MV-058 **TOTAL SHEETS - 43**

CONSTRUCTION PLANS

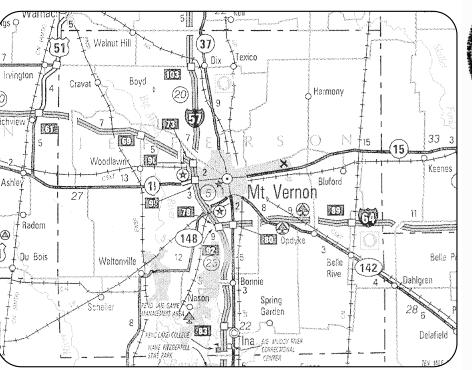
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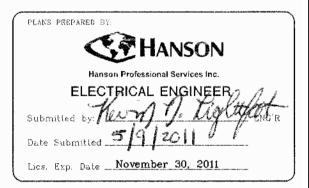
MT. VERNON AIRPORT

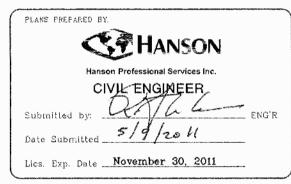
MT. VERNON, JEFFERSON COUNTY, ILLINOIS REPLACE PERIMETER FENCE

SCOPE OF WORK

THE PROJECT SCOPE CONSISTS OF REMOVING THE EXISTING CLASS C AND CLASS E PERIMETER FENCE AND INSTALLING NEW 10 FOOT CLASS E FENCE WITH THREE STRANDS OF BARB WIRE AROUND THE AIRPORT PERIMETER. THE PROJECT INCLUDES REMOVAL AND REPLACEMENT OF EACH OF THE ASSOCIATED GATES WHICH SHALL INCLUDE PEDESTRIAN GATES, MANUAL SLIDE GATES, ELECTRIC SLIDE GATES, AND EACH RESPECTIVE OPERATOR INCLUDING THE ASSOCIATED ELECTRICAL IMPROVEMENTS. THE PROJECT SHALL ALSO INCLUDE INSTALLATION OF OBSTRUCTION LIGHTING ON THE FENCE AND THE ASSOCIATED CABLING, DUCTS, AND ELECTRICAL WORK.





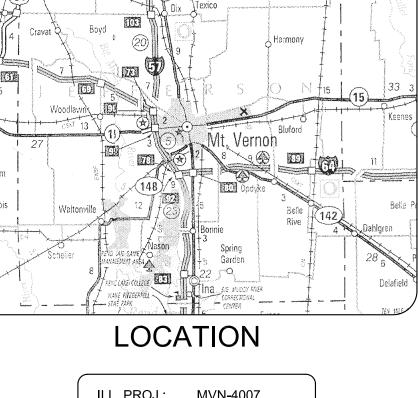


1/LINO19









ILL. PROJ.: MVN-4007 A.I.P. PROJ.: 3-17-0074-B22 38° 19' 24" LATITUDE: LONGITUDE: 88° 51' 30" 480.0' M.S.L. ELEVATION: **APRIL 8, 2011**





	SUMMARY OF QUANTI	TIES		
ITEM NO.	DESCRIPTION	UNIT	TOTAL QUANTITIES	AS BUILT QUANTITIES
AR108660	3/C #10 600V UG CABLE IN UD	L.F.	7,100	
AR110014	4" DIRECTIONAL BORE	L.F.	50	
AR119511	AIRPORT OBSTRUCTION LIGHT-SINGLE	EACH	21	
AR119512	AIRPORT OBSTRUCTION LIGHT-DOUBLE	EACH	8	
AR150510	ENGINEER'S FIELD OFFICE	L.S.	1	
AR161900	REMOVE CLASS C FENCE	L.F.	1,354	
AR161910	REMOVE CLASS C GATE	EACH	1	
AR162212	CLASS E MANUAL SLIDE GATE-12'	EACH	1	
AR162216	CLASS E MANUAL SLIDE GATE-16'	EACH	1	
AR162220	CLASS E MANUAL SLIDE GATE-20'	EACH	3	
AR162224	CLASS E MANUAL SLIDE GATE-24'	EACH	1	
AR162230	CLASS E MANUAL SLIDE GATE-30'	EACH	3	
AR162510	CLASS E FENCE 10'	L.F.	25,983	
AR162605	CLASS E GATE-5'	EACH	5	
AR162606	CLASS E GATE-6'	EACH	2	
AR162610	CLASS E GATE-10'	EACH	1	
AR162718	ELECTRIC GATE-18'	EACH	1	
AR162720	ELECTRIC GATE-20'	EACH	1	
AR162724	ELECTRIC GATE-24'	EACH	3	
AR162900	REMOVE CLASS E FENCE	L.F.	19,136	
AR162905	REMOVE GATE	EACH	7	
AR162908	REMOVE ELECTRIC GATE	EACH	5	
AR162910	REMOVE CLASS E GATE	EACH	6	

NOTE: PAYMENT WILL BE MADE UNDER THE ITEM NUMBERS, DESCRIPTIONS, AND UNITS NOTED IN THE ABOVE TABLE IN ACCORDANCE WITH THE BASIS OF PAYMENT FOR EACH RESPECTIVE WORK ITEM COMPLETED AND ACCEPTED BY THE ENGINEER.

	INDEX TO SHEETS	_
SHEET NO.	DESCRIPTION	MT. VERNON AIRPORT
1	COVER SHEET	┨╠╶╢┋
2	SUMMARY OF QUANTITIES AND INDEX TO SHEETS	─
3	PROPOSED SAFETY PLAN	
4	EXISTING FENCE REMOVAL PLAN OVERVIEW AND LEGEND TO SHEETS	⊣ ຄ ▶ິຯ>
5	EXISTING FENCE REMOVAL PLAN SHEET 1	⊢ ž v ò
6	EXISTING FENCE REMOVAL PLAN SHEET 2	─ ๙ ◍ ◍ ≷
7	EXISTING FENCE REMOVAL PLAN SHEET 3	— i
8	EXISTING FENCE REMOVAL PLAN SHEET 4	
9	EXISTING FENCE REMOVAL PLAN SHEET 5	⊣ ⊨ <u> </u>
10	PROPOSED FENCING PLAN OVERVIEW AND LEGEND TO SHEETS	──│ ≥ ू ▼
11	PROPOSED FENCING PLAN SHEET 1	- > 5
12	PROPOSED FENCING PLAN SHEET 2	-
13	PROPOSED FENCING PLAN SHEET 3	
14	PROPOSED FENCING PLAN SHEET 4	-
15	PROPOSED FENCING PLAN SHEET 5	
16	PROPOSED FENCING PLAN SHEET 6	
17	PROPOSED FENCING PLAN SHEET 7	
		3
18	PROPOSED TERMINAL AREA FENCING PLAN SHEET 1	
19	PROPOSED TERMINAL AREA FENCING PLAN SHEET 2	<u> </u>
20	PROPOSED TERMINAL AREA FENCING PLAN SHEET 3	_
21	PROPOSED FENCE DETAILS 1	10A
22	PROPOSED FENCE DETAILS 2	— ∥ ଶର୍ୟ≯
23	ELECTRICAL LEGEND AND ABBREVIATIONS	김씨국의 [
24	GATE 1 PROPOSED ELECTRICAL SITE PLAN	Broise a L
25	GATE 1 ELECTRICAL ONE LINE	Scale Scale OUT
26	GATES 2 & 3 PROPOSED ELECTRICAL SITE PLAN	HEI PI Filena Scale Date
27	GATE 2 ELECTRICAL ONE LINE	
28	GATE 3 ELECTRICAL ONE LINE	
29	GATE 7 PROPOSED ELECTRICAL SITE PLAN	HANSON Professional Services Inc. 2011 Ressional Services Inc. South Sixth Street A. Illinois 25703-2888
30	GATE 7 ELECTRICAL ONE LINE	es =
31	PROPOSED ELECTRIC SLIDE GATE DETAILS GATES 1, 2, 3, & 7	NSC. Services Inc. Services Inc. 732-2886 (277) 788.
32	GATE 9 PROPOSED ELECTRICAL SITE PLAN	Ser Ser
33	GATE 9 ELECTRICAL ONE LINE	sional Sixth
34	PROPOSED ELECTRIC SLIDE GATE DETAILS GATE 9 (FIRE STATION)	Copyright Honson Professional Services Inc. 201 Hanson Professional Services Inc. 1255 South Stark Street 1255 South Stark Street 1255 South Stark Street 1257 South Stark Street 1277 7789-246 Fav. (2177 7789-2886
35	CARD READER, BOLLARD & GATE OPERATOR DETAILS	on P or P Sout
36	PROPOSED OBSTRUCTION LIGHTING PLAN FOR RUNWAY END 33	Copyright Honson Hanson Professon Springfield, Springfield, 1525 SC Springfield, 1782-24 7782-24
37	PROPOSED OBSTRUCTION LIGHTING PLAN FOR RUNWAY END 5	# i i i i i i i i i i i i i i i i i i i
38	PROPOSED OBSTRUCTION LIGHTING PLAN FOR RUNWAY END 23	O Copyright Hanso Spri
39	ELECTRICAL ONE-LINE DIAGRAM FOR OBSTRUCTION LIGHTING AT RUNWAY ENDS 5 AND 33	\
40	ELECTRICAL ONE-LINE DIAGRAMS FOR OBSTRUCTION LIGHTING NEAR FIRE STATION AND AT RUNWAY END 23	·
41	DETAILS FOR OBSTRUCTION LIGHTING ON FENCE	
42	ELECTRICAL DETAILS SHEET 1	
43	PROPOSED ELECTRICAL NOTES SHEET 1	m ကြ
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		REPLACE PERIMETER FENCE SUMMARY OF QUANTITIES AND
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2 of 43 sheets THE PROJECT SCOPE CONSISTS OF REMOVING THE EXISTING CLASS C AND CLASS E PERIMETER FENCE AND INSTALLING NEW 10 FOOT CLASS E FENCE WITH THREE STRANDS OF BARB WIRE AROUND THE AIRPORT PERIMETER. THE PROJECT INCLUDES REMOVAL AND REPLACEMENT OF EACH OF THE ASSOCIATED GATES WHICH SHALL INCLUDE PEDESTRIAN GATES, MANUAL SLIDE GATES, ELECTRIC SLIDE GATES, AND EACH RESPECTIVE OPERATOR INCLUDING THE ASSOCIATED ELECTRICAL IMPROVEMENTS. THE PROJECT SHALL ALSO INCLUDE INSTALLATION OF OBSTRUCTION LIGHTING ON THE FENCE AND THE ASSOCIATED CABLING, DUCTS, AND ELECTRICAL WORK.

AIRPORT SECURITY NOTE

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

HEIGHT OF CONSTRUCTION EQUIPMENT

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

EQUIPMENT PARKING AND STORAGE AREA

THE CONTRACTOR WILL USE THE DESIGNATED EQUIPMENT PARKING AND STORAGE AREAS AS SHOWN. THE CONTRACTOR WILL BE REQUIRED TO MAINTAIN THE PROPOSED EQUIPMENT PARKING AND STORAGE AREAS 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 EQUIPMENT PARKING AND STORAGE AREAS TO THEIR ORIGINAL STATE. RESTORATION OF THE EQUIPMENT PARKING AND STORAGE AREAS WILL BE CONSIDERED INCIDENTAL TO THE PROJECT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

PROPOSED SAFETY PLAN

GENERAL - THE MT. VERNON AIRPORT IS COMPRISED OF TWO RUNWAYS. THE PROPOSED CONSTRUCTION WILL NOT NECESSITATE CLOSING ANY RUNWAYS, TAXIWAYS, OR APRONS.

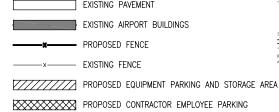
IDENTIFICATION - WHEN THE CONTRACTORS VEHICLES AND EQUIPMENT ARE ON THE AIRPORT THEY SHALL BE PROPERLY MARKED WITH THREE FOOT (3') SQUARE CHECKERED FLAGS (INTERNATIONAL ORANGE AND WHITE). THE CONTRACTOR WILL ALSO PROVIDE WORKERS WITH SOME TYPE OF TAG OR GARMENT TO IDENTIFY THE PERSON AS BEING PART OF THE CONSTRUCTION CREW.

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

CONTRACTOR RESPONSIBILITIES

THE CONTRACTOR'S EMPLOYEES WILL PARK THEIR PERSONAL VEHICLES IN THE AREA DESIGNATED FOR THEM. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO TRANSPORT HIS PERSONNEL FROM THIS PARKING AREA TO THE AREA WHERE HE IS WORKING. THE CONTRACTOR AND HIS EMPLOYEES WILL BE RESTRICTED TO THE WORK AREA AND ALL OTHER AREAS OF THE AIRPORT ARE "OFF LIMITS" TO THEM. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR OR HIS EQUIPMENT BE WITHIN 200 FT OF THE CENTERLINE OF AN ACTIVE RUNWAY, OR BE WITHIN THE OBJECT FREE AREA OF AN ACTIVE TAXIWAY (93 FT FROM THE TAXIWAY CENTERLINE).

THE LOCATION, SIZE, AND TYPE OF MATERIAL OF EXISTING UNDERGROUND AND/OR ABOVEGROUND UTILITIES INDICATED ON THE PLANS ARE NOT REPRESENTED AS BEING ACCURATE SUFFICIENT OR COMPLETE. NEITHER THE OWNER NOR THE ENGINEER ASSUMES ANY RESPONSIBILITY WHATSOEVER IN RESPECT TO THE ACCURACY, COMPLETENESS, OR SUFFICIENCY OF THE INFORMATION. THERE IS NO GUARANTEE, EITHER EXPRESSED OR IMPLIED, THAT THE LOCATIONS, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND UTILITIES INDICATED ARE REPRESENTATIVE OF THOSE TO BE ENCOUNTERED IN THE CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES. INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. 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 OWNER'S REPRESENTATIVE AND/OR THE RESIDENT ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY DAMAGE TO SUCH MAINS AND SERVICES SHALL BE RESTORED TO SERVICE AT ONCE AND PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT. ALL UTILITY CABLES AND LINES SHALL BE LOCATED BY THE RESPECTIVE UTILITY. CONTACT JULIE (JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS) FOR UTILITY INFORMATION, PHONE: 1-800-892-0123. CONTACT THE FAA (FEDERAL AVIATION ADMINISTRATION) FOR ASSISTANCE IN LOCATING FAA CABLES AND UTILITIES. LOCATION OF FAA POWER, CONTROL, AND COMMUNICATION CABLES SHALL BE COORDINATED WITH AND/OR LOCATED BY THE FAA. ALSO CONTACT AIRPORT DIRECTOR/MANAGER AND AIRPORT PERSONNEL FOR ASSISTANCE IN



BENCHMARK

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 49 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION OF AIRPORTS ADOPTED NOVEMBER 02, 2009.

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

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

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

CERTIFIED PAYROLLS

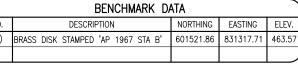
THE RESIDENT ENGINEER **CANNOT** FORWARD CONSTRUCTION REPORTS TO THE ILLINOIS DIVISION OF AERONAUTICS FOR PROCESSING UNTIL ALL CERTIFIED PAYROLLS FOR THE PERIOD HAVE BEEN RECEIVED.

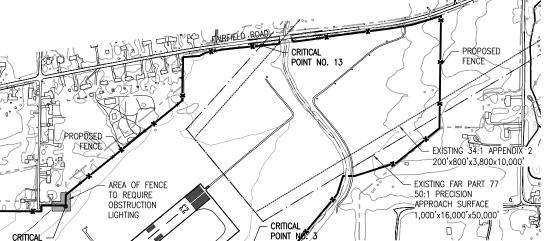
MATERIAL CERTIFICATION

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.

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

MV-058





PROPOSED

CRITICAL POINT DATA

LATITUDE: 38° 19' 18.1852" LONGITUDE: 88° 51' 49.7316" ELEVATION: 470' M.S.L.

LATITUDE: 38' 19' 00.8717"

LATITUDE: 38' 19' 40.8018"

LATITUDE: 38' 19' 44.0033" LONGITUDE: 88° 51' 12.4799"

LATITUDE: 38' 19' 37.7989" LONGITUDE: 88° 51' 32.7210" ELEVATION: 471' M.S.L.

LONGITUDE: 88° 51' 49.3114" ELEVATION: 497' M.S.L.

LATITUDE: 38' 19' 05.0109" LONGITUDE: 88° 51' 32.8813" ELEVATION: 455' M.S.L.

LATITUDE: 38' 19' 05.0017" LONGITUDE: 88° 51' 24.0172" ELEVATION: 452' M.S.L.

LATITUDE: 38° 19' 08.8357' LONGITUDE: 88' 52' 07.9139" ELEVATION: 478' M.S.L.

NO. 10 LATITUDE: 38' 19' 04.2576" LONGITUDE: 88° 52' 10.9783" ELEVATION: 474' M.S.L.

NO 11 LATITUDE: 38' 18' 59.6346" LONGITUDE: 88° 52' 07.1299" ELEVATION: 461' M.S.L.

NO. 12 LATITUDE: 38' 19' 00.3907" LONGITUDE: 88° 51' 59.6088" ELEVATION: 461' M.S.L.

LATITUDE: 38° 19' 57.3318" LONGITUDE: 88° 50' 52.1208"

LATITUDE: 38° 19' 40.6673" LONGITUDE: 88° 51' 49.3231' ELEVATION: 489' M.S.L.



REPLACE PERIMETER FENCI

150N

LEGEND EXISTING PAVEMENT AIRPORT PROPERTY LINE

LOCATING UNDERGROUND AIRPORT CABLES AND/OR UTILITIES. ALSO COORDINATE WORK WITH ALL ABOVEGROUND UTILITIES.

JEFFERSON COUNTY MT. VERNON TOWNSHIP MT. VERNON SECTION NO.__22, 23, 26 & 27 __MT. VERNON AIRPORT AUTHORITY MT. VERNON, ILLINOIS 62864 AREA OF FENCE TO REQUIRE OBSTRUCTION LIGHTING

PROAD.

J.U.L.I.E. INFORMATION

ARFF STATION CRÍTICAL POINT NO. 9 - PROPOSED CONTRACTOR EQUIPMENT PARKING AND MATERIAL STORAGE AREA CONTRACTOR EMPLOYEE PARKING AREA CRITICAL

POINT

NO.

IL ROUTE 15 CRITICAL POINT NO 7 - PROPOSED CRITICAL CRITICAL POINT NO. 2 — CRITICAL NO. 11 POINT NO. 12

EXISTING FAR PART 77 20:1 VISUAL APPROACH SURFACE 250'x1,250'x5,000'

AREA OF FENCE

TO REQUIRE OBSTRUCTION

LIGHTING

EXISTING 20:1 APPENDIX 2 200'x400'x3,400'x10,000

OBSTRUCTION

CRITICAL POINT

NO. 10

- AREA OF FENCE

TO REQUIRE

LIGHTING

EXISTING 20:1 APPENDIX 2 200'x800'x3,800x10,000'

1,000'x3,500'x10,000'

EXISTING FAR PART 77 34:1

NON-PRECISION APPROACH SURFACE

CRITICAL

POINT NO. 8

_POINT NO. 5

TERMINAL

AR150510 ENGINEER'S FIELD OFFICE

BE PAID FOR UNDER ITEM:

THE PROPOSED ENGINEER'S FIELD OFFICE INCLUDING THE CELL PHONE WILL

- EXISTING 20:1 APPENDIX 2

PRÓPOSED

CRITICAL

POINT NO. 14

FENCE

CRITICAL

POINT NO. 6

250'x700'x2,250,

CONTINUE AT 700'

EXISTING FAR PART 77 20:1

VISUAL APPROACH SURFACE 250'x1,250'x5,000'

TO 5,000

D

LONGITUDE: 88° 51' 55.5039" ELEVATION: 460' M.S.L.

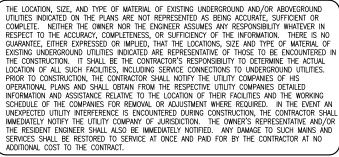
LONGITUDE: 88° 50' 52.9747" ELEVATION: 454' M.S.L.

ELEVATION: 484' M.S.L.

LATITUDE: 38' 19' 33.4769"

ELEVATION: 460' M.S.L.

HALF SIZE SCALE: 1"= 800 FULL SIZE SCALE: 1"= 400



ALL UTILITY CABLES AND LINES SHALL BE LOCATED BY THE RESPECTIVE UTILITY. CONTACT JULIE (JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS) FOR UTILITY INFORMATION. PHONE: 1-800-892-0123. CONTACT THE FAA (FEDERAL AVIATION ADMINISTRATION) FOR ASSISTANCE IN LOCATING FAA CABLES AND UTILITIES. LOCATION OF FAA POWER, CONTROL, AND COMMUNICATION CABLES SHALL BE COORDINATED WITH AND/OR LOCATED BY THE FAA. ALSO CONTACT AIRPORT DIRECTOR/MANAGER AND AIRPORT PERSONNEL FOR ASSISTANCE IN LOCATING UNDERGROUND AIRPORT CABLES AND/OR UTILITIES. ALSO COORDINATE WORK WITH ALL ABOVEGROUND UTILITIES.

FENCING REMOVAL NOTES

THE EXISTING FENCE TO BE REMOVED CONSISTS OF 6' CLASS E (CHAIN LINK) AND 4' CLASS C (WOVEN WIRE). THE CONTRACTOR WILL TURN OVER TO THE AIRPORT THE FENCE FABRIC THAT IS REMOVED. IF THE AIRPORT DECLINES RETAINING ANY OR ALL OF THE FABRIC, THE CONTRACTOR WILL DISPOSE OF THE FENCE MATERIAL OFF THE AIRPORT

THE CONTRACTOR WILL BE REQUIRED TO MAINTAIN AIRPORT SECURITY TO THE SATISFACTION OF THE AIRPORT MANAGER DURING THE REMOVAL OF THE EXISTING AND THE INSTALLATION OF THE PROPOSED FENCE. THE CONTRACTOR SHALL PROVIDE AND PLACE BARRICADES, CHAIN OR CABLE ACROSS ALL GATE ENTRANCES UNTIL THE PERMANENT GATES ARE INSTALLED. THE FABRIC, WHETHER EXISTING OR PROPOSED SHALL BE TEMPORARILY TIED TO THE NEW POSTS TO PROVIDE AIRPORT SECURITY DURING CONSTRUCTION. IN LOCATIONS ALONG THE PROPOSED FENCE ALIGNMENT WHERE EXISTING FENCE DOES NOT CURRENTLY EXIST. THE TEMPORARY SECURITY REQUIREMENT DOES NOT APPLY.

ALTHOUGH NO CLEARING AND GRUBBING IS ANTICIPATED, ANY REMOVAL OF SHRUBS, SMALL TREES, STUMPS, LOGS, ETC. THAT ARE IN THE EXISTING FENCE LINE WILL BE REMOVED AND DISPOSED OF OFF THE AIRPORT PROPERTY. THIS REMOVAL AND DISPOSAL WILL BE CONSIDERED AS AN INCIDENTAL ITEM TO THE EXISTING FENCE REMOVAL AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED

THE HOLES LEFT FROM THE PROPOSED REMOVAL WILL BE FILLED WITH EARTH MATERIAL EITHER OBTAINED FROM THE INSTALLATION OF THE PROPOSED FENCE OR FROM AN APPROVED OFF SITE BORROW AREA. THE EARTH MATERIAL WILL BE COMPACTED TO INSURE NO FUTURE SETTLEMENT. THE EARTH MATERIAL WILL BE CONSIDERED AS AN INCIDENTAL ITEM TO THE FENCE REMOVAL AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

THE REMOVAL AND DISPOSAL OF THE EXISTING FENCE SHALL BE PAID FOR UNDER ITEM:

AR161900 REMOVE CLASS C FENCE, PER LIN. FT. AR162900 REMOVE CLASS E FENCE, PER LIN. FT.

GATE REMOVAL NOTES

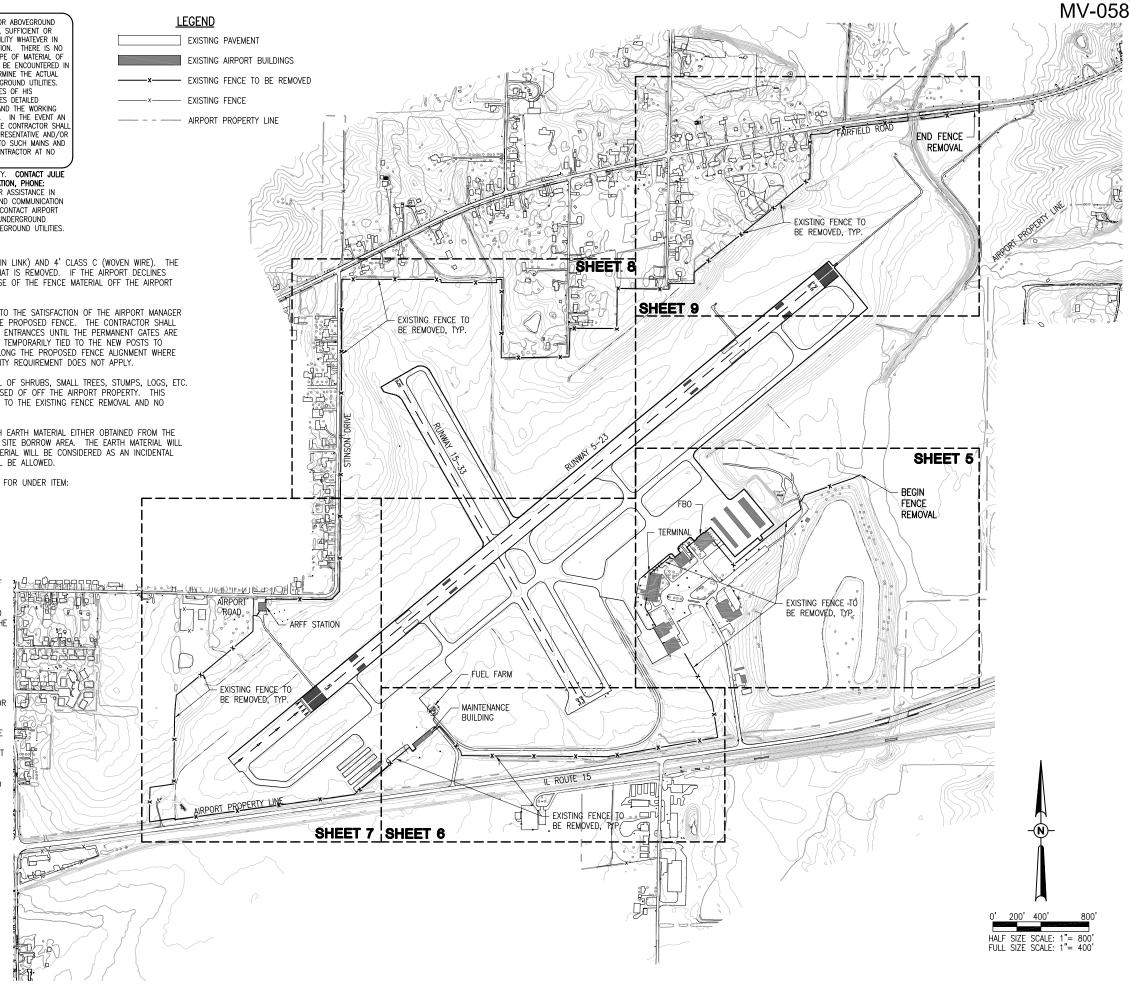
THE EXISTING GATES DESIGNATED TO BE REMOVED ARE 4' CLASS C (WOVEN WIRE), 6' CLASS E (CHAIN LINK) PEDESTRIAN, MANUAL SWING, AND ELECTRIC GATES. THE GATES VARY IN SIZE FROM 5' TO 30' IN LENGTH. THE CONTRACTOR IS REQUIRED TO REMOVE AND DISPOSE OF THESE GATES OFF THE AIRPORT PROPERTY.

THE HOLES LEFT FROM THE PROPOSED GATE REMOVAL WILL BE FILLED WITH EARTH MATERIAL EITHER OBTAINED FROM THE INSTALLATION OF THE PROPOSED FENCE OR FROM AN APPROVED OFF SITE BORROW AREA. THE EARTH MATERIAL WILL BE COMPACTED TO INSURE NO FUTURE SETTLEMENT. THE EARTH MATERIAL WILL BE CONSIDERED AS AN INCIDENTAL ITEM TO THE GATE REMOVAL AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

THE CONTRACTOR IS REQUIRED TO TAKE PRECAUTION WHEN REMOVING EXISTING FENCE OR GATE POSTS THAT ARE EMBEDDED IN CONCRETE OR BITUMINOUS PAVEMENT TO NOT CAUSE DAMAGE TO THE SURROUNDING PAVEMENT. THE CONTRACTOR WILL NOT BE PERMITTED ADDITIONAL COMPENSATION DUE TO THE DIFFICULTY CAUSED BY THE POSTS IN THE PAVEMENT. ALL DAMAGE TO SURROUNDING PAVEMENT SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE RESIDENT ENGINEER AT THE CONTRACTOR'S EXPENSE.

THE REMOVAL AND DISPOSAL OF THE DESIGNATED GATES WILL BE PAID

AR161910 REMOVE CLASS C GATE, PER EACH AR162905 REMOVE GATE, PER EACH AR162908 REMOVE ELECTRIC GATE, PER EACH AR162910 REMOVE CLASS E GATE, PER EACH

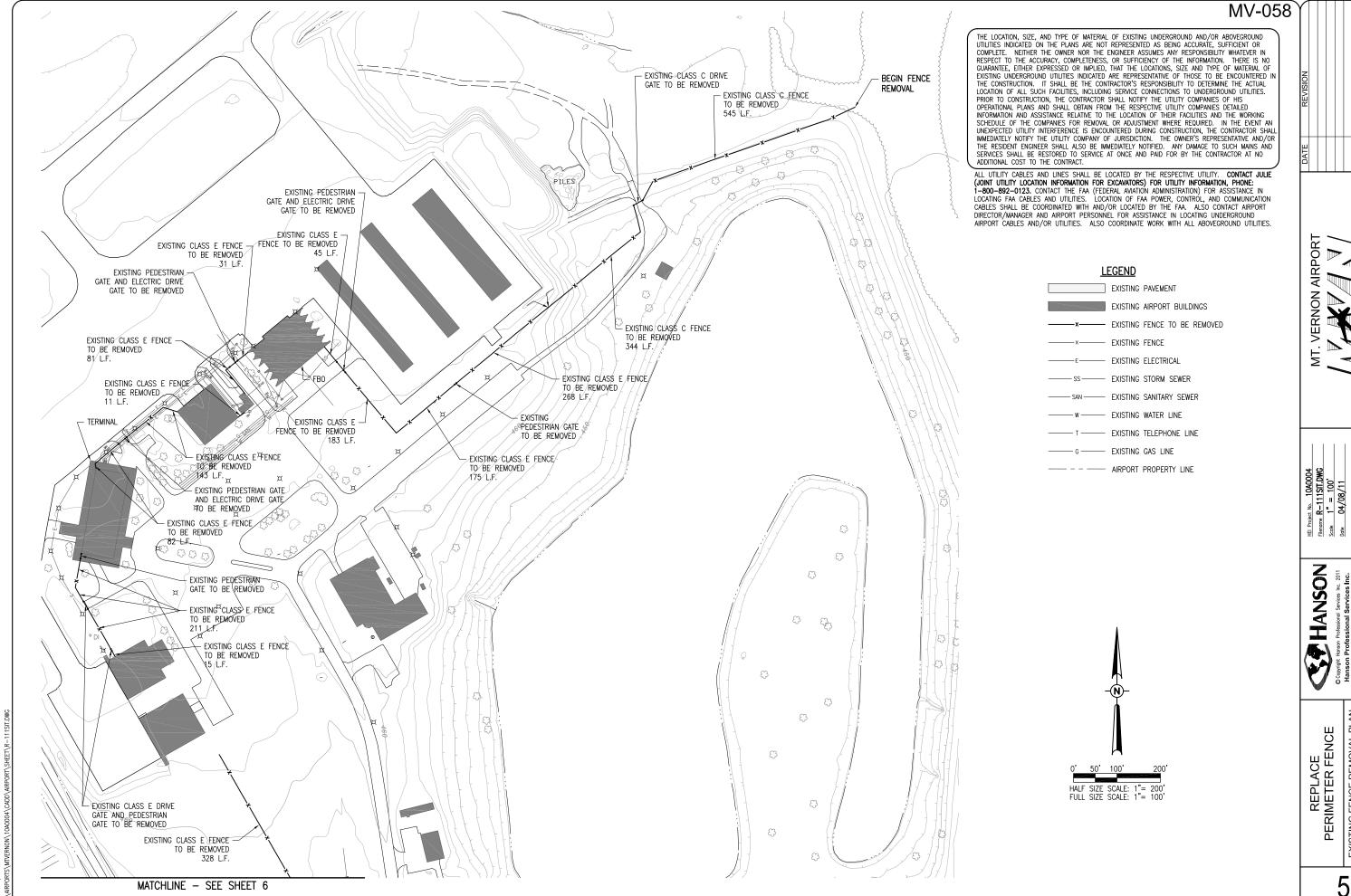


AIRPOR

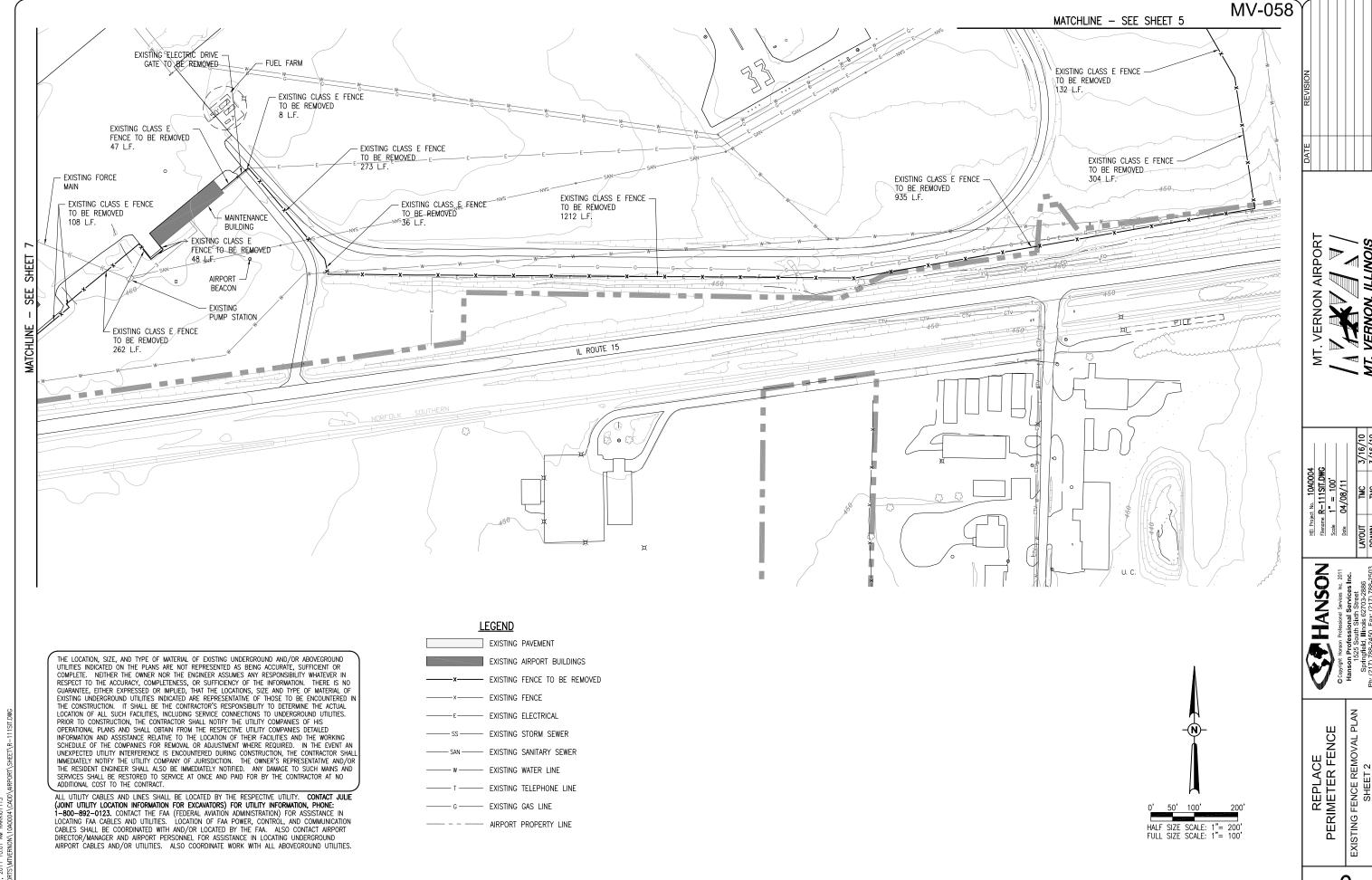
HANSON

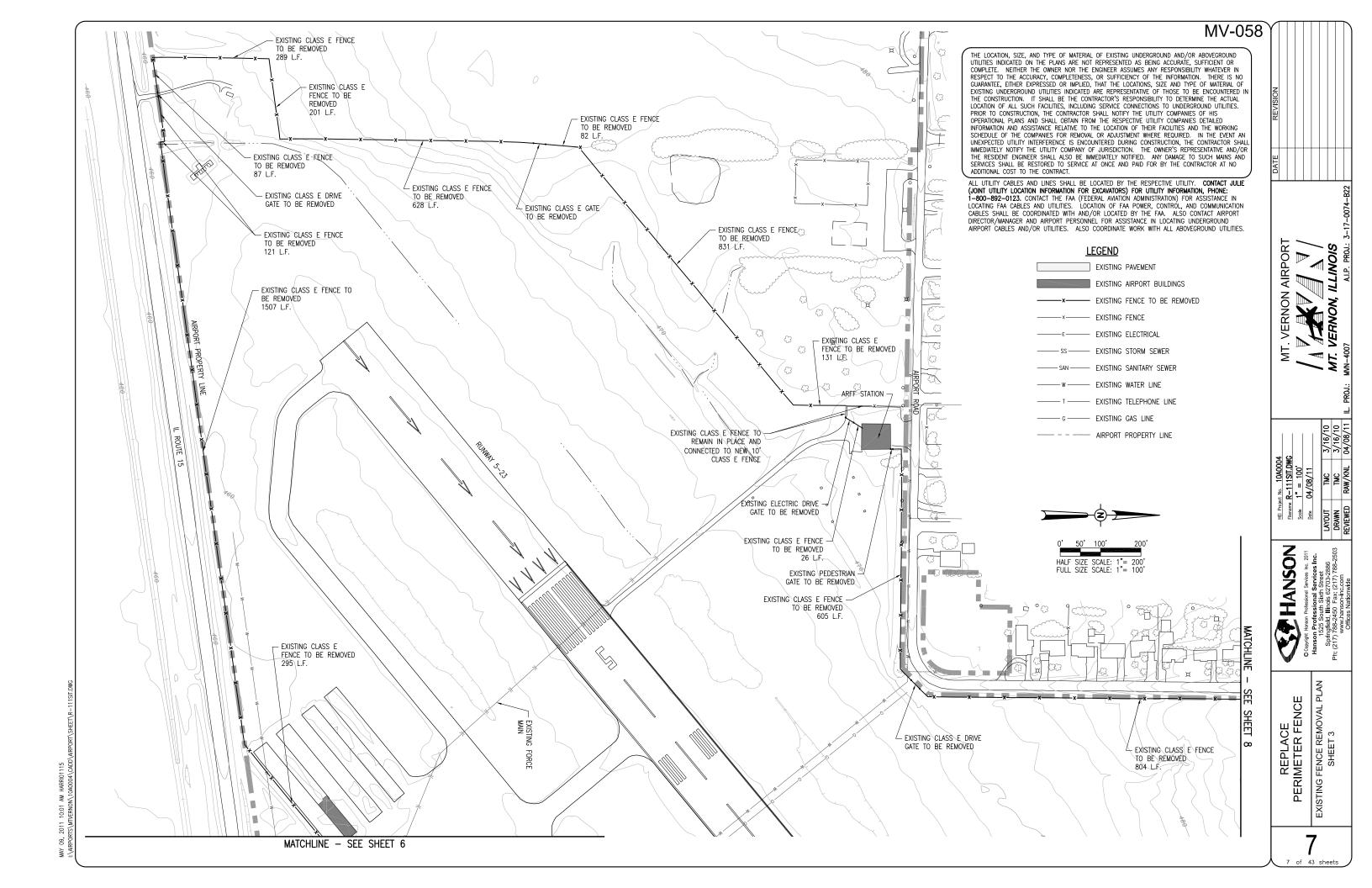
REPLACE PERIMETER FENCE

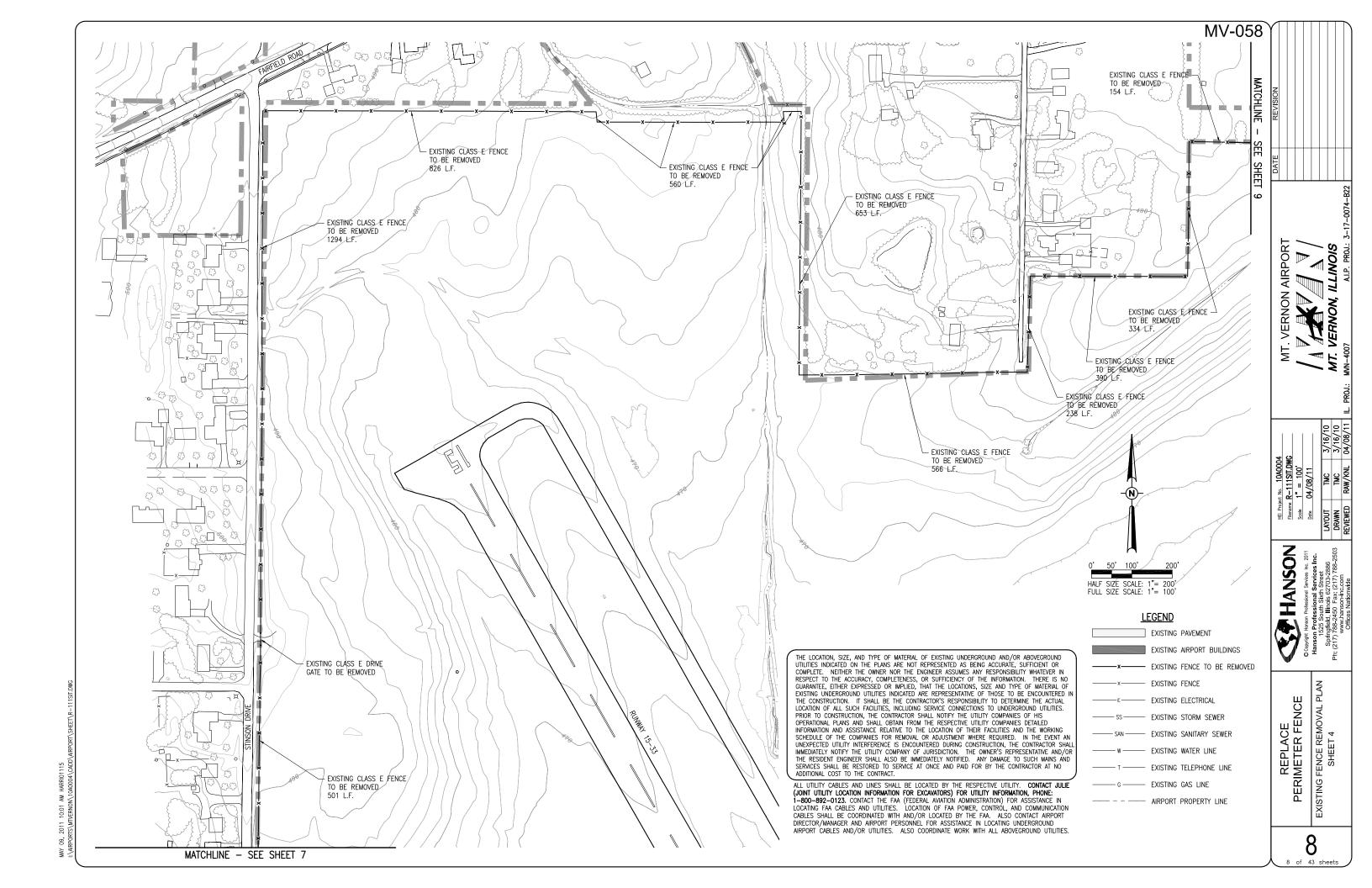
EXISTING FENCE REMOVAL PLAN OVERVIEW AND LEGEND TO SHEETS

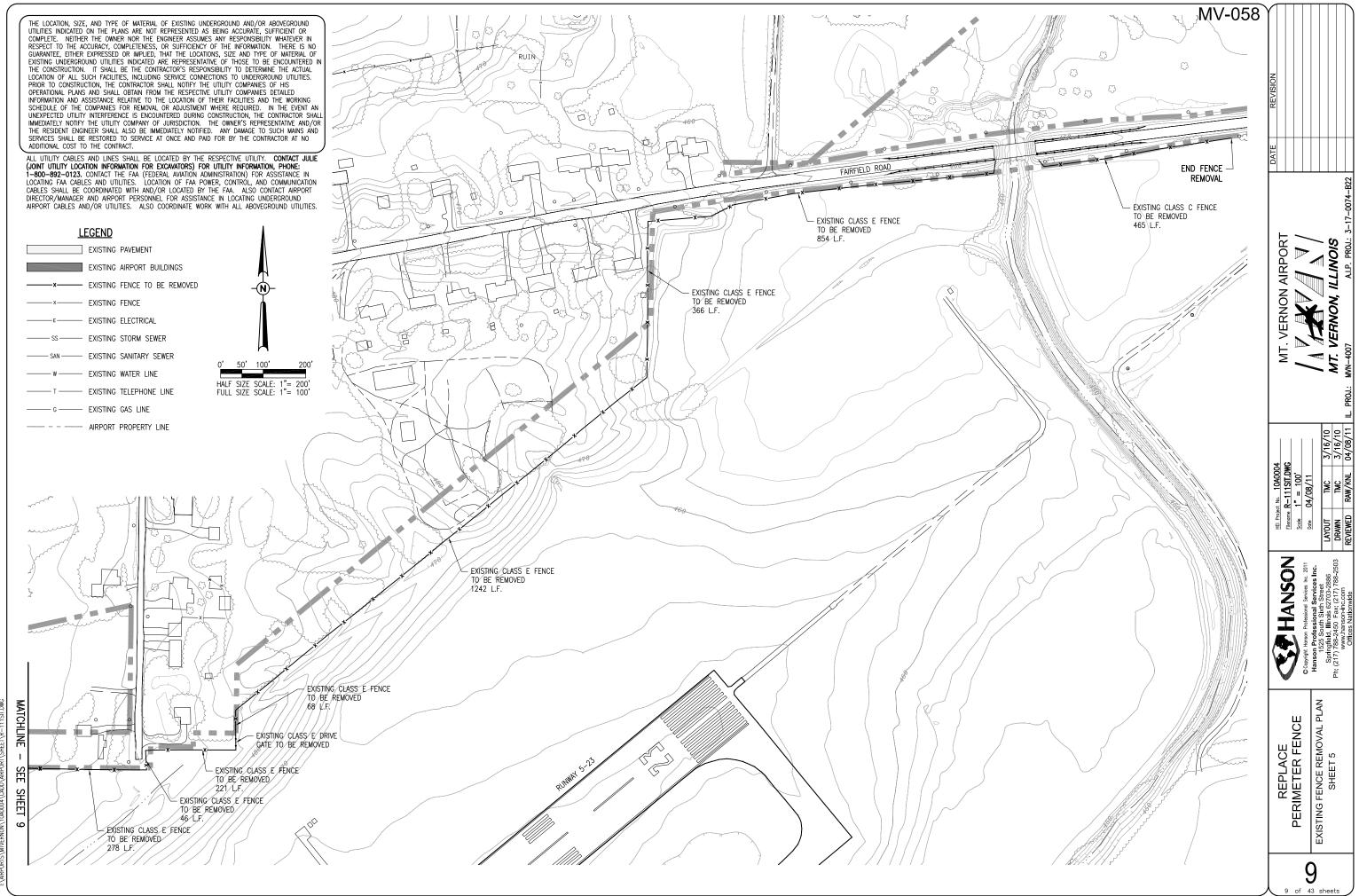


EXISTING FENCE REMOVAL PL SHEET 1









NY 09, 2011 10:01 AM HARRIO1115

WHERE THE PROPOSED FENCE IS SHOWN ALONG THE PROPERTY LINE, THE FENCE WILL BE PLACED 2' (MIN.) INSIDE THE AIRPORT PROPERTY LINE. A SURVEY WILL BE CONDUCTED BY OTHERS PRIOR TO CONSTRUCTION AND THE AIRPORT PROPERTY CORNERS LOCATED AND IDENTIFIED FOR USE DURING CONSTRUCTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT IN NO INSTANCE WILL THE PROPOSED FENCE BE INSTALLED LESS THAN 2' INSIDE THE AIRPORT PROPERTY LINE AT ANY LOCATION

WHERE INSTALLATION OF THE FENCE IS INTERNAL TO THE PERIMETER OF THE AIRPORT PROPERTY, THE FENCE WILL BE CONSTRUCTED IN LOCATIONS OF THE EXISTING FENCE LINE UNLESS OTHERWISE LOCATED BY COORDINATE DATA. THE CONTRACTOR WILL BE RESPONSIBLE FOR LAYOUT OF THE PROPOSED FENCE IN

THE CONTRACTOR WILL BE REQUIRED TO MAINTAIN AIRPORT SECURITY TO THE SATISFACTION OF THE AIRPORT MANAGER DURING THE REMOVAL OF THE EXISTING AND THE INSTALLATION OF THE PROPOSED FENCE. THE CONTRACTOR SHALL PROVIDE AND PLACE BARRICADES. CHAIN OR CABLE ACROSS ALL GATE ENTRANCES UNTIL THE PERMANENT GATES ARE INSTALLED. THE FABRIC. WHETHER EXISTING OR PROPOSED SHALL BE TEMPORARILY TIED TO THE NEW POSTS TO PROVIDE AIRPORT SECURITY DURING CONSTRUCTION. IN LOCATIONS ALONG THE PROPOSED FENCE ALIGNMENT WHERE EXISTING FENCE DOES NOT CURRENTLY EXIST, THE TEMPORARY SECURITY REQUIREMENT DOES NOT APPLY.

GATE INSTALLATION NOTES

THE MANUAL GATE OPENING DIRECTION WILL BE DETERMINED IN THE FIELD AS DIRECTED BY THE RESIDENT ENGINEER AND THE AIRPORT MANAGER.

ALL EXISTING GATE DESIGNATION SIGNS WILL BE REMOVED BY THE CONTRACTOR FROM THE EXISTING GATES PRIOR TO THE GATES REMOVAL, STORED, AND REMOUNTED ON THE NEWLY INSTALLED GATES

CLEARING AND GRUBBING

ALTHOUGH NO CLEARING AND GRUBBING IS ANTICIPATED, ANY REMOVAL OF SHRUBS, SMALL TREES, STUMPS, LOGS, ETC. THAT ARE IN THE PROPOSED FENCE LINE WILL BE REMOVED AND DISPOSED OF OFF THE AIRPORT PROPERTY. THIS REMOVAL AND DISPOSAL WILL BE CONSIDERED AS AN INCIDENTAL ITEM TO THE PROPOSED FENCE INSTALLATION AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

SEEDING AND MULCHING

ALL AREAS ALONG THE PROPOSED FENCE ALIGNMENT DISTURBED BY THE CONSTRUCTION OPERATIONS SHALL BE SEEDED IN ACCORDANCE WITH THE SPECIAL PROVISIONS. PROPOSED SEEDING WILL BE CONSIDERED AS AN INCIDENTAL ITEM TO THE PROPOSED FENCING. SEEDING SHALL BE IN ACCORDANCE WITH ITEM 901 OF

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 FOR THE MAJORITY OF THE PROJECT. THEREFORE, EARTHWORK WILL BE CONSIDERED INCIDENTAL TO THE INSTALLATION OF THE PROPOSED FENCE AND NO ADDITIONAL

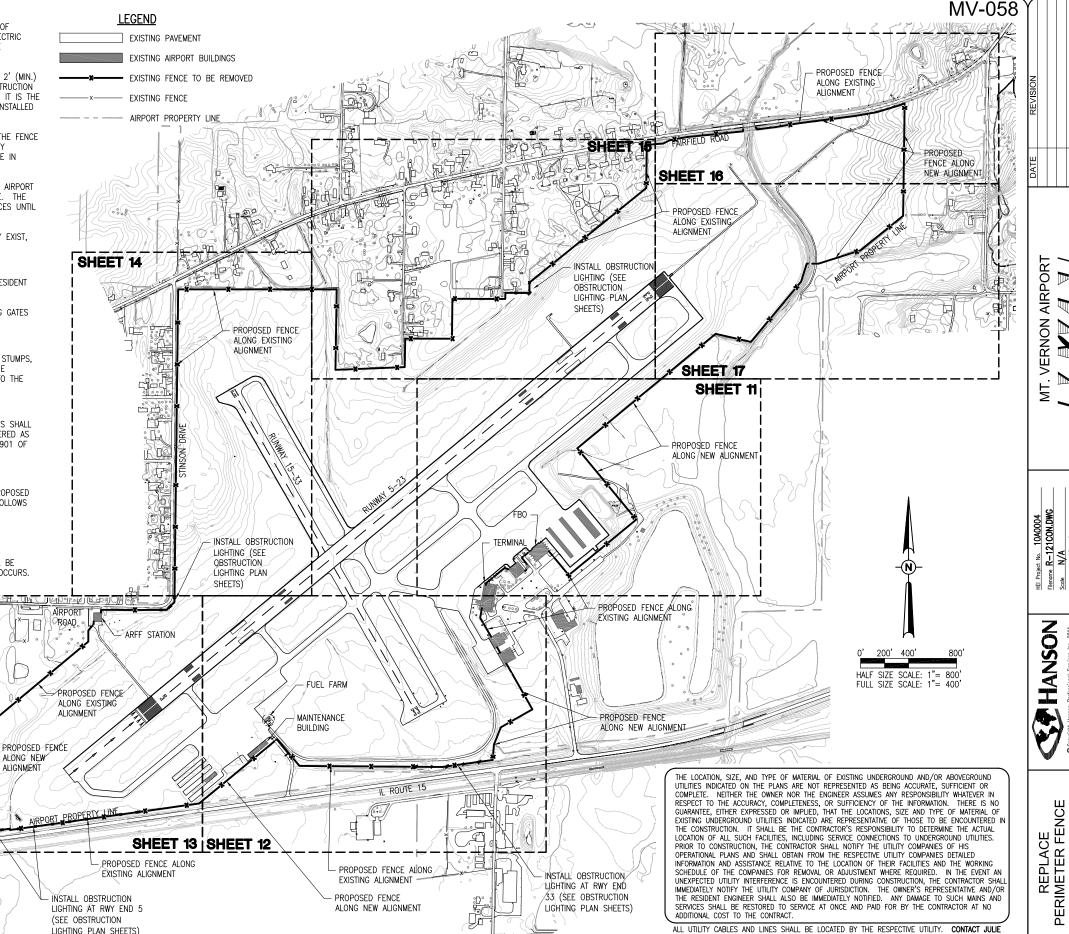
THE GRADING REQUIREMENTS SHALL INCLUDE WHATEVER IS NECESSARY TO INSTALL THE FENCE IN ACCORDANCE TO THE STANDARDS, SPECIFICATIONS, AND SPECIAL PROVISIONS. THE GRADING SHALL BE ACCOMPLISHED SO THAT A ONE TO THREE INCH GAP BETWEEN THE FENCE BOTTOM AND GROUND OCCURS GRADING SHALL BE PERFORMED TO THE SATISFACTION OF THE RESIDENT ENGINEER.

GENERAL NOTES

THE CONTRACTOR IS ENCOURAGED TO VISIT THE PROJECT SITE AND INSPECT THE PROPOSED ALIGNMENT AND GATE LOCATIONS TO ENSURE HIS BID WILL ADEQUATELY COVER THE REQUIREMENTS OF

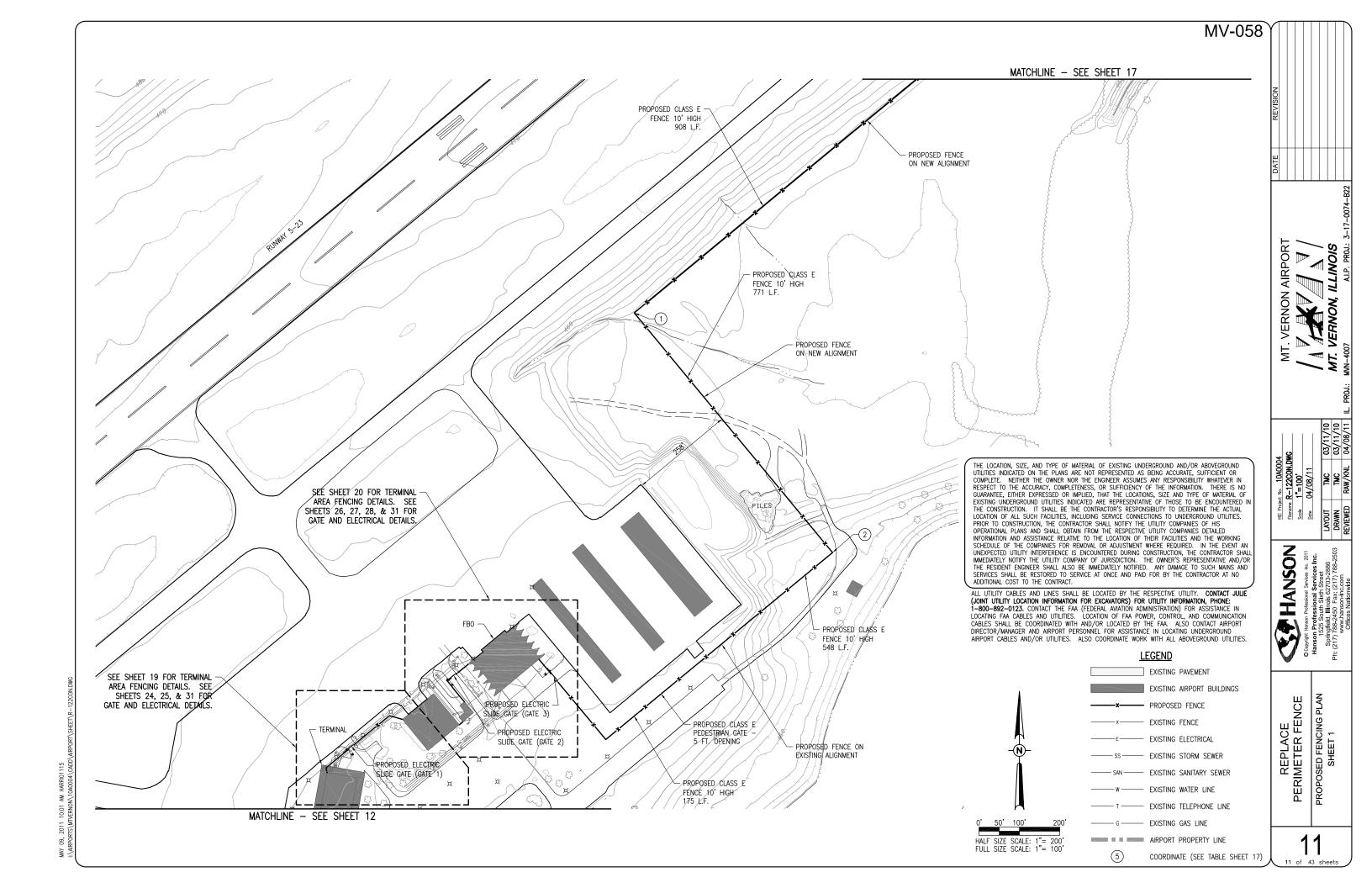
LINEAR QUANTITIES PROVIDED IN THESE PLANS ARE APPROXIMATE FOR THE BASIS OF ESTABLISHING DESIGN INTENT. THE ENGINEER DOES NOT EXPRESS. OR BY IMPLICATION AGREE, THAT THE ACTUAL QUANTITIES INVOLVED WILL CORRESPOND EXACTLY THEREWITH; NOR SHALL THE CONTRACTOR PLEAD MISUNDERSTANDING OR DECEPTION BECAUSE OF SUCH QUANTITIES, OR OF THE CHARACTER, LOCATION, OR OTHER CONDITIONS PERTAINING TO THE WORK. PAYMENT WILL BE MADE FOR ACTUAL QUANTITIES OF WORK PERFORMED AND ACCEPTED BY THE RESIDENT ENGINEER.

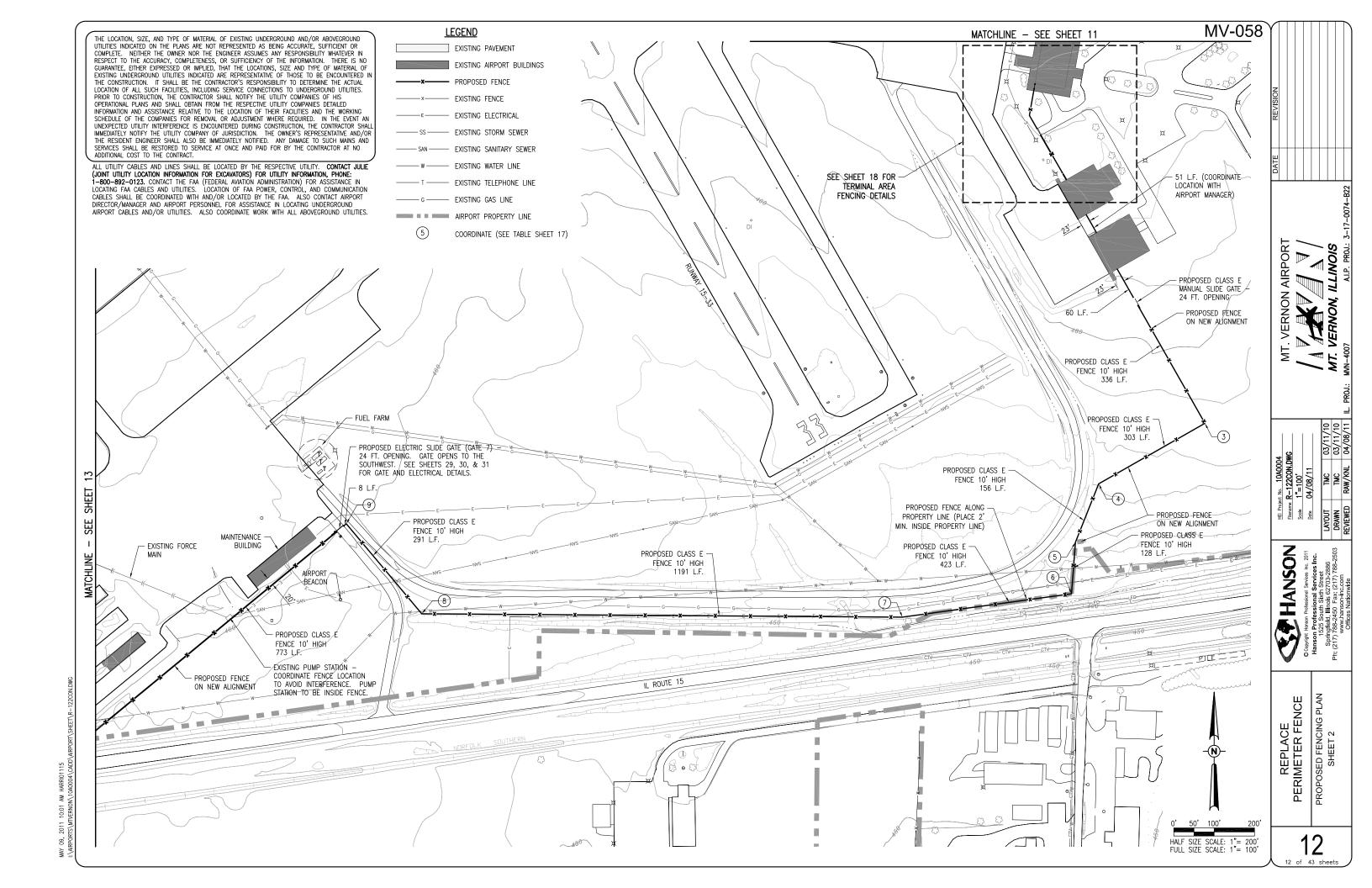
IF MINOR ADJUSTMENTS TO THE ALIGNMENT ARE REQUIRED DUE TO THE TOPOGRAPHY, GATES, MATERIALS, OR TO SIMPLIFY CONSTRUCTION, MODIFICATIONS CAN BE MADE ONLY IF APPROVED BY THE ENGINEER AND THE AIRPORT MANAGER THE CONTRACTOR MUST REQUEST AN ALIGNMENT CHANGE IN WRITING TO THE **ENGINEER**

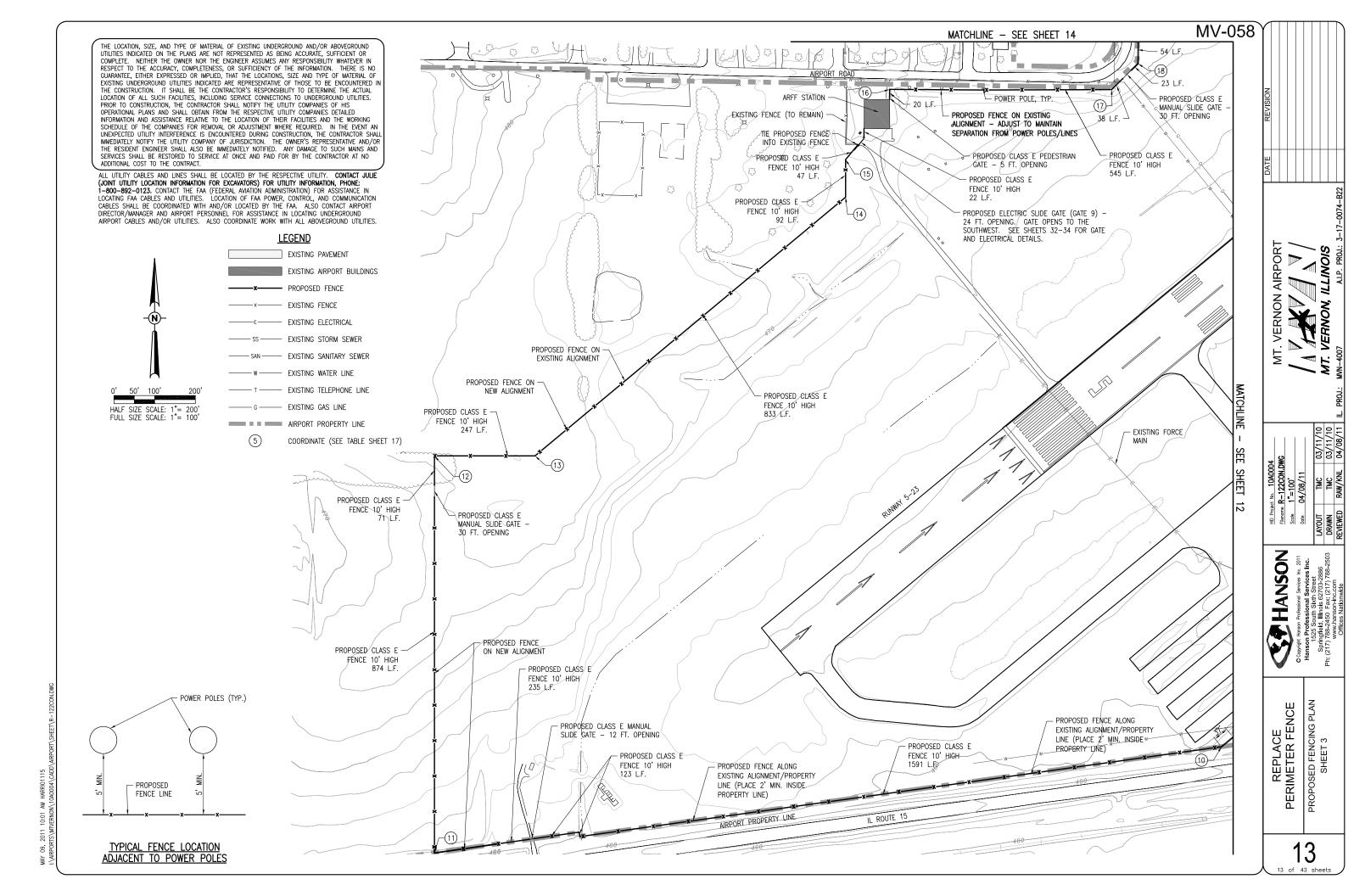


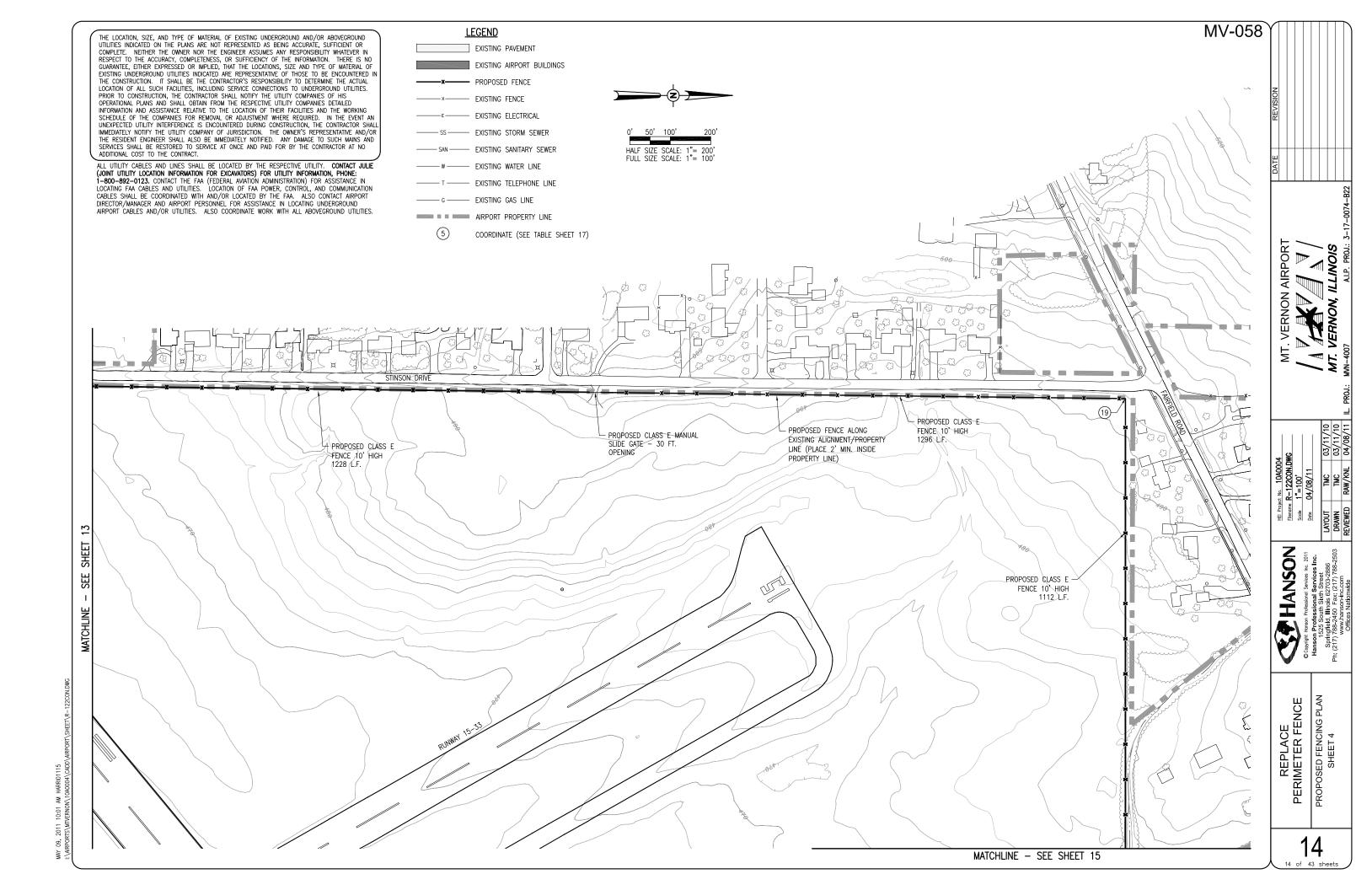
(JOINT LITHITY LOCATION INFORMATION FOR EXCAVATORS) FOR LITHITY INFORMATION PHONE -800-892-0123. CONTACT THE FAA (FEDERAL AVIATION ADMINISTRATION) FOR ASSISTANCE IN LOCATING FAA CABLES AND UTILITIES. LOCATION OF FAA POWER, CONTRÓL, AND COMMUNICATION CABLES SHALL BE COORDINATED WITH AND/OR LOCATED BY THE FAA. ALSO CONTACT AIRPORT DIRECTOR/MANAGER AND AIRPORT PERSONNEL FOR ASSISTANCE IN LOCATING UNDERGROUND AIRPORT CABLES AND/OR UTILITIES. ALSO COORDINATE WORK WITH ALL ABOVEGROUND UTILITIES

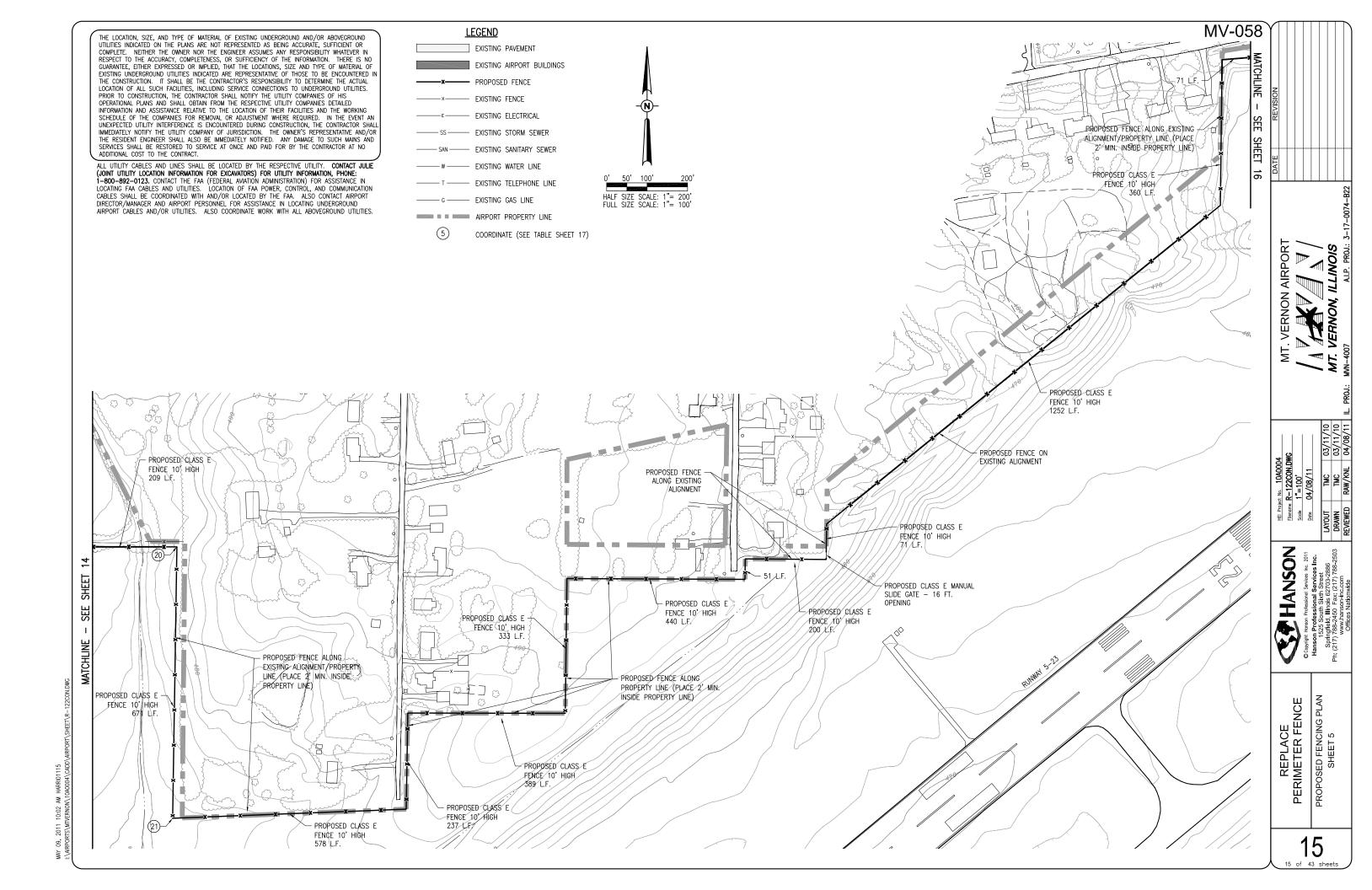
PROPOSED FENCING PLAN OVERVIEW AND LEGEND TO SHEETS

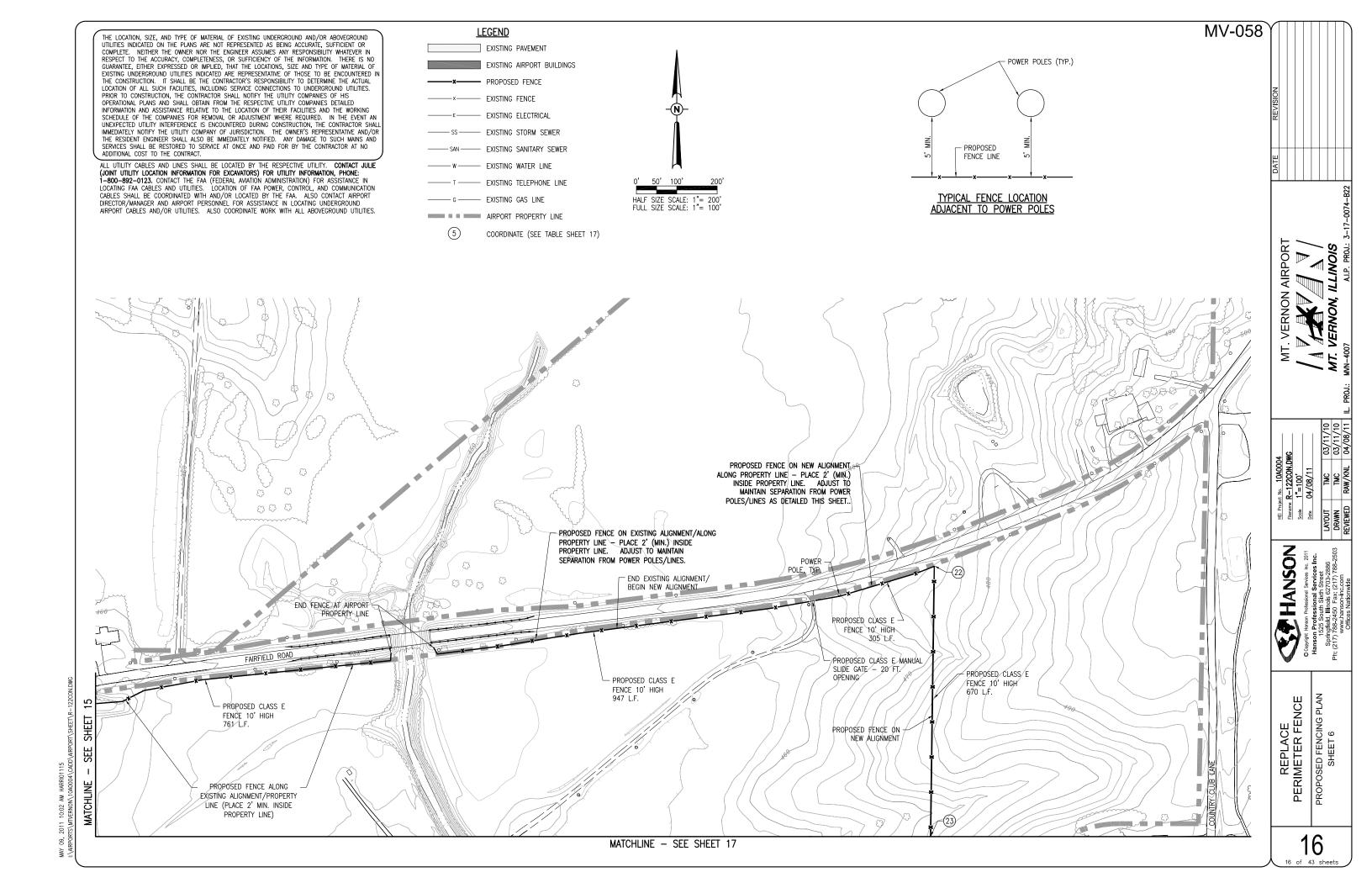


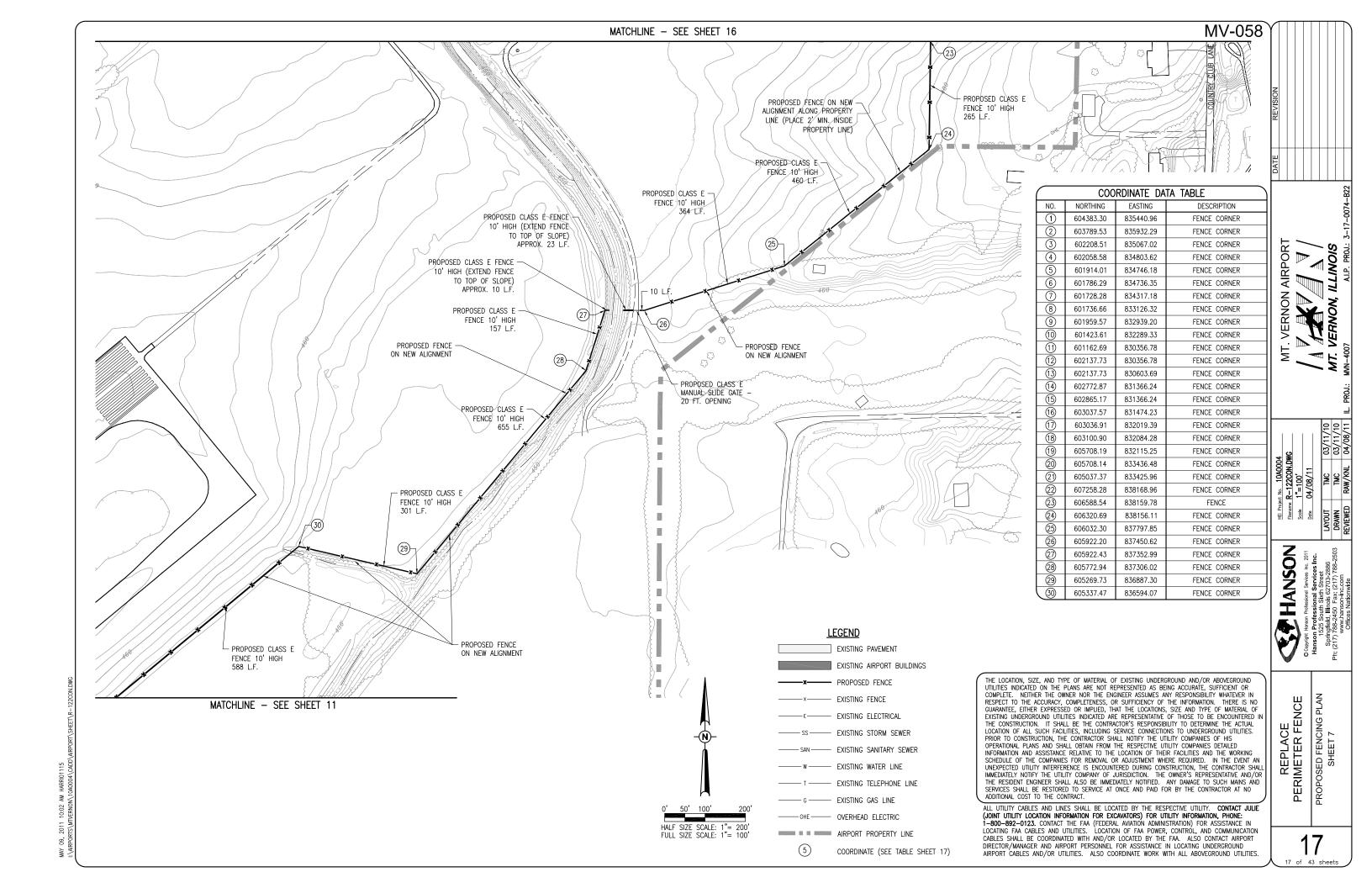










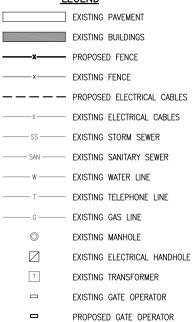


THE LOCATION, SIZE, AND TYPE OF MATERIAL OF EXISTING UNDERGROUND AND/OR ABOVEGROUND UTILITIES INDICATED ON THE PLANS ARE NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. NEITHER THE OWNER NOR THE ENGINEER ASSUMES ANY RESPONSIBILITY WHATSOEVER IN RESPECT TO THE ACCURACY, COMPLETENESS, OR SUFFICIENCY OF THE INFORMATION. THERE IS NO GUARANTEE, EITHER EXPRESSED OR IMPLIED, THAT THE LOCATIONS, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND UTILITIES INDICATED ARE REPRESENTATIVE OF THOSE TO BE ENCOUNTERED IN THE CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES OF HIS OPERATIONAL PLANS AND SHALL OBTAIN FROM THE RESPECTIVE UTILITY COMPANIES OF THIS INFORMATION AND ASSISTANCE RELATIVE TO THE LOCATION OF THEIR FACILITIES AND THE WORKING SCHEDDULE OF THE COMPANIES FOR REMOVAL OR ADJUSTMENT WHERE REQUIRED. IN THE EVENT AN UNEXPECTED UTILITY INTERFERENCE IS ENCOUNTEED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY COMPANY OF JURISDICTION. THE OWNER'S REPRESENTATIVE AND/OR THE RESIDENT ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY DAMAGE TO SUCH MAINS AND SERVICES SHALL BE RESTORED TO SERVICE AT ONCE AND PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT.

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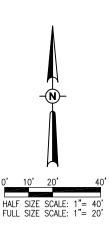
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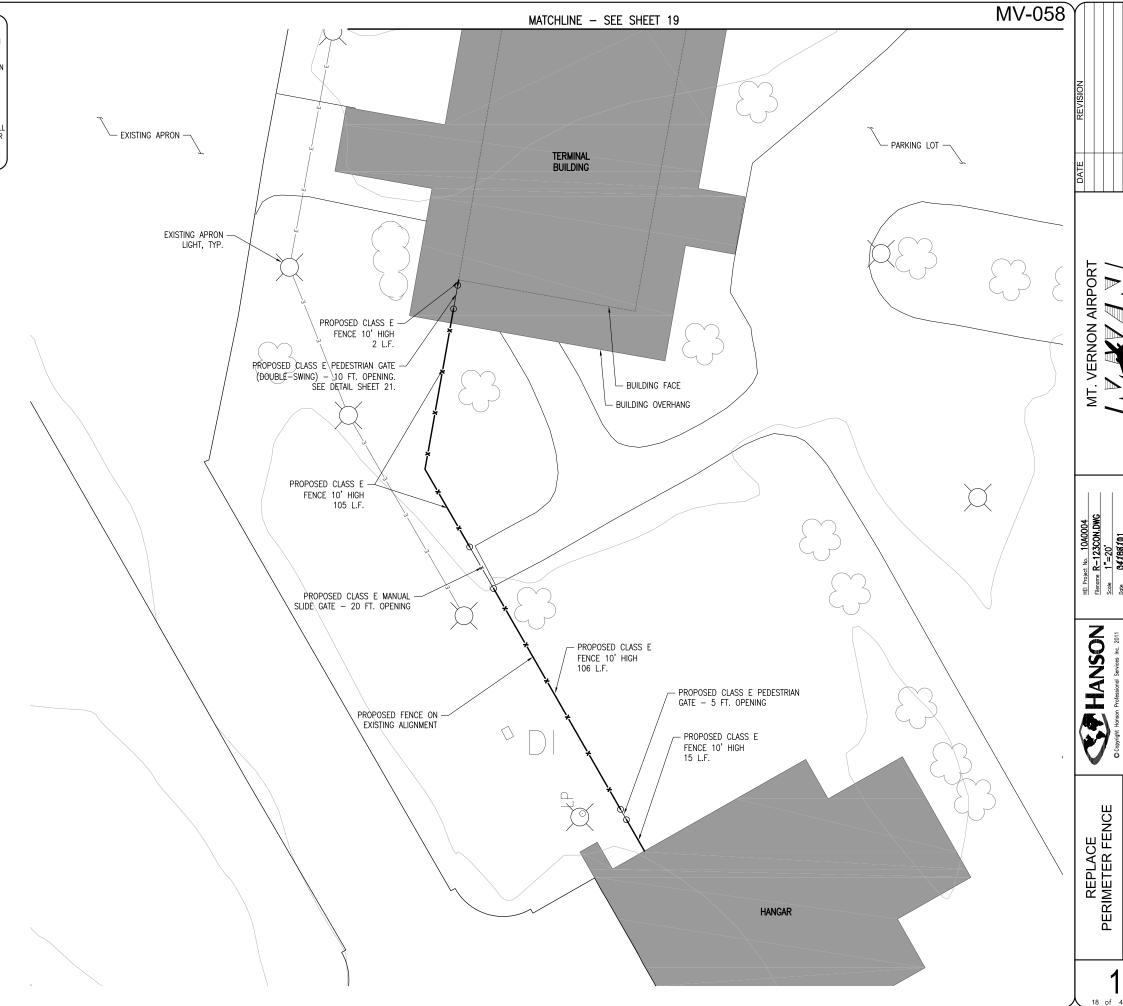
LEGEND



CARD READER WITH BOLLARDS

AIRPORT PROPERTY LINE





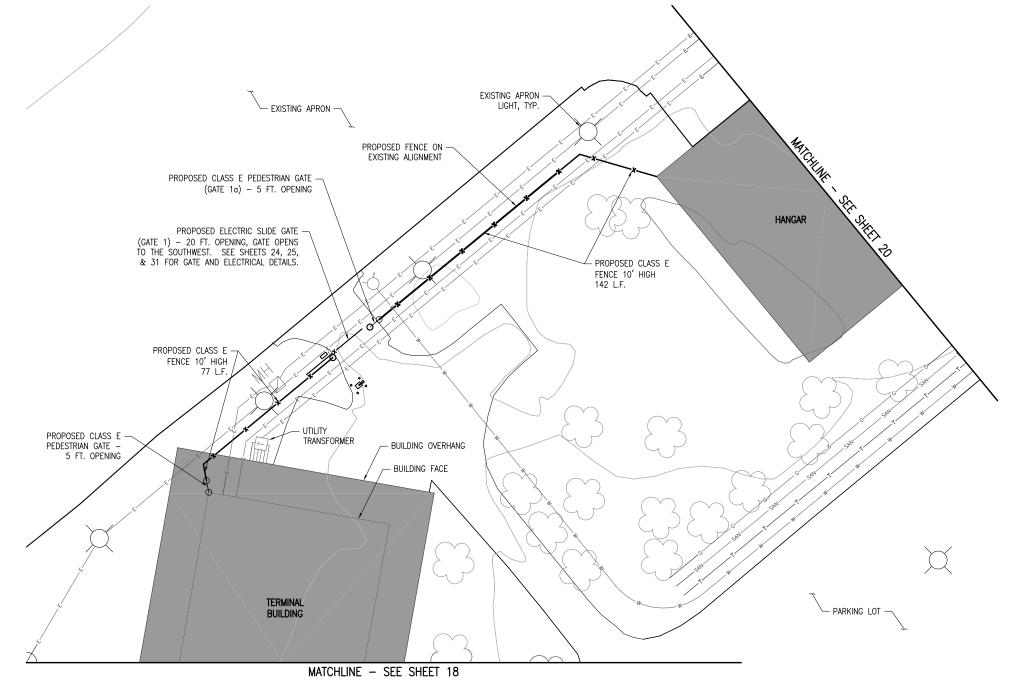
MAY 09, Z011 10:02 AM HARRHOITS :\AIBDORY\AIDGEN\AIDGEN\100004\CARD\AIBDORY\SHEET\P-

18

TERMINAL AREA FENCING PLAN SHEET 1

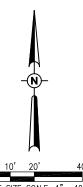
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LEGEND

EXISTING PAVEMENT EXISTING BUILDINGS PROPOSED FENCE — EXISTING FENCE — — PROPOSED ELECTRICAL CABLES EXISTING ELECTRICAL CABLES SS — EXISTING STORM SEWER SAN ---- EXISTING SANITARY SEWER EXISTING WATER LINE EXISTING TELEPHONE LINE EXISTING GAS LINE \bigcirc EXISTING MANHOLE EXISTING ELECTRICAL HANDHOLE Т EXISTING TRANSFORMER



EXISTING GATE OPERATOR

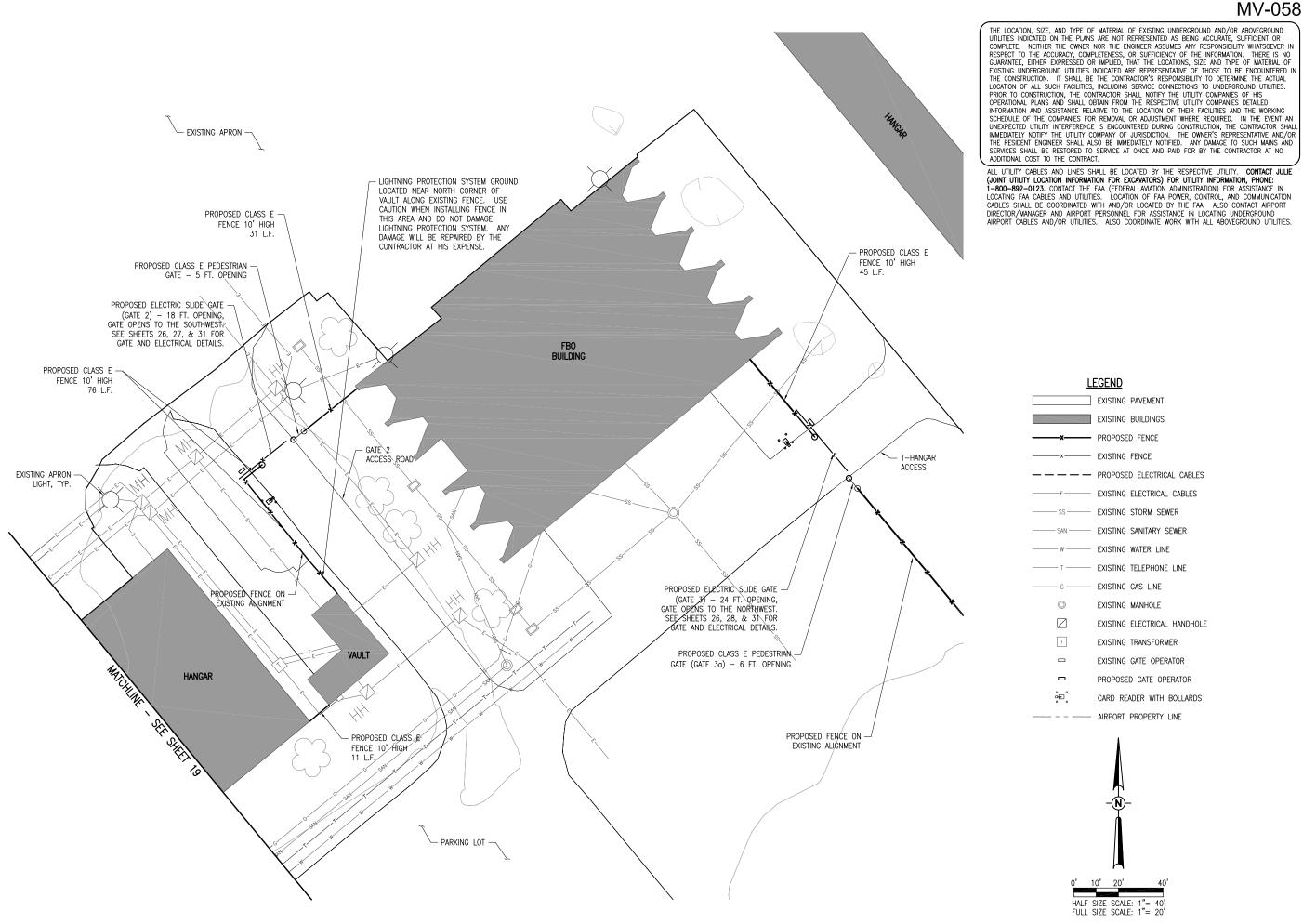
PROPOSED GATE OPERATOR CARD READER WITH BOLLARDS AIRPORT PROPERTY LINE

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

REPLACE PERIMETER FENCE TERMINAL AREA FENCING PLAN SHEET 2

HANSON

MV-058



TERMINAL AREA FENCING PLAN SHEET 3

HANSON

REPLACE PERIMETER FENCE

FABRIC — THE FABRIC MAY BE WOVEN WITH EITHER ZINC COATED STEEL WIRE OR ALUMINUM—ALLOY WIRE IN A 2—INCH MESH. COATED WIRE AND ALUMINUM—ALLOY SHALL HAVE A DIAMETER OF 0.148 INCHES. THE FABRIC SHALL MEET THE FOLLOWING REQUIREMENTS: (1) ZINC—COATED STEEL FABRIC SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 181, TYPE 1, CLASS D. (2) ALUMINUM—COATED STEEL FABRIC SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 181 TYPE II THE UNIT WEIGHT OF THE COATING SHALL BE DETERMINED IN ACCORDANCE WITH AASHTO T 213. THE ALUMINUM—COATED STEEL FABRIC SHALL BE GIVEN A CLEAR ORGANIC COATING AFTER FABRICATION. (3) ALUMINUM—ALLOY FABRIC SHALL BE MADE FROM WIRE CONFORMING TO THE REQUIREMENTS OF AASHTO M 181 TYPE III.

METAL POSTS - METAL POSTS (LINE, CORNER, END, PULL AND GATE POSTS) SHALL BE THE SHAPES, DIMENSIONS, AND WEIGHT SHOWN IN THE TABLES. (1) STEEL PIPE, TYPE A, SHALL BE HOT-DIPPED GALVANIZED CONFORMING TO THE REQUIREMENTS OF ASTM F 1083. (2) STEEL PIPE, TYPE B, SHALL BE MANUFACTURED FROM COLD ROLLED ELECTRIC RESISTANCE WELDED, HEATED AND TEMPERED STEEL, THE STEEL STRIP USED IN THE MANUFACTURE OF THE PIPE SHALL CONFORM TO ASTM A 569 OR ASTM A 607. THE WALL THICKNESS SHALL NOT BE LESS THAN THAT SHOWN IN THE TABLE. THE PRODUCT OF THE YIELD STRENGTH AND SECTION MODULUS OF THE PIPE SHALL NOT BE LESS THAN THAT OF THE PIPE MEETING THE REQUIREMENTS OF ASTM F 1083. (3) STEEL PIPE, TYPE C, SHALL BE MANUFACTURED BY ROLLED FORMING ALUMINIZED STEEL TYPE 2 STRIP AND ELECTRIC RESISTANCE WELDING INTO TUBULAR FORM. THE OUTSIDE OF THE WELD AREA SHALL BE METALLIZED WITH COMMFRCIALLY PURE ALUMINUM TO A THICKNESS SUFFICIENT TO PROVIDE RESISTANCE TO CORROSION THE EQUAL TO THAT OF THE REMAINDER OF THE OUTSIDE OF THE TUBE. THE ALUMINUM COATING WEIGHT SHALL BE A MINIMUM OF 0.75 OUNCES PER SQUARE FOOT, TRIPLE SPOT TEST, 0.70 OUNCES PER SQUARE FOOT SINGLE SPOT TEST, AS MEASURED IN ACCORDANCE WITH ASTM A 428. THE STEEL STRIP USED IN THE MANUFACTURE OF THE PIPE SHALL CONFORM TO ASTM A 787 TYPE 1 AND SHALL HAVE A MINIMUM YIELD STRENGTH OF 50,000 P.S.I. THE WEIGHT OF THE PIPE SHALL NOT BE LESS THAN THAT SHOWN ON THE PLANS AND THE PRODUCT OF THE YIELD STRENGTH AND SECTION MODULUS OF THE PIPE SHALL NOT BE LESS THAN THAT OF PIPE MEETING THE REQUIREMENTS OF ASTM A 120. (4) STRUCTURAL SHAPES SHALL BE FABRICATED FROM STEEL CONFORMING TO THE REQUIREMENTS OF AASHTO M 281, GRADES A OR B. ROLLED FORMED SECTIONS SHALL BE FABRICATED FROM STEEL CONFORMING TO THE REQUIREMENTS OF ASTM A 570, GRADES 36 THRU 50, WITH A MAXIMUM TENSILE STRENGTH OF 80,000 POUNDS PER SQUARE INCH. ALL STRUCTURAL SHAPES AND ROLLED FORMED SECTIONS SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M 111, USING ZINC OF ANY GRADE CONFORMING TO THE REQUIREMENTS OF AASHTO M 120. THE ZINC COATING SHALL BE NOT LESS THAN 2.0 OUNCES PER SQUARE FOOT OF SURFACE. (5) SQUARE HOLLOW STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A 500, GRADE B OR ASTM A 501. THE TUBING SHALL BE GALVANIZED INSIDE AND OUTSIDE IN ACCORDANCE WITH AASHTO M 111, USING ZINC OF ANY GRADE CONFORMING TO THE REQUIREMENT OF AASHTO M 120. THE ZINC COATING SHALL NOT BE LESS THAN 2.0 OUNCES PER SQUARE FOOT OF SURFACE.

TOP RAILS — THE TOP RAILS SHALL BE 1.625 INCH O.D., GALVANIZED OR ALUMINUM COATED PIPE HAVING A MINIMUM BENDING STRENGTH OF 202 LBS. AT THE CENTER OF A 10 FT. SPAN.

BOTTOM TENSION WIRE — THE BOTTOM TENSION WIRE SHALL BE #9 GAUGE GALVANIZED STEEL WIRE MEETING THE REQUIREMENTS OF AASHTO M 181, THE WIRE SHALL BE STRETCHED TIGHT WITH GALVANIZED TURNBUCKLES SPACED AT INTERVALS NOT MORE THAN 1,000 FEET. THE ZINC COATING SHALL BE NOT LESS THAN 12 OUNCES PER SQUARE FOOT OF SURFACE.

HORIZONTAL BRACES - THE BRACES SHALL BE "STANDARD WEIGHT" GALVANIZED STEEL PIPE MEETING THE SPECIFICATIONS FOR LINE POSTS AND SHALL BE THE SAME DIMENSIONS AND WEIGHT AS REQUIRED FOR THE TOP RAIL.

TRUSS RODS - THE TRUSS RODS SHALL BE 3/8" ROUND GALVANIZED STEEL ROD WITH GALVANIZED TURNBUCKLES. THE ZINC COATING SHALL BE NOT LESS THAN 1.2 OUNCES PER SQUARE FOOT OF SURFACE.

 $\mbox{\scriptsize GATE}$ – THE GATE TYPE AND SIZE SHALL CONFORM TO THE DETAILS SHOWN ON THE PLANS AND AS PROVIDED IN THE SPECIAL PROVISIONS.

POST TOPS - THE POST TOPS SHALL BE STEEL OR MALLEABLE IRON OR WROUGHT IRON OR APPROVED TYPE AND SHALL BE GALVANIZED. THE ZINC COATING SHALL BE NOT LESS THAN 1.2 OLINCES PER SOLIARE FOOT OF SUBFACE

STRETCHER BARS – THE STRETCHER BARS SHALL BE FLAT GALVANIZED STEEL BARS NOT LESS THAN 1/4" X 3/4" AND THE STRETCHER BAR BANDS SHALL BE FLAT GALVANIZED STEEL BARS NOT LESS THAN 1/8" X 1' WITH A 3/8" DIAMETER GALVANIZED CARRIAGE BOLT. THE ZINC COATING SHALL BE NOT LESS THAN 1.2 OUNCES PER SQUARE FOOT OF SURFACE.

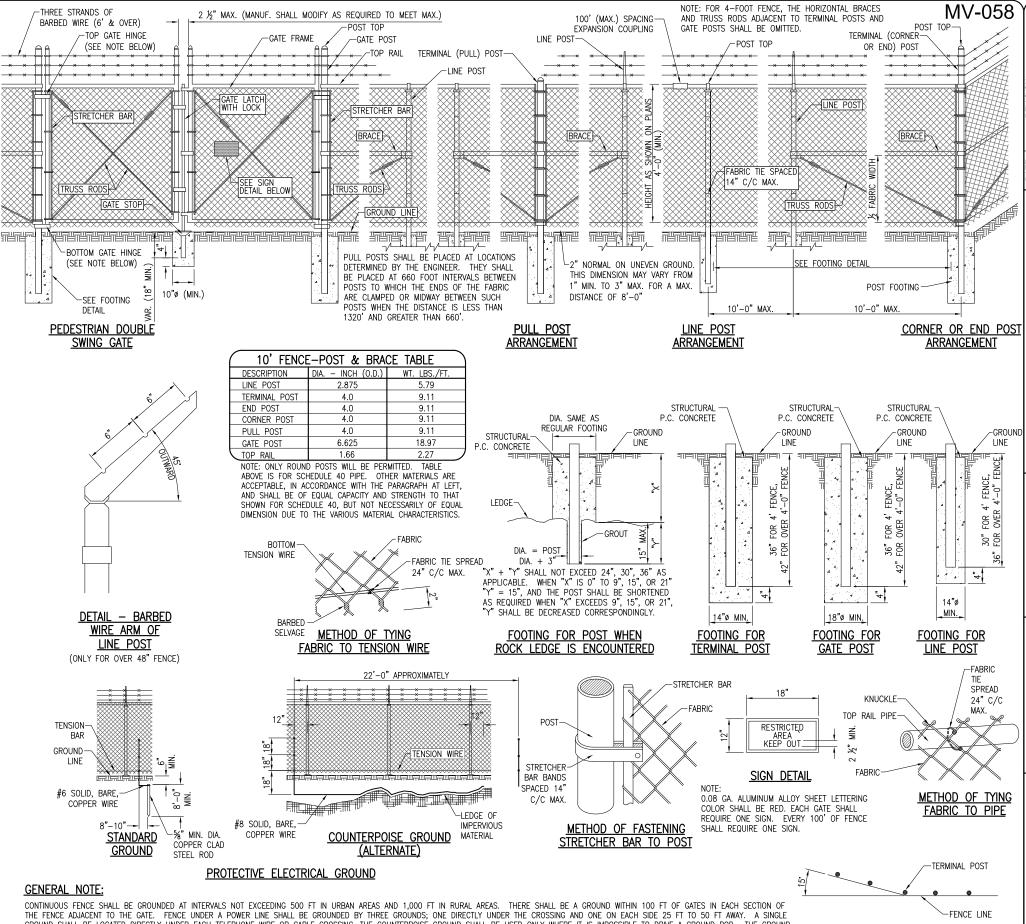
FABRIC TIES — THE FABRIC TIES SHALL BE HOG RINGS, OR ALUMINUM WIRE, OR GALVANIZED STEEL WIRE NOT LESS THAN #9 GAUGE. THE ZINC COATING SHALL BE NOT LESS THAN 1.2 OUNCES PER SQUARE FOOT OF SURFACE.

FITTINGS - THE PERTINENT FITTINGS FOR FENCE AND GATES SHALL BE STEEL OR MALLEABLE IRON OR WROUGHT IRON OR APPROVED TYPE AND SHALL BE GALVANIZED. THE ZINC COATING SHALL BE NOT LESS THAN 1.2 OUNCES PER SQUARE FOOT OF SURFACE IN ACCORDANCE WITH AASHTO M 232.

STRUCTURAL P.C. CONCRETE — THE STRUCTURAL P.C. CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF ITEM 610 OF THE STANDARD SPECIFICATIONS.

BOLTS AND NUTS - THE BOLTS AND NUTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A 307 AND SHALL BE ZINC COATED IN ACCORDANCE WITH AASHTO M 232 OR M 298, CLASS 50.

BARBED WIRE — BARBED WIRE MAY BE EITHER GALVANIZED STEEL BARBED WIRE OR ALUMINUM—COATED STEEL BARBED WIRE CONSISTING OF 2 STRANDS OF 12 1/2 GAUGE WIRE WITH 4—POINT BARBS OF 14 GAUGE WIRE SPACED 5 INCHES APART CONFORMING TO THE FOLLOWING REQUIREMENTS: (1) GALVANIZED BARBED WIRE SHALL CONFORM TO THE SPECIFICATIONS OF ZINC—COATED (GALVANIZED) STEEL BARBED WIRE, AASHTO M 280, CLASS 3 WITH A MINIMUM COATING OF 0.80 OUNCES PER SQUARE FOOT OF WIRE SURFACE (2) ALUMINUM—COATED STEEL BARBED WIRE SHALL CONFORM TO THE SPECIFICATIONS FOR GALVANIZED STEEL BARBED WIRE, EXCEPT THE WIRE SHALL BE ALUMINUM COATED. THE WIRE SHALL HAVE NOT LESS THAN 0.25 OUNCES OF COATING OF ALUMINUM ALLOY PER SQUARE FOOT OF UNCOATED SURFACE. THE WEIGHT OF THE ALUMINUM ALLOY COATING SHALL BE DETERMINED IN ACCORDANCE WITH AASHTO T 213.



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 EXOTHERMIC WELD TYPE CONNECTORS, CADWELD BY ERICO PRODUCTS, INC., DIRECT BURIAL IN EARTH OR SOLON, OHIO, (PHONE 1-800-248-9353), THERMOWELD BY CONTINENTAL INDUSTRIES, INC., TULSA, OKLAHOMA (PHONE 918-663-1440) OR ULTRAWELD BY HARGER, GRAYSLAKE, ILLINOIS (PHONE 1-800-842-7437). 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 RODS SHALL BE #6 AWG BARE SOLID COPPER CONDUCTOR.

21 21 of 43 she

REPLACE PERIMETER FENCE

WHERE THE FENCE LINE HAS A CHANGE IN

DIRECTION OF 15' OR MORE, A TERMINAL POST

SHALL BE PLACED AS SHOWN ABOVE. WHERE

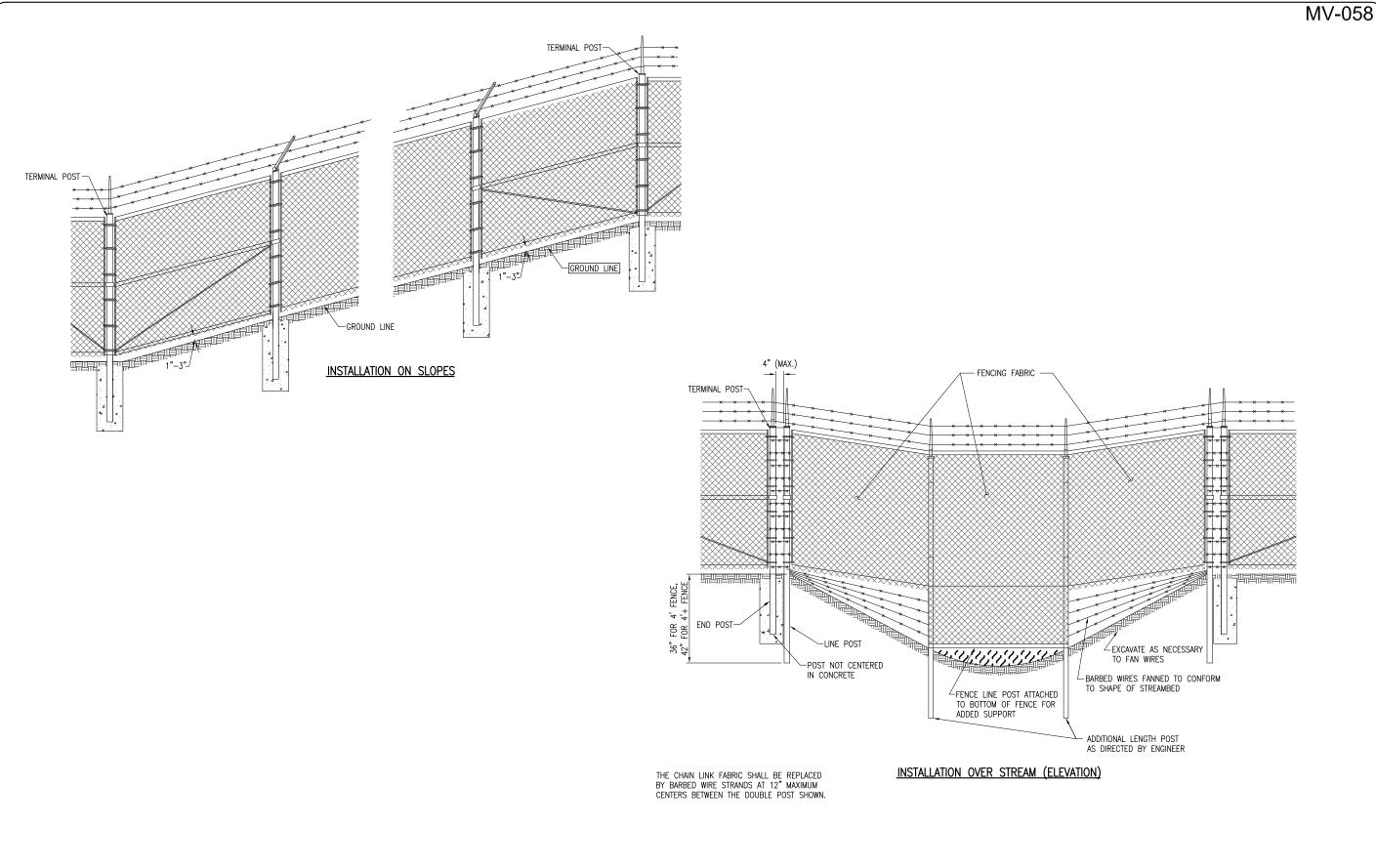
ANGLE IS LESS THAN 15' AND EXISTING CONDITIONS REQUIRE TERMINAL POST, THEY SHAL

BE PLACED AS DIRECTED BY ENGINEER.

VERNON

HANSON

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22 of 43 sheet

HANSON

REPLACE PERIMETER FENCE

ELEC	CTRICAL 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
<del>-1/-</del>	NORMALLY CLOSED (N.C.) CONTACT
<i>\</i> °	TOGGLE SWITCH / 2 POSITION SWITCH
	FUSE
<b>↓</b>	TRANSIENT VOLTAGE SURGE SUPPRESSOR OR SURGE PROTECTOR DEVICE
#	GROUND — GROUND ROD, GROUNDING ELECTRODE, OR AT EARTH POTENTIAL
a	INDICATING LIGHT
W	MOTOR
#	LOAD, MOTOR, # = HORSEPOWER
	ELECTRIC UTILITY METER BASE
·	JUNCTION BOX WITH SPLICE OR TERMINALS
xxx	EQUIPMENT, XXX = DEVICE DESCRIPTION
GND	GROUND BAR, GROUND BUS OR GROUND TERMINAL
S/N	SOLID NEUTRAL, NEUTRAL BUS, OR NEUTRAL TERMINAL
#	PANELBOARD WITH MAIN LUGS
[     	PANELBOARD WITH MAIN BREAKER
**************************************	FUSE PANEL WITH MAIN FUSE PULLOUT
<b>+</b>	DUPLEX RECEPTACLE 120V SINGLE PHASE GROUNDING TYPE
S S	CONTROL STATION
N EM	TRANSFER SWTICH: N = NORMAL EM = EMERGENCY L = LOAD
G	ENGINE GENERATOR SET

	ELECTRICAL LEGEND — PLANS
	CONDUIT (EXPOSED)
	CONDUIT OR UNIT DUCT (CONCEALED OR BURIED)
	DUCT
	DUCT
—Е—	BURIED/UNDERGROUND ELECTRIC
—оне—	OVERHEAD ELECTRIC
\$	TOGGLE SWITCH
₽	PUSH BUTTON STATION
ю٥۰	WALL OR CEILING MT'D. JUNCTION BOX. CONFIGURATION VARIES WITH USE
40	SINGLE THROW DISCONNECT SWITCH
42	SINGLE THROW, FUSIBLE DISCONNECT SWITCH
408	ENCLOSED CIRCUIT BREAKER
<b>®</b>	MOTOR
T	TRANSFORMER
Ф	ELECTRIC UTILITY METER
	ENCLOSURE
	CIRCUIT BREAKER PANEL-SEE SCHEDULES
CP.	CONTROL PANEL
0	GROUND ROD
⊗⊸⊳	POLE WITH CAMERA
<u> </u>	

A.F.F.	ABOVE FINSHED FLOOR
A, AMP	AMPERES
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
BKR	BREAKER
С	CONDUIT
СВ	CIRCUIT BREAKER
СКТ	CIRCUIT
CR	CONTROL RELAY
CU	COPPER
DPDT	DOUBLE POLE DOUBLE THROW
DPST	DOUBLE POLE SINGLE THROW
ЕМ	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
НОА	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
мсв	MAIN CIRCUIT BREAKER
мсм	THOUSAND CIRCLUAR MIL
MDP	MAIN DISTRIBUTION PANEL
MFR	MANUFACTURER
мн	METAL HALIDE
MIN	MINIMUM
MLO	MAIN LUGS ONLY
NEC	NATIONAL ELECTRICAL CODE (NFPA 70)
NC	NORMALLY CLOSED
NO NO	NORMALLY OPEN
NTS	NOT TO SCALE
OHE	OVERHEAD ELECTRIC
OL	OVERLOAD

**ELECTRICAL ABBREVIATIONS** 

ABOVE FINSHED FLOOR

	ECTRICAL 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
٧	VOLTS
W/	WITH
<b>W</b> /0	WITHOUT
WP	WEATHER PROOF
XFER	TRANSFER
XFMR	TRANSFORMER

ELECTRICAL ADDDE MATICALE (CONTINUED)

AIRP	ORT 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
PLASI	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:

- 1. 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. ISTING, 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 DIRECTOR/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).
- S. 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

 208Y/120 VAC, 3
 PHASE, 4
 WIRE

 PHASE A
 BLACK

 PHASE B
 RED

 PHASE C
 BLUE

 NEUTRAL
 WHITE

 GROUND
 GREEN

- 4. 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. CONFIRM LTFMC BEARS THE UL LABEL PRIOR TO INSTALLATION.
- 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.
- 8. 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 I, 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 I, DIVISION 2 LOCATION THAT SHALL EXTEND UPWARD FROM THE FLOOR TO A LEVEL 5FT. 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.



Scale NO SCALE

Date 04/08/11

NYOUT PJG 3/11/10

RAWN PJG 3/11/10

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Springfield, Illinois 62703-2886
(217) 788-2503

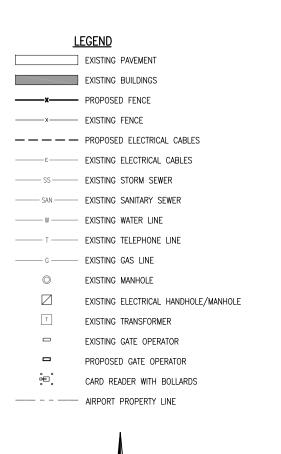
REPLACE PERIMETER FENCE

THE LOCATION, SIZE, AND TYPE OF MATERIAL OF EXISTING UNDERGROUND AND/OR ABOVEGROUND UTILITIES INDICATED ON THE PLANS ARE NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. NEITHER THE OWNER NOR THE ENGINEER ASSUMES ANY RESPONSIBILITY WHATSOEVER IN COMPLETE. NEITHER THE OWNER NOT HE ENGINEER ASSOCIATION RESPONSIBILITY THATSOCIETY TO THE ACCURACY, COMPLETENESS, OR SUFFICIENCY OF THE INFORMATION. THERE IS NO GUARANTEE, EITHER EXPRESSED OR IMPLIED, THAT THE LOCATIONS, SIZE AND TYPE OF MATERIAL EXISTING UNDERGROUND UTILITIES INDICATED ARE REPRESENTATIVE OF THOSE TO BE ENCOUNTEED IN THE CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE UTILITY 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 OWNER'S REPRESENTATIVE AND/OR THE RESIDENT ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY DAMAGE TO SUCH MAINS AND SERVICES SHALL BE RESTORED TO SERVICE AT ONCE AND PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT.

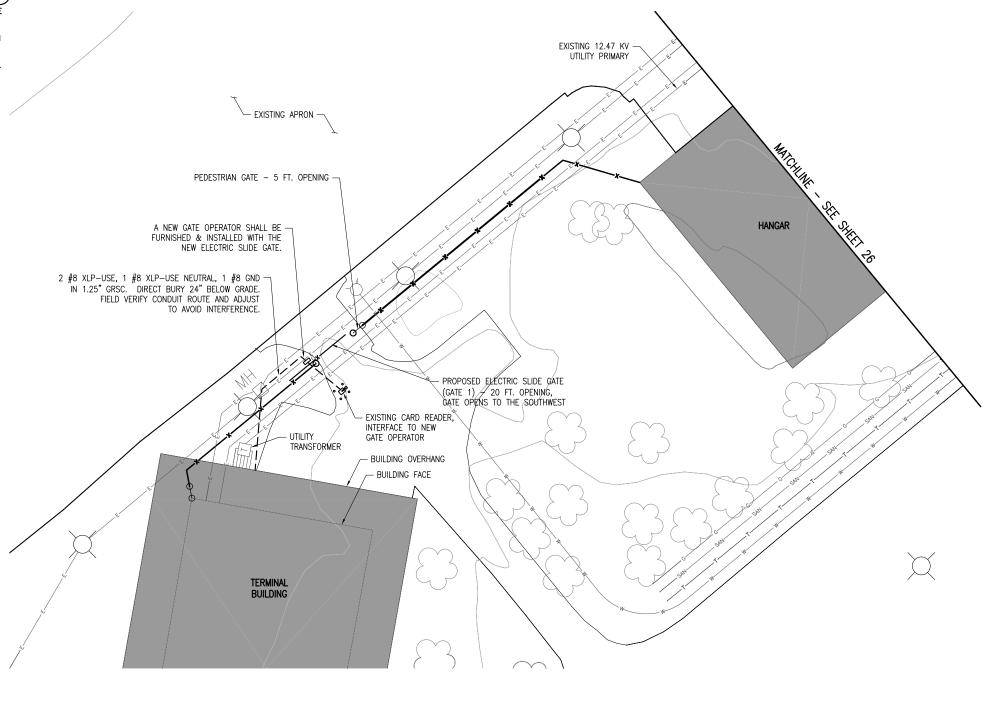
ALL UTILITY CABLES AND LINES SHALL BE LOCATED BY THE RESPECTIVE UTILITY. CONTACT JULIE (JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS) FOR UTILITY INFORMATION, PHONE: 1-800-892-0123. CONTACT THE FAA (FEDERAL AVIATION ADMINISTRATION) FOR ASSISTANCE IN LOCATING FAA CABLES AND UTILITIES. LOCATION OF FAA POWER, CONTROL, AND COMMUNICATION CABLES SHALL BE COORDINATED WITH AND/OR LOCATED BY THE FAA. ALSO CONTACT AIRPORT DIRECTOR/MANAGER AND AIRPORT PERSONNEL FOR ASSISTANCE IN LOCATING UNDERGROUND AIRPORT CABLES AND/OR UTILITIES. ALSO COORDINATE WORK WITH ALL ABOVEGROUND UTILITIES.

### NOTES:

- THE CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS.
- EXISTING DETECTOR LOOPS SHALL BE REMOVED & REPLACED WITH
- SEE "PROPOSED ELECTRIC SLIDE GATE DETAILS" SHEETS FOR EACH RESPECTIVE GATE FOR ADDITIONAL REQUIREMENTS ON ELECTRIC

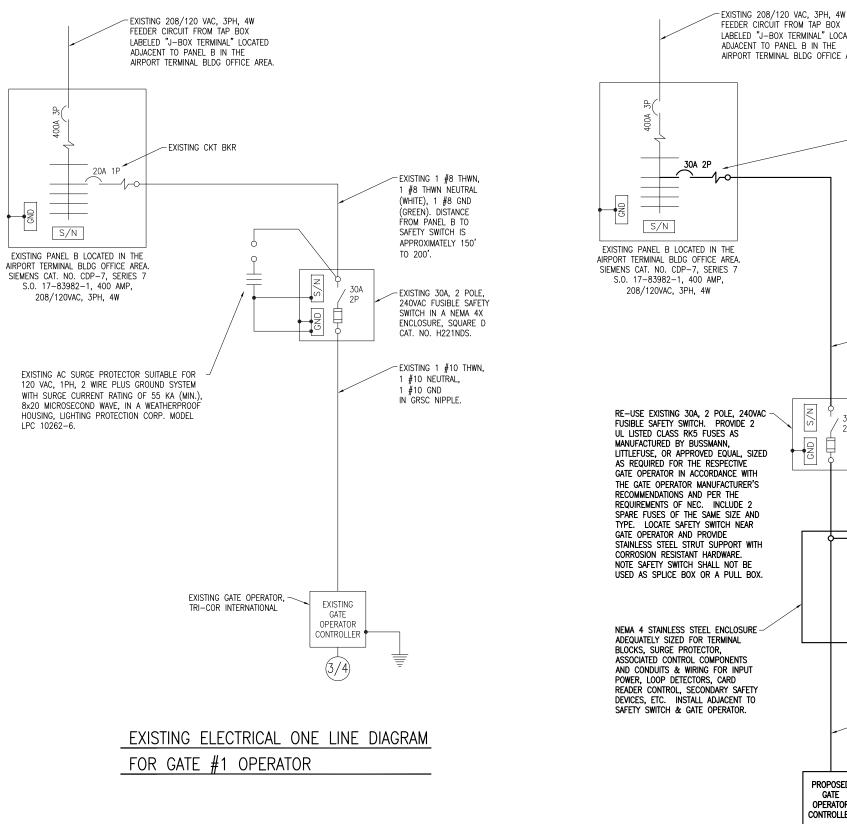


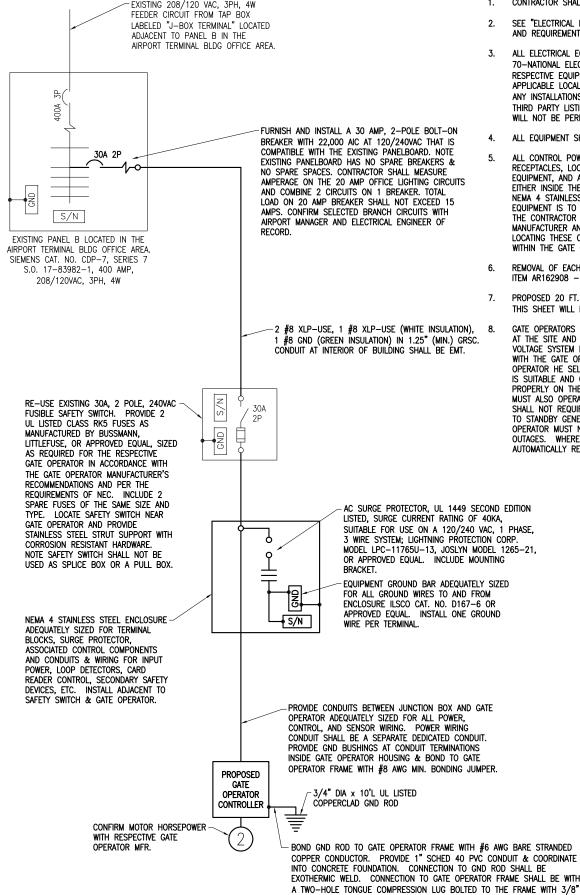
HALF SIZE SCALE: 1"= 40' FULL SIZE SCALE: 1"= 20'



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MV-058





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- CONTRACTOR SHALL EXAMINE THE SITE TO DETERMINE EXISTING CONDITIONS.
- SEE "ELECTRICAL LEGEND AND ABBREVIATIONS" SHEET FOR GENERAL NOTES AND REQUIREMENTS.

<u>NOTES</u>

- 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 EQUIPMENT SHOWN NOT LABELED AS EXISTING IS NEW.
- ALL CONTROL POWER TRANSFORMERS, POWER SUPPLIES, SIMPLEX 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.
- REMOVAL OF EACH EXISTING ELECTRIC SLIDE GATE WILL BE PAID FOR UNDER ITEM AR162908 - REMOVE ELECTRIC GATE.
- 7. PROPOSED 20 FT. ELECTRIC SLIDE GATE AND ASSOCIATED WORK SHOWN ON THIS SHEET WILL BE PAID FOR UNDER ITEM AR162720 ELECTRIC GATE - 20'.
- GATE OPERATORS SHALL BE RATED FOR THE RESPECTIVE VOLTAGE AVAILABLE AT THE SITE AND SHALL PROPERLY OPERATE ON THE RESPECTIVE NOMINAL VOLTAGE SYSTEM PLUS OR MINUS 10 PERCENT. CONTRACTOR SHALL CONFIRM WITH THE GATE OPERATOR MANUFACTURER THAT THE RESPECTIVE GATE OPERATOR HE SELECTS IS RATED SUITABLE FOR THE RESPECTIVE APPLICATION, IS SUITABLE AND COMPATIBLE WITH THE RESPECTIVE GATE, AND WILL OPERATE PROPERLY ON THE RESPECTIVE POWER SUPPLY. NOTE THE GATE OPERATOR MUST ALSO OPERATE PROPERLY ON STANDBY ENGINE GENERATOR POWER AND SHALL NOT REQUIRE MANUAL RESET DUE TO TRANSFER FROM UTILITY POWER TO STANDBY GENERATOR POWER OR BACK TO UTILITY POWER. THE GATE OPERATOR MUST NOT REQUIRE MANUAL RESET FOR MOMENTARY POWER OUTAGES. WHERE A POWER OUTAGE OCCURS THE GATE OPERATOR SHALL AUTOMATICALLY RESUME NORMAL OPERATION UPON RESTORATION OF POWER.

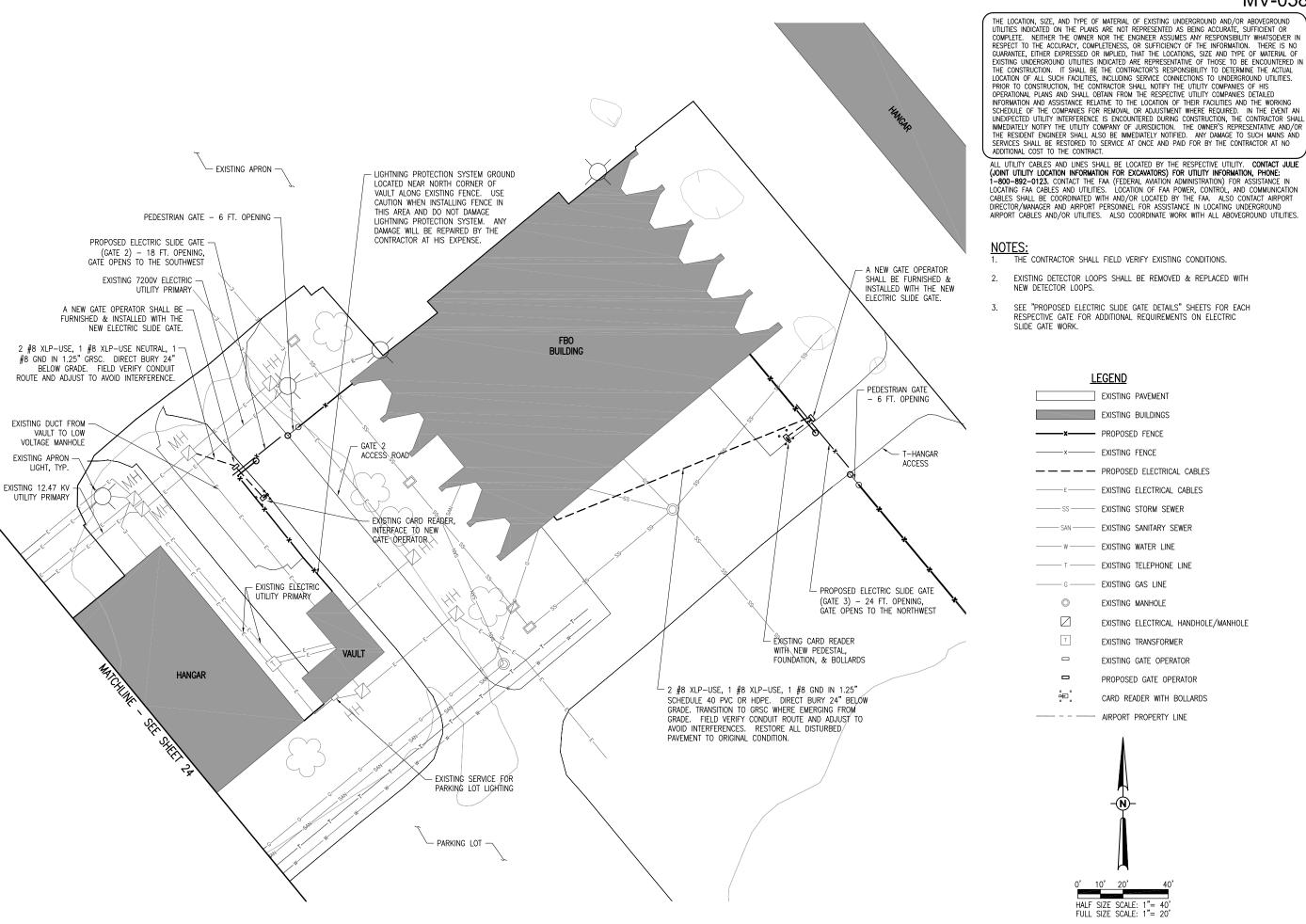
EXOTHERMIC WELD. CONNECTION TO GATE OPERATOR FRAME SHALL BE WITH A TWO-HOLE TONGUE COMPRESSION LUG BOLTED TO THE FRAME WITH 3/8" STAINLESS STEEL BOLTS, NUTS & WASHERS.

PROPOSED ELECTRICAL ONE LINE FOR GATE #1 OPERATOR

25

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MV-058

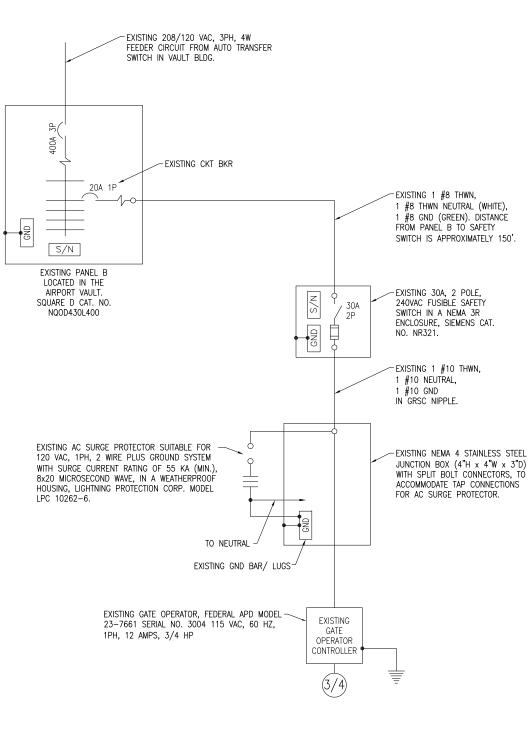
UTILITIES INDICATED ON THE PLANS ARK NOT THE ENGINEER ASSUMES ANY RESPONSIBILITY WHATSOEVER IN RESPECT TO THE ACCURACY, COMPLETENESS, OR SUFFICIENCY OF THE INFORMATION. THERE IS NO GUARANTEE, EITHER EXPRESSED OR IMPLIED, THAT THE LOCATIONS, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND UTILITIES INDICATED ARE REPRESENTATIVE OF THOSE TO BE ENCOUNTERED IN THE CONSTRUCTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THE ACTUAL LOCATION OF ALL SUCH FACILITIES, INCLUDING SERVICE CONNECTIONS TO UNDERGROUND UTILITIES. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE UTILITY 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 OWNER'S REPRESENTATIVE AND/OR THE RESIDENT ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY DAMAGE TO SUCH MAINS AND SERVICES SHALL BE RESTORED TO SERVICE AT ONCE AND PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT.

DIRECTOR/MANAGER AND AIRPORT PERSONNEL FOR ASSISTANCE IN LOCATING UNDERGROUND AIRPORT CABLES AND/OR UTILITIES. ALSO COORDINATE WORK WITH ALL ABOVEGROUND UTILITIES.

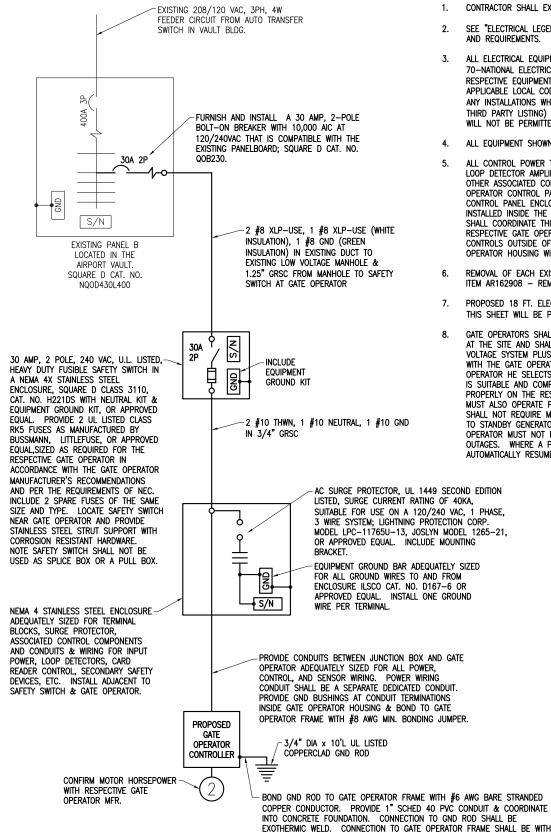
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REPLACE PERIMETER FENCE

GATES 2 & 3 PROPOSED ELECTRICAL



EXISTING ELECTRICAL ONE LINE DIAGRAM FOR GATE #2 OPERATOR



PROPOSED ELECTRICAL ONE LINE FOR GATE #2 OPERATOR

A TWO-HOLE TONGUE COMPRESSION LUG BOLTED TO THE FRAME WITH 3/8"

STAINLESS STEEL, BOLTS, NUTS, & WASHSERS.

MV-058

- CONTRACTOR SHALL EXAMINE THE SITE TO DETERMINE EXISTING CONDITIONS.
- SEE "ELECTRICAL LEGEND AND ABBREVIATIONS" SHEET FOR GENERAL 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 EQUIPMENT SHOWN NOT LABELED AS EXISTING IS NEW.

**NOTES** 

- ALL CONTROL POWER TRANSFORMERS, POWER SUPPLIES, SIMPLEX 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.
- REMOVAL OF EACH EXISTING ELECTRIC SLIDE GATE WILL BE PAID FOR UNDER ITEM AR162908 - REMOVE ELECTRIC GATE.
- 7. PROPOSED 18 FT. ELECTRIC SLIDE GATE AND ASSOCIATED WORK SHOWN ON THIS SHEET WILL BE PAID FOR UNDER ITEM AR162718 ELECTRIC GATE - 18'.
- GATE OPERATORS SHALL BE RATED FOR THE RESPECTIVE VOLTAGE AVAILABLE AT THE SITE AND SHALL PROPERLY OPERATE ON THE RESPECTIVE NOMINAL VOLTAGE SYSTEM PLUS OR MINUS 10 PERCENT. CONTRACTOR SHALL CONFIRM WITH THE GATE OPERATOR MANUFACTURER THAT THE RESPECTIVE GATE OPERATOR HE SELECTS IS RATED SUITABLE FOR THE RESPECTIVE APPLICATION, IS SUITABLE AND COMPATIBLE WITH THE RESPECTIVE GATE, AND WILL OPERATE PROPERLY ON THE RESPECTIVE POWER SUPPLY. NOTE THE GATE OPERATOR MUST ALSO OPERATE PROPERLY ON STANDBY ENGINE GENERATOR POWER AND SHALL NOT REQUIRE MANUAL RESET DUE TO TRANSFER FROM UTILITY POWER TO STANDBY GENERATOR POWER OR BACK TO UTILITY POWER. THE GATE OPERATOR MUST NOT REQUIRE MANUAL RESET FOR MOMENTARY POWER OUTAGES. WHERE A POWER OUTAGE OCCURS THE GATE OPERATOR SHALL AUTOMATICALLY RESUME NORMAL OPERATION UPON RESTORATION OF POWER.



REPLACE PERIMETER FENCE

MV-058

CONTRACTOR SHALL EXAMINE THE SITE TO DETERMINE EXISTING CONDITIONS.

**NOTES** 

SEE "ELECTRICAL LEGEND AND ABBREVIATIONS" SHEET FOR GENERAL NOTES AND REQUIREMENTS.

ALL FLECTRICAL EQUIPMENT SHALL BE INSTALLED IN CONFORMANCE WITH NEPA 70-NATIONAL ELECTRICAL CODE (NEC) MOST CURRENT ISSUE IN FORCE, THE RESPECTIVE EQUIPMENT MANUFACTURER'S DIRECTIONS AND ALL OTHER APPLICABLE LOCAL CODES, LAWS, ORDINANCES AND REQUIREMENTS IN FORCE. ANY INSTALLATIONS WHICH VOID THE U.L. LISTING, ETL LISTING, (OR OTHER THIRD PARTY LISTING) AND/OR THE MANUFACTURER'S WARRANTY OF A DEVICE WILL NOT BE PERMITTED.

4. ALL EQUIPMENT SHOWN NOT LABELED AS EXISTING IS NEW.

ALL FIXED WIRING IN THE RESPECTIVE HANGAR SHALL BE IN METAL RACEWAYS TO COMPLY WITH THE REQUIREMNTS OF NEC 513.7.

ALL CONTROL POWER TRANSFORMERS, POWER SUPPLIES, SIMPLEX 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.

REMOVAL OF EACH EXISTING ELECTRIC SLIDE GATE WILL BE PAID FOR UNDER ITEM AR162908 - REMOVE ELECTRIC GATE.

PROPOSED 24 FT. ELECTRIC SLIDE GATE AND ASSOCIATED WORK SHOWN ON THIS SHEET WILL BE PAID FOR UNDER ITEM AR162724 ELECTRIC GATE - 24'.

GATE OPERATORS SHALL BE RATED FOR THE RESPECTIVE VOLTAGE AVAILABLE AT THE SITE AND SHALL PROPERLY OPERATE ON THE RESPECTIVE NOMINAL VOLTAGE SYSTEM PLUS OR MINUS 10 PERCENT. CONTRACTOR SHALL CONFIRM WITH THE GATE OPERATOR MANUFACTURER THAT THE RESPECTIVE GATE OPERATOR HE SELECTS IS RATED SUITABLE FOR THE RESPECTIVE APPLICATION, IS SUITABLE AND COMPATIBLE WITH THE RESPECTIVE GATE, AND WILL OPERATE PROPERLY ON THE RESPECTIVE POWER SUPPLY. NOTE THE GATE OPERATOR MUST ALSO OPERATE PROPERLY ON STANDBY ENGINE GENERATOR POWER AND SHALL NOT REQUIRE MANUAL RESET DUE TO TRANSFER FROM UTILITY POWER TO STANDBY GENERATOR POWER OR BACK TO UTILITY POWER. THE GATE OPERATOR MUST NOT REQUIRE MANUAL RESET FOR MOMENTARY POWER OUTAGES. WHERE A POWER OUTAGE OCCURS THE GATE OPERATOR SHALL AUTOMATICALLY RESUME NORMAL OPERATION UPON RESTORATION OF POWER.



AIRPOR VERNON

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REPLACE PERIMETER FENCE

28

PROPOSED ELECTRICAL ONE LINE FOR GATE #3 OPERATOR

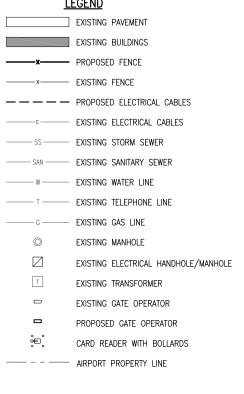
THE LOCATION, SIZE, AND TYPE OF MATERIAL OF EXISTING UNDERGROUND AND/OR ABOVEGROUND UTILITIES INDICATED ON THE PLANS ARE NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. NEITHER THE OWNER NOR THE ENGINEER ASSUMES ANY RESPONSIBILITY WHATSOEVER IN COMPLETE. NEITHER THE UNWER NOR THE ENGINEER ASSUMES ANY RESPONSIBILITY WHATSDEVER RESPECT TO THE ACCURACY, COMPLETENESS, OR SUFFICIENCY OF THE INFORMATION. THERE IS NO GUARANTEE, EITHER EXPRESSED OR IMPLIED, THAT THE LOCATIONS, SIZE AND TYPE OF MATERIAL OF EXISTING UNDERGROUND UTILITIES INDICATED ARE REPRESENTATIVE OF THOSE TO BE ENCOUNTERED 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 OWNER'S REPRESENTATIVE AND/OR THE RESIDENT ENGINEER SHALL ALSO BE IMMEDIATELY NOTIFIED. ANY DAMAGE TO SUCH MAINS AND SERVICES SHALL BE RESTORED TO SERVICE AT ONCE AND PAID FOR BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CONTRACT.

ALL UTILITY CABLES AND LINES SHALL BE LOCATED BY THE RESPECTIVE UTILITY. CONTACT JULIE (JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS) FOR UTILITY INFORMATION, PHONE: 1-800-892-0123. CONTACT THE FAA (FEDERAL AVIATION ADMINISTRATION) FOR ASSISTANCE IN LOCATING FAA CABLES AND UTILITIES. LOCATION OF FAA POWER, CONTROL, AND COMMUNICATION CABLES SHALL BE COORDINATED WITH AND/OR LOCATED BY THE FAA. ALSO CONTACT AIRPORT DIRECTOR/MANAGER AND AIRPORT PERSONNEL FOR ASSISTANCE IN LOCATING UNDERGROUND AIRPORT CABLES AND/OR UTILITIES. ALSO COORDINATE WORK WITH ALL ABOVEGROUND UTILITIES.

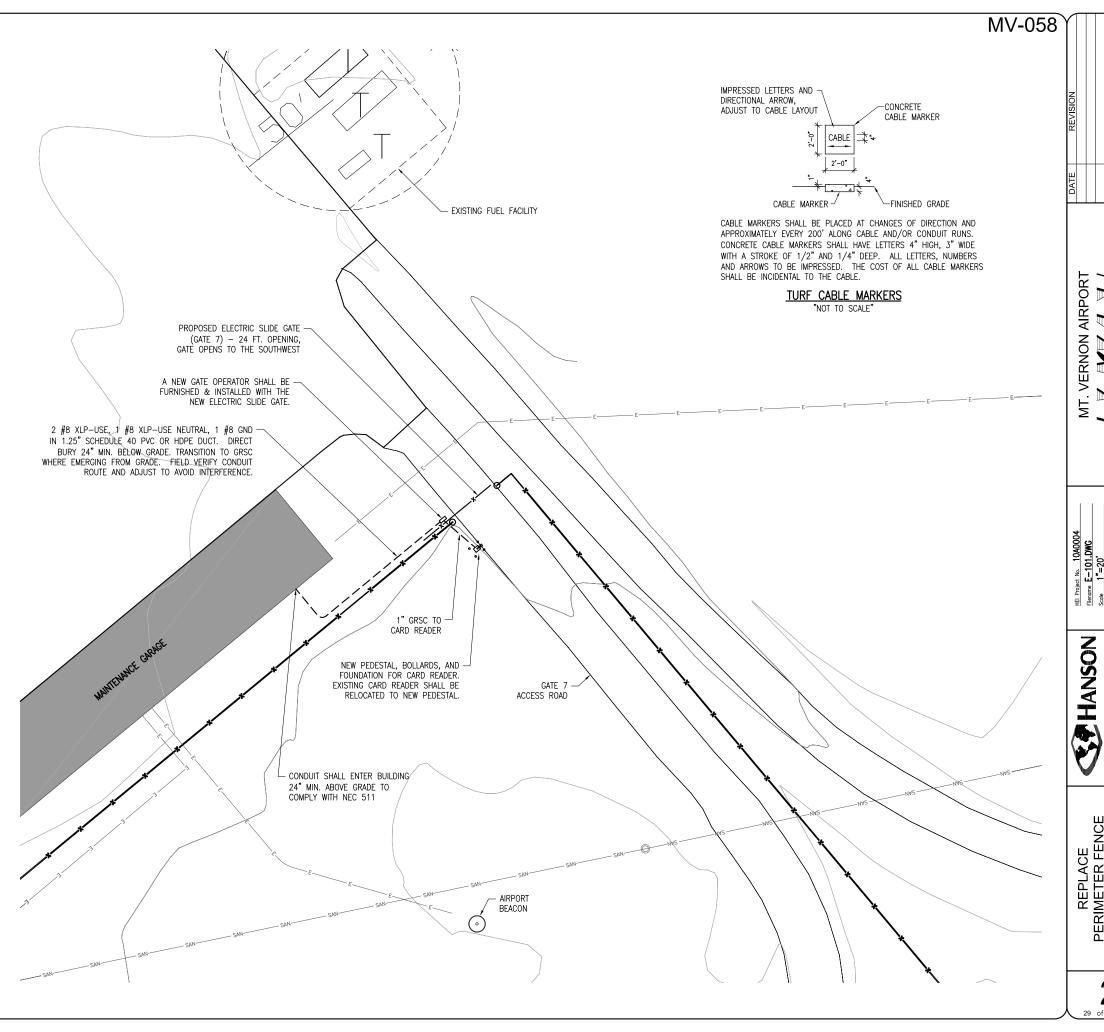
### NOTES:

- THE CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS.
- EXISTING DETECTOR LOOPS SHALL BE REMOVED & REPLACED WITH NEW DETECTOR LOOPS.
- 3. SEE "PROPOSED ELECTRIC SLIDE GATE DETAILS" SHEETS FOR EACH RESPECTIVE GATE FOR ADDITIONAL REQUIREMENTS ON ELECTRIC SLIDE GATE WORK. SEE "PROPOSED PEDESTRIAN SWING GATE WITH LOCK DETAILS" SHEET FOR ADDITIONAL REQUIREMENTS ON PEDESTRIAN GATE WITH LOCK WORK.

#### **LEGEND**

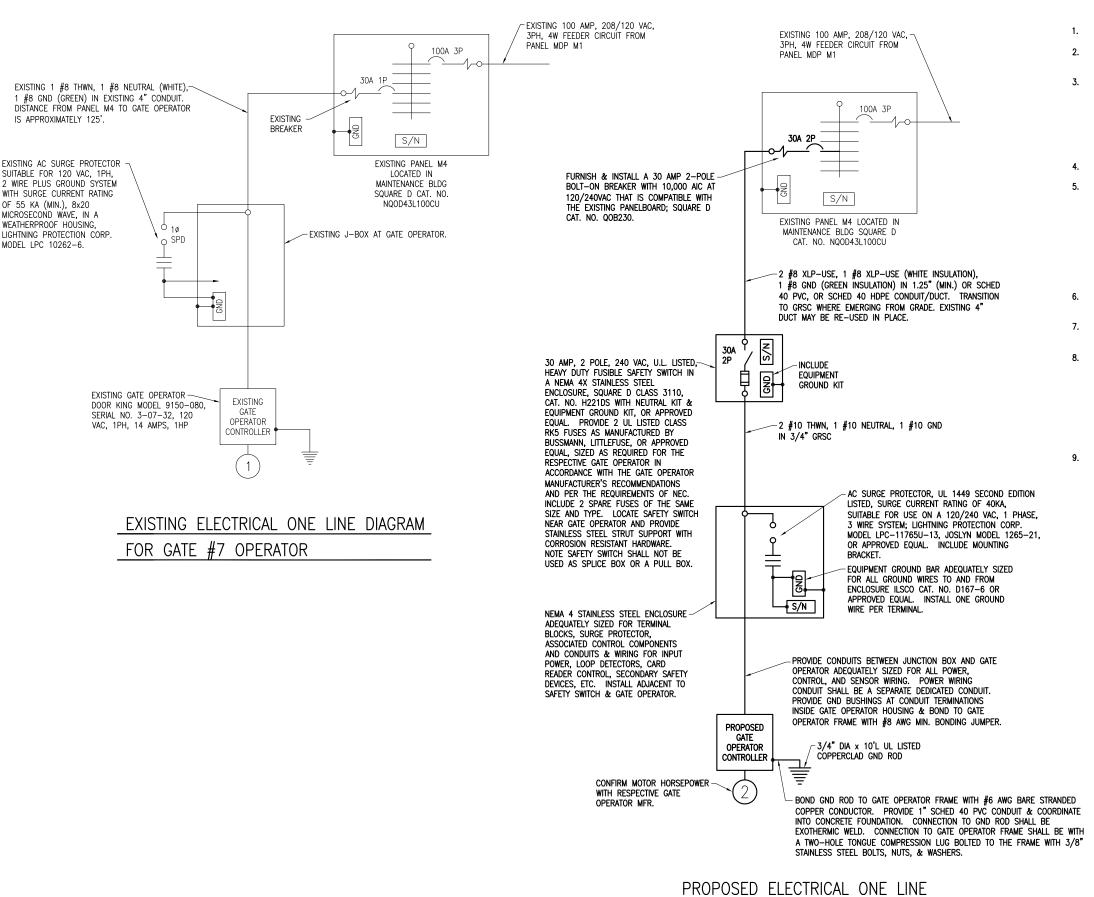


HALF SIZE SCALE: 1"= 40' FULL SIZE SCALE: 1"= 20'



29

REPLACE PERIMETER FENCE



FOR GATE #7 OPERATOR

MV-058

- CONTRACTOR SHALL EXAMINE THE SITE TO DETERMINE EXISTING CONDITIONS.
- SEE "ELECTRICAL LEGEND AND ABBREVIATIONS" SHEET FOR GENERAL NOTES AND REQUIREMENTS.

NOTES

- ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN CONFORMANCE WITH NFPA 70-NATIONAL ELECTRICAL CODE (NEC) MOST CURRENT ISSUE IN FORCE, THE RESPECTIVE FOLIPMENT 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 EQUIPMENT SHOWN NOT LABELED AS EXISTING IS NEW.
  - ALL CONTROL POWER TRANSFORMERS, POWER SUPPLIES, SIMPLEX RECEPTACLES, LOOP DETECTOR AMPLIFIERS, SECONDARY SAFETY DEVICE FOLIIPMENT, 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.
- REMOVAL OF EACH EXISTING ELECTRIC SLIDE GATE WILL BE PAID FOR UNDER ITEM AR162908 - REMOVE ELECTRIC GATE.
- PROPOSED 24 FT. ELECTRIC SLIDE GATE AND ASSOCIATED WORK SHOWN ON THIS SHEET WILL BE PAID FOR UNDER ITEM AR162724 ELECTRIC GATE - 24'.
- PER NEC 511 THE GARAGE AREA OF THE MAINTENANCE GARAGE IS CLASSIFIED AS A CLASS I. DIVISION 2. GROUP D HAZARDOUS LOCATION FOR A LEVEL OF 18 INCHES ABOVE THE FLOOR. ALL ELECTRICAL INSTALLATIONS SHALL CONFORM TO THE APPLICABLE SECTIONS OF NEC 500, 501 AND 511 IN ADDITION TO THE OTHER APPLICABLE SECTIONS OF NEC. WHERE ELECTRICAL EQUIPMENT IS INSTALLED IN A CLASSIFIED HAZARDOUS LOCATION IT SHALL BE SUITABLE FOR USE IN THE RESPECTIVE CLASSIFIED HAZARDOUS LOCATION. WHERE POSSIBLE, AVOID INSTALLATION OF ELECTRICAL EQUIPMENT, RACEWAYS AND WIRING IN THE CLASSIFIED HAZARDOUS AREAS OF THE FACILITY.
- GATE OPERATORS SHALL BE RATED FOR THE RESPECTIVE VOLTAGE AVAILABLE AT THE SITE AND SHALL PROPERLY OPERATE ON THE RESPECTIVE NOMINAL VOLTAGE SYSTEM PLUS OR MINUS 10 PERCENT. CONTRACTOR SHALL CONFIRM WITH THE GATE OPERATOR MANUFACTURER THAT THE RESPECTIVE GATE OPERATOR HE SELECTS IS RATED SUITABLE FOR THE RESPECTIVE APPLICATION. IS SUITABLE AND COMPATIBLE WITH THE RESPECTIVE GATE, AND WILL OPERATE PROPERLY ON THE RESPECTIVE POWER SUPPLY. NOTE THE GATE OPERATOR MUST ALSO OPERATE PROPERLY ON STANDBY ENGINE GENERATOR POWER AND SHALL NOT REQUIRE MANUAL RESET DUE TO TRANSFER FROM UTILITY POWER TO STANDBY GENERATOR POWER OR BACK TO UTILITY POWER. THE GATE OPERATOR MUST NOT REQUIRE MANUAL RESET FOR MOMENTARY POWER OUTAGES. WHERE A POWER OUTAGE OCCURS THE GATE OPERATOR SHALL AUTOMATICALLY RESUME NORMAL OPERATION UPON RESTORATION OF POWER.

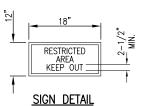
VERNON

HANSON

REPLACE PERIMETER FENCE

30

e7 ONE LINE



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

5/8" DIA. x 8'L UL LISTED COPPERCLAD GND ROD WITH

#8 AWG (MIN.) BARE SOLID CU FROM FENCE FABRIC &

TENSION WIRE TO GND ROD. CONNECTION TO GND ROD

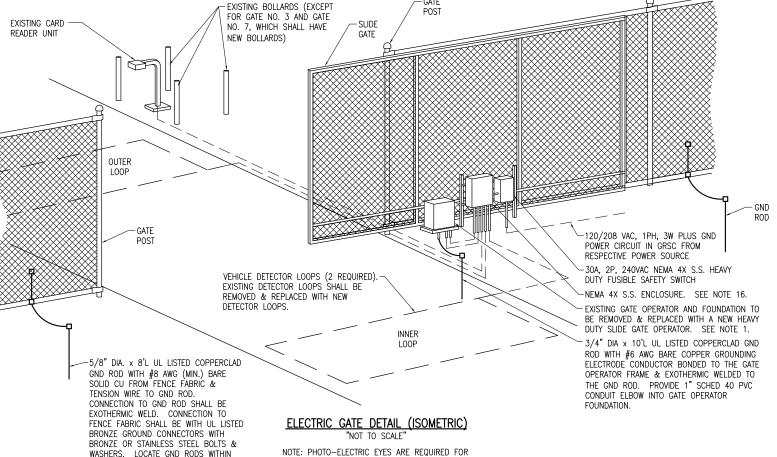
SHALL BE EXOTHERMIC WELD. CONNECTION TO FENCE

CONNECTORS WITH BRONZE OR STAINLESS STEEL BOLTS

FABRIC SHALL BE WITH UL LISTED BRONZE GROUND

& WASHERS. LOCATE GND RODS WITHIN 100 FT. OF

EACH SIDE OF EACH GATE.



THE GATE OPENING ON GATE NO. 1 & GATE NO. 2

BUT NOT SHOWN THIS DETAIL. ✓BOLLARD (TYP.) DRIVEWAY -FXISTING CARD READER UNIT, SECURA-KEY CARD READER MODEL SK-ACP ADVANCED CONTROL **ENTER** PANEL. PROVIDE POWER SUPPLY FOR CARD READER TO INTERFACE TO GATE OPERATOR SYSTEM CARD READER POWER & CONTROL WIRING WITH #12 EQUIPMENT GND IN 1" GRSC 0 0 PROVIDE 1" GRSC FROM ENCLOSURE/GATE OPERATOR TO PAVEMENT EDGE FOR LOOP DETECTOR LEAD-IN WIRING (TYP. EACH LOOP) 20'-0" OUTER LOOP PHOTO-ELECTRIC EYE CONTROL WIRING IN 1" GRSC -NEMA 4X S.S. ENCLOSURE. SEE NOTE 16. -30A, 2P, 240VAC NEMA 4X S.S. HEAVY DUTY FUSIBLE SAFETY SWITCH GATF -CHAIN LINK FENCE POST - NEW SLIDE GATE TO

PEDESTRIAN GATE (WHERE APPLICABLE) GATE POST-REPLACE EXISTING 120/208 VAC, 1PH, 3W PLUS GND POWER CIRCUIT INNER LOOP

EXIT

AIRPORT ACCESS

ELECTRIC GATE PLAN

NOT TO SCALE

PHOTO-ELECTRIC EYE CONTROL WIRING -IN 1" GRSC DIRECTIONAL BORE BELOW PAVEMENT AND/OR SAW CUT & REPAIR

INFRARED PHOTO-ELECTRIC EYE WITH MOUNTING POST

(FOR GATES NO. 1 & NO. 2)

100 FT. OF EACH SIDE OF EACH GATE.

- POWER & CONTROL CONDUITS TO GATE OPERATOR. 120/208 VAC POWER FEED SHALL BE IN A SEPARATE DEDICATED CONDUIT - EXISTING GATE OPERATOR AND FOUNDATION TO BE REMOVED & REPLACED WITH A NEW HEAVY DUTY SLIDE GATE OPERATOR. SEE NOTE 1 3/4" DIA x 10'L UL LISTED COPPERCLAD GND ROD

IN GRSC FROM RESPECTIVE POWER SOURCE

-EDGE OF PAVEMENT (FIELD VERIFY).

WITH #6 AWG BARE COPPER GROUNDING ELECTRODE CONDUCTOR BONDED TO THE GATE OPERATOR FRAME & EXOTHERMIC WELDED TO THE GND ROD. PROVIDE 1" SCHED 40 PVC CONDUIT ELBOW INTO GATE OPERATOR FOUNDATION

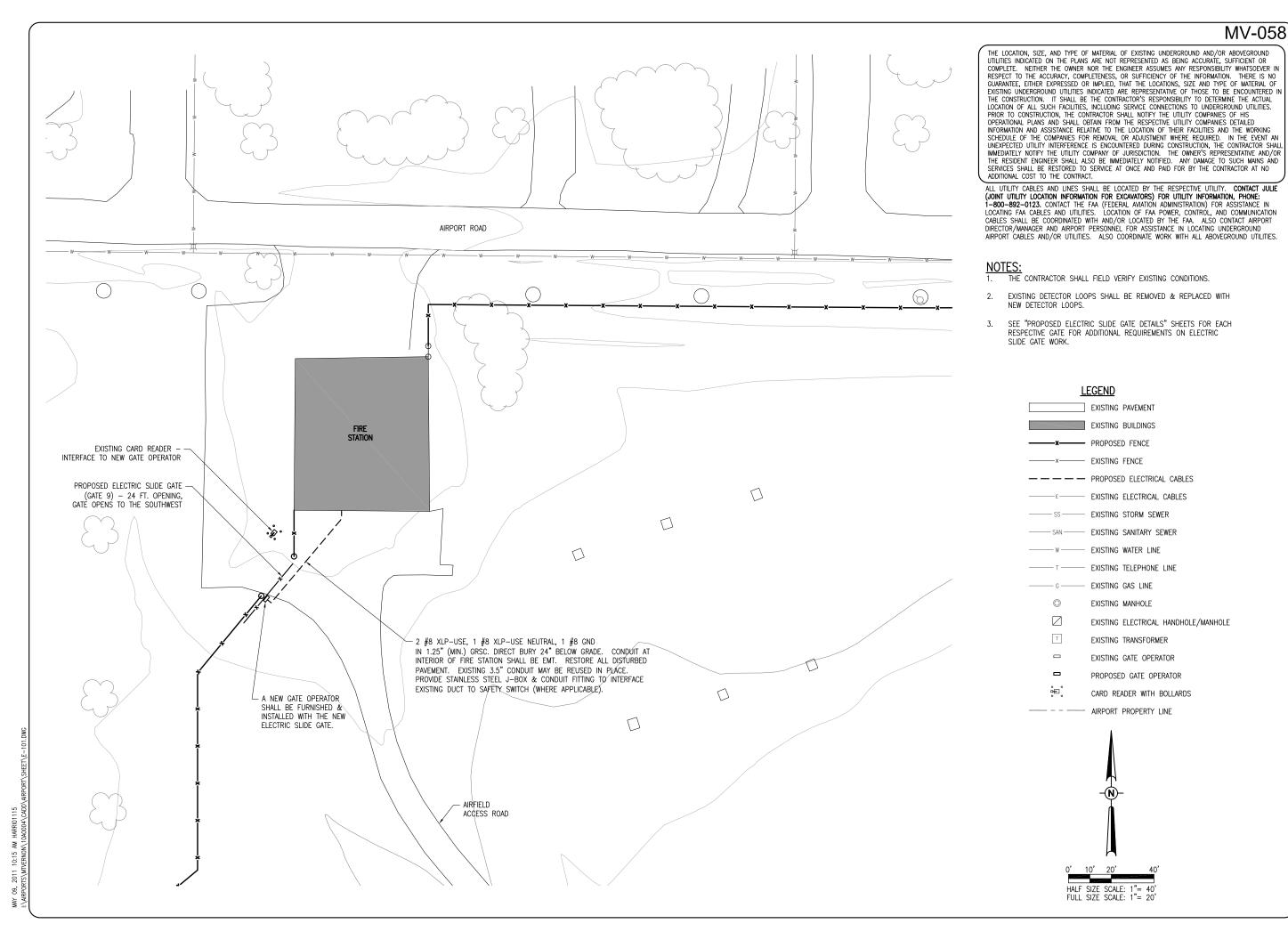
**NOTES:** 

- 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 FACH GATE.
- CONCRETE FOUNDATIONS SHALL BE PROVIDED FOR THE SLIDE GATE OPERATOR UNIT. FOUNDATION FOR THE GATE OPERATOR SHALL BE 48" (MIN.) IN DEPTH AND OF THE SIZE RECOMMENDED BY THE MANUFACTURER
- 1" GRS CONDUIT WILL BE REQUIRED BETWEEN THE SLIDE GATE OPERATOR INSTALLATION AND THE CARD READER ACCESS CONTROL UNIT. THE PHOTO-ELECTRIC EYES, 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.
- REPLACE CARD READER FOUNDATION, PEDESTAL AND BOLLARDS AT GATE NO. 3 AND GATE NO. 7. RELOCATE EXISTING CARD READER TO NEW PEDESTAL. CARD READER FOUNDATION SHALL BE 48" (MIN.) IN DEPTH AS DETAILED HEREIN. INTERFACE EXISTING CARD READER INSTALLATION TO NEW GATE OPERATOR FOR GATES 1 & 2.
- 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
- GATE NO. 1 LOCATED BY THE TERMINAL BUILDING AND GATE NO. 2 LOCATED BY THE VAULT & FBO HANGAR SHALL INCLUDE PHOTO-ELECTRIC EYE SAFETY
- CONTRACTOR SHALL COORDINATE ANY POWER OUTAGES TO EXISTING EQUIPMENT WITH THE RESPECTIVE OWNER'S REPRESENTATIVE AND THE AIRPORT
- INCLUDE AC SURGE PROTECTOR FOR THE GATE OPERATOR, UL 1449 SECOND EDITION LISTED, SURGE CURRENT RATING OF 40KA, SUITABLE FOR USE ON A 120/240 VAC, 1 PHASE, 3 WIRE SYSTEM; LIGHTNING PROTECTION CORP. MODEL LPC-11765U-13, JOSLYN MODEL 1265-21, OR APPROVED EQUAL. INCLUDE MOUNTING BRACKET.
- CONCRETE USED FOR INSTALLING THE GATE OPERATOR, ASSOCIATED EQUIPMENT, & FENCE SHALL MEET THE REQUIREMENTS OF STRUCTURAL PORTLAND CEMENT CONCRETE ITEM 610.
- 11. 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
- 13. PAYMENT FOR EACH SLIDE GATE, 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.
- INCLUDE CORROSION RESISTANT SUPPORT POSTS AND HARDWARE WITH THE PHOTO-ELECTRIC EYE SAFETY DEVICES.
- 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.
- 17. 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.



HANSON

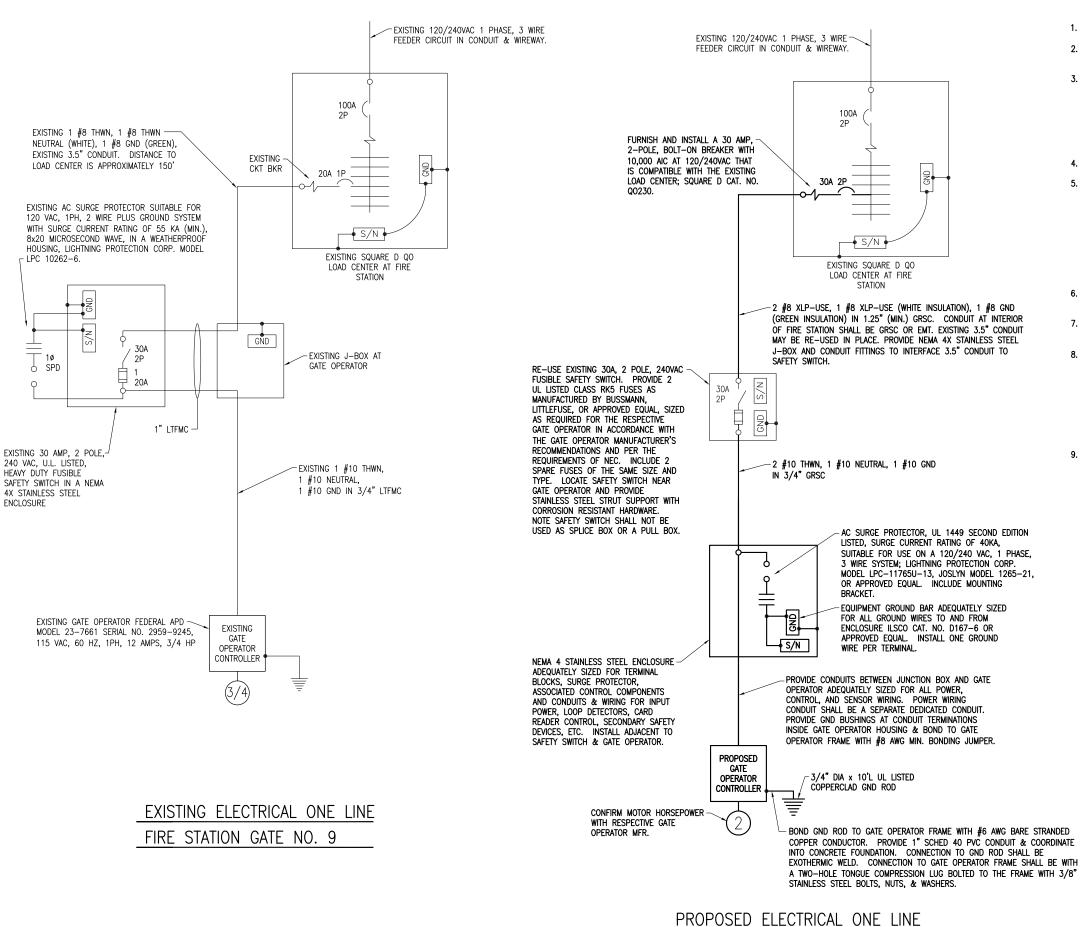
REPLACE PERIMETER FENCE PROPOSED ELECTRIC SLIDE GATE DETAILS GATES 1,2,3, & 7



AIRPOR

HANSON

REPLACE PERIMETER FENCE



FIRE STATION GATE NO. 9

MV-058

- CONTRACTOR SHALL EXAMINE THE SITE TO DETERMINE EXISTING CONDITIONS.
- SEE "ELECTRICAL LEGEND AND ABBREVIATIONS" SHEET FOR GENERAL NOTES AND REQUIREMENTS.

**NOTES** 

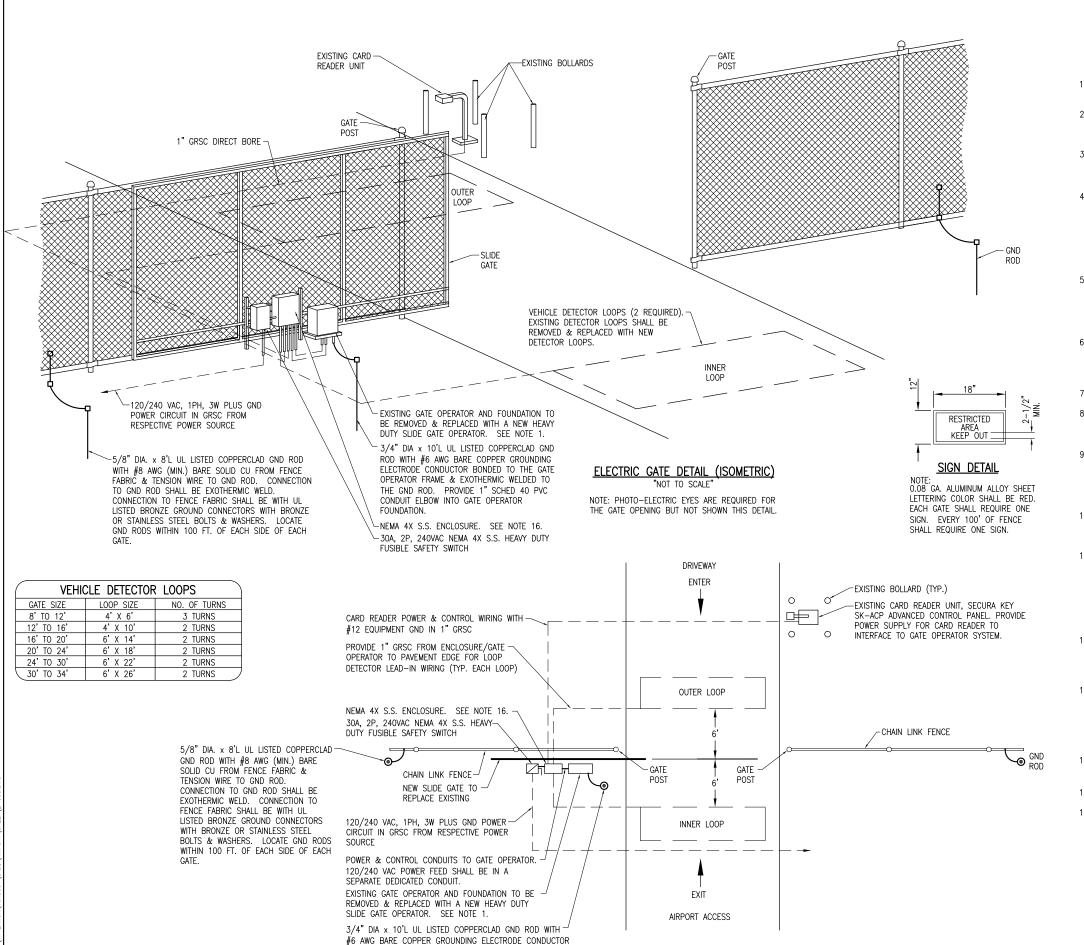
- ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN CONFORMANCE WITH NFPA 70-NATIONAL ELECTRICAL CODE (NEC) MOST CURRENT ISSUE IN FORCE, THE RESPECTIVE EQUIPMENT MANUFACTURER'S DIRECTIONS AND ALL OTHER APPLICABLE LOCAL CODES, LAWS, ORDINANCES AND REQUIREMENTS IN FORCE. ANY INSTALLATIONS WHICH VOID THE U.L. LISTING, ETL LISTING, (OR OTHER THIRD PARTY LISTING) AND/OR THE MANUFACTURER'S WARRANTY OF A DEVICE WILL NOT BE PERMITTED.
- ALL EQUIPMENT SHOWN NOT LABELED AS EXISTING IS NEW.
- ALL CONTROL POWER TRANSFORMERS, POWER SUPPLIES, SIMPLEX 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.
- REMOVAL OF EACH EXISTING ELECTRIC SLIDE GATE WILL BE PAID FOR UNDER ITEM AR162908 - REMOVE ELECTRIC GATE.
- PROPOSED 24 FT. ELECTRIC SLIDE GATE AND ASSOCIATED WORK SHOWN ON THIS SHEET WILL BE PAID FOR UNDER ITEM AR162724 ELECTRIC GATE - 24'.
- PER NEC 511 THE GARAGE AREA OF THE FIRE STATION IS CLASSIFIED AS A CLASS I, DIVISION 2, GROUP D HAZARDOUS LOCATION FOR A LEVEL OF 18 INCHES ABOVE THE FLOOR. ALL ELECTRICAL INSTALLATIONS SHALL CONFORM TO THE APPLICABLE SECTIONS OF NEC 500, 501 AND 511 IN ADDITION TO THE OTHER APPLICABLE SECTIONS OF NEC. WHERE ELECTRICAL EQUIPMENT IS INSTALLED IN A CLASSIFIED HAZARDOUS LOCATION IT SHALL BE SUITABLE FOR USE IN THE RESPECTIVE CLASSIFIED HAZARDOUS LOCATION. WHERE POSSIBLE, AVOID INSTALLATION OF ELECTRICAL EQUIPMENT, RACEWAYS AND WIRING IN THE CLASSIFIED HAZARDOUS AREAS OF THE FACILITY
- GATE OPERATORS SHALL BE RATED FOR THE RESPECTIVE VOLTAGE AVAILABLE AT THE SITE AND SHALL PROPERLY OPERATE ON THE RESPECTIVE NOMINAL VOLTAGE SYSTEM PLUS OR MINUS 10 PERCENT. CONTRACTOR SHALL CONFIRM WITH THE GATE OPERATOR MANUFACTURER THAT THE RESPECTIVE GATE OPERATOR HE SELECTS IS RATED SUITABLE FOR THE RESPECTIVE APPLICATION, IS SUITABLE AND COMPATIBLE WITH THE RESPECTIVE GATE, AND WILL OPERATE PROPERLY ON THE RESPECTIVE POWER SUPPLY. NOTE THE GATE OPERATOR MUST ALSO OPERATE PROPERLY ON STANDBY ENGINE GENERATOR POWER AND SHALL NOT REQUIRE MANUAL RESET DUE TO TRANSFER FROM UTILITY POWER TO STANDBY GENERATOR POWER OR BACK TO UTILITY POWER. THE GATE OPERATOR MUST NOT REQUIRE MANUAL RESET FOR MOMENTARY POWER OUTAGES. WHERE A POWER OUTAGE OCCURS THE GATE OPERATOR SHALL AUTOMATICALLY RESUME NORMAL OPERATION UPON RESTORATION OF POWER.



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REPLACE PERIMETER FENCE



BONDED TO THE GATE OPERATOR FRAME & EXOTHERMIC WELDED TO THE GND ROD. PROVIDE 1" SCHED 40 PVC

CONDUIT ELBOW INTO GATE OPERATOR FOUNDATION.

ELECTRIC GATE PLAN

"NOT TO SCALE"

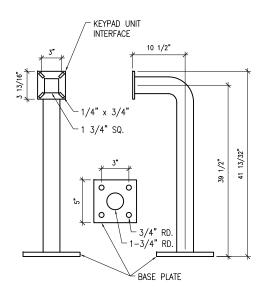
#### NOTES:

- 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 FACH GATE
- CONCRETE FOUNDATIONS SHALL BE PROVIDED FOR THE SLIDE GATE OPERATOR UNIT. FOUNDATION FOR THE GATE OPERATOR SHALL BE 48" (MIN.) IN DEPTH AND OF THE SIZE RECOMMENDED BY THE MANUFACTURER.
- 1" GRS CONDUIT WILL BE REQUIRED BETWEEN THE SLIDE GATE OPERATOR INSTALLATION AND THE CARD READER ACCESS CONTROL UNIT, THE PHOTO-ELECTRIC EYES, 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.
- 5. 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.
- (RESERVED).
- CONTRACTOR SHALL COORDINATE ANY POWER OUTAGES TO EXISTING EQUIPMENT WITH THE RESPECTIVE OWNER'S REPRESENTATIVE AND THE AIRPORT DIRECTOR.
- INCLUDE AC SURGE PROTECTOR FOR THE GATE OPERATOR, UL 1449 SECOND EDITION LISTED, SURGE CURRENT RATING OF 40KA, SUITABLE FOR USE ON A 120/240 VAC, 1 PHASE, 3 WIRE SYSTEM; LIGHTNING PROTECTION CORP. MODEL LPC-11765U-13, JOSLYN MODEL 1265-21, OR APPROVED EQUAL. INCLUDE MOUNTING BRACKET.
- 10. CONCRETE USED FOR INSTALLING THE GATE OPERATOR, ASSOCIATED EQUIPMENT, & FENCE SHALL MEET THE REQUIREMENTS OF STRUCTURAL PORTLAND CEMENT CONCRETE ITEM 610.
- 11. 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.
- 12. 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
- 13. PAYMENT FOR EACH SLIDE GATE, 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.
- 15. (RESERVED)
- 6. 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.

DATE REVISION

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

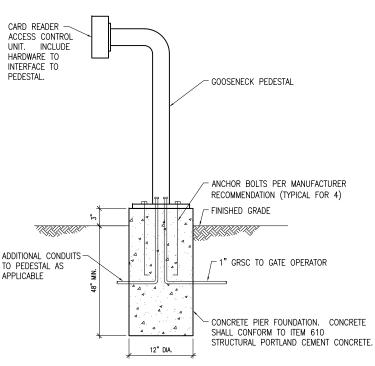
## BOLLARD DETAIL



# GOOSENECK PEDESTAL DETAIL

SCALE: NONE

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**

- CARD READERS ARE EXISTING. GATES 1, 2, & 9 HAVE EXISTING CARD READERS WITH PEDESTALS & FOUNDATIONS THAT WILL REQUIRE INTERFACE TO THE NEW GATE OPERATOR. GATE 3 LOCATED BY THE T-HANGAR ACCESS AREA WILL REQUIRE THE EXISTING PEDESTAL, FOUNDATION, & BOLLARDS TO BE REPLACED. GATE 7 WILL REQUIRE THE EXISTING PEDESTAL, FOUNDATION & BOLLARDS TO BE REMOVED & REPLACED AT A NEW LOCATION. THE EXISTING CARD READERS SHALL BE RELOCATED
- INCLUDE #12 AWG EQUIPMENT GND WIRE TO CARD READER.
- FACE OF CARD READER SHALL NOT EXTEND BEYOND BOLLARDS.

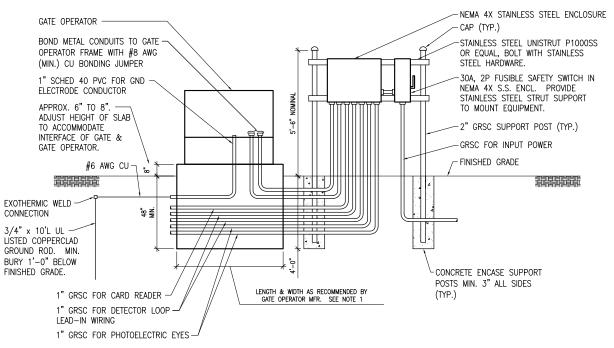
# CARD READER ACCESS CONTROL UNIT PEDESTAL ELEVATION DETAIL



#### **NOTES**

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, HY-SECURITY PART NO. MX000882, OR EQUAL.

WARNING SIGN DETAIL

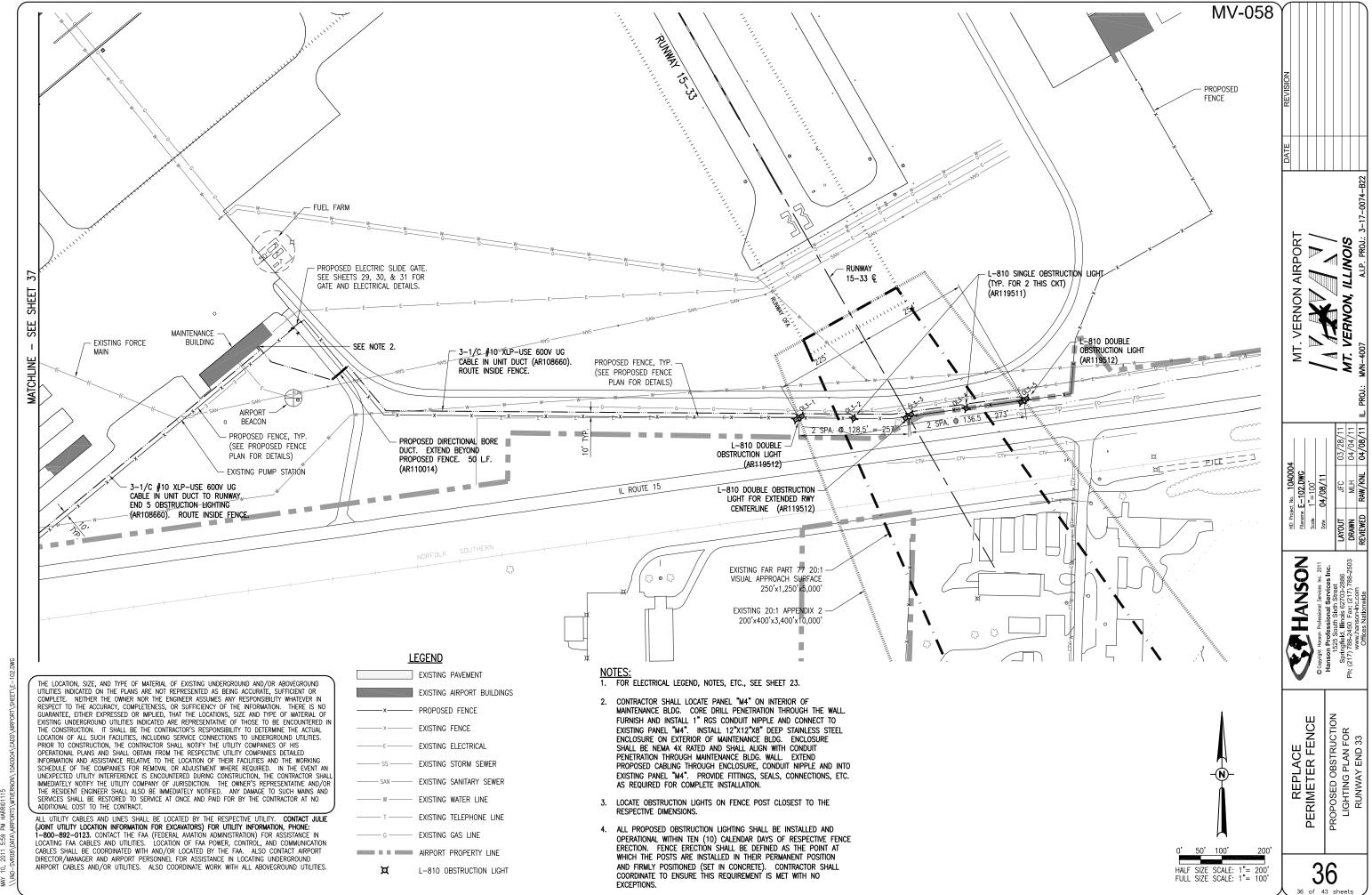


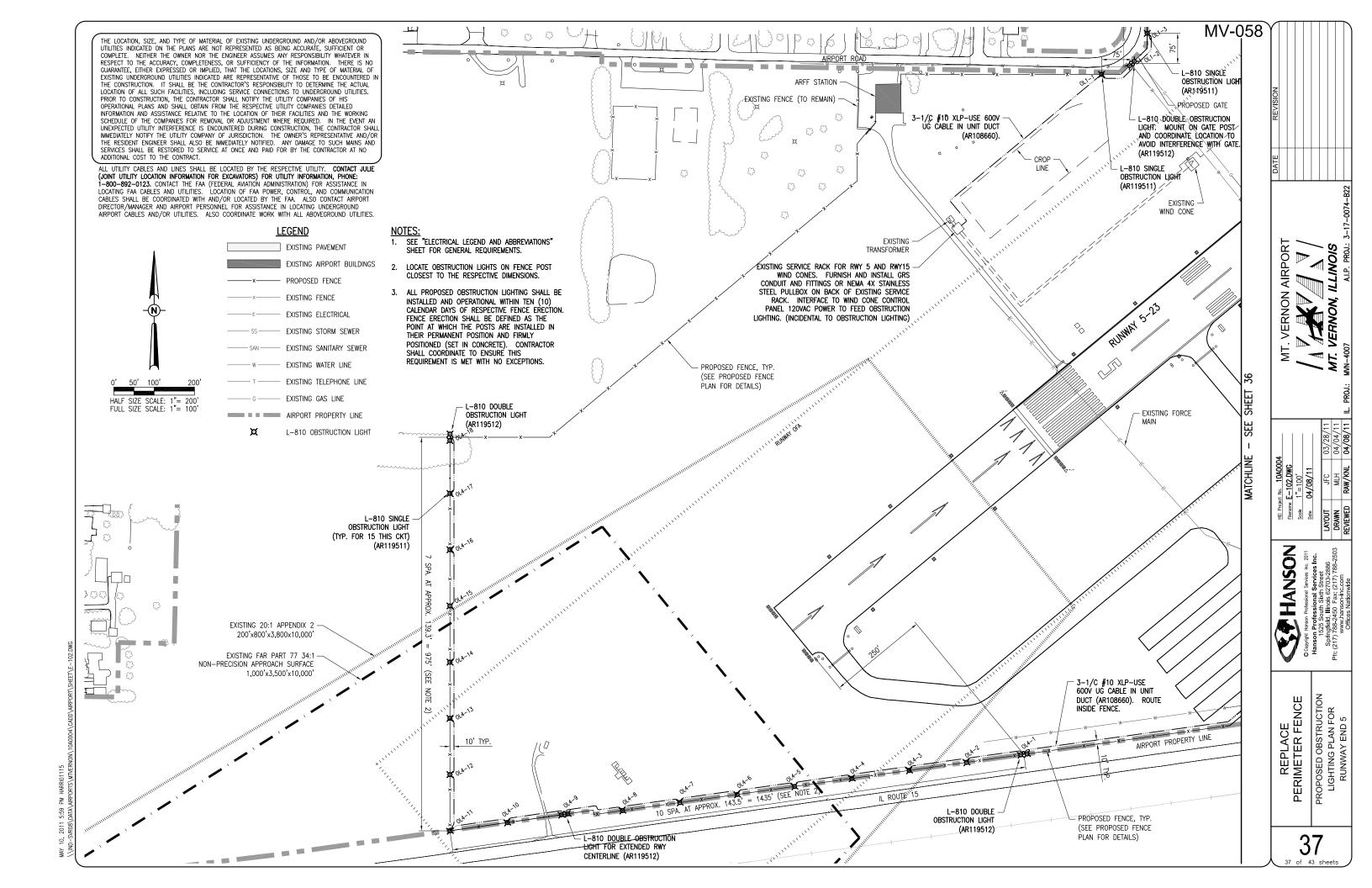
#### **NOTES**

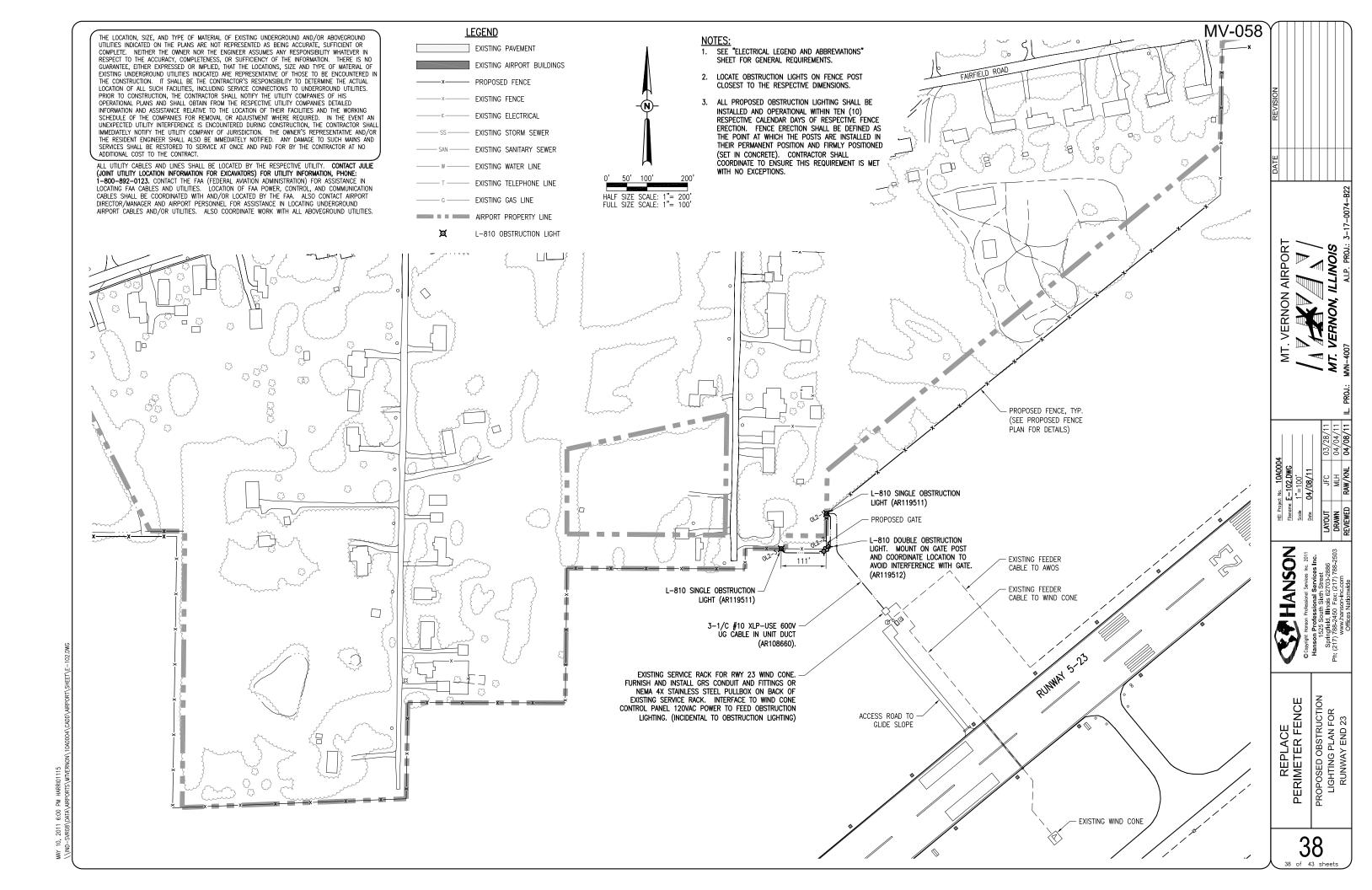
- FOUNDATION FOR GATE OPERATOR SHALL BE 48" MIN. IN DEPTH AND OF THE LENGTH & WIDTH RECOMMENDED BY THE MANUFACTURER.
- COORDINATE CONDUITS INTO FOUNDATION.
- CONFIRM CONDUIT SIZES AND WIRING REQUIREMENTS WITH THE GATE OPERATOR MFR. ADJUST/INCREASE CONDUIT SIZES WHERE APPLICABLE. REQUIREMENTS VARY BETWEEN DIFFFRENT MANUFACTURERS.
- 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
- GATE 1 BY THE TERMINAL BUILDING & GATE 2 BY THE VAULT & FBO HANGAR WILL REQUIRE PHOTOELECTRIC EYE SECONDARY SAFETY DEVICES.
- GATES 3, 7, & 9 WILL NOT REQUIRE PHOTOELECTRIC EYE SECONDARY SAFETY DEVICES.

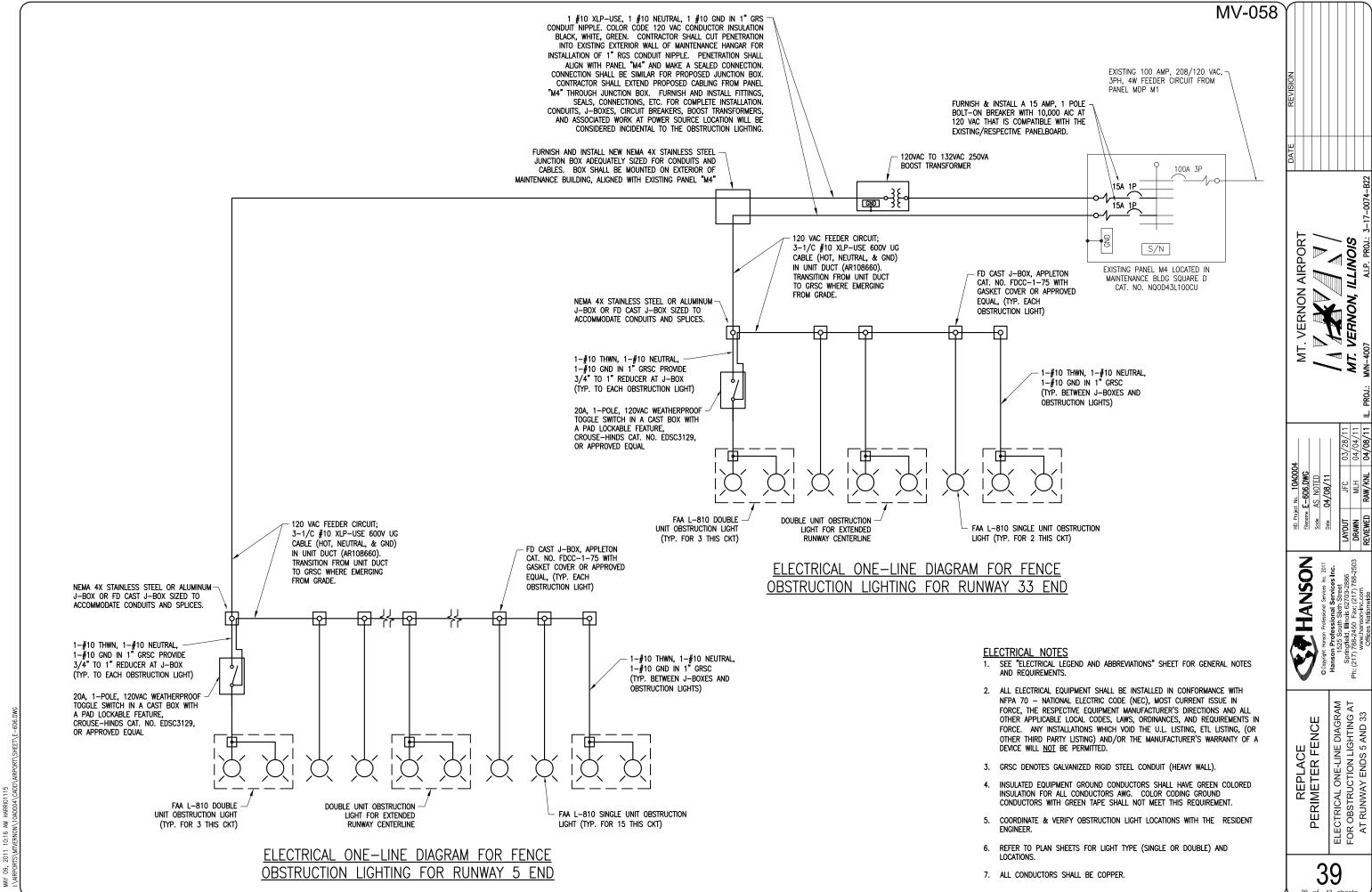
# GATE OPERATOR FOUNDATION DETAIL

REPLACE PERIMETER FENCE







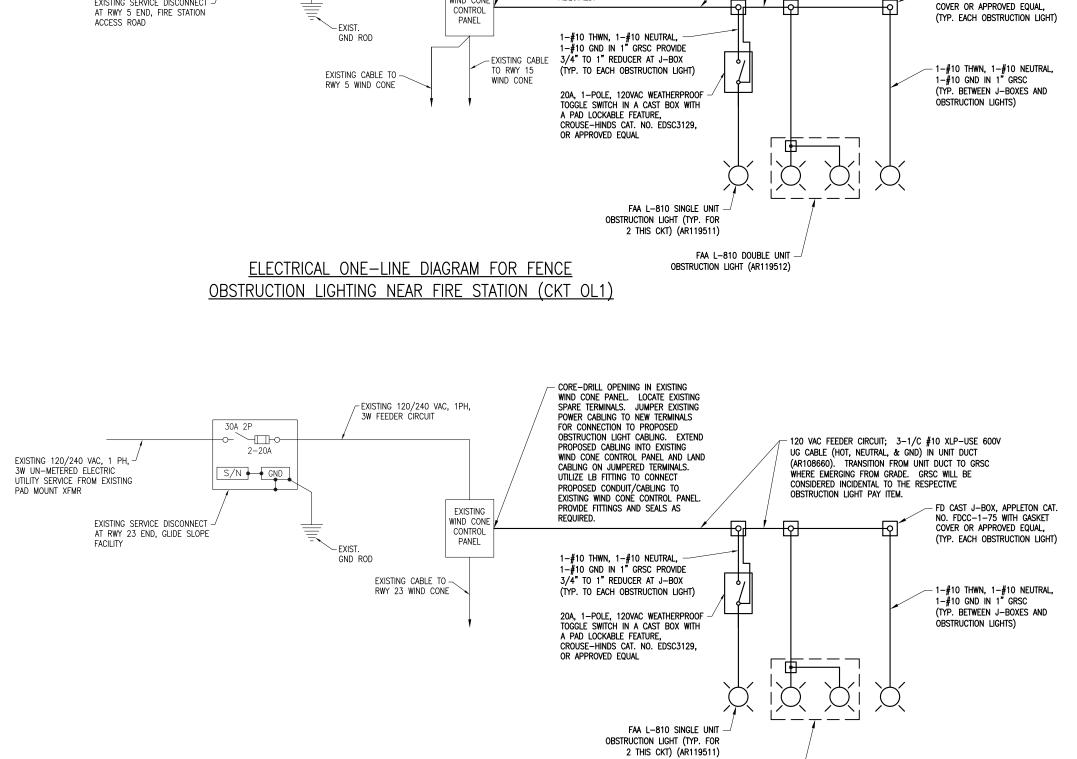


#### **ELECTRICAL NOTES**

SEE "ELECTRICAL LEGEND AND ABBREVIATIONS" SHEET FOR

MV-058

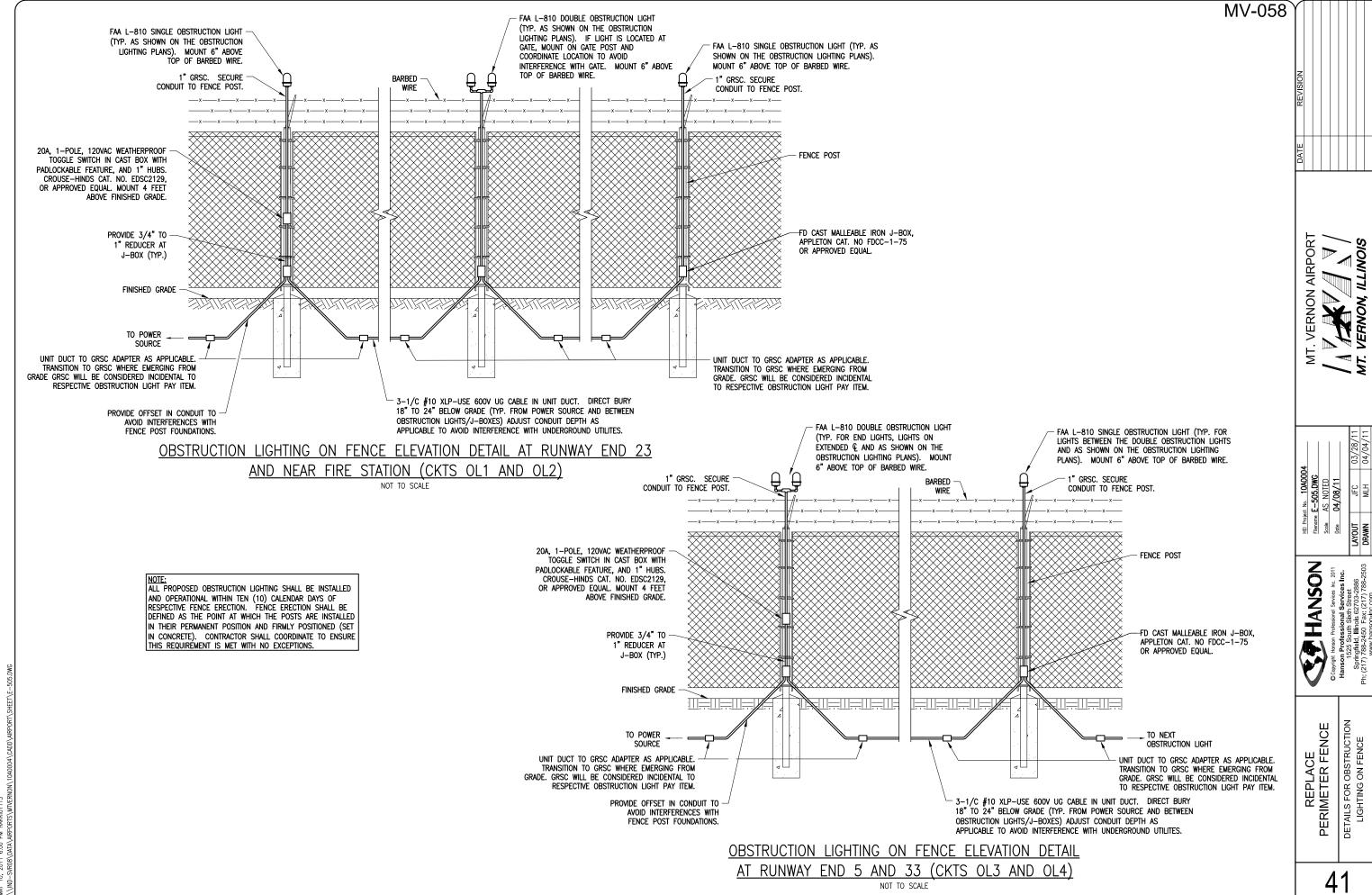
- 2. ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN CONFORMANCE WITH NFPA 70 - NATIONAL ELECTRIC CODE (NEC), MOST CURRENT ISSUE IN FORCE, THE RESPECTIVE EQUIPMENT MANUFACTURER'S DIRECTIONS AND ALL OTHER APPLICABLE LOCAL CODES, LAWS, ORDINANCES, AND REQUIREMENTS IN FORCE. ANY INSTALLATIONS WHICH VOID THE U.L. LISTING, ETL LISTING, (OR OTHER THIRD PARTY LISTING) AND/OR THE MANUFACTURER'S WARRANTY OF A DEVICE WILL NOT BE PERMITTED.
- 3. GRSC DENOTES GALVANIZED RIGID STEEL CONDUIT (HEAVY WALL).
- 4. INSULATED EQUIPMENT GROUND CONDUCTORS SHALL HAVE GREEN COLORED INSULATION FOR ALL CONDUCTORS AWG. COLOR CODING GROUND CONDUCTORS WITH GREEN TAPE SHALL NOT MEET THIS
- COORDINATE & VERIFY OBSTRUCTION LIGHT LOCATIONS WITH THE RESIDENT ENGINEER.
- REFER TO PLAN SHEETS FOR LIGHT TYPE (SINGLE OR DOUBLE) AND LOCATIONS.
- 7. ALL CONDUCTORS SHALL BE COPPER.
- CONTRACTOR SHALL COORDINATE WORK WITH THE SERVING ELECTRIC UTILITY COMPANY (AMEREN, MT. VERNON, IL 46864, ATTN. MR. BRENT BARTEY, PH. 618-244-8220, CELL PH. 618-267-8446) AND THE AIRPORT MANAGER.



HANSON

LECTRICAL ONE-LINE DIAGRAMS FOR OBSTRUCTION LIGHTING NEAR FIRE STATION AND AT RUNWAY END 23 REPLACE PERIMETER FENCE

FAA L-810 DOUBLE UNIT ELECTRICAL ONE-LINE DIAGRAM FOR FENCE OBSTRUCTION LIGHT (AR119512) OBSTRUCTION LIGHTING AT RUNWAY 23 END (CKT OL2)



A DRILLED HOLE AND SECURED WITH EPOXY GLUE.

**DUCT MARKER DETAIL** 

"NOT TO SCALE"

IMPRESSED LETTERS

INDICATING NUMBER AND SIZE OF DUCTS-

CONCRETE DUCT

MARKER-

-2-WAY OR

PROPOSED PAVEMENT

4-WAY DUCT

-CONCRETE PAVEMENT MARKER SEE NOTE 2

DIRECTION AND APPROXIMATELY EVERY 200' ALONG 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.

WAY US, ZUIT 10:16 AM HARKUUIIIS :\AIRPORTS\MTVERNON\1040004\CADD\AIRPORT\SHEET\E

42

REPLACE PERIMETER FENCE

TURF CABLE MARKERS

"NOT TO SCALE"

DUCT-

TURF DUCT MARKERS

"NOT TO SCALE"

MARKER

-CONCRETE

DUCT MARKER

-FINISHED GRADE

IMPRESSED NUMBERS NOTING NUMBER & SIZE OF DUCTS.

QUANTITY & SIZE OF DUCTS

ADJUST FOR RESPECTIVE

- 2. CONTRACTOR SHALL KEEP A COPY OF THE LATEST NEC IN FORCE ON SITE AT ALL TIMES DURING CONSTRUCTION FOR USE AS A REFERENCE.
- 3. CONTRACTOR SHALL COORDINATE WORK AND ANY POWER OUTAGES AND/OR SHUT DOWN OF SYSTEMS WITH THE RESPECTIVE FACILITY OWNER PERSONNEL AND THE AIRPORT MANAGER/DIRECTOR. ONCE SHUT DOWN, THE CIRCUITS SHALL BE LABELED AS SUCH TO PREVENT ACCIDENTAL ENERGIZING OF THE RESPECTIVE CIRCUITS. ALL PERSONNEL SHALL FOLLOW U.S. DEPARTMENT OF LABOR OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION (OSHA) 29 CFR PART 1910 OCCUPATIONAL SAFETY & 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).
- . 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.
- 6. 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.
- 8. ANY AND ALL INSTRUCTIONS FROM THE RESIDENT 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 ILLINOIS DEPARTMENT OF TRANSPORTATION, DIVISION OF AERONAUTICS. 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. A DETAILED DESCRIPTION OF THE OVERALL EQUIPMENT AND ITS INDIVIDUAL COMPONENTS
  - B. THEORY OF OPERATION INCLUDING THE FUNCTION OF EACH COMPONENT.
  - C. INSTALLATION INSTRUCTION.
  - D. START-UP INSTRUCTIONS.
  - E. PREVENTATIVE MAINTENANCE REQUIREMENTS.
- F. CHART FOR TROUBLE-SHOOTING.
- G. 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.
- H. 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 NOTES

- PROVIDE LEGEND PLATES FOR ALL ELECTRICAL EQUIPMENT TO IDENTIFY FUNCTION, CIRCUIT VOLTAGE AND PHASE. WHERE THE EQUIPMENT CONTAINS FUSES, ALSO IDENTIFY THE FUSE OR FUSE LINK AMPERE RATING. WHERE THE EQUIPMENT DOES NOT HAVE SUFFICIENT AREA TO INSTALL LEGEND PLATES, THE LEGEND PLATES SHALL BE INSTALLED ON THE WALL NEXT TO THE UNIT. LEGEND PLATES SHALL BE WEATHERPROOF ENGRAVED PLASTIC OR PHENDLIC 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.
- 2. 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 PHASE CONDUCTORS ON 120/240VAC SINGLE-PHASE, THREE WIRE SYSTEMS. BLACK, RED, AND BLUE SHALL BE USED FOR PHASE CONDUCTORS ON 208/120VAC THREE-PHASE, FOUR WIRE 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. INSULATED GROUND CONDUCTORS SHALL HAVE GREEN COLORED INSULATION FOR ALL CONDUCTOR SIZES (AWG OR KCMIL).
- 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.
- 5. 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:
  - A. 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.
- B. 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.
- 8. 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.
- 10. 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.
- 13. ALL INTERIOR WALL MOUNTED EQUIPMENT ENCLOSURES SHALL BE MOUNTED ON HOT DIPPED GALVANIZED STEEL STRUT SUPPORT, OR STAINLESS STEEL STRUT SUPPORT, WITH CORROSION RESISTANT HARDWARE.
- 14. SUPPORT FOR EXTERIOR MOUNTED EQUIPMENT SHALL USE HOT DIPPED GALVANIZED STEEL STRUT SUPPORT OR STAINLESS STEEL STRUT SUPPORT WITH STAINLESS STEEL HARDWARE. PROVIDE ZINC RICH PAINT APPLIED TO FIELD CUTS OF GALVANIZED STEEL SUPPORT TO MINIMIZE THE POTENTIAL FOR CORROSION PER THE RESPECTIVE STRUT SUPPORT MANUFACTURER'S RECOMMENDATIONS.

- . CONDUITS FOR ELECTRIC SERVICE ENTRANCE AND FEEDERS SHALL BE AS DETAILED HEREIN ON THE PLANS. WHERE GALVANIZED RIGID STEEL CONDUIT IS SPECIFIED IT SHALL HAVE THREADED FITTINGS. SET SCREW TYPE FITTINGS WILL NOT BE ACCEPTABLE. CONDUITS FOR UNDERGROUND APPLICATIONS SHALL BE AS DETAILED HEREIN. CONDUITS FOR GROUNDING ELECTRODE CONDUCTORS OR INDIVIDUAL GROUNDING CONDUCTORS SHALL BE SCHEDULE 40 OR SCHEDULE 80 PVC.
- 16. PROVIDE LIQUID TIGHT FLEXIBLE METAL CONDUIT AT CONNECTIONS TO EQUIPMENT SUBJECT TO VIBRATION OR WHERE FLEXIBILITY IS REQUIRED. LIQUID TIGHT FLEXIBLE METAL CONDUIT AND ASSOCIATED FITTINGS SHALL BE U.L. LISTED TO MEET THE REQUIREMENTS OF NEC 350.6, SUITABLE FOR GROUNDING, SUNLIGHT RESISTANT, AND RESISTANT TO OIL, GASOLINE, AND GREASE. LIQUID TIGHT FLEXIBLE METAL CONDUIT THAT IS USED FOR FLEXIBILITY (INCLUDING CONNECTIONS TO MOTORS, TRANSFORMERS, & CONSTANT CURRENT REGULATORS) SHALL REQUIRE AN EXTERNAL BONDING JUMPER OR INTERNAL EQUIPMENT GROUNDING CONDUCTOR PER NEC 350.60. DO NOT INSTALL LIQUID TIGHT FLEXIBLE METAL CONDUIT THAT IS NOT UL. LISTED. CONFIRM LIQUID—TIGHT FLEXIBLE METAL CONDUIT BEARS THE UL LABEL PRIOR TO INSTALLLING IT.
- 17. UNLESS OTHERWISE SHOWN, ALL EXPOSED CONDUITS SHALL BE RUN PARALLEL TO OR AT RIGHT ANGLES WITH THE LINES OF THE STRUCTURE.
- 18. 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.
- 20. USE DOUBLE LOCK NUTS AT EACH CONDUIT TERMINATION.
- 21. WRAP ALL PRIMARY AND SECONDARY POWER TRANSFORMER CONNECTIONS WITH SUFFICIENT LAYERS OF INSULATING TAPE (3M SCOTCH 23 ALL-VOLTAGE SPLICING TAPE, 3M SCOTCH 13OC LINERLESS RUBBER SPLICING TAPE, OR APPROVED EQUAL) AND COVER WITH VINYL ELECTRICAL TAPE (3M SCOTCH 88 VINYL ELECTRICAL TAPE OR APPROVED EQUAL) FOR FULL VALUE OF CABLE INSULATION VOLTAGE.
- UNLESS OTHERWISE NOTED, ALL SINGLE CONDUCTOR CONTROL WIRING SHALL BE
   NO. 12 AWG. COPPER MINUMUM.
- 23. THE FOLLOWING SHALL APPLY TO RELAY/CONTACTOR PANELS/ENCLOSURES:
  - A. FOR INTERIOR LOCATIONS ALL COMPONENTS SHALL BE MOUNTED IN NEMA 12 (DUST TIGHT) ENCLOSURE(S) WITH VERTICALLY HINGED COVERS. FOR EXTERIOR/OUTDOOR LOCATIONS ALL COMPONENTS SHALL BE MOUNTED IN NEMA 4X STAINLESS STEEL ENCLOSURE(S) WITH VERTICALLY HINGED COVERS. ALL CONDUIT ENTRIES INTO NEMA 4, 4X ENCLOSURES SHALL HAVE NEMA 4 HUBS LISTED SUITABLE FOR THE RESPECTIVE ENCLOSURE TO MAINTAIN THE NEMA 4, 4X RATING OF THE ENCLOSURE.
  - B. THE ENCLOSURE(S) SHALL HAVE AMPLE SPACE FOR THE CIRCUIT COMPONENTS, TERMINAL BLOCKS AND INCOMING AND INTERNAL WIRING.
  - C. ALL CONTROL CONDUCTOR TERMINATIONS SHALL BE OF THE OPEN-EYE CONNECTOR/SCREW TYPE. SOLDERED CLOSED-EYE TERMINATIONS, OR TERMINATIONS WITHOUT CONNECTORS ARE NOT ACCEPTABLE.
  - D. 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 VIOLECT COMPONENTS.
  - E. ACCESS TO, OR REMOVAL OF A CIRCUIT COMPONENT OR TERMINAL BLOCK
    WILL NOT REQUIRE THE REMOVAL OF ANY OTHER CIRCUIT COMPONENT OR
    TERMINAL BLOCK
  - F. EACH CIRCUIT COMPONENT SHALL BE CLEARLY IDENTIFIED INDICATING ITS CORRESPONDING NUMBER SHOWN ON THE DRAWINGS AND ITS FUNCTION.
  - G. A COMPLETE WIRING DIAGRAM SHALL BE MOUNTED ON THE INSIDE OF THE COVER. THE DIAGRAM SHALL REPRESENT EACH CONDUCTOR BY A SEPARATE LINE.
  - H. THE DIAGRAM SHALL IDENTIFY EACH CIRCUIT COMPONENT AN NUMBERING AND COLOR OF EACH TERMINAL CONDUCTOR AND TERMINAL.
  - I. ALL WIRING SHALL BE NEATLY TRAINED AND LACED.
  - J. MINIMUM WIRE SIZE SHALL BE NO. 12 AWG.
- 24. FURNISH & INSTALL A WEATHERPROOF WARNING LABEL FOR EACH METER SOCKET, SERVICE DISCONNECT, SAFETY SWITCH, CUTOUT, PANELBOARD, & CONTROL PANEL TO WARN PERSONS OF POTENTIAL ELECTRIC ARC FLASH HAZARDS, PER THE REQUIREMENTS OF NEC 110.16 "FLASH PROTECTION".