





**SCOPE OF WORK**

THIS PROJECT CONSISTS OF REMOVING 5 UNLIT WIND CONES AND INSTALLING 6 LIGHTED SUPPLEMENTAL WIND CONES. ASSOCIATED WORK ITEMS WILL BE VAULT WORK, POWER CABLES, & DUCT.

**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.

THE CONTRACTOR WILL CONTACT THE AIRPORT MANAGEMENT FOR ADDITIONAL GUIDANCE AND TRAINING FOR AIRPORT SECURITY PROCEDURES.

ALL ACCESS GATES WILL BE LOCKED WHEN NOT IN USE. DURING PERIODS OF CONTINUOUS HAULING OPERATIONS, THE CONTRACTOR WILL FURNISH AN EMPLOYEE AT ALL ACCESS GATES TO MONITOR TRAFFIC THROUGH THE ACCESS GATES.

**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 WILL 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.

ANY NECESSARY ADJUSTMENTS TO THE INSTALLATION OF DUCTS OR CABLE WILL BE COORDINATED WITH THE RESIDENT ENGINEER AND THE UTILITY COMPANY.

**HEIGHT OF CONSTRUCTION EQUIPMENT**

THE MAXIMUM ANTICIPATED HEIGHT OF THE CONSTRUCTION EQUIPMENT WILL BE 15 FEET. THE TALLEST EQUIPMENT IS EXPECTED TO BE A CONCRETE TRUCK.

**HAUL ROUTE AND VEHICLE PARKING**

THE CONTRACTOR WILL USE THE DESIGNATED HAUL ROUTE AND PARKING AREA AS SHOWN ON THIS SHEET. THE PROPOSED PARKING AREA WILL BE AS SHOWN ON THIS SHEET. 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 RESTORE THE HAUL ROUTE AND PARKING AREA TO ITS ORIGINAL STATE. RESTORATION OF THE HAUL ROUTE AND PARKING AREA WILL BE CONSIDERED INCIDENTAL TO THE PROJECT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

**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 SHALL KEEP TWO RUNWAYS OPEN AT ALL TIMES AND MAINTAIN CONTINUOUS TAXIWAY ACCESS TO ALL HANGARS AND ADMINISTRATIVE AREAS.

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

A RUNWAY CLOSURE WILL BE LIMITED TO 10 HOURS OR LESS.

NO TRENCHES OR HOLES WILL REMAIN OPEN OVERNIGHT.

NO RUNWAY SHALL BE CLOSED OVERNIGHT.

**LEGEND**

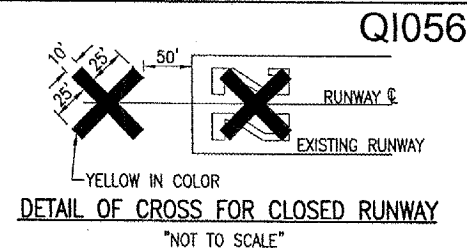
- EXISTING IMPROVEMENTS
- PROPOSED IMPROVEMENTS / SUPPLEMENTAL LIGHTED WIND CONES
- EXISTING BUILDINGS
- PROPOSED HAUL ROUTE AND EQUIPMENT PARKING AREA

**BARRICADES AND TRAFFIC CONES**

IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO PLACE AND MAINTAIN BARRICADES AND TRAFFIC CONES AS DIRECTED BY THE AIRPORT MANAGER. THE BARRICADES WILL BE EQUIPPED WITH RED FLASHING OR RED STEADY BURN LIGHTS AND 20" SQUARE ORANGE FLAGS. THE BARRICADES, THEIR MAINTENANCE, PLACEMENT AND REMOVAL WILL BE CONSIDERED AS AN INCIDENTAL ITEM TO THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

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. CALL FEDERAL AVIATION ADMINISTRATION TO LOCATE THEIR CABLES.



**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 RESIDENT ENGINEER AND REVIEWED BY THE AIRPORT DIRECTOR. THE CROSSES WILL BE PLACED OVER THE NUMERALS AND SECURED IN A MANNER APPROVED BY THE AIRPORT DIRECTOR. 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. ALL RUNWAY CLOSURES WILL BE DONE IN ACCORDANCE WITH ALL PERTINENT FAA ADVISORY CIRCULARS. ALL RUNWAY CLOSURE PROCEDURES WILL BE REVIEWED BY THE AIRPORT DIRECTOR AND COORDINATED WITH THE RESIDENT ENGINEER.

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

COUNTY: ADAMS  
 CITY: QUINCY  
 TOWNSHIP: GLIMER  
 SECTION NO.: 34  
 ADDRESS: QUINCY REGIONAL AIRPORT - BALDWIN FIELD  
 1645 HIGHWAY 104  
 QUINCY, ILLINOIS 62305

AIRPORT DIRECTOR: (217) 535-3285

**PROPOSED SAFETY PLAN**

GENERAL - THE QUINCY REGIONAL AIRPORT IS COMPRISED OF THREE RUNWAYS. THE PROPOSED CONSTRUCTION WILL NECESSITATE CLOSING ALL THE RUNWAYS. ANY TIME THE CONTRACTOR IS WORKING WITHIN 200' OF THE RUNWAY CENTERLINE THE RUNWAY WILL BE CLOSED. THE RUNWAY WILL BE CLOSED ONLY DURING THE CONSTRUCTION DAY. AT THE END OF EACH CONSTRUCTION DAY THE CONTRACTOR WILL SMOOTH GRADE ALL AREAS WITHIN THE SAFETY AREA TO THE SATISFACTION OF THE RESIDENT ENGINEER AND RE-OPEN THE RUNWAY. ALL WORK INCLUDED IN OPENING AND CLOSING THE RUNWAY WILL BE CONSIDERED INCIDENTAL TO THE PROJECT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

ALL CONTRACTOR PERSONNEL, WHO WILL BE OPERATING VEHICLES ON THE AIR SIDE OF THE SECURITY FENCE, WILL BE REQUIRED TO COMPLETE TRAINING AND CERTIFICATION TESTING IN ACCORDANCE WITH 14CFR PART 139. ALL TRAINING AND TESTING WILL BE DONE BY AIRPORT PERSONNEL. ALL FEES ASSOCIATED WITH THIS TRAINING AND TESTING WILL BE PAID BY THE CONTRACTOR AND WILL BE CONSIDERED AS AN INCIDENTAL ITEM TO THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

RUNWAY 4-22 CLOSURE - BEFORE THIS RUNWAY CAN BE CLOSED THE CONTRACTOR MUST CONTACT THE AIRPORT DIRECTOR TO DETERMINE IF IFR CONDITIONS PREVAIL (CEILING HT. < 1,000 FT. AND VISIBILITY < 3 MILES). IF IFR CONDITIONS PREVAIL, THEN RUNWAY 4-22 WILL NOT BE CLOSED. WHEN THE AIRPORT DIRECTOR DETERMINES THAT IFR CONDITIONS ARE NO LONGER PREVAILING, THE RUNWAY CAN BE CLOSED FOR CONSTRUCTION.

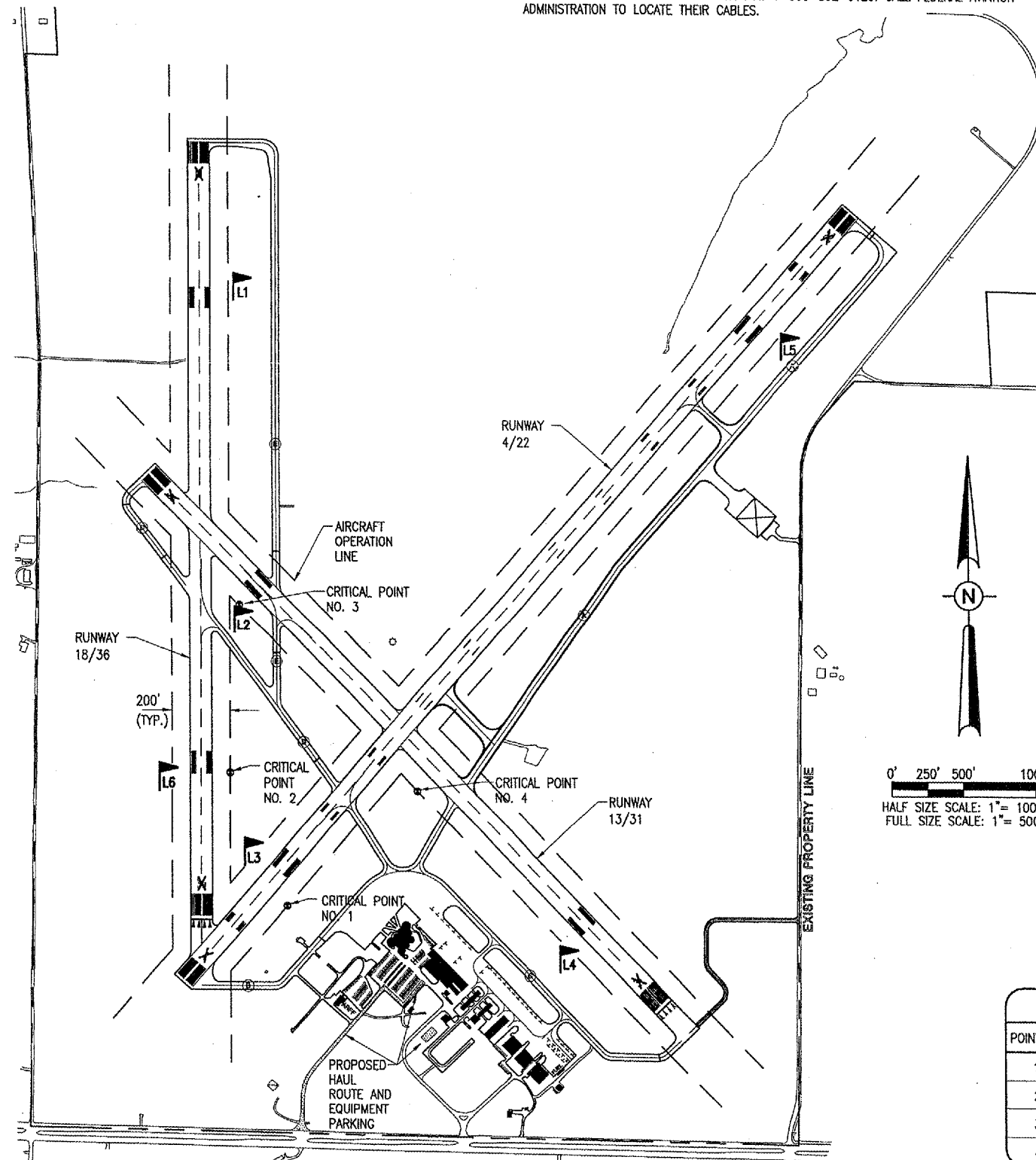
WHENEVER THERE ARE STRONG CROSSWINDS, THE CONTRACTOR WILL CONTACT THE AIRPORT DIRECTOR TO DETERMINE IF A GIVEN RUNWAY CAN BE CLOSED. THE AIRPORT DIRECTOR WILL MAKE THE FINAL DECISION AS TO WHEN THE CROSSWIND COMPONENT HAS DECREASED SUFFICIENTLY TO ALLOW CLOSURE.

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 QUINCY REGIONAL 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.

**EROSION CONTROL**

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



**CRITICAL POINT DATA**

POINT NO.	DESCRIPTION	LATITUDE	LONGITUDE	ELEVATION
1	RUNWAY 4-22, STATION 200+77, 200' RT.	39°56'15.47"	91°11'49.18"	756.8
2	RUNWAY 18-36, STATION 136+90, 200' RT.	39°56'23.28"	91°11'54.38"	759.4
3	RUNWAY 13-31, STATION 81+03, 200' RT.	39°56'35.90"	91°11'53.80"	762.2
4	RUNWAY 13-31, STATION 98+80, 200' RT.	39°56'23.41"	91°11'37.74"	761.4

JUL 10, 2006 2:55 PM CCC  
 I:\AIRPORTS\QUINCY\824-0685WC\AIRPORT\SHEETS\R-0035CY.DWG - Layout1

DATE		REVISION			
QUINCY REGIONAL AIRPORT BALDWIN FIELD ADAMS COUNTY, ILLINOIS					
A.I.P. PROJ.: 3-17-0085-XX I.L. PROJ.: UN-3618					
ILL. PROJECT NO.: 824-0685WC 0240 DRAWING NO.: R-0035CY.DWG SCALE: 1" = 500' DATE: 05/19/06	LAYOUT: KNL 05/15/06 DRAWN: BAK 05/15/06 REVIEWED: CAH 05/19/06				
Hanson Professional Services Inc. 1525 South Sixth Street Springfield, Illinois 62703-2886 Offices Nationwide					
INSTALL WIND CONES PROPOSED SAFETY PLAN					
3					
3 of 16 sheets					

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

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

ELECTRICAL ABBREVIATIONS	
A.F.F.	ABOVE FINISHED FLOOR
A, AMP	AMPERES
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
BKR	BREAKER
C	CONDUIT
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CR	CONTROL RELAY
CU	COPPER
DPDT	DOUBLE POLE DOUBLE THROW
DPST	DOUBLE POLE SINGLE THROW
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
ENCL	ENCLOSURE
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)
LTC	LIGHTING
LP	LIGHTING PANEL
MAX	MAXIMUM
MCB	MAIN CIRCUIT BREAKER
MCM	THOUSAND CIRCLUAR MIL
MDP	MAIN DISTRIBUTION PANEL
MFR	MANUFACTURER
MH	METAL HALIDE
MIN	MINIMUM
MLO	MAIN LUGS ONLY
NEC	NATIONAL ELECTRICAL CODE (NFPA 70)
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OHE	OVERHEAD ELECTRIC
OL	OVERLOAD

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

AIRPORT EQUIPMENT ABBREVIATIONS	
CCR	CONSTANT CURRENT REGULATOR
HRL	HIGH INTENSITY RUNWAY LIGHT
MRL	MEDIUM INTENSITY RUNWAY LIGHT
MTL	MEDIUM INTENSITY TAXIWAY LIGHT
NDB	NON-DIRECTIONAL BEACON
PAPI	PRECISION APPROACH PATH INDICATOR
PLSI	PULSE LIGHT APPROACH SLOPE INDICATOR
REL	RUNWAY END IDENTIFIER LIGHT
VADI	VSUAL APPROACH DESCENT INDICATOR
VASI	VSUAL APPROACH SLOPE INDICATOR
WC	WIND CONE

**NOTES:**

- ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN CONFORMANCE WITH NFPA 70 (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 SHALL NOT BE PERMITTED.
- CONTRACTOR SHALL COORDINATE WORK AND ANY POWER OUTAGES WITH THE RESPECTIVE FACILITY OWNER PERSONNEL AND THE AIRPORT DIRECTOR.
- 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. STANDARD COLORS FOR POWER WIRING AND BRANCH CIRCUITS SHALL BE AS FOLLOWS:

480/277 VAC, 3 PHASE, 4 WIRE  
 PHASE A BROWN  
 PHASE B ORANGE  
 PHASE C YELLOW  
 NEUTRAL GRAY  
 GROUND GREEN

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

DATE	REVISION	BY

QUINCY REGIONAL AIRPORT  
 BALDWIN FIELD  
 ADAMS COUNTY, ILLINOIS

ILL. PROJ.: UIN-3618 A.I.P. PROJ.: 3-17-0085-XX

HEB Project No. 824-06SWCD_0240	05/19/06
Filename E-001.DWG	05/16/06
State NONE	05/17/06
Date 05/19/06	05/18/06
LAYOUT	KNL
DRAWN	MY
REVIEWED	CAH

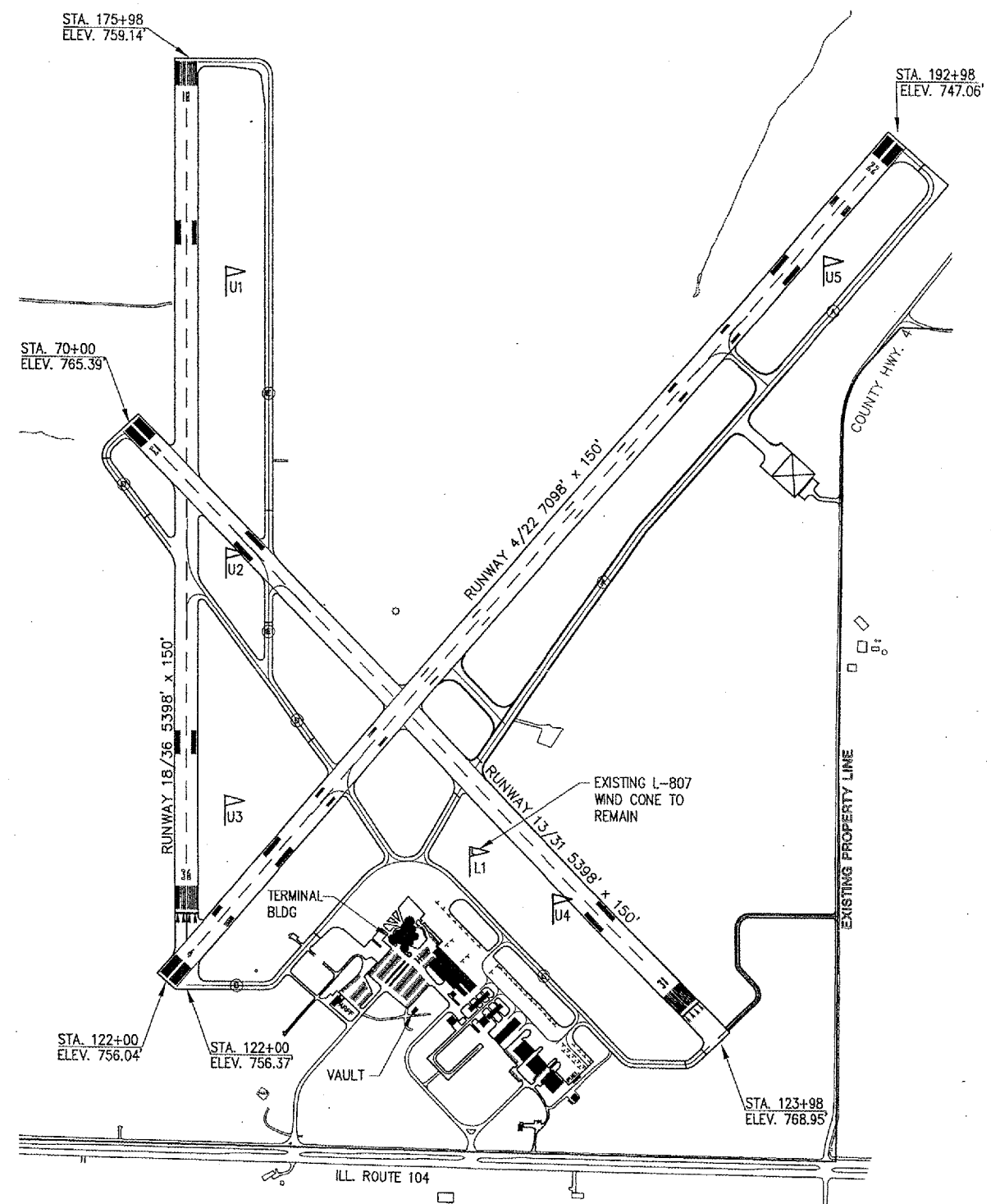
Hanson Professional Services Inc.  
 1626 South Sixth Street  
 Springfield, Illinois 62703-2686  
 Offices Nationwide

INSTALL  
 WIND CONES

ELECTRICAL LEGEND  
 AND ABBREVIATIONS

**4**

4 of 16 sheets



**WIND CONE REMOVAL NOTES**

- EXISTING UNLIT L-806 SUPPLEMENTAL WIND CONES SHALL BE REMOVED. THE CONTRACTOR SHALL COORDINATE THE REMOVAL OF EXISTING UNLIT WIND CONES WITH THE INSTALLATION OF THE EACH NEW SUPPLEMENTAL LIGHTED WIND CONE TO MINIMIZE THE TIME WHEN THE AIRPORT IS WITHOUT A SUPPLEMENTAL WIND CONE AT THAT RESPECTIVE RUNWAY END. THE CONTRACTOR SHALL ALSO COORDINATE WITH AND NOTIFY THE AIRPORT DIRECTOR AND THE RESIDENT ENGINEER AND PROVIDE A SCHEDULE FOR WIND CONE REMOVAL AND THE INSTALLATION OF THE NEW SUPPLEMENTAL LIGHTED WIND CONES. THE CONTRACTOR WILL TURN EACH WIND CONE AND SUPPORT POLE OVER TO THE AIRPORT DIRECTOR. THE CONCRETE BASE/FOUNDATION WILL BE DISPOSED OF OFF THE AIRPORT SITE, IN A LEGAL MANNER, AT THE EXPENSE OF THE CONTRACTOR.
- THE HOLES LEFT FROM THE BASE/FOUNDATION REMOVAL WILL BE FILLED WITH EARTH MATERIAL. THE EARTH MATERIAL WILL BE COMPACTED TO PREVENT ANY FUTURE SETTLEMENT. THE EARTH MATERIAL WILL BE OBTAINED FROM OFF THE AIRPORT SITE. THE DISTURBED AREA WILL BE RESTORED, GRADED, AND SEEDED TO THE SATISFACTION OF THE ENGINEER AND IS CONSIDERED INCIDENTAL TO THE REMOVAL OF THE WIND CONE.
- THE EXISTING L-807 LIGHTED WIND CONE SHALL REMAIN IN PLACE.
- REMOVAL OF EXISTING UNLIT WIND CONES SHALL BE PAID FOR UNDER ITEM AR107900 REMOVE WIND CONE - PER EACH.

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.

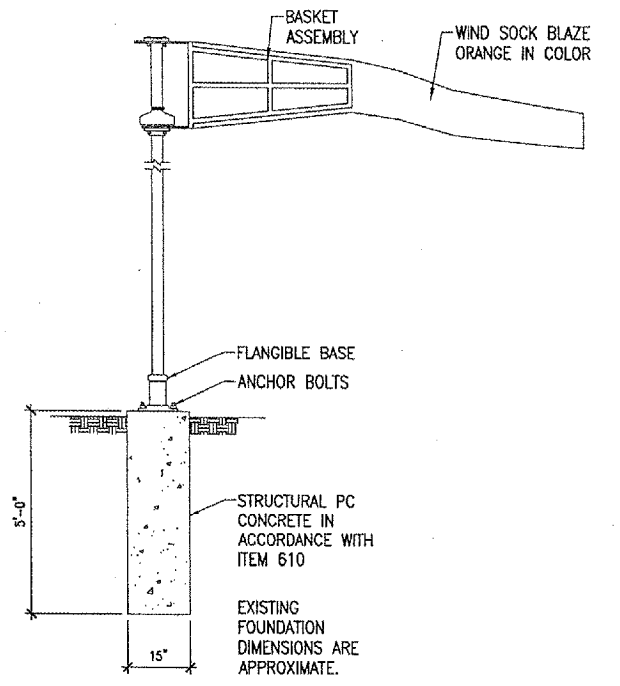
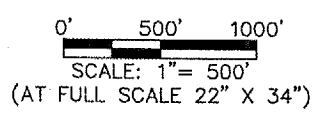
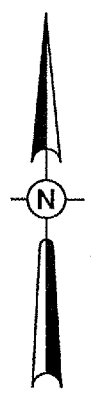
CALL J.U.L.I.E. FOR UTILITY INFORMATION AT 1-800-892-0123. CONTACT AIRPORT PERSONNEL FOR ASSISTANCE IN LOCATING AIRPORT CABLES. CONTACT FAA FOR ASSISTANCE IN LOCATING FAA CABLES

SUMMARY OF PROPOSED QUANTITIES (THIS SHEET)			
ITEM NUMBER	DESCRIPTION	UNIT	QUANTITY
AR107900	REMOVE WIND CONE	EA	5

EXISTING L-806 - WIND CONE LOCATION DATA				
	DESCRIPTION	NORTHING	EASTING	
U1	RUNWAY 18/36 STA. 165+98 250' RT OF C	1,196,634.41	2,007,329.38	
U2	RUNWAY 13/31 STA. 81+35 250' RT OF C	1,194,829.14	2,007,329.50	
U3	RUNWAY 18/36 STA. 132+43 250' RT OF C	1,193,280.41	2,007,329.38	
U4	RUNWAY 13/31 STA. 111+25 250' RT OF C	1,192,678.81	2,009,407.04	
U5	RUNWAY 4/22 STA. 182+98 250' RT OF C	1,196,725.24	2,011,135.19	

EXISTING L-807 - WIND CONE LOCATION DATA				
	DESCRIPTION	NORTHING	EASTING	
L1	RUNWAY 13/31 STA. 105+49.80 425.36' RT OF C	1,192,970.63	2,008,881.26	

- LEGEND**
- EXISTING AIRPORT IMPROVEMENTS / PAVEMENT
  - EXISTING BUILDINGS
  - BENCHMARK
  - PROPOSED IMPROVEMENTS
  - DESIGNATED TAXIWAY
  - EXISTING L-806 8' WIND CONE (UNLIT)
  - EXISTING L-807 12' WIND CONE (LIT)



EXISTING UNLIT L806 WIND CONE  
NOT TO SCALE

DATE	REVISION	BY

QUINCY REGIONAL AIRPORT  
BALDWIN FIELD  
ADAMS COUNTY, ILLINOIS

IL PROJ.: UIN-3618  
A.I.P. PROJ.: 3-17-0085-XX

FILE PROJECT No. 824-06SWCD_0240	DATE 05/19/06
FILENAME EXISTING_WINDSOCKS.DWG	LAYOUT KNL 05/17/06
SCALE AS SHOWN	DRAWN MV 05/17/06
DATE 05/19/06	REVIEWED CAH 05/18/06

**HANSON**

Hanson Professional Services Inc.  
1626 South Sixth Street  
Springfield, Illinois 62703-2886  
Offices Nationwide

INSTALL WIND CONES  
WIND CONE REMOVAL PLAN

JUN 29, 2006 3:18 PM BAK I:\AIRPORTS\QUINCY\824-06SWC\AIRPORT\_SHEETS\EXISTING\_WINDSOCKS.DWG - WINDSOCK LAYOUT

MATCHLINE STA. 152+00

PROPOSED 4" DIRECTIONAL BORE DUCT (AR110014) 170 L.F.

PROPOSED 4" DIRECTIONAL BORE DUCT (AR110014) 70 L.F.

PROPOSED 2/C #8 5KV UG CABLE IN UNIT DUCT (AR108258)

PROPOSED 4" DIRECTIONAL BORE DUCT (AR110014) 170 L.F.

PROPOSED 4" DIRECTIONAL BORE DUCT (AR110014) 170 L.F.

PROPOSED SPLICE CAN (AR125565)

PROPOSED SPLICE CAN (AR125565)

PROPOSED 4" DIRECTIONAL BORE DUCT (AR110014) 170 L.F.

PROPOSED SPLICE CAN (AR125565)

PROPOSED 4" DIRECTIONAL BORE DUCT (AR110014) 100 L.F.

PROPOSED 4" DIRECTIONAL BORE DUCT (AR110014) 80 L.F. COORDINATE DUCT LOCATION TO AVOID INTERFERENCE WITH TAXIWAY LIGHTS.

PROPOSED 4" DIRECTIONAL BORE DUCT (AR110014) 70 L.F.

PROPOSED SPLICE CAN (AR125565)

PROPOSED 4" DIRECTIONAL BORE DUCT (AR110014) 90 L.F.

STA 122+00 ELEV. 756.37

INSTALL 2/C #8 5KV UG CABLE IN UD IN EXISTING SPARE DUCT FROM RESPECTIVE MANHOLE/HANDHOLE TO THE VAULT.

**L-806 - WIND CONE LOCATION DATA**

	DESCRIPTION	NORTHING	EASTING
L2	RUNWAY 13/31 STA. 81+60 260' RT OF CENTERLINE	1,194,812.47	2,007,339.69
L3	RUNWAY 4/22 STA. 132+00 260' LT OF CENTERLINE	1,193,212.05	2,007,407.88
L4	RUNWAY 13/31 STA. 113+98 260' RT OF CENTERLINE	1,192,475.91	2,009,589.86
L6	RUNWAY 18/36 STA. 136+78 260' LT OF CENTERLINE	1,193,715.41	2,006,819.69

**WIND CONE NOTES**  
 THE PROPOSED WIND CONES SHALL BE INSTALLED AS SHOWN ON THIS SHEET & THE "WIND CONE ELEVATION DETAIL" SHEET, AND IN ACCORDANCE WITH THE SPECIAL PROVISIONS.

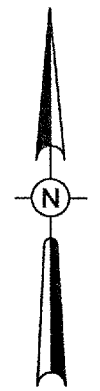
THE LOCATION, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND UTILITIES INDICATED ON THE PLANS IS NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND 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. CONTACT AIRPORT PERSONNEL FOR ASSISTANCE IN LOCATING AIRPORT CABLES. CONTACT FAA FOR ASSISTANCE IN LOCATING FAA CABLES

**SUMMARY OF PROPOSED QUANTITIES (THIS SHEET)**

ITEM NUMBER	DESCRIPTION	UNIT	QUANTITY
AR107408	L-806 WIND CONE - 8" LIGHTED	EA.	4
AR108258	2/C #8 5KV UG CABLE IN UD	L.F.	9,455
AR110014	4" DIRECTIONAL BORE	L.F.	1,090
AR125565	SPLICE CAN	EA.	4

- LEGEND**
- EXISTING PAVEMENT
  - EXISTING BUILDINGS
  - PROPOSED DUCT
  - PROPOSED 2/C #8 5KV UG CABLE IN UD L-824 TYPE C
  - EXISTING LIGHTED WIND CONE
  - PROPOSED SUPPLEMENTAL LIGHTED WIND CONE
  - PROPOSED SPLICE CAN
  - EXISTING ELECTRICAL CABLES



0' 100' 200' 400'  
 HALF SIZE SCALE: 1" = 400'  
 FULL SIZE SCALE: 1" = 200'

JUN 29, 2006 3:18 PM BAK I:\AIRPORTS\QUINCY\824-085WC\AIRPORT SHEETS\R-121CON.DWG - LAYOUT NO. 1

DATE	REVISION	BY			
<p><b>QUINCY REGIONAL AIRPORT</b>                  BALDWIN FIELD                  ADAMS COUNTY, ILLINOIS</p> <p>IL PROJ.: UN-351B A.I.P. PROJ.: 3-17-0085-XX</p>					
I&E Project No. 824-085WCD_0240 Filename: R-121CON.DWG Scale: 1" = 200' Date: 05/19/06	LAYOUT: KNL 05/19/06 DRAWN: BAK 05/19/06 REVIEWED: CAH xx/xx/xx	<p>Hanson Professional Services Inc.                  1525 South Sixth Street                  Springfield, Illinois 62705-2886                  Office: Natamnic</p>			
<p><b>INSTALL WIND CONES</b>                  PROPOSED ELECTRICAL PLAN</p>					
<p style="font-size: 2em; font-weight: bold;">6</p> 6 of 16 sheets					

L-806 - WIND CONE LOCATION DATA				
	DESCRIPTION	NORTHING	EASTING	
L1	RUNWAY 18/36 STA. 170+78 260' RT OF CENTERLINE	1,197,113.41	2,007,339.38	
L5	RUNWAY 4/22 STA. 182+98 260' RT OF CENTERLINE	1,196,718.69	2,011,142.74	

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. CONTACT AIRPORT PERSONNEL FOR ASSISTANCE IN LOCATING AIRPORT CABLES. CONTACT FAA FOR ASSISTANCE IN LOCATING FAA CABLES

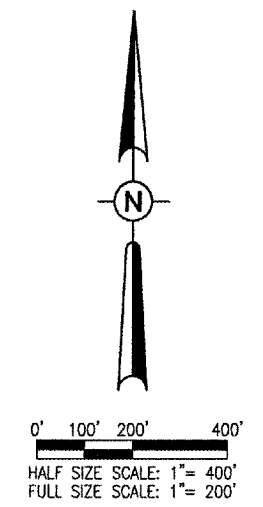
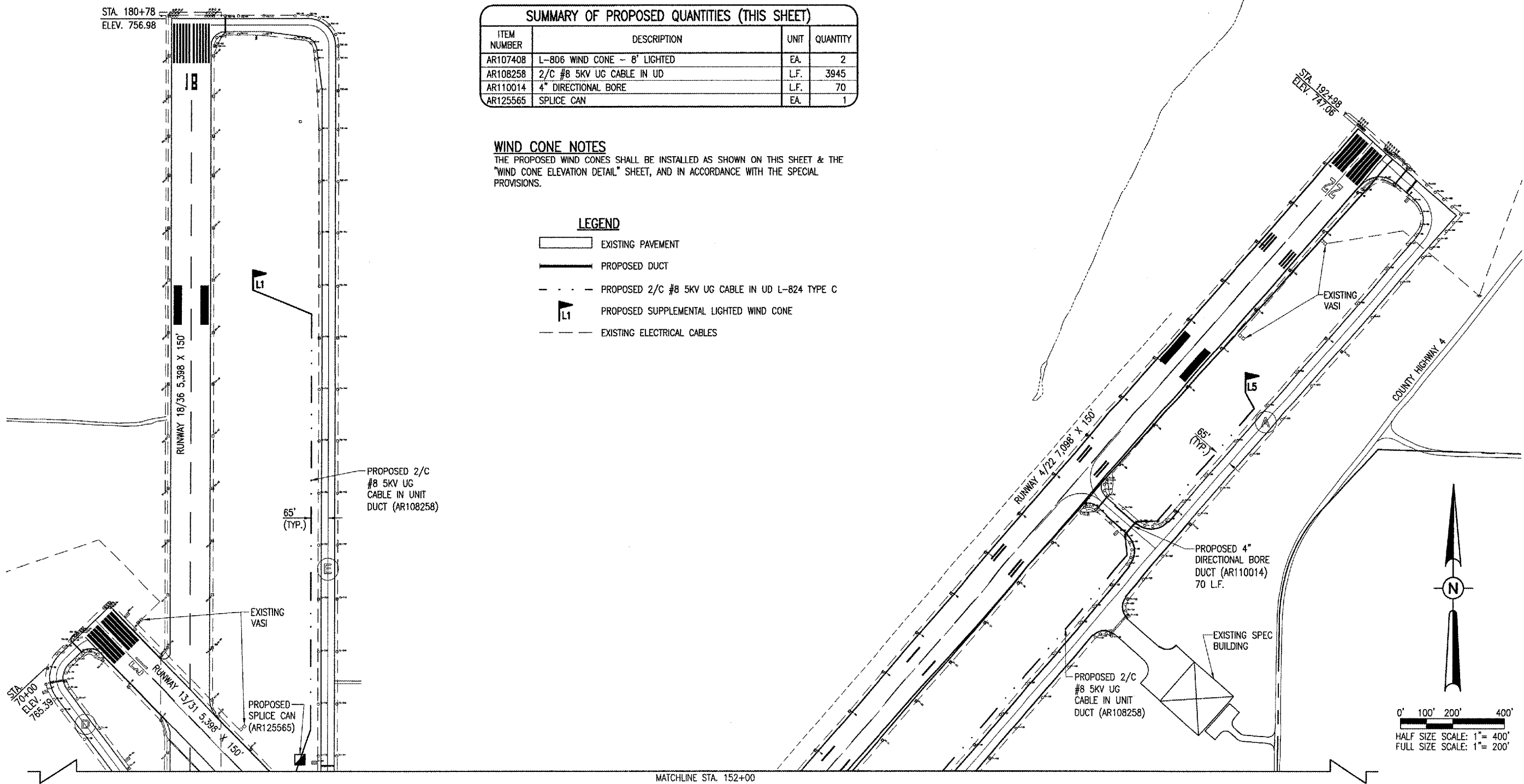
**DUCT MARKER NOTE**

AS PART OF THIS PROJECT THE CONTRACTOR WILL FURNISH AND INSTALL 10 - 2' X 2' CONCRETE DUCT MARKERS ON TAXIWAYS "A" AT THE LOCATIONS AS DETERMINED BY THE RESIDENT ENGINEER. WHAT IS PLACED ON THE DUCT MARKERS WILL BE DETERMINED BY THE RESIDENT ENGINEER. THESE DUCT MARKERS WILL BE CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH THE DETAILS SHOWN ON SHEET NO. 13. THESE DUCT MARKERS WILL BE CONSIDERED AS AN INCIDENTAL ITEM TO THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

SUMMARY OF PROPOSED QUANTITIES (THIS SHEET)				
ITEM NUMBER	DESCRIPTION	UNIT	QUANTITY	
AR107408	L-806 WIND CONE - 8' LIGHTED	EA.	2	
AR108258	2/C #8 5KV UG CABLE IN UD	L.F.	3945	
AR110014	4" DIRECTIONAL BORE	L.F.	70	
AR125565	SPLICE CAN	EA.	1	

**WIND CONE NOTES**  
 THE PROPOSED WIND CONES SHALL BE INSTALLED AS SHOWN ON THIS SHEET & THE "WIND CONE ELEVATION DETAIL" SHEET, AND IN ACCORDANCE WITH THE SPECIAL PROVISIONS.

- LEGEND**
- EXISTING PAVEMENT
  - PROPOSED DUCT
  - PROPOSED 2/C #8 5KV UG CABLE IN UD L-824 TYPE C
  - PROPOSED SUPPLEMENTAL LIGHTED WIND CONE
  - EXISTING ELECTRICAL CABLES



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DATE	REVISION	BY

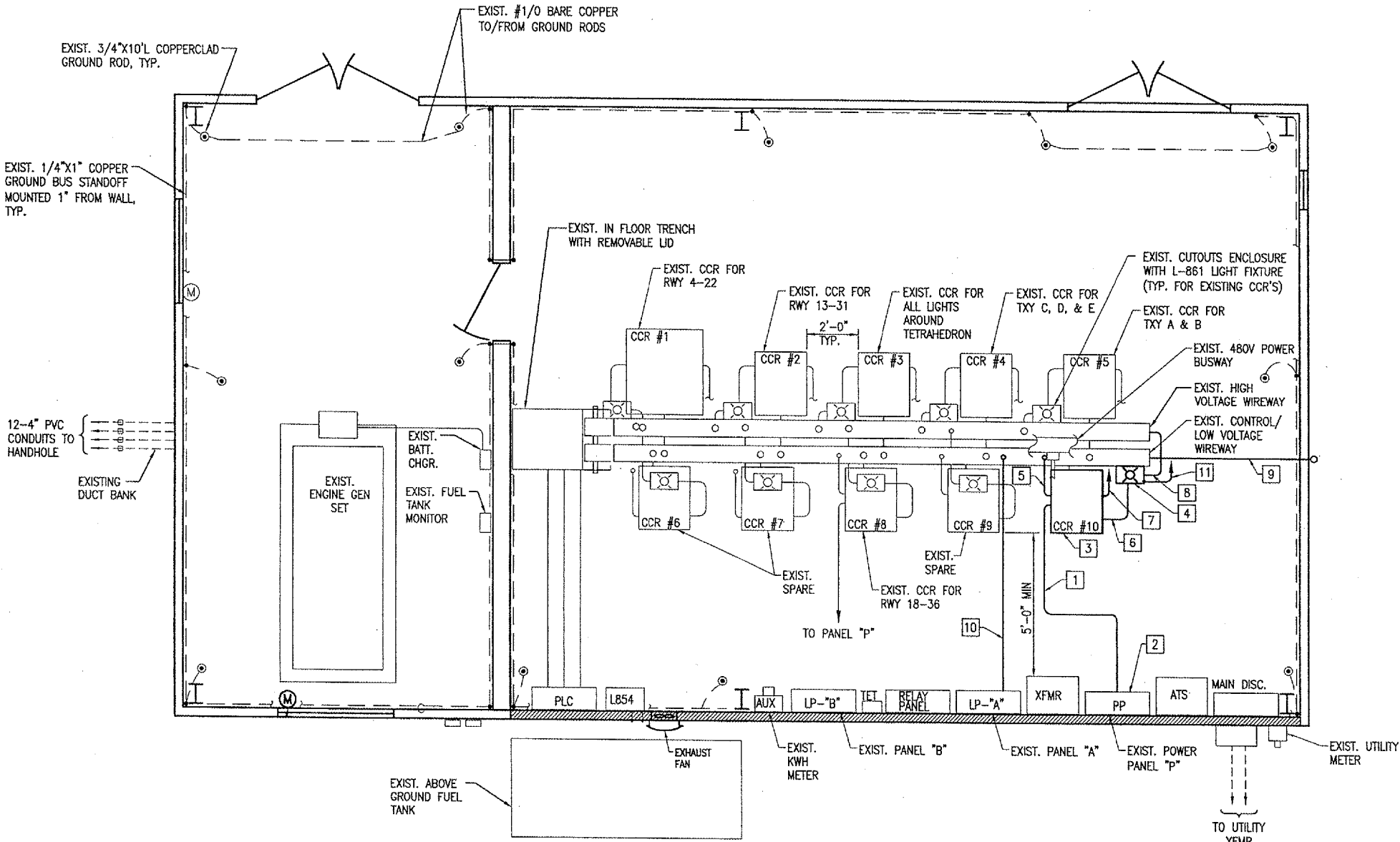
QUINCY REGIONAL AIRPORT  
 BALDWIN FIELD  
 ADAMS COUNTY, ILLINOIS

IL PROJ.: UIN-3618 A.I.P. PROJ.: 3-17-0085-XX

Project No.	824-06SWC02.040
Revision	R-121CON.DWG
Scale	1" = 200'
Date	05/19/06
LAYOUT	KNL 05/19/06
DRAWN	BAK 05/19/06
REVIEWED	CAH xx/xx/xx

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

INSTALL WIND CONES  
 PROPOSED ELECTRICAL  
 PLAN CONTINUED



**ELECTRICAL VAULT FLOOR PLAN**  
 SCALE 3/8"=1'-0"  
 2 0 2 4 FEET

**NOTES:**

1. ALL VAULT WORK AND/OR POWER OUTAGES SHALL BE COORDINATED WITH THE AIRPORT MANAGER.
2. ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN CONFORMANCE WITH NFPA70 (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 SHALL NOT BE PERMITTED.
3. CCR DENOTES CONSTANT CURRENT REGULATOR.
4. LIQUID TIGHT FLEXIBLE METAL CONDUIT AND ASSOCIATED FITTINGS SHALL BE U.L. LISTED TO MEET THE REQUIREMENTS OF NEC 350.6, SUITABLE FOR GROUNDING AND SUNLIGHT RESISTANT. LIQUID TIGHT FLEXIBLE METAL CONDUIT THAT IS USED FOR FLEXIBILITY (INCLUDING CONNECTIONS TO CCR'S & TRANSFORMERS) SHALL REQUIRE AN EXTERNAL BONDING JUMPER OR INTERNAL EQUIPMENT GROUNDING CONDUCTOR PER NEC 350.60. EXTERNAL BONDING JUMPERS USED WITH CCR INSTALLATIONS SHALL BE #6 AWG COPPER (MINIMUM). DO NOT INSTALL LIQUID TIGHT FLEXIBLE METAL CONDUIT THAT IS NOT UL LISTED.

**KEYED NOTES:**

- 1 2 #8 THWN, 1 #8 GND IN 3/4" GRSC WITH LIQ. TIGHT FLEX METAL CONDUIT AT FINAL CONNECTION TO CCR (480 VAC, 1 PHASE BRANCH CIRCUIT FROM POWER PANEL "P"). SEE NOTE 4.
- 2 SEE "VAULT ADDITIONS ONE LINE DIAGRAM" FOR NEW CIRCUIT BREAKER REQUIREMENTS FOR RESPECTIVE BRANCH CIRCUIT.
- 3 NEW CONSTANT CURRENT REGULATOR "CCR #10" FOR SUPPLEMENTAL WIND CONES.
- 4 SERIES PLUG CUTOFF CABINET WITH L-861 LIGHT FIXTURE. SEE DETAIL ON PROPOSED WIND CONE CONTROL SCHEMATIC SHEET. PROVIDE #6 AWG COPPER GND FROM ENCLOSURE FRAME TO VAULT GROUND BUS. PROVIDE ADEQUATE WORKING SPACE IN FRONT OF CUTOFF ENCLOSURE TO MEET NEC CLEARANCE REQUIREMENTS.
- 5 1 #12 THWN, 1 #12 NEUTRAL, 1 #12 GND IN 3/4" LIQ TIGHT FLEX METAL CONDUIT FROM LOW VOLTAGE WIREWAY TO CCR (PHOTOCELL CONTROL CIRCUIT). SEE NOTE 4.
- 6 2 #8 AWG FAA L-824 TYPE C, 5000V CABLES IN 1" LIQ. TIGHT FLEX METAL C. FROM CCR TO CUTOFF ENCLOSURE. SEE NOTE 4.
- 7 #6 AWG COPPER GROUND CONDUCTOR FROM CCR FROM TO VAULT GROUND BUS. CONNECT TO GROUND BUS WITH TWO-HOLE TONGUE COMPRESSION LUG.
- 8 2 #8 AWG FAA L-824 TYPE C, 5000V CABLES IN 1" GRSC WITH LIQ. TIGHT FLEX METAL C. AT FINAL CONNECTION TO SERIES PLUG CUTOFF CABINET (SUPPLEMENTAL WIND CONE LIGHTING CIRCUIT).
- 9 2 #12 THWN, 1 #12 NEUTRAL (PHOTOCELL WIRING) IN 3/4" GRSC TO JUST ABOVE ROOF LEVEL.
- 10 1 #12 THWN, 1 #12 NEUTRAL, 1 #12 GND IN 3/4" GRSC (120 VAC POWER FOR PHOTOCELL CONTROL CIRCUIT FROM PANEL "LP-A").
- 11 #6 AWG COPPER GROUND CONDUCTOR FROM CUTOFF ENCLOSURE TO VAULT GROUND BUS. CONNECT TO GROUND BUS & CUTOFF ENCLOSURE WITH TWO-HOLE TONGUE COMPRESSION LUG.

BY	REVISION	DATE

QUINCY REGIONAL AIRPORT  
 BALDWIN FIELD  
 ADAMS COUNTY, ILLINOIS

IL. PROJ.: UIN-3618  
 A.L.P. PROJ.: 3-17-0085-XX

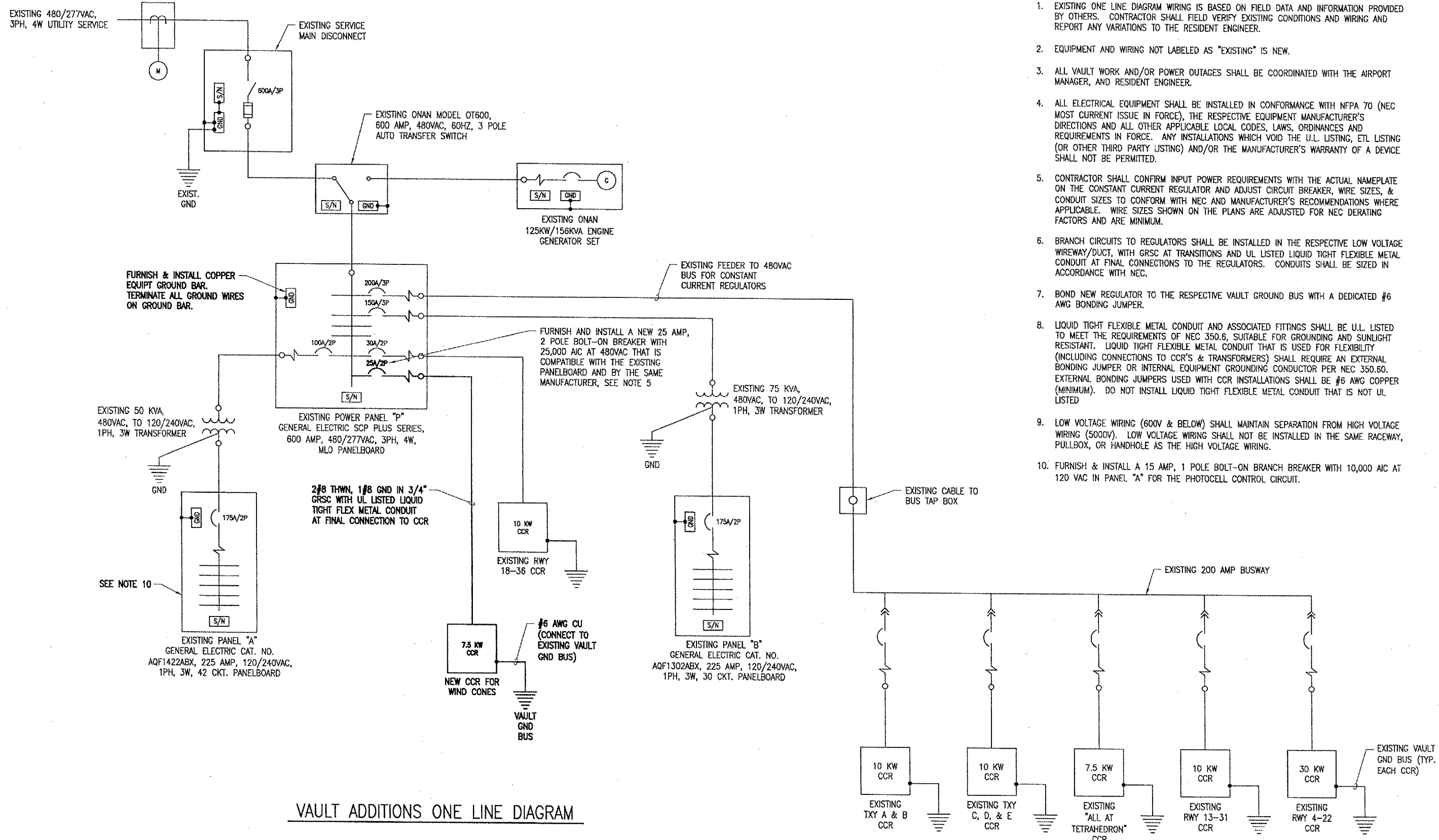
Proj. No. 824-06SWCD-0240	DATE 05/16/06
Drawn E-101.DWG	DATE 05/16/06
Scale 3/8" = 1'-0"	DATE 05/16/06
Date 05/19/06	DATE 05/16/06
LAYOUT KNL	DATE 05/16/06
DRAWN MV	DATE 05/16/06
REVIEWED CAH	DATE 05/16/06

**HANSON**  
 Hanson Professional Services Inc.  
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 Springfield, Illinois 62703-2886  
 Offices Nationwide

INSTALL  
 WIND CONES  
 PROPOSED ELECTRICAL  
 VAULT FLOOR PLAN

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VAULT ADDITIONS ONE LINE DIAGRAM

NOTES:

- EXISTING ONE LINE DIAGRAM WIRING IS BASED ON FIELD DATA AND INFORMATION PROVIDED BY OTHERS. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND WIRING AND REPORT ANY VARIATIONS TO THE RESIDENT ENGINEER.
- EQUIPMENT AND WIRING NOT LABELED AS "EXISTING" IS NEW.
- ALL VAULT WORK AND/OR POWER OUTAGES SHALL BE COORDINATED WITH THE AIRPORT MANAGER, AND RESIDENT ENGINEER.
- 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 U.L. LISTING, ETL LISTING (OR OTHER THIRD PARTY LISTING) AND/OR THE MANUFACTURER'S WARRANTY OF A DEVICE SHALL NOT BE PERMITTED.
- CONTRACTOR SHALL CONFIRM INPUT POWER REQUIREMENTS WITH THE ACTUAL NAMEPLATE ON THE CONSTANT CURRENT REGULATOR AND ADJUST CIRCUIT BREAKER, WIRE SIZES, & CONDUIT SIZES TO CONFORM WITH NEC AND MANUFACTURER'S RECOMMENDATIONS WHERE APPLICABLE. WIRE SIZES SHOWN ON THE PLANS ARE ADJUSTED FOR NEC DERATING FACTORS AND ARE MINIMUM.
- BRANCH CIRCUITS TO REGULATORS SHALL BE INSTALLED IN THE RESPECTIVE LOW VOLTAGE WIREWAY/DUCT, WITH GRSC AT TRANSITIONS AND UL LISTED LIQUID TIGHT FLEXIBLE METAL CONDUIT AT FINAL CONNECTIONS TO THE REGULATORS. CONDUITS SHALL BE SIZED IN ACCORDANCE WITH NEC.
- BOND NEW REGULATOR TO THE RESPECTIVE VAULT GROUND BUS WITH A DEDICATED #6 AWG BONDING JUMPER.
- LIQUID TIGHT FLEXIBLE METAL CONDUIT AND ASSOCIATED FITTINGS SHALL BE U.L. LISTED TO MEET THE REQUIREMENTS OF NEC 350.6, SUITABLE FOR GROUNDING AND SUNLIGHT RESISTANT. LIQUID TIGHT FLEXIBLE METAL CONDUIT THAT IS USED FOR FLEXIBILITY (INCLUDING CONNECTIONS TO CCR'S & TRANSFORMERS) SHALL REQUIRE AN EXTERNAL BONDING JUMPER OR INTERNAL EQUIPMENT GROUNDING CONDUCTOR PER NEC 350.60. EXTERNAL BONDING JUMPERS USED WITH CCR INSTALLATIONS SHALL BE #6 AWG COPPER (MINIMUM). DO NOT INSTALL LIQUID TIGHT FLEXIBLE METAL CONDUIT THAT IS NOT UL LISTED.
- LOW VOLTAGE WIRING (600V & BELOW) SHALL MAINTAIN SEPARATION FROM HIGH VOLTAGE WIRING (5000V). LOW VOLTAGE WIRING SHALL NOT BE INSTALLED IN THE SAME RACEWAY, PULLBOX, OR HANDHOLE AS THE HIGH VOLTAGE WIRING.
- FURNISH & INSTALL A 15 AMP, 1 POLE BOLT-ON BRANCH BREAKER WITH 10,000 AIC AT 120 VAC IN PANEL "A" FOR THE PHOTOCELL CONTROL CIRCUIT.

DATE	REVISION	BY

QUINCY REGIONAL AIRPORT  
BALDWIN FIELD  
ADAMS COUNTY, ILLINOIS

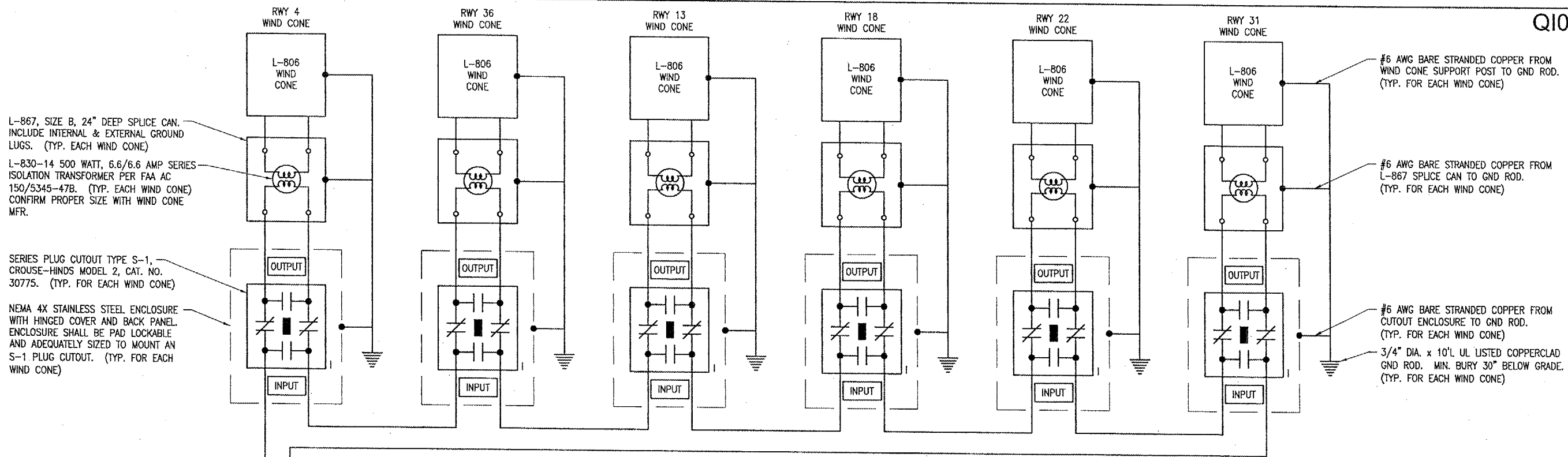
IL PROJ.: JUN-3618 A.I.P. PROJ.: 3-17-0085-XX

Project No. 824-065WCD.0240	File Name E-601.DWG	Date 05/19/06
State NONE	Scale NONE	Author KNL
		Reviewer CAH

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Springfield, Illinois 62703-2886  
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INSTALL WIND CONES  
PROPOSED VAULT ADDITIONS  
ONE LINE DIAGRAM

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L-867, SIZE B, 24" DEEP SPLICE CAN. INCLUDE INTERNAL & EXTERNAL GROUND LUGS. (TYP. EACH WIND CONE)

L-830-14 500 WATT, 6.6/6.6 AMP SERIES ISOLATION TRANSFORMER PER FAA AC 150/5345-47B. (TYP. EACH WIND CONE) CONFIRM PROPER SIZE WITH WIND CONE MFR.

SERIES PLUG CUTOUIT TYPE S-1, CROUSE-HINDS MODEL 2, CAT. NO. 30775. (TYP. FOR EACH WIND CONE)

NEMA 4X STAINLESS STEEL ENCLOSURE WITH HINGED COVER AND BACK PANEL. ENCLOSURE SHALL BE PAD LOCKABLE AND ADEQUATELY SIZED TO MOUNT AN S-1 PLUG CUTOUIT. (TYP. FOR EACH WIND CONE)

#6 AWG BARE STRANDED COPPER FROM WIND CONE SUPPORT POST TO GND ROD. (TYP. FOR EACH WIND CONE)

#6 AWG BARE STRANDED COPPER FROM L-867 SPLICE CAN TO GND ROD. (TYP. FOR EACH WIND CONE)

#6 AWG BARE STRANDED COPPER FROM CUTOUIT ENCLOSURE TO GND ROD. (TYP. FOR EACH WIND CONE)

3/4" DIA. x 10'L UL LISTED COPPERCLAD GND ROD. MIN. BURY 30" BELOW GRADE. (TYP. FOR EACH WIND CONE)

#8 AWG FAA L-824 TYPE C, 5000V CABLE (TYP.)

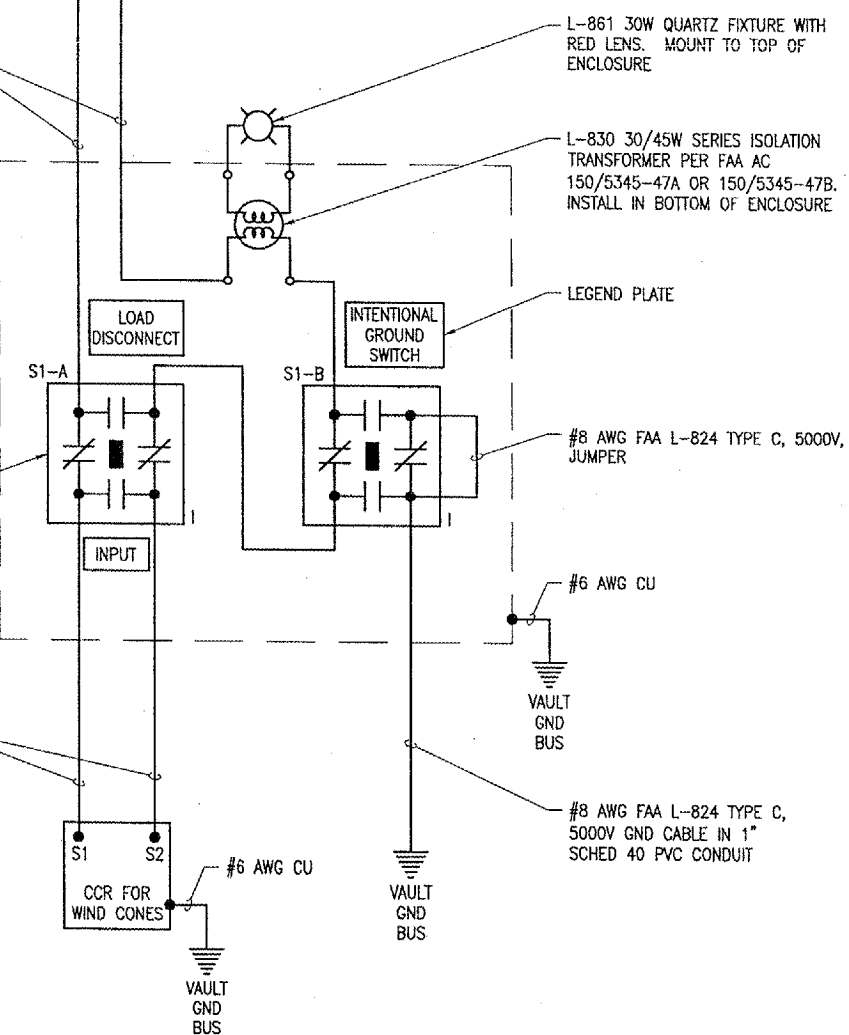
L-861 30W QUARTZ FIXTURE WITH RED LENS. MOUNT TO TOP OF ENCLOSURE

L-830 30/45W SERIES ISOLATION TRANSFORMER PER FAA AC 150/5345-47A OR 150/5345-47B. INSTALL IN BOTTOM OF ENCLOSURE

NEMA 1 OR NEMA 12 ENCLOSURE WITH HINGED COVER AND BACK PANEL. ENCLOSURE SHALL BE PAD LOCKABLE AND ADEQUATELY SIZED FOR EQUIPMENT AND TO MOUNT TWO TYPE S-1 PLUG CUTOUIT ADJACENT TO EACH OTHER. S1-A CUTOUIT SHALL BE WIRED AS A LOAD DISCONNECT SWITCH THAT WILL DISCONNECT THE LOAD AND SHORT THE CCR OUTPUT WHEN THE PLUG/HANDLE IS REMOVED. S1-B CUTOUIT SHALL BE WIRED AS AN INTENTIONAL GROUNDING SWITCH THAT WILL GROUND ONE SIDE OF THE SERIES CIRCUIT LOOP WHEN THE PLUG/HANDLE IS REMOVED.

SERIES PLUG CUTOUIT TYPE S-1, CROUSE-HINDS CAT. NO. 30775, OR APPROVED EQUAL. (HANDLE/PLUG INSERTED) TYP. FOR 2

#8 AWG FAA L-824 TYPE C, 5000V CABLE IN CONDUIT AND/OR WIREWAY. PROVIDE 1" LIQUID TIGHT FLEX METAL CONDUIT AT CONNECTION TO REGULATOR



NOTES

1. PROVIDE PHENOLIC ENGRAVED LEGEND PLATES FOR CONSTANT CURRENT REGULATOR NOTING THE REGULATOR DESIGNATION, L-806 WIND CONES SERVED AND THE POWER SOURCE AND CIRCUIT NUMBER.
2. PLUG CUTOUIT CABINET SHALL BE FURNISHED WITH A PHENOLIC ENGRAVED LEGEND PLATE THAT IDENTIFIES THE RESPECTIVE CIRCUIT OR REGULATOR AND THE VOLTAGE SYSTEM (5000 VOLTS). INCLUDE AN ADDITIONAL LEGEND PLATE LABELED "CAUTION OPERATE CUTOUIT WITH CCR SHUT OFF".
3. PROVIDE PHENOLIC ENGRAVED LEGEND PLATES FOR EACH CUTOUIT TO IDENTIFY THE FUNCTION OF EACH RESPECTIVE CUTOUIT.
4. PROVIDE ADEQUATE WORKING SPACE IN FRONT OF EACH CUTOUIT ENCLOSURE TO MEET NEC CLEARANCE REQUIREMENTS.
5. CONNECTIONS TO GROUND RODS SHALL BE EXOTHERMIC WELD.
6. HIGH VOLTAGE CABLE SPLICES SHALL BE IN L-867 SPLICE CANS OR CUTOUIT ENCLOSURES.
7. LIQUID TIGHT FLEXIBLE METAL CONDUIT AND ASSOCIATED FITTINGS SHALL BE U.L. LISTED TO MEET THE REQUIREMENTS OF NEC 350.6, SUITABLE FOR GROUNDING AND SUNLIGHT RESISTANT. LIQUID TIGHT FLEXIBLE METAL CONDUIT THAT IS USED FOR FLEXIBILITY (INCLUDING CONNECTIONS TO CCR'S & TRANSFORMERS) SHALL REQUIRE AN EXTERNAL BONDING JUMPER OR INTERNAL EQUIPMENT GROUNDING CONDUCTOR PER NEC 350.60. EXTERNAL BONDING JUMPERS USED WITH CCR INSTALLATIONS SHALL BE #6 AWG COPPER (MINIMUM). DO NOT INSTALL LIQUID TIGHT FLEXIBLE METAL CONDUIT THAT IS NOT U.L. LISTED.

LEGEND

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

HIGH VOLTAGE WIRING SCHEMATIC

DATE	REVISION	BY

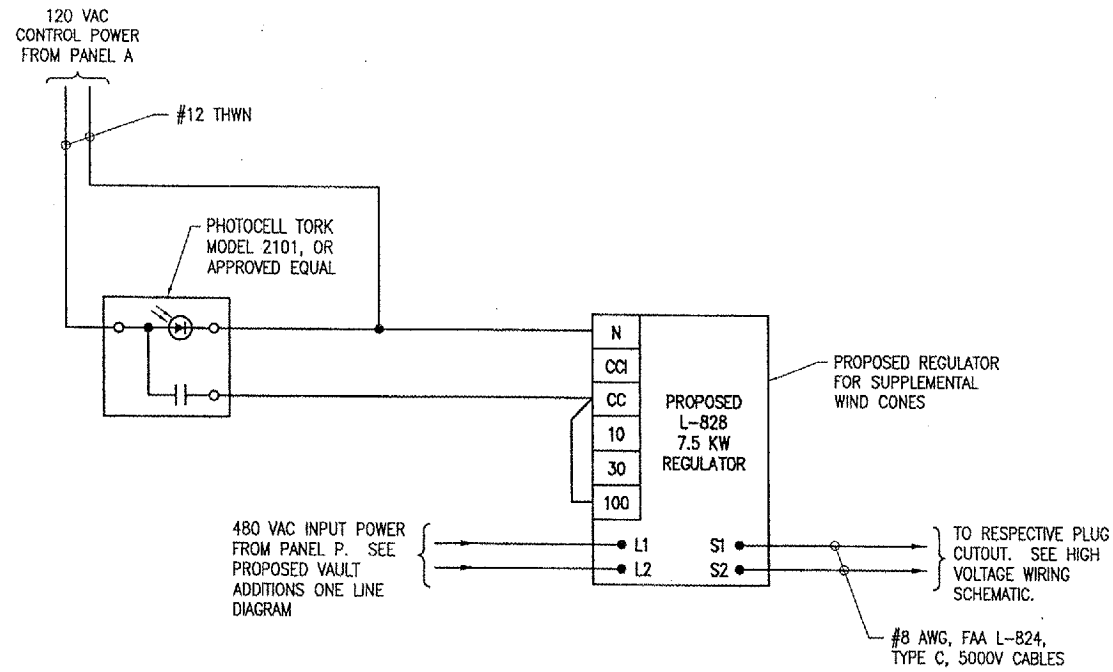
QUINCY REGIONAL AIRPORT  
BALDWIN FIELD  
ADAMS COUNTY, ILLINOIS

IL PROJ.: UIN-3618 A.I.P. PROJ.: 3-17-0085-XX

HEB Project No.	624-065WCD 0740	LAYOUT	KNL	05/15/06
Revision	E-602.DWG	DRAWN	MV	05/15/06
Scale	NONE	REVIEWED	CAH	05/18/06
Date	05/19/06			

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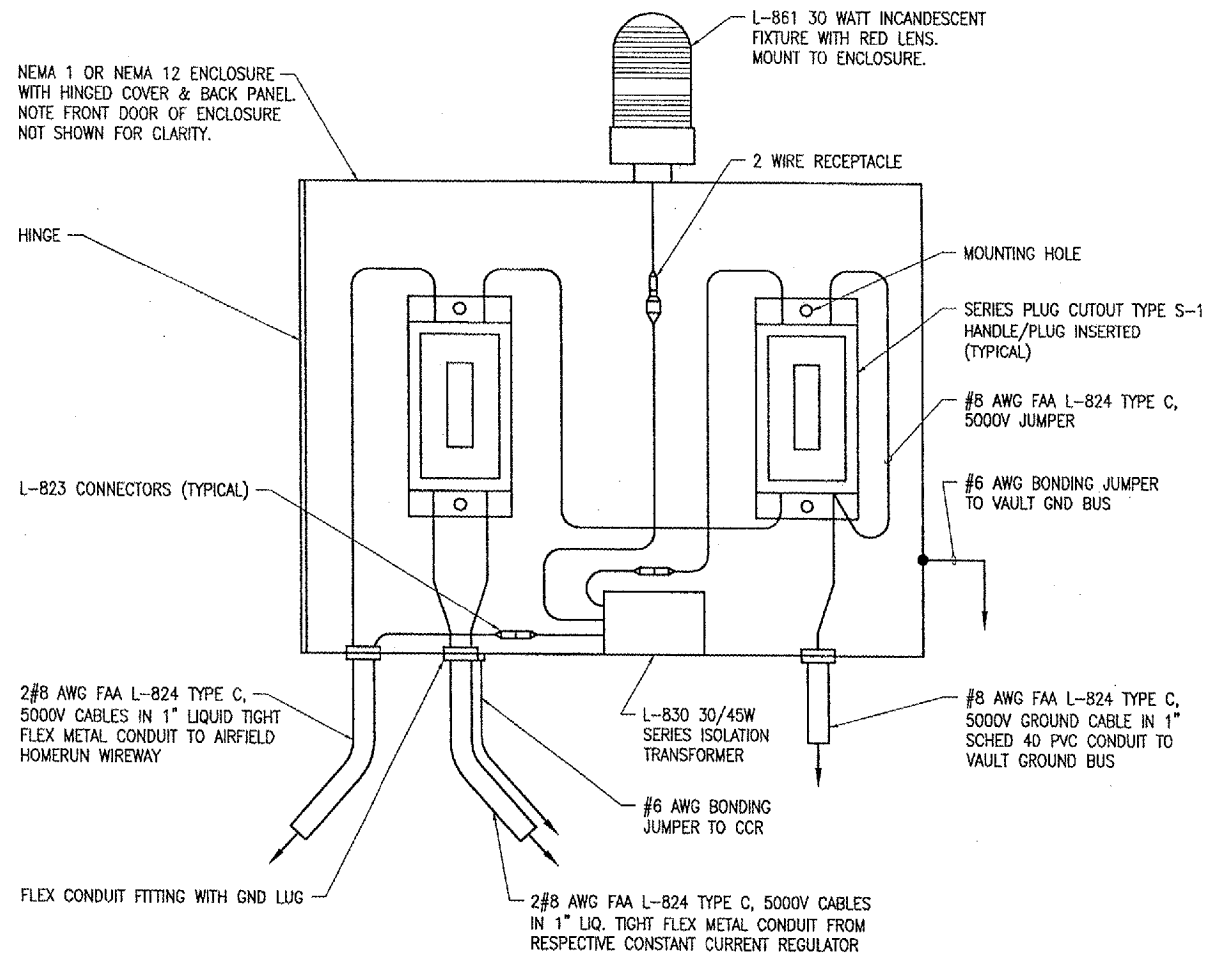
INSTALL WIND CONES  
PROPOSED HIGH VOLTAGE WIRING SCHEMATIC



CCR CONTROL SCHEMATIC FOR SUPPLEMENTAL LIGHTED WIND CONES

NOTES

1. ALL VAULT WORK, AIRFIELD WORK, AND/OR POWER OUTAGES SHALL BE COORDINATED WITH THE AIRPORT DIRECTOR.
2. 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 U.L. LISTING, ETL LISTING, (OR OTHER THIRD PARTY LISTING) AND/OR THE MANUFACTURER'S WARRANTY OF A DEVICE SHALL NOT BE PERMITTED.
3. ALL CONTROL CABLE SHALL BE NO. 12 AWG, 600 VOLT CABLE.
4. ALL ELECTRICAL EQUIPMENT SHALL BE PROPERLY LABELED AND ALL ELECTRICAL CABLES SHALL BE TAGGED.
5. ALL ELECTRICAL CABLES INSIDE THE VAULT SHALL BE IN CONDUIT OR WIREWAY. LOW VOLTAGE CABLES SHALL NOT BE INSTALLED IN THE SAME CONDUIT, DUCT, OR RACEWAY AS HIGH VOLTAGE CABLE.
6. THE SUPPLEMENTAL WIND CONES & RESPECTIVE CCR SHALL BE ACTIVATED TO 100% BRIGHTNESS LEVEL BY A PHOTOCELL IN THE AUTOMATIC MODE OF OPERATION. THE SUPPLEMENTAL WIND CONES SHALL BE ACTIVATED BY THE CONSTANT CURRENT REGULATOR SELECTOR SWITCH (100% BRIGHTNESS LEVEL POSITION) IN THE MANUAL MODE OF OPERATION. CONFIRM CONTROL WIRING REQUIREMENTS WITH THE RESPECTIVE CCR MFR INSTALLATION INSTRUCTIONS FOR PROPER OPERATION.
7. EQUIPMENT GROUND WIRES SHALL BE INCLUDED WITH EACH BRANCH CIRCUIT & EACH CONTROL CIRCUIT.
8. "N" DENOTES NEUTRAL FOR RESPECTIVE BRANCH CIRCUIT OR CONTROL CIRCUIT.



SERIES PLUG CUTOUT MOUNTING DETAIL FOR WIND CONE LIGHTING CIRCUIT

NOTES

1. PLUG CUTOUT CABINET SHALL BE FURNISHED WITH A PHENOLIC ENGRAVED LEGEND PLATE THAT IDENTIFIES THE RESPECTIVE CIRCUIT OR REGULATOR AND THE VOLTAGE SYSTEM (5000 VOLTS). INCLUDE AN ADDITIONAL LEGEND PLATE LABELED "CAUTION OPERATE S1 HANDLES WITH LOAD DE-ENERGIZED".
2. PROVIDE PHENOLIC ENGRAVED LEGEND PLATES FOR EACH CUTOUT TO IDENTIFY THE FUNCTION OF EACH RESPECTIVE CUTOUT.
3. LIQUID TIGHT FLEXIBLE METAL CONDUIT AND ASSOCIATED FITTINGS SHALL BE U.L. LISTED TO MEET THE REQUIREMENTS OF NEC 350.6, SUITABLE FOR GROUNDING AND SUNLIGHT RESISTANT. LIQUID TIGHT FLEXIBLE METAL CONDUIT THAT IS USED FOR FLEXIBILITY (INCLUDING CONNECTIONS TO CCR'S & TRANSFORMERS) SHALL REQUIRE AN EXTERNAL BONDING JUMPER OR INTERNAL EQUIPMENT GROUNDING CONDUCTOR PER NEC 350.60. EXTERNAL BONDING JUMPERS USED WITH CCR INSTALLATIONS SHALL BE #6 AWG COPPER (MINIMUM). DO NOT INSTALL LIQUID TIGHT FLEXIBLE METAL CONDUIT THAT IS NOT U.L. LISTED.

BY	REVISION	DATE

QUINCY REGIONAL AIRPORT  
BALDWIN FIELD  
ADAMS COUNTY, ILLINOIS



A.I.P. PROJ.: 3-17-0085-XX  
ILL. PROJ.: UIN-3618

REV	PROJECT No.	DATE	BY	DATE
	824-06SWCD_0240			
	E-603.DWG			
	State	NONE		
	Date	05/19/06		
	LAYOUT	KNL		05/16/06
	DRAWN	MV		05/16/06
	REVIEWED	CAH		05/18/06

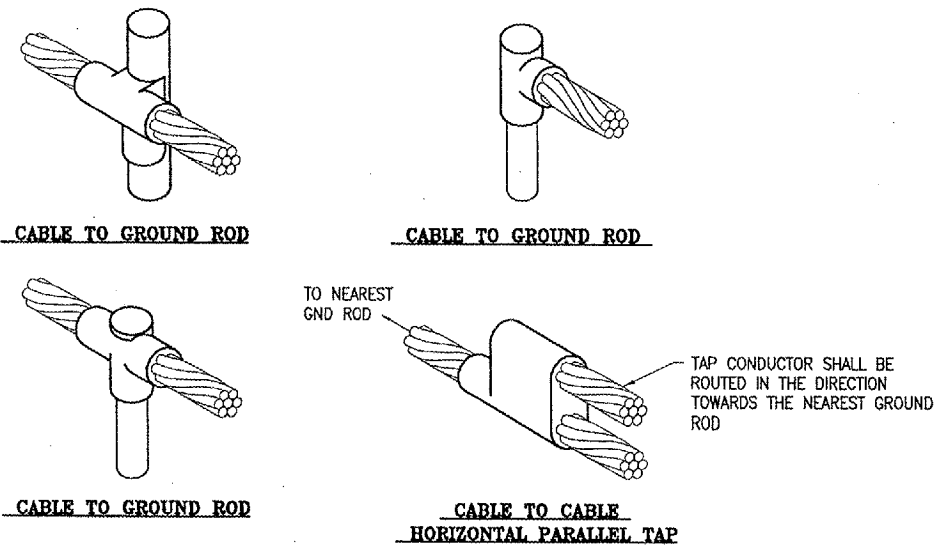
**HANSON**  
Hanson Professional Services Inc.  
1525 South Sixth Street  
Springfield, Illinois 62703-2886  
Offices Nationwide

INSTALL  
WIND CONES  
PROPOSED WIND CONE  
CONTROL SCHEMATIC

JUN 29, 2006 3:20 PM BAK  
I:\AIRPORTS\QUINCY\B24-06SWC\AIRPORT\SHEETS\E-603.DWG - Layout1

VAULT LEGEND PLATE SCHEDULE	
DEVICE	LABEL
EXISTING POWER PANEL P	PANEL P 480/277 VAC, 3 PH, 4W FED FROM AUTO XFER SWITCH
CONSTANT CURRENT REGULATOR FOR WIND CONES	SUPPLEMENTAL WIND CONES 480V FROM PNL P 120V CONTROL FROM PNL A
CONSTANT CURRENT REGULATOR FOR WIND CONES	MANUAL MODE TO BE 100% FOR WIND CONES
CUTOUT ENCLOSURE FOR WIND CONE CCR	SUPPLEMENTAL WIND CONES
CCR LOAD DISCONNECT CUTOUT INPUT SIDE	INPUT
CCR LOAD DISCONNECT CUTOUT	LOAD DISCONNECT
INTENTIONAL GROUND SWITCH CUTOUT	INTENTIONAL GROUND SWITCH
CUTOUT ENCLOSURE FOR RUNWAY 18 WIND CONE	RWY 18 WIND CONE CUTOUT
CUTOUT ENCLOSURE FOR RUNWAY 36 WIND CONE	RWY 36 WIND CONE CUTOUT
CUTOUT ENCLOSURE FOR RUNWAY 4 WIND CONE	RWY 4 WIND CONE CUTOUT
CUTOUT ENCLOSURE FOR RUNWAY 22 WIND CONE	RWY 22 WIND CONE CUTOUT
CUTOUT ENCLOSURE FOR RUNWAY 13 WIND CONE	RWY 13 WIND CONE CUTOUT
CUTOUT ENCLOSURE FOR RUNWAY 31 WIND CONE	RWY 31 WIND CONE CUTOUT
EACH WIND CONE CUTOUT INPUT SIDE CONNECTION	INPUT
EACH WIND CONE CUTOUT OUTPUT SIDE CONNECTION	OUTPUT
EACH CUTOUT ENCLOSURE	CAUTION OPERATE CUTOUTS WITH CCR SHUT OFF

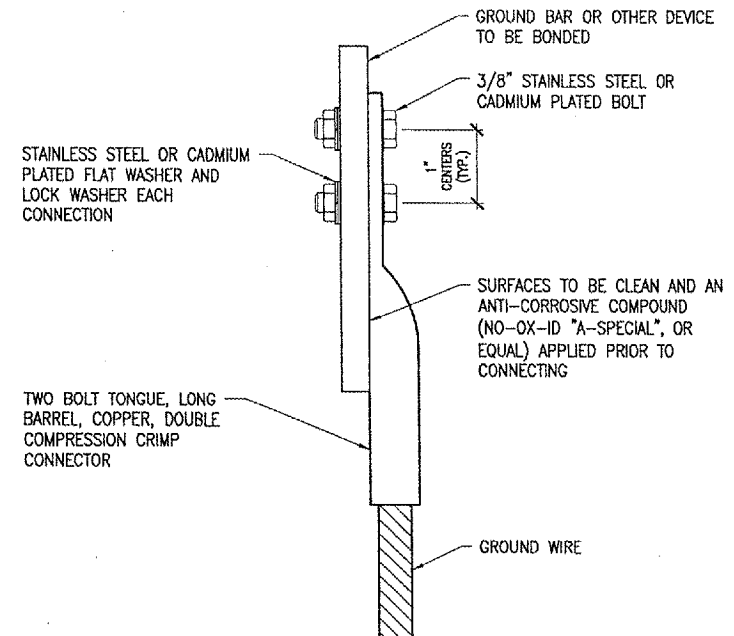
NOTE: LEGEND PLATES SHALL BE WEATHERPROOF ENGRAVED PLASTIC OR PHENOLIC MATERIAL, 1/4" HIGH WHITE LETTERS ON A RED BACKGROUND UNLESS NOTED OTHERWISE. SECURE WITH WEATHERPROOF ADHESIVE AND MACHINE SCREWS. FURNISH ADDITIONAL LEGEND PLATES WHERE REQUIRED BY CODE, FOR ADDITIONAL EQUIPMENT, AS DETAILED HEREIN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



**DETAIL NOTES**

- EXOTHERMIC WELDS SHALL BE CADWELD AS MANUFACTURED BY ERICO PRODUCTS, SOLON, OHIO OR THERMOWELD AS MANUFACTURED BY CONTINENTAL INDUSTRIES, TULSA, OKLAHOMA. VERIFY PROPER SIZES, TYPES, AND REQUIREMENTS FOR THE RESPECTIVE APPLICATION WITH THE MANUFACTURER, AND INSTALL PER THEIR DIRECTIONS.
- FOR APPLICATIONS TO METAL SURFACES THAT ARE LESS THAN 3/16" THICK CONTACT THE EXOTHERMIC WELD MANUFACTURER FOR DIRECTION AND INSTRUCTION ON EXOTHERMIC WELD INSTALLATION TO THE RESPECTIVE SURFACE.
- 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.

**EXOTHERMIC WELD DETAILS**



WIRE SIZE	BURNDY CAT. NO.	THOMAS & BETTS CAT. NO.
#6 AWG STRANDED	YA6C-2TC38	256-30695-1158
#4 AWG STRANDED	YA4C-2TC38	256-30695-1159
#2 AWG STRANDED	YA2C-2TC38	256-30695-1160
#2 AWG SOLID	YA3C-2TC38	256-30695-1160
#1/0 AWG STRANDED	YA25-2TC38	256-30695-1162
#2/0 AWG STRANDED	YA26-2TC38	256-30695-1116
#3/0 AWG STRANDED	YA27-2TC38	548168E

**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.
- 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**

QUINCY REGIONAL AIRPORT  
BALDWIN FIELD  
ADAMS COUNTY, ILLINOIS

QUINCY Regional Airport  
BALDWIN FIELD

BY: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_

IL PROJ.: UIN-3618 A.I.P. PROJ.: 3-17-0085-XX

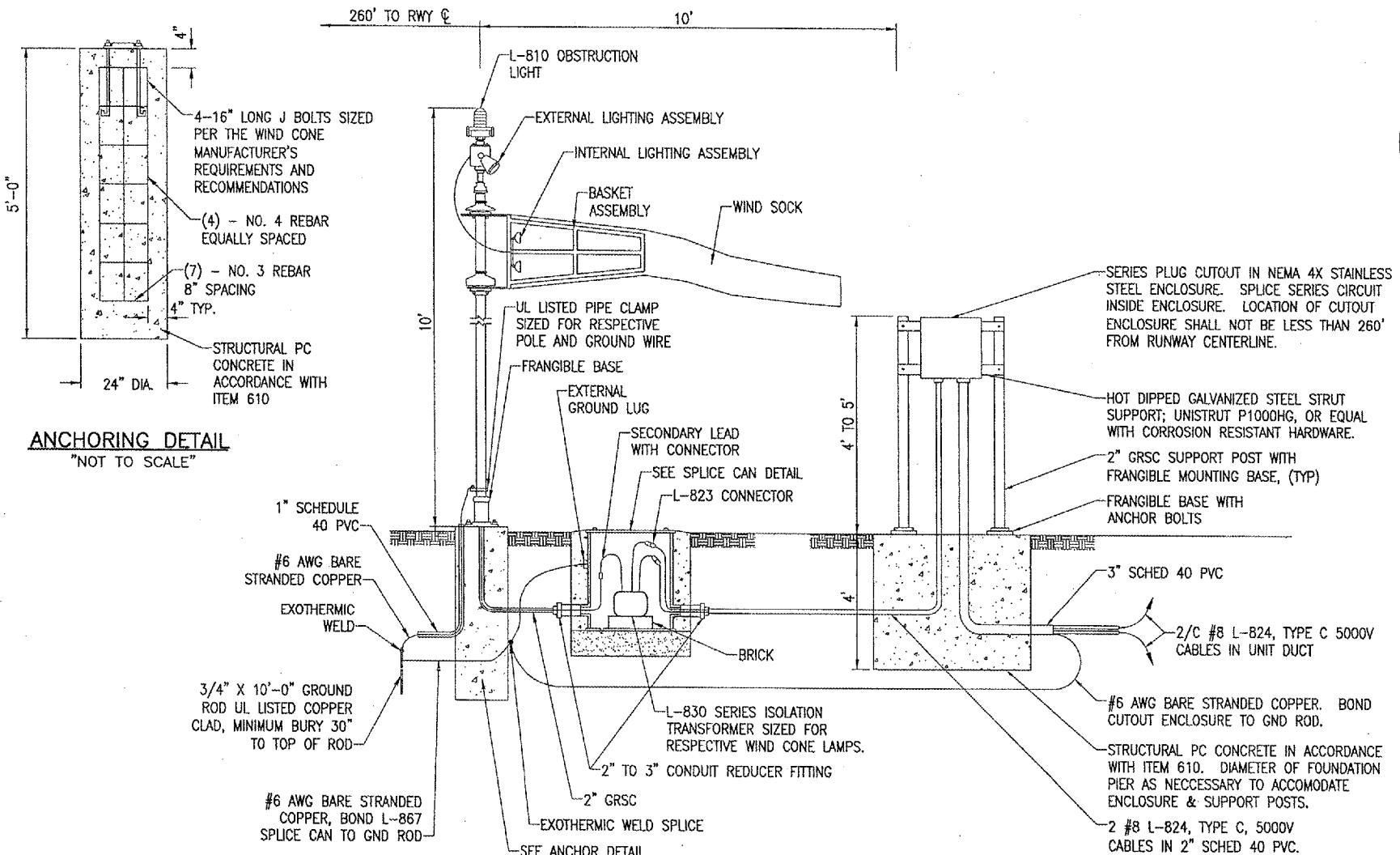
REG. Project No. 924-085WCD\_0240  
Element E-604.DWG  
Scale NONE  
Date 05/19/06

LAYOUT	KNL	05/17/06
DRAWN	MV	05/17/06
REVIEWED	CAH	05/18/06

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Offices Nationwide

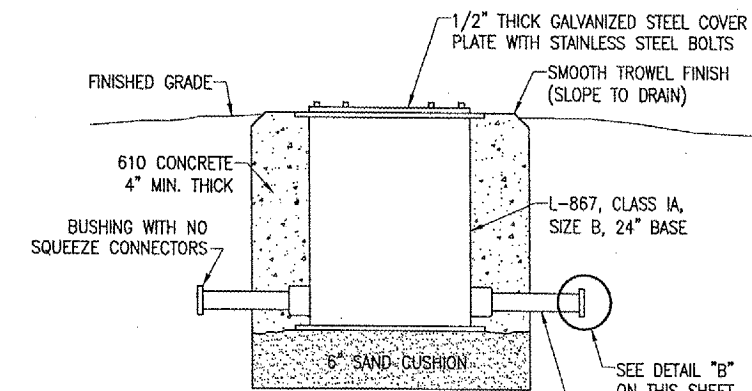
INSTALL WIND CONES  
LEGEND PLATE SCHEDULE  
AND GROUNDING DETAILS



**ANCHORING DETAIL**  
"NOT TO SCALE"

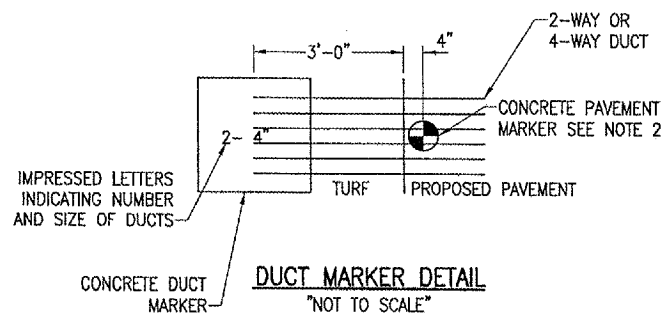
**EXTERNALLY LIGHTED 1806 WIND CONE (SERIES CIRCUIT TYPE)**  
"NOT TO SCALE"

NOTE:  
WIND CONE SHALL ALSO INCLUDE  
INTERNAL LIGHTING OPTION

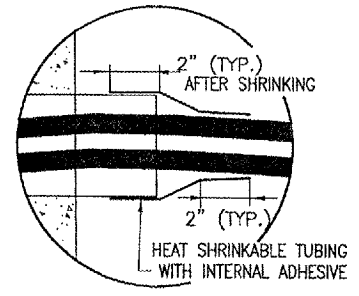


**SPLICE CAN DETAIL**  
"NOT TO SCALE"

INCLUDE INTERNAL AND  
EXTERNAL GROUND LUGS



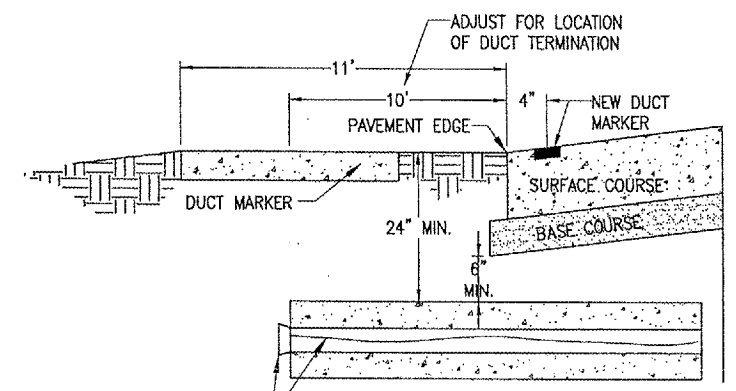
**DUCT MARKER DETAIL**  
"NOT TO SCALE"



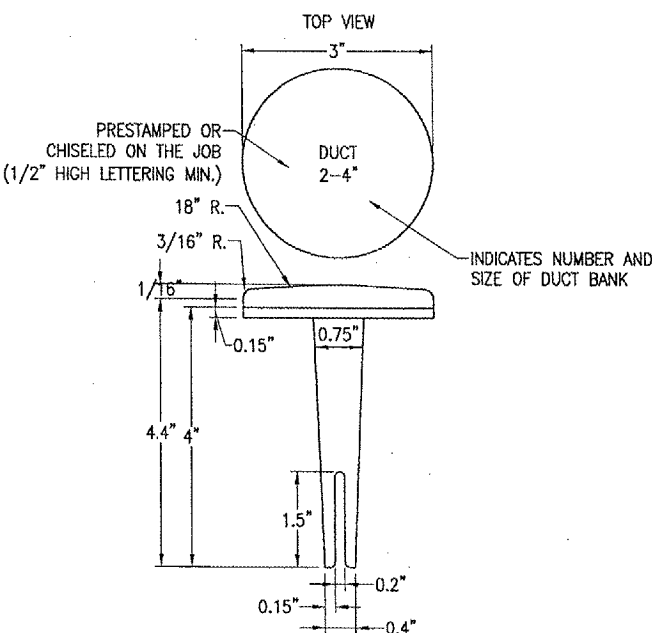
**DETAIL "B"**  
"NOT TO SCALE"

**NOTES:**

1. THE COST OF ALL TURF AND PAVEMENT DUCT MARKERS SHALL BE INCIDENTAL TO THE DUCT. THE COST OF ALL CABLE MARKERS SHALL BE INCIDENTAL TO THE CABLE.
2. BITUMINOUS PAVEMENT DUCT MARKER AND CONCRETE DUCT MARKER TO BE PROVIDED AT EACH END OF EACH DUCT AS SHOWN ON THE LOCATION PLAN. FOR CONCRETE PAVEMENT, THE LETTER "D" SHALL BE IMPRESSED IN THE PAVEMENT INSTEAD OF THE MARKER. THE LETTER SHALL BE IMPRESSED AS DESCRIBED IN NOTE 4.
3. CABLE MARKERS SHALL BE PLACED AT CHANGES OF DIRECTION AND EVERY 400' ALONG CABLE RUNS. CABLE MARKERS SHALL BE INSTALLED IMMEDIATELY ABOVE THE CABLE.
4. CONCRETE CABLE MARKERS AND DUCT MARKERS SHALL HAVE LETTERS 4" HIGH, 3" WIDE WITH WIDTH OF STROKE 1/2" AND 1/4" DEEP. ALL LETTERS, NUMBERS AND ARROWS TO BE IMPRESSED.

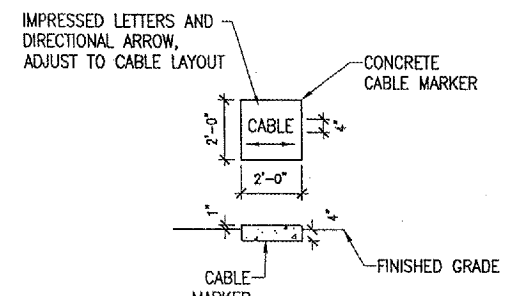


**UNDERGROUND ELECTRICAL DUCT**  
"NOT TO SCALE"

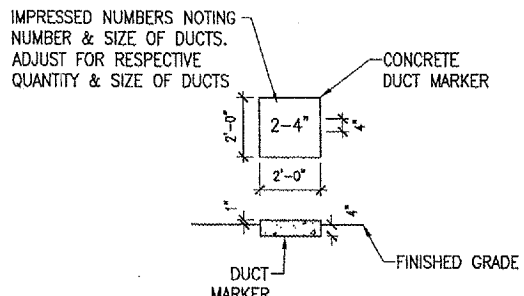


**BITUMINOUS PAVEMENT DUCT MARKERS**  
"NOT TO SCALE"

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



**TURF CABLE MARKERS**  
"NOT TO SCALE"



**TURF DUCT MARKERS**  
"NOT TO SCALE"

BY	
REVISION	
DATE	

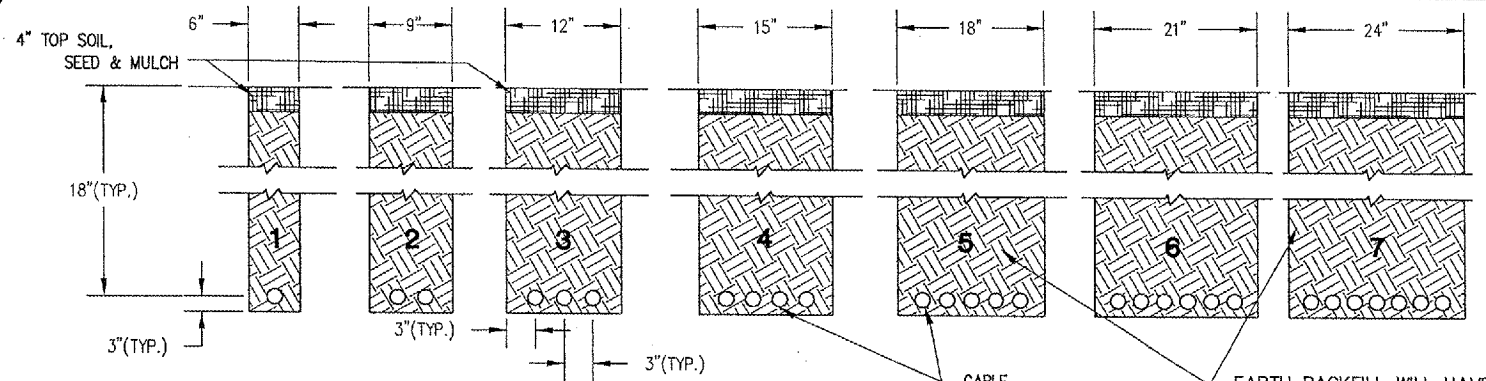
QUINCY REGIONAL AIRPORT  
BALDWIN FIELD  
ADAMS COUNTY, ILLINOIS

Project No.	824-065MCD_0240
Revision	E-502.DWG
Scale	NONE
Date	05/19/06
LAYOUT	KNL 05/16/06
DRAWN	MV 05/16/06
REVIEWED	CAH 05/18/06

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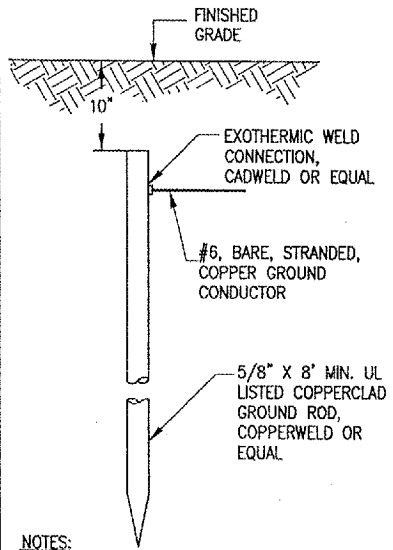
INSTALL  
WIND CONES  
WIND CONE  
ELEVATION DETAIL

JUN 29, 2006 3:21 PM BAK  
E:\AIRPORTS\QUINCY\824-065MCD\AIRPORT\SHEETS\E-502.DWG - ELEC DETAILS



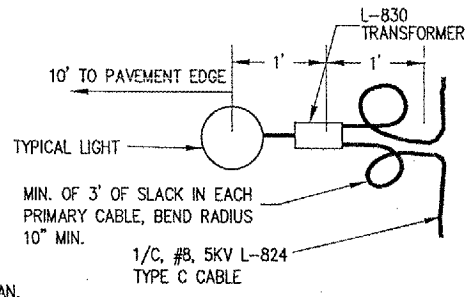
- NOTES:**
1. DETAIL NUMBERS INDICATE NO. OF CABLES.
  2. TRENCHES WITH MORE THAN SEVEN CABLES SHALL BE INCREASED 3" IN WIDTH FOR EACH ADDITIONAL CABLE; IF SPECIFIED ON PLANS TWO PARALLEL TRENCHES MAY BE CONSTRUCTED.
  3. DEPTH OF TRENCHES SHALL BE AS SHOWN ABOVE UNLESS OTHERWISE SPECIFIED ON THE PLANS.
  4. ALL DISTURBED SURFACES SHALL BE RESTORED TO THEIR ORIGINAL CONDITION. COST IS INCIDENTAL TO TRENCH. RETURNING MATERIALS AND RATES MAY BE SHOWN ON THE PLANS.

**CABLE TRENCHES**  
(NOT TO SCALE)

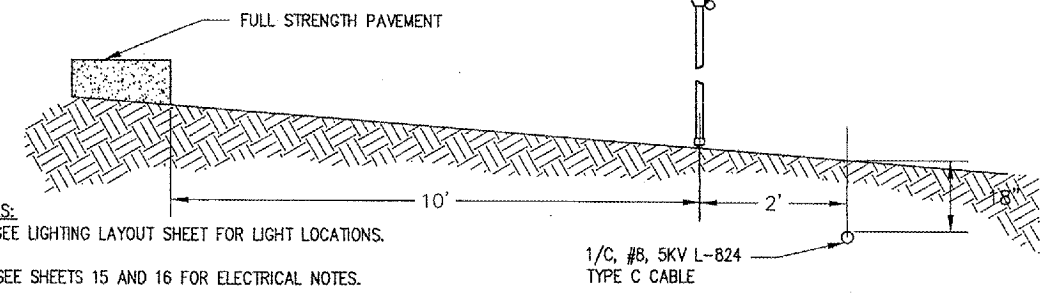


- NOTES:**
1. TYPE AND MINIMUM NUMBER OF GROUND RODS SHALL BE AS SPECIFIED ON THE PLAN.
  2. THE RESISTANCE TO GROUND OF THE GROUNDING SYSTEM SHALL NOT EXCEED 25 OHMS.
  3. COST OF GROUND RODS IS INCIDENTAL TO THE ASSOCIATED ITEMS REQUIRING GROUNDING UNLESS OTHERWISE SPECIFIED.
  4. GROUND RODS SHALL NOT BE SPACED LESS THAN ONE ROD LENGTH APART.

**GROUND ROD**  
(NOT TO SCALE)

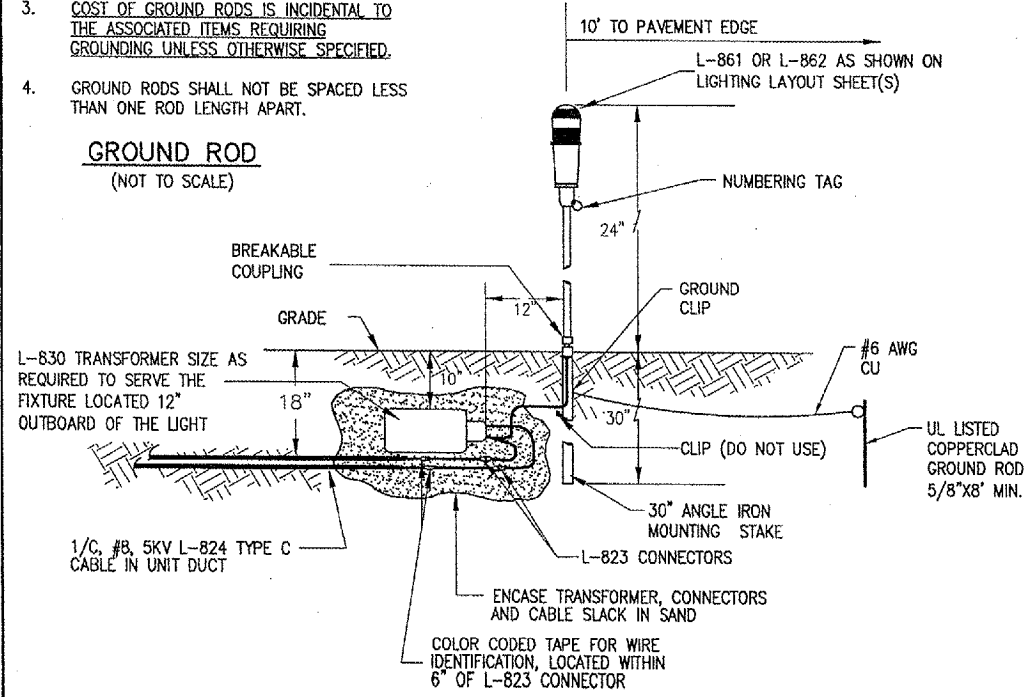


**PLAN VIEW**

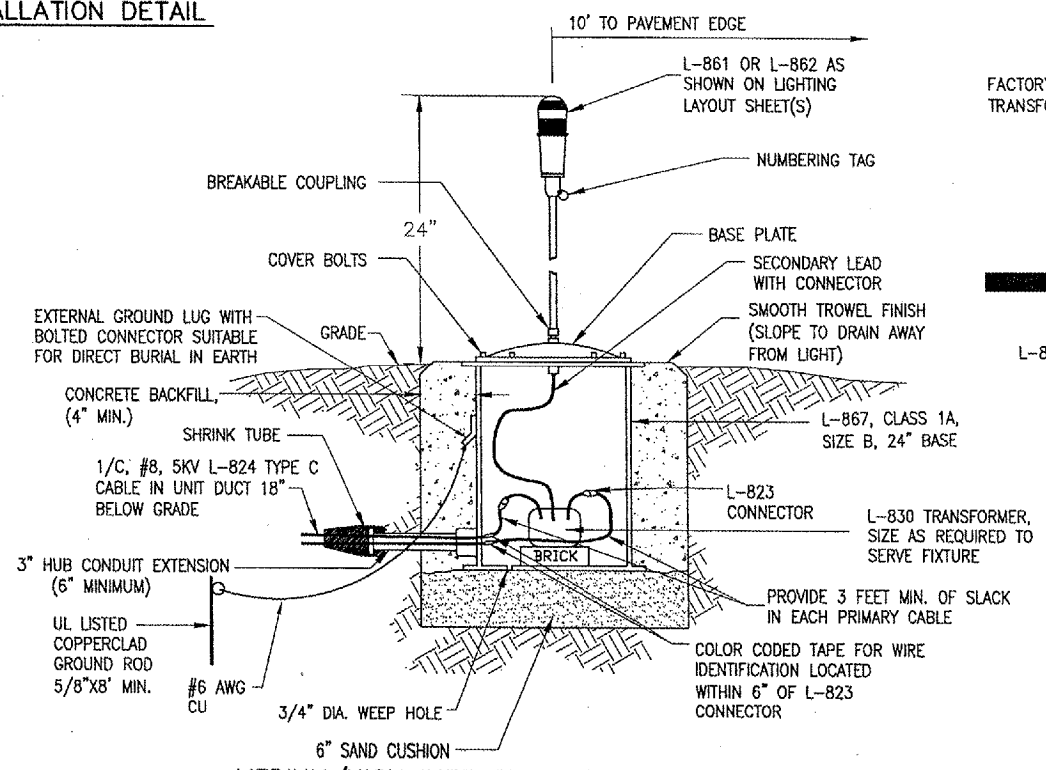


- NOTES:**
1. SEE LIGHTING LAYOUT SHEET FOR LIGHT LOCATIONS.
  2. SEE SHEETS 15 AND 16 FOR ELECTRICAL NOTES.

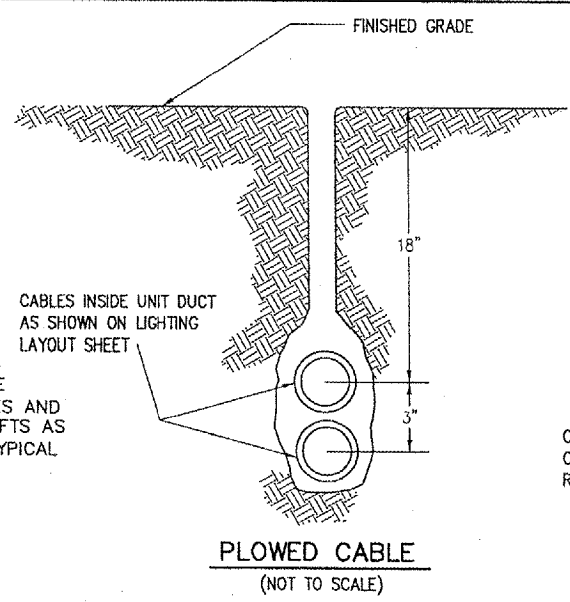
**LIGHT AND CABLE INSTALLATION DETAIL**  
(NOT TO SCALE)



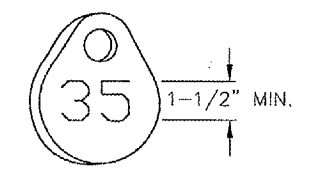
**MEDIUM INTENSITY LIGHT - STAKE MOUNTED**  
(NOT TO SCALE)



**MEDIUM/HIGH INTENSITY LIGHT - BASE MOUNTED**  
(NOT TO SCALE)

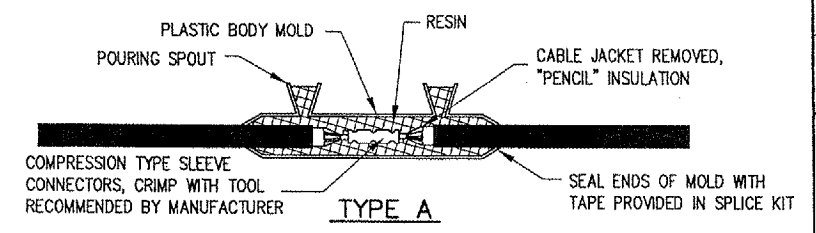


**PLOVED CABLE**  
(NOT TO SCALE)

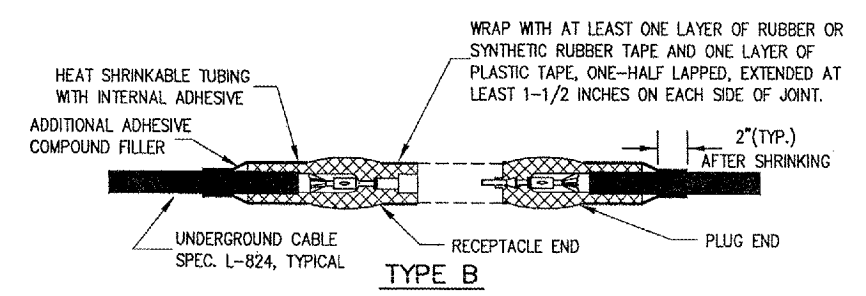


**TAG DETAIL**  
(NOT TO SCALE)

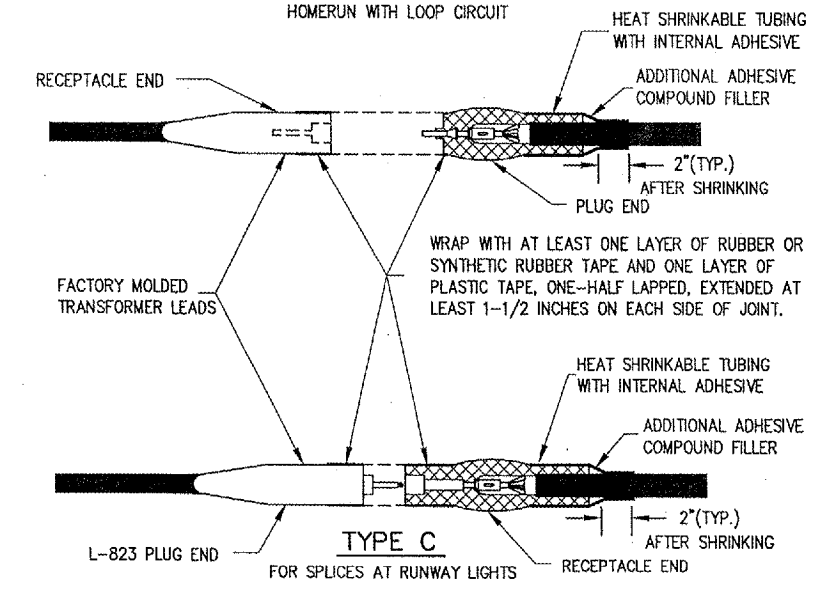
**NOTE:**  
AFFIX NON-CORROSIVE TAG TO FIXTURE FACING RUNWAY WITH SET SCREW, WIRE TIE, OR METAL BAND. NUMERALS SHALL BE ENGRAVED FOR PERMANENT READABILITY.



**TYPE A**  
FOR SPLICES IN HOMERUNS FOR EXTENSIONS TO EXISTING CABLES ONLY



**TYPE B**  
FOR SPLICES AT JUNCTION OF HOMERUN WITH LOOP CIRCUIT



**TYPE C**  
FOR SPLICES AT RUNWAY LIGHTS

- NOTES:**
1. SEE LIGHTING LAYOUT SHEET(S) FOR SPLICE TYPE.
  2. INSIDE DIAMETER OF CONNECTOR SHALL PROPERLY MATCH THE OUTSIDE DIAMETER OF CABLE.

**CABLE SPLICES**  
(NOT TO SCALE)

BY	
REVISION	
DATE	

**QUINCY REGIONAL AIRPORT  
BALDWIN FIELD  
ADAMS COUNTY, ILLINOIS**

ALP PROJ.: 3-17-0085-XX  
IL PROJ.: UIN-3618

HL Project No.	824-06SWCD.0240
File Name	R-502ELD.DWG
Scale	N/A
Date	05/19/06
LAYOUT	R.A.W. 09/02/05
DRAWN	B.A.K. 09/02/05
REVIEWED	C.A.H. 05/19/06

**HANSON**  
Hanson Professional Services Inc.  
1525 South Sixth Street  
Springfield, Illinois 62703-2996  
Offices Nationwide

**INSTALL WIND CONES**

**ELECTRICAL DETAILS**

JUN 29 2006 3:23 PM BAK L:\AIRPORTS\QUINCY\824-06SWCD\AIRPORT\_SHEETS\R-502ELD.DWG - ELEC. DETAILS

REVISION	DATE

**GENERAL**

- THE ELECTRICAL INSTALLATION, AS A MINIMUM, SHALL MEET THE NATIONAL ELECTRICAL CODE (LATEST RECOGNIZED VERSION) AND LOCAL REGULATIONS.
- THE CONTRACTOR SHALL ASCERTAIN THAT ALL LIGHTING SYSTEM COMPONENTS FURNISHED BY HIM, INCLUDING FAA APPROVED EQUIPMENT, ARE COMPATIBLE IN ALL RESPECTS WITH EACH OTHER AND THE REMAINDER OF THE NEW/EXISTING SYSTEM. ANY NONCOMPATIBLE COMPONENTS FURNISHED BY THIS CONTRACTOR SHALL BE REPLACED BY HIM AT NO ADDITIONAL COST TO THE AIRPORT SPONSOR WITH A SIMILAR UNIT, APPROVED BY THE ENGINEER (DIFFERENT MODEL OR DIFFERENT MANUFACTURER) THAT IS COMPATIBLE WITH THE REMAINDER OF THE AIRPORT LIGHTING SYSTEM.
- IN CASE THE CONTRACTOR ELECTS TO FURNISH AND INSTALL AIRPORT LIGHTING EQUIPMENT REQUIRING ADDITIONAL WIRING, TRANSFORMERS, ADAPTORS, MOUNTINGS, ETC., TO THOSE SHOWN ON THE DRAWINGS AND/OR LISTED IN THE SPECIFICATION, ANY COST FOR THESE ITEMS SHALL BE INCIDENTAL TO THE EQUIPMENT COST.
- THE CONTRACTOR INSTALLED EQUIPMENT (INCLUDING FAA APPROVED) SHALL NOT GENERATE ANY ELECTROMAGNETIC INTERFERENCE IN THE EXISTING AND/OR NEW COMMUNICATIONS, WEATHER, AIR NAVIGATION, AND AIR TRAFFIC CONTROL EQUIPMENT. ANY EQUIPMENT GENERATING SUCH INTERFERENCE SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST WITH THE EQUIPMENT MEETING THE APPLICABLE SPECIFICATIONS AND NOT GENERATING ANY INTERFERENCE.
- WHEN A SPECIFIC TYPE, STYLE, CLASS, ETC. OF FAA APPROVED EQUIPMENT IS SPECIFIED ONLY THAT TYPE, STYLE, CLASS, WILL BE ACCEPTABLE, EVEN THOUGH EQUIPMENT OF OTHER TYPES STYLES, CLASSES, ETC. MAY BE APPROVED.
- ANY AND ALL INSTRUCTIONS FROM THE ENGINEER TO THE CONTRACTOR REGARDING CHANGES IN OR DEVIATIONS FROM THE PLANS AND SPECIFICATIONS SHALL BE IN WRITING WITH COPIES SENT TO THE AIRPORT SPONSOR AND THE FAA FIELD OFFICE (ADO/AFO). THE CONTRACTOR SHALL NOT ACCEPT ANY VERBAL INSTRUCTIONS FROM THE RESIDENT ENGINEER REGARDING ANY CHANGES FROM THE PLANS AND SPECIFICATIONS.
- A MINIMUM OF THREE COPIES OF THE INSTRUCTION BOOK SHALL BE SUPPLIED WITH EACH DIFFERENT TYPE OF EQUIPMENT. THE BOOKS DESCRIBING A MORE SOPHISTICATED TYPE OF EQUIPMENT, SUCH AS REGULATORS, PAPI, REIL, ETC. AS A MINIMUM SHALL CONTAIN THE FOLLOWING:
  - A DETAILED DESCRIPTION OF THE OVERALL EQUIPMENT AND ITS INDIVIDUAL COMPONENTS.
  - THEORY OF OPERATION INCLUDING THE FUNCTION OF EACH COMPONENT.
  - INSTALLATION INSTRUCTIONS.
  - START-UP INSTRUCTIONS.
  - PREVENTATIVE MAINTENANCE REQUIREMENTS.
  - CHART FOR TROUBLE-SHOOTING.
  - COMPLETE POWER AND CONTROL DETAILED WIRING DIAGRAM(S), SHOWING EACH CONDUCTOR/CONNECTION/COMPONENT - "BLACK" BOXES ARE NOT ACCEPTABLE. THE DIAGRAM OF THE NARRATIVE SHALL SHOW VOLTAGE/CURRENTS/WAVE SHAPES AT STRATEGIC LOCATIONS TO BE USED WHEN CHECKING AND/OR TROUBLE-SHOOTING THE EQUIPMENT. WHEN THE EQUIPMENT HAS SEVERAL MODES OF OPERATION, SUCH AS SEVERAL BRIGHTNESS STEPS, THESE PARAMETERS SHALL BE INDICATED FOR ALL DIFFERENT MODES.
  - PARTS LIST WHICH WILL INCLUDE ALL MAJOR AND MINOR COMPONENTS SUCH AS RESISTORS, DIODES, ETC. IT SHALL INCLUDE A COMPLETE NOMENCLATURE OF EACH COMPONENT AND, IF APPLICABLE, THE NAME OF ITS MANUFACTURER AND THE CATALOG NUMBER.
  - SAFETY INSTRUCTIONS.

**POWER AND CONTROL**

- STENCIL ALL ELECTRICAL EQUIPMENT TO IDENTIFY FUNCTION, CIRCUIT VOLTAGE AND PHASE. WHERE THE EQUIPMENT CONTAINS FUSES, ALSO STENCIL THE FUSE OR FUSE LINK AMPERE RATING. WHERE THE EQUIPMENT DOES NOT HAVE SUFFICIENT STENCILING AREA, THE STENCILING SHALL BE DONE ON THE WALL NEXT TO THE UNIT. THE LETTERS SHALL BE ONE INCH HIGH AND PAINTED IN WHITE OR BLACK TO PROVIDE THE HIGHEST CONTRAST WITH THE BACKGROUND.
- COLOR CODE ALL PHASE WIRING BY THE USE OF COLORED WIRE INSULATION AND/OR COLORED TAPE. WHERE TAPE IS USED, THE WIRE INSULATION SHALL BE BLACK, BLACK AND RED SHALL BE USED FOR SINGLE-PHASE, THREE WIRE SYSTEMS AND BLACK, RED AND BLUE SHALL BE USED FOR THREE-PHASE SYSTEMS. NEUTRAL CONDUCTORS, SIZE NO. 6 AWG OR SMALLER, SHALL BE IDENTIFIED BY A CONTINUOUS WHITE OR NATURAL GRAY OUTER FINISH ALONG ITS ENTIRE LENGTH. NEUTRAL CONDUCTORS LARGER THAN NO. 6 AWG SHALL BE IDENTIFIED EITHER BY A CONTINUOUS WHITE OR NATURAL GRAY OUTER FINISH ALONG ITS ENTIRE LENGTH OR BY THE USE OF WHITE TAPE AT ITS TERMINATIONS AND INSIDE ACCESSIBLE WIREWAYS.
- ALL BRANCH CIRCUIT CONDUCTORS CONNECTED TO A PARTICULAR PHASE SHALL BE IDENTIFIED WITH THE SAME COLOR. THE COLOR CODING SHALL BE EXTENDED TO THE POINT OF UTILIZATION.
- IN CONTROL WIRING THE SAME COLOR SHALL BE USED THROUGHOUT THE SYSTEM FOR THE SAME FUNCTION, SUCH AS 10%, 30%, 100% BRIGHTNESS CONTROL, ETC.
- LOW VOLTAGE (600 V.) AND HIGH VOLTAGE (5000 V.) CONDUCTORS SHALL BE INSTALLED IN SEPARATE WIREWAYS.
- NEATLY LACE WIRING IN DISTRIBUTION PANELS, WIREWAYS, SWITCHES AND JUNCTION/PULL BOXES.
- THE MINIMUM SIZE OF PULL/JUNCTION BOXES, REGARDLESS OF THE QUANTITY AND SIZE OF THE CONDUCTORS SHOWN, SHALL BE AS FOLLOWS:
  - IN STRAIGHT PULLS THE LENGTH OF THE BOX SHALL NOT BE LESS THAN EIGHT TIMES THE TRADE DIAMETER OF THE LARGER CONDUIT. THE TOTAL AREA (INCLUDING THE CONDUIT CROSS-SECTIONAL AREA) OF A BOX END SHALL BE AT LEAST 3 TIMES GREATER THAN THE TOTAL TRADE CROSS-SECTIONAL AREA OF THE CONDUITS TERMINATING AT THE END.
  - IN ANGLE PULLS OR "U" PULLS THE DISTANCE BETWEEN EACH CONDUIT ENTRY INSIDE THE BOX AND THE OPPOSITE WALL OF THE BOX SHALL NOT BE LESS THAN SIX (6) TIMES THE TRADE DIAMETER OF THE LARGEST CONDUIT. THIS DISTANCE SHALL BE INCREASED FOR ADDITIONAL ENTRIES BY THE AMOUNT OF THE SUM OF THE DIAMETERS OF ALL OTHER CONDUIT ENTRIES ON THE SAME WALL AS THE BOX. THE DISTANCE BETWEEN CONDUIT ENTRIES ENCLOSING THE SAME CONDUCTOR SHALL NOT BE LESS THAN SIX TIMES THE TRADE DIAMETER OF THE LARGEST CONDUIT.
- A RUN OF CONDUIT BETWEEN TERMINATIONS AT EQUIPMENT ENCLOSURES, SQUARE DUCTS AND PULL/JUNCTION BOXES, SHALL NOT CONTAIN MORE THAN THE EQUIVALENT OF FOUR QUARTER BENDS (360 DEGREES TOTAL), INCLUDING THOSE BENDS LOCATED IMMEDIATELY AT THE TERMINATIONS, CAST, CONDUIT TYPE OUTLETS SHALL NOT BE TREATED AS PULL/JUNCTION BOXES.
- EQUIPMENT CABINETS SHALL NOT BE USED AS PULL/JUNCTION BOXES. ONLY WIRING TERMINATING AT THE EQUIPMENT SHALL BE BROUGHT INTO THESE ENCLOSURES.
- SPLICES AND JUNCTION POINTS SHALL BE PERMITTED ONLY IN JUNCTION BOXES, DUCTS EQUIPPED WITH REMOVABLE COVERS, AND AT EASILY ACCESSIBLE LOCATIONS.
- CIRCUIT BREAKERS IN POWER DISTRIBUTION PANEL(S) SHALL BE THERMAL-MAGNETIC MOLDED CASE, PERMANENT TRIP WITH 100 AMPERE, MINIMUM FRAME.
- DUAL LUGS SHALL BE USED WHERE TWO (2) WIRES, SIZE NO. 6 OR LARGER, ARE TO BE CONNECTED TO THE SAME TERMINAL.
- ALL WALL MOUNTED EQUIPMENT ENCLOSURES SHALL BE MOUNTED ON WOODEN MOUNTING BOARDS.
- WOODEN EQUIPMENT MOUNTING BOARDS SHALL BE PLYWOOD, EXTERIOR TYPE, 3/4 INCH, MINIMUM, THICKNESS, BOTH SIDES PAINTED WITH ONE COAT OF PRIMER AND TWO COATS OF GRAY OIL-BASED PAINT.
- RIGID STEEL CONDUIT SHALL BE USED THROUGHOUT THE INSTALLATION UNLESS OTHERWISE SPECIFIED. THE MINIMUM TRADE SIZE SHALL BE 3/4 INCH.
- ALL RIGID CONDUIT SHALL BE TERMINATED AT CONSTANT CURRENT REGULATORS WITH A SECTION (10" MINIMUM) OF FLEXIBLE CONDUIT.
- UNLESS OTHERWISE SHOWN, ALL EXPOSED CONDUITS SHALL BE RUN PARALLEL TO OR AT RIGHT ANGLES WITH THE LINES OF THE STRUCTURE.
- ALL STEEL CONDUITS, FITTINGS, NUTS, BOLTS, ETC. SHALL BE GALVANIZED.
- USE CONDUIT BUSHINGS AT EACH CONDUIT TERMINATION. WHERE NO. 4 AWG OR LARGER UNDERGROUND WIRE IS INSTALLED, USE INSULATED BUSHINGS.
- USE DOUBLE LOCK NUTS AT EACH CONDUIT TERMINATION.
- WRAP ALL PRIMARY AND SECONDARY POWER TRANSFORMER CONNECTIONS WITH SUFFICIENT LAYERS OF INSULATING TAPE AND COVER WITH INSULATING VARNISH FOR FULL VALUE OF CABLE INSULATION VOLTAGE.
- UNLESS OTHERWISE NOTED, ALL INDOOR SINGLE CONDUCTOR CONTROL WIRING SHALL BE NO. 12 AWG. MINIMUM.
- THE FOLLOWING SHALL APPLY TO RELAY/CONTACTOR PANELS/ENCLOSURES:
  - ALL COMPONENTS SHALL BE MOUNTED IN DUST PROOF ENCLOSURE(S) WITH VERTICALLY HINGED COVERS.
  - THE ENCLOSURE(S) SHALL HAVE AMPLE SPACE FOR THE CIRCUIT COMPONENTS, TERMINAL BLOCKS AND INCOMING AND INTERNAL WIRING.
  - ALL CONTROL CONDUCTOR TERMINATIONS SHALL BE OF THE OPEN-EYE CONNECTOR/SCREW TYPE. SOLDERED CLOSED-EYE TERMINATIONS, OR TERMINATIONS WITHOUT CONNECTORS ARE NOT ACCEPTABLE.
  - WHEN THE ENCLOSURE COVER IS OPENED, ALL CIRCUIT COMPONENTS, WIRING AND TERMINALS SHALL BE EXPOSED AND ACCESSIBLE WITHOUT REMOVAL OF ANY PANELS, COVERS, ETC., EXCEPT THOSE COVERING HIGH VOLTAGE COMPONENTS.
  - ACCESS TO, OR REMOVAL OF A CIRCUIT COMPONENT OR TERMINAL BLOCK WILL NOT REQUIRE THE REMOVAL OF ANY OTHER CIRCUIT COMPONENT OR TERMINAL BLOCK.
  - EACH CIRCUIT COMPONENT SHALL BE CLEARLY IDENTIFIED INDICATING ITS CORRESPONDING NUMBER SHOWN ON THE DRAWINGS AND ITS FUNCTION.
  - A COMPLETE WIRING DIAGRAM (NOT A SCHEMATIC DIAGRAM) SHALL BE MOUNTED ON THE INSIDE OF THE COVER. THE DIAGRAM SHALL REPRESENT EACH CONDUCTOR BY A SEPARATE LINE.
  - THE DIAGRAM SHALL IDENTIFY EACH CIRCUIT COMPONENT AN NUMBERING AND COLOR OF EACH TERMINAL CONDUCTOR AND TERMINAL.
  - ALL WIRING SHALL BE NEATLY TRAINED AND LACED.
  - MINIMUM WIRE SIZE SHALL BE NO. 12 AWG.

QUINCY REGIONAL AIRPORT  
BALDWIN FIELD  
ADAMS COUNTY, ILLINOIS



A.I.P. PROJ.: 3-17-0085-XX

ILL. PROJ.: UIN-3618

Proj. No.	824-065WCD_0240
Revision	R-503-ELEC.DWG
Scale	N/A
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LAYOUT	R.A.W. 09/02/05
DRAWN	B.A.K. 09/02/05
REVIEWED	C.A.H. 05/18/06



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

INSTALL  
WIND CONES

ELECTRICAL NOTES  
SHEET 1

**FIELD LIGHTING NOTES**

1. UNLESS OTHERWISE NOTED, ALL UNDERGROUND FIELD POWER MULTIPLE AND SERIES CIRCUIT CONDUCTORS WHETHER DEB OR IN DUCT/CONDUIT SHALL BE FAA APPROVED L-824 TYPE. INSULATION VOLTAGE AND SIZE SHALL BE AS SPECIFIED.
2. NO COMPONENTS OF PRIMARY CIRCUIT SUCH AS CABLE, CONNECTORS AND TRANSFORMERS SHALL BE BROUGHT ABOVE GROUND AT EDGE LIGHTS, SIGNS, REIL, PAPI, ETC.
3. THERE SHALL BE NO EXPOSED POWER/CONTROL CABLES BETWEEN THE POINT WHERE THEY LEAVE THE UNDERGROUND (DEB OR L-867 BASES) AND WHERE THEY ENTER THE EQUIPMENT (SUCH AS TAXIWAY SIGNS, PAPI, REIL, ETC.) ENCLOSURES. THESE CABLES SHALL BE ENCLOSED IN RIGID CONDUIT OR IN FLEXIBLE, WATERTIGHT CONDUIT WITH BREAKABLE COUPLING(S) AT THE GRADE OR THE HOUSING COVER, AS SHOWN IN APPLICABLE DETAILS.
4. THE JOINTS OF THE L-823 PRIMARY CONNECTORS SHALL BE WRAPPED WITH AT LEAST ONE LAYER OF RUBBER OR SYNTHETIC RUBBER TAPE AND ONE LAYER OF PLASTIC TAPE, ONE-HALF LAPPED, EXTENDING AT LEAST 1-1/2 INCHES ON EACH SIDE OF THE JOINT, AS SHOWN ON SHEET NO. 14.
5. THE CABLE ENTRANCE INTO THE FIELD-ATTACHED L-823 CONNECTORS SHALL BE ENCLOSED BY A HEAT-SHRINKABLE TUBING WITH CONTINUOUS INTERNAL ADHESIVE, AS SHOWN ON SHEET NO. 14.
6. L-823 TYPE II, TWO-CONDUCTOR SECONDARY CONNECTORS SHALL BE CLASS 'A' (FACTORY MOLDED).
7. THERE SHALL BE NO SPLICES IN THE SECONDARY CABLE(S) WITHIN THE STEMS OF A RUNWAY/TAXIWAY EDGE/THRESHOLD LIGHTING FIXTURE AND THE WIREWAYS LEADING TO TAXIWAY SIGNS AND PAPI/REIL EQUIPMENT.
8. ELECTRICAL INSULATING GREASE SHALL BE APPLIED WITHIN THE L-823, SECONDARY, TWO CONDUCTOR CONNECTORS TO PREVENT WATER ENTRANCE. THESE CONNECTORS SHALL NOT BE TAPED.
9. DEB ISOLATION TRANSFORMERS SHALL BE BURIED AT A DEPTH OF TEN (10") INCHES ON A LINE CROSSING THE LIGHT AND PERPENDICULAR TO THE RUNWAY/TAXIWAY CENTERLINE AT A LOCATION TWELVE (12") INCHES FROM THE LIGHT OPPOSITE FROM THE RUNWAY/TAXIWAY.
10. A SLACK OF THREE (3') FEET, MINIMUM, SHALL BE PROVIDED IN THE PRIMARY CABLE AT EACH TRANSFORMER/CONNECTOR TERMINATION. AT STAKE-MOUNTED LIGHTS, THE SLACK SHALL BE LOOSELY COILED IMMEDIATELY BELOW THE ISOLATION TRANSFORMER.
11. DIRECTION OF PRIMARY CABLES SHALL BE IDENTIFIED BY COLOR CODING AS FOLLOWS: WHEN FACING LIGHT WITH BACK TO PAVEMENT, CABLE TO THE LEFT IS CODED RED AND CABLE TO RIGHT IS CODED BLUE. THIS APPLIES TO STAKE MOUNTED LIGHTS AND BASE MOUNTED LIGHTS WHERE THE BASE HAS ONLY ONE ENTRANCE.
12. L-867 BASES SHALL BE SIZE B, 24" DEEP, CLASS I, UNLESS OTHERWISE NOTED.
13. BASE MOUNTED BREAKABLE COUPLINGS SHALL NOT HAVE WEEP HOLES TO THE OUTSIDE. PLUGGED UP HOLES SHALL NOT BE ACCEPTABLE. IT SHALL BE A 1/4" DIAMETER, MINIMUM, OR EQUIVALENT OPENING FOR DRAINAGE FROM THE SPACE AROUND THE SECONDARY CONNECTOR INTO THE L-867 BASE.
14. THE ELEVATION OF THE BREAKABLE COUPLING GROOVE SHALL NOT EXCEED 1-1/2" ABOVE THE EDGE OF THE COVER IN CASE OF BASE MOUNTED COUPLINGS, OR THE TOP OF THE STAKE IN CASE OF STAKE MOUNTED COUPLINGS.

15. WHERE THE BREAKABLE COUPLING IS NOT AN INTEGRAL PART OF THE LIGHT FIXTURE STEM OR MOUNTING LEG, A BEAD OF SILICON SEAL SHALL BE APPLIED COMPLETELY AROUND LIGHT STEM OR WIREWAY AT BREAKABLE COUPLING TO PROVIDE A WATERTIGHT SEAL.
16. TOPS OF THE STAKES SUPPORTING LIGHT FIXTURES SHALL BE FLUSH WITH THE SURROUNDING GRADE.
17. PLASTIC LIGHTING FIXTURE COMPONENTS, SUCH AS LAMP HEADS, STEMS, BREAKABLE COUPLINGS, BASE COVERS, BRACKETS, STAKES, SHALL NOT BE ACCEPTABLE.
18. THE TOLERANCE FOR THE HEIGHT OF RUNWAY/TAXIWAY EDGE LIGHTS SHALL BE: ONE (1) INCH. IN CASE OF STAKE MOUNTED LIGHTS, THE SPECIFIED LIGHTING FIXTURE HEIGHT SHALL BE MEASURED BETWEEN THE TOP OF THE STAKE AND THE TOP OF THE LENS. IN CASE OF BASE MOUNTED LIGHTS, THE SPECIFIED LIGHTING FIXTURE HEIGHT SHALL BE MEASURED BETWEEN THE TOP OF THE BASE FLANGE AND THE TOP OF THE LENS, THUS INCLUDING THE BASE COVER, THE FRANGIBLE COUPLING, THE STEM, THE LAMP HOUSING AND THE LENS.
19. THE TOLERANCE FOR THE LATERAL SPACING (LIGHT LANE TO RUNWAY/TAXIWAY CENTERLINE) OF RUNWAY/TAXIWAY EDGE LIGHTS SHALL BE ONE (1) INCH. THIS ALSO APPLIES AT INTERSECTIONS TO LATERAL SPACING BETWEEN LIGHTS OF A RUNWAY/TAXIWAY AND THE INTERSECTING RUNWAY/TAXIWAY.
20. ENTRANCES INTO L-867 BASES SHALL BE SEALED WITH HEAT SHRINK AS SHOWN IN DETAIL "B" ON SHEET NO. 13.
21. GALVANIZED/PAINTED EQUIPMENT/COMPONENT SURFACES SHALL NOT BE DAMAGED BY DRILLING, FILING, ETC. DRAIN HOLES IN METAL TRANSFORMER HOUSINGS SHALL BE MADE BEFORE GALVANIZING.
22. EDGE LIGHT NUMBERING TAGS SHALL BE FACING THE PAVEMENT.
23. CABLE/SPLICE/DUCT MARKERS SHALL BE PRECAST CONCRETE OF THE SIZE SHOWN. LETTERS/NUMBERS/ARROWS FOR THE LEGEND TO BE IMPRESSED INTO THE TOPS OF THE MARKERS SHALL BE PRE-ASSEMBLED AND SECURED IN THE MOLD BEFORE THE CONCRETE IS POURED. LEGEND INSCRIBED BY HAND IN WET CONCRETE SHALL NOT BE ACCEPTABLE.
24. ALL UNDERGROUND CABLE RUNS SHALL BE IDENTIFIED BY CABLE MARKERS AT 400 FEET MAXIMUM SPACING, WITH AN ADDITIONAL MARKER AT EACH CHANGE OF DIRECTION OF THE CABLE RUN. CABLE MARKERS SHALL BE INSTALLED IMMEDIATELY ABOVE THE CABLES.
25. THERE SHALL BE NO SPLICES BETWEEN THE ISOLATION TRANSFORMERS. L-823 CONNECTORS ARE ALLOWED AT TRANSFORMER CONNECTIONS ONLY, UNLESS OTHERWISE SHOWN.
26. APPLY AN OXIDE INHIBITING, ANTI-SEIZING COMPOUND TO ALL SCREWS, NUTS AND BREAKAGE COUPLING THREADS.
27. LOCATIONS OF ENDS OF ALL UNDERGROUND DUCTS SHALL BE IDENTIFIED BY DUCT MARKERS.
28. WHERE A PARALLEL, CONSTANT VOLTAGE PAPI SYSTEM IS PROVIDED, THE "T" SPLICES SHALL BE OF THE CAST TYPE.
29. CONCRETE USED FOR SLABS, FOOTINGS, BACKFILL AROUND TRANSFORMER HOUSINGS, MARKINGS, ETC. SHALL BE 3000 PSI, AIR-ENTRAINED.
30. ALL POWER AND CONTROL CABLES IN MAN/HAND HOLES SHALL BE TAGGED. USE EMBOSSED COPPER STRIPS TO BE ATTACHED AT BOTH ENDS TO THE CABLE BY THE USE OF PLASTIC STRAPS. MINIMUM OF TWO TAGS SHALL BE PROVIDED ON EACH CABLE IN A MAN/HAND HOLE-ONE AT THE CABLE ENTRANCE AND ONE AT THE CABLE EXIT.

**GROUNDING NOTES**

1. ALL GROUND CONNECTIONS TO GROUND RODS, BUSSES, PANELS, ETC. SHALL BE MADE WITH PRESSURE TYPE SOLDERLESS LUGS AND GROUND CLAMPS SOLDERED OR BOLT AND WASHER TYPE CONNECTIONS ARE NOT ACCEPTABLE. CLEAN ALL METAL SURFACES BEFORE MAKING GROUND CONNECTIONS. CONNECTIONS TO GROUND RODS SHALL BE EXOTHERMIC WELD WHERE SPECIFIED HEREIN.
2. TOP OF GROUND RODS SHALL BE TEN (10) INCHES BELOW GRADE, UNLESS SPECIFIED OTHERWISE HEREIN, FOR RESPECTIVE APPLICATIONS.
3. THE RESISTANCE TO GROUND OF THE VAULT GROUNDING SYSTEM WITH THE COMMERCIAL POWER LINE NEUTRAL DISCONNECTED SHALL NOT EXCEED 10 OHMS.

JUN 29, 2006 3:22 PM BAK I:\AIRPORTS\QUINCY\824-06SWCD\AIRPORT SHEETS\R-502-ELEC.DWG - ELEC. NOTES

BY	
REVISION	
DATE	

**QUINCY REGIONAL AIRPORT**  
**BALDWIN FIELD**  
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**INSTALL**  
**WIND CONES**  
**ELECTRICAL NOTES**  
**SHEET 2**