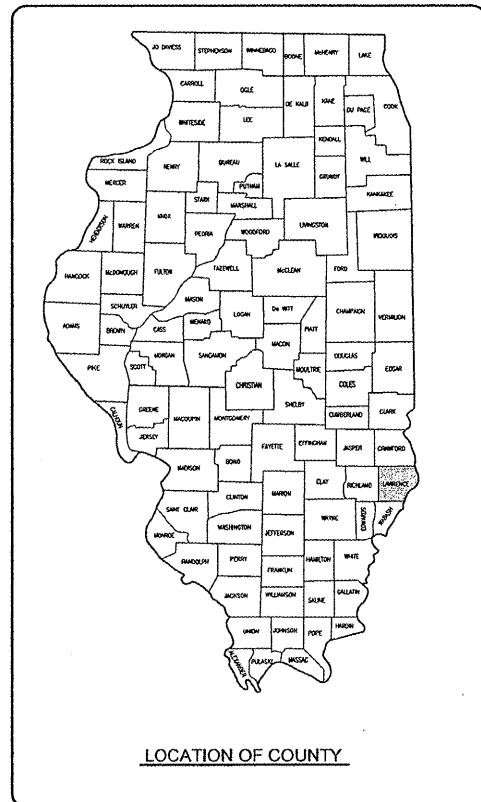


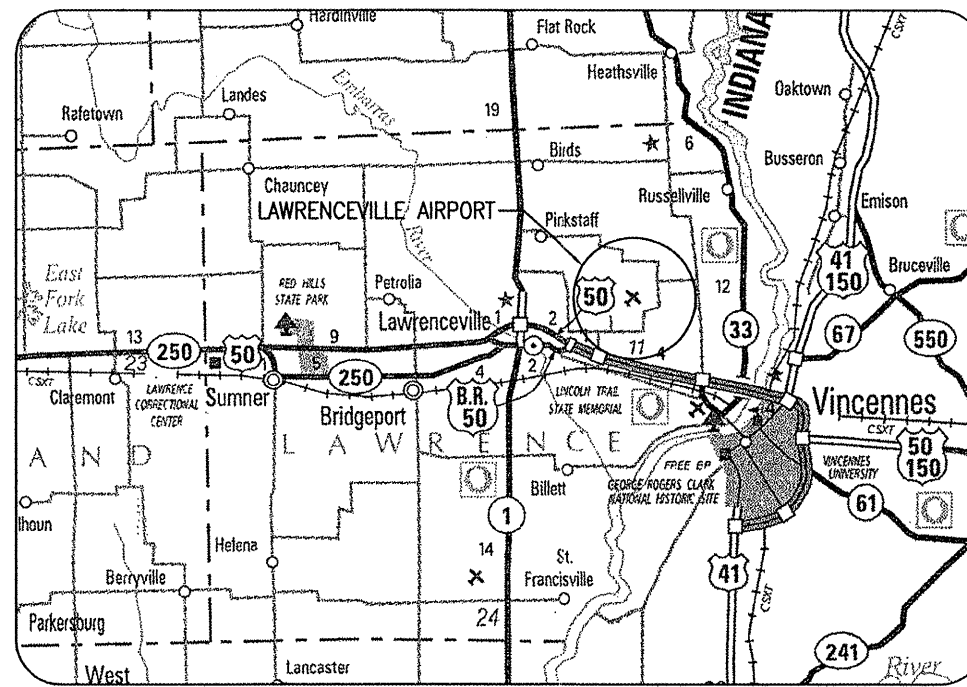
CONSTRUCTION PLANS FOR MID-AMERICAN AIR CENTER LAWRENCEVILLE-VINCENNES AIRPORT LAWRENCEVILLE, LAWRENCE COUNTY, ILLINOIS FRONTAL AREA FENCE INSTALLATION

SCOPE OF WORK

THIS PROJECT CONSISTS OF REMOVING AND REPLACING THE EXISTING 4 FOOT TALL CLASS E FENCE AND GATES IN THE FRONTAL AREA. ALSO INCLUDED IS THE INSTALLATION OF A 24' ELECTRIC SLIDE GATE.

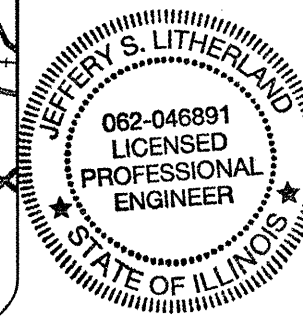


LOCATION OF COUNTY



LOCATION

ILL. PROJ.: LWV-3869
A.I.P. PROJ.: 3-17-0061-B15
LATITUDE: 38° 45' 35"
LONGITUDE: 87° 36' 27"
ELEVATION: 429.0' M.S.L.
DATE: MARCH 20, 2009



HANSON
Hanson Professional Services Inc.
ELECTRICAL ENGINEER

Submitted by: *Kevin N. Lightfoot* ENG'R
Date Submitted: 3/25/2009
Lic. Exp. Date: 11/30/2009

HANSON
Hanson Professional Services Inc.

Submitted by: *Jeffery S. Litherland* ENG'R
Date Submitted: 3/20/09
Lic. Exp. Date: 11/30/09

BI-STATE AUTHORITY

Approved: *Frank S. Sadner* CHAIRMAN
Date: 3-19-2009
Approved: *Paul J. ...* SECRETARY
Date: 3/19/2009

REVISION	BY	
	DATE	
MID-AMERICAN AIR CENTER LAWRENCEVILLE-VINCENNES AIRPORT LAWRENCEVILLE, ILLINOIS		
IL PROJ.: LWV-3869 A.I.P. PROJ.: 3-17-0061-B15		
Hanson Project No.	0620185D	0800
Filename	R-001.CVR.DWG	
Scale	NOT TO SCALE	
Date	01/20/09	
LAYOUT	JSL	12/10/08
DRAWN	BAK	12/10/08
REVIEWED	JSL	01/20/09
HANSON Hanson Professional Services Inc. 1522 South Sixth Street Springfield, Illinois 62703-2886 Chicago, Illinois		
FRONTAL AREA FENCE INSTALLATION		COVER SHEET
1		1 of 15 sheets

MAR 18, 2009 10:45 AM KINCAD00394
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DATE	REVISION	BY

SUMMARY OF QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	TOTAL QUANTITIES	AS BUILT QUANTITIES
AR150510	ENGINEER'S FIELD OFFICE	L.S.	1	
AR161900	REMOVE CLASS C FENCE	L.F.	1,721	
AR162504	CLASS E FENCE 4'	L.F.	4,867	
AR162606	CLASS E GATE-6'	EACH	8	
AR162610	CLASS E GATE-10'	EACH	1	
AR162620	CLASS E GATE-20'	EACH	1	
AR162724	ELECTRIC GATE-24'	EACH	1	
AR162900	REMOVE CLASS E FENCE	L.F.	2,663	
AR162910	REMOVE CLASS E GATE	EACH	11	
AR501604	4" PCC SIDEWALK	S.F.	230	
AR701900	REMOVE PIPE	L.F.	20	
AR800467	GATE OPERATOR	EACH	1	
AR800524	CLASS E MANUAL SLIDE GATE	EACH	2	
AR910200	ROADWAY SIGN	EACH	4	

INDEX TO SHEETS

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	SUMMARY OF QUANTITIES AND INDEX TO SHEETS
3	PROPOSED SAFETY PLAN
4	EXISTING FENCE REMOVAL PLAN
5	PROPOSED FENCING PLAN
6	PROPOSED DETAIL SHEET
7	ELECTRICAL LEGEND AND ABBREVIATIONS
8	TERMINAL GATE ELECTRICAL PLAN
9	EXISTING TERMINAL GATE ELECTRICAL ONE LINE DIAGRAM
10	PROPOSED TERMINAL GATE ELECTRICAL ONE LINE DIAGRAM
11	PROPOSED GATE OPERATOR DETAILS - TERMINAL GATE
12	SOARING CLUB GATE ELECTRICAL PLAN
13	SOARING CLUB GATE ELECTRICAL ONE LINE DIAGRAM
14	PROPOSED ELECTRIC SLIDE GATE DETAILS - SOARING CLUB
15	CARD READER, BOLLARD, & GATE OPERATOR DETAILS

MID-AMERICAN AIR CENTER
LAWRENCEVILLE-VINCENNES AIRPORT
LAWRENCEVILLE, ILLINOIS

IL PROJ.: LWV-3869 A.I.P. PROJ.: 3-17-0061-B15

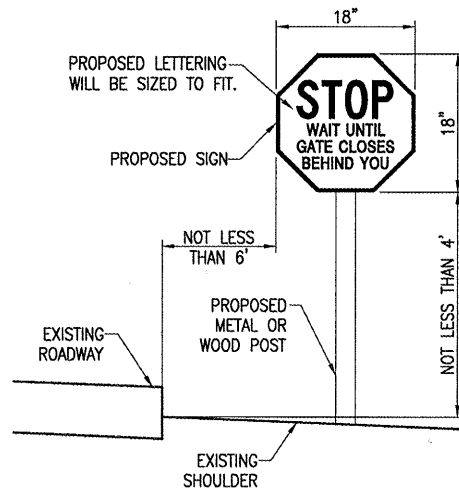
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Filename	R-002FLP.DWG
Scale	NOT TO SCALE
Date	01/20/09
LAYOUT	JSL 12/10/08
DRAWN	BK 12/10/08
REVIEWED	JSL 01/20/09



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

FRONTAL AREA
FENCE INSTALLATION

SUMMARY OF QUANTITIES
AND
INDEX TO SHEETS

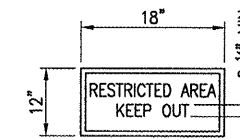


TYPICAL SLIDE GATE STOP SIGN

NOT TO SCALE

SLIDE GATE STOP SIGN NOTE

THE PROPOSED SLIDE GATE STOP SIGN WILL BE LOCATED WITHIN 20' (MINIMUM) TO 40' (MAXIMUM) DISTANCE FROM THE PROPOSED SLIDE GATE. ONE SIGN WILL BE INSTALLED ON BOTH SIDES OF THE PROPOSED SLIDE GATE. EXACT LOCATION WILL BE DETERMINED BY THE AIRPORT MANAGER. THESE SIGNS WILL BE PAID FOR UNDER ITEM NO. AR910200 "ROADWAY SIGN" - PER EACH.



SIGN DETAIL

"NOT TO SCALE"

NOTE:
0.08 GA. ALUMINUM ALLOY SHEET LETTERING COLOR SHALL BE RED. EACH GATE SHALL REQUIRE ONE SIGN. EVERY 100' OF FENCE SHALL REQUIRE ONE SIGN.

THE COST TO FURNISH AND INSTALL THE SIGNS SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

SCOPE OF WORK

THIS PROJECT CONSISTS OF REMOVING AND REPLACING THE EXISTING 4 FOOT TALL CLASS E FENCE AND GATES IN THE FRONTAL AREA. ALSO INCLUDED IS THE INSTALLATION OF A 24' ELECTRIC SLIDE GATE.

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.

HEIGHT OF CONSTRUCTION EQUIPMENT

THE MAXIMUM ANTICIPATED HEIGHT OF THE CONSTRUCTION EQUIPMENT WILL BE 25 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 200' 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 THE HAUL ROUTE AND PARKING AREA AS NEEDED TO RESTORE IT 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 WILL NOT BE REQUIRED TO CLOSE ANY RUNWAY OR TAXIWAY.

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.

CERTIFIED PAYROLLS

THE RESIDENT ENGINEER CANNOT FORWARD CONSTRUCTION REPORTS TO THE ILLINOIS DIVISION OF AERONAUTICS FOR PROCESSING UNTIL ALL CERTIFIED PAYROLLS FOR THE PERIOD HAVE BEEN RECEIVED.

MATERIAL CERTIFICATION

COMPLETED WORK CANNOT BE PLACED ON A CONSTRUCTION REPORT UNTIL ALL MATERIAL CERTIFICATIONS FOR THAT PAY ITEM HAVE BEEN RECEIVED, REVIEWED AND ACCEPTED BY THE RESIDENT ENGINEER.

PROPOSED SAFETY PLAN

GENERAL - THE LAWRENCEVILLE-VINCENNES AIRPORT IS COMPRISED OF TWO RUNWAYS. THE PROPOSED CONSTRUCTION WILL NOT NECESSITATE CLOSING ANY RUNWAYS.

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 (122.80 MHz.) WITH THE AIRPORT UNICOM. THIS WILL KEEP THE CONTRACTOR IN CONSTANT CONTACT WITH THE LAWRENCEVILLE-VINCENNES 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.

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 JANUARY 1, 2003.

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

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

EROSION CONTROL

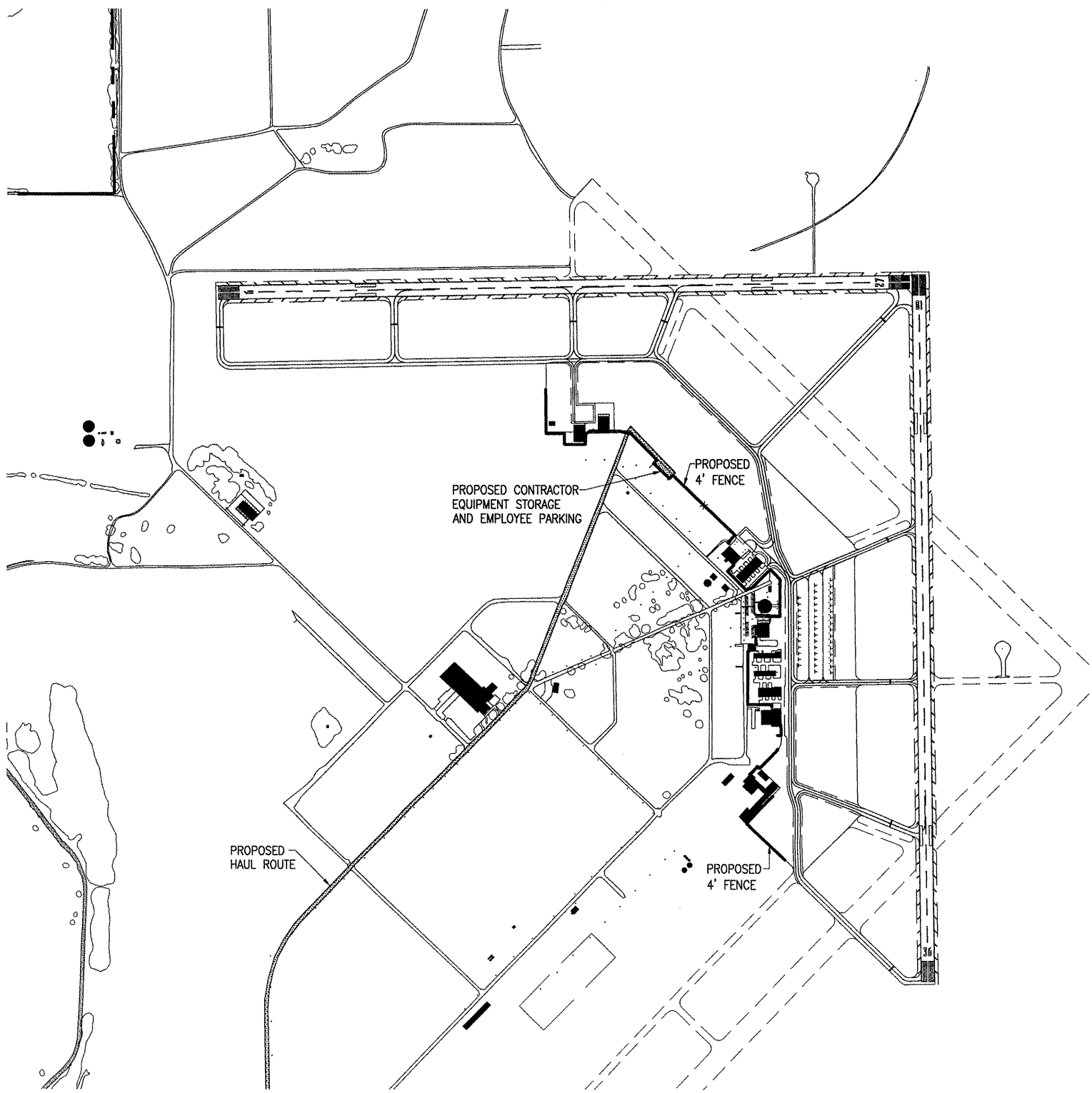
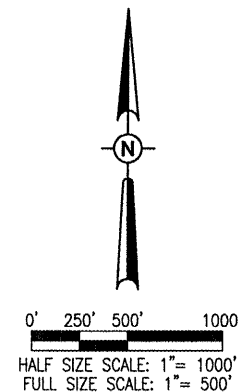
THIS PROJECT WILL DISTURB LESS THAN 1 ACRE OF LAND, THEREFORE NO N.P.D.E.S. PERMIT WILL BE REQUIRED.

J.U.L.I.E. INFORMATION

COUNTY: LAWRENCE
CITY: LAWRENCEVILLE
TOWNSHIP: ALLISON
SECTION NO.: 23 & 26
ADDRESS: LAWRENCEVILLE-VINCENNES AIRPORT
RR# 4, BOX 195
LAWRENCEVILLE, ILLINOIS 62439

CRITICAL POINT DATA

LATITUDE: *** ** **
LONGITUDE: *** ** **
ELEVATION: *** ** M.S.L.



LEGEND

- [Solid line] EXISTING IMPROVEMENTS
- [Dashed line] PROPOSED IMPROVEMENTS
- [Solid black rectangle] EXISTING BUILDINGS
- [Hatched rectangle] PROPOSED HAUL ROUTE AND EQUIPMENT PARKING AREA
- [Circle with 1] PROPOSED BENCHMARK
- [Triangle] PROPOSED BARRICADES OR TRAFFIC CONES

MAR 25, 2009 1:03 PM V00RH00805
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LW023

DATE	REVISION	BY

MID-AMERICAN AIR CENTER
LAWRENCEVILLE-VINCENNES AIRPORT
LAWRENCEVILLE, ILLINOIS
A.I.P. PROJ.: 3-17-0061-B15
IL PROJ.: LW-3869

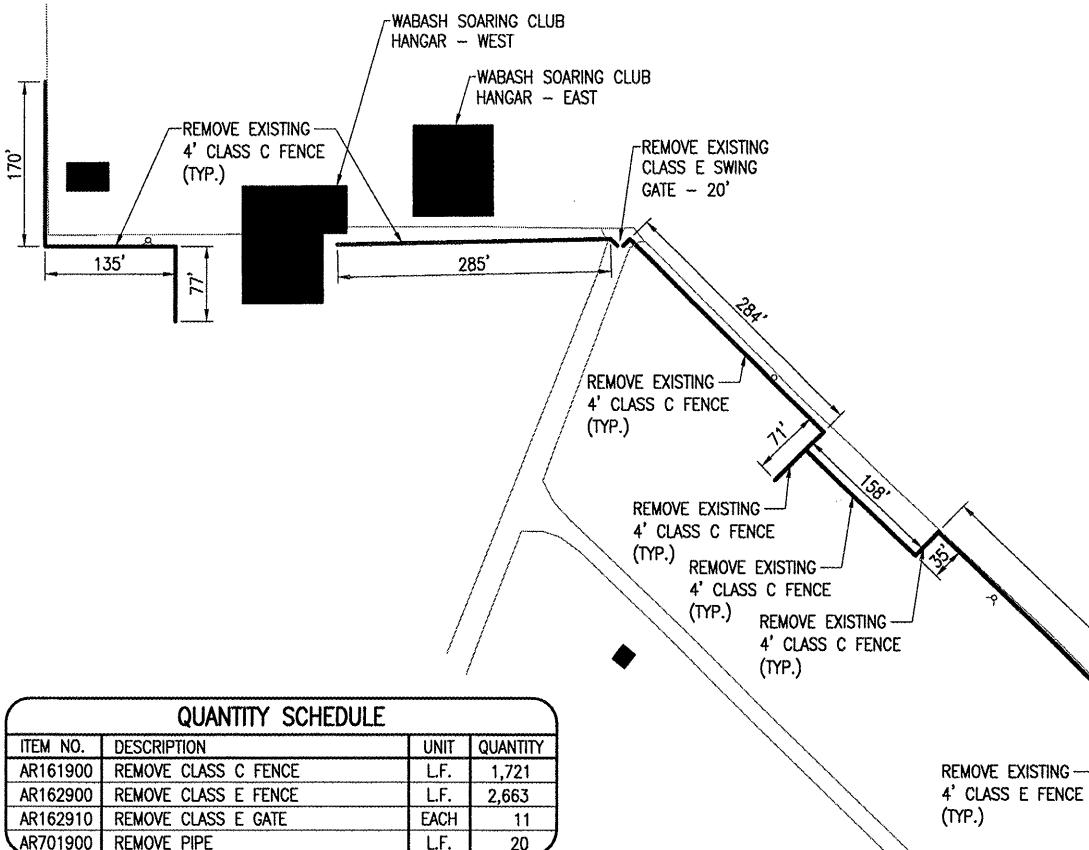
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Filename: R-03SFT.DWG	BKK	12/10/08
Scale: 1"= 500'	JSL	01/20/09
Date: 01/20/09		
LAYOUT		

Hanson Professional Services Inc.
1525 South Sixth Street
Springfield, Illinois 62703-2885
Offices Nationwide

FRONTAL AREA
FENCE INSTALLATION
PROPOSED
SAFETY
PLAN

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.



QUANTITY SCHEDULE			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
AR161900	REMOVE CLASS C FENCE	L.F.	1,721
AR162900	REMOVE CLASS E FENCE	L.F.	2,663
AR162910	REMOVE CLASS E GATE	EACH	11
AR701900	REMOVE PIPE	L.F.	20

EARTHWORK

MINOR EARTHWORK GRADING MAY BE NECESSARY TO ESTABLISH ADEQUATE CLEARANCE FOR THE PROPOSED FENCE. HOWEVER, THIS WORK IS ANTICIPATED TO BE MINIMAL SINCE THE PROPOSED ALIGNMENT FOLLOWS THAT OF THE EXISTING FENCE. THEREFORE, ALL EARTHWORK WILL BE CONSIDERED INCIDENTAL TO THE INSTALLATION OF THE PROPOSED FENCE.

THE CONTRACTOR IS RECOMMENDED TO VISIT THE SITE AND INSPECT THE PROPOSED ALIGNMENT.

PIPE REMOVAL NOTES

THE 15" RCP CULVERT TO BE REMOVED IS SHOWN ON THIS SHEET. THE PIPE AND EXCESS DIRT SHALL BE DISPOSED OFF OF THE AIRPORT PROPERTY. THE REMOVAL OF THE EXCESS DIRT SHALL BE CONSIDERED INCIDENTAL TO THE PIPE REMOVAL AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

THE REMOVAL OF THE THE 15" RCP CULVERT WILL BE PAID FOR UNDER: AR701900 "REMOVE PIPE" PER L.F.

FENCE REMOVAL NOTES

THE EXISTING FENCE TO BE REMOVED IS PART 4' TALL CLASS E (CHAIN LINK) AND 4' TALL CLASS C (WOVEN WIRE) FENCE. THE CONTRACTOR IS REQUIRED TO REMOVE AND HAND OVER THE FENCE MATERIAL TO THE AIRPORT.

THE CONTRACTOR IS REQUIRED TO REMOVE THE EXISTING FENCE IN A MANNER THAT WILL NOT COMPROMISE THE SECURITY AT THE AIRPORT. THE EXISTING FENCE WILL NOT BE REMOVED UNTIL THE PROPOSED FENCE CAN BE INSTALLED IN ITS PLACE.

ONCE THE PROPOSED FENCE HAS BEEN INSTALLED THE EXISTING FENCE CAN BE REMOVED. ONLY THE EQUIVALENT AMOUNT OF FENCE THAT CAN BE ERECTED IN A DAY'S TIME CAN BE REMOVED IN ORDER TO AVOID UNACCEPTABLE GAPS. THE CONTRACTOR IS CAUTIONED TO BE COGNIZANT OF INCLEMENT WEATHER, EQUIPMENT TROUBLE, OR OTHER UNEXPECTED EVENTS THAT WOULD INTERFERE WITH THE COMPLETION OF A DAYS WORK. A GAP IN THE FENCE WILL NOT BE PERMITTED TO REMAIN OVERNIGHT.

ALL EXISTING FENCE MATERIAL TO INCLUDE FENCE POST, WIRE, HARDWARE, AND ALL ASSOCIATED MATERIAL SHALL BE REMOVED AND DELIVERED TO THE AIRPORT AT A LOCATION IN THE AIRPORT PROPERTY TO BE DETERMINED BY THE AIRPORT MANAGER. BROKEN CONCRETE, EXCESS DIRT, PIPE REMOVED, ETC. SHALL BE DISPOSED OFF OF AIRPORT PROPERTY. DISPOSAL OF THE EXISTING FENCE MATERIAL SHALL BE INCLUDED IN THE COST OF AR161900 AND AR162900.

GATE REMOVAL NOTE

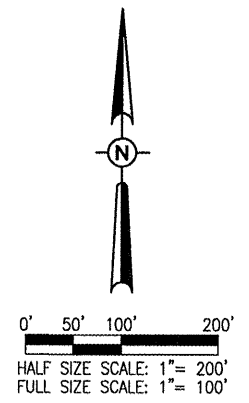
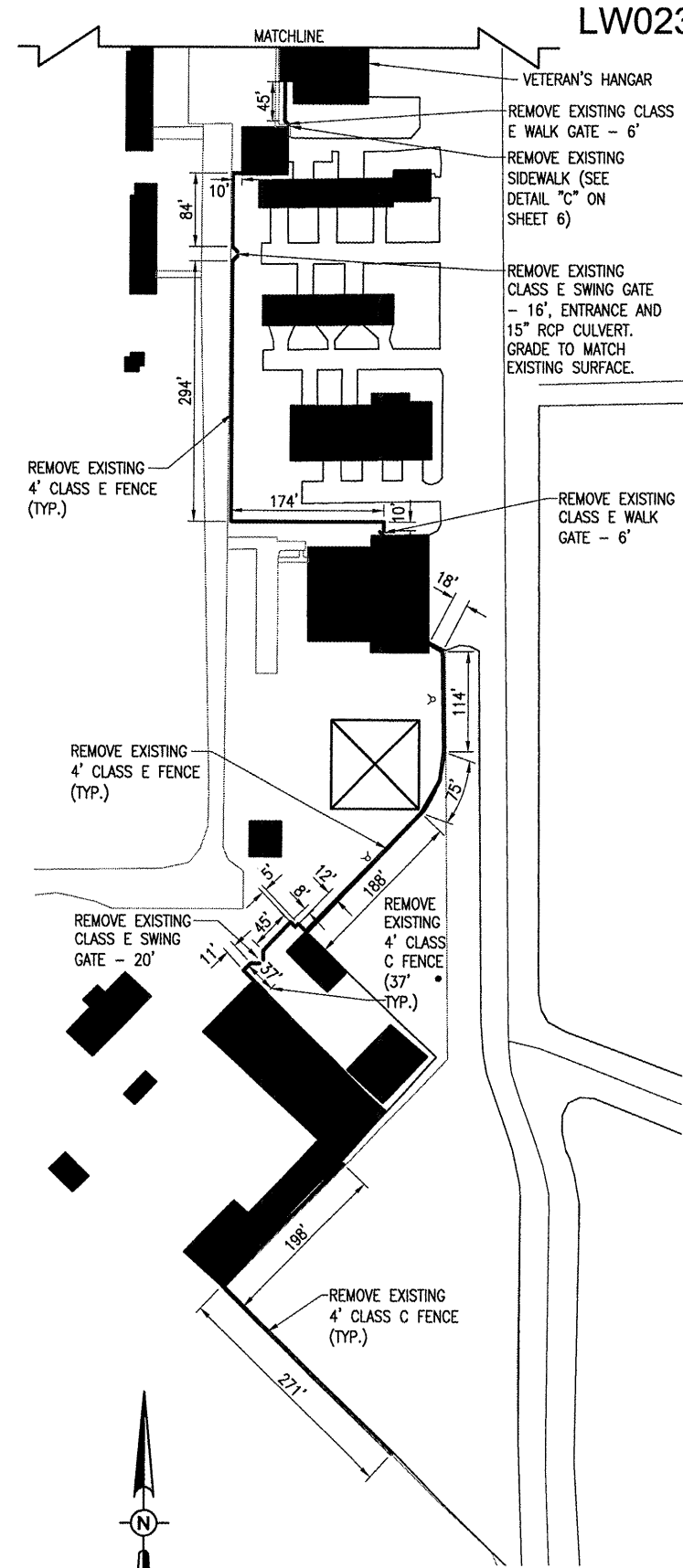
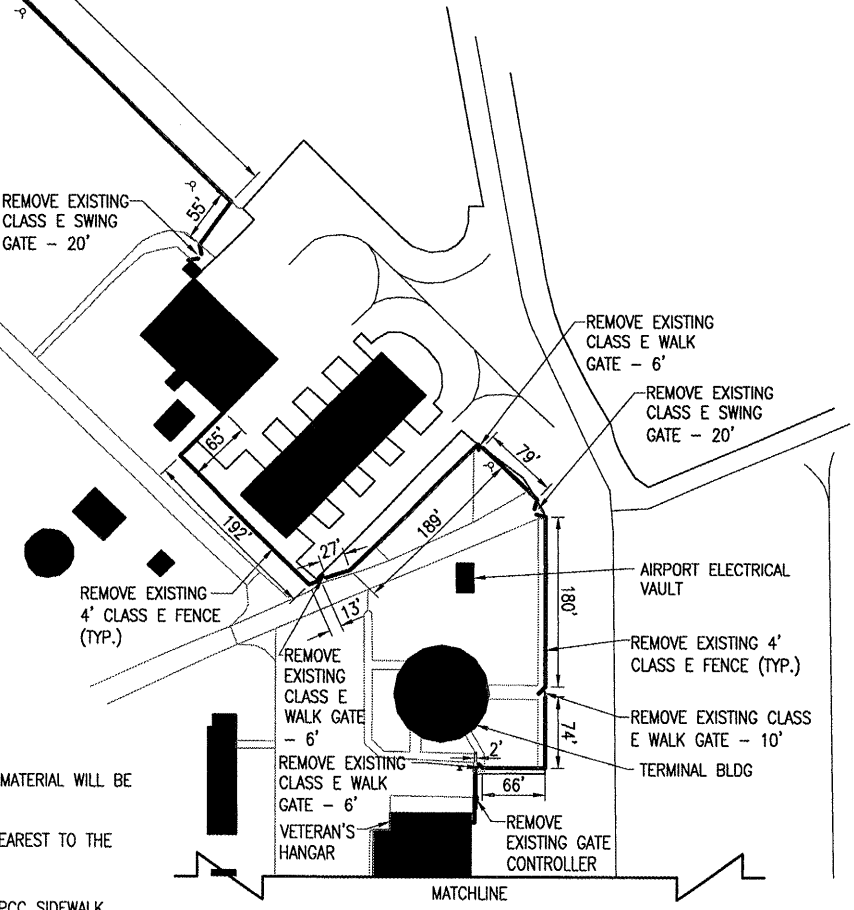
ALL GATES TO BE REMOVED, REGARDLESS OF SIZE OR TYPE, SHALL BE PAID FOR AS AR162910 REMOVE CLASS E GATE.

SIDEWALK REMOVAL NOTES

THE SIDEWALK REMOVAL IS SHOWN ON THIS SHEET. ALL REMOVED MATERIAL WILL BE DISPOSED OF OFF THE AIRPORT SITE.

THE EXISTING SIDEWALK WILL BE REMOVED TO THE JOINT THAT IS NEAREST TO THE DIMENSIONS SHOWN IN SIDEWALK DETAIL "C" ON SHEET 6.

THIS ITEM OF WORK SHALL BE CONSIDERED INCIDENTAL TO THE 4" PCC SIDEWALK AND NO FURTHER COMPENSATION WILL BE ALLOWED.



LEGEND

	EXISTING IMPROVEMENTS
	EXISTING BUILDINGS
	PROPOSED BUILDING
	EXISTING FENCE (TO BE REMOVED)

REVISION

NO.	DATE	BY

**MID-AMERICAN AIR CENTER
LAWRENCEVILLE-VINCENNES AIRPORT
LAWRENCEVILLE, ILLINOIS**

IL PROJ.: LWV-3869 A.I.P. PROJ.: 3-17-0061-815

Hanson Project No. 08A0185D_0800
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 Scale: 1"=100'
 Date: 01/20/09

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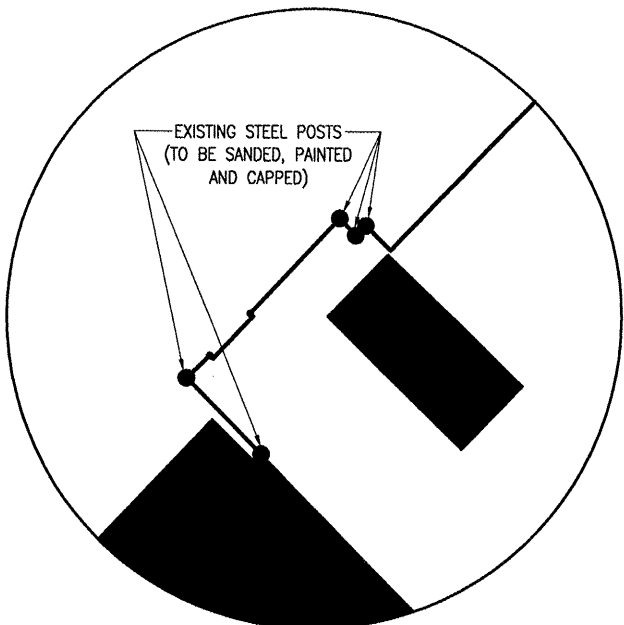
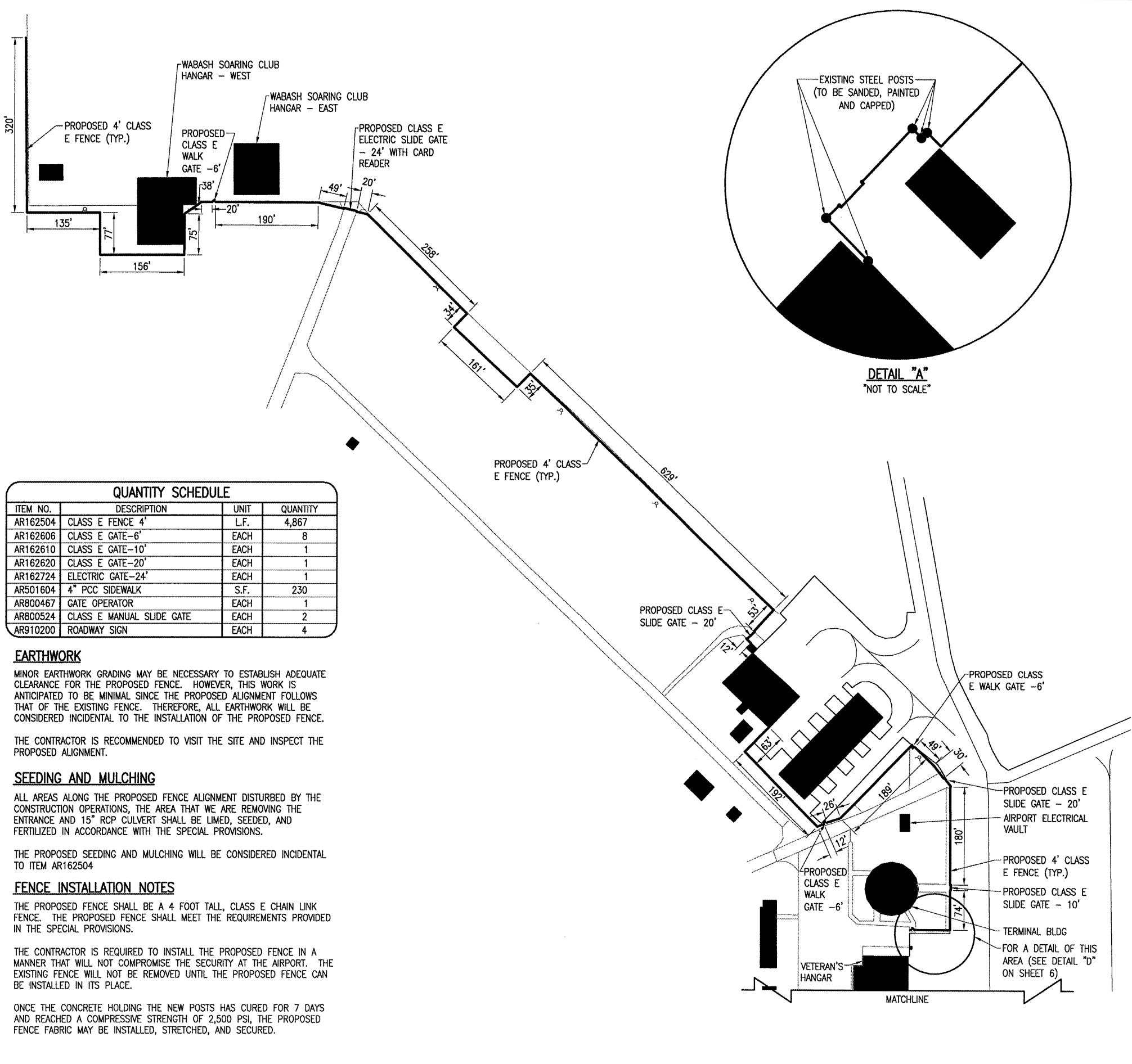


**FRONTAL AREA
FENCE INSTALLATION**

EXISTING FENCE REMOVAL PLAN

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MAR 25, 2009 1:03 PM V00RH0805
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QUANTITY SCHEDULE			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
AR162504	CLASS E FENCE 4'	L.F.	4,867
AR162606	CLASS E GATE-6'	EACH	8
AR162610	CLASS E GATE-10'	EACH	1
AR162620	CLASS E GATE-20'	EACH	1
AR162724	ELECTRIC GATE-24'	EACH	1
AR501604	4" PCC SIDEWALK	S.F.	230
AR800467	GATE OPERATOR	EACH	1
AR800524	CLASS E MANUAL SLIDE GATE	EACH	2
AR910200	ROADWAY SIGN	EACH	4

EARTHWORK

MINOR EARTHWORK GRADING MAY BE NECESSARY TO ESTABLISH ADEQUATE CLEARANCE FOR THE PROPOSED FENCE. HOWEVER, THIS WORK IS ANTICIPATED TO BE MINIMAL SINCE THE PROPOSED ALIGNMENT FOLLOWS THAT OF THE EXISTING FENCE. THEREFORE, ALL EARTHWORK WILL BE CONSIDERED INCIDENTAL TO THE INSTALLATION OF THE PROPOSED FENCE.

THE CONTRACTOR IS RECOMMENDED TO VISIT THE SITE AND INSPECT THE PROPOSED ALIGNMENT.

SEEDING AND MULCHING

ALL AREAS ALONG THE PROPOSED FENCE ALIGNMENT DISTURBED BY THE CONSTRUCTION OPERATIONS, THE AREA THAT WE ARE REMOVING THE ENTRANCE AND 15" RCP CULVERT SHALL BE LIMED, SEEDED, AND FERTILIZED IN ACCORDANCE WITH THE SPECIAL PROVISIONS.

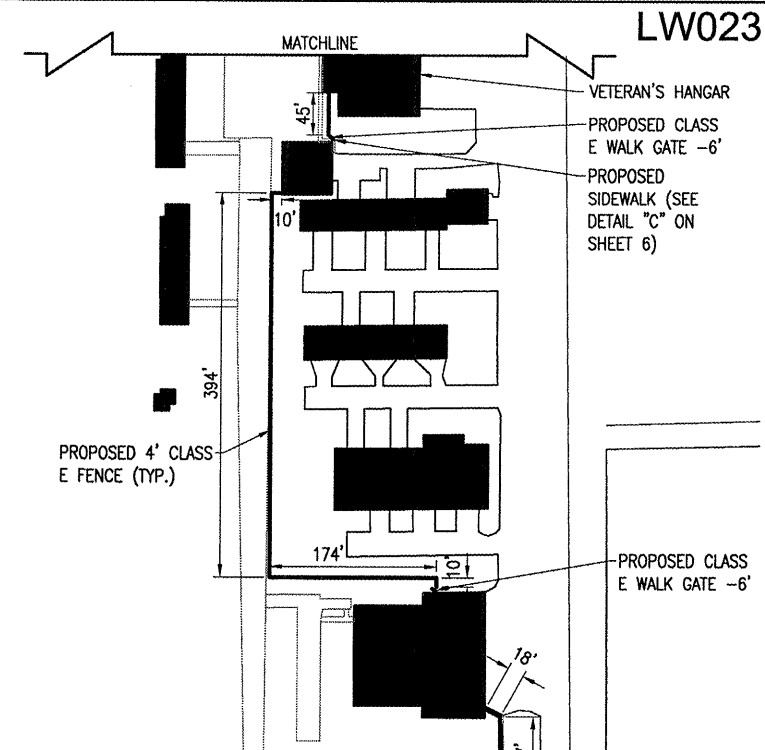
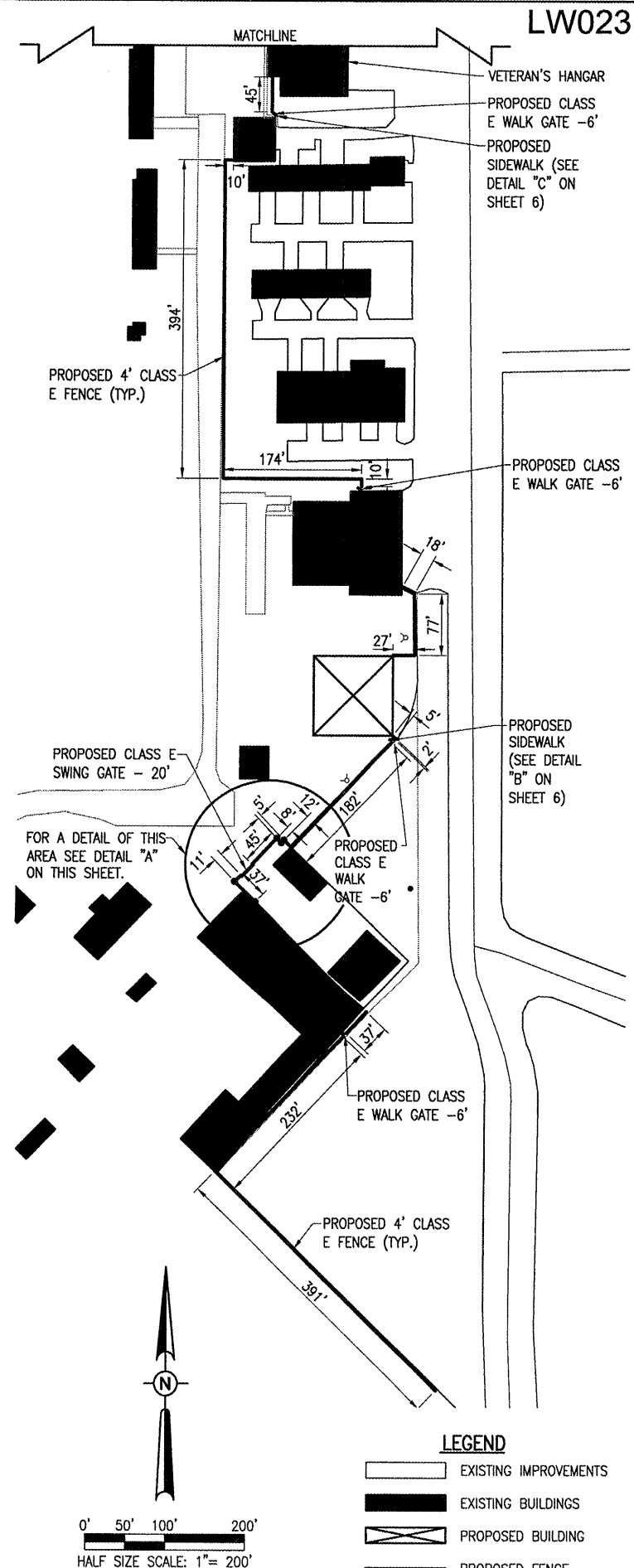
THE PROPOSED SEEDING AND MULCHING WILL BE CONSIDERED INCIDENTAL TO ITEM AR162504

FENCE INSTALLATION NOTES

THE PROPOSED FENCE SHALL BE A 4 FOOT TALL, CLASS E CHAIN LINK FENCE. THE PROPOSED FENCE SHALL MEET THE REQUIREMENTS PROVIDED IN THE SPECIAL PROVISIONS.

THE CONTRACTOR IS REQUIRED TO INSTALL THE PROPOSED FENCE IN A MANNER THAT WILL NOT COMPROMISE THE SECURITY AT THE AIRPORT. THE EXISTING FENCE WILL NOT BE REMOVED UNTIL THE PROPOSED FENCE CAN BE INSTALLED IN ITS PLACE.

ONCE THE CONCRETE HOLDING THE NEW POSTS HAS CURED FOR 7 DAYS AND REACHED A COMPRESSIVE STRENGTH OF 2,500 PSI, THE PROPOSED FENCE FABRIC MAY BE INSTALLED, STRETCHED, AND SECURED.



QUANTITY SCHEDULE			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
AR162504	CLASS E FENCE 4'	L.F.	4,867
AR162606	CLASS E GATE-6'	EACH	8
AR162610	CLASS E GATE-10'	EACH	1
AR162620	CLASS E GATE-20'	EACH	1
AR162724	ELECTRIC GATE-24'	EACH	1
AR501604	4" PCC SIDEWALK	S.F.	230
AR800467	GATE OPERATOR	EACH	1
AR800524	CLASS E MANUAL SLIDE GATE	EACH	2
AR910200	ROADWAY SIGN	EACH	4

EARTHWORK

MINOR EARTHWORK GRADING MAY BE NECESSARY TO ESTABLISH ADEQUATE CLEARANCE FOR THE PROPOSED FENCE. HOWEVER, THIS WORK IS ANTICIPATED TO BE MINIMAL SINCE THE PROPOSED ALIGNMENT FOLLOWS THAT OF THE EXISTING FENCE. THEREFORE, ALL EARTHWORK WILL BE CONSIDERED INCIDENTAL TO THE INSTALLATION OF THE PROPOSED FENCE.

THE CONTRACTOR IS RECOMMENDED TO VISIT THE SITE AND INSPECT THE PROPOSED ALIGNMENT.

SEEDING AND MULCHING

ALL AREAS ALONG THE PROPOSED FENCE ALIGNMENT DISTURBED BY THE CONSTRUCTION OPERATIONS, THE AREA THAT WE ARE REMOVING THE ENTRANCE AND 15" RCP CULVERT SHALL BE LIMED, SEEDED, AND FERTILIZED IN ACCORDANCE WITH THE SPECIAL PROVISIONS.

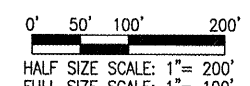
THE PROPOSED SEEDING AND MULCHING WILL BE CONSIDERED INCIDENTAL TO ITEM AR162504

FENCE INSTALLATION NOTES

THE PROPOSED FENCE SHALL BE A 4 FOOT TALL, CLASS E CHAIN LINK FENCE. THE PROPOSED FENCE SHALL MEET THE REQUIREMENTS PROVIDED IN THE SPECIAL PROVISIONS.

THE CONTRACTOR IS REQUIRED TO INSTALL THE PROPOSED FENCE IN A MANNER THAT WILL NOT COMPROMISE THE SECURITY AT THE AIRPORT. THE EXISTING FENCE WILL NOT BE REMOVED UNTIL THE PROPOSED FENCE CAN BE INSTALLED IN ITS PLACE.

ONCE THE CONCRETE HOLDING THE NEW POSTS HAS CURED FOR 7 DAYS AND REACHED A COMPRESSIVE STRENGTH OF 2,500 PSI, THE PROPOSED FENCE FABRIC MAY BE INSTALLED, STRETCHED, AND SECURED.



LEGEND

[Dashed line]	EXISTING IMPROVEMENTS
[Solid black]	EXISTING BUILDINGS
[Cross-hatched]	PROPOSED BUILDING
[Thick solid line]	PROPOSED FENCE

LW023

VETERAN'S HANGAR
PROPOSED CLASS E WALK GATE -6'
PROPOSED SIDEWALK (SEE DETAIL "C" ON SHEET 6)

PROPOSED CLASS E WALK GATE -6'

PROPOSED SIDEWALK (SEE DETAIL "B" ON SHEET 6)

PROPOSED CLASS E WALK GATE -6'

PROPOSED CLASS E SWING GATE - 20'

FOR A DETAIL OF THIS AREA SEE DETAIL "A" ON THIS SHEET.

PROPOSED CLASS E WALK GATE -6'

PROPOSED CLASS E WALK GATE -6'

PROPOSED CLASS E WALK GATE -6'

PROPOSED CLASS E WALK GATE -6'

PROPOSED CLASS E WALK GATE -6'

PROPOSED CLASS E SLIDE GATE - 20'

AIRPORT ELECTRICAL VAULT

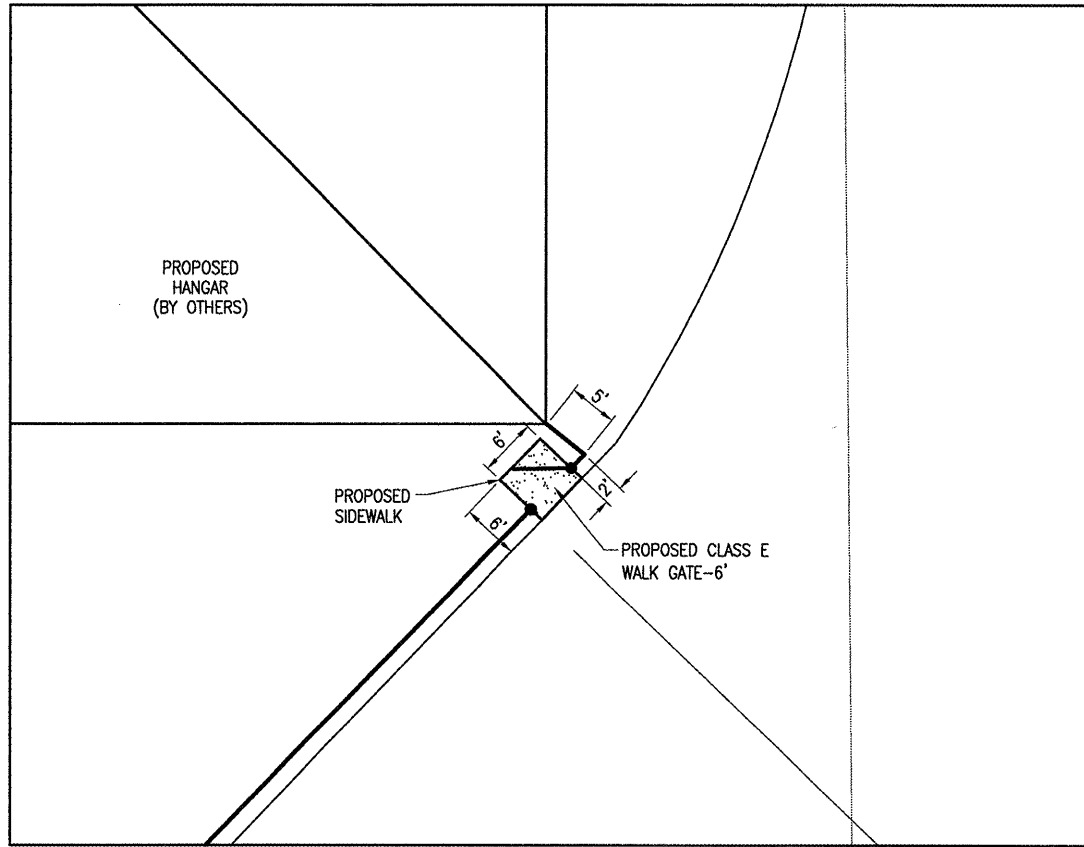
PROPOSED CLASS E SLIDE GATE - 10'

TERMINAL BLDG

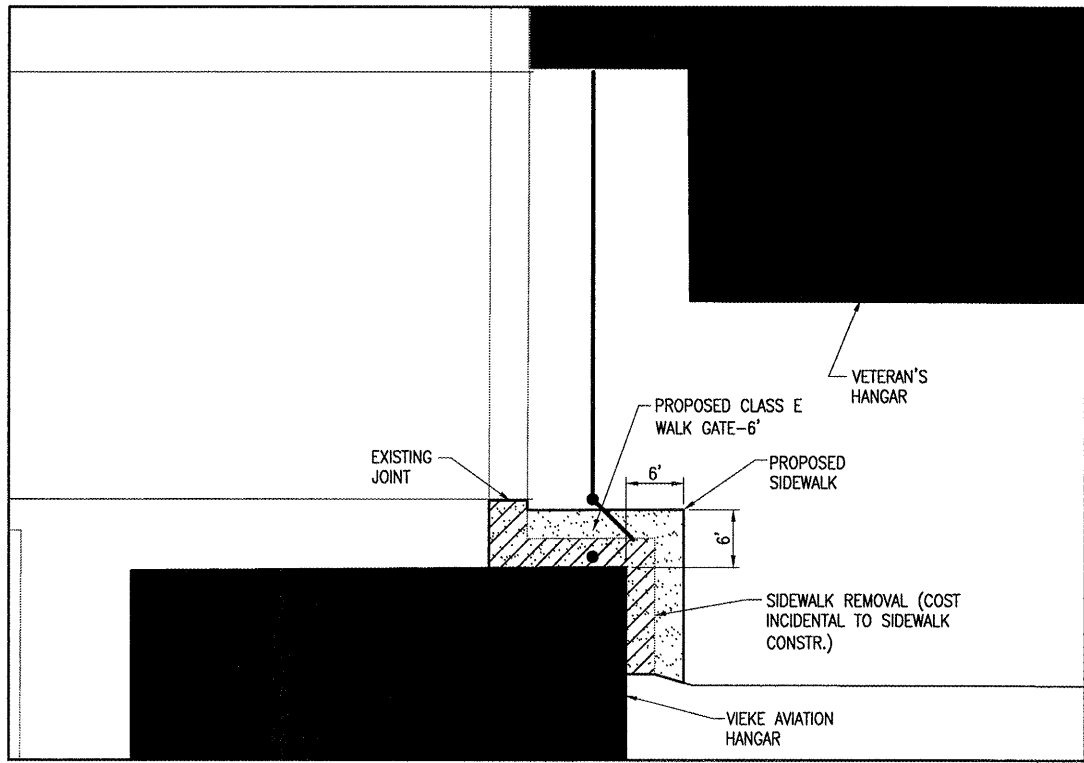
FOR A DETAIL OF THIS AREA (SEE DETAIL "D" ON SHEET 6)

VETERAN'S HANGAR

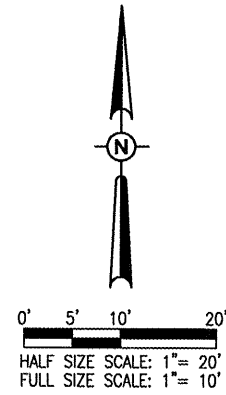
DATE	REVISION	BY	BY										
<p>MID-AMERICAN AIR CENTER LAWRENCEVILLE, ILLINOIS</p> <p>IL. PROJ.: LW-3869 A.I.P. PROJ.: 3-17-0061-B15</p>													
<p>Hanson Project No. 08A0185D_0800 Etchome R-172FEN.DWG Scale 1"= 100' Date 01/20/09</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>LAYOUT</td> <td>JSL</td> <td>12/15/08</td> </tr> <tr> <td>DRAWN</td> <td>BAK</td> <td>12/15/08</td> </tr> <tr> <td>REVIEWED</td> <td>JSL</td> <td>01/20/09</td> </tr> </table>					LAYOUT	JSL	12/15/08	DRAWN	BAK	12/15/08	REVIEWED	JSL	01/20/09
LAYOUT	JSL	12/15/08											
DRAWN	BAK	12/15/08											
REVIEWED	JSL	01/20/09											
<p>HANSON Hanson Professional Services Inc. 1525 South Sixth Street Springfield, Illinois 62705-2886 Offices Nationwide</p>													
<p>FRONTAL AREA FENCE INSTALLATION</p> <p>PROPOSED FENCE PLAN</p>			<p>5</p> <p>5 of 15 sheets</p>										



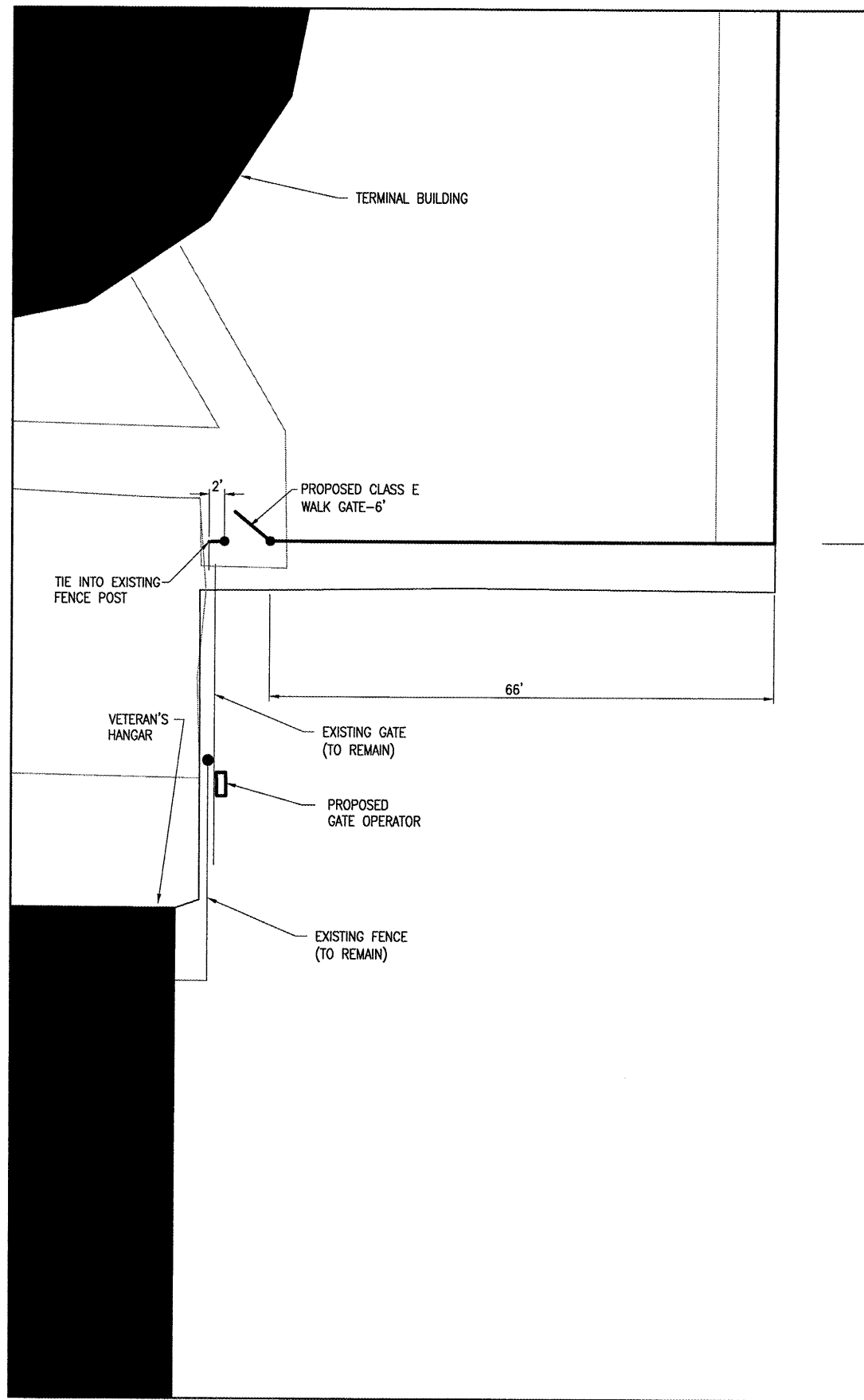
SIDEWALK DETAIL "B" NEAR NEW HANGAR
 SCALE: 1"=10'



SIDEWALK DETAIL "C" NEAR VIEKE HANGAR
 SCALE: 1"=10'



- LEGEND**
- EXISTING SIDEWALK (TO BE REMOVED)
 - PROPOSED SIDEWALK



FENCE DETAIL "D" NEAR VETERAN'S HANGAR
 SCALE: 1"=10'

LW023

REVISION	DATE	BY

MID-AMERICAN AIR CENTER
 LAWRENCEVILLE-VINCENNES AIRPORT
 LAWRENCEVILLE, ILLINOIS

IL PROJ.: LWV-3869 A.I.P. PROJ.: 3-17-0061-B15

Hanson Project No. 08A0185D_0800	
Filename: R-571FEN.DWG	
Scale: "NOT TO SCALE"	
Date: 01/20/09	
LAYOUT	JSL 12/15/08
DRAWN	BAK 12/15/08
REVIEWED	JSL 01/20/09



FRONTAL AREA
 FENCE INSTALLATION

PROPOSED
 DETAIL
 SHEET

6

ELECTRICAL LEGEND - ONE-LINE DIAGRAM	
	CABLE TERMINATOR/LUG, TERMINAL BLOCK, OR SPLICE
	TRANSFORMER
	DISCONNECT SWITCH
	FUSIBLE DISCONNECT SWITCH
	CIRCUIT BREAKER
	THERMAL MAGNETIC CIRCUIT BREAKER
	NORMALLY OPEN (N.O.) CONTACT
	NORMALLY CLOSED (N.C.) CONTACT
	TOGGLE SWITCH / 2 POSITION SWITCH
	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 OR TERMINALS
	EQUIPMENT, XXX = DEVICE DESCRIPTION
	GROUND BAR, GROUND BUS OR GROUND TERMINAL
	SOLID NEUTRAL, NEUTRAL BUS, OR NEUTRAL TERMINAL
	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: N = NORMAL EM = EMERGENCY L = LOAD
	ENGINE GENERATOR SET

ELECTRICAL LEGEND - PLANS	
	CONDUIT (EXPOSED)
	CONDUIT OR UNIT DUCT (CONCEALED OR BURIED)
	DUCT
	BURIED/UNDERGROUND ELECTRIC
	OVERHEAD ELECTRIC
	TOGGLE SWITCH
	PUSH BUTTON STATION
	WALL OR CEILING MTD. JUNCTION BOX. CONFIGURATION VARIES WITH USE
	SINGLE THROW DISCONNECT SWITCH
	SINGLE THROW, FUSIBLE DISCONNECT SWITCH
	ENCLOSED CIRCUIT BREAKER
	MOTOR
	TRANSFORMER
	ELECTRIC UTILITY METER
	ENCLOSURE
	CIRCUIT BREAKER PANEL-SEE SCHEDULES
	CONTROL PANEL
	GROUND ROD

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
DPT	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
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/FACILITY ABBREVIATIONS	
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
MITL	MEDIUM INTENSITY TAXIWAY LIGHT
NDB	NON-DIRECTIONAL BEACON
PAPI	PRECISION APPROACH PATH INDICATOR
PLSI	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

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 WORK, POWER OUTAGES, AND/OR SHUT DOWN OF EXISTING SYSTEMS SHALL BE COORDINATED WITH THE AIRPORT MANAGER. ONCE SHUT DOWN, THE CIRCUITS SHALL BE LABELED AS SUCH TO PREVENT ACCIDENTAL ENERGIZING OF THE RESPECTIVE CIRCUITS. ALL PERSONNEL SHALL FOLLOW U.S. DEPARTMENT OF LABOR OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION (OSHA) 29 CFR PART 1910 OCCUPATIONAL SAFETY & HEALTH STANDARDS FOR ELECTRICAL SAFETY AND LOCKOUT/TAGOUT PROCEDURES INCLUDING, BUT NOT LIMITED TO, 29 CFR SECTION 1910.147 THE CONTROL OF HAZARDOUS ENERGY (LOCKOUT/TAGOUT).
- 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
- SEE RESPECTIVE SITE PLANS FOR SITE LEGEND INFORMATION.
- LTFMC DENOTES LIQUID TIGHT FLEXIBLE METAL CONDUIT UL LISTED, SUNLIGHT RESISTANT, & SUITABLE FOR GROUNDING. LIQUID TIGHT FLEXIBLE METAL CONDUIT AND ASSOCIATED FITTINGS SHALL BE U.L. LISTED TO MEET THE REQUIREMENTS OF NEC 350.6. 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 LTFMC THAT IS NOT UL LISTED.
- ALL ENCLOSURES RATED NEMA 4, 4X SHALL HAVE WATERTIGHT HUBS AT CONDUIT ENTRANCES U.L. LISTED NEMA 4, 4X FOR THE RESPECTIVE ENCLOSURE, TO MAINTAIN THE NEMA 4, 4X RATING.
- HIGH VOLTAGE & LOW VOLTAGE CIRCUITS SHALL NOT BE INSTALLED IN THE SAME WIREWAY, CONDUIT, DUCT, OR HANDHOLE.
- PER NEC 513 THE ENTIRE AREA OF A HANGAR INCLUDING ANY ADJACENT AND COMMUNICATING AREAS NOT SUITABLY CUT OFF FROM THE HANGAR, SHALL BE CLASSIFIED AS A CLASS 1, DIVISION 2 HAZARDOUS LOCATION UP TO A LEVEL 18 INCHES ABOVE THE FLOOR. PER NEC 513.3(C) "VICINITY OF AIRCRAFT", THE AREA WITHIN 5 FT. HORIZONTALLY FROM AIRCRAFT POWER PLANTS OR AIRCRAFT FUEL TANKS SHALL BE CLASSIFIED AS A CLASS 1, DIVISION 2 LOCATION THAT SHALL EXTEND UPWARD FROM THE FLOOR TO A LEVEL 5 FT. ABOVE THE UPPER SURFACE OF WINGS AND OF ENGINE ENCLOSURES. ALL ELECTRICAL INSTALLATIONS IN CLASSIFIED HAZARDOUS LOCATIONS SHALL BE AVOIDED UNLESS SPECIFICALLY APPROVED FOR SUCH LOCATIONS AND INSTALLED IN CONFORMANCE WITH NEC 500, 501, AND 513 AS WELL AS OTHER APPLICABLE CODES AND REQUIREMENTS.

LW023

DATE	REVISION	BY

MID-AMERICAN AIR CENTER
 LAWRENCEVILLE-VINCENNES AIRPORT
 LAWRENCEVILLE, ILLINOIS

IL PROJ.: LW-3869 A.I.P. PROJ.: 3-17-0061-B15

Hanson Project No. 08A0185D-0800	DATE: 01/20/09
Filename: E-001.DWG	LAYOUT: KNL 01/06/09
Scale: NONE	DRAWN: MW 01/07/09
	REVIEWED: JSL 01/07/09








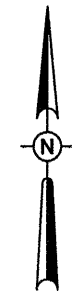
FRONTAL AREA
 FENCE INSTALLATION
 ELECTRICAL LEGEND
 AND ABBREVIATIONS

NOTES:

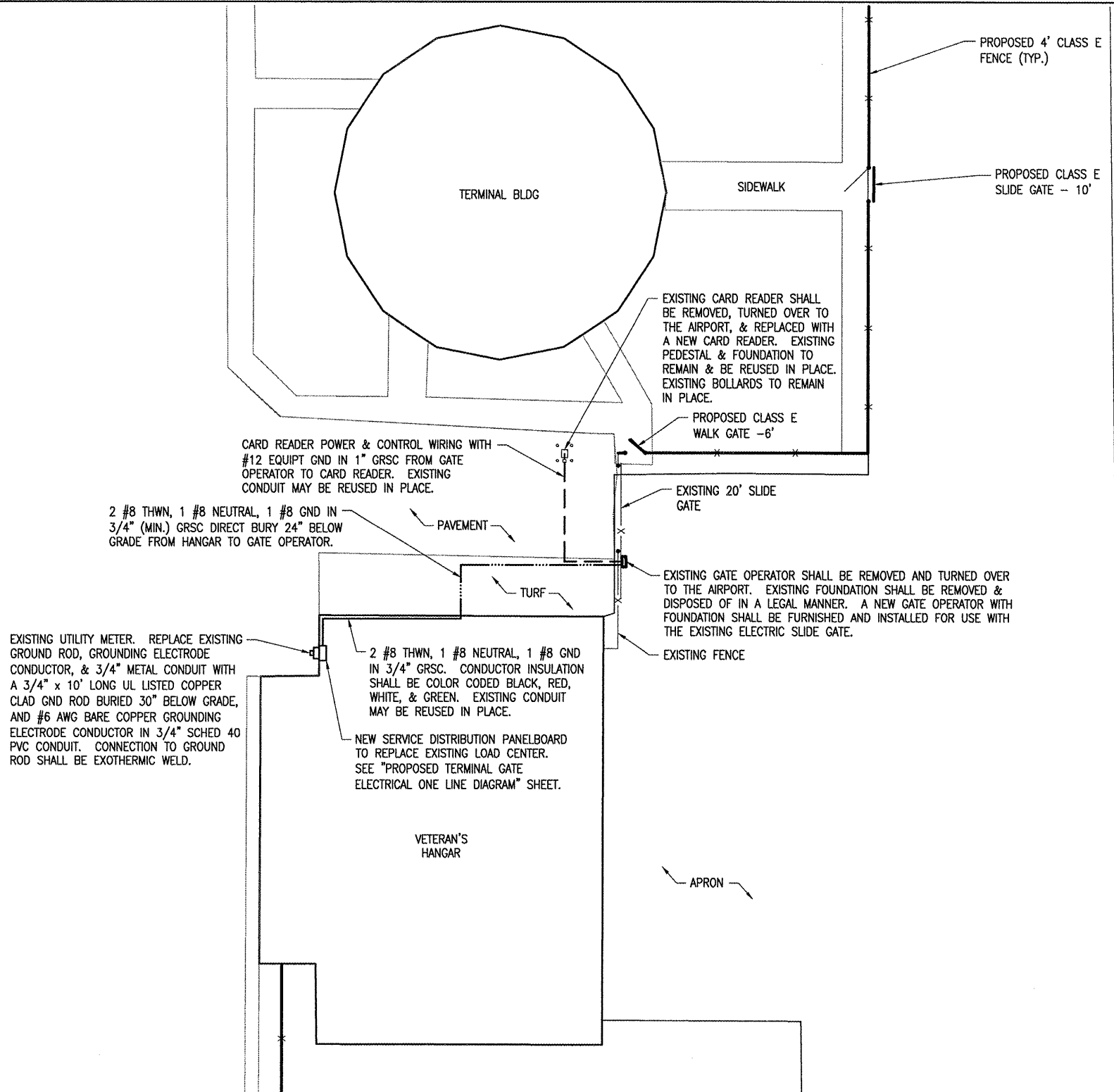
1. THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES AND AGENCIES WHICH HAVE LINES, UTILITIES, AND/OR CONDUITS IN THE PROPOSED WORK AREA. ALL LINES, UTILITIES, AND CONDUITS SHALL BE LOCATED AND IDENTIFIED FOR DEPTH BEFORE ANY WORK BEGINS. THE CONTRACTOR SHALL CALL J.U.L.I.E. (1-800-892-0123) FOR ASSISTANCE IN LOCATING UTILITY LINES. THE CONTRACTOR SHALL CONTACT THE FAA FOR ASSISTANCE IN LOCATING THEIR LINES & UTILITIES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO IDENTIFY ALL UNDERGROUND NON-J.U.L.I.E. LINES, UTILITIES, AND CONDUITS LOCATED WITHIN THE PROPOSED CONSTRUCTION LIMITS. THESE UNDERGROUND LINES, UTILITIES, AND CONDUITS SHALL BE LOCATED AT THE CONTRACTOR'S OWN EXPENSE PRIOR TO THE START OF CONSTRUCTION ACTIVITIES. ANY EXISTING UTILITY LINES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR AT HIS OWN EXPENSE.
2. EXISTING DETECTOR LOOPS SHALL BE REMOVED & REPLACED WITH NEW DETECTOR LOOPS.
3. SEE "PROPOSED GATE OPERATOR DETAILS - TERMINAL GATE" SHEET FOR ADDITIONAL REQUIREMENTS ON ELECTRIC SLIDE GATE OPERATOR WORK.
4. ALL FIXED WIRING IN THE RESPECTIVE HANGAR SHALL BE IN METAL RACEWAYS TO COMPLY WITH THE REQUIREMENTS OF NEC 513.7.
5. CONTINUOUS FENCE SHALL BE GROUNDED AT INTERVALS NOT EXCEEDING 500 FT. IN URBAN AREAS AND 1,000 FT. IN RURAL AREAS. THERE SHALL BE A GROUND WITHIN 100 FT. OF GATES IN EACH SECTION OF THE FENCE ADJACENT TO THE GATE. FENCE UNDER A POWER LINE SHALL BE GROUNDED BY THREE GROUNDS; ONE DIRECTLY UNDER THE CROSSING, AND ONE ON EACH SIDE 25 FT. TO 50 FT. AWAY. A SINGLE GROUND SHALL BE LOCATED DIRECTLY UNDER EACH TELEPHONE WIRE OR CABLE CROSSING. THE COUNTERPOISE GROUND SHALL BE USED ONLY WHERE IT IS IMPOSSIBLE TO DRIVE A GROUND ROD. THE GROUND WIRE SHALL BE CONNECTED TO THE FABRIC AND TENSION WIRE WITH UL LISTED GROUNDING CONNECTORS OF CAST BRONZE BODY AND BRONZE OR STAINLESS STEEL BOLTS AND WASHERS. GROUNDING CONNECTORS SHALL BE SIZED AND SUITABLE FOR THE RESPECTIVE APPLICATION. CONNECTIONS TO GROUND RODS SHALL BE WITH UL LISTED GROUNDING CONNECTORS SUITABLE FOR DIRECT BURIAL IN EARTH OR EXOTHERMIC WELD TYPE CONNECTORS. EXOTHERMIC WELD CONNECTIONS SHALL BE INSTALLED IN CONFORMANCE WITH THE RESPECTIVE MANUFACTURER'S DIRECTIONS USING MOLDS AS SUITABLE FOR EACH RESPECTIVE APPLICATION. GROUND RODS SHALL BE 5/8-IN. DIAMETER BY 8 FT. LONG (MINIMUM), UL-LISTED, COPPER-CLAD. THE GROUND WIRE USED TO BOND THE FENCE FABRIC AND TENSION WIRE TO THE GROUND ROD SHALL BE #6 AWG MINIMUM BARE COPPER CONDUCTOR.

LEGEND

-  EXISTING IMPROVEMENTS
-  EXISTING BUILDINGS
-  PROPOSED FENCE
-  PROPOSED ELECTRICAL CABLES
-  PROPOSED ELECTRICAL CABLES



0' 10' 20' 40'
 HALF SIZE SCALE: 1" = 40'
 FULL SIZE SCALE: 1" = 20'



EXISTING UTILITY METER. REPLACE EXISTING GROUND ROD, GROUNDING ELECTRODE CONDUCTOR, & 3/4" METAL CONDUIT WITH A 3/4" x 10' LONG UL LISTED COPPER CLAD GND ROD BURIED 30" BELOW GRADE, AND #6 AWG BARE COPPER GROUNDING ELECTRODE CONDUCTOR IN 3/4" SCHED 40 PVC CONDUIT. CONNECTION TO GROUND ROD SHALL BE EXOTHERMIC WELD.

2 #8 THWN, 1 #8 NEUTRAL, 1 #8 GND IN 3/4" (MIN.) GRSC DIRECT BURY 24" BELOW GRADE FROM HANGAR TO GATE OPERATOR.

CARD READER POWER & CONTROL WIRING WITH #12 EQUIPT GND IN 1" GRSC FROM GATE OPERATOR TO CARD READER. EXISTING CONDUIT MAY BE REUSED IN PLACE.

2 #8 THWN, 1 #8 NEUTRAL, 1 #8 GND IN 3/4" GRSC. CONDUCTOR INSULATION SHALL BE COLOR CODED BLACK, RED, WHITE, & GREEN. EXISTING CONDUIT MAY BE REUSED IN PLACE.

NEW SERVICE DISTRIBUTION PANELBOARD TO REPLACE EXISTING LOAD CENTER. SEE "PROPOSED TERMINAL GATE ELECTRICAL ONE LINE DIAGRAM" SHEET.

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 FAA FOR ASSISTANCE IN LOCATING THEIR LINES AND UTILITIES.

DATE	REVISION	BY

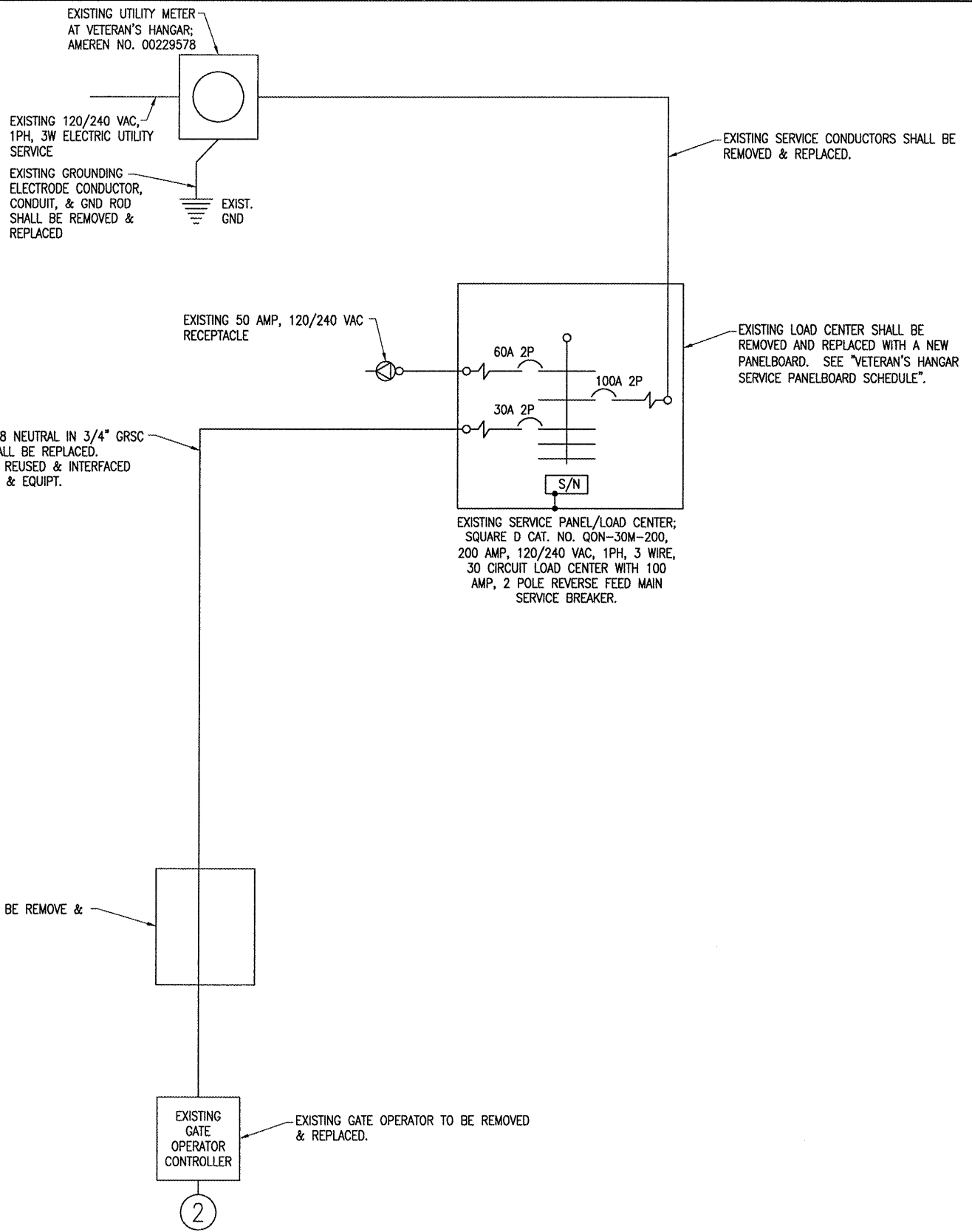
MID-AMERICAN AIR CENTER
 LAWRENCEVILLE-VINCENNES AIRPORT
 LAWRENCEVILLE, ILLINOIS
 I.L. PROJ.: LW-3869 A.I.P. PROJ.: 3-17-0061-B15

Hanson Project No. 0840185D_0800	01/07/09
File Name: E-101.DWG	01/07/09
Scale: 1" = 20'	01/07/09
Date: 01/20/09	01/09/09
LAYOUT	KNL
DRAWN	MV
REVIEWED	JSL

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

FRONTAL AREA
 FENCE INSTALLATION
 TERMINAL GATE
 ELECTRICAL PLAN

MAR 25, 2009 1:03 PM V00RH0805
 I:\AIRPORTS\LAURENCE\08A0185\CADD\AIRPORT\ SHEET E-602.DWG - Work



**EXISTING TERMINAL GATE OPERATOR
 ELECTRICAL ONE LINE DIAGRAM**

NOTES

1. SEE "ELECTRICAL LEGEND AND ABBREVIATIONS" SHEET FOR GENERAL NOTES AND REQUIREMENTS.
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 SHALL NOT BE PERMITTED.
3. ALL WORK SHOWN ON THIS SHEET SHALL BE PAID FOR UNDER ITEM AR800467 - GATE OPERATOR.

LW023

BY	
REVISION	
DATE	

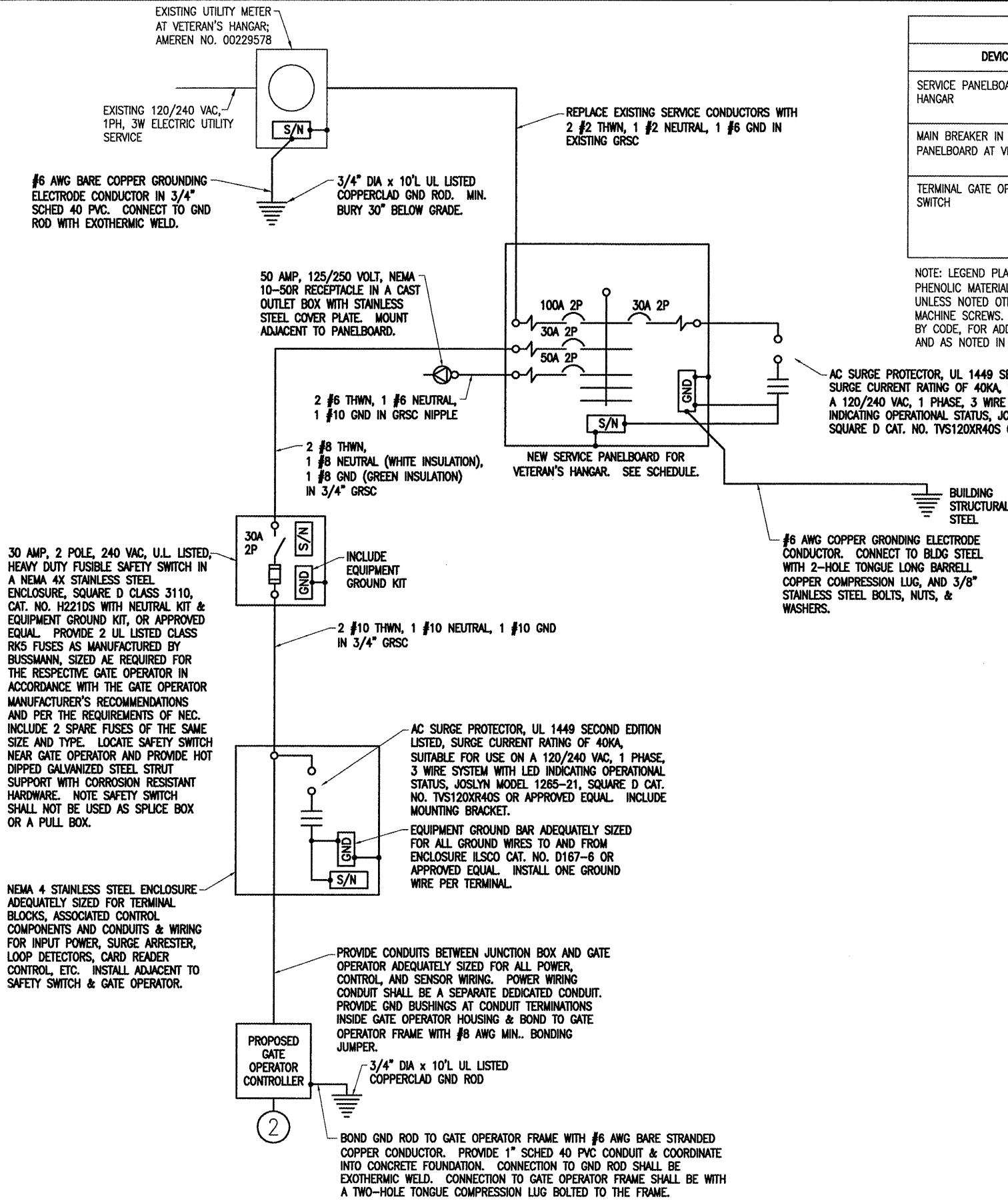
**MID-AMERICAN AIR CENTER
 LAWRENCEVILLE-VINCENNES AIRPORT
 LAWRENCEVILLE, ILLINOIS**

IL PROJ.: LWV-3869 A.I.P. PROJ.: 3-17-0061-B15

Hanson Project No.	08A0185D-0800
Filename	E-602.DWG
Scale	NONE
Date	01/20/09
LAYOUT	KNL 01/06/09
DRAWN	MV 01/07/09
REVIEWED	JSL 01/09/09



**FRONTAL AREA
 FENCE INSTALLATION
 EXISTING TERMINAL GATE
 ELECTRICAL ONE-LINE
 DIAGRAM**



**PROPOSED TERMINAL GATE OPERATOR
ELECTRICAL ONE LINE DIAGRAM**

LEGEND PLATE SCHEDULE

DEVICE	LABEL
SERVICE PANELBOARD IN VETERAN'S HANGAR	SERVICE & MAIN DISTRIBUTION PANEL 120/240VAC, 1PH, 3W
MAIN BREAKER IN SERVICE PANELBOARD AT VETERAN'S HANGAR	SERVICE DISCONNECT
TERMINAL GATE OPERATOR SAFETY SWITCH	TERMINAL GATE 120/240VAC FED FROM VETERAN'S HGR SERVICE PANEL

NOTE: LEGEND PLATES SHALL BE WEATHERPROOF ENGRAVED PLASTIC OR PHENOLIC MATERIAL, 1/4" HIGH BLACK LETTERS ON A WHITE 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.

VETERAN'S HANGAR SERVICE PANELBOARD SCHEDULE

CKT #	DUTY	SIZE	SIZE	DUTY	CKT #
1	50 AMP 125/250V RECEPTACLE	50A 2P	20A 1P (UNKNOWN)		2
3		---	20A 1P (UNKNOWN)		4
5	SPARE	30A 2P	20A 1P (UNKNOWN)		6
7		---	20A 1P (UNKNOWN)		8
9	(UNKNOWN)	20A 1P	20A 1P (UNKNOWN)		10
11	(UNKNOWN)	20A 1P	20A 1P (UNKNOWN)		12
13	(UNKNOWN)	20A 1P	20A 1P (UNKNOWN)		14
15	(UNKNOWN)	20A 1P	20A 1P (UNKNOWN)		16
17	(UNKNOWN)	20A 1P	20A 1P (UNKNOWN)		18
19	(UNKNOWN)	20A 1P	20A 1P (UNKNOWN)		20
21	SPARE	30A 1P	20A 1P RECEPTACLES AT PANEL		22
23	GATE OPERATOR	30A 2P	20A 1P SPARE		24
25		---	20A 1P SPARE		26
27	AC SURGE PROTECTOR	30A 2P	100A 2P SERVICE MAIN BREAKER		28
29		---	---		30

225 AMP, 120/240 VAC, 1 PHASE, 3 WIRE, 30 CIRCUIT MAIN LUGS PANELBOARD WITH A 100 AMP, 2 POLE BACK FED MAIN BREAKER RATED 10,000 AIC AT 120/240 VAC IN A NEMA 12 ENCLOSURE WITH HINGED COVER, UL LISTED SUITABLE FOR SERVICE ENTRANCE, SQUARE D CLASS 1630, CAT. NO. NQ0D30L225CU WITH MH32WP ENCLOSURE, OR APPROVED EQUAL. INCLUDE COPPER EQUIPT GROUND BAR. BRANCH BREAKERS SHALL BE BOLT-ON TYPE WITH 10,000 AIC AT 120/240 VAC. PANELBOARD BUSSES INCLUDING NEUTRAL SHALL BE COPPER.

- NOTES**
- PANELBOARD SHALL BE INSTALLED IN THE SAME LOCATION AS THE EXISTING LOAD CENTER THAT IS BEING REPLACED. PROVIDE STRUT SUPPORT FOR NEW PANEL. TOP OF PANELBOARD ENCLOSURE SHALL BE 6'-0" NOMINALLY ABOVE FINISHED FLOOR. BOTTOM OF PANEL ENCLOSURE AND CONDUITS TO OR FROM THE PANEL ENCLOSURE, SHALL NOT EXTEND INTO THE AREA 18" ABOVE THE HANGAR FLOOR TO COMPLY WITH NEC 513.
 - INCLUDE PHENOLIC ENGRAVED LEGEND PLATE LABELED "SERVICE & MAIN DISTRIBUTION PANEL, 120/240 VAC, 1 PH, 3W".
 - PROVIDE ADDITIONAL LEGEND PLATE OR PLACARD FOR PANELBOARD LABELED "NOTICE AIRCRAFT SHALL MAINTAIN 5 FT. MINIMUM CLEARANCE FROM ELECTRICAL EQUIPMENT PANELS". LETTERING SHALL BE 1/2" HIGH ON WHITE OR RED BACKGROUND.
 - INCLUDE WITH PANELBOARD A U.L. LISTED PER UL 1449, AC SURGE PROTECTOR SUITABLE FOR 120/240 VAC, 1 PH, 3W PLUS GROUND SYSTEM, WITH SURGE CURRENT RATING OF 40KA (MIN.), 8x20 MICROSECOND WAVE, PER MODE, AND STATUS INDICATION LIGHTS, JOSLYN MODEL 1265-21, SQUARE D CAT. NO. TVS120XR40S OR APPROVED EQUAL. MAINTAIN LEADS AS SHORT & AS STRAIGHT AS POSSIBLE.
 - RECONNECT EXISTING BRANCH CIRCUITS TO NEW PANELBOARD. FIELD VERIFY EXISTING UNKNOWN CIRCUITS AND IDENTIFY THEM ON THE NEW CIRCUIT DIRECTORY.
 - LABEL MAIN SERVICE BREAKER "SERVICE DISCONNECT".
 - FURNISH & INSTALL TWO-DUPLEX, 120 VAC SPEC GRADE, 20 AMP, NEMA 5-20R UL LISTED GROUND FAULT CIRCUIT INTERRUPTER TYPE RECEPTACLES IN A DOUBLE GANG CAST/WEATHERPROOF OUTLET BOX WITH STAINLESS STEEL COVER PLATE. LOCATE ADJACENT TO PANEL. PROVIDE 1 #12 THWN, 1 #12 NEUTRAL, 1 #12 GND IN 3/4" GRSC NIPPLE FROM PANEL TO RECEPTACLES.

LW023

- NOTES**
- SEE "ELECTRICAL LEGEND AND ABBREVIATIONS" SHEET FOR GENERAL NOTES AND REQUIREMENTS.
 - 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 SHALL NOT BE PERMITTED.
 - ALL EQUIPMENT SHOWN NOT LABELED AS EXISTING IS NEW.
 - ALL FIXED WIRING IN THE RESPECTIVE HANGAR SHALL BE IN METAL RACEWAYS TO COMPLY WITH THE REQUIREMENTS OF NEC 513.7.
 - ALL CONTROL POWER TRANSFORMERS, POWER SUPPLIES, RECEPTACLES, LOOP DETECTOR AMPLIFIERS, SECONDARY SAFETY DEVICE EQUIPMENT, AND ANY OTHER ASSOCIATED CONTROLS SHALL BE INSTALLED EITHER INSIDE THE GATE OPERATOR CONTROL PANEL OR INSIDE A SEPARATE NEMA 4 STAINLESS STEEL CONTROL PANEL ENCLOSURE. WHERE THE CONTROL EQUIPMENT IS TO BE INSTALLED INSIDE THE GATE OPERATOR CONTROL PANEL THE CONTRACTOR SHALL COORDINATE THIS WITH THE GATE OPERATOR MANUFACTURER AND THE RESPECTIVE GATE OPERATOR EQUIPMENT SUPPLIER. LOCATING THESE CONTROLS OUTSIDE OF GATE OPERATOR CONTROL PANEL BUT WITHIN THE GATE OPERATOR HOUSING WILL NOT MEET THIS REQUIREMENT.
 - ALL WORK SHOWN ON THIS SHEET SHALL BE PAID FOR UNDER ITEM AR800467 - GATE OPERATOR.
 - COORDINATE ELECTRIC SERVICE ENTRANCE WORK & UPGRADES WITH THE SERVING ELECTRIC UTILITY COMPANY; AMEREN CIPS PHONE: 1-888-789-2477.

BY _____
REVISION _____
DATE _____

**MID-AMERICAN AIR CENTER
LAURENCEVILLE-VINCENNES AIRPORT
LAURENCEVILLE, ILLINOIS**

IL. PROJ.: LW-3869 A.I.P. PROJ.: 3-17-0061-B15

Hanson Project No. 08A0185D_0800
Elevation: E-603.DWG
Scale: NONE
Date: 01/20/09

LAYOUT	KNL	01/06/09
DRAWN	MY	01/07/09
REVIEWED	JSL	01/09/09

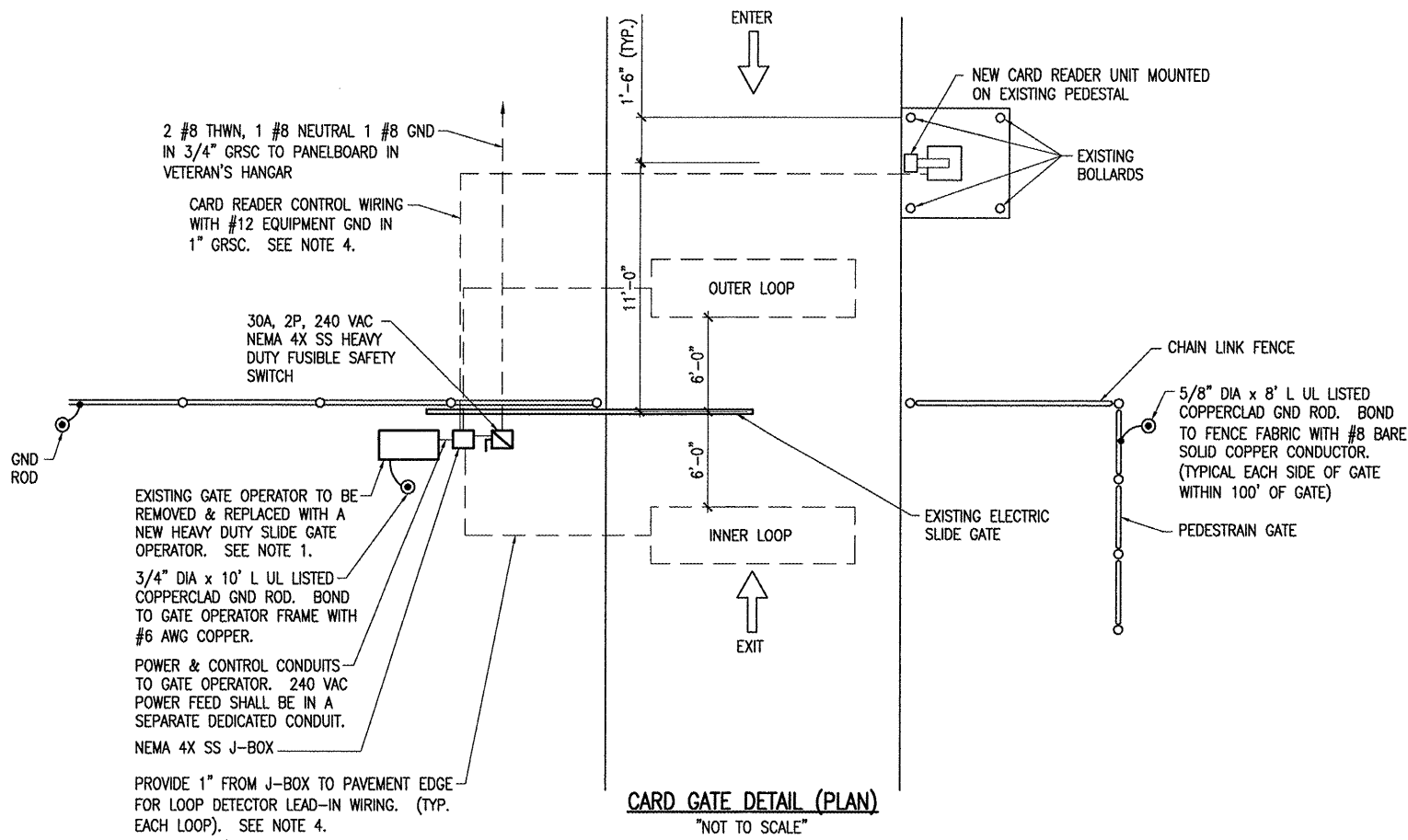
HANSON
Hanson Professional Services Inc.
1525 South Sixth Street
Springfield, Illinois 62703-2886
Offices Nationwide

**FRONTAL AREA
FENCE INSTALLATION**

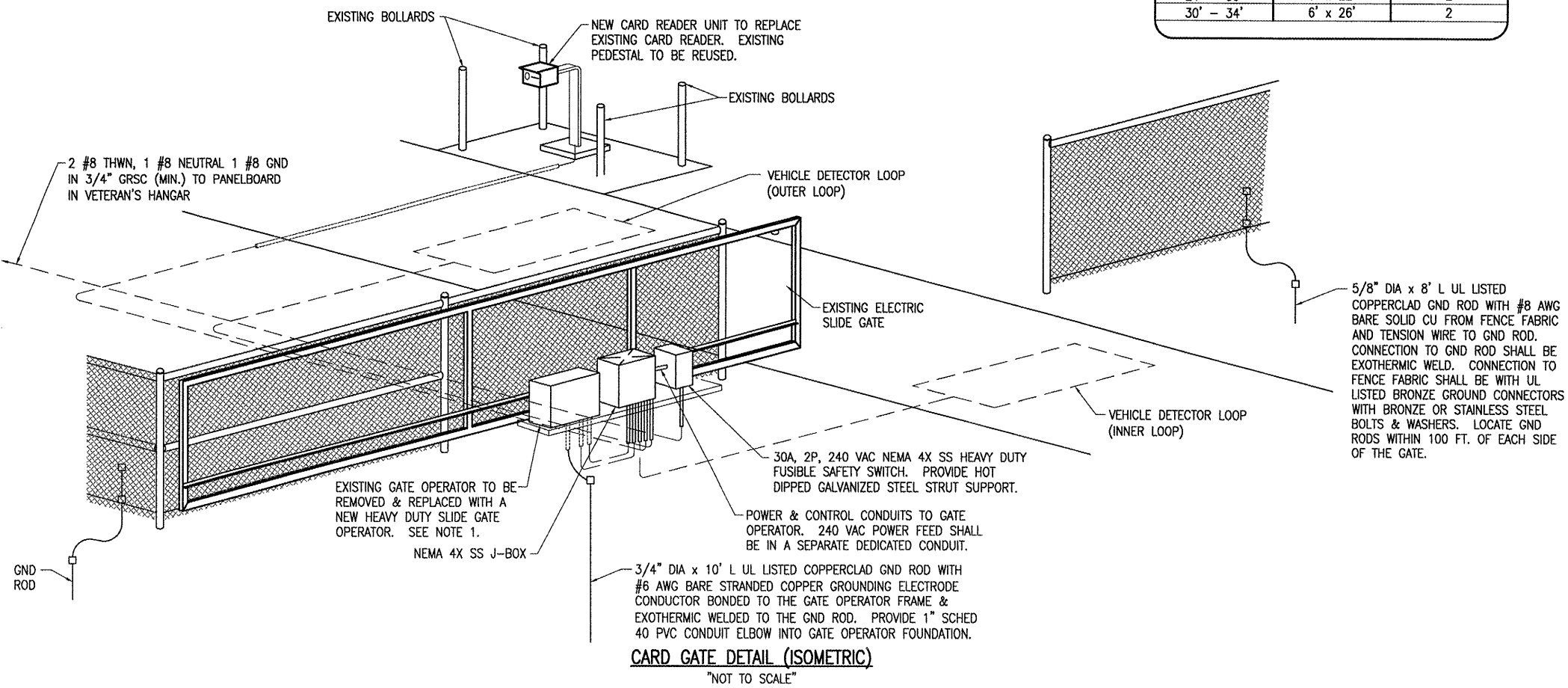
**PROPOSED TERMINAL GATE
ELECTRICAL ONE-LINE
DIAGRAM**

NOTES:

- SEE SPECIAL PROVISION SPECIFICATIONS FOR REQUIREMENTS ON RESPECTIVE GATE & GATE OPERATOR SYSTEMS
- ALL DIMENSIONS AND LAYOUT INFORMATION SHOWN SHOULD BE ADJUSTED AS RECOMMENDED BY THE MANUFACTURER.
- CONCRETE FOUNDATIONS SHALL BE PROVIDED FOR THE SLIDE GATE OPERATOR AND THE CARD READER CONTROL UNIT. FOUNDATION FOR THE GATE OPERATOR SHALL BE 48" (MIN.) IN DEPTH AND OF THE SIZE RECOMMENDED BY THE MANUFACTURER PLUS MOUNTING SPACE FOR SAFETY SWITCH & J-BOX. FOUNDATION FOR THE CARD READER ACCESS CONTROL UNIT SHALL BE 48" (MIN.) IN DEPTH, AS DETAILED HEREIN.
- 1" GRS CONDUIT WILL BE REQUIRED BETWEEN THE SLIDE GATE OPERATOR AND THE CARD READER ACCESS CONTROL UNIT AND BETWEEN THE SLIDE GATE OPERATOR AND THE DETECTOR LOOPS. THE MINIMUM BURYING DEPTH IS 24". ALL METAL CONDUITS ENTERING THE GATE OPERATOR SHALL BE BONDED TO THE GATE OPERATOR FRAME WITH A #8 AWG (MIN.) COPPER BONDING JUMPER. CONFIRM CONTROL WIRING REQUIREMENTS WITH THE RESPECTIVE GATE OPERATOR SALES AND SERVICE REPRESENTATIVE. WHERE AVAILABLE EXISTING CONDUIT MAY BE REUSED IN PLACE. FIELD VERIFY EXISTING SITE CONDITIONS.
- GUARD/BOLLARD POSTS AROUND CARD READER ARE EXISTING AND SHALL REMAIN IN PLACE.
- THE EXISTING GATE OPERATOR, CARD READER, & DETECTOR LOOPS SHALL BE REPLACED WITH A NEW GATE OPERATOR, CARD READER, & DETECTOR LOOPS. EXISTING SLIDE GATE SHALL REMAIN & BE USED WITH THE NEW GATE OPERATOR.
- AS PART OF THIS ITEM 75 CARDS AND 25 REMOTE TRANSMITTERS FOR EACH GATE SHALL BE PROVIDED BY THE CONTRACTOR. COORDINATE PROGRAMMING OF CARDS & TRANSMITTER FREQUENCIES WITH THE AIRPORT MANAGER.
- CONTRACTOR SHALL COORDINATE ANY POWER OUTAGES TO EXISTING EQUIPMENT WITH THE RESPECTIVE OWNER'S REPRESENTATIVE AND THE AIRPORT MANAGER.
- INCLUDE UL LISTED SECONDARY SURGE ARRESTER FOR THE GATE OPERATOR SUITABLE FOR USE ON 240 VAC, 1 PHASE, 2 WIRE PLUS GROUND SYSTEM, WITH SURGE CURRENT RATING OF 100 KA PER MODE, LIFETIME PRODUCT REPLACEMENT WARRANTY, DITEK MODEL DTK-120/240 CM PLUS OR EQUAL.
- CONCRETE USED FOR INSTALLING THE GATE OPERATOR & FENCE SHALL MEET THE REQUIREMENTS OF STRUCTURAL PORTLAND CEMENT CONCRETE ITEM AR610.
- 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 UL LISTING, ETL LISTING, (OR OTHER THIRD PARTY LISTING) AND/OR THE MANUFACTURER'S WARRANTY OF A DEVICE WILL NOT BE PERMITTED.
- PROVIDE A WEATHERPROOF ENGRAVED PHENOLIC OR PLASTIC LEGEND PLATE FOR THE SAFETY SWITCH AT THE RESPECTIVE GATE OPERATOR NOTING THE GATE SERVED, VOLTAGE, AND RESPECTIVE POWER SOURCE CIRCUIT AND LOCATION.
- PAYMENT FOR REPLACING THE GATE OPERATOR, CARD READER, AND ALL ASSOCIATED CONTROL & SAFETY DEVICES SHALL BE ON A LUMP SUM BASIS AND SHALL BE FULL COMPENSATION FOR ALL MATERIALS, EQUIPMENT, LABOR, TOOLS, COORDINATION, TESTING, AND INCIDENTALS REQUIRED TO PLACE THE GATE COMPLETE AND IN OPERATING CONDITION.
- CONTROL CIRCUIT WIRING SHALL NOT BE ROUTED THROUGH THE SAFETY SWITCH/DISCONNECT.
- LOCATE RECEIVER ANTENNA TO PROVIDE PROPER OPERATION FROM REMOTE TRANSMITTERS FROM A DISTANCE UP TO 150 FEET. INCLUDE CONDUITS & SUPPORT HARDWARE.
- ALL CONTROL POWER TRANSFORMERS, POWER SUPPLIES, RECEPTACLES, LOOP DETECTOR AMPLIFIERS, SECONDARY SAFETY DEVICE EQUIPMENT, AND ANY OTHER ASSOCIATED CONTROLS SHALL BE INSTALLED EITHER INSIDE THE GATE OPERATOR CONTROL PANEL OR INSIDE A SEPARATE NEMA 4 STAINLESS STEEL CONTROL PANEL ENCLOSURE. WHERE THE CONTROL EQUIPMENT IS TO BE INSTALLED INSIDE THE GATE OPERATOR CONTROL PANEL THE CONTRACTOR SHALL COORDINATE THIS WITH THE GATE OPERATOR MANUFACTURER AND THE RESPECTIVE GATE OPERATOR EQUIPMENT SUPPLIER. LOCATING THESE CONTROLS OUTSIDE OF GATE OPERATOR CONTROL PANEL BUT WITHIN THE GATE OPERATOR HOUSING WILL NOT MEET THIS REQUIREMENT.



VEHICLE DETECTOR LOOPS		
GATE SIZE	LOOP SIZE	No. OF TURNS
8' - 12'	4' x 6'	3
12' - 16'	4' x 10'	2
16' - 20'	4' x 14'	2
20' - 24'	4' x 18'	2
24' - 30'	6' x 22'	2
30' - 34'	6' x 26'	2



DATE	REVISION	BY

MID-AMERICAN AIR CENTER
LAWRENCEVILLE-VINCENNES AIRPORT
LAWRENCEVILLE, ILLINOIS

IL. PROJ.: LW-3869 A.I.P. PROJ.: 3-17-0061-815

Hanson Project No. 08A018SD_0800	FILENAME E-503.DWG	SCALE N/A	DATE 01/20/09
LAYOUT	KNL	01/06/09	
DRAWN	MY	01/07/09	
REVIEWED	JSL	01/09/09	



FRONTAL AREA
FENCE INSTALLATION

PROPOSED GATE
OPERATOR DETAILS -
TERMINAL GATE

MAR 25, 2009 1:03 PM VOORH0805 I:\AIRPORTS\LAURENCE\08A018SD\CADD\AIRPORT\SHEET\E-503.DWG - DETAILS

NOTES:

1. THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES AND AGENCIES WHICH HAVE LINES, UTILITIES, AND/OR CONDUITS IN THE PROPOSED WORK AREA. ALL LINES, UTILITIES, AND CONDUITS SHALL BE LOCATED AND IDENTIFIED FOR DEPTH BEFORE ANY WORK BEGINS. THE CONTRACTOR SHALL CALL J.U.L.I.E. (1-800-892-0123) FOR ASSISTANCE IN LOCATING UTILITY LINES. THE CONTRACTOR SHALL CONTACT THE FAA FOR ASSISTANCE IN LOCATING THEIR LINES & UTILITIES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO IDENTIFY ALL UNDERGROUND NON-J.U.L.I.E. LINES, UTILITIES, AND CONDUITS LOCATED WITHIN THE PROPOSED CONSTRUCTION LIMITS. THESE UNDERGROUND LINES, UTILITIES, AND CONDUITS SHALL BE LOCATED AT THE CONTRACTOR'S OWN EXPENSE PRIOR TO THE START OF CONSTRUCTION ACTIVITIES. ANY EXISTING UTILITY LINES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR AT HIS OWN EXPENSE.
2. SEE "PROPOSED ELECTRIC SLIDE GATE DETAILS - SOARING CLUB" SHEET FOR ADDITIONAL REQUIREMENTS ON ELECTRIC SLIDE GATE WORK.
3. COORDINATE ELECTRICAL WORK WITH FENCE WORK AND EXISTING SITE CONDITIONS, UTILITIES, LINES, ETC. TO AVOID INTERFERENCES.
4. CONTINUOUS FENCE SHALL BE GROUNDED AT INTERVALS NOT EXCEEDING 500 FT. IN URBAN AREAS AND 1,000 FT. IN RURAL AREAS. THERE SHALL BE A GROUND WITHIN 100 FT. OF GATES IN EACH SECTION OF THE FENCE ADJACENT TO THE GATE. FENCE UNDER A POWER LINE SHALL BE GROUNDED BY THREE GROUNDS; ONE DIRECTLY UNDER THE CROSSING, AND ONE ON EACH SIDE 25 FT. TO 50 FT. AWAY. A SINGLE GROUND SHALL BE LOCATED DIRECTLY UNDER EACH TELEPHONE WIRE OR CABLE CROSSING. THE COUNTERPOISE GROUND SHALL BE USED ONLY WHERE IT IS IMPOSSIBLE TO DRIVE A GROUND ROD. THE GROUND WIRE SHALL BE CONNECTED TO THE FABRIC AND TENSION WIRE WITH UL LISTED GROUNDING CONNECTORS OF CAST BRONZE BODY AND BRONZE OR STAINLESS STEEL BOLTS AND WASHERS. GROUNDING CONNECTORS SHALL BE SIZED AND SUITABLE FOR THE RESPECTIVE APPLICATION. CONNECTIONS TO GROUND RODS SHALL BE WITH UL LISTED GROUNDING CONNECTORS SUITABLE FOR DIRECT BURIAL IN EARTH OR EXOTHERMIC WELD TYPE CONNECTORS. EXOTHERMIC WELD CONNECTIONS SHALL BE INSTALLED IN CONFORMANCE WITH THE RESPECTIVE MANUFACTURER'S DIRECTIONS USING MOLDS SUITABLE FOR EACH RESPECTIVE APPLICATION. GROUND RODS SHALL BE 5/8-IN. DIAMETER BY 8 FT. LONG (MINIMUM), UL-LISTED, COPPER-CLAD. THE GROUND WIRE USED TO BOND THE FENCE FABRIC AND TENSION WIRE TO THE GROUND ROD SHALL BE #6 AWG MINIMUM BARE COPPER CONDUCTOR.

DATE	REVISION	BY

MID-AMERICAN AIR CENTER
LAWRENCEVILLE-VINCENNES AIRPORT
LAWRENCEVILLE, ILLINOIS

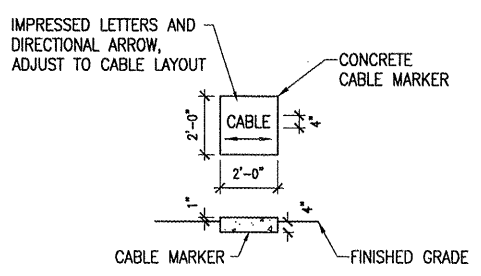
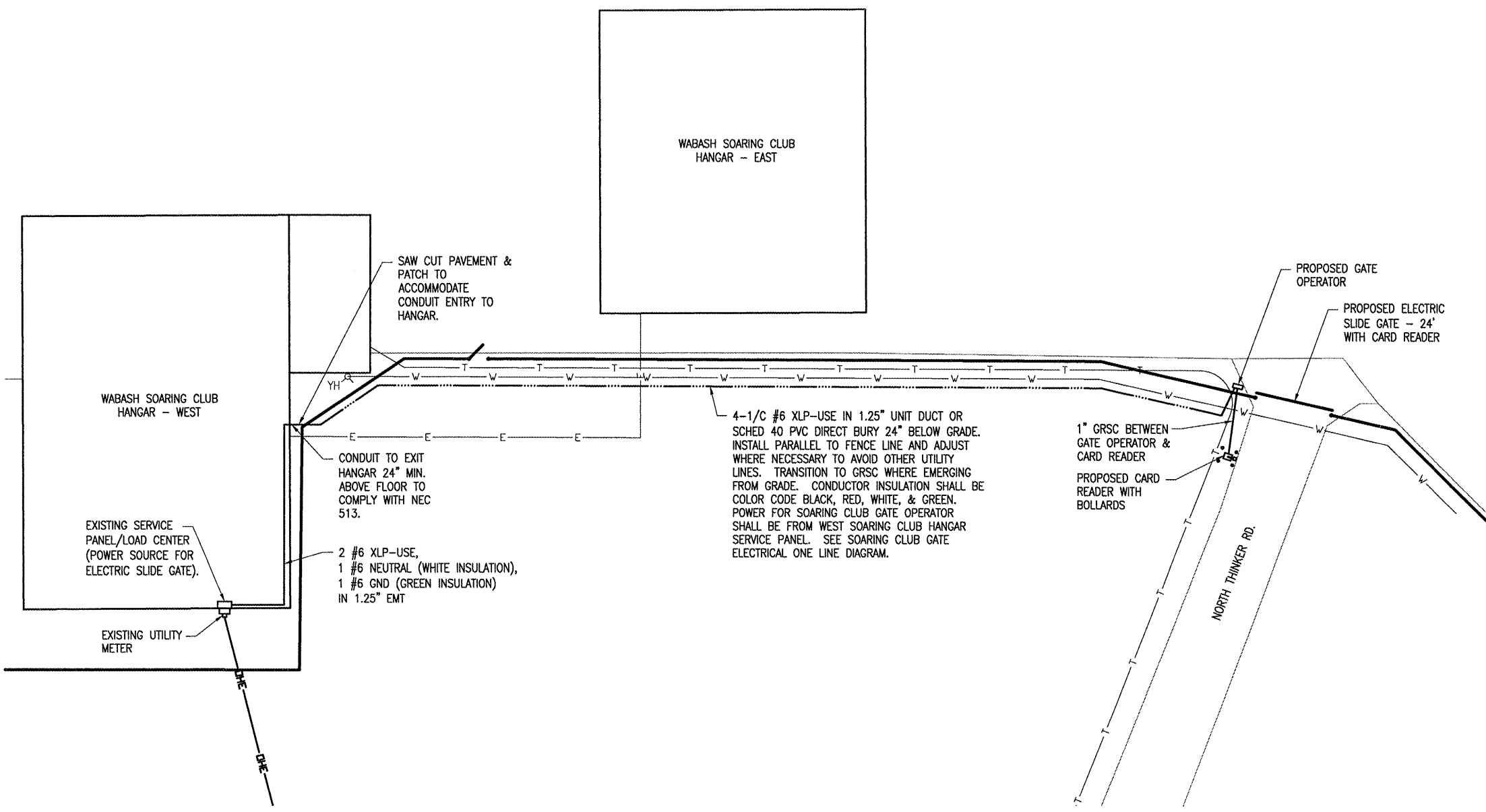
IL. PROJ.: LW-3869 A.I.P. PROJ.: 3-17-0081-B15

Hanson Project No. 08A0185D-0800	Filename: E-102.DWG	Scale: 1" = 20'	Date: 01/20/09
LAYOUT	KNL	01/07/09	
DRAWN	MV	01/07/09	
REVIEWED	JSL	01/09/09	

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Springfield, Illinois 62703-2886
Offices Nationwide

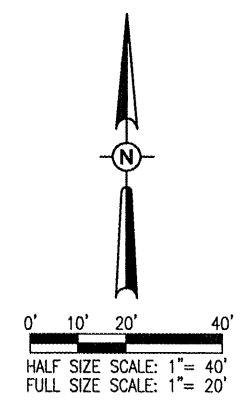
FRONTAL AREA
FENCE INSTALLATION

SOARING CLUB GATE
ELECTRICAL PLAN



CABLE MARKERS SHALL BE PLACED AT CHANGES OF DIRECTION AND APPROXIMATELY EVERY 200' ALONG CABLE RUNS. CONCRETE CABLE MARKERS SHALL HAVE LETTERS 4" HIGH, 3" WIDE WITH A STROKE OF 1/2" AND 1/4" DEEP. ALL LETTERS, NUMBERS AND ARROWS TO BE IMPRESSED. THE COST OF ALL CABLE MARKERS SHALL BE INCIDENTAL TO THE CABLE.

TURF CABLE MARKERS
"NOT TO SCALE"



LEGEND

- EXISTING PAVEMENT
- EXISTING BUILDING
- EXISTING FENCE
- PROPOSED FENCE
- PROPOSED ELECTRICAL CABLES
- EXISTING UNDERGROUND ELECTRIC
- EXISTING OVERHEAD ELECTRIC
- EXISTING WATER LINE
- EXISTING TELEPHONE LINE
- EXISTING GAS LINE
- GATE OPERATOR
- CARD READER WITH BOLLARDS
- EXISTING YARD HYDRANT

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 FAA FOR ASSISTANCE IN LOCATING THEIR LINES AND UTILITIES.

NOTES

1. SEE "ELECTRICAL LEGEND AND ABBREVIATIONS" SHEET FOR GENERAL NOTES AND REQUIREMENTS.
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 SHALL NOT BE PERMITTED.
3. ALL EQUIPMENT SHOWN NOT LABELED AS EXISTING IS NEW.
4. ALL FIXED WIRING IN THE HANGAR SHALL BE IN METAL RACEWAYS TO COMPLY WITH THE REQUIREMENTS OF NEC 513.7.
5. ALL CONTROL POWER TRANSFORMERS, POWER SUPPLIES, RECEPTACLES, LOOP DETECTOR AMPLIFIERS, SECONDARY SAFETY DEVICE EQUIPMENT, AND ANY OTHER ASSOCIATED CONTROLS SHALL BE INSTALLED EITHER INSIDE THE GATE OPERATOR CONTROL PANEL OR INSIDE A SEPARATE NEMA 4 STAINLESS STEEL CONTROL PANEL ENCLOSURE. WHERE THE CONTROL EQUIPMENT IS TO BE INSTALLED INSIDE THE GATE OPERATOR CONTROL PANEL THE CONTRACTOR SHALL COORDINATE THIS WITH THE GATE OPERATOR MANUFACTURER AND THE RESPECTIVE GATE OPERATOR EQUIPMENT SUPPLIER. LOCATING THESE CONTROLS OUTSIDE OF GATE OPERATOR CONTROL PANEL BUT WITHIN THE GATE OPERATOR HOUSING WILL NOT MEET THIS REQUIREMENT.
6. ALL WORK SHOWN ON THIS SHEET SHALL BE PAID FOR UNDER ITEM AR162724 - ELECTRIC GATE - 24'.

BY	REVISION	DATE

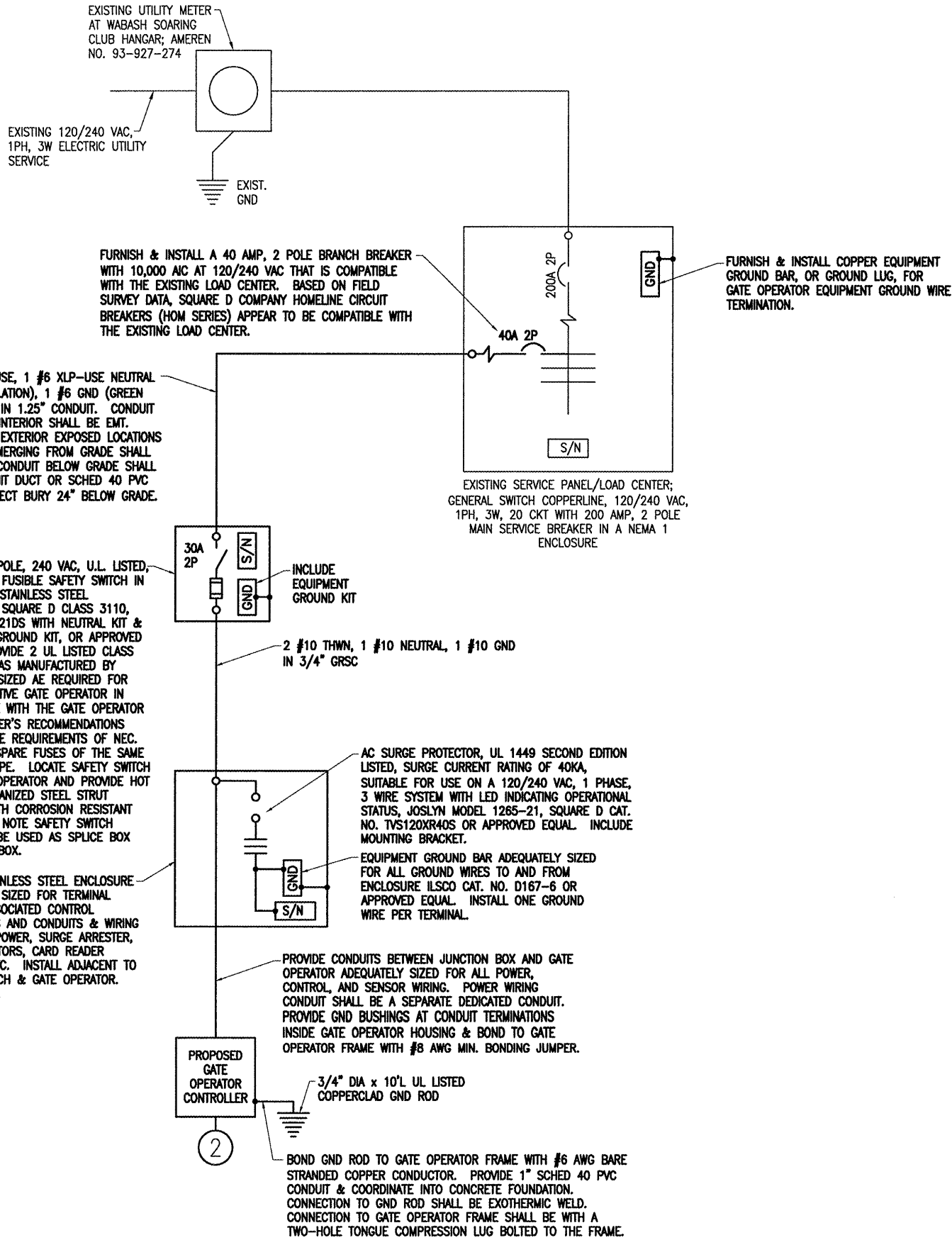
MID-AMERICAN AIR CENTER
LAWRENCEVILLE-VINCENNES AIRPORT
LAWRENCEVILLE, ILLINOIS

IL PROJ.: LW-3869 A.I.P. PROJ.: 3-17-0061-B15

Hanson Project No. 08A0185D_0800	Revision	01/06/09
Filename: E-601.DWG	Drawn	MV
Scale: NONE	Reviewed	JSL
Date: 01/20/09		

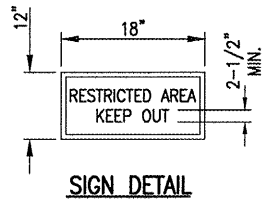


FRONTAL AREA
FENCE INSTALLATION
SOARING CLUB GATE
ELECTRICAL ONE-LINE
DIAGRAM

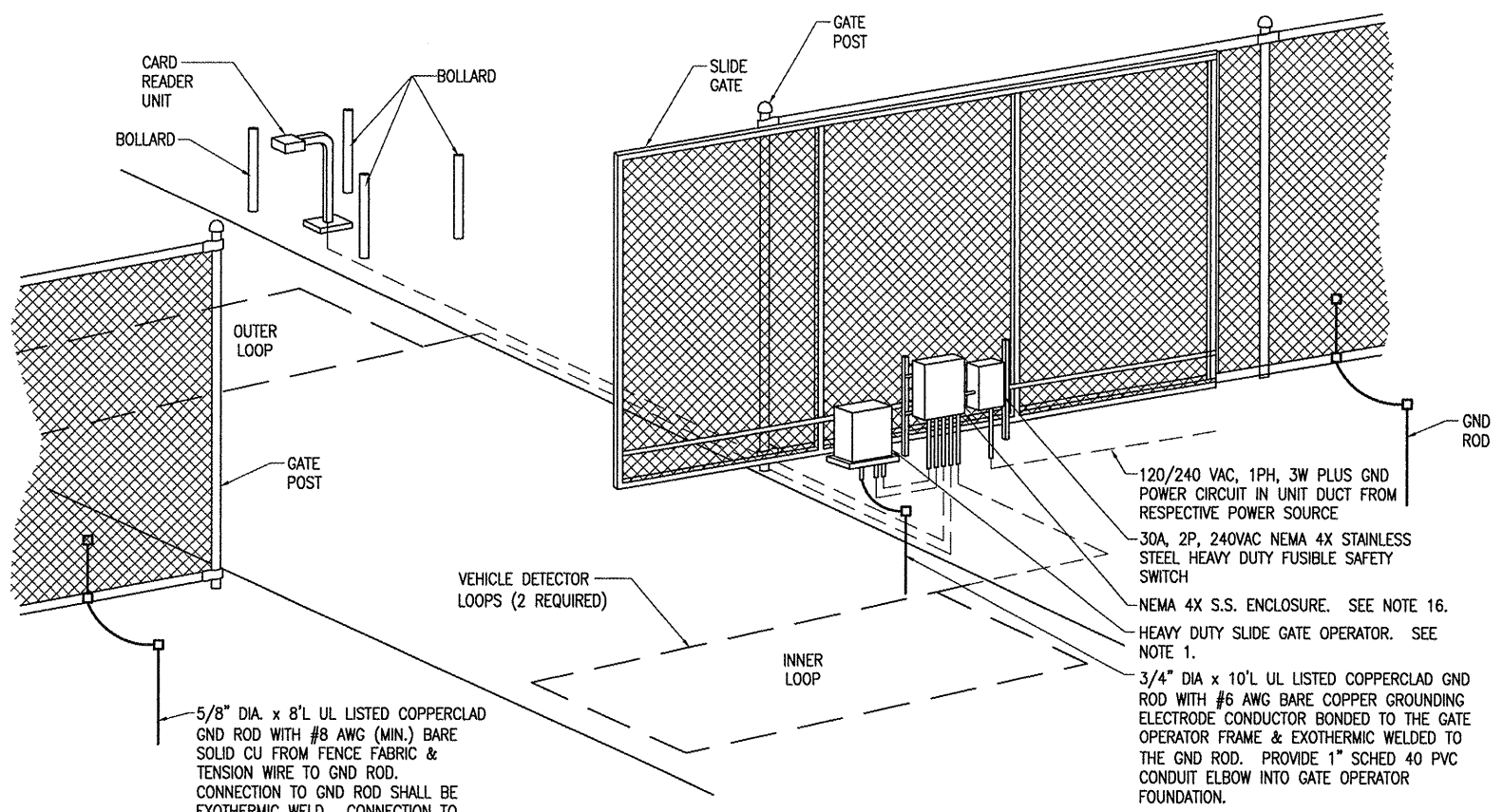


WABASH SOARING CLUB GATE OPERATOR
ELECTRICAL ONE LINE DIAGRAM

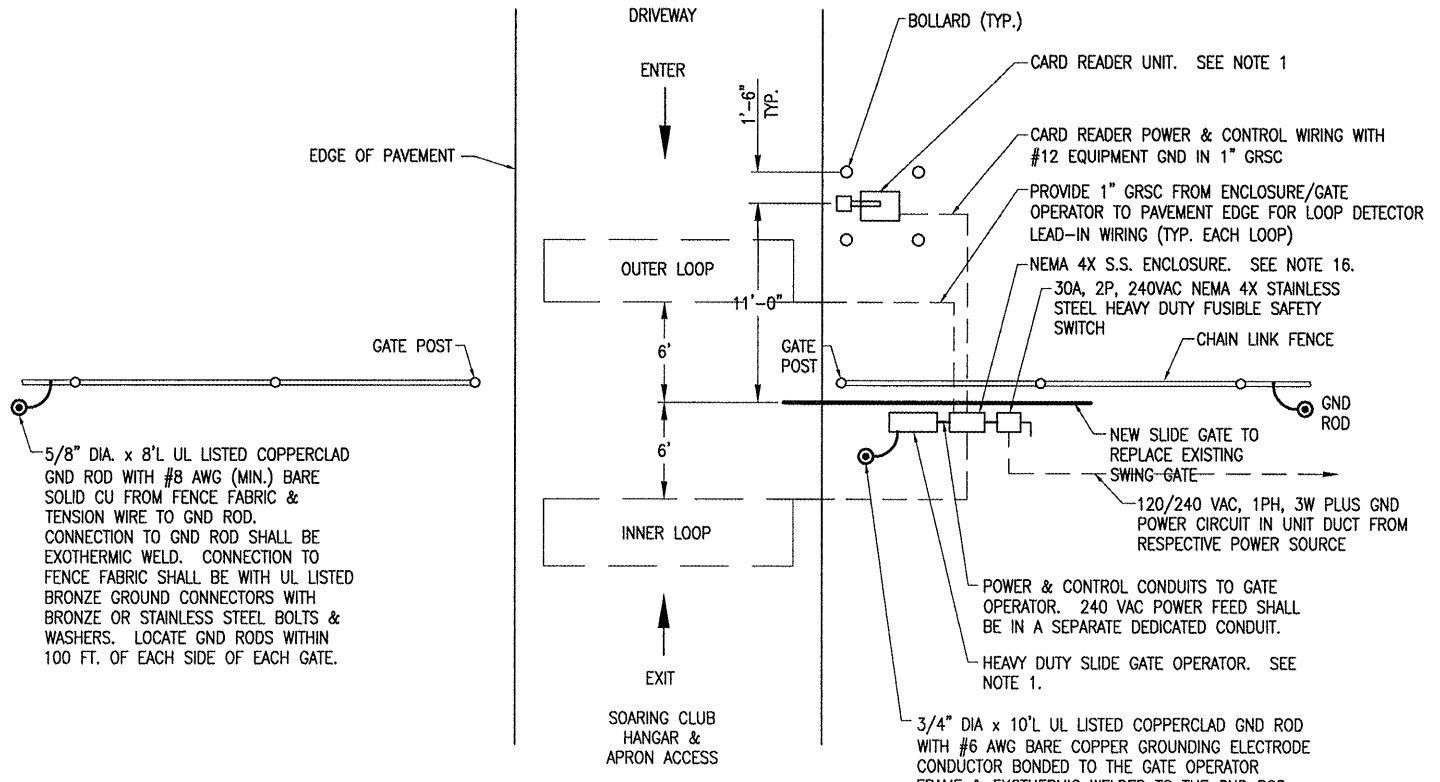
VEHICLE DETECTOR LOOPS		
GATE SIZE	LOOP SIZE	NO. OF TURNS
8' TO 12'	4' X 6'	3 TURNS
12' TO 16'	4' X 10'	2 TURNS
16' TO 20'	4' X 14'	2 TURNS
20' TO 24'	4' X 18'	2 TURNS
24' TO 30'	6' X 22'	2 TURNS
30' TO 34'	6' X 26'	2 TURNS



SIGN DETAIL
 NOTE:
 0.08 GA. ALUMINUM ALLOY SHEET
 LETTERING COLOR SHALL BE RED.
 EACH GATE SHALL REQUIRE ONE
 SIGN. EVERY 100' OF FENCE
 SHALL REQUIRE ONE SIGN.



ELECTRIC GATE DETAIL
 "NOT TO SCALE"



ELECTRIC GATE PLAN
 "NOT TO SCALE"

NOTES:

- SEE SPECIAL PROVISION SPECS FOR REQUIREMENTS ON RESPECTIVE GATE & GATE OPERATOR SYSTEM.
- ALL DIMENSIONS AND LAYOUT INFORMATION SHOWN SHOULD BE ADJUSTED AS RECOMMENDED BY THE MANUFACTURER. SEE RESPECTIVE SITE PLAN FOR EACH GATE.
- CONCRETE FOUNDATIONS SHALL BE PROVIDED FOR THE SLIDE GATE OPERATOR AND THE CARD READER CONTROL UNIT. FOUNDATION FOR THE GATE OPERATOR SHALL BE 48" (MIN.) IN DEPTH AND OF THE SIZE RECOMMENDED BY THE MANUFACTURER PLUS MOUNTING SPACE FOR SAFETY SWITCH & J-BOX. FOUNDATION FOR THE CARD READER ACCESS CONTROL UNIT SHALL BE 48" (MIN.) IN DEPTH, AS DETAILED HEREIN.
- 1" GR5 CONDUIT WILL BE REQUIRED BETWEEN THE SLIDE GATE OPERATOR AND THE CARD READER ACCESS CONTROL UNIT AND BETWEEN THE SLIDE GATE OPERATOR AND THE DETECTOR LOOPS. THE MINIMUM BURYING DEPTH IS 24". ALL METAL CONDUITS ENTERING THE GATE OPERATOR SHALL BE BONDED TO THE GATE OPERATOR FRAME WITH A #8 AWG (MIN.) COPPER BONDING JUMPER. CONFIRM CONTROL WIRING REQUIREMENTS WITH THE RESPECTIVE GATE OPERATOR SALES AND SERVICE REPRESENTATIVE.
- THE GUARD/BOLLARD POSTS SHALL BE 4" DIA. STEEL (HEAVY WALL) PIPE, CONCRETE FILLED, AND SHALL EXTEND FROM THE TOP OF THE CARD CONTROL UNIT TO A DEPTH OF 48" BELOW THE GROUND LINE. THE CONCRETE FOOTER DIMENSION SHALL BE AS DETAILED HEREIN. GUARD/BOLLARD POSTS SHALL BE PAINTED WITH YELLOW COLORED ENAMEL FINISH.
- THE SLIDING GATE SHALL BE CANTILEVER TYPE OF THE SIZE CALLED FOR ON THE PLANS, SHALL HAVE AN ENCLOSED ROLLER ASSEMBLY WHICH IS PROTECTED FROM FREEZING RAIN AND SNOW, AND SHALL BE AS MANUFACTURED BY TYMETAL CORPORATION OR APPROVED EQUAL.
- AS PART OF THIS ITEM 75 CARDS AND 25 REMOTE TRANSMITTERS FOR EACH GATE SHALL BE PROVIDED BY THE CONTRACTOR. COORDINATE PROGRAMMING OF CARDS & TRANSMITTER FREQUENCIES WITH THE AIRPORT MANAGER.
- CONTRACTOR SHALL COORDINATE ANY POWER OUTAGES TO EXISTING EQUIPMENT WITH THE RESPECTIVE OWNER'S REPRESENTATIVE AND THE AIRPORT MANAGER.
- INCLUDE UL LISTED SECONDARY SURGE ARRESTER FOR THE GATE OPERATOR SUITABLE FOR USE ON 240 VAC, 1 PHASE, 2 WIRE PLUS GROUND SYSTEM, WITH SURGE CURRENT RATING OF 100 KA PER MODE, LIFETIME PRODUCT REPLACEMENT WARRANTY, DITEK MODEL DTK-120/240 CM PLUS OR EQUAL.
- CONCRETE USED FOR INSTALLING THE GATE OPERATOR, CARD READER, & FENCE SHALL MEET THE REQUIREMENTS OF STRUCTURAL PORTLAND CEMENT CONCRETE ITEM 610.
- 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 UL LISTING, ETL LISTING, (OR OTHER THIRD PARTY LISTING) AND/OR THE MANUFACTURER'S WARRANTY OF A DEVICE WILL NOT BE PERMITTED.
- PROVIDE A WEATHERPROOF ENGRAVED PHENOLIC OR PLASTIC LEGEND PLATE FOR THE SAFETY SWITCH AT THE RESPECTIVE GATE OPERATOR NOTING THE GATE SERVED, VOLTAGE, AND RESPECTIVE POWER SOURCE CIRCUIT AND LOCATION.
- PAYMENT FOR EACH SLIDE GATE, CARD READER, GATE OPERATOR, AND ALL ASSOCIATED CONTROL & SAFETY DEVICES SHALL BE ON A LUMP SUM BASIS AND SHALL BE FULL COMPENSATION FOR ALL MATERIALS, EQUIPMENT, CABLE IN CONDUIT, DUCT, OR UNIT DUCT, GROUNDING, LABOR, TOOLS, COORDINATION, TESTING, AND INCIDENTALS REQUIRED TO INSTALL THE GATE COMPLETE AND IN OPERATING CONDITION.
- CONTROL CIRCUIT WIRING SHALL NOT BE ROUTED THROUGH THE SAFETY SWITCH/DISCONNECT.
- LOCATE RECEIVER ANTENNA TO PROVIDE PROPER OPERATION FROM REMOTE TRANSMITTERS FROM A DISTANCE UP TO 150 FEET. INCLUDE CONDUITS & SUPPORT HARDWARE.
- ALL CONTROL POWER TRANSFORMERS, POWER SUPPLIES, RECEPTACLES, LOOP DETECTOR AMPLIFIERS, SECONDARY SAFETY DEVICE EQUIPMENT, AND ANY OTHER ASSOCIATED CONTROLS SHALL BE INSTALLED EITHER INSIDE THE GATE OPERATOR CONTROL PANEL OR INSIDE A SEPARATE NEMA 4 STAINLESS STEEL CONTROL PANEL ENCLOSURE. WHERE THE CONTROL EQUIPMENT IS TO BE INSTALLED INSIDE THE GATE OPERATOR CONTROL PANEL THE CONTRACTOR SHALL COORDINATE THIS WITH THE GATE OPERATOR MANUFACTURER AND THE RESPECTIVE GATE OPERATOR EQUIPMENT SUPPLIER. LOCATING THESE CONTROLS OUTSIDE OF GATE OPERATOR CONTROL PANEL BUT WITHIN THE GATE OPERATOR HOUSING WILL NOT MEET THIS REQUIREMENT.

BY	
REVISION	
DATE	

**MID-AMERICAN AIR CENTER
 LAWRENCEVILLE-VINCENNES AIRPORT
 LAWRENCEVILLE, ILLINOIS**

IL PROJ.: LW-3869 A.I.P. PROJ.: 3-17-0061-B15

Hanson Project No. 08A0185D_0800	
Filename: E-501.DWG	
Scale: NOT TO SCALE	
Date: 01/20/09	
LAYOUT	KNL 01/06/09
DRAWN	MY 01/07/09
REVIEWED	JSL 01/09/09



**FRONTAL AREA
 FENCE INSTALLATION**

**PROPOSED ELECTRIC
 SLIDE GATE DETAILS -
 SOARING CLUB**

BY	
REVISION	
DATE	

MID-AMERICAN AIR CENTER
LAWRENCEVILLE-VINCENNES AIRPORT
LAWRENCEVILLE, ILLINOIS

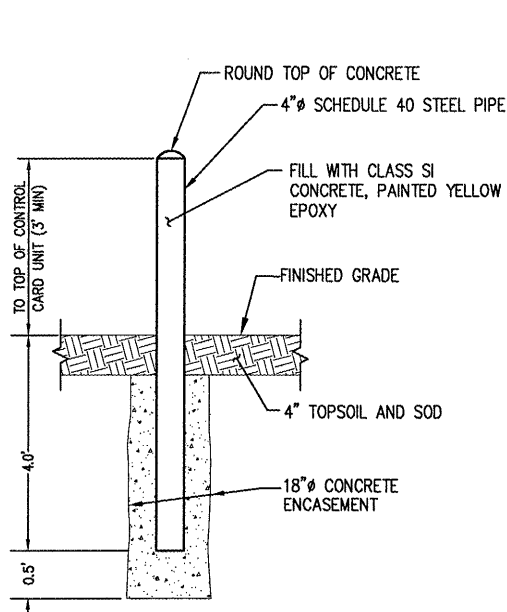
A.I.P. PROJ.: 3-17-0061-B15
ILL. PROJ.: LW-3869

Hanson Project No.	08A0185D-0800
Filename	E-502.DWG
Scale	NONE
Date	01/20/09
LAYOUT	KNL 01/06/09
DRAWN	MV 01/07/09
REVIEWED	JSL 01/09/09



FRONTAL AREA
FENCE INSTALLATION

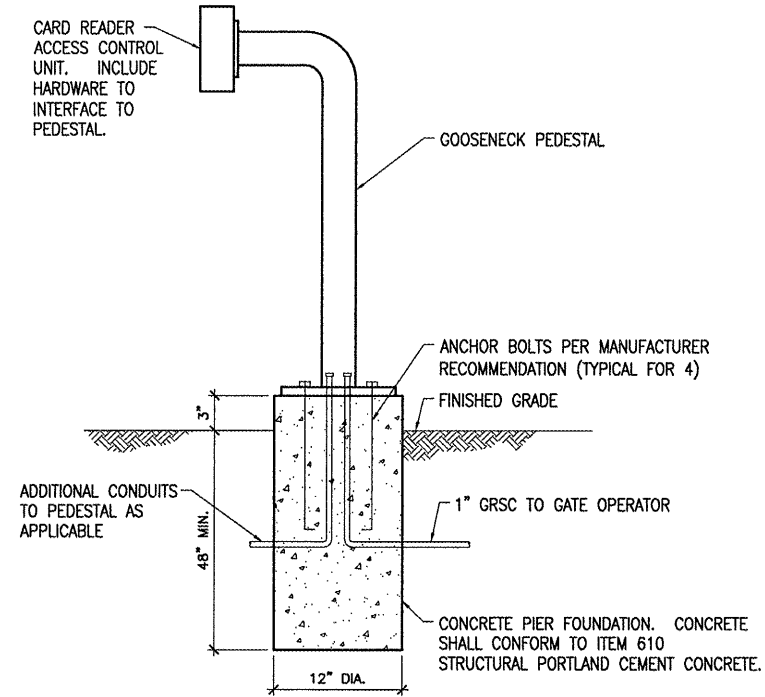
CARD READER,
BOLLARD & GATE
OPERATOR DETAILS



NOTES

1. THE EXPOSED PORTION OF THE BOLLARD SHALL BE PAINTED YELLOW EPOXY.
2. BOLLARD AND ASSOCIATED ITEMS ARE INCIDENTAL TO THE ELECTRIC SLIDING GATE.

BOLLARD DETAIL

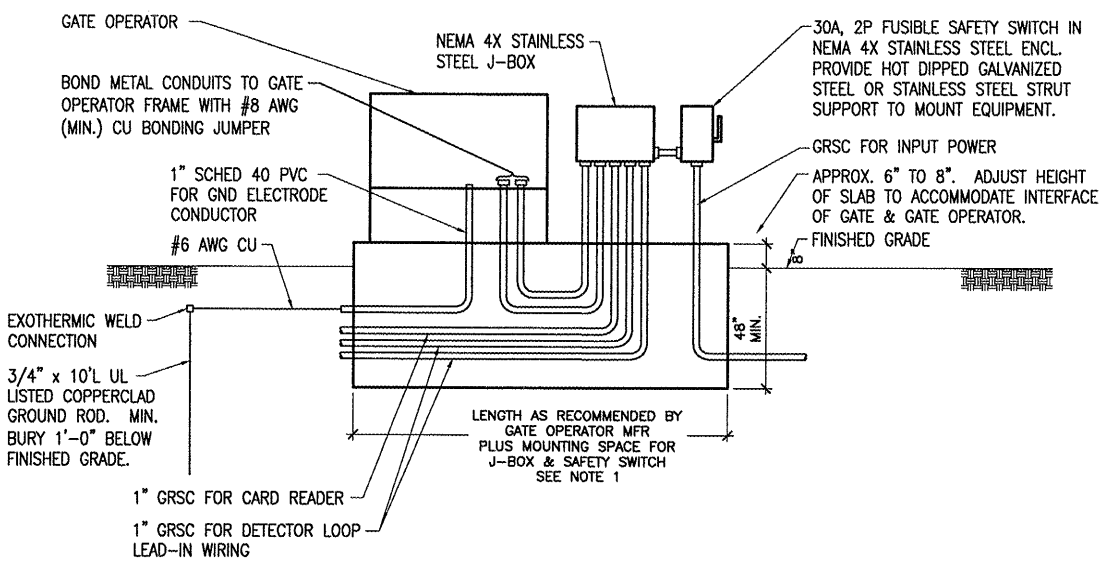


NOTES

1. SEE SPECIAL PROVISION SPECS FOR REQUIREMENTS ON CARD READER ACCESS CONTROL UNIT.
2. INCLUDE #12 AWG EQUIPMENT GND WIRE TO CARD READER.
3. FACE OF CARD READER SHALL NOT EXTEND BEYOND BOLLARDS.

CARD READER ACCESS CONTROL UNIT PEDESTAL ELEVATION DETAIL

SCALE: NONE

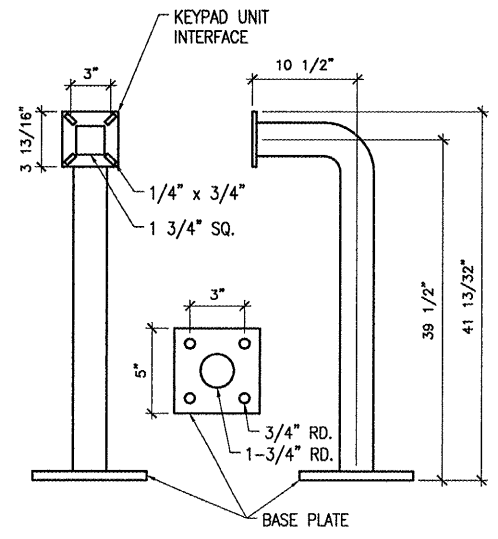


NOTES

1. FOUNDATION FOR GATE OPERATOR SHALL BE 48" MIN. IN DEPTH AND OF THE LENGTH & WIDTH RECOMMENDED BY THE MANUFACTURER, PLUS SPACE FOR SAFETY SWITCH, J-BOX & CONDUITS.
2. COORDINATE CONDUITS INTO FOUNDATION.
3. CONFIRM CONDUIT SIZES AND WIRING REQUIREMENTS WITH THE GATE OPERATOR MFR. ADJUST/INCREASE CONDUIT SIZES WHERE APPLICABLE. REQUIREMENTS VARY BETWEEN DIFFERENT MANUFACTURERS.
4. ALL ENCLOSURES RATED NEMA 4, 4X SHALL HAVE WATERTIGHT HUBS AT CONDUIT ENTRANCES U.L. LISTED NEMA 4, 4X FOR THE RESPECTIVE ENCLOSURE, TO MAINTAIN THE NEMA 4, 4X RATING.

GATE OPERATOR FOUNDATION DETAIL

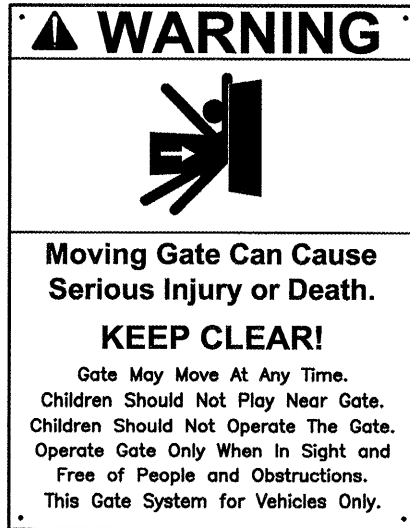
"NOT TO SCALE"



GOOSENECK PEDESTAL DETAIL

SCALE: NONE

NOTE:
GOOSENECK PEDESTAL SHALL BE AMERICAN ACCESS SYSTEMS, INC. (7079 SOUTH JORDAN RD., UNIT 6, ENGLEWOOD, CO 80112, PHONE: 800-541-5677, FAX 303-799-9756) MODEL 18-001 OR APPROVED EQUAL.



NOTES

1. WARNING SIGNS/PLACARDS AS DETAILED ABOVE OR SIMILAR, SHALL BE INSTALLED WHERE CLEARLY VISIBLE ON BOTH SIDES OF EACH ELECTRIC SLIDE GATE. WARNING SIGNS SHALL BE WEATHERPROOF, CORROSION RESISTANT METAL, AS DETAILED ABOVE, AND IN ACCORDANCE WITH THE RESPECTIVE GATE MANUFACTURER'S RECOMMENDATIONS, B&B ARMR PART NO. 0000-0017, HY-SECURITY PART NO. MX000882, OR EQUAL.

WARNING SIGN DETAIL