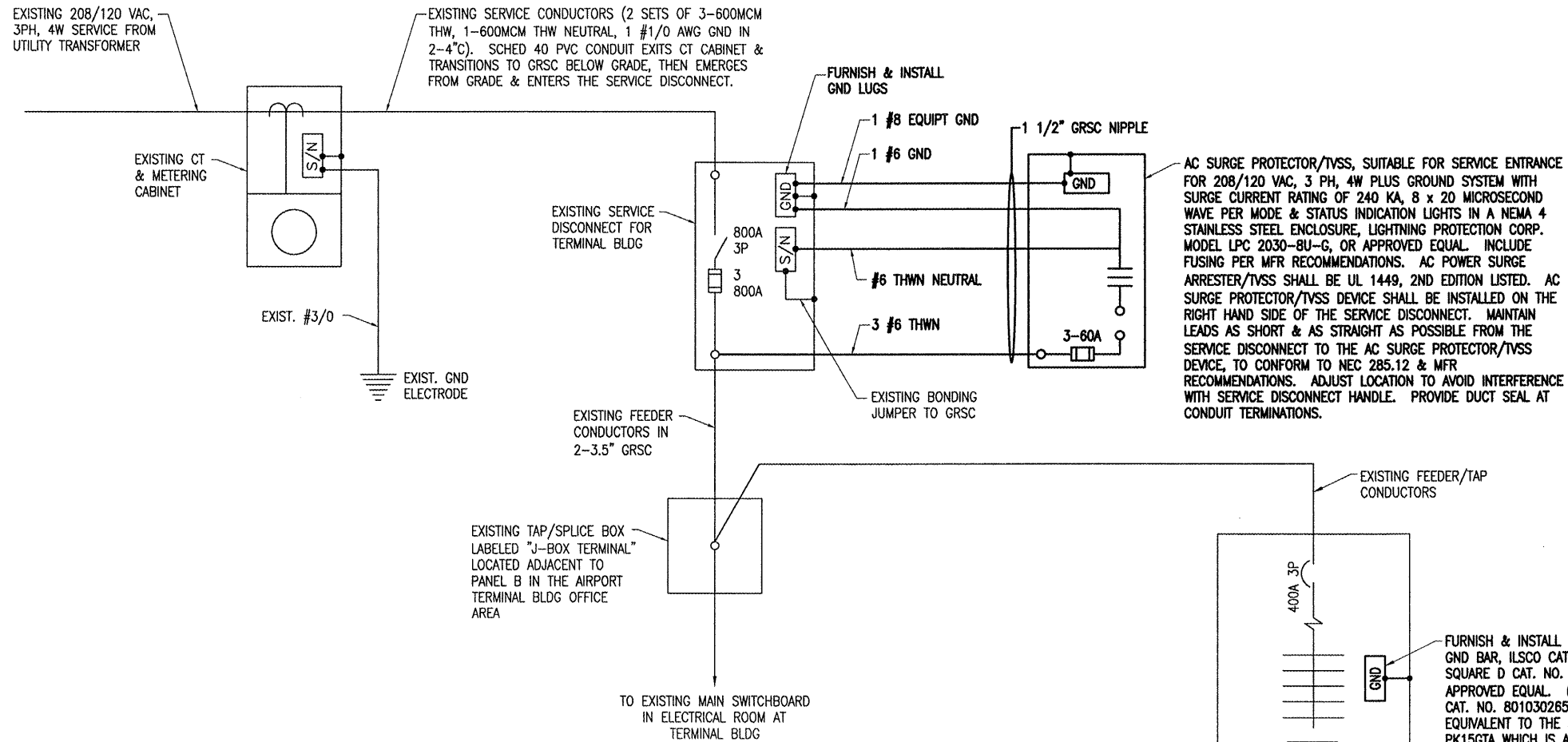
MT. VERNON AIRPORT  
  
 MT. VERNON, ILLINOIS  
 A.I.P. PROJ.: 3-17-0074-B18  
 IL. PROJ.: MVN-3818

Hanson Project No. 08A0003D	DATE 06/18/08
Filename: E-502.DWG	
Scale: NONE	
DATE 06/18/08	
LAYOUT	KNL 06/09/08
DRAWN	MV 06/09/08
REVIEWED	CAH 06/11/08

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REHABILITATE TAXIWAYS  
 "C" AND "D"  
 INSTALL ELECTRICAL  
 EQUIPMENT  
 GROUNDING &  
 LIGHTNING PROTECTION  
 DETAILS





AC SURGE PROTECTOR/TVSS, SUITABLE FOR SERVICE ENTRANCE FOR 208/120 VAC, 3 PH, 4W PLUS GROUND SYSTEM WITH SURGE CURRENT RATING OF 240 KA, 8 x 20 MICROSECOND WAVE PER MODE & STATUS INDICATION LIGHTS IN A NEMA 4 STAINLESS STEEL ENCLOSURE, LIGHTNING PROTECTION CORP. MODEL LPC 2030-8U-G, OR APPROVED EQUAL. INCLUDE FUSING PER MFR RECOMMENDATIONS. AC POWER SURGE ARRESTER/TVSS SHALL BE UL 1449, 2ND EDITION LISTED. AC SURGE PROTECTOR/TVSS DEVICE SHALL BE INSTALLED ON THE RIGHT HAND SIDE OF THE SERVICE DISCONNECT. MAINTAIN LEADS AS SHORT & AS STRAIGHT AS POSSIBLE FROM THE SERVICE DISCONNECT TO THE AC SURGE PROTECTOR/TVSS DEVICE, TO CONFORM TO NEC 285.12 & MFR RECOMMENDATIONS. ADJUST LOCATION TO AVOID INTERFERENCE WITH SERVICE DISCONNECT HANDLE. PROVIDE DUCT SEAL AT CONDUIT TERMINATIONS.

FURNISH & INSTALL COPPER EQUIPMENT GND BAR, ILSCO CAT. NO. D167-14, SQUARE D CAT. NO. 8010302652, OR APPROVED EQUAL. (NOTE: SQUARE D CAT. NO. 8010302652 IS THE COPPER EQUIVALENT TO THE SQUARE D CAT. NO. PK15GT4 WHICH IS AN ALUMINUM GND BAR.)

NOTES

1. ALL WORK AND/OR POWER OUTAGES SHALL BE COORDINATED WITH THE AIRPORT DIRECTOR AND THE RESIDENT ENGINEER.
2. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS & REPORT ANY VARIATIONS TO RESIDENT ENGINEER.
3. ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN CONFORMANCE WITH NFPA 70 - NATIONAL ELECTRICAL CODE (NEC) MOST CURRENT ISSUE IN FORCE, THE RESPECTIVE EQUIPMENT MANUFACTURER'S DIRECTIONS AND ALL OTHER APPLICABLE LOCAL CODES, LAWS, ORDINANCES AND REQUIREMENTS IN FORCE. ANY INSTALLATIONS WHICH VOID THE U.L. LISTING, ETL LISTING, (OR OTHER THIRD PARTY LISTING) AND/OR THE MANUFACTURER'S WARRANTY OF A DEVICE WILL NOT BE PERMITTED.
4. ALL EQUIPMENT NOT LABELED AS EXISTING IS NEW.
5. WORK SHOWN ON THIS SHEET SHALL BE PAID UNDER ITEM AT109200.
6. FURNISH & INSTALL A WEATHERPROOF WARNING LABEL FOR EACH SERVICE DISCONNECT & PANELBOARD B, LOCATED AT THE TERMINAL BUILDING, TO WARN PERSONS OF POTENTIAL ELECTRIC ARC FLASH HAZARDS, PER THE REQUIREMENTS OF NEC 110.16 "FLASH PROTECTION". LABELS SHALL BE HAZARD COMMUNICATION SYSTEMS, LLC (119 OLD MILFORD RD., P.O. BOX 1174, MILFORD, PA. 18337, PHONE: 1-877-748-0244) PART NO. H6010-9VWHBJ OR APPROVED EQUAL.

ELECTRICAL ONE LINE DIAGRAM FOR TERMINAL BUILDING (OFFICE AREA)

LEGEND PLATE SCHEDULE	
DEVICE	LABEL
TERMINAL BUILDING SERVICE DISCONNECT	TERMINAL BLDG SERVICE DISCONNECT 208/120VAC, 3PH, 4W
KITCHEN SERVICE DISCONNECT	KITCHEN SERVICE DISCONNECT 208/120VAC, 3PH, 4W
SUITE 131 SERVICE DISCONNECT	SUITE 131 SERVICE DISCONNECT
AIRLINE OFFICE SERVICE DISCONNECT	AIRLINE OFFICE SERVICE DISCONNECT
EMERGENCY PANEL IN ELECTRICAL ROOM OF TERMINAL BUILDING	EMERGENCY PANEL 120/208VAC, 1PH, 3W FED FROM PANEL B LOCATED IN THE VAULT
EACH SERVICE DISCONNECT (4 LEGEND PLATES)	NOTE THERE ARE 3 ADDITIONAL SERVICE DISCONNECTS LOCATED ADJACENT TO THIS DISCONNECT. THERE IS ALSO AN ADDITIONAL FEEDER CIRCUIT TO THIS BUILDING LOCATED AT THE EMERGENCY PANEL IN THE ELECTRICAL ROOM
EMERGENCY PANEL IN ELECTRICAL ROOM OF TERMINAL BUILDING	NOTE THERE ARE 4 ADDITIONAL SERVICE DISCONNECTS FOR THE TERMINAL BUILDING LOCATED ON THE NORTH EXTERIOR WALL

LEGEND PLATES SHALL BE WEATHERPROOF ENGRAVED PLASTIC OR PHENOLIC MATERIAL, 1/4" HIGH BLOCK LETTERS ON A WHITE BACKGROUND, SECURE WITH WEATHERPROOF ADHESIVE AND/OR MACHINE SCREWS.

WORK SHOWN ON THIS SHEET IS FOR ADDITIVE ALTERNATE NO. 2

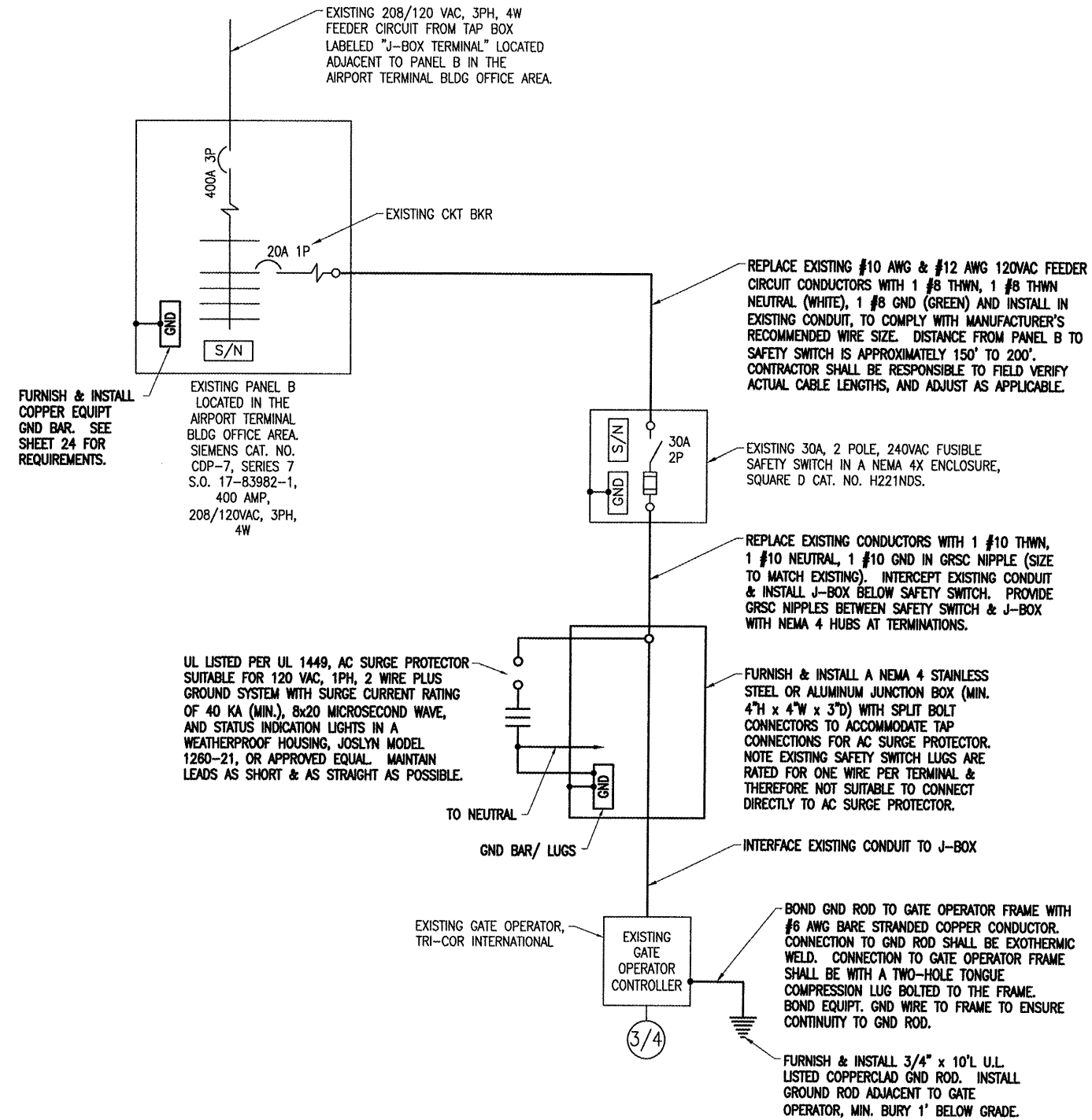
BY	REVISION	DATE

MT. VERNON AIRPORT  
  
 MT. VERNON, ILLINOIS  
 A.I.P. PROJ.: 3-17-0074-B18  
 I.L. PROJ.: MW-3818

Hanson Project No. 08A0003D	11/30/05
Drawn: E-601.DWG	11/30/05
Scale: NONE	12/16/05
Date: 06/18/08	
LAYOUT: KNL	
DRAWN: MV	
REVIEWED: LDP	

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REHABILITATE TAXIWAYS  
 "C" AND "D"  
 INSTALL ELECTRICAL  
 EQUIPMENT  
 ELECTRICAL  
 ONE LINE DIAGRAM  
 FOR TERMINAL BUILDING



FURNISH & INSTALL COPPER EQUIPT GND BAR. SEE SHEET 24 FOR REQUIREMENTS.

UL LISTED PER UL 1449, AC SURGE PROTECTOR SUITABLE FOR 120 VAC, 1PH, 2 WIRE PLUS GROUND SYSTEM WITH SURGE CURRENT RATING OF 40 KA (MIN.), 8x20 MICROSECOND WAVE, AND STATUS INDICATION LIGHTS IN A WEATHERPROOF HOUSING, JOSLYN MODEL 1260-21, OR APPROVED EQUAL. MAINTAIN LEADS AS SHORT & AS STRAIGHT AS POSSIBLE.

EXISTING PANEL B LOCATED IN THE AIRPORT TERMINAL BLDG OFFICE AREA. SIEMENS CAT. NO. CDP-7, SERIES 7 S.O. 17-83982-1, 400 AMP, 208/120VAC, 3PH, 4W

EXISTING 208/120 VAC, 3PH, 4W FEEDER CIRCUIT FROM TAP BOX LABELED "J-BOX TERMINAL" LOCATED ADJACENT TO PANEL B IN THE AIRPORT TERMINAL BLDG OFFICE AREA.

EXISTING CKT BKR

REPLACE EXISTING #10 AWG & #12 AWG 120VAC FEEDER CIRCUIT CONDUCTORS WITH 1 #8 THWN, 1 #8 THWN NEUTRAL (WHITE), 1 #8 GND (GREEN) AND INSTALL IN EXISTING CONDUIT, TO COMPLY WITH MANUFACTURER'S RECOMMENDED WIRE SIZE. DISTANCE FROM PANEL B TO SAFETY SWITCH IS APPROXIMATELY 150' TO 200'. CONTRACTOR SHALL BE RESPONSIBLE TO FIELD VERIFY ACTUAL CABLE LENGTHS, AND ADJUST AS APPLICABLE.

EXISTING 30A, 2 POLE, 240VAC FUSIBLE SAFETY SWITCH IN A NEMA 4X ENCLOSURE, SQUARE D CAT. NO. H221NDS.

REPLACE EXISTING CONDUCTORS WITH 1 #10 THWN, 1 #10 NEUTRAL, 1 #10 GND IN GRSC NIPPLE (SIZE TO MATCH EXISTING). INTERCEPT EXISTING CONDUIT & INSTALL J-BOX BELOW SAFETY SWITCH. PROVIDE GRSC NIPPLES BETWEEN SAFETY SWITCH & J-BOX WITH NEMA 4 HUBS AT TERMINATIONS.

FURNISH & INSTALL A NEMA 4 STAINLESS STEEL OR ALUMINUM JUNCTION BOX (MIN. 4"H x 4"W x 3"D) WITH SPLIT BOLT CONNECTORS TO ACCOMMODATE TAP CONNECTIONS FOR AC SURGE PROTECTOR. NOTE EXISTING SAFETY SWITCH LUGS ARE RATED FOR ONE WIRE PER TERMINAL & THEREFORE NOT SUITABLE TO CONNECT DIRECTLY TO AC SURGE PROTECTOR.

INTERFACE EXISTING CONDUIT TO J-BOX

BOND GND ROD TO GATE OPERATOR FRAME WITH #6 AWG BARE STRANDED COPPER CONDUCTOR. CONNECTION TO GND ROD SHALL BE EXOTHERMIC WELD. CONNECTION TO GATE OPERATOR FRAME SHALL BE WITH A TWO-HOLE TONGUE COMPRESSION LUG BOLTED TO THE FRAME. BOND EQUIPT. GND WIRE TO FRAME TO ENSURE CONTINUITY TO GND ROD.

FURNISH & INSTALL 3/4" x 10' U.L. LISTED COPPERCLAD GND ROD. INSTALL GROUND ROD ADJACENT TO GATE OPERATOR, MIN. BURY 1' BELOW GRADE.

EXISTING GATE OPERATOR, TRI-COR INTERNATIONAL

EXISTING GATE OPERATOR CONTROLLER

3/4"

GATE NO. 1 ELECTRICAL ONE LINE

ELECTRICAL NOTES

- ELECTRIC SLIDE GATE NO. 1 IS LOCATED AT THE NORTH SIDE OF THE TERMINAL BUILDING.
- ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN CONFORMANCE WITH NFPA 70 - NATIONAL ELECTRICAL CODE (NEC) MOST CURRENT ISSUE IN FORCE, THE RESPECTIVE EQUIPMENT MANUFACTURER'S DIRECTIONS AND ALL OTHER APPLICABLE LOCAL CODES, LAWS, ORDINANCES, AND REQUIREMENTS IN FORCE. ANY INSTALLATIONS WHICH VOID THE U.L. LISTING, ETL LISTING (OR OTHER THIRD PARTY LISTING) AND/OR THE MANUFACTURER'S WARRANTY OF A DEVICE WILL NOT BE PERMITTED.
- CONTRACTOR SHALL COORDINATE NEW WORK AND ANY POWER OUTAGES TO EXISTING EQUIPMENT WITH THE RESPECTIVE USER PERSONNEL & THE AIRPORT DIRECTOR.
- ALL EQUIPMENT NOT LABELED AS EXISTING IS NEW.
- PROVIDE A WEATHERPROOF ENGRAVED PHENOLIC OR PLASTIC LEGEND PLATE FOR THE SAFETY SWITCH AT THE RESPECTIVE GATE OPERATOR LABELED "GATE NO. 1, 120 VAC, FED FROM TERM BLDG PANEL B".
- FURNISH AND INSTALL A #12 AWG EQUIPMENT GROUND WIRE FROM THE GATE OPERATOR TO THE CARD READER UNIT IN THE EXISTING CONTROL WIRING CONDUIT.
- CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS.
- WORK SHOWN ON THIS SHEET SHALL BE PAID FOR UNDER ITEM AT109200.

WORK SHOWN ON THIS SHEET IS FOR ADDITIVE ALTERNATE NO. 2

REHABILITATE TAXIWAYS "C" AND "D" INSTALL ELECTRICAL EQUIPMENT	DATE	BY
	REVISION	
GATE NO. 1 ELECTRICAL ONE LINE		
	I.L. PROJ.: MW-3818 A.I.P. PROJ.: 3-17-0074-B18	
26	Hanson Professional Services Inc. 1525 South Sixth Street Springfield, Illinois 62705-2886 Offices Nationwide	
	26 of 30 sheets	





BY	
REVISION	
DATE	

MT. VERNON AIRPORT  
  
 MT. VERNON, ILLINOIS  
 ILL. PROJ.: MVN-3818 A.I.P. PROJ.: 3-17-0074-818

Hanson Project No.	08A00030
Filename	E-605.DWG
Scale	NONE
Date	06/18/08
LAYOUT	KNL 12/02/05
DRAWN	MV 12/02/05
REVIEWED	LDP 12/16/05

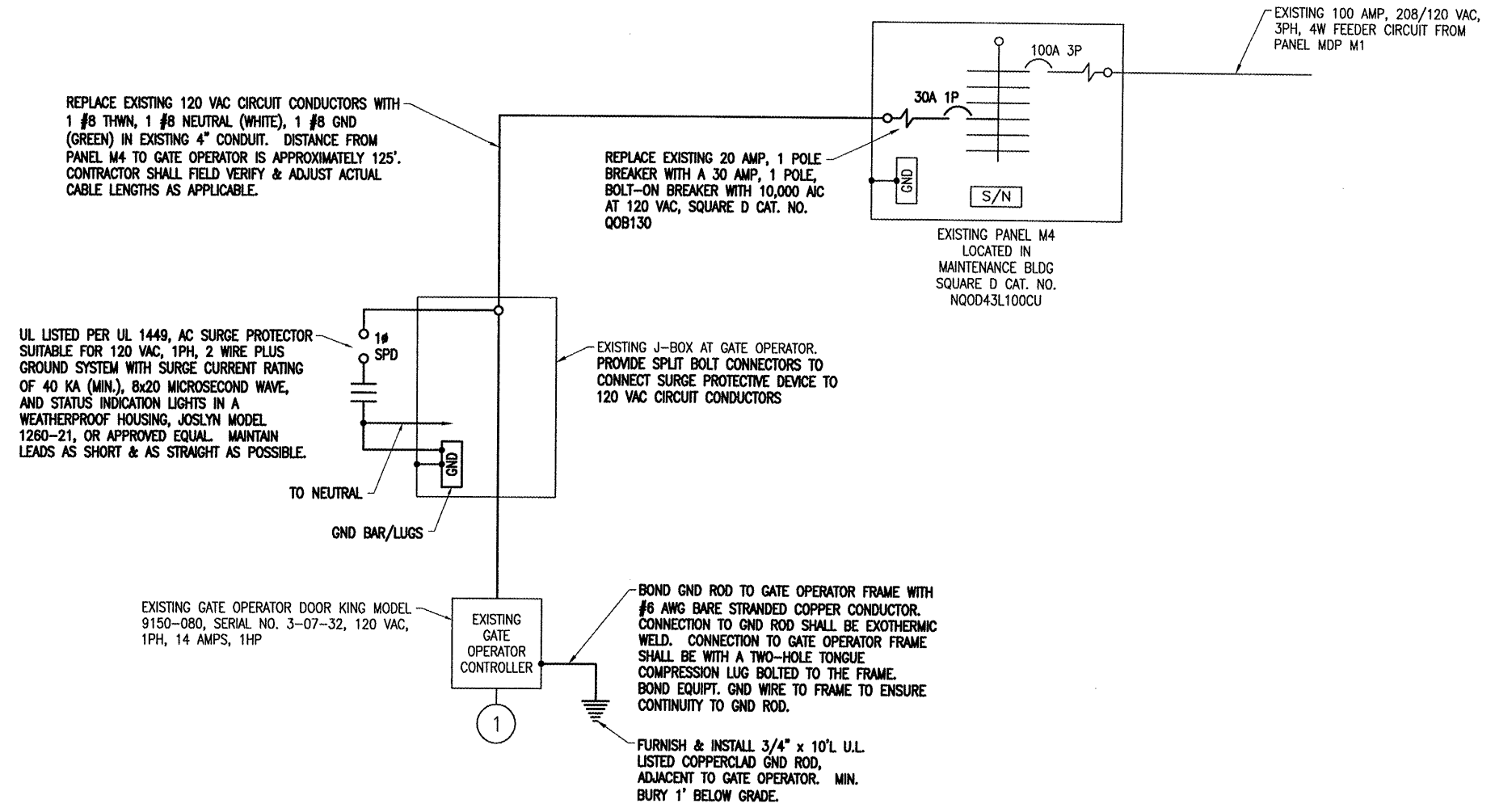
**HANSON**  
  
 Hanson Professional Services, Inc.  
 1625 South Sixth Street  
 Springfield, Illinois 62703-2886  
 Offices Nationwide

REHABILITATE TAXIWAYS  
 "C" AND "D"  
 INSTALL ELECTRICAL  
 EQUIPMENT  
 GATE NO. 7  
 ELECTRICAL ONE LINE

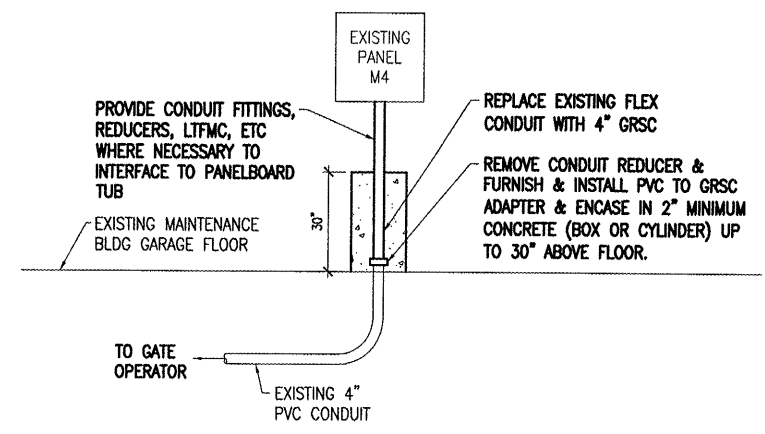
ELECTRICAL NOTES

- ELECTRIC SLIDE GATE NO. 7 IS LOCATED AT THE MAINTENANCE BUILDING.
- ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN CONFORMANCE WITH NFPA 70 - NATIONAL ELECTRICAL CODE (NEC) MOST CURRENT ISSUE IN FORCE, THE RESPECTIVE EQUIPMENT MANUFACTURER'S DIRECTIONS AND ALL OTHER APPLICABLE LOCAL CODES, LAWS, ORDINANCES, AND REQUIREMENTS IN FORCE. ANY INSTALLATIONS WHICH VOID THE U.L. LISTING, ETL LISTING (OR OTHER THIRD PARTY LISTING) AND/OR THE MANUFACTURER'S WARRANTY OF A DEVICE WILL NOT BE PERMITTED.
- CONTRACTOR SHALL COORDINATE NEW WORK AND ANY POWER OUTAGES TO EXISTING EQUIPMENT WITH THE RESPECTIVE USER PERSONNEL & THE AIRPORT DIRECTOR.
- ALL EQUIPMENT NOT LABELED AS EXISTING IS NEW.
- PROVIDE A WEATHERPROOF ENGRAVED PHENOLIC OR PLASTIC LEGEND PLATE FOR THE SAFETY SWITCH AT THE RESPECTIVE GATE OPERATOR LABELED "GATE NO. 7, 120 VAC, FED FROM PANEL M4".
- FURNISH AND INSTALL A LOW VOLTAGE LINE PROTECTOR FOR THE EXISTING CARD READER UNIT. LOW VOLTAGE LINE PROTECTOR SHALL BE SUITABLE FOR USE ON THE RESPECTIVE CONTROL VOLTAGE SYSTEM USED IN THE CARD READER UNIT, AC OR DC PROTECTION MODES (AS APPLICABLE) ON ALL LINES WITH A SURGE CURRENT RATING OF 2000 AMPS (MINIMUM). LOW VOLTAGE LINE PROTECTOR FOR 12 VDC, 24 VDC, OR 24 VAC APPLICATIONS SHALL BE DITEK CORPORATION, MODEL DTK-4LVL-CP, OR APPROVED EQUAL. LOCATE INSIDE GATE OPERATOR HOUSING.
- FURNISH AND INSTALL A #12 AWG EQUIPMENT GROUND WIRE FROM THE GATE OPERATOR TO THE CARD READER UNIT IN THE EXISTING CONTROL WIRING CONDUIT.
- CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS.
- WORK SHOWN ON THIS SHEET SHALL BE PAID FOR UNDER ITEM AT109200.

WORK SHOWN ON THIS SHEET IS FOR ADDITIVE ALTERNATE NO. 2



GATE NO. 7 ELECTRICAL ONE LINE



PANEL M4 & GATE NO. 7 CONDUIT ELEVATION DETAIL

NOTE: TRANSITION FROM PVC TO GRSC & 2" CONCRETE ENCASEMENT REQUIRED TO COMPLY WITH NEC 511.4 & NEC 501.5(A)(4) EXCEPTION NO. 1. ALSO SEE NEC 230.6(2).

REPLACE EXISTING 120VAC BRANCH CIRCUIT CONDUCTORS WITH 1 #8 THWN, 1 #8 THWN NEUTRAL (WHITE), 1 #8 GND (GREEN) AND INSTALL IN EXISTING 3.5" CONDUIT. DISTANCE TO LOAD CENTER IS APPROXIMATELY 150'. CONTRACTOR SHALL FIELD VERIFY ACTUAL CABLE LENGTHS & ADJUST AS APPLICABLE.

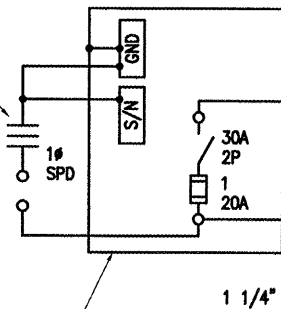
EXISTING CKT BKR

EXISTING FEEDER CIRCUIT IN CONDUIT & WIREWAY. FURNISH & INSTALL #6 EQUIPT GND WIRE WITH EXISTING FEEDER CIRCUIT FROM ORIGIN OF FEEDER TO LOAD CENTER.

FURNISH & INSTALL EQUIPT GND BAR

EXISTING SQUARE D QO LOAD CENTER AT FIRE STATION

UL LISTED PER UL 1449, AC SURGE PROTECTOR SUITABLE FOR 120 VAC, 1PH, 2 WIRE PLUS GROUND SYSTEM WITH SURGE CURRENT RATING OF 40 KA (MIN.), 8x20 MICROSECOND WAVE, AND STATUS INDICATION LIGHTS IN A WEATHERPROOF HOUSING, JOSLYN MODEL 1260-21, OR APPROVED EQUAL. MAINTAIN LEADS AS SHORT & AS STRAIGHT AS POSSIBLE. INSTALL AT SAFETY SWITCH WHERE LUGS ARE RATED FOR 2 CONDUCTORS, OR PROVIDE SPLIT BOLT CONNECTORS IN EXISTING J-BOX & CONNECT AT J-BOX.



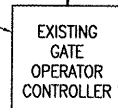
FURNISH & INSTALL GND BAR/LUGS

EXISTING J-BOX AT GATE OPERATOR

FURNISH & INSTALL 30 AMP, 2 POLE, 240 VAC, U.L. LISTED, HEAVY DUTY FUSIBLE SAFETY SWITCH IN A NEMA 4X STAINLESS STEEL ENCLOSURE, SQUARE D CLASS 3110, CAT. NO. H221DS WITH SOLID NEUTRAL KIT & EQUIPT GND BAR, OR APPROVED EQUAL. PROVIDE 1 UL LISTED CLASS RK5 FUSE AS MANUFACTURED BY BUSSMANN, SIZED AS REQUIRED FOR THE RESPECTIVE GATE OPERATOR IN ACCORDANCE WITH THE GATE OPERATOR MANUFACTURER'S RECOMMENDATIONS AND PER THE REQUIREMENTS OF NEC. INCLUDE 1 SPARE FUSE OF THE SAME SIZE AND TYPE. LOCATE SAFETY SWITCH NEAR GATE OPERATOR AND PROVIDE STAINLESS STEEL STRUT SUPPORT WITH CORROSION RESISTANT HARDWARE. NOTE SAFETY SWITCH SHALL NOT BE USED AS A SPLICE BOX OR A PULL BOX.

1 #10 THWN, 1 #10 NEUTRAL, 1 #10 GND IN 3/4" LTFMC

EXISTING GATE OPERATOR FEDERAL APD MODEL 23-7661 SERIAL NO. 2959-9245, 115 VAC, 60 HZ, 1PH, 12 AMPS, 3/4 HP



BOND GND ROD TO GATE OPERATOR FRAME WITH #6 AWG BARE STRANDED COPPER CONDUCTOR. CONNECTION TO GND ROD SHALL BE EXOTHERMIC WELD. CONNECTION TO GATE OPERATOR FRAME SHALL BE WITH A TWO-HOLE TONGUE COMPRESSION LUG BOLTED TO THE FRAME. BOND EQUIPT. GND WIRE TO FRAME TO ENSURE CONTINUITY TO GND ROD.

FURNISH & INSTALL 3/4" x 10' U.L. LISTED COPPERCLAD GND ROD. CORE PAVEMENT TO INSTALL GROUND ROD ADJACENT TO GATE OPERATOR. TOP OF GND ROD SHALL BE 6" OR LESS ABOVE GRADE TO MINIMIZE DISTURBANCE TO PAVEMENT.

FIRE STATION GATE ELECTRICAL ONE LINE

ELECTRICAL NOTES

1. THE FIRE STATION ELECTRIC SLIDE GATE IS LOCATED AT THE FIRE STATION AT THE WEST SIDE OF THE AIRPORT.
2. ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN CONFORMANCE WITH NFPA 70 - NATIONAL ELECTRICAL CODE (NEC) MOST CURRENT ISSUE IN FORCE, THE RESPECTIVE EQUIPMENT MANUFACTURER'S DIRECTIONS AND ALL OTHER APPLICABLE LOCAL CODES, LAWS, ORDINANCES, AND REQUIREMENTS IN FORCE. ANY INSTALLATIONS WHICH VOID THE U.L. LISTING, ETL LISTING (OR OTHER THIRD PARTY LISTING) AND/OR THE MANUFACTURER'S WARRANTY OF A DEVICE WILL NOT BE PERMITTED.
3. CONTRACTOR SHALL COORDINATE NEW WORK AND ANY POWER OUTAGES TO EXISTING EQUIPMENT WITH THE RESPECTIVE USER PERSONNEL & THE AIRPORT DIRECTOR.
4. ALL EQUIPMENT NOT LABELED AS EXISTING IS NEW.
5. PROVIDE A WEATHERPROOF ENGRAVED PHENOLIC OR PLASTIC LEGEND PLATE FOR THE SAFETY SWITCH AT THE RESPECTIVE GATE OPERATOR LABELED "FIRE STATION GATE, 120 VAC, FED FROM FIRE STN LOAD CENTER".
6. FURNISH AND INSTALL A #12 AWG EQUIPMENT GROUND WIRE FROM THE GATE OPERATOR TO THE CARD READER UNIT IN THE EXISTING CONTROL WIRING CONDUIT.
7. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS.
8. EXISTING LTFMC (LIQUID TIGHT FLEXIBLE METAL CONDUIT) AT THE GATE OPERATOR IS IN POOR CONDITION. REPLACE ALL EXISTING LTFMC WITH NEW. LIQUID TIGHT FLEXIBLE METAL CONDUIT AND ASSOCIATED FITTINGS SHALL BE U.L. LISTED TO MEET THE REQUIREMENTS OF NEC 350.6 SUITABLE FOR GROUNDING AND SUNLIGHT RESISTANT. LIQUID TIGHT FLEXIBLE METAL CONDUIT THAT IS USED FOR FLEXIBILITY (INCLUDING CONNECTIONS TO GATE OPERATORS) SHALL REQUIRE AN EXTERNAL BONDING JUMPER OR INTERNAL EQUIPMENT GROUNDING CONDUCTOR PER NEC 350.60. DO NOT INSTALL LIQUID TIGHT FLEXIBLE METAL CONDUIT THAT IS NOT UL LISTED.
9. WORK SHOWN ON THIS SHEET SHALL BE PAID FOR UNDER ITEM AT109200.

WORK SHOWN ON THIS SHEET IS FOR ADDITIVE ALTERNATE NO. 2

BY	
REVISION	
DATE	

MT. VERNON AIRPORT  

 MT. VERNON, ILLINOIS  
 I.L. PROJ.: MVN-3818  
 A.I.P. PROJ.: 3-17-0074-B18

Hanson Project No.	08A0003D
Filename	E-606.DWG
State	NONE
Date	06/18/08
LAYOUT	KNL 12/02/05
DRAWN	MV 12/02/05
REVIEWED	LDP 12/16/05

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REHABILITATE TAXIWAYS  
 "C" AND "D"  
 INSTALL ELECTRICAL  
 EQUIPMENT  
 FIRE STATION GATE  
 ELECTRICAL ONE LINE