

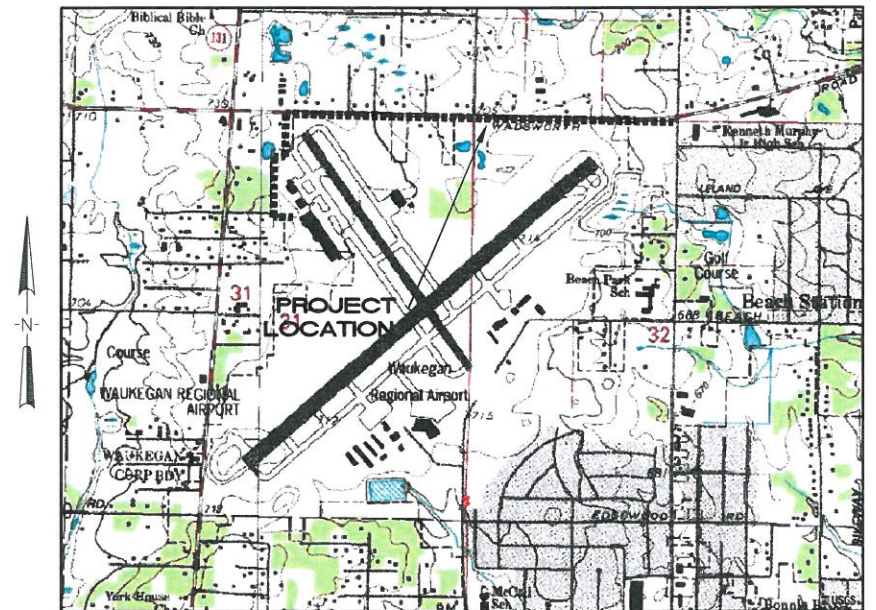
CONSTRUCTION PLANS

CONSTRUCT PERIMETER FENCE, PHASE 2

WAUKEGAN PORT DISTRICT
WAUKEGAN NATIONAL AIRPORT (UGN)
WAUKEGAN, LAKE COUNTY, ILLINOIS

SBG PROJECT NO. 3-17-0105-B55
IDA PROJECT NO. UGN-4190

VICINITY MAP



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No.	Issue/Description	Sheets Changed	Date	By

Seal

STEPHEN J. MCLAUGHLIN
062-059993
STATE OF ILLINOIS

Date of Plans
Exp. 11/30/2013

May 17, 2013

Stephen J. McLaughlin
Project Engineer

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Ronald M. Hudson *17 May 2013*

Ronald M. Hudson, AICP
Project Manager Date

WAUKEGAN REGIONAL AIRPORT
WAUKEGAN PORT DISTRICT
3580 North McAree Road
Waukegan, Illinois 60087
Telephone: 847.244.0055
Fax: 847.244.3813

Duncan C. Henderson *16 May 2013*

Duncan C. Henderson
Executive Director Date

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SUMMARY OF QUANTITIES				
ITEM NO.	DESCRIPTION	UNIT	AS BID	RECORD PAID
AR108051	POWER CABLE IN UNIT DUCT	LINEAR FOOT	1,677.0	
AR109535	ELECTRICAL SERVICE ENTRANCE	LUMP SUM	1.0	
AR110014	4" DIRECTIONAL BORE	LINEAR FOOT	70.0	
AR119511	AIRPORT OBSTRUCTION LIGHT - SINGLE	EACH	4.0	
AR119512	AIRPORT OBSTRUCTION LIGHT - DOUBLE	EACH	3.0	
AR150510	ENGINEER'S FIELD OFFICE	LUMP SUM	1.0	
AR151450	CLEARING AND GRUBBING	ACRE	1.1	
AR152499	UNCLASSIFIED EXCAVATION (LS)	LUMP SUM	1.0	
AR156510	SILT FENCE	LINEAR FOOT	3,500.0	
AR156531	EROSION CONTROL BLANKET	SQUARE YARD	1,900.0	
AR156544	RIPRAP - GRADATION NO. 4	SQUARE YARD	67.0	
AR800944	CL. E FENCE 10' BARB W/2' BUR. GA.	LINEAR FOOT	5,367.0	
AR800945	CLASS E FENCE 8' BARB	LINEAR FOOT	749.0	
AR800948	28' MANUAL SLIDING GATE GALV	EACH	1.0	
AR800961	12" HDPE DRAINAGE PIPE W/ CONCRETE COLLARS	EACH	1.0	
AR800969	SECONDARY POWER DISTRIBUTION	LUMP SUM	1.0	
AR800991	REMOVE FENCE	LINEAR FOOT	6,575.0	
AR901510	SEEDING	ACRE	4.4	
AR905510	TOPSOILING (FROM ON SITE)	CUBIC YARD	130.0	
AR908510	MULCHING	ACRE	4.4	

ALTERNATE A				
ITEM NO.	DESCRIPTION	UNIT	AS BID	RECORD PAID
AS800946	CL. E FEN. 10' W/O BARB 2' BUR GAL	LINEAR FOOT	345.0	
AS800947	28' ELECTRICAL SLIDING GATE GAL	EACH	1.0	

ALTERNATE B				
ITEM NO.	DESCRIPTION	UNIT	AS BID	RECORD PAID
AT800962	CL. E FEN 10' W/O BARB 2' BUR VN	LINEAR FOOT	345.0	
AT800963	28' ELECTRICAL SLIDING GATE VINYL	EACH	1.0	

SOME FENCE ITEMS ARE BID AS ALTERNATE A ITEMS (AS) AND OTHERS ARE BID AS ALTERNATE B (AT). THE AWARD WILL BE MADE BASED ON THE BASE BID AND EITHER ALTERNATE A OR ALTERNATE B. ONLY ONE OF THE ALTERNATES WILL BE AWARDED.

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 NOTED IN THE SPECIAL PROVISIONS, COMPLETED AND ACCEPTED BY THE ENGINEER.

REVISION	DATE

WAUKEGAN NATIONAL AIRPORT
 WAUKEGAN PORT DISTRICT
 3580 North McAtee Road
 Waukegan, Illinois 60087
 Telephone: 847.244.0066
 Fax: 847.244.3813



Hanson No. 11A00002D	LDH	3/15/11
Filename 02-INDEX AND SOO.DWG	LDH	3/15/11
Scale N/A	RMH	5/14/13
Date MAY 17, 2013		
LAYOUT		
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REVIEWED		

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 Illinois Professional Design Firm
 Registration No. 184-001084
Hanson Professional Services Inc.
 815 Commerce Drive, Suite 200
 Oak Brook, Illinois 60523

SHEET INDEX AND SUMMARY OF QUANTITIES
 CONSTRUCT PERIMETER FENCE, PHASE 2
 IDA No. UGN-4190 SBG No. 3-17-0105-555

REVISION
DATE

WAUKEGAN REGIONAL AIRPORT
WAUKEGAN PORT DISTRICT
3580 North McArees Road
Waukegan, Illinois 60087
Telephone: 847.244.0066
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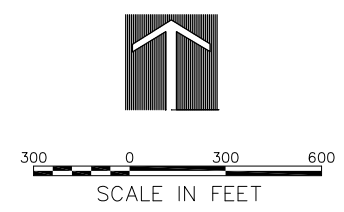
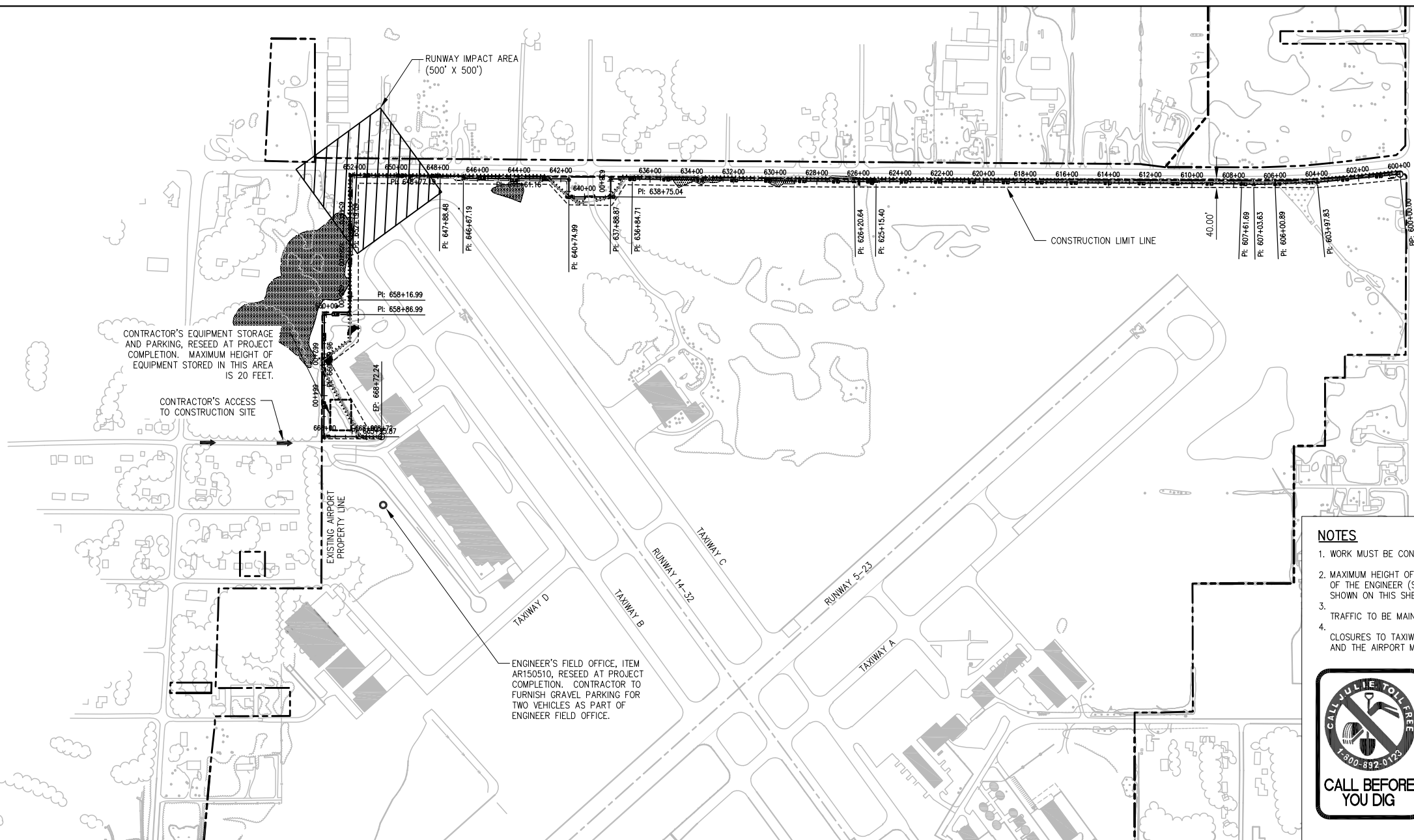
Hanson No.	11A0002D	LAYOUT	LDH	3/15/11
Filename	03-SITE-PLAN.DWG	DRAWN	LDH	3/15/11
Scale	1"=300'	REVIEWED	RMH	5/14/13
Date	MAY 17, 2013			

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

SITE PLAN AND GENERAL NOTES

CONSTRUCT PERIMETER FENCE, PHASE 2
IDA No. UGN-4190 SBG No. 3-17-0105-555



RUNWAY IMPACT AREA
WORK IN THIS AREA LIMITED TO DAYLIGHT, VFR FLIGHT CONDITIONS, 12 FOOT EQUIPMENT HEIGHT. MAXIMUM DURATION IS 8 HOURS/DAY. RUNWAY SHALL BE CLOSED BY AIRPORT OWNER BEFORE WORK MAY BEGIN.

NOTES

1. WORK MUST BE CONTROLLED AND STAGED.
2. MAXIMUM HEIGHT OF CONTRACTOR'S EQUIPMENT 20 FEET FOR ALL WORK, EXCEPT BY PRIOR APPROVAL OF THE ENGINEER (SEE SPECIAL PROVISIONS) AND IN THE RUNWAY IMPACT AREA WHERE EQUIPMENT, SHOWN ON THIS SHEET, WHEN THE HEIGHT IS LIMITED TO 12 FEET.
3. TRAFFIC TO BE MAINTAINED ON ALL AIRPORT ROADWAYS AT ALL TIMES.
4. CLOSURES TO TAXIWAY, APRON, ROADWAY, AND AUTO PARKING SHALL BE COORDINATED WITH THE ATCT AND THE AIRPORT MANAGER. SEE SAFETY NOTES.



PROJECT IS LOCATED IN
NW 1/4 OF SECTION 32, N 1/2 OF SECTION 31
TOWNSHIP 46N, LAKE COUNTY

GENERAL NOTES

PROJECT DESCRIPTION

THIS PROJECT IS TO EXTEND THE PERIMETER FENCING AND INSTALL GATES AT WAUKEGAN NATIONAL AIRPORT INCLUDING, AMONG OTHER INCIDENTAL WORK, THE FOLLOWING ITEMS:

- PLACEMENT OF TEMPORARY EROSION CONTROL MEASURES.
- PROVIDE SELECT GRADING OF EARTH TO RE-GRADE FENCE LINE AND CONSTRUCTION OF DRAINAGE AND EROSION CONTROL FACILITIES.
- INSTALL HDPE DRAINAGE PIPE AND RIPRAP AS PERMANENT EROSION CONTROL.
- INSTALL CHAIN-LINK FENCING.
- INSTALL ELECTRIC VEHICULAR SLIDING GATES AND MANUAL VEHICULAR SLIDING GATES.
- CONSTRUCT ELECTRICAL POWER AND CONTROL CABLING AND EQUIPMENT. INSTALL ELECTRIC SERVICE ENTRANCE.
- INSTALL OBSTRUCTION LIGHTS.
- TOPSOIL, SEED AND MULCH FENCE LINE AND DISTURBED AREAS.

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; AND SEEDED 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 AIRPORT MANAGER AND THE OWNER'S REPRESENTATIVE.

IN ADDITION WHEN CONDITIONS DICTATE OR AS DETERMINED BY THE AIRPORT MANAGER OR THE OWNER'S REPRESENTATIVE, THE CONTRACTOR SHALL BE REQUIRED TO USE A PICK-UP TYPE SWEEPER IN ALL ACTIVE CONSTRUCTION AIRFIELD PAVEMENT AREAS. THE CONTRACTOR WILL BE REQUIRED TO HAVE A SWEEPER AVAILABLE FOR USE AT ALL TIMES. THE COST OF SWEEPING SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE FAA (SMO) THROUGH THE RESIDENT ENGINEER TO LOCATE ALL FAA CABLES ON THE PROJECT SITE. ALL FAA CABLES SHALL BE PROTECTED AT ALL TIMES.

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.

HEAVY VEHICLES SHALL NOT CROSS EXISTING PAVEMENT SURFACES EXCEPT AS APPROVED BY THE AIRPORT MANAGER AND THE OWNER'S REPRESENTATIVE. 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 OWNER'S REPRESENTATIVE.

THE CONTRACTOR IS TO PROVIDE AN EQUIPMENT, STORAGE AND PARKING AREA AT THE LOCATION SHOWN ON THIS SHEET. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN THE ACCESS ROADS AND THE STORAGE AREA DURING CONSTRUCTION AND TO RESTORE THE AREAS AT PROJECT COMPLETION TO CONDITIONS SUITABLE TO THE AIRPORT MANAGER AND THE OWNER'S REPRESENTATIVE. AT THE AIRPORT MANAGER'S DISCRETION, THE TEMPORARY FACILITIES MAY REMAIN, BUT THEY MUST BE LEFT IN CONDITIONS SUITABLE TO THE AIRPORT MANAGER. THE COST OF PROVIDING, MAINTAINING AND RESTORING THE TEMPORARY FACILITIES IS INCIDENTAL TO THE CONTRACT.

RESPONSIBILITY FOR EXISTING UTILITIES

THE LOCATION, SIZE AND/OR TYPE OF MATERIAL OF EXISTING UNDERGROUND OR OVERHEAD UTILITIES AS MAY BE INDICATED ON THESE CONSTRUCTION PLANS IS NOT REPRESENTED AS BEING ACCURATE, SUFFICIENT OR COMPLETE. NEITHER THE OWNER NOR THE PROJECT ENGINEER HAVE INDEPENDENTLY VERIFIED THIS INFORMATION AND NEITHER ASSUMES ANY RESPONSIBILITY WHATSOEVER IN RESPECT TO THE ACCURACY, SUFFICIENCY OR COMPLETENESS OF THE INFORMATION AND GIVE NO EXPRESSED OR IMPLIED GUARANTEE THAT ANY CONDITIONS INDICATED ARE REPRESENTATIVE OF ACTUAL CONDITIONS TO BE ENCOUNTERED.

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 ALL UTILITY COMPANIES AND AGENCIES OF HIS CONSTRUCTION PLANS AND SHALL OBTAIN FROM EACH PARTY DETAILED INFORMATION AND ASSISTANCE RELATIVE TO THE LOCATION OF ALL UTILITIES AND THE WORKING SCHEDULE OF ANY REMOVALS OR ADJUSTMENTS REQUIRED OF THE UTILITY. THE CONTRACTOR SHALL CONTACT J.U.L.I.E. (PHONE 800-892-0123) TO ASSIST IN THE ABOVE.

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.

THE CONTRACTOR SHALL PROTECT ANY FACILITIES TO THE SATISFACTION OF THE UTILITY OR OWNING-AGENCY WITH THE COST OF ANY REQUIRED PROTECTION TO BE INCIDENTAL TO THE CONTRACT. IN THE EVENT A UTILITY LINE OR SERVICE IS UNEXPECTEDLY ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER'S REPRESENTATIVE AND THE UTILITY COMPANY OR AGENCY OF JURISDICTION. ANY SUCH UTILITIES DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED TO SERVICE IMMEDIATELY.

AIRPORT SECURITY

THE CONTRACTOR IS TO COORDINATE GATE SECURITY, THROUGH THE RESIDENT ENGINEER, WITH THE AIRPORT MANAGEMENT. AIRPORT SECURITY SHALL BE MAINTAINED AT ALL TIMES.

EXISTING BENCHMARK

BENCHMARK IS AS FOLLOWS (SOUTH OF PROJECT AREA):
 ▲ B.M.1 ELEVATION 721.34
 STEEL ROD SET IN 6" LOGO CAP
 LOCATION: 36.5 FEET EAST OF RT. 131 (GREEN BAY RD.), 230 FEET SOUTH OF SUDDARD ST., 101 FEET NORTH OF CENTER ST.
 COORDINATES: N 2094502.438 E 1107324.042

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CONSTRUCTION AND SAFETY NOTES

SEQUENCE OF CONSTRUCTION

TO MINIMIZE DISRUPTIONS TO AIRPORT OPERATIONS, CONSTRUCTION OPERATIONS MUST BE CONTROLLED THROUGHOUT THE PROJECT'S DURATION AND WORK MUST BE COMPLETED EXPEDITIOUSLY. A CONSTRUCTION STAGING PLAN DETAILING THE SEQUENCING OF THE CONTRACTOR'S WORK THROUGHOUT THE PROJECT SHALL BE FURNISHED TO THE RESIDENT ENGINEER BY THE CONTRACTOR AT THE PRE-CONSTRUCTION CONFERENCE FOR THE REVIEW AND APPROVAL OF THE OWNER AND PROJECT ENGINEER. ANY AND ALL CHANGES TO THE CONSTRUCTION STAGING PLAN THAT IS SUBSEQUENTLY APPROVED THAT MAY BE REQUESTED BY THE CONTRACTOR AFTER PROJECT START MUST BE APPROVED BY THE PROJECT ENGINEER AND THE AIRPORT OWNER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE SUFFICIENT ADVANCE NOTICE OF ANY PROPOSED STAGING CHANGE TO PERMIT CONSIDERATION AND APPROVAL BY THE PROJECT ENGINEER AND THE AIRPORT OWNER. THE CONTRACTOR SHALL NOT BE ENTITLED TO ANY EXTRA COMPENSATION NOR EXTENSION TO THE CONTRACT TIME BECAUSE OF A STAGING CHANGE REQUEST NOR FOR ANY TIME NECESSARY IN RECEIVING THE REQUIRED APPROVALS. 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.

AT THE PRE-CONSTRUCTION CONFERENCE, THE CONTRACTOR SHALL PROVIDE A CONTRACTOR COORDINATION PLAN THAT COORDINATES HIS WORK WITH THE WORK OF HIS SUBCONTRACTORS AND THE WORK OF OTHER CONTRACTORS OF OTHER AIRPORT PROJECTS.

CONSTRUCTION LIMITS

THE CONTRACTOR SHALL REMAIN WITHIN THE CONSTRUCTION LIMITS SHOWN ON THE PLANS. THE CONTRACTOR SHALL FURNISH MEASURES TO PREVENT EQUIPMENT AND PERSONNEL FROM OPERATING OUTSIDE THESE LIMITS.

TEMPORARY BARRICADES

THE CONTRACTOR SHALL FURNISH BARRICADES FOR ANY AIRFIELD OR ROADWAY PAVEMENT TO BE CLOSED BY HIS WORK. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO FURNISH, PLACE AND MAINTAIN BARRICADES AS SHOWN IN DETAIL A, THIS SHEET, AND AS DIRECTED BY THE RESIDENT ENGINEER AND AIRPORT DIRECTOR. THE COST OF THESE ITEMS, AND THEIR MAINTENANCE, IS TO BE INCIDENTAL TO THE CONTRACT. ANY WORK THAT REQUIRES PORTIONS OF AN ACTIVE TAXIWAY OR APRON TO BE CLOSED MUST BE COMPLETED EXPEDITIOUSLY TO MINIMIZE DISRUPTION TO AIRCRAFT OPERATIONS.

VEHICULAR TRAFFIC CONTROL

THE CONTRACTOR SHALL ERECT AND MAINTAIN, AT NO COST TO THE CONTRACT, DIRECTIONAL AND INFORMATIONAL SIGNS FOR THE CONTRACTOR'S ACCESS ROUTES AT THE EXISTING CONSTRUCTION ENTRANCE AND FOR THE CONTRACTOR'S ROUTE WITHIN THE AIRPORT OPERATIONS AREA, AS NOTED ON THE PLANS OR AS DIRECTED BY THE RESIDENT ENGINEER.

AIRFIELD OPERATIONAL SAFETY DURING CONSTRUCTION

THE CONTRACTOR SHALL NOT HAVE ACCESS TO ANY PART OF THE ACTIVE AIRFIELD (RUNWAYS, TAXIWAYS OR APRONS) FOR ANY EQUIPMENT OR PERSONNEL WITHOUT THE APPROVAL OF THE RESIDENT ENGINEER AND THE AIRPORT OWNER. ACTIVITIES WITHIN THE AIRPORT OPERATIONS AREA (AOA) ARE SUBJECT TO FEDERAL ACCESS CONTROL. BECAUSE OF THE HIGH REQUIREMENTS FOR AIRPORT SECURITY AND SAFETY, THE FOLLOWING REQUIREMENTS MUST BE ADHERED TO:

ALL EMPLOYEES OF THE CONTRACTOR SHALL PARK THEIR PERSONAL VEHICLES IN THE DESIGNATED EQUIPMENT PARKING AND STORAGE AREA. EACH PERSON OR VEHICLE ENTERING THE CONTRACTOR AREA SHALL DO SO IN ACCORDANCE WITH THE POLICIES AND PROCEDURES OF THE AIRPORT OWNER. THE CONTRACTOR WILL TRANSPORT THE WORKERS FROM THE PARKING AREAS TO THE WORK AREA. ONLY CONTRACTOR VEHICLES WILL BE ALLOWED OUTSIDE OF THE PROPOSED EQUIPMENT STORAGE AND PARKING AREAS.

THE CONTRACTOR WILL BE REQUIRED TO BE IN CONTACT WITH AIRPORT OPERATIONS. THIS WILL KEEP THE CONTRACTOR IN CONTACT WITH AIRPORT PERSONNEL AND ENABLE THE AIRPORT PERSONNEL TO IMMEDIATELY CONTACT THE CONTRACTOR IN CASE OF AN AERONAUTICAL EMERGENCY THAT WOULD REQUIRE ACTION BY THE CONTRACTOR AND/OR HIS PERSONNEL.

THE CONTRACTOR SHALL REMAIN WITHIN THE CONSTRUCTION LIMITS LINE SHOWN IN THE PLANS. WHEN OUTSIDE THESE LIMITS, ALL CONTRACTOR ACTIVITIES SHALL REMAIN MORE THAN 200 FEET FROM THE CENTERLINE AND 300 FEET FROM THE END OF ACTIVE RUNWAY 14-32, AND 250 FEET FROM THE CENTERLINE AND 1,000 FEET FROM THE END OF ACTIVE RUNWAY 5-23. FOR WORK NEAR TAXIWAYS AND APRONS, THE CONTRACTOR'S PERSONNEL AND EQUIPMENT MUST REMAIN AT LEAST 65.5 FEET FROM ACTIVE CATEGORY II TAXIWAYS AND 93 FEET FROM ACTIVE CATEGORY III TAXIWAYS, 44.5 FEET FROM ACTIVE T-HANGAR TAXILANES, AND TEN (10) FEET FROM ACTIVE APRONS. WHEN CONSTRUCTION OPERATIONS MUST BE CONDUCTED WITHIN THESE SEPARATIONS, THE PAVEMENT MUST BE CLOSED TO AIRCRAFT ACTIVITY BY THE CONTRACTOR BY PROVIDING TEMPORARY BARRICADES AS SHOWN IN THE PLANS, AND IN THE CASE OF RUNWAY PAVEMENTS, CLOSED RUNWAY MARKERS.

WHEN WORKING WITHIN THE "RUNWAY IMPACT AREA" SHOWN ON SHEET 3, SITE PLAN AND GENERAL NOTES, OF THE CONSTRUCTION PLANS, RUNWAY 14-32 SHALL BE CLOSED TO AIR TRAFFIC. WORK WITHIN THE RUNWAY IMPACT AREA SHALL BE LIMITED TO: 1) DAYLIGHT HOURS; 2) VFR (VISUAL FLIGHT RULES) WEATHER CONDITIONS; 3) MAXIMUM 12-FOOT EQUIPMENT HEIGHT; 4) MAXIMUM DURATION OF EIGHT (8) HOURS PER DAY; AND 5) THE RUNWAY SHALL NOT BE CLOSED FOR MORE THAN THREE (3) CONSECUTIVE DAYS. THE CONTRACTOR SHALL FURNISH FIVE (5) DAYS ADVANCE NOTICE OF ANY RUNWAY CLOSING; WHOSE CLOSING SHALL BE APPROVED BY THE AIRPORT OWNER. THE AIRPORT OWNER WILL COORDINATE THE RUNWAY CLOSURES WITH THE WAUKEGAN AIR TRAFFIC CONTROL TOWER, AND FURNISH NOTICES TO AIRMEN (NOTAMS) AND CLOSED RUNWAY MARKERS. THE AIRPORT OWNER WILL DE-ENERGIZE AIRPORT/RUNWAY NAVAIDS, AND AIRFIELD LIGHTING POWER AND CONTROL CIRCUITS WHEN REQUIRED BY THE CONTRACTOR'S ACTIVITIES.

THE CONTRACTOR SHALL NOT PROCEED WITH WORK IN THE "RUNWAY IMPACT AREA" UNTIL AFTER THE REQUIRED COORDINATION, NOTICES AND CLOSED RUNWAY DESIGNATION HAVE BEEN COMPLETED AND THE CHANGES TO THE AIRPORT POWER AND CONTROL CIRCUITS HAVE BEEN MADE BY THE AIRPORT OWNER.

CLOSING OF ANY RUNWAY BY CONTRACTOR ACTIVITIES SHALL NOT BE PERMITTED IN THIS PROJECT, EXCEPT AS ALLOWED IN THE CONSTRUCTION PLANS.

THE CONTRACTOR SHALL KEEP ALL OF HIS EQUIPMENT AND PERSONNEL AT LEAST 15 FEET FROM THE EDGE OF ANY ACTIVE ROADWAY OR AUTO PARKING PAVEMENT. WHEN HIS ACTIVITIES REQUIRE WORKING WITHIN 15 FEET OF THE ROAD/PAVEMENT EDGE, THE CONTRACTOR SHALL PROVIDE FOR TRAFFIC CONTROL IN ACCORDANCE WITH IDOT SPECIFICATIONS (HIGHWAY STANDARDS).

OPEN TRENCHES, EXCAVATIONS AND STOCKPILED MATERIAL AT THE CONSTRUCTION SITE SHALL BE DELINEATED WITH THE USE OF BARRICADES DURING HOURS OF RESTRICTED VISIBILITY AND/OR DARKNESS. NO OPEN TRENCHES SHALL BE ALLOWED WITHIN THE RUNWAY SAFETY AREA (RSA) OR THE TAXIWAY SAFETY AREA (TSA) WHEN THE RUNWAY OR TAXIWAY IS OPEN TO AIR TRAFFIC (INCLUDING OVERNIGHT). THE RSA IS DEFINED AS 75 FEET FROM THE CENTERLINE AND 300 FEET FROM THE END OF RUNWAY 14-32, AND 250 FEET FROM THE CENTERLINE AND 1,000 FEET FROM THE END OF RUNWAY 5-23. THE TSA IS MEASURED AT 39.5 FEET FROM THE CATEGORY II TAXIWAY CENTERLINE AND 59 FEET FROM THE CATEGORY III TAXIWAY CENTERLINE, AND 24.5 FEET FROM THE T-HANGAR TAXILANE CENTERLINE. NO VERTICAL DROP OF GREATER THAN 3-INCHES IN HEIGHT FROM PAVEMENT EDGE TO EARTH GRADE OR EARTH GRADE TO EARTH GRADE WITHIN THE RSA OR TSA WILL BE PERMITTED WHEN THE RUNWAY OR TAXIWAY IS OPEN TO AIR TRAFFIC. THE CONTRACTOR WILL HAVE STEEL PLATES ON-SITE TO ALLOW FOR THE RAPID COVERING OF TRENCHES OR EARTH DROPS IN THE EVENT OF UNEXPECTED WORK STOPPAGES FOR WEATHER OR AIRPORT EMERGENCIES.

WHEN NOT IN USE AND DURING NONWORKING HOURS, CONTRACTOR'S EQUIPMENT SHALL BE PARKED WITHIN THE CONTRACTOR'S EQUIPMENT STORAGE AND PARKING AREAS. THE EQUIPMENT STORAGE AND PARKING AREAS ARE TO BE LOCATED AS SHOWN ON THE STAGING PLAN. THE CONTRACTOR WILL BE RESPONSIBLE FOR MAINTAINING THE CONSTRUCTION ENTRANCE IN GOOD CONDITION. THE COST OF MAINTAINING THE CONSTRUCTION ENTRANCE IS TO BE INCIDENTAL TO THE CONTRACT.

AT NO TIME SHALL THE CONTRACTOR OPERATE OR PARK EQUIPMENT SO AS TO OBSTRUCT AN ACTIVE RUNWAY APPROACH SURFACE.

BEFORE REOPENING TEMPORARILY CLOSED RUNWAYS, TAXIWAYS OR ROADWAYS, 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 RESIDENT ENGINEER AND AIRPORT OWNER AND IS INCIDENTAL TO THE CONTRACT.

CONTRACTOR'S EQUIPMENT SHALL EXTEND NO HIGHER THAN 20 FEET, EXCEPT WHEN WORKING IN THE RUNWAY IMPACT AREA SHOWN ON SHEET 3, SITE PLAN AND GENERAL NOTES, OF THE CONSTRUCTION PLANS, WHEN A HEIGHT OF ONLY 12 FEET WILL BE PERMITTED.

ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE APPROVED PROJECT SAFETY PLAN, ISSUED BY THE ILLINOIS DIVISION OF AERONAUTICS.

FAILURE TO USE THESE PRESCRIBED PROCEDURES OR ADHERE TO THE SAFETY REQUIREMENTS WILL RESULT IN THE SUSPENSION OF WORK.

NOTIFICATIONS BY CONTRACTOR

THE CONTRACTOR MUST NOTIFY THE RESIDENT ENGINEER AND THE AIRPORT OWNER FIVE (5) DAYS IN ADVANCE OF ANY CLOSING OF RUNWAY 14-32; SUCH CLOSING SHALL BE AS SPECIFIED HEREIN. THE CONTRACTOR MUST NOTIFY THE RESIDENT ENGINEER AND THE AIRPORT OWNER 72 HOURS IN ADVANCE OF ANY REQUIRED PARTIAL OR COMPLETE CLOSING OF ANY TAXIWAY OR APRON. THE DATE, TIME AND SCHEDULED DURATION OF THE CLOSING MUST BE APPROVED BY THE RESIDENT ENGINEER AND THE AIRPORT OWNER. THE CONTRACTOR SHALL NOTIFY THE RESIDENT ENGINEER AND AIRPORT OWNER 72 HOURS IN ADVANCE OF THE CONTRACTOR'S CLOSING OF OTHER ACTIVE ROADWAYS, AIRFIELD OR ROADWAY LIGHTING CIRCUITS, OR OTHER AIRPORT FACILITIES.

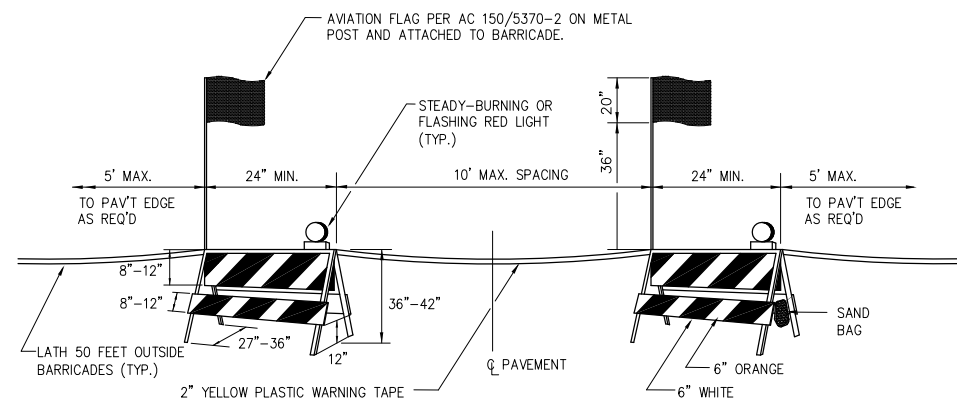
CONTRACTOR'S USE OF SITE

THE CONTRACTOR SHALL NOT OPERATE WITHIN, ENCROACH 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".

THE CONTRACTOR IS RESPONSIBLE FOR RESTORATION OF THE WORK AREA PRIOR TO BEGINNING WORK AT A NEW LOCATION.

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.



BARRICADES ARE TO BE OF IDOT TYPE I. A STEADY-BURNING OR FLASHING RED LIGHT FACING PASSING TRAFFIC IS TO BE MOUNTED ABOVE THE TOP OF EACH BARRICADE FRAME. THE BARRICADE IS TO BE STABILIZED FROM WIND BY SANDBAGS PLACED ON THE FRAME OR OTHER METHODS APPROVED BY THE RESIDENT ENGINEER. NO PART OF THE REFLECTORIZED PORTION OF THE BARRICADE IS TO BE OBSTRUCTED IN ANY MANNER. COST OF FURNISHING, INSTALLING, RELOCATING, MAINTAINING and REMOVING BARRICADES IS TO BE INCIDENTAL TO THE CONTRACT.

DETAIL A
PAVEMENT BARRICADES
NTS

MAY 17, 2013 11:49 AM MCLAU01058 I:\1\JOBS\00831\11A0002D\DRAWINGS\SHEETS\04-SAFETY NOTES.DWG

REVISION	DATE

WAUKEGAN NATIONAL AIRPORT
WAUKEGAN PORT DISTRICT
3580 North McAtee Road
Waukegan, Illinois 60087
Telephone: 847.244.0066
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Hanson No.	11A0002D	LDH	3/15/11
Filename	04-SAFETY NOTES.DWG	LDH	3/15/11
Scale	N/A	RMH	5/14/13
Date	MAY 17, 2013		
LAYOUT			
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CONSTRUCTION SAFETY
NOTES AND DETAILS
CONSTRUCT PERIMETER FENCE, PHASE 2
IDA No. UGN-4190 SBG No. 3-17-0105-B55

DATE	REVISION

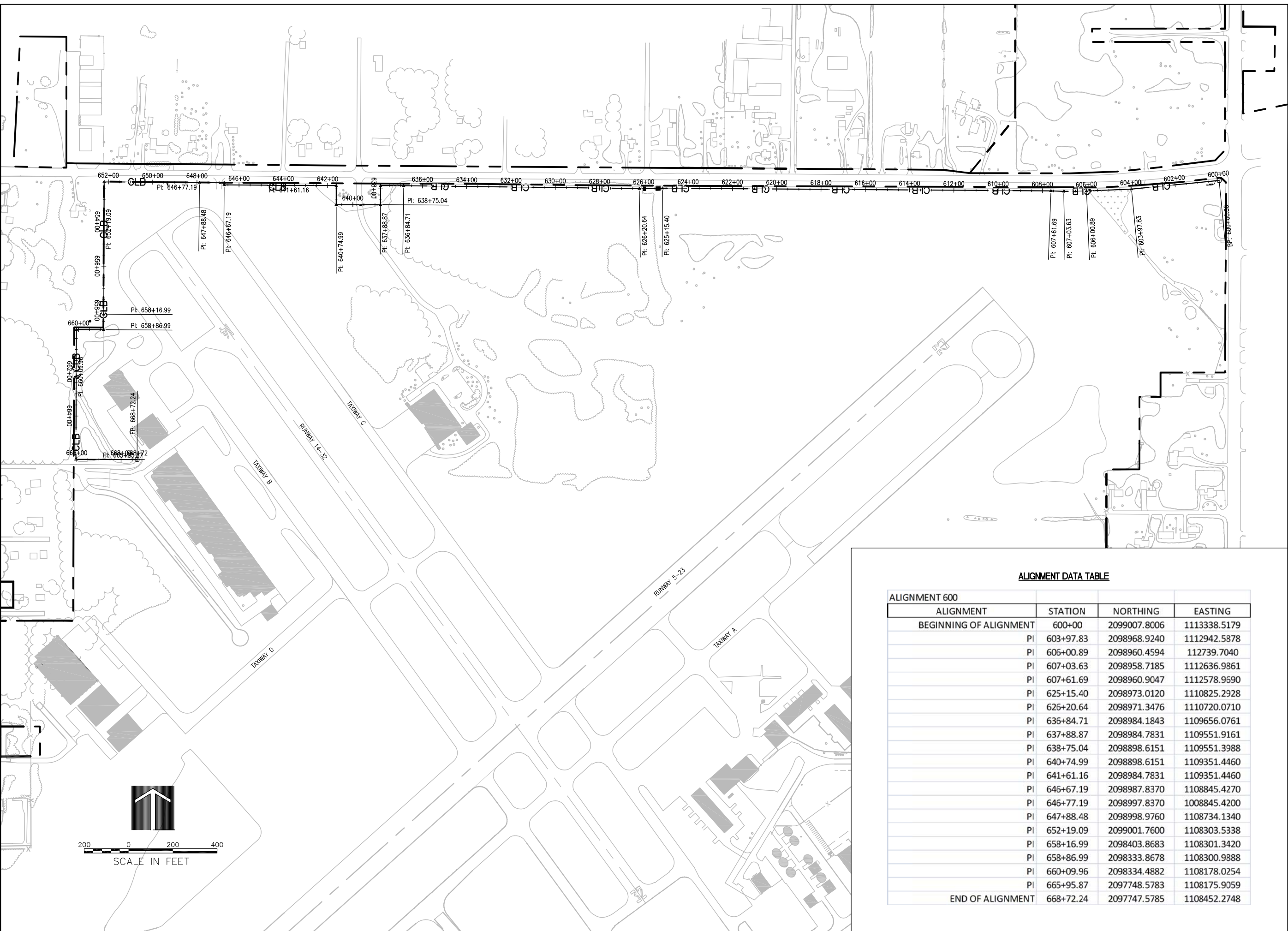
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 WAUKEGAN PORT DISTRICT
 3580 North McArees Road
 Waukegan, Illinois 60087
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FILENAME	DATE	BY	CHKD	REVISED
05-ALIGNMENT_TABLE.DWG	MAY 17, 2013	LDH	LDH	5/19/11
				5/19/11
				5/14/13

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ALIGNMENT DATA TABLE
 CONSTRUCT PERIMETER FENCE, PHASE 2
 IDA No. UGN-4190 SEG No. 3-17-0105-555



ALIGNMENT DATA TABLE

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PI	607+03.63	2098958.7185	1112636.9861
PI	607+61.69	2098960.9047	1112578.9690
PI	625+15.40	2098973.0120	1110825.2928
PI	626+20.64	2098971.3476	1110720.0710
PI	636+84.71	2098984.1843	1109656.0761
PI	637+88.87	2098984.7831	1109551.9161
PI	638+75.04	2098898.6151	1109551.3988
PI	640+74.99	2098898.6151	1109351.4460
PI	641+61.16	2098984.7831	1109351.4460
PI	646+67.19	2098987.8370	1108845.4270
PI	646+77.19	2098997.8370	1008845.4200
PI	647+88.48	2098998.9760	1108734.1340
PI	652+19.09	2099001.7600	1108303.5338
PI	658+16.99	2098403.8683	1108301.3420
PI	658+86.99	2098333.8678	1108300.9888
PI	660+09.96	2098334.4882	1108178.0254
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END OF ALIGNMENT	668+72.24	2097747.5785	1108452.2748

MAY 17, 2013 11:48 AM MCLAU01058
 I:\1\JOBS\00831\11A0002D\DRAWINGS\SHEETS\05-ALIGNMENT_TABLE.DWG

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Hanson No.	11A0002D	LAYOUT	LDH	4/20/11
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Scale	1"=40'	REVIEWED	RWH	5/14/13
Date	MAY 17, 2013			

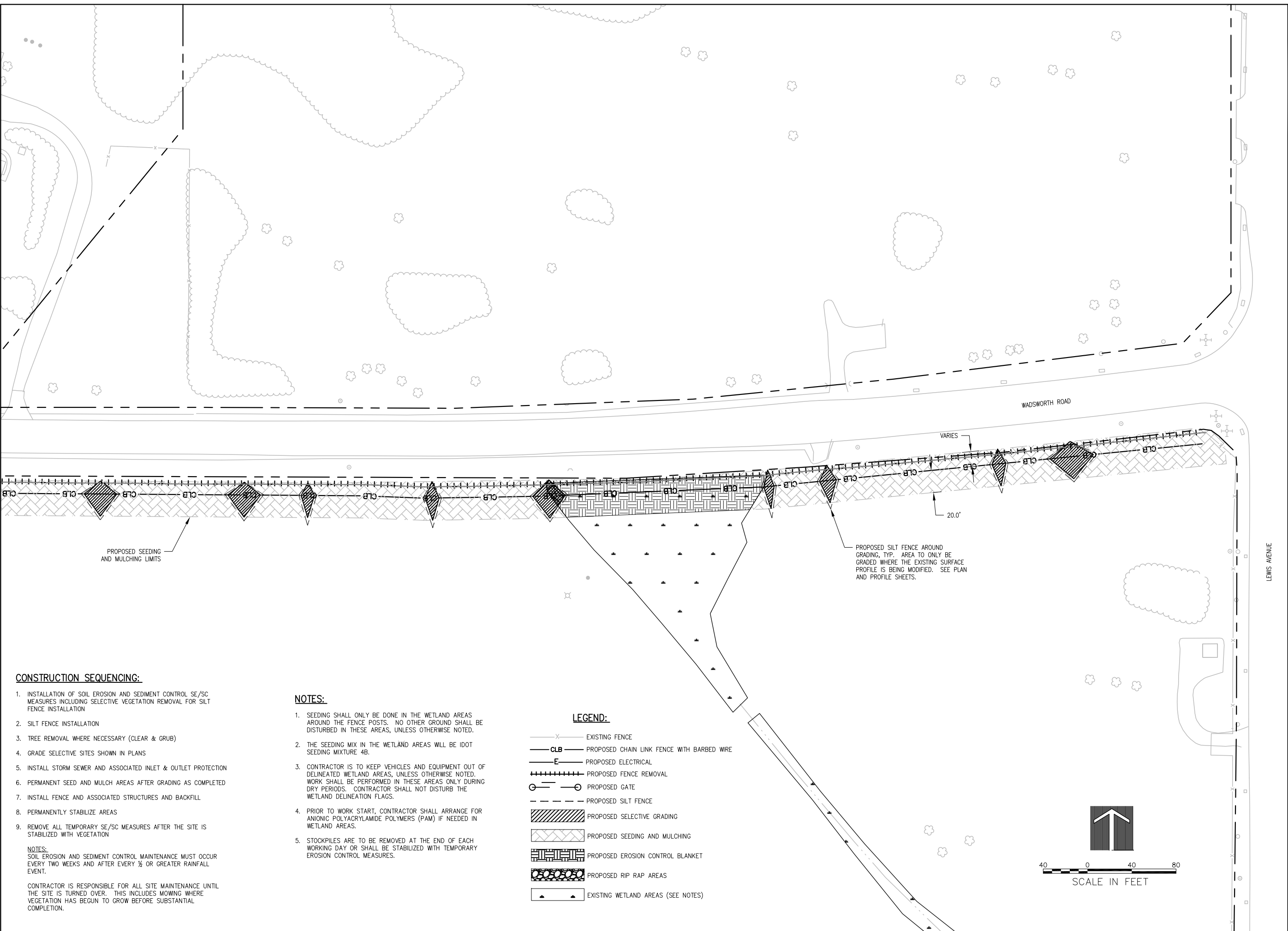
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LANDSCAPING AND
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 IDA No. UGN-4190 SFG No. 3-17-0105-555

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CONSTRUCTION SEQUENCING:

1. INSTALLATION OF SOIL EROSION AND SEDIMENT CONTROL SE/SC MEASURES INCLUDING SELECTIVE VEGETATION REMOVAL FOR SILT FENCE INSTALLATION
2. SILT FENCE INSTALLATION
3. TREE REMOVAL WHERE NECESSARY (CLEAR & GRUB)
4. GRADE SELECTIVE SITES SHOWN IN PLANS
5. INSTALL STORM SEWER AND ASSOCIATED INLET & OUTLET PROTECTION
6. PERMANENT SEED AND MULCH AREAS AFTER GRADING AS COMPLETED
7. INSTALL FENCE AND ASSOCIATED STRUCTURES AND BACKFILL
8. PERMANENTLY STABILIZE AREAS
9. REMOVE ALL TEMPORARY SE/SC MEASURES AFTER THE SITE IS STABILIZED WITH VEGETATION

NOTES:

1. SEEDING SHALL ONLY BE DONE IN THE WETLAND AREAS AROUND THE FENCE POSTS. NO OTHER GROUND SHALL BE DISTURBED IN THESE AREAS, UNLESS OTHERWISE NOTED.
2. THE SEEDING MIX IN THE WETLAND AREAS WILL BE IDOT SEEDING MIXTURE 4B.
3. CONTRACTOR IS TO KEEP VEHICLES AND EQUIPMENT OUT OF DELINEATED WETLAND AREAS, UNLESS OTHERWISE NOTED. WORK SHALL BE PERFORMED IN THESE AREAS ONLY DURING DRY PERIODS. CONTRACTOR SHALL NOT DISTURB THE WETLAND DELINEATION FLAGS.
4. PRIOR TO WORK START, CONTRACTOR SHALL ARRANGE FOR ANIONIC POLYACRYLAMIDE POLYMERS (PAM) IF NEEDED IN WETLAND AREAS.
5. STOCKPILES ARE TO BE REMOVED AT THE END OF EACH WORKING DAY OR SHALL BE STABILIZED WITH TEMPORARY EROSION CONTROL MEASURES.

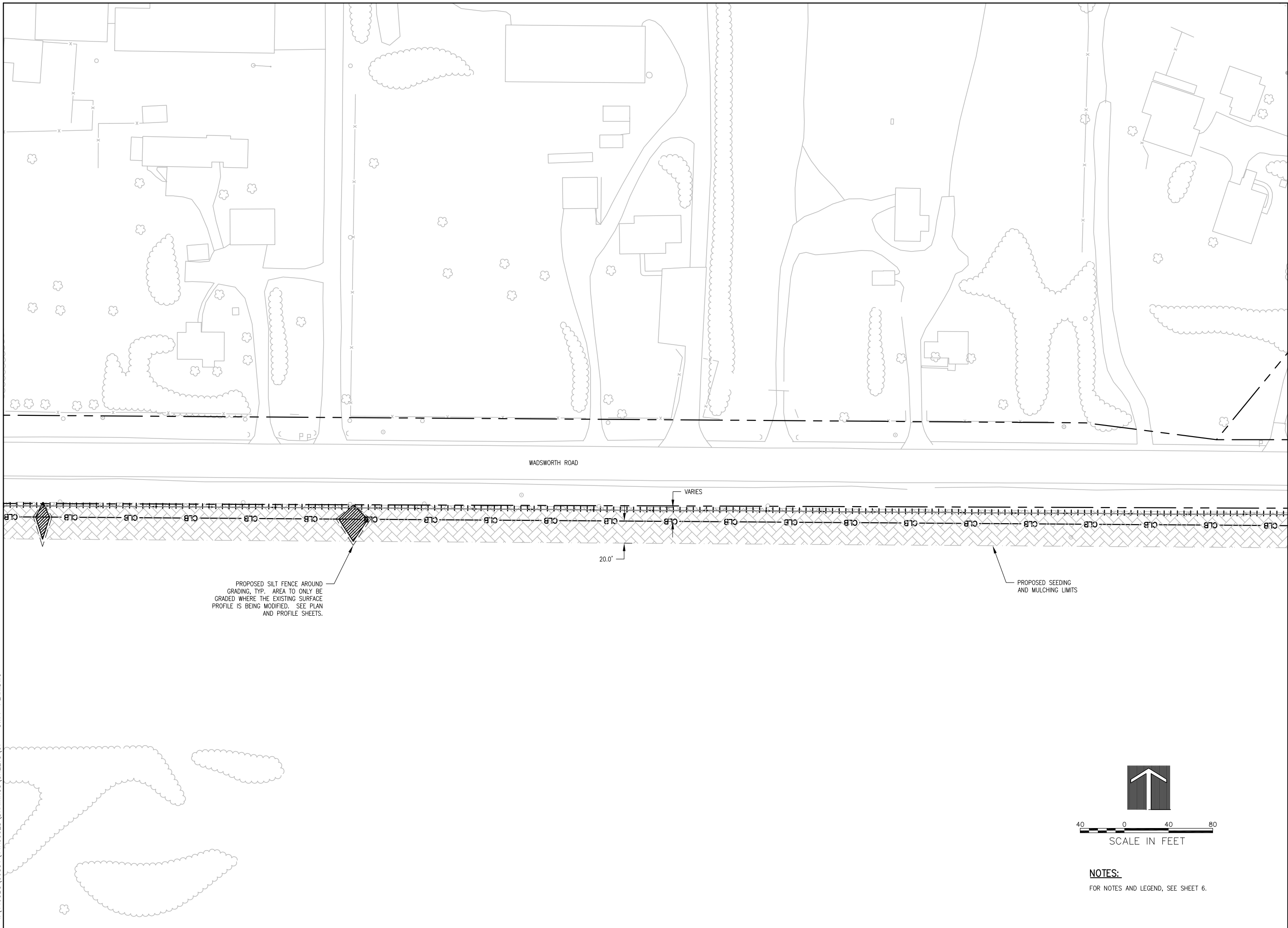
LEGEND:

- EXISTING FENCE
- PROPOSED CHAIN LINK FENCE WITH BARBED WIRE
- PROPOSED ELECTRICAL
- PROPOSED FENCE REMOVAL
- PROPOSED GATE
- PROPOSED SILT FENCE
- PROPOSED SELECTIVE GRADING
- PROPOSED SEEDING AND MULCHING
- PROPOSED EROSION CONTROL BLANKET
- PROPOSED RIP RAP AREAS
- EXISTING WETLAND AREAS (SEE NOTES)

NOTES:
 SOIL EROSION AND SEDIMENT CONTROL MAINTENANCE MUST OCCUR EVERY TWO WEEKS AND AFTER EVERY 1/2 OR GREATER RAINFALL EVENT.

CONTRACTOR IS RESPONSIBLE FOR ALL SITE MAINTENANCE UNTIL THE SITE IS TURNED OVER. THIS INCLUDES MOWING WHERE VEGETATION HAS BEGUN TO GROW BEFORE SUBSTANTIAL COMPLETION.

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WA067

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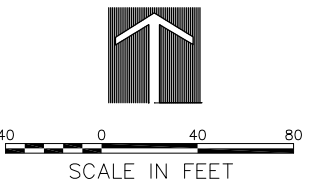
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Filename	07 - SWPP PLAN.DWG	DRAWN	LDH	4/20/11
Scale	1"=40'	REVIEWED	RWH	5/14/13
Date	MAY 17, 2013			

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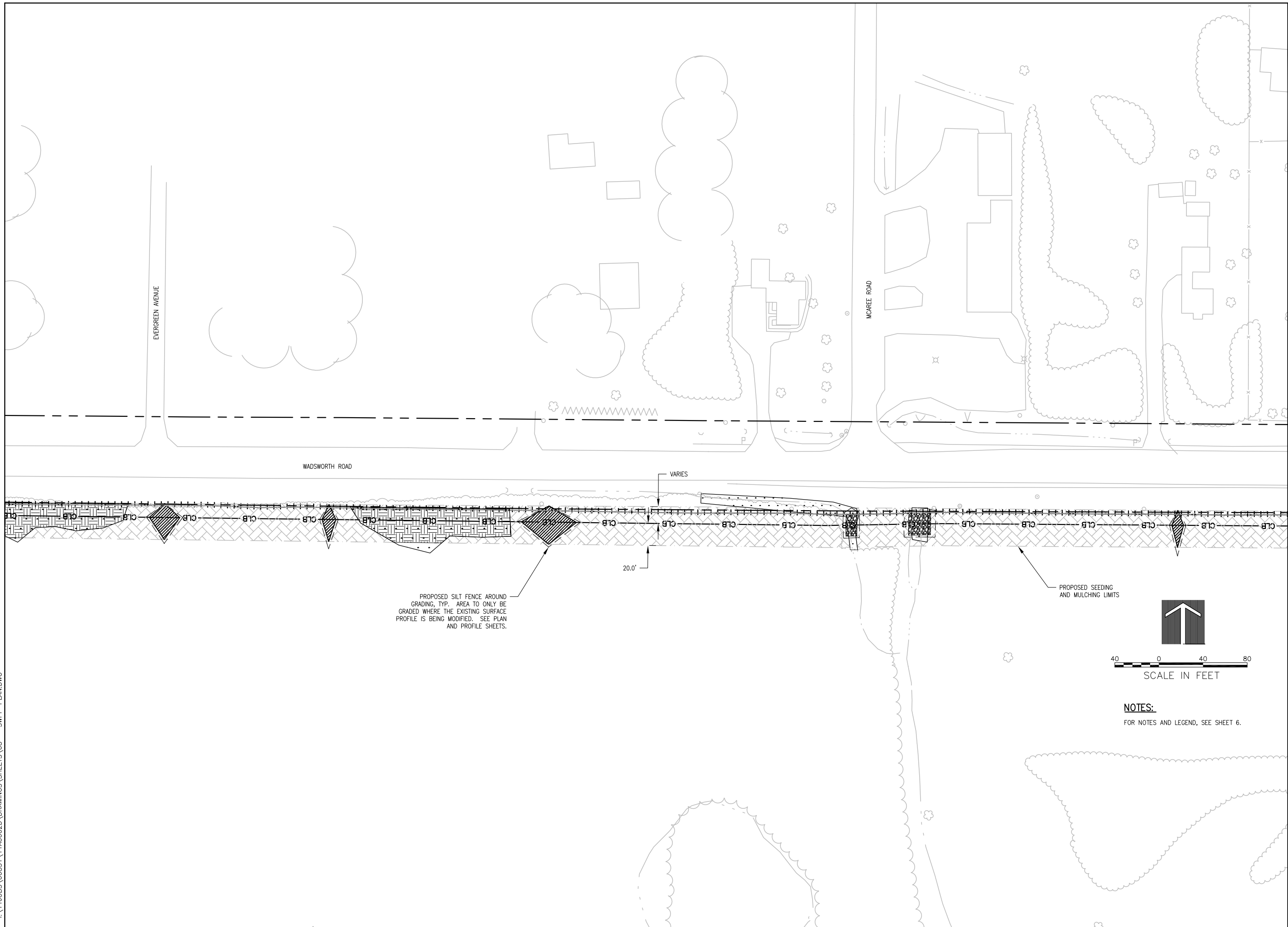
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LANDSCAPING AND
 SWPP PLAN

CONSTRUCT PERIMETER FENCE, PHASE 2
 IDA No. UGN-4190 SEG No. 3-17-0105-B55



NOTES:
 FOR NOTES AND LEGEND, SEE SHEET 6.

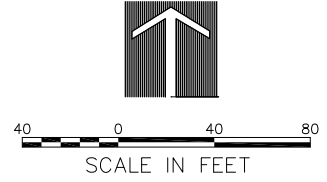


PROPOSED SILT FENCE AROUND GRADING, TYP. AREA TO ONLY BE GRADED WHERE THE EXISTING SURFACE PROFILE IS BEING MODIFIED. SEE PLAN AND PROFILE SHEETS.

20.0'

VARIES

PROPOSED SEEDING AND MULCHING LIMITS



NOTES:
 FOR NOTES AND LEGEND, SEE SHEET 6.

REVISION	DATE

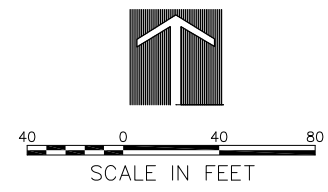
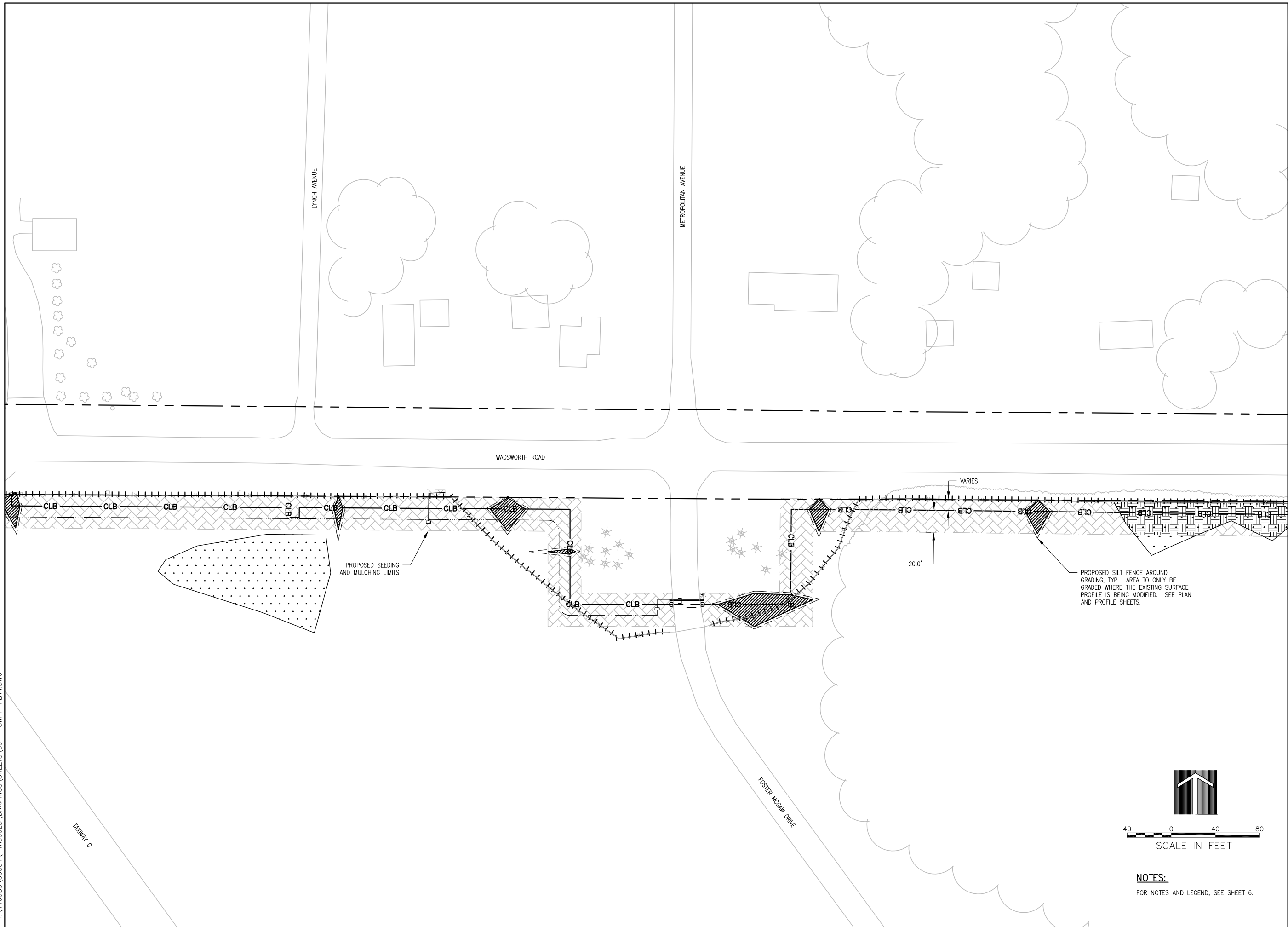
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FILENAME	DATE	BY	REVIEWED
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08 - SWPP PLAN.DWG	4/20/11	LDH	LDH
1"=40'	5/14/13		RWH
Scale			
Date			

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 IDA No. UGN-4190 SGG No. 3-17-0105-B55



NOTES:
 FOR NOTES AND LEGEND, SEE SHEET 6.

WA067

REVISION	DATE

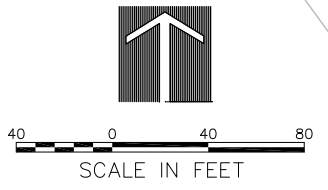
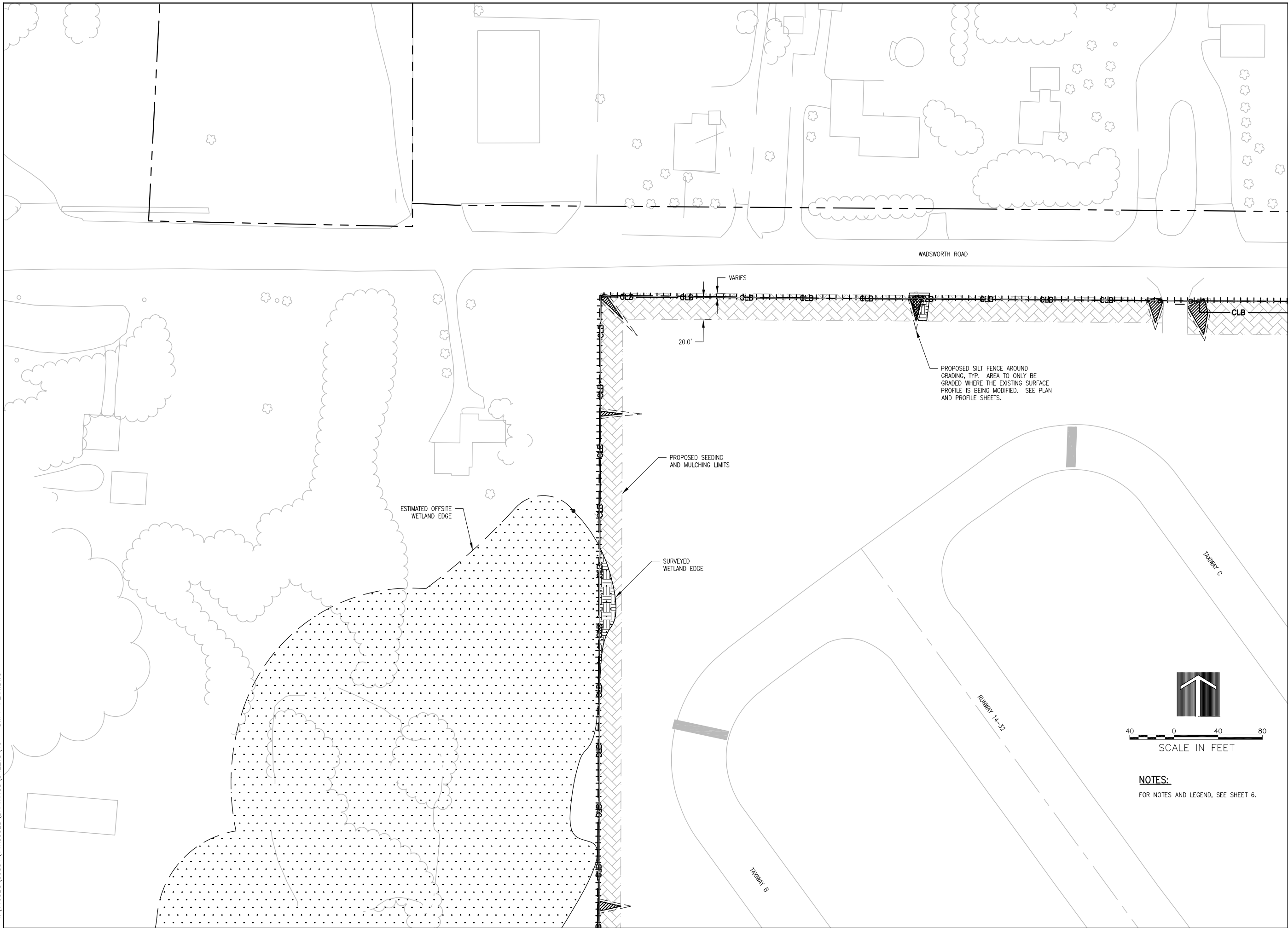

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Hanson No.	11A0002D	LAYOUT	LDH	4/20/11
Filename	09 - SWPP PLAN.DWG	DRAWN	LDH	4/20/11
Scale	1"=40'	REVIEWED	RWH	5/14/13
Date	MAY 17, 2013			


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 IDA No. UGN-4190 SEG No. 3-17-0105-B55

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NOTES:
 FOR NOTES AND LEGEND, SEE SHEET 6.

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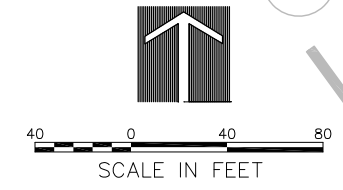
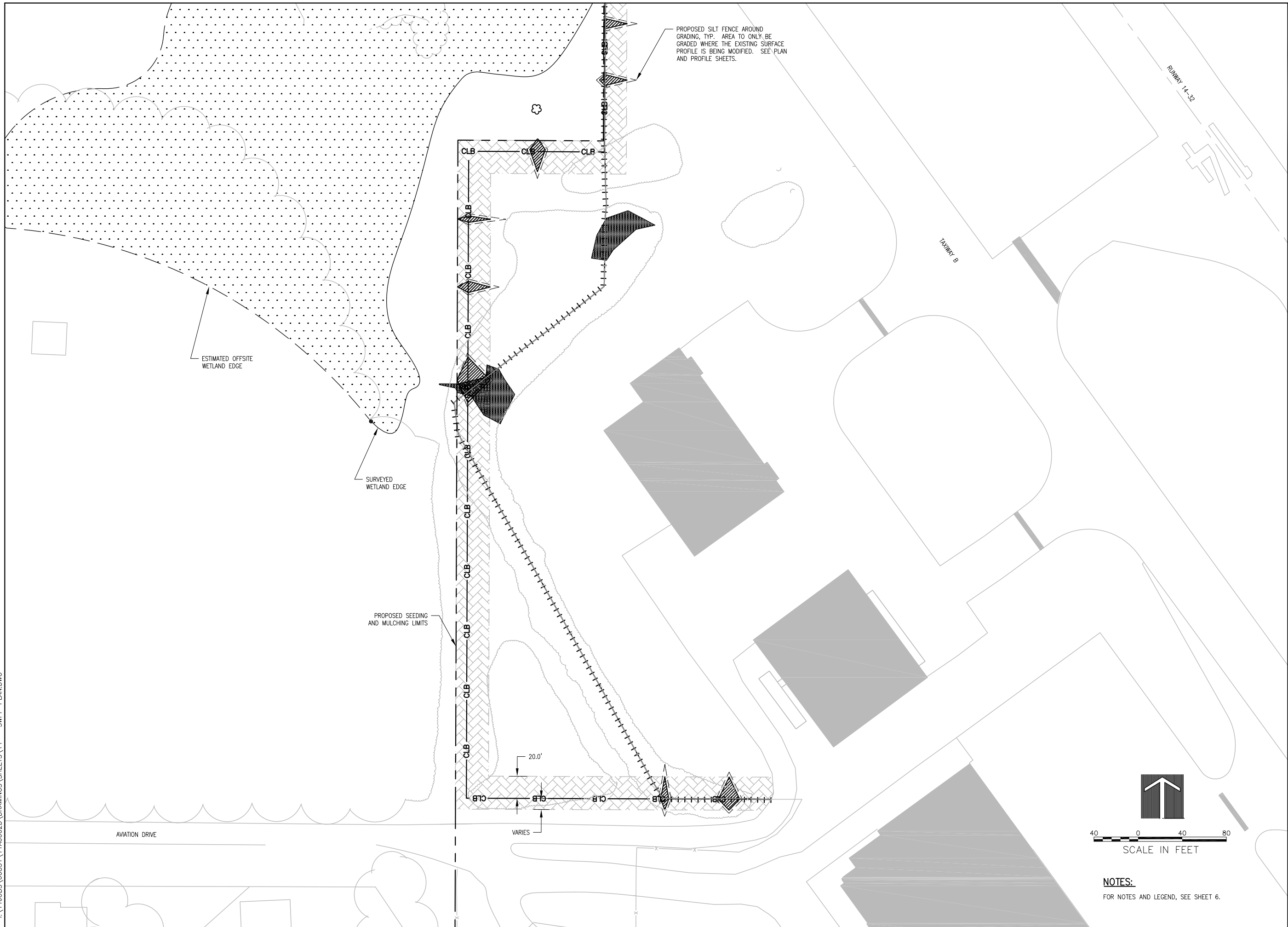


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Scale	1"=40'	REVIEWED	RWH	5/14/13
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 IDA No. UGN-4190 SFG No. 3-17-0105-B55

MAY 17, 2013 11:53 AM MCLAU01058
 I:\1\JOBS\00831\11A0002D\DRAWINGS\SHEETS\11 - SWPP PLAN.DWG



NOTES:
 FOR NOTES AND LEGEND, SEE SHEET 6.

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**LANDSCAPING AND
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CONSTRUCT PERIMETER FENCE, PHASE 2
 IDA No. UGN-4190 SEG No. 3-17-0105-B55

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Hanson No. 11A0002D	LDH	5/11/10
Filename 12-PLAN & PROFILE 600	LDH	5/11/10
Scale 1"=20'	LDH	5/11/10
Date MAY 17, 2013	RWH	5/14/13
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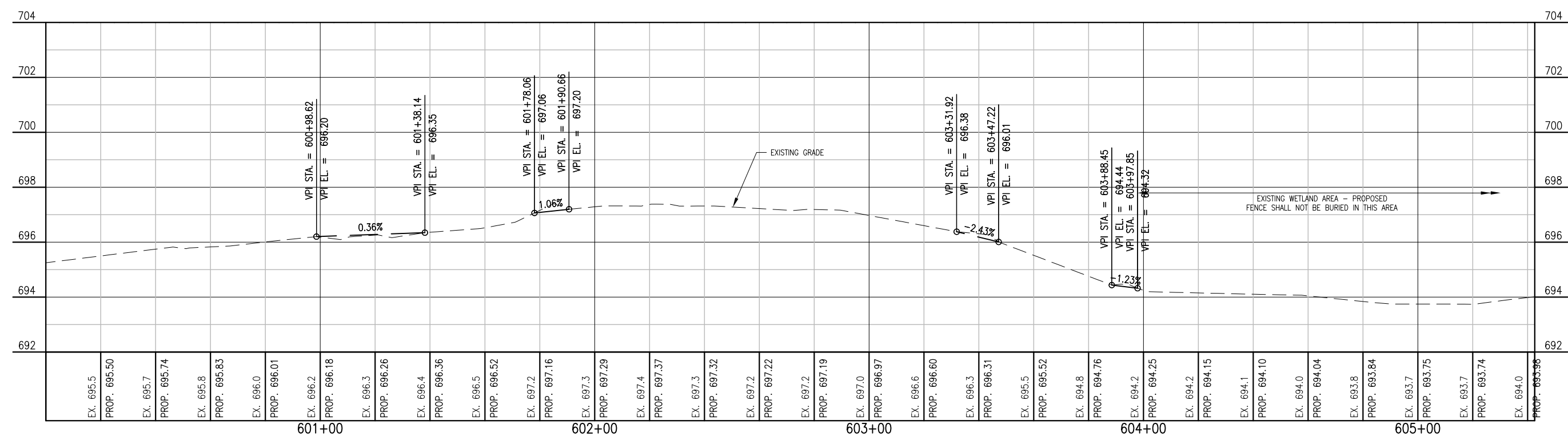
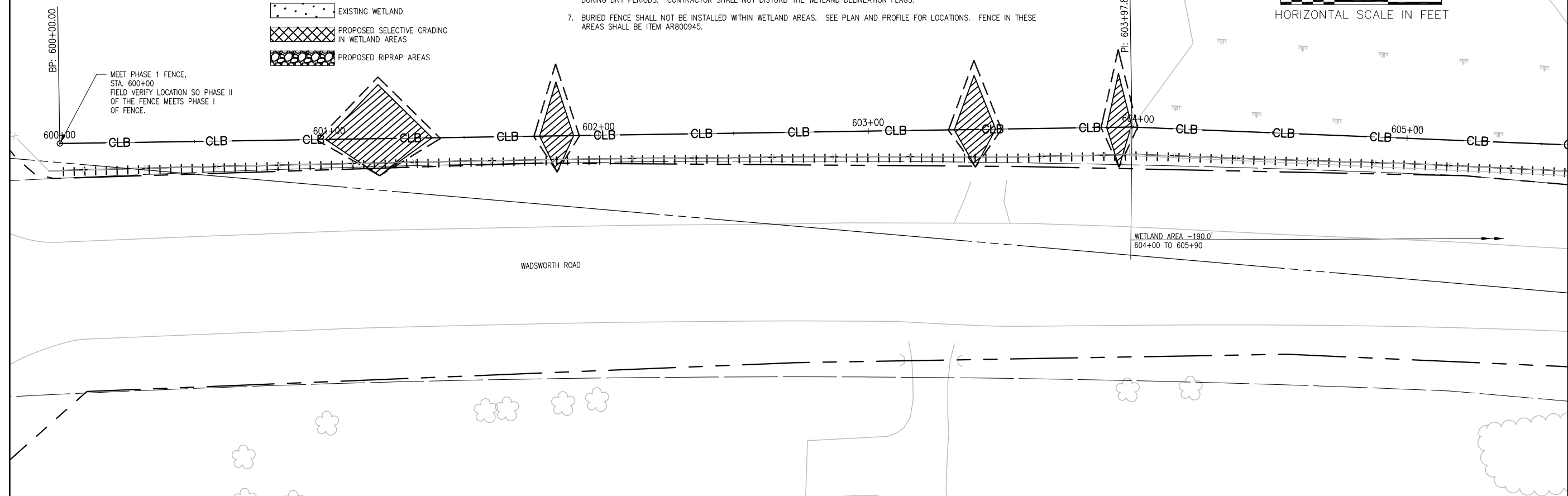
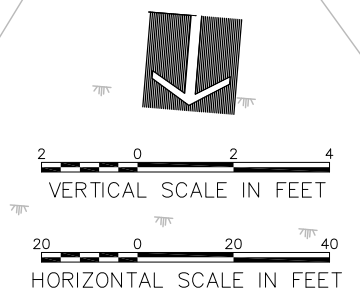
PLAN AND PROFILE
ALIGNMENT 600
 CONSTRUCT PERIMETER FENCE, PHASE 2
 IDA No. UGN-4190 SEG No. 3-17-0105-555

LEGEND:

- EXISTING STORM SEWER
- EXISTING UNDERDRAIN
- EXISTING ELECTRICAL
- EXISTING POWER CABLE
- EXISTING TELEPHONE
- EXISTING FENCE
- EXISTING STORM SEWER MANHOLE
- EXISTING FLARED END SECTION
- PROPOSED CHAIN LINK FENCE WITH BARBED WIRE
- PROPOSED ELECTRICAL
- PROPOSED FENCE REMOVAL
- PROPOSED GATE
- PROPOSED CLEARING & GRUBBING
- PROPOSED SILT FENCE
- PROPOSED SELECTIVE GRADING
- EXISTING WETLAND
- PROPOSED SELECTIVE GRADING IN WETLAND AREAS
- PROPOSED RIPRAP AREAS

NOTES:

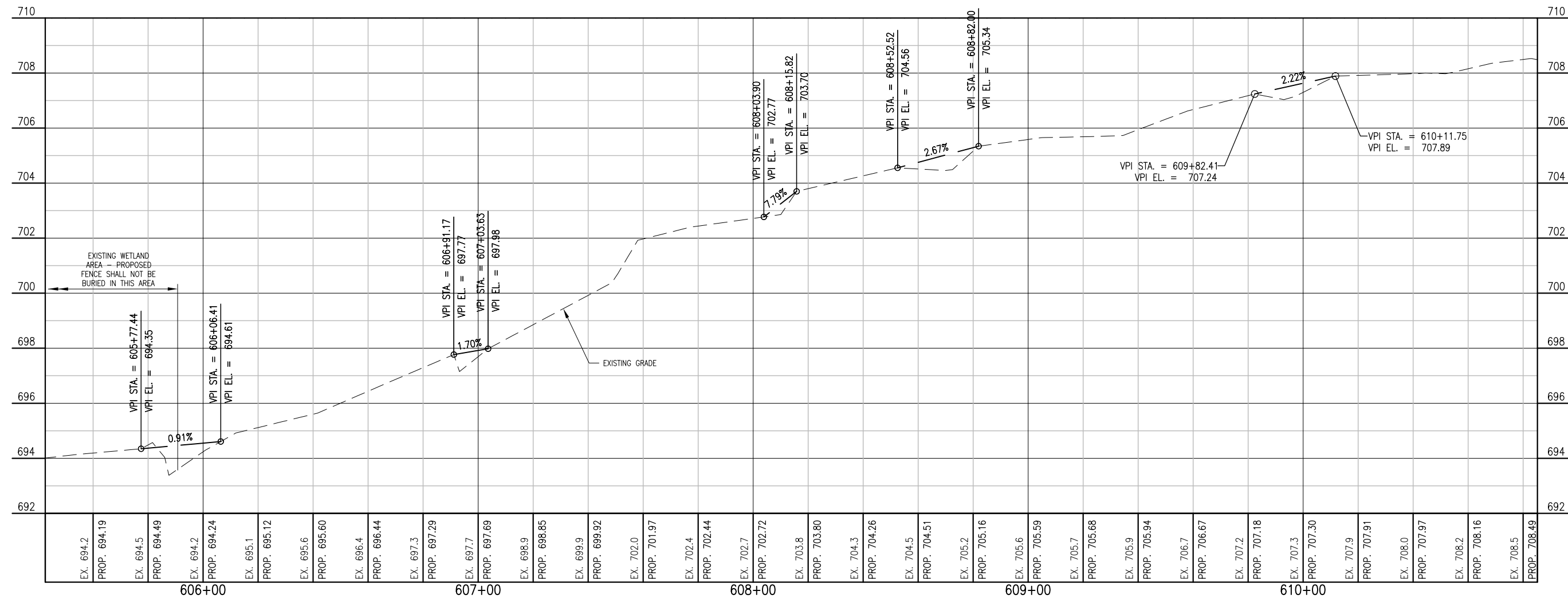
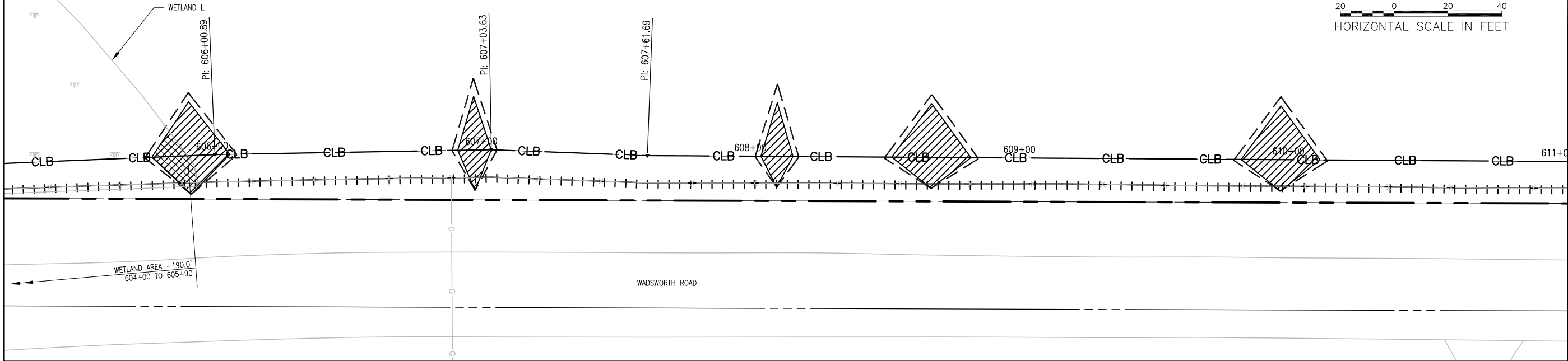
- FOR ALIGNMENT DATA, SEE ALIGNMENT DATA TABLE, SHEET 05.
- PROPOSED FENCE LINE FOLLOWS THE EXISTING GRADE UNLESS OTHERWISE NOTED. ALSO, SEE SPECIAL PROVISIONS FOR ADDITIONAL FENCELINE REQUIREMENTS.
- DRAINAGE AND UTILITIES NOT SHOWN IN PROFILE.
- SOME EXISTING AND PROPOSED UTILITIES HAVE BEEN OMITTED FOR CLARITY.
- PROPOSED FENCE THAT IS NOT TO BE BURIED IS SHOWN ON THE PLAN AND PROFILE SHEETS.
- CONTRACTOR IS TO KEEP VEHICLES AND EQUIPMENT OUT OF DELINEATED WETLAND AREAS UNLESS OTHERWISE NOTED. WORK SHALL BE PERFORMED ONLY IN THE AREAS SHOWN IN THE PLAN AND PROFILES. WORK SHALL BE DONE IN THESE AREAS ONLY DURING DRY PERIODS. CONTRACTOR SHALL NOT DISTURB THE WETLAND DELINEATION FLAGS.
- BURIED FENCE SHALL NOT BE INSTALLED WITHIN WETLAND AREAS. SEE PLAN AND PROFILE FOR LOCATIONS. FENCE IN THESE AREAS SHALL BE ITEM AR800945.



MAY 17, 2013 11:57 AM MCLAU01058
 I:\1\JOBS\00831\11A0002D\DRAWINGS\SHEETS\12-PLAN & PROFILE 600 - (1).DWG

NOTES:

1. FOR NOTES AND LEGEND, SEE SHEET 12.



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2) DWG

Hanson No. 11A0002D	File Name 13-PLAN & PROFILE 600 -
Scale 1"=20'	Date MAY 17, 2013
LAYOUT	LDH 5/16/11
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PLAN AND PROFILE
 ALIGNMENT 600

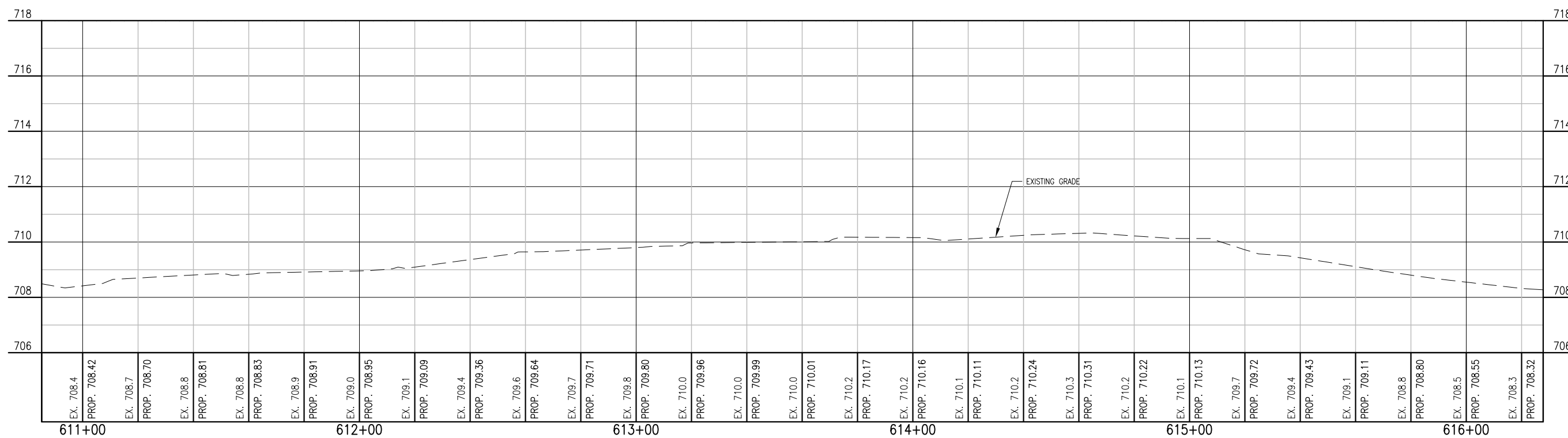
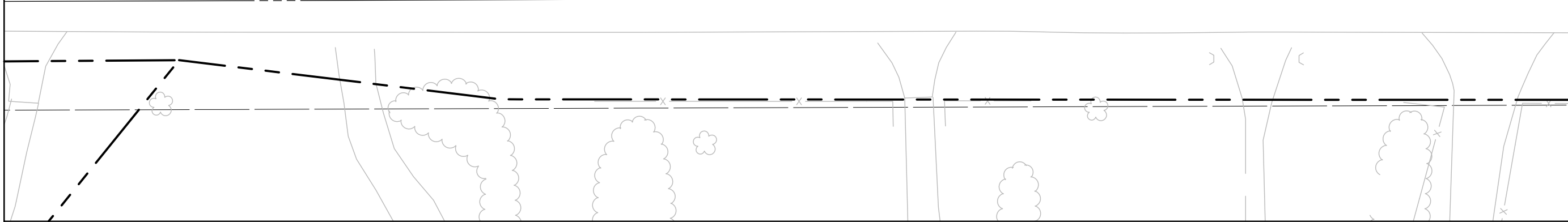
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NOTES:

1. FOR NOTES AND LEGEND, SEE SHEET 12.



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Hanson No. 11A0002D	File Name 14-PLAN & PROFILE 600 -	LAYOUT	LDH	5/16/11
Scale 1"=20'	Date MAY 17, 2013	DRAWN	LDH	5/16/11
		REVIEWED	RWH	5/14/13

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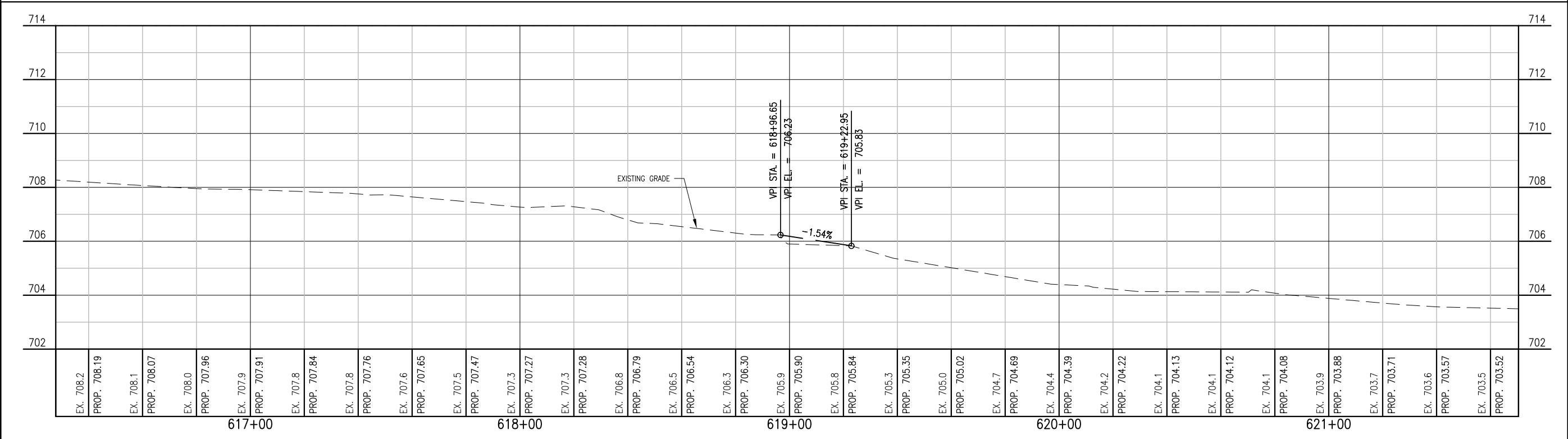
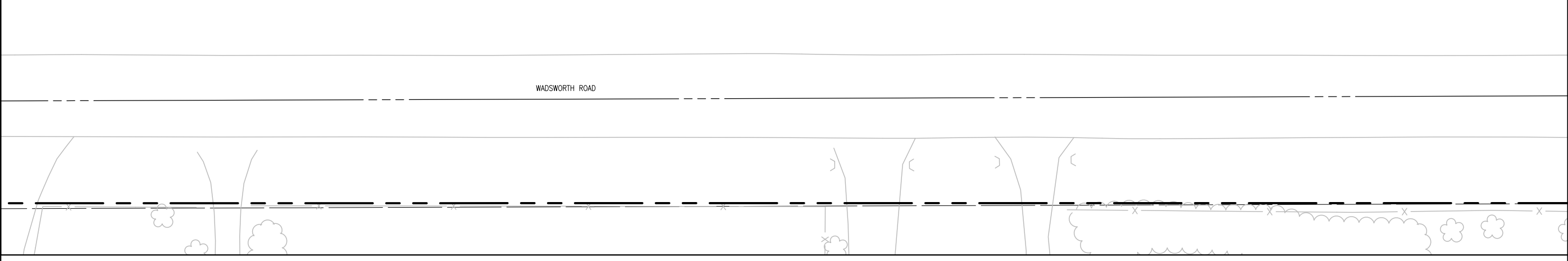
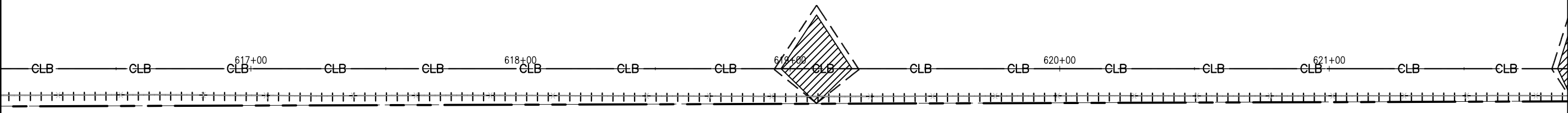
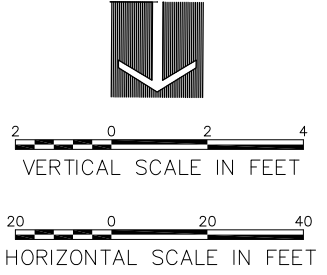
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PLAN AND PROFILE
ALIGNMENT 600

CONSTRUCT PERIMETER FENCE, PHASE 2
 IDA No. UGN-4190 SEG No. 3-17-0105-555

MAY 17, 2013 11:57 AM MCLAU01058
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NOTES:
 1. FOR NOTES AND LEGEND, SEE SHEET 12.



REVISION	DATE

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 Filename: 15-PLAN & PROFILE 600 -
 Scale: 1" = 20'
 Date: MAY 17, 2013

LAYOUT	LDH	5/16/11
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**PLAN AND PROFILE
 ALIGNMENT 600**

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 IDA No. UGN-4190 SBG No. 3-17-0105-555

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 WAUKEGAN PORT DISTRICT
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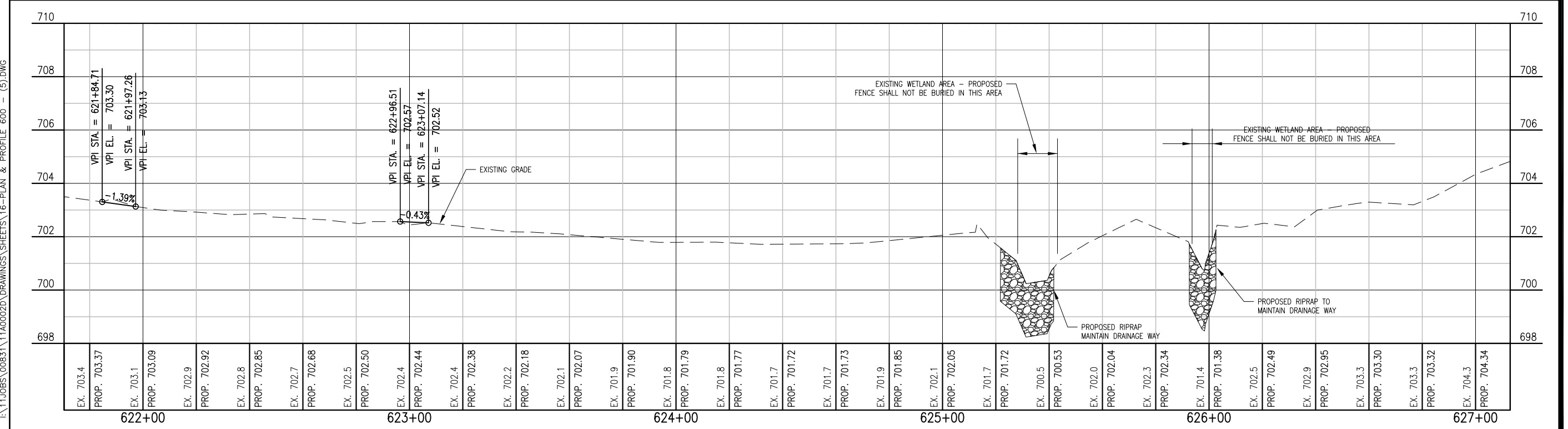
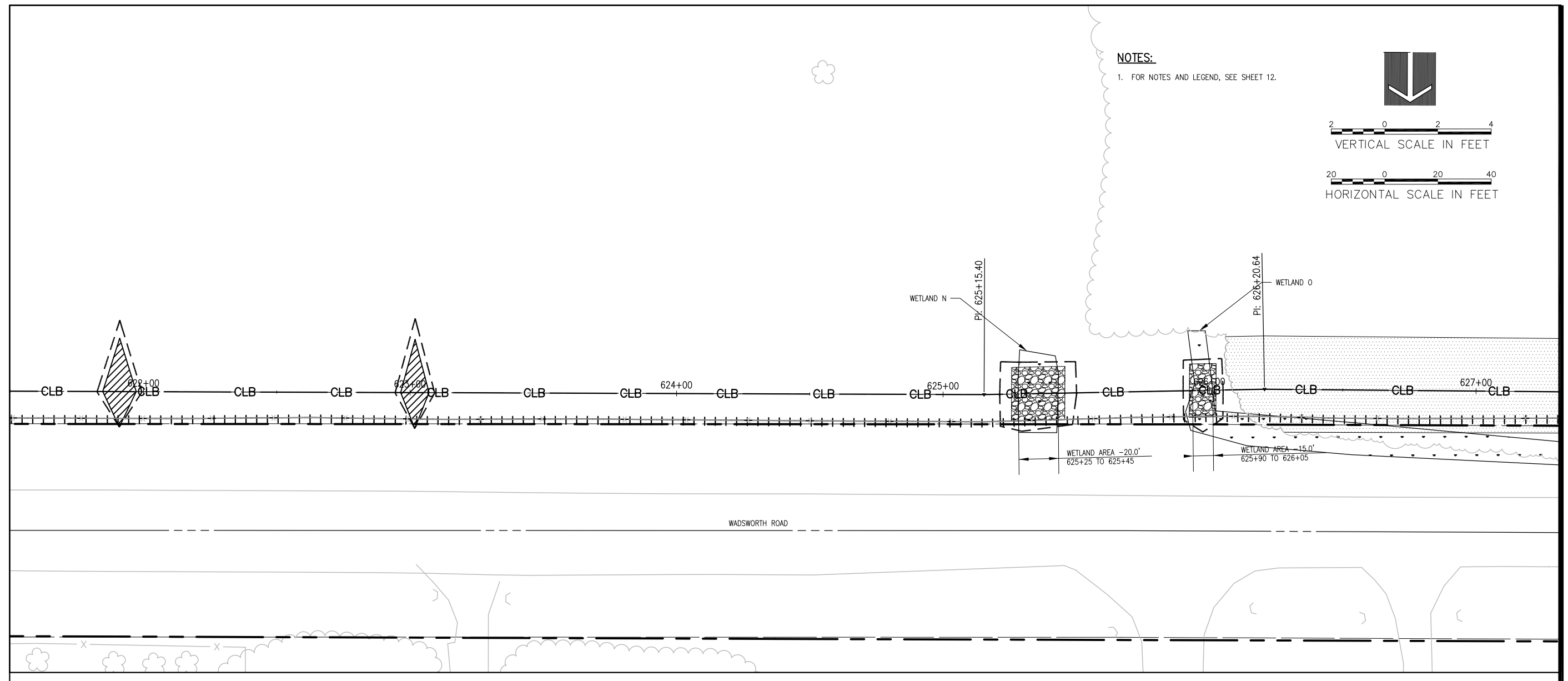
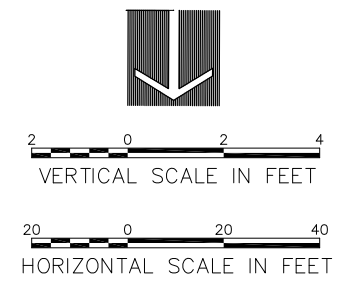
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Filename 16-PLAN & PROFILE 600	LDH	5/16/11
Scale 1"=20'	LDH	5/16/11
Date MAY 17, 2013	RWH	5/14/13
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 Oak Brook, Illinois 60523

**PLAN AND PROFILE
 ALIGNMENT 600**

CONSTRUCT PERIMETER FENCE, PHASE 2
 IDA No. UGN-4190 SBG No. 3-17-0105-555

NOTES:
 1. FOR NOTES AND LEGEND, SEE SHEET 12.



MAY 17, 2013 11:56 AM MCLAU01058
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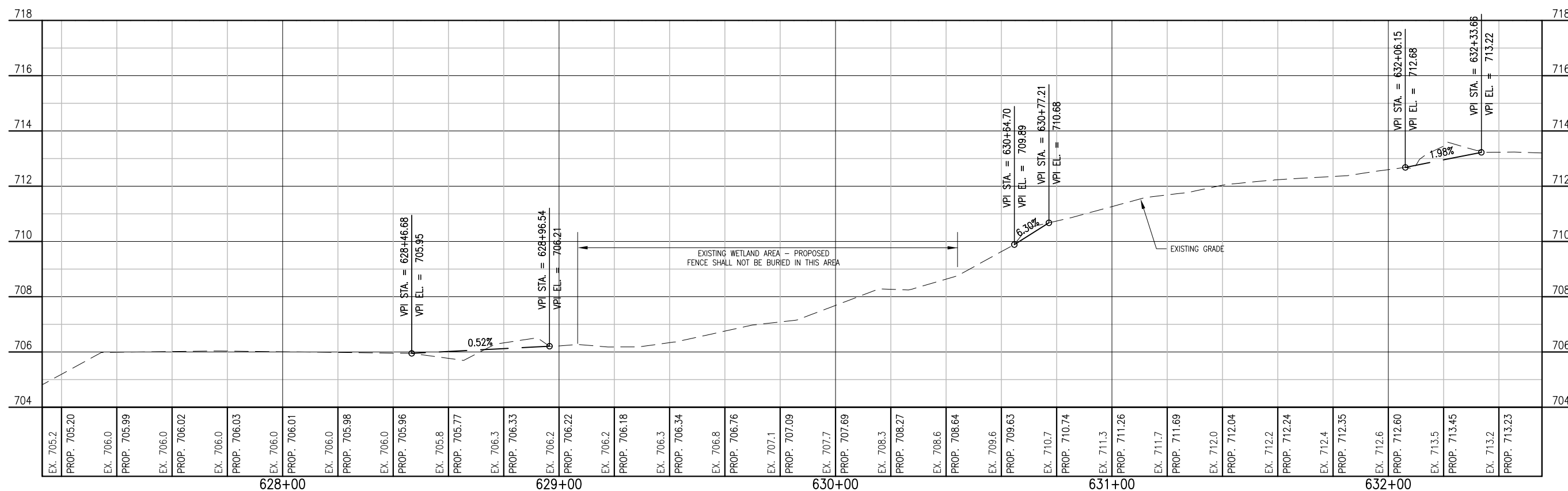
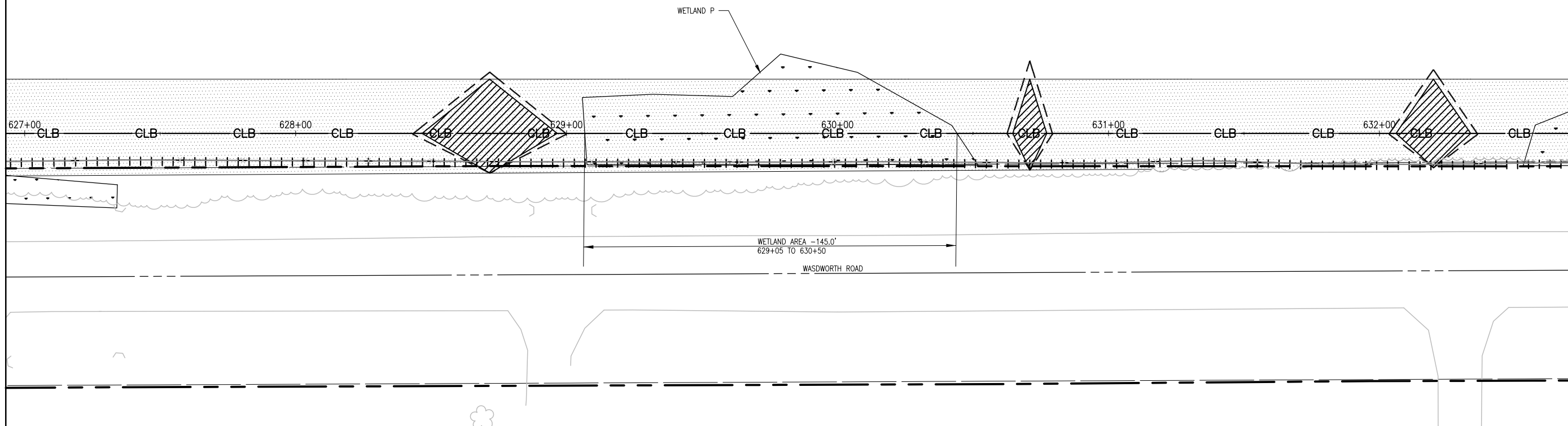
NOTES:

1. FOR NOTES AND LEGEND, SEE SHEET 12.



2 0 2 4
VERTICAL SCALE IN FEET

20 0 20 40
HORIZONTAL SCALE IN FEET



REVISION	DATE

WAUKEGAN NATIONAL AIRPORT
WAUKEGAN PORT DISTRICT
3580 North McAtee Road
Waukegan, Illinois 60087
Telephone: 847.244.0066
Fax: 847.244.3813



FILENAME	SCALE	DATE	LAYOUT	LDH	LDH	RWH
17-PLAN & PROFILE 600	1"=20'	MAY 17, 2013	LAYOUT	LDH	LDH	RWH
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			REVIEWED	LDH	LDH	RWH

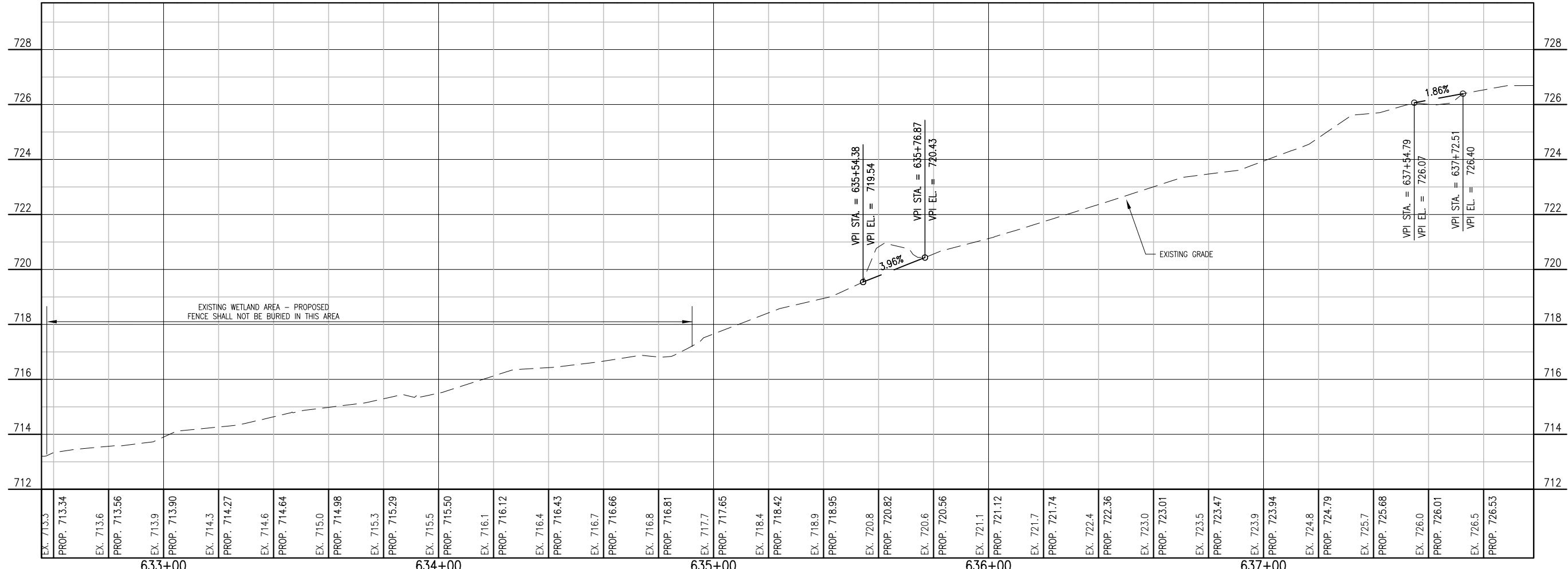
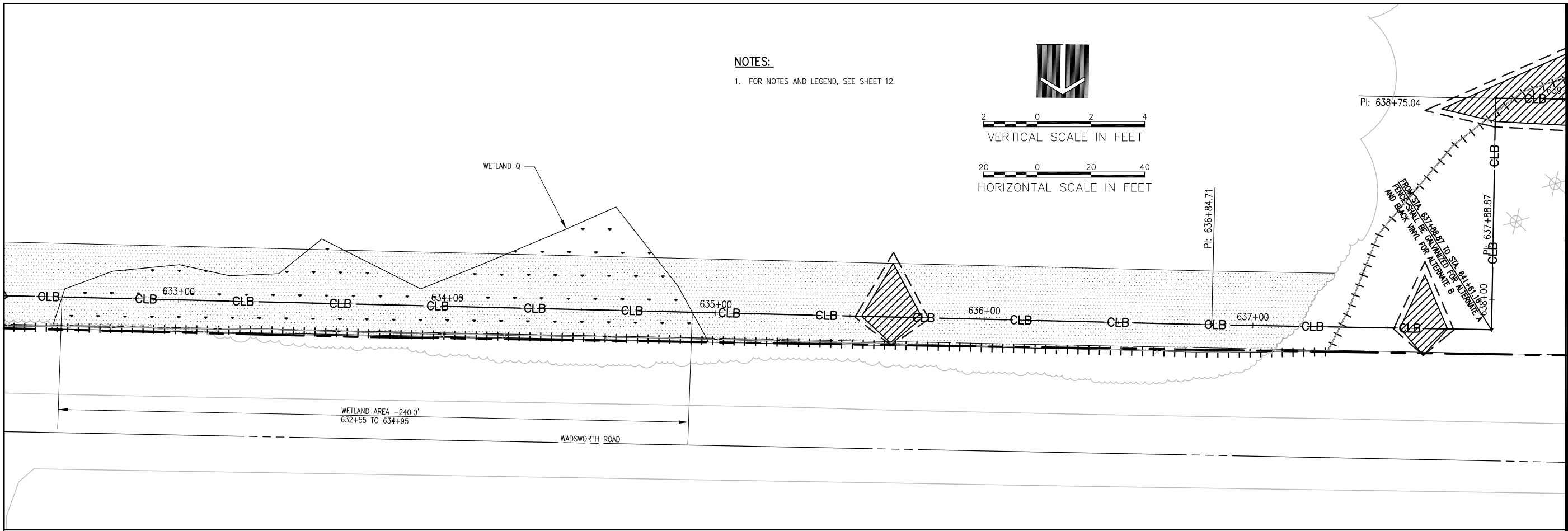
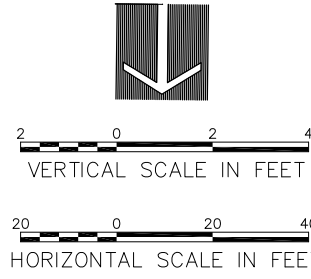
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**PLAN AND PROFILE
ALIGNMENT 600**

CONSTRUCT PERIMETER FENCE, PHASE 2
IDA No. UGN-4190 SBG No. 3-17-0105-555

NOTES:
1. FOR NOTES AND LEGEND, SEE SHEET 12.



EX. 713.3	PROP. 713.34	633+00
EX. 713.6	PROP. 713.56	
EX. 713.9	PROP. 713.90	
EX. 714.3	PROP. 714.27	
EX. 714.6	PROP. 714.64	
EX. 715.0	PROP. 714.98	
EX. 715.3	PROP. 715.29	
EX. 715.5	PROP. 715.50	634+00
EX. 716.1	PROP. 716.12	
EX. 716.4	PROP. 716.43	
EX. 716.7	PROP. 716.66	
EX. 716.8	PROP. 716.81	
EX. 717.7	PROP. 717.65	635+00
EX. 718.4	PROP. 718.42	
EX. 718.9	PROP. 718.95	
EX. 720.8	PROP. 720.82	
EX. 720.6	PROP. 720.56	636+00
EX. 721.1	PROP. 721.12	
EX. 721.7	PROP. 721.74	
EX. 722.4	PROP. 722.36	
EX. 723.0	PROP. 723.01	
EX. 723.5	PROP. 723.47	637+00
EX. 723.9	PROP. 723.94	
EX. 724.8	PROP. 724.79	
EX. 725.7	PROP. 725.68	
EX. 726.0	PROP. 726.01	
EX. 726.5	PROP. 726.53	

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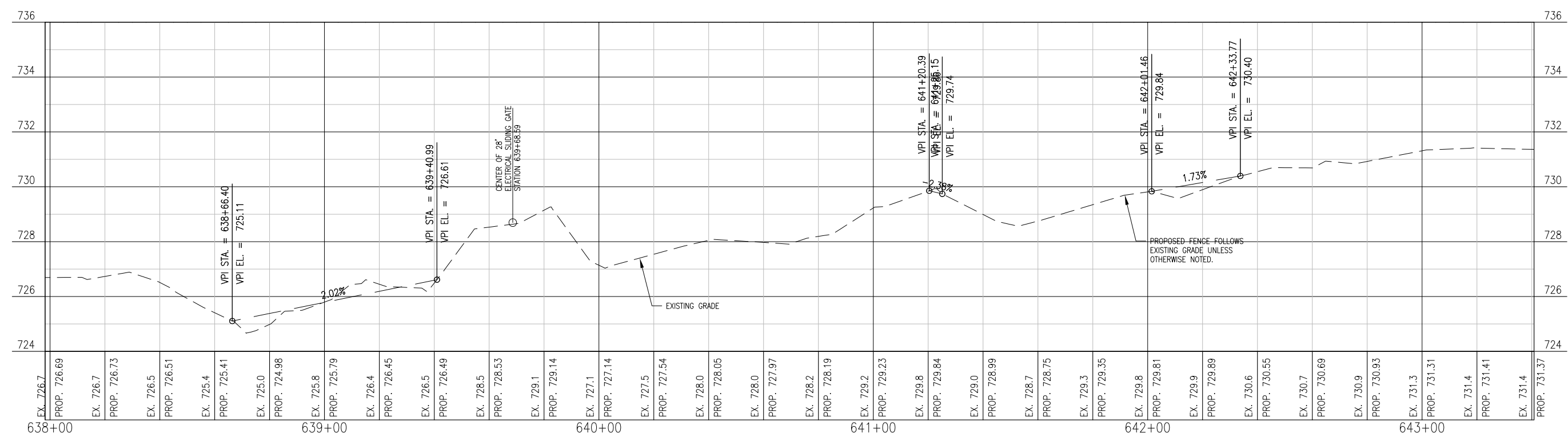
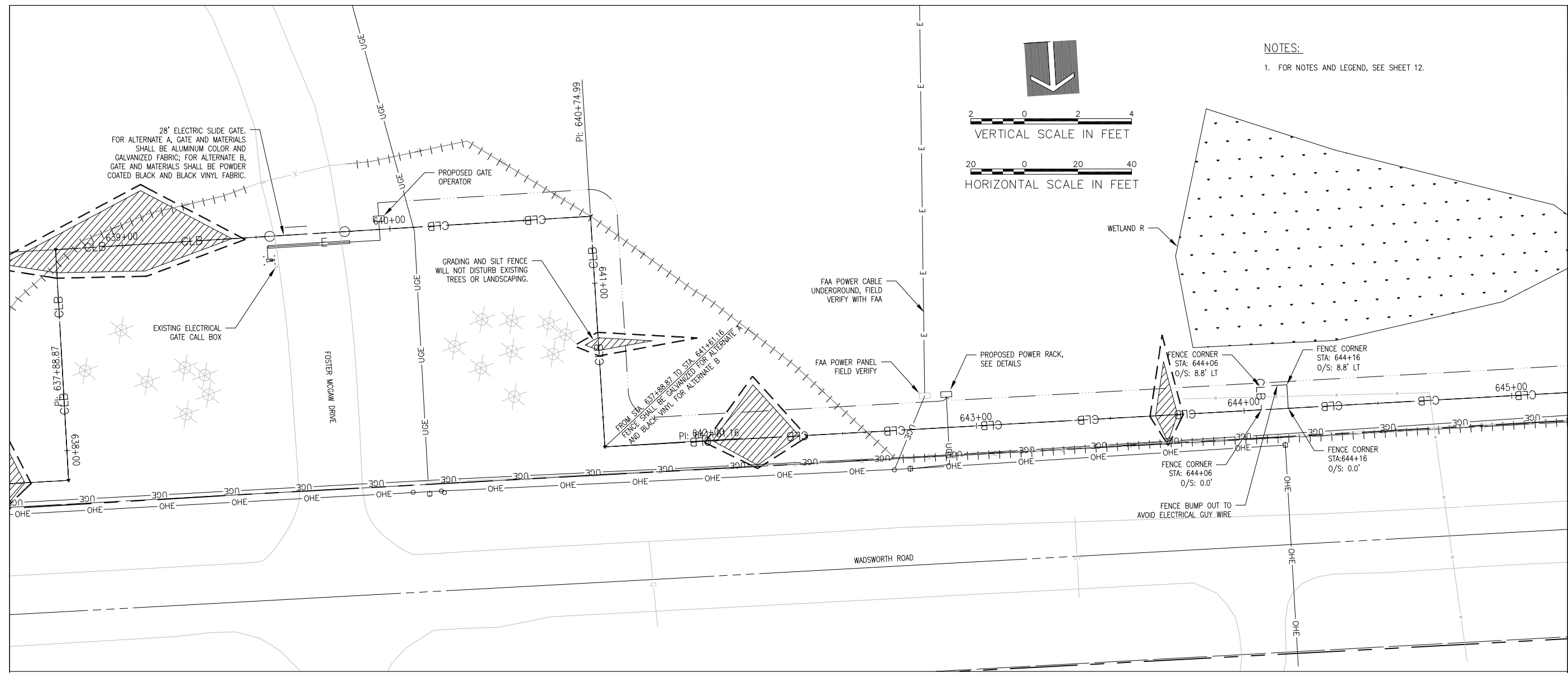
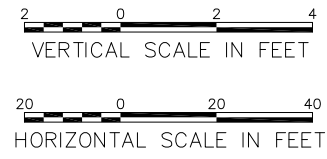
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Scale 1"=20'	Date MAY 17, 2013	DRAWN	LDH	5/17/11
		REVIEWED	RMH	5/14/13

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PLAN AND PROFILE
ALIGNMENT 600
CONSTRUCT PERIMETER FENCE, PHASE 2
IDA No. UGN-4190 SEG No. 3-17-0105-555

NOTES:
1. FOR NOTES AND LEGEND, SEE SHEET 12.



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(8) DWG

Hanson No.	11A0002D		
Filename	19-PLAN & PROFILE 600 -		
Scale	1"=20'		
Date	MAY 17, 2013		

LAYOUT	LDH	5/17/11
DRAWN	LDH	5/17/11
REVIEWED	RWH	5/14/13

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ALIGNMENT 600

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IDA No. UGN-4190 SEG No. 3-17-0105-555

MAY 17, 2013 12:07 PM MCLAU01058
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Hanson No.	11A0002D	Project	20-PLAN & PROFILE 600
File Name	20-PLAN & PROFILE 600	Scale	1"=20'
Date	MAY 17, 2013	LAYOUT	LDH
		DRAWN	LDH
		REVIEWED	RWH

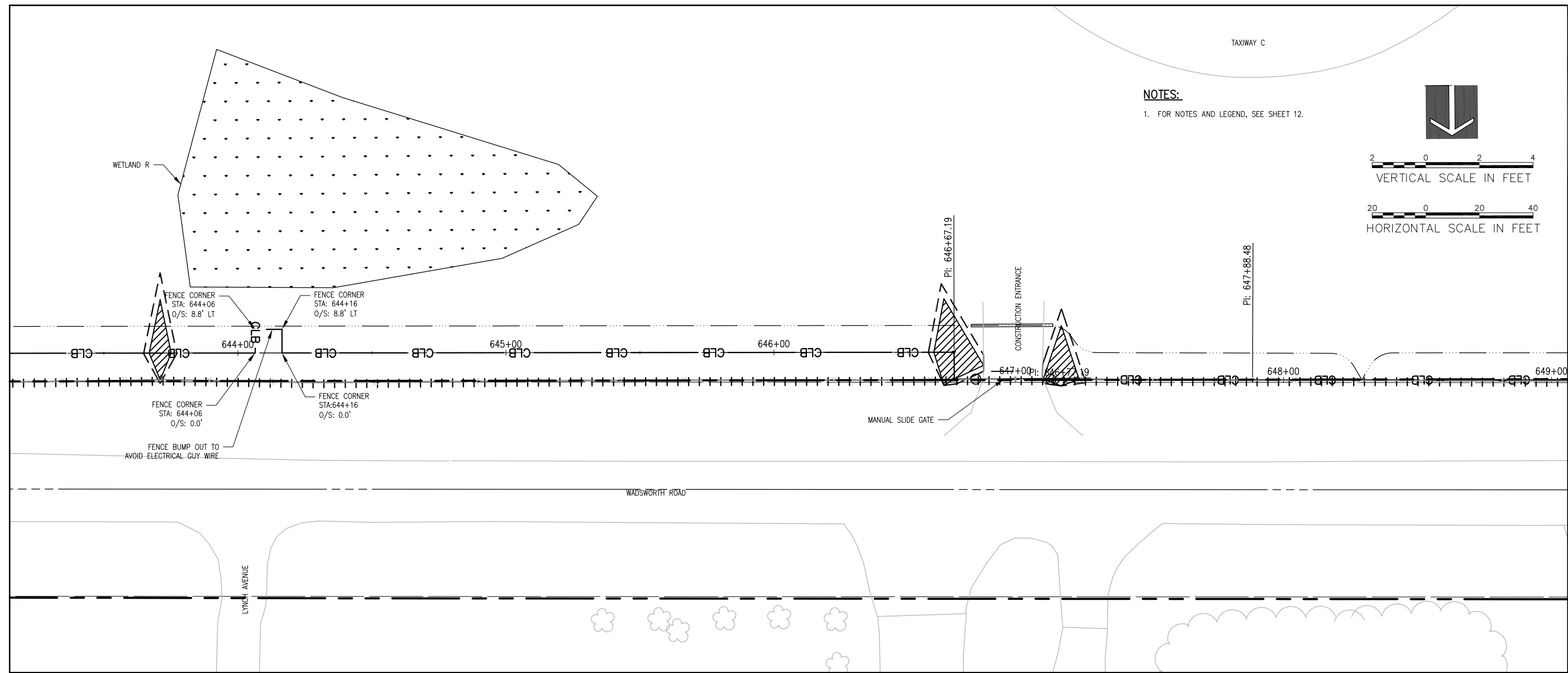
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PLAN AND PROFILE
 ALIGNMENT 600

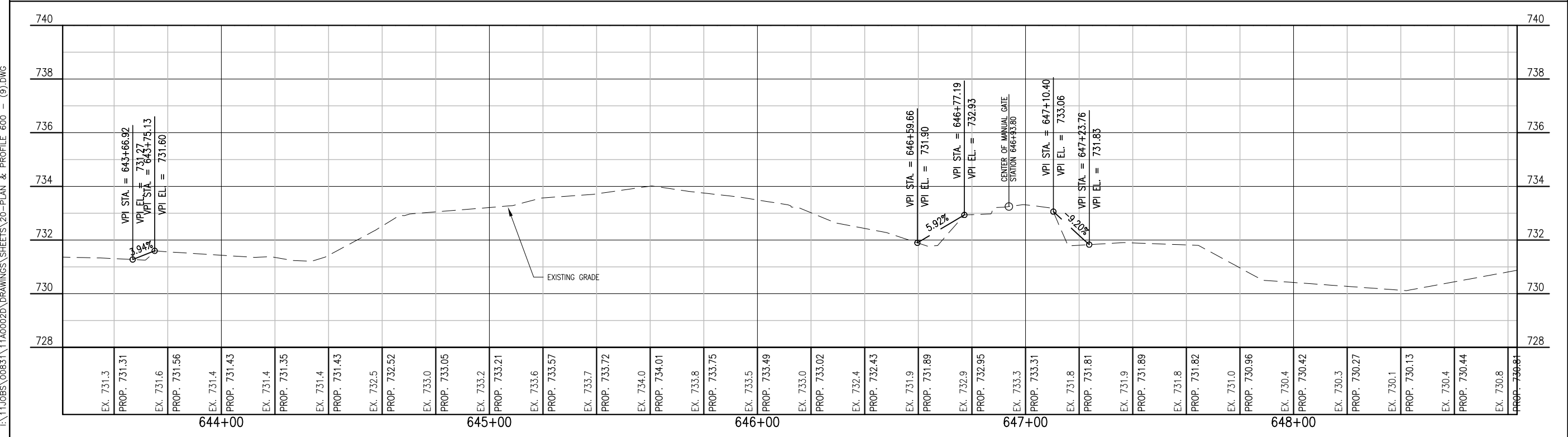
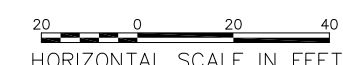
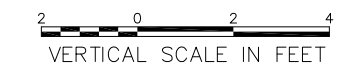
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 IDA No. UGN-4190 SFG No. 3-17-0105-555

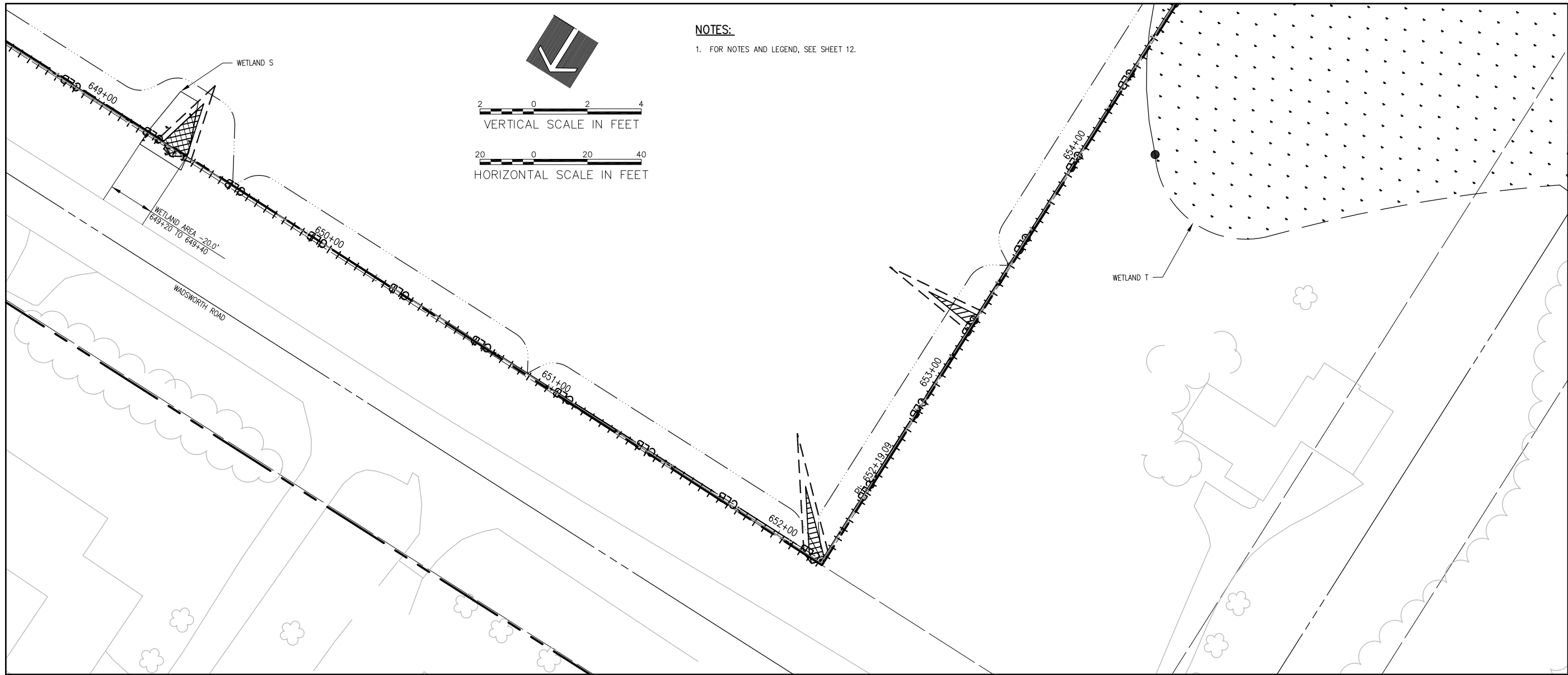
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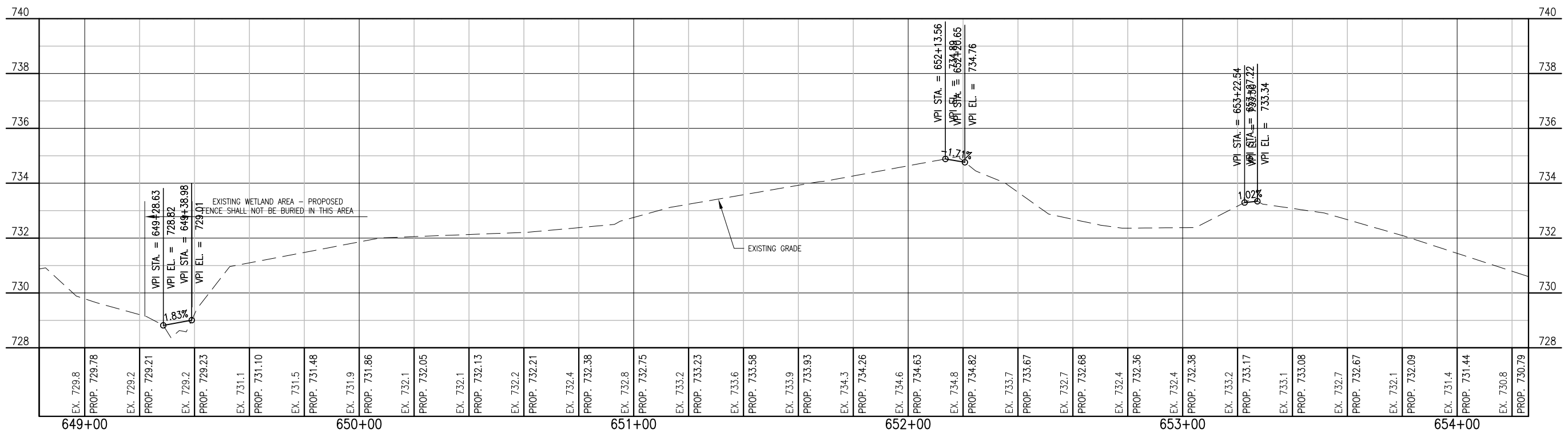
NOTES:

- 1. FOR NOTES AND LEGEND, SEE SHEET 12.





NOTES:
 1. FOR NOTES AND LEGEND, SEE SHEET 12.



DATE	REVISION

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FILENAME	DATE	BY	CHKD	REV
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21-PLAN & PROFILE 600	MAY 17, 2013	LDH	LDH	5/17/11
LAYOUT				5/14/13
DRAWN				
REVIEWED				

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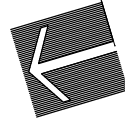
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PLAN AND PROFILE
 ALIGNMENT 600

CONSTRUCT PERIMETER FENCE, PHASE 2
 IDA No. UGN-4190 - SEG No. 3-17-0105-555

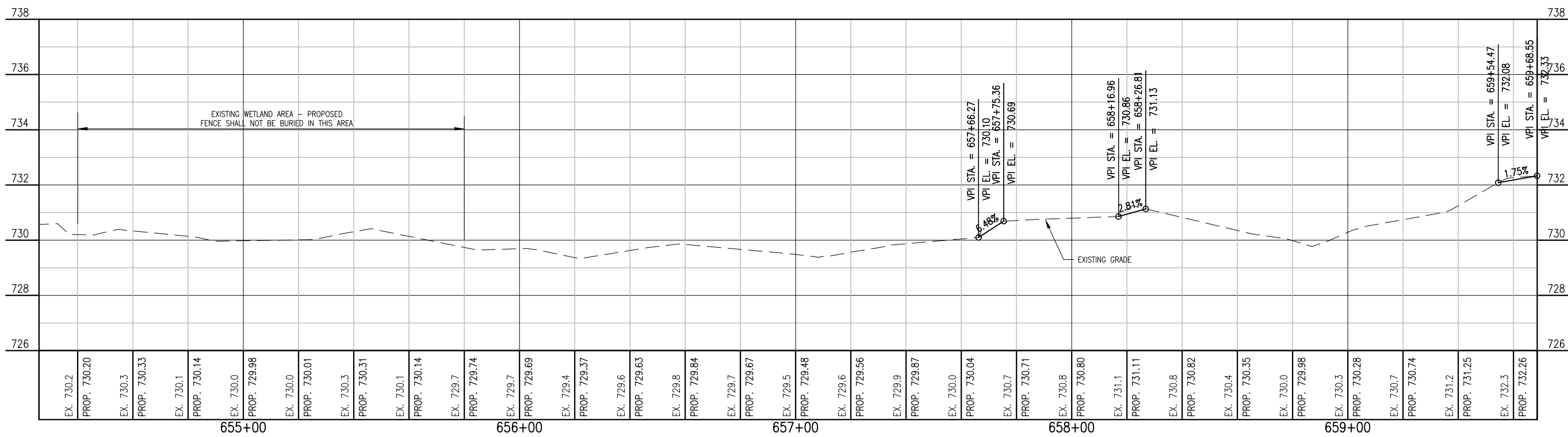
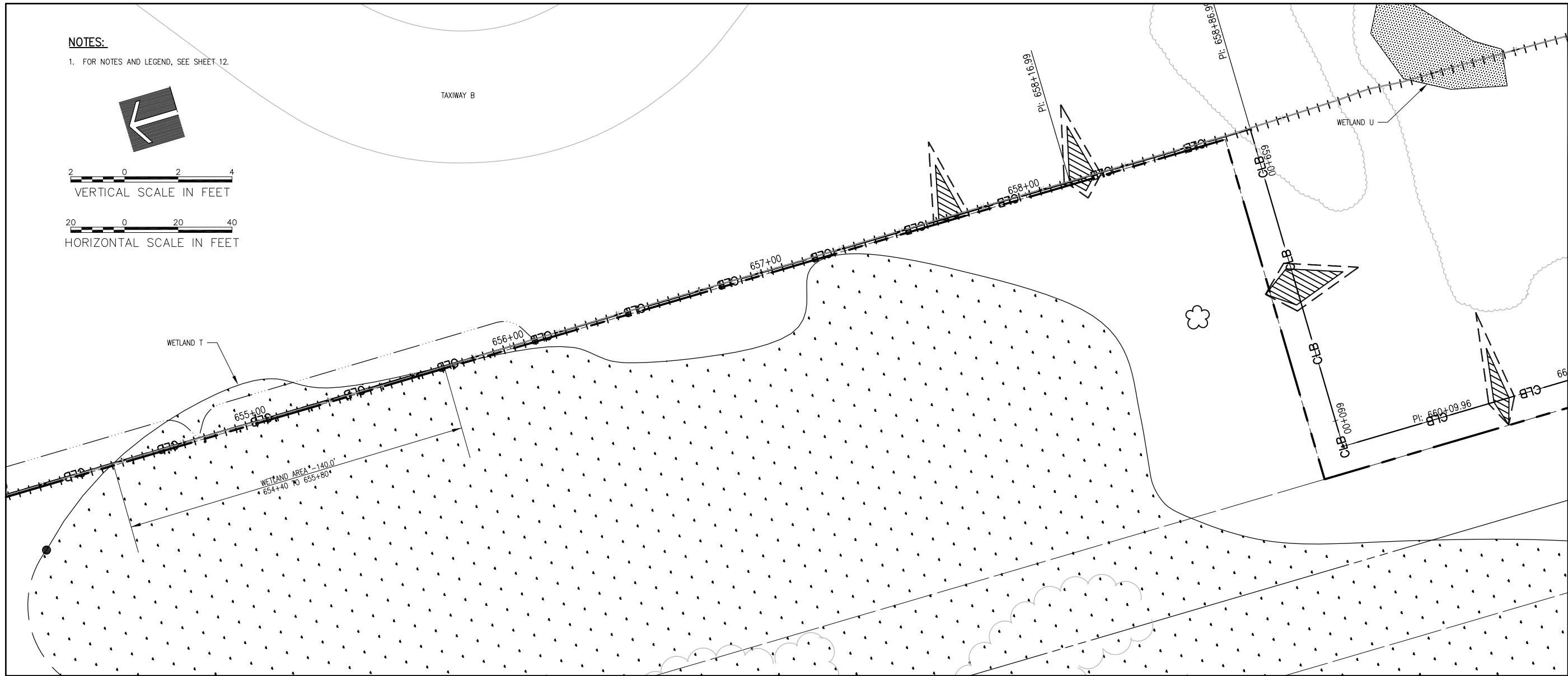
NOTES:

1. FOR NOTES AND LEGEND, SEE SHEET 12.



VERTICAL SCALE IN FEET

HORIZONTAL SCALE IN FEET



REVISION	DATE

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Hanson No. 11A0002D	LDH	5/17/11
Filename 22-PLAN & PROFILE 600	LDH	5/17/11
Scale 1"=20'	LDH	5/17/11
Date MAY 17, 2013	RMH	5/14/13
LAYOUT		
DRAWN		
REVIEWED		

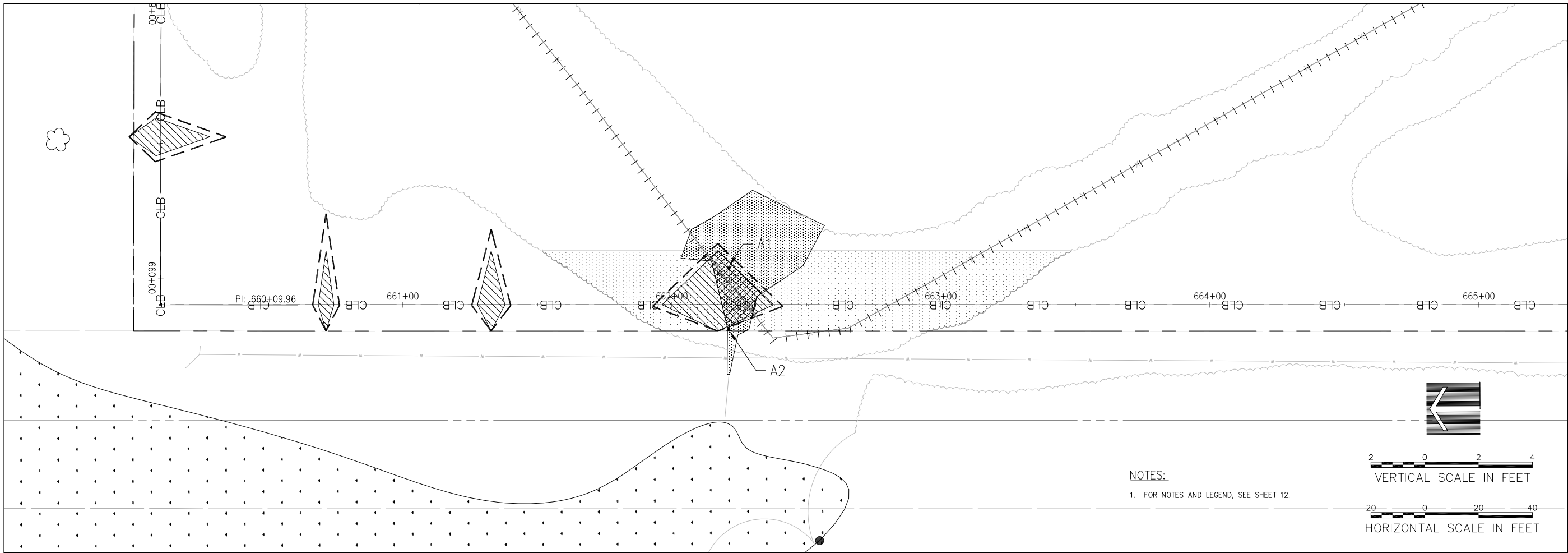
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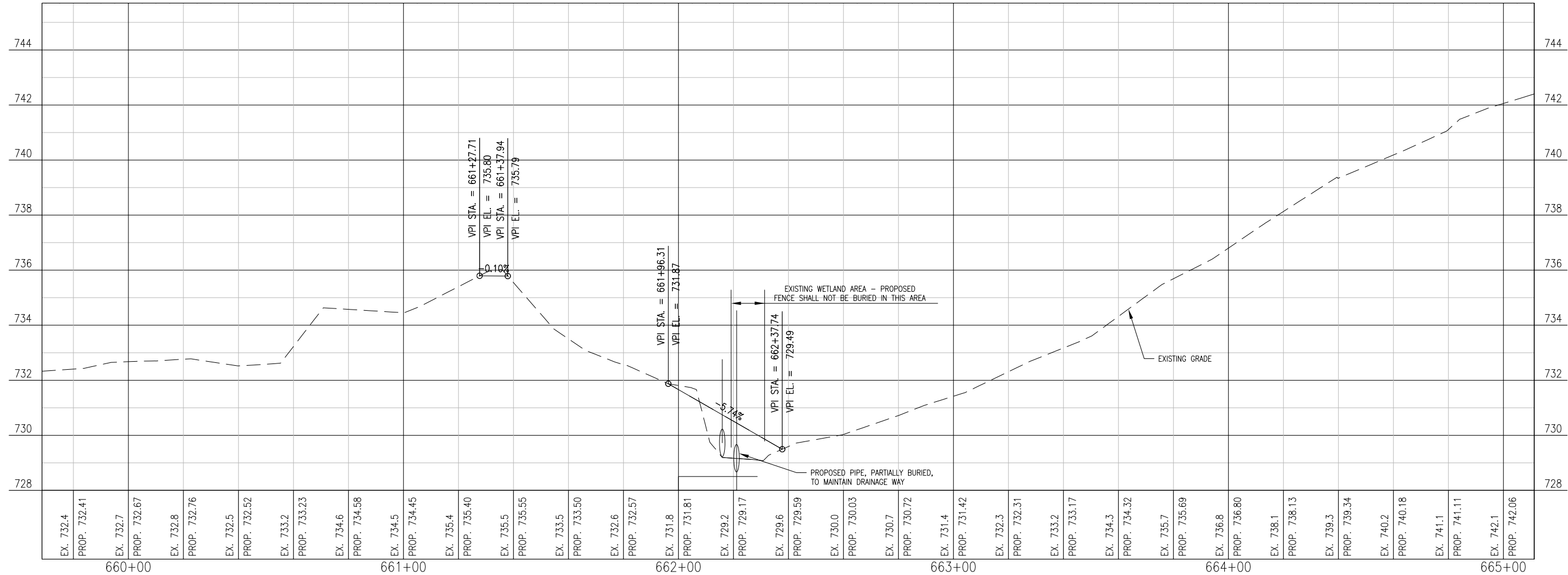
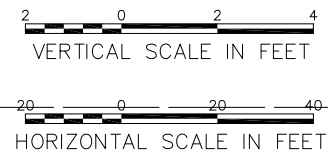
PLAN AND PROFILE
ALIGNMENT 600

CONSTRUCT PERIMETER FENCE, PHASE 2
 IDA No. UGN-4190 SEG No. 3-17-0105-555

MAY 17, 2013 12:09 PM MGLAU01058 I:\1\JOBS\00831\11A0002D\DRAWINGS\SHEETS\22-PLAN & PROFILE 600 - (11).DWG



NOTES:
 1. FOR NOTES AND LEGEND, SEE SHEET 12.



REVISION	DATE

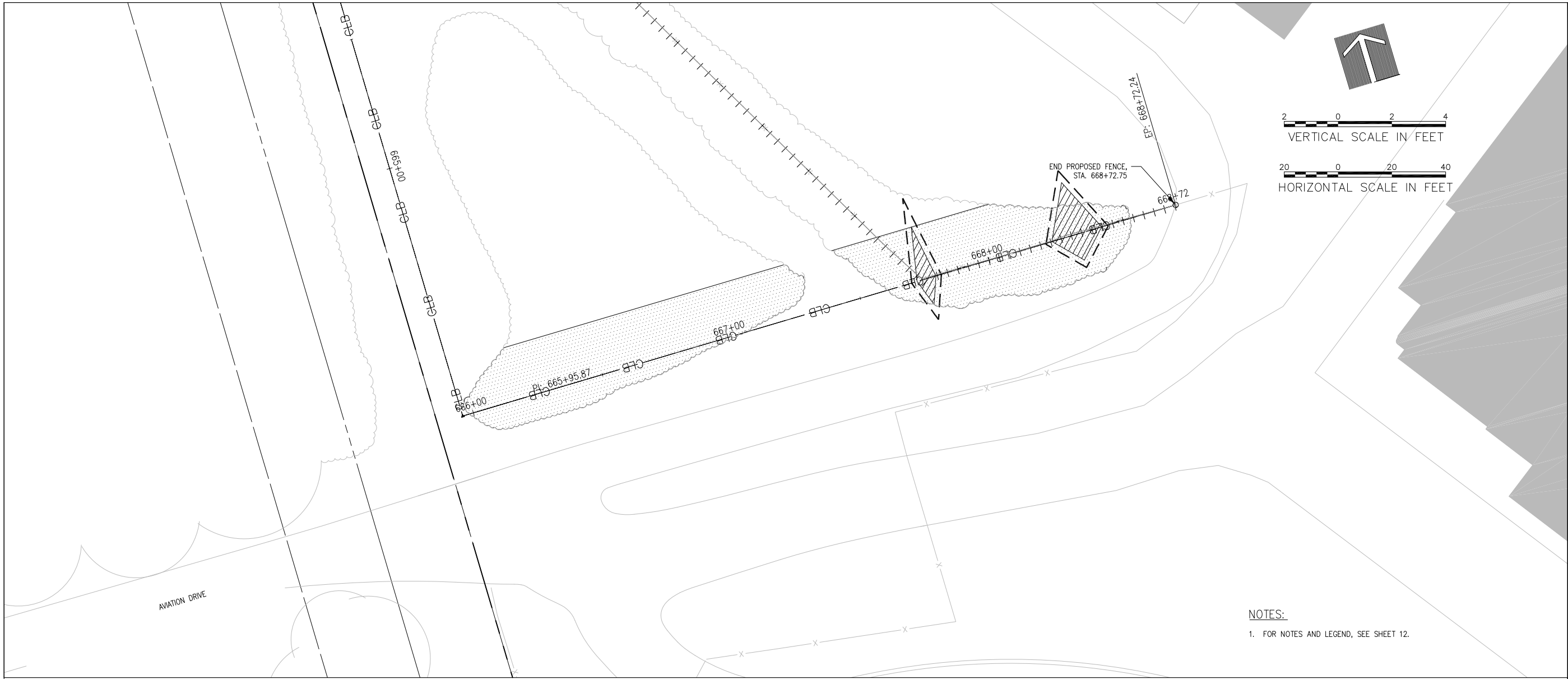
WAUKEGAN NATIONAL AIRPORT
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 Waukegan, Illinois 60087
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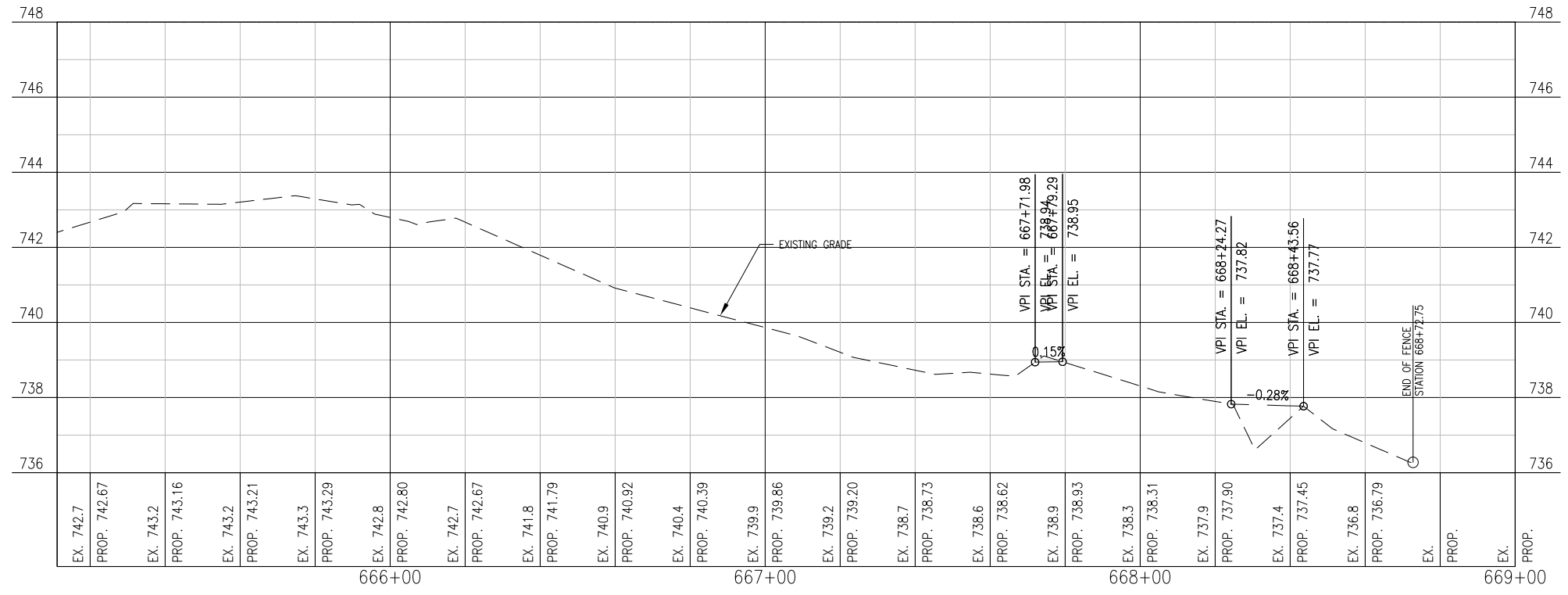
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Scale 1"=20'		LDH	
LAYOUT	5/17/11		
DRAWN	5/17/11		
REVIEWED	5/14/13		

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ALIGNMENT 600
CONSTRUCT PERIMETER FENCE, PHASE 2
 IDA No. UGN-4190 SBG No. 3-17-0105-555



NOTES:
 1. FOR NOTES AND LEGEND, SEE SHEET 12.



REVISION	DATE

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FILENAME	SCALE	DATE	LAYOUT	LDH	5/17/11
11A0002D	1"=20'	MAY 17, 2013	DRAWN	LDH	5/17/11
24-PLAN & PROFILE 600			REVIEWED	RWH	5/14/13

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 ALIGNMENT 600

CONSTRUCT PERIMETER FENCE, PHASE 2
 IDA No. UGN-4190 SEG No. 3-17-0105-555

REVISION

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Hanson No. 11A00002D
 Filename 25-FENCING-DETAILS.DWG
 Scale N/A
 Date MAY 17, 2013

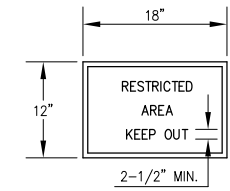
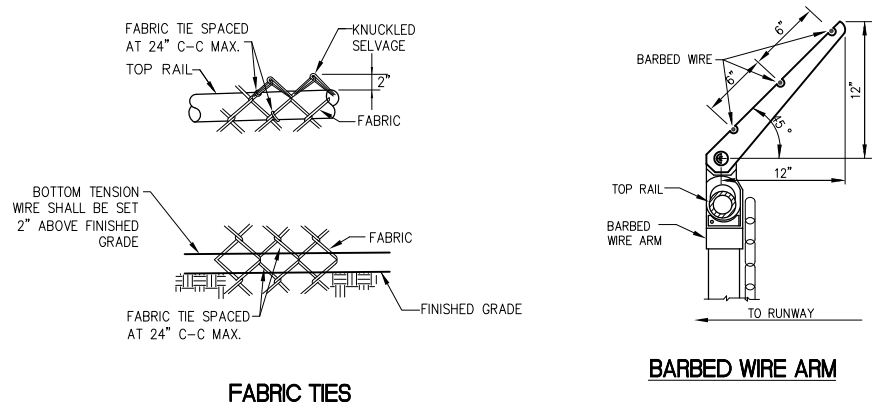
LAYOUT	LDH	3/15/11
DRAWN	LDH	3/15/11
REVIEWED	RWH	5/14/13

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FENCE DETAILS

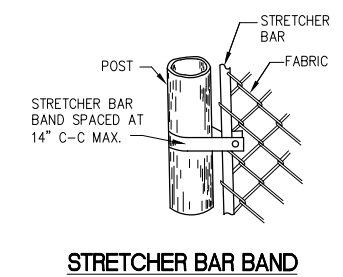
CONSTRUCT PERIMETER FENCE, PHASE 2
 IDA No. UGN-4190 SEG No. 3-17-0105-555



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

NOTES:

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

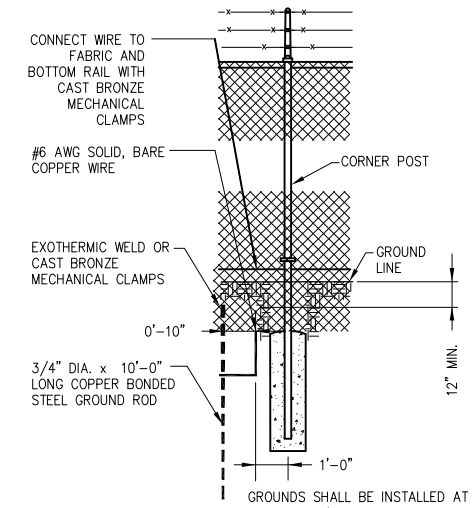


FABRIC TIES

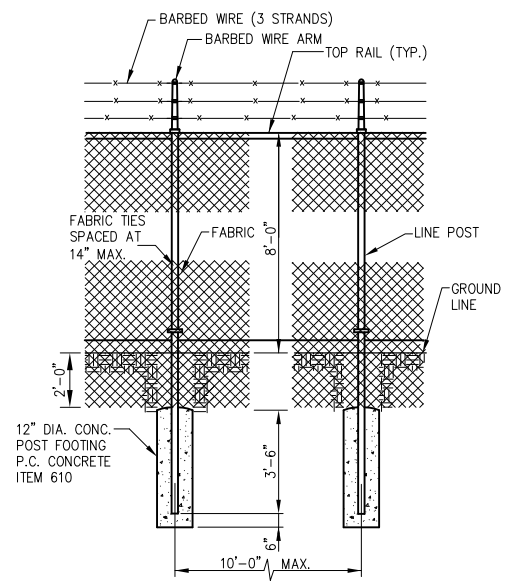
BARBED WIRE ARM

SIGN DETAIL

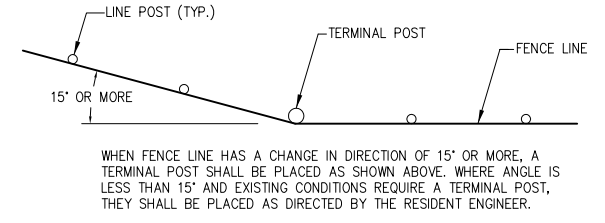
STRETCHER BAR BAND



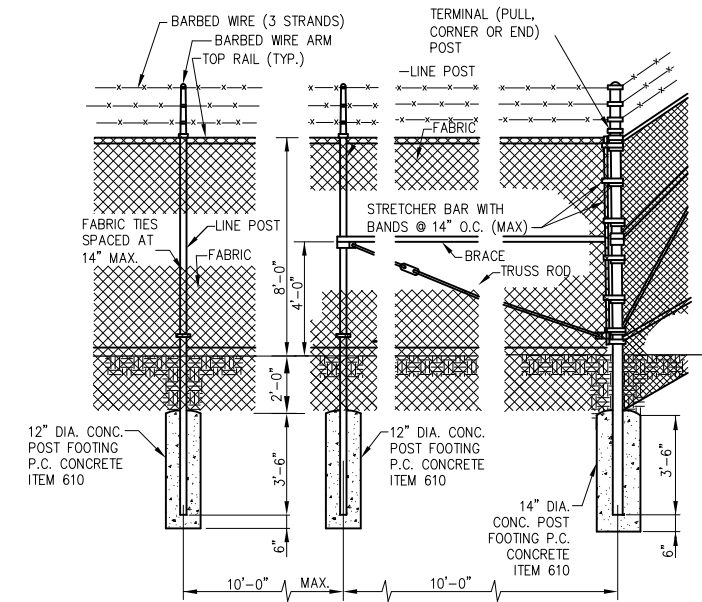
PROTECTIVE ELECTRICAL GROUND



LINE POST



INSTALLATION AT CORNERS



TERMINAL (PULL, CORNER OR END) POST

FENCING NOTES

- ALL FENCE, FABRIC, POSTS, GATES, TENSION WIRE, RODS, BRACES, ARMS, BARBED WIRE AND MISCELLANEOUS FITTINGS SHALL BE GALVANIZED STEEL, EXCEPT FOR ITEMS AT800962 AND AT800963 WHICH SHALL BE BLACK VINYL COATED.
- BARBED WIRE FOR FENCE AND GATES SHALL BE GALVANIZED STEEL.
- FENCE HEIGHT SHALL BE 10' WITH BOTTOM 2' BURIED, EXCEPT ITEM AR800945, WHICH IS 8' WITHOUT BURIAL. GATE HEIGHT ABOVE GROUND LINE SHALL BE 8'-0" AS SHOWN.
- 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.
- ALUMINUM RESTRICTED AREA SIGNS SHALL BE FURNISHED AS SHOWN IN THE DETAIL. COST INCIDENTAL TO FENCE OR GATE.
- SONOTUBE TO BE USED FOR CASTING POST FOUNDATIONS IN WETLAND AREAS AND WHERE REQUIRED BY THE SOIL CONDITIONS TO PROVIDE A CONSTANT WIDTH FOOTING.
- COST OF TRENCHING FOR FENCE FABRIC BURIAL SHALL BE INCIDENTAL TO CHAIN LINK FENCE.
- SOME FENCE ITEMS ARE BID AS ALTERNATE BID A ITEMS (AS) AND OTHERS ARE BID AS ALTERNATE BID B ITEMS (AT). THE AWARD WILL BE MADE BASED ON THE BASE BID AND EITHER ALTERNATE BID A OR ALTERNATE BID B. ONLY ONE OF THE ALTERNATES WILL BE AWARDED.
- SEE SPECIAL PROVISIONS.

LINE POST	
Section	lbs./ft. (kg/m)
Pipe Type A 2.375 (60.3) O.D.	4.64 (6.90)
Pipe Type B 2.375 (60.3) O.D.	4.64 (6.90)
Pipe Type C 2.25x1.7 (57.2x43.2)	2.78 (4.14)
H 2.25x1.70 (57.2x43.2)	2.72 (4.05)

TERMINAL POST	
Section	lbs./ft. (kg/m)
Pipe Type A 2.875 (73.0) O.D.	4.64 (6.90)
Pipe Type B 2.875 (73.0) O.D.	4.64 (6.90)
Pipe Type C 3.5x3.5 (89.0x89.0)	5.10 (7.59)
Roll Formed 3.5x3.5 (89.0x89.0)	See detail
Sq. Tubing 2.5x2.5 (63.5x63.5)	5.10 (7.59)

HORIZONTAL BRACES	
Section	lbs./ft. (kg/m)
Pipe Type A 1.66 (42.2) O.D.	2.27 (3.38)
Pipe Type B 1.66 (42.2) O.D.	1.83 (2.72)
Pipe Type C 1.66 (42.2) O.D.	1.82 (2.71)
H 1.31x1.5 (33.3x38.1)	2.25 (3.35)
Roll Formed 1.625x1.25 (41.3x31.8)	See detail

GATE FRAMES	
Section	lbs./ft. (kg/m)
Pipe Type A 1.66 (42.2) O.D.	2.27 (3.38)
Pipe Type B 1.66 (42.2) O.D.	1.83 (2.72)
Pipe Type C 1.66 (42.2) O.D.	1.82 (2.71)

GATE POSTS *				
Gate Opening * ft. (m)	Pipe Type A		Pipe Type B	
	Size (O.D.)	lbs./ft. (kg/m)	Size (O.D.)	kg/m (lbs./ft.)
Over 12 (3.75) but not over 30 (9.375)	4.0 (101.6)	9.11 (13.6)	4.0 (101.6)	9.11 (13.6)

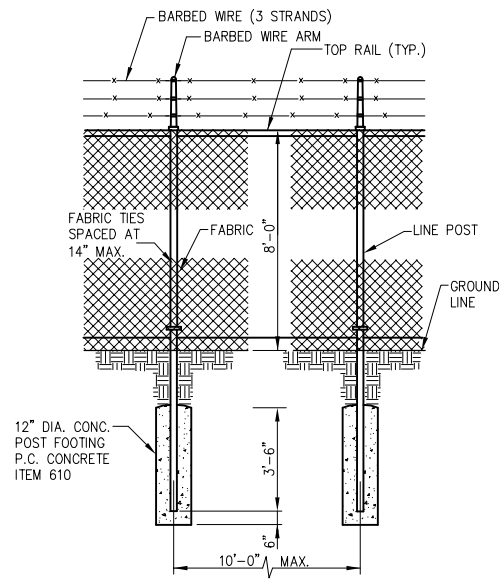
Gate Opening * ft. (m)		Pipe Type A				Pipe Type B	
		Size (O.D.)	lbs./ft. (kg/m)	Sq. Tubing Size	lbs./ft. (kg/m)	Size (O.D.)	(lbs./ft.) (kg/m)
Single	Up to 4 (1.2)	2,375 (60.3)	3,65 (5,43)	2 1/2 (6,35)	4,32 (6,43)	2,375 (60.3)	3,11 (4,63)
	Over 4 (1,2) to 8 (2,5)	2,875 (73,0)	5,79 (8,62)	3 (7,62)	5,78 (8,60)	2,875 (73,0)	4,64 (6,91)
Double	Over 8 (2,5) to 16 (5,0)	3,5 (89,0)	7,58 (11,28)	3 (7,62)	8,80 (13,10)	3,5 (89)	5,707 (8,49)
	Over 16 (5,0) to 24 (7,4)	3,5 (89,0)	7,58 (11,28)	3 (7,62)	8,80 (13,10)	3,5 (89)	5,707 (8,49)

* The 3.5x3.5 (89.0 x 89.0) roll formed section as detailed may be used as gate posts for single gate up to 6' (1.8 m) and double gate up to 12' (3.6 m).

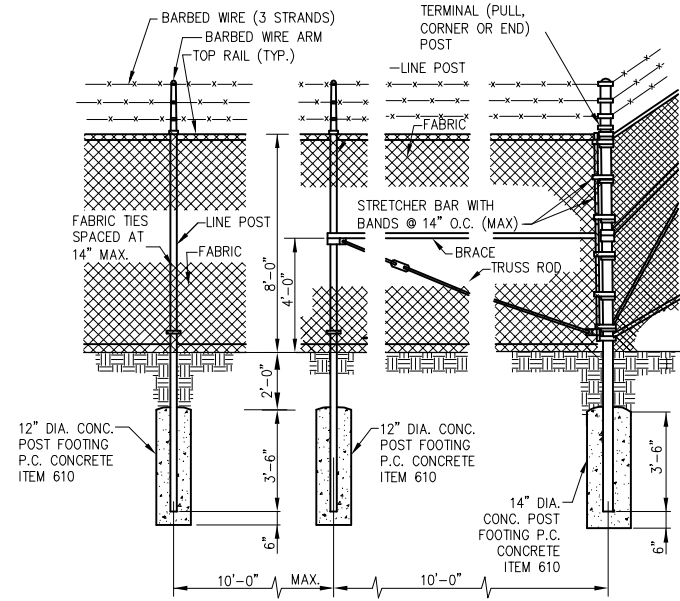
* The 3/2 x 3/2 (89.0 x 89.0) roll formed section as detailed may be used as gate posts for single gate up to 6' (1.8 m) and double gate up to 12' (3.6 m).

DETAILS SHOWN ARE NOT TO SCALE

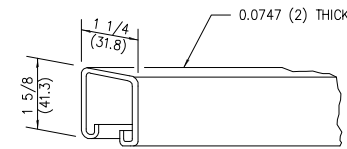
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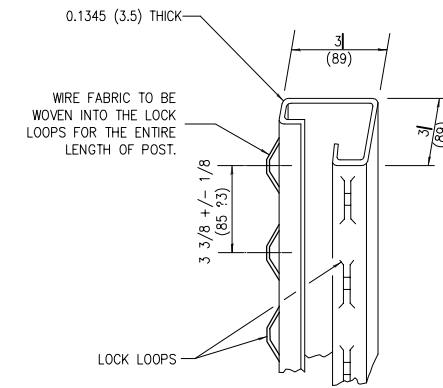
LINE POST - NO FENCE SKIRT



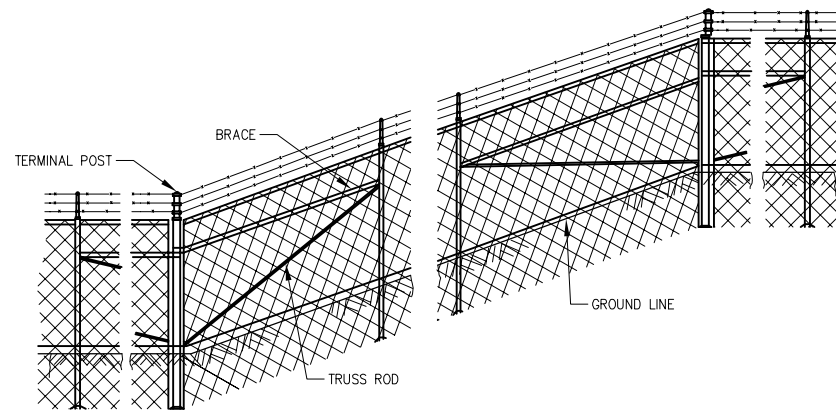
TERMINAL (PULL, CORNER OR END) POST - NO FENCE SKIRT



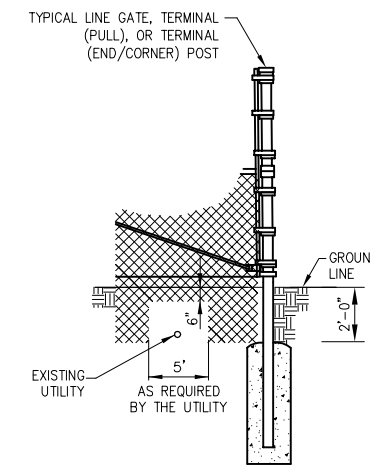
ROLL FORMED SECTION OF BRACE



ROLL FORMED SECTION OF TERMINAL + GATE POST



INSTALLATION ON SLOPES



FENCE INSTALLATION OVER UTILITIES

REVISION	DATE

WAUKEGAN NATIONAL AIRPORT
 WAUKEGAN PORT DISTRICT
 3580 North McArees Road
 Waukegan, Illinois 60087
 Telephone: 847.244.0066
 Fax: 847.244.3813



Hanson No. 11A00002D

Filename: 26-FENCING DETAILS 2.DWG

Scale: N/A

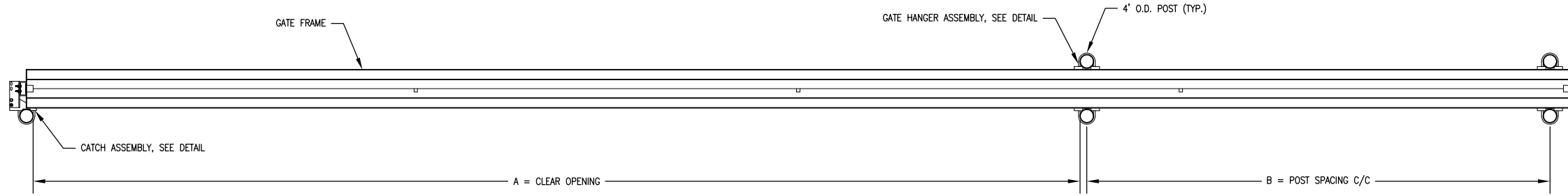
Date: MAY 17, 2013

LAYOUT	LDH	3/15/11
DRAWN <td>LDH <td>3/15/11 </td></td>	LDH <td>3/15/11 </td>	3/15/11
REVIEWED <td>RWH <td>5/14/13 </td></td>	RWH <td>5/14/13 </td>	5/14/13

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FENCE DETAILS
 CONSTRUCT PERIMETER FENCE, PHASE 2
 IDA No. UGN-4190 SEG No. 3-17-0105-555

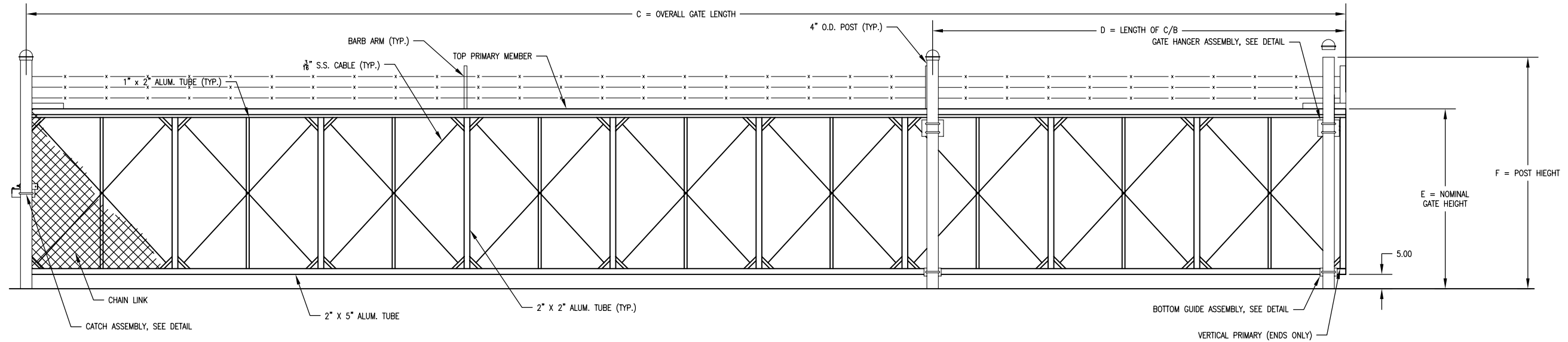
DETAILS SHOWN ARE NOT TO SCALE



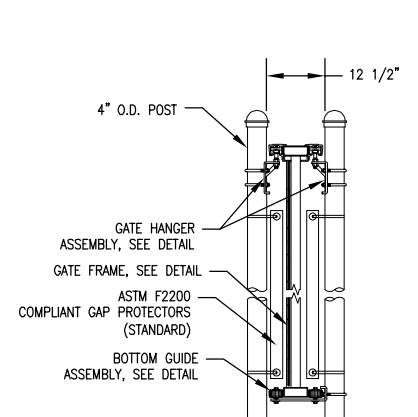
NOTES

1. GATE ELEVATION IS VIEWED FROM THE OUTSIDE OF THE SECURE AREA LOOKING IN.
2. FOR ITEM AT800963, ALL GATE COMPONENTS SHALL BE POWDER COATED FINISHED BLACK; FABRIC SHALL BE VINYL-COATED BLACK.

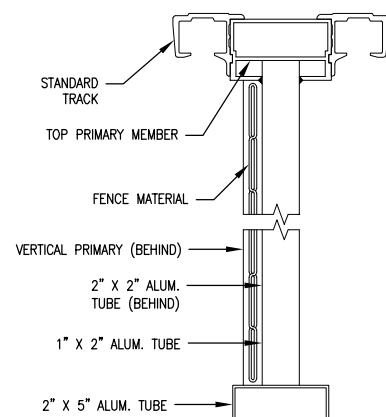
PLAN VIEW



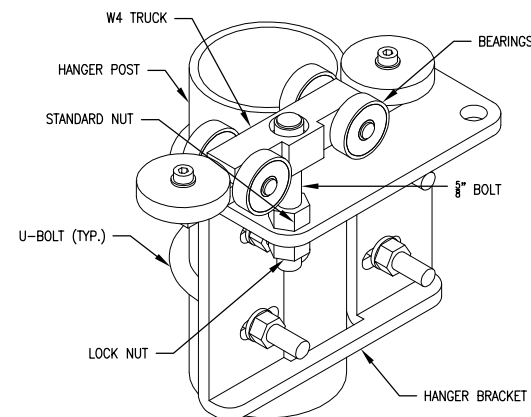
ELEVATION



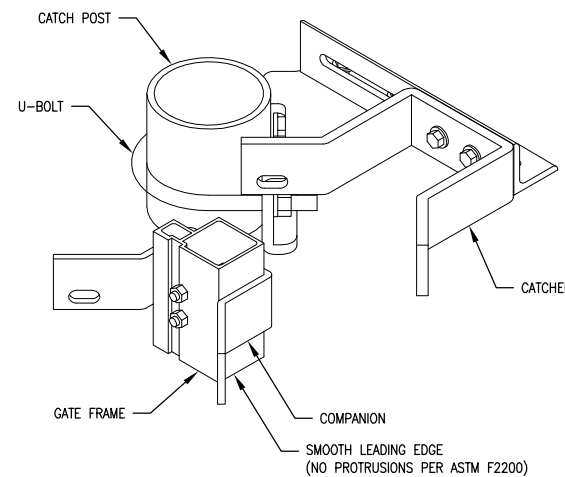
ASSEMBLY SECTION



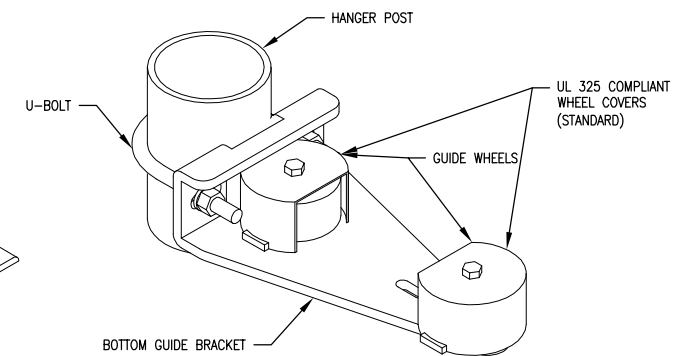
GATE FRAME SECTION



GATE HANGER ASSEMBLY



CATCH ASSEMBLY



BOTTOM GUIDE ASSEMBLY

NOMINAL GATE SIZE		
28' W X 8'-1" H		
CRITICAL DIMENSION CHART		
A	CLEAR OPENING	28'-0"
B	COUNTERBALANCE POST SPACING C/C	13'-1"
C	OVERALL GATE LENGTH	42'-0"
D	COUNTERBALANCE LENGTH	14'-0"
E	NOMINAL GATE HEIGHT	8'-0"
F	POST HEIGHT	9'-6"

REVISION	DATE

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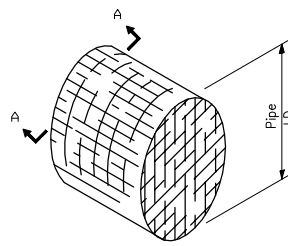
LAYOUT	LDH	3/15/11
DRAWN	LDH	3/15/11
REVIEWED	RWH	5/14/13

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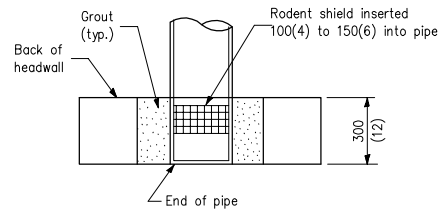
FENCE 28' GATE DETAILS

CONSTRUCT PERIMETER FENCE, PHASE 2
IDA No. UGN-4190 SBG No. 3-17-0105-555

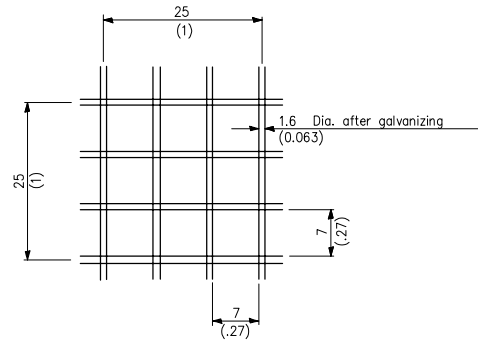
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I:\1\JOBS\00831\11A0002D\DRAWINGS\SHEETS\27-FENCE 28' GATE DETAILS.DWG



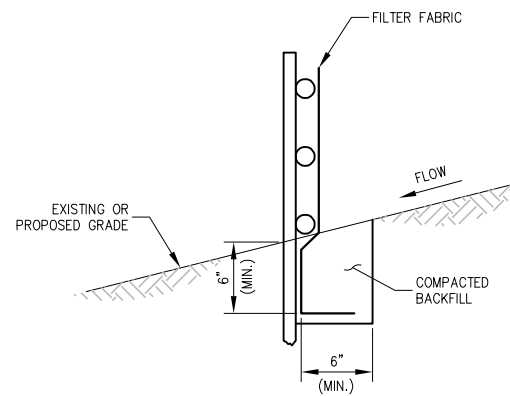
DETAIL OF RODENT SHIELD



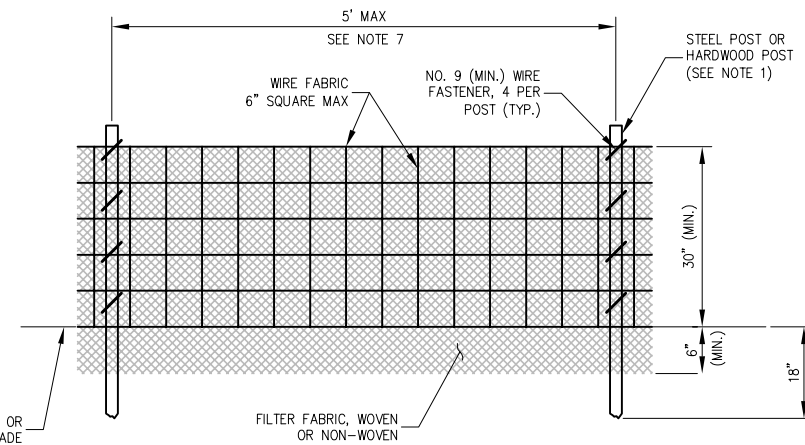
RODENT SHIELD PLACEMENT



SECTION A-A



FABRIC ANCHOR DETAIL

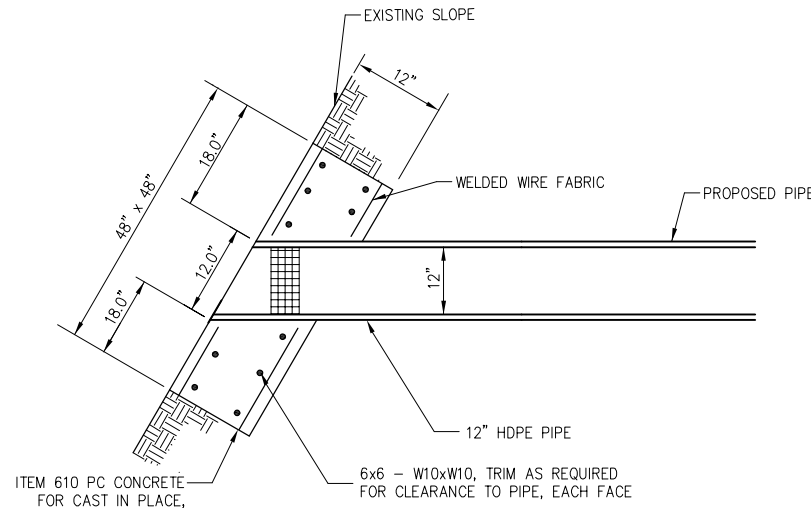


ELEVATION

SILT FENCE DETAILS

NOTES:

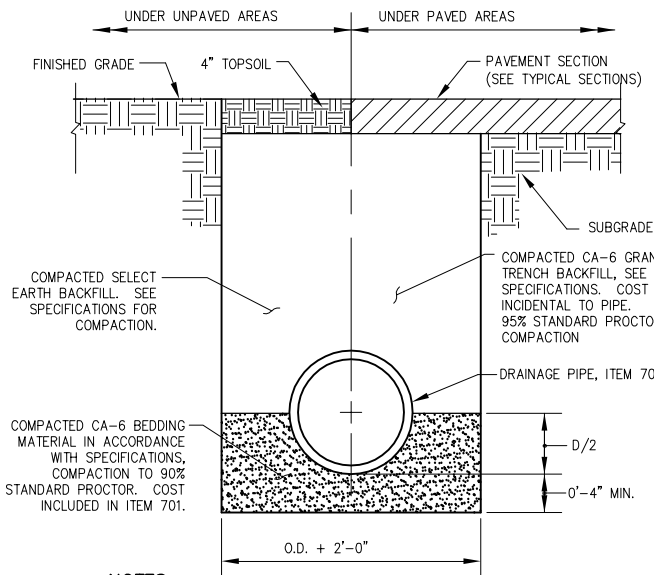
- FENCE POST SHALL BE EITHER STEEL "T" LINE POST OR HARDWOOD POST WITH A MINIMUM SECTIONAL AREA OF 3.0 SQUARE INCHES. A CARPENTER'S (NOMINAL) 2"x2" POST WILL NOT MEET SPECIFICATIONS.
- TOP AND BOTTOM WIRE OF WIRE FABRIC SHALL BE MINIMUM GAGE NO. 9. INTERMEDIATE WIRES OF THE WIRE FABRIC SHALL BE MINIMUM GAGE NO. 11.
- WIRE FABRIC SHALL BE SECURELY FASTENED TO FENCE POSTS WITH NO. 9 GAGE WIRE MINIMUM. FOUR (4) FASTENERS PER POST REQUIRED.
- FILTER FABRIC SHALL BE SECURELY FASTENED TO WIRE FABRIC AND POSTS WITH TIES OR STAPLES SPACED AT 12" APART AT THE TOP, MIDDLE AND BOTTOM.
- WHEN TWO SECTIONS OF FILTER FABRIC MEET, THEY SHALL BE OVERLAPPED BY 6" AND FOLDED AND ATTACHED TO THE WIRE FABRIC AT A POST.
- FILTER FABRIC SHALL BE IN ACCORDANCE WITH SPECIAL PROVISIONS WITH EQUIVALENT OPENING SIZE OF AT LEAST 30 FOR NONWOVEN AND 50 FOR WOVEN.
- A MAXIMUM OF 5 FEET IS USED FOR POST-TO-POST SPACING.
- SOIL DISTURBANCE SHALL BE CONDUCTED IN SUCH A MANNER AS TO MINIMIZE EROSION. SOIL STABILIZATION MEASURES SHALL CONSIDER THE TIME OF YEAR, SITE CONDITIONS AND THE USE OF TEMPORARY OR PERMANENT MEASURES.
- ALL STORM SEWERS THAT ARE OR WILL BE FUNCTIONING DURING CONSTRUCTION SHALL BE PROTECTED BY AN APPROPRIATE SEDIMENT CONTROL MEASURE.
- SILT FENCE SHALL BE INSTALLED PRIOR TO ANY GRADING WORK IN THE AREA TO BE PROTECTED. PERIODIC INSPECTION SHALL BE PERFORMED AND REQUIRED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN EVENT.
- MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED AND REPLACED WHEN BULGES DEVELOP IN THE SILT FENCE.
- IF DEWATERING SERVICES ARE USED, ADJOINING PROPERTIES AND DISCHARGE LOCATIONS SHALL BE PROTECTED FROM EROSION. DISCHARGES SHALL BE ROUTED THROUGH AN EFFECTIVE SEDIMENT CONTROL MEASURE (E.G. SEDIMENT TRAP, SEDIMENT BASIN, OR OTHER APPROPRIATE MEASURE).
- FENCE POSTS SHALL BE REMOVED WHEN DIRECTED AT PROJECT END.
- THE EROSION CONTROL MEASURES INDICATED ON THE PLANS ARE THE MINIMUM REQUIREMENTS. ADDITIONAL MEASURES MAY BE REQUIRED, AS DIRECTED BY THE ENGINEER OR GOVERNING AGENCY.



PIPE END SECTION

NOTES

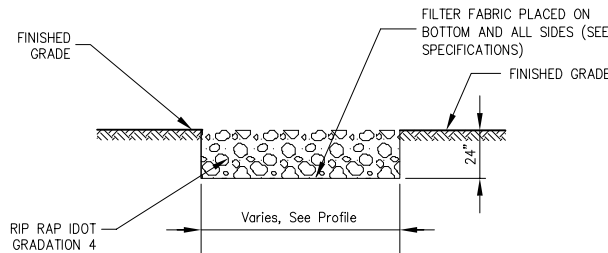
- COLLAR CONSTRUCTION OPENING MODIFIED TO ACCEPT 12 INCH HDPE PIPE.
- PRECAST CONCRETE SHALL BE IDOT ITEM 610.
- RODENT SHIELD SHALL BE FURNISHED INCIDENTAL TO COLLAR.
- DRAIN PIPE SHALL BE GROUTED AND SEALED TO THE COLLAR OPENING WITH CEMENT MORTAR.
- COLLAR AND RODENT SHIELD SHALL BE FURNISHED AT BOTH ENDS OF PIPE.
- PIPE WITH CONCRETE COLLARS SHALL BE FURNISHED AS ONE UNIT, PAID UNDER ITEM EACH AR800961.



NOTES

- UNSUITABLE MATERIAL ENCOUNTERED DURING PLACEMENT OF BEDDING SHALL BE REMOVED AND REPLACED.
- WITHIN 3 FEET OF PAVED AREA, GRANULAR BACKFILL IS TO BE USED INSTEAD OF EARTH BACKFILL.
- AT CONTRACTOR'S OPTION IDOT CONTROLLED LOW STRENGTH MATERIAL WITH A HIGH EARLY STRENGTH, "FLASH FILL", MAY BE USED INSTEAD OF GRANULAR TRENCH BACKFILL UNDER PAVEMENTS.

PIPE TRENCH



RIPRAP

NOTE

- COST OF FILTER FABRIC IS INCIDENTAL TO RIPRAP.
- WIDTH (W) OF RIPRAP VARIES, SEE PLAN AND PROFILE, SEE SHEET 16.

SEDIMENTATION AND EROSION CONTROL NOTES:

- SOIL DISTURBANCE SHALL BE CONDUCTED IN SUCH A MANNER AS TO MINIMIZE EROSION. SOIL STABILIZATION MEASURES SHALL CONSIDER THE TIME OF YEAR, SITE CONDITIONS AND THE USE OF TEMPORARY OR PERMANENT MEASURES.
- SOIL EROSION AND SEDIMENT CONTROL FEATURES SHALL BE CONSTRUCTED PRIOR TO THE COMMENCEMENT OF HYDROLOGIC DISTURBANCE OF UPLAND AREAS.
- DISTURBED AREAS SHALL BE STABILIZED WITH TEMPORARY OR PERMANENT MEASURES WITHIN 14 CALENDAR DAYS OF THE END OF ACTIVE HYDROLOGIC DISTURBANCE, OR REDISTURBANCE.
- AREAS OR ENBANKMENTS HAVING SLOPES GREATER THAN OR EQUAL TO 3H:1V, AND APPROVED BY THE ENFORCEMENT OFFICER, SHALL BE STABILIZED WITH SOD, MAT OR BLANKET IN COMBINATION WITH SEEDING.
- EROSION CONTROL BLANKET SHALL BE REQUIRED ON ALL INTERIOR DETENTION BASIN SIDE SLOPES BETWEEN NORMAL WATER LEVEL AND HIGH WATER LEVEL.
- ALL STORM SEWERS THAT ARE OR WILL BE FUNCTIONING DURING CONSTRUCTION SHALL BE PROTECTED, BY AN APPROPRIATE SEDIMENT CONTROL MEASURE.
- ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED.
- ALL TEMPORARY AND PERMANENT EROSION CONTROL MEASURES MUST BE MAINTAINED AND REPAIRED AS NEEDED. THE PROPERTY OWNER SHALL BE ULTIMATELY RESPONSIBLE FOR MAINTENANCE AND REPAIR.
- A STABILIZED MAT OF AGGREGATE UNDERLAIN WITH FILTER CLOTH (OR OTHER APPROPRIATE MEASURE) SHALL BE LOCATED AT ANY POINT WHERE TRAFFIC WILL BE ENTERING OR LEAVING A CONSTRUCTION SITE TO OR FROM A PUBLIC RIGHT-OF-WAY, STREET, ALLEY OR PARKING AREA. ANY SEDIMENT OR SOIL REACHING AN IMPROVED PUBLIC RIGHT-OF-WAY, STREET, ALLEY OR PARKING AREA SHALL BE REMOVED BY SCRAPING OR STREET CLEANING AS ACCUMULATIONS WARRANT AND TRANSPORTED TO A CONTROLLED SEDIMENT DISPOSAL AREA.
- SOIL STOCKPILES SHALL NOT BE LOCATED IN A FLOOD PRONE AREA OR A DESIGNATED BUFFER PROTECTING WATERS OF THE UNITED STATES OR ISOLATED WATERS OF LAKE COUNTY.
- IF DEWATERING SERVICES ARE USED, ADJOINING PROPERTIES AND DISCHARGE LOCATIONS SHALL BE PROTECTED FROM EROSION. DISCHARGES SHALL BE ROUTED THROUGH AN EFFECTIVE SEDIMENT CONTROL MEASURE (E.G. SEDIMENT TRAP, SEDIMENT BASIN, OR OTHER APPROPRIATE MEASURE).
- THE EROSION CONTROL MEASURES INDICATED ON THE PLANS ARE THE MINIMUM REQUIREMENTS. ADDITIONAL MEASURES MAY BE REQUIRED, AS DIRECTED BY THE ENGINEER OR GOVERNING AGENCY.

STORM WATER POLLUTION PREVENTION NOTES

GENERAL

THE CONTRACTOR SHALL IMPLEMENT ALL PROVISIONS OF THE CONTRACT DOCUMENTS TO ASSURE THAT STORM WATER POLLUTION PREVENTION ITEMS ARE CONSTRUCTED AND MAINTAINED IN A TIMELY MANNER. SEDIMENTATION MUST NOT BE TRANSPORTED OFF THE CONSTRUCTION SITE. PERMANENT DRAINAGE FEATURES AND VEGETATIVE MEASURES SHALL BE PROVIDED AS SOON AS POSSIBLE.

THE MAINTENANCE OF ALL STORM WATER POLLUTION PREVENTION MEASURES IS INCIDENTAL TO THE ASSOCIATED ITEM.

POLLUTION PREVENTION MEASURES

THE CONTRACTOR SHALL BE REQUIRED TO IMPLEMENT AND MAINTAIN STORM WATER POLLUTION PREVENTION PRACTICES AND MEASURES PRIOR TO THE STRIPPING OF EXISTING VEGETATION WHERE EVER POSSIBLE AND AS SOON AS CONSTRUCTION PERMITS IN OTHER AREAS. POLLUTION CONTROL MEASURES SHALL BE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, INCLUDING THESE CONSTRUCTION PLANS, AND WITH STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, ILLINOIS ENVIRONMENTAL PROTECTION AGENCY, CURRENT ISSUE. THE CONTRACTOR SHALL ADJUST HIS OPERATIONS AND IMPLEMENT POLLUTION CONTROL MEASURES SO THAT NO RUNOFF FROM STRIPPED AREAS WILL LEAVE THE CONSTRUCTION SITE OTHER THAN THROUGH SEDIMENT TRAPS OR OTHER SUITABLE CONTROL MEASURES.

POLLUTION CONTROL ITEMS SHALL BE PROVIDED AS NOTED ON THE STORM WATER POLLUTION PREVENTION PLAN AND IN THE STORM WATER POLLUTION PREVENTION DETAILS AND AS DIRECTED BY THE ENGINEER. THE LIMITS OF SUCH MEASURES SHALL BE STAKED BY THE CONTRACTOR PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. SUCH LIMITS MAY BE ADJUSTED BY THE ENGINEER TO ACCOUNT FOR ACTUAL SITE CONDITIONS EXPERIENCED DURING CONSTRUCTION. ADDITIONAL COMPENSATION FOR MEASURES EXCEEDING THE PLAN QUANTITIES WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR EACH ITEM.

THE CONTRACTOR IS TO MAINTAIN AND ADJUST, REPAIR OR REPLACE ALL POLLUTION PREVENTION MEASURES AS REQUIRED OR AS DIRECTED BY THE ENGINEER UNTIL PERMANENT VEGETATION HAS BEEN ESTABLISHED. MAINTENANCE OF POLLUTION CONTROL MEASURES IS TO BE PROVIDED AT NO ADDITIONAL COST TO THE CONTRACT.

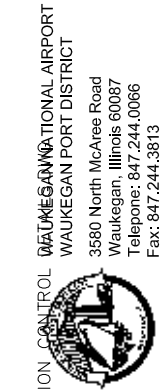
ADDITIONAL STORMWATER POLLUTION PREVENTION MEASURES ARE EXISTING ON SITE LOCATED AT DRAINAGE FACILITIES AND ALONG THE PROPERTY LINE.

DRAINAGE PIPE SCHEDULE

Structure	Station	Offset	Type	Diameter	Rim B.	Invert B.	Install Length	Size	Type	Slope %
A1	662+21.22	14.2' LT	CONCRETE END SECTION	12	--	728.31	24.0	12.0	HDPE	1.3
A2	662+21.11	9.8' RT	CONCRETE END SECTION	12	--	728.62				

NOTE: PIPE IS TO BE PARTIALLY BURIED TO MAINTAIN WETLAND HYDROLOGY. INVERT ELEVATIONS SHOWN ARE THE BURIED ELEVATIONS.

DETAILS SHOWN ARE NOT TO SCALE



Hanson No.	11A00002D	DATE	MAY 17, 2013
Filename	28-DRAINAGE AND EROSION CONTROL	LAYOUT	LDH
Scale	N/A	DRAWN	LDH
Revision		REVIEWED	RMH
			3/15/11
			3/15/11
			5/14/13

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DRAINAGE AND EROSION CONTROL DETAILS
 CONSTRUCT PERIMETER FENCE, PHASE 2
 IDA No. UGN-4190 SBG No. 3-17-0105-555

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

ELECTRICAL LEGEND -- PLANS	
	CONDUIT (EXPOSED)
	CONDUIT OR UNIT DUCT (CONCEALED OR BURIED)
	DUCT
	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
LTFMC	LIQUID TIGHT FLEXIBLE METAL CONDUIT (UL LISTED)
LTG	LIGHTING
LP	LIGHTING PANEL
MAX	MAXIMUM
MCB	MAIN CIRCUIT BREAKER
MCM	THOUSAND CIRCUAR MIL
MDP	MAIN DISTRIBUTION PANEL
MFR	MANUFACTURER
MH	METAL HALIDE
MIN	MINIMUM
MLO	MAIN LUGS ONLY
NEC	NATIONAL ELECTRICAL CODE (NFPA 70)
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OHE	OVERHEAD ELECTRIC
OL	OVERLOAD

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

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

120/240 VAC, 1 PHASE, 3 WIRE	
PHASE A	BLACK
PHASE B	RED
NEUTRAL	WHITE
GROUND	GREEN
- SEE RESPECTIVE SITE PLANS FOR SITE LEGEND INFORMATION.
- LTFMC DENOTES LIQUID TIGHT FLEXIBLE METAL CONDUIT UL LISTED, SUNLIGHT RESISTANT, & SUITABLE FOR GROUNDING. LIQUID TIGHT FLEXIBLE METAL CONDUIT AND ASSOCIATED FITTINGS SHALL BE U.L. LISTED TO MEET THE REQUIREMENTS OF NEC 350.6. LIQUID TIGHT FLEXIBLE METAL CONDUIT THAT IS USED FOR FLEXIBILITY (INCLUDING CONNECTIONS TO CCR'S & TRANSFORMERS) SHALL REQUIRE AN EXTERNAL BONDING JUMPER OR INTERNAL EQUIPMENT GROUNDING CONDUCTOR PER NEC 350.60. EXTERNAL BONDING JUMPERS USED WITH CCR INSTALLATIONS SHALL BE #6 AWG COPPER (MINIMUM). DO NOT INSTALL LTFMC THAT IS NOT UL LISTED. 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.

REVISION	DATE

ABBREVIATIONS.DWG WAUKEGAN NATIONAL AIRPORT
WAUKEGAN PORT DISTRICT
3580 North McArae Road
Waukegan, Illinois 60087
Telephone: 847.244.0066
Fax: 847.244.3813

Revision No.	11A0002D
Filename	29-ELECTRICAL LEGEND AND
Scale	N/A
Date	MAY 17, 2013
LAYOUT	JFC 4/18/11
DRAWN	JFC 4/18/11
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ELECTRICAL LEGEND
AND ABBREVIATIONS

CONSTRUCT PERIMETER FENCE, PHASE 2
IDA No. UGN-4190 SBG No. 3-17-0105-555

REVISION	DATE

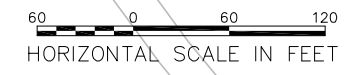
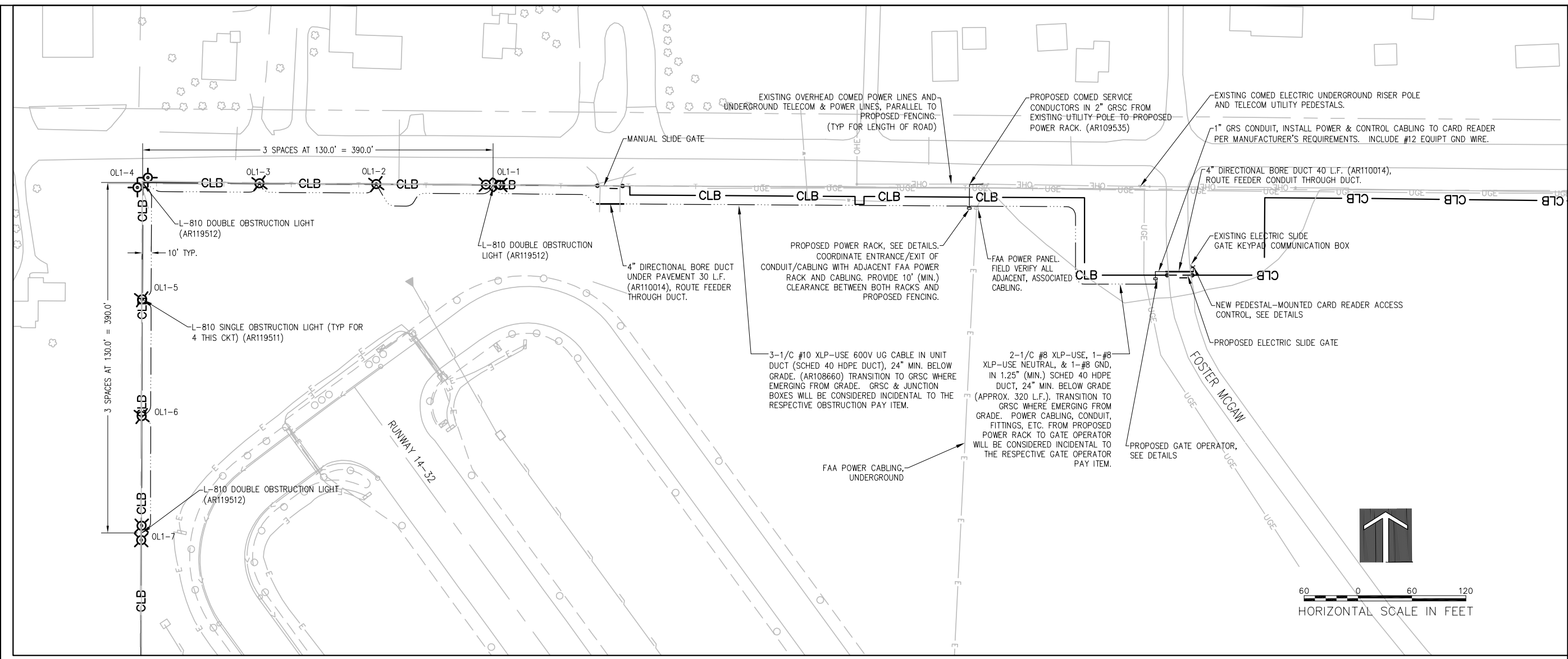
WAUKEGAN NATIONAL AIRPORT
 WAUKEGAN PORT DISTRICT
 3580 North McAfee Road
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Hanson No.	11A0002D	DATE	MAY 17, 2013
Filename	30-ELECTRICAL_PLAN.DWG	LAYOUT	SJM
Scale	1"=60'	DRAWN	JFC
Date	MAY 17, 2013	REVIEWED	RMH
			5/23/11
			5/24/11
			5/14/13

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ELECTRICAL SITE PLAN
 CONSTRUCT PERIMETER FENCE, PHASE 2
 IDA No. UGN-4190 SBG No. 3-17-0105-555

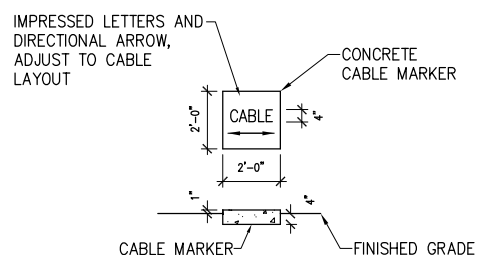


NOTES:

- REFER TO CORRESPONDING CIVIL SHEETS FOR ADDITIONAL INFORMATION.
- SOME EXISTING AND PROPOSED UTILITIES HAVE BEEN OMITTED FOR CLARITY.
- SEE "ELECTRIC SLIDE GATE DETAILS" SHEET FOR GATE OPERATOR INSTALLATION DETAIL AND ELECTRIC GATE PLAN.
- SEE "ELECTRICAL ONE LINE FOR ELECTRIC SLIDE GATE & OBSTR. LTG." SHEET FOR DETAILS.
- SEE "ELECTRICAL LEGEND AND ABBREVIATIONS" SHEET FOR GENERAL REQUIREMENTS.
- CONTRACTOR SHALL EXAMINE THE SITE AND REPORT ANY POSSIBLE INTERFERENCES TO THE ENGINEER PRIOR TO INSTALLATION OF THE GATE OPERATOR AND CONTROLS.
- ALL PROPOSED OBSTRUCTION LIGHTING SHALL BE INSTALLED AND OPERATIONAL WITHIN TEN (10) CALENDAR DAYS OF RESPECTIVE FENCE ERECTION. FENCE ERECTION SHALL BE DEFINED AS THE POINT AT WHICH THE POSTS ARE INSTALLED IN THEIR PERMANENT POSITION AND FIRMLY POSITIONED (SET IN CONCRETE). CONTRACTOR SHALL COORDINATE TO ENSURE THIS REQUIREMENT IS MET WITH NO EXCEPTIONS.
- CONTRACTOR SHALL COORDINATE THE INSTALLATION OF PROPOSED COMED SERVICE FEED WITH COMED REPRESENTATIVE. CONTRACTOR SHALL INSTALL METER AND SERVICE PANEL PER DETAIL ON "SERVICE PANELBOARD SCHEDULE & DETAILS" SHEET AND IN ACCORDANCE WITH THE SERVING ELECTRIC UTILITY CO. REQUIREMENTS.
- DIRECT-BURIED CONDUIT/DUCT SHALL BE INSTALLED A MINIMUM OF 24" BELOW FINISHED GRADE. CONTRACTOR SHALL FIELD VERIFY PROPOSED CONDUIT ROUTING PRIOR TO INSTALLATION. CONTRACTOR SHALL COORDINATE INSTALLATION OF PROPOSED CONDUIT WITH PROPOSED FENCING. PROPOSED FENCING WILL BE INSTALLED PARTIALLY BELOW GRADE, THEREFORE ANY CONDUIT/FENCING CROSSINGS MUST BE INSTALLED BELOW LOWER LIMIT OF FENCING. CONDUIT SHALL NOT PENETRATE FENCING BELOW GRADE.
- THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES AND AGENCIES WHICH HAVE LINES, UTILITIES, AND/OR CONDUITS IN THE PROPOSED WORK AREA. ALL LINES, UTILITIES, AND CONDUITS SHALL BE LOCATED AND IDENTIFIED FOR DEPTH BEFORE ANY WORK BEGINS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO IDENTIFY ALL UNDERGROUND ELECTRIC SERVICE LINES, UTILITIES, AND CONDUITS LOCATED WITHIN THE PROPOSED CONSTRUCTION LIMITS. THESE UNDERGROUND LINES, UTILITIES, AND CONDUITS SHALL BE LOCATED AT THE CONTRACTOR'S OWN EXPENSE PRIOR TO THE START OF CONSTRUCTION ACTIVITIES. ANY EXISTING UTILITY LINES DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR AT HIS OWN EXPENSE.

LEGEND:

- EXISTING STORM SEWER
- EXISTING UNDERDRAIN
- EXISTING OVERHEAD UTILITY ELECTRIC
- EXISTING UNDERGROUND UTILITY ELECTRIC
- EXISTING UNDERGROUND ELECTRIC
- EXISTING POWER CABLE
- EXISTING TELEPHONE
- EXISTING FENCE
- EXISTING STORM SEWER MANHOLE
- EXISTING FLARED END SECTION
- PROPOSED CHAIN LINK FENCE WITH BARBED WIRE
- PROPOSED FENCE REMOVAL
- PROPOSED GATE
- PROPOSED 3-1/C #10 XLP-USE 600V UG CABLE IN UNIT DUCT
- PROPOSED 4-1/C #8 XLP-USE 600V UG CABLE IN DUCT
- PROPOSED L-810 OBSTRUCTION LIGHT



CABLE MARKERS SHALL BE PLACED AT CHANGES OF DIRECTION AND APPROXIMATELY EVERY 50' ALONG CABLE AND/OR CONDUIT RUNS. CONCRETE CABLE MARKERS SHALL HAVE LETTERS 4" HIGH, 3" WIDE WITH A STROKE OF 1/2" AND 1/4" DEEP. ALL LETTERS, NUMBERS AND ARROWS TO BE IMPRESSED. THE COST OF ALL CABLE MARKERS SHALL BE INCIDENTAL TO THE CABLE.

TURF CABLE MARKERS
 "NOT TO SCALE"

THE LOCATION, SIZE, AND TYPE OF MATERIAL OF EXISTING UNDERGROUND AND/OR ABOVEGROUND UTILITIES THAT MAY BE 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 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 J.U.L.I.E. (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.

REVISION
DATE

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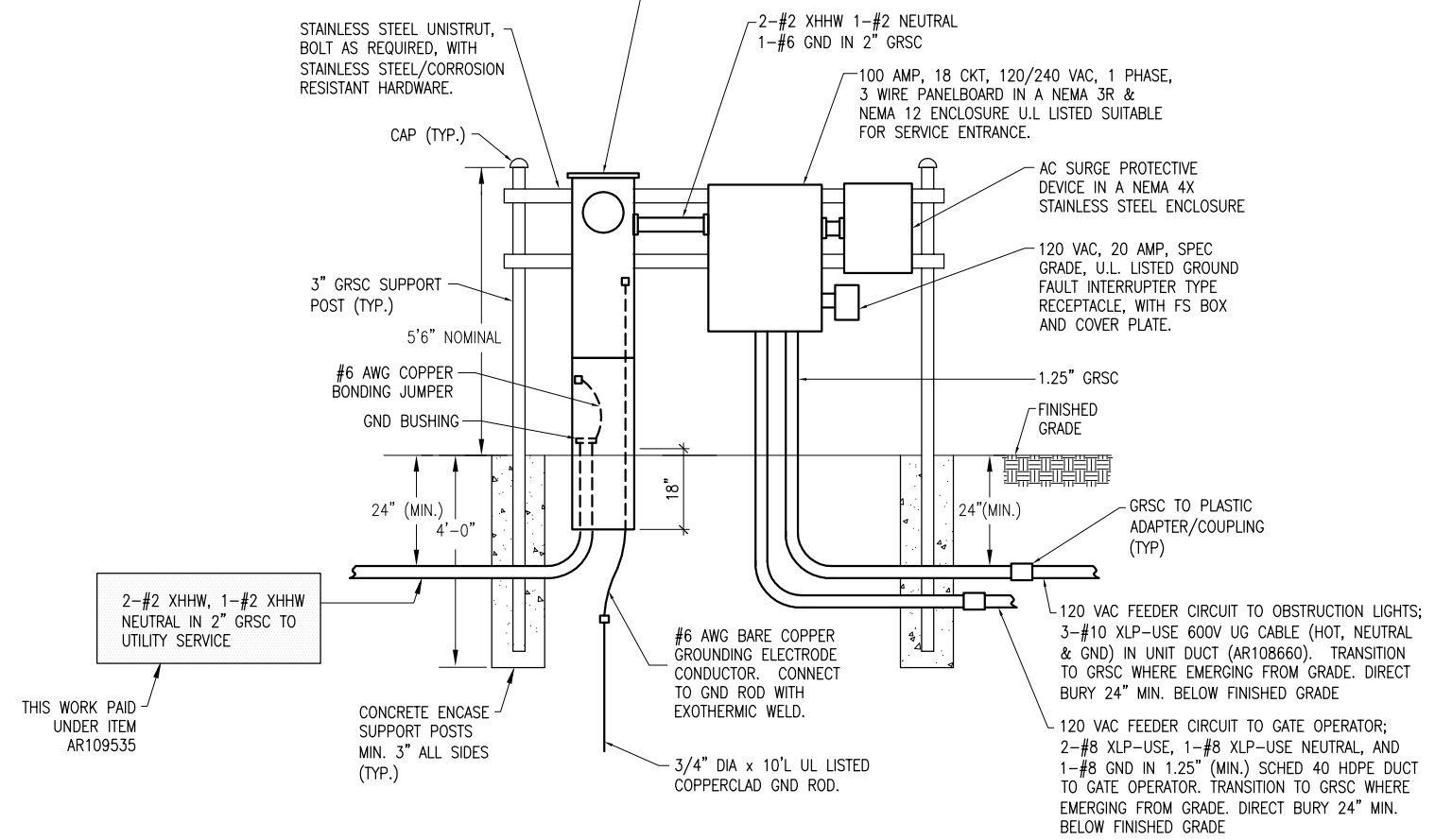


Hanson No. 11A0002D
Filename 31-ELECTRICAL POWER RACK
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SERVICE PANELBOARD
SCHEDULE & DETAILS
CONSTRUCT PERIMETER FENCE, PHASE 2
IDA No. UGN-4190 SSG No. 3-17-0105-B55

CECHA (COMMONWEALTH EDISON CHICAGO HOUSING AUTHORITY) APPROVED UTILITY METER BASE/PEDESTAL PER SERVING ELECTRIC UTILITY CO. REQUIREMENTS WITH REMOTE READING EQUIPMENT. FASTEN PEDESTAL TO UNISTRUT. CONFIRM METER REQUIREMENTS WITH SERVING ELECTRIC UTILITY AND FURNISH METER BASE MEETING THEIR REQUIREMENTS.



THIS WORK PAID UNDER ITEM AR109535

NOTES:

- SERVICE CONDUCTORS & CONDUIT FROM THE UTILITY TRANSFORMER TO THE UTILITY METER WILL BE PAID FOR UNDER ITEM AR109535 ELECTRIC SERVICE ENTRANCE PER LUMP SUM.
- ELECTRIC UTILITY METER PEDESTAL, SERVICE PANELBOARD, SURGE PROTECTIVE DEVICE, SUPPORT STRUCTURE AND ASSOCIATED CONDUITS, WIRING, GROUNDING, AND INCIDENTALS WILL BE PAID FOR UNDER ITEM AR800969 SECONDARY POWER DISTRIBUTION PER LUMP SUM.
- 2-1/C #8 XLP-USE IN 1.25" UNIT DUCT (SCHED 40 HDPE DUCT) FROM THE GATE OPERATOR AND OBSTRUCTION LIGHTS SERVICE PANEL TO EACH GATE OPERATOR DISCONNECT WILL BE PAID FOR UNDER ITEM AR108051, POWER CABLE IN UNIT DUCT, PER LINEAL FOOT.

SECONDARY POWER DISTRIBUTION
AND
ELECTRIC SERVICE ENTRANCE

"NOT TO SCALE"

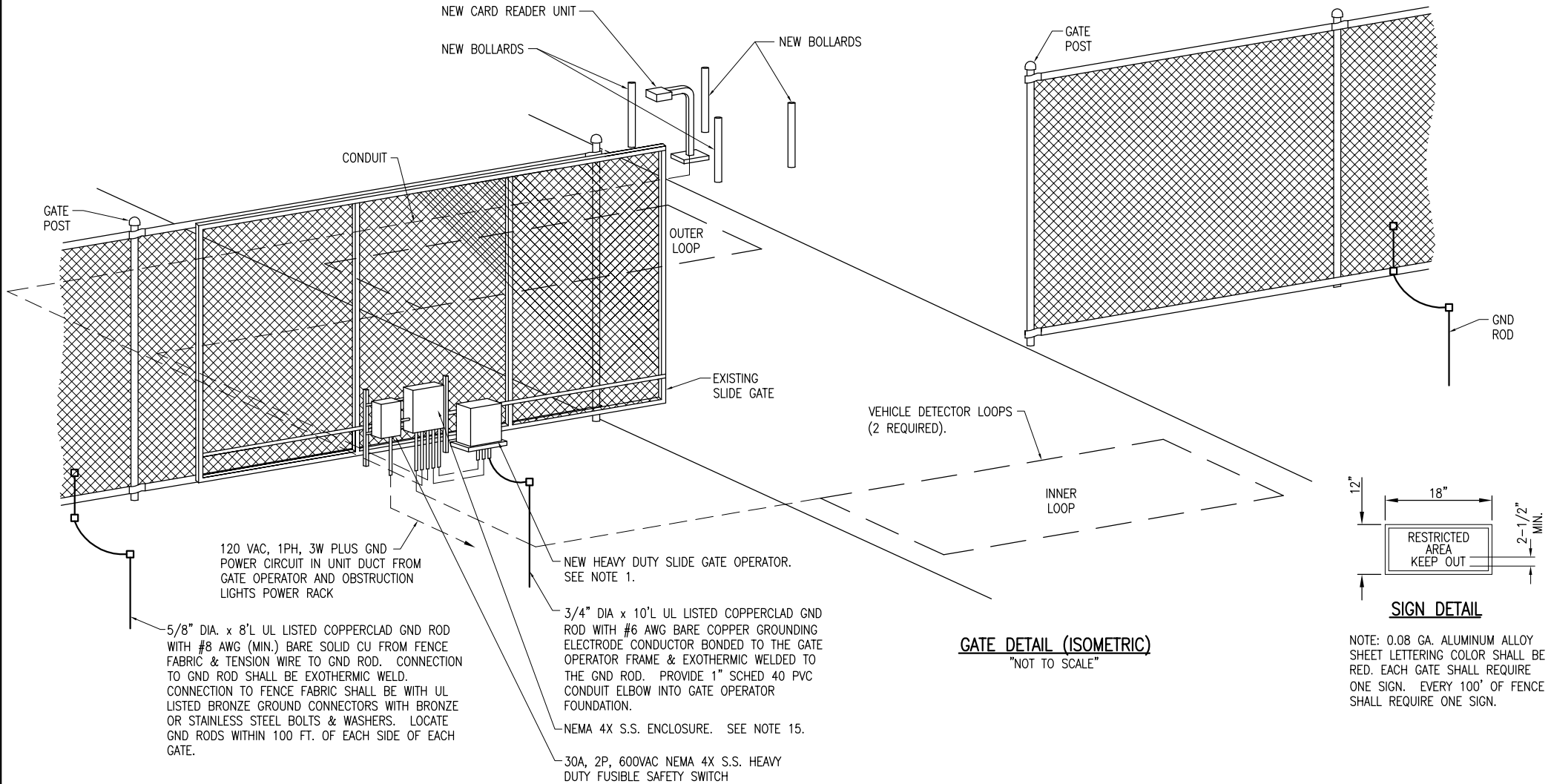
GATE OPERATORS SERVICE PANEL SCHEDULE

CKT #	DUTY	SIZE	SIZE	DUTY	CKT #
1	MAIN BREAKER	100A 2P	60A 2P	TVSS / SURGE ARRESTOR	2
3					4
5	GATE OPERATOR 1	30A 2P	15A 1P	OBSTRUCTION LIGHTS	6
7			15A 1P	SPARE	8
9	SPARE	30A 2P		BLANK	10
11				BLANK	12
13	BLANK			BLANK	14
15	BLANK			BLANK	16
17	BLANK			BLANK	18

100 AMP, 120/240 VAC, 1 PHASE, 3 WIRE, 16 CIRCUIT PANELBOARD WITH A 100 AMP, 2 POLE MAIN BREAKER RATED 10,000 AIC AT 120/240 VAC IN A NEMA 3R AND 12 ENCLOSURE UL LISTED SUITABLE FOR SERVICE ENTRANCE. SQUARE D CAT. NO. NQ181C WITH NEMA 3R AND 12 SURFACE MOUNT ENCLOSURE, OR APPROVED EQUAL. ENCLOSURE SHALL HAVE HINGED COVER. PANELBOARD SHALL ACCOMMODATE FEEDER/BRANCH BREAKERS UP TO 100 AMP FRAME SIZE. INCLUDE COPPER EQUIPT GROUND BAR. BRANCH BREAKERS SHALL BE BOLT-ON TYPE WITH 10,000 AIC AT 120/240 VAC. PANELBOARD BUSSES INCLUDING NEUTRAL SHALL BE COPPER.

NOTES

- INCLUDE PHENOLIC ENGRAVED LEGEND PLATE LABELED "GATE OPERATOR AND OBSTRUCTION LIGHTS SERVICE PANEL, 120/240 VAC, 1PH, 3W".
- EQUIPMENT RATINGS MAY VARY DEPENDING ON MANUFACTURER AND APPLICATION. CIRCUIT BREAKERS, WIRING, CONDUIT AND ALL RELATED EQUIPMENT SHALL BE PROPERLY SIZED FOR THE RESPECTIVE EQUIPMENT RATING IN CONFORMANCE WITH NEC AND MANUFACTURER'S RECOMMENDATIONS.
- PANELBOARD SHALL BE MANUFACTURED IN THE UNITED STATES TO COMPLY WITH THE AIRPORT IMPROVEMENT PROGRAM BUY AMERICAN REQUIREMENT AND THE BUY AMERICAN ACT.



GATE DETAIL (ISOMETRIC)
"NOT TO SCALE"

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

KEYPAD ACCESS CONTROLLER POWER & CONTROL WIRING WITH #12 EQUIPMENT GND IN 1" RIGID GALVANIZED STEEL CONDUIT

PROVIDE 1" GRSC FROM ENCLOSURE/GATE OPERATOR TO PAVEMENT EDGE FOR LOOP DETECTOR LEAD-IN WIRING (TYP. EACH LOOP)

NEMA 4X S.S. ENCLOSURE. SEE NOTE 15.
30A, 2P, 600VAC NEMA 4X S.S. HEAVY DUTY FUSIBLE SAFETY SWITCH

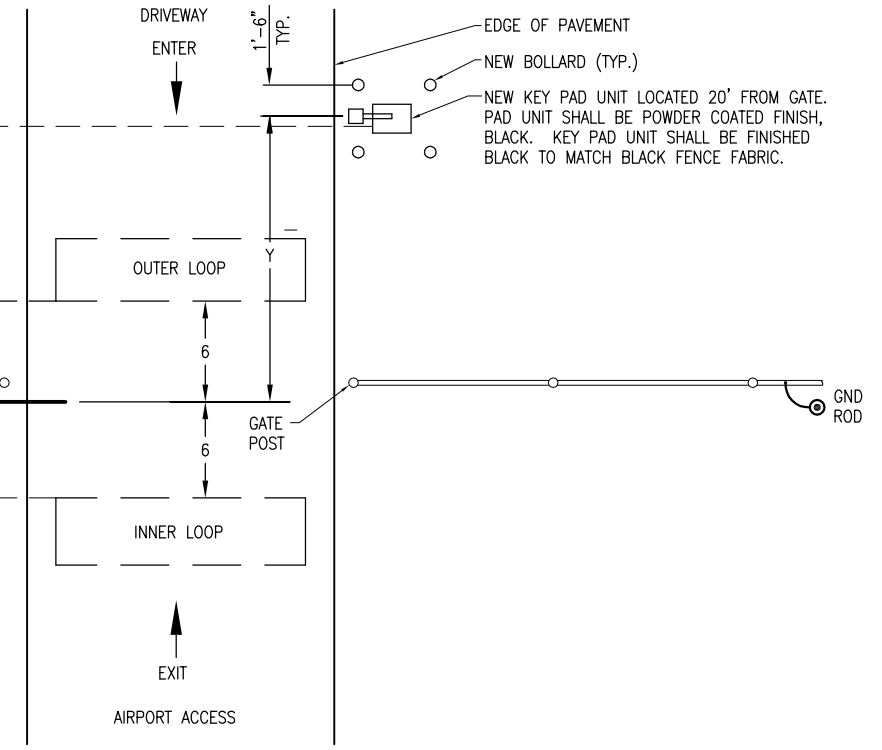
5/8" DIA. x 8'L UL LISTED COPPERCLAD GND ROD WITH #8 AWG (MIN.) BARE SOLID CU FROM FENCE FABRIC & TENSION WIRE TO GND ROD. CONNECTION TO GND ROD SHALL BE EXOTHERMIC WELD. CONNECTION TO FENCE FABRIC SHALL BE WITH UL LISTED BRONZE GROUND CONNECTORS WITH BRONZE OR STAINLESS STEEL BOLTS & WASHERS. LOCATE GND RODS WITHIN 100 FT. OF EACH SIDE OF EACH GATE.

120/240 VAC, 1PH, 3W PLUS GND POWER CIRCUIT IN UNIT DUCT TO GATE OPERATOR'S POWER RACK

POWER & CONTROL CONDUITS TO GATE OPERATOR. 240 VAC POWER FEED SHALL BE IN A SEPARATE DEDICATED CONDUIT.

NEW HEAVY DUTY SLIDE GATE OPERATOR. SEE NOTE 1. CABINET SHALL BE POWDER COATED FINISH, BLACK.

3/4" DIA x 10'L UL LISTED COPPERCLAD GND ROD 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.



ELECTRIC GATE PLAN
"NOT TO SCALE"

NOTES:

- SEE SPECIAL PROVISION SPECS FOR REQUIREMENTS ON RESPECTIVE GATE & GATE OPERATOR SYSTEM.
- ALL DIMENSIONS AND LAYOUT INFORMATION SHOWN SHOULD BE ADJUSTED AS RECOMMENDED BY THE MANUFACTURER. SEE RESPECTIVE SITE PLAN FOR EACH GATE.
- CONCRETE FOUNDATIONS SHALL BE PROVIDED FOR THE SLIDE GATE OPERATOR AND THE CARD READER 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 ON "KEYPAD UNIT, BOLLARD AND GATE OPERATOR DETAILS" SHEET.
- 1" GRS CONDUIT WILL BE REQUIRED BETWEEN THE SLIDE GATE OPERATOR INSTALLATION AND THE CARD READER ACCESS CONTROL UNIT 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 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.
- CONTRACTOR SHALL PROVIDE VERIFICATION THAT THE PROPOSED GATE OPERATOR IS SUITABLE FOR USE WITH AND PROPERLY SIZED FOR THE EXISTING SLIDE GATE.
- (RESERVED).
- CONTRACTOR SHALL COORDINATE ANY POWER OUTAGES TO EXISTING EQUIPMENT WITH THE RESPECTIVE OWNER'S REPRESENTATIVE AND THE AIRPORT DIRECTOR.
- INCLUDE AC SURGE PROTECTION DEVICE FOR EACH GATE OPERATOR, UL 1449 THIRD EDITION LISTED, SURGE CURRENT RATING OF 40KA, SUITABLE FOR USE ON A 120/240 VAC, 1 PHASE, 3 WIRE SYSTEM WITH LED INDICATING OPERATIONAL STATUS, JOSLYN MODEL 1265-21 OR APPROVED EQUAL. INCLUDE MOUNTING BRACKET.
- CONCRETE USED FOR INSTALLING THE GATE OPERATOR, CARD READER 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, CARD READER, GATE OPERATOR, AND ALL ASSOCIATED CONTROL & SAFETY DEVICES SHALL BE ON A LUMP SUM BASIS AND SHALL BE FULL COMPENSATION FOR ALL MATERIALS, EQUIPMENT, CABLE IN CONDUIT, DUCT, OR UNIT DUCT, GROUNDING, LABOR, TOOLS, COORDINATION, TESTING, AND INCIDENTALS REQUIRED TO INSTALL THE GATE COMPLETE AND IN OPERATING CONDITION.
- CONTROL CIRCUIT WIRING SHALL NOT BE ROUTED THROUGH THE SAFETY SWITCH/DISCONNECT.
- 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.

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Hanson No. 11A0002D
 File Name: 32- ELECTRICAL GATE_OPERATOR_DETAILS.DWG
 Scale: N/A
 Date: MAY 17, 2013

WAUKEGAN NATIONAL AIRPORT
 WAUKEGAN PORT DISTRICT
 3580 North McAfee Road
 Waukegan, Illinois 60087
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 Fax: 847.244.3813

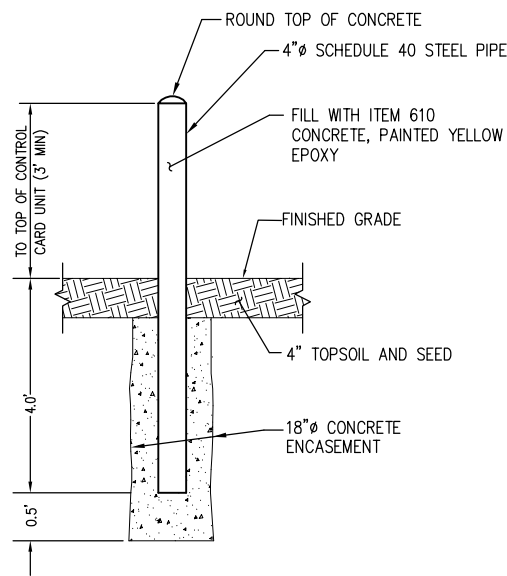
LAYOUT	JFC	4/18/11
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REVIEWED	RWH	5/14/13

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ELECTRIC SLIDE GATE DETAILS

CONSTRUCT PERIMETER FENCE, PHASE 2
 IDA No. UGN-4190 SBG No. 3-47-0105-555

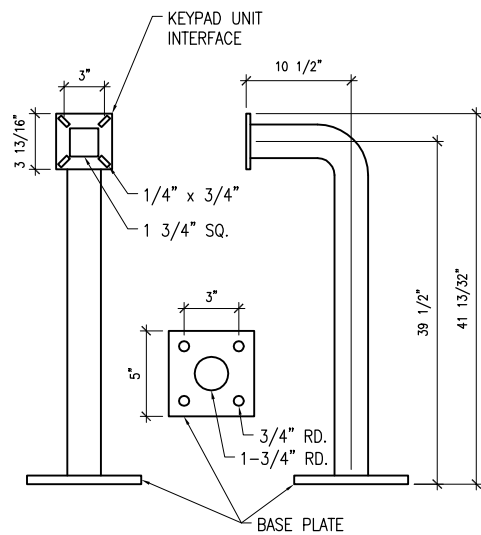


NOTES

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

NOT TO SCALE

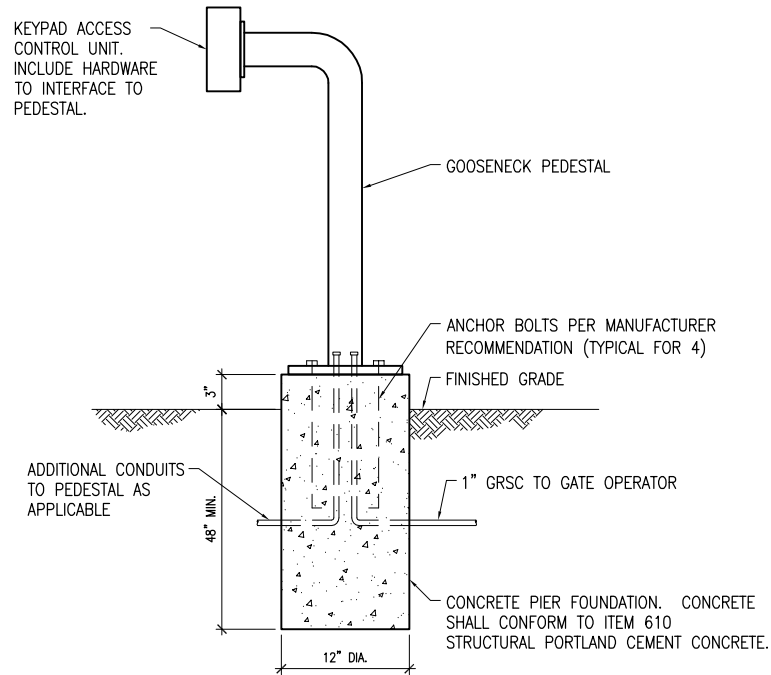


GOOSENECK PEDESTAL DETAIL

NOT TO SCALE

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.
3. KEYPAD SHALL NOT EXTEND BEYOND BOLLARDS.
4. KEYPAD ACCESS CONTROL UNIT AND GOOSENECK PEDESTAL SHALL BE POWDER-COATED FINISH, BLACK.

KEYPAD ACCESS CONTROL UNIT PEDESTAL ELEVATION DETAIL

NOT TO SCALE

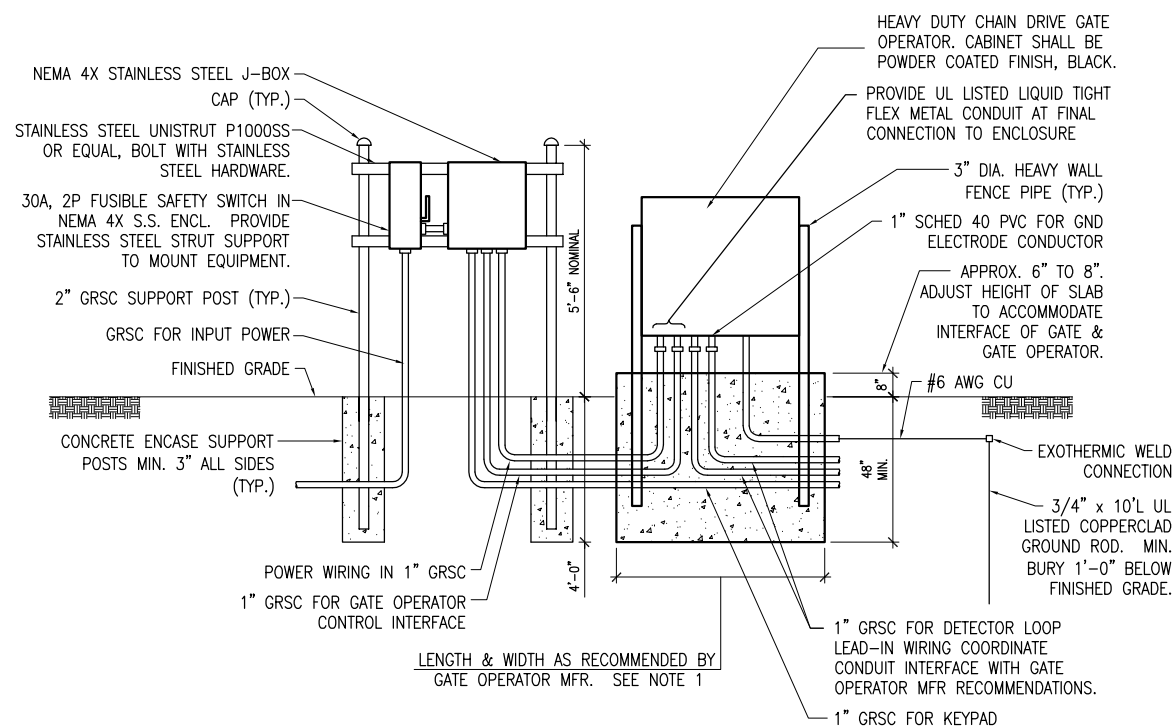


WARNING SIGN DETAIL

NOT TO SCALE

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 (OR SIMILAR), AND IN ACCORDANCE WITH THE RESPECTIVE GATE OPERATOR MANUFACTURER'S RECOMMENDATIONS.



NOTES

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

GATE OPERATOR FOUNDATION DETAIL

NOT TO SCALE

LEGEND PLATE SCHEDULE	
DEVICE	LABEL
GATE OPERATOR DISCONNECT	GATE 120VAC FED FROM POWER RACK

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

REVISION

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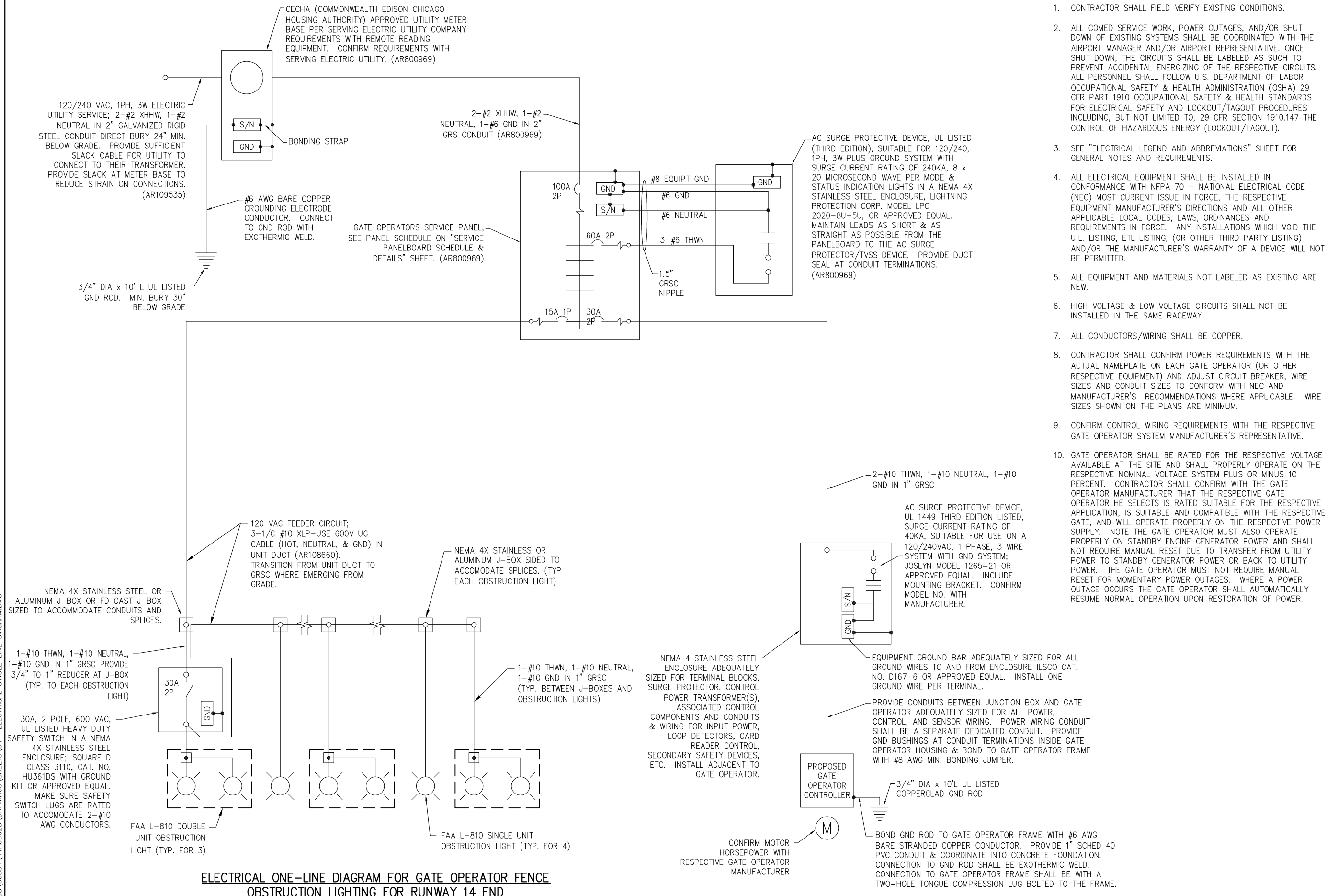


Hanson No.	11A00002D	JFC	4/18/11
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KEYPAD UNIT, BOLLARD AND
GATE OPERATOR DETAILS
CONSTRUCT PERIMETER FENCE, PHASE 2
IDA No. UGN-4190 SBG No. 3-17-0105-555

MAY 17, 2013 12:04 PM SPITZ01394
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ELECTRICAL ONE-LINE DIAGRAM FOR GATE OPERATOR FENCE OBSTRUCTION LIGHTING FOR RUNWAY 14 END

NOTES:

- CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS.
- ALL COMED SERVICE WORK, POWER OUTAGES, AND/OR SHUT DOWN OF EXISTING SYSTEMS SHALL BE COORDINATED WITH THE AIRPORT MANAGER AND/OR AIRPORT REPRESENTATIVE. 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).
- 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 AND MATERIALS NOT LABELED AS EXISTING ARE NEW.
- HIGH VOLTAGE & LOW VOLTAGE CIRCUITS SHALL NOT BE INSTALLED IN THE SAME RACEWAY.
- ALL CONDUCTORS/WIRING SHALL BE COPPER.
- CONTRACTOR SHALL CONFIRM POWER REQUIREMENTS WITH THE ACTUAL NAMEPLATE ON EACH GATE OPERATOR (OR OTHER RESPECTIVE EQUIPMENT) AND ADJUST CIRCUIT BREAKER, WIRE SIZES AND CONDUIT SIZES TO CONFORM WITH NEC AND MANUFACTURER'S RECOMMENDATIONS WHERE APPLICABLE. WIRE SIZES SHOWN ON THE PLANS ARE MINIMUM.
- CONFIRM CONTROL WIRING REQUIREMENTS WITH THE RESPECTIVE GATE OPERATOR SYSTEM MANUFACTURER'S REPRESENTATIVE.
- GATE OPERATOR 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.

WA067

REVISION		
DATE		

WAUKEGAN NATIONAL AIRPORT
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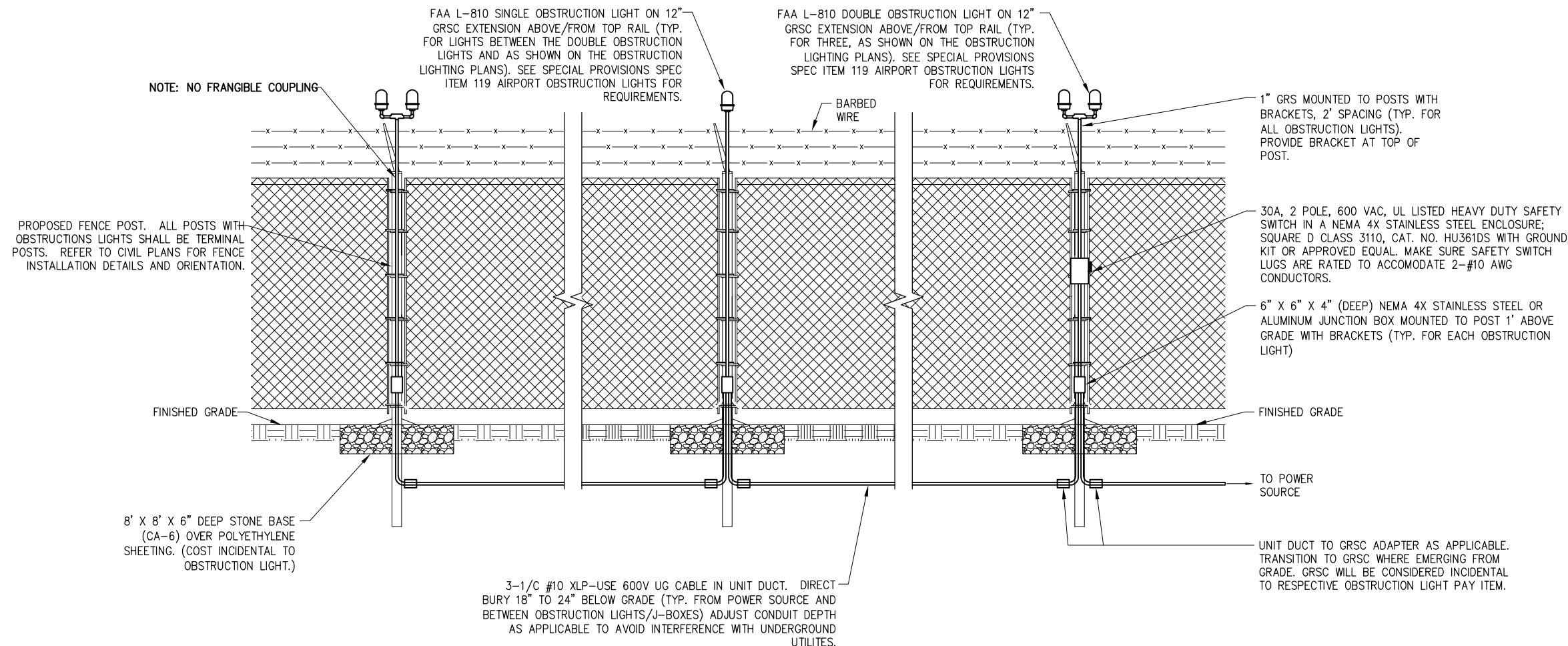
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 34- ELECTRICAL SINGLE LINE
 N/A
 MAY 17, 2013

LAYOUT	JFC	4/18/11
DRAWN	JFC	4/18/11
REVIEWED	RWH	5/14/13

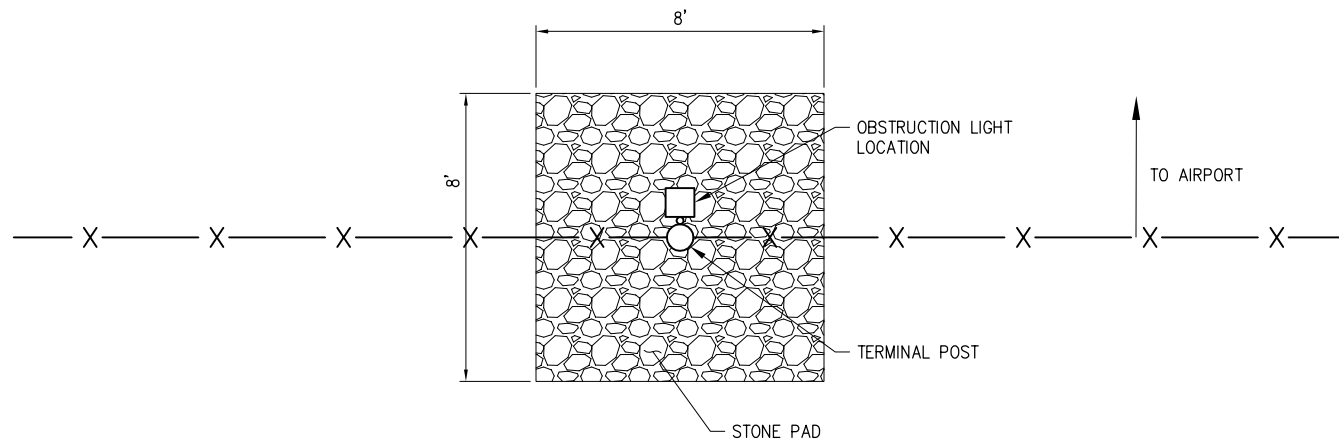
**ELECTRICAL ONE LINE FOR
 ELECTRIC GATE & OBSTR LGT**

CONSTRUCT PERIMETER FENCE, PHASE 2
 IDA No. UGN-4190 SBG No. 3-17-0105-555

34
 34 of 37 sheets



NOTE: ALL WORK SHOWN PAID UNDER ITEM AR119511 OR AR119512.
OBSTRUCTION LIGHTING ON FENCE ELEVATION
DETAIL AT RUNWAY END 14
 NOT TO SCALE



NOTE: ALL WORK SHOWN PAID UNDER ITEM AR119511 OR AR119512.
OBSTRUCTION LIGHTING ON FENCE PLAN DETAIL
AT RUNWAY END 14
 NOT TO SCALE

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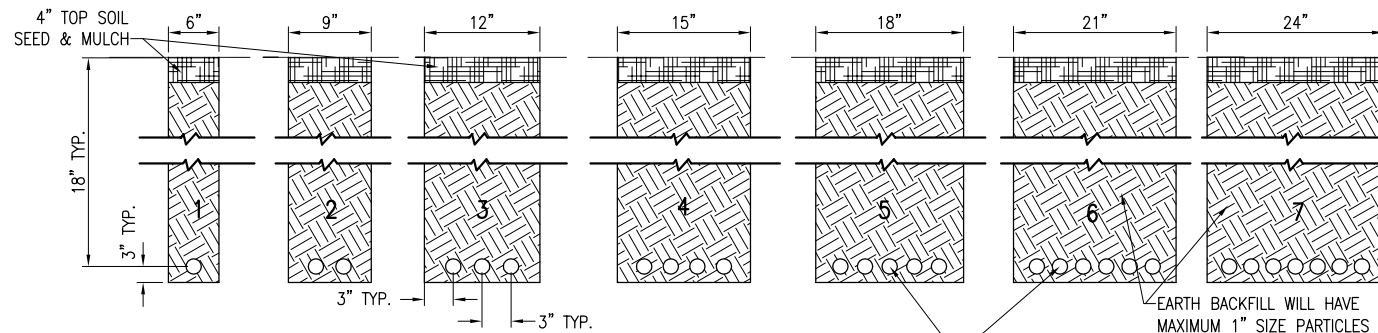


PROJECT	DATE	BY	CHKD
11A0002D - OBSTRUCTION LIGHTING	4/18/11	SJM/JFC	RMH
35 - OBSTRUCTION LIGHTING	4/18/11	SJM/JFC	RMH
Scale: N/A			
Date: MAY 17, 2013			

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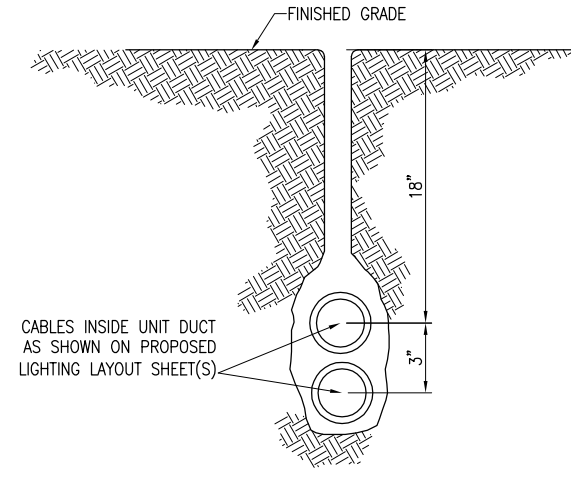
OBSTRUCTION LIGHTING
INSTALLATION DETAILS
 CONSTRUCT PERIMETER FENCE, PHASE 2
 IDA No. UGN-4190 SBG No. 3-47-0105-555

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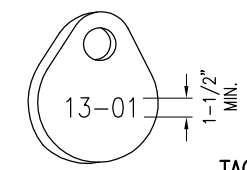


NOTES:
 DETAIL NUMBERS INDICATE NO. OF CABLES.
 TRENCHES WITH MORE THAN SEVEN CABLES SHALL BE INCREASED 3" IN WIDTH FOR EACH ADDITIONAL CABLE; IF SPECIFIED ON PLANS TWO PARALLEL TRENCHES MAY BE CONSTRUCTED.
 DEPTH OF TRENCHES SHALL BE AS SHOWN ABOVE UNLESS OTHERWISE SPECIFIED ON THE PLANS.
 ALL DISTURBED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

CABLE TRENCHES
 (NOT TO SCALE)

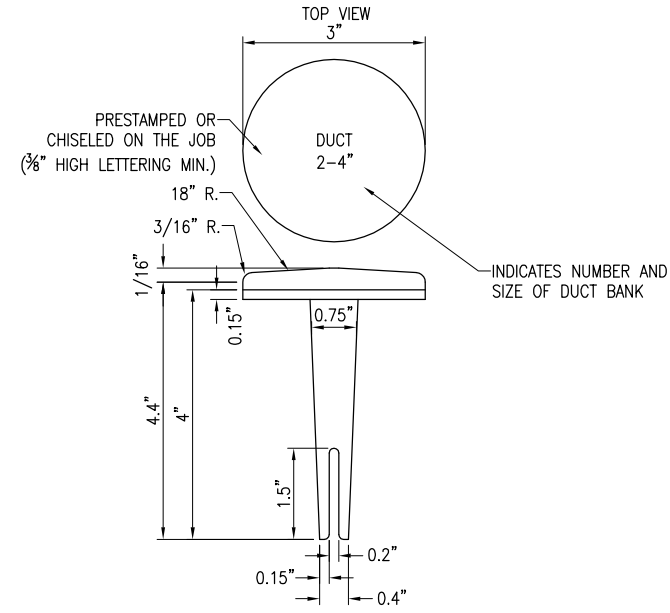


PLOWED CABLE
 (NOT TO SCALE)



TAG DETAIL
 (NOT TO SCALE)

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

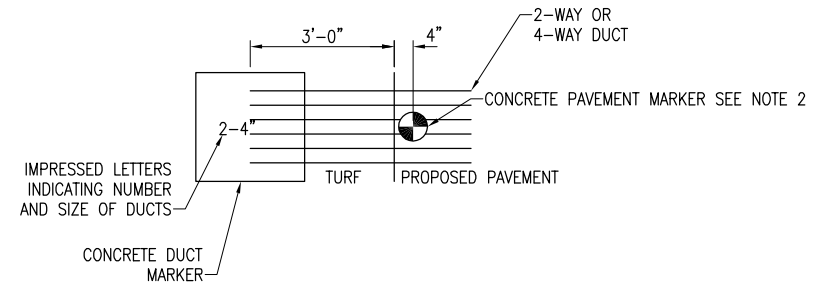


BITUMINOUS PAVEMENT DUCT MARKERS
 "NOT TO SCALE"

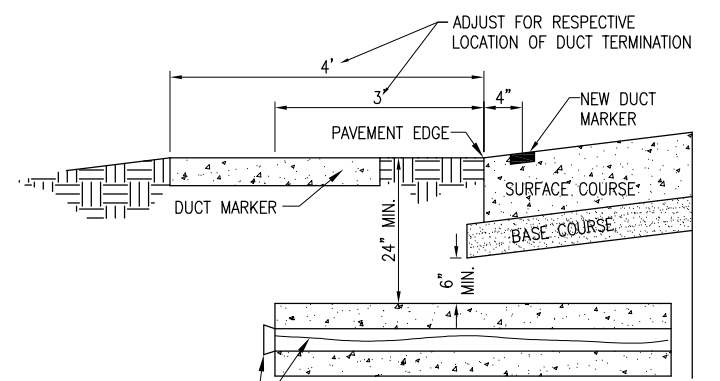
NOTE:
 TOP OF MARKER SHALL BE FLUSH WITH FINISHED PAVEMENT SURFACE. MARKER MAY BE INSTALLED IN A DRILLED HOLE AND SECURED WITH EPOXY GLUE.

CABLE & DUCT MARKER NOTES:

1. THE COST OF ALL TURF AND PAVEMENT DUCT MARKERS SHALL BE INCIDENTAL TO THE DUCT. THE COST OF ALL CABLE MARKERS SHALL BE INCIDENTAL TO THE CABLE.
2. BITUMINOUS PAVEMENT DUCT MARKER AND CONCRETE DUCT MARKER TO BE PROVIDED AT EACH END OF EACH DUCT AS SHOWN ON THE LOCATION PLAN. FOR CONCRETE PAVEMENT, THE LETTER "D" SHALL BE IMPRESSED IN THE PAVEMENT INSTEAD OF THE MARKER. THE LETTER SHALL BE FORMED AS DESCRIBED IN NOTE 4.
3. CABLE MARKERS SHALL BE PLACED AT CHANGES OF DIRECTION AND APPROXIMATELY EVERY 200' ALONG CABLE RUNS.
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.

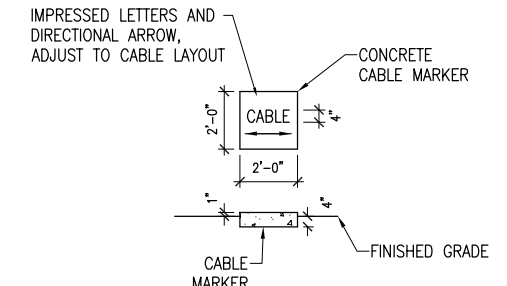


DUCT MARKER DETAIL
 "NOT TO SCALE"

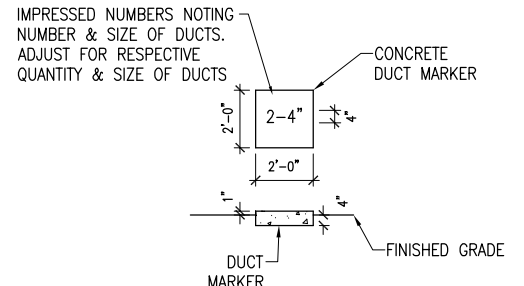


UNDERGROUND ELECTRICAL DUCT
 (NOT TO SCALE)

#10 PULL WIRE COIL A MINIMUM OF 3' AT DUCT ENDS. INSTALL APPROVED PLUGS IN END OF DUCTS NOT USED.



TURF CABLE MARKERS
 "NOT TO SCALE"



TURF DUCT MARKERS
 "NOT TO SCALE"

REVISION	DATE

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Revision No.	Date	By	Check
1	4/18/11	JFC	JFC
2	4/18/11	JFC	JFC
3	5/14/13	RWH	RWH

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ELECTRICAL DETAILS
 CONSTRUCT PERIMETER FENCE, PHASE 2
 IDA No. UGN-4190 SBG No. 3-17-0105-555

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.
- CONTRACTOR SHALL KEEP A COPY OF THE LATEST NEC IN FORCE ON SITE AT ALL TIMES DURING CONSTRUCTION FOR USE AS A REFERENCE.
- 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.
- THE CONTRACTOR INSTALLED EQUIPMENT (INCLUDING FAA APPROVED) SHALL NOT GENERATE ANY ELECTROMAGNETIC INTERFERENCE IN THE EXISTING AND/OR NEW COMMUNICATIONS, WEATHER, AIR NAVIGATION, AND AIR TRAFFIC CONTROL EQUIPMENT. ANY EQUIPMENT GENERATING SUCH INTERFERENCE SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST WITH THE EQUIPMENT MEETING THE APPLICABLE SPECIFICATIONS AND NOT GENERATING ANY INTERFERENCE.
- WHEN A SPECIFIC TYPE, STYLE, CLASS, ETC. OF FAA APPROVED EQUIPMENT IS SPECIFIED ONLY THAT TYPE, STYLE, CLASS, WILL BE ACCEPTABLE, EVEN THOUGH EQUIPMENT OF OTHER TYPES STYLES, CLASSES, ETC. MAY BE APPROVED.
- ANY AND ALL INSTRUCTIONS FROM THE 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 DETAILED DESCRIPTION OF THE OVERALL EQUIPMENT AND ITS INDIVIDUAL COMPONENTS.
 - THEORY OF OPERATION INCLUDING THE FUNCTION OF EACH COMPONENT.
 - INSTALLATION INSTRUCTION.
 - START-UP INSTRUCTIONS.
 - PREVENTATIVE MAINTENANCE REQUIREMENTS.
 - CHART FOR TROUBLE-SHOOTING.
- COMPLETE POWER AND CONTROL DETAILED WIRING DIAGRAM(S), SHOWING EACH CONDUCTOR/CONNECTION/COMPONENT - "BLACK" BOXES ARE NOT ACCEPTABLE. THE DIAGRAM OF THE NARRATIVE SHALL SHOW VOLTAGE/CURRENTS/WAVE SHAPES AT STRATEGIC LOCATIONS TO BE USED WHEN CHECKING AND/OR TROUBLE-SHOOTING THE EQUIPMENT. WHEN THE EQUIPMENT HAS SEVERAL MODES OF OPERATION, SUCH AS SEVERAL BRIGHTNESS STEPS, THESE PARAMETERS SHALL BE INDICATED FOR ALL DIFFERENT MODES.
- PARTS LIST WHICH WILL INCLUDE ALL MAJOR AND MINOR COMPONENTS SUCH AS RESISTORS, DIODES, ETC. IT SHALL INCLUDE A COMPLETE NOMENCLATURE OF EACH COMPONENT AND, IF APPLICABLE, THE NAME OF ITS MANUFACTURER AND THE CATALOG NUMBER.
- SAFETY INSTRUCTIONS.

POWER AND CONTROL 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 PHENOLIC MATERIAL, 1/4" HIGH BLACK LETTERS ON A WHITE BACKGROUND UNLESS NOTED OTHERWISE. SECURE WITH WEATHERPROOF ADHESIVE AND MACHINE SCREWS. FURNISH ADDITIONAL LEGEND PLATES WHERE REQUIRED BY CODE, FOR ADDITIONAL EQUIPMENT, AS DETAILED HEREIN ON THE PLANS, AND AS NOTED IN THE SPECIAL PROVISION SPECIFICATIONS.
- 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.
- LOW VOLTAGE (600 V.) AND HIGH VOLTAGE (5000 V.) CONDUCTORS SHALL BE INSTALLED IN SEPARATE WIREWAYS.
- NEATLY LACE WIRING IN DISTRIBUTION PANELS, WIREWAYS, SWITCHES AND JUNCTION/PULL BOXES.
- THE MINIMUM SIZE OF PULL/JUNCTION BOXES, REGARDLESS OF THE QUANTITY AND SIZE OF THE CONDUCTORS SHOWN, SHALL BE AS FOLLOWS:
 - IN STRAIGHT PULLS THE LENGTH OF THE BOX SHALL NOT BE LESS THAN EIGHT TIMES THE TRADE DIAMETER OF THE LARGER CONDUIT. THE TOTAL AREA (INCLUDING THE CONDUIT CROSS-SECTIONAL AREA) OF A BOX END SHALL BE AT LEAST 3 TIMES GREATER THAN THE TOTAL TRADE CROSS-SECTIONAL AREA OF THE CONDUITS TERMINATING AT THE END.
 - IN ANGLE PULLS OR 'U' PULLS THE DISTANCE BETWEEN EACH CONDUIT ENTRY INSIDE THE BOX AND THE OPPOSITE WALL OF THE BOX SHALL NOT BE LESS THAN SIX (6) TIMES THE TRADE DIAMETER OF THE LARGEST CONDUIT. THIS DISTANCE SHALL BE INCREASED FOR ADDITIONAL ENTRIES BY THE AMOUNT OF THE SUM OF THE DIAMETERS OF ALL OTHER CONDUIT ENTRIES ON THE SAME WALL AS THE BOX. THE DISTANCE BETWEEN CONDUIT ENTRIES ENCLOSING THE SAME CONDUCTOR SHALL NOT BE LESS THAN SIX TIMES THE TRADE DIAMETER OF THE LARGEST CONDUIT.
- A RUN OF CONDUIT BETWEEN TERMINATIONS AT EQUIPMENT ENCLOSURES, SQUARE DUCTS AND PULL/JUNCTION BOXES, SHALL NOT CONTAIN MORE THAN THE EQUIVALENT OF FOUR QUARTER BENDS (360 DEGREES TOTAL), INCLUDING THOSE BENDS LOCATED IMMEDIATELY AT THE TERMINATIONS, CAST, CONDUIT TYPE OUTLETS SHALL NOT BE TREATED AS PULL/JUNCTION BOXES.
- EQUIPMENT CABINETS SHALL NOT BE USED AS PULL/JUNCTION BOXES. ONLY WIRING TERMINATING AT THE EQUIPMENT SHALL BE BROUGHT INTO THESE ENCLOSURES.
- SPLICED AND JUNCTION POINTS SHALL BE PERMITTED ONLY IN JUNCTION BOXES, DUCTS EQUIPPED WITH REMOVABLE COVERS, AND AT EASILY ACCESSIBLE LOCATIONS.
- CIRCUIT BREAKERS IN POWER DISTRIBUTION PANEL(S) SHALL BE THERMAL-MAGNETIC MOLDED CASE, PERMANENT TRIP WITH 100 AMPERE, MINIMUM FRAME.
- DUAL LUGS SHALL BE USED WHERE TWO (2) WIRES, SIZE NO. 6 OR LARGER, ARE TO BE CONNECTED TO THE SAME TERMINAL.
- ALL INTERIOR WALL MOUNTED EQUIPMENT ENCLOSURES SHALL BE MOUNTED ON HOT DIPPED GALVANIZED STEEL STRUT SUPPORT, OR STAINLESS STEEL STRUT SUPPORT, WITH CORROSION RESISTANT HARDWARE.
- 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.
- 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 INSTALLING IT.
- UNLESS OTHERWISE SHOWN, ALL EXPOSED CONDUITS SHALL BE RUN PARALLEL TO OR AT RIGHT ANGLES WITH THE LINES OF THE STRUCTURE.
- ALL STEEL CONDUITS, FITTINGS, NUTS, BOLTS, ETC. SHALL BE GALVANIZED.
- USE CONDUIT BUSHINGS AT EACH CONDUIT TERMINATION. WHERE NO. 4 AWG OR LARGER UNDERGROUND WIRE IS INSTALLED, USE INSULATED BUSHINGS.
- USE DOUBLE LOCK NUTS AT EACH CONDUIT TERMINATION.
- WRAP ALL PRIMARY AND SECONDARY POWER TRANSFORMER CONNECTIONS WITH SUFFICIENT LAYERS OF INSULATING TAPE (3M SCOTCH 23 ALL-VOLTAGE SPLICING TAPE, 3M SCOTCH 130C 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 MINIMUM.
- THE FOLLOWING SHALL APPLY TO RELAY/CONTACTOR PANELS/ENCLOSURES:
 - 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.
 - THE ENCLOSURE(S) SHALL HAVE AMPLE SPACE FOR THE CIRCUIT COMPONENTS, TERMINAL BLOCKS AND INCOMING AND INTERNAL WIRING.
 - ALL CONTROL CONDUCTOR TERMINATIONS SHALL BE OF THE OPEN-EYE CONNECTOR/SCREW TYPE. SOLDERED CLOSED-EYE TERMINATIONS, OR TERMINATIONS WITHOUT CONNECTORS ARE NOT ACCEPTABLE.
 - WHEN THE ENCLOSURE COVER IS OPENED, ALL CIRCUIT COMPONENTS, WIRING AND TERMINALS SHALL BE EXPOSED AND ACCESSIBLE WITHOUT REMOVAL OF ANY PANELS, COVERS, ETC., EXCEPT THOSE COVERING HIGH VOLTAGE COMPONENTS.
 - ACCESS TO, OR REMOVAL OF A CIRCUIT COMPONENT OR TERMINAL BLOCK WILL NOT REQUIRE THE REMOVAL OF ANY OTHER CIRCUIT COMPONENT OR TERMINAL BLOCK.
 - EACH CIRCUIT COMPONENT SHALL BE CLEARLY IDENTIFIED INDICATING ITS CORRESPONDING NUMBER SHOWN ON THE DRAWINGS AND ITS FUNCTION.
 - A COMPLETE WIRING DIAGRAM SHALL BE MOUNTED ON THE INSIDE OF THE COVER. THE DIAGRAM SHALL REPRESENT EACH CONDUCTOR BY A SEPARATE LINE.
 - THE DIAGRAM SHALL IDENTIFY EACH CIRCUIT COMPONENT AN NUMBERING AND COLOR OF EACH TERMINAL CONDUCTOR AND TERMINAL.
 - ALL WIRING SHALL BE NEATLY TRAINED AND LACED.
 - MINIMUM WIRE SIZE SHALL BE NO. 12 AWG.
- 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".

REVISION	DATE

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Hanson No. 11A00002D	4/18/11
Filename 37 - ELECTRICAL NOTES.DWG	JFC
Scale N/A	JFC
Date MAY 17, 2013	RMH
LAYOUT	
DRAWN	
REVIEWED	

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ELECTRICAL NOTES

CONSTRUCT PERIMETER FENCE, PHASE 2
 IDA No. UGN-4190 SBG No. 3-17-0105-555

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