

# ERIE INTERNATIONAL AIRPORT

## REALIGNMENT & RECONSTRUCTION OF TAXIWAY A - PHASE 3

### ERIE, PENNSYLVANIA

### BID SET SUBMITTAL MAY 17, 2024

#### OWNER REPRESENTATIVE

DEREK V. MARTIN  
EXECUTIVE DIRECTOR

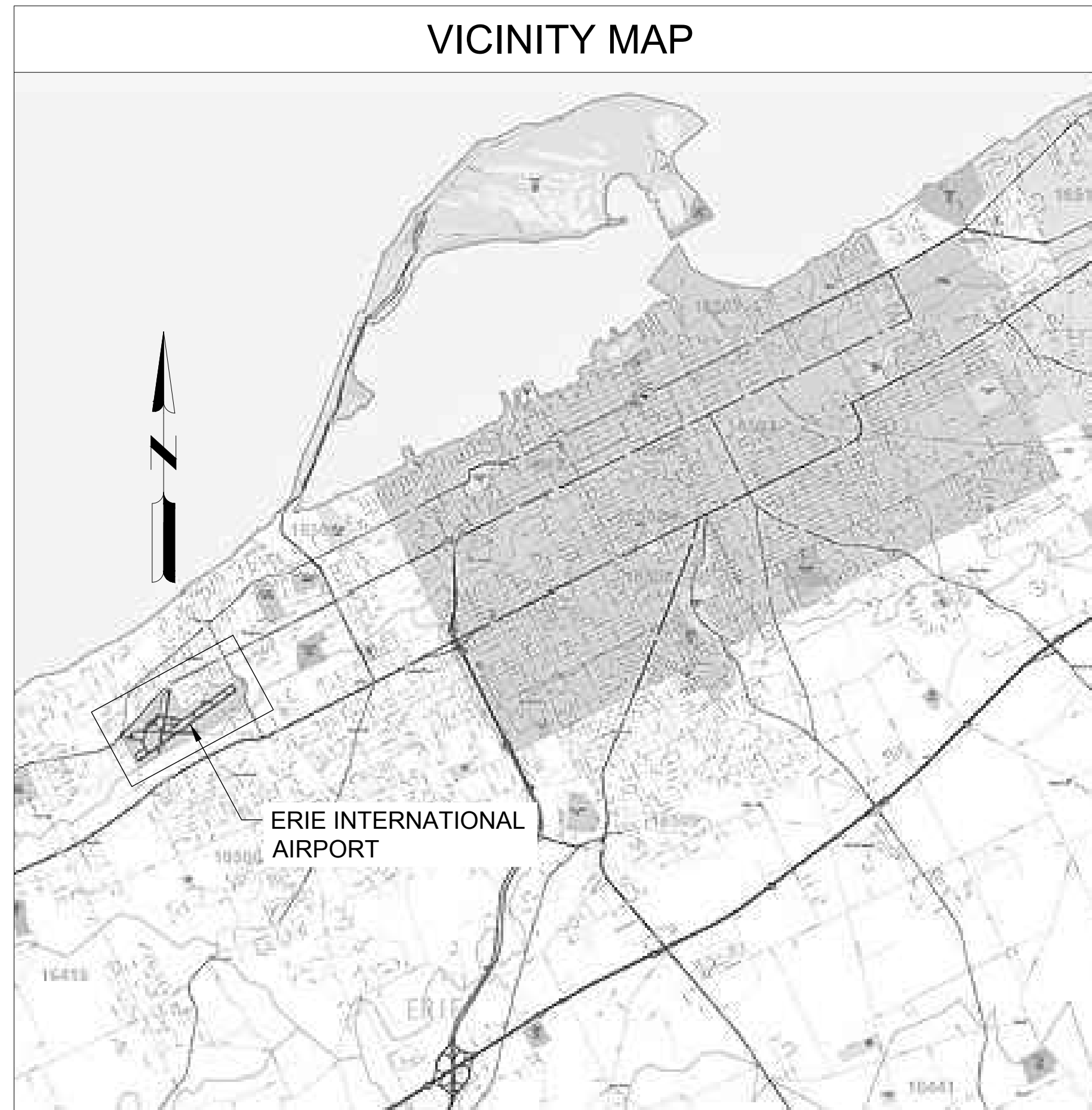
ERIE INTERNATIONAL AIRPORT  
4411 WEST 12TH STREET  
ERIE, PA 16505-3091  
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#### CIVIL/AVIATION ENGINEER

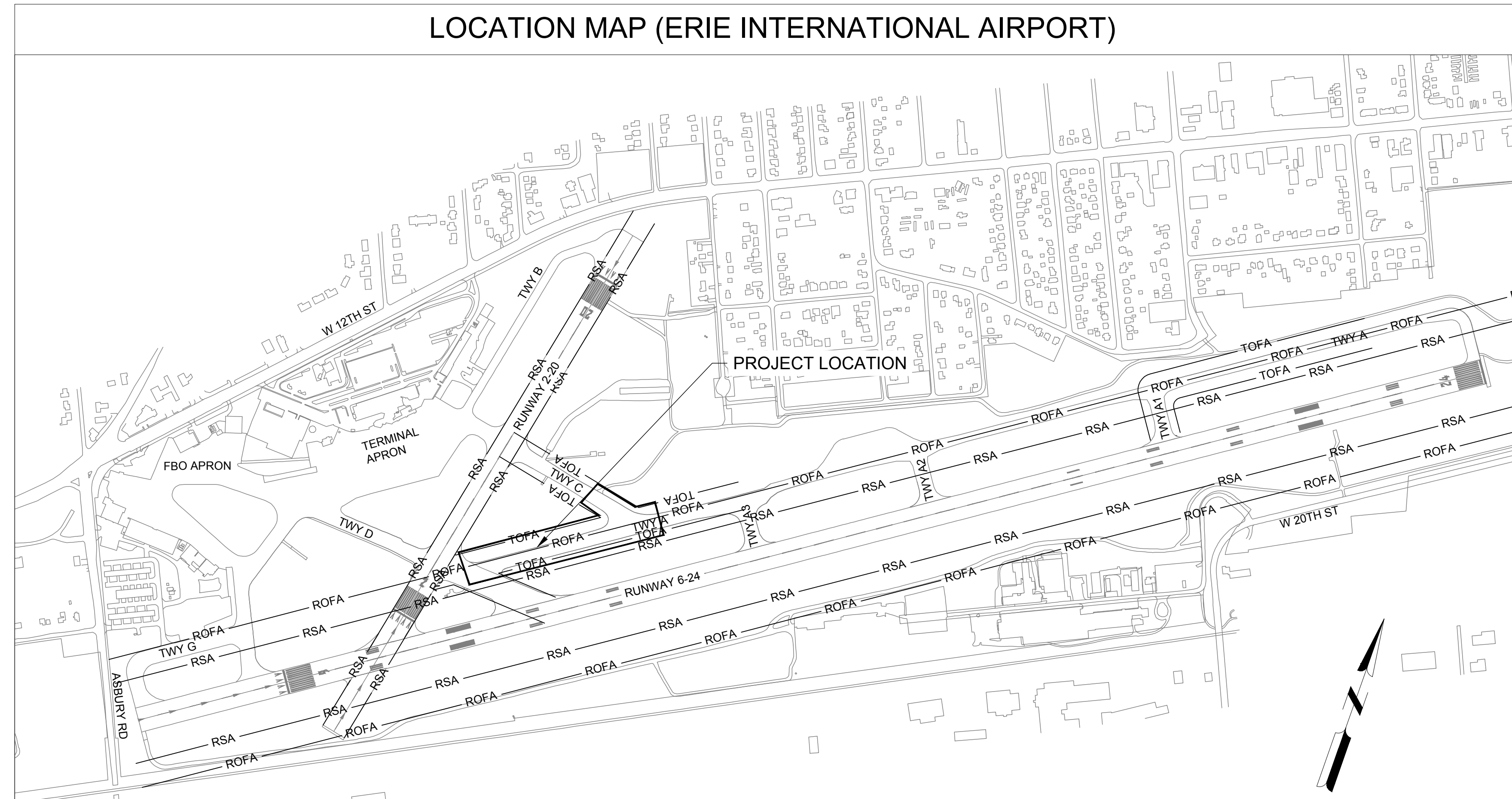
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VICINITY MAP



LOCATION MAP (ERIE INTERNATIONAL AIRPORT)



**Mead & Hunt**

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ERIE INTERNATIONAL AIRPORT  
REALIGNMENT & RECONSTRUCTION  
OF TAXIWAY A - PHASE 3  
4411 WEST 12TH STREET  
ERIE, PENNSYLVANIA

ISSUED 05/17/2024 ISSUED FOR BID



AIP NO: 3-42-030-XXX-2024  
MSH NO: 3225600-192499.05  
DATE: MAY 17, 2024  
DESIGNED BY: RGM  
DRAWN BY: PSH/RGM  
CHECKED BY: BDH  
DO NOT SCALE DRAWINGS

SHEET CONTENTS  
COVER SHEET

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G-001



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## LINES

CON	CONDUIT, GENERIC
G <sub>x</sub>	EXISTING GAS
E <sub>x</sub>	EXISTING ELECTRIC, OVERHEAD
E	PROPOSED ELECTRIC, UNDERGROUND
E <sub>x</sub>	EXISTING ELECTRIC, UNDERGROUND
XXX	EXISTING CONTOUR LINES
XXX	PROPOSED CONTOUR LINES
XXX	EXISTING FENCE
FO	EXISTING FIBER OPTIC CABLE
	GRADING LIMITS
W	GROUND
→	HAUL ROUTE
PL	PROPERTY LINE
RW	RIGHT-OF-WAY
SS <sub>x</sub>	EXISTING SANITARY SEWER
S	SIGNAL CABLE, UNDERGROUND
SF	SILT FENCE
SD <sub>x</sub>	EXISTING STORM SEWER / CULVERT
T <sub>x</sub>	EXISTING TELEPHONE, UNDERGROUND
CATV <sub>x</sub>	EXISTING TV CABLE
UD	PROPOSED UNDERDRAIN
UD	EXISTING UNDERDRAIN
W <sub>x</sub>	EXISTING WATER
ooo	DITCH
SSSSSSSSSSSSSS	SEDIMENT LOG
TB	TURBIDITY BARRIER
FOC	FIBER OPTIC CABLE

APL	AIRCRAFT PARKING LIMIT
AOA	AIRPORT OPERATION AREA
AS	APPROACH SURFACE
BRL	BUILDING RESTRICTION LINE
DRPZ	DEPARTURE RUNWAY PROTECTION ZONE
DS	DEPARTURE SURFACE
FAA	FAA
GLIDE	GLIDE SLOPE CRITICAL AREA
GCA	GROUND CONTROL APPROACH
ROFA	RUNWAY OBJECT FREE AREA
OFZ	OBJECT FREE ZONE
RGL	RUNWAY GUARD LIGHTS
ROFA	RUNWAY OBJECT FREE AREA
RPZ	RUNWAY PROTECTION ZONE
RRA	RUNWAY RESTRICTED AREA
RSA	RUNWAY SAFETY AREA
RWA	RUNWAY WORK AREA
SIDA	SECURITY IDENTIFICATION DISPLAY AREA
TAXIWAY EDGE	TAXIWAY EDGE
TOFA	TAXIWAY OBJECT FREE AREA
TSA	TAXIWAY SAFETY AREA

W	ABANDON
CON\W	ABANDON CONDUIT
E\W	ABANDON ELECTRIC, UNDERGROUND
G\W	ABANDON GAS, UNDERGROUND
SS\W	ABANDON SANITARY SEWER
SD\W	ABANDON STORM SEWER
W\W	ABANDON WATER
X	REMOVE STRUCTURE
R	REMOVE AND DISPOSE OF EXISTING TAXIWAY LIGHT FIXTURE, BASE PLATE, TRANSFORMER, LIGHT BASE, AND CONNECTORS.
X X X X	REMOVE CONDUIT
//E//	REMOVE ELECTRICAL DUCT BANK
//OHE//	REMOVE ELECTRIC, OVERHEAD
//FNC//	REMOVE FENCE
//FOC//	REMOVE FIBER OPTIC CABLE
//G//	REMOVE GAS LINE
//SS//	REMOVE SANITARY SEWER
//SD//	REMOVE STORM DRAIN
//T//	REMOVE TELEPHONE
//W//	REMOVE WATER LINE
//UD//	REMOVE UNDERDRAIN
---	SAW CUT PAVEMENT

RIPRAP OUTFALL
RIPRAP
STANDING WATER
AGGREGATE BASE COURSE
AGGREGATE SUBBASE
ASPHALT
ASPHALT OVERLAY
CONCRETE
STABILIZED CONSTRUCTION ENTRANCE
EROSION MAT
GROUND, EXISTING
GROUND, PROPOSED
RESTORATION AREA
WELDED WIRE REINFORCEMENT
WETLAND
PAVEMENT MARKING REMOVAL

BASE CAN L-867
BASE CAN
C/L BASE CAN
TDZ BASE CAN
RGL (ELEVATED BASE MOUNTED)
RGL (ELEVATED STAKE MOUNTED)
RGL (INSET)
LIRL (ELEVATED BASE MOUNTED)
LIRL (ELEVATED STAKE MOUNTED)
LIRL (INSET)
MIRL (ELEVATED BASE MOUNTED)
MIRL (ELEVATED STAKE MOUNTED)
MIRL (INSET)
HIRL (ELEVATED BASE MOUNTED)
HIRL (ELEVATED STAKE MOUNTED)
HIRL (INSET)
MITL (ELEVATED BASE MOUNTED)
MITL (ELEVATED STAKE MOUNTED)
MITL (INSET)
RW APPROACH (FLASHING)
RW APPROACH
RW C/L
TW C/L BIDIRECTIONAL
TW C/L UNIDIRECTIONAL
AVIATION CONE
MALS (ELEVATED BASE MOUNTED)
MALS (INSET)
RAIL
PAPI
REIL
RETROREFLECTOR
SEQUENCE FLASH
TDZ
VASI
ANTENNA
CABLE MARKER
DUCT MARKER
GROUNDING LUG
TIEDOWN
WINDCONE
GUIDANCE SIGN
CONDUIT LABEL (CABLE QTY & CIRCUIT NAME)
AIRFIELD RATED ELECTRIC MANHOLE
EXISTING MITL

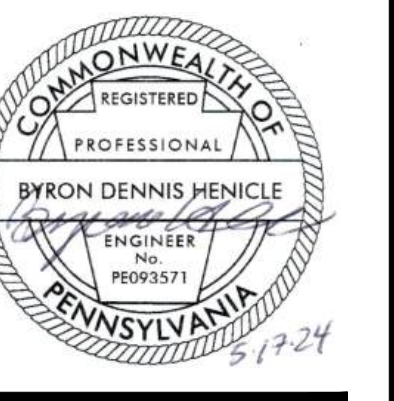
BASE CAN L-867
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HIRL (ELEVATED BASE MOUNTED)
HIRL (ELEVATED STAKE MOUNTED)
HIRL (INSET)
MITL (ELEVATED BASE MOUNTED)
MITL (ELEVATED STAKE MOUNTED)
MITL (INSET)
RW APPROACH (FLASHING)
RW APPROACH
RW C/L
TW C/L BIDIRECTIONAL
TW C/L UNIDIRECTIONAL
AVIATION CONE
MALS (ELEVATED BASE MOUNTED)
MALS (INSET)
RAIL
PAPI
REIL
RETROREFLECTOR
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TDZ
VASI
ANTENNA
CABLE MARKER
DUCT MARKER
GROUNDING LUG
TIEDOWN
WINDCONE
GUIDANCE SIGN
CONDUIT LABEL (CABLE QTY & CIRCUIT NAME)
AIRFIELD RATED ELECTRIC MANHOLE

BENCHMARK
AOA BARRICADE
CONTROL POINT
BARRIER, JERSEY
BOLLARD
CLEANOUT, SANITARY OR STORM
ELECTRIC MANHOLE
ELECTRIC METER
ELECTRIC PEDESTAL BOX
ELECTRIC TRANSFORMER BOX
ELECTRIC SERVICE PANEL
ELECTRIC HANDHOLE (PULLBOX)
FIBER OPTIC MANHOLE
FIRE HYDRANT
FLAGPOLE
FUEL SHUT OFF VALVE
FUEL VENT PIPE
GAS MANHOLE
GAS METER
GAS VALVE
GAS VENT PIPE
GATE
GUY ANCHOR
HANDHOLE, GENERIC
IRON PIN
LIGHT BOLLARD
FLOODLIGHT POLE
LIGHT POLE (SINGLE)
LIGHT POLE (DOUBLE)
MARKER, CABLE
MARKER, DUCT
MONITORING WELL
SANITARY SEWER MANHOLE
SANITARY SEWER VALVE
SANITARY SEWER WET WELL
SIGN (SINGLE POST)
SOIL BORING
STORM INLET, CURB
STORM INLET, ROUND
STORM INLET, SQUARE
STORM FLARED END SECTION
STORM SEWER MANHOLE
STORM WATER QUALITY MANHOLE
TELECOMMUNICATIONS MANHOLE
TELECOMMUNICATIONS PEDESTAL BOX
UTILITY CROSSING / CONFLICT OR CAUTION
UNDERDRAIN FLUSHER RISER
UNDERDRAIN MANHOLE
VALVE MANHOLE
WATER AIR RELIEF VALVE
WATER BLOW OFF VALVE
WATER MANHOLE
WATER SURFACE
SECTION REFERENCE
ELEVATION REFERENCE
SHEET REFERENCE
DETAIL REFERENCE
EXISTING SPOT ELEVATION
FINISHED / PROPOSED SPOT ELEVATION
FINISHED / PROPOSED SLOPE
DRAINAGE FLOW DIRECTION
INLET PROTECTION
REMOVE

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 MSH NO: 3225600-192499.05  
 DATE: MAY 17, 2024  
 DESIGNED BY: RGM  
 DRAWN BY: PSH/RGM  
 CHECKED BY: BDH  
 DO NOT SCALE DRAWINGS

SHEET CONTENTS  
 INDEX OF DRAWINGS



SUMMARY OF CONTRACT QUANTITIES

BASE BID

ITEM DESCRIPTION	UNIT	QTY
5011 Restore and Repair Haul Routes	T&M	1
100001 Contractor Quality Control Program (CQCP)	LS	1
102001 Temporary Erosion and Sedimentation Controls	LS	1
105001 Mobilization, 10% Maximum	LS	1
105002 Safety and Security	LS	1
105004 Permits	DLR	10,000
105005 Engineer's Field Office	LS	1
101001 Pavement Removal, Asphalt	SYD	5,845
101003 Bituminous Cold Milling, Variable Depth	SYD	3,048
101005 Remove Drainage structure	EA	4
101007 Remove Storm Sewer	LFT	1,170
101009 Remove Underdrain	LFT	960
101012 Remove Electrical Handhole	EA	1
101014 Remove Elevated Edge Light and Base	EA	13
101016 Remove Guidance Sign and Base	EA	2
101019 Sawing Asphalt Pavement	LFT	675
152001 Unclassified Excavation	CYD	2,400
152003 Subgrade Undercut	CYD	150
154001 Subbase Course	CYD	2,650
154003 Separation Geotextile	SYD	4,250
209001 Crushed Aggregate Base Course	CYD	750
401001 Asphalt Surface Course, Gradation 2	TON	1,600
403001 Asphalt Mixture Base Course, Gradation 2	TON	1,250
603001 Emulsified Asphalt Tack Coat	GAL	1,360
620001 Surface Preparation	LS	1
620004 Airport Pavement Marking, Solid, Yellow, 1/2 Rate	SFT	600
620007 Airport Pavement Marking, Solid, Black	SFT	1,150
620010 Airport Pavement Marking, Solid, Yellow, with Reflective Beads	SFT	600
701001 12" Corrugated Polyethylene Pipe	LF	97
701002 24" Corrugated Polyethylene Pipe	LF	142
701004 12" Reinforced Concrete Pipe	LF	97
701005 24" Reinforced Concrete Pipe	LF	203
705001 6" Corrugated Perforated Polyethylene Pipe complete, including porous backfill and filter fabric	LF	1,091
751001 Inlet, Triple Grate	EA	1
751003 6" Diameter Manhole	EA	2
751004 Aircraft Rated Handhole	EA	6
751006 Structure Grade Adjustment	VF	1
108001 No. 8 AWG, 5kV, L-824, Type C Cable, Installed in Trench, Duct Bank or Conduit	LFT	1,550
110001 Non-Encased Electrical Conduit, 1-Way 1 1/4 Inch	LFT	1,550
115001 Electrical Handhole, Aircraft Rated	EA	1
125001 L-858(L) Guidance Sign, Base Mounted	EA	2
125003 L-861T(L) Elevated Medium Intensity Taxiway Light, Base Mounted in Turf	EA	17
125005 L-861T(L) Elevated Medium Intensity Taxiway Light, Reinstall on New Base in Turf	EA	2
125006 Electrical and Communication Investigation	LS	1
901001 Seeding	AC	2
905001 Topsoil (Obtained on Site or Removed from Stockpile)	CY	2,000
908001 Mulching, Netted/Binded	SY	12,000

BID ALTERNATE 1

ITEM DESCRIPTION	UNIT	QTY
102002 Temporary Erosion and Sedimentation Controls (Alternative 1)	LS	1
105003 Safety and Security (Alternative 1)	LS	1
101002 Pavement Removal, Asphalt (Alternative 1)	SYD	6,050
101004 Bituminous Cold Milling, Variable Depth (Alternative 1)	SYD	880
101006 Remove Drainage Structure	EA	6
101008 Remove Storm Sewer	LFT	505
101010 Remove Underdrain	LFT	1,405
101011 Remove Electrical Junction Can (Alternative 1)	EA	2
101013 Remove Electrical Handhole (Alternative 1)	EA	2
101015 Remove Elevated Edge Light and Base (Alternative 1)	EA	12
101017 Remove Guidance Sign and Base (Alternative 1)	EA	3
101018 Remove Concrete Encased Electrical Duct Bank (Alternative 1)	LFT	240
101020 Sawing Asphalt Pavement (Alternative 1)	LFT	805
152002 Unclassified Excavation (Alternative 1)	CYD	3,500
152004 Subgrade Undercut (Alternative 1)	CYD	150
154002 Subbase Course (Alternative 1)	CYD	3,100
154004 Separation Geotextile (Alternative 1)	SYD	4,650
209002 Crushed Aggregate Base Course (Alternative 1)	CYD	800
401002 Asphalt Surface Course, Gradation 2 (Alternative 1)	TON	1,200
403002 Asphalt Mixture Base Course, Gradation 2 (Alternative 1)	TON	1,400
603002 Emulsified Asphalt Tack Coat (Alternative 1)	GAL	1,400
620002 Surface Preparation (Alternative 1)	LS	1
620003 Airport Pavement Marking, Solid, White, 1/2 Rate (Alternative 1)	SFT	350
620005 Airport Pavement Marking, Solid, Yellow, 1/2 Rate (Alternative 1)	SFT	2,350
620006 Airport Pavement Marking, Solid, Red, 1/2 Rate (Alternative 1)	SFT	1,000
620008 Airport Pavement Marking, Solid, Black (Alternative 1)	SFT	4,600
620009 Airport Pavement Marking, Solid, White, with Reflective Beads (Alternate 1)	SFT	350
620011 Airport Pavement Marking, Solid, Yellow, with Reflective Beads (Alternative 1)	SFT	2,700
620012 Airport Pavement Marking, Solid, Red, with Reflective Beads (Alternate 1)	SFT	1,000
701003 24" Corrugated Polyethylene Pipe (Alternate 1)	LF	1,600
701006 18" Reinforced Concrete Pipe (Alternate 1)	LF	400
705002 6" Corrugated Perforated Polyethylene Pipe complete, including porous backfill and filter fabric (Alternate 1)	LF	1,400
705003 6" Corrugated Polyethylene Pipe (Alternate 1)	LF	214
751001 Inlet, Triple Grate (Alternate 1)	EA	1
751005 Aircraft Rated Handhole (Alternate 1)	EA	7
751007 Inlet, Double Grate (Alternate 1)	EA	2
751008 5" Diameter Manhole (Alternate 1)	EA	2
108002 No. 8 AWG, 5kV, L-824, Type C Cable, Installed in Trench, Duct Bank or Conduit (Alternative 1)	LFT	3,000
110002 Non-Encased Electrical Conduit, 1-Way 1 1/4 Inch (Alternative 1)	LFT	1,380
110003 Concrete Encased Electrical Ductbank, 4W 2 Inch	LFT	240
115002 Electrical Handhole, Aircraft Rated (Alternate 1)	EA	2
115003 Electrical Junction Can (Alternate 1)	EA	2
125002 L-858(L) Guidance Sign, Base Mounted (Alternative 1)	EA	3
125004 L-861T(L) Elevated Medium Intensity Taxiway Light, Base Mounted in Turf (Alternate 1)	EA	9
130001 Furnish and Install Surface Sensor Cable, Vaisala Type V Multi-Conductor (Alternate 1)	LF	4,350
901002 Seeding (Alternate 1)	AC	2
905002 Topsoil (Obtained on Site or Removed from Stockpile)(Alternate 1)	CY	1,800
908002 Mulching, Netted/Binded (Alternate 1)	SY	10,800

GENERAL NOTES:

- THIS PROJECT IS SUBJECT TO ALL INSPECTIONS PROVIDED IN THE CONTRACT DOCUMENTS AND TO INSPECTIONS BY REPRESENTATIVES OF ERIE REGIONAL AIRPORT AUTHORITY (ERAA), MILLCREEK TOWNSHIP AND ERIE COUNTY CONSERVATION DISTRICT.
- ACCESS TO THE SITE - THE CONTRACTOR'S ACCESS POINTS TO THE SITE WILL BE VERIFIED AT THE PRE-CONSTRUCTION MEETING.
- HAUL ROUTES - IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE OFF-SITE HAUL ROUTES (STATE HIGHWAYS, COUNTY ROADS, OR LOCAL ROADS) WITH THE APPROPRIATE OWNER WHO HAS JURISDICTION OVER THE AFFECTED ROUTE. ON-SITE HAUL ROUTES SHALL BE MAINTAINED BY THE CONTRACTOR AND SHALL BE RESTORED TO THE PRE-CONSTRUCTION CONDITION UPON COMPLETION OF USE AS A HAUL ROUTE. THE BEFORE AND AFTER CONDITION OF ON-SITE HAUL ROUTES SHALL BE JOINTLY INSPECTED BY THE CONTRACTOR AND THE ENGINEER PRIOR TO COMMENCING WORK.
- THE CONTRACTOR'S LAYDOWN AREA AND STAGING AREA WILL BE VERIFIED AT THE PRE-CONSTRUCTION MEETING. CONTRACTOR'S LAYDOWN AND STAGING AREA SHALL BE MAINTAINED BY THE CONTRACTOR AND SHALL BE RESTORED TO THE PRE-CONSTRUCTION CONDITION UPON COMPLETION OF THE PROJECT. THE BEFORE AND AFTER CONDITION OF THE LAYDOWN AND STAGING AREA SHALL BE JOINTLY INSPECTED BY THE CONTRACTOR AND ENGINEER. CONTRACTOR'S LAYDOWN DOCUMENTATION AND RESTORATION INCIDENTAL TO MOBILIZATION ITEM.
- THE EXISTING CONDITIONS SHOWN ON THESE PLANS WERE DEVELOPED FROM RECORD PLANS AND SURVEY DATA AND ARE THE ANTICIPATED CONDITIONS AT THE COMMENCEMENT OF CONSTRUCTION. PRIOR TO BID, THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO BID OF ANY DISCREPANCIES BETWEEN THE BID DOCUMENTS AND THE EXISTING CONDITIONS.
- THE APPROXIMATE LOCATIONS OF KNOWN AIRPORT UNDERGROUND UTILITIES ARE SHOWN ON THE PLANS AND ARE NOT WARRANTED TO BE CORRECT. PRIOR TO ANY EXCAVATION THE CONTRACTOR SHALL CALL THE PENNSYLVANIA ONE CALL SYSTEM, INC. AT 1-800-242-1776. THE CONTRACTOR MUST VERIFY THE EXACT LOCATION OF UTILITIES PRIOR TO THE START OF CONSTRUCTION. IN THE EVENT THAT THE CONTRACTOR DAMAGES A UTILITY, THE ENGINEER MUST BE NOTIFIED IMMEDIATELY. THE REPAIR MUST BE STARTED IMMEDIATELY AND CONTINUED UNTIL SERVICE HAS BEEN FULLY RESTORED AND THE REPAIRS ARE COMPLETE. ALL SUCH REPAIRS SHALL BE AT THE CONTRACTOR'S EXPENSE AND SHALL BE INSPECTED AND APPROVED BY THE ENGINEER AND THE UTILITY OWNER PRIOR TO BACKFILL BY THE CONTRACTOR. IF REQUIRED BY THE ENGINEER, THE CONTRACTOR SHALL SUPPLY AND INSTALL A CONCRETE MARKER AT ALL APPLICABLE LOCATIONS AT NO ADDITIONAL EXPENSE TO THE OWNER.
- THE CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION ACTIVITIES WITH THE ENGINEER, OTHER CONTRACTORS, AND UTILITY COMPANIES WITHIN THE PROJECT LIMITS.
- ANY WORK PERFORMED WITHOUT THE KNOWLEDGE AND APPROVAL OF THE ENGINEER IS SUBJECT TO REMOVAL AND REPLACEMENT AT THE CONTRACTOR'S EXPENSE.
- THE ENGINEER MAY SUSPEND THE WORK BY WRITTEN NOTICE WHEN, IN HIS/HER JUDGMENT, PROGRESS IS UNSATISFACTORY. WORK BEING DONE IS UNAUTHORIZED OR DEFECTIVE, WEATHER CONDITIONS ARE UNSUITABLE, OR THERE IS DANGER TO THE PUBLIC HEALTH, SAFETY, OR AIRFIELD SAFETY.
- APPROVAL OF A PORTION OF THE WORK IN PROGRESS DOES NOT GUARANTEE ITS FINAL ACCEPTANCE. TESTING AND EVALUATION MAY CONTINUE UNTIL FINAL ACCEPTANCE OF A COMPLETE WORKABLE UNIT IS PROVIDED IN WRITING.
- ACCEPTANCE OF COMPLETED WORK WILL NOT BE GIVEN UNTIL DEFECTIVE OR UNAUTHORIZED WORK IS REMOVED AND FINAL CLEAN-UP IS COMPLETE.
- CONTRACTOR RESPONSIBLE TO KEEP PUBLIC ROADS FREE OF DEBRIS BETWEEN THE CONTRACTOR STAGING AREA AND AIRFIELD ACCESS POINT.
- PRIOR TO REOPENING TEMPORARILY CLOSED AIRFIELD PAVEMENTS, THE AREA MUST BE THOROUGHLY CLEANED OF ALL DEBRIS AND INSPECTED AND APPROVED BY THE ENGINEER AND AIRPORT PERSONNEL.
- CONTRACTOR'S PERSONNEL SHALL PARK IN CONTRACTOR STAGING AREAS.
- THE CONTRACTOR SHALL CONDUCT ITS ACTIVITIES IN A SAFE MANNER AS SPECIFIED IN THE CONTRACT DOCUMENTS.
- THE HORIZONTAL CONTROL IS TIED TO THE PENNSYLVANIA STATE PLANE COORDINATE SYSTEM (SPSC 83), PA NORTH AND IS RELATIVE TO THE PAC'S AND SAC'S MONUMENTS AT THE AIRPORT.
- VERTICAL CONTROL IS BASED UPON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) AND IS RELATIVE TO THE PAC'S AND SAC'S MONUMENTS AT THE AIRPORT.
- ALL EROSION AND SEDIMENTATION POLLUTION CONTROL DEVICES SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT.

PENNSYLVANIA ACT 287, as amended

REQUIRES NOTIFICATION TO UTILITY COMPANIES PRIOR TO ANY DIGGING, DRILLING, BLASTING OR EXCAVATING. CONTRACTOR SHALL CONTACT:



PA ONE-CALL  
1-800-242-1776  
PRIOR TO START OF WORK.

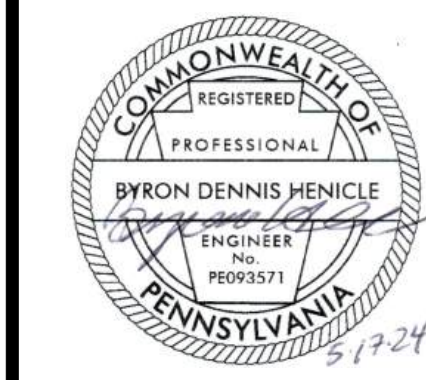
EXISTING UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE INFORMATION AND THE LOCATIONS MUST BE CONSIDERED APPROXIMATE. OTHER UTILITIES MAY EXIST WHICH ARE NOT SHOWN. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ASCERTAIN THE PHYSICAL LOCATION OF ALL UTILITY LINES PRIOR TO THE START OF CONSTRUCTION.

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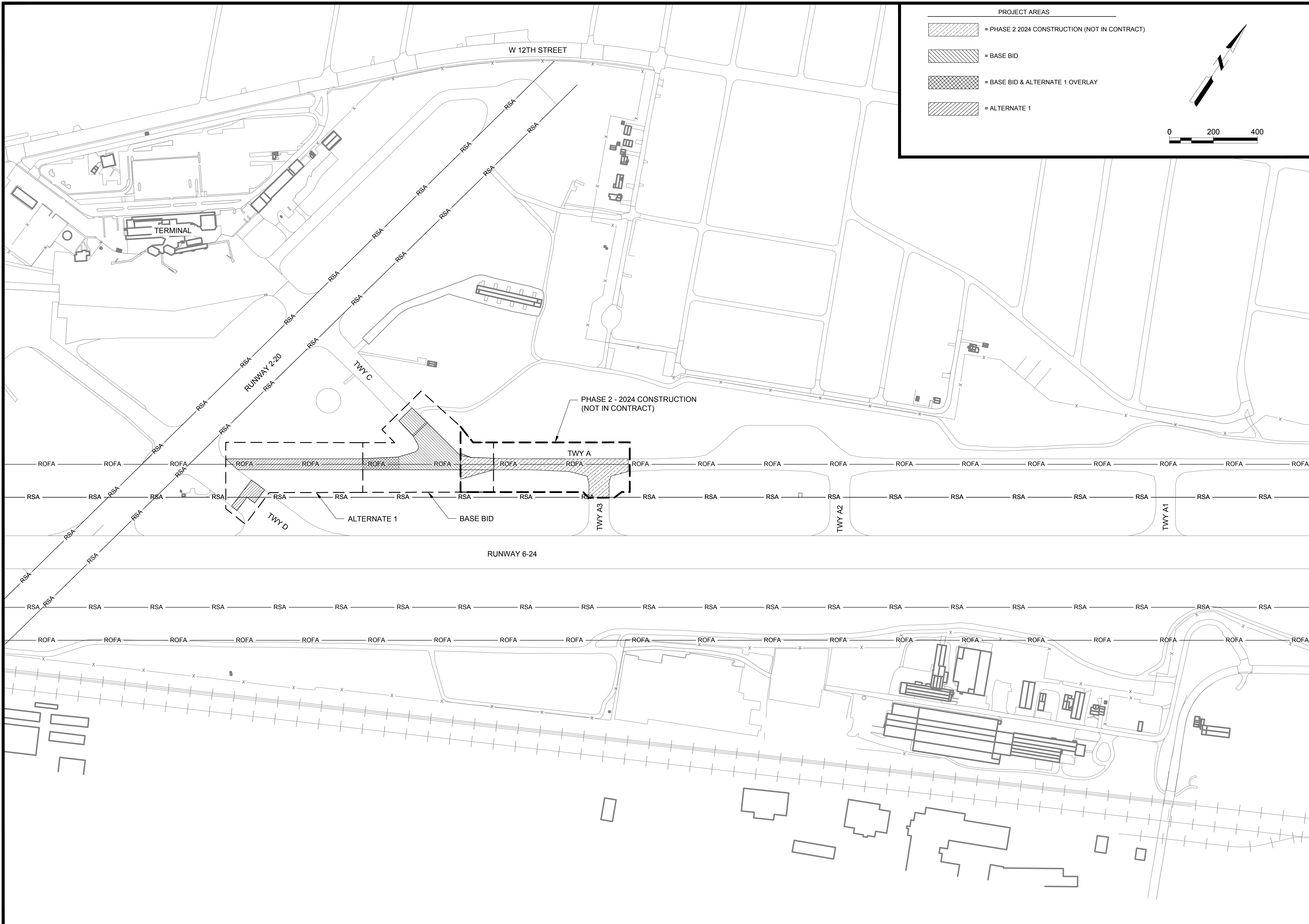
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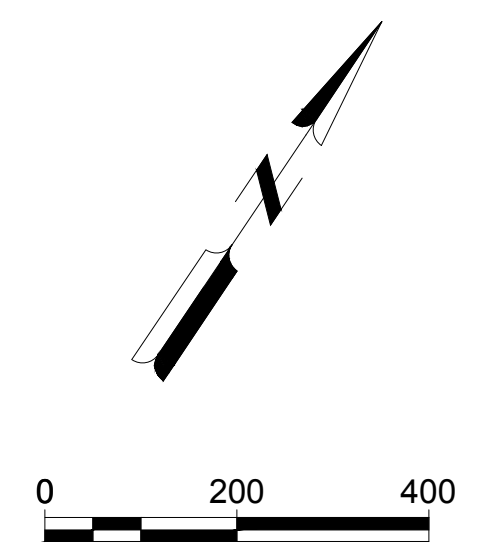
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**G-003**





- PROJECT AREAS
-  = PHASE 2 2024 CONSTRUCTION (NOT IN CONTRACT)
  -  = BASE BID
  -  = BASE BID & ALTERNATE 1 OVERLAY
  -  = ALTERNATE 1



**Mead & Hunt**  
 Mead and Hunt, Inc.  
 1007 N. Front Street  
 Suite 4N  
 Harrisburg, PA 17102  
 phone: 971-256-9307  
 meadhunt.com

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**ERIE INTERNATIONAL AIRPORT  
 REALIGNMENT & RECONSTRUCTION  
 OF TAXIWAY A - PHASE 3**  
 4411 WEST 12TH STREET  
 ERIE, PENNSYLVANIA

ISSUED 05/17/2024 ISSUED FOR BID



AIP NO: 3-42-030-XXX-2024  
 MSH NO: 3225600-192499.05  
 DATE: MAY 17, 2024  
 DESIGNED BY: RGM  
 DRAWN BY: PSH/RGM  
 CHECKED BY: BDH  
 DO NOT SCALE DRAWINGS

SHEET CONTENTS  
 PROJECT LAYOUT PLAN

SHEET NO. 4 of 27

**G-021**

X:\3225600\192499.05\TECH\CAD\G-021 PROJECT LAYOUT PLAN.DWG  
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**ERIE INTERNATIONAL AIRPORT  
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4411 WEST 12TH STREET  
ERIE, PENNSYLVANIA**

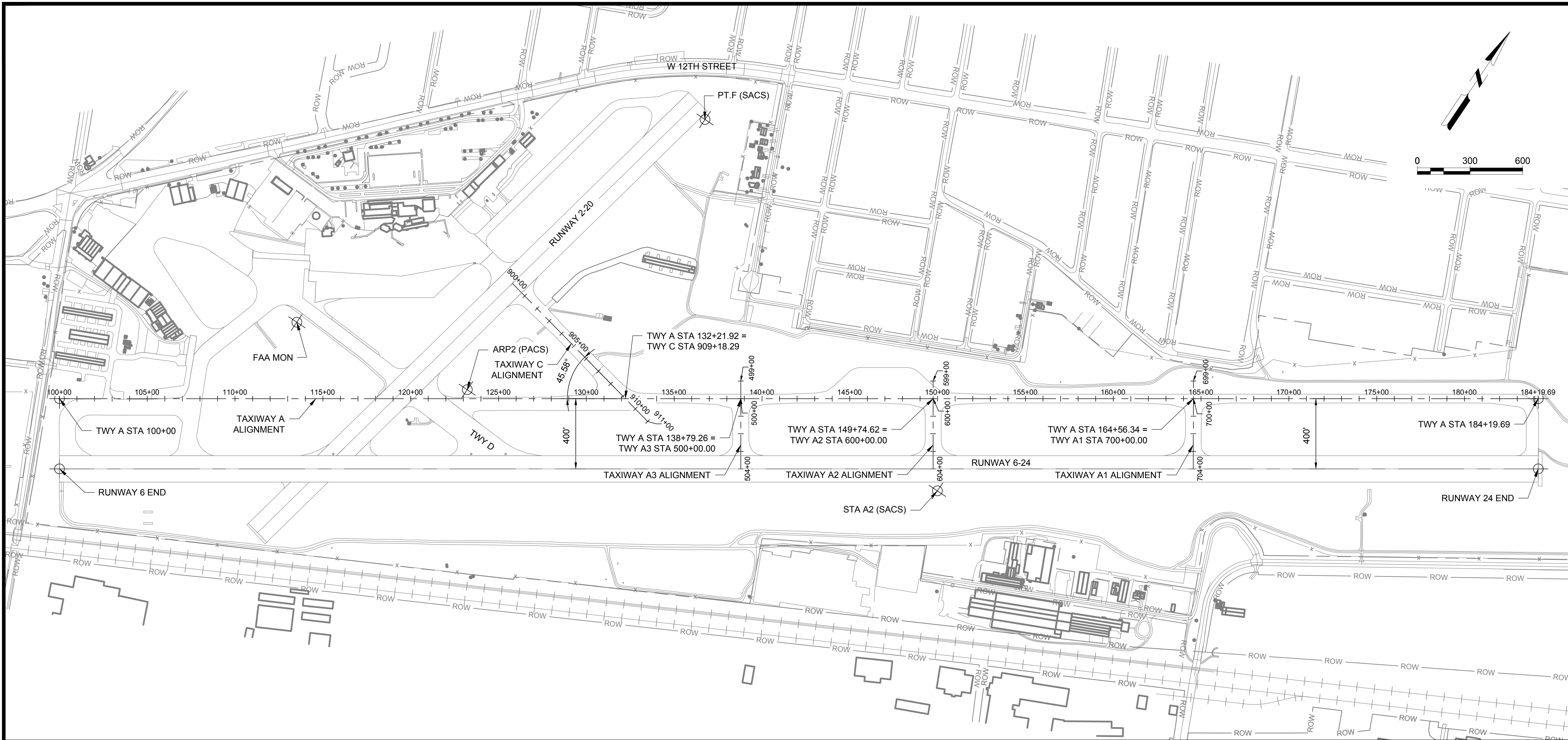
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SHEET CONTENTS  
SURVEY CONTROL PLAN

SHEET NO. 5 of 27



### SURVEY CONTROL POINT DATA

BENCHMARK	DESCRIPTION	NORTHING	EASTING	ELEVATION
ARP2 (PACS)	NGS MONUMENT	706885.150	1309324.980	728.410
STA A2 (SACS)	NGS MONUMENT	707900.39	1311868.02	727.590
PT.F (SACS)	NGS MONUMENT	708916.53	1309590.82	733.560
FAA MON	FAA MONUMENT	706662.31	1308305.90	729.010

### TAXIWAY A ALIGNMENT DATA

GEOMETRY POINTS	STATION	NORTHING	EASTING
P.O.B.	100+00.00	705547.6000	1307426.5400
P.O.E.	184+19.69	710244.9756	1314414.0883
PA83-NF BEARING:	N 56° 05' 29.59" E		

### TAXIWAY A1 ALIGNMENT DATA

GEOMETRY POINTS	STATION	NORTHING	EASTING
P.O.B.	699+00.00	709232.7397	1312729.1020
P.O.E.	704+00.00	708817.1316	1313007.0760
PA83-NF BEARING:	S 33° 46' 33.83" E		

### TAXIWAY A2 ALIGNMENT DATA

GEOMETRY POINTS	STATION	NORTHING	EASTING
P.O.B.	599+00.00	708405.9518	1311499.2188
P.O.E.	604+00.00	707991.0004	1311778.1698
PA83-NF BEARING:	S 33° 54' 39.44" E		

### TAXIWAY A3 ALIGNMENT DATA

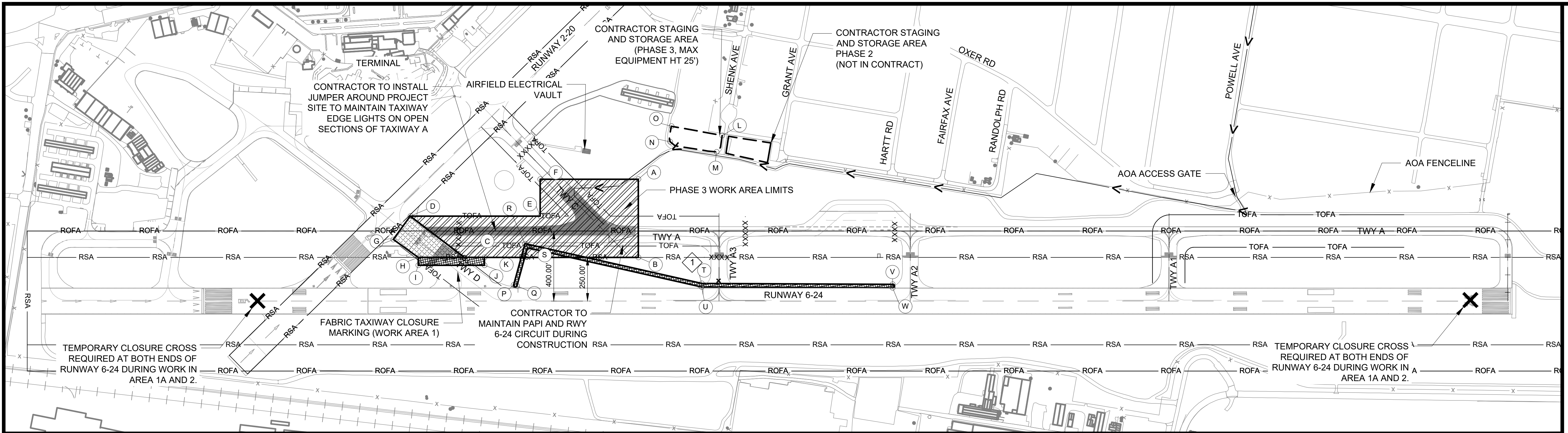
GEOMETRY POINTS	STATION	NORTHING	EASTING
P.O.B.	499+00.00	707794.8468	1310590.1739
P.O.E.	504+00.00	707379.8917	1310869.1189
PA83-NF BEARING:	S 33° 54' 36.56" E		

### TAXIWAY C ALIGNMENT DATA

GEOMETRY POINTS	STATION	NORTHING	EASTING
P.O.B.	900+00.00	707530.7896	1309201.1018
P.O.E.	911+00.00	707308.3786	1310278.3823
PA83-NF BEARING:	S 78° 20' 05.42" E		

TOPOGRAPHIC SURVEY PERFORMED BY MICHAEL BAKER INTERNATIONAL USING LIDAR TECHNOLOGY IN NOV 2016. REFERENCING LOCAL AIRPORT PACS (ERI ARP 2) AND SACS (ERI AP STA A 2, ERI CONTROL POINT F). FIELD SURVEY PERFORMED BY PARKER SURVEYING AND ENGINEERING LLC IN NOV 2016 TO ESTABLISH HORIZONTAL AND VERTICAL CONTROL POINTS TO GEOREFERENCE THE LIDAR POINT CLOUD DATA TO THE PA STATE PLANE COORDINATE SYSTEM, FIPS ZONE 3701, NAD 83 USING RTK GPS EQUIPMENT. ELEVATIONS FOR LIDAR CONTROL POINTS WERE BASED ON NAVD 88 AND ESTABLISHED BY DIFFERENTIAL LEVELS USING A TRIMBLE DINI DIGITAL LEVEL.





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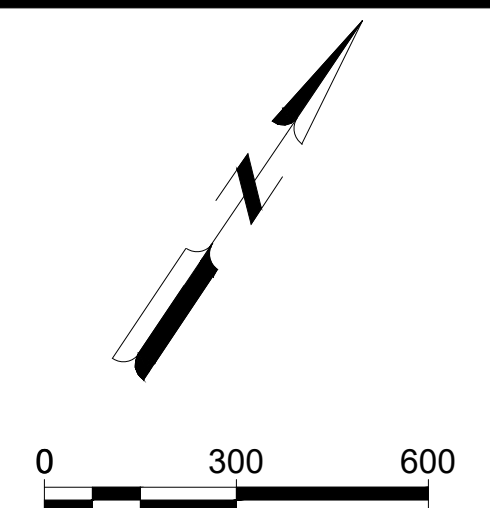
## ERIE INTERNATIONAL AIRPORT REALIGNMENT & RECONSTRUCTION OF TAXIWAY A - PHASE 3 4411 WEST 12TH STREET ERIE, PENNSYLVANIA

### GENERAL NOTES:

- THE CONTRACTOR IS RESPONSIBLE FOR PLACEMENT AND REMOVAL OF BARRICADES. COORDINATE WITH THE RPR AND AIRPORT TO CONFIRM NOTAM'S ARE ISSUED AND APPROPRIATE RUNWAY AND TAXIWAY LIGHTING CIRCUITS ARE DISABLED.
- THE CONTRACTOR SHALL LOCK OUT/TAG OUT ALL ELECTRICAL CIRCUITS TO CLOSED PAVEMENTS AND INSTALL TEMPORARY JUMPERS WHERE NECESSARY TO LIGHT OPEN PAVEMENTS. THE CONTRACTOR SHALL PROVIDE A TEMPORARY JUMPER PLAN 14 DAYS PRIOR TO WORK AREA CHANGE FOR APPROVAL BY THE RPR AND AIRPORT. ELECTRICAL LOCK OUT/TAG OUT AND TEMPORARY INSTALLATION SHALL BE INCIDENTAL TO MOBILIZATION.
- THE CONTRACTOR SHALL REMOVE TAXIWAY CENTERLINES LEADING TO CLOSED TAXIWAY PAVEMENTS FOR ALL CLOSURES OVER 30 DAYS IN DURATION.
- THE CONTRACTOR SHALL PROVIDE GATE GUARD(S) AT ALL CONSTRUCTION ENTRANCES. COORDINATE ADDITIONAL TRAINING WITH THE AIRPORT OPERATOR.
- THE CONTRACTOR SHALL REQUEST A SAFETY AND LIGHTING INSPECTION BY AIRPORT OPERATIONS PRIOR TO LEAVING THE CONSTRUCTION SITE AFTER EACH WORKING DAY. THE SAFETY INSPECTION SHALL INCLUDE THE CONDITION OF ACTIVE OPERATION AREAS ADJACENT TO THE CONSTRUCTION LIMIT, THE CONDITION OF THE CONTRACTOR STAGING AREA, AND THE SECURITY OF THE CONSTRUCTION ENTRANCE(S). THE CONTRACTOR'S SUPERVISOR SHALL REMAIN ON SITE UNTIL THE SAFETY INSPECTION IS COMPLETE AND ALL DEFICIENCIES HAVE BEEN CORRECTED TO THE SATISFACTION OF THE AIRPORT OPERATIONS DEPARTMENT.
- ACCESS TO THE SITE WILL BE FROM POWELL AVE. THE CONTRACTOR SHALL INSTALL CONSTRUCTION ENTRANCE ROADWAY SIGNAGE AS REQUIRED BY MILLCREEK TWP AND IN COMPLIANCE WITH MUTCD.
- CONTRACTOR TO COORDINATE ACCESS TO CABLE INSTALLATION AREAS (NEW CABLE IN EXISTING CONDUIT) THAT ARE OUTSIDE OF THE PHASE 3 WORK LIMITS WITH AIRPORT OPERATIONS. WORK IN THESE AREAS WITHIN THE RSA OR TOFA WILL INCLUDE NIGHT WORK BETWEEN THE HOURS OF 11:00PM TO 5:00 AM. ALL PERSONNEL AND EQUIPMENT MUST VACATE THE RSA OR TOFA WHEN AIRCRAFT ARE OPERATIONAL ON ADJACENT PAVEMENTS.
- CONTRACTOR IS ADVISED OF SPECIAL EVENTS INCLUDING TALL SHIPS FESTIVAL IN AUGUST, AND DISCOVER PRESQUE IS IN JULY. CONTRACTOR SHALL COORDINATE WITH THE AIRPORT ON POTENTIAL IMPACTS THESE EVENTS HAVE ON CONSTRUCTION OPERATIONS.
- CONTRACTOR TO COORDINATE WORK AREA 1 WORK WITH AIRPORT OPERATIONS. THE WORK WITHIN RUNWAY SAFETY AREA SHALL ONLY BE PERMITTED AT NIGHT BETWEEN THE HOURS OF 11:00 PM TO 5:00 AM, IN COORDINATION WITH AIRPORT OPERATIONS. ALLOWABLE WORK ONLY WHEN NO COMMERCIAL AIRCRAFT OPERATIONS ARE SCHEDULED. ALL WORK SHALL BE BACKFILLED TO MEET RSA REQUIREMENTS (NO DROPOFFS GREATER THAN 3") WITHIN THE WORK TIMEFRAME PERMITTED BY AIRPORT OPERATIONS. RUNWAY CLOSURE CROSSES SHALL PROVIDED BY AIRPORT. CONTRACTOR SHALL MAINTAIN, PROVIDE FUEL, AND SERVICE THE CLOSURE CROSSES FOR THE DURATION OF CLOSURES.

### FAA AIRSPACE AND 7460 INFORMATION

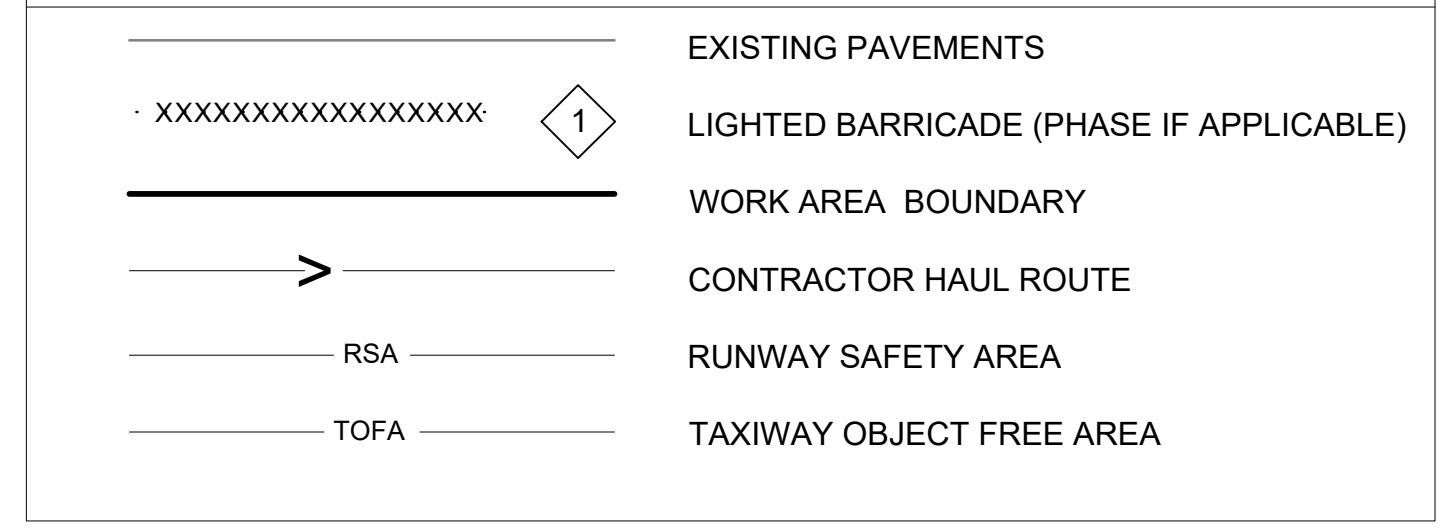
POINT	DESCRIPTION	LATITUDE	LONGITUDE	GROUND	HEIGHT AGL
A	WORK AREA	N42° 05' 01.15"	W80° 10' 32.31"	727'	25'
B	WORK AREA	N42° 04' 57.57"	W80° 10' 28.88"	728'	25'
C	WORK AREA	N42° 04' 51.84"	W80° 10' 39.62"	729'	25'
D	WORK AREA	N42° 04' 51.97"	W80° 10' 44.78"	729'	25'
E	WORK AREA	N42° 04' 56.24"	W80° 10' 36.75"	729'	25'
F	WORK AREA	N42° 04' 57.93"	W80° 10' 38.38"	729'	25'
G	WORK AREA	N42° 04' 50.33"	W80° 10' 44.80"	729'	25'
H	WORK AREA	N42° 04' 50.34"	W80° 10' 42.47"	729'	25'
I	WORK AREA	N42° 04' 49.97"	W80° 10' 42.13"	729'	25'
J	WORK AREA	N42° 04' 52.15"	W80° 10' 38.04"	729'	25'
K	WORK AREA	N42° 04' 52.51"	W80° 10' 38.39"	729'	25'
L	STORAGE AREA	N42° 05' 05.92"	W80° 10' 29.06"	732'	25'
M	STORAGE AREA	N42° 05' 04.98"	W80° 10' 28.68"	732'	25'
N	STORAGE AREA	N42° 05' 03.93"	W80° 10' 32.00"	732'	25'
O	STORAGE AREA	N42° 05' 04.68"	W80° 10' 32.60"	732'	25'
P	WORK AREA	N42° 04' 52.20"	W80° 10' 35.36"	730'	25'
Q	WORK AREA	N42° 04' 52.27"	W80° 10' 35.11"	730'	25'
R	WORK AREA	N42° 04' 54.47"	W80° 10' 36.48"	730'	25'
S	WORK AREA	N42° 04' 54.36"	W80° 10' 36.15"	730'	25'
T	WORK AREA	N42° 04' 58.45"	W80° 10' 23.81"	729'	25'
U	WORK AREA	N42° 04' 58.28"	W80° 10' 23.66"	729'	25'
V	WORK AREA	N42° 05' 04.68"	W80° 10' 11.97"	729'	25'
W	WORK AREA	N42° 05' 04.52"	W80° 10' 11.82"	729'	25'



WORK AREA	CONSTRUCTION	AFFECTED ACTIVE OPERATION AREAS (AOA'S)	WORK HOURS	CONTRACT TIME	SAFETY AND SECURITY
1	CONSTRUCT TAXIWAY A AS SHOWN. COMPLETE REMOVAL OF TAXIWAY A INCLUDING SAWCUTTING, PAVEMENT REMOVAL, BASE COURSE, PAVEMENT, TOPSOIL GRADING, SEEDING AND MULCHING. COMPLETE TAXIWAY EDGE LIGHTING AND GUIDANCE SIGN MODIFICATIONS. EDGE RESTORATION AFTER PAVING, AND PLACE HALF-RATE MARKING ON NEW PAVEMENTS.	1. TAXIWAY A CLOSED (TWY D TO TWY A2) 1.1. FAA FLIGHT PROCEDURES MAY INCREASE VISIBILITY MINIMUMS ON RUNWAY 6-24 2. TAXIWAY C CLOSED (RWY2-20 TO TWY A)	NORMAL / UN-RESTRICTED	60 CALENDAR DAYS TOTAL BASE BID: 30 DAYS ALT 1: 28 DAYS	THE CONTRACTOR SHALL NOTIFY THE AIRPORT AT LEAST 5 DAYS IN ADVANCE OF WORK AND WORK AREA CHANGES SO THAT THE AIRPORT MANAGEMENT CAN ISSUE A NOTAM OF CONSTRUCTION ACTIVITY. 1. ALL GATES MUST BE LOCKED OR GATE GUARD POSTED. 2. ALL CONTRACTOR PERSONNEL WORKING ON-SITE SHALL UNDERGO AIRPORT TRAINING AND HAVE AIRPORT ISSUED BADGE. 3. MAXIMUM EQUIPMENT HEIGHT FOR THE PROPOSED WORK AREA IS 25' UNLESS OTHERWISE NOTED.
1A	ALL WORK AREA 1 WORK (PAVEMENT REMOVAL AND RESTORATION) WITHIN THE 500' WIDE RSA ALL PHASE 1 ELECTRICAL WORK WITHIN THE 500' WIDE RSA	1. RWY 6-24 CLOSED 2. TAXIWAY A3 CLOSED 3. TAXIWAY A2 CLOSED	SEE GENERAL NOTE 9	SEE GENERAL NOTE 9	
1B	WORK AREA 1 WORK WITHIN THE TAXIWAY D TOFA.	1. TWY D CLOSED 2. TWY A CLOSED (FROM TWY C TO TWY D)	NORMAL / UN-RESTRICTED	ALT 1: 2 CALENDAR DAYS	
SCHEDULING NOTE: FINAL MARKING WORK MUST OCCUR A MINIMUM OF 30 DAYS AFTER COMPLETION OF RESPECTIVE ASPHALT PAVING, A STOP ORDER IS ANTICIPATED.					
2	COMPLETE FULL RATE MARKING OF NEW PAVEMENTS.	1. COORDINATE TEMPORARY CLOSURES ON TAXIWAYS AND RUNWAYS WITH AIRPORT OPERATIONS.	NORMAL / UN-RESTRICTED	1 CALENDAR DAY (BASE AND ALT 1)	1. WORK SHALL TAKE PLACE ON A PULL-OFF BASIS. CONSTRUCTION TRAFFIC MUST YIELD TO ALL AIRCRAFT.

TOTAL CONTRACT TIME: 60 CALENDAR DAYS

### LEGEND



### CRITICAL DIMENSIONS (TOTAL WIDTH):

RUNWAY 6-24: RDC: C-II-2400 RSA: 500' WIDE OFZ: 400' WIDE OFA: 800' WIDE	RUNWAY 2-20: RDC: B-II-VISUAL RSA: 150' WIDE OFZ: 400' WIDE OFA: 500' WIDE	TAXIWAYS: TDG: 3 ADG: III TSA: 118' WIDE OFA: 171' WIDE
--------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------	------------------------------------------------------------------

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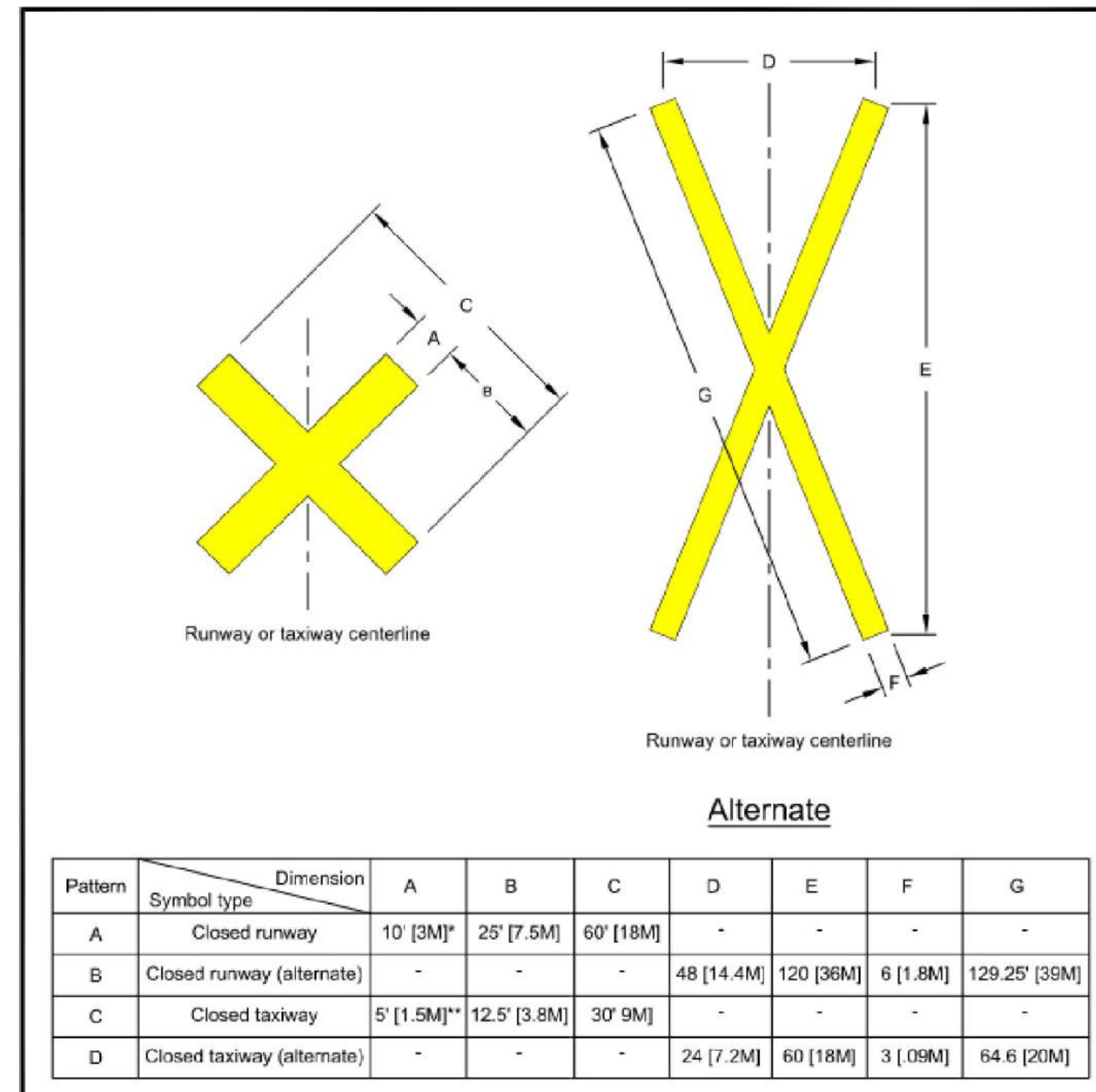
SHEET CONTENTS  
 CONSTRUCTION SAFETY PHASING PLAN

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# G-081



Figure A-27. Closed Runway and Taxiway Markings

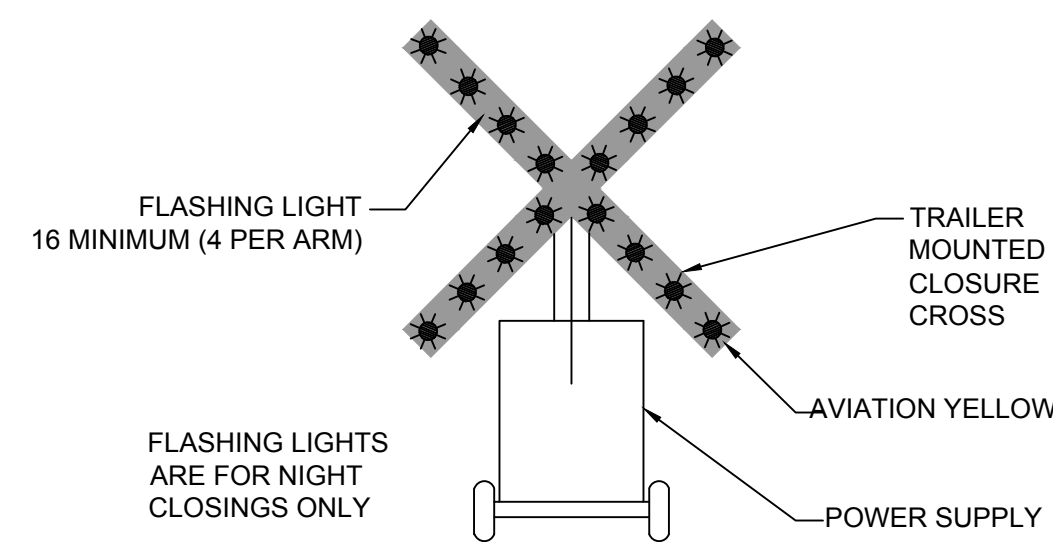


Note: Both symbols are always painted yellow.

\* For temporary symbol, this dimension may be changed to 8 ft (2.4m).

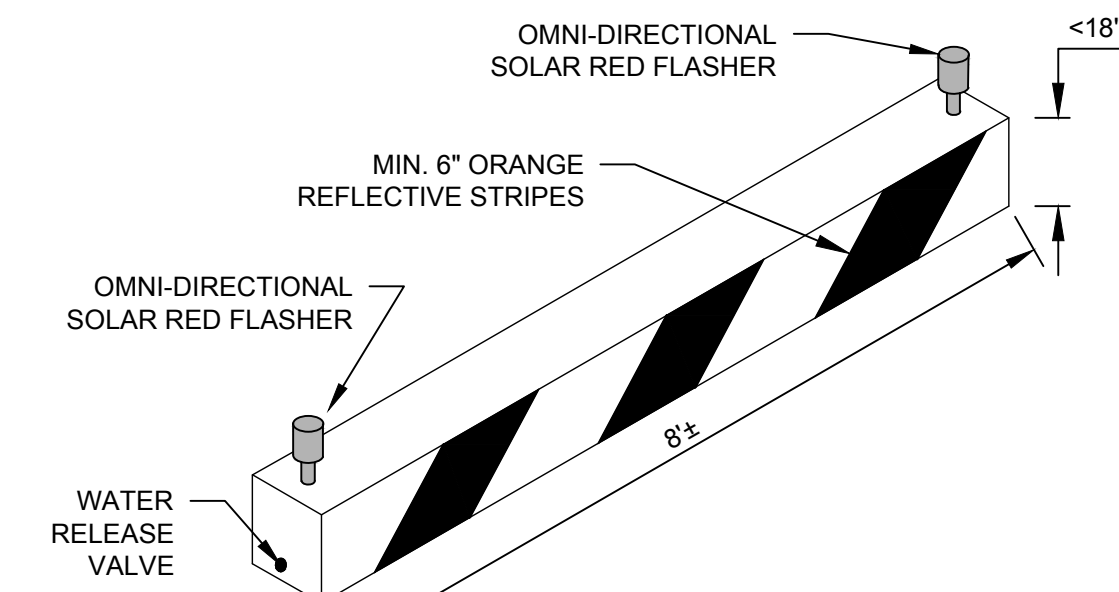
\*\* For temporary symbol, this dimension may be changed to 4 ft (1.2m).

4 CLOSED RUNWAY AND TAXIWAY MARKINGS  
NOT TO SCALE



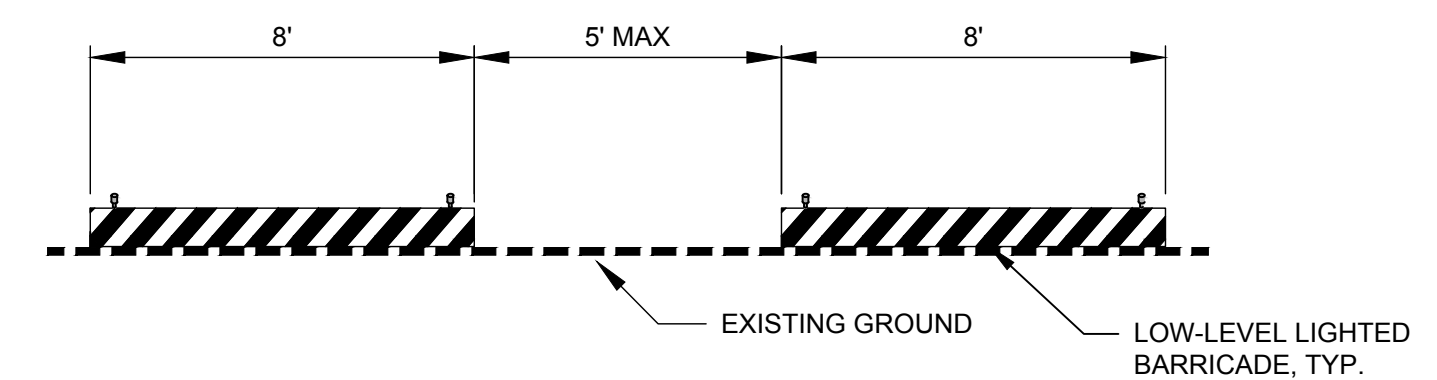
TEMPORARY CLOSURE CROSS DETAIL

- NOTE:
1. THE OWNER SHALL SUPPLY. THE CONTRACTOR SHALL MAINTAIN TWO GENERATOR-POWERED, LIGHTED CLOSURE MARKERS FOR THE DURATION REQUIRED. MARKERS SHALL BE MOVED, FUELED, OILED AND MAINTAINED BY THE CONTRACTOR FOR THE DURATION REQUIRED.
  2. MARKERS SHALL BE PLACED ON RUNWAY NUMERALS FOR THE ENTIRE PERIOD OF TIME THAT RUNWAY 6-24 IS CLOSED AS SHOWN.
  3. CLOSURE MARKERS SHALL BE CERTIFIED AND CURRENTLY APPROVED EQUIPMENT PER THE CURRENT EDITIONS OF FAA AC 150/5345-53 AND FAA AC 150/5345-55.

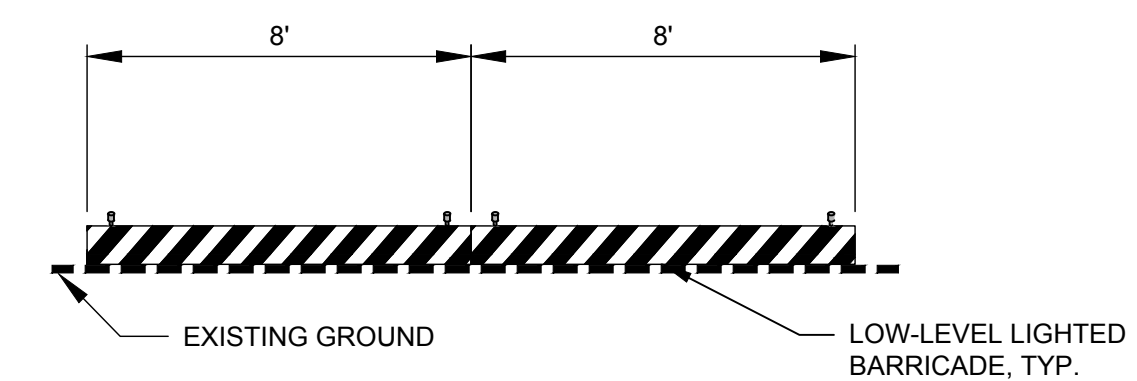


- NOTES:
1. CONTRACTOR SHALL SUPPLY AND MAINTAIN LOW-LEVEL LIGHTED BARRICADES FOR THE DURATION OF THE PROJECT.
  2. GAPS IN BARRICADES SHALL NOT EXCEED 5-FEET.
  3. THERE SHALL BE NO GAPS IN BARRICADES PLACED AT RUNWAYS.

1 LOW-LEVEL LIGHTED BARRICADE DETAIL  
NOT TO SCALE



2 LOW-LEVEL LIGHTED BARRICADE LAYOUT DETAIL  
NOT TO SCALE



3 LOW-LEVEL LIGHTED BARRICADE PLACED AT RUNWAYS DETAIL  
NOT TO SCALE

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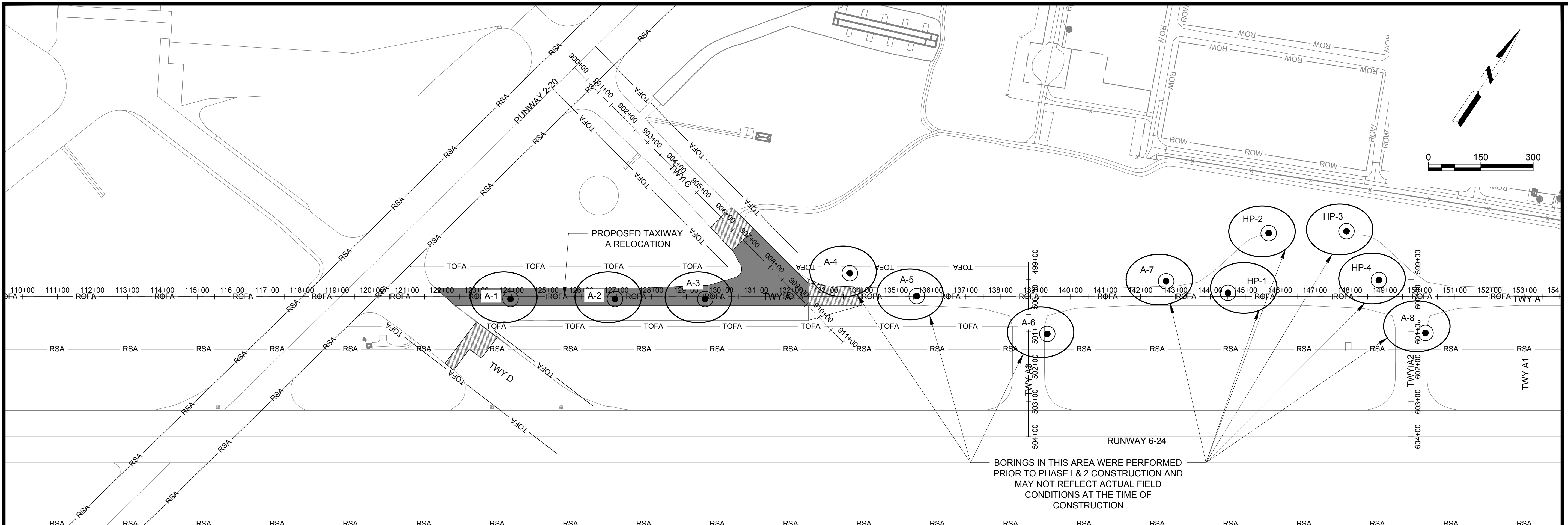
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SHEET CONTENTS  
CONSTRUCTION  
SAFETY PHASING  
PLAN DETAILS

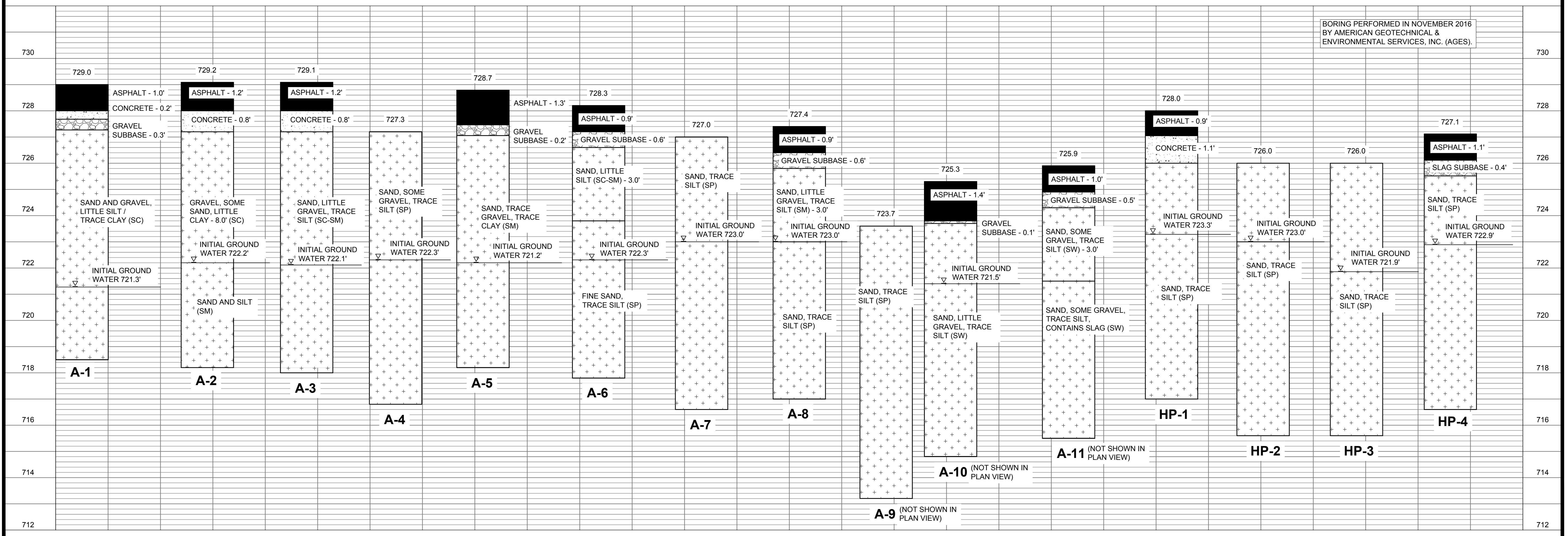
SHEET NO. 7 of 27

**G-151**



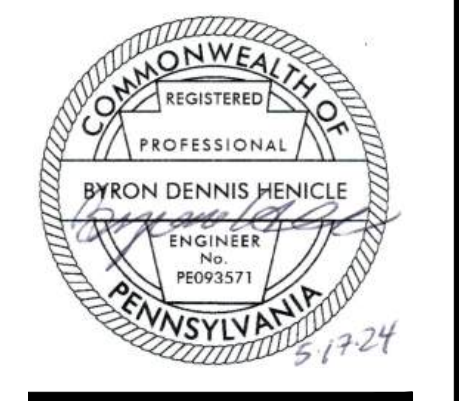


BORINGS IN THIS AREA WERE PERFORMED PRIOR TO PHASE I & 2 CONSTRUCTION AND MAY NOT REFLECT ACTUAL FIELD CONDITIONS AT THE TIME OF CONSTRUCTION



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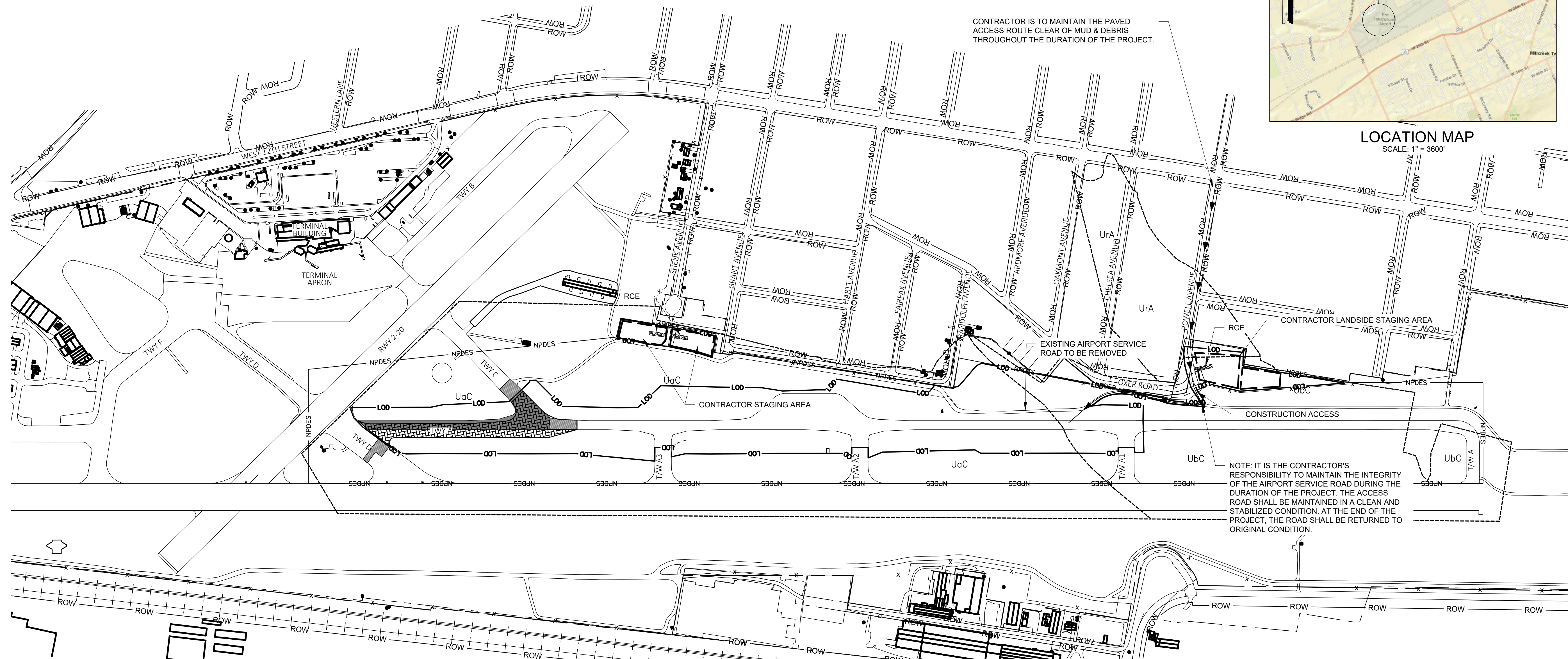
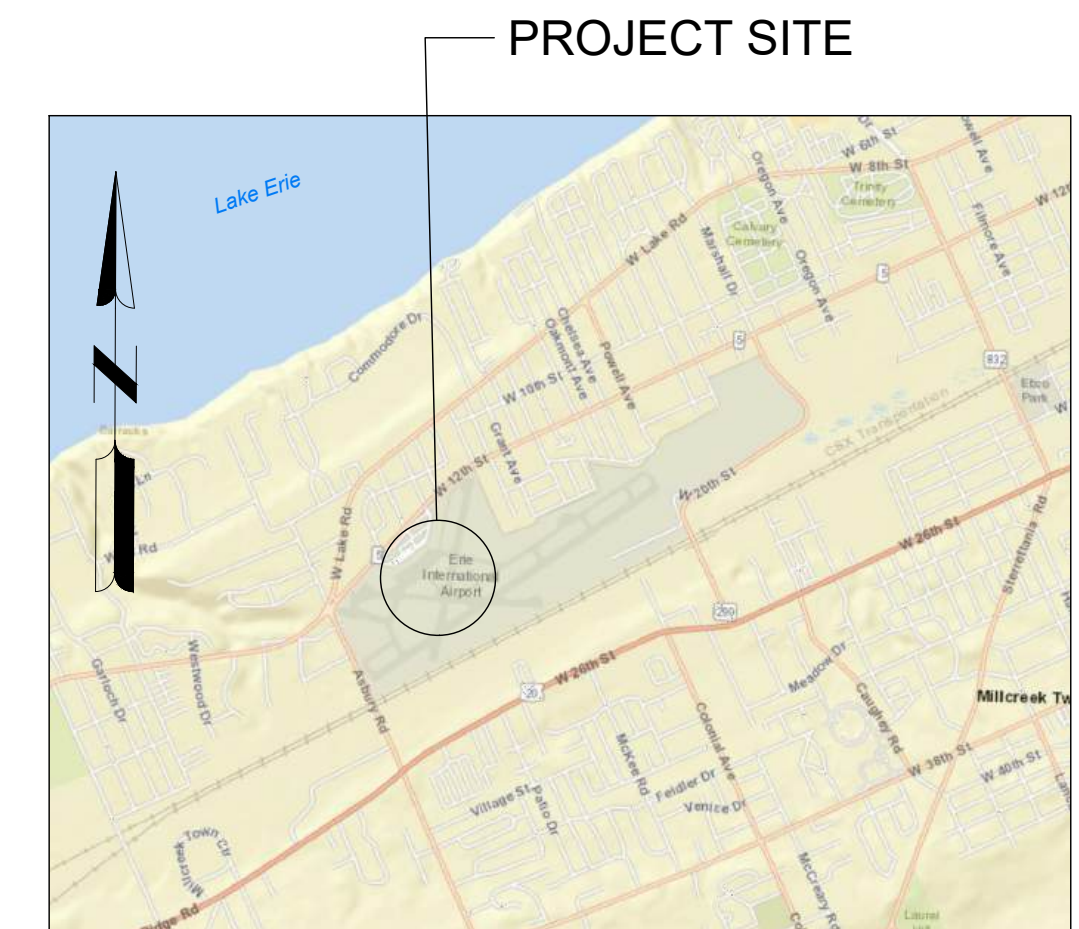
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SHEET CONTENTS  
BORING LOCATION PLAN

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DRAINS TO LAKE ERIE  
(UNT 62435)  
COLD WATER FISHES (CWF), MIGRATORY FISH (MF)  
(SEE DA-1 & DA-2 FOR DISCHARGE POINTS)



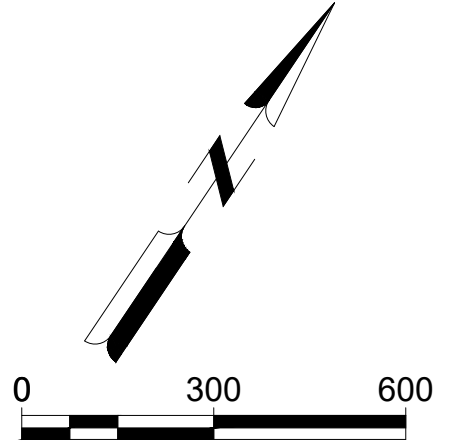
CONTRACTOR IS TO MAINTAIN THE PAVED ACCESS ROUTE CLEAR OF MUD & DEBRIS THROUGHOUT THE DURATION OF THE PROJECT.

NOTE: IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN THE INTEGRITY OF THE AIRPORT SERVICE ROAD DURING THE DURATION OF THE PROJECT. THE ACCESS ROAD SHALL BE MAINTAINED IN A CLEAN AND STABILIZED CONDITION. AT THE END OF THE PROJECT, THE ROAD SHALL BE RETURNED TO ORIGINAL CONDITION.

OVERALL SITE PLAN

**LEGEND**

	AIRPORT PROPERTY LINE
	LIMIT OF DISTURBANCE: 36.0 ACRES
	NPDES PERMIT BOUNDARY / SITE BOUNDARY: 93.0 ACRES
	WORK AREA STAGING AREA
	PAVEMENT AREAS TO BE REMOVED
	PROPOSED PAVEMENT AREAS
	PROPOSED ROCK CONSTRUCTION ENTRANCE (RCE)
	SOIL BOUNDARY AND DESCRIPTION
	CONTRACTOR HAUL ROUTE

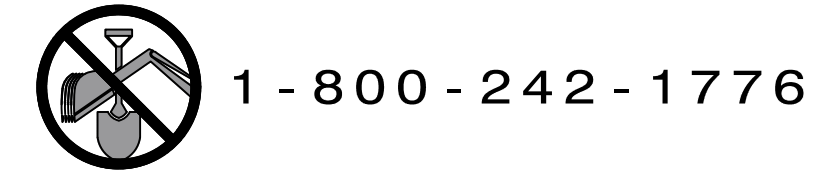


**SOILS**

THE SOILS WITHIN PROJECT AREA:

- UaC - UDORTHENTS, LOAMY, 0 - 15% SLOPES
- UaB - UDORTHENTS, SAND, 0 - 15% SLOPES
- UaA - URBAN LAND-RED HOOK COMPLEX, 0 TO 3 PERCENT SLOPES

**CALL BEFORE YOU DIG!**  
PENNSYLVANIA LAW REQUIRES 3 WORKING DAYS NOTICE FOR CONSTRUCTION PHASE AND 10 WORKING DAYS IN DESIGN STAGE - STOP CALL Pennsylvania One Call System, Inc.



PENNSYLVANIA ACT 287 OF 1974, AS AMENDED BY PA ACT 121 OF 2008, REQUIRES NOTIFICATION OF EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN THE COMMONWEALTH, CALL PENNSYLVANIA ONE CALL SYSTEM, INC. AT 1-800-242-1776 BEFORE ANY DISTURBANCE.

**Mead & Hunt**  
Mead and Hunt, Inc.  
2605 Port Lansing Road  
Lansing, MI 48906  
phone: 517-321-8334  
meadhunt.com

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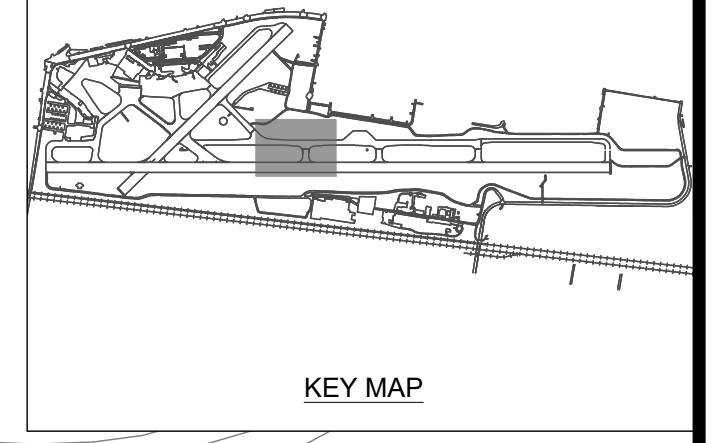
SHEET CONTENTS  
OVERALL EROSION AND SEDIMENTATION CONTROL PLAN

SHEET NO. 9 of 26

**C-021**

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## ERIE INTERNATIONAL AIRPORT REALIGNMENT & RECONSTRUCTION OF TAXIWAY A - PHASE 3 4411 WEST 12TH STREET ERIE, PENNSYLVANIA

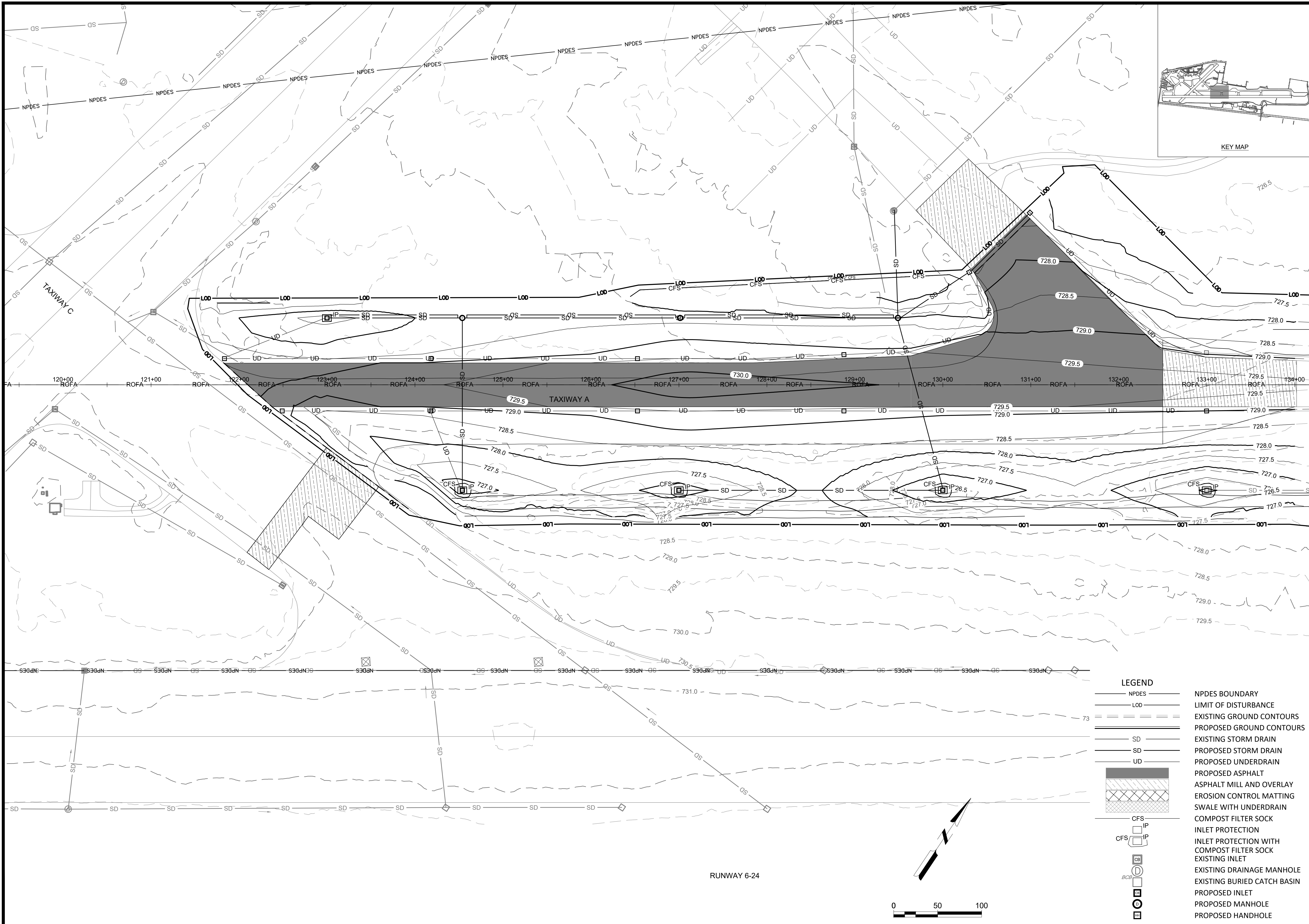
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AIP NO: 3-42-030-XXX-2023  
M&H NO: 3225600-192499.05  
DATE: MAY 17, 2024  
DESIGNED BY: RCL  
DRAWN BY: SRK  
CHECKED BY: RCL  
DO NOT SCALE DRAWINGS

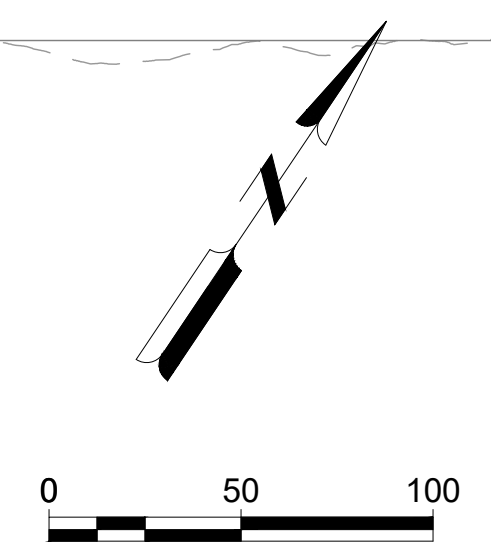
SHEET CONTENTS  
EROSION AND  
SEDIMENTATION  
CONTROL PLAN

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### C-022



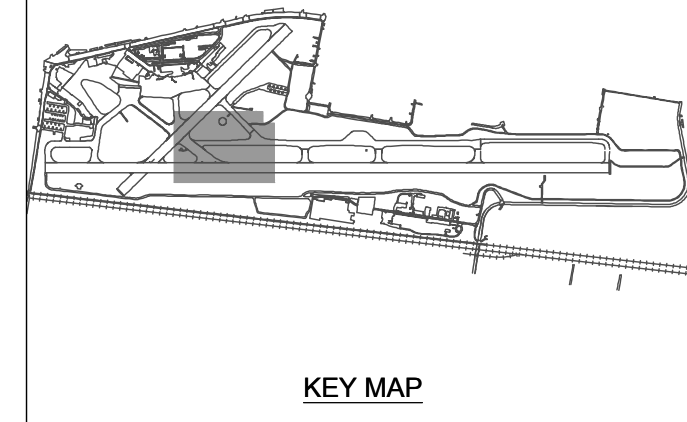
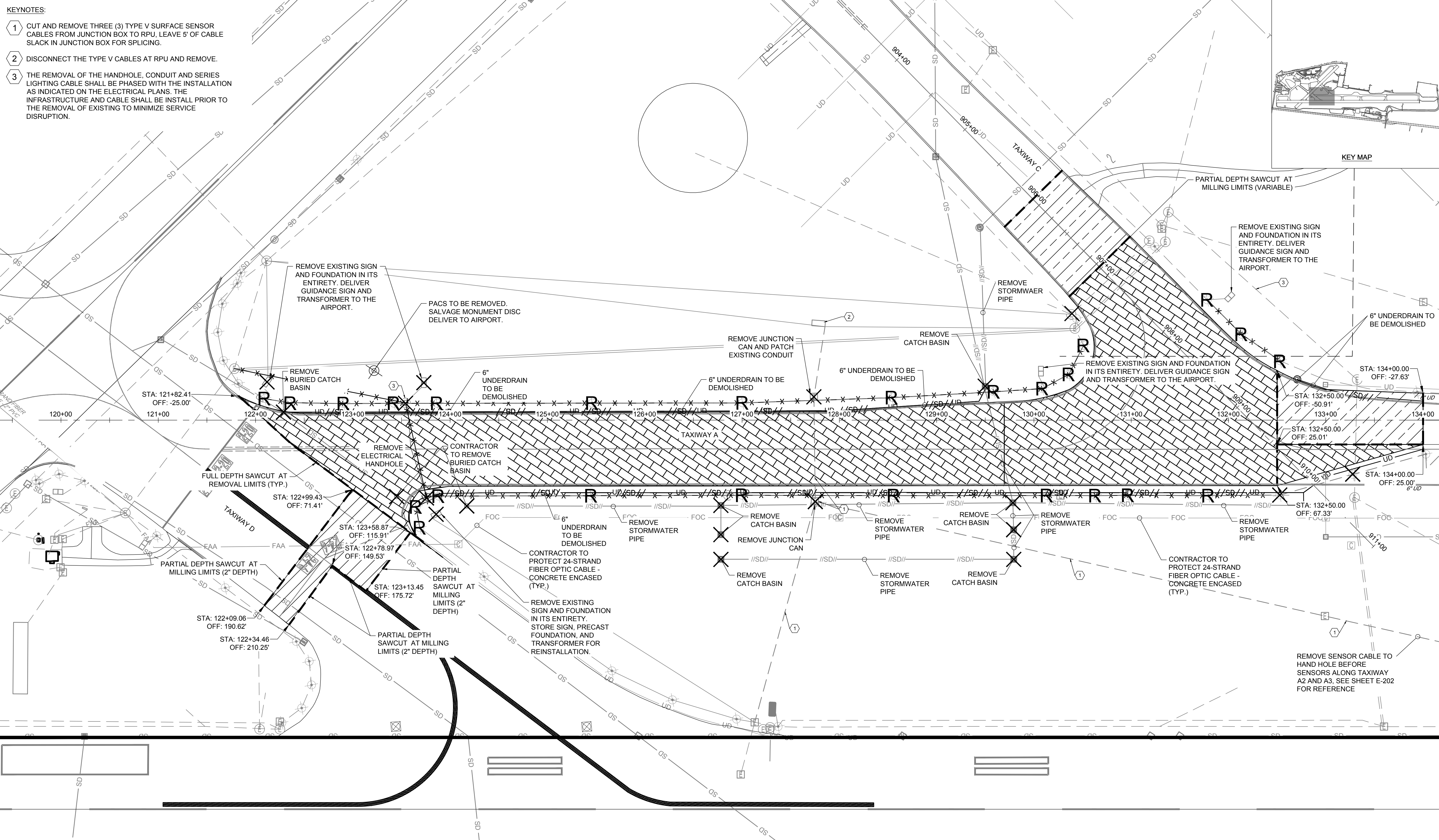
LEGEND	
	NPDES BOUNDARY
	LIMIT OF DISTURBANCE
	EXISTING GROUND CONTOURS
	PROPOSED GROUND CONTOURS
	EXISTING STORM DRAIN
	PROPOSED STORM DRAIN
	PROPOSED UNDERDRAIN
	PROPOSED ASPHALT
	ASPHALT MILL AND OVERLAY
	EROSION CONTROL MATTING
	SWALE WITH UNDERDRAIN
	COMPOST FILTER SOCK
	INLET PROTECTION
	INLET PROTECTION WITH COMPOST FILTER SOCK
	EXISTING INLET
	EXISTING DRAINAGE MANHOLE
	EXISTING BURIED CATCH BASIN
	PROPOSED INLET
	PROPOSED MANHOLE
	PROPOSED HANDHOLE



RUNWAY 6-24

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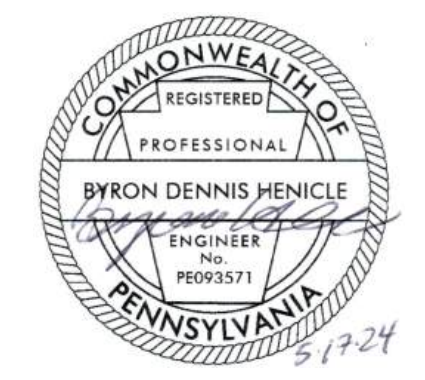


- KEYNOTES:**
- CUT AND REMOVE THREE (3) TYPE V SURFACE SENSOR CABLES FROM JUNCTION BOX TO RPU, LEAVE 5' OF CABLE SLACK IN JUNCTION BOX FOR SPLICING.
  - DISCONNECT THE TYPE V CABLES AT RPU AND REMOVE.
  - THE REMOVAL OF THE HANDHOLE, CONDUIT AND SERIES LIGHTING CABLE SHALL BE PHASED WITH THE INSTALLATION AS INDICATED ON THE ELECTRICAL PLANS. THE INFRASTRUCTURE AND CABLE SHALL BE INSTALL PRIOR TO THE REMOVAL OF EXISTING TO MINIMIZE SERVICE DISRUPTION.

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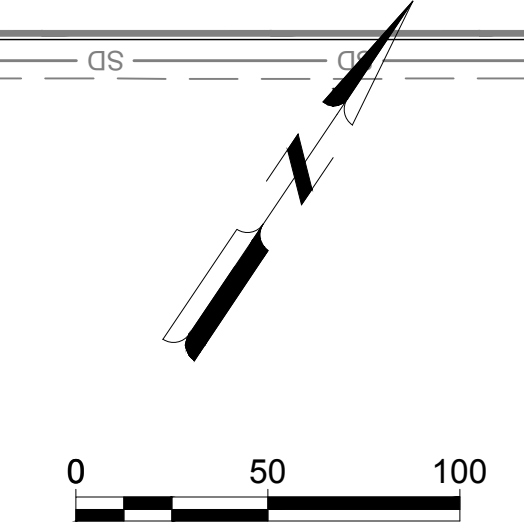
## ERIE INTERNATIONAL AIRPORT REALIGNMENT & RECONSTRUCTION OF TAXIWAY A - PHASE 3 4411 WEST 12TH STREET ERIE, PENNSYLVANIA

ISSUED 05/17/2024 ISSUED FOR BID



LEGEND	
	ASPHALT PAVEMENT MILLING (2" DEPTH)
	ASPHALT PAVEMENT MILLING (VARIABLE DEPTH)
	ASPHALT PAVEMENT REMOVAL
	PAVEMENT MARKING REMOVAL
	SAW CUT PAVEMENT
	REMOVE STRUCTURE
	REMOVE AND DISPOSE OF EXISTING TAXIWAY LIGHT FIXTURE, BASE PLATE, TRANSFORMER, LIGHT BASE, AND CONNECTORS.
	REMOVE STORM DRAIN
	REMOVE ELECTRICAL DUCT BANK
	REMOVE CABLE/CONDUIT
	REMOVE UNDERDRAIN
	REMOVE SENSOR CABLE

- NOTES:**
- CONTRACTOR TO VERIFY LOCATION OF EXISTING UTILITIES PRIOR TO THE START OF DEMOLITION.
  - CONTRACTOR TO PROTECT ALL UTILITIES AT ALL TIMES DURING CONSTRUCTION.
  - UTILITY LOCATIONS ARE OBTAINED FROM EXISTING SURVEYS, RECORD DRAWINGS, AND FIELD VISITS. LOCATIONS ARE APPROXIMATE. CONTRACTOR SHALL TAKE NOTE OF THESE LOCATIONS AND SHALL TAKE CARE DURING CONSTRUCTION ACTIVITIES WHEN ENCOUNTERING THEM. IF ENCOUNTERED CONTRACTOR SHALL NOTIFY THE RPR IMMEDIATELY FOR FURTHER DIRECTION.



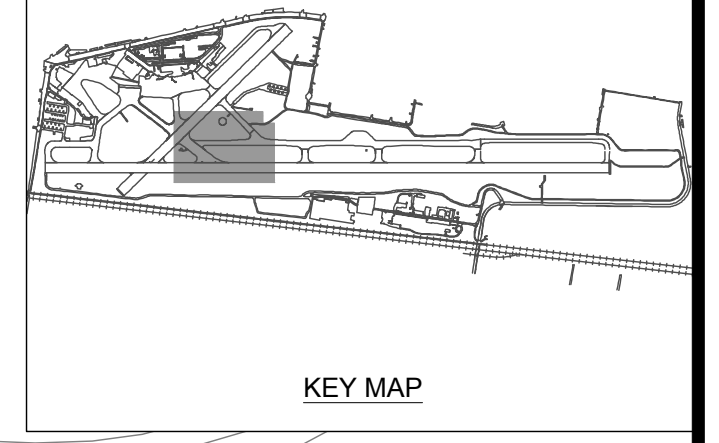
APP NO: 3-42-030-XXX-2024  
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DRAWN BY: PSH/RGM  
CHECKED BY: BDH  
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SHEET CONTENTS  
DEMOLITION PLAN

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### C-051





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## ERIE INTERNATIONAL AIRPORT REALIGNMENT & RECONSTRUCTION OF TAXIWAY A - PHASE 3 4411 WEST 12TH STREET ERIE, PENNSYLVANIA

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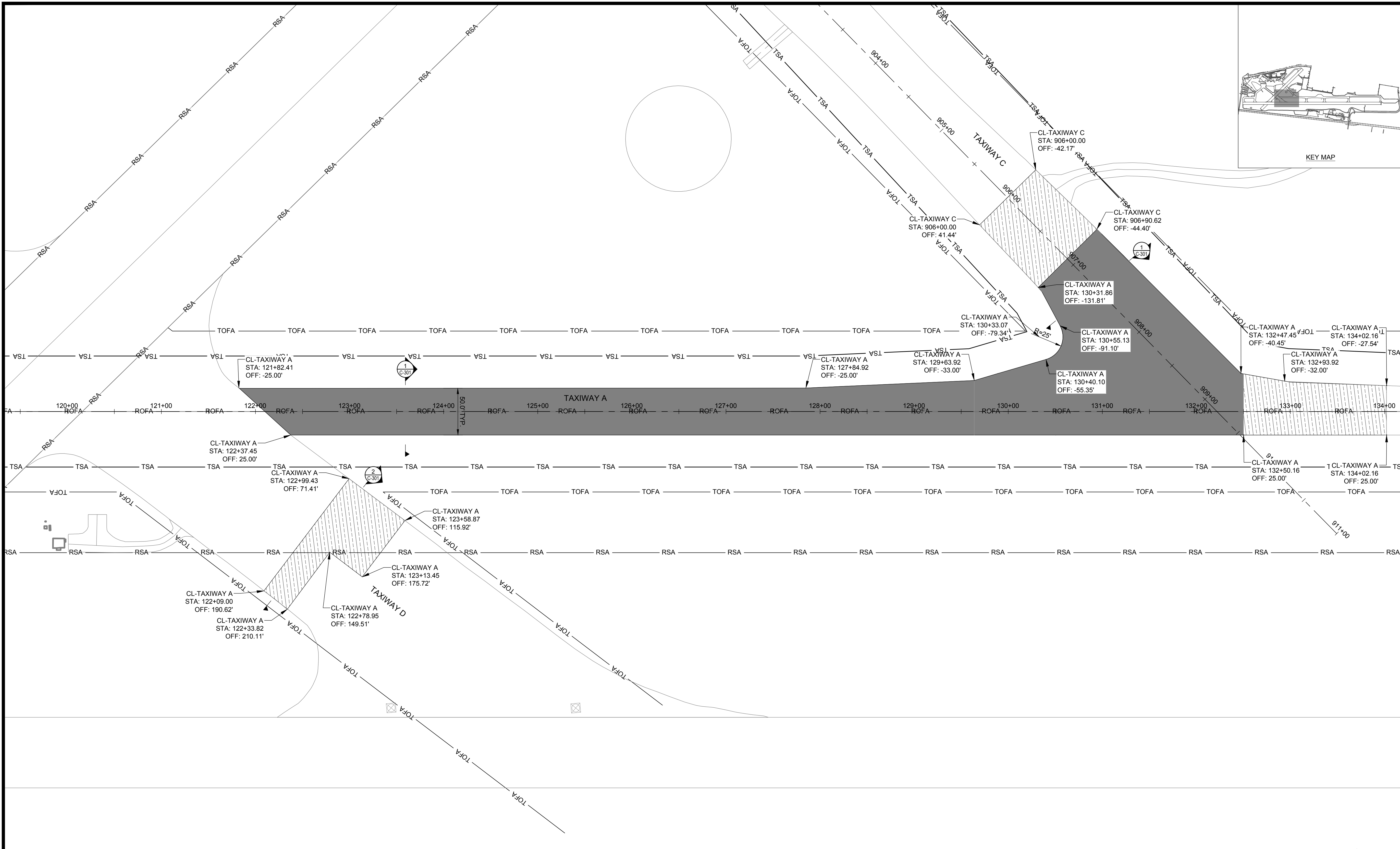


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SHEET CONTENTS  
PROJECT GEOMETRICS

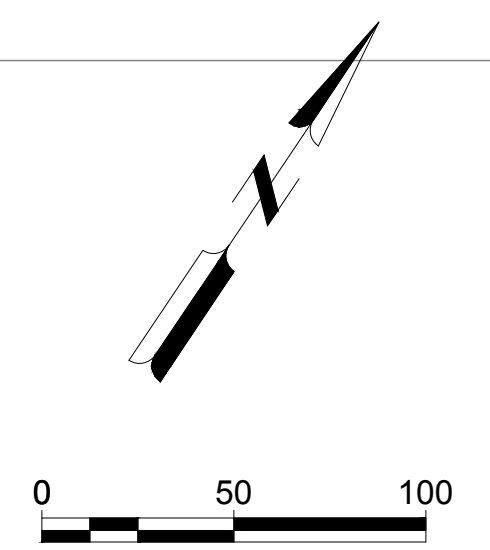
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### C-081



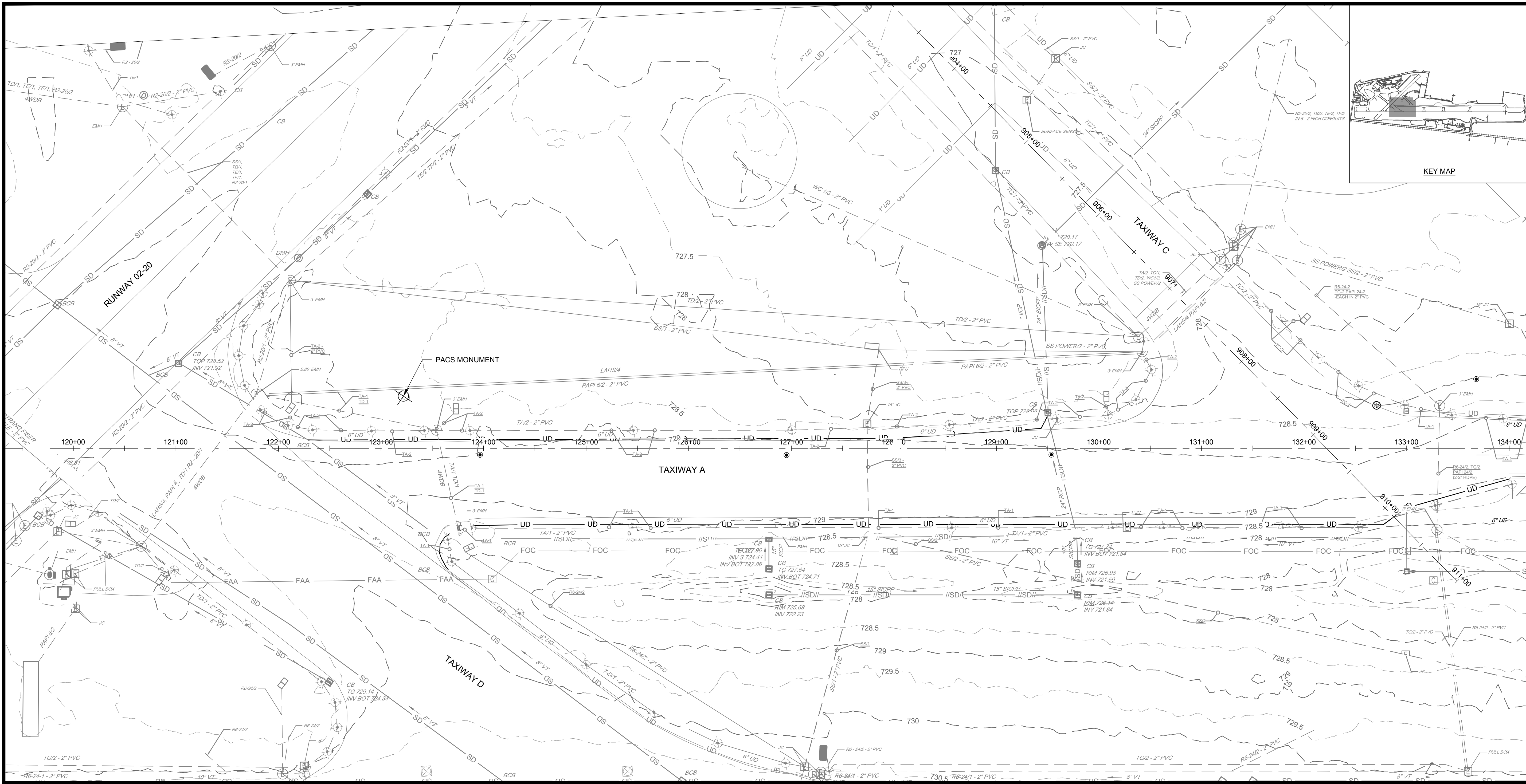
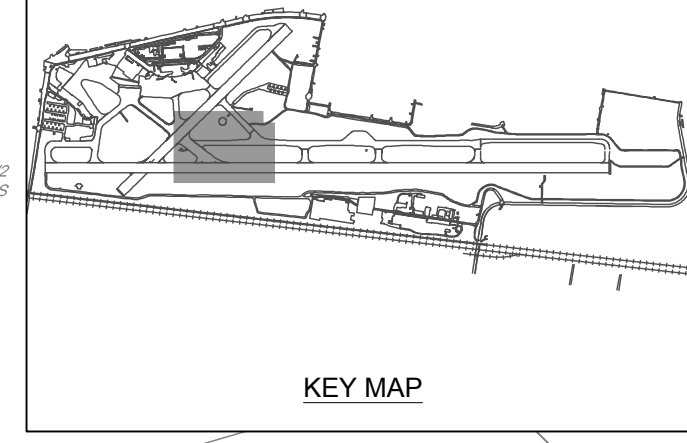
RUNWAY 6-24

LEGEND	
	PROPOSED ASPHALT PAVEMENT SECTION
	2" ASPHALT PAVEMENT OVERLAY



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## ERIE INTERNATIONAL AIRPORT REALIGNMENT & RECONSTRUCTION OF TAXIWAY A - PHASE 3

4411 WEST 12TH STREET  
ERIE, PENNSYLVANIA

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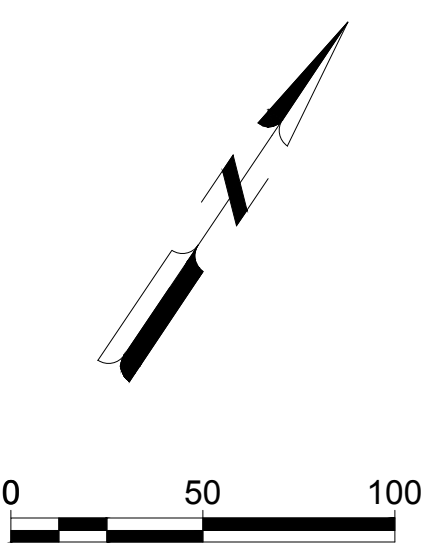
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EXISTING CONDITIONS

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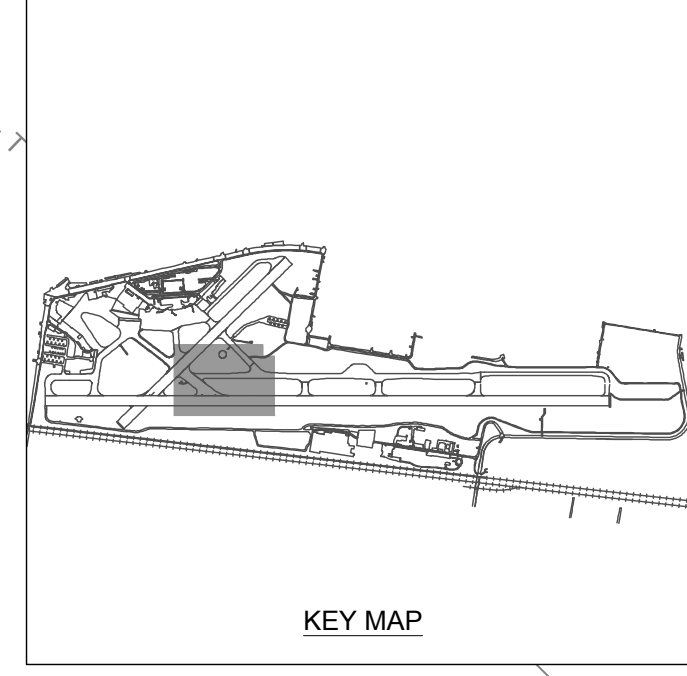
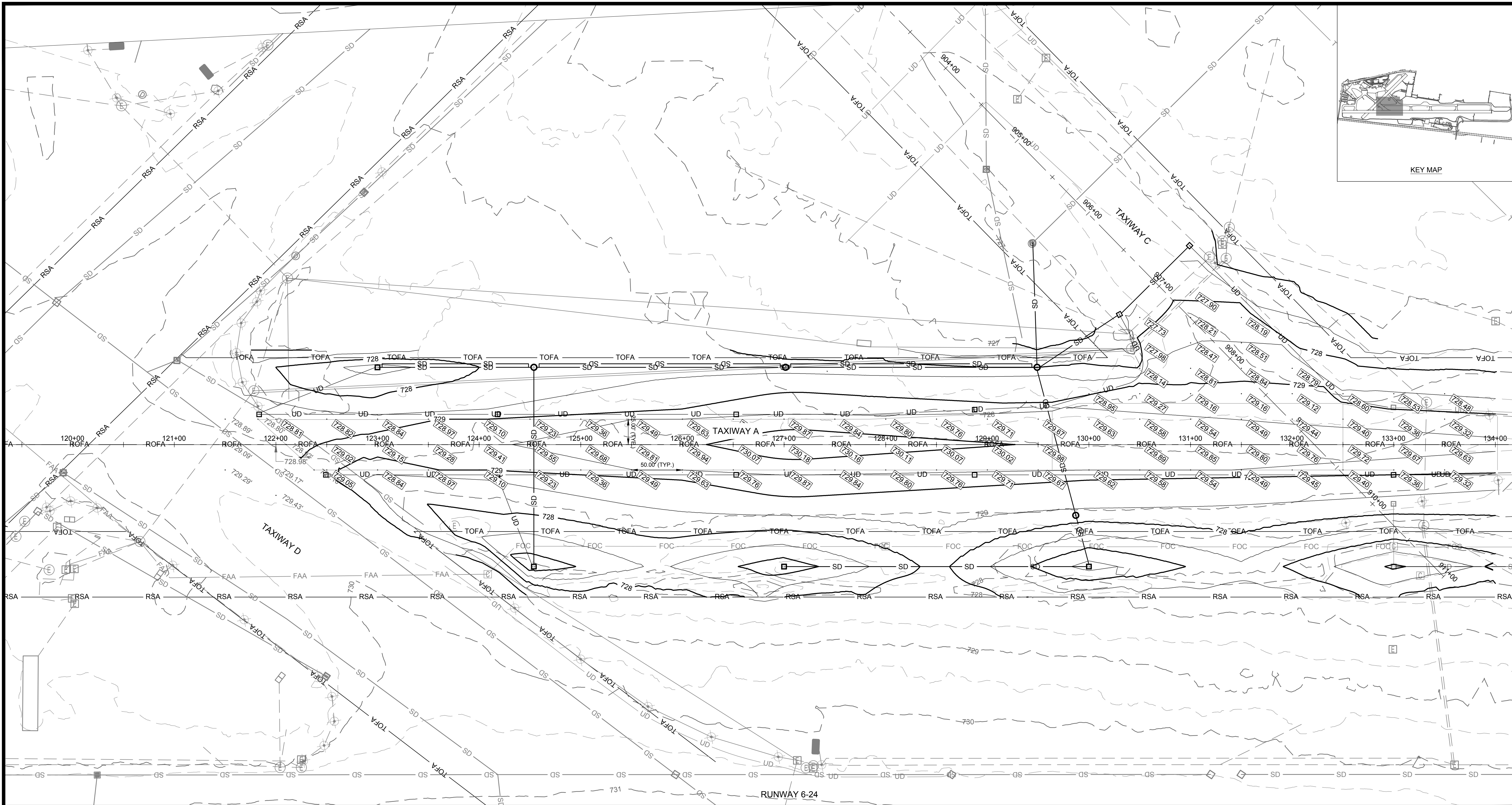
### C-091

LEGEND	
	EXISTING GRADE CONTOUR (1')
	EXISTING GRADE CONTOUR (0.2')
	SOIL BORING

NOTES:  
1. THERE ARE A NUMBER OF EXISTING UTILITIES, INCLUDING DRAINAGE, SANITARY SEWER, WATER MAIN, ELECTRICAL, AND COMMUNICATIONS CABLES, TRaversing THE SITE. THE DESIGNER HAS MADE EVERY ATTEMPT TO DEPICT THE APPROXIMATE LOCATIONS OF THESE ITEMS CURRENTLY IN PLACE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE EVERY EXISTING ITEM LOCATED, FLAGGED AND IDENTIFIED PRIOR TO START UP OF CONSTRUCTION AND TO MAINTAIN VISIBLE LOCATION THROUGHOUT THE CONSTRUCTION DURATION. THIS SHALL INCLUDE COORDINATION WITH ALL NECESSARY AGENCIES INCLUDING THE AIRPORT AUTHORITY INSPECTORS. ANY DAMAGE DONE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL REPAIR ANY UTILITY DAMAGED DURING THE CONSTRUCTION BY THE CONTRACTOR'S OPERATIONS AT NO COST TO THE AIRPORT AUTHORITY.







**Mead & Hunt**  
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 meadhunt.com

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**ERIE INTERNATIONAL AIRPORT  
 REALIGNMENT & RECONSTRUCTION  
 OF TAXIWAY A - PHASE 3  
 4411 WEST 12TH STREET  
 ERIE, PENNSYLVANIA**

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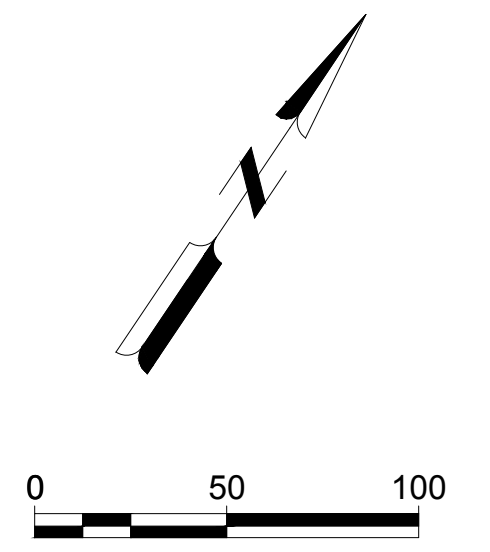
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SHEET CONTENTS  
 GRADING PLAN

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**C-101**

LEGEND			
	FINISHED GRADE CONTOUR (1')		DITCH FLOW LINE
	FINISHED GRADE CONTOUR (0.2')		FINISHED GRADE
	EXISTING GRADE CONTOUR (1')		GRADING LIMITS
	EXISTING GRADE CONTOUR (0.2')		EXISTING/ PROPOSED CATCH BASIN





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## ERIE INTERNATIONAL AIRPORT REALIGNMENT & RECONSTRUCTION OF TAXIWAY A - PHASE 3 4411 WEST 12TH STREET ERIE, PENNSYLVANIA

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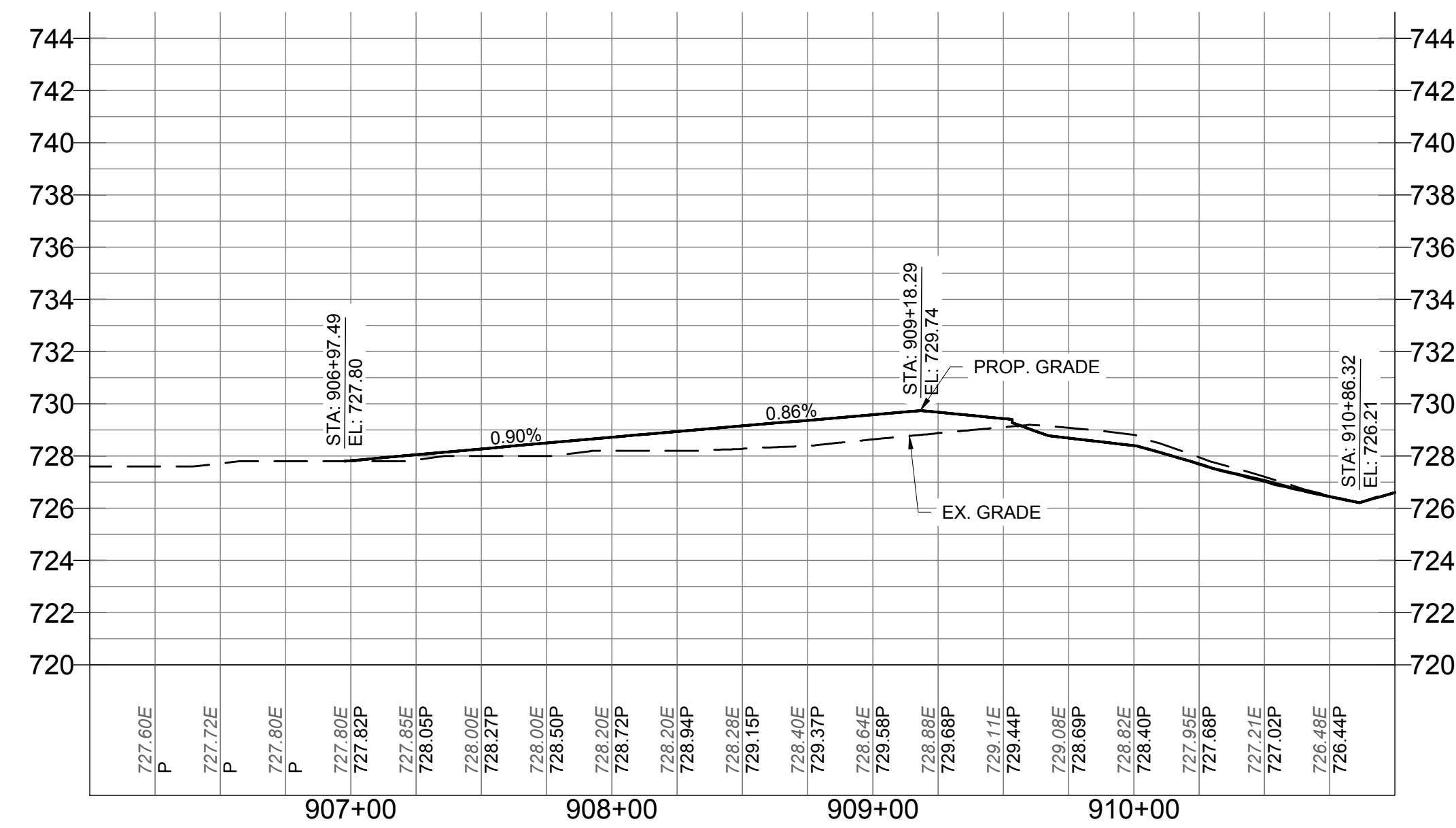
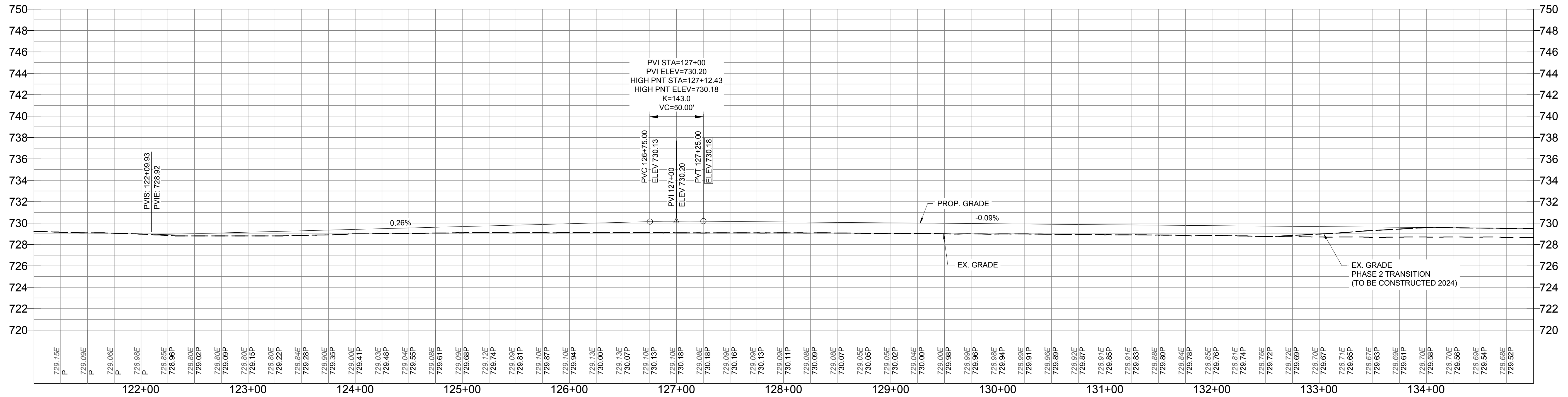


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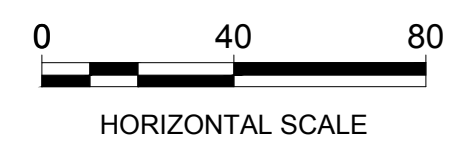
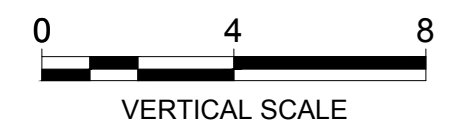
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CENTERLINE  
PROFILES

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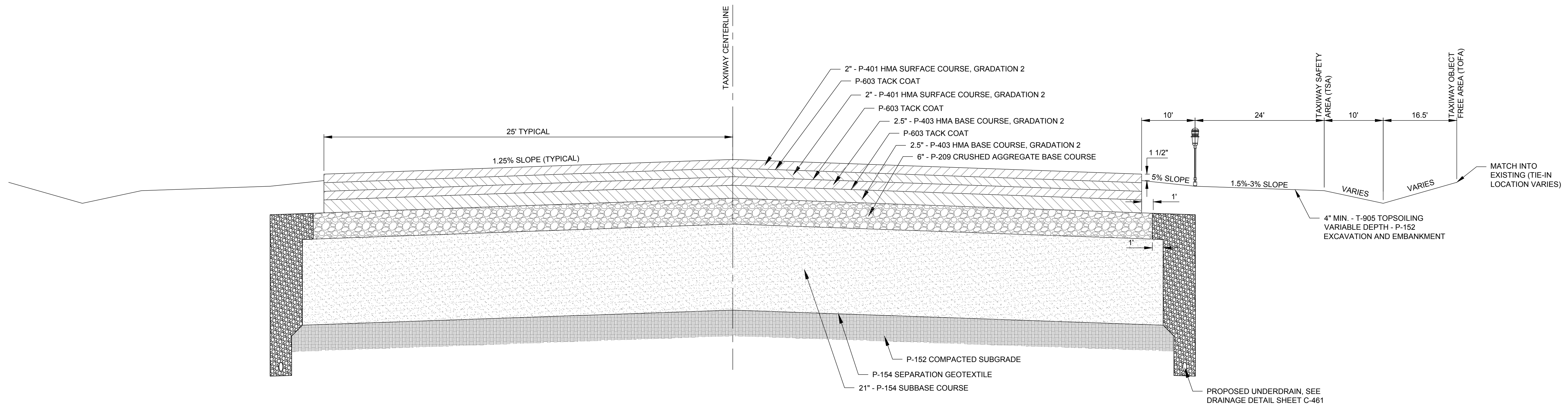
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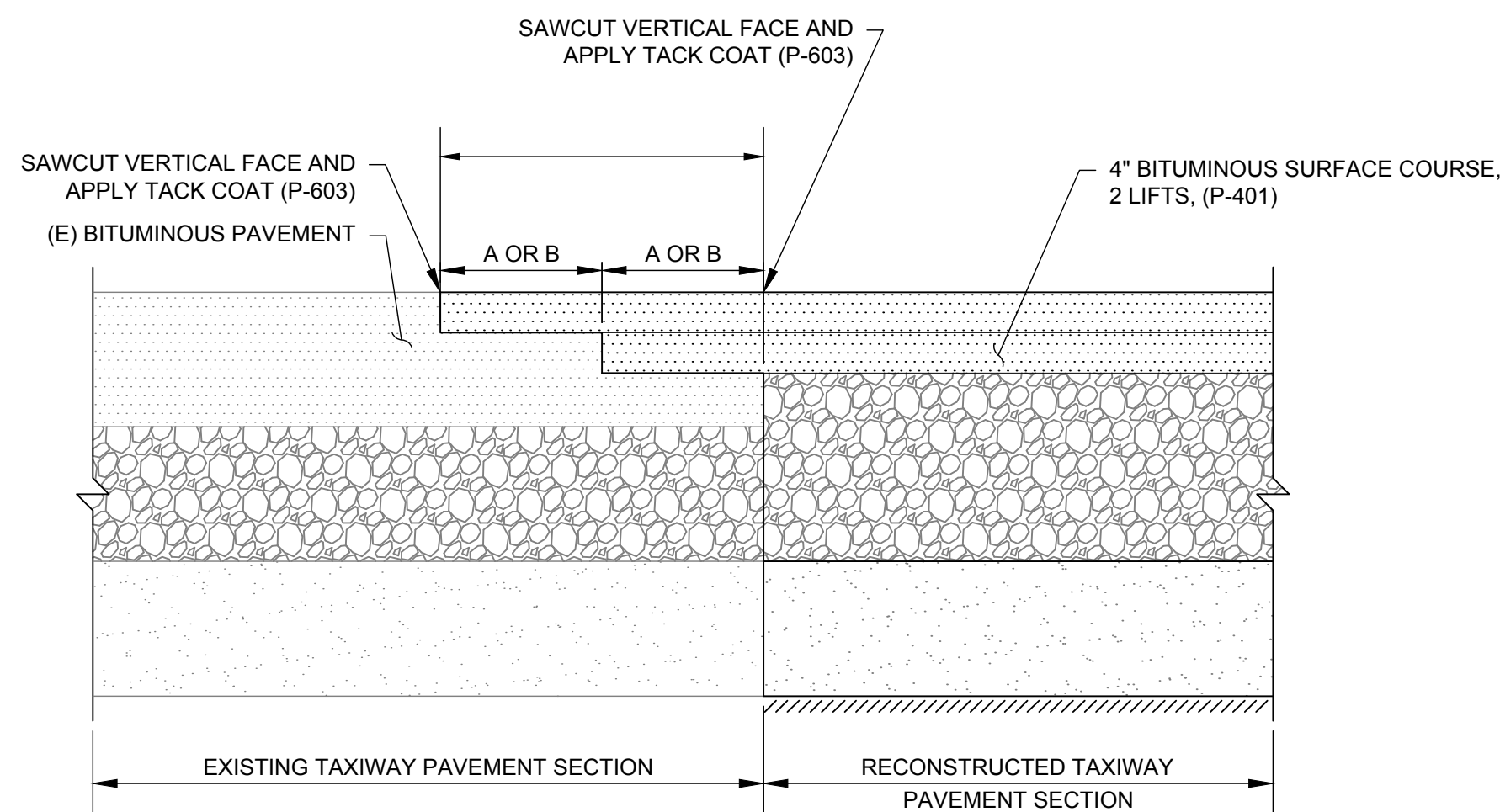
TAXIWAY C PROFILE







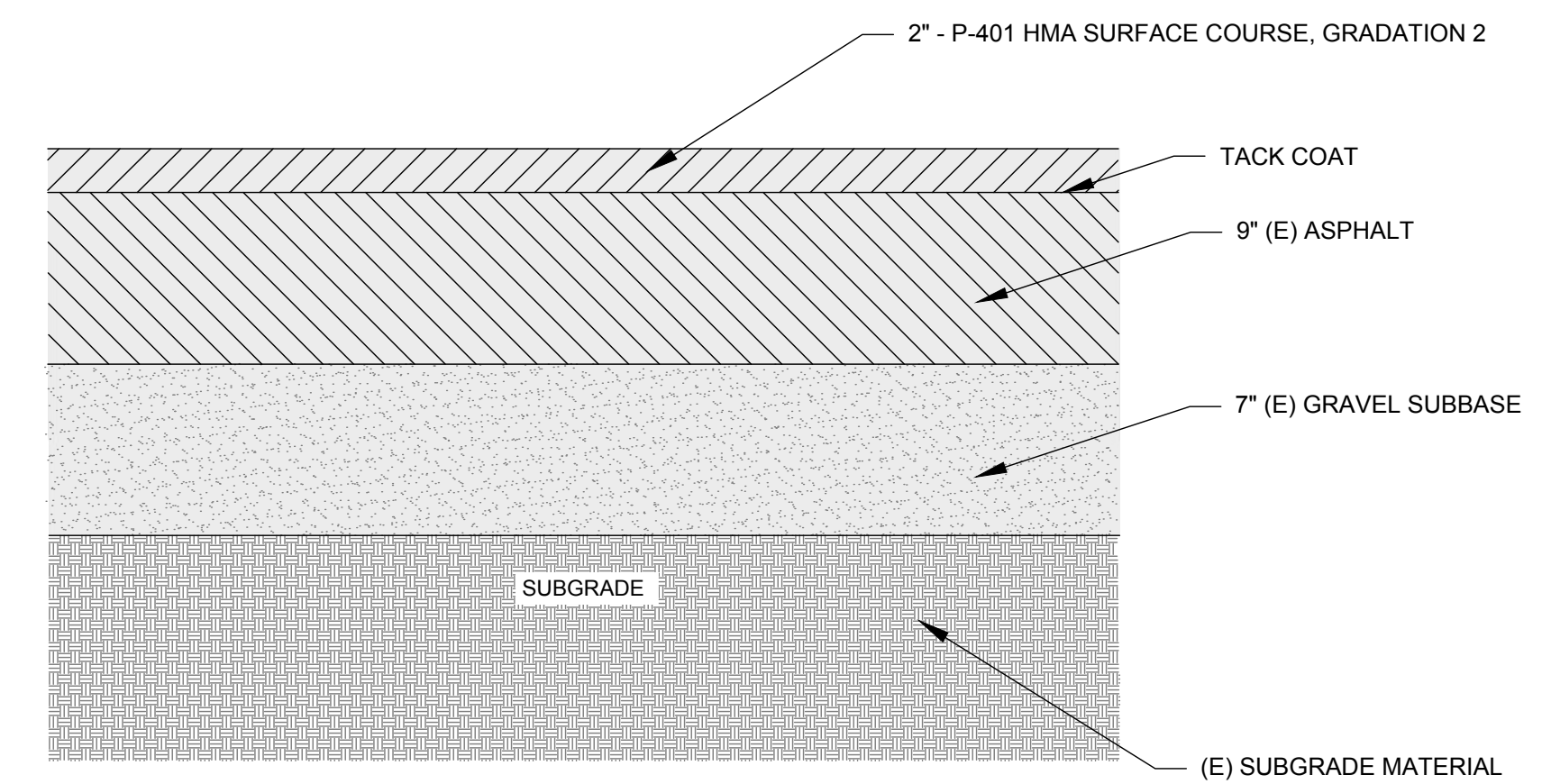
**1** TYPICAL PROPOSED ASPHALT PAVEMENT  
NOT TO SCALE



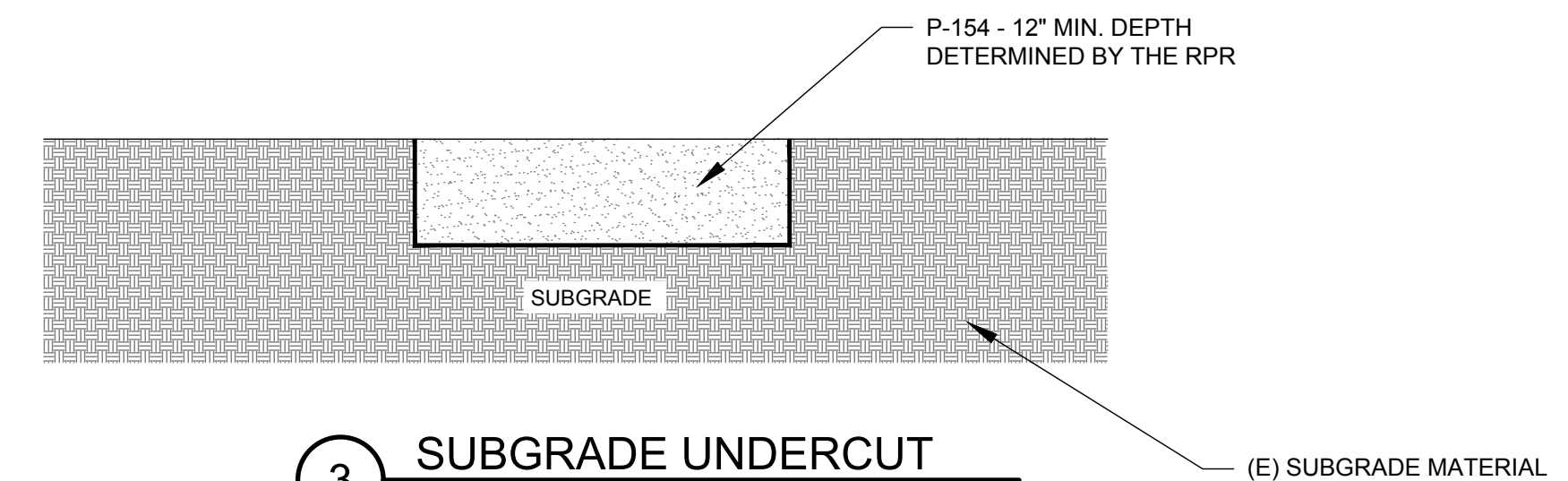
**NOTES:**

1. A = 2' FOR A 4' PAVEMENT TRANSITION TO EXISTING PAVEMENT
2. B = 5' FOR A 10' PAVEMENT TRANSITION TO EXISTING PAVEMENT

**4** NEW PAVEMENT TO EXISTING PAVEMENT TAXIWAY TRANSITION DETAIL  
NOT TO SCALE



**2** MILL AND OVERLAY  
NOT TO SCALE

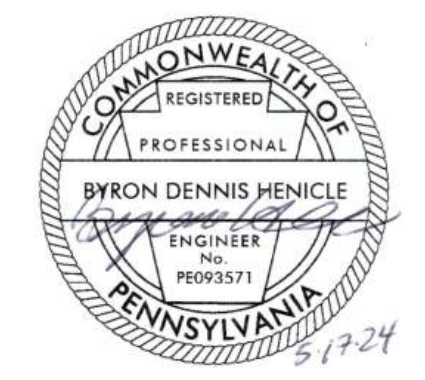


**3** SUBGRADE UNDERCUT  
NOT TO SCALE

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**ERIE INTERNATIONAL AIRPORT  
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OF TAXIWAY A - PHASE 3**  
 4411 WEST 12TH STREET  
 ERIE, PENNSYLVANIA

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SHEET CONTENTS  
TYPICAL SECTIONS

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**C-301**

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### Erie International Airport- Realignment and Reconstruction of Taxiway A

#### Proposed Erosion and Sedimentation BMPs and BMP Construction Sequence

##### Proposed Erosion and Sedimentation BMPs

The proposed Erosion and Sedimentation (E&S) controls for this Project are identified on E&S Control Plan Drawings. All Best Management Practices (BMPs) shall be installed as indicated in the E&SCP Plan and Detail Drawings and approved by the Erie County Conservation District (ECCD).

Prior to the start of earth disturbance, the contractor is required to sign on as co-permittee and will be responsible for the installation/maintenance of all E&S controls within the designated area of earth disturbance.

- a) The contractor's staging/storage areas will be located in between the taxiway and the airport service road and east of Taxiway C in the locations shown on the plan drawings. It is the contractor's responsibility to maintain the staging areas in stabilized condition during construction. Matting and rock may be required to prevent rutting and potential for erosion and sediment runoff. The areas must be maintained throughout construction due to the close proximity of air operations. The staging areas are to be restored to original condition when the area is no longer needed.
- b) A rock construction entrance will be installed at the entrance/exit of the construction vehicles into the staging areas/project site. The rock construction entrance will be maintained in a clean condition with clean rock being added as necessary throughout construction. The rock construction entrances should have fabric applied along with rock thickness according to the specifications in the rock construction detail and should be constantly maintained to the specified dimensions by adding rock, as necessary. A stockpile or other nearby storage shall be accessible on site for this purpose. Vacuum street sweeping must be used on paved surfaces in conjunction with utilizing the rock construction entrance.
- c) The access road into the site must be maintained free of mud and debris throughout the duration of the project. Any surface disturbance along the construction access route will be repaired and revegetated as a part of the final restoration process. Any mud and/or debris tracked onto Powell Road must be cleaned by the contractor. A vacuum sweeper should be kept onsite during construction to endure the roadways area maintained.
- d) Compost filter sock (CFS) is to be installed at various locations within the project area, as indicated on the Erosion and Sedimentation Control Plans. Switchgrass silt sock can be substituted for standard CFS at the contractor's preference. If the compost filter sock is undermined or overtopped, it shall be immediately replaced. The CFS shall be installed in accordance with the details shown on the plan sheets. A CFS may be utilized in the location indicated. The contractor is to ensure the CFS is the designated size indicated on the plan drawings. CFS should be installed in accordance with the detail and shall be inspected weekly and after each runoff event. A supply of CFS should be kept onsite in the event that a tube becomes damaged and/or needs replaced.
- e) Blackhawk/blanket Inlet Protection System or an approved equal will be utilized on the designated inlets as shown on the plan drawing. It is the contractor's responsibility to ensure that the inlets are maintained and utilized in the designated locations throughout the proposed construction activities until the site is stabilized. Inlet protection shall be inspected on a weekly basis and after each runoff event. Compost filter sock will be installed around the inlets within the newly graded area as an added measure to controlling sediment during the construction process.
- f) A pumped water filter bag will be utilized if water is encountered when excavating for the proposed stormwater controls and/or when trenching for utilities. If an area needs dewatering throughout the duration of the project, a pumped filter bag will be utilized. The pumped water filter bag will have CFS installed downgradient.
- g) Vacuum street sweeping is to be performed throughout the course of the proposed project to ensure that all airport pavement is maintained in a clean condition and free of mud and debris.
- h) Erosion control fabric will be utilized on the designated slopes throughout the project area. The erosion control fabric is to be installed as soon as finished grade is achieved.
- i) Interim stabilization procedures will be utilized if required and are provided in this narrative.
- j) Seeding specifications are included within the narrative and on the E&S Plan detail sheets. It should be noted that mulch must be netted/binded/tackified material due to the close proximity of air operations.

##### Construction Sequence

- a) The contractor shall notify the Erie County Conservation District 7 days prior to the start of construction at Phone: (814) 825-6403 to schedule the required pre-construction meeting. At least three days prior to the start of any earth disturbance activities, notify the Pennsylvania One Call System, Inc. at 1-800-242-1776 for buried utilities location.
- b) The locations for each staging area are shown on the plan drawings. It is the contractor's responsibility to maintain the staging areas in clean condition during construction. The area must be maintained clean throughout construction due to the close proximity of air operations. Topsoil stockpiles will be located adjacent to the staging area or within the project area, outside the runway and taxiway safety areas. Compost filter sock shall be installed around the perimeter of the stockpiles. The staging areas are to be kept in a stabilized condition throughout the course of use. Matting and rock may be required to prevent rutting and potential for erosion and sediment runoff. It is the contractor's responsibility to maintain the staging areas utilized during construction. The staging areas are to be restored to original condition when the area is no longer needed. The staging areas are to be restored to original condition when the area is no longer needed.
- c) Install the rock construction entrances in the locations indicated on the plan drawing. The rock construction entrances are to be constructed according to the specified dimensions and maintained throughout the duration of the project.
- d) Install the compost filter socks (CFS) in the locations shown and according to the details shown. The CFS will be in place and functioning prior to any adjacent and/or upslope disturbance.
- e) Install the Blackhawk/blanket inlet protection (or equivalent) and CFS inlet protection as well as the blanket inlet protection on the designated inlets that may receive runoff during the project. Refer to the plan drawing for designated inlet protection for each inlet.
- f) If necessary, utilize a pumped water filter bag in any area that requires dewatering during the project. CFS must be installed downslope of the pumped water filter bag.
- g) Once the E&S controls are installed and functioning as intended, earthwork can begin.
- h) Refer to the Construction Safety & Phasing Plan for detailed project phasing.
- i) Perform the taxiway realignment and reconstruction, associated grading, lighting, signage, and installation of stormwater management controls as specified on the plan drawings.

- j) During the proposed project, the contractor is to ensure that all airport pavement and surrounding pavement are clean of mud and debris. A vacuum street sweeper shall be utilized.
- k) It is the contractor's responsibility to ensure E&S BMPs are installed and functioning, and that no sediment enters the proposed stormwater controls prior to stabilization.
- l) Prior to mulching, any newly graded slopes should be tracked to create horizontal tracks or grooved to help reduce runoff velocity and erosion. Stabilization of any disturbed area will be achieved by applying agricultural lime, fertilizer, seed, and mulch according to the designated seeding specifications. Minimum topsoil placement depth will be four (4) inches. Apply binded mulch to areas that will be left for a period greater than 4 days prior to continued earthmoving activities. Erosion control fabric will be applied to the designated locations. Apply according to the manufacturer's recommendations.
- m) Until the site is stabilized, all erosion and sediment BMPs shall be maintained properly. Maintenance shall include inspections of all erosion and sediment BMPs after each runoff event and on a weekly basis. All preventative and remedial maintenance work, including clean-out, repair, replacement, regrading, and mulching must be performed immediately. A log showing dates that BMPs were inspected as well as any deficiencies found and the date they were corrected shall be maintained on the site and be made available to regulatory agency officials at the time of inspection. The PADEP Visual Site Inspection Report form is included.
- n) The contractor will be responsible for maintaining the compost filter sock, inlet protection, and any remaining erosion and sedimentation control BMPs until the site achieves uniform 70% ground cover with perennial vegetation.
- o) When the project is complete and the site is at least 70% stabilized, the permittee shall submit a Notice of Termination form to the Erie County Conservation District to terminate the permit.

##### General Erosion and Sedimentation Notes:

1. The contractor shall notify the Erie County Conservation District 7 days prior to the start of construction at Phone: (814) 825-6403. At least 7 days prior to starting any earth disturbance activities, including clearing and grubbing, the owner and/or operator shall invite all contractors, appropriate municipal officials, the E&S/Restoration plan preparer, and a representative from the DEP to the site. At least three days prior to starting any earth disturbance activities, or expanding into any areas previously unmarked, the Pennsylvania One Call System Inc. shall be notified at 1-800-242-1776 for the location of existing underground utilities.
2. A co-permittee agreement must be completed by all parties involved in order to share permit responsibility, coverage, and liability.
3. To properly implement the Plan, the contractor should become familiar with the requirements 25 PA Code, Chapter 102 for Erosion and Sediment Control.
4. All earth disturbances, including clearing and grubbing as well as cuts and fills shall be done in accordance with the approved E&S plan. A copy of the approved drawings (stamped, signed, and dated by the Erie County Conservation District) must be available at the project site at all times.
5. Erosion and sediment BMPs must be constructed, stabilized, and functional before site disturbance begins within the tributary areas of those BMPs.
6. Until the site is stabilized all E&S BMPs must be maintained properly by the Contractor. Maintenance must include inspection of all E&S BMPs on a weekly basis and after each stormwater event. All preventative and remedial maintenance work, including clean out, repair, replacement, regrading, reseeding, mulching, and renetting must be performed immediately. If E&S BMPs fail to perform as expected, replacement BMPs or modifications of those installed will be required.
7. At no time shall construction vehicles be allowed to enter areas outside the limit of disturbance boundaries shown on the plan maps. These areas must be clearly marked and fenced off before operations begin.
8. Any off-site waste and borrow areas must have an E&S plan approved by the Conservation District or PADEP fully implemented prior to being activated.
9. Areas which are to be topsoiled shall be scarified to a minimum depth of 3 to 5 inches – 6 to 12 inches on compacted soils- prior to placement of topsoil. Areas to be vegetated shall have a minimum 4 inches of topsoil in place prior to seeding and mulching. Fill outcrops shall have a minimum of 2 inches of topsoil.
10. Seeding and soil supplements, mulching and slope erosion protection will be conducted according to the seeding specifications shown on the details and in the narrative.
11. Mulch materials shall be only of the mulch netting type for this site.
12. If stockpiles are created, then place compost filter sock around the pile perimeter. Stockpile heights must not exceed 35 feet and slopes must be 2:1 or flatter.
13. If stockpiles are created, then place compost filter sock around the downslope pile perimeter. Stockpile heights must not exceed 35 feet and slopes must be 2:1 or flatter.
14. Any mud deposited upon paved surfaces open to public travel will be immediately cleaned with a vacuum street sweeper. At the end of each construction day, all paved roadways will be checked for sediment deposition and cleaned if necessary.
15. It is the responsibility of the Contractor to remove accumulated sediment from inlet filter protection after each storm event. All sediment removed from BMPs shall be disposed of in the manner described on the plan drawings.
16. The contractor's staging areas shall be kept in a stabilized condition with perimeter controls, as necessary.
17. Permanent stabilization is defined as a minimum uniform, perennial 70% vegetative cover or other permanent non-vegetative cover with a density sufficient to resist accelerated erosion.
18. E&S BMPs shall remain functional as such until all areas tributary to them are permanently stabilized.
19. All preventative and remedial maintenance work, including clean out, repair, replacement, regrading, reseeding, mulching, and renetting must be performed within 24 hours. If erosion and sediment control BMPs fail to perform as expected, replacement BMPs, or modification of those installed will be required.
20. After final site stabilization has been achieved, temporary erosion and sediment BMPs must be removed. Areas disturbed during removal of the BMPs must be stabilized immediately.
21. Failure to correctly install E&S BMPs, failure to prevent sediment-laden runoff from leaving the construction site, or failure to take immediate corrective action to resolve failure of E&S BMPs may result in administrative, civil, and/or criminal penalties being instituted by DEP as defined in Section 602 of the Pennsylvania Clean Streams Law. The Clean Streams Law provides for up to \$10,000 per day in civil penalties, up to \$10,000 in summary criminal penalties, and up to \$25,000 in misdemeanor criminal penalties for each violation.
22. It is condition of the NPDES and E&S Permits that a maintenance program be conducted to provide for the operation and maintenance of all BMPs to be inspected on a weekly basis and after each stormwater event. Failure to conduct the required inspection may result in permit suspension of the imposition of civil penalties. At a minimum, the DEP Visual Site Inspection Report shall be utilized for weekly and/or storm event inspections.

#### Maintenance and Inspection Program

Inspection and Oversight Requirements- visual site inspections must occur throughout the duration of construction and until the Notice of Termination (NOT) has been submitted by the permittee. Two types of inspections are required: 1) routine inspections (at least weekly); and 2) post-storm event inspections (within 24 hours of each 0.25 inch or greater storm event or the occurrence of snowmelt sufficient to cause a discharge; and 3) corrective action inspections. Each inspection must be documented on DEP's Chapter 102 Visual Site Inspection Report or an alternative with identical information.

In order to properly implement the Plan and handle onsite changes the contractor should become familiar with the requirements 25 PA Code, Chapter 102 for Erosion and Sediment Control. It shall be the responsibility of the contractor to designate a person or persons to maintain the integrity and operation of all erosion and sedimentation control facilities. The contractor shall provide a weekly maintenance check and a check after each precipitation event to ensure that all BMPs are in place and functioning as intended. All preventative and remedial maintenance work, including clean out, repair, replacement, regrading, reseeding, mulching and renetting must be performed within 24 hours. If erosion and sediment control BMPs fail to perform as expected, replacement BMPs, or modification of those installed will be required.

Inspection and maintenance should abide by all general notes included in this narrative. Interim stabilization, if needed, will be in accordance with the specifications in this narrative and as shown on the enclosed detail sheet. Maintenance for each specific BMP is included on the Erosion and Sedimentation Plan detail sheets.

It is condition of the NPDES and E&S Permits that a maintenance program be conducted to provide for the operation and maintenance of all BMPs to be inspected on a weekly basis and after each stormwater event. Failure to conduct the required inspection may result in permit suspension of the imposition of civil penalties. At a minimum, the DEP Visual Site Inspection Report shall be utilized for weekly and/or storm event inspections.

#### Recycling or Disposal of Materials

Any waste materials generated as a result of the proposed construction activities will be disposed of in accordance with state and local mandates and ordinances. The contractor responsible for earth disturbance activities must ensure that proper mechanisms are in place to control waste materials. Construction wastes include, but are not limited to, excess soil materials, concrete washwater, sanitary wastes, etc. that could adversely impact water quality. Measures should be planned and implemented for housekeeping, materials management, and litter control. Whenever possible, recycling of excess materials is preferred, rather than disposal.

#### Natural Occurring Geologic Formations and Soil Conditions

No known naturally occurring geologic formations or soil conditions have the potential to cause pollution during earth disturbance activities. The project area exists as the current taxiway system and has been previously disturbed for past taxiway construction and associated grading.

#### Potential Thermal Impacts

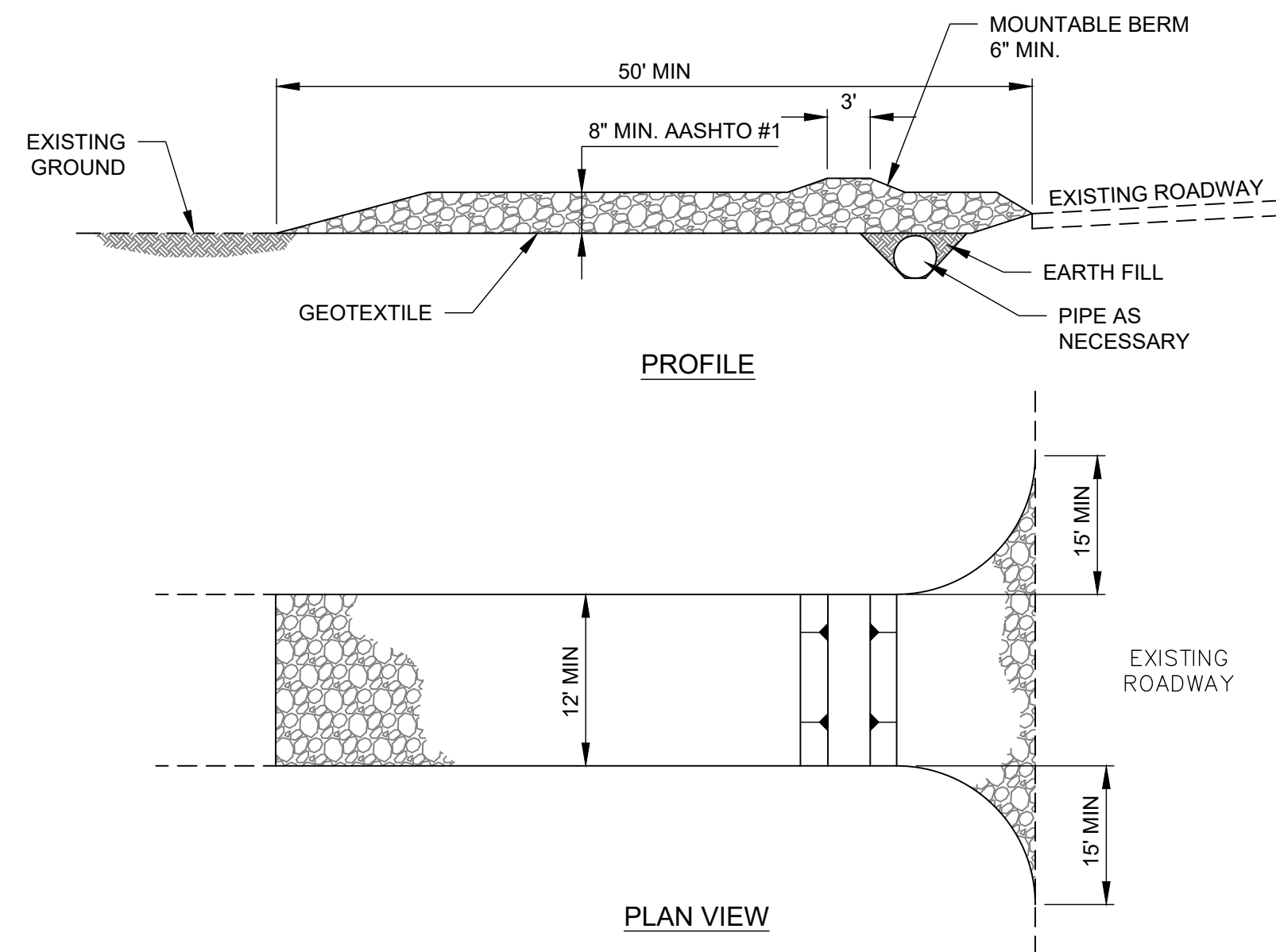
There is little potential for thermal impacts as a result of the proposed project. With the removal of existing pavement, there will be less impervious surface which will contribute to less runoff post construction. Stormwater will sheet flow to proposed inlets and piping, and ultimately discharge to existing stormwater outfalls at the Airport. Stormwater will have the ability to cool to ambient temperatures before reaching waters of the Commonwealth.

#### Existing and Proposed Riparian Forest Buffers

The existing riparian buffer, located downslope and outside the limits of the project area, will remain undisturbed for this project.

It is the responsibility of the operator to perform environmental due diligence and determine that all fill imported into the site meets the DEP definition of clean fill. Clean fill is defined as "Uncontaminated non-water soluble, nondecomposable inert solid material. The term includes soil, rock, stone, dredged material, used asphalt, and brick, block or concrete from construction and demolition activities that is separate from other waste and recognizable as such. (25 Pa. Code §§287.1, 271.1) The term does not include materials placed in or on the waters of the Commonwealth unless otherwise authorized. Environmental Due Diligence is defined as "Investigative techniques, including but not limited to, visual property inspections, electronic data base searches, review of ownership and use history of property, Sanborn maps, environmental questionnaires, transaction screens, analytical testing, environmental assessments and audits. (35 P.S. §6027.103)





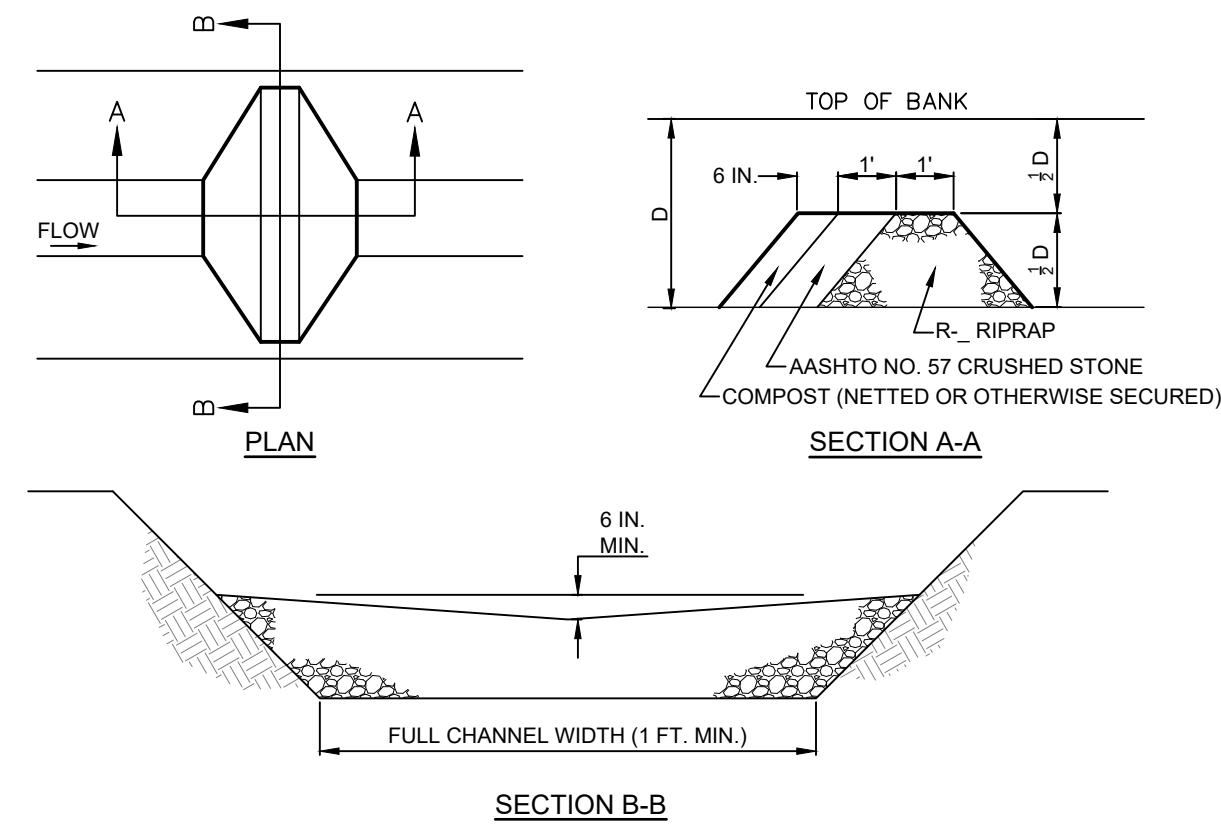
**NOTES:**

1. REMOVE TOPSOIL PRIOR TO INSTALLATION OF ROCK CONSTRUCTION ENTRANCE. EXTEND ROCK OVER FULL WIDTH OF ENTRANCE.
2. RUNOFF SHALL BE DIVERTED FROM ROADWAY TO A SUITABLE SEDIMENT REMOVAL BMP PRIOR TO ENTERING ROCK CONSTRUCTION ENTRANCE.
3. MOUNTABLE BERM SHALL BE INSTALLED WHEREVER OPTIONAL CULVERT PIPE IS USED AND PROPER PIPE COVER AS SPECIFIED BY MANUFACTURER IS NOT OTHERWISE PROVIDED. PIPE SHALL BE SIZED APPROPRIATELY FOR SIZE OF DITCH BEING CROSSED.

**MAINTENANCE:**

ROCK CONSTRUCTION ENTRANCE THICKNESS SHALL BE CONSTANTLY MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK. A STOCKPILE SHALL BE MAINTAINED ON SITE FOR THIS PURPOSE. ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE IMMEDIATELY. IF EXCESSIVE AMOUNTS OF SEDIMENT ARE BEING DEPOSITED ON THE ROADWAY, EXTEND LENGTH OF ROCK CONSTRUCTION ENTRANCE BY 50 FEET INCREMENTS UNTIL CONDITION IS ALLEVIATED OR INSTALL A WASH RACK. WASHING THE ROADWAY OR SWEEPING DEPOSITS INTO ROADWAY DITCHES, SEWER, CULVERTS, OR OTHER DRAINAGE COURSES IS NOT ACCEPTABLE.

**1 ROCK CONSTRUCTION ENTRANCE**  
NOT TO SCALE



FOR D ≥ 3 FT. - USE R-4  
FOR D ≥ 2 FT. TO D < 3 FT. - USE R-3  
NOT APPLICABLE FOR D < 2 FT.

ROCK FILTER NO.	LOCATION	D (FT)	RIPRAP SIZE (R-...)
RF-1	STA. 154+32.25; OFF. 77.25	5	4

**NOTES:**

SEDIMENT MUST BE REMOVED WHEN ACCUMULATIONS REACH 1/2 THE HEIGHT OF THE FILTERS.  
IMMEDIATELY UPON STABILIZATION OF EACH CHANNEL, REMOVE ACCUMULATED SEDIMENT, REMOVE ROCK FILTER, AND STABILIZE DISTURBED AREAS.

**2 ROCK FILTER**  
NOT TO SCALE

**BLACKHAWK™**  
Advanced Inlet Filter Mat



Sediment control device designed to prevent street flooding while being easy to install and service.

Silt sacks have limited sediment storage capacity and can easily blind whereby causing street flooding. Blackhawk™ has a much higher sediment storage capacity because sediment is kept above the grate. It's unique design – vertically oriented coir fibers, scalloped edging, hi-flow holes, and emergency dewatering plugs, make this device the most robust in it's class.

Blackhawk™ is held to the grate with high strength rubberized magnets so installation, servicing, and removal is a snap – no skid steer or backhoe needed. This device can be cleaned and re-used multiple times.

**Performance Details:**

- 1300 GPM hydraulic flow rating (2x4 grate version)
- Removes 99% .425 mm particle size and larger
- Independent testing shows 87% overall sediment removal
- Works with both Type-M and Type-C inlet configurations
- Mats for 2x2, 2x3, and 2x4 grates are in stock
- Custom sizes available with short lead-times

**Other Benefits:**

- Easy to handle - Installs by just laying on the grate
- Can be cleaned and re-used multiple times
- Can be used for both E&S and MS-4 compliance
- Much higher sediment storage capacity than bags
- Designed to be highly resistant to blinding and flooding
- Integrated emergency dewatering plugs

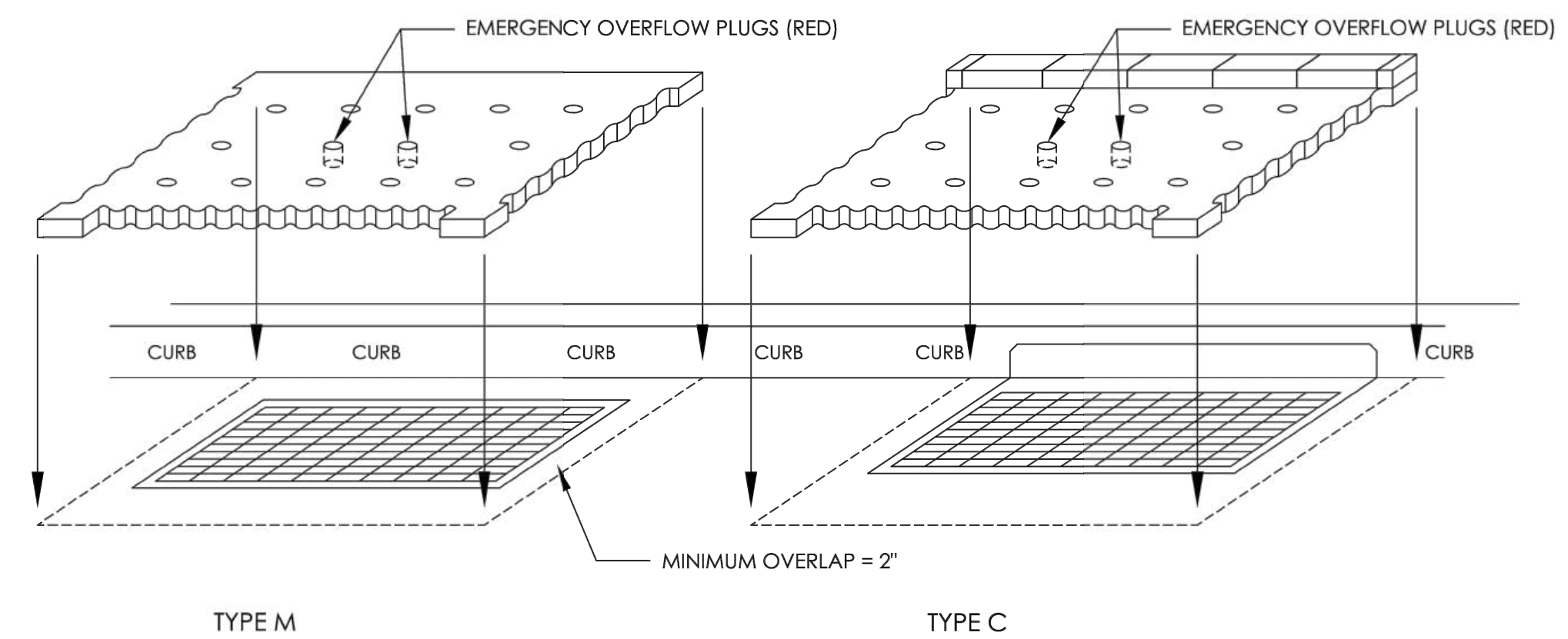


**MKB Stormwater Innovation**

888-578-0777  
mkbcompany.com

Patent Pending 15/448,576  
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Made in U.S.A.



**BLACKHAWK INLET FILTER SYSTEM**  
(OR EQUIVALENT)

**NOTES:**

-PRIOR TO INSTALLATION, INLET GRATE SURFACE AND SURROUNDING AREA SHALL BE CLEANED AND CLEARED OF DEBRIS. INLET FILTER MAT SHALL BE INSTALLED WITH A MINIMUM 2' OVERLAP FROM EDGE OF GRATE TO EDGE OF MAT WITH STRAIGHT EDGE FLUSH TO CURB FACE. ADJUST MAT BY HAND UNTIL PLACEMENT ALLOWS FOR OPTIMAL MAGNETIC ADHESION TO GRATE SURFACE.

-PREINSTALLED RED EMERGENCY OVERFLOW PLUGS CAN BE REMOVED IN THE EVENT OF FLOODING TO ALLOW FOR RAPID DEWATERING. AFTER DEWATERING, THE INLET FILTER MAT SHALL BE LIFTED AND THOROUGHLY CLEANED OR REPLACED AND THE AND THE EMERGENCY OVERFLOW PLUGS SHALL BE REINSTALLED. IF GRATE IS AT LOWEST POINT OF STREET, REMOVAL OF ONE PLUG WILL ALLOW FOR EXPECTED DEWATERING AT ALL TIMES.

-INLET FILTER MATS SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EACH RUNOFF EVENT. AS NEEDED, INLET FILTER MATS SHALL BE LIFTED AND RINSED OR REPLACED. WHEN FLOW CAPACITY HAS BEEN REDUCED SO AS TO CAUSE FLOODING OR BYPASSING OF THE INLET OR THE INLET FILTER MAT BECOMES COMPRESSED DUE TO HEAVY TRAFFIC, REPLACEMENT IS REQUIRED.

-A SUPPLY OF SPARE INLET FILTER MATS SHALL BE MAINTAINED ON SITE. ALL NECESSARY REPAIRS SHALL BE INITIATED IMMEDIATELY AFTER THE INSPECTION. DISPOSE ACCUMULATED SEDIMENT AS WELL AS ALL USED MATS ACCORDING TO THE PLAN NOTES.

**3 INLET FILTER MAT**  
NOT TO SCALE

**Mead & Hunt**

Mead and Hunt, Inc.  
2605 Port Lansing Road  
Lansing, MI 48906  
phone: 517-321-8334  
meadhunt.com

ERIE INTERNATIONAL AIRPORT  
REALIGNMENT & RECONSTRUCTION  
OF TAXIWAY A - PHASE 3  
4411 WEST 12TH STREET  
ERIE, PENNSYLVANIA

ISSUED  
05/17/2024

ISSUED FOR  
BID

AIP NO.: 3-42-030-XXX-2023  
M&H NO.: 3225600-192499.05

DATE: MAY 17, 2024

DESIGNED BY: RCL

DRAWN BY: SRK

CHECKED BY: RCL

DO NOT SCALE DRAWINGS

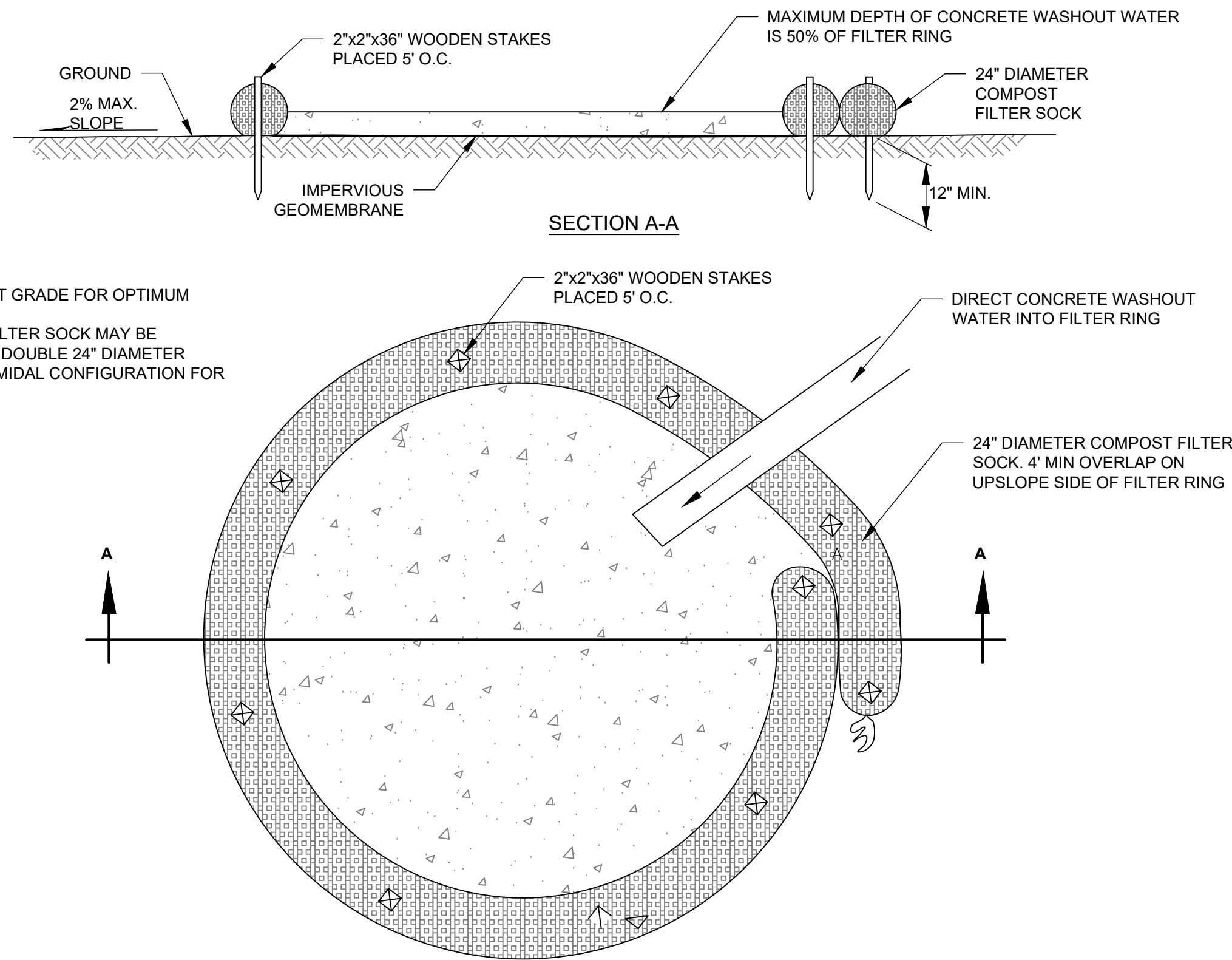
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EROSION AND  
SEDIMENT CONTROL  
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2 OF 4

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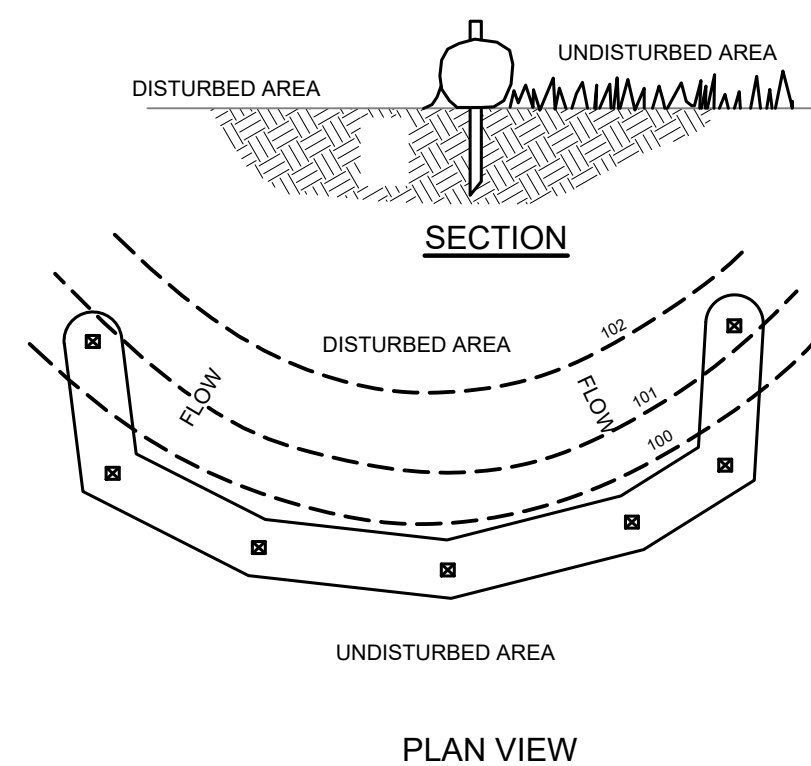
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- NOTES:
1. INSTALL ON FLAT GRADE FOR OPTIMUM PERFORMANCE
  2. 18" DIAMETER FILTER SOCK MAY BE STACKED ONTO DOUBLE 24" DIAMETER SOCKS IN PYRAMIDAL CONFIGURATION FOR ADD HEIGHT.

4 TYPICAL COMPOST SOCK WASHOUT INSTALLATION  
NOT TO SCALE



NOTES:

SOCK FABRIC SHALL MEET STANDARDS OF TABLE 4.1 OF THE PA DEP EROSION CONTROL MANUAL. COMPOST SHALL MEET THE STANDARDS OF TABLE 4.2 OF THE PA DEP EROSION CONTROL MANUAL.

COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE BARRIER SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE AT 45 DEGREES TO THE MAIN BARRIER ALIGNMENT. MAXIMUM SLOPE LENGTH ABOVE ANY BARRIER SHALL NOT EXCEED THAT SPECIFIED FOR THE SIZE OF THE SOCK AND THE SLOPE OF ITS TRIBUTARY AREA.

TRAFFIC SHALL NOT BE PERMITTED TO CROSS COMPOST FILTER SOCKS.

ACCUMULATED SEDIMENT SHALL BE REMOVED WHEN IT REACHES 1/2 THE ABOVE GROUND HEIGHT OF THE BARRIER AND DISPOSED IN THE MANNER DESCRIBED ELSEWHERE IN THE PLAN.

COMPOST FILTER SOCKS SHALL BE INSPECTED WEEKLY AND AFTER EACH RUNOFF EVENT. DAMAGED SOCKS SHALL BE REPAIRED ACCORDING TO MANUFACTURER'S SPECIFICATIONS OR REPLACED WITHIN 24 HOURS OF INSPECTION.

BIODEGRADABLE COMPOST FILTER SOCKS SHALL BE REPLACED AFTER 6 MONTHS; PHOTODEGRADABLE SOCKS AFTER 1 YEAR. POLYPROPYLENE SOCKS SHALL BE REPLACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.

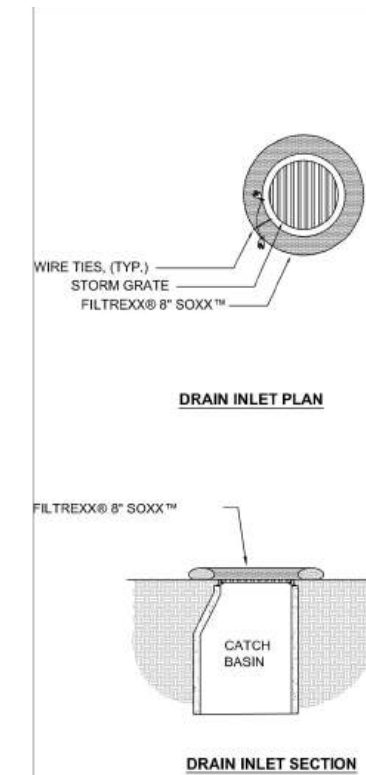
UPON STABILIZATION OF THE AREA TRIBUTARY TO THE SOCK, STAKES SHALL BE REMOVED. THE SOCK MAY BE LEFT IN PLACE AND VEGETATED OR REMOVED. IN THE LATTER CASE, THE MESH SHALL BE CUT OPEN AND THE MULCH SPREAD AS A SOIL SUPPLEMENT.

Compost filter sock (CFS)\*

- |                       |                       |
|-----------------------|-----------------------|
| CFS-1: 3'/100' = 3%   | CFS-6: 3'/100' = 3%   |
| CFS-2: 3'/180' = 1.7% | CFS-7: 5'/100' = 5%   |
| CFS-3: 5'/120' = 4.2% | CFS-8: 4'/100' = 4%   |
| CFS-4: 5'/110' = 4.5% | CFS-9: 3'/100' = 3%   |
| CFS-5: 3'/180' = 1.6% | CFS-10: 7'/90' = 7.7% |

\*All CFS should be 12" minimum.

5 COMPOST FILTER SOCK  
NOT TO SCALE



INSTALLATION

1. Inlet protection shall be placed at locations indicated on plans as directed by the Engineer. Inlet protection should be installed in a pattern that allows complete protection of the inlet area.
2. Installation of curb inlet protection will ensure a minimal overlap of at least 1 ft (300mm) on either side of the opening being protected. Inlet protection will be anchored to the soil behind the curb using stakes, stakes or other devices capable of holding the inlet protection in place.
3. Standard inlet protection for curb inlet protection and curb sediment containment will use 8 in (200mm) diameter inlet protection, and drain inlets on soil will use 12 in (300mm) or 18 in (450mm) diameter inlet protection. In severe flow situations, larger inlet protection may be specified by the Engineer. During curb installation, inlet protection shall be compacted to be slightly shorter than curb height.
4. If inlet protection becomes clogged with debris and sediment, they shall be maintained so as to assure proper drainage and water flow into the storm drain. In severe storm events, overflow of the inlet protection may be acceptable in order to keep the area from flooding.
5. Curb and drain inlet protection shall be positioned so as to provide a permeable physical barrier to the drain itself, allowing sediment to collect on the outside of the inlet protection.
6. For drains and inlets that have only curb cuts, without street grates, a spacer is required in order to keep the inlet protection away from the drain opening. This spacer should be cinder

7. Stakes shall be installed through the middle of the drain inlet protection on 5 ft (1.5m) centers, using 2 in (50mm) by 2 in (50mm) by 3 ft (1m) wooden stakes.
8. Staking depth for sand and silt loam soils shall be 12 in (300mm), and 8 in (200mm) for clay soils.

MAINTENANCE & DISPOSAL

1. The Contractor shall remove sediment at the base of the upslope side of the inlet protection when accumulation has reached 1/2 of the effective height of the inlet protection, or as directed by the Engineer. Alternatively, for drain inlet protection, a new Soxx may be placed on top of the original increasing the sediment storage capacity without soil disturbance.
2. Inlet protection shall be maintained until disturbed area above or around the device has been permanently stabilized and construction activity has ceased. Regular maintenance includes lifting the inlet protection and cleaning around and under them as sediment collects.
3. The FilterMedia will be removed from paved areas or dispersed on site soil or behind curb once disturbed area has been permanently stabilized, construction activity has ceased, or as determined by the Engineer.

6 INLET PROTECTION - COMPOST FILTER SOCK  
NOT TO SCALE

The maximum slope length above a compost filter sock should not exceed those shown in Figure 4.2. **NOTE: Slope length is not addressed by use of multiple rows of compost socks.** The anticipated functional life of a biodegradable filter sock should be 6 months; for photodegradable socks it is 1 year. Some other types may last longer. Projects with disturbances anticipated to last longer than the functional life of a sock should plan to replace the socks periodically or use another type of BMP.

Upon stabilization of the tributary area, the filter sock may be left in place and vegetated or removed. In the latter case, the mesh is typically cut open and the mulch spread as a soil supplement. In either case, the stakes should be removed.

Filter socks using other fillers may be approved on a case-by-case basis if sufficient supporting information (including manufacturer's specs and independent test data) is provided. However, they might not qualify as ABACTs. Wherever compost socks are used, Table 4.1 should be placed on a detail sheet.

TABLE 4.1  
Compost Sock Fabric Minimum Specifications

Material Type	3 mil HDPE	5 mil HDPE	5 mil HDPE	Multi-Filament Polypropylene (MFPP)	Heavy Duty Multi-Filament Polypropylene (HDMFPP)
<b>Material Characteristics</b>	Photo-degradable	Photo-degradable	Bio-degradable	Photo-degradable	Photo-degradable
<b>Sock Diameters</b>	12" 18"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"
<b>Mesh Opening</b>	3/8"	3/8"	3/8"	3/8"	1/8"
<b>Tensile Strength</b>		26 psi	26 psi	44 psi	202 psi
<b>Ultraviolet Stability % Original Strength (ASTM G-155)</b>	23% at 1000 hr.	23% at 1000 hr.		100% at 1000 hr.	100% at 1000 hr.
<b>Minimum Functional Longevity</b>	6 months	9 months	6 months	1 year	2 years

Two-ply systems

Inner Containment Netting	Outer Filtration Mesh
HDPE biaxial net	
Continuously wound	
Fusion-welded junctures	
3/4" X 3/4" Max. aperture size	
Composite Polypropylene Fabric (Woven layer and non-woven fleece mechanically fused via needle punch)	
3/16" Max. aperture size	

Filterex & JMD

Compost should be a well decomposed, weed-free organic matter derived from agriculture, food, stump grindings, and yard or wood/bark organic matter sources. The compost should be aerobically composted. The compost should possess no objectionable odors and should be reasonably free (<1% by dry weight) of man-made foreign matter. The compost product should not resemble the raw material from which it was derived. Wood and bark chips, ground construction debris or reprocessed wood products are not acceptable as the organic component of the mix.

The physical parameters of the compost should comply with the standards in Table 4.2. The standards contained in the PennDOT Publication 408 are an acceptable alternative.

TABLE 4.2  
Compost Standards

Organic Matter Content	80% - 100% (dry weight basis)
Organic Portion	Fibrous and elongated
pH	5.5 - 8.0
Moisture Content	35% - 55%
Particle Size	98% pass through 1" screen
Soluble Salt Concentration	5.0 dS/m (mmhos/cm) Maximum

Filterex

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AIP NO: 3-42-030-XXX-2023  
M&H NO: 3225600-192499.05  
DATE: MAY 17, 2024

DESIGNED BY: RCL  
DRAWN BY: SRK  
CHECKED BY: RCL

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SHEET CONTENTS  
EROSION AND  
SEDIMENT CONTROL  
PLAN DETAILS SHEET  
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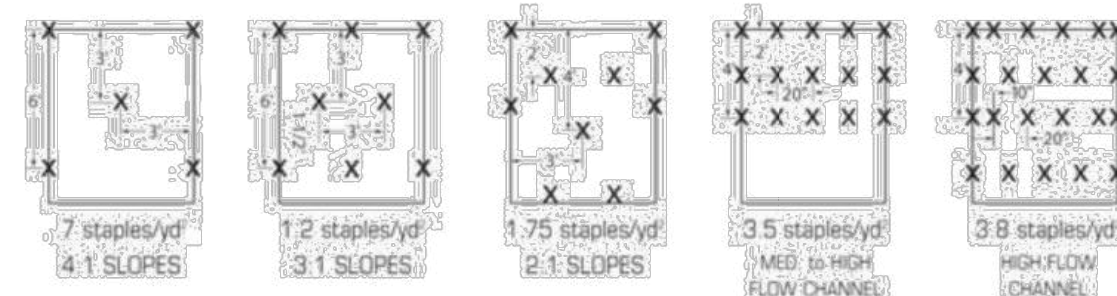


## INSTALLATION

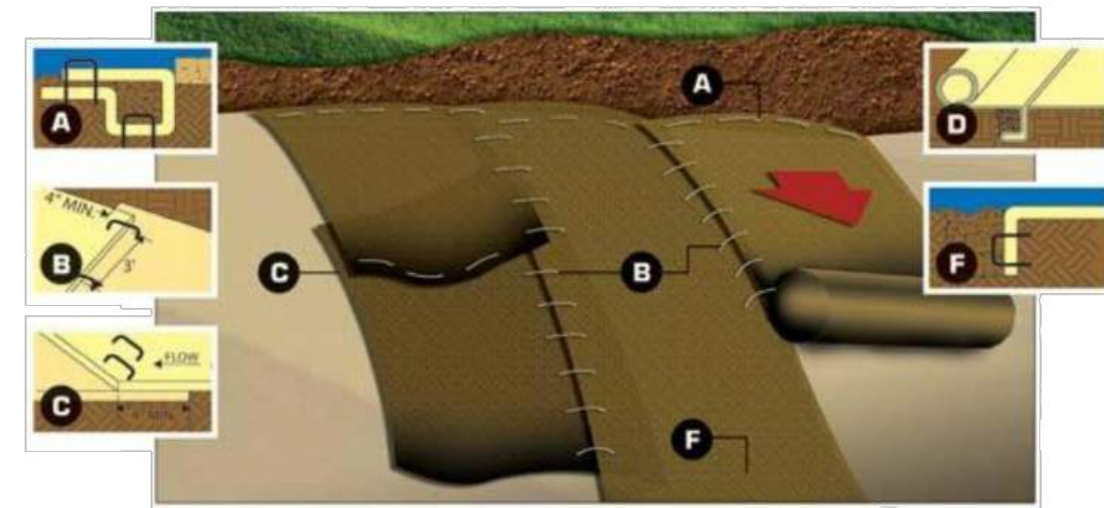
These guidelines are recommendations only. Any questions with the installation should be confirmed with your local distributor.

### BASIC INSTALLATION GUIDELINES

- Prepare the soil surface including raking, seeding, and fertilizing.
- Begin the installation process by digging a trench 6" deep by 6" wide at the top of the slope. Place 12" of blanket over the up-slope portion of the trench. Secure the blanket at the bottom of the trench with staples placed 12" apart. Backfill and compact the trench. Apply seed, and fold the remaining 12" over soil, secure with a row of staples placed 12" apart across the width of the blanket (Diagram A).
- Roll the blanket vertically down the slope. Secure using the appropriate staple pattern below, specified by slopes.



- Parallel blankets must be overlapped by a minimum of 4", and secured with a row of staples placed approximately 3'-0" apart (Diagram B).
- Additional vertical blankets can be joined using a minimum 4" overlapping or shingle style in the direction of water flow. Connect the blankets by placing staples approximately 12" apart across the width of the blankets (Diagram C).
- An intermittent check slot is recommended for blankets placed on a long slope. A 6" deep by 6" wide trench is made. Blanket is placed at bottom of trench and covered with approximately 2" of soil. Blanket is rolled over compacted soil and secured with staples placed 12" apart. Backfill and compact the trench. Apply seed, and continue with general installation (Diagram D).
- The end of blanket must be secured in a 6" x 6" trench with a row of staples placed at 12" intervals (Diagram F).



### CHANNEL LINING INSTALLATION GUIDELINES

- Prepare the soil surface including raking, seeding, and fertilizing.
- Begin the installation process by digging a trench 6" deep by 6" wide at the top of the slope. Place 12" of blanket over the up-slope portion of the trench. Secure the blanket at the bottom of the trench with staples placed 12" apart. Backfill and compact the trench. Apply seed, and fold the remaining 12" over soil, secure with a row of staples placed 12" apart across the width of the blanket (Diagram A).
- Continue placing blankets up the slopes on both sides, with a minimum 4" overlapping, and securing each blanket in the beginning trench. Staples should be placed in a staggered pattern at approximately 12" intervals, refer to sample patterns under Basic Installation Guidelines.
- Additional horizontal blankets can be joined using a minimum 4" overlapping or shingle style in the direction of water flow. Connect the blankets by placing staples approximately 5" apart across the width of the blankets (Diagram E).
- For maximum performance, a check slot should be placed at 25'-40' intervals. Place a row of staples 4" apart along the entire width of the channel. A second row should be placed 4" below in a staggered pattern (Diagram D).
- The end of the blanket must be secured in a 6" x 6" trench by a row of staples placed at 12" intervals (Diagram F).
- At the top edge of the side slope, fasten the blanket in a 6" x 6" trench with staples placed at 12" intervals. Install an additional row of staples 1'-0" down slope of the trench along the width of the fabric (Diagram G).

## 7 EROSION CONTROL BLANKET INSTALLATION AND SPECIFICATIONS

NOT TO SCALE

## MATERIAL SPECIFICATION

### EROSION CONTROL BLANKET 12-month Straw Double Net Blanket

The erosion control blanket shall be made with uniformly distributed straw and two layers of net covering, which is securely stitched together to create an even mat. The outer ends will be rolled and stitched to create a closed edge. It will have a durability lifespan of approximately 12 months.

The blanket shall be covered on the top and bottom with a lightweight photodegradable polypropylene net having an approximate 0.5 x 0.5 mesh size. The straw shall be 100% agricultural. The blanket shall be sewn together with degradable thread. The blanket size will be 7.5 ft x 96 ft (80 yd<sup>2</sup>). The blanket shall weigh 48 pounds plus or minus 10 percent. Blankets will be shipped in tightly compressed rolls inside polyethylene bags. Each bag will include a product label and installation guide.

#### MATERIALS:

Fiber: 100% Straw Fiber  
0.55 lbs/sq yd

Netting: Top: Lightweight Photodegradable Polypropylene  
Bottom: Lightweight Photodegradable Polypropylene

#### Thread: Degradable

#### PHYSICAL PROPERTIES:

Property	Test Method *	Mean
Thickness	ASTM D 4354	.29 in
Resiliency	ECTC TASC 00197	69.0%
Mass per Unit Area	ASTM D 5261	11.95 oz/sq. yd.
Water Absorption	ASTM D 1117/ECTC TASC 00197	338.0%
Swell	ECTC TASC 00197	32%
Stiffness	ASTM D 1388/ECTC	.96 oz/in (10,901 mg-cm)
Light Penetration	ECTC TASC 00197	19.0%
MD Tensile	ASTM D 5035/ECTC	195.6 lbs/ft
MD Elongation	ASTM D 5035/ECTC	19.9%
TD Tensile	ASTM D 5035/ECTC	152.4 lbs/ft
TD Elongation	ASTM D 5035/ECTC	15.9%
Ash Content	ASTM D 586	7.33%
Organic Matter	ASTM D 2974	92.67%

#### FUNCTIONING PROPERTIES

Permissible Sheer Stress ECTC Test Method #3 2.1 psf

\*All figures are based on Bench Scale test methods

#### NOTES:

LOW VOLUME FILTER BAGS SHALL BE MADE FROM NON-WOVEN GEOTEXTILE MATERIAL SEWN WITH HIGH STRENGTH, DOUBLE STITCHED "J" TYPE SEAMS. THEY SHALL BE CAPABLE OF TRAPPING PARTICLES LARGER THAN 150 MICRONS. HIGH VOLUME FILTER BAGS SHALL BE MADE FROM WOVEN GEOTEXTILES THAT MEET THE FOLLOWING STANDARDS:

PROPERTY	TEST METHOD	MINIMUM STANDARD
AVG. WIDE WIDTH STRENGTH	ASTM D-4884	60 LB/IN
GRAB TENSILE	ASTM D-4632	205 LB
PUNCTURE	ASTM D-4833	110 LB
MULLEN BURST	ASTM D-3786	350 PSI
UV RESISTANCE	ASTM D-4355	70%
AOS % RETAINED	ASTM D-4751	80 SIEVE

A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY REQUIRED FOR DISPOSAL PURPOSES SHALL BE PROVIDED. FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME 1/2 FULL OF SEDIMENT. SPARE BAGS SHALL BE KEPT AVAILABLE FOR REPLACEMENT OF THOSE THAT HAVE FAILED OR ARE FILLED. BAGS SHALL BE PLACED ON STRAPS TO FACILITATE REMOVAL UNLESS BAGS COME WITH LIFTING STRAPS ALREADY ATTACHED.

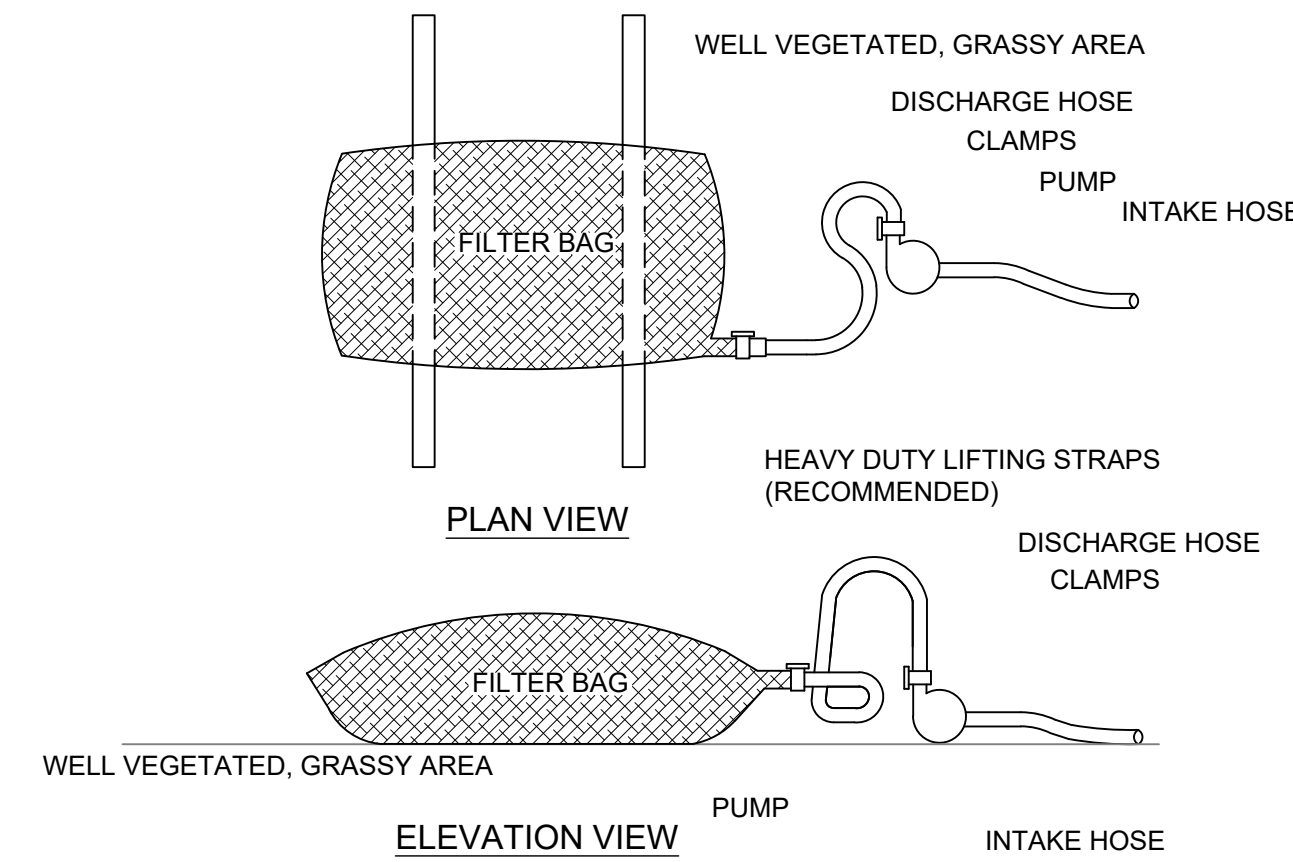
BAGS SHALL BE LOCATED IN WELL-VEGETATED (GRASSY) AREA, AND DISCHARGE ONTO STABLE, EROSION RESISTANT AREAS. WHERE THIS IS NOT POSSIBLE, A GEOTEXTILE UNDERLAYMENT AND FLOW PATH SHALL BE PROVIDED. BAGS MAY BE PLACED ON FILTER STONE TO INCREASE DISCHARGE CAPACITY. BAGS SHALL NOT BE PLACED ON SLOPES GREATER THAN 5%. FOR SLOPES EXCEEDING 5%, CLEAN ROCK OR OTHER NON-ERODIBLE AND NON-POLLUTING MATERIAL MAY BE PLACED UNDER THE BAG TO REDUCE SLOPE STEEPNESS.

NO DOWNSLOPE SEDIMENT BARRIER IS REQUIRED FOR MOST INSTALLATIONS. COMPOST BERM OR COMPOST FILTER SOCK SHALL BE INSTALLED BELOW BAGS LOCATED IN HQ OR EV WATERSHEDS, WITHIN 50 FEET OF ANY RECEIVING SURFACE WATER OR WHERE GRASSY AREA IS NOT AVAILABLE.

THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED. A PIECE OF PVC PIPE IS RECOMMENDED FOR THIS PURPOSE.

THE PUMPING RATE SHALL BE NO GREATER THAN 750 GPM OR 1/2 THE MAXIMUM SPECIFIED BY THE MANUFACTURER, WHICHEVER IS LESS. PUMP INTAKES SHALL BE FLOATING AND SCREENED.

FILTER BAGS SHALL BE INSPECTED DAILY. IF ANY PROBLEM IS DETECTED, PUMPING SHALL CEASE IMMEDIATELY AND NOT RESUME UNTIL THE PROBLEM IS CORRECTED.



## 8 PUMPED WATER FILTER BAG

NOT TO SCALE

### SEEDING SPECIFICATIONS- Erie International Airport-Realignment and Rehabilitation of Taxiway A

#### Temporary Cover

Use the temporary seed mixture listed below on all disturbed areas if the area is to be disturbed again, prior to completion of the earth disturbance.

Use the temporary seed mixture listed below in conjunction with the permanent cover seed mixture if the area is at final grade.

- (1) Annual Ryegrass Rate: 40lbs/acre (common seed)  
Seeding Dates: March 15- October 15

#### Permanent Cover

Use one of the following seed mixtures or an approved alternative:

a) Seed Mixture Species	Rate of Application (lbs/acre) PLS**	Min. % Germ.	Min% Purity
(2) Perennial Ryegrass	15	90	98
Tall Fescue	60	80	95

\*\*PLS means Pure Live Seed. PLS = (% Purity x % Germination)/100. For example, to obtain the actual planting rate for Perennial Ryegrass, multiply the percent pure seed by the percent germination (both are shown on the seed tag) and divide that product by 100, then divide 25 lbs PLS by that quotient. Thus, if the pure seed content of a given seedlot is 85%, and its percent germination is 75%, (85%x 75%)/100= 63.75%, then divide 25 lbs PLS by 0.6375 to obtain 39.2 pounds, the amount of seed from that seed lot required to plant 1 acre.

b) Seed Mixture No.:	Use:	Seeding Dates:
(1) and (2)	Final cover on all disturbed areas (mowed and not mowed)	March 15 – June 15 August 16– October 15

c) Method(s) of Seeding:  
Broadcast seeding, hydroseeding, or grain drilling.

Note: Hydroseeding should only be done during the growing season.

d) Seedbed preparation:  
If compaction has occurred, the soil will be scarified before planting. Lime shall be added at the rate of 4 tons per acre.

e) Soil preparation and mulching  
Apply 100-200 commercial fertilizer per acre. Apply netted/binded mulch material at the rate of 3 tons per acre immediately after seeding. Erosion matting is to be utilized on all slopes 3:1 or greater.  
Info in this Section obtained from Penn State Agronomy Guide- 1995-1996.

## 9 SEEDING SPECIFICATIONS

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# Mead & Hunt

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Lansing, MI 48906  
phone: 517-321-8334  
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**ERIE INTERNATIONAL AIRPORT  
REALIGNMENT & RECONSTRUCTION  
OF TAXIWAY A - PHASE 3**  
 4411 WEST 12TH STREET  
 ERIE, PENNSYLVANIA

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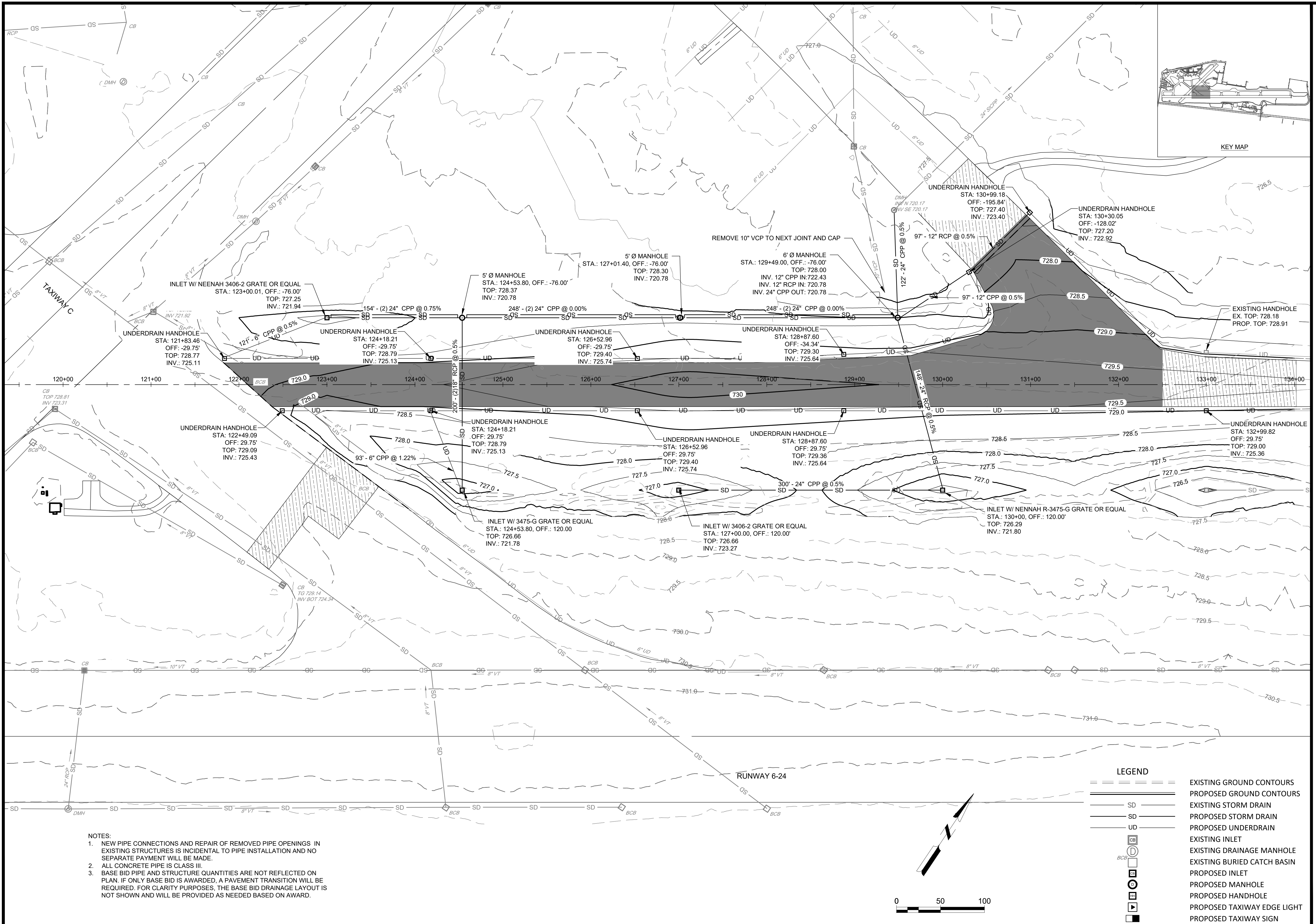
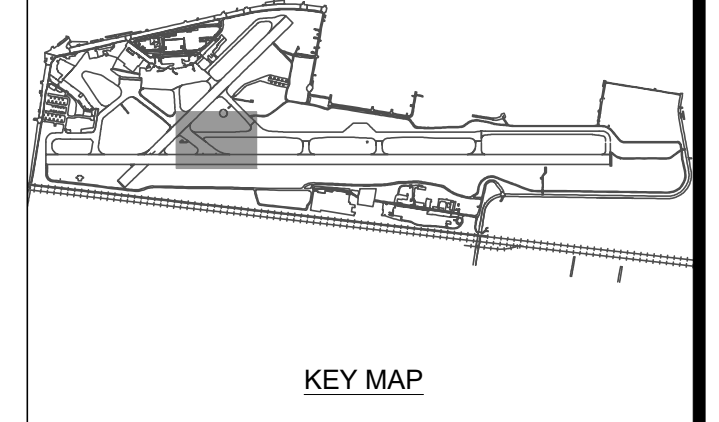
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# C-305





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SHEET CONTENTS  
PROPOSED DRAINAGE PLAN

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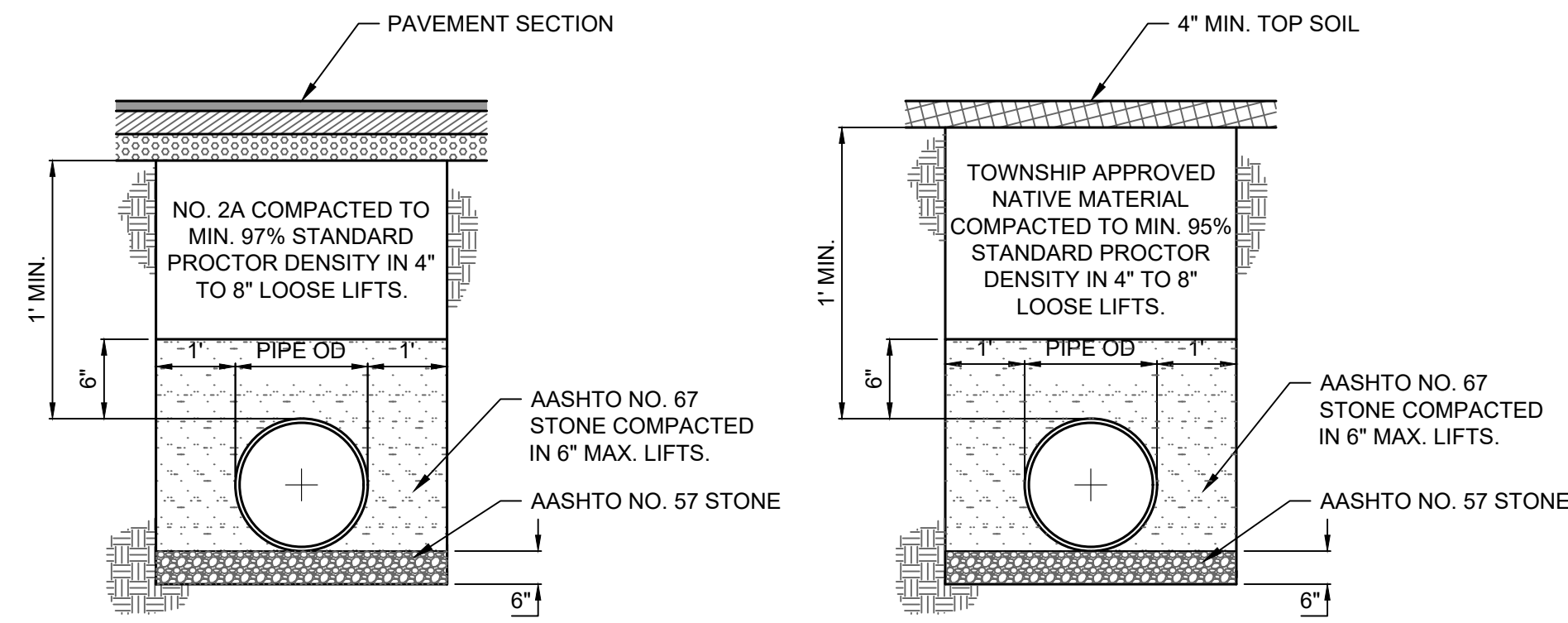
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- NOTES:
1. NEW PIPE CONNECTIONS AND REPAIR OF REMOVED PIPE OPENINGS IN EXISTING STRUCTURES IS INCIDENTAL TO PIPE INSTALLATION AND NO SEPARATE PAYMENT WILL BE MADE.
  2. ALL CONCRETE PIPE IS CLASS III.
  3. BASE BID PIPE AND STRUCTURE QUANTITIES ARE NOT REFLECTED ON PLAN. IF ONLY BASE BID IS AWARDED, A PAVEMENT TRANSITION WILL BE REQUIRED. FOR CLARITY PURPOSES, THE BASE BID DRAINAGE LAYOUT IS NOT SHOWN AND WILL BE PROVIDED AS NEEDED BASED ON AWARD.

LEGEND	
	EXISTING GROUND CONTOURS
	PROPOSED GROUND CONTOURS
	EXISTING STORM DRAIN
	PROPOSED STORM DRAIN
	PROPOSED UNDERDRAIN
	EXISTING INLET
	EXISTING DRAINAGE MANHOLE
	EXISTING BURIED CATCH BASIN
	PROPOSED INLET
	PROPOSED MANHOLE
	PROPOSED HANDHOLE
	PROPOSED TAXIWAY EDGE LIGHT
	PROPOSED TAXIWAY SIGN





**TYPICAL PIPE TRENCH DETAIL UNDER PAVEMENT**

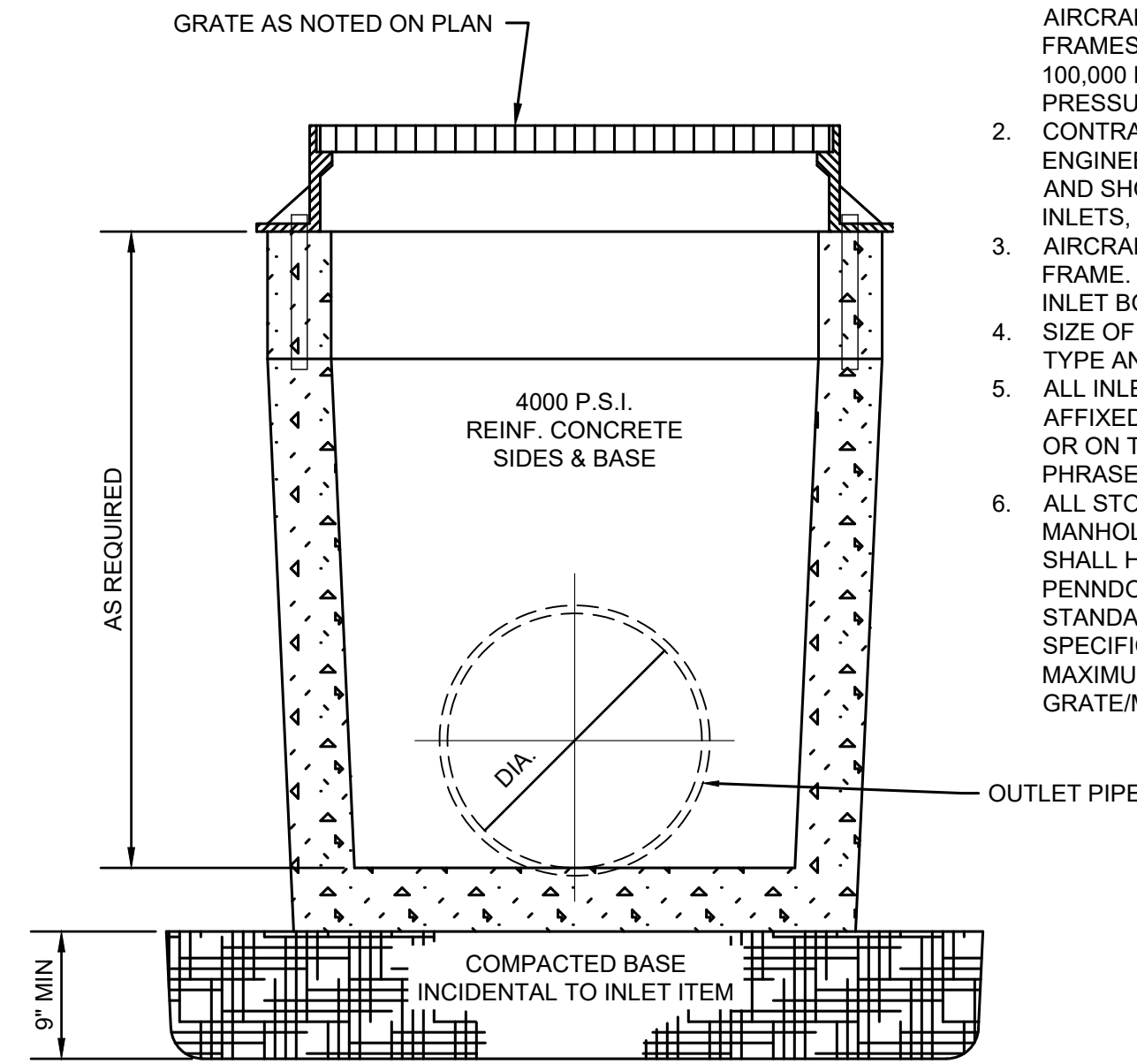
**TYPICAL PIPE TRENCH DETAIL UNDER SOD**

HDPE PIPE SIZE		MIN. TRENCH WIDTH PER PIPE SIZE
I.D.	O.D. *	
12"	14.4"	31"
15"	17.6"	34"
18"	21.2"	39"
24"	27.8"	48"
30"	35.1"	66"
36"	41.7"	78"
42"	46.8"	83"
48"	52.7"	89"

\* O.D. MAY VARY DEPENDING ON PIPE MANUFACTURER

**NOTES:**

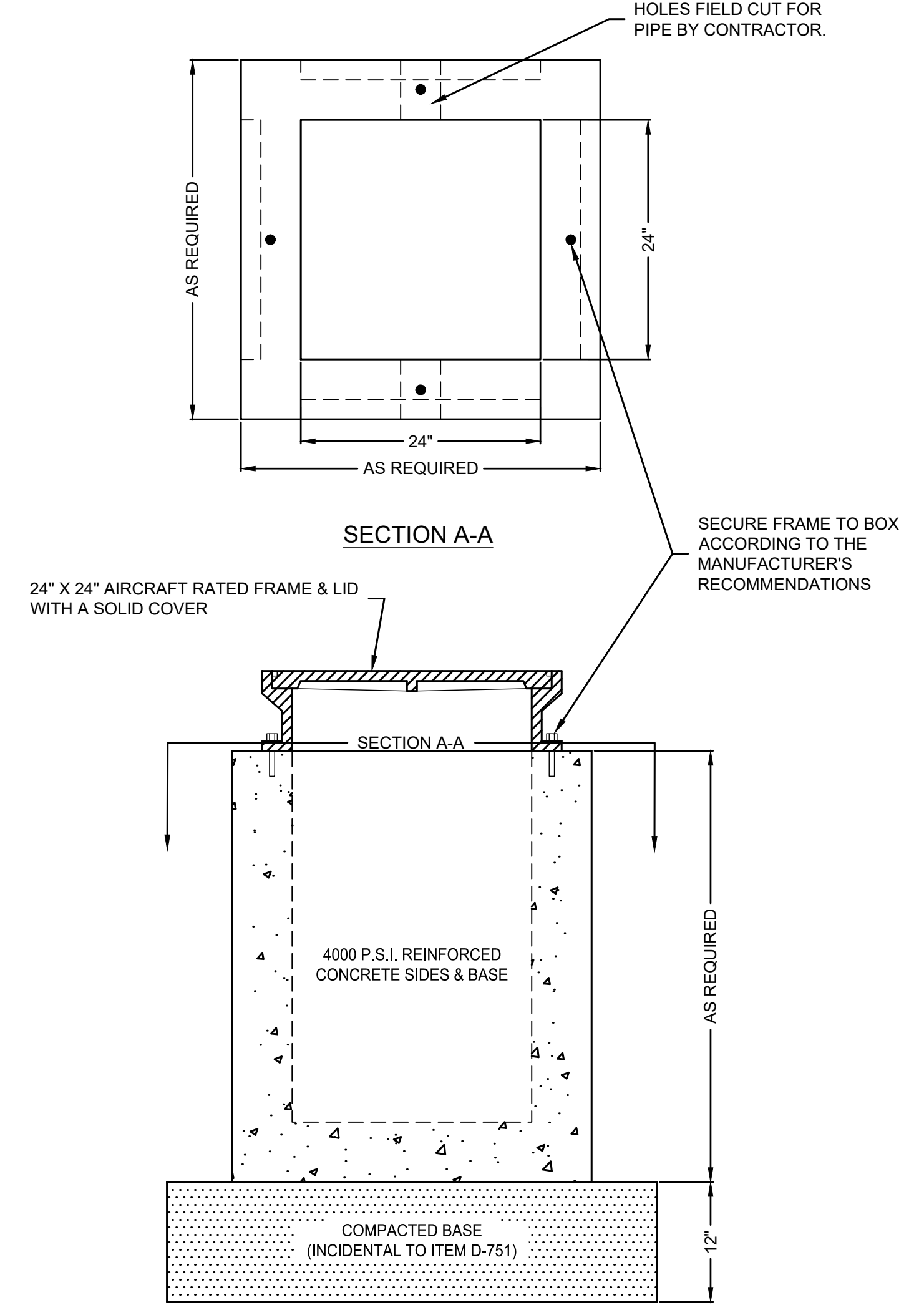
- TRENCH WALLS SHALL BE COMPLETELY VERTICAL TO A DEPTH AT LEAST 12" ABOVE TOP OF PIPE. SHORING REQUIRED FOR ALL TRENCHES IN ACCORDANCE WITH APPLICABLE REGULATIONS, LAWS AND SAFETY CODES.
- REFER TO FAA SPECIFICATION D-701, THE TOWNSHIP'S, MANUFACTURER'S AND ASTM D2321 SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- TYPICAL ROADWAY/SIDEWALK/DRIVEWAY AREA DETAIL SHALL BE USED AS FOLLOWS:
  - WHEN EXCAVATION DEPTH IS FIVE (5) FEET OR LESS, THIS DETAIL SHALL BE USED WITHIN FIVE (5) HORIZONTAL FEET OF ANY PAVEMENT, BERM, SIDEWALK OR DRIVEWAY
  - WHEN EXCAVATION DEPTH IS GREATER THAN FIVE (5) FEET, THIS DETAIL SHALL BE USED WITHIN TEN (10) HORIZONTAL FEET OF ANY PAVEMENT, BERM, SIDEWALK OR DRIVEWAY.
- UNSUITABLE MATERIAL BELOW THE EXCAVATED TRENCH BOTTOM SHALL BE REMOVED, WHERE DIRECTED, AND REPLACED WITH AASHTO NO. 57 AGGREGATE.
- INSTALLATION SHALL BE IN ACCORDANCE WITH ASTM D2321 "STANDING PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE".
- IN ADDITION TO THE APPROVED PIPE BACKFILL OF 2A, OTHER GRAVEL SOURCES MAY BE USED, PROVIDED THAT TEST DATA IS SUBMITTED TO AND APPROVED BY THE TOWNSHIP PRIOR TO USE OF THE ALTERNATE SOURCE.



**3 PRECAST INLET (NON STANDARD) NOT TO SCALE**

**NOTES:**

- FOR STRUCTURES NOTED TO HAVE AN AIRCRAFT RATED GRATE, THE INLET BOXES, FRAMES, GRATES, AND LIDS TO SUPPORT 100,000 LB WHEEL LOADING AND 250 PSI TIRE PRESSURE U.N.O.
- CONTRACTOR TO SUPPLY PROFESSIONAL ENGINEER STAMPED MANUFACTURER DESIGN AND SHOP DRAWINGS FOR AIRCRAFT RATED INLETS, MANHOLES, AND HANDHOLES.
- AIRCRAFT RATED GRATE MUST BE BOLTED TO FRAME. FRAME MUST BE ANCHORED INTO INLET BOX.
- SIZE OF INLET BOX WILL BE DEPENDENT ON TYPE AND SIZE OF GRATE OR AS NOTED.
- ALL INLETS SHALL HAVE PERMANENTLY AFFIXED SIGNAGE LOCATED ON THE CASTING OR ON THE TOP OF THE INLET WITH THE PHRASE "DO NOT DUMP, DRAINS TO STREAM"
- ALL STORM DRAIN STRUCTURES INCLUDING MANHOLES AND INLETS DEEPER THAN 4 FEET SHALL HAVE ACCESS STEPS PER THE PENNDOT ROADWAY CONSTRUCTION STANDARDS AND PUBLICATION 408 SPECIFICATIONS. THE TOP STEP SHALL BE A MAXIMUM OF 18" FROM THE TOP OF GRATE/MANHOLE COVER.

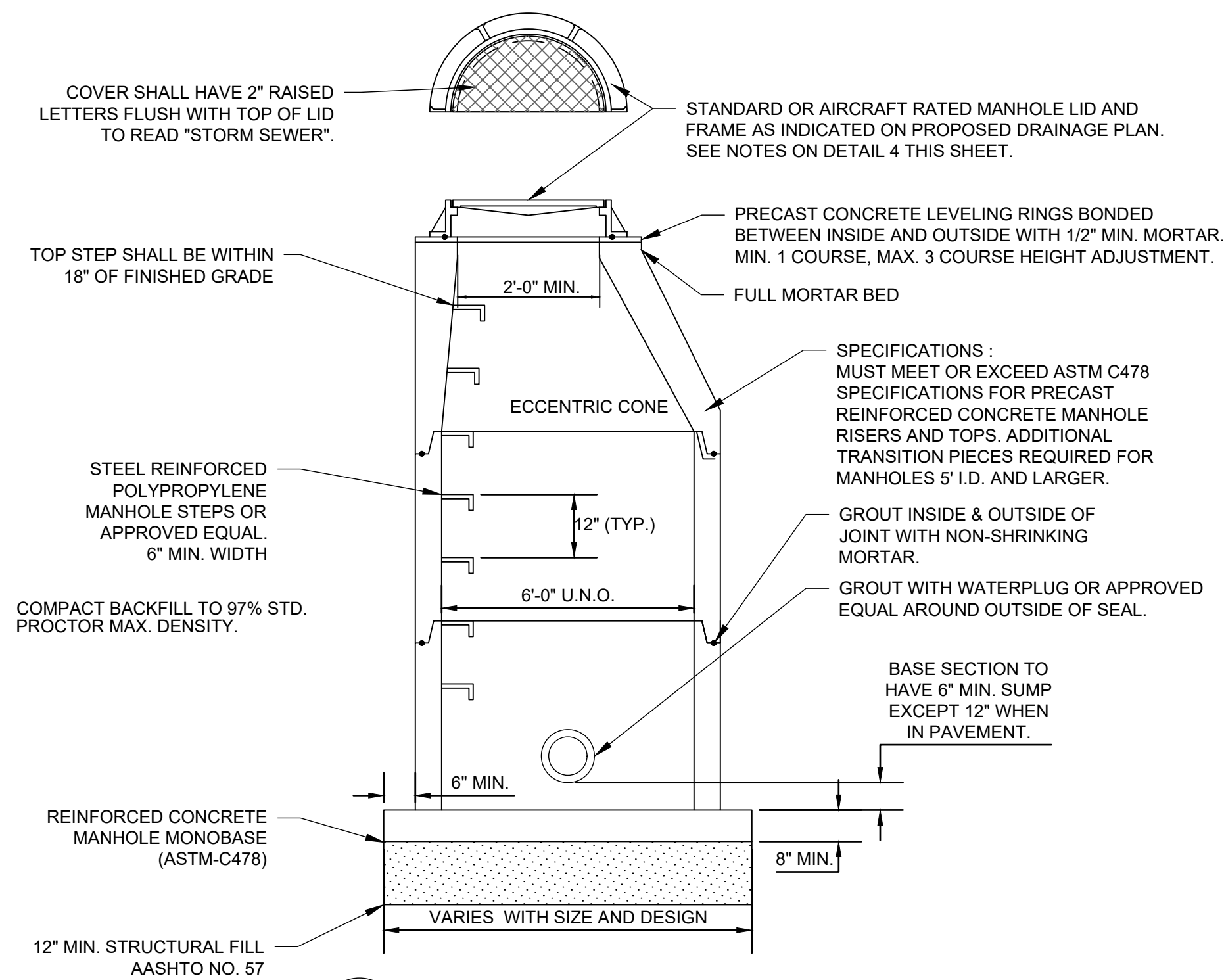


**5 UNDERDRAIN HANDHOLE DETAIL NOT TO SCALE**

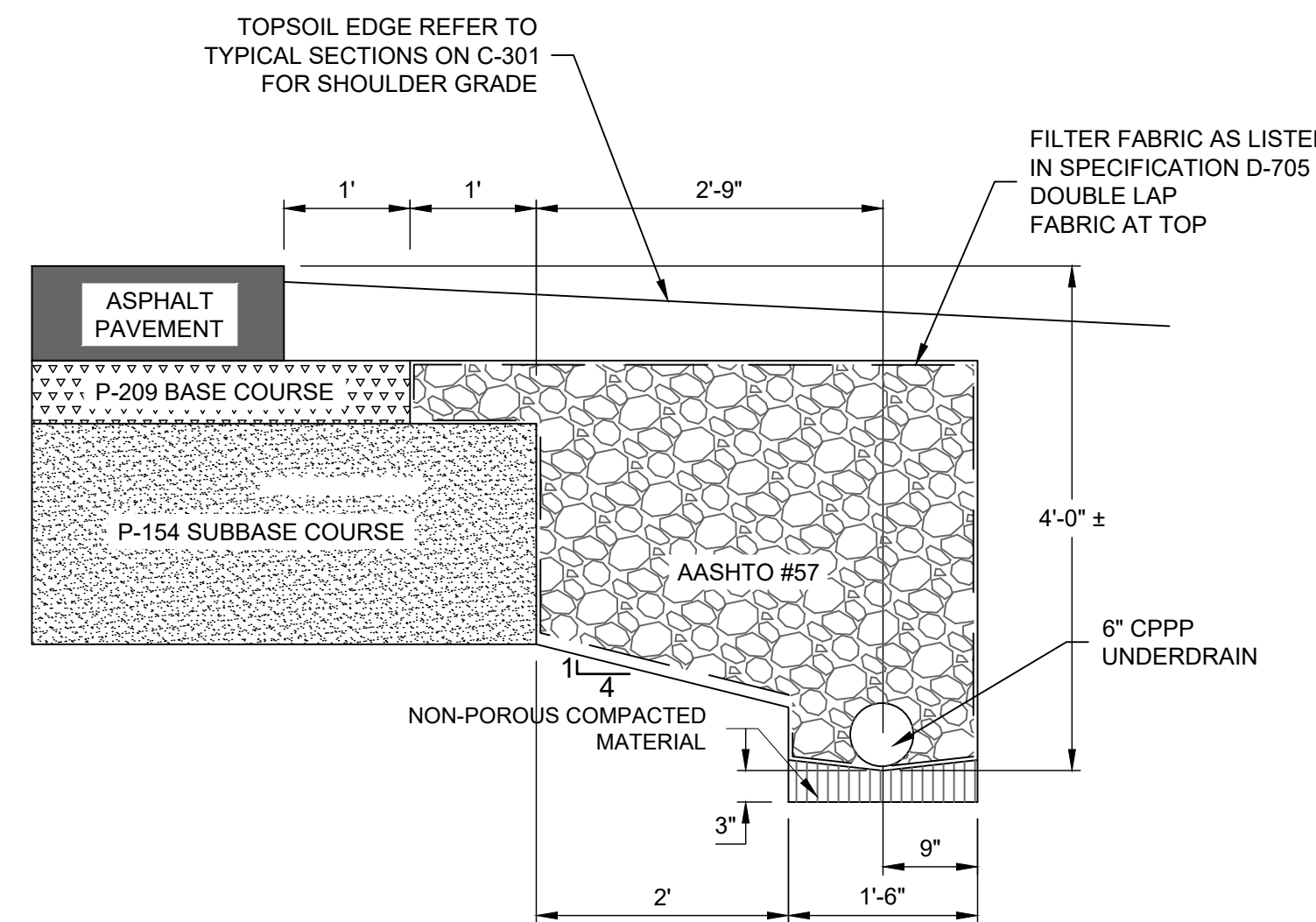
**NOTE:**

HANDHOLE STRUCTURE TO SUPPORT 100,000 LB WHEEL LOAD AND 250 PSI TIRE PRESSURE. CONTRACTOR TO PROVIDE MANUFACTURER'S DESIGN AND SHOP DRAWINGS FOR AIRCRAFT RATED HANDHOLE BOXES, FRAMES, AND LIDS.

**1 TYPICAL PIPE TRENCH DETAILS SCALE: 1/2" = 1'-0"**



**2 PRECAST MANHOLE NOT TO SCALE**



**NOTE:**  
1) EXCAVATION, AASHTO #57, AND FILTER FABRIC SHALL BE INCIDENTAL TO ITEM D-705.

**4 TAXIWAY UNDERDRAIN DETAIL NOT TO SCALE**

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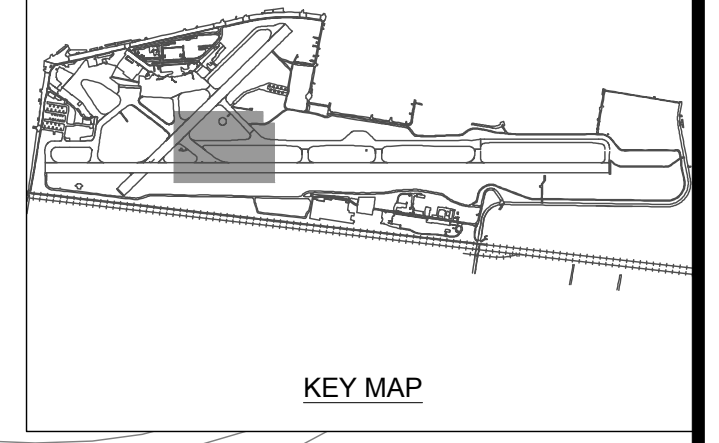
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SHEET CONTENTS  
DRAINAGE DETAILS

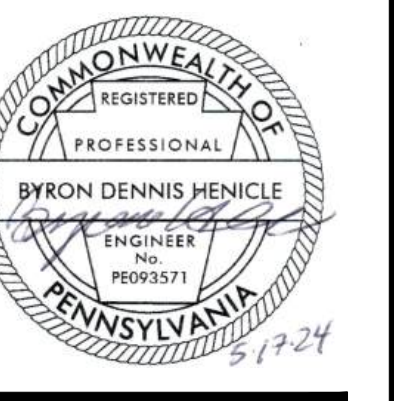




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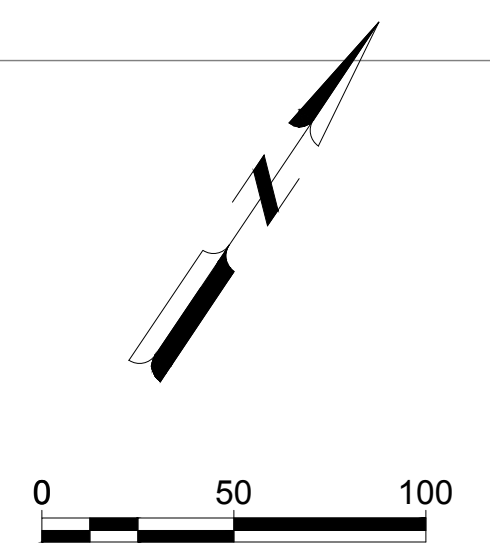
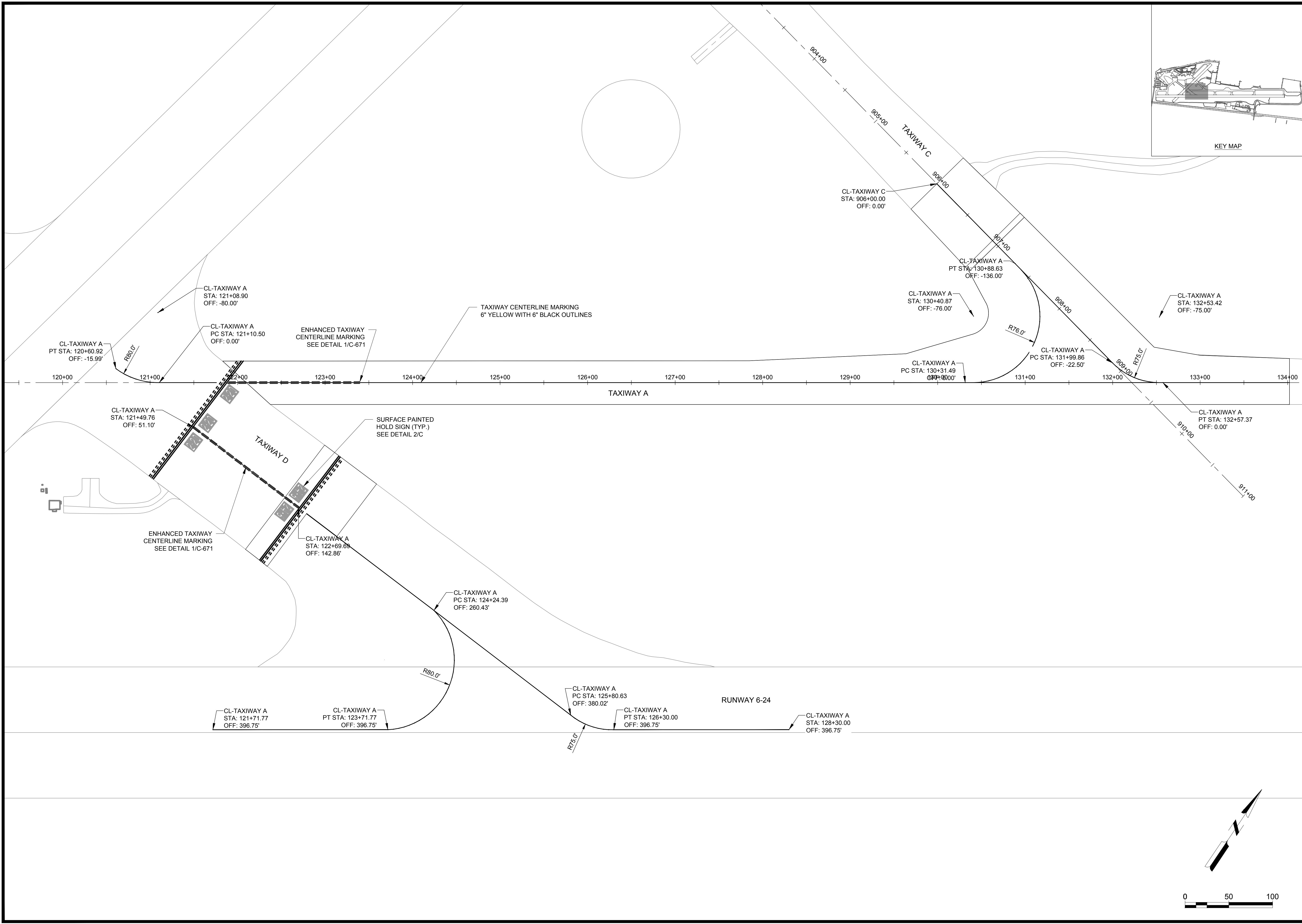


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SHEET CONTENTS  
PAVEMENT MARKING PLAN

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### C-651



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4411 WEST 12TH STREET  
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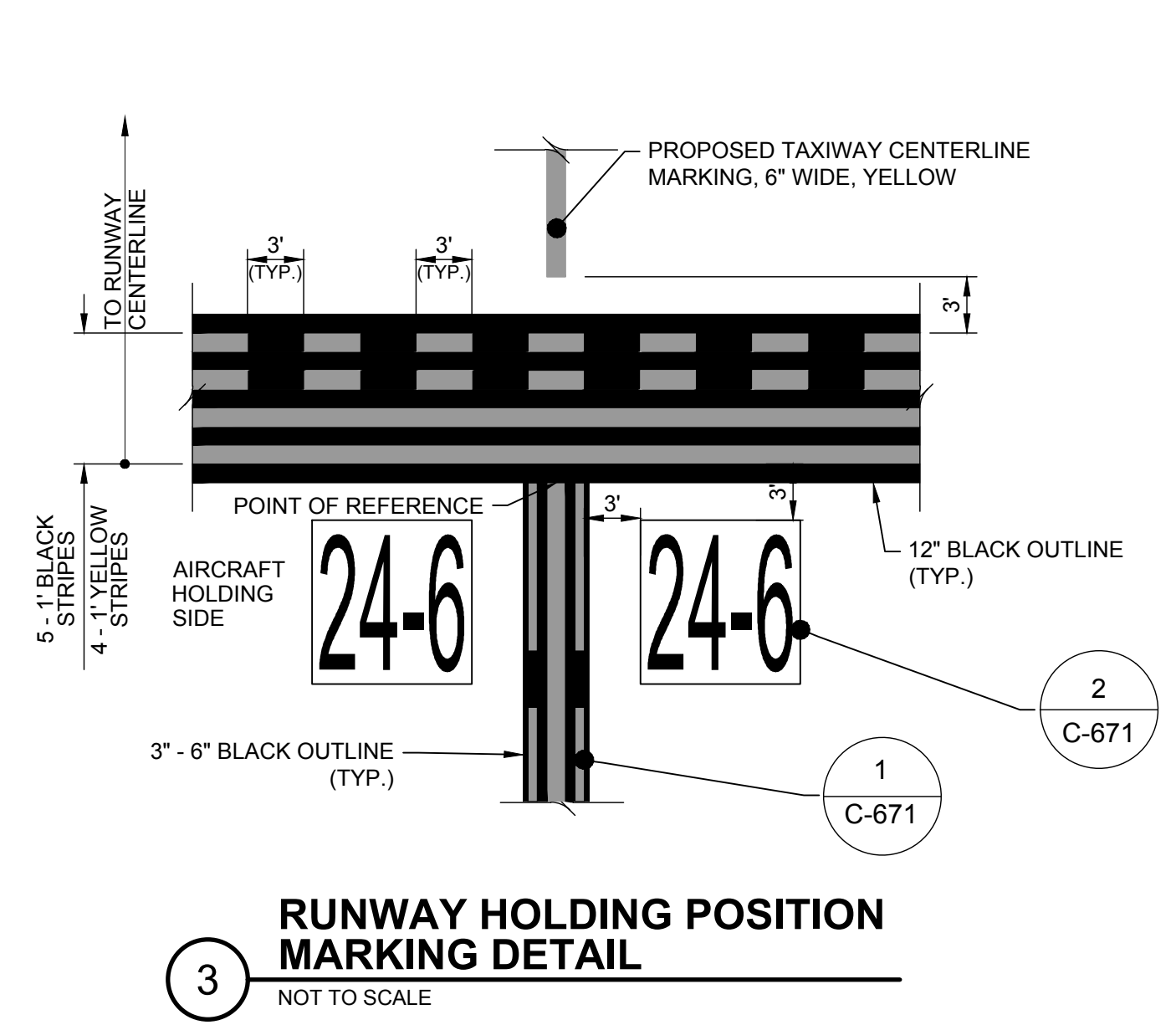


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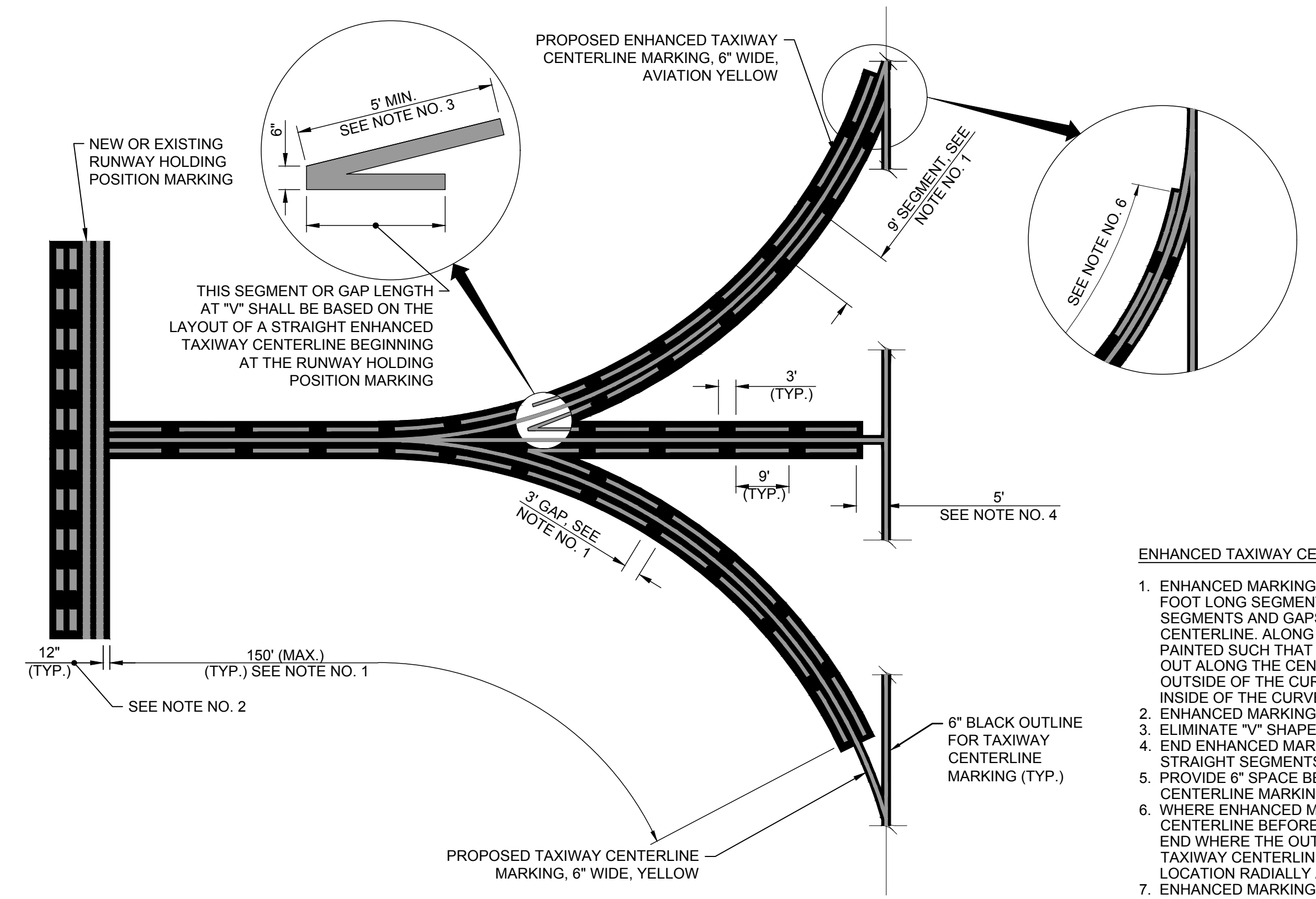
SHEET CONTENTS  
MARKING DETAILS

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**C-671**



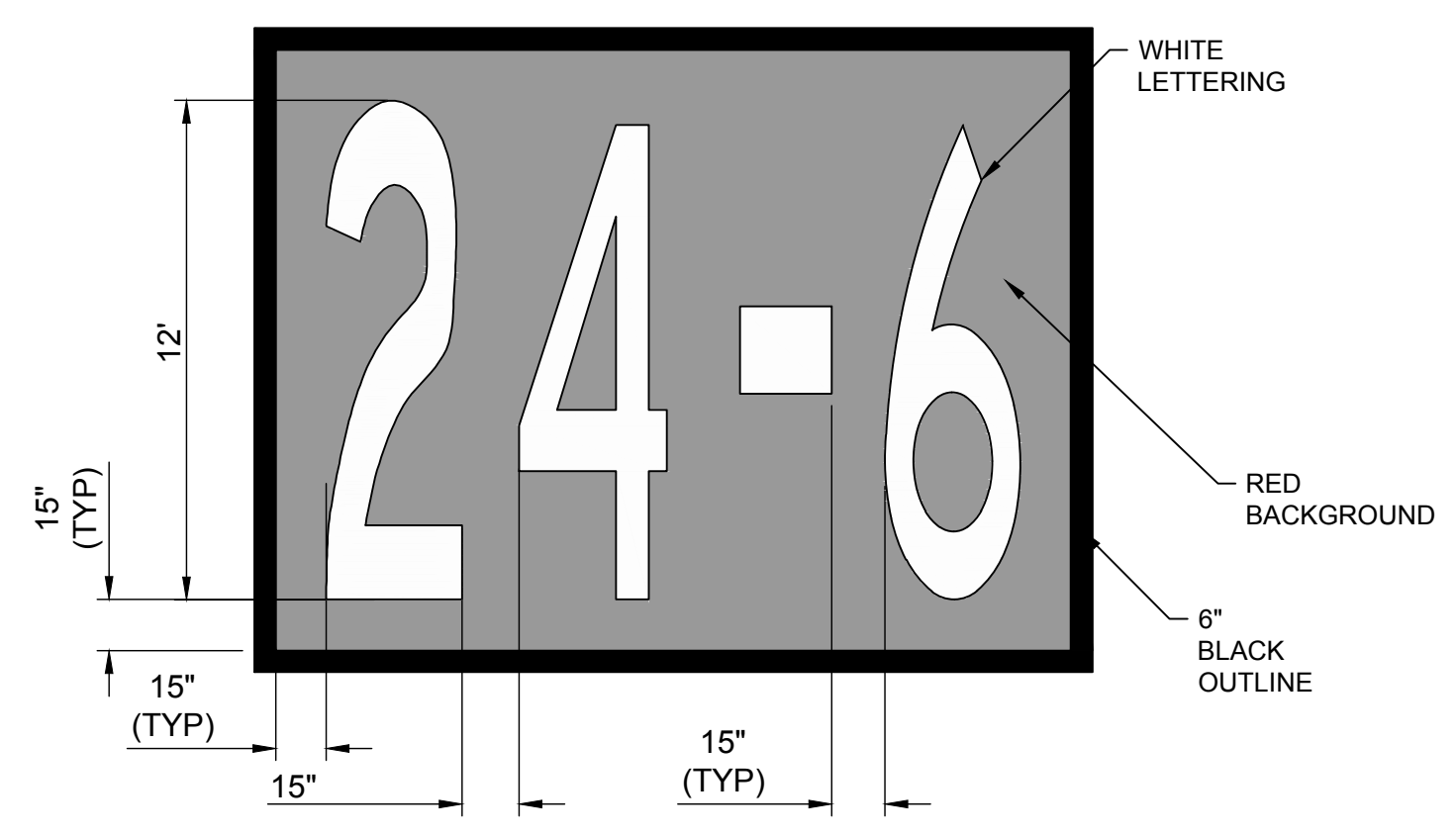
**3 RUNWAY HOLDING POSITION MARKING DETAIL**  
NOT TO SCALE



**1 ENHANCED TAXIWAY CENTERLINE MARKING**  
NOT TO SCALE

**ENHANCED TAXIWAY CENTERLINE MARKING NOTES:**

1. ENHANCED MARKINGS SHALL BE LAID OUT ALONG THE TAXIWAY CENTERLINE WITH 9 FOOT LONG SEGMENTS AND 3 FOOT LONG GAPS FOR A DISTANCE OF 150 FEET. SEGMENTS AND GAPS SHALL LINE UP WITH EACH OTHER ON OPPOSITE SIDES OF THE CENTERLINE. ALONG CURVED CENTERLINES, THE SEGMENTS AND GAPS SHALL BE PAINTED SUCH THAT THEIR ENDS ARE IN LINE WITH RADIAL LINES TO THE POINTS LAID OUT ALONG THE CENTERLINE. THIS WILL RESULT IN SEGMENTS AND GAPS ON THE OUTSIDE OF THE CURVE BEING LONGER THAN THE SEGMENTS AND GAPS ON THE INSIDE OF THE CURVE.
2. ENHANCED MARKINGS SHALL BEGIN 12" FROM THE HOLDING POSITION MARKING.
3. ELIMINATE "V" SHAPED SEGMENTS IF THE LONGEST LEG IS LESS THAN 5 FEET.
4. END ENHANCED MARKINGS 5' FROM INTERSECTING TAXIWAY CENTERLINES ALONG STRAIGHT SEGMENTS ONLY IF THE TOTAL LENGTH IS LESS THAN 150'.
5. PROVIDE 6" SPACE BETWEEN TAXIWAY CENTERLINE AND ENHANCED TAXIWAY CENTERLINE MARKING.
6. WHERE ENHANCED MARKINGS ALONG A CURVED CENTERLINE MEET A STRAIGHT CENTERLINE BEFORE THE OVERALL 150 FOOT DIMENSION IS REACHED, THEY SHALL END WHERE THE OUTSIDE SEGMENT (OR GAP) INTERSECTS WITH THE STRAIGHT TAXIWAY CENTERLINE. THE INNER SEGMENT (OR GAP) SHALL END AT THE SAME LOCATION RADIALY AS THE OUTER SEGMENT (OR GAP).
7. ENHANCED MARKINGS SHALL BE OUTLINED WITH A 3" WIDE BLACK BORDER.



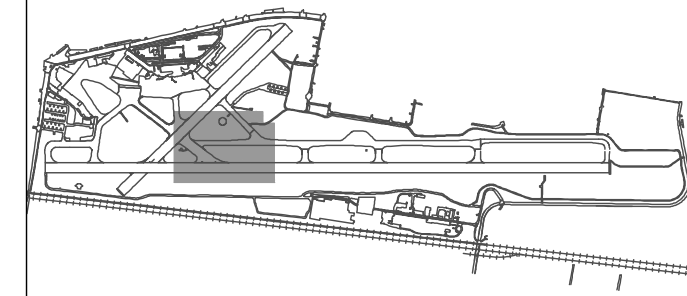
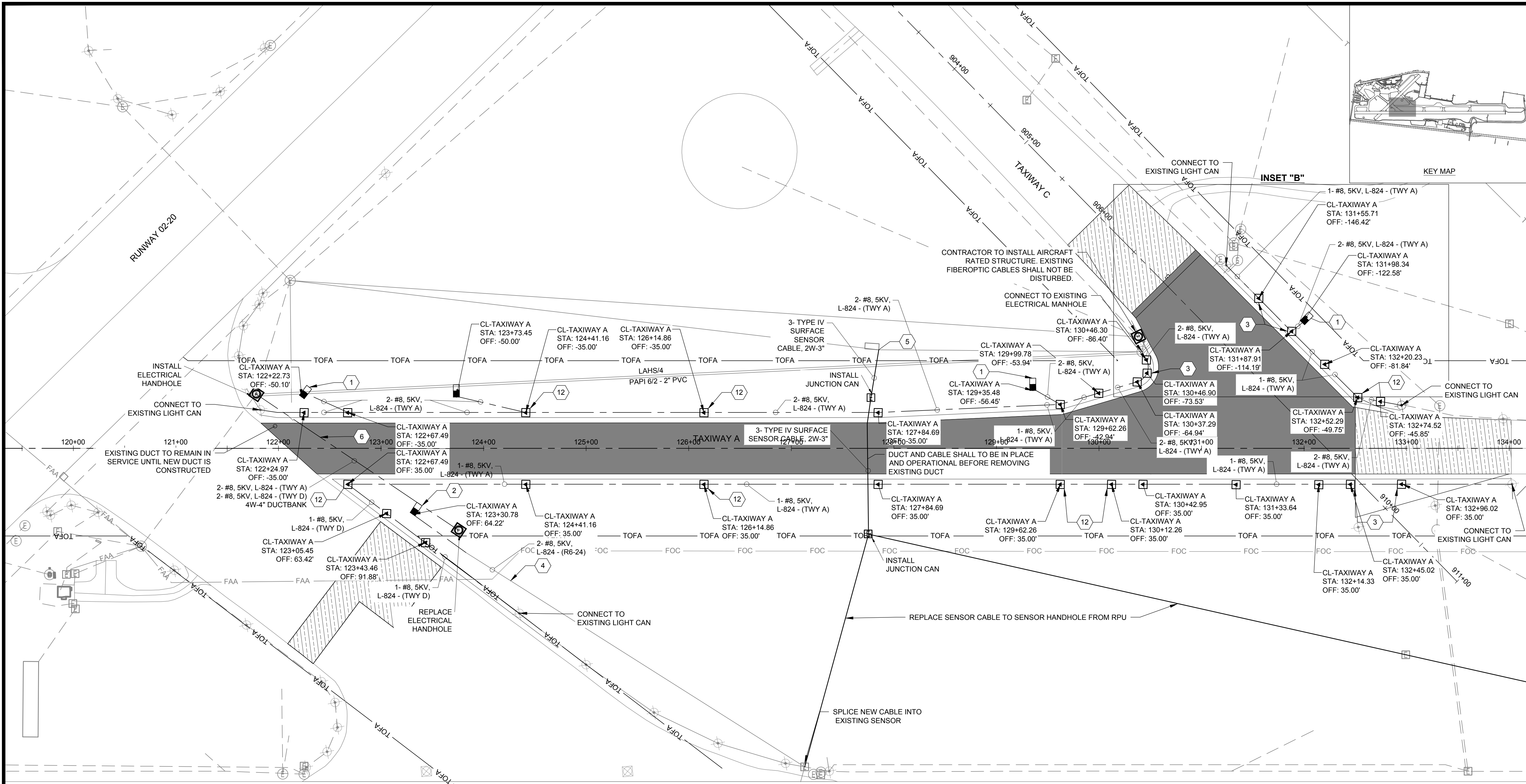
**24-6 DETAIL**

**NOTES:**

1. STENCILS PROVIDED BY AIRPORT TO BE USED FOR PAINT MARKING.
2. SURFACE PAINTED HOLDING POSITION SIGN SHALL BE WHITE PAINTED TEXT ON A RED PAINTED BACKGROUND.
3. LEGEND AS SHOWN ON PLANS.
4. DIMENSIONS ARE SHOWN BETWEEN OUTERMOST EDGES OF CHARACTERS

**2 SURFACE PAINTED HOLDING POSITION SIGN**  
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KEY MAP

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## ERIE INTERNATIONAL AIRPORT REALIGNMENT & RECONSTRUCTION OF TAXIWAY A - PHASE 3 4411 WEST 12TH STREET ERIE, PENNSYLVANIA

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SHEET CONTENTS  
ELECTRICAL PLAN

SHEET NO. 25 of 27

### E-201

#### KEYNOTES:

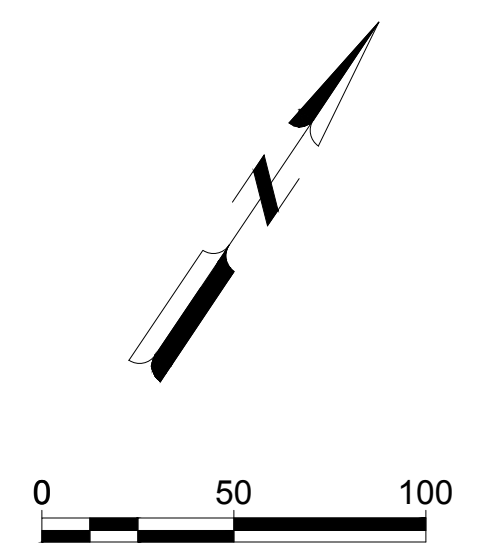
- 1 FURNISH AND INSTALL L-858(L) LED INTERNALLY ILLUMINATED AIRFIELD GUIDANCE SIGN, PRECAST SIGN FOUNDATION, L-830 ISOLATION TRANSFORMER, L-823 CONNECTORS, AND FOUNDATION.
- 2 REINSTALL AIRFIELD GUIDANCE SIGN, PRECAST FOUNDATION, AND ISOLATION TRANSFORMER.
- 3 FURNISH AND INSTALL L-867B LIGHT BASE AND L-823 CONNECTORS. REINSTALL ELEVATED TAXIWAY EDGE LIGHT FIXTURE, BASE PLATE, AND ISOLATION TRANSFORMER.
- 4 CONNECT CONDUIT TO EXISTING CONDUIT STUB.
- 5 FURNISH AND INSTALL (3) TYPE 5 SENSOR CABLES FROM RPU TO JUNCTION LIGHT BASE LOCATED ON THE SOUTH SIDE OF TAXIWAY A. MAKE CONNECTIONS AND SPLICES TO RESTORE CIRCUITS.
- 6 DUCTBANK INSTALLATION SHALL BE PHASED WITH THE REMOVAL OF EXISTING DUCTBANK.
- 7 FURNISH AND INSTALL 2W-3" DUCTBANK AND MAKE CONNECTIONS TO EXISTING RPU UNIT.
- 8 CONNECT CONDUIT TO EXISTING CONDUIT. FURNISH AND INSTALL SERIES LIGHTING CABLE FROM SIGN TO EXISTING HANDHOLE.
- 9 CONNECT CONDUIT TO EXISTING LIGHT BASE CONDUIT STUB. FURNISH AND INSTALL SERIES LIGHTING CABLE AND MAKE NECESSARY CONNECTIONS.
- 10 FURNISH AND INSTALL L-861(L) LED ELEVATED TAXIWAY EDGE LIGHT FIXTURE, L-830 ISOLATION TRANSFORMER, ARCTIC KIT, L-823 CONNECTORS AND L-867B CLASS 1A LIGHT BASE.
- 11 ROUTE THE THREE (3) TYPE V SURFACE SENSOR CABLES INTO EXISTING JUNCTION LIGHT BASE AND SPLICE TO EXISTING CABLE.
- 12 FURNISH AND INSTALL L-867B LIGHT BASE AND L-823 CONNECTORS. INSTALL ELEVATED TAXIWAY EDGE LIGHT FIXTURE, BASE PLATE, AND ISOLATION TRANSFORMER.

#### LEGEND

- PROPOSED ELECTRICAL MANHOLE
- EXISTING ELECTRICAL MANHOLE
- EXISTING ELECTRICAL JUNCTION STRUCTURE
- PROPOSED ELEVATED MITL (NEW BASE)
- EXISTING / PROPOSED TAXIWAY GUIDANCE SIGN
- EXISTING ELEVATED MITL
- EXISTING ELEVATED MITL (PHASE 1 CONSTRUCTION)
- 1-#8, 5KV, L-824, DUCT AS SHOWN
- 2-#8, 5KV, L-824, DUCT AS SHOWN
- PROPOSED ELECTRICAL DUCT BANK
- EXISTING ELECTRICAL DUCT BANK

#### ELECTRICAL INSTALLATION NOTES:

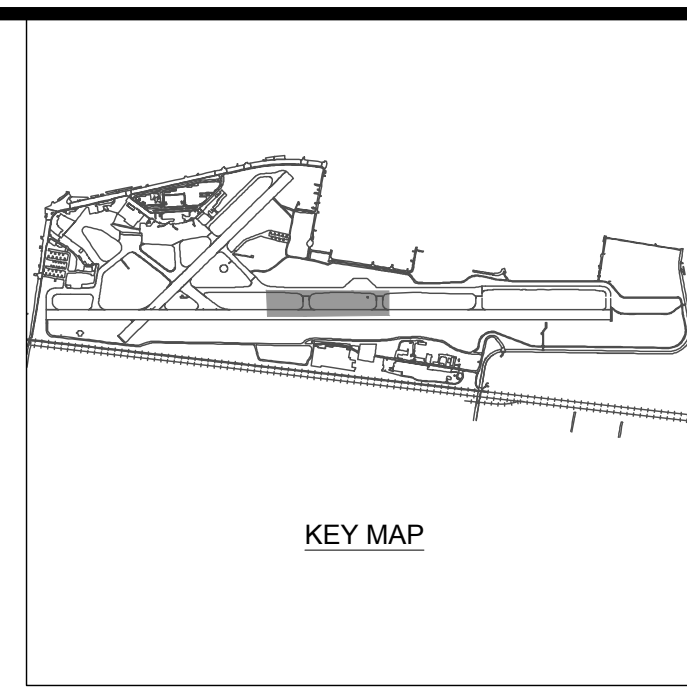
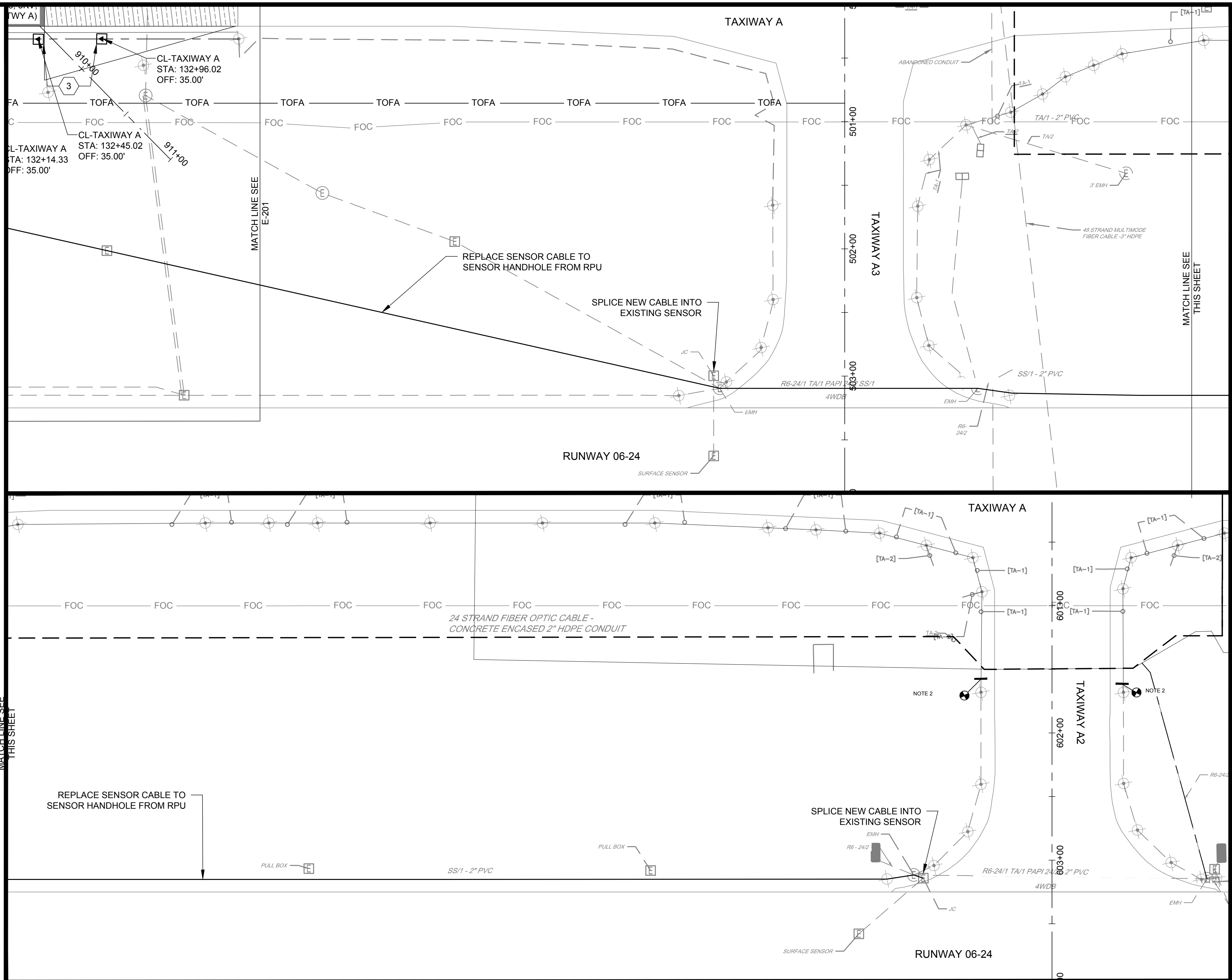
- #6 SOLID BARE COUNTERPOISE IS NOT SHOWN FOR CLARITY. COUNTERPOISE SHALL BE INSTALLED MID-WAY BETWEEN PROPOSED EDGE LIGHTS AND PAVEMENT EDGE. FOR HOMERUNS, COUNTERPOISE SHALL BE INSTALLED ABOVE PROPOSED CONDUIT PER L-108.
- EXISTING DUCT BANKS SHALL NOT REQUIRE NEW COUNTERPOISE.



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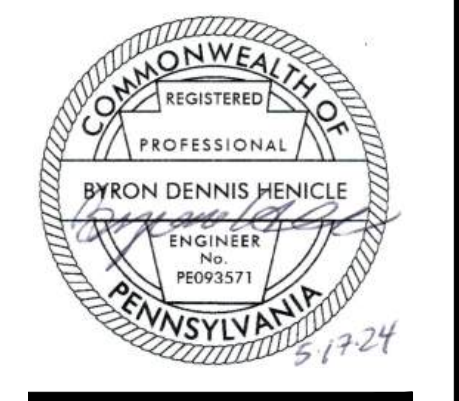


**Mead & Hunt**  
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Harrisburg, PA 17102  
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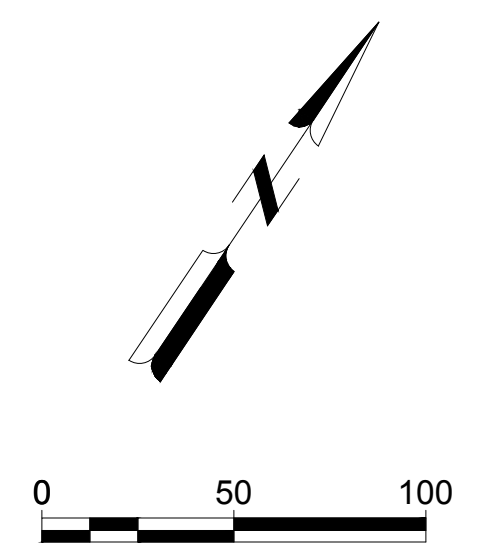
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DRAWN BY: PSH/RGM  
CHECKED BY: BDH  
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SHEET CONTENTS  
ELECTRICAL PLAN

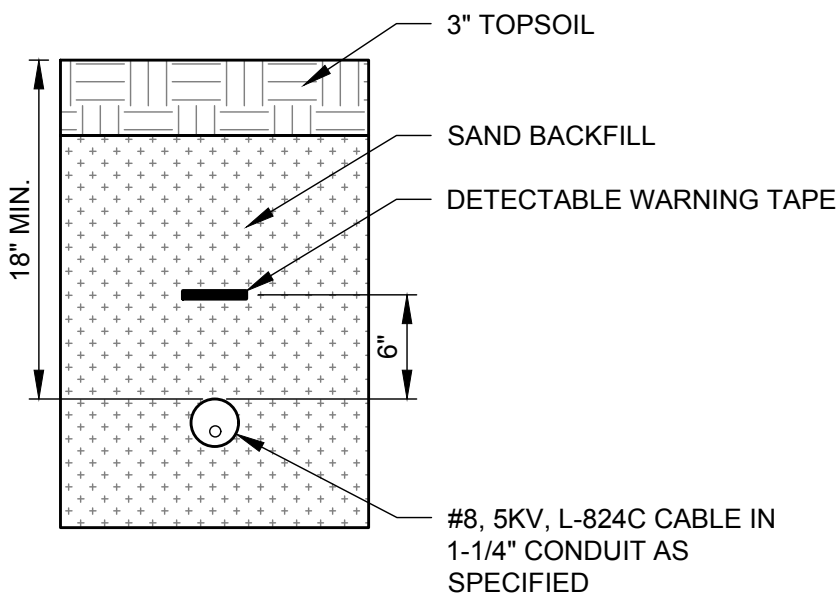
SHEET NO. 26 of 27

**E-202**

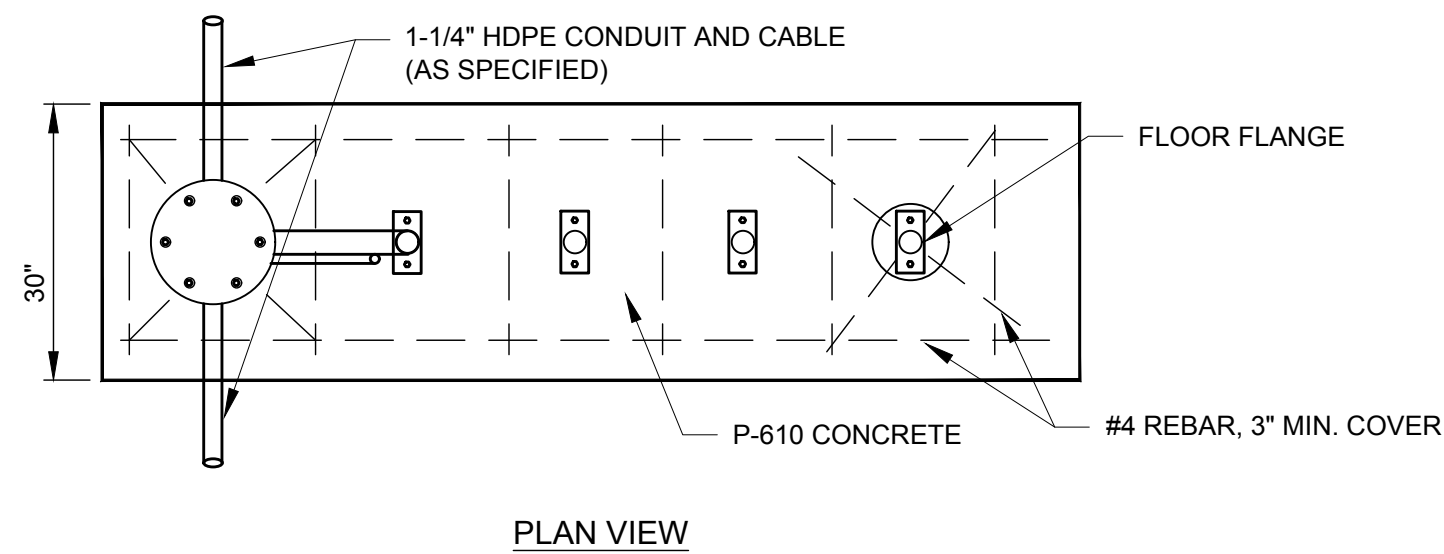
LEGEND	
	PROPOSED ELECTRICAL MANHOLE
	EXISTING ELECTRICAL MANHOLE
	EXISTING ELECTRICAL JUNCTION STRUCTURE
	PROPOSED ELEVATED MITL (NEW BASE)
	EXISTING / PROPOSED TAXIWAY GUIDANCE SIGN
	EXISTING ELEVATED MITL
	EXISTING ELEVATED MITL (PHASE 1 CONSTRUCTION)
	1-#8, 5KV, L-824, DUCT AS SHOWN
	2-#8, 5KV, L-824, DUCT AS SHOWN
	PROPOSED ELECTRICAL DUCT BANK
	EXISTING ELECTRICAL DUCT BANK



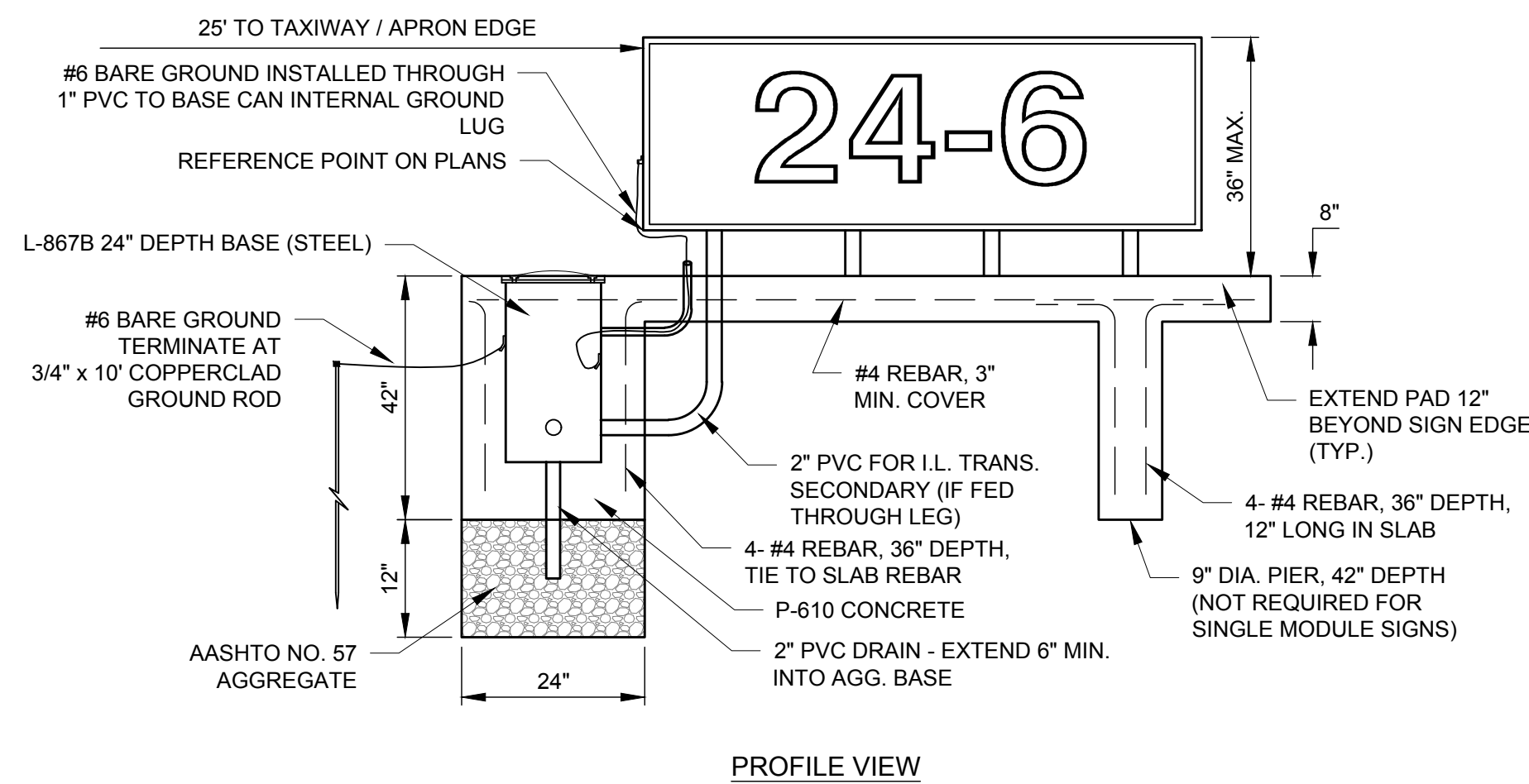




**4 CONDUIT INSTALLATION IN TURF**  
NOT TO SCALE

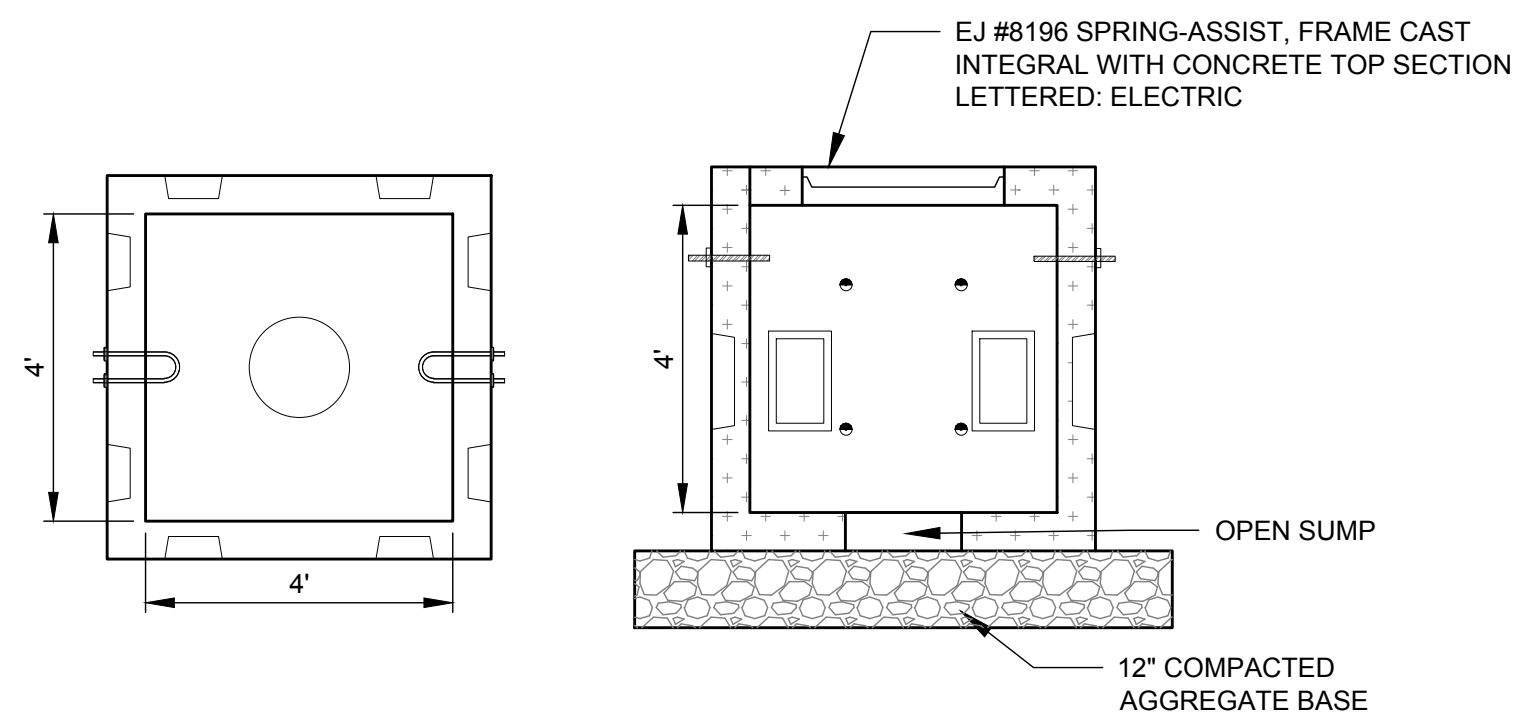


PLAN VIEW



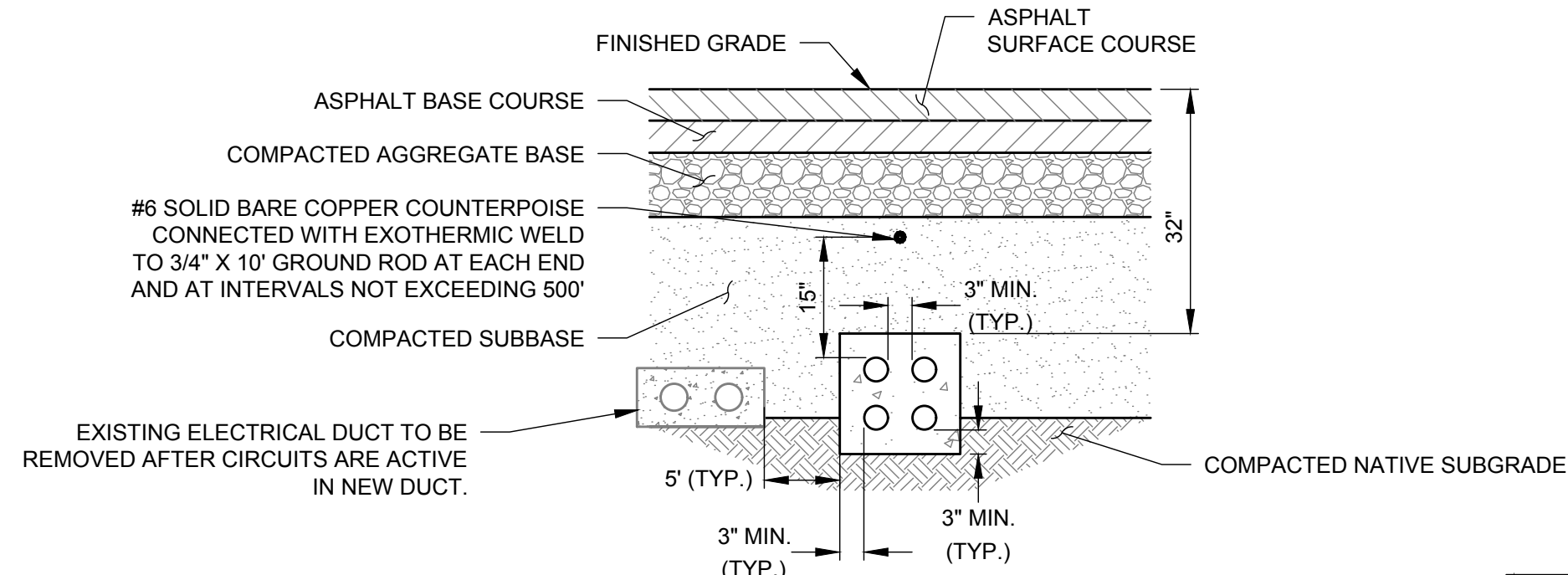
PROFILE VIEW

**5 SIZE 2 GUIDANCE SIGN INSTALLATION**  
NOT TO SCALE

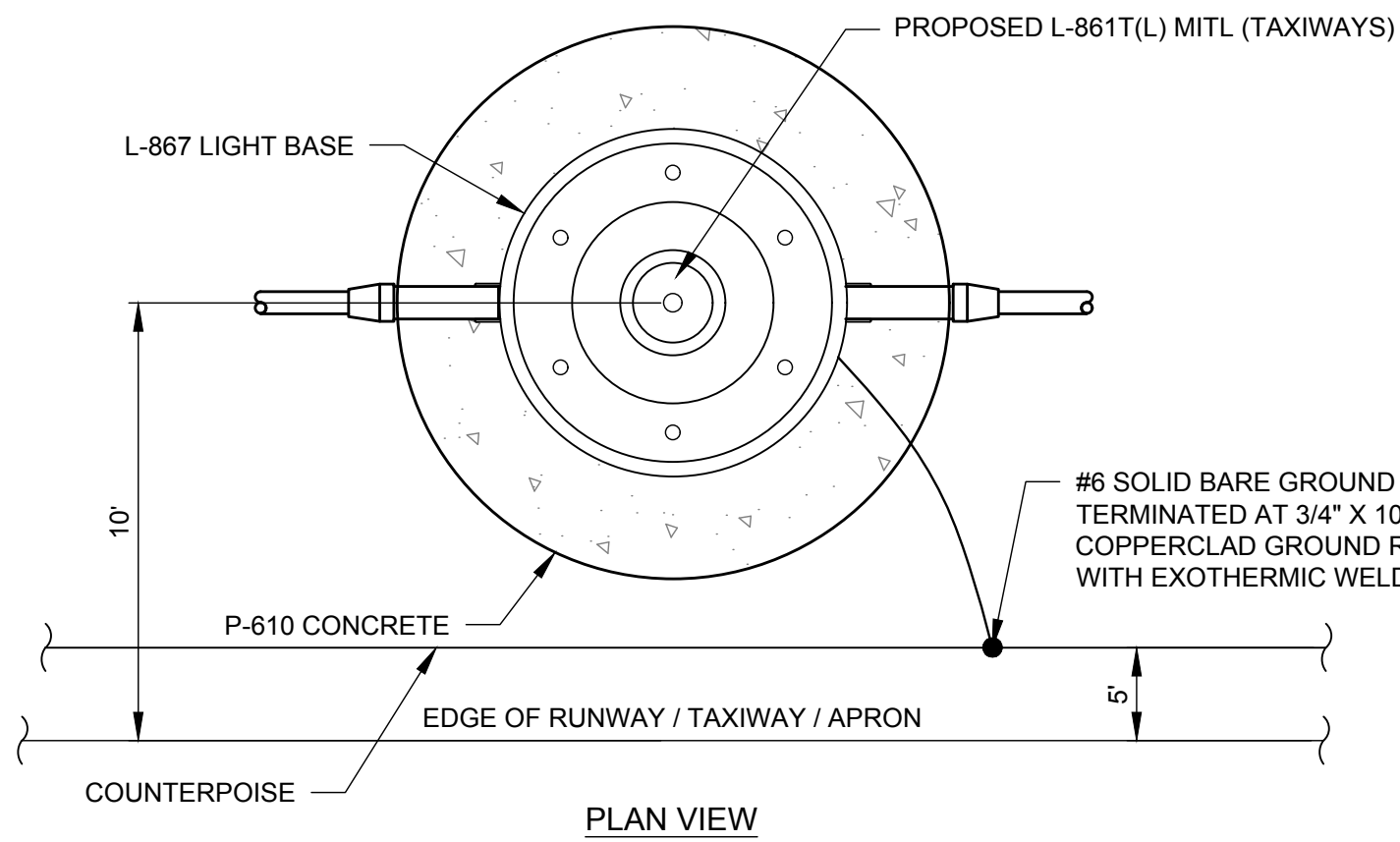


- NOTES:
1. INSTALL PLASTIC CABLE RACKS AS REQUIRED TO NEATLY BUNDLE EXCESS CABLE (MIN. ONE RACK PER SIDE).
  2. INSTALL GROUND ROD AND #4/0 GROUND RING PER L-115.

**6 ELECTRICAL HANDHOLE AIRCRAFT RATED, 4'x4'x4'**  
NOT TO SCALE



**3 4 BANK 2" CONCRETE ENCASED ELECTRICAL DUCT DETAIL**  
NOT TO SCALE



PLAN VIEW

- NOTES:
1. CONTRACTOR TO PROVIDE LIGHT TAGS AND COORDINATE NUMBERING WITH AIRPORT.

**1 BASE MOUNTED EDGE LIGHT IN TURF SHOULDER DETAIL**  
NOT TO SCALE

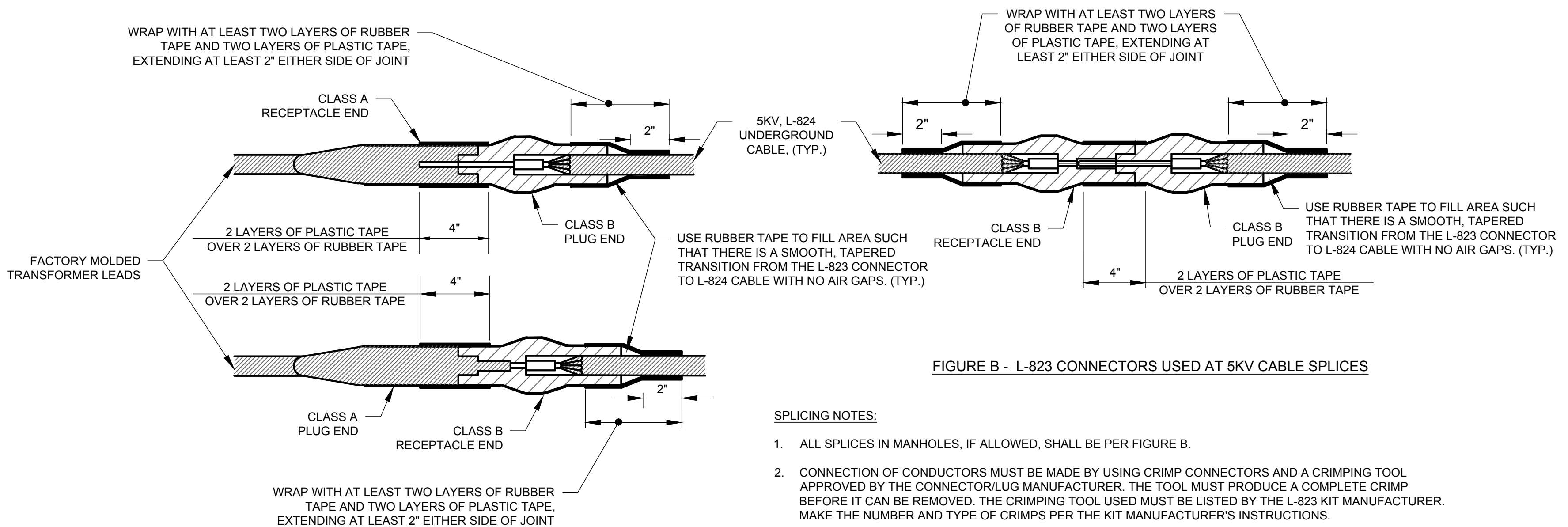


FIGURE A - L-823 PLUG SPLICES AT L-830 ISOLATION TRANSFORMERS

FIGURE B - L-823 CONNECTORS USED AT 5KV CABLE SPLICES

**SPLICING NOTES:**

1. ALL SPLICES IN MANHOLES, IF ALLOWED, SHALL BE PER FIGURE B.
2. CONNECTION OF CONDUCTORS MUST BE MADE BY USING CRIMP CONNECTORS AND A CRIMPING TOOL APPROVED BY THE CONNECTOR/LUG MANUFACTURER. THE TOOL MUST PRODUCE A COMPLETE CRIMP BEFORE IT CAN BE REMOVED. THE CRIMPING TOOL USED MUST BE LISTED BY THE L-823 KIT MANUFACTURER. MAKE THE NUMBER AND TYPE OF CRIMPS PER THE KIT MANUFACTURER'S INSTRUCTIONS.
3. L-823 SPLICE KITS SHALL BE EITHER AMERACE 54 SUPER KIT, OR INTEGRO COMPLETE KIT.
4. RUBBER TAPE SHALL BE 3M SCOTCH 130C-RUBBER SPLICING, LINERLESS TAPE, OR APPROVED EQUAL.
5. PLASTIC TAPE SHALL BE 3M SUPER 88 SCOTCH VINYL TAPE OR APPROVED EQUAL.

**2 L-823 CABLE SPLICE WATERPROOFING DETAIL**  
NOT TO SCALE

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ISSUED 05/17/2024  
ISSUED FOR BID



A/P NO: 3-42-030-XXX-2024  
M&H NO: 3225600-192499.05  
DATE: MAY 17, 2024  
DESIGNED BY: RGM  
DRAWN BY: PSH/RGM  
CHECKED BY: BDH  
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SHEET CONTENTS  
ELECTRICAL DETAILS

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