

ERIE INTERNATIONAL AIRPORT

REALIGNMENT & RECONSTRUCTION OF TAXIWAY A - PHASE 2

ERIE, PENNSYLVANIA

ISSUED FOR BID 04/27/2023

OWNER REPRESENTATIVE

DEREK V. MARTIN
EXECUTIVE DIRECTOR

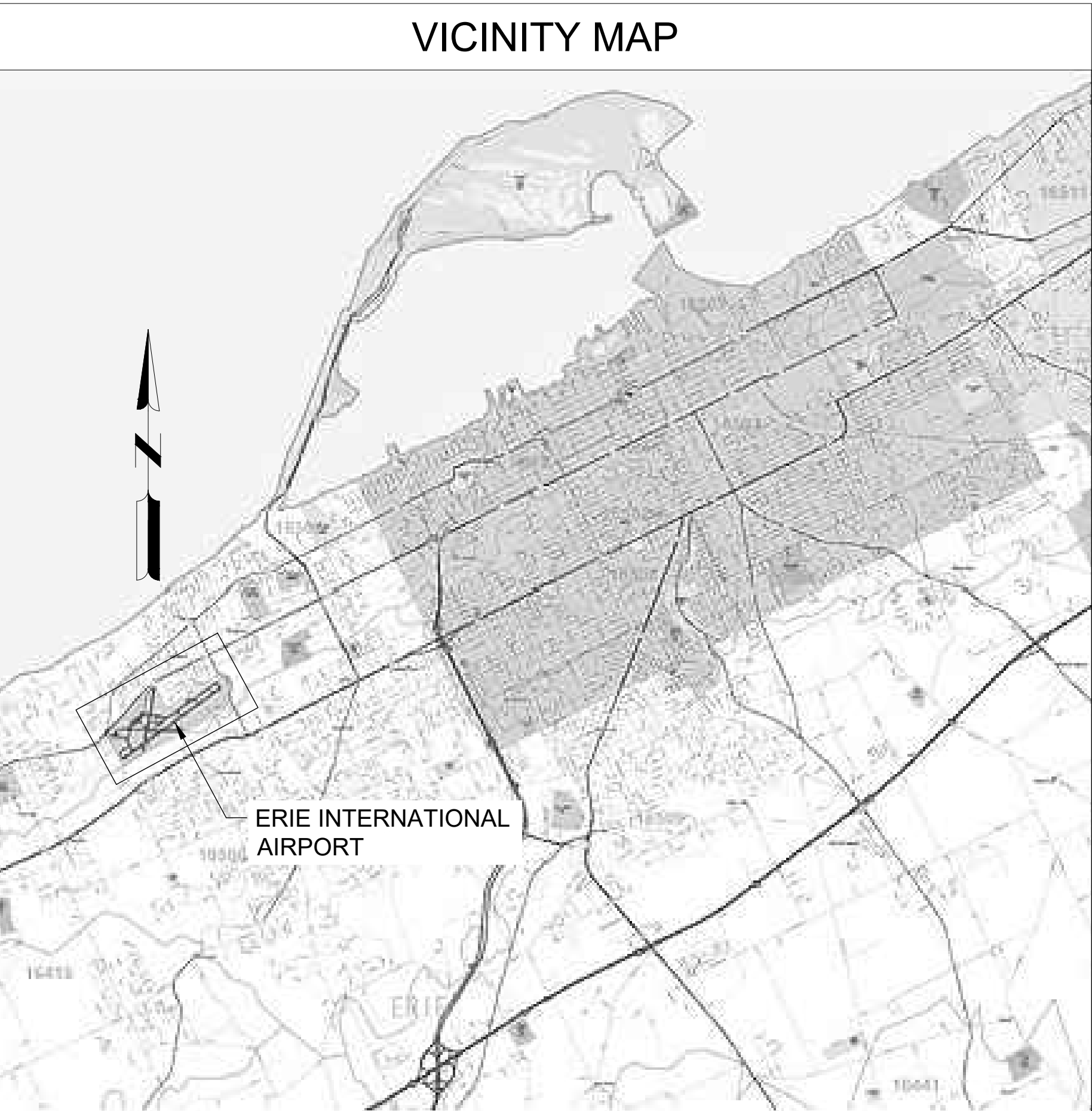
ERIE INTERNATIONAL AIRPORT
4411 WEST 12TH STREET
ERIE, PA 16505-3091
PHONE: (814) 835-4156

CIVIL/AVIATION ENGINEER

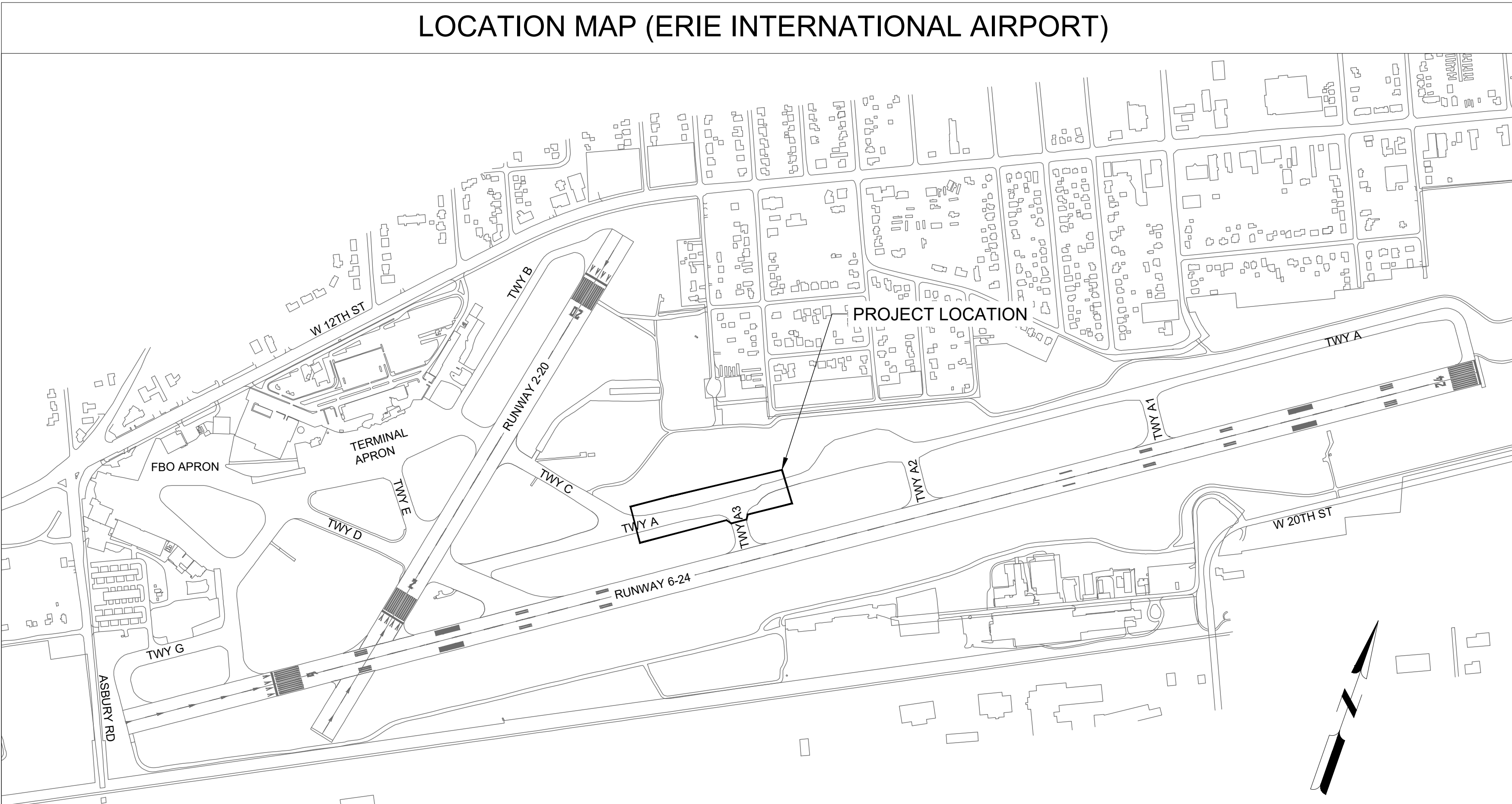
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VICINITY MAP



LOCATION MAP (ERIE INTERNATIONAL AIRPORT)



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4411 WEST 12TH STREET
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AIP NO.: 3-42-030-XXX-2023
MSH NO.: 3225600-192499.03
DATE: 04/27/2023
DESIGNED BY: PSH
DRAWN BY: PSH
CHECKED BY: BDH
DO NOT SCALE DRAWINGS

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LINES

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

	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
(SEE X-XXX)	SHEET REFERENCE
(SEE X/X-XXX)	DETAIL REFERENCE
734.97'	EXISTING SPOT ELEVATION
738.76'	FINISHED / PROPOSED SPOT ELEVATION
3:1	FINISHED / PROPOSED SLOPE
2%	
	DRAINAGE FLOW DIRECTION
	INLET PROTECTION
	REMOVE

	RIPRAP
	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
	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

	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 SLOPE CRITICAL AREA	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
	ABANDON	ABANDON
	ABANDON CONDUIT	ABANDON CONDUIT
	ABANDON ELECTRIC, UNDERGROUND	ABANDON ELECTRIC, UNDERGROUND
	ABANDON GAS, UNDERGROUND	ABANDON GAS, UNDERGROUND
	ABANDON SANITARY SEWER	ABANDON SANITARY SEWER
	ABANDON STORM SEWER	ABANDON STORM SEWER
	ABANDON WATER	ABANDON WATER
	REMOVE STRUCTURE	REMOVE STRUCTURE
	REMOVE AND DISPOSE OF EXISTING TAXIWAY LIGHT FIXTURE, BASE PLATE, TRANSFORMER, LIGHT BASE, AND CONNECTORS	REMOVE AND DISPOSE OF EXISTING TAXIWAY LIGHT FIXTURE, BASE PLATE, TRANSFORMER, LIGHT BASE, AND CONNECTORS
	REMOVE CONDUIT	REMOVE CONDUIT
	REMOVE ELECTRICAL DUCT BANK	REMOVE ELECTRICAL DUCT BANK
	REMOVE ELECTRIC, OVERHEAD	REMOVE ELECTRIC, OVERHEAD
	REMOVE FENCE	REMOVE FENCE
	REMOVE FIBER OPTIC CABLE	REMOVE FIBER OPTIC CABLE
	REMOVE GAS LINE	REMOVE GAS LINE
	REMOVE SANITARY SEWER	REMOVE SANITARY SEWER
	REMOVE STORM DRAIN	REMOVE STORM DRAIN
	REMOVE TELEPHONE	REMOVE TELEPHONE
	REMOVE WATER LINE	REMOVE WATER LINE
	REMOVE UNDERDRAIN	REMOVE UNDERDRAIN
	SAW CUT PAVEMENT	SAW CUT PAVEMENT



SUMMARY OF CONTRACT QUANTITIES

BASE BID

ITEM NO.	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY
100001	Contractor Quality Control Program (CQCP)	LS	1
102001	Temporary Erosion and Sediment Controls	LS	1
105001	Mobilization, 10% Maximum	LS	1
105004	Safety and Security	LS	1
105007	Permits	DLR	10,000
105008	Engineer's Field Office	LS	1
101001	Pavement Removal, Asphalt	SYD	4,800
101004	Bituminous Cold Milling, Variable Depth	SYD	500
101005	Remove Drainage Structure	EA	8
101008	Remove Storm Sewer	LFT	929
101011	Remove Underdrain	LFT	1,313
101014	Remove Pavement Marking	SFT	3,000
101017	Remove Elevated Edge Light and Base	EA	19
101020	Remove Guidance Sign and Base	EA	4
101023	Sawing Asphalt Pavement	LFT	600
152001	Unclassified Excavation	CYD	2,400
152004	Subgrade Undercut	CYD	250
154001	Subbase Course	CYD	2,400
154004	Separation Geotextile	SYD	4,380
209001	Crushed Aggregate Base Course	CYD	570
401001	Asphalt Surface Course, Gradation 2	TON	900
403001	Asphalt Mixture Base Course, Gradation 2	TON	1,060
603001	Emulsified Asphalt Tack Coat	GAL	800
620001	Surface Preparation	LS	1
620003	Airport Pavement Marking, Solid, Yellow, 1/2 Rate	SFT	1,400
620006	Airport Pavement Marking, Solid, Black	SFT	2,400
620009	Airport Pavment Marking, Solid, White, with Reflective Beads	SFT	125
620010	Airport Pavment Marking, Solid, Yellow, with Reflective Beads	SFT	1,200
620013	Airport Pavment Marking, Solid, Red, with Reflective Beads	SFT	410
701001	15" Corrugated Polythylene Pipe	LF	107
701003	24" Corrugated Polythylene Pipe	LF	472
701006	12" Reinforced Concrete Pipe	LF	363
705001	6" Corrugated Perforated Polyethylene Pipe, Including Porous Backfill and Filter Fabric	LF	927
705004	6" Corrugated Polythylene Pipe	LF	100
751001	Inlet, Single Grate	EA	1
751004	Inlet, Triple Grate	EA	1
751006	6" Diameter Manhole	EA	1
751007	Aircraft Rated 5' Diameter Manhole	EA	1
751008	Aircraft Rated Handhole	EA	5
751011	Structure Adjustment	VF	0.66
108001	No. 8 AWG, 5kV, L-824, Type C Cable, Installed in Trench, Duct Bank or Conduit	LFT	1,900
108004	No. 6 AWG, Solid, Bare Copper Counterpoise Wire, Installed in Trench, Including Connections/Terminations	LFT	1,550
110001	Non-Encased Electrical Conduit, 1-Way 1 1/4 Inch	LFT	1,550
115002	Communications Manhole, Aircraft Rated	EA	1
125001	L-858(L) Guidance Sign, Base Mounted	EA	4
125003	L-861T(L) Elevated Medium Intensity Taxiway Light, Base Mounted in Turf	EA	16
125006	Electrical and Communication Investigation	LS	1
901001	Seeding	AC	2.0
905001	Topsoil (Obtained On Site Or Removed From Stockpile)	CY	630
908001	Mulching	SY	9,680

BID ALTERNATE 1

ITEM NO.	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY
102002	Temporary Erosion and Sedimentation Controls (Alternative 1)	LS	1
105002	Mobilization, 10% Maximum (Alternative 1)	LS	1
105005	Safety and Security (Alternative 1)	LS	1
101002	Pavement Removal, Asphalt (Alternative 1)	SYD	1,600
101005	Remove Drainage Structure (Alternative 1)	EA	4
101009	Remove Storm Sewer (Alternative 1)	LFT	562
101012	Remove Underdrain (Alternative 1)	LFT	350
101018	Remove Elevated Edge Light and Base (Alternative 1)	EA	4
152002	Unclassified Excavation (Alternative 1)	CYD	1,100
152005	Subgrade Undercut (Alternative 1)	CYD	110
154002	Subbase Course (Alternative 1)	CYD	640
154005	Separation Geotextile (Alternative 1)	SYD	1,090
209002	Crushed Aggregate Base Course (Alternative 1)	CYD	190
401002	Asphalt Surface Course, Gradation 2 (Alternative 1)	TON	270
403002	Asphalt Mixture Base Course, Gradation 2 (Alternative 1)	TON	340
603002	Emulsified Asphalt Tack Coat (Alternative 1)	GAL	220
620004	Airport Pavement Marking, Solid, Yellow, 1/2 Rate (Alternative 1)	SFT	90
620007	Airport Pavement Marking, Solid, Black (Alternative 1)	SFT	180
620011	Airport Pavment Marking, Solid, Yellow, with Reflective Beads (Alternative 1)	SFT	90
701003	24" Corrugated Polyethylene Pipe (Alternative 1)	LF	175
701007	12" Reinforced Concrete Pipe (Alternative 1)	LF	207
705002	6" Corrugated Perforated Polyethylene Pipe, Including Porous Backfill and Filter Fabric (Alternative 1)	LF	350
705005	6" Corrugated Polyethylene Pipe (Alternative 1)	LF	50
751002	Inlet, Double Grate (Alternative 1)	EA	1
751005	Inlet, Triple Grate (Alternative 1)	EA	1
751009	Aircraft Rated Handhole (Alternative 1)	EA	2
108002	No. 8 AWG, 5kV, L-824, Type C Cable, Installed in Trench, Duct Bank or Conduit (Alternative 1)	LFT	400
108005	No. 6 AWG, Solid, Bare Copper Counterpoise Wire, Installed in Trench, Including Connections/Terminations (Alternative 1)	LFT	385
110002	Non-Encased Electrical Conduit, 1-Way 1 1/4 Inch (Alternative 1)	LFT	385
125004	L-861T(L) Elevated Medium Intensity Taxiway Light, Base Mounted in Turf (Alternative 1)	EA	4
901002	Seeding (Alternative 1)	AC	1.0
905002	Topsoil (Obtained On Site or Removed From Stockpile) (Alternative 1)	CY	410
908002	Mulching (Alternative 1)	SY	4,840

BID ALTERNATE 2

ITEM NO.	ITEM DESCRIPTION	UNIT	ESTIMATED QUANTITY
102003	Temporary Erosion and Sedimentation Controls (Alternative 2)	LS	1
105003	Mobilization, 10% Maximum (Alternative 2)	LS	1
105006	Safety and Security (Alternative 2)	LS	1
101003	Pavement Removal, Asphalt (Alternative 2)	SYD	3,200
101007	Remove Drainage Structure (Alternative 2)	EA	2
101010	Remove Storm Sewer (Alternative 2)	LFT	305
101013	Remove Underdrain (Alternative 2)	LFT	610
101015	Remove Pavement Marking (Alternative 2)	SFT	300
101016	Remove Electrical Manhole (Alternative 2)	EA	1
101019	Remove Elevated Light and Base (Alternative 2)	EA	7
101021	Remove Guidance Sign and Base (Alternative 2)	EA	1
101022	Remove Concrete Encased Electrical Duct Bank (Alternative 2)	LFT	122
101023	Sawing Asphalt Pavement (Alternative 2)	LFT	120
152003	Unclassified Excavation (Alternative 2)	CYD	1,800
152006	Subgrade Undercut (Alternative 2)	CYD	180
154003	Subbase Course (Alternative 2)	CYD	1,390
154006	Separation Geotextile (Alternative 2)	SYD	2,380
209003	Crushed Aggregate Base Course (Alternative 2)	CYD	400
401003	Asphalt Surface Course, Gradation 2 (Alternative 2)	TON	590
403003	Asphalt Mixture Base Course, Gradation 2 (Alternative 2)	TON	730
603003	Emulsified Asphalt Tack Coat (Alternative 2)	GAL	460
620002	Surface Preparation (Alternative 2)	LS	1
620005	Airport Pavement Marking, Solid, Yellow, 1/2 Rate (Alternative 2)	SFT	270
620008	Airport Pavement Marking, Solid, Black (Alternative 2)	SFT	540
620012	Airport Pavement Marking, Solid, Yellow, with Reflective Beads (Alternative 2)	SFT	270
701002	24" Corrugated Polyethylene Pipe (Alternative 2)	LF	600
705005	6" Corrugated Perforated Polyethylene Pipe, Including Porous Backfill and Fileter Fabric (Alternative 2)	LF	590
705006	6" Corrugated Polyethylene Pipe (Alternative 2)	LF	100
751002	Inlet, Double Grate (Alternative 2)	EA	1
751007	Aircraft Rated Handhole (Alternative 2)	EA	2
108003	No. 8 AWG, 5kV, L-824, Type C Cable, Installed in Trench, Duct Bank or Conduit (Alternative 2)	LFT	3,360
108006	No. 6 AWG, Solid, Bare Copper Counterpoise Wire, Installed in Trench, Including Connections/Terminations (Alternative 2)	LFT	1,200
110003	Non-Encased Electrical Conduit, 1-Way 1 1/4 Inch (Alternative 2)	LFT	800
110004	Concrete Encased Electrical Conduit, 2-Way 4 Inch (Alternative 2)	LFT	160
110005	Non-Encased Electrical Conduit, 2-Way 2 Inch (Alternative 2)	LFT	240
115001	Electrical Manhole, Aircraft Rated (Alternative 2)	EA	1
125002	L-858(L) Guidance Sign, Base Mounted (Alternative 2)	EA	1
125005	L-861T(L) Elevated Medium Intensity Taxiway Light, Base Mounted in Turf (Alternative 2)	EA	7
901003	Seeding (Alternative 2)	AC	1.5
905003	Topsoil (Obtained On Site or Removed From Stockpile) (Alternative 2)	CY	750
908003	MULCHING (Alternative 2)	SY	7,260

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.

Mead & Hunt

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

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ERIE INTERNATIONAL AIRPORT
REALIGNMENT & RECONSTRUCTION
OF TAXIWAY A - PHASE 2
4411 WEST 12TH STREET
ERIE, PENNSYLVANIA

ISSUED
04.27.23
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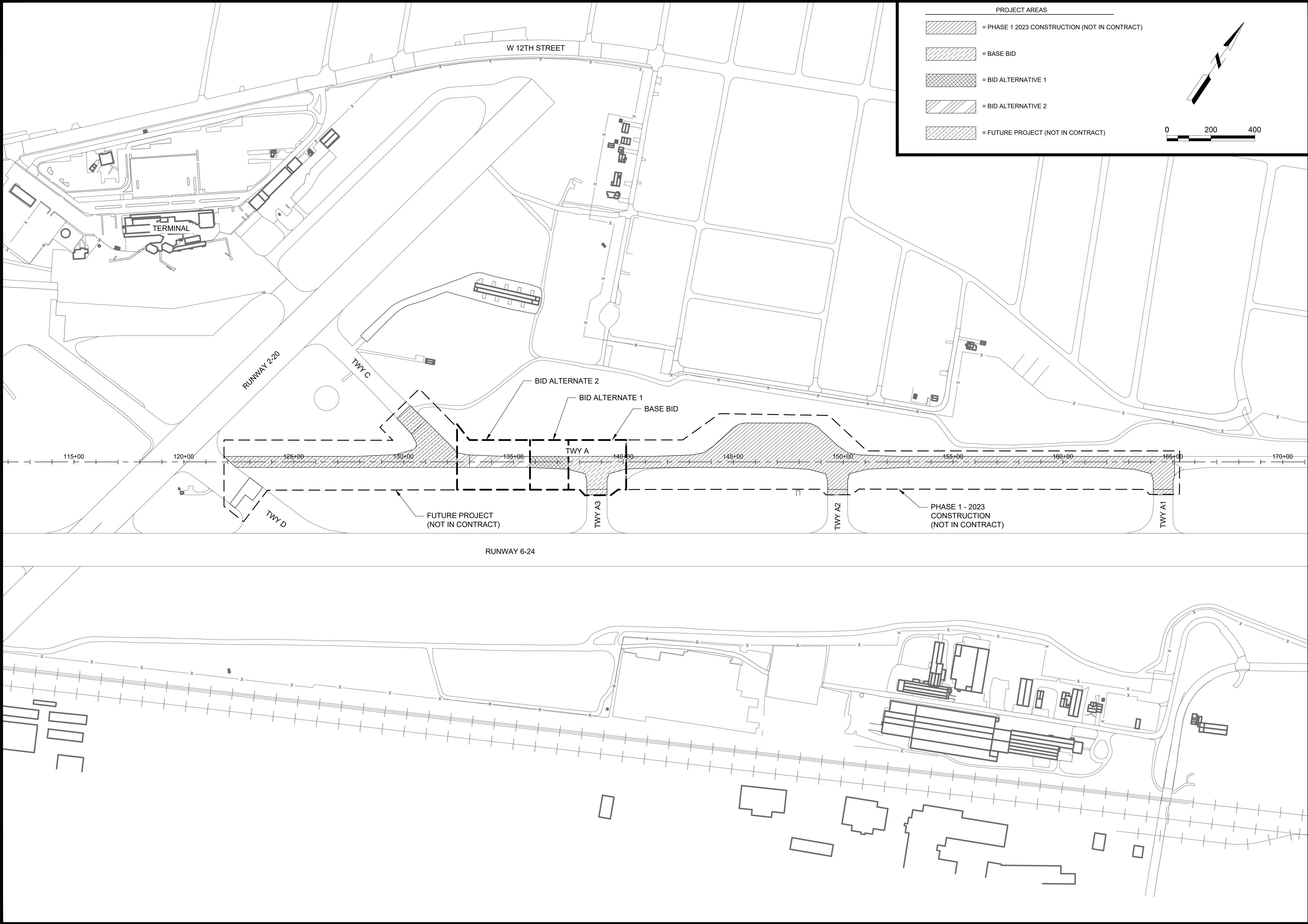


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SHEET CONTENTS
GENERAL NOTES

SHEET NO. 3 of 26

G-003



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REALIGNMENT & RECONSTRUCTION
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4411 WEST 12TH STREET
ERIE, PENNSYLVANIA

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SHEET CONTENTS
PROJECT LAYOUT
PLAN

SHEET NO. 4 of 26

G-021

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OF TAXIWAY A - PHASE 2
4411 WEST 12TH STREET
ERIE, PENNSYLVANIA

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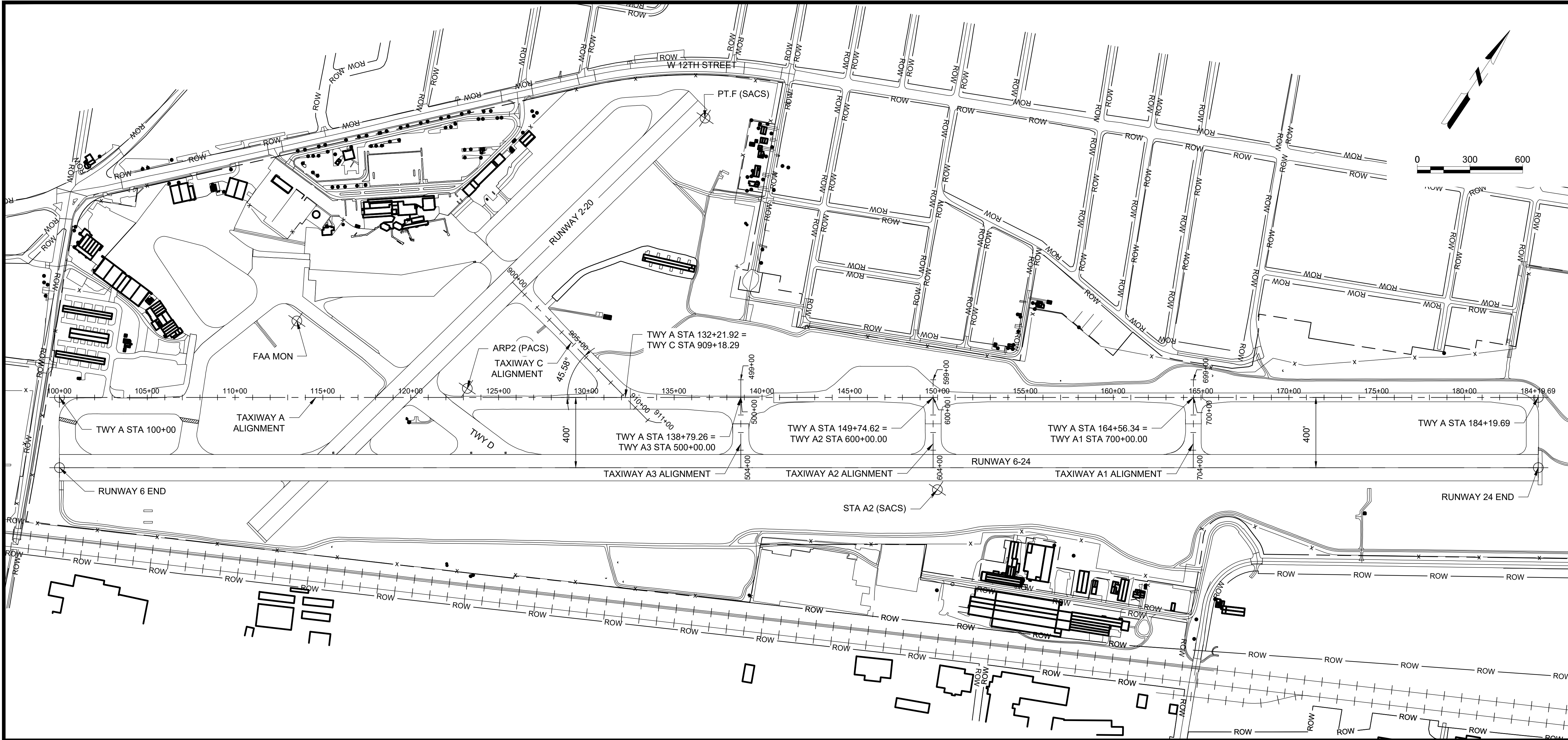


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SHEET CONTENTS
SURVEY CONTROL
PLAN

SHEET NO. 5 of 26

G-041



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

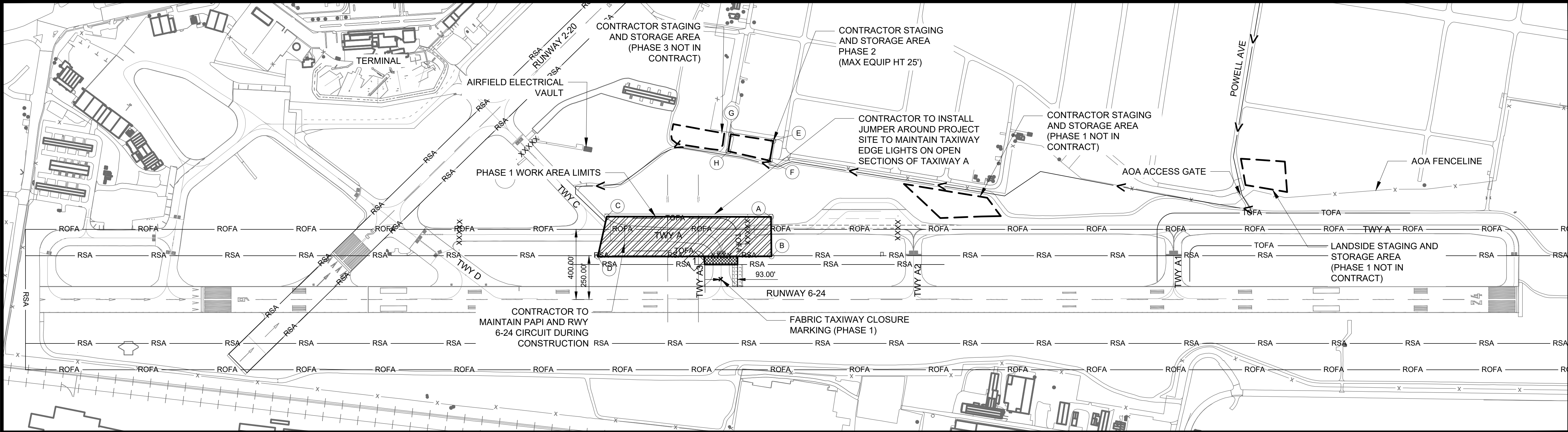
GEOMETRY POINTS	STATION	NORTHING	EASTING
P.O.B.	499+00.00	707794.8468	1310590.1739
P.O.E.	504+00.00	707379.8917	1310869.1189
PA83-NF BEARING:	S 33° 54' 36.56" E		

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.

X:\32256001\92499_03\TECH\CADD\DRAWINGS\G-101 CONSTRUCTION SAFETY PHASING PLAN.DWG
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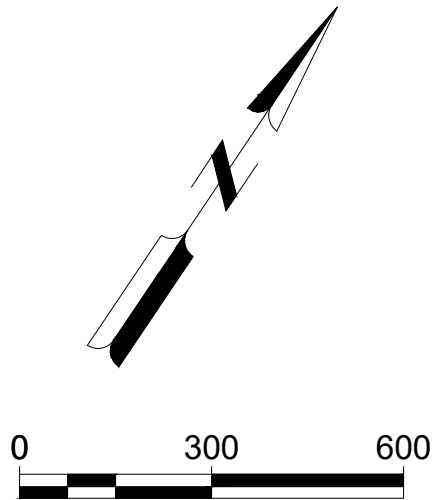


GENERAL NOTES:

- 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 PHASE 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 PHASE 1A WORK WITH AIRPORT OPERATIONS. RUNWAY TO BE RESTRICTED TO RDC C-II FOR ALL WORK THAT IS BETWEEN 200' AND 250' FROM RUNWAY CENTERLINE. PROVIDING AN RSA WIDTH OF 400' (200' FROM CENTERLINE). THIS WORK SHALL ONLY BE PERMITTED IN BLOCKS OF 2 TO 6 HOURS OF DURATION AT A TIME, IN COORDINATION WITH AIRPORT OPERATIONS. ALLOWABLE ONLY WHEN NO ADG III 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.
- CONTRACTOR TO COORDINATE ACCESS TO CABLE INSTALLATION AREAS (NEW CABLE IN EXISTING CONDUIT) THAT ARE OUTSIDE OF THE PHASE 1 OR 1A WORK LIMITS WITH AIRPORT OPERATIONS. WORK IN THESE AREAS WITHIN THE RSA OR TOFA WILL INCLUDE SHORT TERM CLOSURES OF ADJACENT PAVEMENTS AND/OR WORK PERFORMED ON A PULL-BACK BASIS. ALL PERSONNEL AND EQUIPMENT MUST VACATE THE RSA OR TOFA WHEN AIRCRAFT ARE OPERATION 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 PHASE 1B WORK WITH AIRPORT OPERATIONS. THE WORK SHALL ONLY BE PERMITTED IN BLOCKS OF 2 TO 6 HOURS OF DURATION AT A TIME 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.

PHASE	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	45 CALENDAR DAYS TOTAL. BASE BID: 24 DAYS ALT 1: 6 DAYS ALT 2: 15 DAYS	1. THE CONTRACTOR SHALL NOTIFY THE AIRPORT AT LEAST 5 DAYS IN ADVANCE OF WORK AND PHASE CHANGES SO THAT THE AIRPORT MANAGEMENT CAN ISSUE A NOTAM OF CONSTRUCTION ACTIVITY. 2. ALL GATES MUST BE LOCKED OR GATE GUARD POSTED. 3. ALL CONTRACTOR PERSONNEL WORKING ON-SITE SHALL UNDERGO AIRPORT TRAINING AND HAVE AIRPORT ISSUED BADGE. 4. MAXIMUM EQUIPMENT HEIGHT FOR THE PROPOSED WORK AREA IS 25' UNLESS OTHERWISE NOTED.
	ALL PHASE 1 WORK (PAVEMENT REMOVAL AND RESTORATION) WITHIN THE 500' WIDE RSA	1. RWY 6-24 RESTRICTED TO ARC C-II OPERATIONS AND RSA REDUCED IN WIDTH TO 400'. 2. TAXIWAY A3 CLOSED.	SEE GENERAL NOTE 7	SEE GENERAL NOTE 7	
	ALL PHASE 1 ELECTRICAL WORK WITHIN THE 500' WIDE RSA	1. RWY 6-24 CLOSED	SEE GENERAL NOTE 10	SEE GENERAL NOTE 10	
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	2 CALENDAR DAYS (BASE BID)	1. WORK SHALL TAKE PLACE ON A PULL-OFF BASIS. CONSTRUCTION TRAFFIC MUST YIELD TO ALL AIRCRAFT.

TOTAL CONTRACT TIME: 47 CALENDAR DAYS



FAA AIRSPACE AND 7460 INFORMATION

POINT	DESCRIPTION	LATITUDE	LONGITUDE	GROUND	HEIGHT AGL
A	WORK AREA	N42° 05' 03.63"	W80° 10' 22.53"	729'	25'
B	WORK AREA	N42° 05' 01.83"	W80° 10' 20.77"	726'	25'
C	WORK AREA	N42° 04' 58.27"	W80° 10' 32.63"	726'	25'
D	WORK AREA	N42° 04' 56.15"	W80° 10' 31.43"	729'	25'
E	STORAGE AREA	N42° 05' 07.18"	W80° 10' 25.72"	727'	25'
F	STORAGE AREA	N42° 05' 06.16"	W80° 10' 25.07"	727'	25'
G	STORAGE AREA	N42° 05' 06.10"	W80° 10' 28.62"	726'	25'
H	STORAGE AREA	N42° 05' 05.23"	W80° 10' 28.04"	726'	25'

LEGEND

XXXXXXXXXXXXXXXXX	EXISTING PAVEMENTS
1	LIGHTED BARRICADE (PHASE IF APPLICABLE)
	WORK AREA BOUNDARY
>	CONTRACTOR HAUL ROUTE
— RSA —	RUNWAY SAFETY AREA
— TOFA —	TAXIWAY OBJECT FREE AREA

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
--	--	--

Mead & Hunt

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

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4411 WEST 12TH STREET
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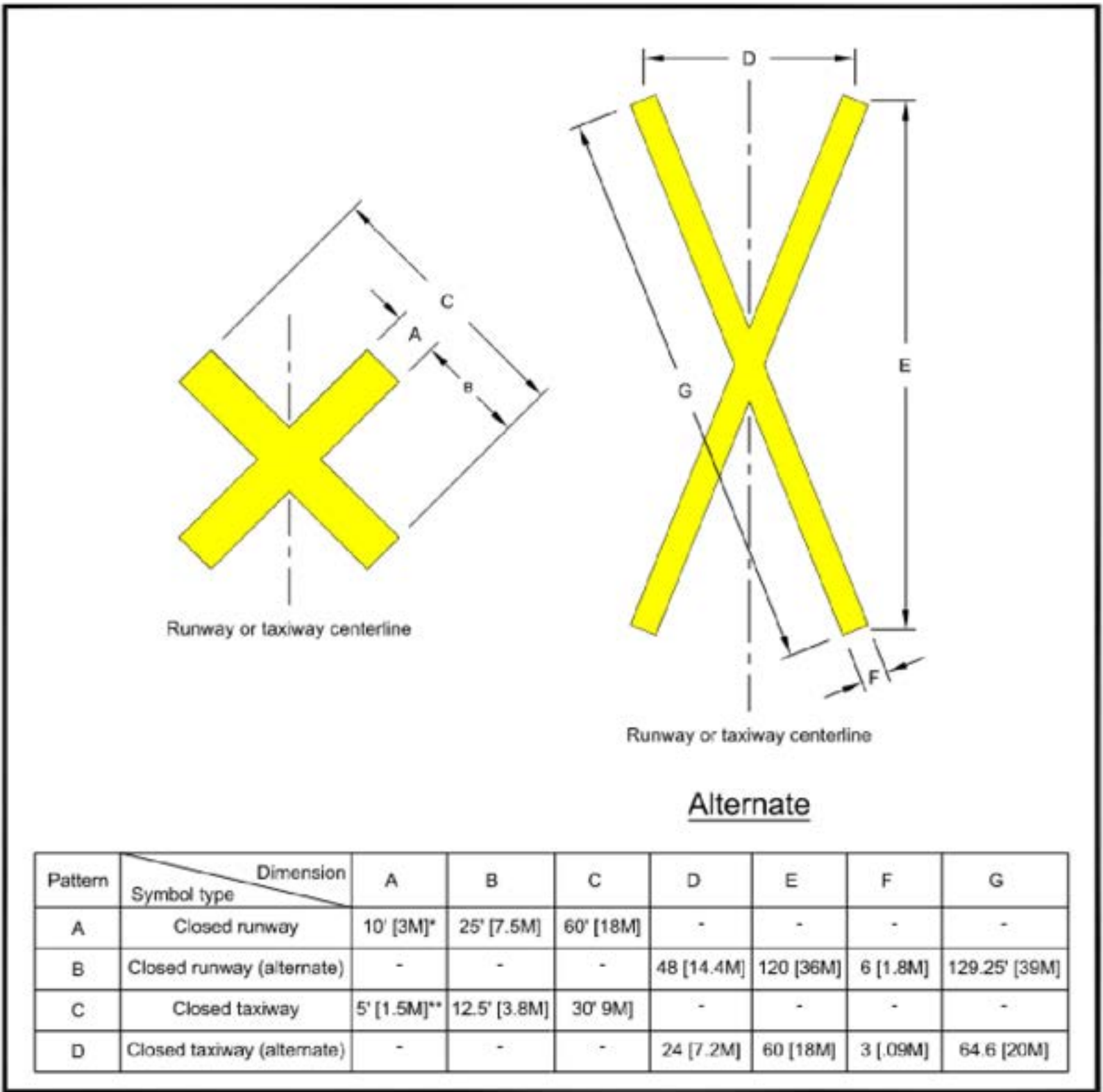
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SHEET CONTENTS
CONSTRUCTION
SAFETY PHASING
PLAN

SHEET NO. 6 of 26

G-101

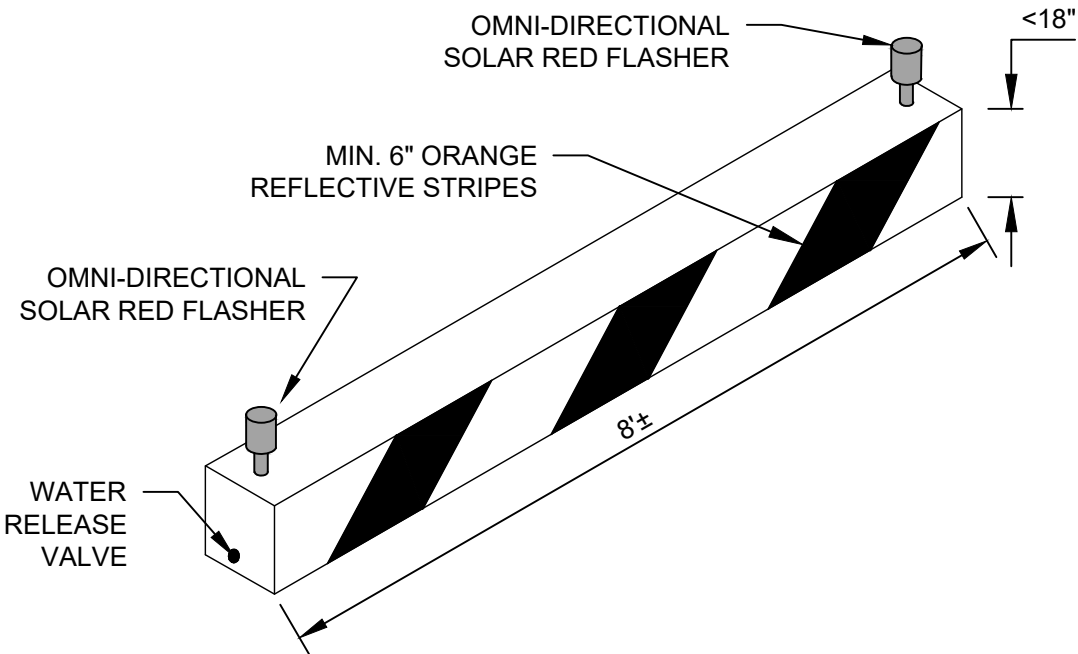
Figure A-27. Closed Runway and Taxiway Markings



Note: Both symbols are always painted yellow.

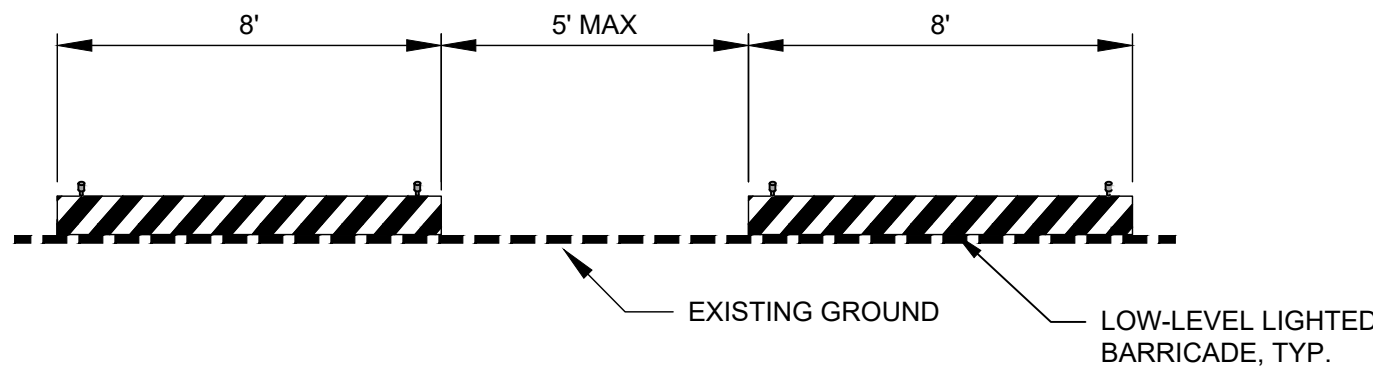
- * For temporary symbol, this dimension may be changed to 8 ft (2.4m).
- ** For temporary symbol, this dimension may be changed to 4 ft (1.2m).

4 CLOSED RUNWAY AND TAXIWAY MARKINGS
NOT TO SCALE

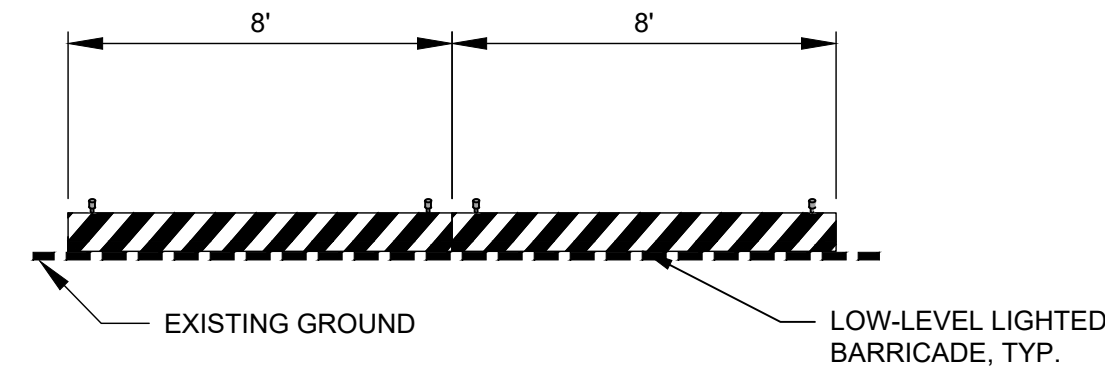


- NOTES:
- CONTRACTOR SHALL SUPPLY AND MAINTAIN LOW-LEVEL LIGHTED BARRICADES FOR THE DURATION OF THE PROJECT.
 - GAPS IN BARRICADES SHALL NOT EXCEED 5-FEET.
 - THERE SHALL BE NO GAPS IN BARRICADES PLACED AT RUNWAYS.

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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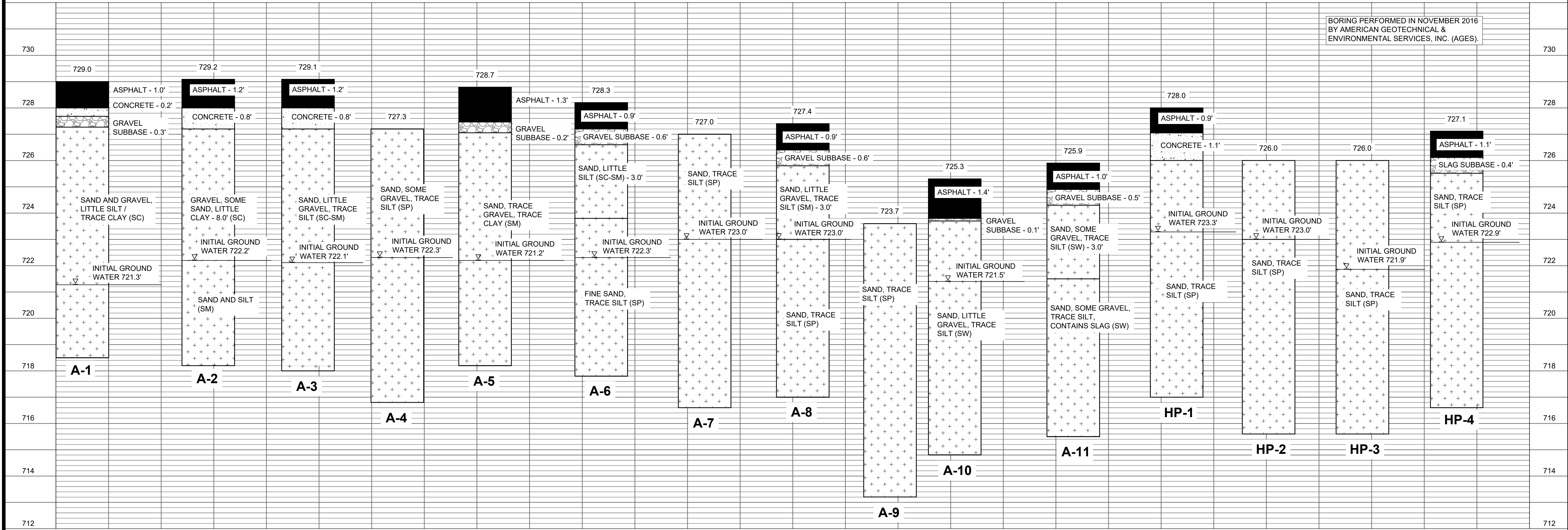
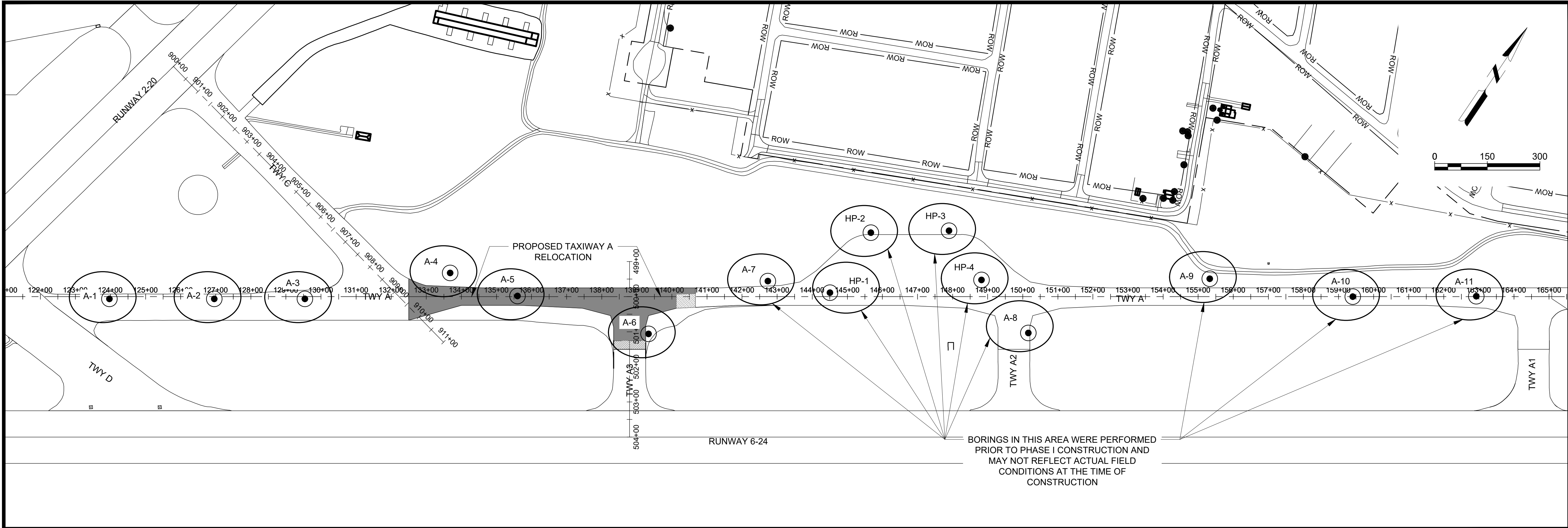
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SHEET CONTENTS
CONSTRUCTION
SAFETY PHASING
PLAN DETAILS

SHEET NO. 7 of 26



**ERIE INTERNATIONAL AIRPORT
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SHEET CONTENTS
BORING LOCATION PLAN

SHEET NO. 8 of 26

B-051


 DRAINS TO LA
 (UNIT 62425)

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

1 - 800 - 242 - 1776

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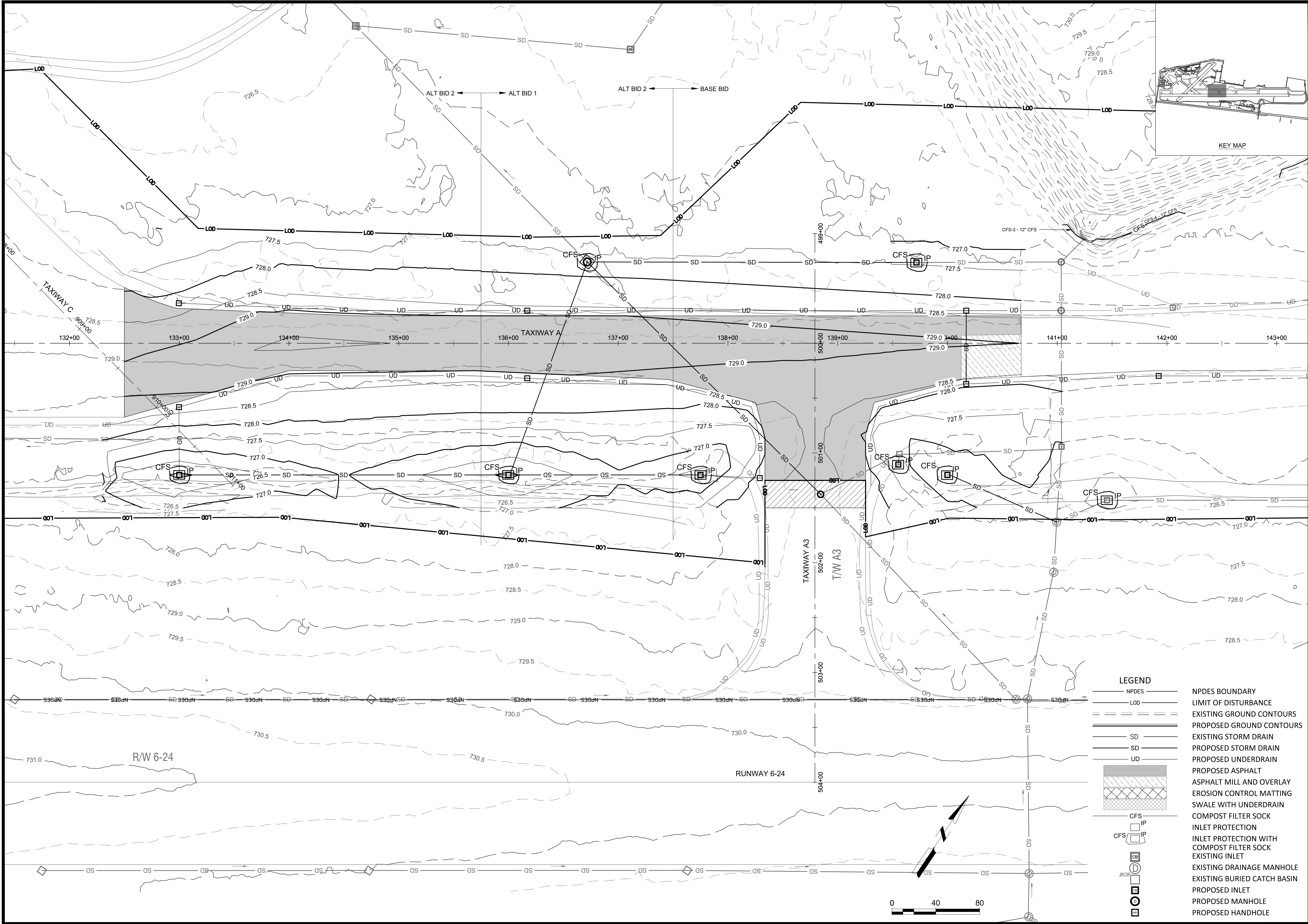
SHEET CONTENTS

**OVERALL EROSION
AND SEDIMENTATION
CONTROL PLAN**

C-021

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

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2605 Port Lansing Road
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meadhunt.com

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DATE: 04/27/2023
DESIGNED BY: RCL
DRAWN BY: SRK
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SHEET CONTENTS
EROSION AND
SEDIMENTATION
CONTROL PLAN

SHEET NO. 10 of 26

C-022

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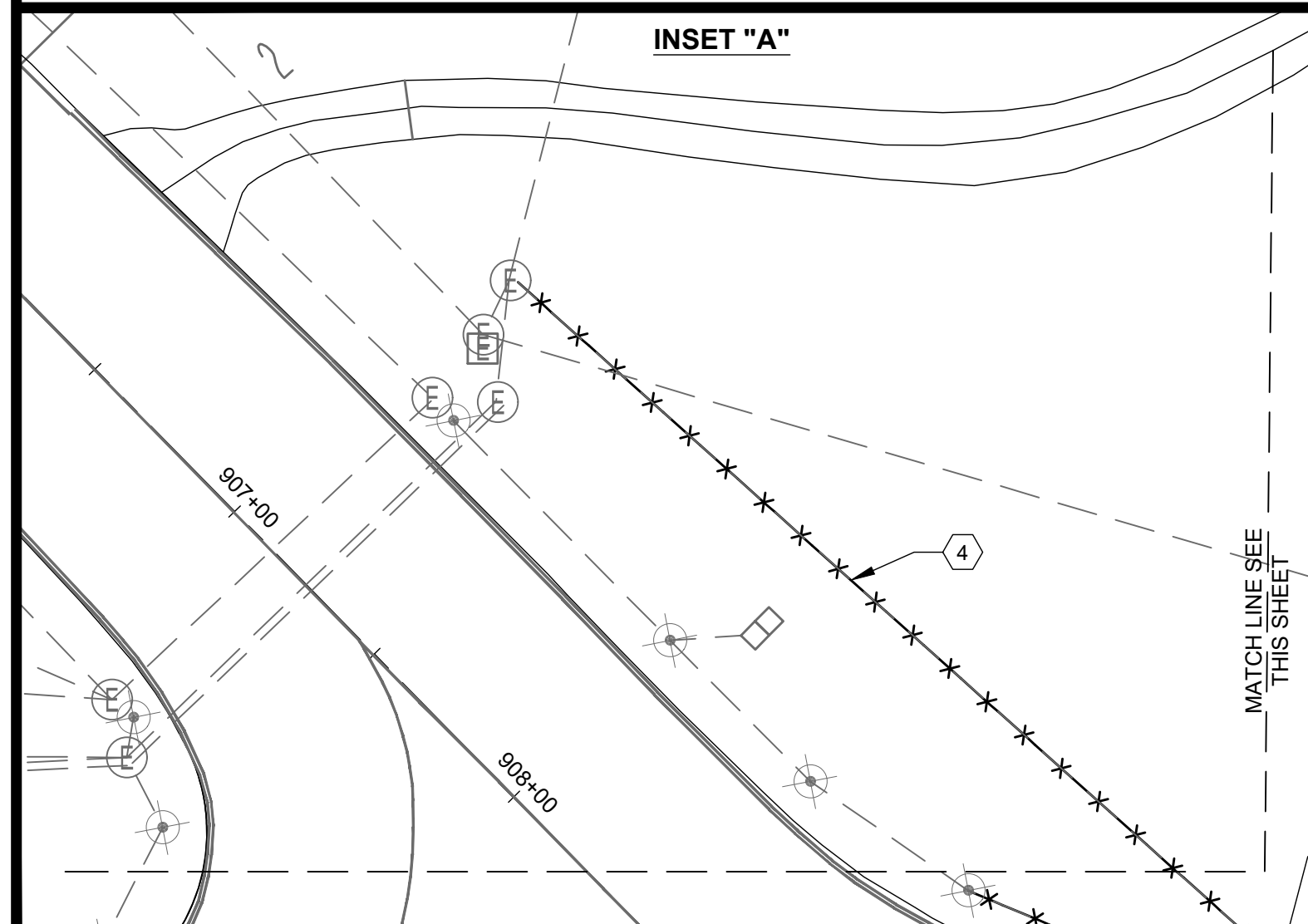
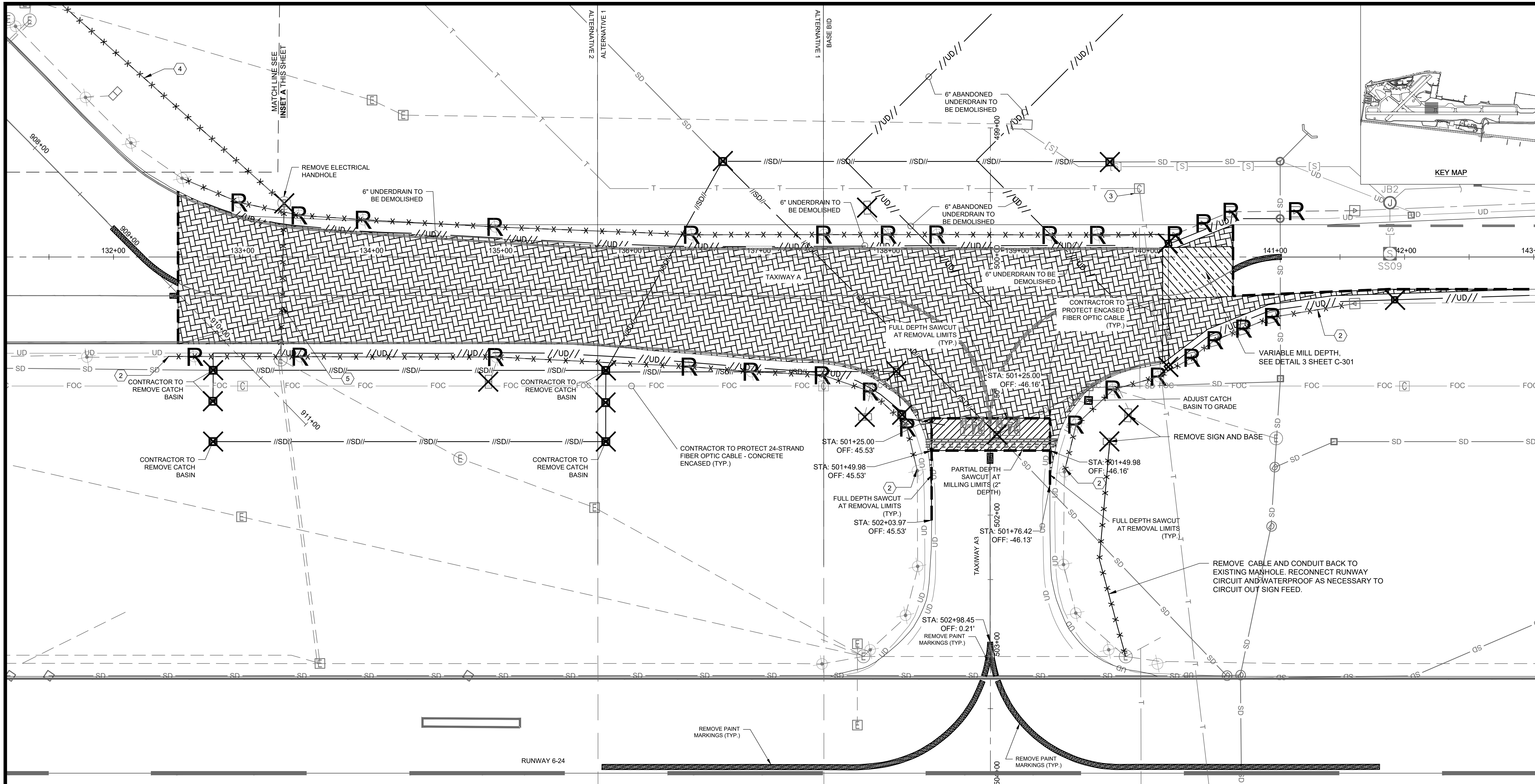


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SHEET CONTENTS
DEMOLITION PLAN

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C-051



KEYNOTES:

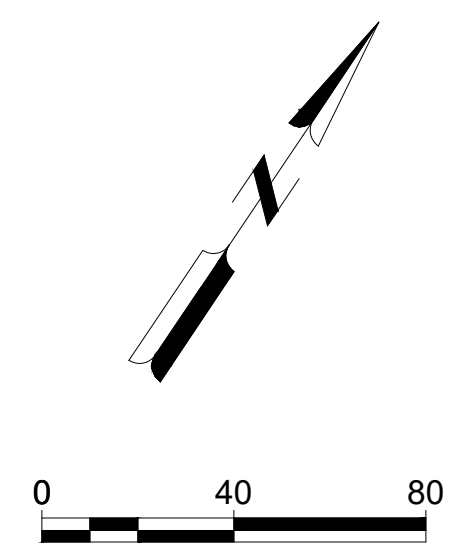
- 1 CUT CONDUIT AND PROTECT END FOR RE-USE.
- 2 REMOVE SERIES LIGHTING CABLE BACK TO NEXT ADJACENT TAXIWAY LIGHT. SECURE AND PROTECT CABLE ENDS.
- 3 JUNCTION BOX CONTAINS A 24 STRAND FIBER OPTIC CABLE SPLICE. THE SPLICE SHALL BE PROTECTED AND REMAIN INTACT.
- 4 REMOVE SERIES LIGHTING CABLE BACK TO HANDHOLE. FURNISH AND INSTALL SPLICE TO MAINTAIN AND CONTINUE CIRCUIT. CUT AND CAP CONDUIT FOR REUSE.
- 5 CABLE IN CONDUIT TO REMAIN ACTIVE UNTIL NEW DUCT BANK IS BUILT.

LEGEND

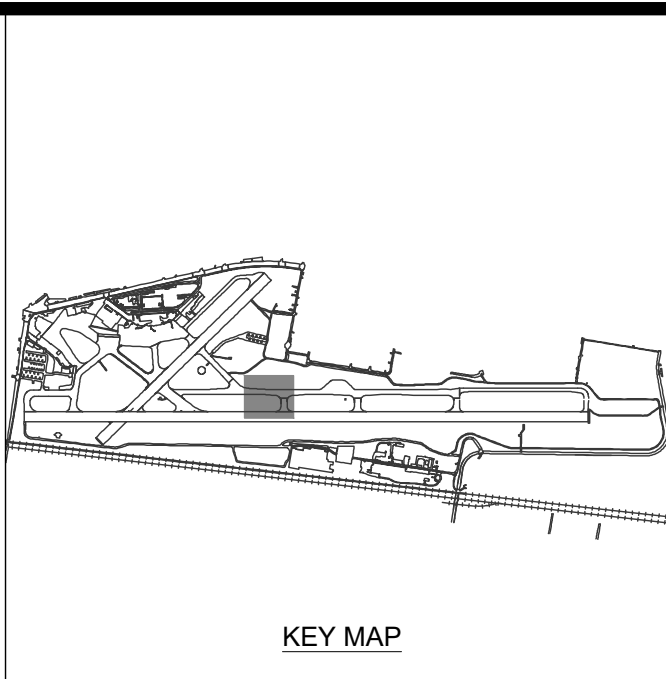
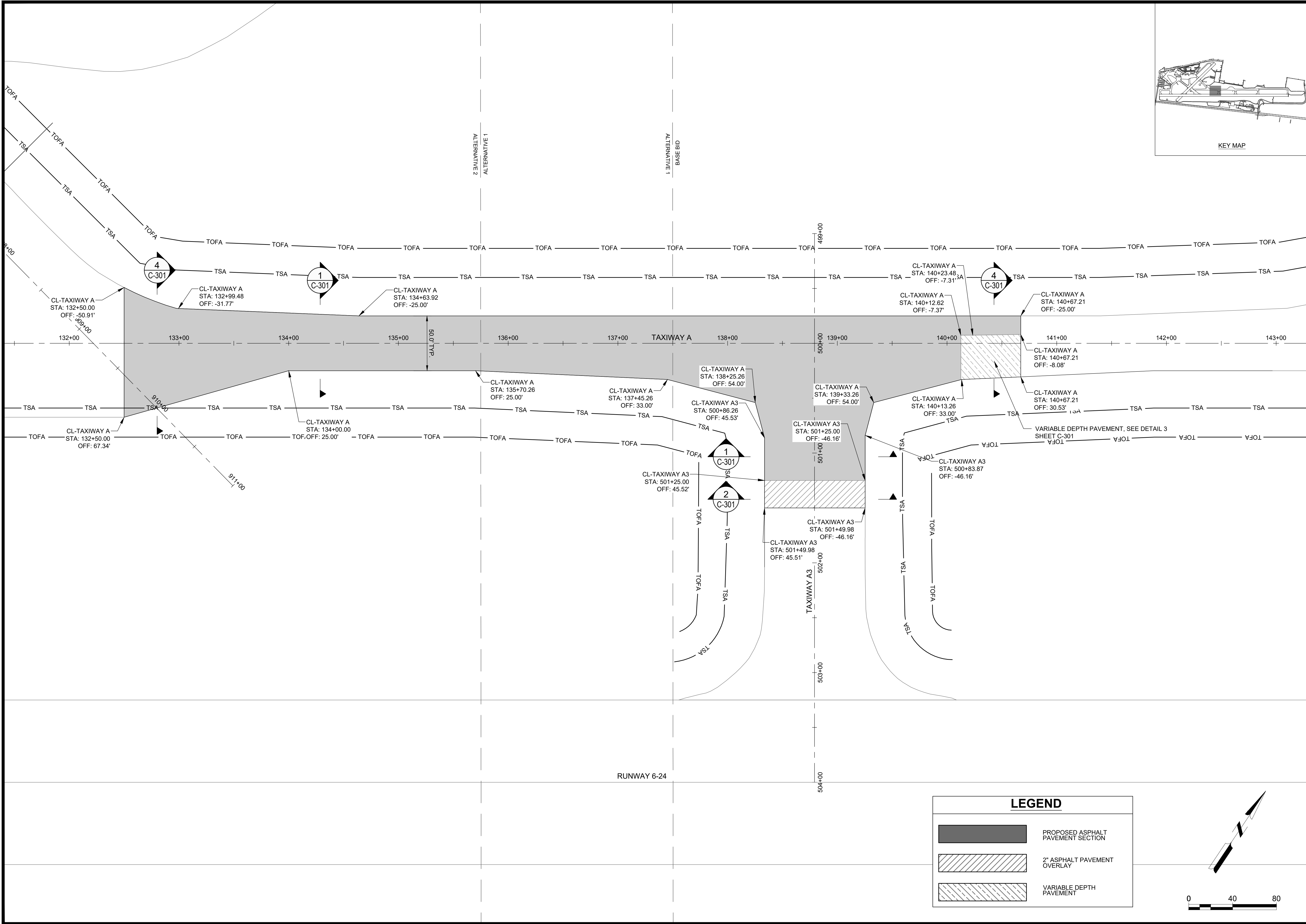
	ASPHALT PAVEMENT MILLING (2' DEPTH)		REMOVE STRUCTURE
	ASPHALT PAVEMENT MILLING (VARIABLE DEPTH)		REMOVE AND DISPOSE OF EXISTING TAXIWAY LIGHT FIXTURE, BASE PLATE, TRANSFORMER, LIGHT BASE, AND CONNECTORS.
	ASPHALT PAVEMENT REMOVAL		REMOVE STORM DRAIN
	PAVEMENT MARKING REMOVAL		REMOVE ELECTRICAL DUCT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

NOTES:

1. CONTRACTOR TO VERIFY LOCATION OF EXISTING UTILITIES PRIOR TO THE START OF DEMOLITION.
2. CONTRACTOR TO PROTECT ALL UTILITIES AT ALL TIMES DURING CONSTRUCTION.
3. 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.



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REALIGNMENT & RECONSTRUCTION
OF TAXIWAY A - PHASE 2**
4411 WEST 12TH STREET
ERIE, PENNSYLVANIA

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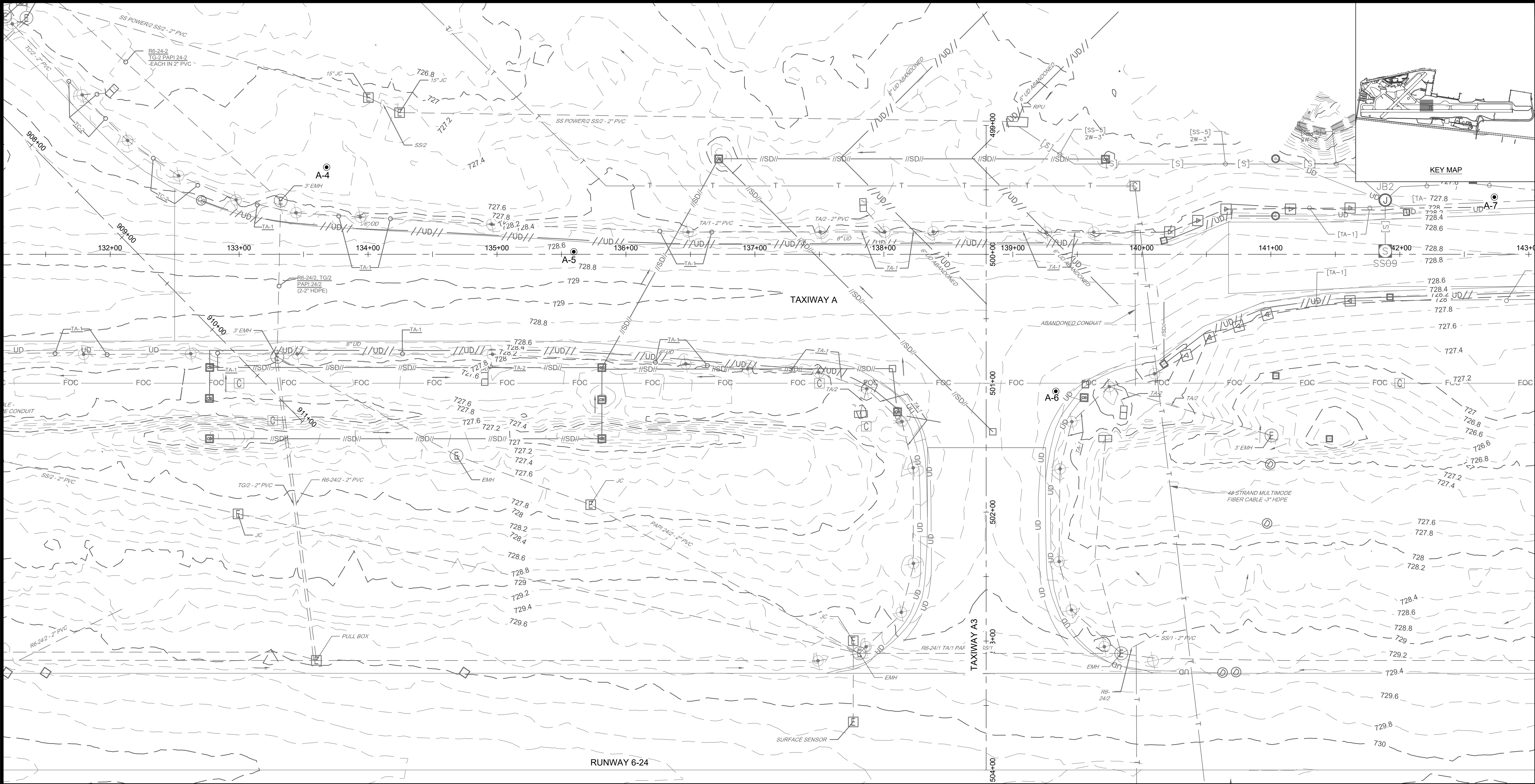


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MSH NO.: 3225600-192499.03
DATE: 04/27/2023
DESIGNED BY: PSH
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SHEET CONTENTS
PROJECT
GEOMETRICS

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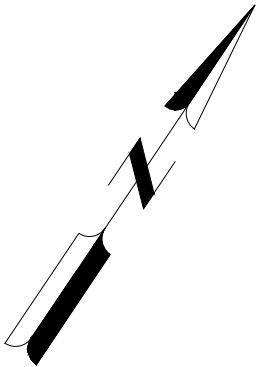
C-081



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

NOTES:

- 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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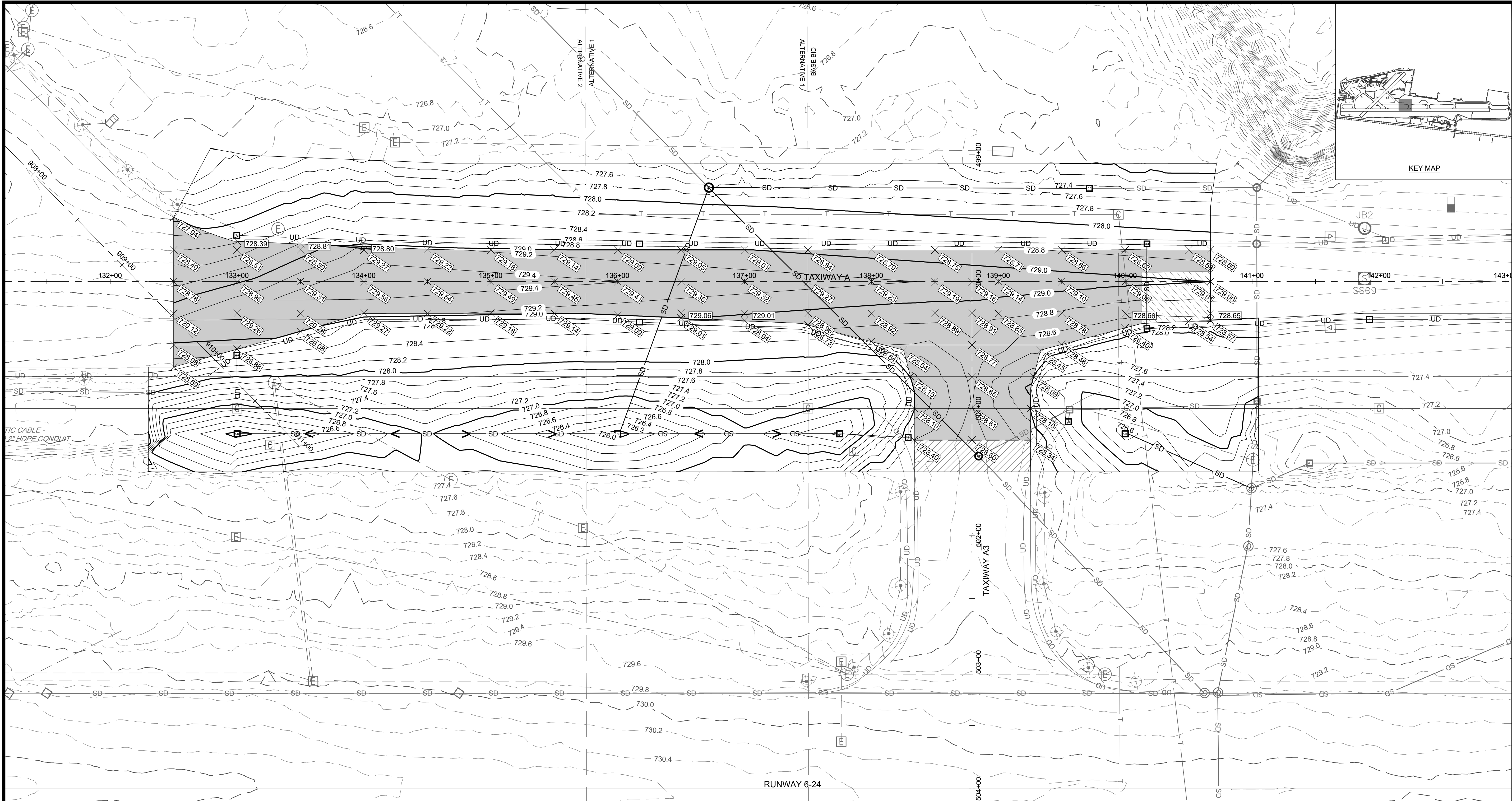


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EXISTING
CONDITIONS

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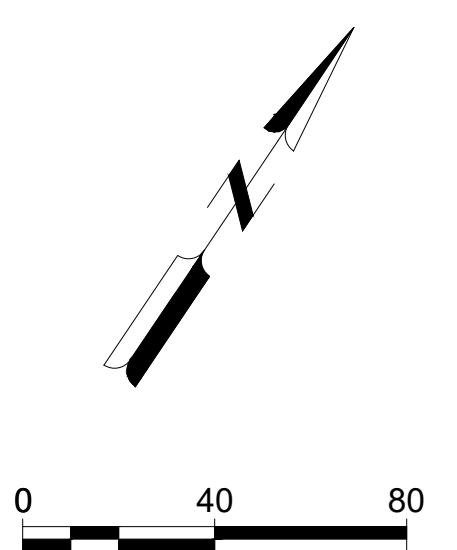
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SHEET CONTENTS
GRADING PLAN

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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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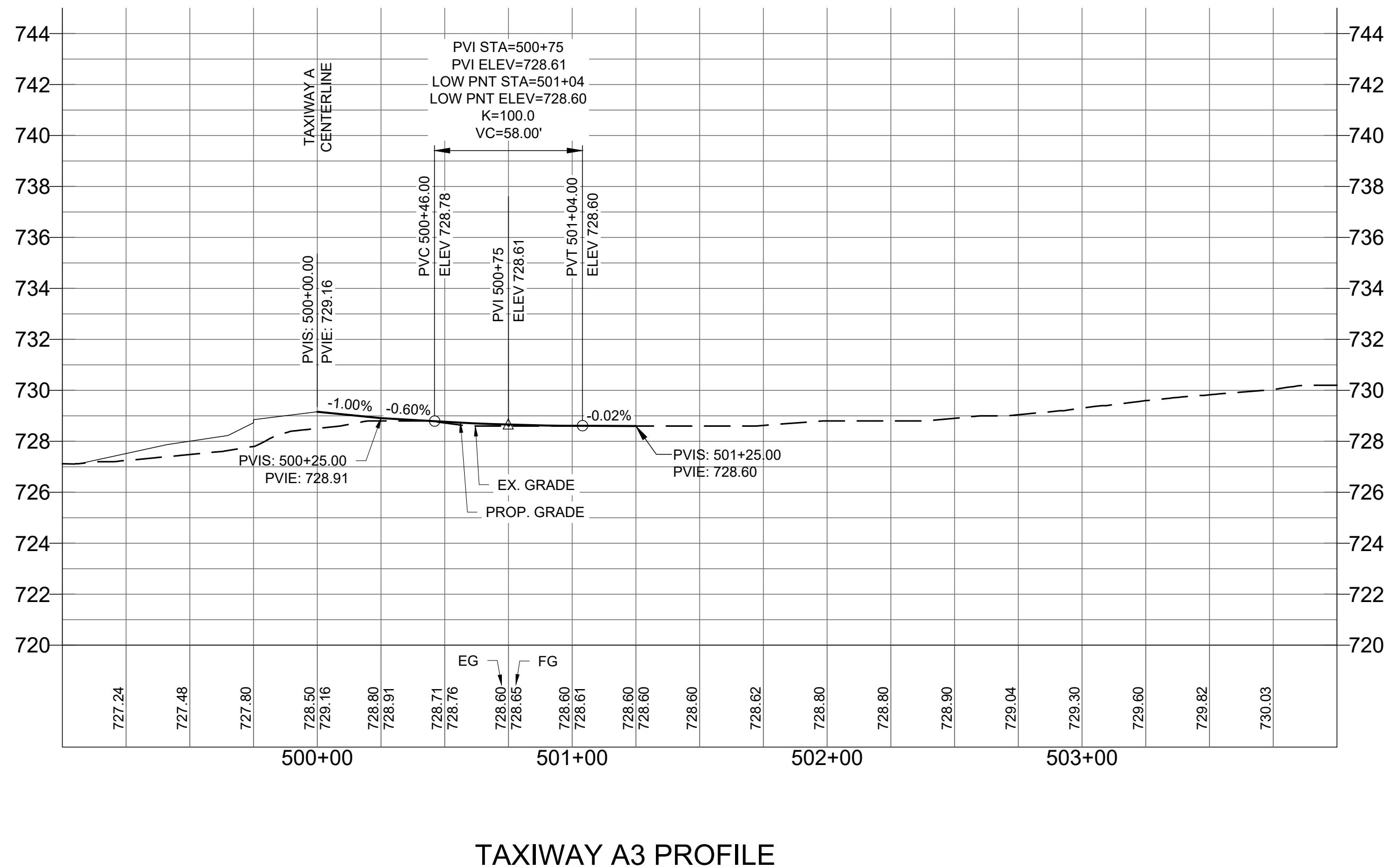
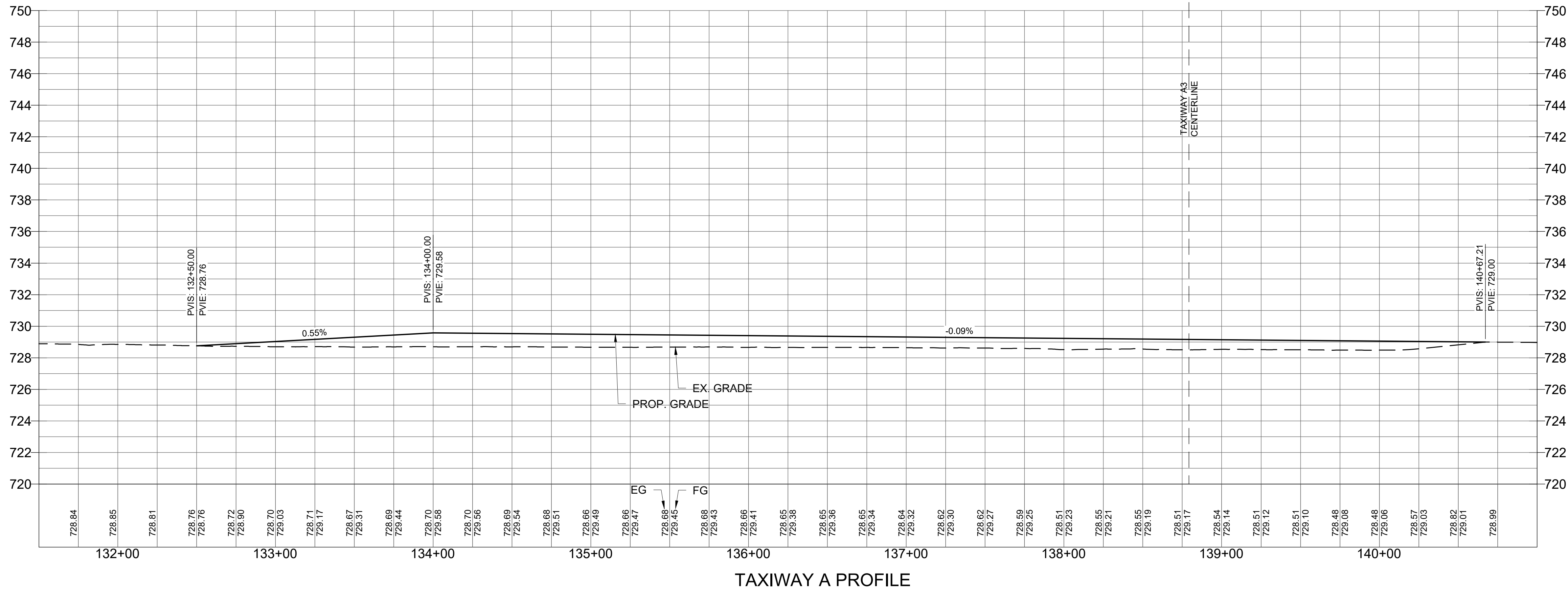


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SHEET CONTENTS
CENTERLINE
PROFILES

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C-201



0 4 8
VERTICAL SCALE

0 40 80
HORIZONTAL SCALE

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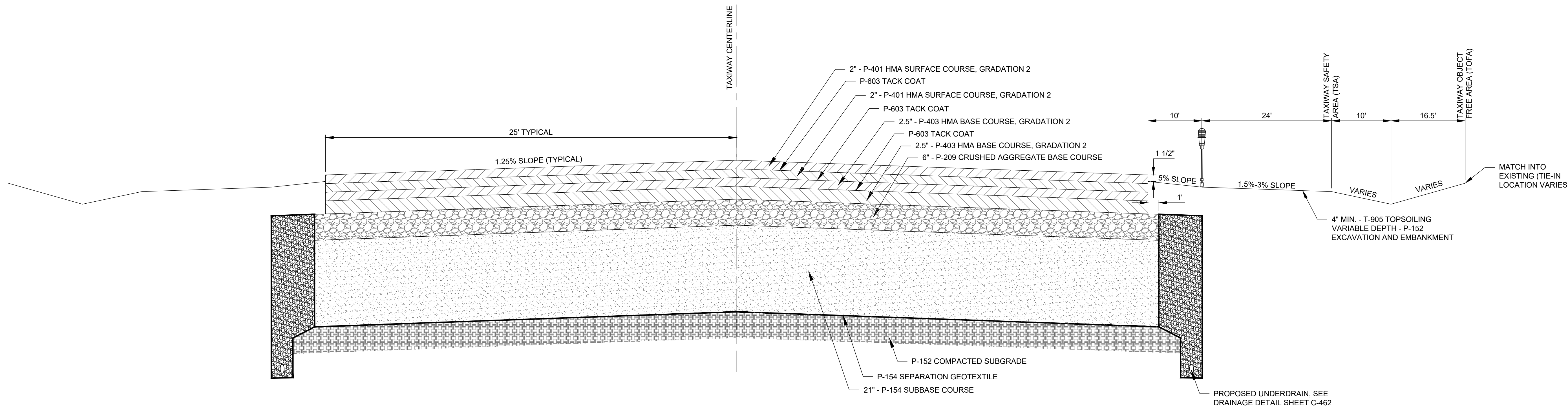


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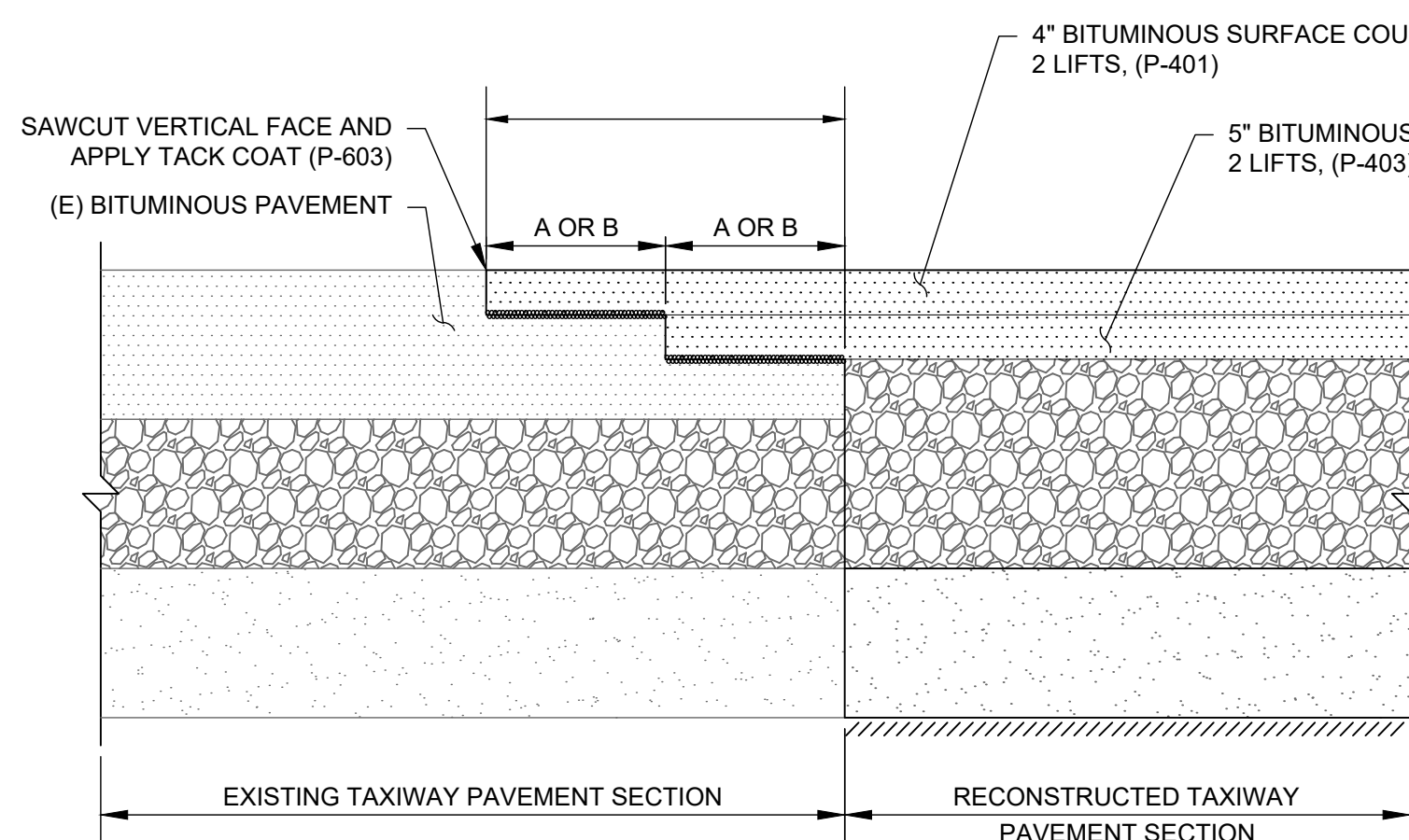
SHEET CONTENTS
TYPICAL SECTIONS

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C-301

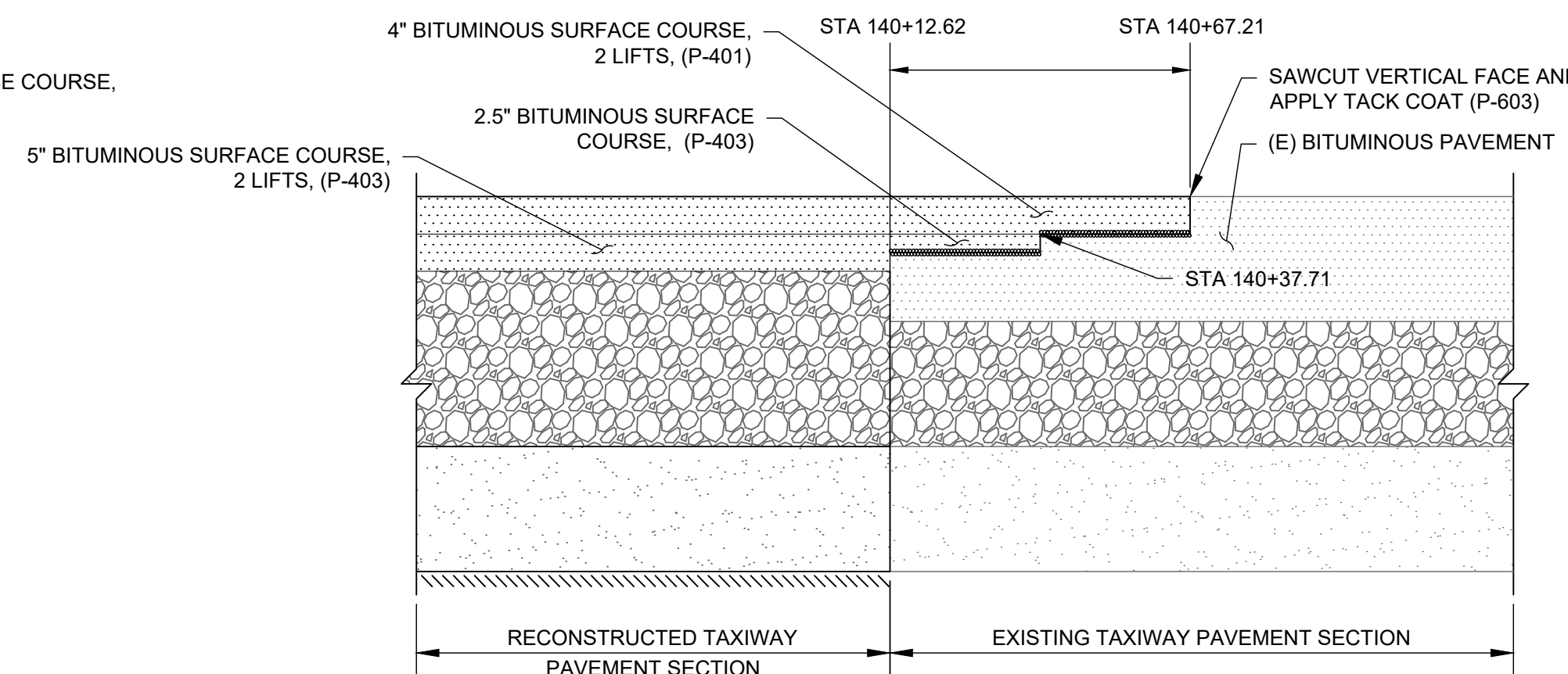


1 TYPICAL PROPOSED ASPHALT PAVEMENT
NOT TO SCALE

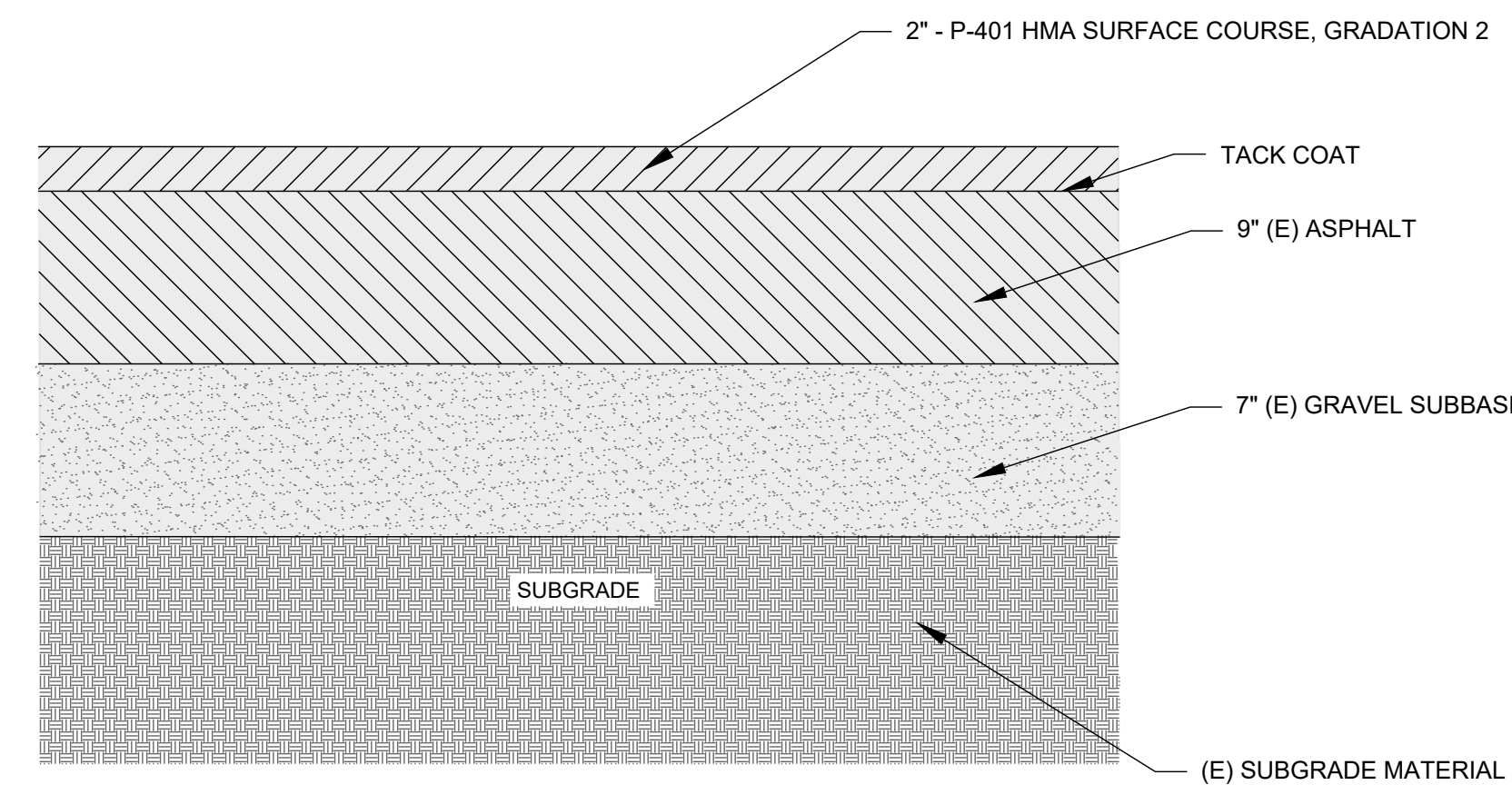


- NOTES:
1. A = 2' FOR A 4' PAVEMENT TRANSITION TO EXISTING PAVEMENT
 2. B = 5' FOR A 10' PAVEMENT TRANSITION TO EXISTING PAVEMENT

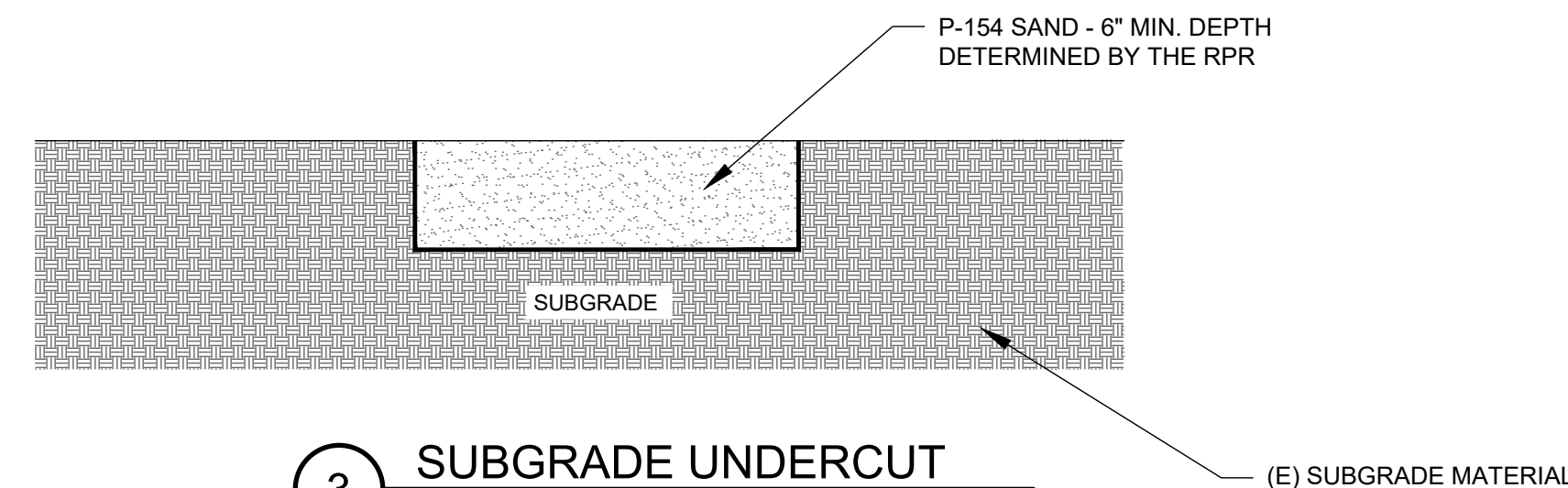
5 NEW PAVEMENT TO EXISTING PAVEMENT TAXIWAY TRANSITION DETAIL
NOT TO SCALE



4 NEW PAVEMENT TO EXISTING PAVEMENT TAXIWAY TRANSITION TO PHASE 1 DETAIL
NOT TO SCALE



2 MILL AND OVERLAY
NOT TO SCALE



3 SUBGRADE UNDERCUT
NOT TO SCALE

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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:

- 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
- 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.
- A co-permittee agreement must be completed by all parties involved in order to share permit responsibility, coverage, and liability.
- To properly implement the Plan, the contractor should become familiar with the requirements 25 PA Code, Chapter 102 for Erosion and Sediment Control.
- 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.
- Erosion and sediment BMPs must be constructed, stabilized, and functional before site disturbance begins within the tributary areas of those BMPs.
- 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.
- 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.
- 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.
- 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 out slopes shall have a minimum of 2 inches of topsoil.
- 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.
- Mulch materials shall be only of the mulch netting type for this site.
- 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.
- 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.
- 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.
- 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.
- The contractor’s staging areas shall be kept in a stabilized condition with perimeter controls, as necessary.
- 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.
- E&S BMPs shall remain functional as such until all areas tributary to them are permanently stabilized.
- 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.
- 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.
- 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.
- 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)

BMP Maintenance and Inspection Schedule	
Rock Construction Entrance	
Inspection Schedule:	Rock Construction Entrances (RCEs) shall be inspected daily as necessary.
Maintenance:	RCE thickness shall be constantly maintained to the specified dimensions by adding rock. RCE must be maintained with clean rock or if rock becomes clogged, it must be replaced.
Inlet Protection	
Inspection Schedule:	Inlet Protection shall be inspected on a weekly basis and after each runoff event.
Maintenance:	Protection shall be emptied and rinsed or replaced when flow capacity has been reduced with potential to cause flooding or bypassing of the inlet. Damaged or clogged protection shall be replaced.
Compost Filter Sock (CFS)	
Inspection Schedule:	Controls shall be inspected weekly and after each runoff event.
Maintenance:	Damaged controls shall be repaired according to manufacturer’s specifications or replaced within 24 hours of inspection. Sediment shall be removed when accumulations reach 1/3 the height of the control.
Rock Filter	
Inspection Schedule:	Outlets shall be inspected on a weekly basis as necessary.
Pumped Water Filter Bag	
Inspection Schedule:	Filter Bags shall be inspected daily.
Maintenance:	If any problem is detected, pumping shall cease immediately and not resume until the problem is corrected. Filter bags shall be replaced when they become one-half full of sediment.
Erosion Control Blanket	
Inspection Schedule:	Blanketed areas shall be inspected weekly and after each runoff event until perennial vegetation is established to a minimum uniform 70% coverage throughout the blanketed area.
Maintenance:	Damaged or displaced blankets shall be restored or replaced within 4 calendar days.
Access and Staging Area	
Inspection Schedule:	Access and staging areas shall be inspected daily and after each runoff event.
Maintenance:	Mud and sediment on the access and staging areas or surrounding airport pavement will be cleaned with a vacuum street sweeper throughout construction. Damaged roadways, ditches, or cross drains shall be repaired immediately.

Mead & Hunt

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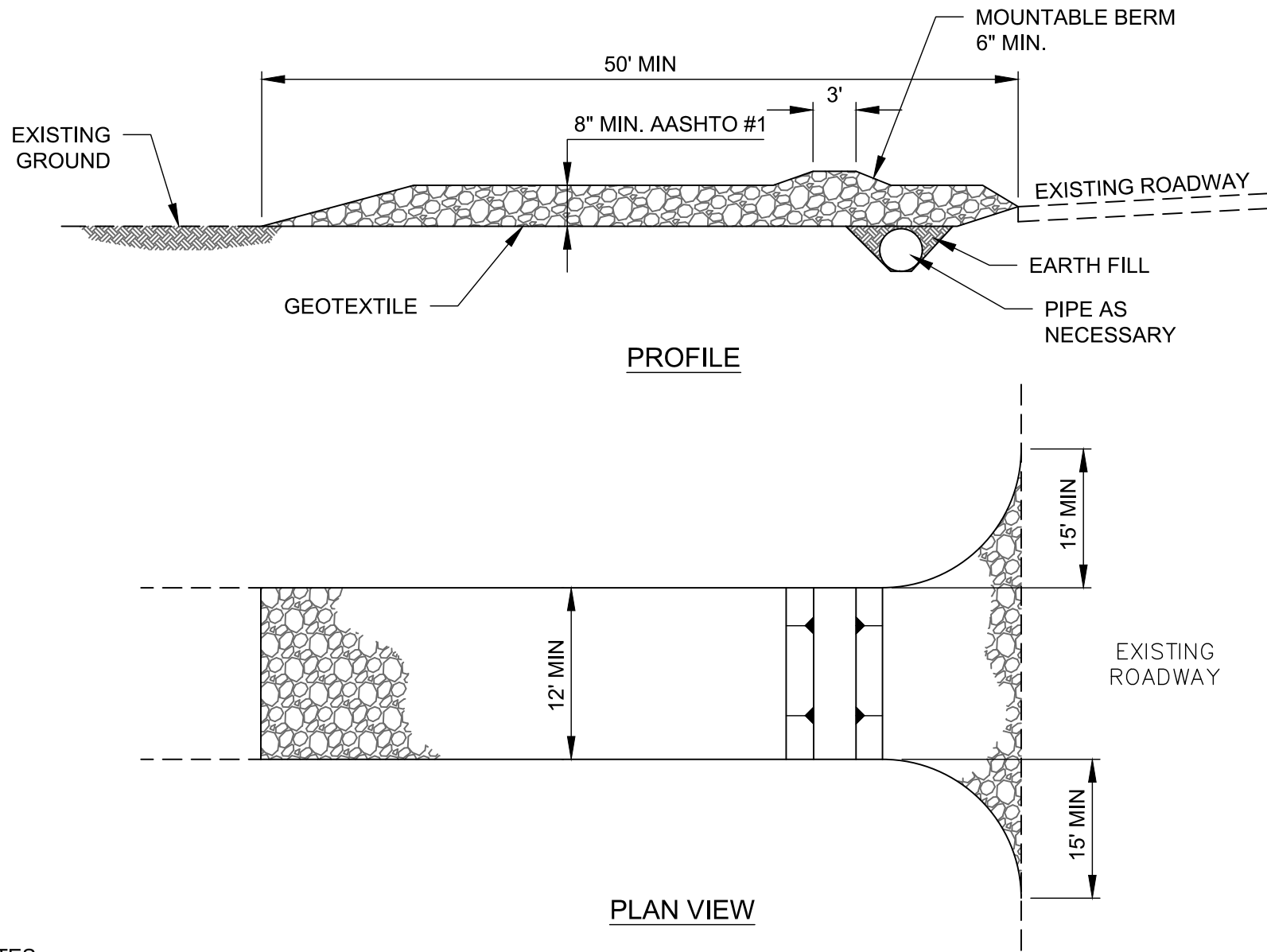
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DRAWN BY: SRK
CHECKED BY: RCL
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SHEET CONTENTS
EROSION AND
SEDIMENT CONTROL
PLAN DETAILS SHEET
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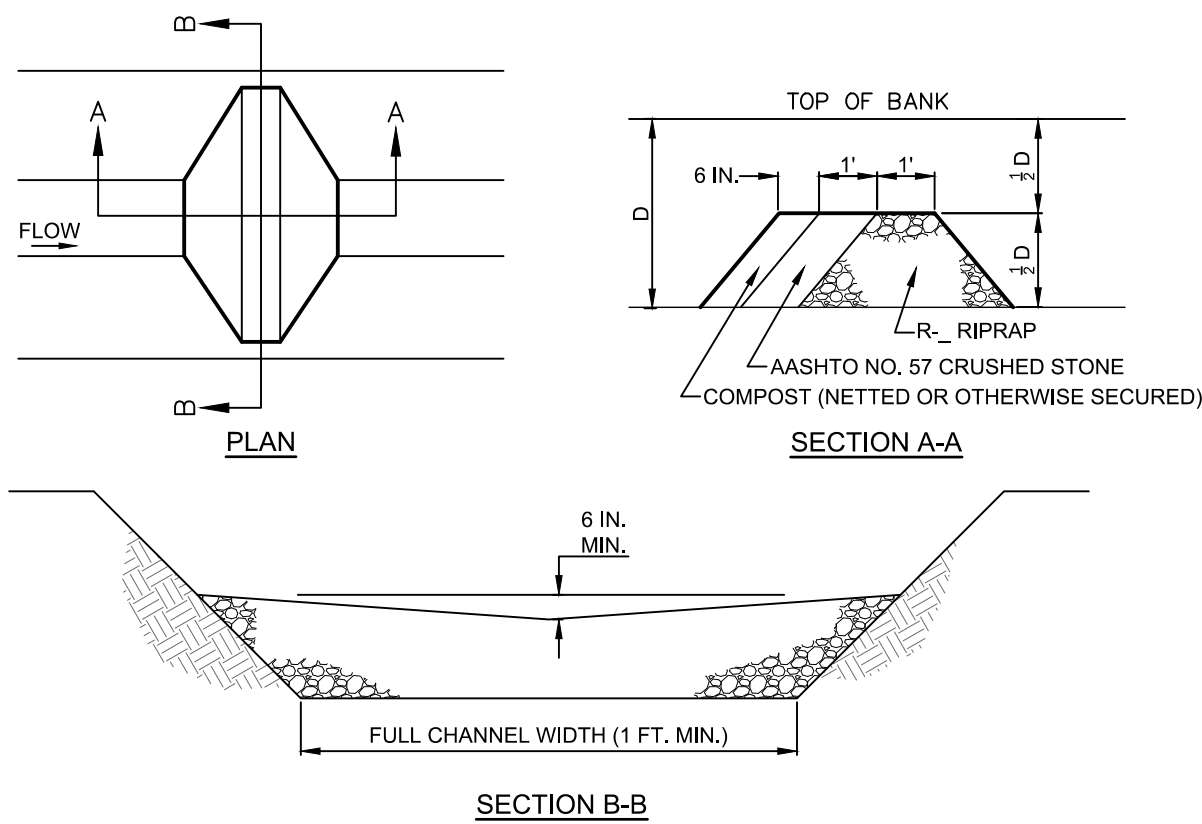
NOTES:

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

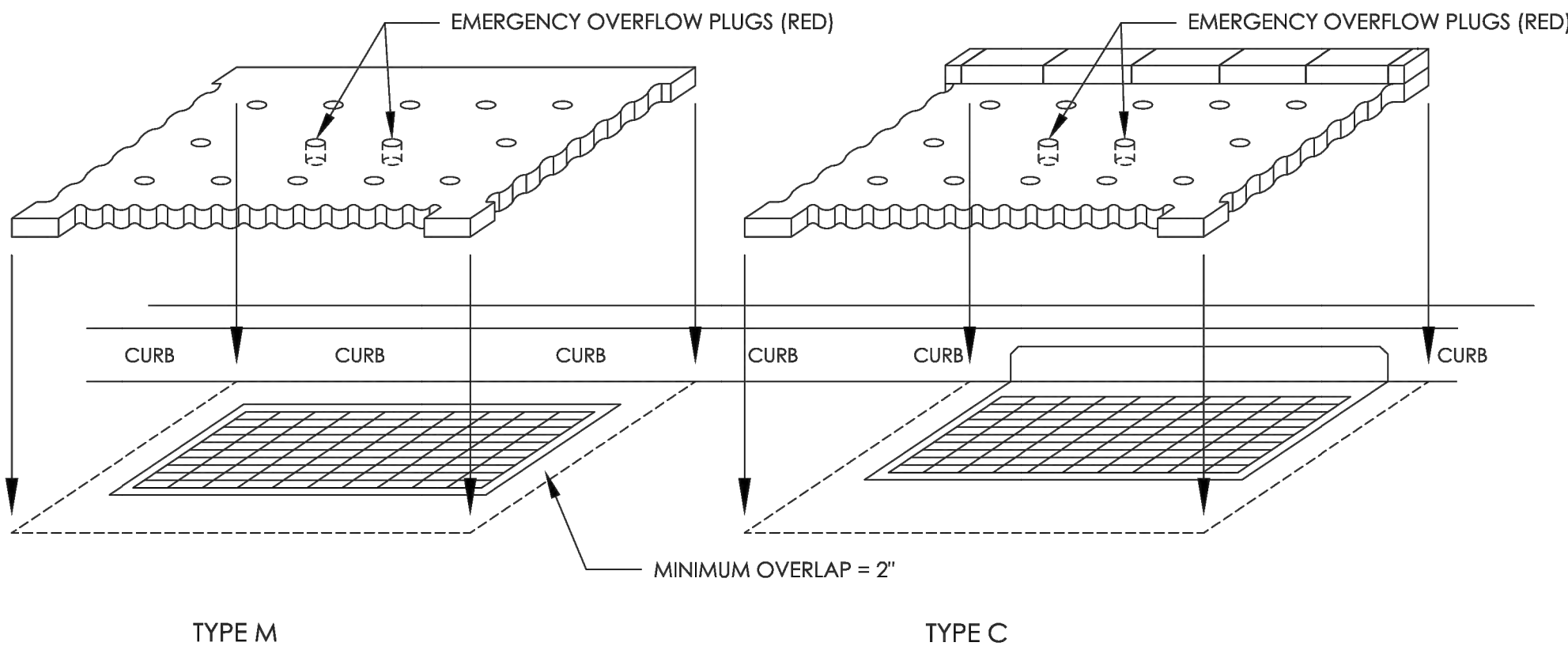


MKB Stormwater
Innovation

888-578-0777
mkbcompany.com

Patent Pending 15/449,576
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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

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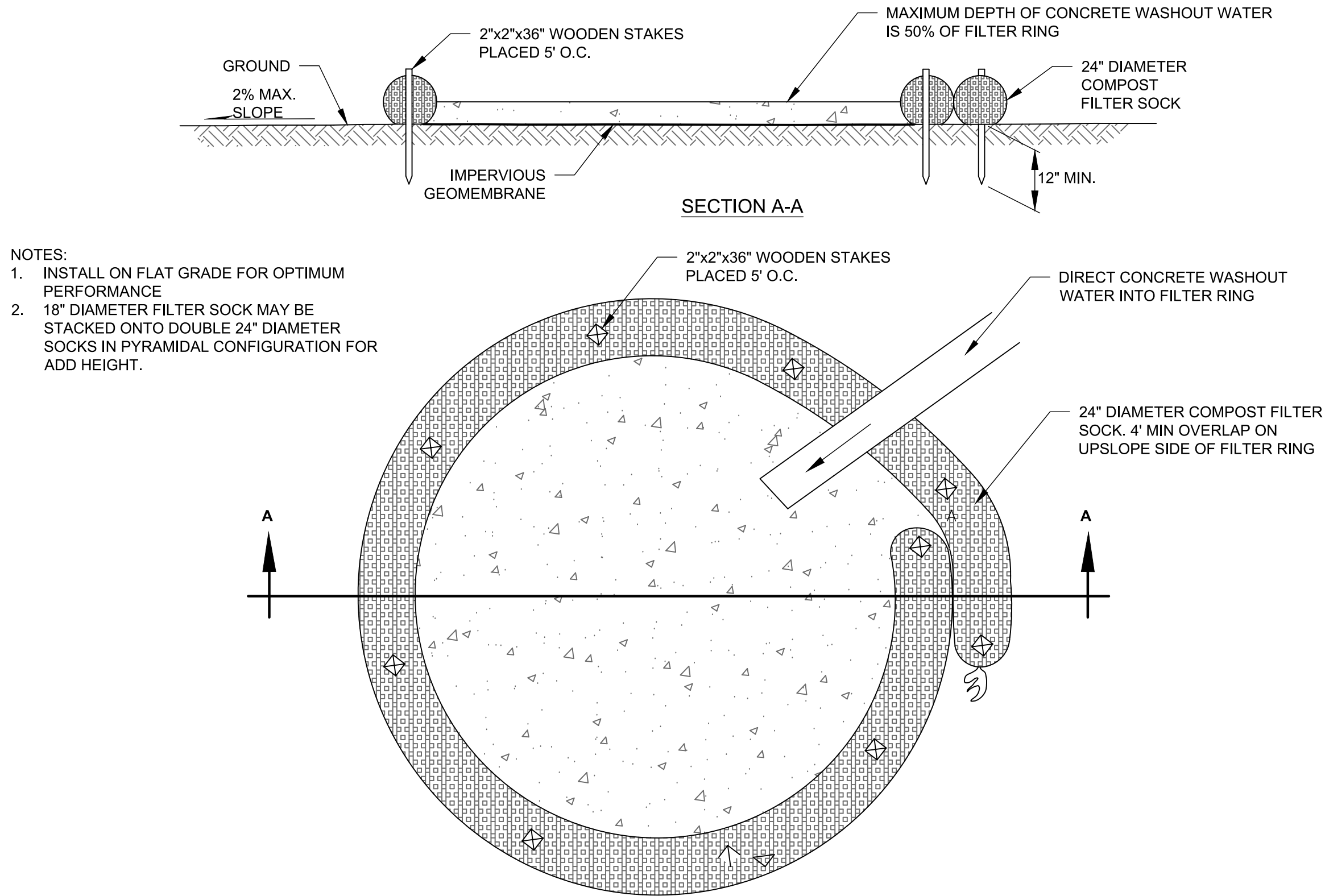
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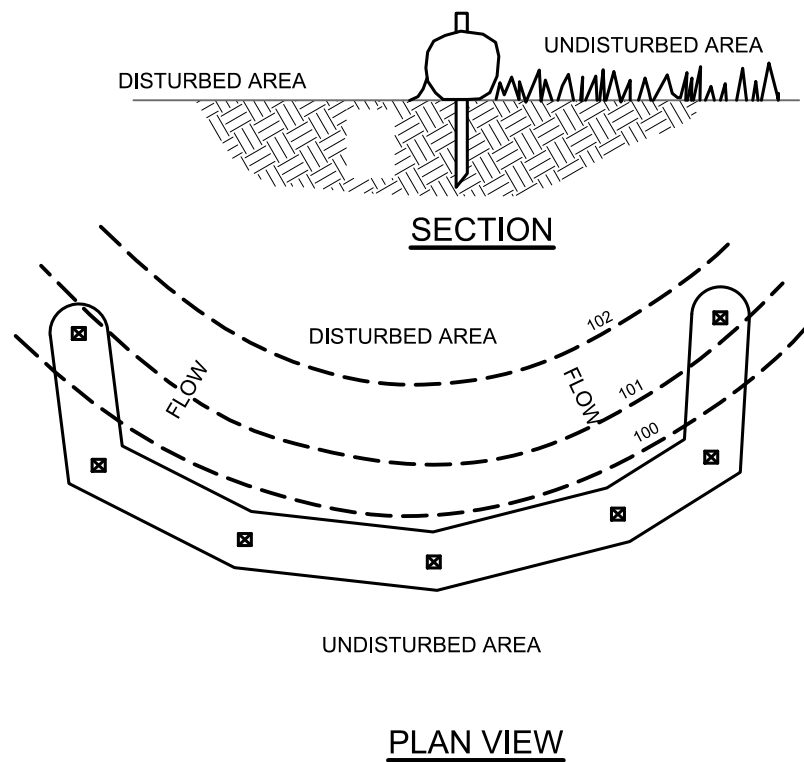
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4 TYPICAL COMPOST SOCK WASHOUT INSTALLATION
NOT TO SCALE



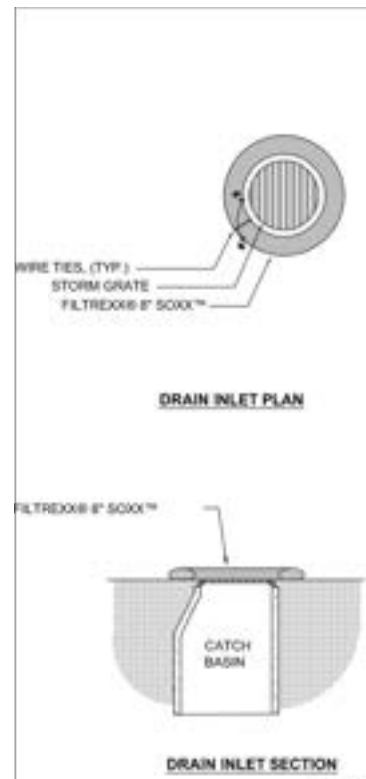
NOTES:
SOCK FABRIC SHALL MEET STANDARDS OF TABLE 4.1 OF THE PA DEP EROSION CONTROL MANUAL. COMPOST SHALL MEET THE STANDARDS OF TABLE 4.2 OF THE PA DEP EROSION CONTROL MANUAL.
COMPOST FILTER SOCK SHALL BE PLACED AT EXISTING LEVEL GRADE. BOTH ENDS OF THE BARRIER SHALL BE EXTENDED AT LEAST 8 FEET UP SLOPE 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 staples, 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 Sox 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)
Material Characteristics	Photo-degradable	Photo-degradable	Bio-degradable	Photo-degradable	Photo-degradable
Sock Diameters	12" 18"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"	12" 18" 24" 32"
Mesh Opening	3/8"	3/8"	3/8"	3/8"	1/8"
Tensile Strength		26 psi	26 psi	44 psi	202 psi
Ultraviolet Stability % Original Strength (ASTM G-155)	23% at 1000 hr.	23% at 1000 hr.		100% at 1000 hr.	100% at 1000 hr.
Minimum Functional Longevity	6 months	9 months	6 months	1 year	2 years

Two-ply systems

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

Sock fabrics composed of burlap may be used on projects lasting 6 months or less.

Filterxx & 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

Filterxx

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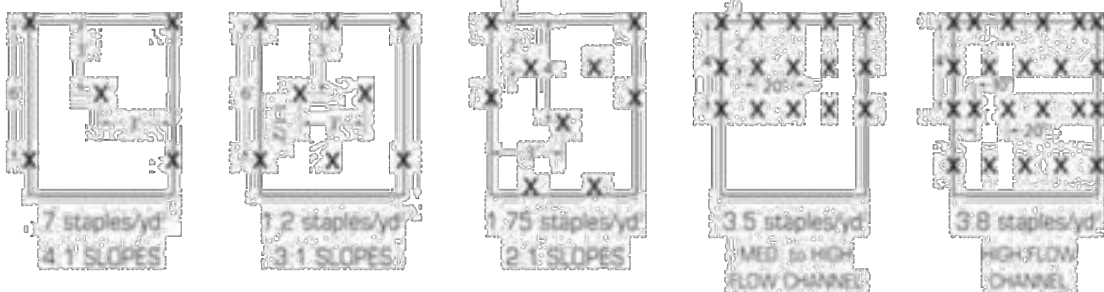
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INSTALLATION

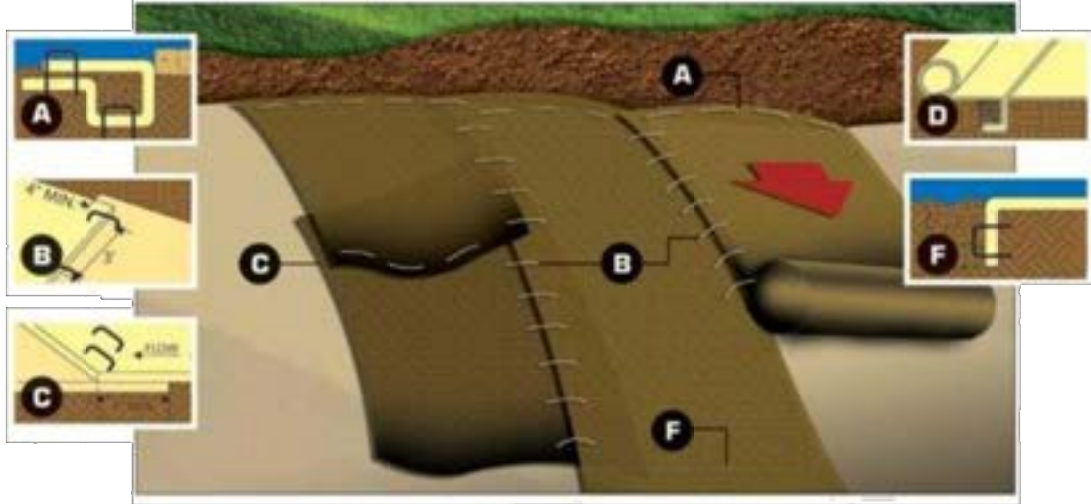
These guidelines are recommendations only. Any questions with the installation should be confirmed with your local distributor.

BASIC INSTALLATION GUIDELINES

1. Prepare the soil surface including raking, seeding, and fertilizing.
2. 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).
3. Roll the blanket vertically down the slope. Secure using the appropriate staple pattern below, specified by slopes.



4. Parallel blankets must be overlapped by a minimum of 4", and secured with a row of staples placed approximately 3'-0" apart (Diagram B).
5. 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).
6. 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).
7. 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

1. Prepare the soil surface including raking, seeding, and fertilizing.
2. 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).
3. 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.
4. 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).
5. 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).
6. 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).
7. 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 yd²). 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:

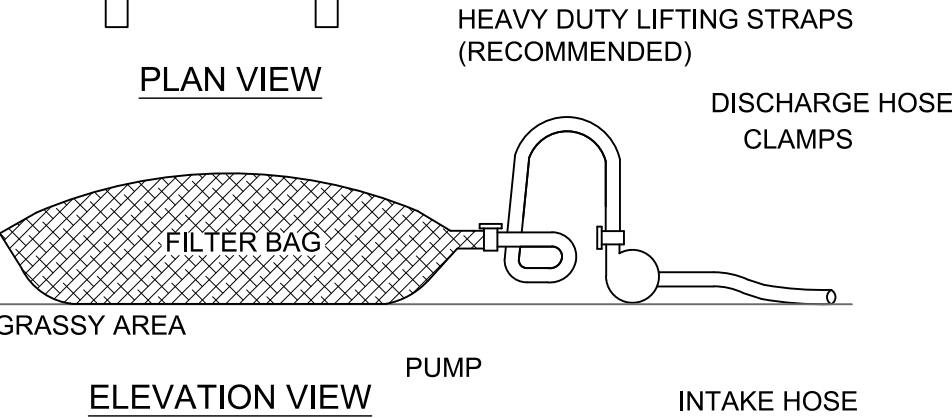
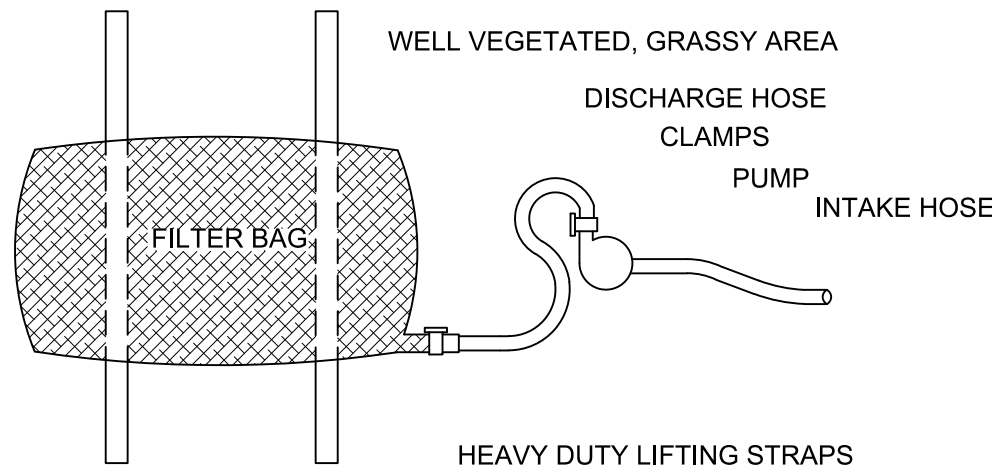
Property	Test Method *	Mean
Thickness	ASTM D 4354	.29 in
Resiliency	ECTC TASC 00197	69.0%
Mass per Unit Area	ASTM D 5261	11.95 oz/sq. yd.
Water Absorption	ASTM D 1117/ECTC TASC 00197	338.0%
Swell	ECTC TASC 00197	32%
Stiffness	ASTM D 1388/ECTC	.96 oz/in (10,901 mg-cm)
Light Penetration	ECTC TASC 00197	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

*All figures are based on Bench Scale test methods

2.1 psf



8

PUMPED WATER FILTER BAG

NOT TO SCALE

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.

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 100-200-200 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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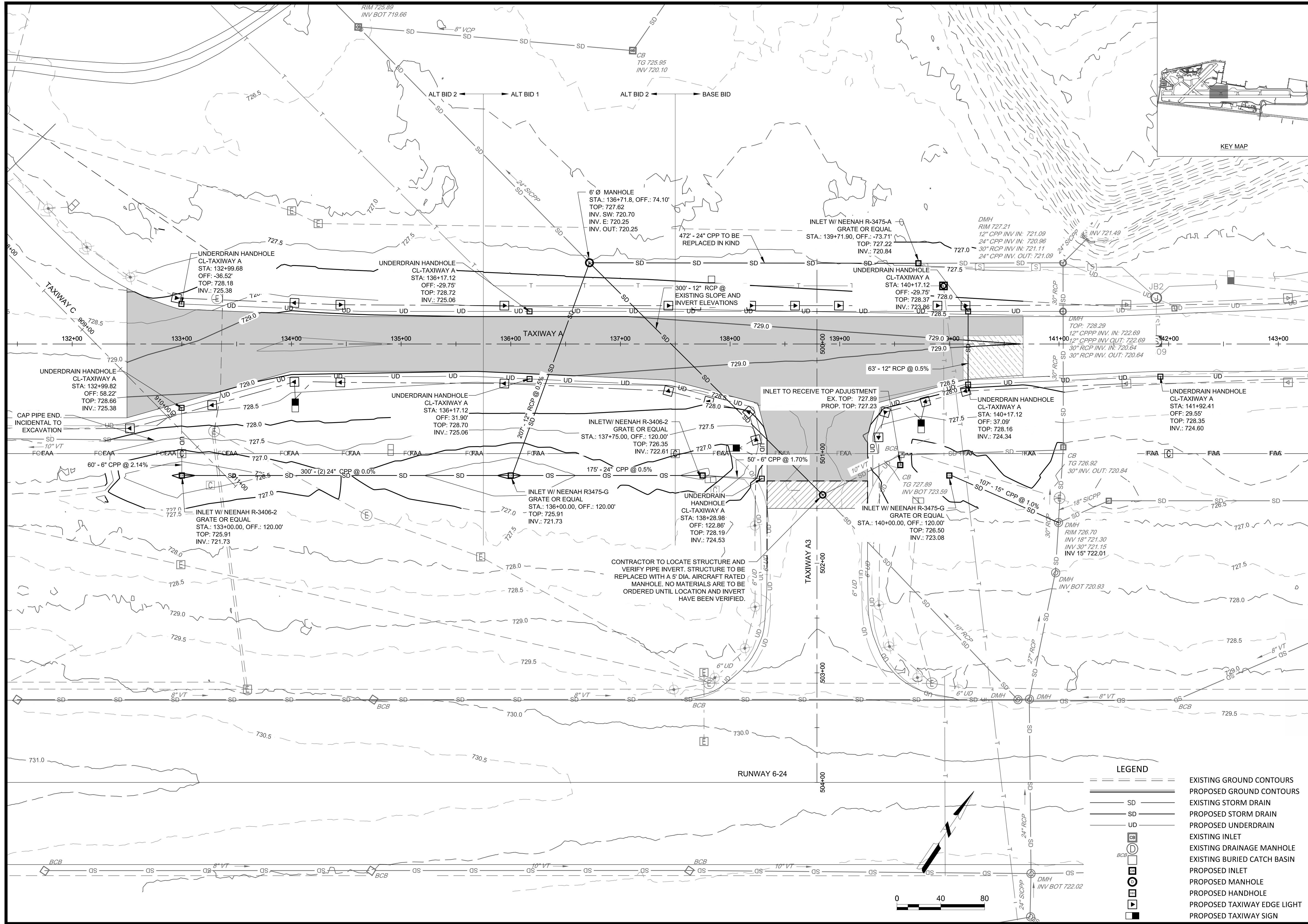
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ERIE INTERNATIONAL AIRPORT REALIGNMENT & RECONSTRUCTION OF TAXIWAY A - PHASE 2

4411 WEST 12TH STREET
ERIE, PENNSYLVANIA

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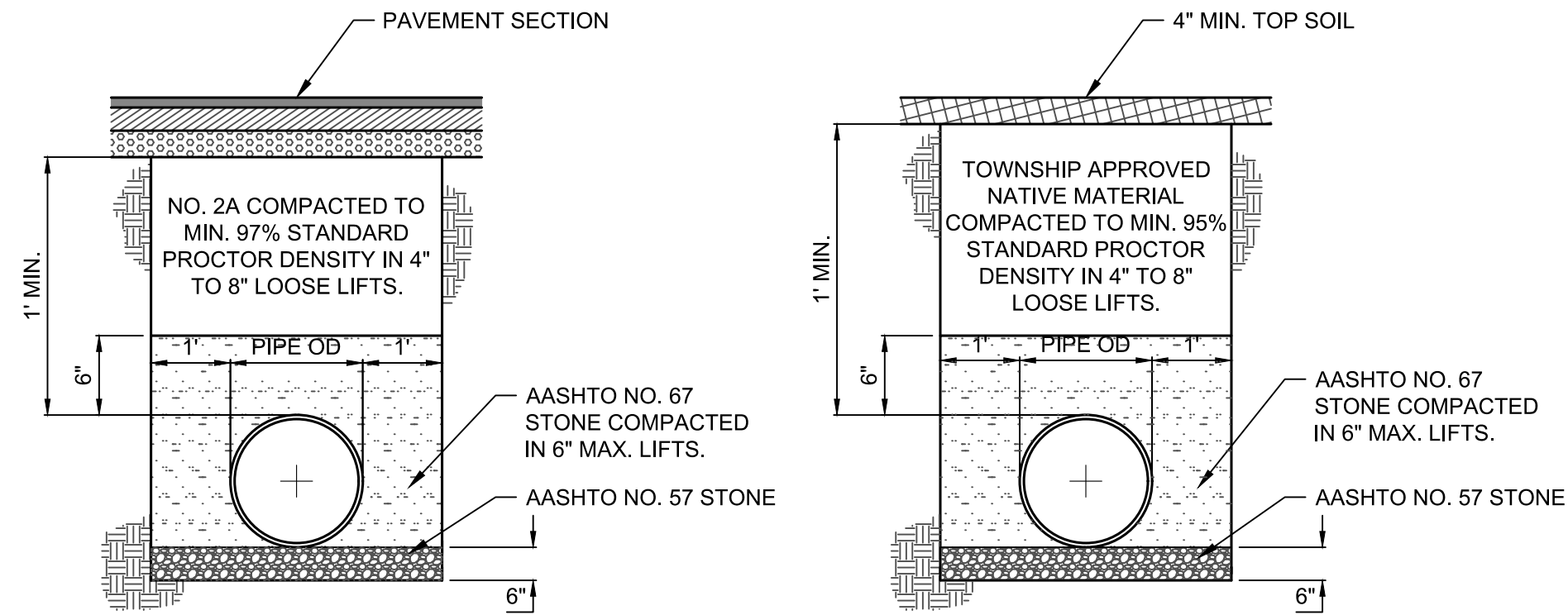
APP NO.:	3-42-030-XXX-2023
M&H NO.:	3225600-192499.03
DATE:	04/27/2023
DESIGNED BY:	RCL
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SHEET CONTENTS

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

SHEET NO. 21 of 26

C-451



**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"

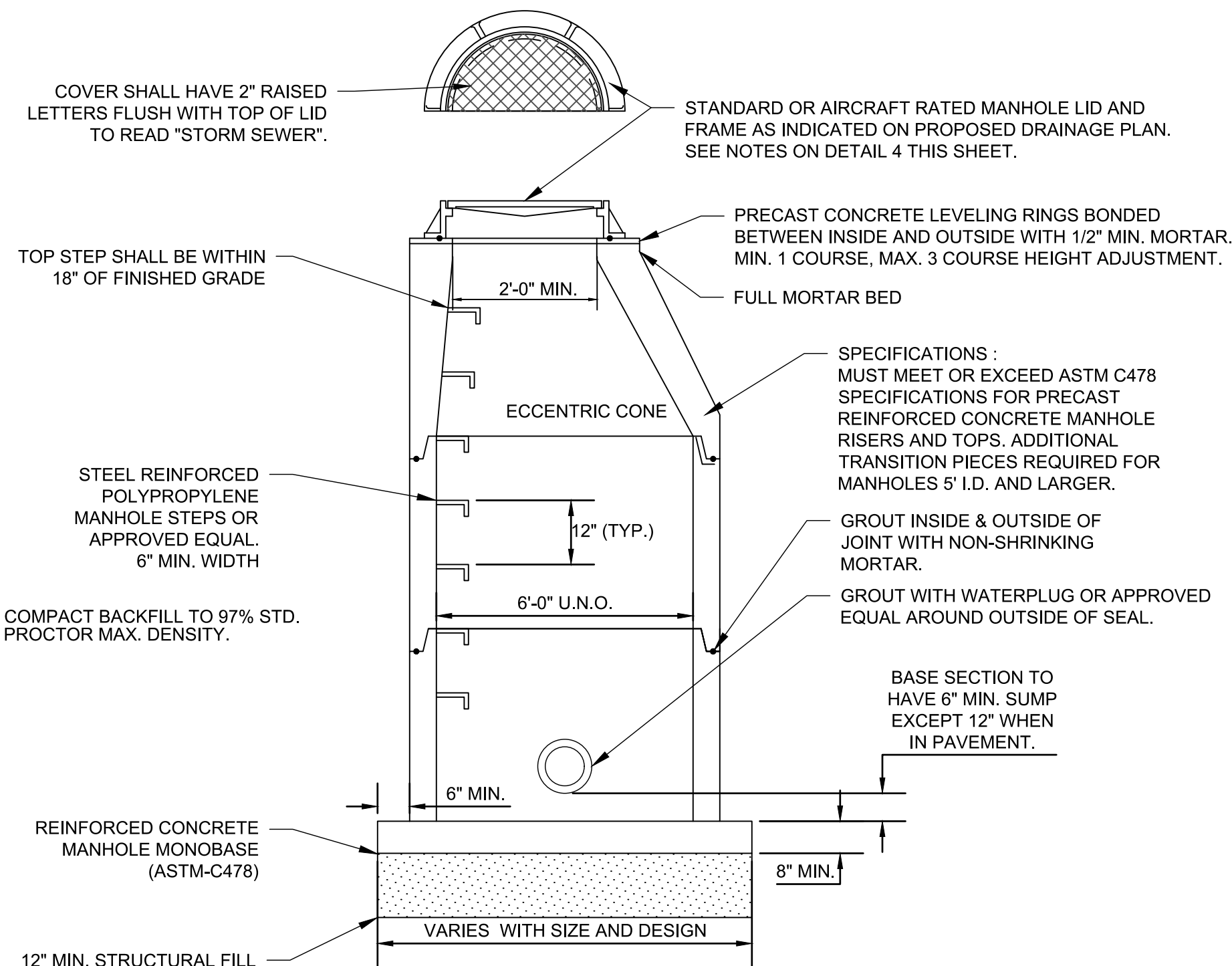
* O.D. MAY VARY DEPENDING ON PIPE MANUFACTURER

NOTES:

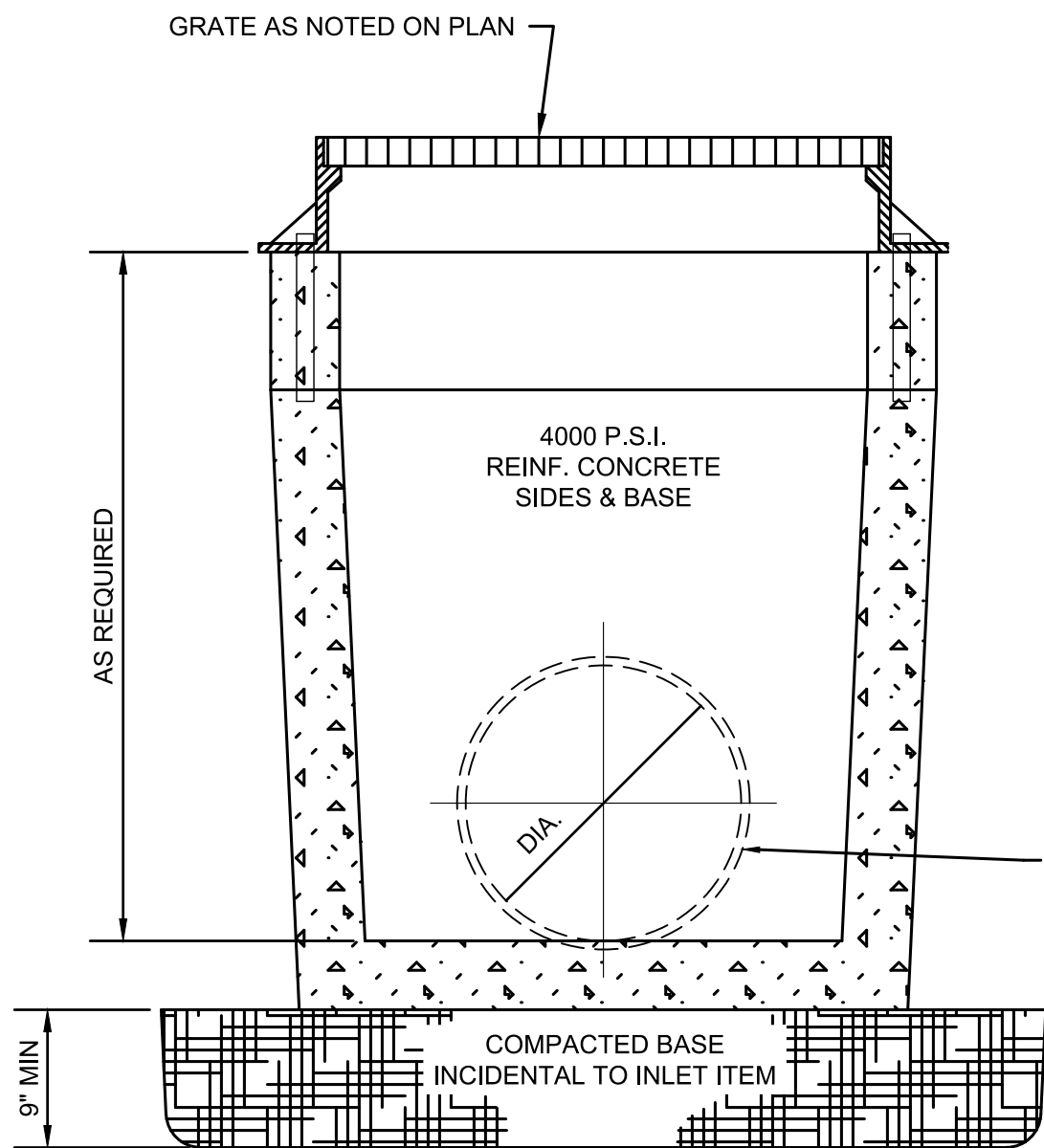
- TRENCH WALLS SHALL BE COMPLETELY VERTICAL TO A DEPTH AT LEAST 12" ABOVE TOP OF PIPE. SHORING REQUIRED FOR ALL TRENCHES IN ACCORDANCE WITH APPLICABLE REGULATIONS, LAWS AND SAFETY CODES.
- REFER TO FAA SPECIFICATION D-701, THE TOWNSHIP'S, MANUFACTURER'S AND ASTM D2321 SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- 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.

1 TYPICAL PIPE TRENCH DETAILS

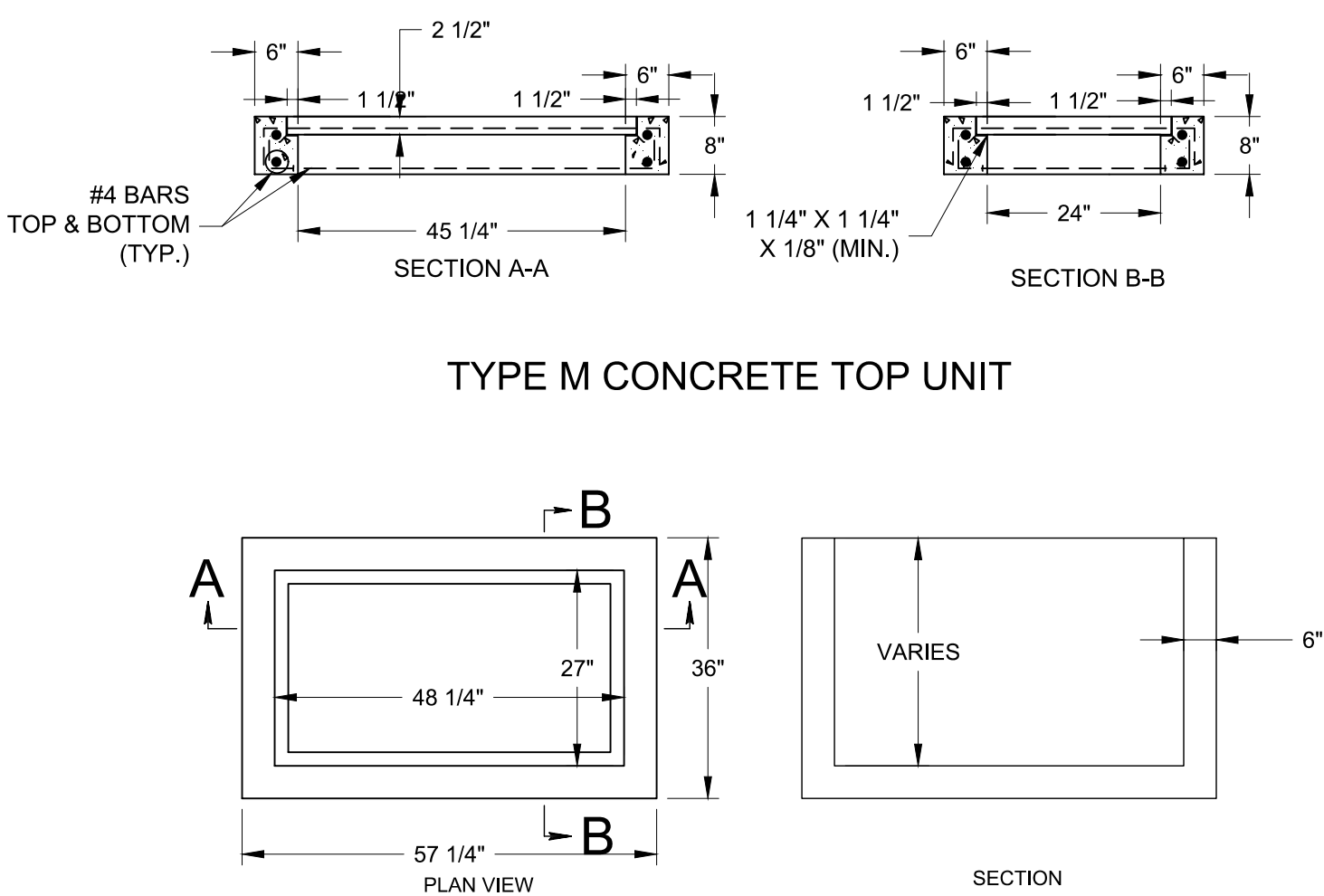
SCALE: 1/2" = 1'-0"



**2 PRECAST MANHOLE
NOT TO SCALE**

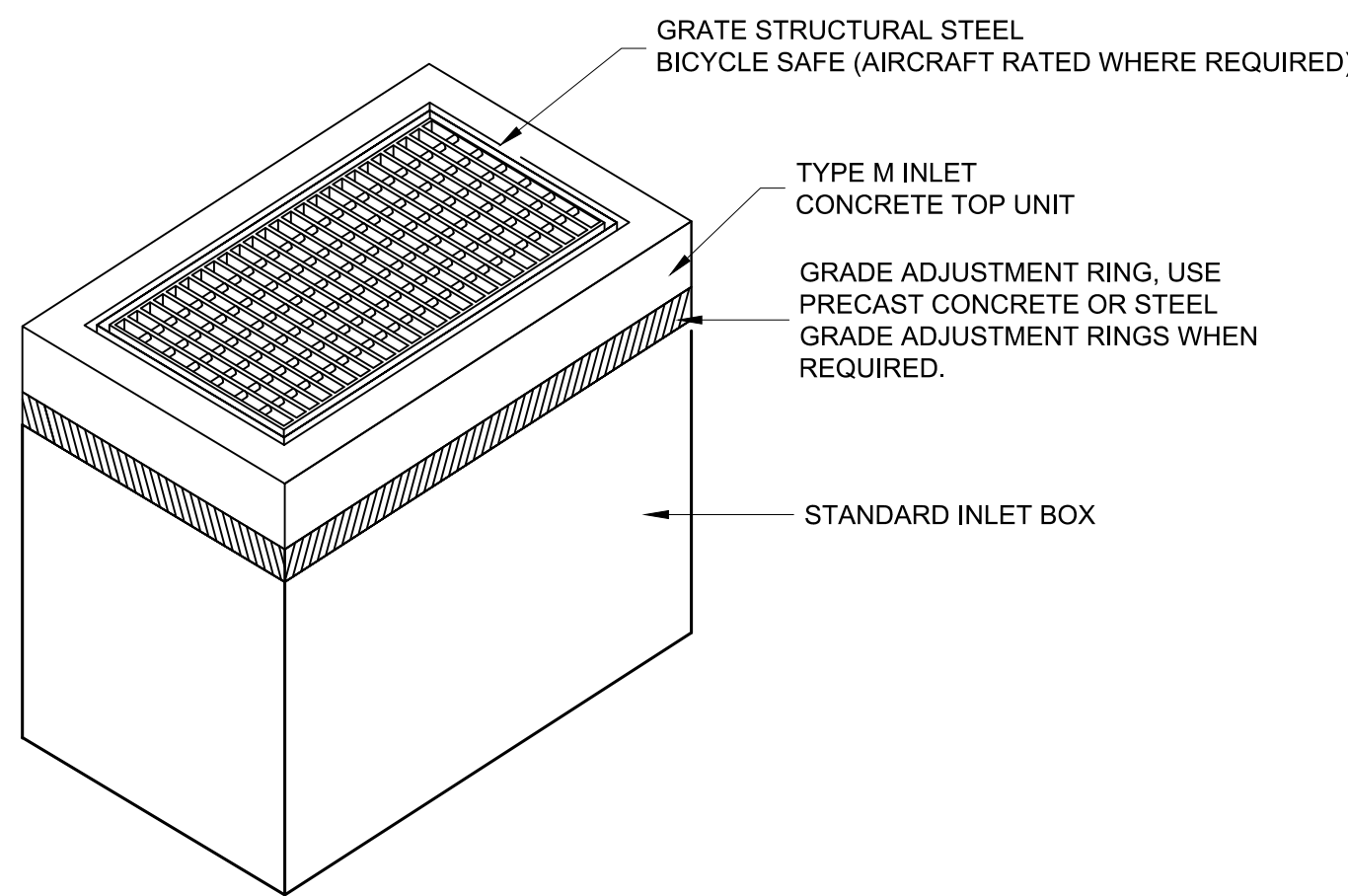


**4 PRECAST INLET (NON STANDARD)
NOT TO SCALE**



TYPE M CONCRETE TOP UNIT

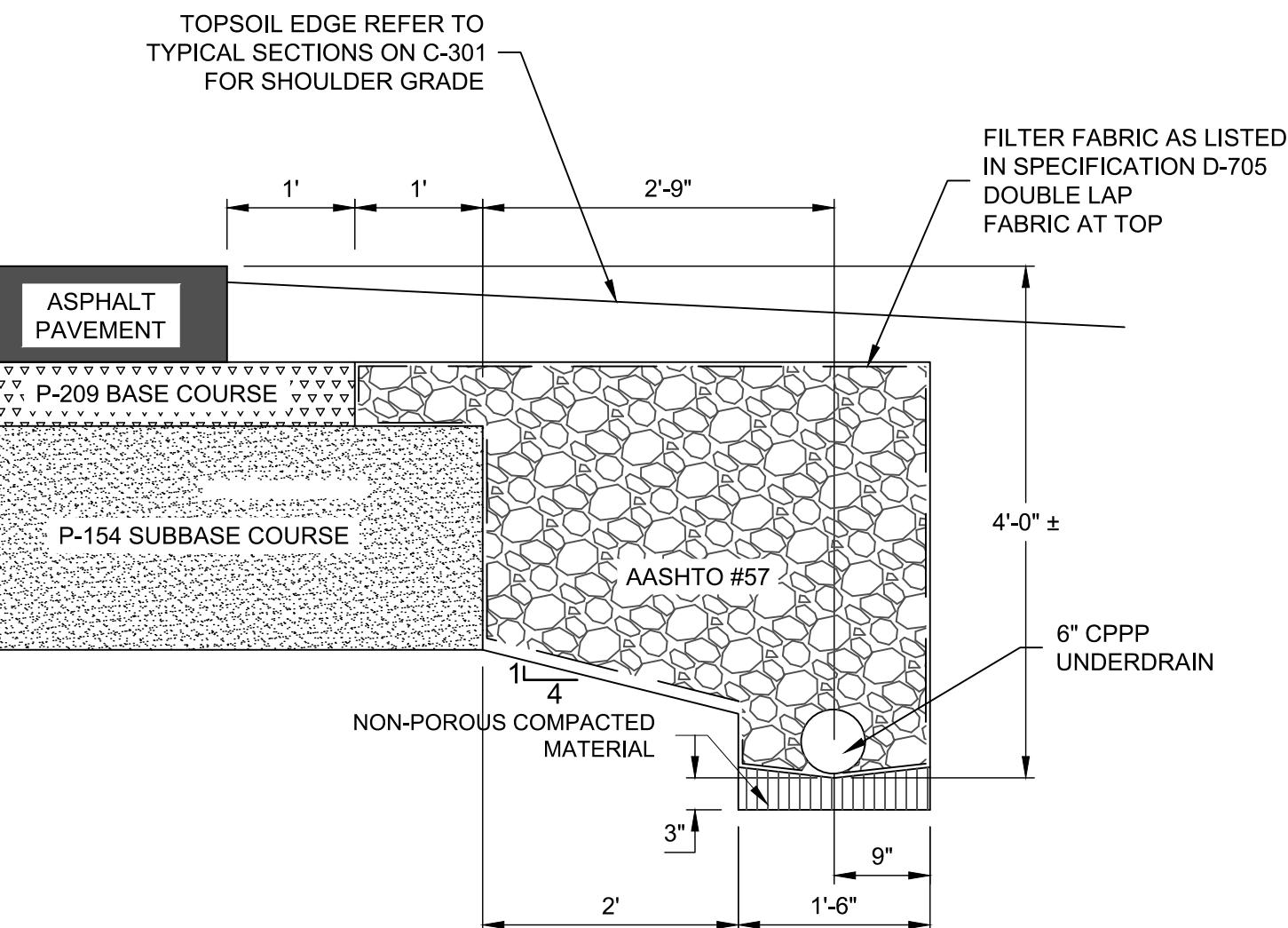
STANDARD INLET BOX



**3 STANDARD INLET BOX WITH TYPE M TOP
NOT TO SCALE**

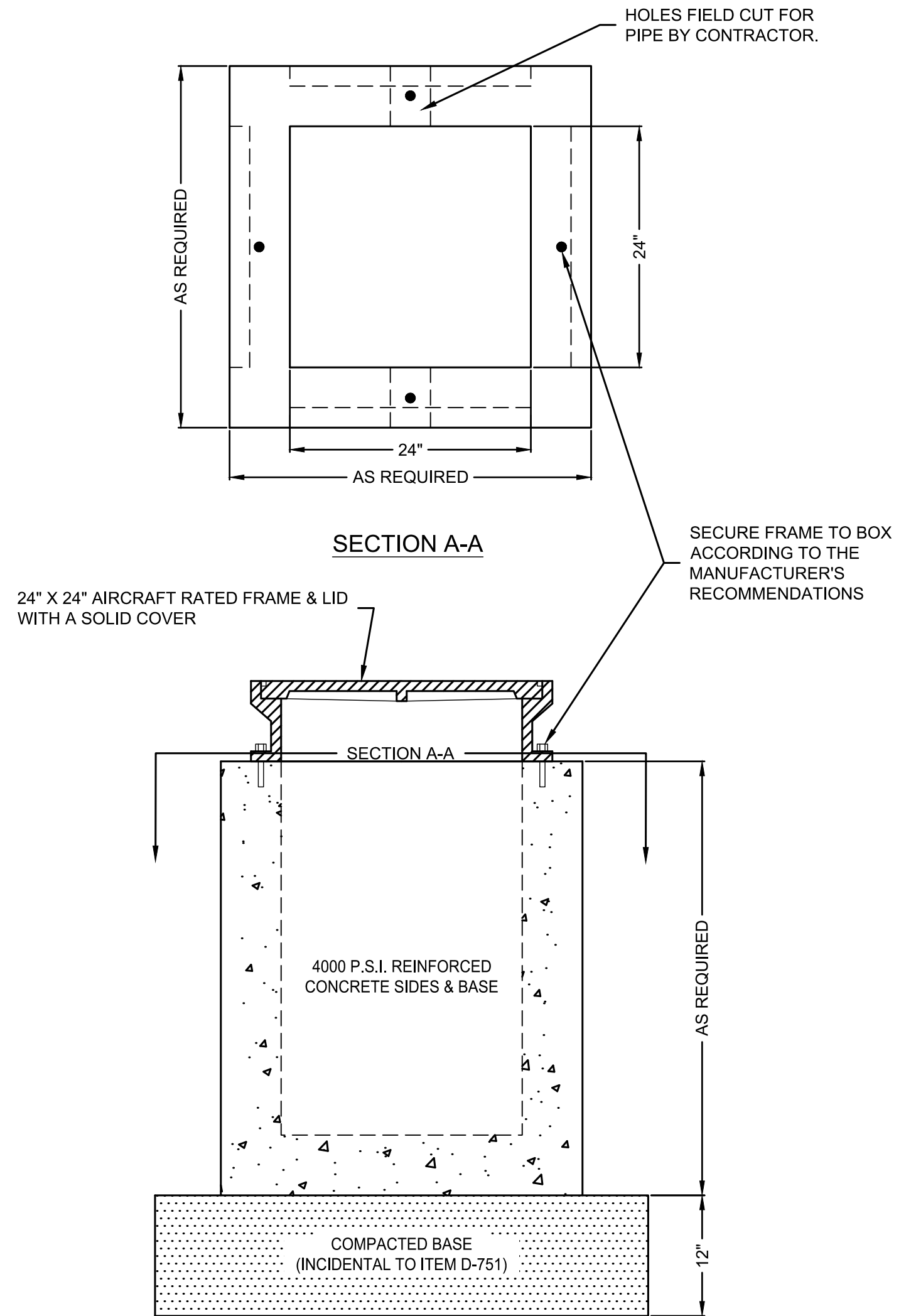
NOTES:

- 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.



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

**6 TAXIWAY UNDERDRAIN 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.

**5 UNDERDRAIN HANDHOLE DETAIL
NOT TO SCALE**

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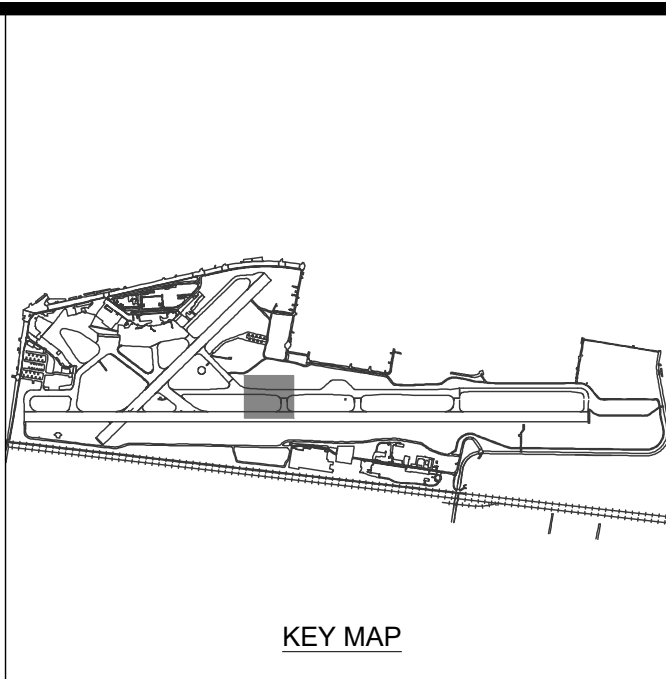
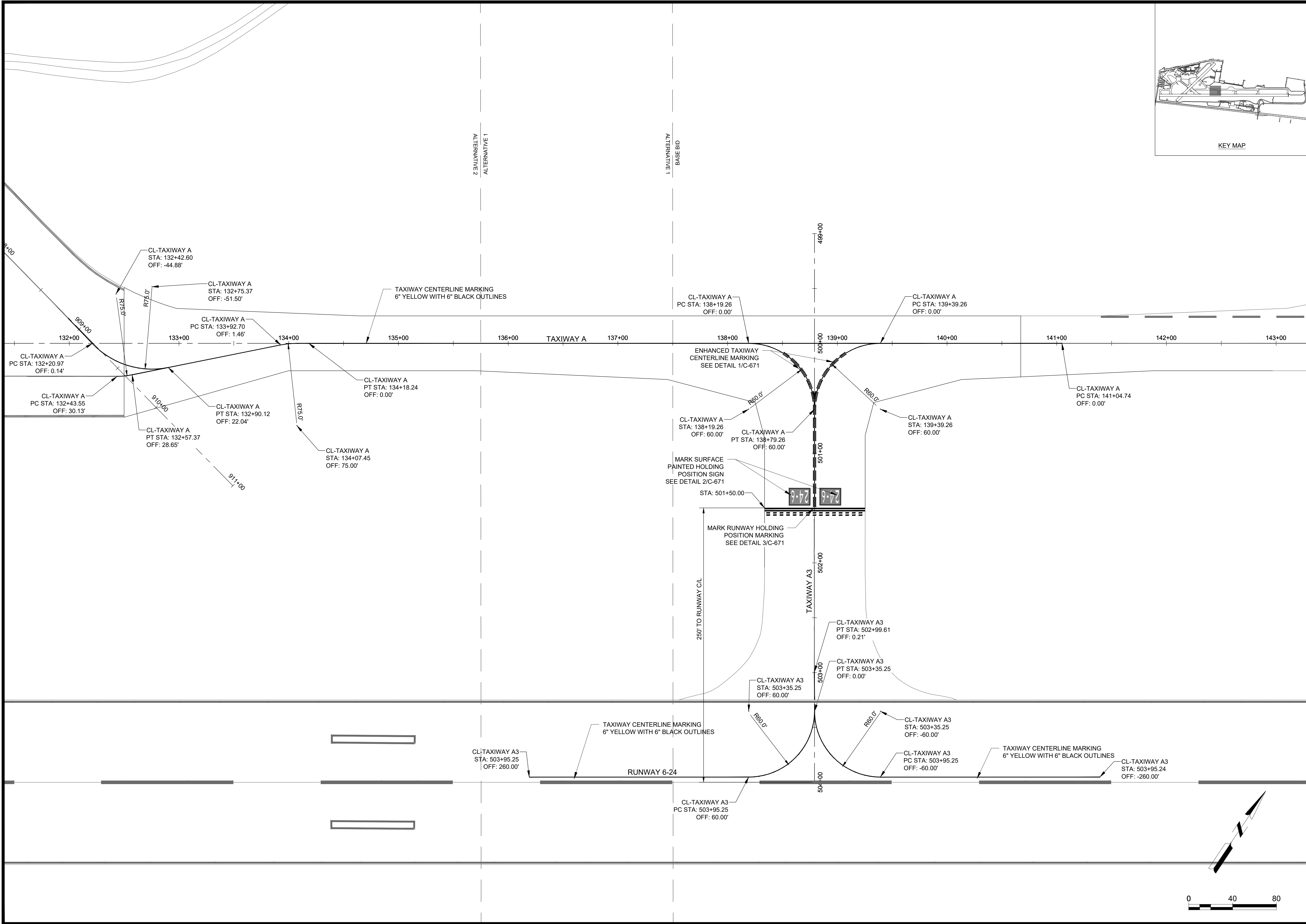


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SHEET CONTENTS
DRAINAGE DETAILS

SHEET NO. 22 of 26

X:\3225600\192499.03\TECH\DRAWINGS\C-651 PAVEMENT MARKING PLANDWG
4/27/2023 2:00:10 PM



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4411 WEST 12TH STREET
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SHEET CONTENTS
PAVEMENT MARKING
PLAN

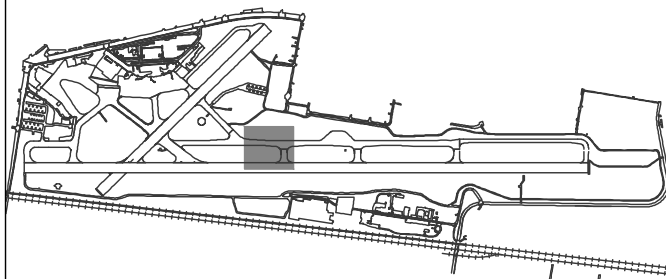
SHEET NO. 23 of 26

C-651



- 2 SURFACE PAINTED HOLDING POSITION SIGN**
NOT TO SCALE

C-67



KEY MAP

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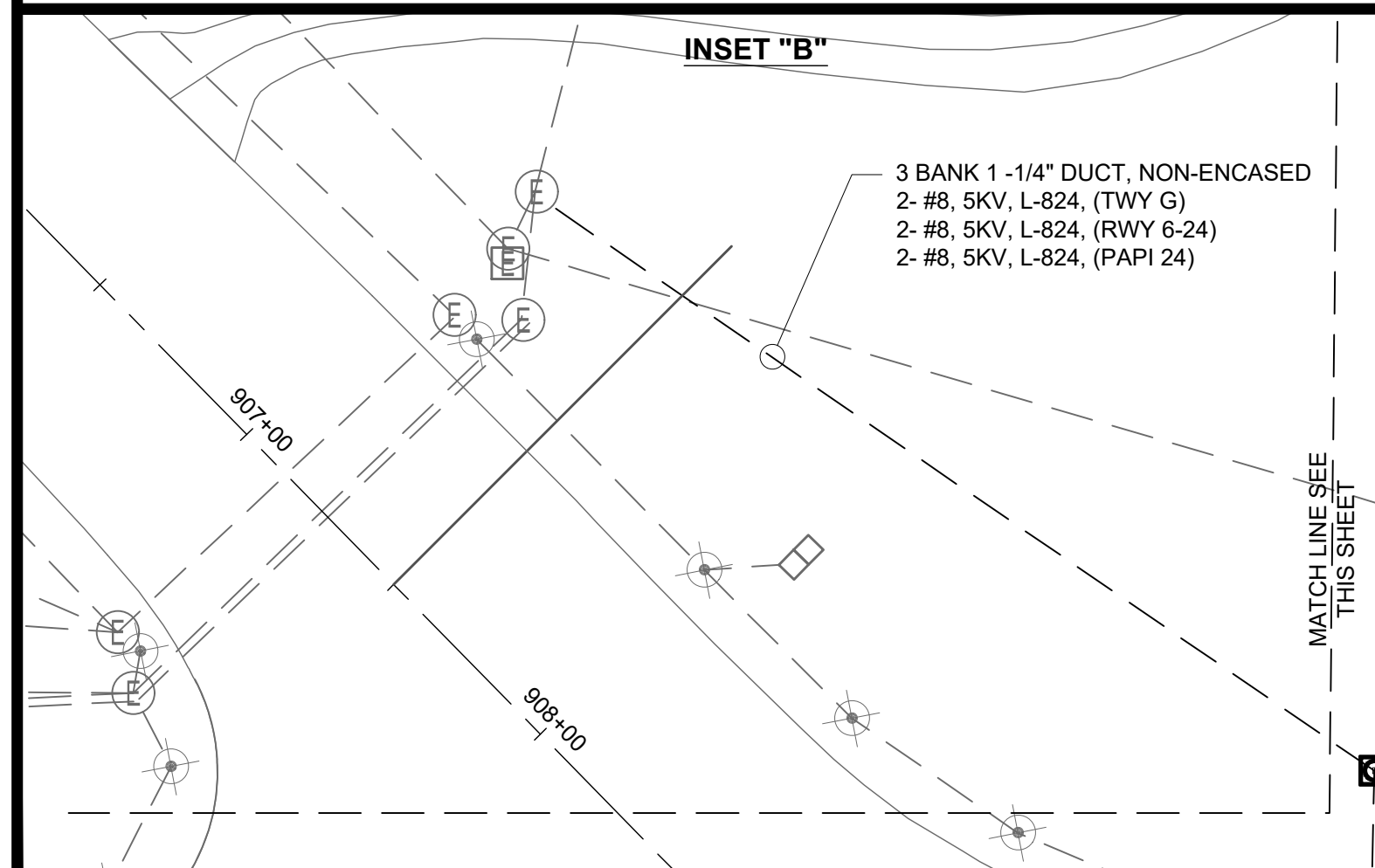
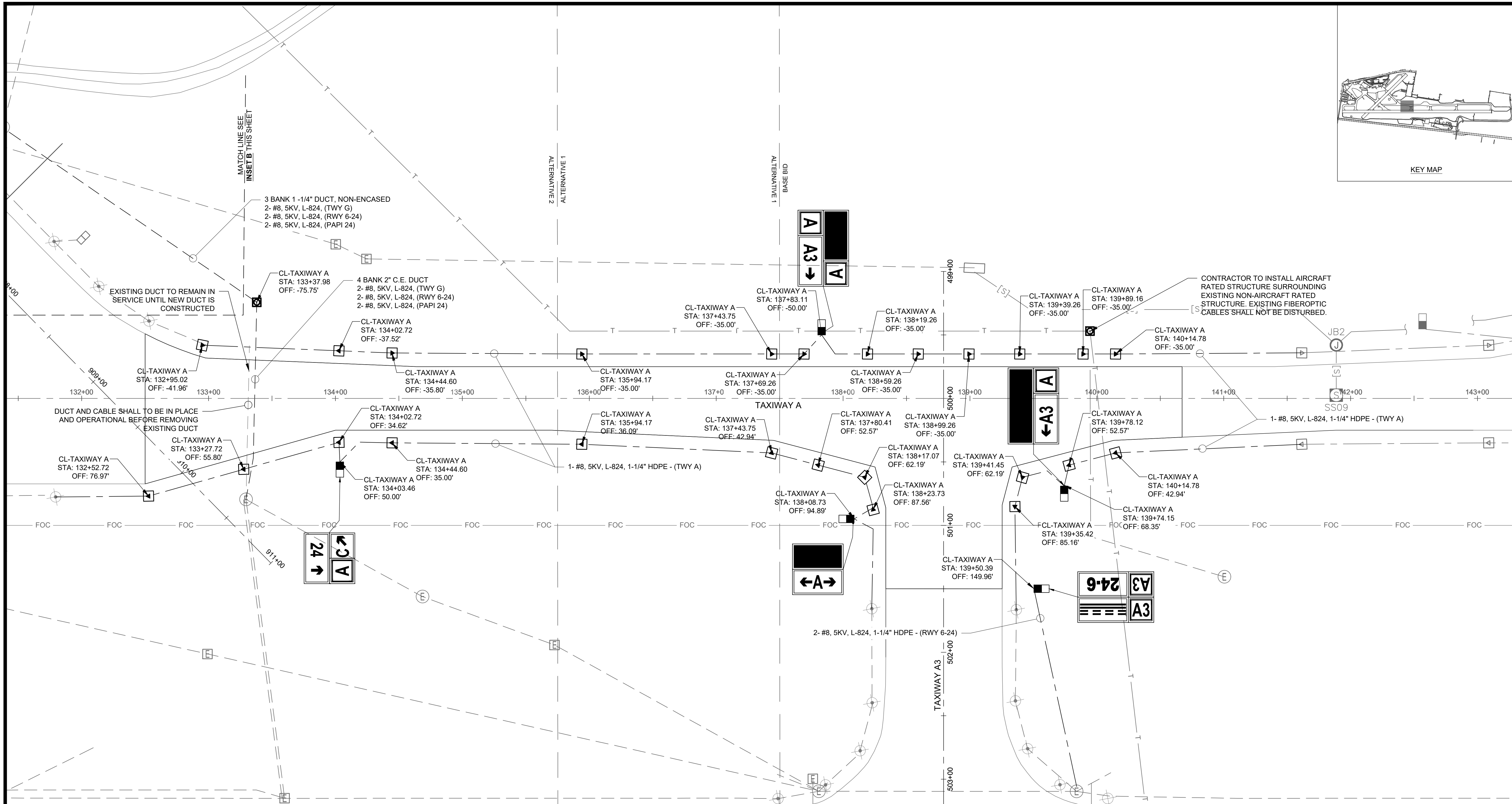


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MSH NO.: 3225600-192499.03
DATE: 04/27/2023
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SHEET CONTENTS
ELECTRICAL PLAN

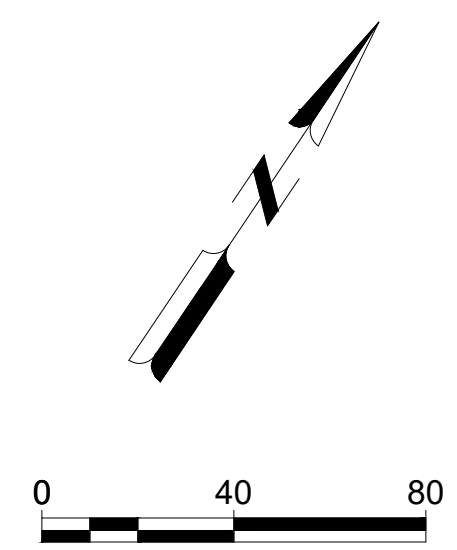
SHEET NO. 25 of 26

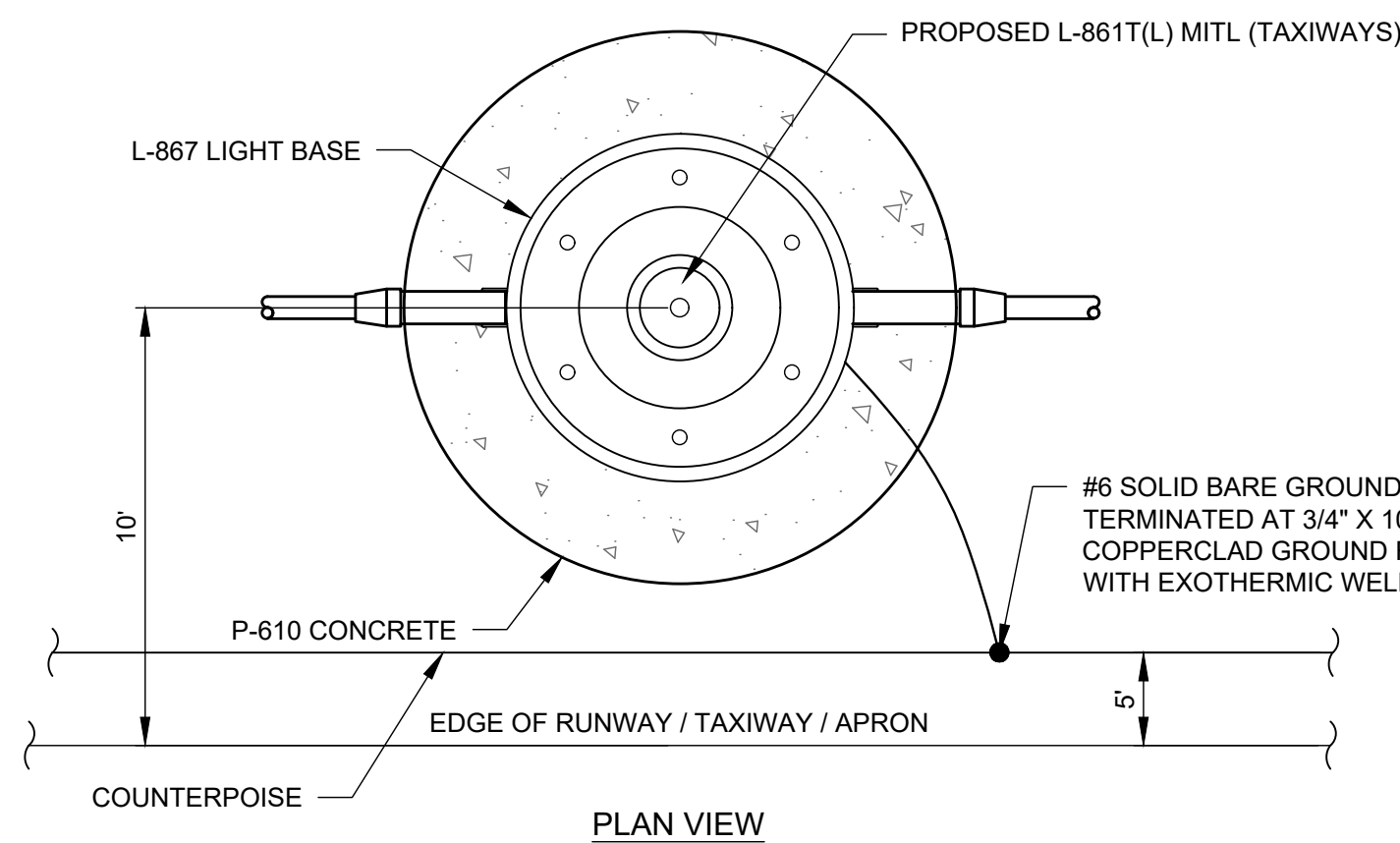
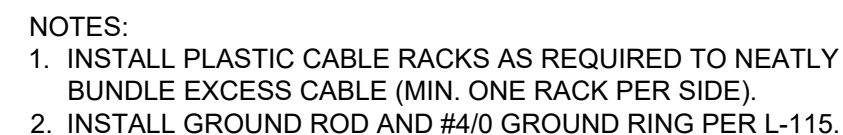
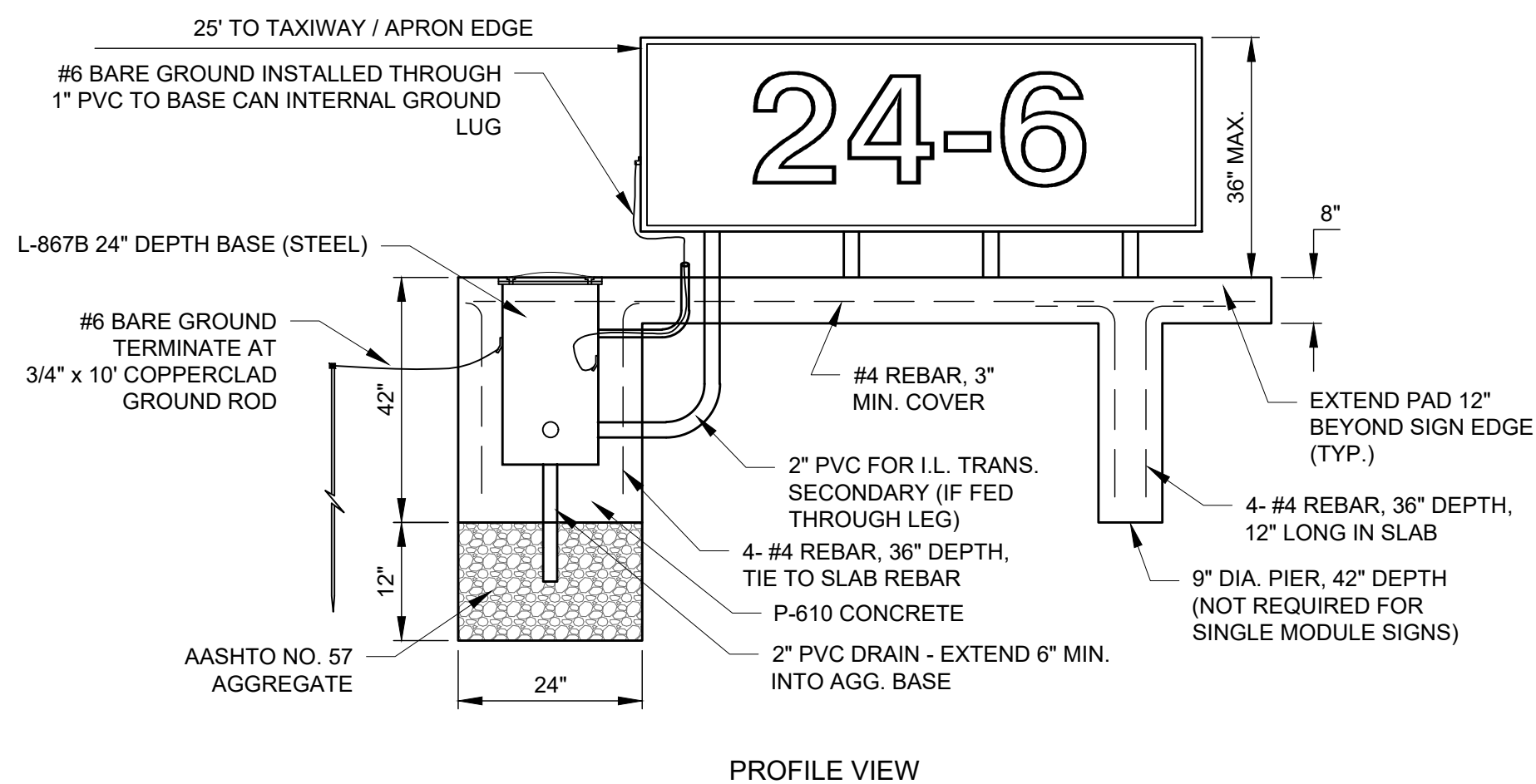
E-201



LEGEND	
	PROPOSED ELECTRICAL MANHOLE
	EXISTING ELECTRICAL MANHOLE
	EXISTING ELECTRICAL JUNCTION STRUCTURE
	PROPOSED ELEVATED MITL / MRL (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:**
- #8 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.
 - EXISTING GUIDANCE SIGNS SHALL BE RE-USED. SEE L-125 APPENDIX FOR SIGN PANEL RECONFIGURATIONS.





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

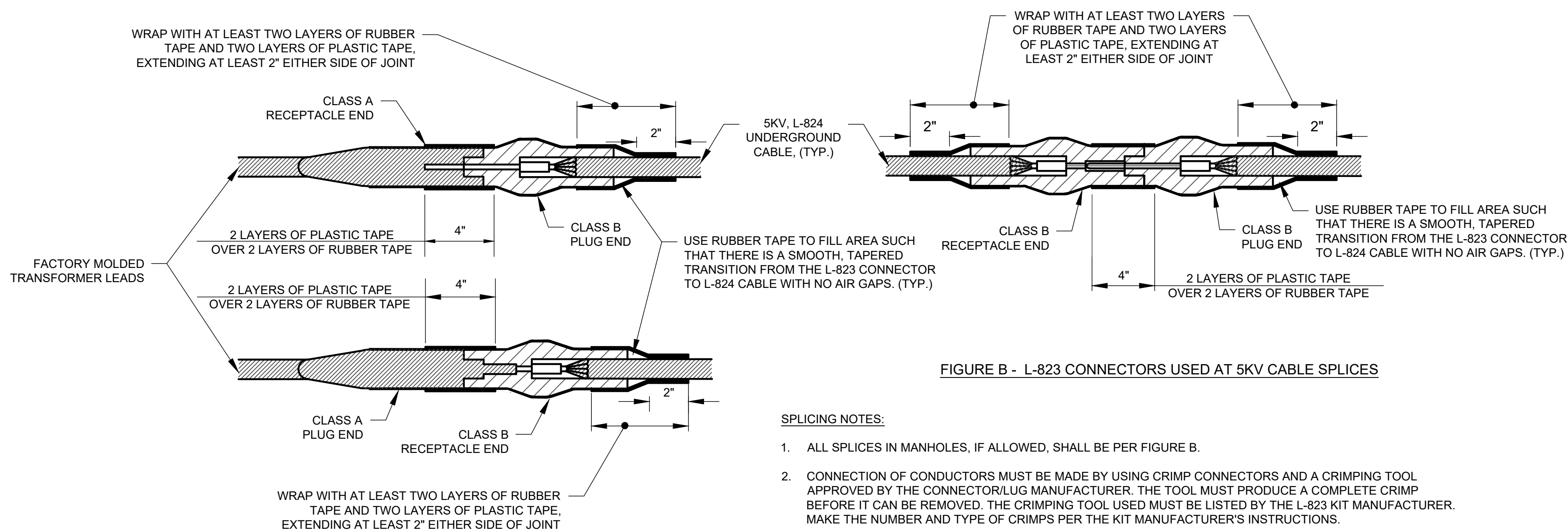


FIGURE B - L-823 CONNECTORS USED AT 5KV CABLE SPLICES

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

