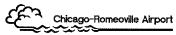


HANSON PROFESSIONAL SERVICES INC.

815 Commerce Drive, Suite 200 Oak Brook, Illinois 60523 Telephone: 630.990.3800

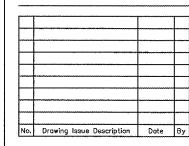


JOLIET REGIONAL PORT DISTRICT

1 Hangar Road Romeoville, Illinois 60446 Telephone: 815.838.9497 Fax: 815.838.9524

EXTEND TAXIWAY E: CONSTRUCT GA APRON, AVGAS FUELING APRON AND AUTO PARK 100

AIP PROJECT NO. 3-17-0140-B38 IDA PROJECT NO. LOT-3441



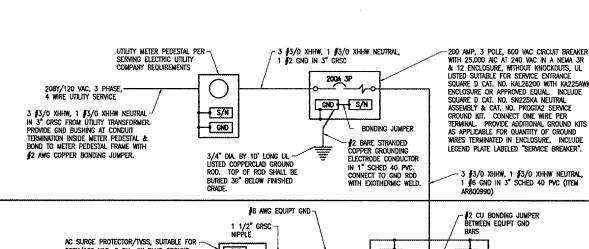
Date

MARCH 25, 2005

Sheet Title

ELECTRICAL ONE-LINE DIAGRAM

840-040	08041
Project Numbe	r
KNL	03-08-05
Layout By	Date
KNL	03/08/05
Designed By	Dote
CAH	03/08/05
Reviewed By	Octo



3. ALL ELECTRICAL INSTALLATIONS INSTALLED IN CLASSIFIED HAZARDOUS LOCATIONS AROUND FUEL STORAGE & DISPENSING SYSTEMS SHALL BE SPECIFICALLY APPROVED FOR SUCH LOCATIONS AND INSTALLED IN CONFORMANCE WITH NEC 500, 501, 504, 514, AND 515 AS WELL AS ANY OTHER APPLICABLE CODES AND REQUIREMENTS. - 200 AMP, 3 POLE, 600 VAC CIRCUIT BREAKER WITH 25,000 AIC AT 240 VAC IN A NEWA 3R & 12 ENCLOSURE, WITHOUT KNOCKOUTS, UL 4. CONTRACTOR SHALL COORDINATE NEW ELECTRIC SERVICE WITH THE SERVING ELECTRIC UTILITY COMPANY, AIRPORT MANAGER, & RESIDENT ENGINEER. SQUARE D CAT. NO. KAL26200 WITH KA22SAWK ENCLOSURE OR APPROVED EQUAL. INCLUDE SQUARE D CAT. NO. SN225KA NEUTRAL ASSEMBLY & CAT, NO. PROGTAZ SERVICE GROUND KIT. CONNECT ONE WIRE PER TERMINAL. PROVIDE ADDITIONAL GROUND KITS AS APPLICABLE FOR QUANTITY OF GROUND #2 BARE STRANDED COPPER GROUNDING - #2 CU BONDING JUMPER FLECTRODE CONDUCTOR CND 208Y/120 VAC, 3 PH, 4W PLUS GROUND SYSTEM WITH SURGE CURRENT RATING OF GND CND 1 IN 1" SCHED 40 PVC. 180 KA, 8 x 20 MICROSECOND WAVE PER MODE & STATUS INDICATION LIGHTS IN A NEMA 12 ENCLOSURE, LIGHTNING S/N CONNECT TO GND ROD WITH EXOTHERMIC WELD. 1/4" x 2" x 12" COPPER -/ GROUND BAR, HARGER CAT, NO. GBI14212N OR 3/4" x 10"L, UL LISTED PROTECTION CORP. MODEL LPC SPD = #6 GND - #6 THWN NEUTRAL SURGE PROTECTOR/ TVSS DEVICE SHALL BE INSTALLED ON THE LEFT HAND SIDE OF THE PANELBOARD. MAINTAIN LEADS AS SHORT 3 #6 THWN 60A 3P & AS STRAIGHT AS POSSIBLE FROM THE 20A 3P 1 0 SPARE FOR FUEL FARM USE PANELBOARD TO THE AC SURGE PROTECTOR/TVSS DEVICE. PROVIDE DUCT SECONDARY POWER DIST. & SEAL AT CONDUIT TERMINATIONS. 1 30A 2P 30A 2P STANDING ENCLOSURE MOUNTED ON CONCRETE 4/C #8 XIP-USE, 600V UG CARLE 4/C #8 XLP-USE 600V UG CARIF PAD (ITEM AR109400) IN 1.25" UNIT DUCT. DIRECT BURY IN 1.25" UNIT DUCT. DIRECT BURY 24" MIN. BELOW GRADE. COLOR 24" MIN. BELOW GRADE. COLOR CODE 208 VAC CONDUCTOR _2 #10 THWN ~2 **∦**10 THWN -2 #10 THWN CODE 208 VAC CONDUCTOR INSULATION BLACK, RED, BLUE & 225 AMP, 208/120 VAC, 3PH, 4W DISTRIBUTION PANELBOARD. INSULATION BLACK, RED. BLUE & 오 30A 오 30A GND GREEN. (ITEM ARBO0922) TRANSITION UNIT DUCT TO GRSC WHERE EMERGING FROM GRADE. 오 30A 궁 2P GREEN. (ITEM AR800922) TRANSITION UNIT DUCT TO GRSC WHERE EMERGING FROM GRADE. -30 AMP 12 POLE LIGHTING CONTACTOR -30 AMP, 3 POLE, 240 VAC, U.L. LISTED, HEAVY DUTY FUSBLE SAFETY SWITCH IN A NEMA 3R & 12 ENCLOSURE, WITHOUT KNOCKOUTS, SQUARE D CLASS 3110, CAT. NO. H321AWK WITH GROUND KIT OR APPROVED EQUAL. PROVIDE SPLICE WHERE APPLICABLE ---3/C #8 XLP-USE, 600V UG -3/C #2 XLP-USE & 2/C #6 XLP-USE, 600V (208 VAC CKT FOR LIGHTS) ~5/C #8 XLP-USE, 600V INCLUDE EQUIPMENT -UG CABLE IN 1.25" (ITEM AR800918) 3 UL LISTED CLASS RK5 FUSES AS MANUFACTURED BY BUSSMANN, SIZED AS REQUIRED FOR THE RESPECTIVE GATE OPERATOR IN ACCORDANCE WITH THE GATE OPERATOR UNIT DUCT (208 VAC CKT FOR LIGHTS, 120 UG CABLE IN 2" UNIT -2 #8 XLP-USE, 1 #8 GND (ITEM AR108608) DUCT (208 VAC CKT FOR LIGHTS, 120 VAC IN 2" GRSC (ITEM AR110212) OPERATOR IN ALZOROANCE WITH THE GATE DEPRATOR MANUFACTURE'S RECOMMENDIATIONS AND PER THE REQUIREMENTS OF NEC. INCLUDE 3 SPARE FUSES OF THE REQUIREMENTS OF NEC. INCLUDE 3 SPARE FUSES OF THE SAME SIZE AND TYPE. LOCATE SAFETY SWITCH NEAR CATE OPERATOR AND PROVIDE HOT DIPPED CALVANIZED STEEL STRUT SUPPORT WITH CORROSION RESISTANT HARDWARE. NOTE SAFETY SWITCH SHALL NOT BE USED AS A SPLICE BOX OR A PULL BOX. VAC CKT FOR RECEPT.) EXPLOSION PROOF CONDUIT SEAL-OFF FITTING SUITABLE FOR CLASS I, DM. 1, GROUP D LOCATION. INSTALL IN TRANSFORMER BASE AT CKT FOR RECEPT.) (ITEM INCLUDE EQUIPMENT AR800917) 30A 2P. 30A 2P GROUND KIT ELECTRICAL HANDHOLE LIGHT POLE & AT ELECTRICAL HANDHOLE. ppp ppp NORTH APRON FLOOD LIGHTS SOUTH APRON FLOOD LIGHTS FUEL DISPENSER 3 #10 THWN, 1 #10 GND IN 3/4" GRSC WITH UL LISTED LIQUID TIGHT FLEXIBLE METAL CONDUIT AT FINAL ISLAND LIGHTING 3 \$10 THWN, 1 \$10 GND IN 3/4" GRSC WITH UL LISTED LIQUID TIGHT FLEXIBLE METAL CONDUIT AT FINAL (POLE NO. 1) (POLE NO. 2) (POLE NO. 3) GATE #2
OPERATOR
CONTROLLER 3/4" x 10"L, UL LISTED COPPERCLAD GND-ROD WITH 10 MIL, MINIMUM COPPER -3/4" x 10"L. UL LISTED COPPERCLAD GND ROD WITH 10 MIL. MINIMUM COPPER COATING. MIN. BURY 1" BELOW FINISHED GRADE IN UNDISTURBED EARTH. COATING. MIN. BURY 1" BELOW FINISHED CONTROLLER 208 VAC, 3 PHASE GATE OPERATOR MOTOR. NOTE MOTOR HORSEPOWER MAY VARY

BOND GND ROD TO GATE OPERATOR FRAME WITH #6 AWG BARE STRANDED COPPER CONDUCTOR PROVIDE 1" SCHED 40 PVC CONDUIT & COORDINATE INTO CONCRETE FOUNDATION. 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

DEPENDING LIPON MANUFACTURER

DEPENDING UPON MANUFACTURER.

208 VAC, 3 PHASE GATE OPERATOR MOTOR.
NOTE MOTOR HORSEPOWER MAY VARY

ELECTRICAL NOTES

ELECTRICAL SERVICE EQUIPMENT & THE ELECTRICAL DISTRIBUTION EQUIPMENT PANEL SHALL NOT BE LOCATED IN THE CLASSIFIED HAZARDOUS AREAS OF THE FUEL STORAGE AND DISPENSING SYSTEMS. REFER TO NEC 514 & 515 FOR INFORMATION ON THE CLASSIFIED HAZARDOUS LOCATION BOUNDARIES FOR FUEL STORAGE & DISPENSING.

CONDUIT FROM THE RESPECTIVE HANDHOLE TO THE POLE LIGHT AT THE FUEL DISPENSER ISLAND SHALL BE GALVANIZED RIGID STEEL CONDUIT WITH EXPLOSION PROOF CONDUIT SEAL OFF FITTINGS LISTED SUITABLE FOR CLASS I, DIVISION 1, GROUP D LOCATION WHERE CONDUIT EMERGES FROM GRADE.

BOND GND ROD TO GATE OPERATOR FRAME WITH #6 AWG BARE STRANDED COPPER CONDUCTOR PROVIDE 1" SCHED 40 PVC CONDUIT & COORDINATE INTO CONCERTE FOUNDATION. CONNECTION TO GND ROD SHALL BE EXOTHERING WELD. CONNECTION TO GND ROD FRAME SHALL BE WITH A TWO-HOLE TONGUE COMPRESSION LUG BOLIED TO THE FRAME

MV |---|