### 5A

## GREATER PEORIA REGIONAL AIRPORT

PEORIA, ILLINOIS

### TERMINAL APRON EXPANSION

IL PROJECT NUMBER: PIA-3812
AIP PROJECT NUMBER: 3-17-0080-46



FOR THE METROPOLITAN AIRPORT AUTHORITY OF PEORIA

6100 W EVERETT MCKINLEY DIRKSEN PARKWAY PEORIA, ILLINOIS 61607 309.697.8272

# METROPOLITAN AIRPORT AUTHORITY OF PEORIA

VICINITY MAP

#### BOARD

DEAN HEINZMANN - CHAIRPERSON MICHAEL LANDWIRTH GARY STELLA JAMES BROWDER LARRY STRANZ STEVE ROEHM STEVE LARSON RICK HINCK LEE GRAVES

AIRPORT DIRECTOR

KEN SPIRITO, A.A.E.

### ISSUED FOR BID DOCUMENTS



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JUNE 27, 2008



# PE087 TOTAL SHEETS: 43

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#### **APPROVAL BLOCK**



DRAWINGS PREPARED BY
PS&H ILLINOIS, INC.

SUBMITTED BY:

DATE:

RS&H PROJECT No. 213-6945-000

#### SUMMARY OF QUANTITIES

ITEM NO.	ITEM DESCRIPTION	UNIT	TOTAL ESTIMATED QUANTITY	AS-BUILT QUANTITY
AR152410	UNCLASSIFIED EXCAVATION	C.Y.	1,400	
AR152460	<del>-  </del>	C.Y.	4,100	
AR152460 AR152441	TOPSOIL STRIPPING ON-SITE BORROW	C.Y.		
AR152441 AR155712			14,500	
AR155/12	LIME-MODIFIED SUBGRADE 12"	S.Y.	12,200	·
AR209608	CRUSHED AGG. BASE COURSE 8"	S.Y.	12,250	
AR209612	CRUSHED AGG. BASE COURSE - 12"	S.Y.	235	
AR401900	REMOVE BITUMINOUS PAVEMENT	S.Y.	1,650	
AR501514	14" PCC PAVEMENT	S.Y.	11,100	
AR501518	18" PCC PAVEMENT	S.Y.	700	
AR501530	PCC TEST BATCH	EACH	1	
AR501900	REMOVE PCC PAVEMENT	S.Y.	2,900	
AR501910	REMOVE & REPLACE PCC PAVEMENT	S.Y.	750	
AR605541	CLEAN & SEAL CRACKS	LF.	2,000	
AR162506	CLASS E FENCE 6'	LF.	600	
AR162900	REMOVE CLASS E FENCE	LF.	800	
AR701512	12" RCP, CLASS IV	LF.	120	
AR701524	24" RCP, CLASS IV	LF.	325	
AR701900	REMOVE PIPE	LF.	250	***************************************
AR705526	6" PERFORATED UNDERDRAIN W/ SOCK	LF.	1,100	
AR751540	MANHOLE 4'	EACH	1′	
AR751550	MANHOLE 5'	EACH	1	
AR751803	UNDERDRAIN CLEANOUT	EACH	4	
AR751903	REMOVE MANHOLE	EACH	2	
AR751906	REMOVE CATCH BASIN	EACH	1	
AR751943	ADJUST MANHOLE	EACH	1	
AR752412	PRECAST REINFORCED CONC. FES 12"	EACH	2	
AR752424	PRECAST REINFORCED CONC. FES 24"	EACH	3	
AR752903	REMOVE HEADWALL	EACH	3	
AR754904	REMOVE COMB CURB & GUTTER	LF.	300	
AR901510	SEEDING	ACRE	1.8	
AR108108	1/C ∯8 5 KV UG CABLE	LF.	1,600	******
AR108706	1/C #6 COUNTERPOISE	LF.	800	
AR110202	2" PVC DUCT, DIRECT BURY	LF.	1,000	
AR110508	8-WAY CONCRETE ENCASED DUCT	LF.	350	
AR110610	ELECTRICAL HANDHOLE	EACH	4	
AR125415	MITL-BASE MOUNTED	EACH	13	
AR125442	TAXIWAY GUIDANCE SIGN, 2 CHARACTER	EACH	1	
AR125445	TAXIWAY GUIDANCE SIGN, 5 CHARACTER	EACH	1	***************************************
Independent				
AR150520	MOBILIZATION	LS.	1 1	
AR150530	TRAFFIC MAINTENANCE	L.S.	1	
AR156510	SILT FENCE	LF.	800	
AR156511	DITCH CHECK	EACH	1	
AR156520	INLET PROTECTION	EACH	5	
AR156532	EXCELSIOR BLANKET	S.Y.	8,700	
AR156540	RIPRAP	S.Y.	140	
		LF	30	***************************************
	REMOVE GUARDRAIL		1 55	
AR801700	REMOVE GUARDRAIL  ECONOCRETE BASE COURSE 6"		11.950	
AR801700 AR801701	ECONOCRETE BASE COURSE - 6"	S.Y.	11,950	
AR801700 AR801701 AR801702	ECONOCRETE BASE COURSE — 6"  PART DEPTH PCC PAVT. REPAIR — 2"-4"	S.Y. S.F.	250	
AR801700 AR801701	ECONOCRETE BASE COURSE - 6"	S.Y.		

PE087



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PEORIA, ILLINOIS

TERMINAL APRON EXPANSION

SUBCONSULTANTS

PSA ♥ Dewberry

STS AECOM

IL PROJECT: PIA-3812 AIP PROJECT: 3-17-0080-46

#### REVISIONS

NO.	DESCRIPTION	DATE
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DATE ISSUED: 06/27/08
REVIEWED BY: PCB
DRAWN BY: MJL

DESIGNED BY: NDO

AEP PROJECT NUMBER

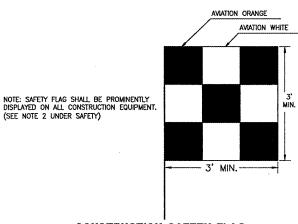
213-6945-000 © 2008 REYNOLDS, SMITH AND HILLS INC.

SHEET TITLE

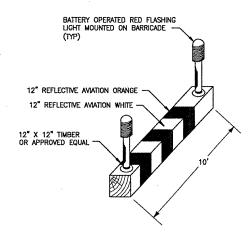
SUMMARY OF QUANTITIES

SHEET NUMBER

2 OF 43



**CONSTRUCTION SAFETY FLAG** 



#### LOW LEVEL LIGHTED BARRICADES

- LOW LEVEL LIGHTED BARRICADES SHALL BE PLACED AROUND ALL OPEN EXCAVATIONS, HOLES, TRENCHES, PAVEMENT DROPOFFS, AND AREAS IDENTIFIED ON THE PHASING PLAN.
- 2. PLACE BARRICADES @ 20 FT. O.C. UNLESS OTHERWISE NOTED.
- 3. 20 BARRICADES SHALL BE TURNED OVER TO AND BECOME THE PROPERTY OF THE AIRPORT UPON COMPLETION OF THE PROJECT.

#### **CONTRACTOR'S SAFETY AND SECURITY REQUIREMENTS**

#### SAFETY

- THE CONTRACTOR SHALL ACQUAINT HIS SUPERVISORS AND EMPLOYEES OF THE AIRPORT ACTIVITY AND OPERATIONS THAT ARE INHERENT TO THIS ACTIVE AIR CARRIER AIRPORT AND SHALL CONDUCT THE CONSTRUCTION ACTIVITIES TO CONFORM TO ALL ROUTINE AND EMERGENCY AIR TRAFFIC REQUIREMENTS AND GUIDELINES ON SAFETY AS SPECIFIED IN PARAGRAPH NO. 11 BELOW
- ALL CONTRACTOR VEHICLES THAT ARE AUTHORIZED TO OPERATE ON THE AIRPORT IN THE ACTIVE AIRCRAFT OPERATIONS AREA (AOA) SHALL DISPLAY IN FULL VIEW A FLASHING AMBER (YELLOW) DOME-TYPE LIGHT OR ABOVE THE VEHICLE A 3' X 3' OR LARGER, ORANGE AND WHITE CHECKERBOARD FLAG, EACH CHECKERBOARD COLOR BEING 1-FOOT SQUARE, (SEE CONSTRUCTION SAFETY FLAG DETAIL, THIS SHEET) AND ESCORTED UNDER THE CONTROL OF ONE CONTRACTOR MOBILE (TWO-WAY) RADIO OPERATOR ON THE JOB AT ALL TIMES. ANY VEHICLE OPERATING IN THE ACTIVE AGA DURING THE HOURS OF DARKNESS SHALL BE EQUIPPED WITH A FLASHING AMBER (YELLOW) DOME LIGHT, MOUNTED ON TOP OF THE VEHICLE AND OF SUCH INTENSITY TO CONFORM TO LOCAL CODES FOR MAINTENANCE AND EMERGENCY VEHICLES.
- 3. ALL NON-RADIO EQUIPPED CONTRACTOR VEHICLES THAT ARE REQUIRED TO OPERATE ON OR ACROSS ACTIVE RUNWAYS, TAXIWAYS, APRONS AND RUNWAY APPROACH AND PROTECTION ZONES SHALL DO SO UNDER THE DIRECT CONTROL OF A RADIO EQUIPPED ESCORT VEHICLE. ESCORT VEHICLES, OPERATORS, AND RADIO EQUIPMENT SHALL BE APPROVED BY THE AIRPORT. ESCORT VEHICLES SHALL BE MARKED AND LIGHTED AS DESCRIBED IN PARAGRAPH NO. 2 ABOVE AND SHALL BE EQUIPPED WITH AN APPROVED AVIATION BAND, RADIO EQUIPPED VEHICLES SHALL CONTINUOUSLY MONITOR GROUND CONTROL FREQUENCY 121.85 MHZ. ALL AIRCRAFT TRAFFIC ON RUNWAYS, TAXIWAYS AND APRONS SHALL HAVE PRIORITY OVER CONTRACTOR'S TRAFFIC.
- 4. NO RUNWAY, TAXIWAY, APRON OR AIRPORT ROADWAY SHALL BE CLOSED WITHOUT WRITTEN APPROVAL OF AIRPORT OPERATIONS. TO ENABLE NECESSARY "NOTICES TO AIRMEN" (NOTAM) OR ADVISORIES TO AIRPORT SERVICES OR TENANTS, A MINIMUM OF 72 HOURS WRITTEN NOTICE REQUESTING CLOSING SHALL BE DIRECTED TO THE RESIDENT PROJECT REPRESENTATIVE (RPR) AND/OR RESIDENT ENGINEER WHO WILL COORDINATE THE REQUEST WITH AIRPORT OPERATIONS.
- ANY CONSTRUCTION ACTIVITY WITHIN 175 FEET OF AN ACTIVE RUNWAY EDGE OR 50 FEET FROM AN ACTIVE TAXWAY EDGE OR OPEN EXCAVATIONS IN EXCESS OF THREE INCHES DEEP WITHIN THE ABOVE AREAS, WILL REQUIRE CLOSURE OF THE AFFECTED RUNWAY OR TAXIWAY, UNLESS OTHERWISE APPROVED BY AIRPORT OPERATIONS. CLOSURE REQUIRES THE SAME PROVISIONS AS PARAGRAPH
- OPEN FLAME WELDING OR TORCH CUTTING OPERATIONS ARE PROHIBITED UNLESS ADEQUATE FIRE AND SAFETY PRECAUTIONS HAVE BEEN TAKEN AND THE PROCEDURE APPROVED BY THE RPR
- STOCKPILED MATERIAL SHALL BE CONSTRAINED IN A MANNER TO PREVENT MOVEMENT RESULTING FROM AIRCRAFT JET BLAST OR WIND CONDITIONS IN EXCESS OF TEN KNOTS. STOCKPILE HEIGHT SHALL BE LESS THAN 15 FEET, AND OUTSIDE THE RUNWAY AND TAXIWAY OBJECT FREE AREAS. IN STOCKPILED MATERIAL SHALL HAVE SILT FENCE LOCATED AROUND THE MATERIAL TO PREVENT FOD FROM MOVING ONTO THE AIRFIELD PAVEMENTS.
- 8. OPEN TRENCHES, EXCAVATIONS AND STOCKPILED MATERIAL LOCATED IN THE AGA SHALL BE PROMINENTLY MARKED WITH FLAGS AND LIGHTED BY APPROVED LIGHT UNITS DURING HOURS OF
- DEBRIS, WASTE AND LOOSE MATERIAL CAPABLE OF CAUSING DAMAGE TO AIRCRAFT LANDING GEARS, PROPELLERS OR BEING INGESTED IN JET ENGINES SHALL NOT BE ALLOWED ON ACTIVE AIRCRAFT MOVEMENT AREAS. IF THESE MATERIALS ARE OBSERVED TO BE ON ACTIVE AIRCRAFT MOVEMENT areas, they will be removed immediately and/or continuously during construction.
- 10. THE RESIDENT ENGINEER WILL ARRANGE WITH AIRPORT OPERATIONS FOR INSPECTION PRIOR TO OPENING FOR AIRCRAFT USE ANY RUNWAY OR TAXIWAY THAT HAS BEEN CLOSED FOR WORK, ON OR ADJACENT THERETO, OR THAT HAS BEEN USED FOR A CROSSING POINT OR HAUL ROUTE BY THE
- 11. THE CONTRACTOR IS DIRECTED TO COMPLY WITH AND ACQUAINT HIS/HER EMPLOYEES WITH THE FOLLOWING SAFETY GUIDELINES, RELATED MATERIALS AND FAA ADVISORY CIRCULARS:

FAA ORDER "SAFETY REQUIREMENT ON AIRPORTS DURING AGENCY FUNDED CONSTRUCTION AND MAINTENANCE ACTIVITIES"

150/5200-18C "AIRPORT SAFETY-SELF INSPECTION"

150/5210-58 "PAINTING, MARKING & LIGHTING OF VEHICLES USED ON

AIRPORTS\*

150/5370-2E "OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION"

150/5370-4 "APPENDIX 3. SUGGESTED SPECIAL PROVISIONS FOR PROTECTION OF CABLES, CONTROLS, NAVAIDS AND

WEATHER BUREAU FACILITIES"
"AIRPORT CONSTRUCTION CONTROLS TO PREVENT AIR AND 150/5370--7

WATER POLLUTION"

12. CONSTRUCTION DURING THE PROJECT MAY BE HALTED AT ANY TIME BY RPR, ENGINEER, AND/OR AIRPORT OPERATIONS IF IT IS DETERMINED TO BE IN THE BEST INTEREST OF AIRPORT OPERATIONS OR SAFETY. THE CONTRACTOR MAY BE DIRECTED TO REMOVE EQUIPMENT AND/OR EVACUATE THE SITE IN ORDER TO ENABLE AIRCRAFT OPERATIONS. NECESSARY EXTENSIONS IN CONTRACT TIME WILL BE GRANTED OR A STOP WORK ORDER WILL BE ISSUED DUE TO THESE DELAYS, HOWEVER, THERE WILL BE NO ADJUSTMENTS IN CONTRACT PRICE DUE TO THESE DELAYS, ANY DELAY LONGER THAN B HOURS WILL RESULT IN AN EXTENSION OF CONTRACT TIME IF THE DELAY IS THROUGH NO FAULT O

IN ADDITION TO THE ABOVE, THE FOLLOWING SPECIAL REQUIREMENTS WILL APPLY

- 13. WHEN APPLICABLE, A DAILY SAFETY AND PROGRESS MEETING SHALL BE HELD BETWEEN THE RESIDENT ENGINEER AND THE CONTRACTOR'S SUPERINTENDENT TO DISCUSS REQUIREMENTS FOR
- 14. WHEN APPLICABLE, THE CONTRACTOR SHALL PREPARE A SAFETY PLAN SPECIFIC TO NIGHTTIME CONSTRUCTION OPERATIONS, AS WELL AS A CONTINGENCY PLAN TO ADDRESS CASES OF ABNORMAL FAULURES OR UNEXPECTED DISASTERS.
- TRUCK HAUL ROUTES ON THE AIRFIELD SHALL BE DELINEATED WITH LIGHTED BARRICADES. OTHER MEANS TO CLEARLY MARK THE ROUTES TO THE WORK SITE MAY BE APPROVED BY THE RPR, ENGINEER, AND/OR AIRPORT OPERATIONS.
- 16. ALL COMMUNICATION WITH THE AIR TRAFFIC CONTROL TOWER OR OTHER ELEMENTS OF THE AIRPORT SHALL BE THROUGH THE RESIDENT ENGINEER AND/OR AIRPORT OPERATIONS OR THE CONTRACTOR'S BADGED PERSONELL. IF THE CONTRACTOR IS REQUIRED TO CROSS ACTIVE MOVEMENT AREAS THE CONTRACTOR'S SUPERINTENDENT AND FOREMAN SHALL BE BADGED BY THE AIRPORT, SEE SECURITY

#### SECURITY

- GENERAL INTENT: IT IS INTENDED THAT THE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF THE AIRPORT SECURITY PLAN AND WITH THE SECURITY REQUIREMENTS SPECIFIED HEREIN BY AIRPORT OPERATIONS. THE CONTRACTOR SHALL DESIGNATE TO THE RESIDENT ENGINEER AND AIRPORT OPERATIONS, IN WRITING, THE NAME OF HIS "CONTRACTOR SECURITY OFFICER (CSO)." THE CSO SHALL REPRESENT THE CONTRACTOR ON THE SECURITY REQUIREMENTS FOR THE
- 2. CONTRACTOR PERSONNEL SECURITY ORIENTATION: THE CSO SHALL BE RESPONSIBLE FOR BRIEFING ALL CONTRACTOR PERSONNEL ON SECURITY REQUIREMENTS. ALL NEW CONTRACTOR EMPLOYEES SHALL BE BRIEFED ON SECURITY REQUIREMENTS PRIOR TO WORKING IN THE CONSTRUCTION AREA.
- ACCESS TO THE SITE: CONTRACTOR'S ACCESS TO THE SITE SHALL BE AS SHOWN ON THE PLANS. NO OTHER ACCESS POINTS SHALL BE ALLOWED UNLESS APPROVED BY AIRPORT OPERATIONS. ALL CONTRACTOR TRAFFIC AUTHORIZED TO ENTER THE SITE SHALL BE EXPERIENCED IN THE ROUTE OR GUIDED BY CONTRACTOR PERSONNEL. THE CONTRACTOR SHALL BE RESPONSIBLE TRAFFIC CONTROL TO AND FROM THE VARIOUS CONSTRUCTION AREAS ON THE SITE, AND FOR THE OPERATION AND SECURITY OF THE VARIOUS CONSTRUCTION AREAS ON THE STIE, AND FOR THE OPERATION AND SECURITY OF THE ACCESS GATE TO THE SITE. A CONTRACTOR'S FLAGMAN OR TRAFFIC CONTROL PERSON SHALL MONITOR AND COORDINATE ALL CONTRACTOR TRAFFIC AT THE ACCESS GATE SITH SECURITY. THE CONTRACTOR SHALL NOT PERMIT ANY UNAUTHORIZED CONSTRUCTION PERSONNEL OR TRAFFIC ON THE SITE. ACCESS GATES TO THE SITE SHALL BE LOCKED AND SECURED AT ALL TIMES WHEN NOT ATTENDED BY THE CONTRACTOR. IF THE CONTRACTOR CHOOSES TO LEAVE ANY ACCESS GATE OPEN, IT SHALL BE ATTENDED BY CONTRACTOR PERSONNEL WHO ARE FAMILIAR WITH THE REQUIREMENTS OF THE AIRPORT OPERATIONS SECURITY PROGRAM. THE CONTRACTOR IS RESPONSIBLE FOR THE IMMEDIATE CLEANUP OF ANY DEBRIS DEPOSITED ALONG THE ACCESS ROUTE AS A RESULT OF HIS CONSTRUCTION TRAFFIC. DIRECTIONAL SIGNING FROM THE ACCESS GATE ALONG THE DELIVERY ROUTE TO THE STORAGE AREA, PLANT SITE OR WORK SITE SHALL BE AS DIRECTED BY AIRPORT OPERATIONS.
- MATERIALS DELIVERY TO THE SITE: ALL CONTRACTOR'S MATERIAL ORDERS FOR DELIVERY TO THE WORK SITE WILL USE AS A DELIVERY ADDRESS, THE STREET NAME ASSIGNED TO THE ACCESS POINT AT THE CONTRACTOR'S STAGING SITE AT THE AIRPORT. THE AIRPORT NAME SHALL NOT BE USED IN THE DELIVERY ADDRESS AT ANY TIME. THIS WILL PRECLUDE DELIVERY TRUCKS FROM ENTERING INTO THE TERMINAL COMPLEX, OR TAKING SHORT CUTS THROUGH THE PERIMETER GATES AND ENTERING INTO AIRCRAFT OPERATIONS AREAS INAPPROPRIATELY.
- 5. CONSTRUCTION AREA LIMITS: THE LIMITS OF CONSTRUCTION, MATERIAL STORAGE AREAS, PLANT SITE, EQUIPMENT STORAGE AREA, PARKING AREA AND OTHER AREAS DEFINED AS REQUIRED FOR THE CONTRACTOR'S EXCLUSIVE USE DURING CONSTRUCTION SHALL BE MARKED BY THE CONTRACTOR. THE CONTRACTOR SHALL ERECT AND MAINTAIN AROUND THE PERIMETER OF THESE AREAS SUITABLE FENCING, MARKING AND/OR WARNING DEVICES VISIBLE FOR DAY/NIGHT USE.
  TEMPORARY BARRICADES, FLAGGING AND FLASHING WARNING LIGHTS WILL BE REQUIRED AT CRITICAL ACCESS POINTS. TYPE OF MARKING AND WARNING DEVICES SHALL BE APPROVED BY AIRPORT
- . <u>IDENTIFICATION—PERSONNEL:</u> ALL EMPLOYEES, AGENTS, VENDORS, INVITEES, ETC. OF THE CONTRACTOR OR SUBCONTRACTORS REQUIRING ACCESS TO THE CONSTRUCTION SITE SHALL, IN ACCORDANCE WITH THE AIRPORT OPERATIONS SECURITY PROGRAM, BE REQUIRED TO DISPLAY IDENTIFICATION OR BE UNDER ESCORT BY PROPERLY BADGED PERSONNEL. THESE BADGES WILL BE DENTIFIED NUMERICALLY AND ISSUED TO INDIVIDUAL EMPLOYEES WITH A PERMANENT RECORD MAINTAINED ON EACH INDIVIDUAL TO WHOM A BADGE IS ISSUED. AT THE COMPLETION OF THE MAINTAINED ON EACH INDIVIDUAL TO WHOM A BAUGE IS ISSUED. AT THE COMPLETION OF THE CONTRACT ALL BADGES WILL BE RETURNED TO THE AIRPORT AND A CHARGE OF \$100 PER BADGE WILL BE ASSESSED FOR ALL BADGES NOT RETURNED. NO BADGE WILL BE ISSUED TO ANY PERSON UNTIL A REVIEW OF THE TSA REQUIRED PAPERWORK BY AIRPORT SECURITY AND ALL REQUIREMENTS ARE MET. PAPERWORK SHALL BE SUBMITTED A MINIMUM OF 7 DAYS BEFORE ISSUANCE OF BADGE. IDENTIFIABLE HARD HATS OR OTHER IDENTIFICATION SHALL ALSO BE WORN AT ALL TIMES IF REQUIRED BY AIRPORT OPERATIONS. THE CONTRACTOR'S SUPERINTENDENT AND FOREMAN ARE RESPONSIBLE FOR ATTENDING TRAINING AND COMPLETING SECURITY BADGE APPLICATIONS, WHICH WILL INCLUDE AIR/GROUND RADIO COMMUNICATION, TAXIWAY AND AIRPORT FAMILIARIZATION. ESTIMATED TIME FOR COMPLETION IS 3 HOURS.
- 7. <u>IDENTIFICATION—-VEHICLES:</u> THE CONTRACTOR, THROUGH THE CSO, SHALL ESTABLISH AND MAINTAIN A LIST OF CONTRACTOR AND SUBCONTRACTOR VEHICLES AUTHORIZED TO OPERATE ON THE SITE. PERSONAL VEHICLES OF CONTRACTOR EMPLOYEES SHALL BE RESTRICTED TO THE CONTRACTOR'S EMPLOYEE PARKING AREA AND ARE NOT ALLOWED ON OTHER AREAS OF THE AGA AT ANY TIME.
- 8. FINES: PAYMENT OF ALL FINES ASSESSED TO THE AIRPORT DUE TO VIOLATIONS BY THE CONTRACTOR OF TSA/FAA SECURITY OR SAFETY REQUIREMENTS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. IF THE RESTRICTED AREA GATE IS FOUND TO BE OPEN OR UNLOCKED AND UNATTENDED, AIRPORT SECURITY POLICE MAY ISSUE THE CONTRACTOR A CITATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS AND IMPOSED FINES. IN ADDITION, A \$1,000.00 CHARGE MAY BE LEVIED BY THE AIRPORT FOR EACH VIOLATION SO DOCUMENTED AND UPON FINAL PAYMENT THE TOTAL OF ANY SUCH CHARGES WILL BE DEDUCTED FROM MONEYS DUE
- A MINIMUM OF 48 HOURS IN ADVANCE OF ANY EXCAVATION OR BORINGS, THE CONTRACTOR SHALL CONTACT LOCAL CABLE OWNERS TO VERIFY ALL UNDERGROUND CABLE LOCATIONS IN THE VICINITY THE PROPOSED WORK.

- THIS PROJECT INCLUDES APPROXIMATELY 11,600 SY OF NEW CONCRETE APRON PAVEMENT, EXCAVATION, DRAINAGE IMPROVEMENTS, ELECTRICAL IMPROVEMENTS AND SITE RESTORATION.
- AIRCRAFT OPERATIONS WILL CONTINUE DURING CONSTRUCTION. TYPE OF AIRCRAFT OPERATIONS DURING CONSTRUCTION INCLUDE DESIGN GROUPS I, II, III AND IV AND APPROACH CATEGORY A, B
- 3. BASIS FOR TEMPORARY DISPLACED OR RELOCATED THRESHOLDS: NOT APPLICABLE.
- 4. BASIS FOR DEVIATING FROM STANDARDS: NOT APPLICABLE.
- 5. TYPE AND HEIGHT OF CONSTRUCTION EQUIPMENT A TRUCKS (DUMP, FLATBED, CONCRETE) - 15 FEET B. FRONT END LOADERS - 20 FEET C. BULLDOZERS - 15 FEET D. ROLLERS AND COMPACTORS - 15 FEET
  - E. EXCAVATORS 25 FEET
- DATES FOR START AND COMPLETION OF WORK SEPTEMBER 15, 2008 JULY 3, 2009 ESTIMATED COMPLETE: CONSTRUCTION TIME: 150 CALENDAR DAYS

**PE087** 



850 East Diehl Road Suite 120 Naperville, Illinois 60563 630-505-1991 FAX 630-505-1977 www.rsandh.com



PEORIA, ILLINOIS

TERMINAL APRON **EXPANSION** 

SUBCONSULTANTS

PSA 🤀 Dewberry

STS | AECOM

IL PROJECT: PIA-3812 AIP PROJECT: 3-17-0080-46

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NO.	DESCRIPTION	DAT
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DATE ISSUED: 06/27/08 REVIEWED BY: PCB DRAWN BY: MJL

DESIGNED BY: NDO

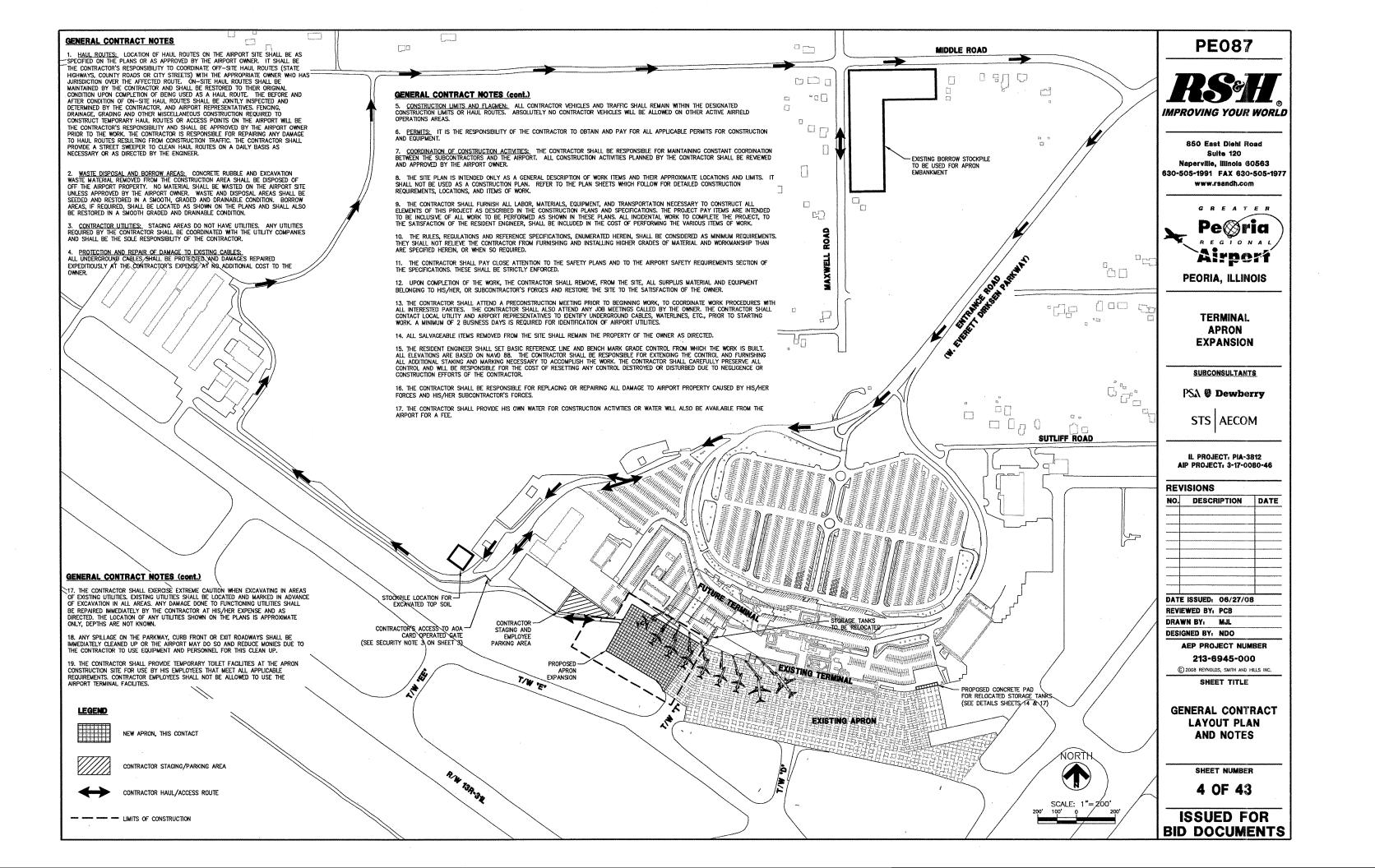
**AEP PROJECT NUMBER** 213-6945-000

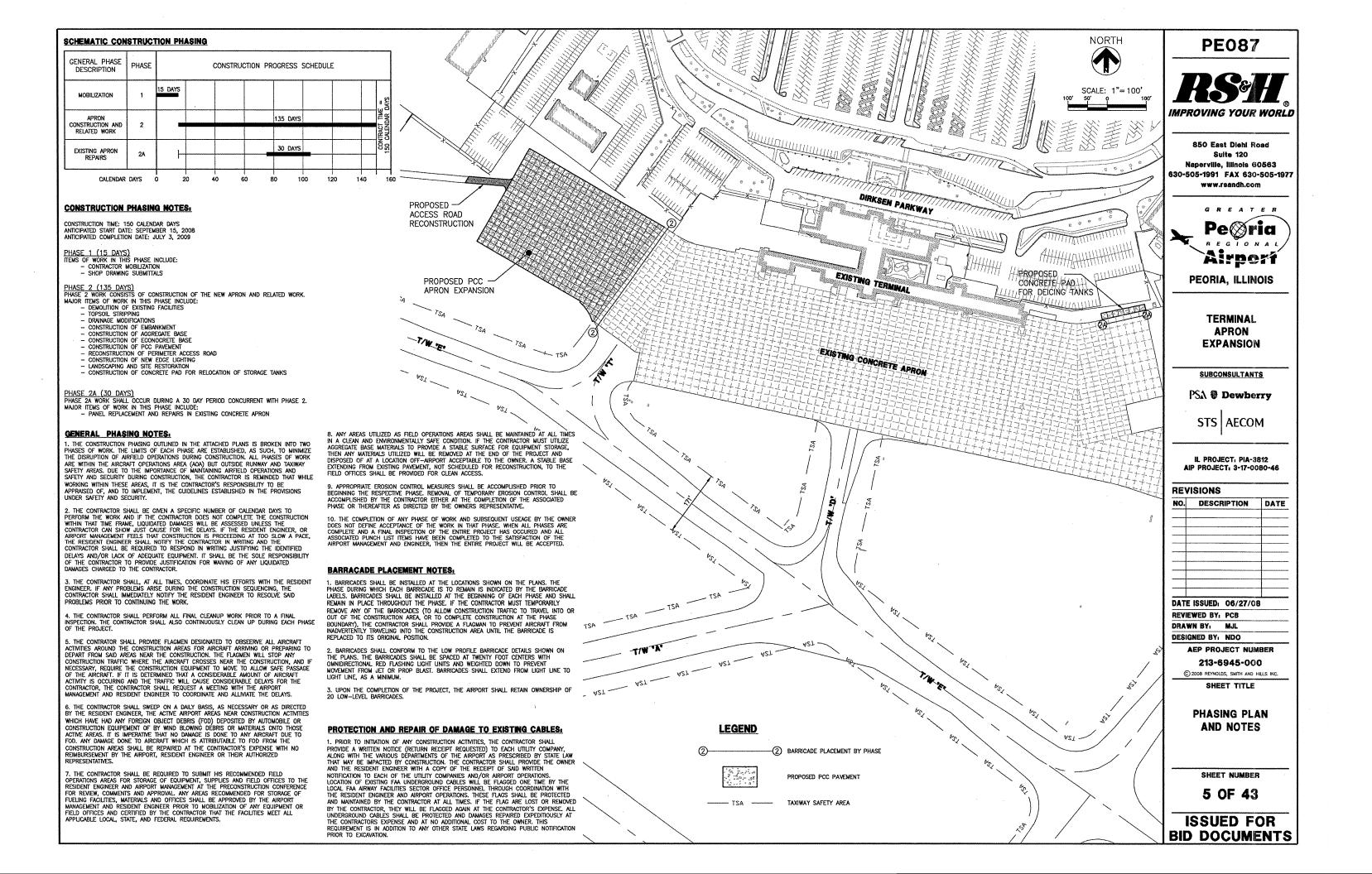
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SAFETY AND SECURITY **NOTES AND DETAILS** 

SHEET NUMBER

3 OF 43





#### CIVIL LEGEND

	AIRPORT PROPERTY LINE
	EXISTING PAVEMENT
	EXISTING CONTOUR
650	PROPOSED CONTOUR
em funs som markam som sanklam ma markam som ranklam mm	EXISTING STORM SEWER
	PROPOSED STORM SEWER
	EXISTING WATERMAIN
W	PROPOSED WATERMAIN
,	EXISTING GAS MAIN
	PROPOSED GAS MAIN
······································	EXISTING SANITARY SEWER
SAN	PROPOSED SANITARY SEWER
	PROPOSED GRADING LIMITS
The second secon	EXISTING FENCE
XXXX	PROPOSED FENCE
	EXISTING STORM MANHOLE
<b>©</b>	PROPOSED STORM MANHOLE
SAN	EXISTING SANITARY MANHOLE
© <sub>SAN</sub>	PROPOSED SANITARY MANHOLE
2000 Zood	EXISTING CATCHBASIN
	PROPOSED CATCHBASIN
<b>\$</b>	EXISTING INLET
•	PROPOSED INLET
p4 MA	EXISTING WATER VALVE
₩w	PROPOSED WATER VALVE
₩ov	EXISTING GAS VALVE
₩gv	PROPOSED GAS VALVE
©	EXISTING GAS METER
©	PROPOSED GAS METER
* METER	EXISTING WATER METER
◆ METER	PROPOSED WATER METER
St.	EXISTING FIRE HYDRANT
₩	PROPOSED FIRE HYDRANT
DRAIN	EXISTING STORM DRAIN

DRAIN

PROPOSED STORM DRAIN

#### **ELECTRICAL LEGEND**

	EXISTING FAA CONTROL CABLE
	PROPOSED FAA CONTROL CABLE
	EXISTING TELEPHONE
	PROPOSED TELEPHONE
	EXISTING FIBER OPTIC CABLE
FO	PROPOSED FIBER OPTIC CABLE
	EXISTING POWER CABLE
E	PROPOSED POWER CABLE
	EXISTING OVERHEAD ELECTRIC
Φ	EXISTING ELECTRICAL JUNCTION BOX
<b>\$</b>	LIGHT POLE
-0-	UTILITY POLE

**ABBREVIATIONS** ABC - AGGREGATE BASE COURSE AC/ACP - ASPHALTIC CONCRETE PAVEMENT AFLD - AIRFIELD AIP - AIRPORT IMPROVEMENT PROGRAM AOA - AIRCRAFT OPERATIONS AREA ATCT - AIR TRAFFIC CONTROL TOWER AUG - AUGER
AWG - AMERICAN WIRE GAUGE
B - BASELINE
C - CENTERLINE
C - CONDUIT
CB - CATCH BASIN CBF — CALFORNIA BEARING RATIO
CFES — CONCRETE FLARED END SECTION
CMP — CORREGATED METAL PIPE
CO — CLEANOUT
CONC — CONCRETE
CPP — CORREGATED PLASTIC PIPE CPP -- CORRECATED PLASTIC PIPE
CSO -- CONTRACTOR SECURITY OFFICER
CY -- CUBIC YARD
DIA -- DIAMETER
DIP -- DUCTILE IRON PIPE
DRI -- DOUBLE RING INFILTROMETER
DWG -- DRAWING
EC -- EXISTING GROUND
EL (EL DISTING GROUND EG - EXISTING GROUND
EL/ELEV - ELEVATION
EOP - EOGE OF PAVEMENT
ERCP - ELLIPTICAL REINFORCED CONCRETE PIPE
ERSA - EXTENDED RUNWAY SAFETY AREA
EX/EXST/EXIST - EXISTING
FAA - FEDERAL AVIATION ADMINISTRATION
FOD - FOREIGN OBJECT DEBRIS
GNE - GROUNDWATER NOT ENCOUNTERED
GRS - GALVENIZED RIGID STEEL
GS - GLIVENIZED RIGID STEEL
I/C - NUMBER OF CONDUCTORS/CONDUCTOR
IDOT - ILLINOIS DEPARTMENT OF TRANSPORTATION
IE/INV - INVERT ET FAVATION / IMPERT IDOT — ILLINOIS DEPARTMENT OF TRANS
IE/INV — INVERT ELEVATION / INVERT
ILS — INSTRUMENT LANDING SYSTEM
kV — KILOVOLT
LEO — LAW ENFORCEMENT OFFICER
LF — LINEAR FEET
LT — LEFT (LOOKING UP—STATION)
MAX — MAXIMUM
MES — MITERED END SECTION
MH — MANHOLE
MIN — MINIMUM
N — NORTHING
NAD — NORTH AMERICAN DATUM MH — MANHOLE
MIN — MINIMUM
N — NORTHINIG
NAD — NORTHINIG
NAD — NORTHINIG
NIC — NORTH NORTHINIG
NIC — NORTHINIG
NIC — NORTHINIG
NIC — NOT IN CONTRACT
NOTAM — NOTICE TO AIRMEN
NITS — NOT TO SCALE
OC — ON CENTER
OFA — OBJECT FREE AREA
OC — POINT OF CURVATURE
PCC — POINT OF CURVATURE
PCC — POINT OF CURVATURE
PCC — PORTLAND CEMENT CONCRETE
PERF — PERFORATED
PG — PROPOSED GRADE
PT — POINT OF TANGENCY
PVC — POINT OF VERTICAL INTERSECTION
R/W — RUNWAY
RCP — REINFORCED CONCRETE PIPE
RDWY — ROADWAY
RCL — RUNWAY PROTECTION ZONE
RSA — RUNWAY SAFETY AREA
RT — RIGHT (LOOKING UP—STATION)
SCH — SCHEDULE
SF — SQUARE FOOT
SGN — SIGN
SIDA — SECURITY IDENTIFICATION DISPLAY AREA
SPT — STANDARD PENETRATION TEST
SS — STANDARD
SY — SCURITY IDENTIFICATION TEST
SS — STANDARD
SY — SCHANDARD
T/L — TAXIWAY SAFETY
TRE
T/W — TAXIWAY
TBR — TO BE REMOVED
TOZ — TOUCHDOWN ZONE
TSA — TOUGHOWN ZONE
TSA — TOUGERDAND
TYPICAL
UD — UNDERDRAIN
W — WATER

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TERMINAL APRON EXPANSION

SUBCONSULTANTS

PSA @ Dewberry

STS AECOM

IL PROJECT: PIA-3812 AIP PROJECT: 3-17-0080-46

REVISIONS					
NO.	DESCRIPTION	DATE			
	***************************************				
DATE	DATE ISSUED: 06/27/08				

DATE ISSUED: 06/27/0
REVIEWED BY: PCB
DRAWN BY: MJL
DESIGNED BY: NDO

AEP PROJECT NUMBER 213-6945-000

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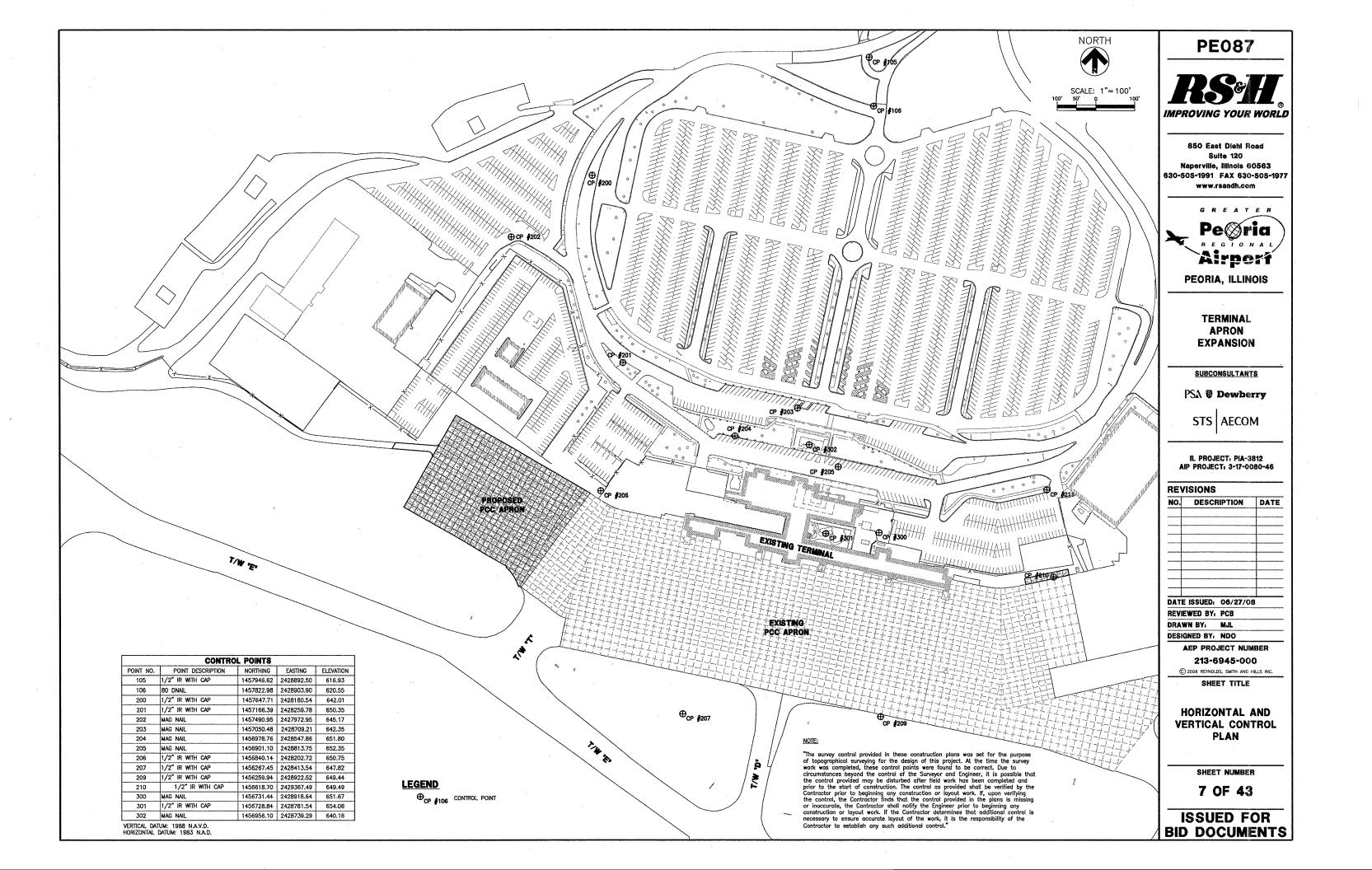
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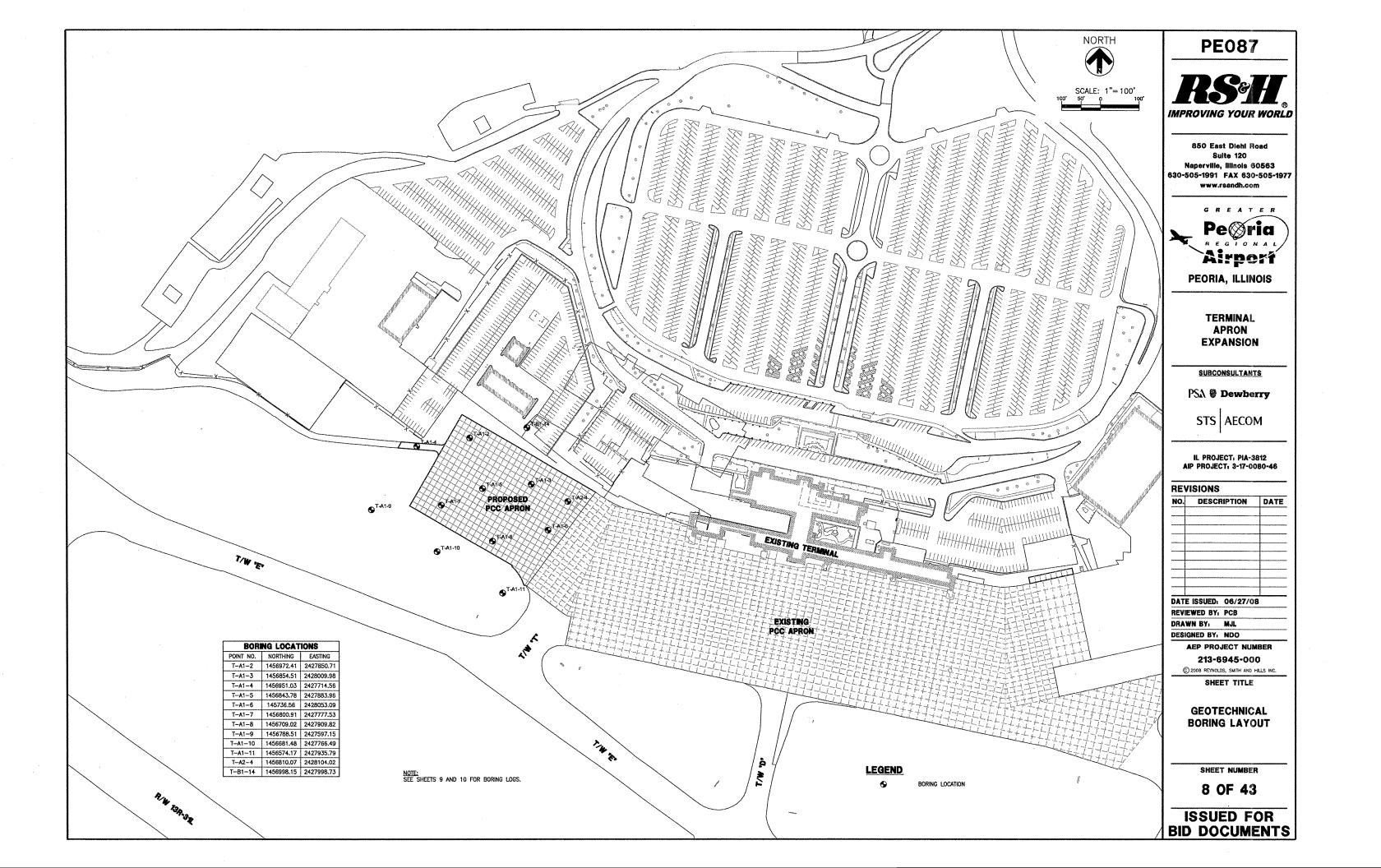
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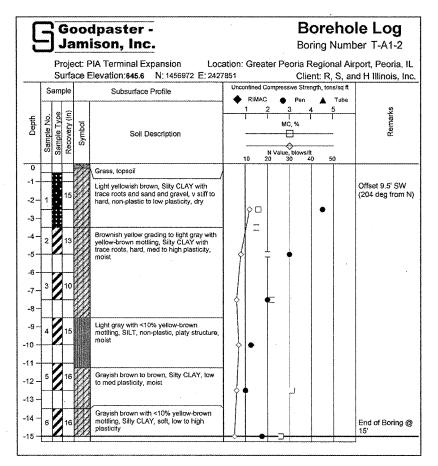
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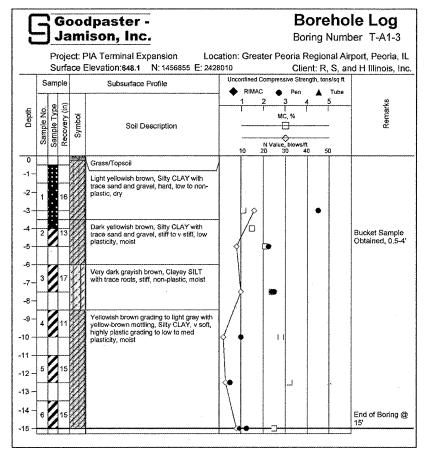
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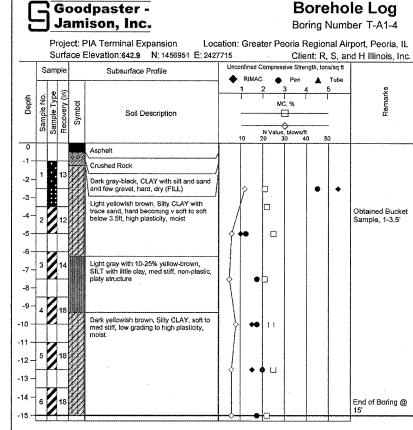
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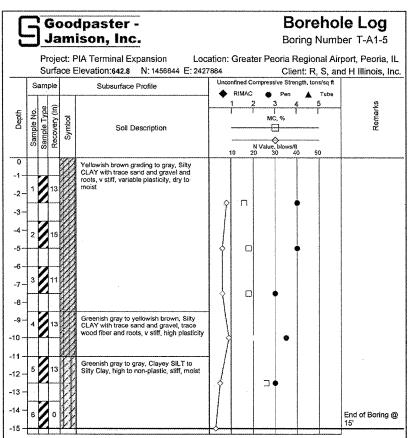


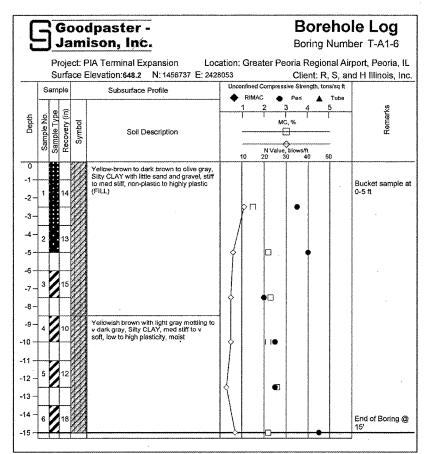


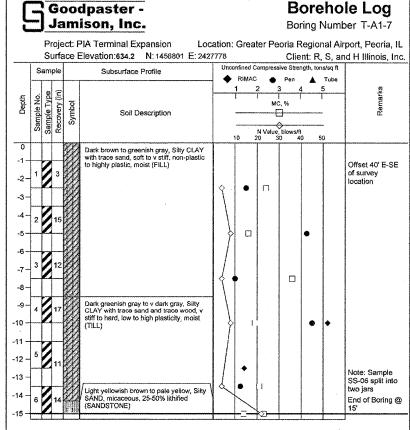












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AIP PROJECT: 3-17-0080-46

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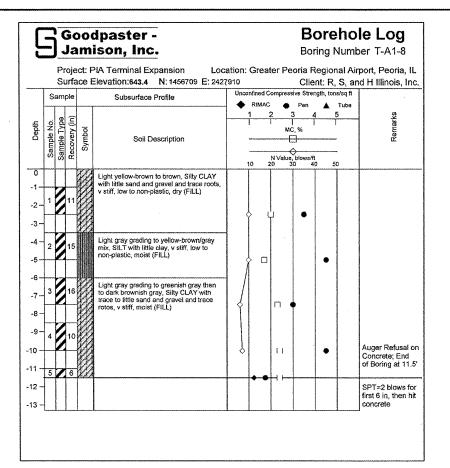
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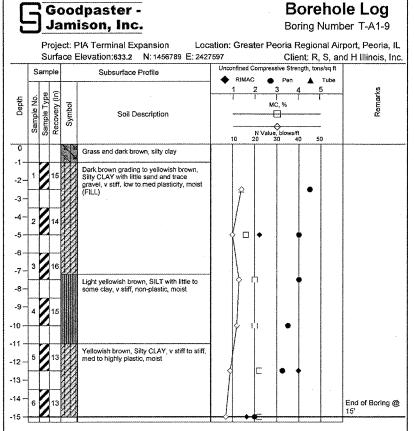
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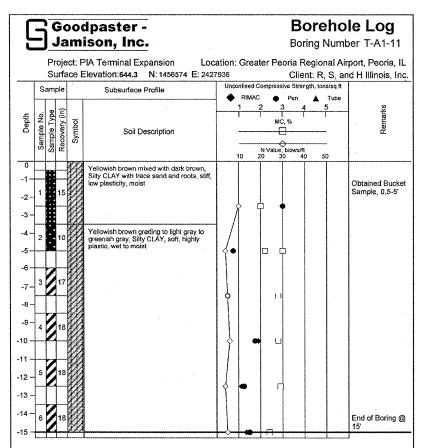
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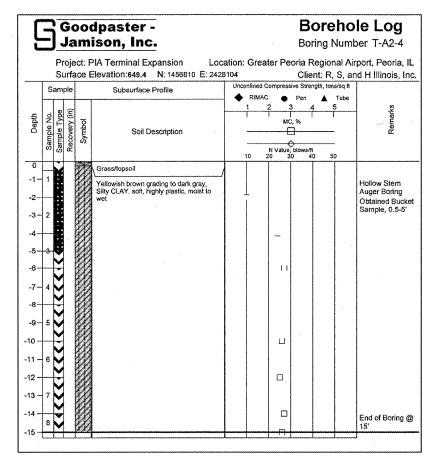
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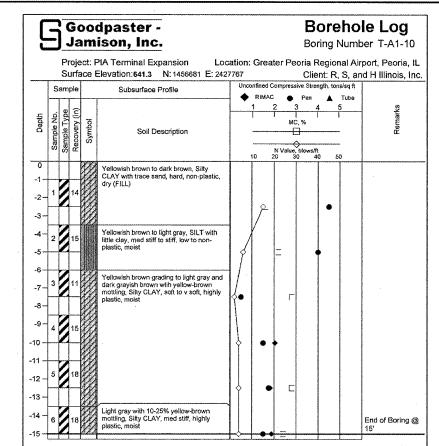
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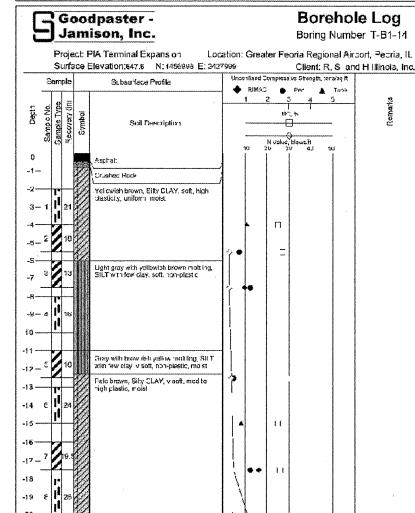














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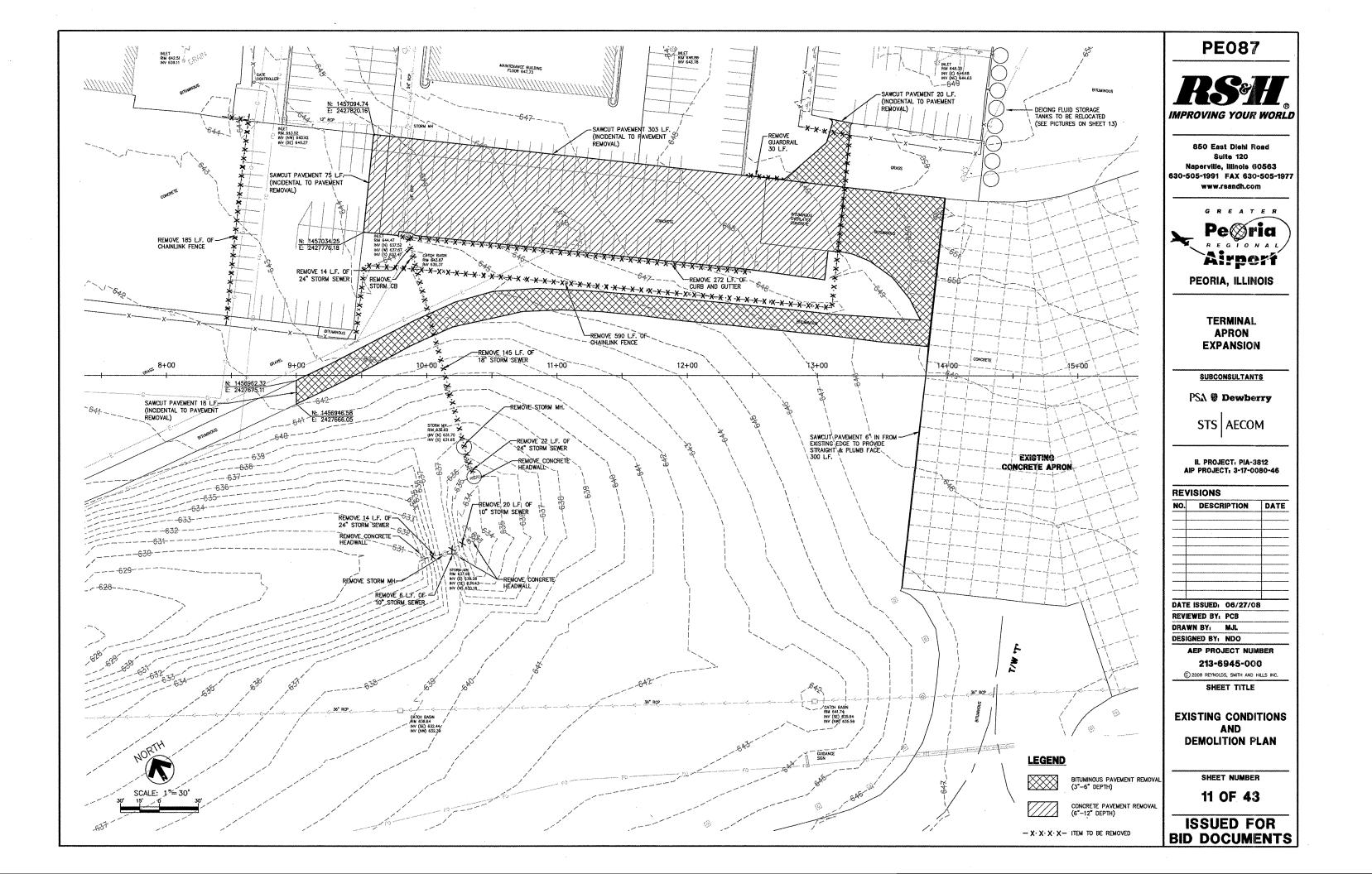
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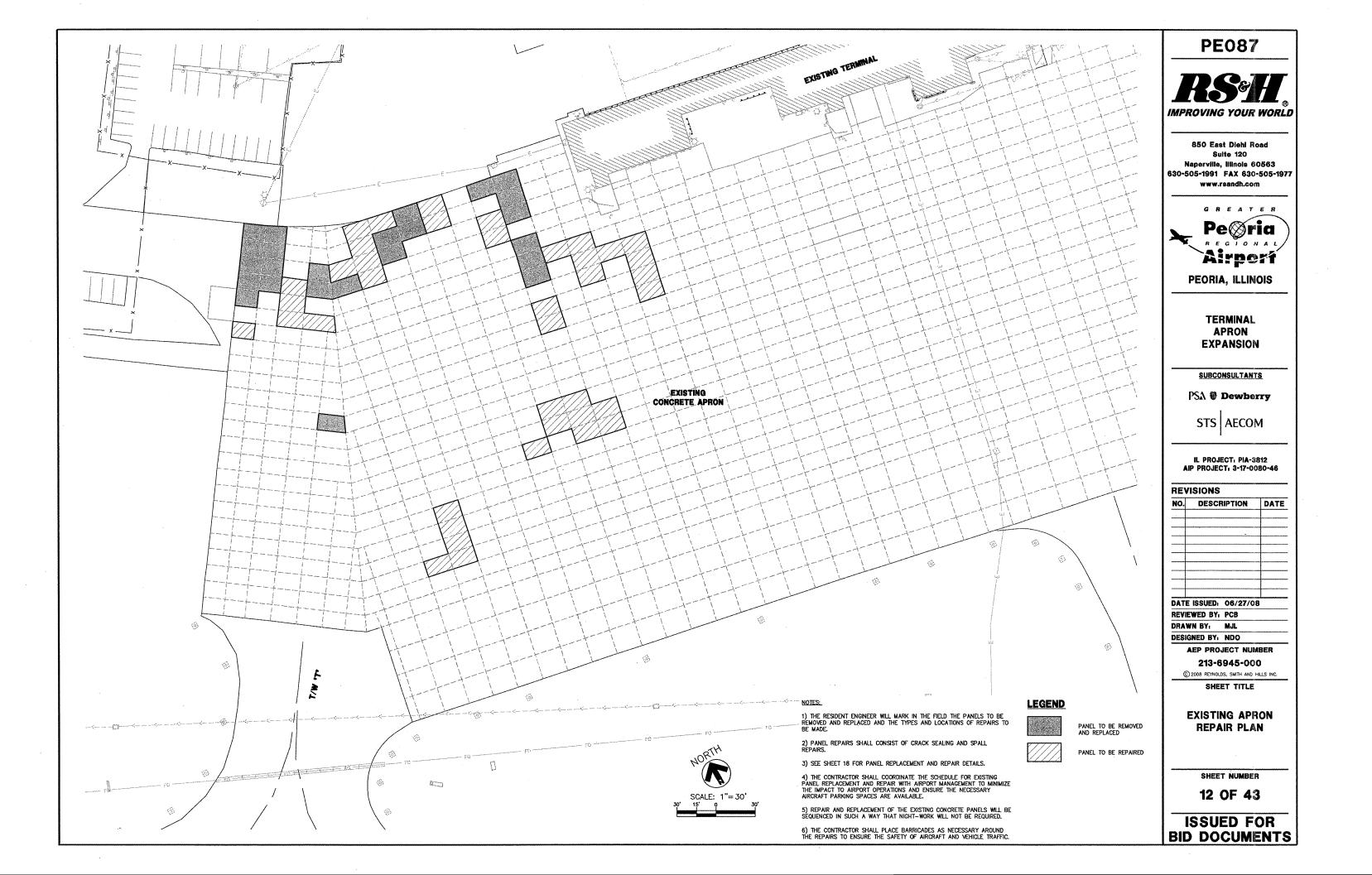
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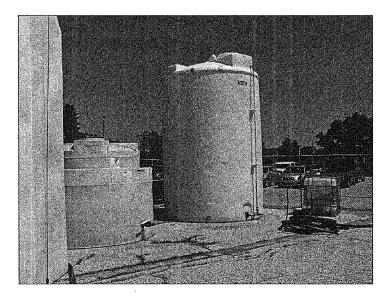
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**BORING LOGS** 

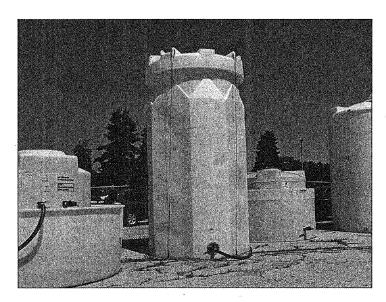
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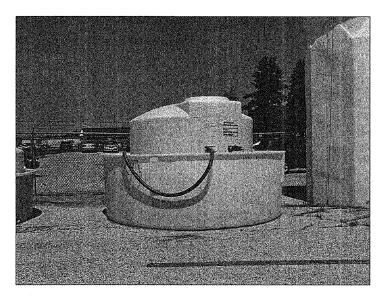




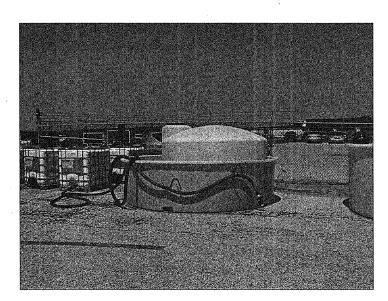
LARGE DEICING STORAGE TANKS



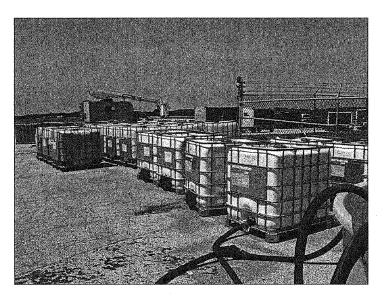
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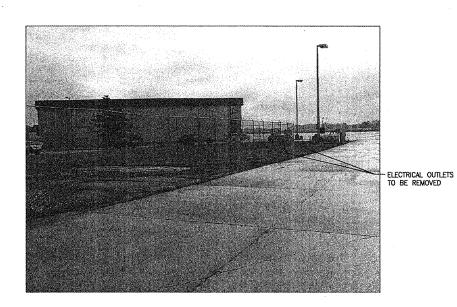
LARGE DEICING STORAGE TANKS



LARGE DEICING STORAGE TANK



SMALL DEICING STORAGE TANKS



PROPOSED RELOCATION AREA

#### TES:

- 1) RELOCATION OF DEICING FLUID STORAGE TANKS SHALL BE COORDINATED WITH THE RESIDENT ENGINEER AND AIRPORT OPERATIONS.
- 2) CONSTRUCTION OF NEW CONCRETE PAD AND RELOCATION OF STORAGE TANKS SHALL TAKE PLACE WITHIN THE FIRST 30 DAYS OF PHASE 2 IN ORDER TO FACILITATE OTHER CONSTRUCTION IN THE AREA.
- 3) LARGE STORAGE TANKS WILL BE PUMPED OUT BY THE AIRPORT/AIRLINES PRIOR TO RELOCATION.
- 4) CARE SHALL BE TAKEN BY THE CONTRACTOR TO NOT DAMAGE ANY OF THE TANKS DURING THE RELOCATION PROCESS. DAMAGED TANKS SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
- 5) EXISTING ELECTRICAL OUTLETS MOUNTED ON WOOD POSTS (SEE PHOTO ABOVE) SHALL BE REMOVED BY THE CONTRACTOR. COST SHALL BE INCIDENTAL TO CONSTRUCTION OF NEW CONCRETE PAD.

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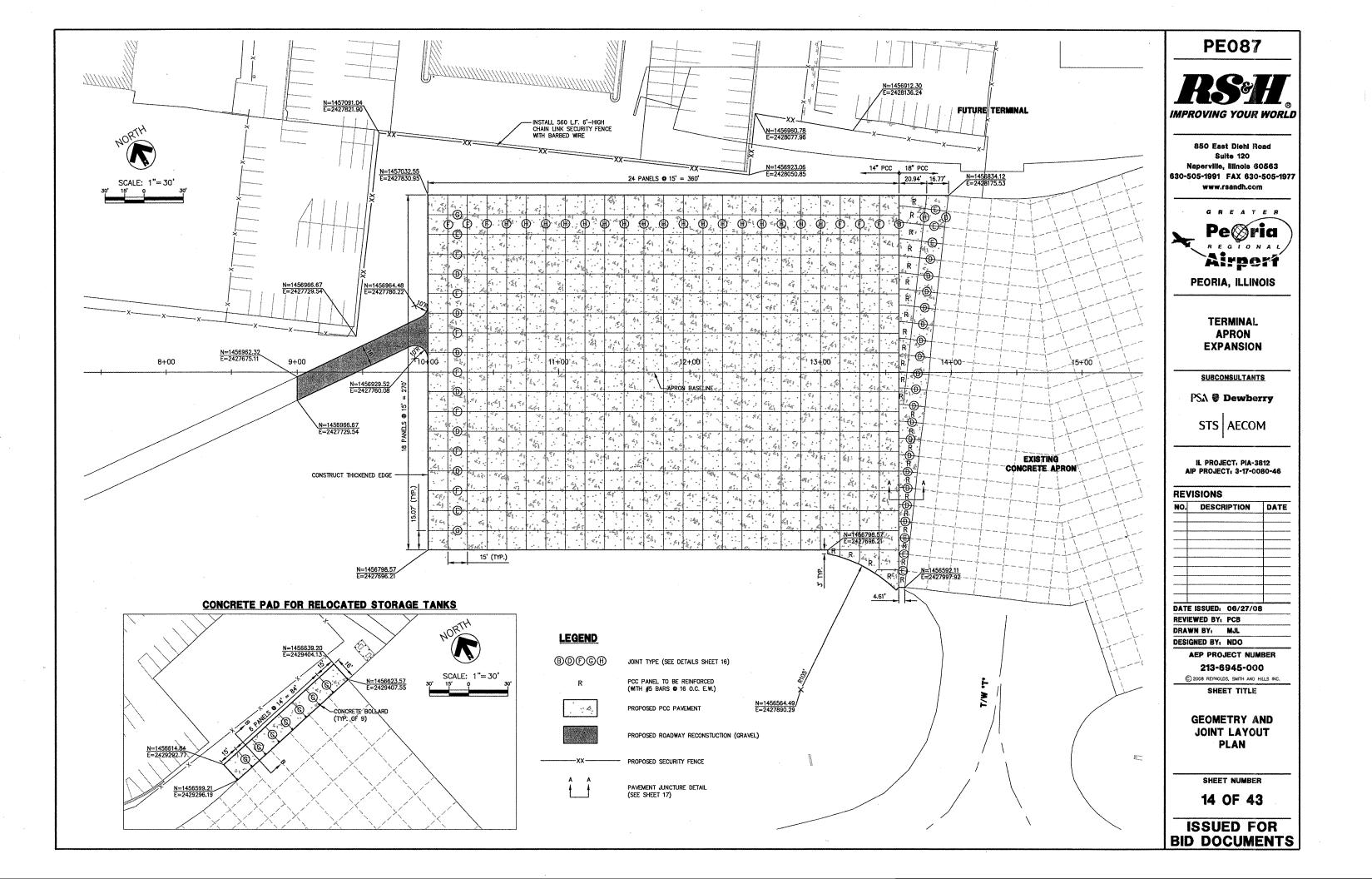
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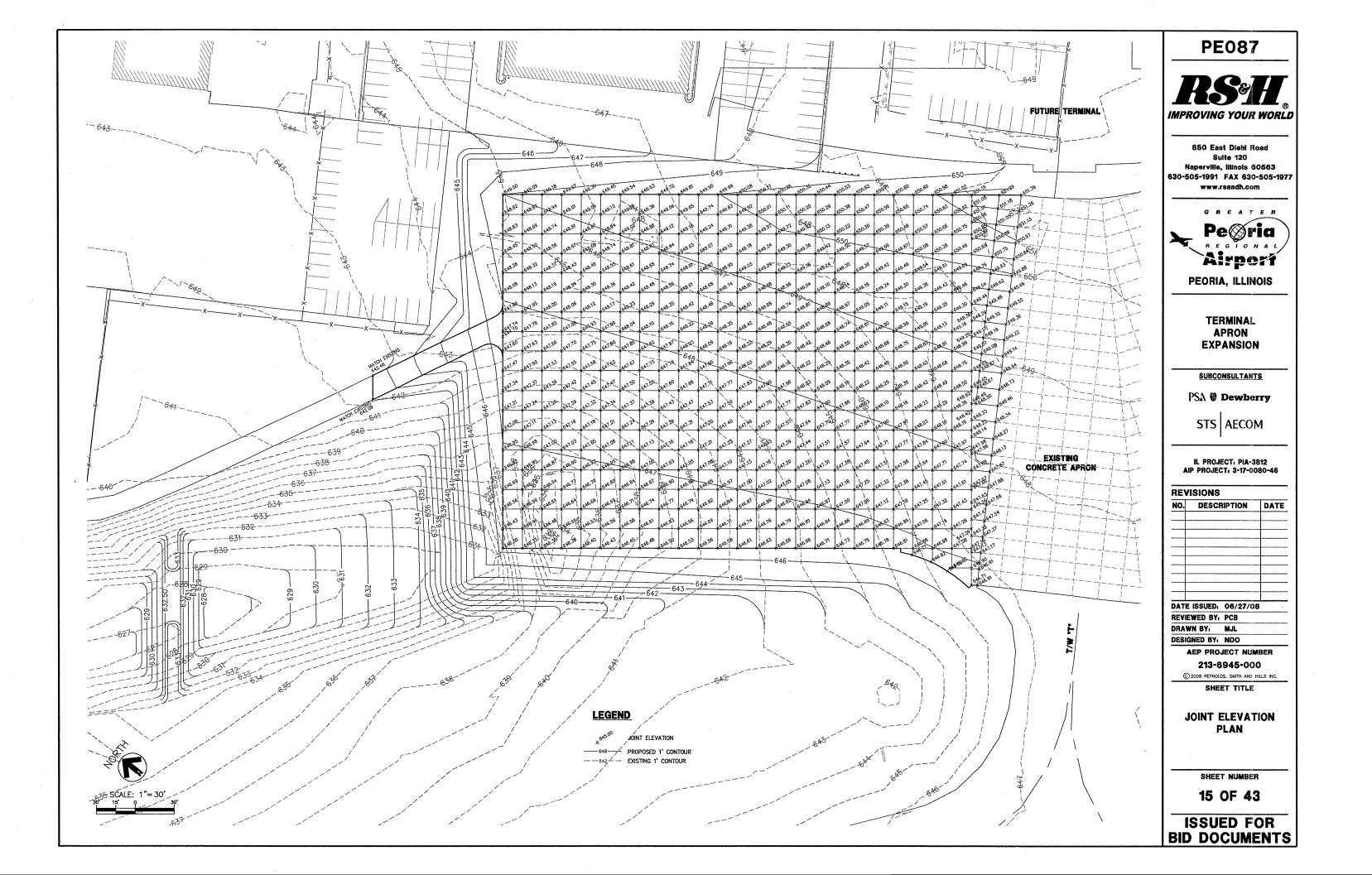
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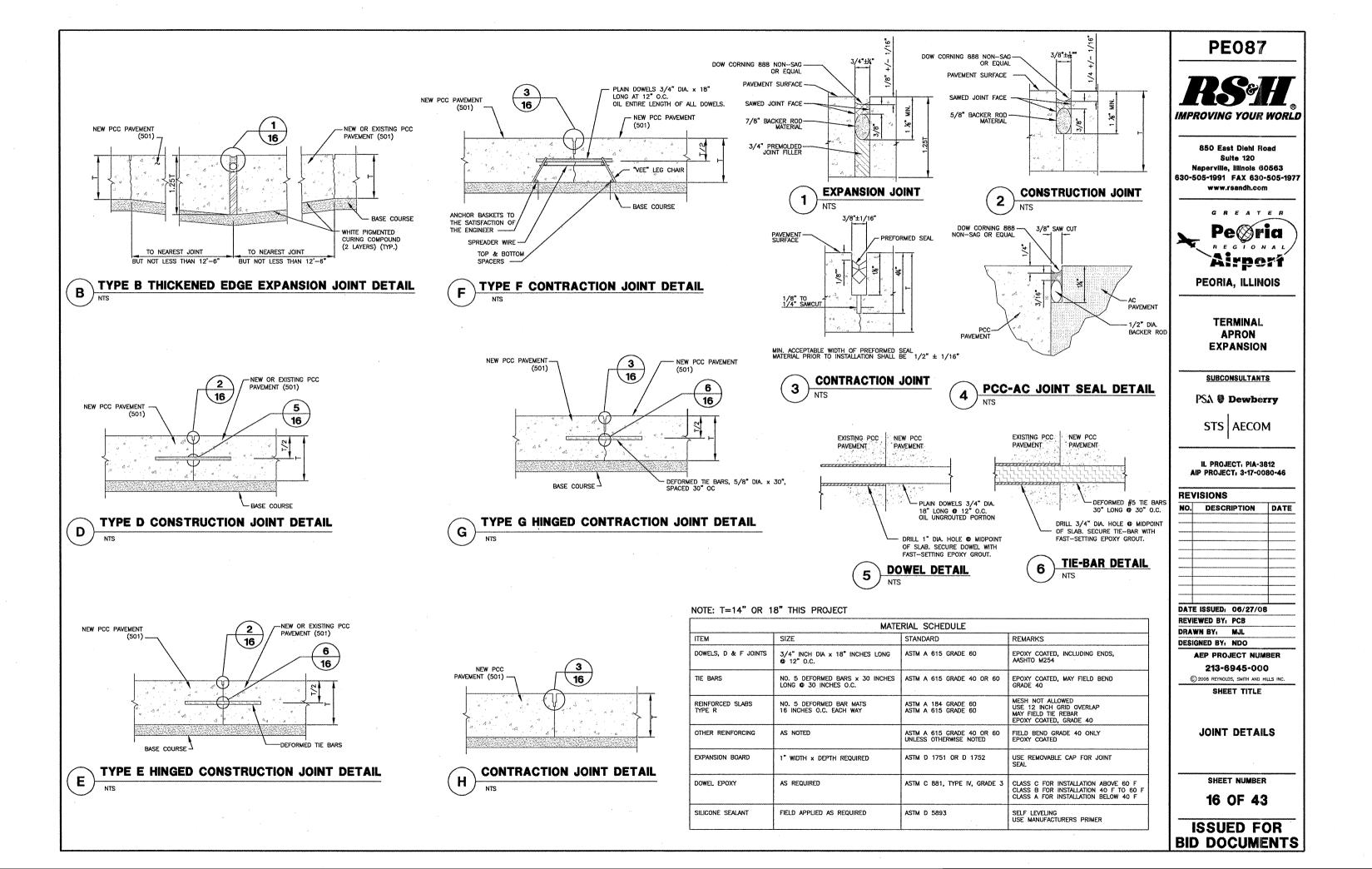
PHOTOS OF STORAGE TANKS TO BE RELOCATED

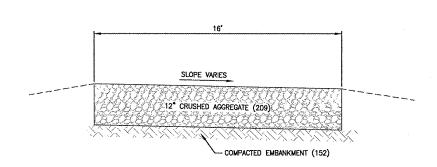
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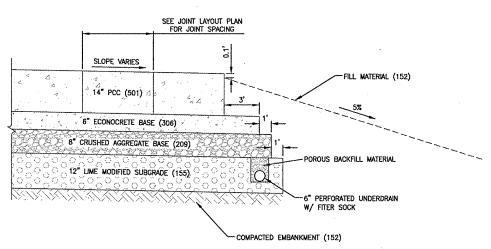




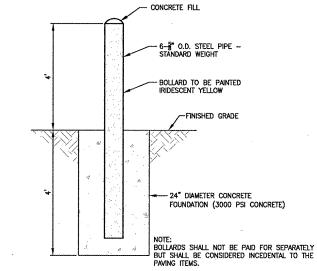




TYPICAL PERIMETER ROAD PAVEMENT SECTION



TYPICAL PCC APRON PAVEMENT SECTION



TYPICAL BOLLARD DETAIL

PROPOSED APRON PAVEMENT

TYPE B THICKENED EDGE

BENFORCING

#5 BARS
16" O.C. E.W.

14" PCC (501)

18" PCC

6" ECONOCRETE BASE (306)

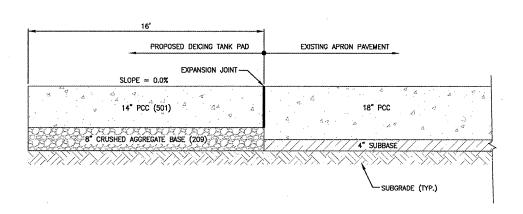
4" SUBBASE

COMPACTED EMBANKMENT (152)

JUNCTION DETAIL A-A

STORAGE TANK PAD SECTION B-B

NTS



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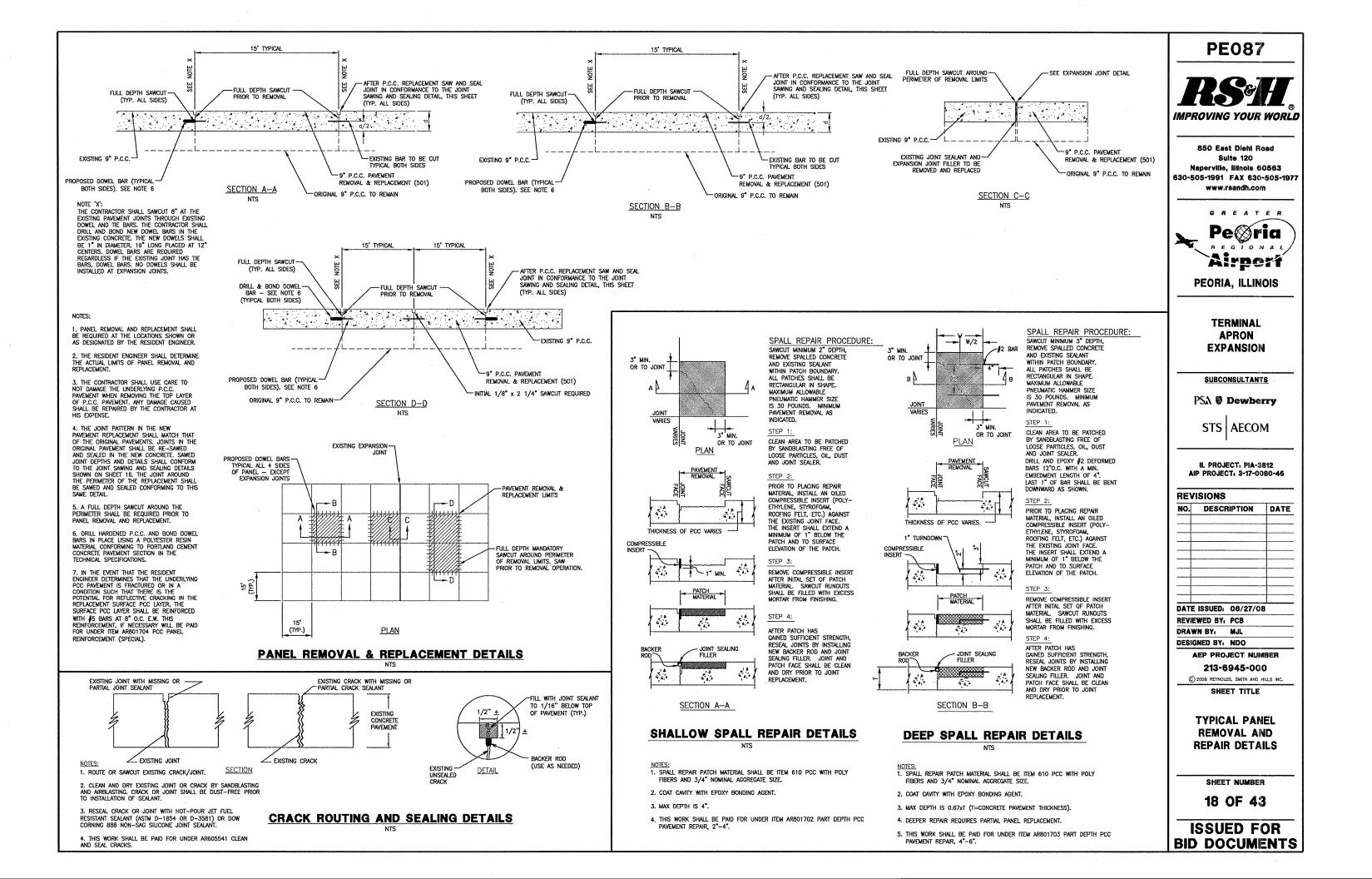
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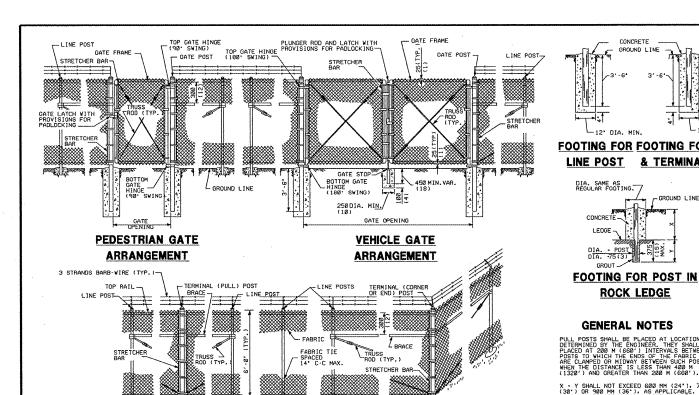
SHEET TITLE

TYPICAL
PAVEMENT
SECTIONS
AND DETAILS

SHEET NUMBER

17 OF 43





**PULL POST** ARRANGEMENT

PROTECTIVE ELECTRICAL GROUNDS

INSTALLATION ON SLOPES

Maria Same

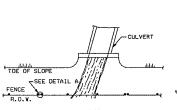
NOTE:
PULL POSTS SHALL BE PLACED AT 660 FOOT MAXIMUM
INTERVALS OR AT LOCATIONS DETERMINED BY THE
CONSTRUCTION MANAGER. PLAL POST SHALL BE
LOCATED MIDWAY BETWEEN POSTS THAT ARE LESS
THAN 1320' AND GREATER THAN 660'. THE ENDS
OF THE FABRIC SHALL BE CLAMPED TO PULL POST.

STANDARD GROUND

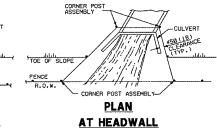
LINE POST ARRANGEMENT

COUNTERPOISE GROUND (ALTERNATE)

**CORNER OR END POST** ARRANGEMENT



**PLAN** AT STREAM CROSSING



**ELEVATION INSTALLATION AROUND HEADWALL** 

LIS. DIA. MIN.

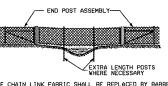
1 FOGE -

**ROCK LEDGE** 

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN.

**GENERAL NOTES** 

GROUND LINE



DETAIL A



WHEN FENCE LINE HAS A CHANGE IN DIRECTION OF 15  $^{\circ}$  OR MORE, A TERMINAL POST SHALL BE PLACED AS SHOWN ABOVE.

WHERE ANGLE IS LESS THAN 15' AND EXISTING CONDITIONS REQUIRE A TERMINAL POST, THEY SHALL BE PLACED AS DIRECTED BY THE RESIDENT ENGINEER.

**INSTALLATION AT CORNERS** 



#### ROLL FORMED SECTION OF BRACE

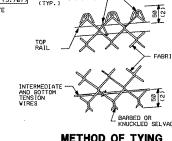
LINE POST	
SECTION	KG/M (LBS./FT.)
PIPE TYPE A 48.3 0.0.	4.05
PIPE TYPE B 48.3 O.D.	3.39
(1.90) PIPE TYPE C 48,3 0.D.	(2.28)
(1.90) H 47.6X41.3	(2.26)
(1.875X1.625)	(2.72)
C	2.36 (1.60)
1	3.42



_	KG/M (LBS./FT.)	TERMINAL POST	
	4.05 (2.72)	SECTION	KĢ/M (LBS./FT.)
	3.39	PIPE TYPE A 60.3 O.D. (2.375)	5.43 (3.65)
	3.36	PIPE TYPE 8 60.3 0.D. (2.375)	4.63 (3.11)
	4.05 (2.72)	PIPE TYPE C 60.3 0.D. (2.375)	4.60
	2.36 (1.60)	ROLL FORMED 89.0X89.0 (3*X3*)	SEE DETAIL
	3.42 (2.30)	SQ. TUBING 63.5X63.5 (2*X2*)	6.43 (4,32)

		GATE POSTS						
GATE OPENI	Mg* M	PIPE T	YPE A	SQ.	TUBING	PIPE TYPE B		
SINGLE	DOUBLE	SIZE (0.D.)	(LBS./FT.)	SIZE	(LBS./FT.)	SIZE (0.0.)	(LBS./FT.)	
UP TO 1.2	UP TO 2.5	60.3	5.43	63.5	6.43	60.3	4.63	
(4)	(8)	(2.375)	(3.65)	(2*)	(4.32)	(2.375)	(3.11)	
OVER 1.2TO 2.5	OVER 2.5 TO 5.0	73.0	8.62	76.2	8.60	73.0	6.91	
(4) (8)	(8) (16)	(2.875)	(5.79)	(3)	(5.78)	(2.875)	(4.64)	
OVER 2.5TO 3.6	OVER 5.0 TO 7.4	89.0	11.28	76.2	13.10	89.0	8.49	
(8) (12)	(16) (24)	(3.5)	(7.58)	(3)	(8.80)	(3.5)	(5.707)	

THE 89.0 X 89.0 (3. X 3.) ROLL FORMED SECTION AS DETAILED MAY BE USED AS GATE POSTS FOR SINGLE GATE UP TO 1.8 M(6') AND DOUBLE GATE UP TO 3.6 M (12')



(2.25) SEE DETAIL

METHOD OF FASTENING

STRETCHER BAR TO POST

(1.66) PIPE TYPE B 42.2 0.D.

(1.66) PIPE TYPE C 42.2 0.0.

(1.66) H 33.3X38.1 H 33,3456. (1.31X1.5) ROLL FORMED 41.3X31.8 (1\*X1\*)

#### METHOD OF TYING FABRIC TO TENSION WIRES

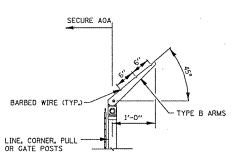
KNUCKLED SELVAGE

GATE FRAMES	
SECTION	KG/M (LBS./FT.)
PIPE TYPE A42.20.D.	3,38
(1.66)	(2,27)
PIPE TYPE 842.20.0.	2.72
(1.66)	(1.83)
PIPE TYPE C42.20.D.	2.71
(1.66)	(1.82)

## TENSION WIRE GROUND LINE #6 GREEN INSULATED COPPER WIRE (ALSO UNDER POWER LINES) 3/4 " DIA. MIN. STAINLESS STEEL SOLID ROD -MIN. 8" TO 10"

#### STANDARD GROUNDING DETAIL

N.T.S.



#### BARBED WIRE DETAIL

N.T.S.

NOTES:

BARBED WIRE SHALL BE 3 EACH, 2 STRAND, 12 1/2 AWG, ZINC COATED, WITH 4-POINT BARBS, CONFORMING TO THE REQUIREMENTS OF ASTM A-121, CLASS 3, CHAINLINK FENCE GRADE.





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### REVISIONS

AT

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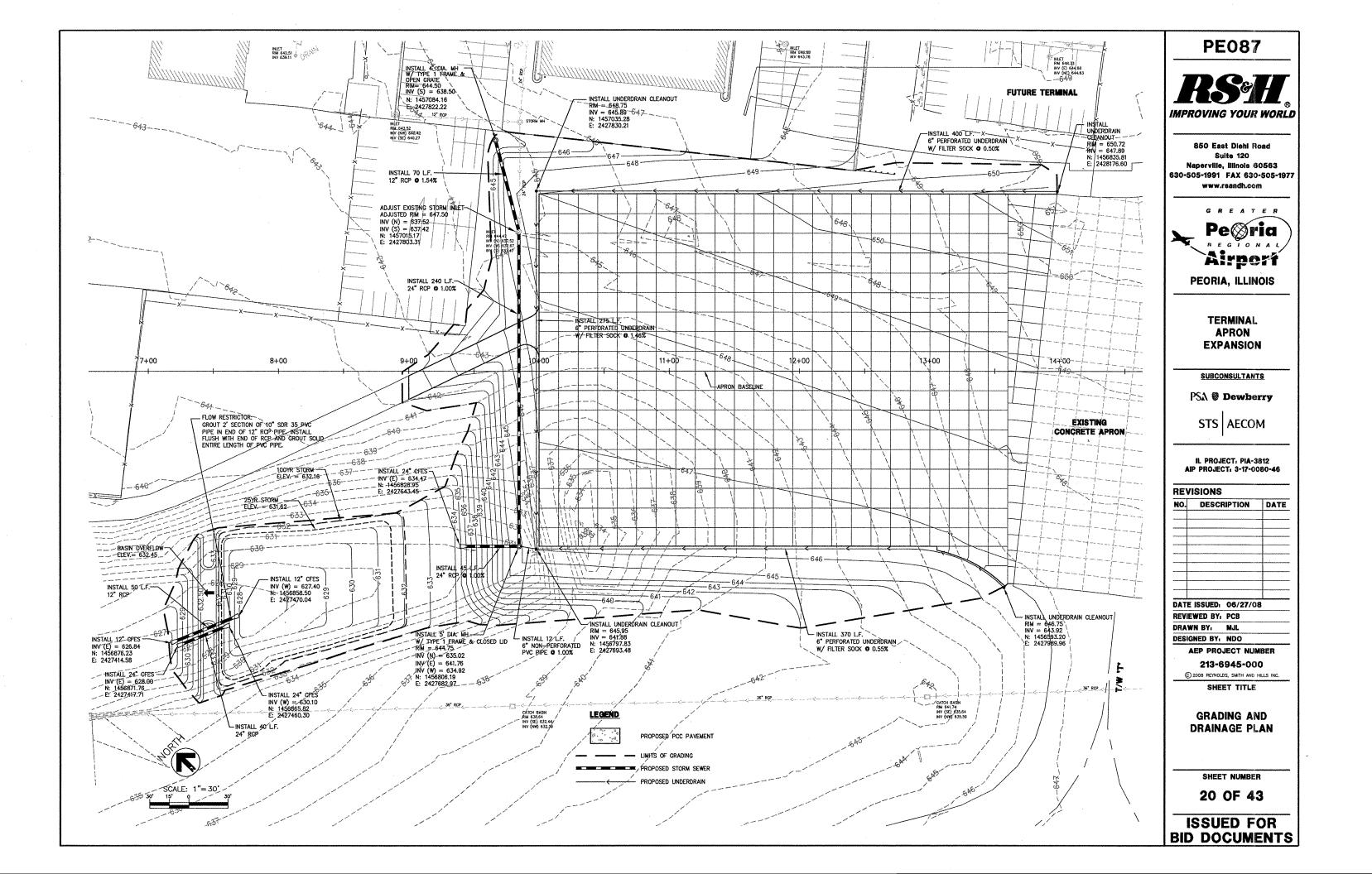
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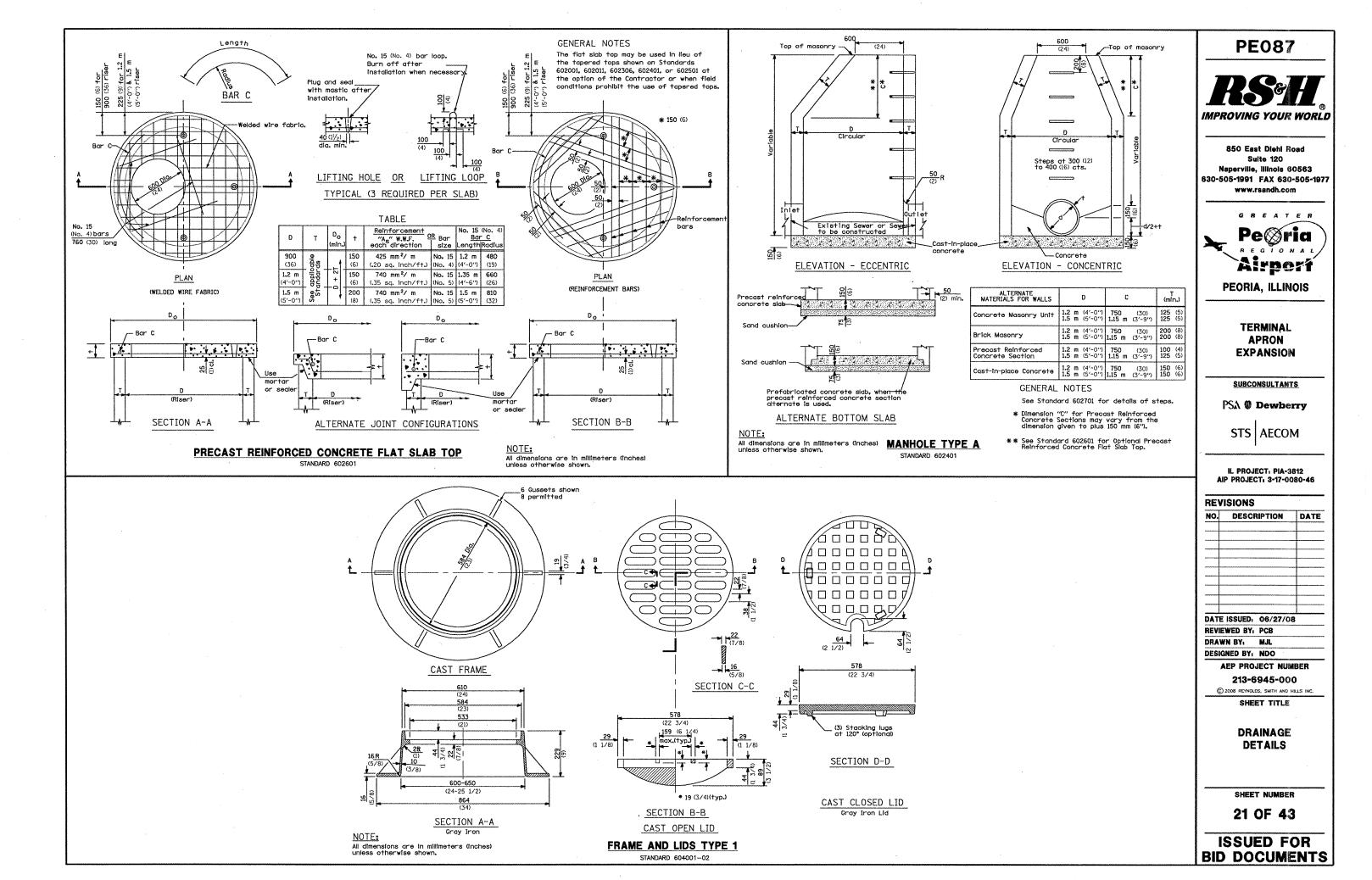
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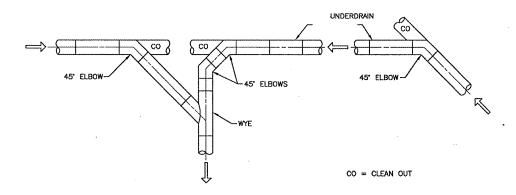
FENCING DETAILS AND NOTES

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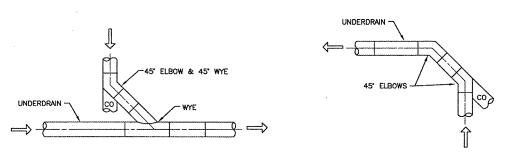
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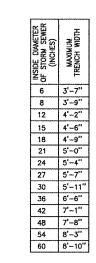


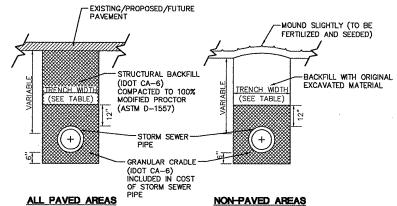
TYPICAL JUNCTION PLAN



TYPICAL 'T' PLAN

90 DEGREE BEND PLAN

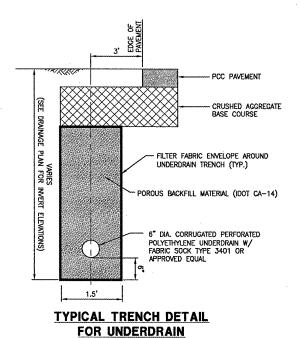


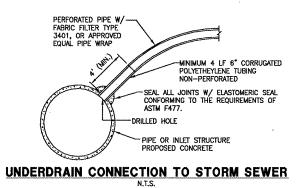


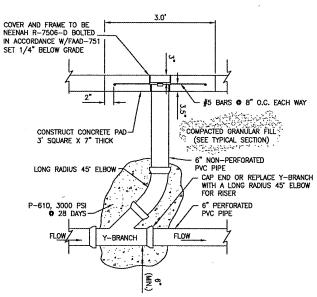
- 1. GRANULAR BACKFILL SHALL BE INSTALLED FIVE FEET BEYOND EDGE OF PROPOSED PAVEMENT.
- 2. TRENCH BEDDING AND BACKFILL IS INCIDENTAL TO PIPE INSTALLATION.

#### STORM SEWER TRENCH DETAIL

N.T.S







**UNDERDRAIN CLEANOUT DETAIL** 

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DESIGNED BY: NDO **AEP PROJECT NUMBER** 

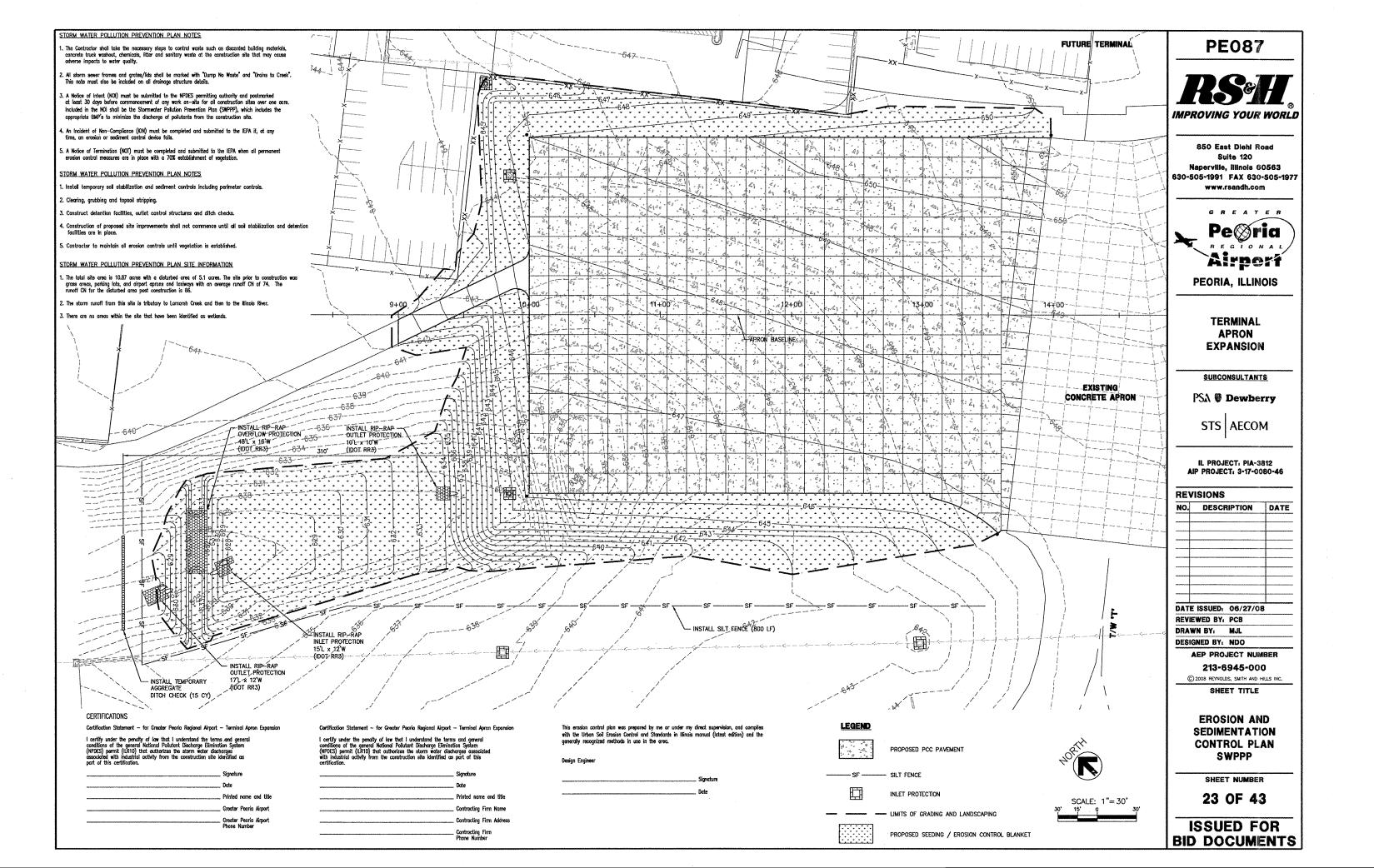
213-6945-000 2008 REYNOLDS, SMITH AND HILLS INC.

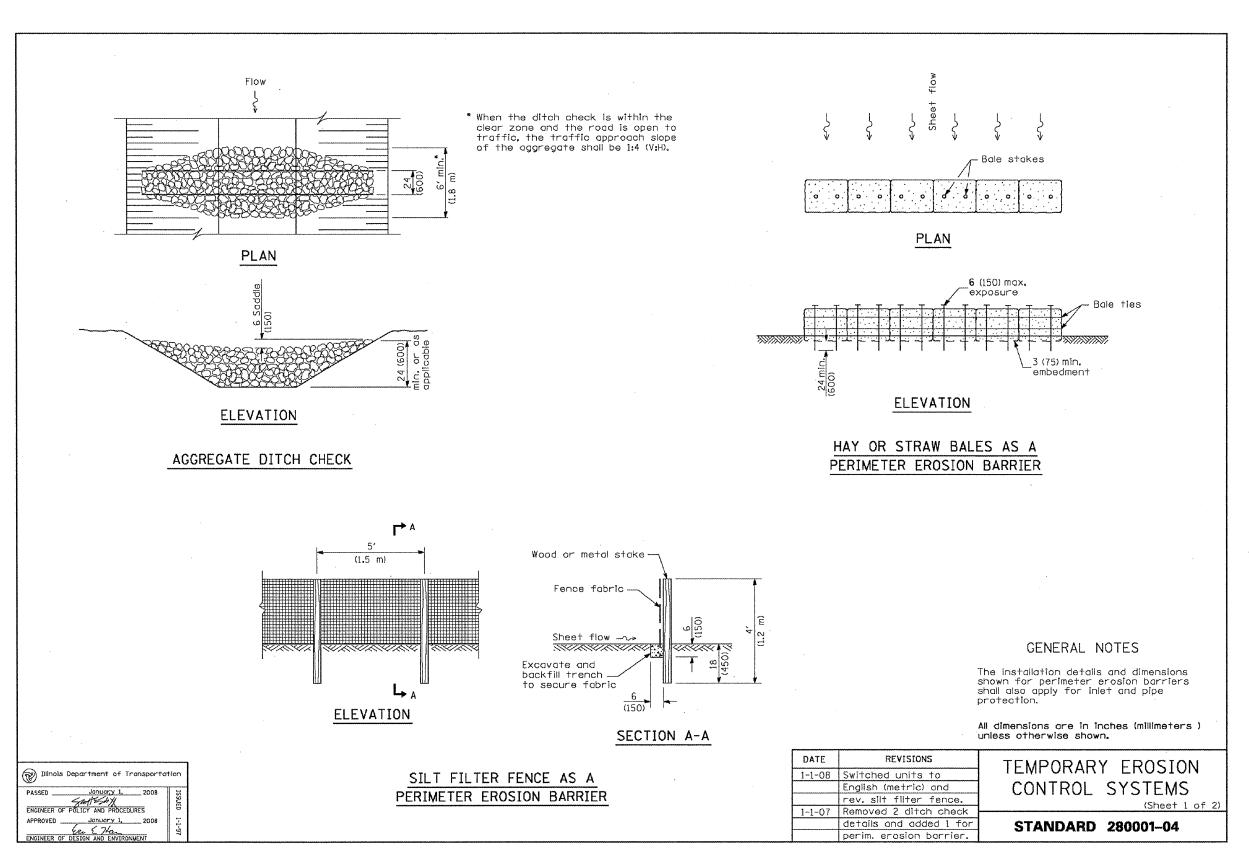
SHEET TITLE

DRAINAGE DETAILS

SHEET NUMBER

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STS AECOM

IL PROJECT: PIA-3812 AIP PROJECT: 3-17-0080-46

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REVIEWED BY: PCB
DRAWN BY: MJL

DESIGNED BY: NDO

AEP PROJECT NUMBER 213-6945-000

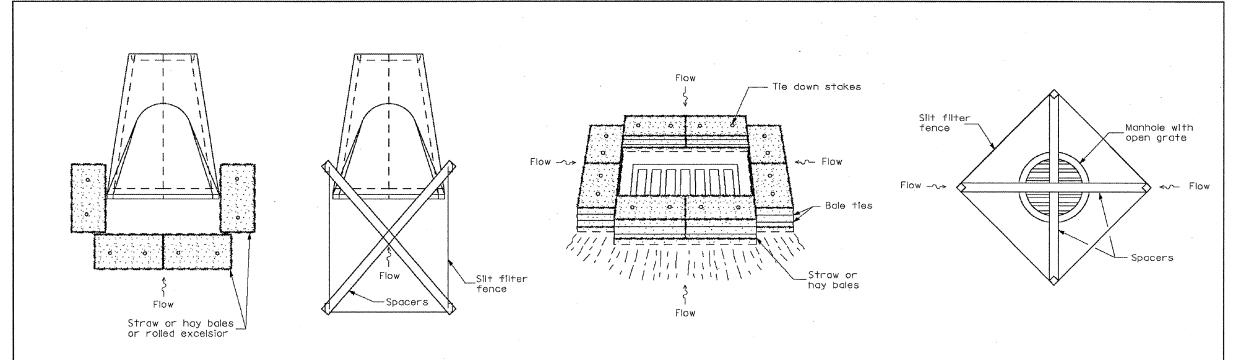
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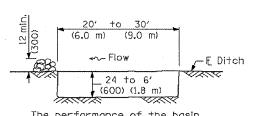
EROSION AND SEDIMENTATION CONTROL DETAILS

SHEET NUMBER

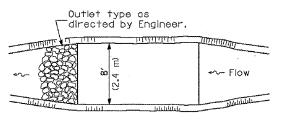
24 OF 43



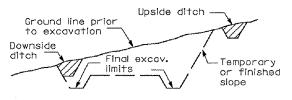
#### INLET AND PIPE PROTECTION



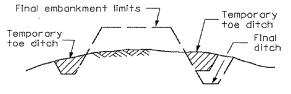
The performance of the basin will improve if put into a series.



The long dimension should be parallel with the direction of the flow. Accumulated silt shall be removed anytime the basins become 75% filled.



TYPICAL CUT CROSS-SECTION



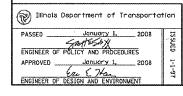
TYPICAL FILL CROSS-SECTION

**ELEVATION** 

PLAN

TEMPORARY DITCHES FOR CUT & FILL SECTIONS

SEDIMENT BASIN



TEMPORARY EROSION CONTROL SYSTEMS (Sheet 2 of 2)

STANDARD 280001-04

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DATE ISSUED: 06/27/08 REVIEWED BY: PCB DRAWN BY: MJL DESIGNED BY: NDO

> AEP PROJECT NUMBER 213-6945-000

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**EROSION AND** SEDIMENTATION **CONTROL DETAILS** 

SHEET NUMBER

25 OF 43

#### **ELECTRICAL GENERAL NOTES:**

- THE CONTRACTOR SHALL PROVIDE ALL MATERIALS AND LABOR TO RELOCATE, MODIFY AND INSTALL THE AIRFIELD ELECTRICAL SYSTEMS AS INDICATED ON THE DRAWINGS, ITEMS NOT SHOWN BUT OBVIOUSLY NECESSARY FOR COMPLETION OF THE WORK SHALL BE INCLUDED.
- ITEMS SHOWN IN SCREEN (HALFTONE OR LIGHT) ARE EXISTING OR CIVIL ITEMS. ITEMS SHOWN IN SOLID (BOLD) ARE NEW TO BE INSTALLED UNDER THIS CONTRACT, UNLESS OTHERWISE NOTED.
- 3. THE INSTALLATION SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL SAFETY CODE, NATIONAL ELECTRICAL CODE, FEDERAL AVIATION ADMINISTRATION SPECIFICATIONS/ ADVISORY CIRCULARS AND APPLICABLE LOCAL BUILDING CODES.
- THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED PERMITS, LICENSES, ETC., PRIOR TO COMMENCEMENT OF WORK. THE COST OF PERMITS, LICENSES, ETC., SHALL BE INCIDENTAL TO AND INCLUDED IN THE BID PRICE FOR THE RESPECTIVE PAY
- 5. ALL MATERIALS SCHEDULED FOR REMOVAL SUCH AS EXISTING RUNWAY AND TAXIWAY LIGHTS, ISOLATION TRANSFORMERS, ETC., WHICH ARE DEEMED SALVAÇABLE BY THE AIRPORT SHALL BE DELIVERED TO THE LOCATION ON AIRPORT PROPERTY AS INDICATED BY THE AIRPORT, ALL NON-SALVAÇABLE MATERIALS REMOVED SUCH AS MANHOLES, HANDHOLES, CONCRETE FOUNDATIONS, CONDUIT, LIGHT BASES, CONDUCTORS, ETC. SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR AND LEGALLY DISPOSED OF OFF THE SITE BY THE CONTRACTOR.
- 6. EXISTING CONDUIT, DUCTBANK, CIRCUITING AND UTILITY INFORMATION IS BASED ON AIRPORT "AS BUILT" AND "RECORD" DRAWINGS AND SITE VISITS BY THE UTILITY COMPANIES AND THE PROJECT EXISTING UTILITY LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE AND SHALL NOT BE SCALED FOR EXACT LOCATIONS. NOT ALL UTILITIES MAY BE SHOWN. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE APPROPRIATE UTILITY/AGENCY PRIOR TO STARTING WORK, FOR THE LOCATION OF EXISTING UTILITIES, ANY INTERPRETATION OF AN EXISTING SYSTEM OR UTILITY SERVICE SHALL BE COORDINATED AND APPROVED BY THE AUTHORITY, AGENCY OR UTILITY HAVING JURISDICTION. PRIOR TO STARTING WORK, THE CONTRACTOR SHALL CONTACT ALL LOCAL UTILITIES TO ALLOW THEM TIME TO PROPERLY LOCATE ALL LITHTIES.
- THE CONTRACTOR SHALL COORDINATE HIS WORK WITH THE AIRPORT, FEDERAL AVIATION ADMINISTRATION, UTILITY COMPANIES, AND RESIDENT PROJECT REPRESENTATIVE (RPR) PRIOR TO AND DURING CONSTRUCTION TO ENSURE THAT ALL ELECTRICAL CIRCUITS AND FACILITIES HAVE BEEN LOCATED, FLAGGED AND ACCOUNTED FOR AND THAT ALL NECESSARY CIRCUITS HAVE BEEN DETERMINED PRIOR TO INITIATING CONSTRUCTION IN ANY LOCATION.
- 8. IT SHALL BE THE CONTRACTORS' RESPONSIBILITY TO DETERMINE THAT ALL AIRFIELD LIGHTING CIRCUITS, EXCEPT THOSE THAT ARE SERVING CLOSED TAXIWAYS OR RUNWAYS, ARE COMPLETELY OPERATIONAL AT THE END OF EACH WORK SHIFT AND SHALL SO CERTIFY TO THE RESIDENT ENGINEER BEFORE THE END OF EACH SHIFT. THE CONTRACTOR SHALL NOT LEAVE THE WORK STIE UNTIL CIRCUIT OPERATION HAS BEEN CONFIRMED BY THE RESIDENT ENGINEER. TEMPORARY CABLE CONNECTIONS SHALL BE MADE IN AIRFIELD LIGHTING CIRCUITS WHEN PERMANENT WIRING CANNOT BE COMPLETED DURING THE WORK SHIFT. ALL AREAS NOT CLOSED FOR CONSTRUCTION (REFER TO PHASING PLAN) SHALL HAVE FULLY OPERABLE ARFIELD LIGHTING DURING THE HOURS BETWEEN ONE HOUR BEFORE DUSK AND ONE HOUR AFTER DAWN. THE CONTRACTOR SHALL DISCUSS THE PROPOSED WIRING WITH THE RPR AND OBTAIN APPROVAL PRIOR TO COMMENCING WORK IN THAT AREA. ALL ELECTRICAL WIRING SHALL BE COMPLETED AND TESTED ONE (1) HOUR PRIOR TO THE ELECTRICAL MAINTENANCE DEPARTMENT'S END OF SHIFT
- ALL EXISTING SYSTEMS/UTILITIES TO REMAIN SHALL BE PROTECTED FROM DAMAGE. REPLACEMENT OF ANY DAMAGED EXISTING SYSTEMS/UTILITIES SHALL BE AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGED ELECTRICAL SYSTEMS AND SHALL MAKE REPAIRS IMMEDIATELY, AT THEIR OWN COST, IN ACCORDANCE WITH APPLICABLE SPECIFICATIONS. DAMAGED ELECTRICAL SYSTEMS SHALL BE IMMEDIATELY REPORTED TO THE RPR. THE CONTRACTOR IS URGED TO TAKE EVERY PRECAUTION NECESSARY TO PROTECT ANY AND ALL CABLES FROM DAMAGE OF ANY SORT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR KNOWING THE DEPTH OF ANY CABLE IN THE PROXIMITY OF THE CONSTRUCTION AS WELL AS THE HORIZONTAL LOCATION
- 11. ALL EXCAVATION WITHIN 5 FEET OF ANY UNDERGROUND UTILITY SHALL BE PERFORMED BY HAND EXCAVATION METHODS.
- 12. TAXIWAY EDGE LIGHTS SHALL BE INSTALLED 10 FEET FROM THE EDGE OF PAVEMENT OR AS OTHERWISE INDICATED. ALL STRAIGHT SECTIONS OF TAXIMAY EDGE LIGHTS SHALL BE ALIGNED TO DEVELOP A CONTINUOUS "IN-LINE" APPEARANCE OF THE LIGHTS WHEN VIEWED AT GROUND LEVEL FROM ONE END. ALL TAXIMAY EDGE LIGHTS ON STRAIGHT SECTIONS OF THE TAXIMAY SHALL BE LOCATED SUCH THAT A LINE BETWEEN LIGHTS ON OPPOSITE SIDES OF THE TAXIMAY IS PERPENDICULAR TO THE
- 13. CHANGES TO THE LOCATION OF THE TAXIWAY LIGHTS, SHALL BE SUBMITTED BY THE CONTRACTOR TO THE RPR FOR APPROVAL CONFLICTS THAT MAY OCCUR DUE TO CHANGES IN THE LOCATION OF THE LIGHTS SHALL BE THE FULL RESPONSIBILITY OF THE CONTRACTOR.
- 14. ELECTRICAL DEMOLITION WORK SHALL BE LIMITED TO THE AREAS AND SCHEDULES INDENTIFIED IN THE DEMOLITION PLANS.
- 15. ALL GROUND RODS AND OTHER UNDERGROUND GROUNDING CONNECTIONS SHALL BE CADWELD OR APPROVED EQUIVALENT. CADWELD CONNECTIONS SHALL BE IN ACCORDANCE WITH MANUFACTURERS GUIDELINES. THE PROPOSED COUNTERPOISE SYSTEM SHALL BE CONNECTED WITH THE EXISTING SYSTEM AT ALL CROSSING POINTS.
- 16. CML DATA IS SHOWN ON ELECTRICAL DRAWINGS FOR REFERENCE ONLY. REFER TO CIVIL DRAWINGS FOR DRAINAGE, PAVING
- 17. THE CONTRACTOR SHALL UTILIZE A LOCATE SERVICE AS WELL AS HAVE A CABLE TRACER AVAILABLE TO LOCATE THE EXISTING CABLES WHEN HAND DIGGING SHALL BE UNDERTAKEN WITHIN TEN (10) FEET OF ANY KNOWN OR SUSPECTED EXISTING UNDERGROUND CABLES AND UTILITIES WHICH ARE NOT TO BE DISTURBED.
- 18. SHOULD ANY RUNWAY OR TAXIWAY LIGHTING SYSTEM BE INOPERABLE DUE TO CONTRACTOR'S WORK, AND THE CONTRACTOR IS UNABLE TO RESTORE THE SYSTEM BY NIGHTFALL WITH PERMANENT REPAIRS, THE CONTRACTOR SHALL AT HIS OWN EXPENSE TAKE NECESSARY MEASURES TO ENSURE OPERATION OF THE SYSTEM DURING NIGHT HOURS. TEMPORARY WORK SHALL BE SUBJECT TO THE REN'S APPROVAL. IF THE SYSTEM CANNOT BE RESTORED BY NIGHTFALL, THE CONTRACTOR SHALL INSTALL A TEMPORARY SYSTEM OF BATTERY OPERATED LICHTS WITH THE APPROPRIATE COLORED LENSES FOR BOTH THRESHOLD AND RUNNAY EDGE LICHTING TO ENSURE THE RUNNAY OPERATION CAN OCCUR. THE COST OF SUCH TEMPORARY LICHTING SYSTEMS SHALL BE AT THE SOLE COST OF THE CONTRACTOR AND SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN OTHER ITEMS OF WORK
- 19. ALL MANHOLES, HANDHOLES, ETC., SHALL BE INSTALLED 25 FEET MINIMUM FROM THE EDGE OF THE FULL STRENGTH PAVEMENT UNLESS SHOWN OTHERWISE ON THE PLANS. COORDINATE FINAL LOCATION WITH GRADING AND DRAINAGE PLANS. WHEN EXTENDING EXISTING DUCT TO NEW MANHOLE, HANDHOLE, ETC., LOCATE STRUCTURE IN LINE WITH EXISTING DUCT. WHEN POSSIBLE DO NOT INSTALL STRUCTURES IN DITCHES OR SWALES OR WHERE WATER WILL POND ON TOP OF THE STRUCTURES.
- 20. DEWATERING FOR THE INSTALLATION OF STRUCTURES AND/OR DUCTBANKS IS INCIDENTAL TO THE RESPECTIVE PAY ITEM. THE CONTRACTOR SHALL BE RESPONSIBLE TO PAY FOR AND OBTAIN ANY AND ALL PERMITS REQUIRED FOR DEWATERING
- 21. THE AIRPORT "LOCK/TAG/TRY" PROCEDURE AND NEPA 70F SHALL BE COMPLIED WITH BY THIS CONTRACTOR
- 22. IF A LIGHT CAN IS INSTALLED INCORRECTLY, THE DUCT/CONDUIT IS PLUGGED/BROKEN, OR THE LIGHT CAN IS DAMAGED, PAVEMENT AROUND THE LIGHT CAN AND THE LIGHT SHALL BE REMOVED AND REPLACED AT THE CONTRACTORS' EXPENSE.

- ALL DUCT LOCATED IN OR UNDER THE PAVEMENT AND WITHIN 5 FEET OF THE EDGE OF THE SHOULDER PAVEMENT SHALL BE CONCRETE ENCASED DUCT. ALL OTHER 2" DUCT SHALL BE DIRECT BURIED.
- 24. THE DIMENSION BETWEEN LIGHTS SHOWN ON A RADIUS IS DEFINED AS THE CHORD LENGTH. LOCATIONS SHOWN ARE TO THE
- 25. PROJECT PAY ITEMS: THE PROJECT PAY ITEMS ARE PROVIDED TO BE INCLUSIVE OF ALL WORK TO BE. PERFORMED AS SHOWN IN THESE PLANS. ALL WORK TO BE IDENTIFED WITH A SPECIFIC PAY ITEM IS TO BE CONSIDERED REQUIRED WORK TO COMPLETE THE PROJECT AND IS TO BE SUBSIDIARY TO THE COST OF PROJECT PAY ITEMS PROVIDED.
- 26. EXISTING AIRFIELD SIGNS TO REMAIN PROVIDING DIRECTIONS TO CLOSED AREAS SHALL BE COVERED. ALL AREAS CLOSED TO AIRCRAFT SHALL NOT BE LIGHTED. ADEQUATE LIGHTING IN THE OPINION OF THE RPR SHALL BE PROVIDED TO DELINEATE THE ACTIVE AND CLOSED AREAS OF THE AGA. THE ABOVE ITEMS ARE INCLUDED IN THE L-105 PAY ITEM.
- 27. THIS CONTRACTOR SHALL VERIFY EXISTING CONDITIONS PRIOR TO STARTING WORK
- 28. THE CONTRACTOR SHALL CONDUCT GROUND RESISTANCE TESTS (MEGGER) ON EACH CIRCUIT AFFECTED BY THIS WORK BEFORE COMMENCING WORK ON THAT CIRCUIT. CONTRACTOR SHALL PREPARE AND FORWARD TO THE RESIDENT ENGINEER A WRITTEN REPORT, BY CIRCUIT, OF THESE RESULTS. THE CONTRACTOR SHALL REPEAT THIS TEST ON EACH AFFECTED CIRCUIT AFTER COMPLETION OF THE WORK, RESULTS OF BOTH TESTS SHALL BE PROVIDED TO THE RESIDENT ENGINEER.
- 29. THE IDENTITY AND ROUTING OF ALL CABLES SHOWN ON THE PLANS SHALL BE VERIFIED IN THE FIELD. ANY DISCREPANCY SHALL BE BROUGHT TO THE ATTENTION OF THE RPR AND RECORDED IN THE AS-BUILT DRAWINGS TO PROVIDE AN ACCURATE RECORD OF CONDITIONS. THE CONTRACTOR SHALL COORDINATE INFORMATION SHOWN ON THE PLAN SHEETS WITH EXISTING RECORD INFORMATION AVAILABLE THROUGH THE APPORT MAINTENANCE STAFF. THESE PLANS DO NOT PURPORT TO SHOW ALL EXISTING CABLES AND CONCEALED UTILITIES WHICH WILL REQUIRE STAKE OUT PRIOR TO CONSTRUCTION. CONTRACTOR SHALL MEDICE CHIEFLY EXPERTED REPORTS OF CONTRACTOR SHALL VERIFY EXISTING CIRCUIT ROUTING PRIOR TO COMMENCING WORK.
- 30. CONTRACTOR SHALL COORDINATE ALL WORK WITH THE SAFETY, SECURITY AND PHASING PLANS.
- WHENEVER, IN THE CONTRACT DOCUMENTS, THE WORDS "PROVIDE", "FURNISH", "INSTALL", "FURNISH AND INSTALL", OR OTHER WORDS OF LIKE IMPORT ARE USED, IT SHALL BE UNDERSTOOD THAT THE INTENT OF THE CONTRACT DOCUMENTS IS TO PROVIDE FOR THE CONSTRUCTION AND COMPLETION IN EVERY DETAIL OF THE WORK DESCRIBED. IT IS FURTHER INTENDED THAT THE CONTRACTOR SHALL FURNISH ALL LABOR, SUPPLIES,
- 32. THE CONTRACTOR SHALL COMPLETELY SURVEY AND STAKE OUT EACH AREAS' LIGHTING LAYOUT PRIOR TO STARTING ANY INSTALLATION. SHOULD ANY IRREGULARITIES OCCUR IN THE LIGHTING LAYOUT, THE RPR SHALL BE NOTIFIED IMMEDIATELY. THE BID ITEM PRICE SHALL INCLUDE THE NECESSARY LAYOUT FOR EACH FIXTURE AND THE COST FOR ANY ADDITIONAL ADJUSTMENT OF THE LOCATION OF THE FIXTURES, DUE TO THE EXISTING GEOMETRIC CONDITIONS. THE NEW LIGHTING INSTALLATION SHALL BE COORDINATED WITH AND BLEND INTO THE EXISTING INSTALLATION AS REQUIRED.
- 33. THERE ARE A NUMBER OF AIRPORT, PUBLIC UTILITIES AND FAA LIGHTING, COMMUNICATIONS, UNDERGROUND CABLES AND PIPES TRAVER'SING THE AIRFIELD. THE PROJECT ENGINEER HAS MADE EVERY ATMIN'S OWN THE APPROXIMATE LOCATION OF ALL
  ITEMS. HOWEVER, THE PROJECT ENGINEER IS NOT RESPONSIBLE FOR SHOWING OR LOCATING EVERY ITEM CURRENTLY IN
  PLACE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE EVERY ITEM LOCATED, FLAGGED AND IDENTIFIED PRIOR TO START OF CONSTRUCTION. ANY DAMAGE DONE TO ANY OF THE EXISTING UTILITIES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL REPAIR ANY ITEM DAMAGED, CAUSED BY HIS ACTIONS, WITH NO ADDITIONAL
- 34. THE CONTRACTOR SHALL THOROUGHLY INSPECT ALL AIRFIELD LIGHTING, SIGNS, AND MATERIALS UPON ARRIVAL AT THE PROJECT SITE FOR ANY DAMAGE THAT OCCURRED DURING SHIPPING OR FOR MATERIAL DEFECTS.
- 35. ALL WORK SHOWN TO BE DEMOLISHED ON THE DRAWINGS IS BASED ON FIELD OBSERVATION OF THE ACTUAL EXISTING ALL WORK SHOWN TO BE DEMONSHED UNTILE DROWNINGS TO THE AREA SFECTED. THEY ARE THEREFORE CONSIDERED TO BE SCHEMATIC. IT IS THE INTENT OF THE DEMOLITION DRAWINGS THAT ALL EQUIPMENT, DEVICES, FIXTURES, WIRING MATERIALS, AND APPURTENANCES, ETC. WHICH ARE NO LONGER REQUIRED AS A RESULT OF THE PROJECT BE REMOVED.

#### **ELECTRICAL LEGEND**

- EXISTING L-861T TAXIWAY ELEVATED EDGE LIGHT, ISOLATION TRANSFORMER AND EXISTING L-8611 I ANIWAT ELEVATED EACH CONT. SOCIATED EQUIPMENT ON A L-867 BASE CAN, 'R' INDICATES TO BE REMOVED.
- PROPOSED L-861T TAXIWAY ELEVATED EDGE LIGHT, ISOLATION TRANSFORMER AND ASSOCIATED EQUIPMENT ON A L-867 BASE CAN.
- × PROPOSED COMMUNICATIONS HANDHOLE
- PROPOSED POWER HANDHOLE
- PROPOSED L-858 SINGLE FACE, INTERNALLY ILLUMINATED, TAXI GUIDANCE SIGN

PROPOSED 2" PVC CONDUIT, FURNISH AND INSTALL SERIES LIGHTING \_\_\_2-CKT3 CIRCUIT CABLES WHERE INDICATED. NUMERAL INDICATES THE NUMBER OF 1/C #8, 5KV SERIES LIGHTING CABLES, TYPE L-824. 'CKT3' INDICATES

2-TW

PROPOSED CONCRETE—ENCASED DUCTBANK, QUANTITY AND SIZE OF DUCTS AS INDICATED, FURNISH AND INSTALL SERIES LIGHTING CABLE WHERE INDICATED. NUMERAL INDICATES THE NUMBER OF 1/C #8 5kV SERIES LIGHTING CABLES. 'TW' INDICATES CIRCUIT DESIGNATION.

PROPOSED DUCTBANK CROSS SECTION.

#### **ABBREVIATIONS**

AGA - AIRCRAFT OPERATIONS AREA AWG - AMERICAN WIRE GAUGE

• - BASELINE

BSD - BARE SOFT DRAWN SOLID COPPER

- CENTERLINE C - CONDUIT CONC - CONCRETE

Ø. DIA - DIAMETER

DWG - DRAWING

EL/ELEV - ELEVATION

EOP - EDGE OF PAVEMENT ES - EQUAL SPACES

EX/EXST/EXIST - EXISTING FEDERAL AVIATION ADMINISTRATION

FOD - FOREIGN OBJECT DEBRIS

GND - GROUND

I/C - NUMBER OF CONDUCTORS/CONDUCTOR

IE/INV - INVERT ELEVATION / INVERT ILS - INSTRUMENT LANDING SYSTEM

kV - KILOVOLT LF - LINEAR FEET

LT - LEFT MAX - MAXIMUM

MCB - MAIN CIRCUIT BREAKER

MIN - MINIMUM N - NORTHING

NAD - NORTH AMERICAN DATUM

NGVD - NATIONAL GEODETIC VERTICAL DATUM NOTAM - NOTICE TO AIRMEN

NTS - NOT TO SCALE

OC - ON CENTER OFA - OBJECT FREE AREA

PAPI - PRECISION APPROACH PATH INDICATOR

PC - POINT OF CLIRVATURE

PCC - PORTLAND CEMENT CONCRETE PG - PROPOSED GRADE

PT - POINT OF TANGENCY

PVC - POLYMNYL CHLORIDE RPR - RESIDENT PROJECT REPRESENTATIVE

R/W - RUNWAY

RPZ - RUNWAY PROTECTION ZONE

RSA - RUNWAY SAFETY AREA

RT - RIGHT

SCH — SCHEDULE SGN — SIGN SIDA — SECURITY IDENTIFICATION DISPLAY AREA

SS - STAINLESS STEEL

STA - STATION STD - STANDARD

T/L - TAXILANE T/W - TAXIWAY

TBR - TO BE REMOVED

TDZ - TOUCHDOWN ZONE
TSA - TAXIWAY SAFETY AREA

TYP.. (TYP) - TYPICAL

- UNDERGROUND ELECTRICAL DUCT

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REVIEWED BY: PCB DRAWN BY: RS

DESIGNED BY, NDO

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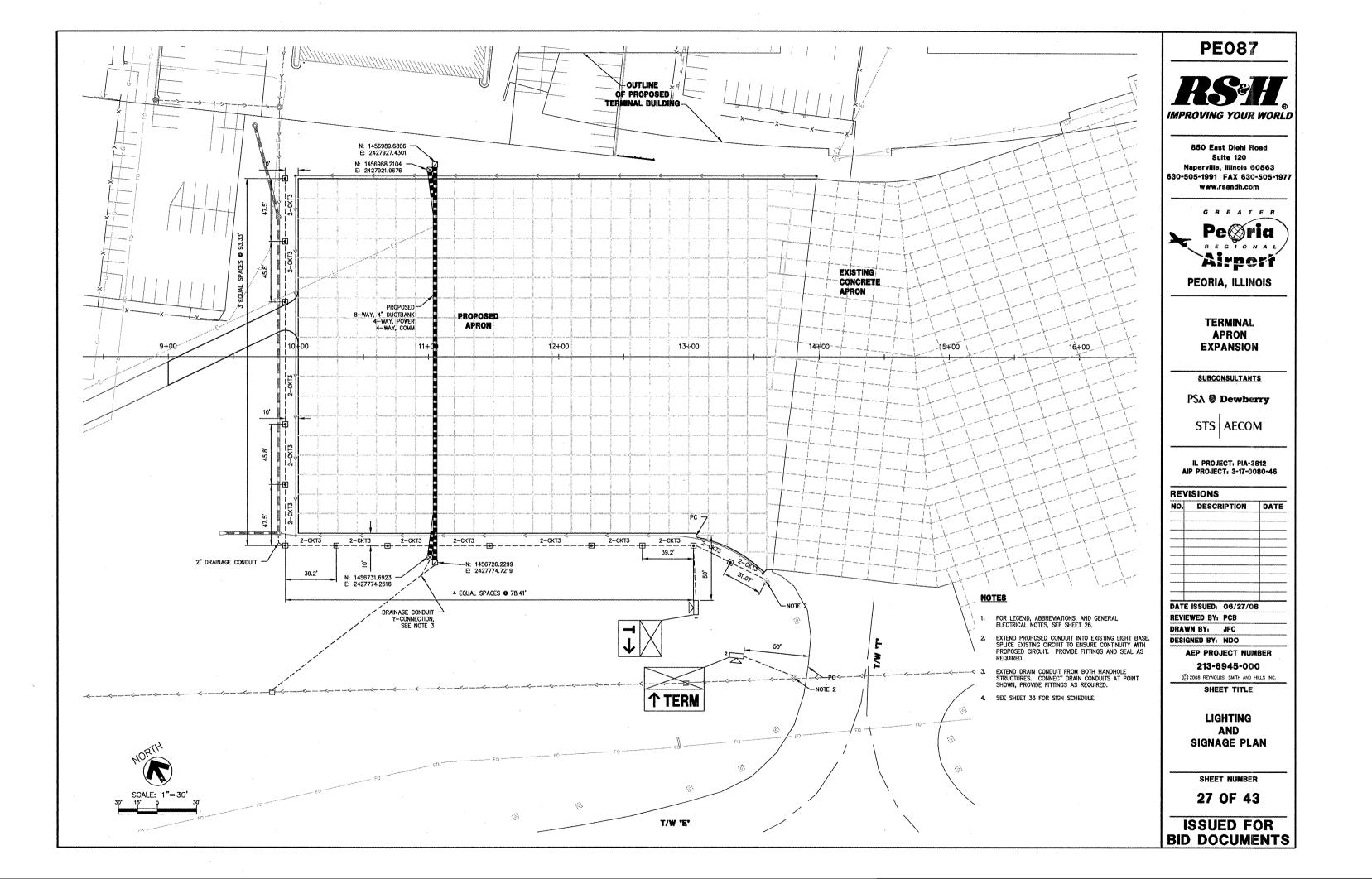
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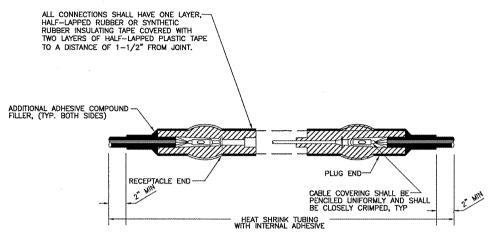
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ELECTRICAL LEGEND. **ABBREVIATIONS** AND NOTES

SHEET NUMBER

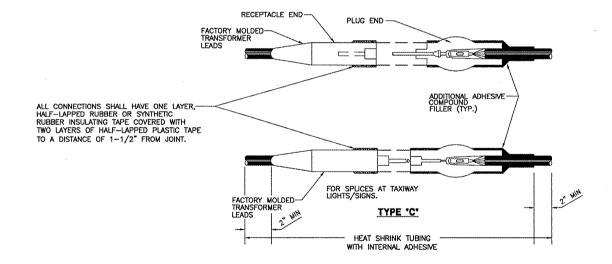
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FOR SPLICES AT JUNCTION OF HOMERUN WITH LOOP CIRCUIT. ALL CRIMPING SHALL BE DONE WITH APPROVED TOOL WHICH SHALL NOT RELEASE UNTIL PROPER PRESSURE IS APPLIED.

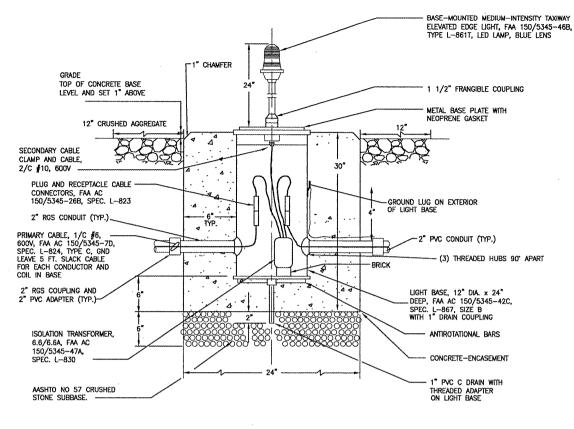
#### TYPE 'B'



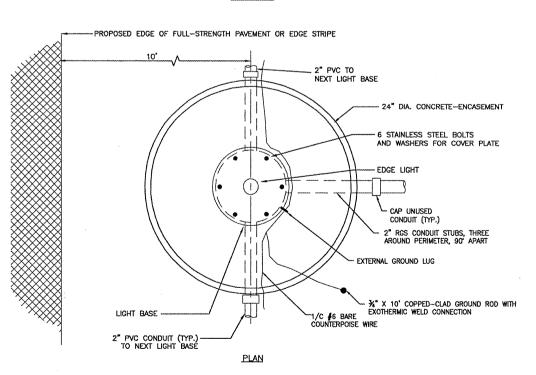
#### NOTES:

- INSIDE DIAMETER OF CONNECTOR KITS SHALL PROPERLY MATCH THE OUTSIDE DIAMETER OF CABLE.
- ALL CABLES SHALL BE CLEANED OF ALL OILS, GREASE, DIRT OR OTHER MATERIALS WHICH COULD CONTAMINATE OR ADVERSELY AFFECT THE SPLICE.
- NO CAST SPLICES TO BE USED ON THIS PROJECT WITHOUT WRITTEN AUTHORIZATION OF PROJECT ENGINEER.
- 4. NO SEPARATE PAYMENT FOR SPLICES OR CONNECTORS, COST TO BE INCLUDED IN PRICE FOR CABLE.
- 5. ALL SPLICES SHALL BE PLACED IN JUNCTION CANS AND HANDHOLES.

CABLE SPLICES - TYPE 'B' & 'C'



#### **ELEVATION**



#### TAXIWAY ELEVATED EDGE LIGHT AND BASE IN UNPAVED AREAS

NTS

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DRAWN BY: JFC
DESIGNED BY: NDO

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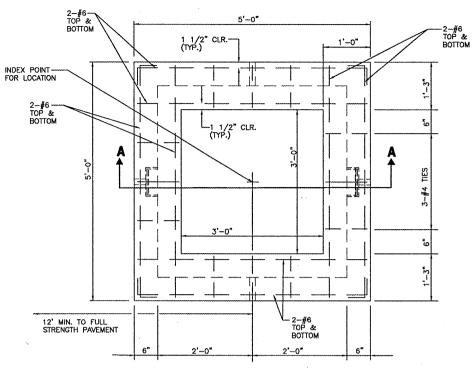
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SHEET TITLE

ELEVATED EDGE LIGHT AND CABLE SPLICING DETAILS

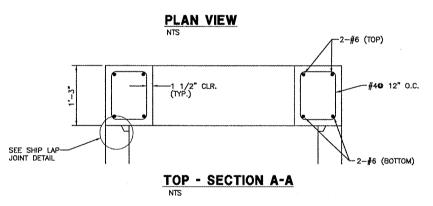
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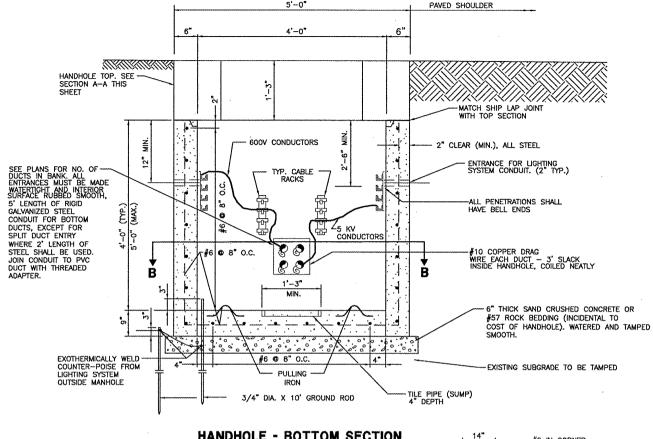


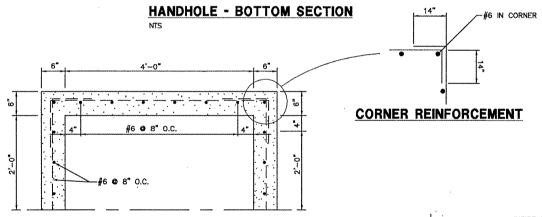
- NOTES:

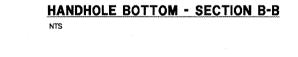
  1. SHOP DWG. OF HANDHOLE REQUIRED B727—200 SERIES MAIN GEAR DESIGN LOAD
  2. CONC. TO HAVE 5000 PSI (MIN) COMPRESSIVE STRENGTH @ 28 DAYS.
  3. ALL ENTRANCES MUST BE WATERPROPED & GROUTED SMOOTH ON THE INSIDE.
  4. ALL HANDHOLES SHALL BE INSTALLED WITH NEW GROUND RODS.
  5. PROPOSED HANDHOLES SHALL BE FAA APPROVED.

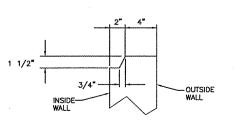


HANDHOLE DETAIL

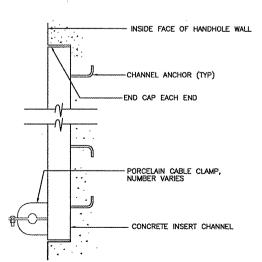








SHIP LAP JOINT DETAIL



NOTE: ALL COMPONENTS TO BE OF SAME MANUFACTURER

CABLE SUPPORT BRACKET

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NOTES:

1. INSTALL IN UNPAVED AREAS.

BOND GROUND WIRE TO ALL EXPOSED METAL.

3. BOND COUNTERPOISE WIRE TO GROUND RODS TO MAINTAIN THE COMBINED COUNTERPOISE/GROUND

4. COST OF PULLING IRONS, SPLIT DUCTS WHERE REQUIRED, CABLE SUPPORT RACKS, GROUND RODS AND CONNECTIONS ARE INCIDENTAL TO HANDHOLES AND NO SEPERATE

SYSTEM USED FOR GROUNDING EXISTING LIGHTS, EQUIPMENT, ETC.



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#### REVISIONS

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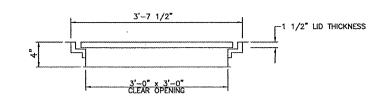
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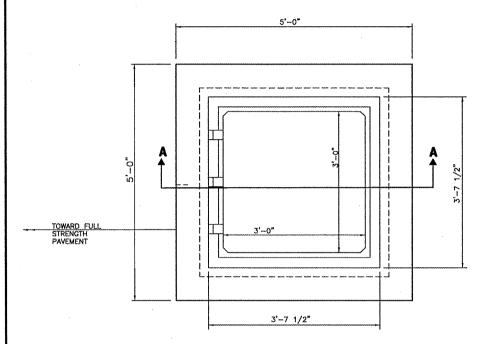
HANDHOLE **DETAILS** (SHEET 1 OF 2)

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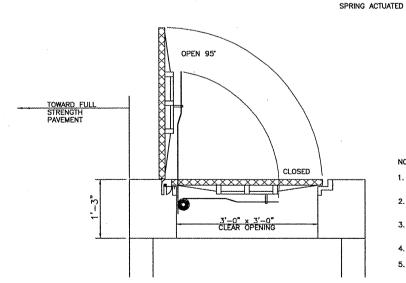
### SECTION A-A



#### **PLAN VIEW**

#### FRAME AND HATCH COVER DETAIL

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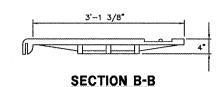


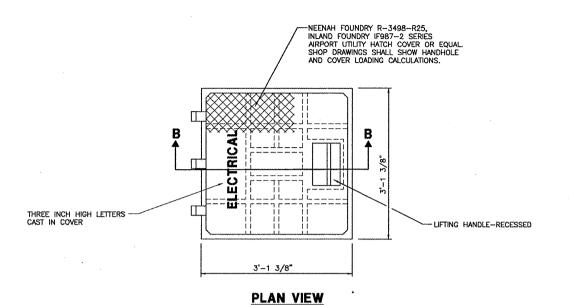
#### NOTES:

- 1. HOLD OPEN BAR AND HOLD DOWN BOLTS ARE REQUIRED.
- 2. COVER AND SPRING SHALL BE CAPABLE OF REMOVAL.
- 3. MANHOLE COVER MUST BE SUITABLE FOR SPRING HARDWARE SUPPLIED.
- 4. BOND COUNTERPOISE SYSTEM TO COVER.
- 5. ALL METAL COMPONENTS TO BE HOT DIPPED GALVANIZED AND SPOT—PAINTED IN FIELD AFTER INSTALLATION.

#### SPRING LIFT ASSEMBLY

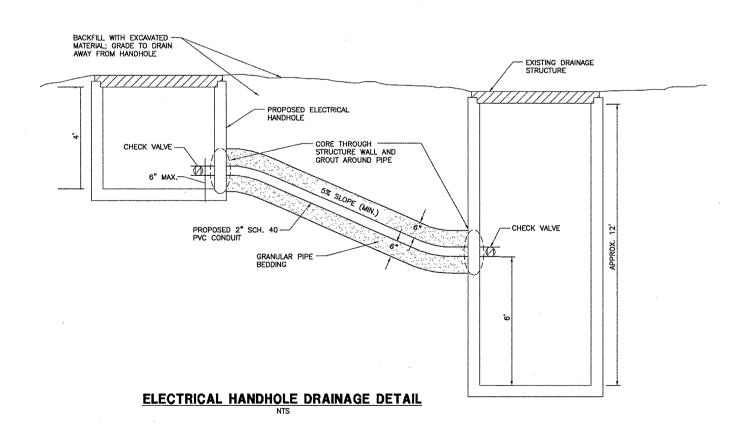
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#### HATCH COVER DETAIL

ICH COVER DETAIL



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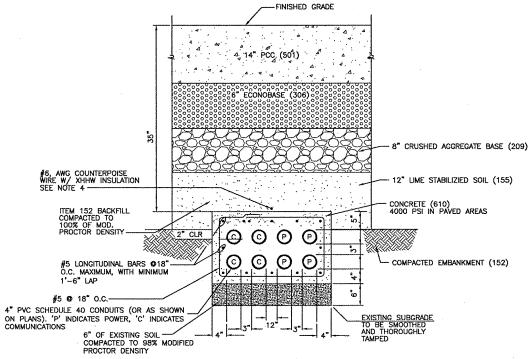
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HANDHOLE DETAILS (SHEET 2 OF 2)

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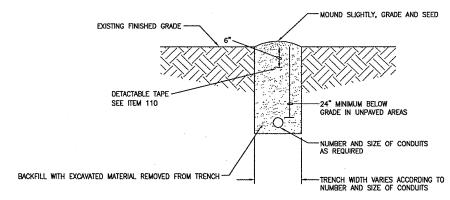
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- COORDINATE TRENCHING AND DUCTBANK WORK WITH EARTHWORK.
   DUCTBANK INSTALLATION SHALL BE SIMILAR IN TURF AREAS. TRENCH BACKFILL TO BE EXISTING SOIL.
- COMPACTED TO 95% MODIFIED PROCTOR DENSITY IN LIEU OF CONCRETE.

  3. DUCTBANK INSTALLATION SHALL BE SIMILAR FOR DUCTBANK IN SHOULDER AREAS.

### 8-WAY, 4' DUCTBANK



#### TYPICAL CONDUIT TRENCHING IN UNPAVED AREAS

NOT TO SCALE

#### **DUCTBANK NOTES:**

- 1) THE #6 AWG BSD COPPER COUNTERPOISE WIRE SHALL BE CENTERED ON THE DUCT BANK.
- 2) THE MINIMUM DISTANCE BETWEEN TOP OF CONDUIT IN DUCTBANK AND COUNTERPOISE SHALL BE 3".
- 3) THE CONTRACTOR SHALL INSTALL A NYLON PULL WIRE IN EACH UNUSED DUCT OR CONDUIT INSTALLED AND PLUG OR CAP THE DUCT. THE WIRE SHALL BE SECURELY ATTACHED TO THE PLUG/CAP AT EACH END OF THE DUCT OR CONDUIT. NEW PULL WIRES SHALL BE INSTALLED IN EACH UNUSED DUCT OR CONDUIT IN DUCT BANK EXTENSIONS.
- 4) THE CONTRACTOR SHALL INSTALL A PLASTIC COATED, DETECTABLE MAGNETIC TWO (2) INCH WIDE TAPE EIGHT (8) INCHES BELOW TURF GRADE ABOVE ALL DUCTBANKS OR CONDUITS NOT INSTALLED UNDER AIRFIELD PAVEMENT.
- 5) DUCTBANKS SHALL DRAIN TOWARD THE MANHOLES WITH THE CROWN OF THE DUCT BANK MIDWAY BETWEEN MANHOLES. THE DUCT SLOPE
- 6) ALL CONDUITS, DUCT AND DUCT BANKS SHOWN AS CONCRETE ENCASED SHALL BE ENCASED IN 4000 PSI CONCRETE COMPRESSIVE STRENGTH, WITH NOT LESS THAN 3" OF COVER AT TOP AND SIDES.
- 7) GRADING, SODDING, AREA RESTORATION, AND DEWATERING FOR THE INSTALLATION OF BASE CANS, MANHOLES, DUCT BANKS OR CONDUITS IS INCIDENTAL TO THE RESPECTIVE PAY ITEM. THE CONTRACTOR SHALL BE RESPONSIBLE TO PAY FOR AND OBTAIN ANY AND ALL
- 8) THE ITEM 610 CONCRETE AROUND CONDUITS, DUCTS AND BASE CANS SHALL BE COMPLETELY CONSOLIDATED BY MECHANICAL MEANS AND SHALL BE FREE OF ANY VOIDS.
- 9) ALL DUCTS SHALL BE SECURELY FASTENED IN PLACE DURING CONSTRUCTION AND PROGRESS OF THE WORK AND SHALL BE PLUGGED TO PREVENT SEEPAGE OF GROUT, WATER OR DIRT. ANY DUCT SECTION HAVING A DEFECTIVE JOINT SHALL NOT BE INSTALLED. DUCTS SHALL BE SUPPORTED AND SPACED APART USING APPROVED SPACERS AT INTERVALS NOT TO EXCEED 5 FEET.
- 10) ALL CONSTRUCTION JOINTS IN CONCRETE ENCASED DUCTS SHALL HAVE A MINIMUM OF 4 STEEL DOWELS, EVENLY SPACED AND INSTALLED AT THE JOINT. THE DOWELS SHALL BE #4 DEFORMED STEEL REINFORCING BARS, 24" LONG, WITH 1/2 OF THE LENGTH EMBEDDED IN THE PLASTIC CONCRETE THAT IS CONSTRUCTED
- 11) ALL LOOSE MATERIAL SHALL BE REMOVED FROM ALL EXCAVATIONS FOR ELECTRICAL EQUIPMENT, RACEWAYS, MANHOLES, PADS, ETC. THE BOTTOM OF THE EXCAVATION SHALL BE COMPACTED TO 95% COMPACTION IN ACCORDANCE WITH ASTM D1557 PRIOR TO THE INSTALLATION OF THE ELECTRICAL ITEM AND BACKFILL

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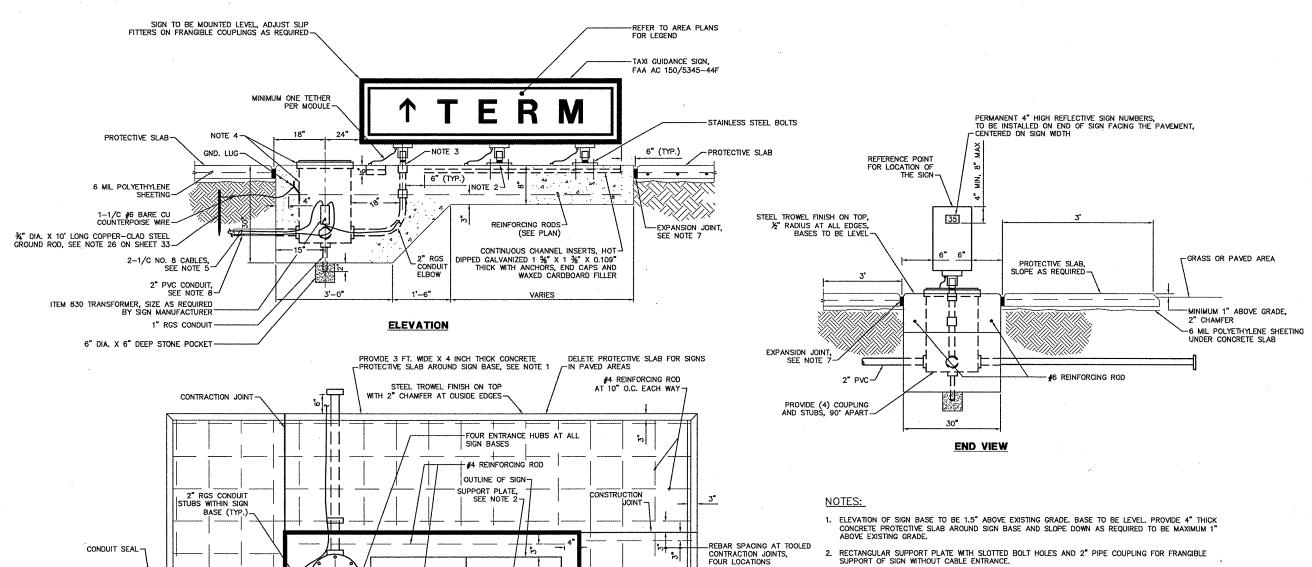
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> **DUCTBANK** AND CONDUIT DETAILS

SHEET NUMBER

31 OF 43



- RECTANGULAR SUPPORT PLATE WITH SLOTTED BOLT HOLES AND 2" PIPE COUPLING FOR FRANGBLE SUPPORT OF SIGN WITHOUT CABLE ENTRANCE.
- FRANGIBLE COUPLING FOR CABLE ENTRANCE AT SIGN. INSTALL CLAMP ON LOWER CABLE AT JUNCTION OF FRANGIBLE COUPLING AND 2" PIPE COUPLING. SET TOP OF PIPE COUPLING 3/4" ABOVE FINISHED
- 4. 3/4" THICK STEEL COVER PLATE WITH NEOPRENE GASKET AND TRANSFORMER HOUSING FOR TAXI GUIDANCE SIGN AC 150/5345-42C, CLASS 1, TYPE FAA L-867, SIZE D, 16" DIAMETER BY 24" DEEP WITH 1" DRAIN COUPLING. PROVIDE 4 2" THREADED CONDUIT HUBS.
- 5. 1/C #8, 5 KV CABLE SHALL BE AC 150/5345-7, L-824, TYPE C CONNECTED TO TRANSFORMER WITH PLUG AND RECEPTACLE CONNECTORS AC 150/5345-26B, L-823.
- 6. TAXI GUIDANCE SIGN SHALL BE AC 150/5345-44, TYPE L-858-L (YELLOW LEGEND ON BLACK BACKGROUND), L-858-Y (BLACK LEGEND ON A YELLOW BACKGROUND) OR TYPE L-858R (WHITE LEGEND ON RED BACKGROUND), SIZE 3, 30" SIGN FACE, 18" LEGEND, STYLE 2. SIGN SHALL HAVE
- 7. PROVIDE 1/2" PREMOLDED EXPANSION JOINT MATERIAL CONTINUOUS AROUND SIGN BASE. PROVIDE
- 8. EXTEND 2" PVC CONDUIT 6" PAST PROTECTIVE SLAB. FOR ADDITIONAL NOTES, REFER TO SHEET 33.
- 9. FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES, SEE NOTES, SEE SHEET 26.

CONTRACTION

1/2" EXPANSION JOINT CONTINUOS AROUND SIGN BASE, SEE NOTE 7

\_\_\_

EXPANSION JOINT

CONDUIT ADAPTOR

RGS TO PVC

PVC CONDUIT (TYP.)

PLAN

DIRECT BURIED CABLE

CONTRACTION JOINT

ALIGN CONCRETE BASE PERPENDICULAR TO TAXIWAY

THREADED STEEL CAP ON ALL

14" DIA. X 10' LONG COPPER CLAD STEEL GROUND ROD, SEE NOTE 26 ON SHEET 33

1-1/C #6 BARE CU COUNTERPOISE WIRE (USE TYPE "TW" IN CONCRETE)\_

TAXI GUIDANCE SIGN DETAILS

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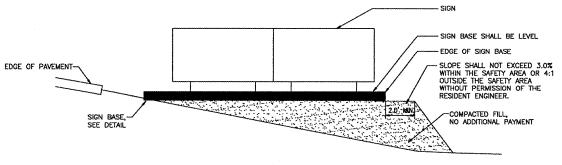
**GUIDANCE** SIGNAGE **DETAILS** 

SHEET NUMBER

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#### **GENERAL SIGN NOTES**

- 1 ALL SIGNS SHALL BE SIZE 3.
- (2) SEE LIGHTING AND SIGNAGE PLAN SHEET 27 FOR SIGN LOCATIONS AND LEGENDS.
- (3) ALL LETTERS AND SPACINGS OF SIGN FACES TO BE PER AC 150/5345-44F, OR LATEST REVISION.
- (4) ALL NEW SIGN MODULES, SIGNS AND ANY MODIFICATIONS TO EXISTING SIGNS SHALL CONFORM TO AC 150/5340-18 AND 150/5345-44, LATEST EDITIONS AND SIGNAGE AND MARKING SUPPLEMENTS. ALL MATERIALS, SIGN BASE DETAILS, ETC., SHALL BE SUBMITTED TO THE RESIDENT ENGINEER FOR APPROVAL NEW SIGN PANELS SHALL BE FURNISHED BY THE MANUFACTURER OF THE SIGN IN WHICH THE NEW PANELS ARE TO BE INSTALLED.
- (5) THE SIGNS SHALL BE FRANGIBLE, MEETING THE REQUIREMENTS OF AC 150/5345-44, LATEST EDITION.
- THE DETAILS SHOWN IN THE PLANS PROVIDE THE MINIMUM REQUIREMENTS FOR SIGN INSTALLATIONS. THE CONTRACTOR SHALL USE STANDARDS APPLICABLE FOR THE PARTICULAR SIGN MANUFACTURER. THE BOLTING PATTERN, METHOD OF ANCHORING, ETC., SHALL BE PER SIGN MANUFACTURER'S RECOMMENDATIONS AND APPROVED BY THE RESIDENT ENGINEER.
- THE ACTUAL SIGN DIMENSIONS WILL VARY PER MANUFACTURER. THE BASE SIZE AS SHOWN SHALL BE ADJUSTED TO MATCH THE SIGNS SUBMITTED. THE SUBMITTAL SHALL INCLUDE NEW BASE DIMENSIONS, LAYOUT, ETC.
- B FOR LOCATION AND ORIENTATION OF SIGNS AND FOUNDATIONS, SEE PLANS. THE LOCATION SHOWN ON THE PLANS IS THE PERPENDICULAR DISTANCE FROM THE DEFINED TAXIWAY EDGE OF FULL STRENGTH PAVEMENT, TO THE NEAR SIDE OF THE SIGN ON THE SIGN'S LONGITUDINAL CENTERLINE (SEE PLAN VIEW). ALL SIGNS SHALL BE INSTALLED WITH FIXTURE I.D. MARKERS.
- (9) ALL SIGNS SHALL BE ORIENTED SUCH THAT THE LONGITUDINAL CENTERLINE OF THE SIGN IS PERPENDICULAR TO THE RESPECTIVE TAXIMAY CENTERLINE. UNLESS NOTED OTHERWISE.
- (10) CONTRACTOR SHALL PROVIDE NEW CONCRETE FOUNDATION, BASE CAN, LAMPS, GROUND RODS, ISOLATION TRANSFORMERS AND CONNECTIONS FOR ALL RELOCATED OR ADJUSTED GUIDANCE SIGNS.
- (1) SITE GRADING AT EACH SIGN IS ANTICIPATED. GRADING AND RESTORATION ARE INCIDENTAL TO SIGN COST.
- (12) ALL CONCRETE SHALL COMPLY WITH ITEM 610 SPECIFICATION, ITEM 610 CONCRETE STEEL REINFORCEMENT SHALL BE TYPE ASTM A615 GRADE 60. ALL REINFORCEMENT SHALL HAVE A 2" MINIMUM CONCRETE COVER. REINFORCEMENTS MAY BE ADJUSTED TO MISS INTERFERENCES.
- (13) STRUCTURAL BACKFILL, FREE—DRAINING, AS APPROVED BY THE RESIDENT ENGINEER, SHALL BE PLACED IN HORIZONTAL LIFTS NOT TO EXCEED 4" IN LOOSE DEPTH AND COMPACTED TO 95% MAXIMUM DENSITY AT ZERO TO 2% ABOVE OPTIMUM MOISTURE AS DETERMINED BY ASTIM D1557. SLOPE SHALL NOT EXCEED 33:1 WITHIN RUNWAY SAFETY AREA. THE RUNWAY SAFETY AREA IS ANY APPEN WITHIN 250 EFFT OF THE RUNWAY CENTERLINE
- SODDING OF DISTURBED AREAS SHALL BE INCLUDED IN THE INDIVIDUAL SIGN PAY ITEM. EXCAVATION, GRADING, FILL ETC. FOR THE SIGNS IS INCIDENTAL TO THE SIGN PAY ITEM.
- (5) ALL AREAS FOR THE SUPPORT PLATES SHALL BE IN THE SAME HORIZONTAL PLANE. WHEN CAST INTEGRALLY WITH THE CONCRETE PAD, THE ANCHOR BOLTS SHALL BE A-36 STEEL, HOT DIP GALVANIZED.
- (16) NUMBER AND SPACING OF LEGS SHALL BE AS PER MANUFACTURERS REQUIREMENTS.
- (17) GROUNDING SHALL BE PER MANUFACTURERS REQUIREMENTS.
- (18) BASE CAN SHALL BE ON SIDE OF SIGN CLOSEST TO THE POWER SOURCE.
- (19) APPLY "NEVER SIEZE" OR APPROVED EQUAL TO ALL THREADED BOLTS AND CONNECTIONS.
- (20) EXISTING SIGNS TO BE REMOVED SHALL BECOME THE PROPERTY OF THE GREATER PEORIA REGIONAL AIRPORT, UNLESS OTHERWISE NOTED.
- (21) SIGNS TO BE PLACED PLUMB AND LEVEL.
- FRANCIBLE COUPLING SHALL BE LOCATED 1-1/2" MAX. ABOVE CORNER. MANUFACTURER SHALL PROVIDE AT LEAST A 1/4" DIA OPENING OR EQUAL FOR DRAINAGE INTO ITEM 867 BASE. COUPLING SHALL NOT BE SUPPLIED WITH WEEP HOLES TO THE OUTSIDE.
- (23) NON-METALLIC COMPONENTS IN LIGHT FIXTURE STEMS, FRANGIBLE COUPLING AND BASES SHALL NOT BE PERMITTED.
- COLOR CODE PROPOSED WIRING PER AIRPORT REQUIREMENTS. CONTRACTOR SHALL COORDINATE WITH AIRPORT MAINTENANCE PERSONNEL.
- (25) CONTRACTOR TO PLACE NEW REPLACEMENT LAMPS FOR ALL LIGHT UNITS INSIDE SIGN AT TIME OF FINAL INSPECTION.
- GROUND RODS SHALL BE 3/4 INCH DIAMETER, 10 FEET LONG, COPPER CLAD STEEL SECTIONAL RODS. EACH GROUND ROD SHALL BE INDMODUALLY TESTED PRIOR TO CONNECTION TO THE GROUND GRID OR COUNTERPOISE SYSTEM. EACH INDIVIDUAL ROD SHALL HAVE AN EARTH RESISTANCE OF 25 OHMS OR LESS. ADDITIONAL SECTIONS SHALL BE ADDED TO THE ROD TO ACHIEVE THE 25 OHM REQUIREMENT.
- THE #6 AWG COPPER BONDING CONDUCTOR AND SIGN TETHER SHALL NOT BE ATTACHED AT THE SAME ANCHOR BOLT. AN APPROVED IRREVERSIBLE CRIMP SHALL BE USED TO CONNECT THE BONDING CONDUCTOR TO THE SIGN FLANGE AND SIGN.
- 28) USE #6 AWG COPPER COUNTERPOISE WITH TYPE THHW INSULATION WHEN INSTALLED IN CONCRETE. COUNTERPOISE TO BE CONNECTED TO GROUND ROD AT EACH SIGN.
- (29) ALL SIGNS SHALL BE FURNISHED WITH TWO TETHERS PER MODULE. TETHERS SHALL BE 3/16" STAINLESS STEEL AIRCRAFT CABLE WITH A FORMED EYE ON BOTH ENDS. THE TETHER EYE SHALL BE ATTACHED TO THE SIGN AND BASE BY BEING SANDWICHED BETWEEN TWO STAINLESS STEEL FENDER WASHERS, WITH A 1/2" MINIMUM STAINLESS STEEL BOLT. THE TETHER SHALL BE OF SUFFICIENT LENGTH TO HAVE A MINIMUM OF 6" OF SLACK WHEN ATTACHED BETWEEN THE SIGN AND THE SIGN BASE. THE TETHERS AND BONDING CONDUCTORS SHALL BE OF SUFFICIENT LENGTH TO ALLOW THE FRANGIBLE COUPLINGS TO OPERATE WITHOUT RESTRICTIONS AND TO ALLOW THE POWER CABLE TO DISCONNECT IF THE SIGN FALLS OVER.
- (30) SIGNS SHALL BE WELL SEALED AGAINST INFILTRATION BY WATER AND DIRT.
- (31) EACH SIGN SHALL BE FURNISHED WITH AN ON-OFF TOGGLE SWITCH WITH WEATHERPROOF COVER. THE SWITCH SHALL BE USED BY MAINTENANCE PERSONNEL TO DE-ENERGIZE THE SIGN SO MAINTENANCE WORK CAN BE PERFORMED. THE SWITCH SHALL BE PHYSICALLY AND ELECTRICALLY LOCATED IMMEDIATELY ADJACRET TO THE LOAD SIDE OF THE L-823 DISCONNECT PLUG, WHEN THE SWITCH IS IN THE OFF POSITION, THE SIGN SHALL BE ISOLATED FROM THE SERIES CIRCUIT AND THE SECONDARY OF THE L-830 ISOLATION TRANSFORMER SHALL BE SHORTED. THE WEATHERPROOF COVER SHALL PROVIDE PROTECTION FROM DRIVING RAIN, SNOW AND ICE, AND SHALL HAVE A SPRING OPERATED CLOSING DEVICE. THE WEATHERPROOF COVER SHALL ALSO PROVIDE PHYSICAL PROTECTION FOR THE SWITCH HANDLE.



#### SIGN BASE GRADING AND FILL DETAIL

N.T.S.

#### SIGNAGE SCHEDULE

CION	MODINES	SIDE	A LEGE	ND	SIDE	B LEGI	END	SIDE	A COL	OR	SIDE	B COL	OR	None		
SIGN	MODULES	1	2	3	1	2	3	1	2	3	1	2	3	NORTHING	EASTING	
1	1	T →						B/Y			В			1456600.9670	2427935.0618	
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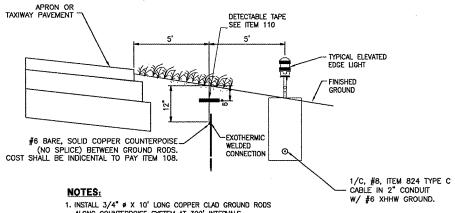
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GENERAL
GUIDANCE SIGN
NOTES & DETAILS

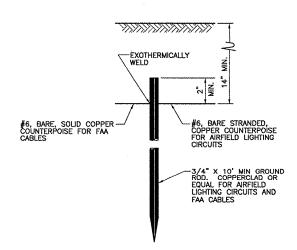
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- I. INSTALL 3/4" Ø X 10' LONG COPPER CLAD GROUND RODS
   ALONG COUNTERPOISE SYSTEM AT 300' INTERVALS.
   CONNECTIONS OF GROUND RODS TO COUNTERPOISE CABLE SHALL
   BE EXCTHERMIC TYPE (COPPERWELD OR EQUAL)
- 2. DO NOT CONNECT COUNTERPOISE WIRING TO EDGE LIGHT BASES.
- 3. THE RESISTANCE TO GROUND OF THE COUNTERPOISE GROUNDING SYSTEM SHALL NOT EXCEED 25 OHMS.
- 4. COST OF THE GROUND RODS IS INCIDENTAL TO THE ASSOCIATED ITEMS REQUIRING GROUNDING UNLESS OTHERWISE SPECIFIED.

#### COUNTERPOISE (ALONG PAVEMENT) INSTALLATION DETAIL

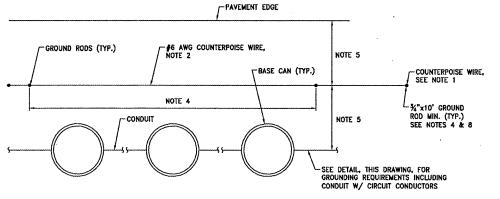


#### NOTES

- 1. THE RESISTANCE TO GROUND OF ANY GROUNDING SYSTEM SHALL NOT EXCEED 10 OHMS.
- 2. COST OF GROUND RODS AND CONNECTIONS TO COUNTERPOISE IS INCIDENTAL TO ASSOCIATED ITEMS OF WORK REQUIRING GROUNDING AND NO SEPARATE PAYMENT WILL BE MADE.
- 3. MAXIMUM SPACING OF GROUND RODS FOR EDGE LIGHTING SYSTEMS SHALL NOT EXCEED 200 FEET.
- 4. ALL GROUND RODS ARE INSTALLED VERTICALLY.
- 5. EACH ROD TO BE TESTED INDMIDUALLY TO ENSURE RESISTANCE TO GROUND OF 25 OHMS OR LESS. ADD ADDITIONAL SECTIONS UNTIL THIS REQUIREMENT IS MET.

#### **GROUND ROD DETAIL**

NTS



#### NOTES:

- 1. CONNECTIONS TO GROUND RODS SHALL BE MADE USING EXOTHERMIC WELDS.
- 2. COUNTERPOISE WIRE SHALL BE #6 AWG, BARE SOLID COPPER.
- 3. NOT USED.
- 4. GROUND RODS FOR AUTHORITY LIGHTING CABLES SHALL BE PROVIDED AT A MAXIMUM SPACING OF 100 FEET. ADDITIONALLY, THE RESISTANCE TO GROUND OF THE COUNTERPOISE SYSTEM SHALL NOT EXCEED 10 OHMS.
- 5. SEE COUNTERPOISE WIRE INSTALLATION DETAIL FOR COUNTERPOISE WIRE LOCATION, GROUND RODS SHALL BE COPPERCIAD OR EQUAL.
- 6. WHERE DUCTS CROSS, THE COUNTERPOISE SHALL BE TERMINATED AT GROUND RODS ON EACH SIDE OF A DUCT CROSSING.
- 7. ALL COUNTERPOISE CONNECTIONS SHALL BE UL LISTED FOR DIRECT EARTH BURIAL AND/OR INSTALLATION IN CONCRETE AS APPLICABLE.
- B. PROVIDE GROUND ROD WHERE NEW LIGHTING DUCTS CONNECT TO EXISTING DUCTS, HANDHOLES, MANHOLES, AND/OR LIGHT CANS.
- 9. COST OF GROUND RODS AND CONNECTIONS TO GROUNDING CONDUCTORS IS INCIDENTAL TO ASSOCIATED ITEMS OF WORK REQUIRING GROUNDING AND NO SEPARATE PAYMENT WILL BE MADE.

  PLAN COUNTERPOISE WIRE FOR PROPOSED EDGE LIGHTS

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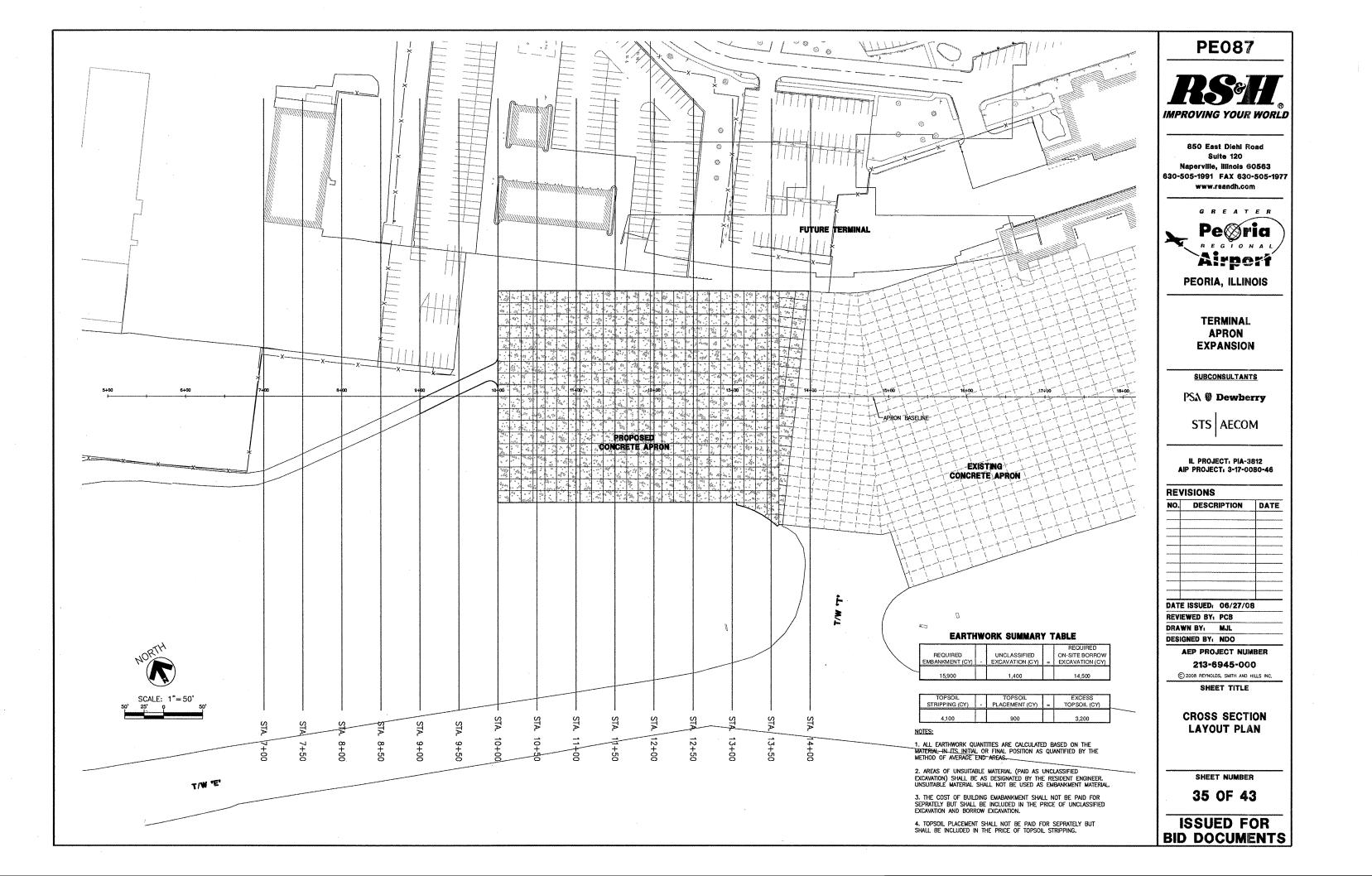
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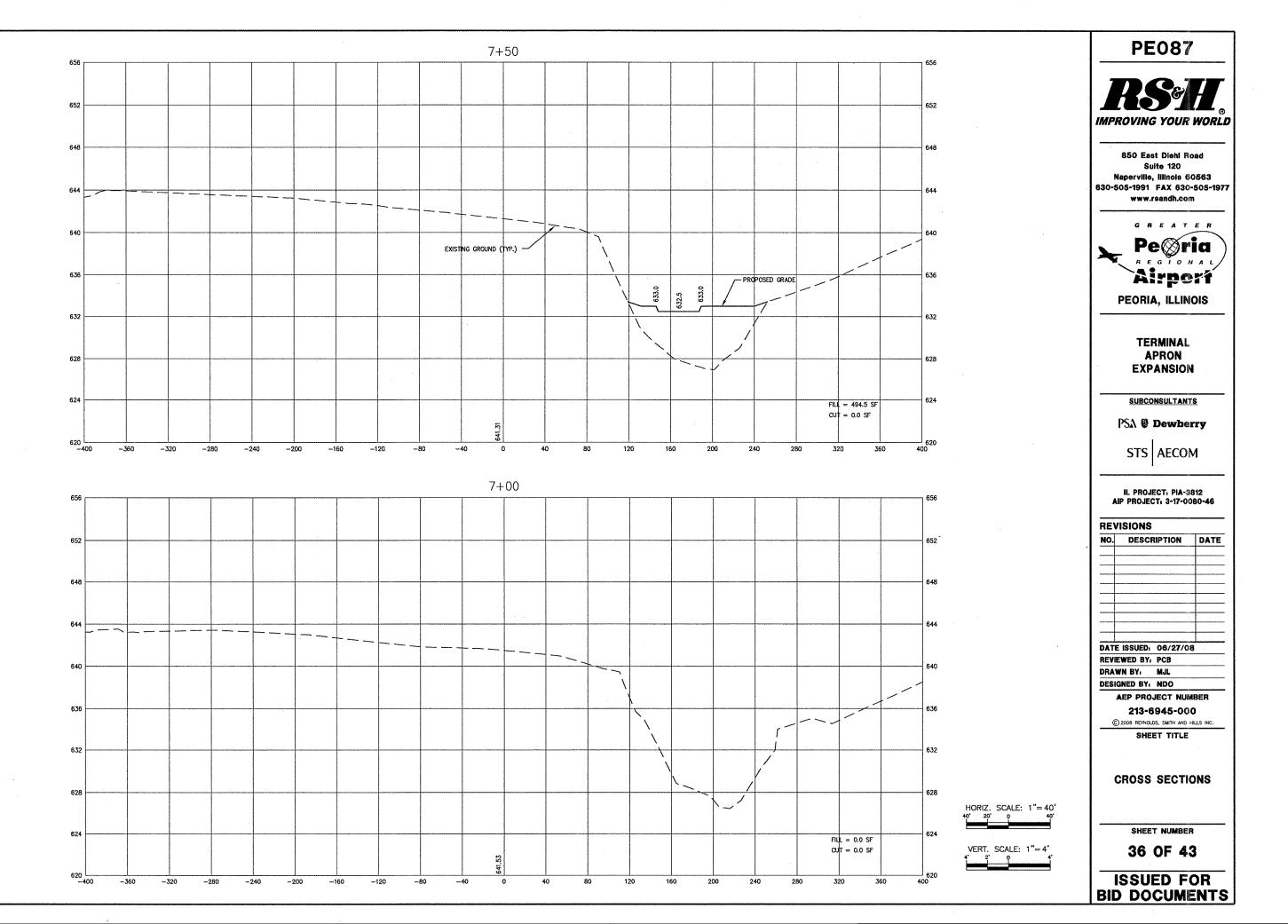
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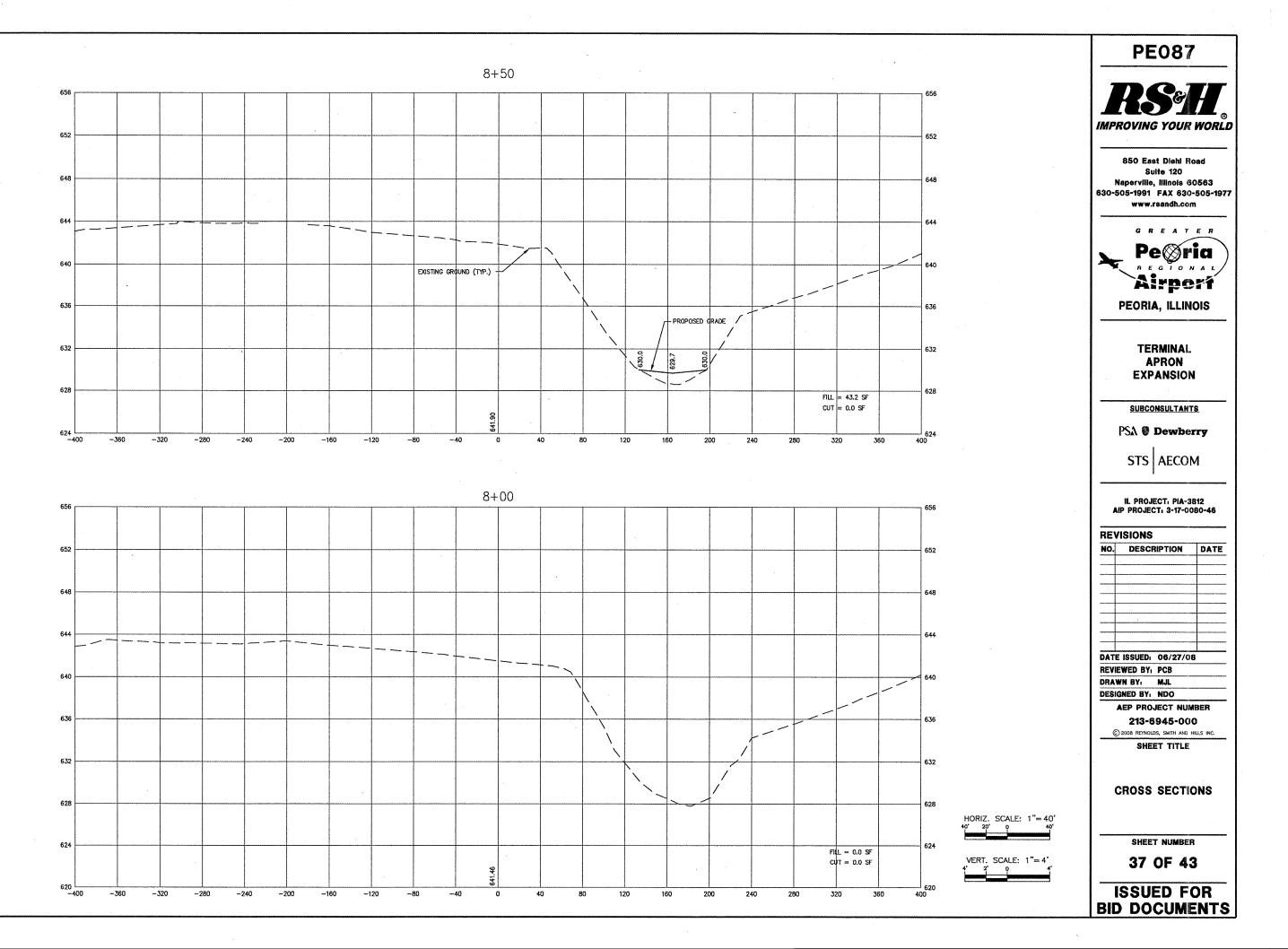
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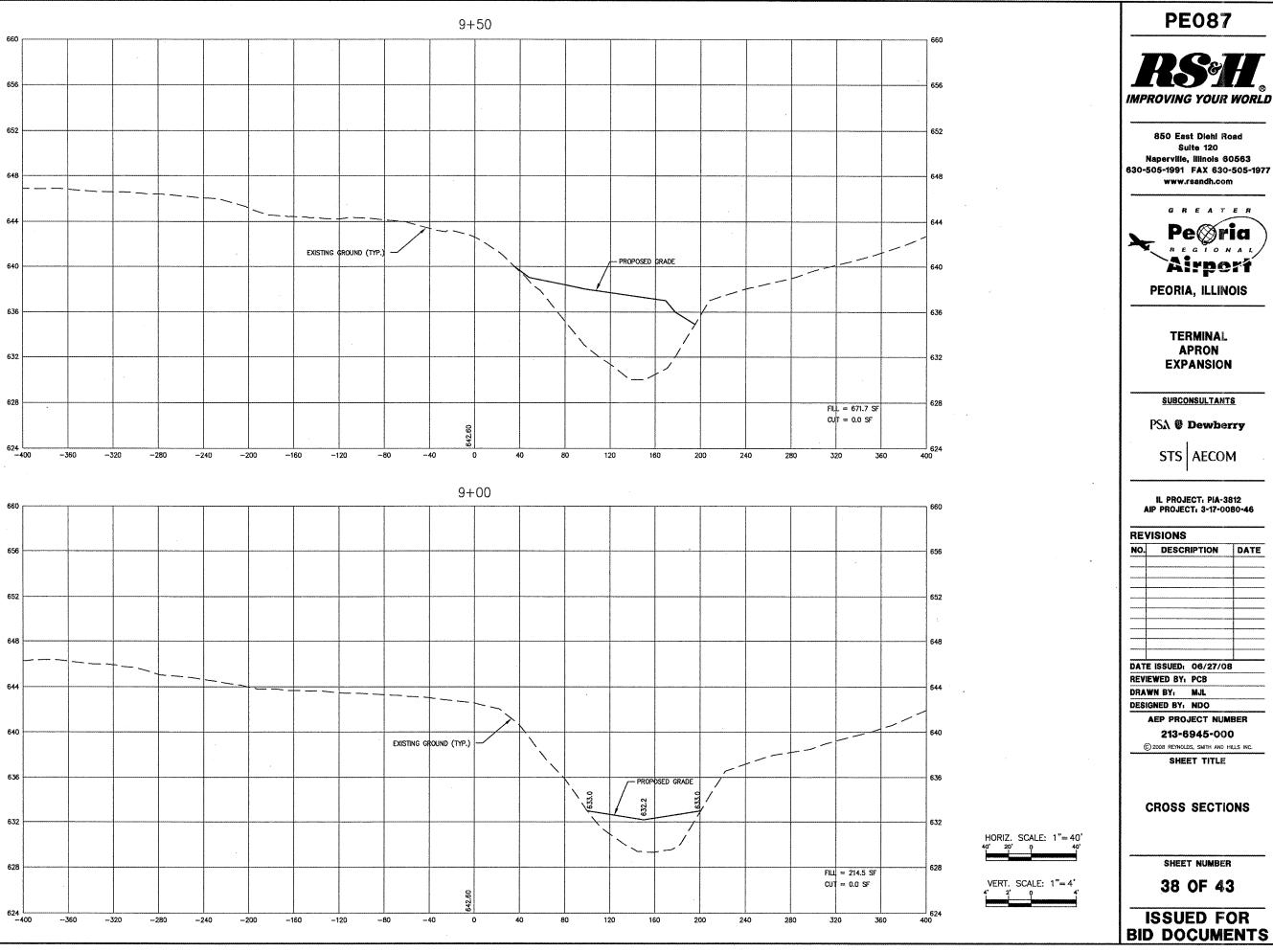
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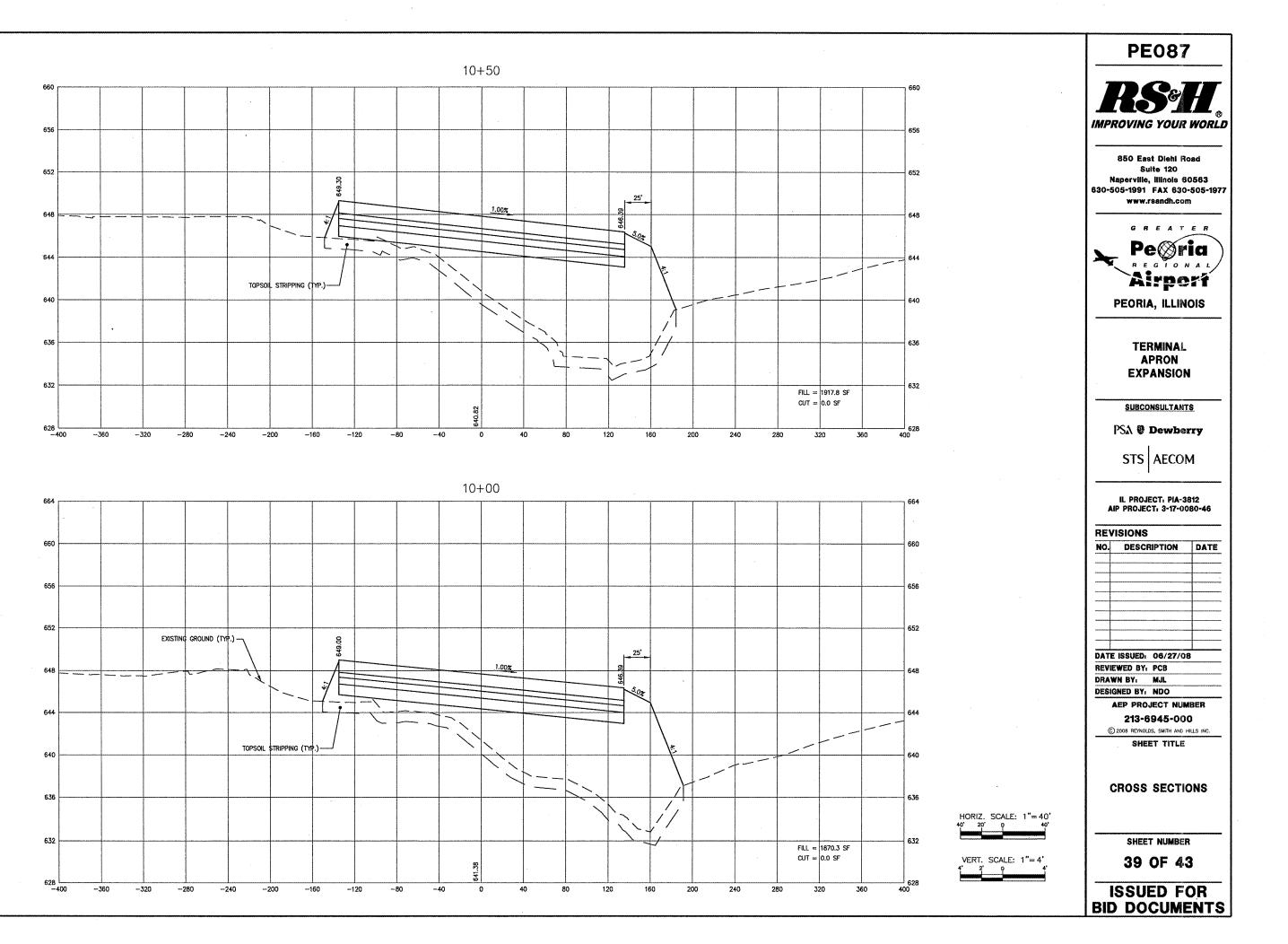


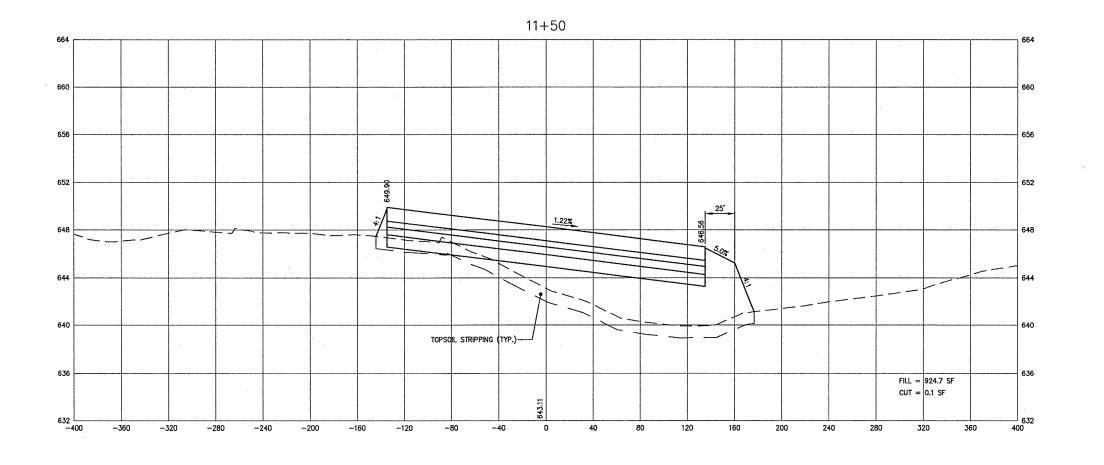


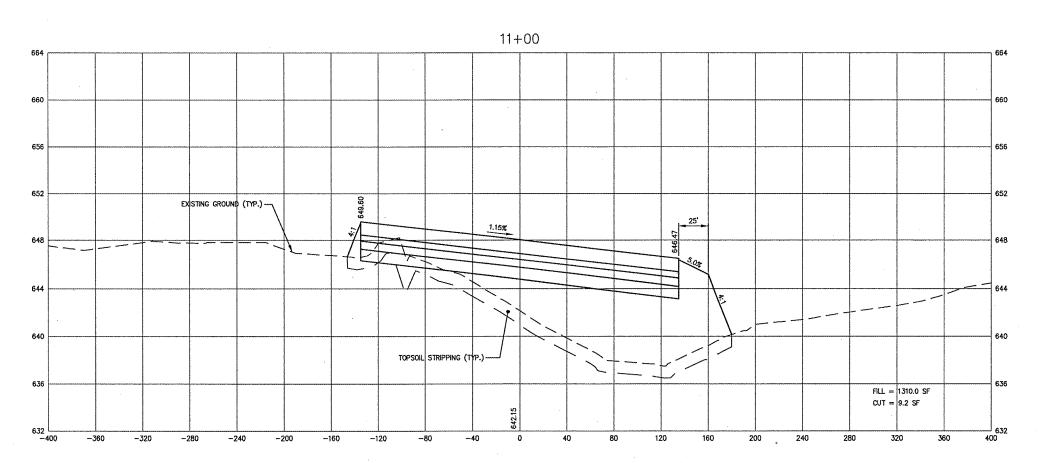


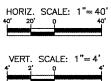














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DRAWN BY: MJL
DESIGNED BY: NDO

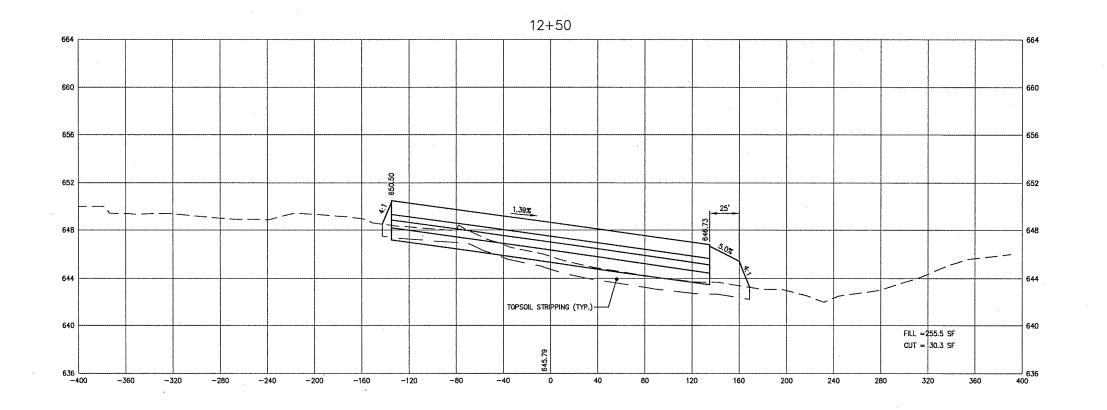
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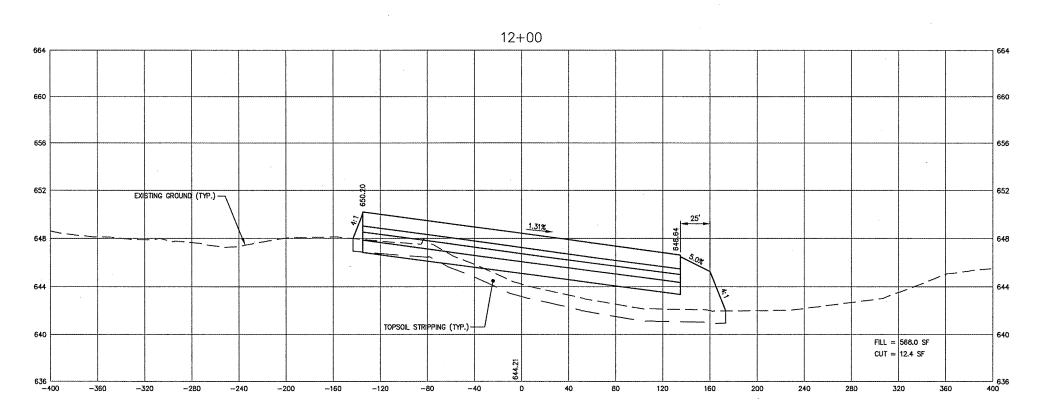
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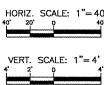
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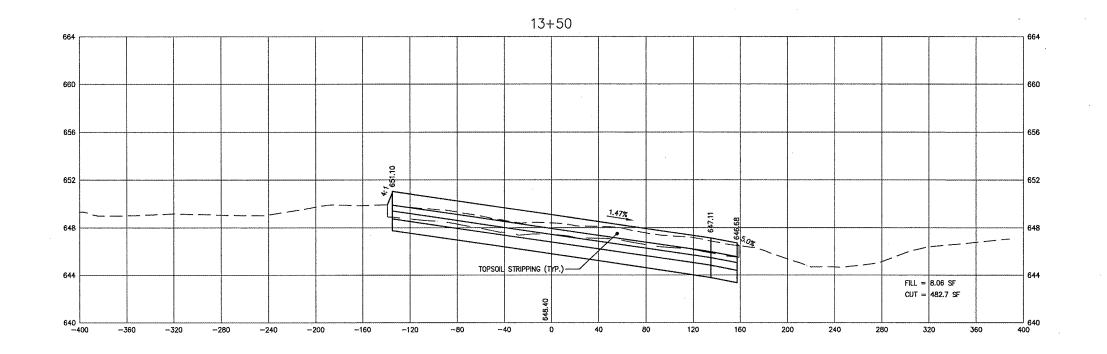
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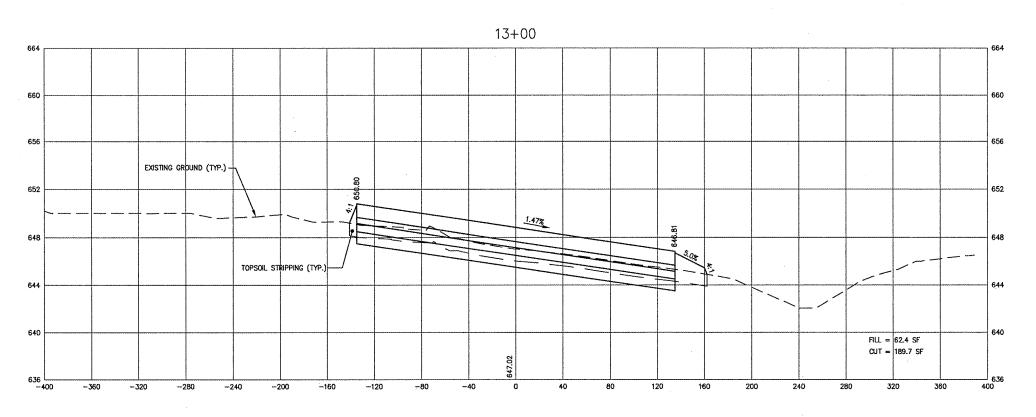
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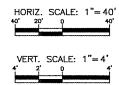
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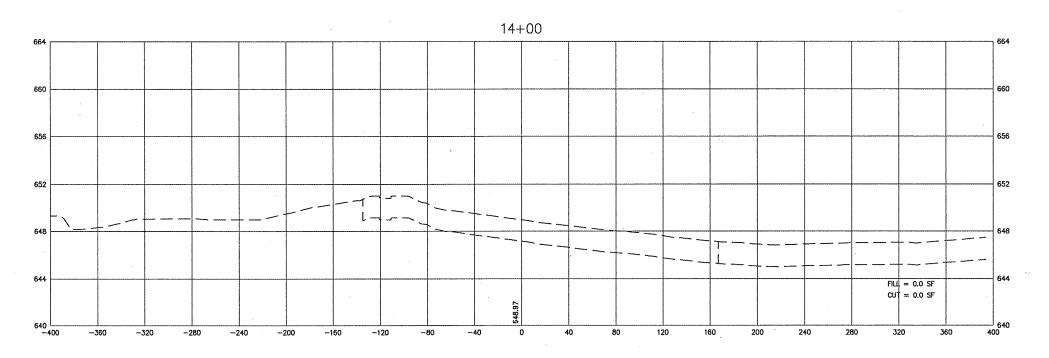
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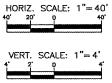
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