

ITEM NO: 4A  
 LETTING DATE: MARCH 11, 2011

BO001  
 TOTAL SHEETS = 17

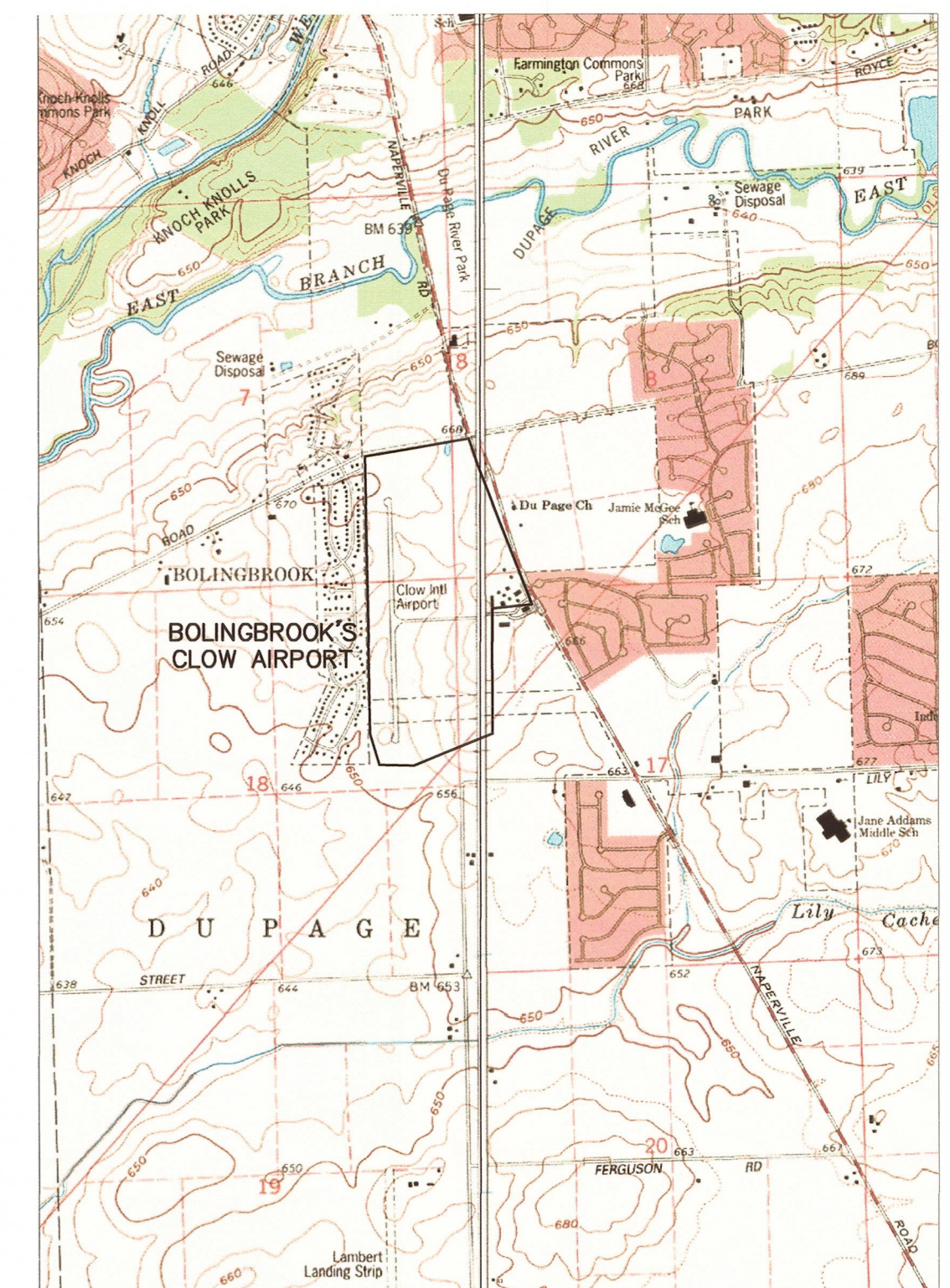
## CONSTRUCTION PLANS

# PERIMETER FENCING INSTALLATION

BOLINGBROOK'S CLOW INTERNATIONAL AIRPORT (1C5)  
 BOLINGBROOK, WILL COUNTY, ILLINOIS

AIP PROJECT NO. 3-17-0135-B2  
 IDA PROJECT NO. 1C5-3995

VICINITY MAP



2000 0 2000 4000  
 SCALE IN FEET

No.	Issue/Description	Sheets Changed	Date	By

I:\08\085\00844\0840180\DRAWINGS\SHEETS\01-COVER.DWG NOV 17, 2010 9:19AM MCLAUD1058

Seal  
 (Sheets 13 thru 17)

COVERING  
 ELECTRICAL  
 DESIGN

Kevin M. Lightfoot  
 Kevin M. Lightfoot, P.E.  
 Project Engineer

Date of Plans  
 11/23/2010

Seal  
 (Sheets 1 thru 12)

Lindsay Hausman  
 Lindsay D. Hausman, P.E.  
 Project Engineer

Date of Plans  
 10/29/10

HANSON PROFESSIONAL SERVICES INC.  
 815 Commerce Drive, Suite 200  
 Oak Brook, Illinois 60523  
 Telephone: 630.990.3800  
 Fax: 630.990.3801

Ronald M. Hudson, AICP  
 Project Manager

29 Oct 2010  
 Date

BOLINGBROOK'S CLOW AIRPORT  
 VILLAGE OF BOLINGBROOK, ILLINOIS  
 375 West Briarcliff Road  
 Bolingbrook, Illinois 60440  
 Telephone: 630.226.8400

Michael J. Drey  
 Director of Public Works

11/18/2010  
 Date

INDEX OF SHEETS	
SHEET NO.	TITLE
1	COVER SHEET
2	SHEET INDEX AND SUMMARY OF QUANTITIES
3	SITE PLAN AND GENERAL AND SAFETY NOTES
4	FENCE REMOVAL PLAN
5	FENCING PLAN AND COORDINATES
6	FENCING PLAN
7	FENCING PLAN – TERMINAL AND HANGAR AREA
8	SIDEWALK PLAN AND DETAILS
9	CHAIN LINK FENCE DETAILS
10	ARCHITECTURAL (AS) FENCE DETAILS
11	24' GATE DETAILS
12	44' GATE DETAILS
13	ELECTRICAL LEGEND AND ABBREVIATIONS
14	ELECTRIC SLIDE GATE, ELECTRICAL SITE PLAN
15	ELECTRIC SLIDE GATE, ELECTRICAL ONE LINE DIAGRAM
16	ELECTRIC SLIDE GATE DETAILS
17	KEYPAD UNIT, BOLLARD & GATE OPERATOR DETAILS

SUMMARY OF QUANTITIES - BASE BID				
ITEM NO.	DESCRIPTION	UNIT	AS BID	RECORD PAID
AR108501	POWER CABLE IN UNIT DUCT	LINEAR FEET	395.0	
AR109200	INSTALL ELECTRICAL EQUIPMENT	LUMP SUM	1.0	
AR110011	1" DIRECTIONAL BORE	LINEAR FEET	32.0	
AR110014	4" DIRECTIONAL BORE	LINEAR FEET	36.0	
AR150510	ENGINEER'S FIELD OFFICE	LUMP SUM	1.0	
AR208606	6" AGGREGATE BASE COURSE	SQUARE YARD	187.0	
AR501604	4" PCC SIDEWALK	SQUARE FEET	1675.0	
AR800951	24' CL ELECTRIC GATE	EACH	1.0	
AR800952	CLASS E FENCE 10' W/ 2' BURIED	LINEAR FEET	3780.0	
AR800953	24' CL SLIDE GATE	EACH	5.0	
AR800954	10' (DOUBLE 5') CL PED. GATE	EACH	2.0	
AR800955	5' CL PED. GATE	EACH	5.0	
AR800956	AS FENCE 8'	LINEAR FEET	4570.0	
AR800957	44' (DOUBLE 22') AS SLIDE GATE	EACH	7.0	
AR800958	24' AS SLIDE GATE	EACH	1.0	
AR800991	REMOVE FENCE	LINEAR FEET	430.0	
AR901510	SEEDING	ACRE	2.0	
AR904510	SODDING	SQUARE YARD	323.0	
AR908510	MULCHING	ACRE	2.0	

SUMMARY OF QUANTITIES - ALTERNATE BID				
ITEM NO.	DESCRIPTION	UNIT	AS BID	RECORD PAID
AS800951	24' CL ELECTRIC GATE – GALV	EACH	1.0	
AS800952	CLASS E FENCE 10' W/ 2' BURIED – GALV	LINEAR FEET	3780.0	
AS800953	24' CL SLIDE GATE – GALV	EACH	5.0	
AS800954	10' (DOUBLE 5') CL PED. GATE – GALV	EACH	2.0	
AS800955	5' CL PED. GATE – GALV	EACH	5.0	

THE BIDDER/CONTRACTOR SHALL FURNISH ALTERNATE BID PRICING DELETING THE VINYL COATING OF FABRIC AND POSTS IN THE FIVE PAY ITEMS CONTAINING CHAIN-LINK FENCE. THESE ALTERNATE BIDS SHALL BE MADE THROUGH THE FURNISHING OF UNIT PRICES FOR FIVE PAY ITEM NUMBERS BEGINNING WITH AS, INSTEAD OF THE BASE BID NUMBERS BEGINNING IN AR. UNIT PRICES FOR BOTH THE AR AND AS PAY ITEM NUMBERS SHALL BE FURNISHED BY EACH BIDDER/CONTRACTOR. ONLY ONE OF THE TWO ITEMS – AR OR AS – SHALL BE AWARDED.

**NOTICE TO CONTRACTORS AND BIDDERS**

THESE CONSTRUCTION PLANS RELY UPON THE SPECIAL PROVISIONS AND THE SPECIFICATIONS TO PROVIDE FOR A COMPLETE DESCRIPTION OF THE WORK AND CONSTRUCTION REQUIREMENTS. THE PLANS SHALL ONLY BE USED IN COMBINATION WITH ALL CONTRACT DOCUMENTS.

REVISION

DATE

Village of Bolingbrook, Illinois  
375 West Briarcliff Road  
Bolingbrook, Illinois 60440  
Telephone: 630.226.8400



Hanson No. 08A0180

Filename 02-QUANTITIES.DWG

Scale N/A

Date JULY 23, 2010

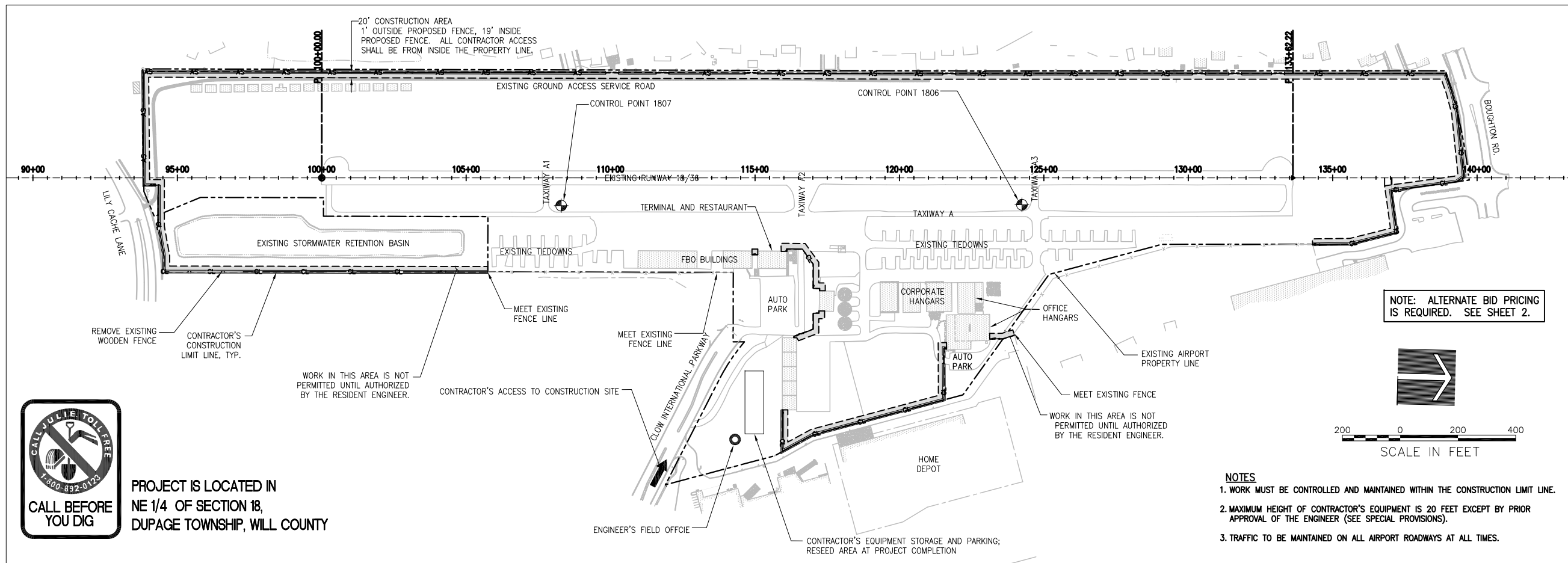
LAYOUT	LDH	7/15/10
DRAWN	LDH	7/15/10
REVIEWED	RMH	7/23/10



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815 Commerce Drive Suite 200  
Oak Brook, Illinois 60523

**SHEET INDEX AND SUMMARY OF QUANTITIES**

**PERIMETER FENCE INSTALLATION**  
IDA No. TCS-3995 AIP No. 3-17-0135-B2



PROJECT IS LOCATED IN  
NE 1/4 OF SECTION 18,  
DUPAGE TOWNSHIP, WILL COUNTY

### GENERAL NOTES

#### PROJECT DESCRIPTION

THIS PROJECT IS TO INSTALL PERIMETER FENCING AT BOLINGBROOK'S CLOW INTERNATIONAL AIRPORT IN BOLINGBROOK, ILLINOIS. INCLUDING, AMONG OTHER INCIDENTAL WORK, THE FOLLOWING ITEMS:

- INSTALLATION OF PERIMETER FENCING.
- INSTALLATION OF ELECTRIC AND NONELECTRIC FENCE GATES.
- TOPSOILING AND SEEDING OF DISTURBED AREAS.

TWO TYPES OF FENCING -- ARCHITECTURAL STEEL AND GREEN VINYL COATED CHAIN LINK -- WILL BE FURNISHED.

#### CONTRACTOR'S USE OF SITE

THE CONTRACTOR SHALL ONLY OPERATE WITHIN THE LIMITS OF CONSTRUCTION SHOWN.

#### PROTECTION OF EXISTING AIRPORT FACILITIES

THE CONTRACTOR IS TO BE RESPONSIBLE FOR THE PROTECTION OF EXISTING UNDERGROUND AND OVERHEAD UTILITIES AND LIGHTING EQUIPMENT, DRIVEWAY AND ROAD PAVEMENT AND SHOULDERS; RUNWAY, TAXIWAY AND APRON PAVEMENTS AND SHOULDERS; RUNWAY, TAXIWAY AND AIRPORT LIGHTING EQUIPMENT; BUILDINGS LOCATED ON THE AIRPORT AND SEEDING AND TURFED AREAS THAT ARE UTILIZED IN OR AFFECTED BY THE CONTRACTOR'S ACTIVITIES. ITEMS DAMAGED BY THE CONTRACTOR ARE TO BE REPAIRED AT CONTRACTOR'S EXPENSE AND TO THE SATISFACTION OF THE AIRPORT MANAGER AND THE RESIDENT ENGINEER.

IN ADDITION WHEN CONDITIONS DICTATE, OR AS DETERMINED BY THE AIRPORT MANAGER OR RESIDENT ENGINEER, THE CONTRACTOR SHALL USE A PICK-UP TYPE SWEEPER IN ALL ACTIVE PAVEMENT AREAS AND ROADS USED AS HAUL ROUTES. THE CONTRACTOR WILL BE REQUIRED TO HAVE A SWEEPER AVAILABLE FOR USE AT ALL TIMES, AND THIS COST SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

#### CONTRACTOR'S ACCESS AND TEMPORARY FACILITIES

CONTRACTOR'S ACCESS TO THE PROJECT WHEN ON AIRPORT PROPERTY IS SHOWN ON THIS SHEET. CONTRACTOR'S ACCESS TO THE AIRPORT ITSELF IS TO BE PROVIDED BY PUBLIC RIGHTS-OF-WAY. THE CONTRACTOR IS TO SECURE ALL NECESSARY PERMITS FOR THE USE OF ANY PUBLIC RIGHTS-OF-WAY AND IS TO MAINTAIN TRAFFIC ON THESE PUBLIC ROADS AT ALL TIMES, WITH THE COSTS OF PERMITTING, CLEANING AND REPAIRING OF PAVEMENT DAMAGED BY CONTRACTOR'S ACTIVITIES INCIDENTAL TO THE CONTRACT. USE OF AND REPAIRS TO ANY PUBLIC FACILITIES ARE TO BE COMPLETED TO THE SATISFACTION OF THE FACILITY'S OWNER.

THE CONTRACTOR IS TO PROVIDE TEMPORARY CONSTRUCTION ROADS WITHIN THE CONSTRUCTION LIMIT LINES AS MAY BE REQUIRED BY HIS ACTIVITIES AT HIS OWN EXPENSE AND DISCRETION, SUBJECT TO THE APPROVAL OF THE RESIDENT ENGINEER. HEAVY VEHICLES SHALL NOT CROSS EXISTING OR NEW PAVEMENT SURFACES EXCEPT AS APPROVED BY THE AIRPORT MANAGER AND THE RESIDENT ENGINEER. ANY DAMAGE TO PAVEMENTS THAT MAY OCCUR BY THE CONTRACTOR'S ACTIVITIES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE AND TO THE SATISFACTION OF THE AIRPORT MANAGER AND THE RESIDENT ENGINEER.

THE CONTRACTOR SHALL PROVIDE EQUIPMENT STORAGE AND PARKING AREAS FOR HIS OWN USE AT THE LOCATIONS SHOWN ON THIS SHEET. THE CONTRACTOR WILL BE RESPONSIBLE TO MAINTAIN THE ACCESS ROADS AND STORAGE AREA DURING CONSTRUCTION AND TO RESTORE THE AREAS AT PROJECT COMPLETION TO CONDITIONS SUITABLE TO THE AIRPORT MANAGER AND THE RESIDENT ENGINEER. THE COST OF PROVIDING, MAINTAINING AND RESTORING THE TEMPORARY FACILITIES IS INCIDENTAL TO THE CONTRACT.

#### RESPONSIBILITY FOR EXISTING UTILITIES

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 WHATEVER 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.

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.

#### EXISTING BENCHMARKS

**CONTROL POINT 1807**  
LAT 41°41'37.09"  
LONG 88°07'43.58"  
ELEV. 656.39  
N: 1831019.48  
E: 1040117.88  
LOCATION - 95.1 FEET EAST FROM THE CENTER OF THE RUNWAY, 52.8 FEET NORTH FROM THE CENTER OF THE RAMP, 48.9 FEET EAST - SOUTHEAST FROM A RUNWAY LIGHT, AND 31.5 FEET WEST FROM THE CENTER OF THE TAXIWAY.

**CONTROL POINT 1806**  
LAT 41°41'52.85"  
LONG 88°07'44.23"  
ELEV. 664.48  
N: 1832613.98  
E: 1040065.14  
LOCATION - 91.9 FEET EAST FROM THE CENTER OF THE RUNWAY, 47.2 FEET SOUTH FROM THE CENTER OF THE RAMP, AND 33.5 FEET WEST FROM THE CENTER OF THE TAXIWAY.

### CONSTRUCTION SAFETY NOTES

#### NOTES

1. WORK MUST BE CONTROLLED AND MAINTAINED WITHIN THE CONSTRUCTION LIMIT LINE.
2. MAXIMUM HEIGHT OF CONTRACTOR'S EQUIPMENT IS 20 FEET EXCEPT BY PRIOR APPROVAL OF THE ENGINEER (SEE SPECIAL PROVISIONS).
3. TRAFFIC TO BE MAINTAINED ON ALL AIRPORT ROADWAYS AT ALL TIMES.

#### WORK SCHEDULE

TO MINIMIZE DISRUPTIONS TO AIRPORT OPERATIONS, CONSTRUCTION OPERATIONS MUST BE CONTROLLED THROUGHOUT THE PROJECT'S DURATION AND WORK MUST BE COMPLETED EXPEDITIOUSLY. THE CONTRACTOR IS TO PREPARE AND FOLLOW A STAGING PLAN THAT COORDINATES HIS WORK WITH THE WORK OF HIS SUBCONTRACTORS AND THE WORK OF OTHER CONTRACTORS ON-FIELD. THIS STAGING PLAN MUST BE SATISFACTORY TO THE OWNER'S REPRESENTATIVE AND THE AIRPORT MANAGER. THE CONTRACTOR SHALL EXPEDITE WORK AT THOSE STAGES WHEN ACTIVE TAXIWAYS, APRONS, ROADWAYS OR PARKING LOTS MUST BE CLOSED TO MINIMIZE THE LENGTH OF TIME THAT AIRPORT OPERATIONS ARE RESTRICTED.

#### AIRFIELD OPERATIONAL SAFETY DURING CONSTRUCTION

ALL CONSTRUCTION TRAFFIC AND PERSONNEL SHALL REMAIN WITHIN THE CONSTRUCTION LIMIT LINE SHOWN ON THE SITE PLAN. CONTRACTOR'S PERSONNEL AND EQUIPMENT MUST NOT OPERATE WITHIN 175 FEET OF AN ACTIVE RUNWAY CENTERLINE, 400 FEET OF THE ACTIVE RUNWAY 18 THRESHOLD AND 320 FEET OF THE ACTIVE RUNWAY 36 THRESHOLD, 45 FEET OF ACTIVE TAXIWAY/TAXILANE CENTERLINES OR WITHIN 10 FEET OF AN ACTIVE APRON EDGE. THE CONTRACTOR'S EQUIPMENT HEIGHT WILL BE LIMITED TO 20 FEET WITHOUT PRIOR APPROVAL OF THE RESIDENT ENGINEER AND THE AIRPORT MANAGER.

WHEN IT IS NECESSARY FOR CONSTRUCTION VEHICLES TO OPERATE ON OR WITHIN THESE LIMITS, THE TAXIWAYS OR APRON MUST BE CLOSED. THE CONTRACTOR WILL PROVIDE POSITIVE CONTROL OF CONSTRUCTION VEHICLES USING RADIO-EQUIPPED FLAGGERS. ALL CONTRACTOR'S EQUIPMENT USED IN ACTIVE AIRPORT OPERATIONS AREAS SHALL BE EQUIPPED WITH A FAA-STANDARD FLAG, AS REFERENCED IN FAA AC 150/5370-2, CURRENT ISSUE. AIRCRAFT SHALL HAVE THE RIGHT-OF-WAY. CONSTRUCTION VEHICLES SHALL NOT CROSS ANY ACTIVE RUNWAYS. THE COST OF ALL TRAFFIC CONTROL, BOTH WITHIN AND OUTSIDE OF AIRPORT OPERATIONS AREAS, IS TO BE INCIDENTAL TO THE CONTRACT. **THE CLOSING OF THE RUNWAY SHALL NOT BE PERMITTED DURING THIS PROJECT.**

WHEN NOT IN USE AND DURING NONWORKING HOURS, CONTRACTOR'S EQUIPMENT SHALL BE PARKED WITHIN THE CONTRACTOR'S EQUIPMENT, STORAGE AND PARKING AREA. AT NO TIME SHALL THE CONTRACTOR OPERATE OR PARK EQUIPMENT SO AS TO OBSTRUCT AN ACTIVE RUNWAY APPROACH SURFACE.

BEFORE REOPENING TEMPORARILY CLOSED TAXIWAYS, APRONS, ROADWAYS OR PARKING LOTS, THE CONTRACTOR SHALL INSPECT AND CLEAN, AS NECESSARY, THE PAVEMENT TO ASSURE THAT NO MATERIALS OR OBJECTS THAT MAY DAMAGE AIRCRAFT OR VEHICLES REMAIN. ANY REQUIRED CLEANING SHALL BE TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE AND AIRPORT MANAGER AND IS INCIDENTAL TO THE CONTRACT.

#### NOTIFICATIONS BY CONTRACTOR

THE CONTRACTOR SHALL NOTIFY THE RESIDENT ENGINEER AND AIRPORT DIRECTOR 72 HOURS IN ADVANCE OF THE CONTRACTOR'S CLOSING OF ACTIVE TAXIWAYS, APRONS, ROADWAYS, PARKING LOTS, AIRFIELD OR ROADWAY LIGHTING CIRCUITS OR OTHER AIRPORT OPERATIONAL FACILITIES.

#### CONTRACTOR'S USE OF SITE

THE CONTRACTOR SHALL NOT OPERATE WITHIN, ENCR OACH UPON OR OBSTRUCT AIRPORT OPERATIONAL AREAS, INCLUDING ACTIVE RUNWAY, TAXIWAYS AND APRON SAFETY AREAS, OBJECT AND OBSTACLE FREE ZONES, RUNWAY PROTECTION ZONES AND AIRPORT IMAGINARY SURFACES AS DEFINED IN FEDERAL AVIATION REGULATIONS (FAR) PART 77, "OBJECTS AFFECTING NAVIGABLE AIRSPACE".

#### UTILITY OUTAGES AND SHUTDOWNS

THE CONTRACTOR SHALL PROVIDE 72 HOURS PRIOR NOTICE OF ANY OUTAGES OR SHUTDOWNS TO THE OWNER AND THE AGENCY OWNING THE AFFECTED UTILITY. THE CONTRACTOR SHALL PROVIDE ANY TEMPORARY CONNECTIONS OR OTHER MEASURES AS MAY BE REQUIRED TO MAINTAIN SERVICE AS MAY BE REQUIRED BY THE OWNING AGENCY AT NO COST TO THE OWNER.

REVISION	DATE

Village of Bolingbrook, Illinois  
375 West Briarcliff Road  
Bolingbrook, Illinois 60440  
Telephone: 630.226.8400

**Bolingbrook**  
a place to grow

FILENAME	DATE	LAYOUT	DATE
03-SITE PLAN & GEN	JULY 23, 2010	LDH	7/15/10
1"=200'		LDH	7/15/10
		RMH	7/23/10

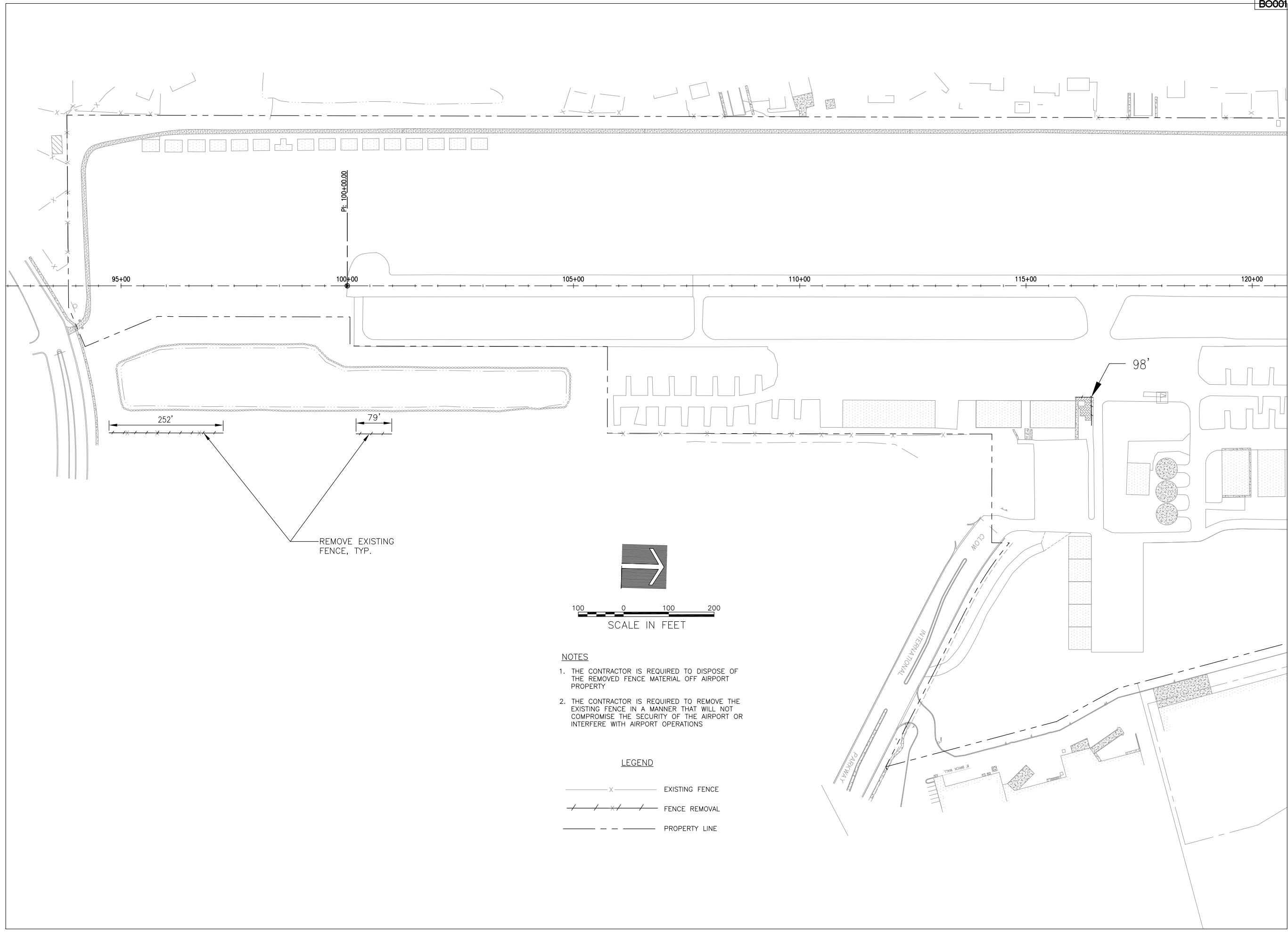
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Hanson Professional Services Inc.  
815 Commerce Drive Suite 200  
Oak Brook, Illinois 60523

**SITE PLAN AND GENERAL AND SAFETY NOTES**

**PERIMETER FENCE INSTALLATION**  
AIP No. 3-17-0135-B2  
IDA No. 1C5-3995

JAN 18, 2011 11:06 AM HAUSM00682  
 I:\08\085\00844\08A0180\DRAWINGS\SHEETS\04-FENCE REMOVAL PLAN.DWG



- NOTES**
1. THE CONTRACTOR IS REQUIRED TO DISPOSE OF THE REMOVED FENCE MATERIAL OFF AIRPORT PROPERTY
  2. THE CONTRACTOR IS REQUIRED TO REMOVE THE EXISTING FENCE IN A MANNER THAT WILL NOT COMPROMISE THE SECURITY OF THE AIRPORT OR INTERFERE WITH AIRPORT OPERATIONS

- LEGEND**
- X — EXISTING FENCE
  - / - / X - / - / FENCE REMOVAL
  - - - - - PROPERTY LINE

REVISION	DATE

Village of Bolingbrook, Illinois  
 375 West Briarcliff Road  
 Bolingbrook, Illinois 60440  
 Telephone: 630.226.8400



PLAN/DWG	REVISION	DATE
08A0180	04-FENCE REMOVAL	JULY 23, 2010
LDH	LAYOUT	7/15/10
LDH	DRAWN	7/15/10
RMH	REVIEWED	7/23/10

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 Oak Brook, Illinois 60523

**FENCE REMOVAL PLAN**

**PERIMETER FENCE INSTALLATION**  
 IDA No. TCS-3995 AIP No. 3-17-0135-B2

REVISION	DATE

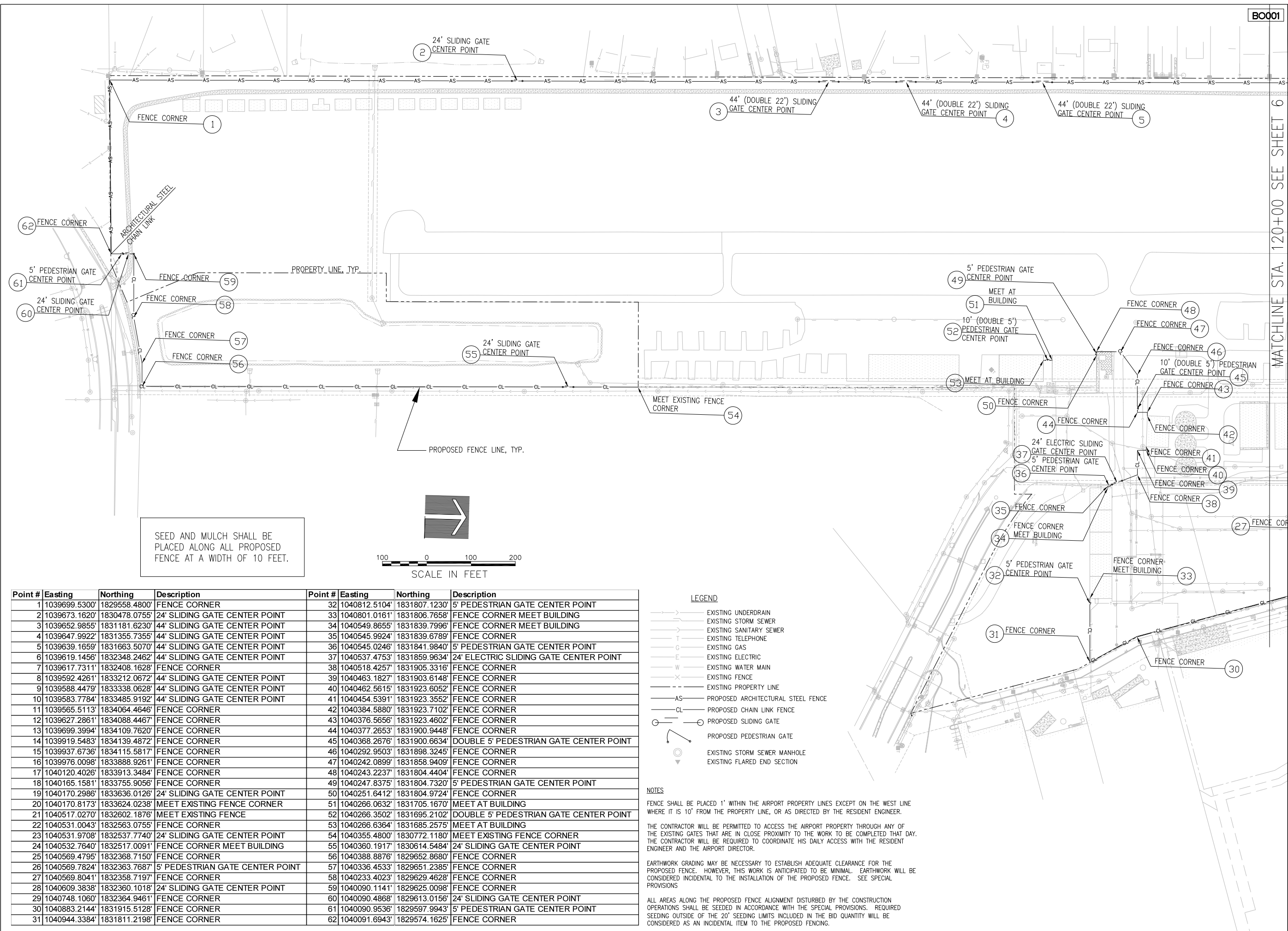
Village of Bolingbrook, Illinois  
 375 West Briarcliff Road  
 Bolingbrook, Illinois 60440  
 Telephone: 630.226.8400

Hanson No.	08A0180	DATE	JULY 23, 2010
Filename	05-FENCE LAYOUT.DWG	LAYOUT	LDH
Scale	1"=100'	DRAWN	LDH
Date	JULY 23, 2010	REVIEWED	RMH

**HANSON**  
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 815 Commerce Drive Suite 200  
 Oak Brook, Illinois 60523

**FENCING PLAN AND COORDINATES**

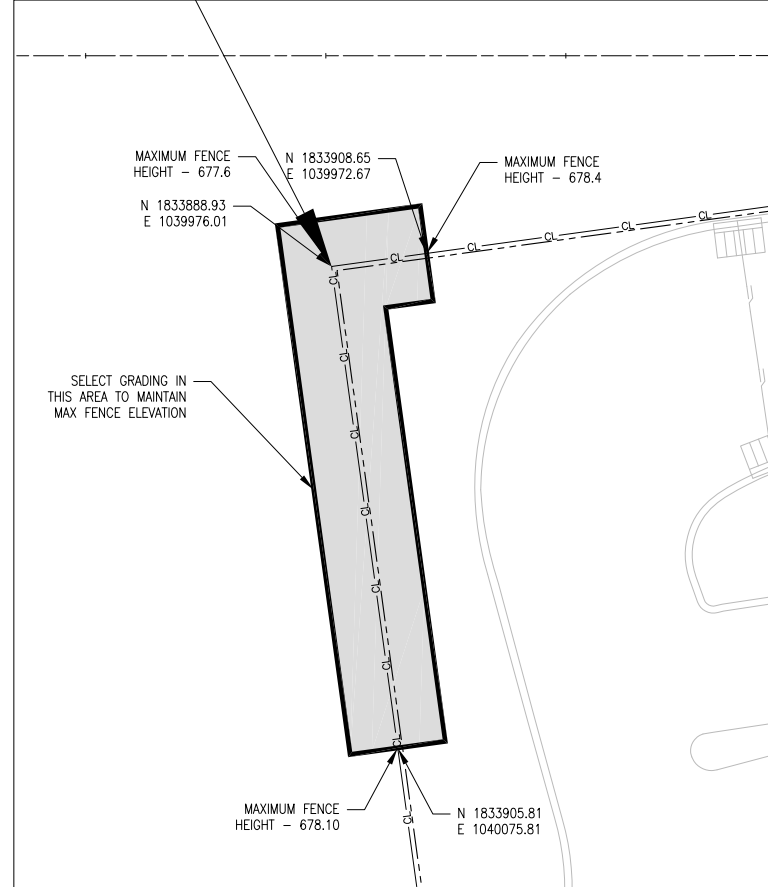
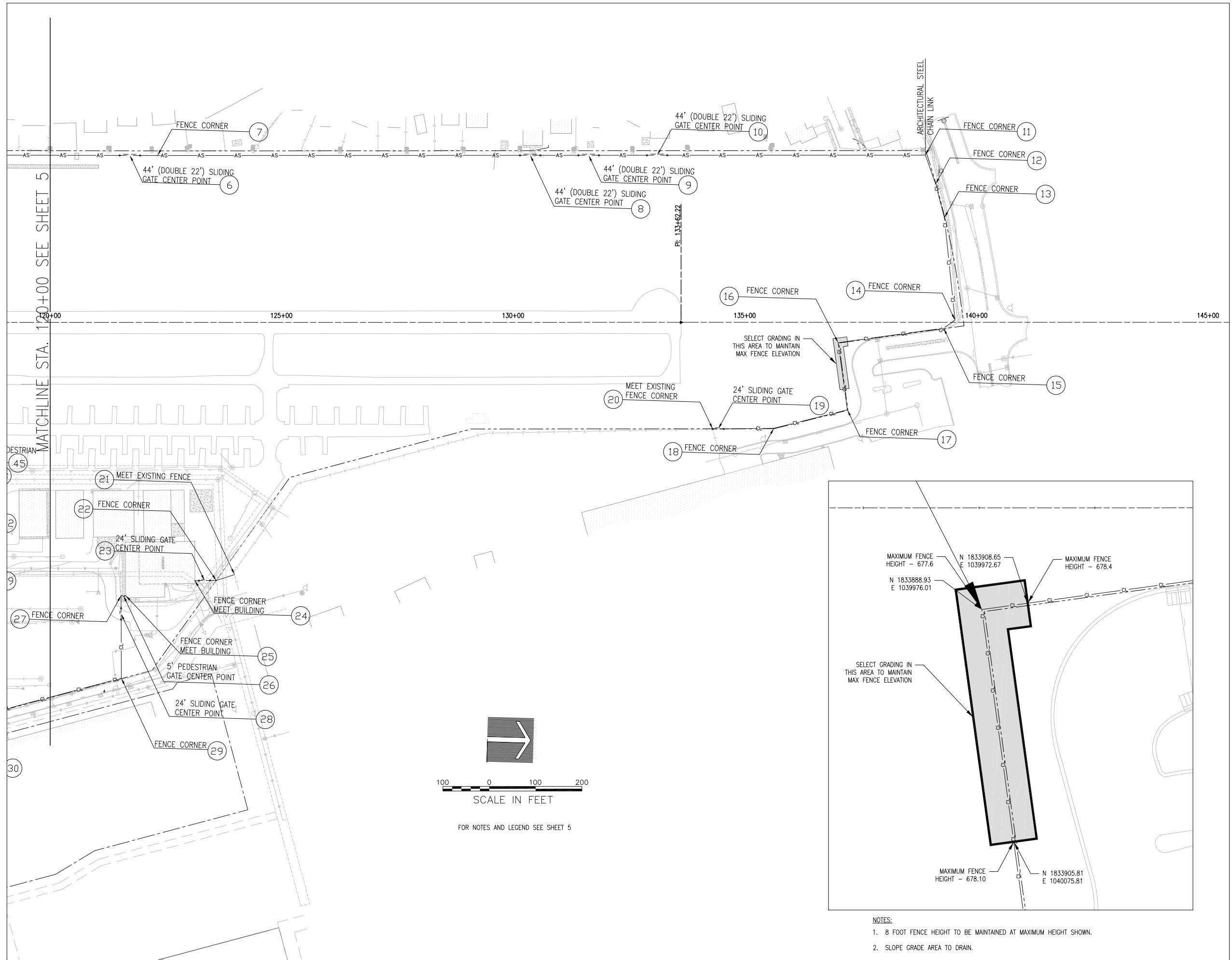
PERIMETER FENCE INSTALLATION  
 IDA No. 1C5-3995 AIP No. 3-17-0135-B2



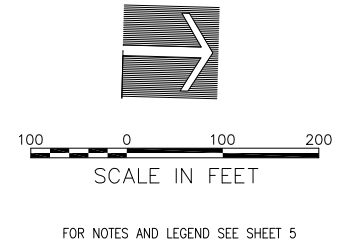
Point #	Easting	Northing	Description	Point #	Easting	Northing	Description
1	1039699.5300'	1829558.4800'	FENCE CORNER	32	1040812.5104'	1831807.1230'	5' PEDESTRIAN GATE CENTER POINT
2	1039673.1620'	1830478.0755'	24' SLIDING GATE CENTER POINT	33	1040801.0161'	1831806.7658'	FENCE CORNER MEET BUILDING
3	1039652.9855'	1831181.6230'	44' SLIDING GATE CENTER POINT	34	1040549.8655'	1831839.7996'	FENCE CORNER MEET BUILDING
4	1039647.9922'	1831355.7355'	44' SLIDING GATE CENTER POINT	35	1040545.9924'	1831839.6789'	FENCE CORNER
5	1039639.1659'	1831663.5070'	44' SLIDING GATE CENTER POINT	36	1040545.0246'	1831841.9840'	5' PEDESTRIAN GATE CENTER POINT
6	1039619.1456'	1832348.2462'	44' SLIDING GATE CENTER POINT	37	1040537.4753'	1831859.9634'	24' ELECTRIC SLIDING GATE CENTER POINT
7	1039617.7311'	1832408.1628'	FENCE CORNER	38	1040518.4257'	1831905.3316'	FENCE CORNER
8	1039592.4261'	1833212.0672'	44' SLIDING GATE CENTER POINT	39	1040463.1827'	1831903.6148'	FENCE CORNER
9	1039588.4479'	1833338.0628'	44' SLIDING GATE CENTER POINT	40	1040462.5615'	1831923.6052'	FENCE CORNER
10	1039583.7784'	1833485.9192'	44' SLIDING GATE CENTER POINT	41	1040454.5391'	1831923.3552'	FENCE CORNER
11	1039565.5113'	1834064.4646'	FENCE CORNER	42	1040384.5880'	1831923.7102'	FENCE CORNER
12	1039627.2861'	1834088.4467'	FENCE CORNER	43	1040376.5656'	1831923.4602'	FENCE CORNER
13	1039699.3994'	1834109.7620'	FENCE CORNER	44	1040377.2653'	1831900.9448'	FENCE CORNER
14	1039919.5483'	1834139.4872'	FENCE CORNER	45	1040368.2676'	1831900.6634'	DOUBLE 5' PEDESTRIAN GATE CENTER POINT
15	1039937.6736'	1834115.5817'	FENCE CORNER	46	1040292.9503'	1831898.3245'	FENCE CORNER
16	1039976.0098'	1833888.9261'	FENCE CORNER	47	1040242.0899'	1831858.9409'	FENCE CORNER
17	1040120.4026'	1833913.3484'	FENCE CORNER	48	1040243.2237'	1831804.4404'	FENCE CORNER
18	1040165.1581'	1833755.9056'	FENCE CORNER	49	1040247.8375'	1831804.7320'	5' PEDESTRIAN GATE CENTER POINT
19	1040170.2986'	1833636.0126'	24' SLIDING GATE CENTER POINT	50	1040251.6412'	1831804.9724'	FENCE CORNER
20	1040170.8173'	1833624.0238'	MEET EXISTING FENCE CORNER	51	1040266.0632'	1831705.1670'	MEET AT BUILDING
21	1040517.0270'	1832602.1876'	MEET EXISTING FENCE	52	1040266.3502'	1831695.2102'	DOUBLE 5' PEDESTRIAN GATE CENTER POINT
22	1040531.0043'	1832563.0755'	FENCE CORNER	53	1040266.6364'	1831685.2575'	MEET AT BUILDING
23	1040531.9708'	1832537.7740'	24' SLIDING GATE CENTER POINT	54	1040355.4800'	1830772.1180'	MEET EXISTING FENCE CORNER
24	1040532.7640'	1832517.0091'	FENCE CORNER MEET BUILDING	55	1040360.1917'	1830614.5484'	24' SLIDING GATE CENTER POINT
25	1040569.4795'	1832368.7150'	FENCE CORNER	56	1040388.8876'	1829652.8680'	FENCE CORNER
26	1040569.7824'	1832363.7687'	5' PEDESTRIAN GATE CENTER POINT	57	1040336.4533'	1829651.2385'	FENCE CORNER
27	1040569.8041'	1832358.7197'	FENCE CORNER	58	1040233.4023'	1829629.4628'	FENCE CORNER
28	1040609.3838'	1832360.1141'	24' SLIDING GATE CENTER POINT	59	1040090.1141'	1829625.0098'	FENCE CORNER
29	1040748.1060'	1832364.9461'	FENCE CORNER	60	1040090.4868'	1829613.0156'	24' SLIDING GATE CENTER POINT
30	1040883.2144'	1831915.5128'	FENCE CORNER	61	1040090.9536'	1829597.9943'	5' PEDESTRIAN GATE CENTER POINT
31	1040944.3384'	1831811.2198'	FENCE CORNER	62	1040091.6943'	1829574.1625'	FENCE CORNER

JAN 18, 2011 11:06 AM HAUSM00682  
 I:\08\0844\0844\08A0180\DRAWINGS\05-FENCE LAYOUT.DWG

MATCHLINE STA. 120+00 SEE SHEET 6



- NOTES:
1. 8 FOOT FENCE HEIGHT TO BE MAINTAINED AT MAXIMUM HEIGHT SHOWN.
  2. SLOPE GRADE AREA TO DRAIN.



JAN 18, 2011 11:06 AM HAUSM00682  
 I:\08\085\00844\08A0180\DRAWINGS\SHEETS\06-FENCE LAYOUT.DWG

MATCHLINE STA. 120+00 SEE SHEET 5

DATE	REVISION

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 Bolingbrook, Illinois 60440  
 Telephone: 630.226.8400

**Bolingbrook**  
 a place to grow

Hanson No. 08A0180	File Name 06-FENCE LAYOUT.DWG	Scale 1" = 100'	Date JULY 23, 2010
LAYOUT	LDH	7/15/10	
DRAWN	LDH	7/15/10	
REVIEWED	RMH	7/23/10	

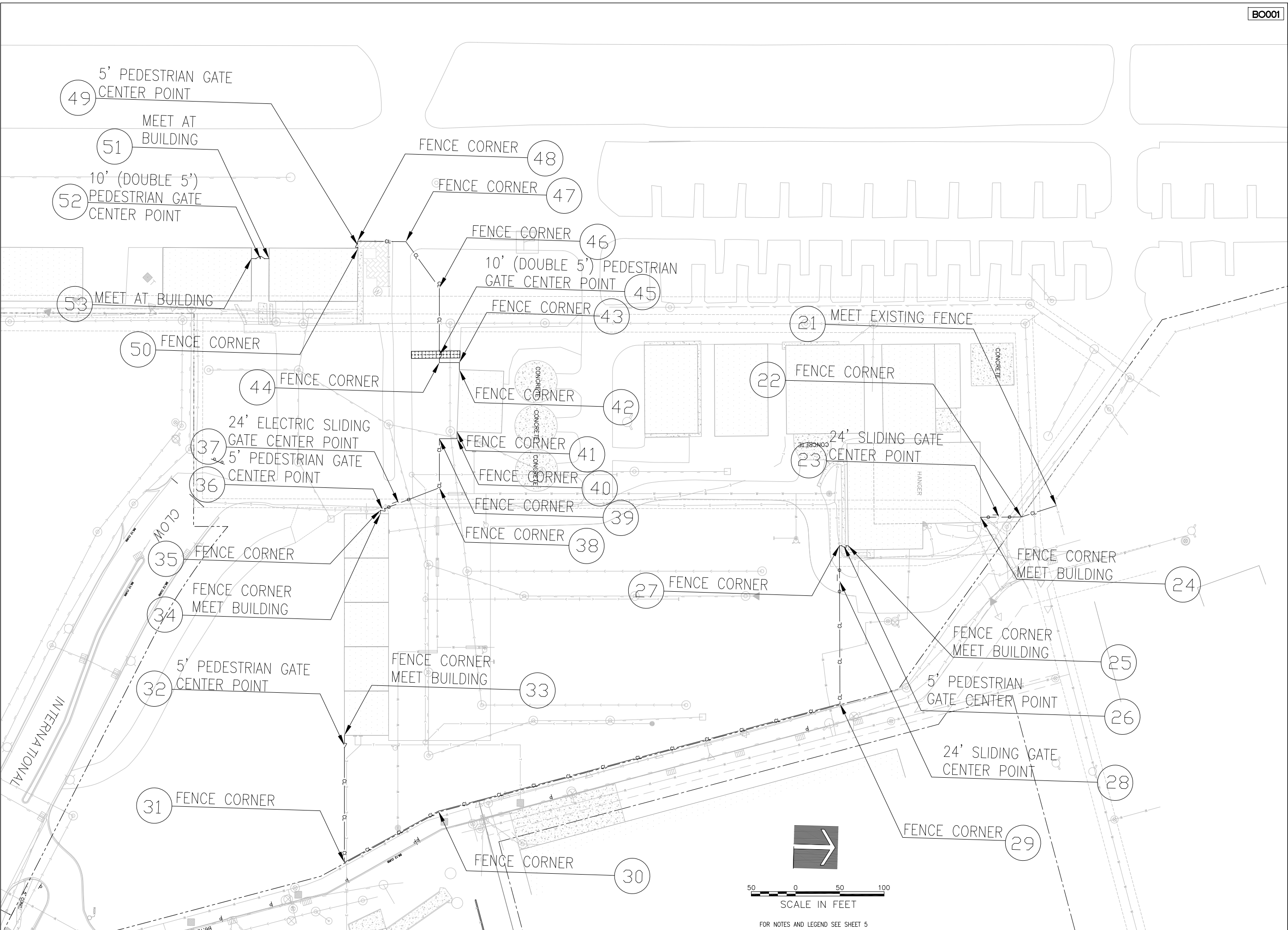
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**FENCING PLAN**

**PERIMETER FENCE INSTALLATION**  
 IDA No. TCS-3995 AIP No. 3-17-0135-B2

JAN 18, 2011 11:05 AM HAUSM00682  
I:\08\085\00844\08A0180\DRAWINGS\SHEETS\07-FENCE\_LAYOUT\_ZOOM.DWG



50 0 50 100  
SCALE IN FEET

FOR NOTES AND LEGEND SEE SHEET 5

DATE	REVISION

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Bolingbrook, Illinois 60440  
Telephone: 630.226.8400

**Bolingbrook**  
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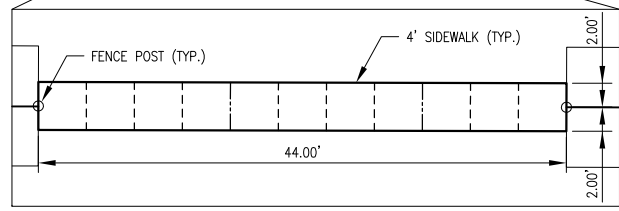
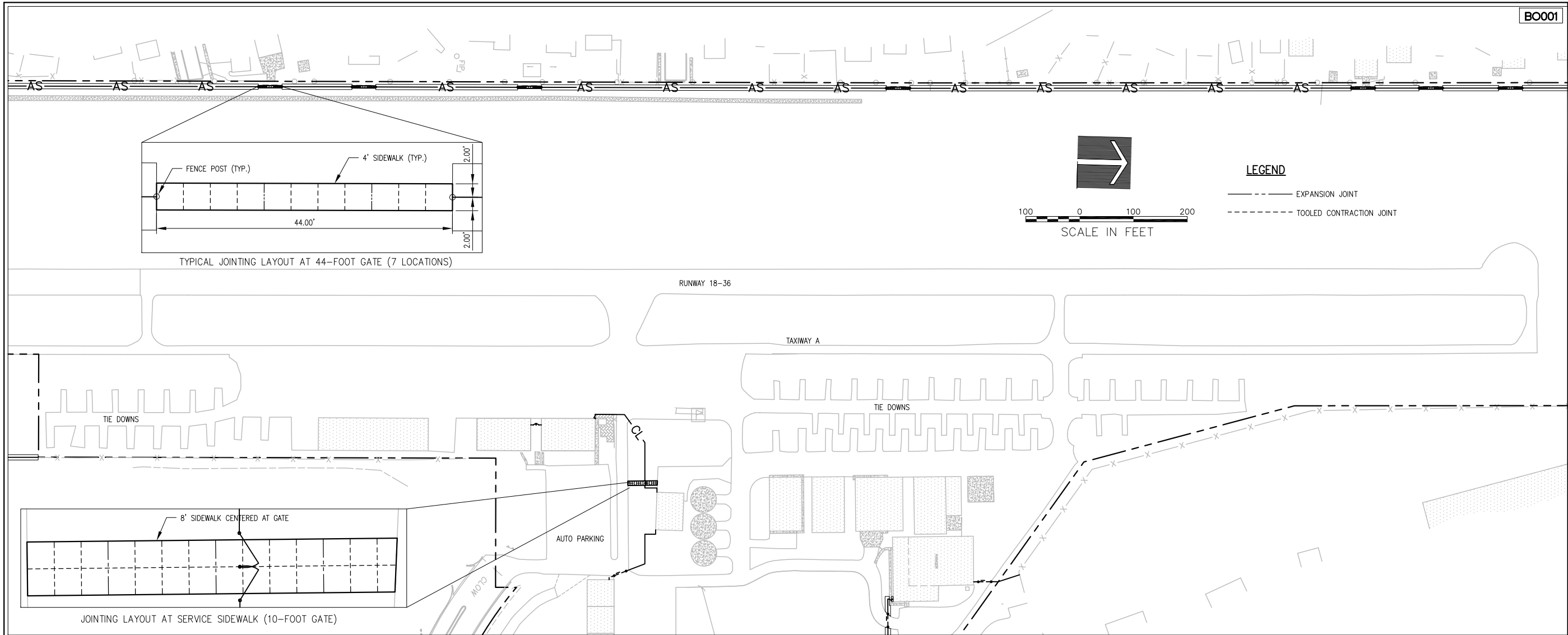
Hanson No. 08A0180	LAYOUT	LDH	7/15/10
Filename 07-FENCE_LAYOUT_ZOOM.DWG	DRAWN	LDH	7/15/10
Scale 1"=50'	REVIEWED	RMH	7/23/10
Date JULY 23, 2010			

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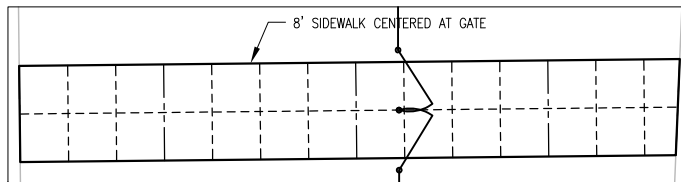
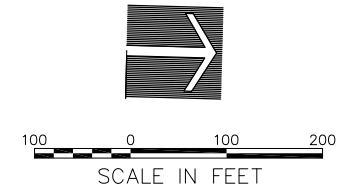
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Oak Brook, Illinois 60523

**FENCING PLAN- TERMINAL AND HANGAR AREA**

**PERIMETER FENCE INSTALLATION**  
IDA No. TCS-3995 AIP No. 3-17-0135-B2



TYPICAL JOINTING LAYOUT AT 44-FOOT GATE (7 LOCATIONS)



JOINTING LAYOUT AT SERVICE SIDEWALK (10-FOOT GATE)

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375 West Briarcliff Road  
Bolingbrook, Illinois 60440  
Telephone: 630.226.8400

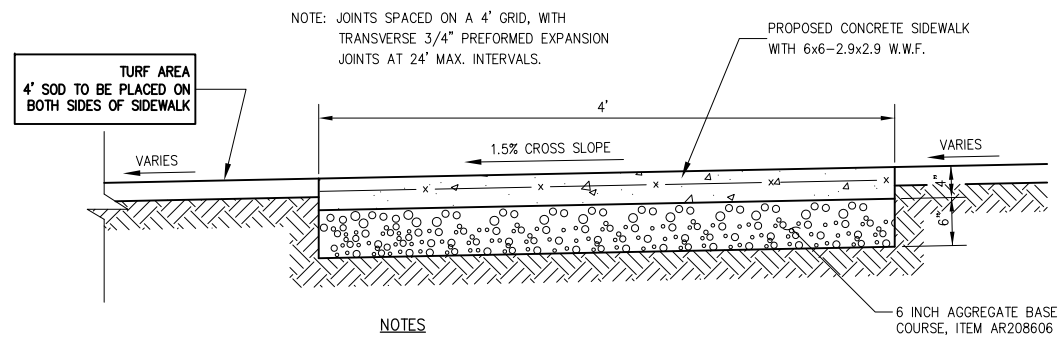
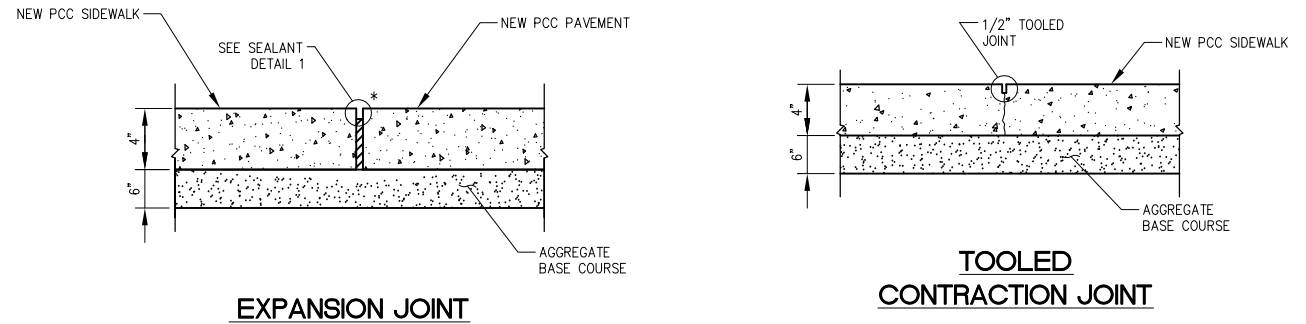


Hanson No. 08A0180  
Filename 08-SIDEWALK PLAN.DWG  
Scale 1"=100'  
Date JULY 23, 2010

LAYOUT	LDH	7/15/10
DRAWN	LDH	7/15/10
REVIEWED	RMH	7/23/10

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SIDEWALK PLAN AND DETAILS  
PERIMETER FENCE INSTALLATION  
IDA No. TCS-3995 AIP No. 3-17-0135-B2



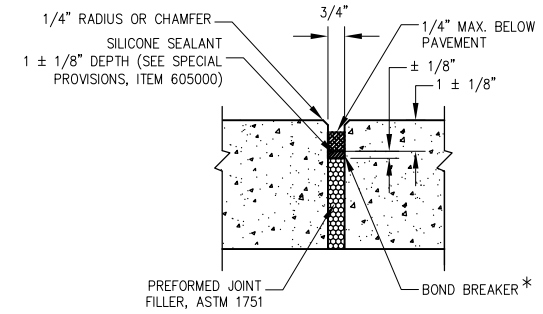
NOTE: JOINTS SPACED ON A 4' GRID, WITH TRANSVERSE 3/4" PREFORMED EXPANSION JOINTS AT 24' MAX. INTERVALS.

PROPOSED CONCRETE SIDEWALK WITH 6x6-2.9x2.9 W.W.F.

NOTES

- 3/4" PREFORMED JOINT FILLER TO BE USED IN ALL LOCATIONS WHERE SIDEWALK IS ADJACENT TO EXISTING PAVEMENT.
- SIDEWALK SHALL BE SET AT 2 INCHES ABOVE EXISTING GRADE AND SLOPED TRANSVERSELY TO MEET FENCE GRADE.

SIDEWALK CROSS SECTION DETAIL

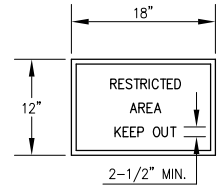
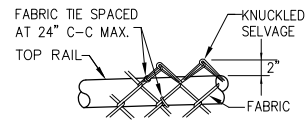


DETAIL 1 - SEALANT

\* POLYETHYLENE OR POLYESTER TAPE (3 MIL. MIN.) OR MARKING TAPE, RUBBER TAPE, 1/8" WIDER THAN WIDTH OF JOINT.

JAN 18, 2011 10:57 AM HAUSM00682  
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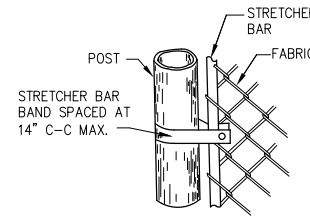


0.08 GA. ALUMINUM ALLOY SHEET  
(LETTERING COLOR SHALL BE RED ON  
WHITE BACKGROUND.)

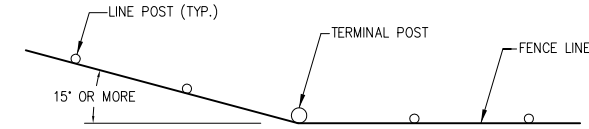
**NOTES:**

1. EACH GATE SHALL REQUIRE ONE SIGN.
2. EVERY 100' OF FENCE SHALL REQUIRE ONE SIGN.
3. COST OF THESE SIGNS AND THEIR INSTALLATION IS INCIDENTAL TO FENCE OR GATE.

**SIGN DETAIL**

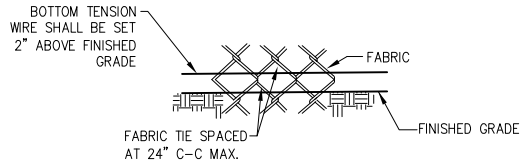


**STRETCHER BAR BAND**

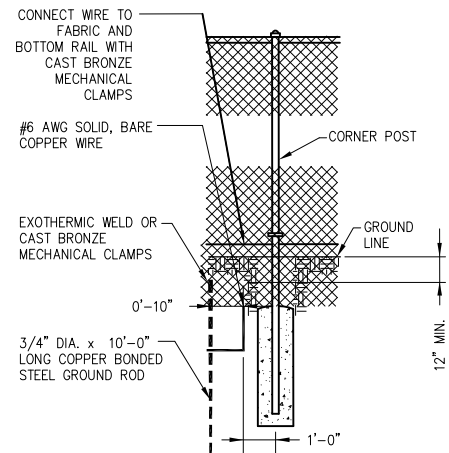


WHEN FENCE LINE HAS A CHANGE IN DIRECTION OF 15' OR MORE, A TERMINAL POST SHALL BE PLACED AS SHOWN ABOVE. WHERE ANGLE IS LESS THAN 15' AND EXISTING CONDITIONS REQUIRE A TERMINAL POST, THEY SHALL BE PLACED AS DIRECTED BY THE RESIDENT ENGINEER.

**INSTALLATION AT CORNERS**

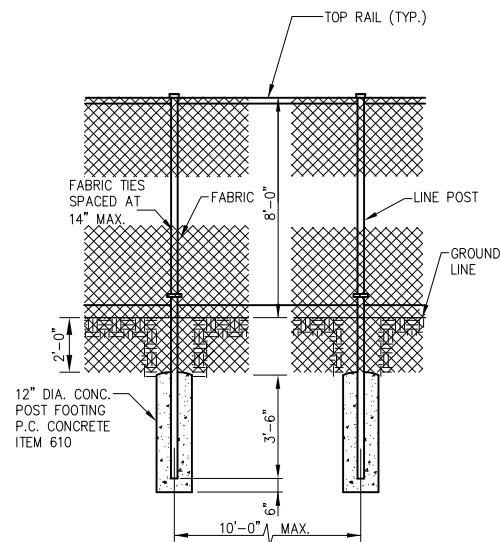


**FABRIC TIES**

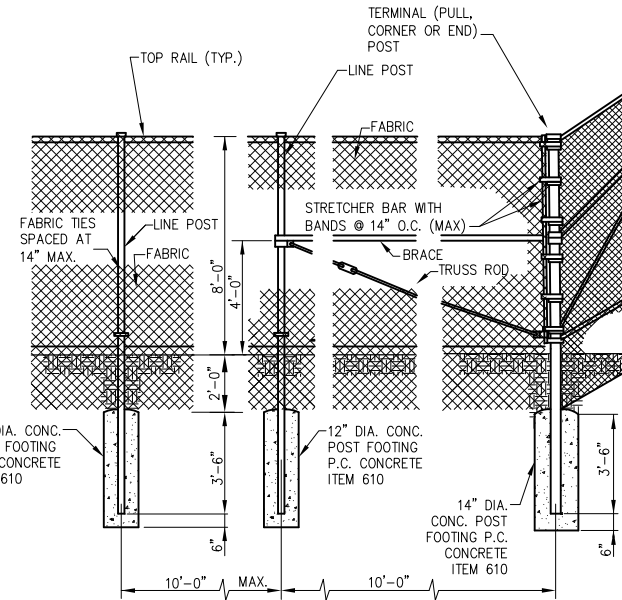


**PROTECTIVE ELECTRICAL GROUND**

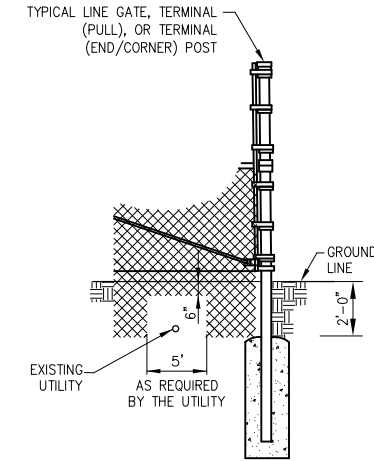
GROUNDS SHALL BE INSTALLED AT END POSTS AND AT 500' INTERVALS ALONG THE FENCE EXCEPT AROUND THE ELECTRICAL VAULT WHERE THEY ARE TO BE PLACED AT ALL FOUR FENCE CORNERS, COST INCIDENTAL TO FENCE.



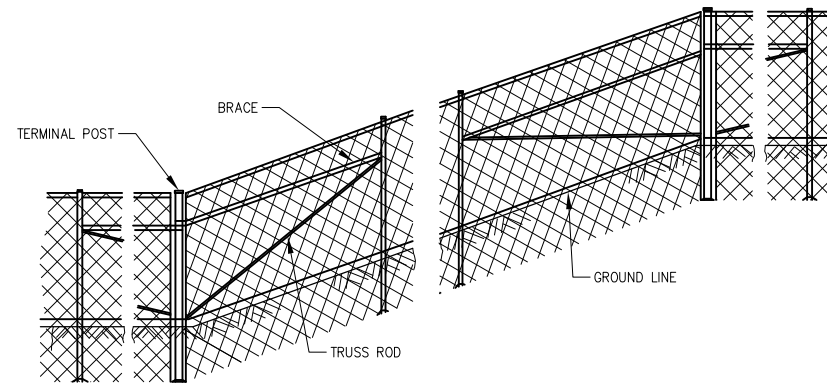
**LINE POST**



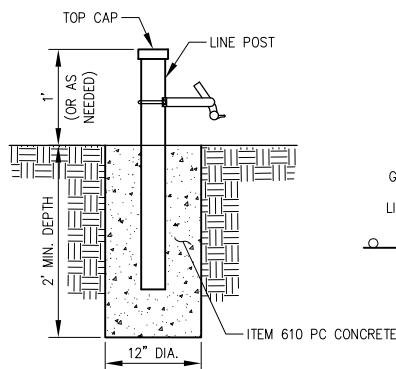
**TERMINAL (PULL, CORNER OR END) POST**



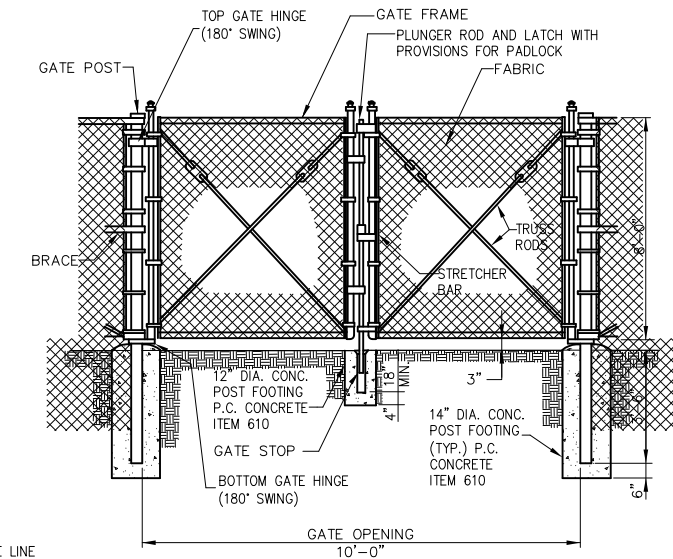
**FENCE INSTALLATION OVER UTILITIES**



**INSTALLATION ON SLOPES**



**GATE HOLDBACK**



**PEDESTRIAN GATE, 10' (DOUBLE 5')**

**FENCING NOTES**

1. FOR BASE BID OR PAY ITEMS, ALL FENCE, FABRIC, POSTS, GATES, TENSION WIRE, RODS, BRACES, ARMS, BARBED WIRE AND MISCELLANEOUS FITTINGS SHALL BE GALVANIZED STEEL WITH GREEN VINYL COATING. VINYL COATING SHALL BE DELETED FOR AS PAY ITEMS AS800951, AS800952, AS800953, AS800954 AND AS800955.
2. FENCE HEIGHT SHALL BE 10' WITH BOTTOM 2' BURIED. GATE HEIGHT ABOVE GROUND LINE SHALL BE 8'-0" AS SHOWN.
3. PULL POSTS SHALL BE PLACED AT 660 FOOT INTERVALS BETWEEN CORNER OR END POSTS TO WHICH THE ENDS OF THE FABRIC ARE CLAMPED OR MIDWAY BETWEEN SUCH POSTS WHEN THE DISTANCE IS LESS THAN 1,320 FEET AND GREATER THAN 660 FEET.
4. GATE HOLDBACKS SHALL BE PROVIDED TO HOLD GATES IN THE OPEN POSITION. THEY SHALL BE LOCATED AND INSTALLED AS SHOWN OR AS DIRECTED BY THE RESIDENT ENGINEER.
5. ALUMINUM RESTRICTED AREA SIGNS SHALL BE FURNISHED AS SHOWN IN THE DETAIL. COST INCIDENTAL TO FENCE OR GATE.
6. SONOTUBE TO BE USED FOR CASTING POST FOUNDATIONS WHERE REQUIRED BY THE SOIL CONDITIONS TO PROVIDE A CONSTANT WIDTH FOOTING
7. COST OF TRENCHING FOR FENCE FABRIC BURIAL SHALL BE INCIDENTAL TO CHAIN LINK FENCE.
8. SS40 POSTS SHALL NOT BE USED.
9. SEE SPECIAL PROVISIONS.

LINE POST	
SECTION (O.D.)	LBS./FT.
PIPE SCH. 40 2.375"	3.65

HORIZONTAL BRACES	
SECTION (O.D.)	LBS./FT.
PIPE SCH. 40 1.66"	*

GATE FRAMES	
SECTION (O.D.)	LBS./FT.
PIPE SCH. 40 2.0"	*

GATE POSTS			
GATE OPENING (FT.)		PIPE SCH. 40	
SINGLE	DOUBLE	SIZE (O.D.)	(LBS./FT.)
OVER 8 TO 14	OVER 16 TO 28	4.0"	9.11

TERMINAL POST	
SECTION (O.D.)	LBS./FT.
PIPE SCH. 40 2.875"	5.79

\* SEE SPECIAL PROVISIONS.

DETAILS SHOWN ARE NOT TO SCALE

REVISION	DATE

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Bolingbrook, Illinois 60440  
Telephone: 630.226.8400

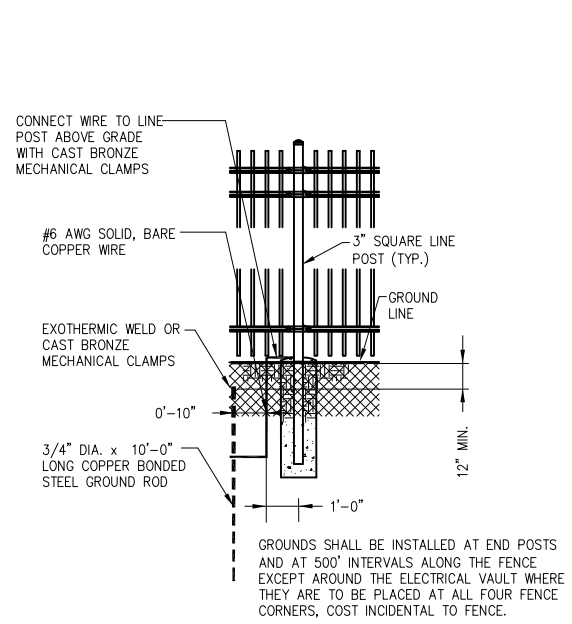


LAYOUT	LDH	7/15/10
DRAWN	LDH	7/15/10
REVIEWED	RMH	7/23/10

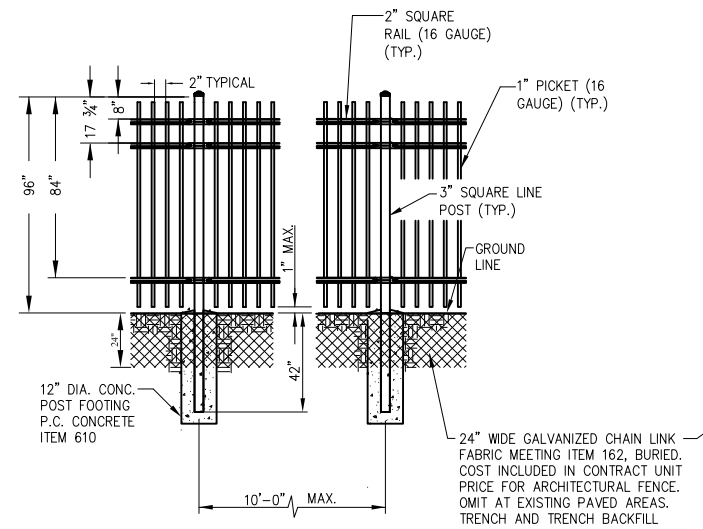
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Hanson Professional Services Inc.  
815 Commerce Drive Suite 200  
Oak Brook, Illinois 60523

**CHAIN LINK FENCE DETAILS**  
PERIMETER FENCE INSTALLATION  
IDA No. TCS-3995 AIP No. 3-17-0135-B2

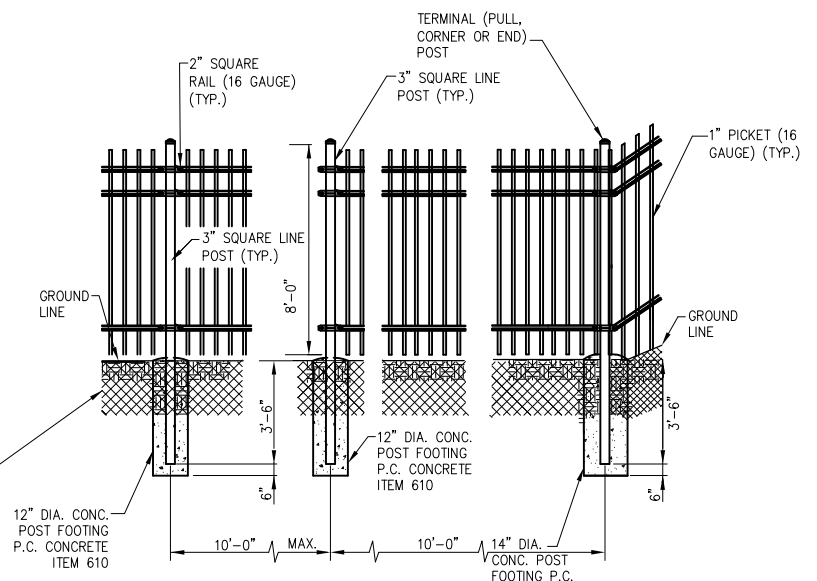
JAN 19, 2011 8:49 AM HAUSM00682  
I:\080BS\08044\08044\DRAWINGS\SHEETS\09--FENCING DETAILS.DWG



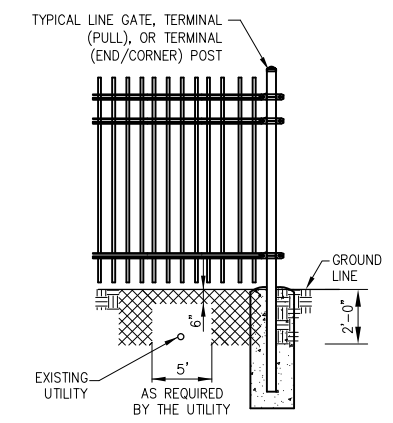
PROTECTIVE ELECTRICAL GROUND



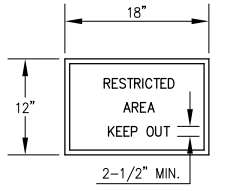
LINE POST



TERMINAL (PULL, CORNER OR END) POST

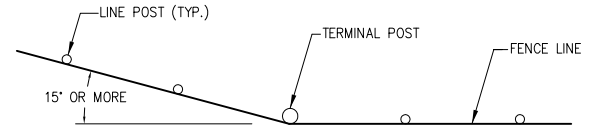


FENCE INSTALLATION OVER UTILITIES



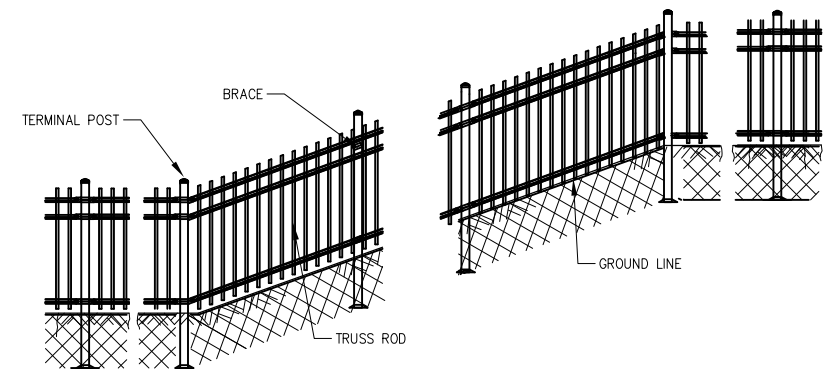
SIGN DETAIL

- 0.08 GA. ALUMINUM ALLOY SHEET (LETTERING COLOR SHALL BE RED ON WHITE BACKGROUND.)
- NOTES:**
1. EACH GATE SHALL REQUIRE ONE SIGN.
  2. EVERY 100' OF FENCE SHALL REQUIRE ONE SIGN.
  3. COST OF THESE SIGNS AND THEIR INSTALLATION IS INCIDENTAL TO FENCE OR GATE.



INSTALLATION AT CORNERS

WHEN 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 A TERMINAL POST, THEY SHALL BE PLACED AS DIRECTED BY THE RESIDENT ENGINEER.



INSTALLATION ON SLOPES

JAN 18, 2011 10:56 AM HAUSM00682 I:\08\085\0844\08A0180\DRAWINGS\SHEETS\10--FENCING--DETAILS.DWG

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 Bolingbrook, Illinois 60440  
 Telephone: 630.226.8400

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DATE	BY	REVIEWED
JULY 23, 2010	N/A	N/A
7/15/10	LDH	LDH
7/15/10	LDH	LDH
7/23/10	LDH	RMH

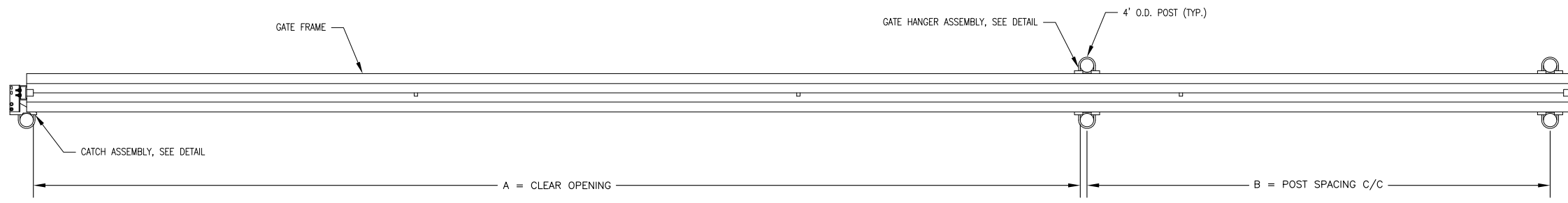
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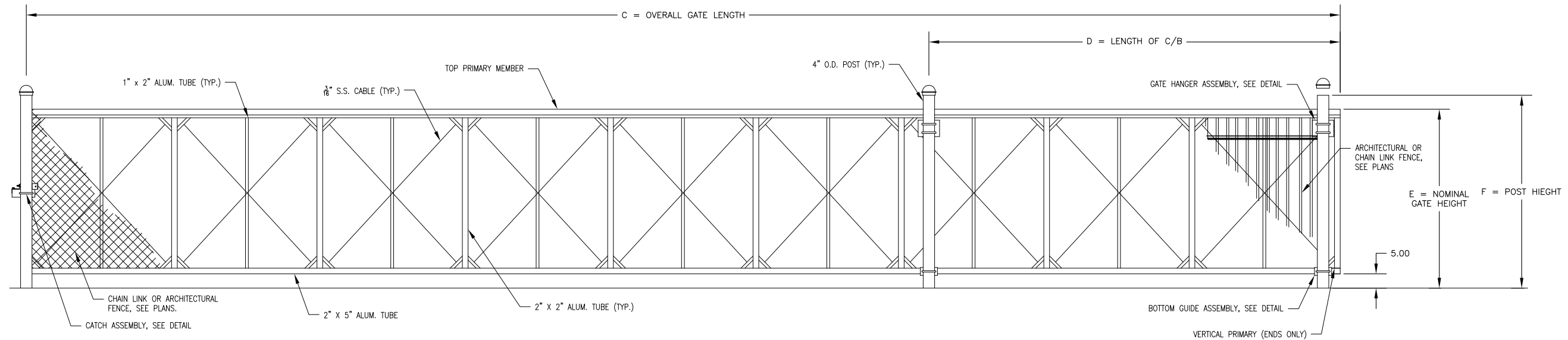
ARCHITECTURAL (AS)  
 FENCE DETAILS

PERIMETER FENCE INSTALLATION  
 IDA No. TCS-3995 AIP No. 3-17-0135-B2

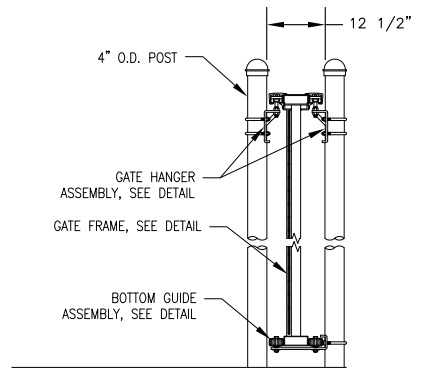
DETAILS SHOWN ARE NOT TO SCALE



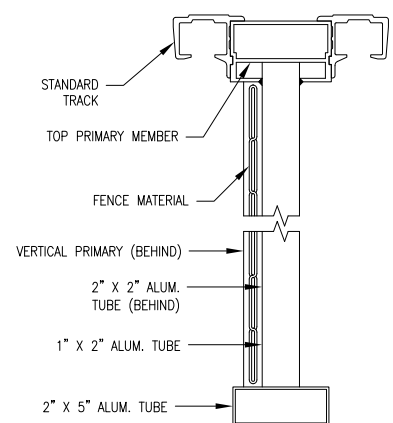
PLAN VIEW



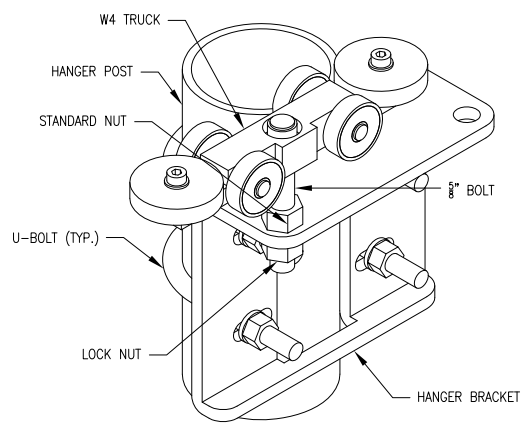
ELEVATION



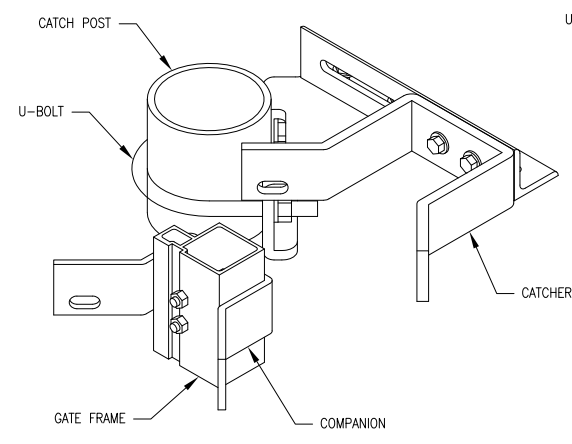
ASSEMBLY SECTION



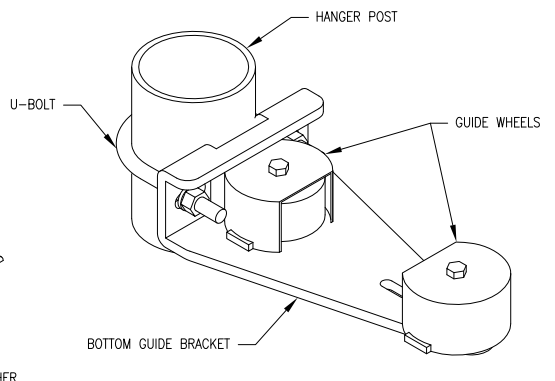
GATE FRAME SECTION



GATE HANGER ASSEMBLY



CATCH ASSEMBLY



BOTTOM GUIDE ASSEMBLY

NOMINAL GATE SIZE	
24' W X 8' H	
CRITICAL DIMENSION CHART	
A	CLEAR OPENING 24'-0"
B	COUNTERBALANCE POST SPACING C/C 11'-1"
C	OVERALL GATE LENGTH 36'-0"
D	COUNTERBALANCE LENGTH 12'-0"
E	NOMINAL GATE HEIGHT 8'-0"
F	POST HEIGHT 8'-6"

NOTE:  
GATE ELEVATION IS VIEWED FROM THE OUTSIDE OF THE SECURE AREA LOOKING IN.

JAN 18, 2011 11:10 AM HAUSM00682 I:\08\085\00844\08A0180\DRAWINGS\SHEETS\11-24' GATE DETAILS.DWG

REVISION	DATE

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Bolingbrook, Illinois 60440  
Telephone: 630.226.8400



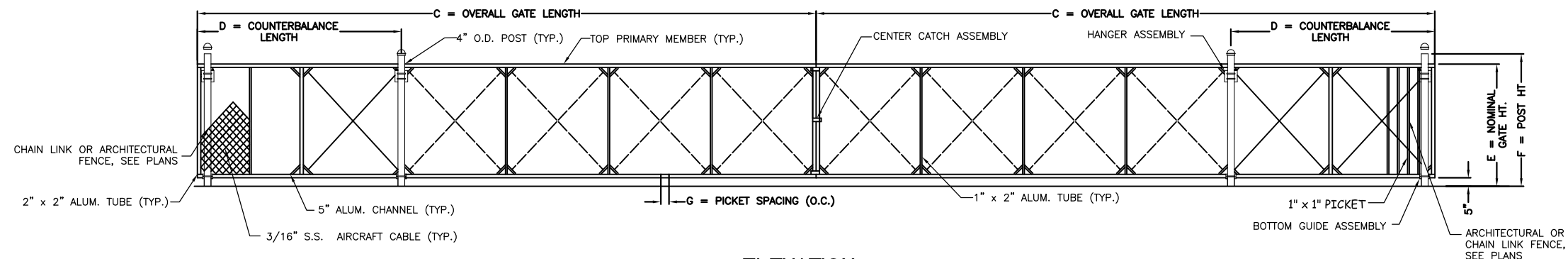
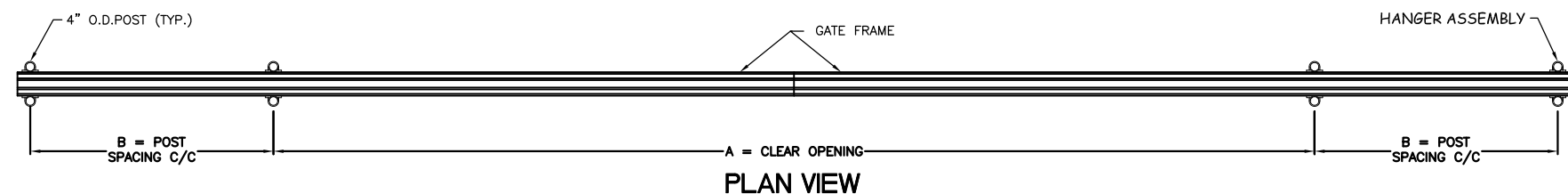
FILENAME	SCALE	DATE	LAYOUT	DRAWN	REVIEWED
11-24' GATE DETAILS.DWG	N/A	JULY 23, 2010	LDH	LDH	RMH

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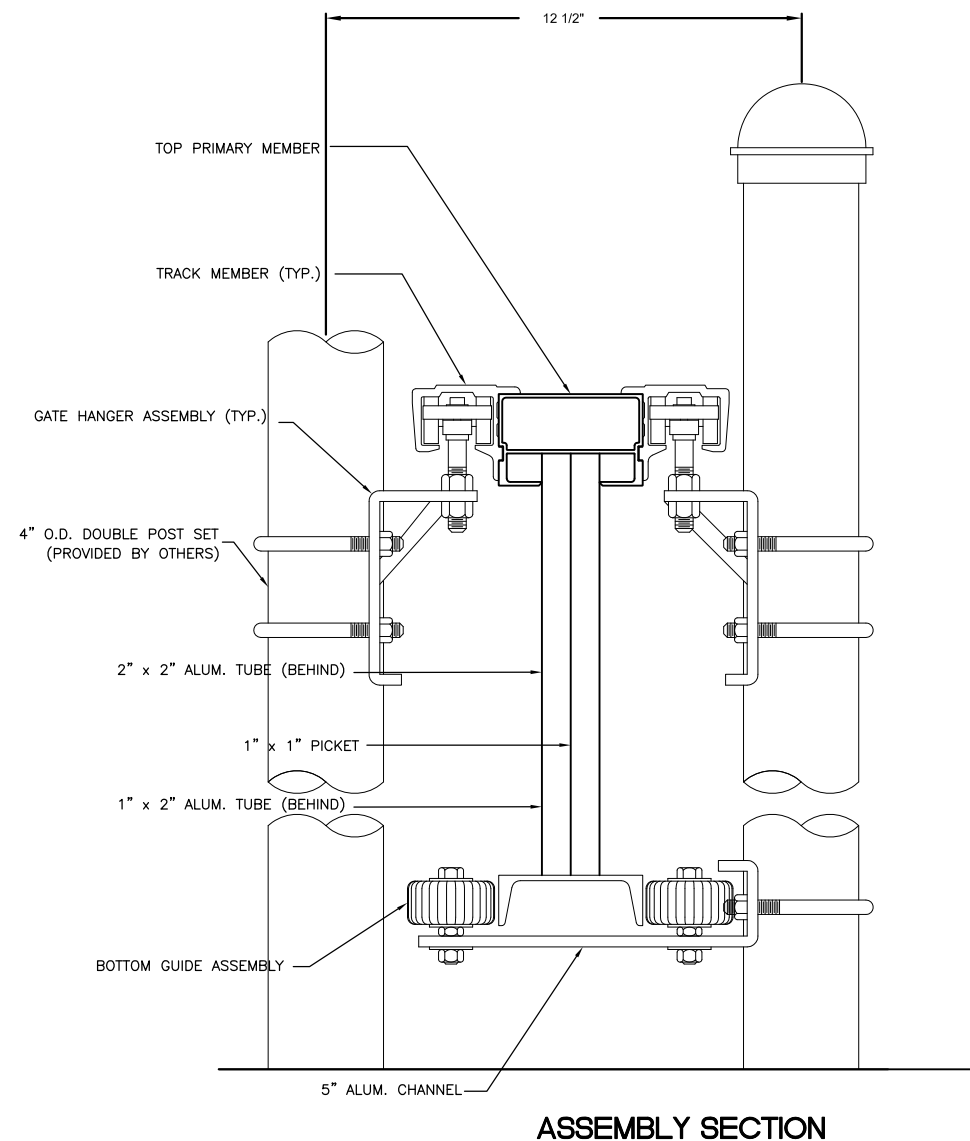
24' GATE DETAILS

PERIMETER FENCE INSTALLATION  
IDA No. TCS-3995 AIP No. 3-17-0135-B2

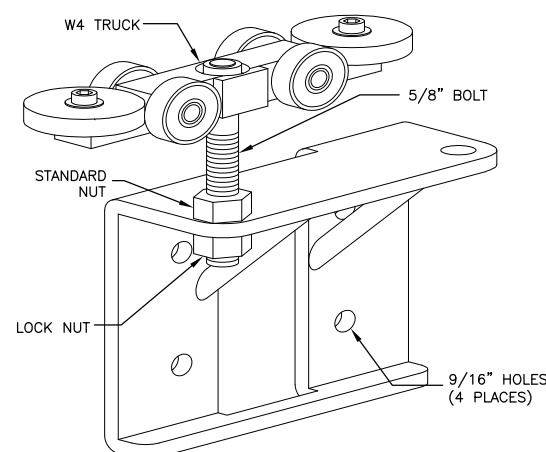
NOTES:  
 1. FOR GATES THAT REQUIRE FABRICATION IN ONE PIECE, A 2" x 5" ALUMINUM TUBE WILL BE SUBSTITUTED FOR THE ALUMINUM CHANNEL BOTTOM MEMBER.



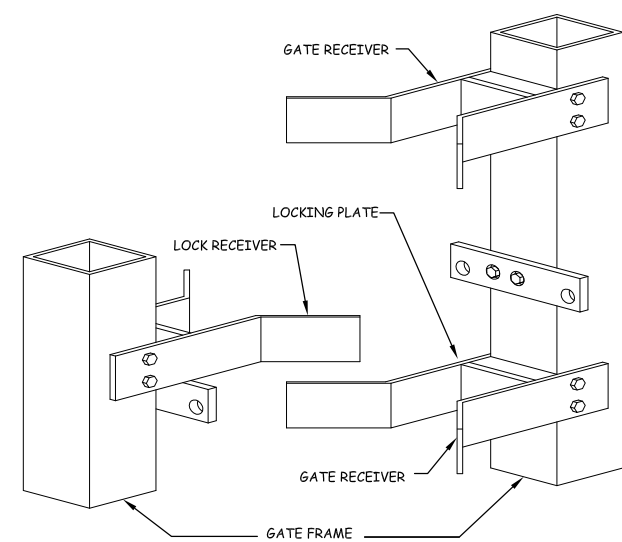
ELEVATION



ASSEMBLY SECTION

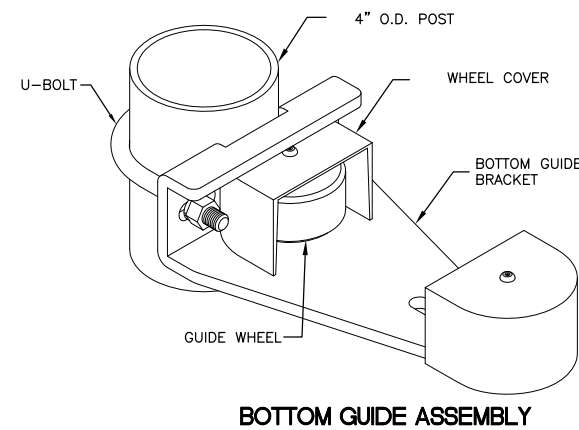


GATE HANGER ASSEMBLY



CATCH ASSEMBLY

CRITICAL DIMENSION CHART		
A	CLEAR OPENING	44'-0"
B	COUNTERBALANCE POST SPACING C/C	10'-1"
C	OVERALL GATE LENGTH	33'-0"
D	COUNTERBALANCE LENGTH	11'-0"
E	NOMINAL GATE HEIGHT	8'-0"
F	POST HEIGHT	8'-6"
G	PICKET SPACING	0'-5"



BOTTOM GUIDE ASSEMBLY

REVISION	DATE

Village of Bolingbrook, Illinois  
 375 West Briarcliff Road  
 Bolingbrook, Illinois 60440  
 Telephone: 630.226.8400



Hanson No. 08A0180	Filename 12-44' GATE_DET	LAYOUT LDH 7/15/10
Scale N/A	Date JULY 23, 2010	DRAWN LDH 7/15/10
		REVIEWED RMH 7/23/10

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44' GATE DETAILS

PERIMETER FENCE INSTALLATION  
 IDA No. TCS-3995 AIP No. 3-17-0135-B2

JAN 18, 2011 11:10 AM HAUSM00682  
 I:\08\085\00844\08A0180\DRAWINGS\SHEETS\12-44' GATE DETAILS.DWG

ELECTRICAL LEGEND -- ONE-LINE DIAGRAM	
	CABLE TERMINATOR/LUG, TERMINAL BLOCK, OR SPLICE
	TRANSFORMER
	DISCONNECT SWITCH
	FUSIBLE DISCONNECT SWITCH
	CIRCUIT BREAKER
	THERMAL MAGNETIC CIRCUIT BREAKER
	NORMALLY OPEN (N.O.) CONTACT
	NORMALLY CLOSED (N.C.) CONTACT
	TOGGLE SWITCH / 2 POSITION SWITCH
	FUSE
	TRANSIENT VOLTAGE SURGE SUPPRESSOR OR SURGE PROTECTOR DEVICE
	GROUND -- GROUND ROD, GROUNDING ELECTRODE, OR AT EARTH POTENTIAL
	INDICATING LIGHT
	MOTOR
	LOAD, MOTOR, # = HORSEPOWER
	ELECTRIC UTILITY METER BASE
	JUNCTION BOX WITH SPLICE OR TERMINALS
	EQUIPMENT, XXXX = DEVICE DESCRIPTION
	GROUND BAR, GROUND BUS OR GROUND TERMINAL
	SOLID NEUTRAL, NEUTRAL BUS, OR NEUTRAL TERMINAL
	PANELBOARD WITH MAIN LUGS
	PANELBOARD WITH MAIN BREAKER
	FUSE PANEL WITH MAIN FUSE PULLOUT
	DUPLEX RECEPTACLE 120V SINGLE PHASE GROUNDING TYPE
	CONTROL STATION
	TRANSFER SWITCH: N = NORMAL EM = EMERGENCY L = LOAD
	ENGINE GENERATOR SET

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

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

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

AIRPORT EQUIPMENT/FACILITY ABBREVIATIONS	
ASOS	AUTOMATED SURFACE OBSERVING SYSTEM
ATCT	AIR TRAFFIC CONTROL TOWER
AWOS	AUTOMATED WEATHER OBSERVING SYSTEM
CCR	CONSTANT CURRENT REGULATOR
DME	DISTANCE MEASURING EQUIPMENT
FAR	FEDERAL AVIATION REGULATION
GS	GLIDE SLOPE FACILITY
HIRL	HIGH INTENSITY RUNWAY LIGHT
ILS	INSTRUMENT LANDING SYSTEM
IM	INNER MARKER
LIR	LOW IMPACT-RESISTANT
LOC	LOCALIZER FACILITY
MALS	MEDIUM INTENSITY APPROACH LIGHTING SYSTEM
MALSR	MEDIUM INTENSITY APPROACH LIGHTING SYSTEM WITH RUNWAY ALIGNMENT INDICATING LIGHTS
MIRL	MEDIUM INTENSITY RUNWAY LIGHT
MITL	MEDIUM INTENSITY TAXIWAY LIGHT
NDB	NON-DIRECTIONAL BEACON
PAPI	PRECISION APPROACH PATH INDICATOR
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:

- ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN CONFORMANCE WITH NFPA 70 - NATIONAL ELECTRICAL CODE (NEC) MOST CURRENT ISSUE IN FORCE, THE RESPECTIVE EQUIPMENT MANUFACTURER'S DIRECTIONS AND ALL OTHER APPLICABLE LOCAL CODES, LAWS, ORDINANCES, AND REQUIREMENTS IN FORCE. ANY INSTALLATIONS WHICH VOID THE U.L. LISTING, ETL LISTING (OR OTHER THIRD PARTY LISTING) AND/OR THE MANUFACTURER'S WARRANTY OF A DEVICE WILL NOT BE PERMITTED.
- ALL WORK, POWER OUTAGES, AND/OR SHUT DOWN OF EXISTING SYSTEMS SHALL BE COORDINATED WITH THE AIRPORT 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).
- 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:  
  
208/120 VAC, 3 PHASE, 4 WIRE  

PHASE A	BLACK
PHASE B	RED
PHASE C	BLUE
NEUTRAL	WHITE
GROUND	GREEN
- SEE RESPECTIVE SITE PLANS FOR SITE LEGEND INFORMATION.
- LTFCM 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 LTFCM THAT IS NOT UL LISTED. CONFIRM LTFCM 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.
- 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 5 FT. ABOVE THE UPPER SURFACE OF WINGS AND OF ENGINE ENCLOSURES. ALL ELECTRICAL INSTALLATIONS IN CLASSIFIED HAZARDOUS LOCATIONS SHALL BE AVOIDED UNLESS SPECIFICALLY APPROVED FOR SUCH LOCATIONS AND INSTALLED IN CONFORMANCE WITH NEC 500, 501, AND 513 AS WELL AS OTHER APPLICABLE CODES AND REQUIREMENTS.

REVISION	DATE

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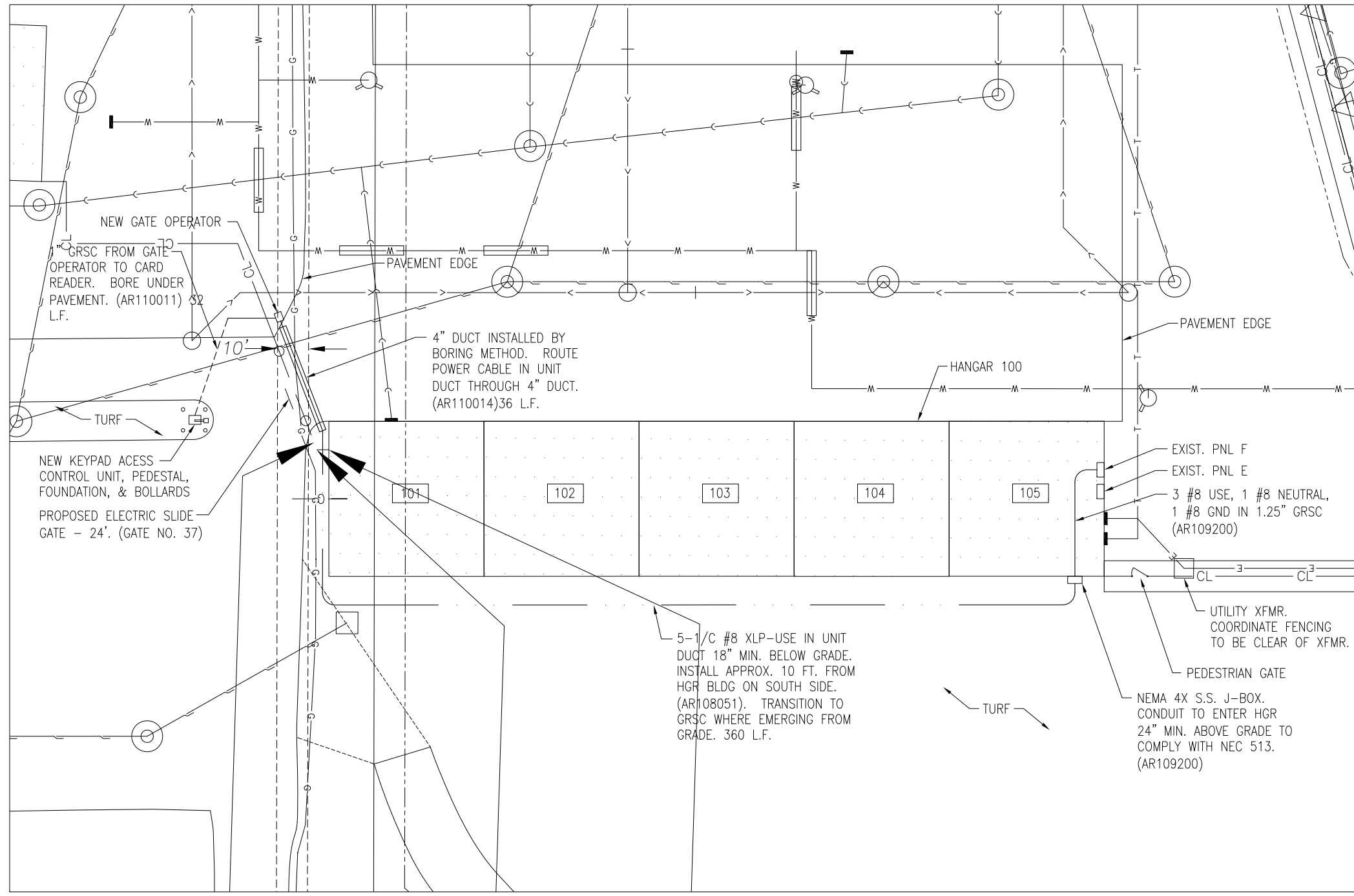
Hanson No. 08A0180	7/15/10
Filename 13-E-001.DWG	LDH
Scale N/A	LDH
Date JULY 23, 2010	RMH
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**ELECTRICAL LEGEND AND ABBREVIATIONS**

**PERIMETER FENCE INSTALLATION**  
 IDA No. TCS-3995 AIP No. 3-17-0135-B2



**NOTES:**

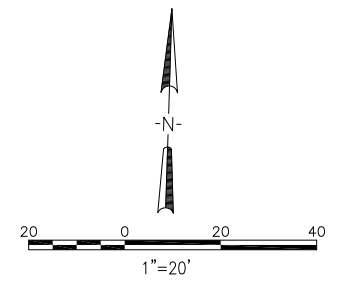
1. SEE "PROPOSED ELECTRIC SLIDE GATE DETAILS" SHEET FOR ADDITIONAL REQUIREMENTS ON ELECTRIC SLIDE GATE WORK.
2. SEE PLAN SHEET 5 FOR ADDITIONAL LEGEND INFO.

**LEGEND**

- E — EXISTING ELECTRICAL CABLES
- · — · — PROPOSED ELECTRICAL CABLES
- W — EXISTING WATER LINE
- T — EXISTING TELEPHONE LINE
- G — EXISTING GAS LINE
- X — PROPOSED FENCE
- ⊙ EXISTING MANHOLE
- ⊙ CARD READER WITH BOLLARDS

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 WHATEVER 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.

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.



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Hanson No.	Filename	Scale	Date	LAYOUT	LDH	7/15/10
08A0180	14-E-101.DWG	1"=20'	JULY 23, 2010	DRAWN	LDH	7/15/10
				REVIEWED	RMH	7/23/10

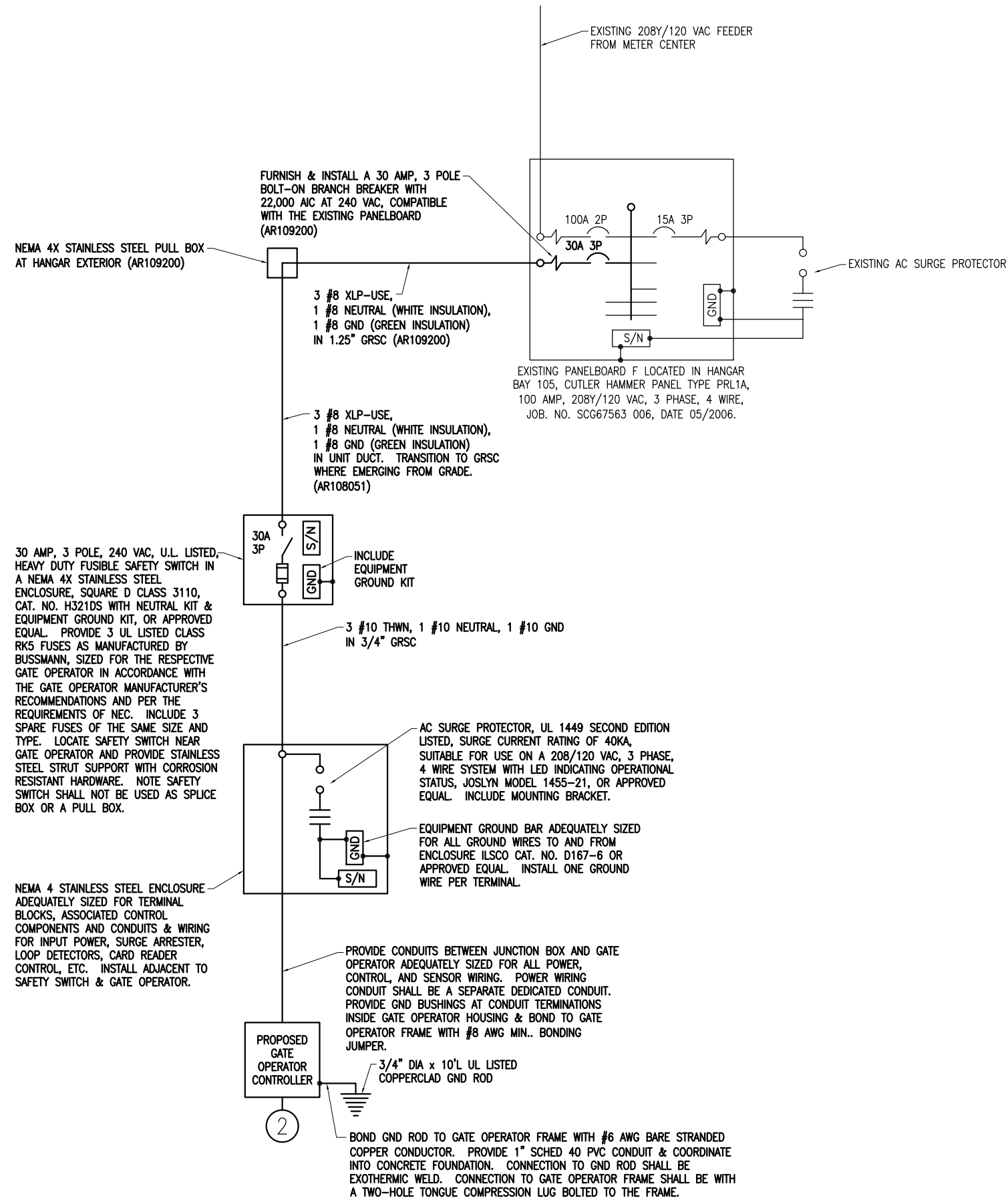
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**ELECTRIC SLIDE GATE  
 ELECTRICAL SITE PPLAN**

**PERIMETER FENCE INSTALLATION**  
 IDA No. TCS-3995 AIP No. 3-17-0135-B2

NOTES

- SEE "ELECTRICAL LEGEND AND ABBREVIATIONS" SHEET FOR GENERAL NOTES AND REQUIREMENTS.
- ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN CONFORMANCE WITH NFPA 70-NATIONAL ELECTRICAL CODE (NEC) MOST CURRENT ISSUE IN FORCE, THE RESPECTIVE EQUIPMENT MANUFACTURER'S DIRECTIONS AND ALL OTHER APPLICABLE LOCAL CODES, LAWS, ORDINANCES AND REQUIREMENTS IN FORCE. ANY INSTALLATIONS WHICH VOID THE U.L. LISTING, ETL LISTING, (OR OTHER THIRD PARTY LISTING) AND/OR THE MANUFACTURER'S WARRANTY OF A DEVICE WILL NOT BE PERMITTED.
- ALL EQUIPMENT SHOWN NOT LABELED AS EXISTING IS NEW.
- ALL FIXED WIRING IN THE RESPECTIVE HANGAR SHALL BE IN METAL RACEWAYS TO COMPLY WITH THE REQUIREMENTS OF NEC 513.7.
- ALL CONTROL POWER TRANSFORMERS, POWER SUPPLIES, RECEPTACLES, LOOP DETECTOR AMPLIFIERS, SECONDARY SAFETY DEVICE EQUIPMENT, AND ANY OTHER ASSOCIATED CONTROLS SHALL BE INSTALLED EITHER INSIDE THE GATE OPERATOR CONTROL PANEL OR INSIDE A SEPARATE NEMA 4 STAINLESS STEEL CONTROL PANEL ENCLOSURE. WHERE THE CONTROL EQUIPMENT IS TO BE INSTALLED INSIDE THE GATE OPERATOR CONTROL PANEL THE CONTRACTOR SHALL COORDINATE THIS WITH THE GATE OPERATOR MANUFACTURER AND THE RESPECTIVE GATE OPERATOR EQUIPMENT SUPPLIER. LOCATING THESE CONTROLS OUTSIDE OF GATE OPERATOR CONTROL PANEL BUT WITHIN THE GATE OPERATOR HOUSING WILL NOT MEET THIS REQUIREMENT.
- CIRCUIT BREAKER, CABLES, CONDUITS, & JUNCTION BOXES INSTALLED IN OR AT HANGAR 100 WILL BE PAID FOR UNDER ITEM AR109200 INSTALL ELECTRICAL EQUIPMENT PER LUMP SUM.
- 5 #8 XLP-USE (POWER CABLE) IN UNIT DUCT FROM HANGAR 100 TO THE GATE OPERATOR WILL BE PAID FOR UNDER ITEM AR108501 POWER CABLE IN UNIT DUCT PER LINEAL FOOT.



**PROPOSED GATE OPERATOR  
ELECTRICAL ONE LINE DIAGRAM**

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375 West Briarcliff Road  
Bolingbrook, Illinois 60440  
Telephone: 630.226.8400

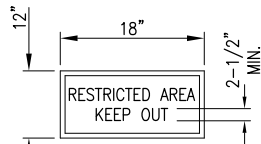
Hanson No.	08A0180	LAYOUT	LDH	7/15/10
Filename	15-E-601.DWG	DRAWN	LDH	7/15/10
Scale	N/A	REVIEWED	RMH	7/23/10
Date	JULY 23, 2010			

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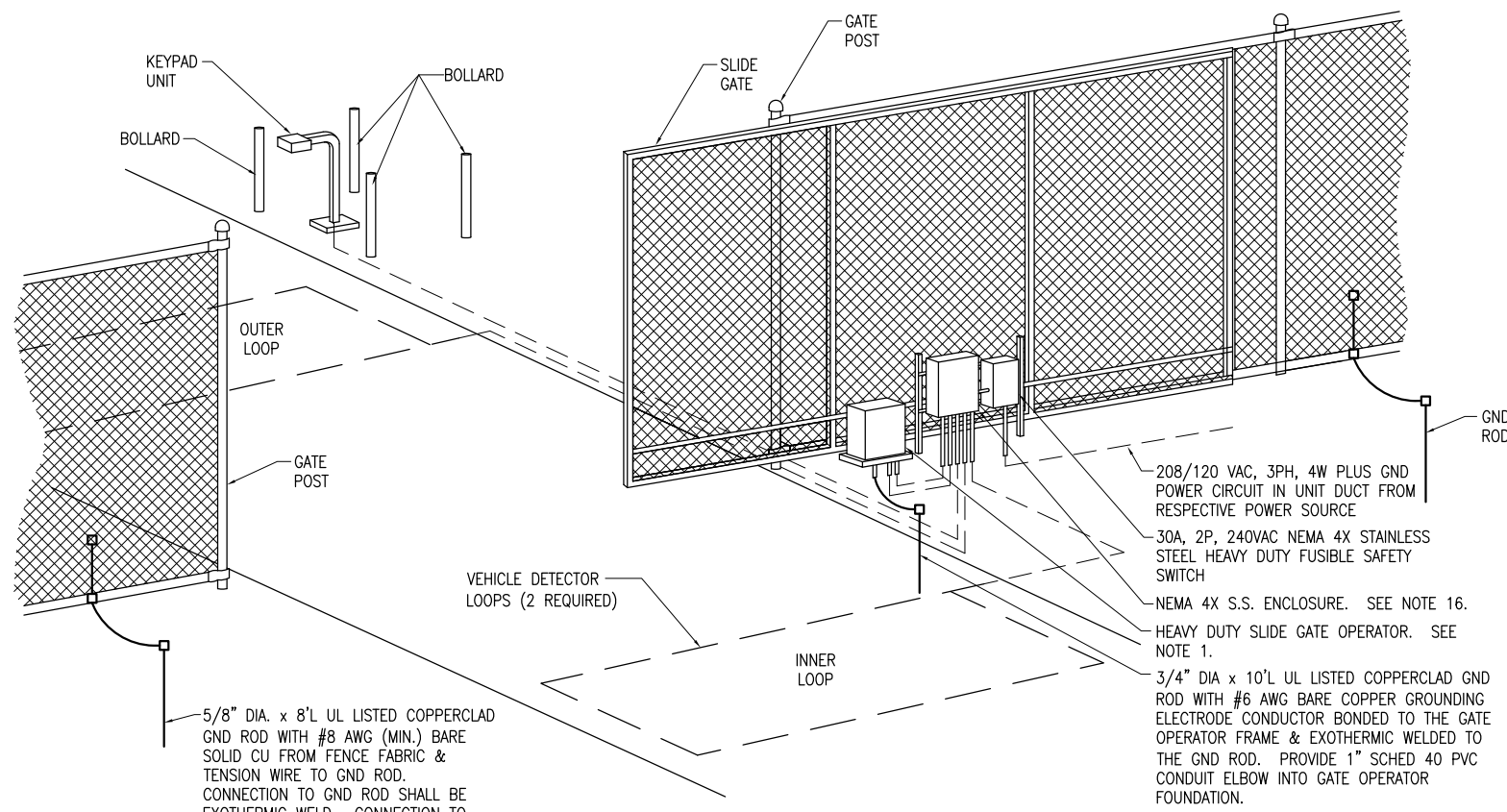
**ELECTRIC SLIDE GATE  
ONE LINE DIAGRAM**

PERIMETER FENCE INSTALLATION  
IDA No. TCS-3995 AIP No. 3-17-0135-B2

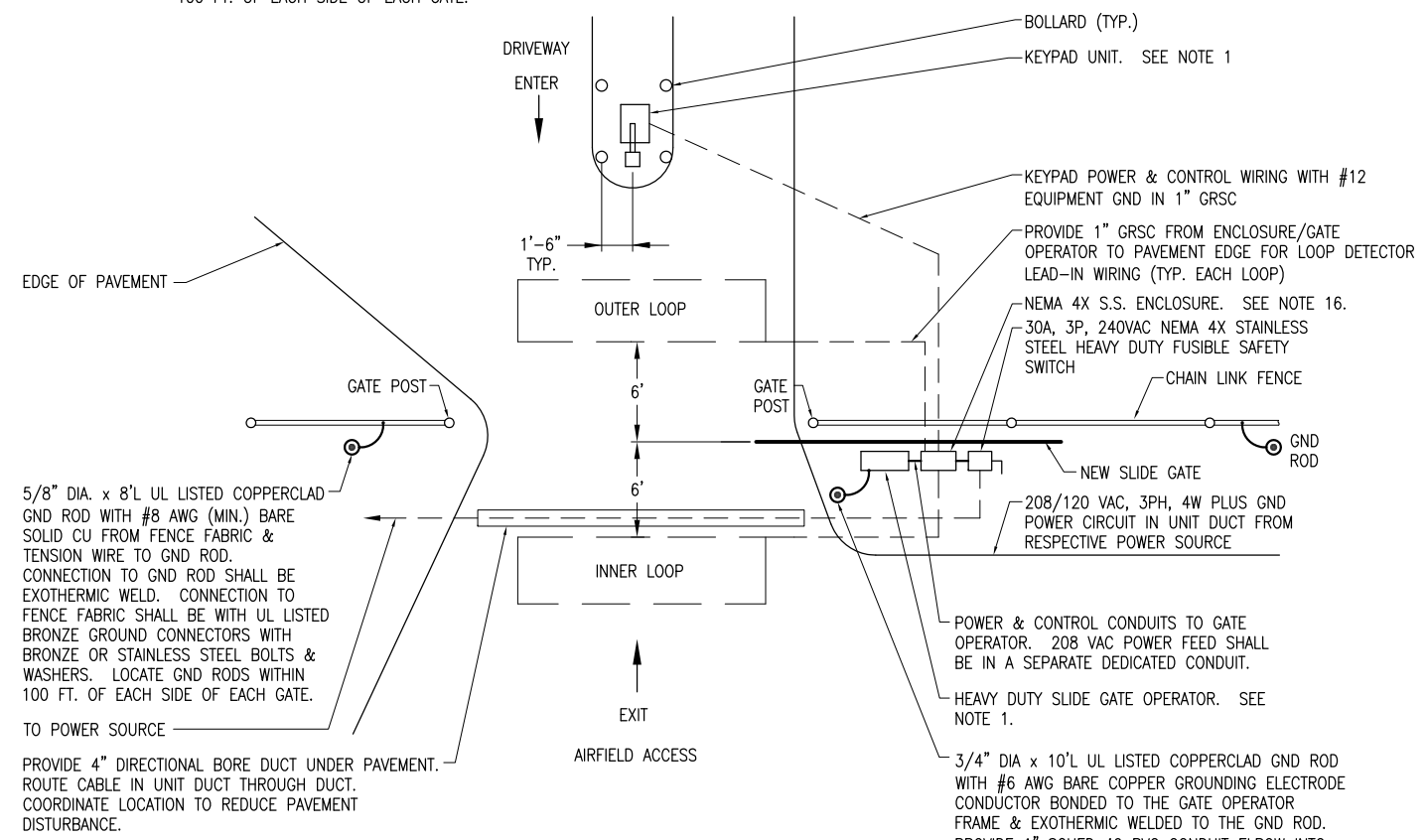
VEHICLE DETECTOR LOOPS		
GATE SIZE	LOOP SIZE	NO. OF TURNS
8' TO 12'	4' X 6'	3 TURNS
12' TO 16'	4' X 10'	2 TURNS
16' TO 20'	4' X 14'	2 TURNS
20' TO 24'	4' X 18'	2 TURNS
24' TO 30'	6' X 22'	2 TURNS
30' TO 34'	6' X 26'	2 TURNS



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



**ELECTRIC GATE DETAIL (ISOMETRIC)**  
 "NOT TO SCALE"



**ELECTRIC GATE PLAN**  
 "NOT TO SCALE"

COORDINATE EQUIPMENT LOCATIONS WITH FENCING AND SITE PLAN

**NOTES:**

- SEE SPECIAL PROVISION SPECS FOR REQUIREMENTS ON RESPECTIVE GATE & GATE OPERATOR SYSTEM.
- ALL DIMENSIONS AND LAYOUT INFORMATION SHOWN SHOULD BE ADJUSTED AS RECOMMENDED BY THE MANUFACTURER. SEE RESPECTIVE SITE PLAN FOR EACH GATE.
- CONCRETE FOUNDATIONS SHALL BE PROVIDED FOR THE SLIDE GATE OPERATOR AND THE KEYPAD ACCESS CONTROL UNIT. FOUNDATION FOR THE GATE OPERATOR SHALL BE 48" (MIN.) IN DEPTH AND OF THE SIZE RECOMMENDED BY THE MANUFACTURER. FOUNDATION FOR THE KEYPAD ACCESS CONTROL UNIT SHALL BE 48" (MIN.) IN DEPTH, AS DETAILED HEREIN.
- 1" GRCS CONDUIT WILL BE REQUIRED BETWEEN THE SLIDE GATE OPERATOR AND THE KEYPAD ACCESS CONTROL UNIT AND BETWEEN THE SLIDE GATE OPERATOR AND THE DETECTOR LOOPS. THE MINIMUM BURYING DEPTH IS 24". ALL METAL CONDUITS ENTERING THE GATE OPERATOR SHALL BE BONDED TO THE GATE OPERATOR FRAME WITH A #8 AWG (MIN.) COPPER BONDING JUMPER. CONFIRM CONTROL WIRING REQUIREMENTS WITH THE RESPECTIVE GATE OPERATOR SALES AND SERVICE REPRESENTATIVE.
- THE GUARD/BOLLARD POSTS SHALL BE 4" DIA. STEEL (HEAVY WALL) PIPE, CONCRETE FILLED, AND SHALL EXTEND FROM THE TOP OF THE KEYPAD ACCESS 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 TYEMETAL CORPORATION OR APPROVED EQUAL.
- AS PART OF THIS ITEM 10 REMOTE TRANSMITTERS FOR EACH GATE SHALL BE PROVIDED BY THE CONTRACTOR. COORDINATE PROGRAMMING OF TRANSMITTER FREQUENCIES WITH THE AIRPORT MANAGER.
- CONTRACTOR SHALL COORDINATE ANY POWER OUTAGES TO EXISTING EQUIPMENT WITH THE RESPECTIVE OWNER'S REPRESENTATIVE AND THE AIRPORT MANAGER.
- INCLUDE UL LISTED SECONDARY SURGE ARRESTER FOR THE GATE OPERATOR SUITABLE FOR USE ON 208/120 VAC, 3 PHASE, 4 WIRE PLUS GROUND SYSTEM, WITH SURGE CURRENT RATING OF 40 KA PER MODE, JOSLYN MODEL 1455-21, OR APPROVED EQUAL.
- CONCRETE USED FOR INSTALLING THE GATE OPERATOR, KEYPAD ACCESS, CONTROL UNIT, & FENCE SHALL MEET THE REQUIREMENTS OF STRUCTURAL PORTLAND CEMENT CONCRETE ITEM 610.
- ALL ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN CONFORMANCE WITH NFPA 70 - NATIONAL ELECTRICAL CODE (NEC) MOST CURRENT ISSUE IN FORCE, THE RESPECTIVE EQUIPMENT MANUFACTURER'S DIRECTIONS AND ALL OTHER APPLICABLE LOCAL CODES, LAWS, ORDINANCES, AND REQUIREMENTS IN FORCE. ANY INSTALLATIONS WHICH VOID THE UL LISTING, ETL LISTING, (OR OTHER THIRD PARTY LISTING) AND/OR THE MANUFACTURER'S WARRANTY OF A DEVICE WILL NOT BE PERMITTED.
- PROVIDE A WEATHERPROOF ENGRAVED PHENOLIC OR PLASTIC LEGEND PLATE FOR THE SAFETY SWITCH AT THE RESPECTIVE GATE OPERATOR NOTING THE GATE SERVED, VOLTAGE, AND RESPECTIVE POWER SOURCE CIRCUIT AND LOCATION.
- PAYMENT FOR EACH SLIDE GATE, KEYPAD ACCESS, CONTROL UNIT, 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 CONDUIT, GROUNDING, LABOR, TOOLS, COORDINATION, TESTING, AND INCIDENTALS REQUIRED TO INSTALL THE GATE COMPLETE AND IN OPERATING CONDITION.
- CONTROL CIRCUIT WIRING SHALL NOT BE ROUTED THROUGH THE SAFETY SWITCH/DISCONNECT.
- LOCATE RECEIVER ANTENNA TO PROVIDE PROPER OPERATION FROM REMOTE TRANSMITTERS FROM A DISTANCE UP TO 150 FEET. INCLUDE CONDUITS & SUPPORT HARDWARE.
- ALL CONTROL POWER TRANSFORMERS, POWER SUPPLIES, RECEPTACLES, LOOP DETECTOR AMPLIFIERS, SECONDARY SAFETY DEVICE EQUIPMENT, AND ANY OTHER ASSOCIATED CONTROLS SHALL BE INSTALLED EITHER INSIDE THE GATE OPERATOR CONTROL PANEL OR INSIDE A SEPARATE NEMA 4 STAINLESS STEEL CONTROL PANEL ENCLOSURE. WHERE THE CONTROL EQUIPMENT IS TO BE INSTALLED INSIDE THE GATE OPERATOR CONTROL PANEL THE CONTRACTOR SHALL COORDINATE THIS WITH THE GATE OPERATOR MANUFACTURER AND THE RESPECTIVE GATE OPERATOR EQUIPMENT SUPPLIER. LOCATING THESE CONTROLS OUTSIDE OF GATE OPERATOR CONTROL PANEL BUT WITHIN THE GATE OPERATOR HOUSING WILL NOT MEET THIS REQUIREMENT.

REVISION	DATE

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 Bolingbrook, Illinois 60440  
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FILENAME	SCALE	DATE	LAYOUT	DRAWN	REVIEWED
16-E-501.DWG	N/A	JULY 23, 2010	LDH	LDH	RMH

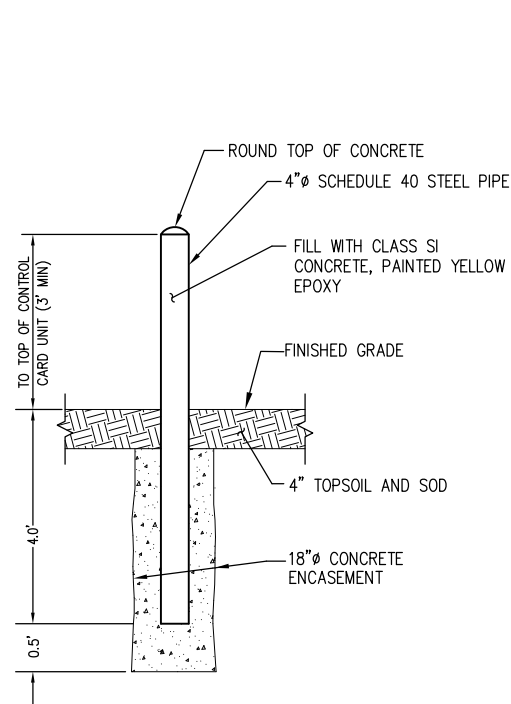
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**ELECTRIC SLIDE GATE DETAILS**

**PERIMETER FENCE INSTALLATION**  
 IDA No. 1C5-3995 AIP No. 3-17-0135-B2



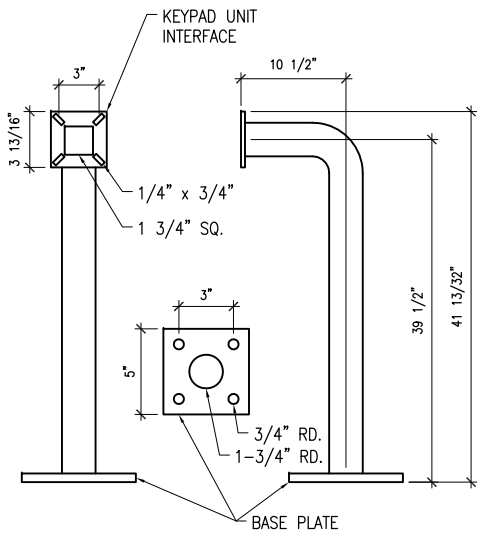


NOTES

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

BOLLARD DETAIL

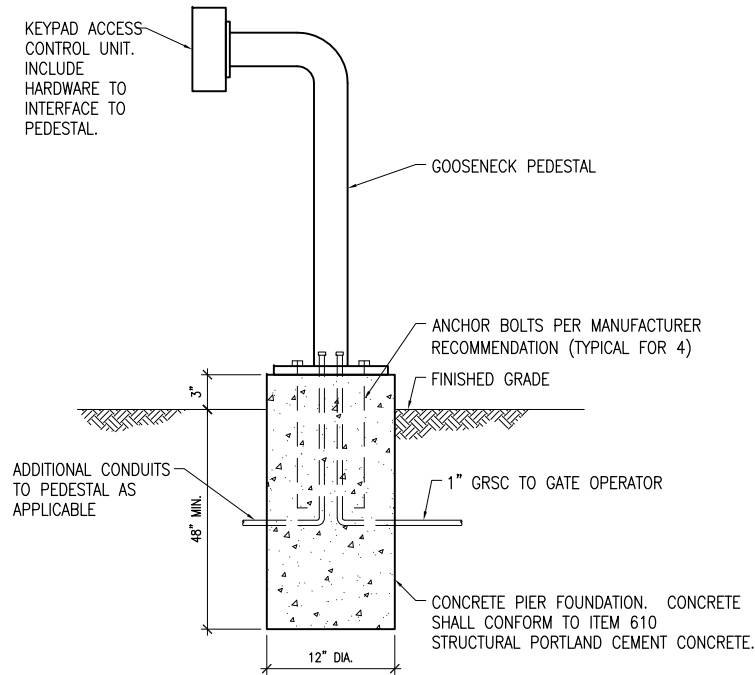
SCALE: NONE



GOOSENECK PEDESTAL DETAIL

SCALE: NONE

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



NOTES

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

KEYPAD ACCESS CONTROL UNIT PEDESTAL ELEVATION DETAIL

SCALE: NONE

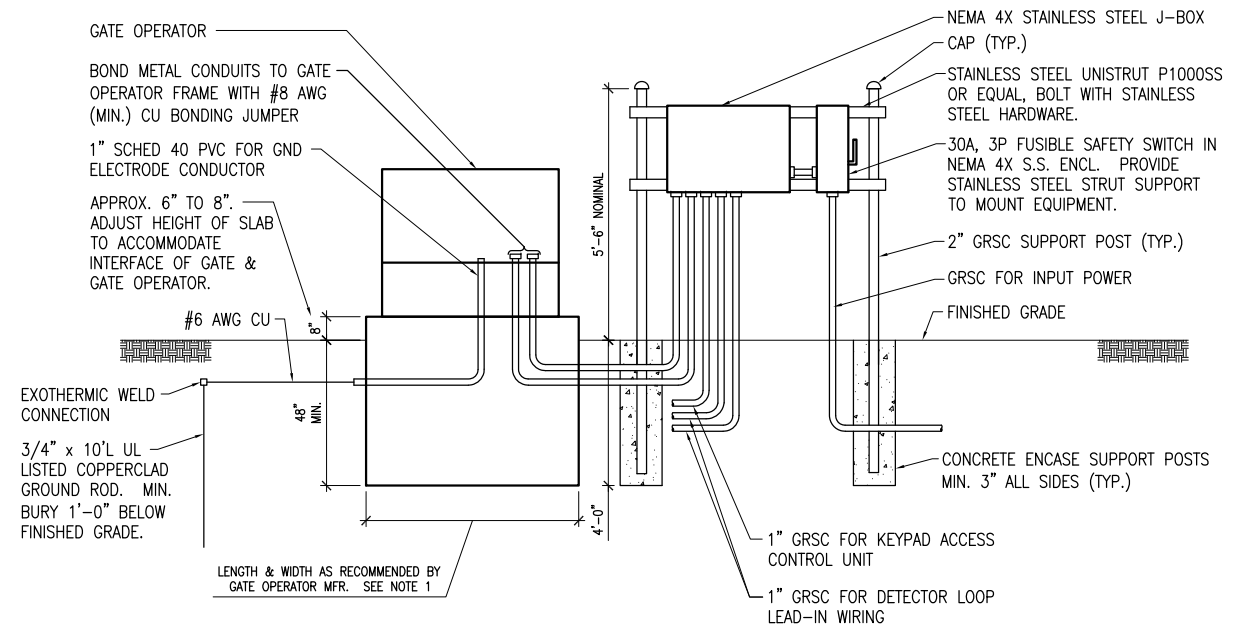


NOTES

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

WARNING SIGN DETAIL

SCALE: NONE



NOTES

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

GATE OPERATOR FOUNDATION DETAIL

SCALE: NONE

REVISION	DATE

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375 West Briarcliff Road  
Bolingbrook, Illinois 60440  
Telephone: 630.226.8400



Revision No.	Filename	Scale	Date	LAYOUT	LDH	7/15/10
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KEYPAD UNIT, BOLLARD AND GATE OPERATOR DETAILS  
PERIMETER FENCE INSTALLATION  
IDA No. TCS-3995 AIP No. 3-17-0135-B2