

ANNE ARUNDEL COUNTY
MARYLAND

DEPARTMENT OF PUBLIC WORKS

CHAPTER III

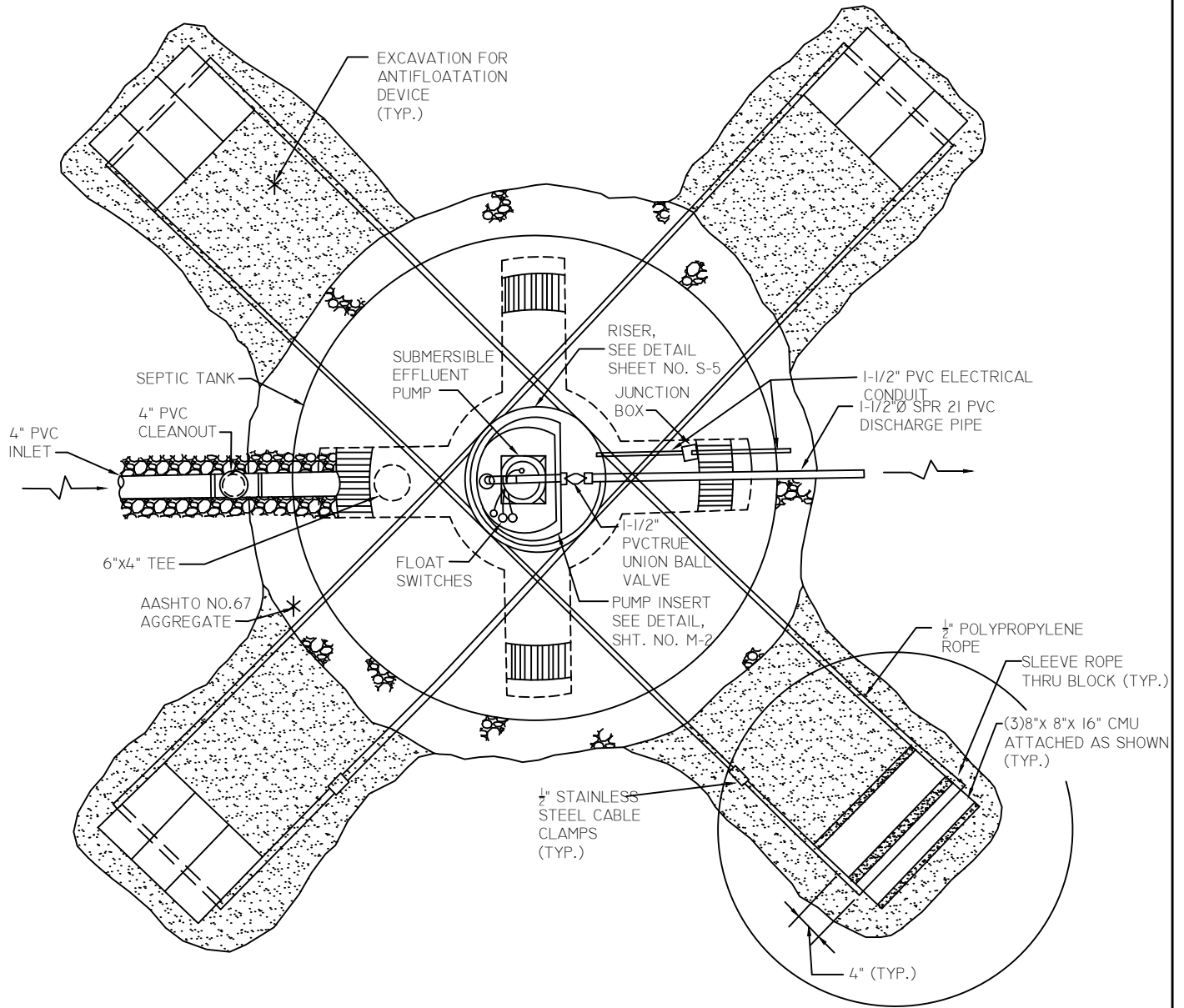
REFERENCE DRAWINGS for CONCRETE AND ROMAR STEP AND GRAVITY SEPTIC TANK INSTALLATIONS

April 2024

**REFERENCE DRAWINGS FOR
CONCRETE AND ROMAR STEP AND GRAVITY
SEPTIC TANK INSTALLATIONS**

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14. Pump Insert Detail	SS-M-2



NOTES:
 SEE SECTION 11745 STEP & GRAVITY TANK SYSTEM FOR MATERIAL AND INSTALLATION REQUIREMENTS.

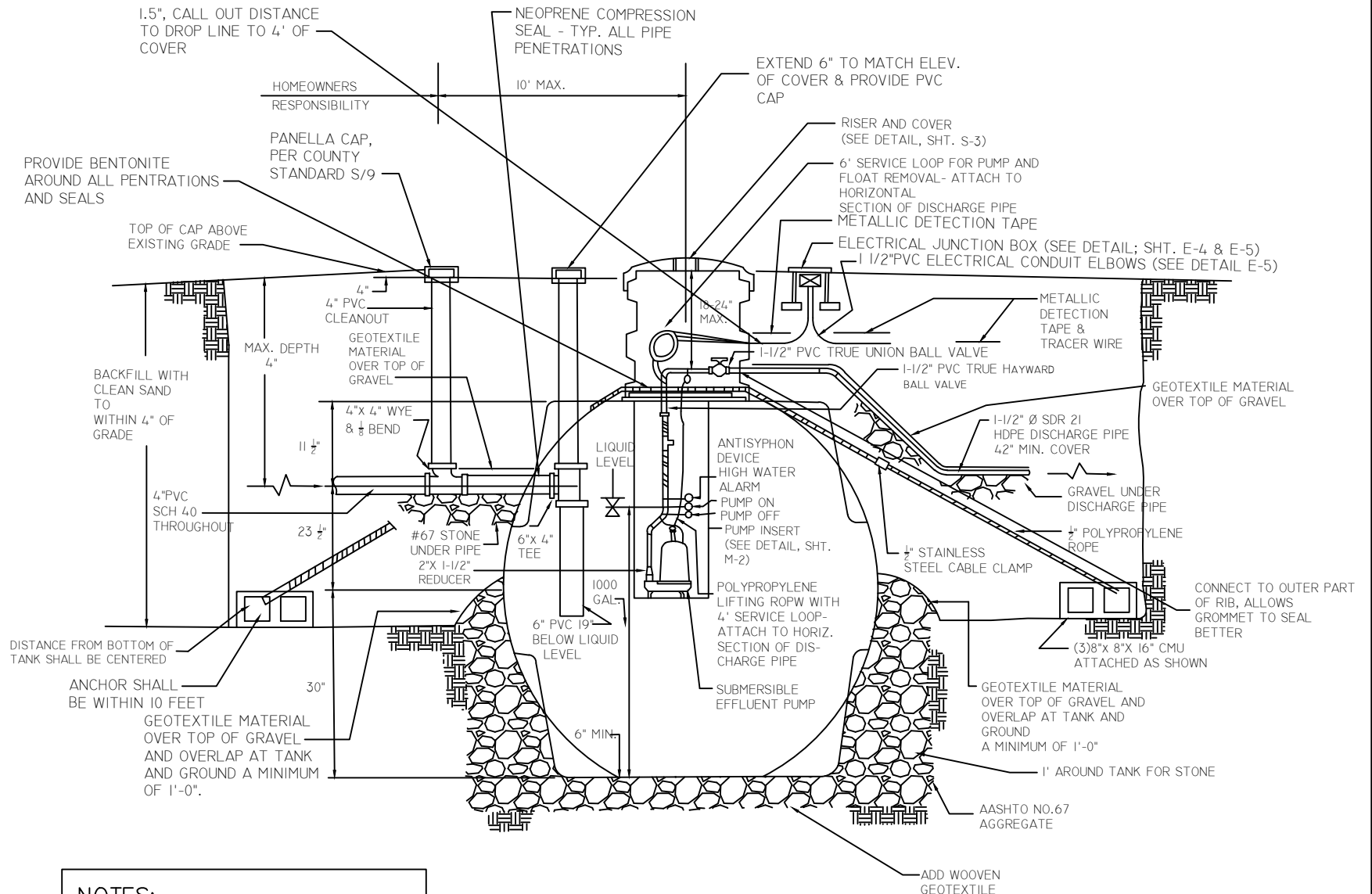
ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED _____ CHIEF ENGINEER	REFERENCE STEP & GRAVITY SEPTIC TANK DESIGN PLAN - HDPE STEP SEPTIC TANK SEVERE DUTY, PRESSURE INSTALLATION	REVISED 04/2024	SS S-1a
	_____ DESIGN ENGINEER		_____	
	DATE:		_____	
	_____		_____	

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS

APPROVED
 CHIEF ENGINEER
 DESIGN ENGINEER

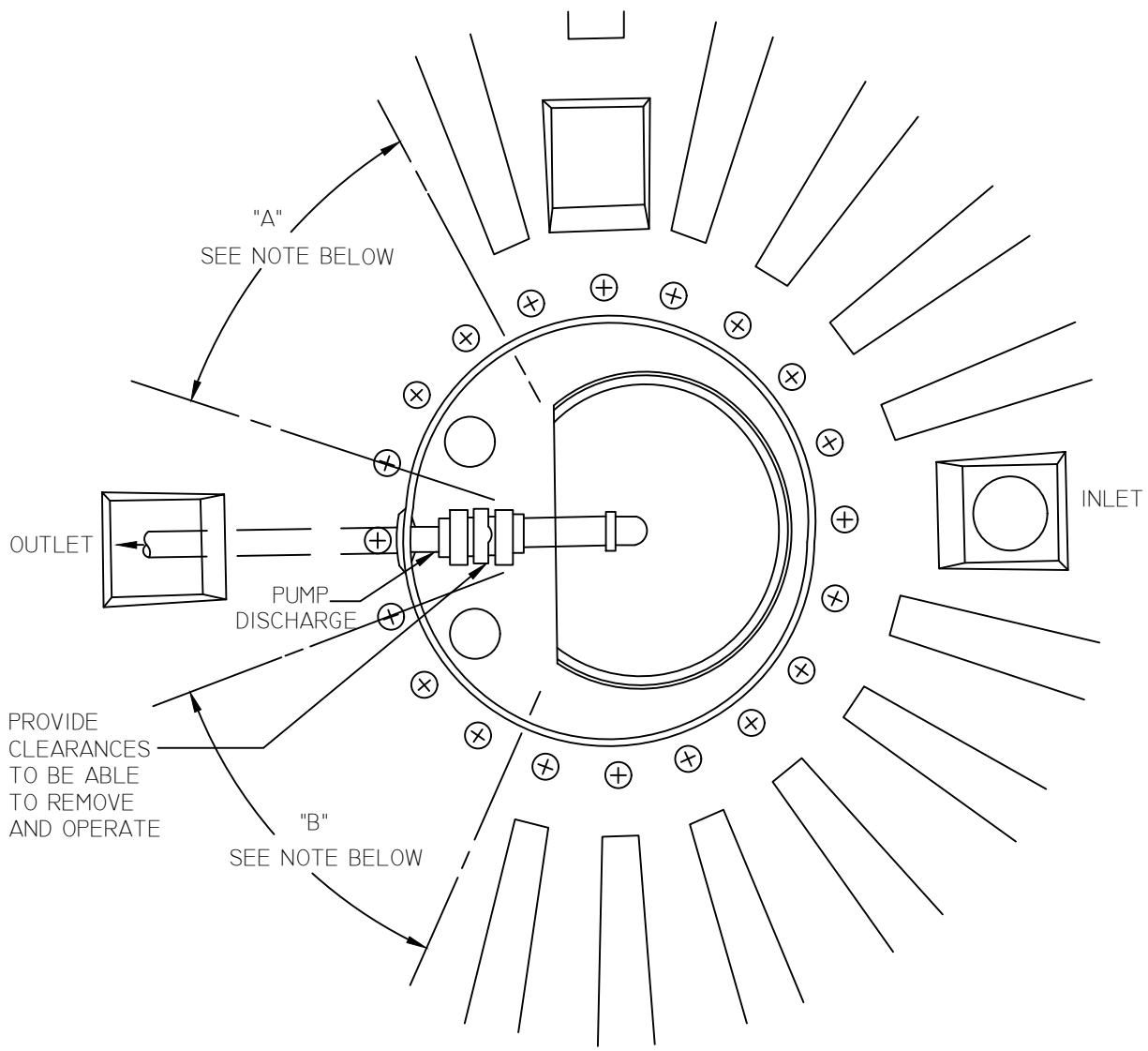
REFERENCE STEP & GRAVITY SEPTIC TANK DESIGN
 SECTION - HDPE STEP SEPTIC TANK SEVERE DUTY, PRESSURE INSTALLATION

REVISED
 04/2024
 SS
 S-1b



NOTES:
 SEE SECTION 11745 STEP & GRAVITY TANK SYSTEM FOR MATERIAL AND INSTALLATION REQUIREMENTS.

NOTES:
 PROVIDE TRACER WIRE BETWEEN TANK & R/W
 PROVIDE BALL VALVE



PROVIDE CLEARANCES TO BE ABLE TO REMOVE AND OPERATE

NOTE: RISER CONDUIT PENETRATION FOR PUMP POWER AND FLOATS SHALL FALL WITHIN EITHER AREA "A" OR "B" IN ORDER TO AVOID INTERFERENCE WITH THE PUMP DISCHARGE PIPE AND TO PREVENT INTERFERENCE WITH PUMP DISCHARGE REMOVAL.

NOTE:
SEE SECTION 11745 STEP & GRAVITY TANK SYSTEM FOR MATERIAL AND INSTALLATION REQUIREMENTS.

ANNE ARUNDEL COUNTY
DEPARTMENT OF PUBLIC WORKS

APPROVED

CHIEF ENGINEER

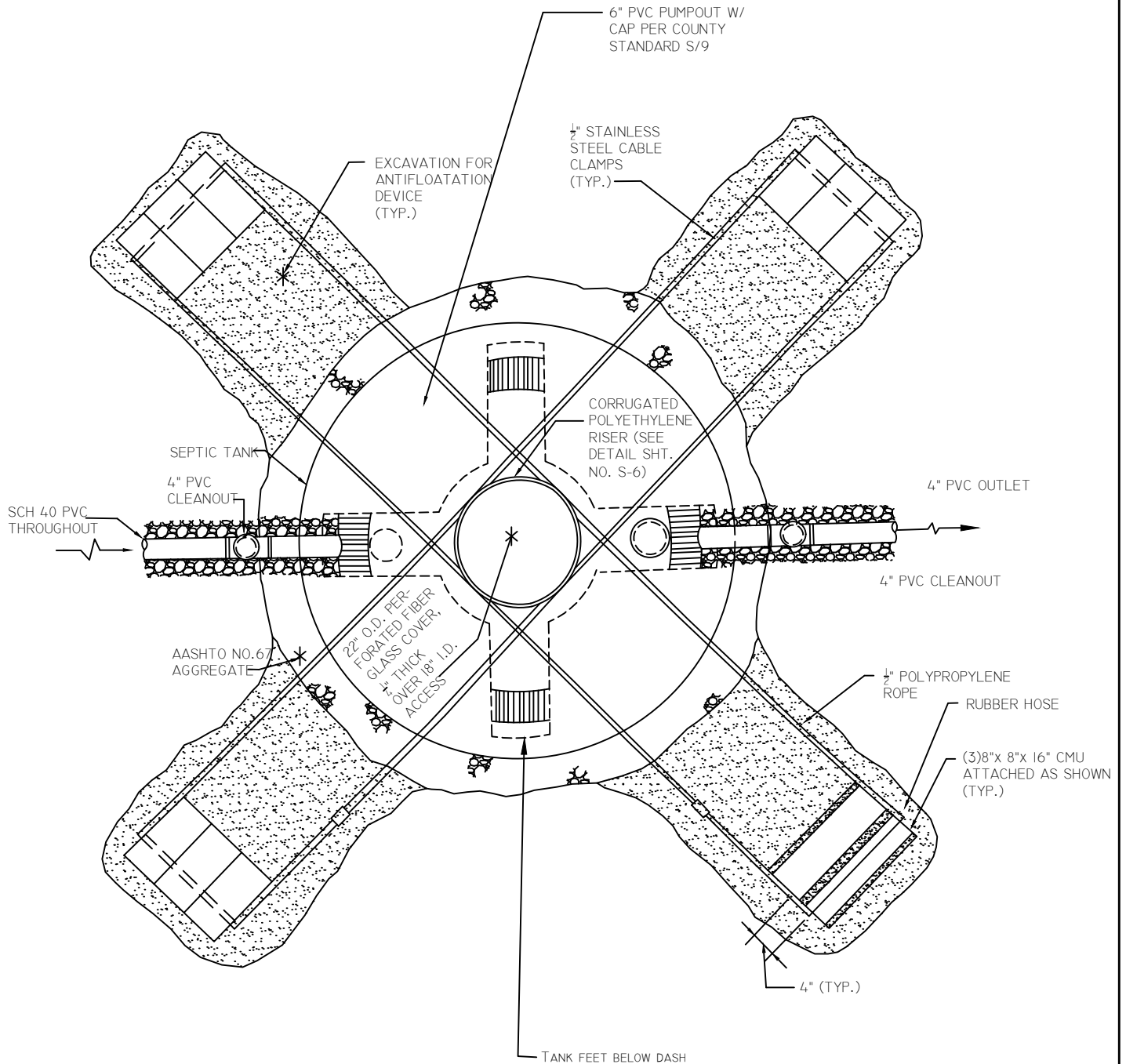
DESIGN ENGINEER
DATE:

REFERENCE STEP & GRAVITY SEPTIC TANK DESIGN

PLAN VIEW
TANK TOP / RISER

REVISED
04/2024

SS
S-1c



NOTES:
SEE SECTION 11745 STEP &
GRAVITY TANK SYSTEM FOR
MATERIAL AND INSTALLATION
REQUIREMENTS.

ANNE ARUNDEL
COUNTY
DEPARTMENT OF
PUBLIC WORKS

APPROVED

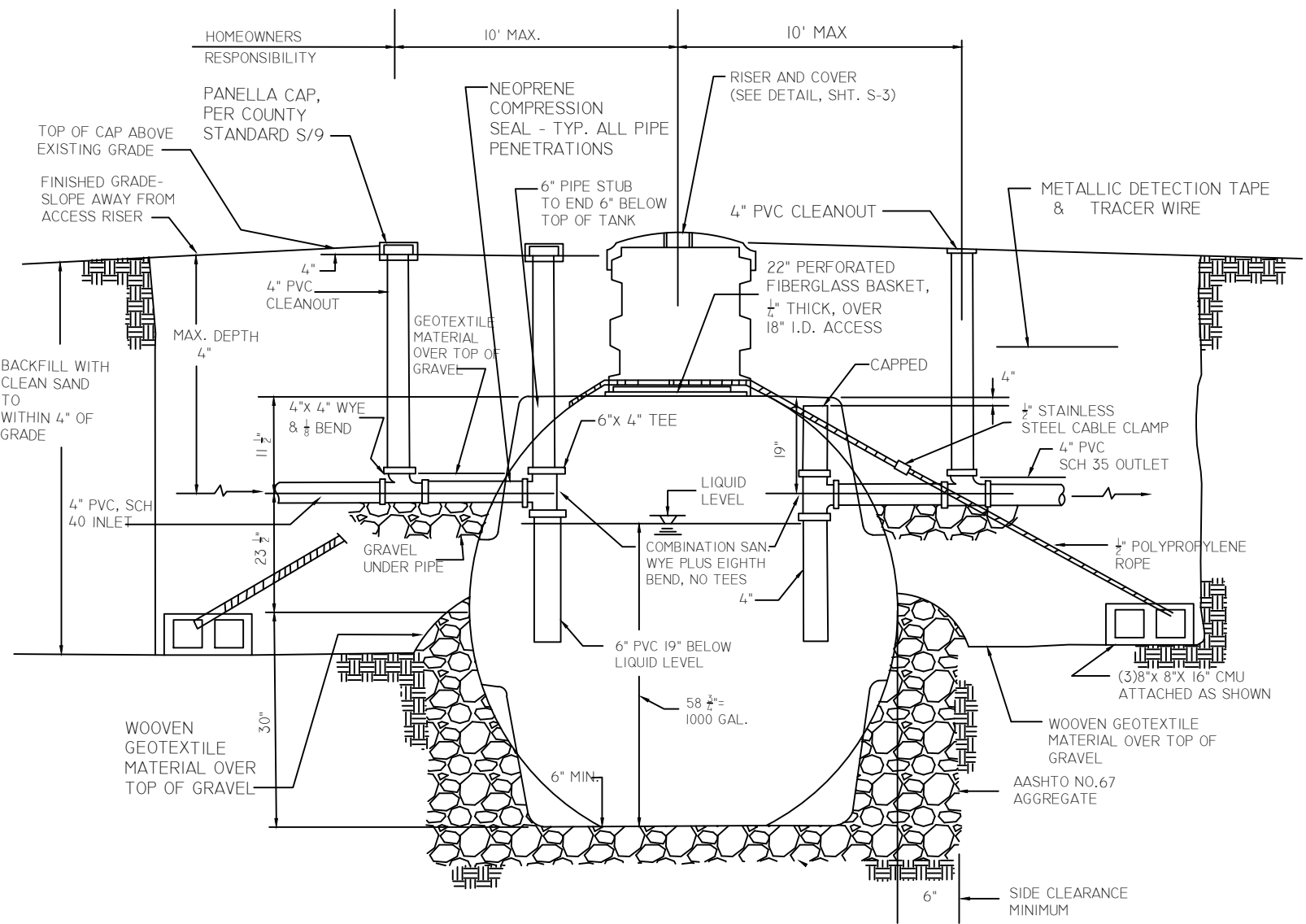
CHIEF ENGINEER

DESIGN ENGINEER
DATE:

REFERENCE STEP & GRAVITY
SEPTIC TANK DESIGN
PLAN – ROMAR SDG SEPTIC TANK
SEVERE DUTY, GRAVITY
INSTALLATION

REVISED
04/2024

SS
S-2a

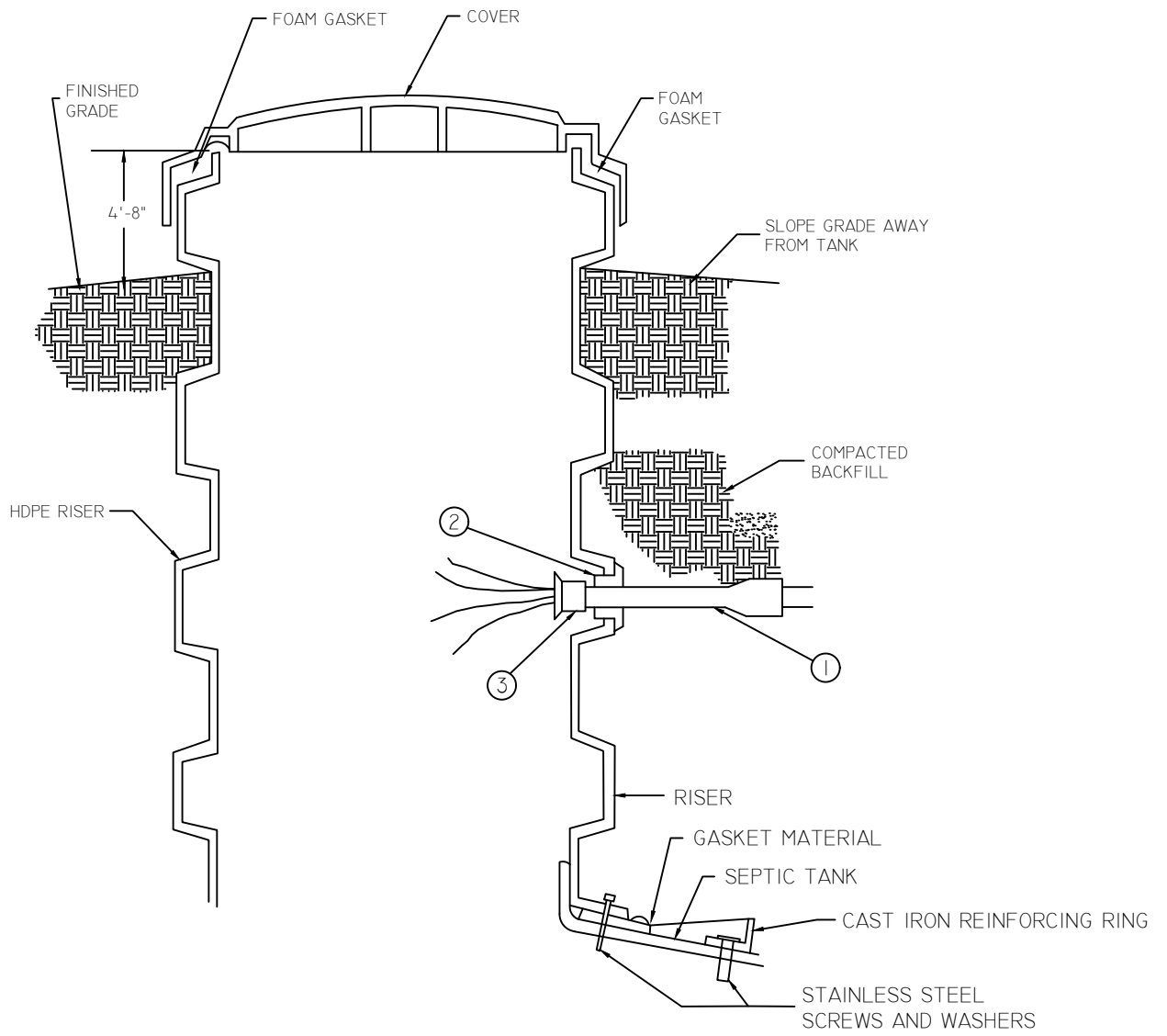


NOTES:
 SEE SECTION 11745 STEP &
 GRAVITY TANK SYSTEM FOR
 MATERIAL AND INSTALLATION
 REQUIREMENTS.

NOTES:
 PROVIDE TRACER WIRE
 BETWEEN TANK & R/W

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED CHIEF ENGINEER	REFERENCE STEP & GRAVITY SEPTIC TANK DESIGN SEVERE DUTY, GRAVITY INSTALLATION	REVISED 04/2024	SS S-2b
	DATE: DESIGN ENGINEER		 	

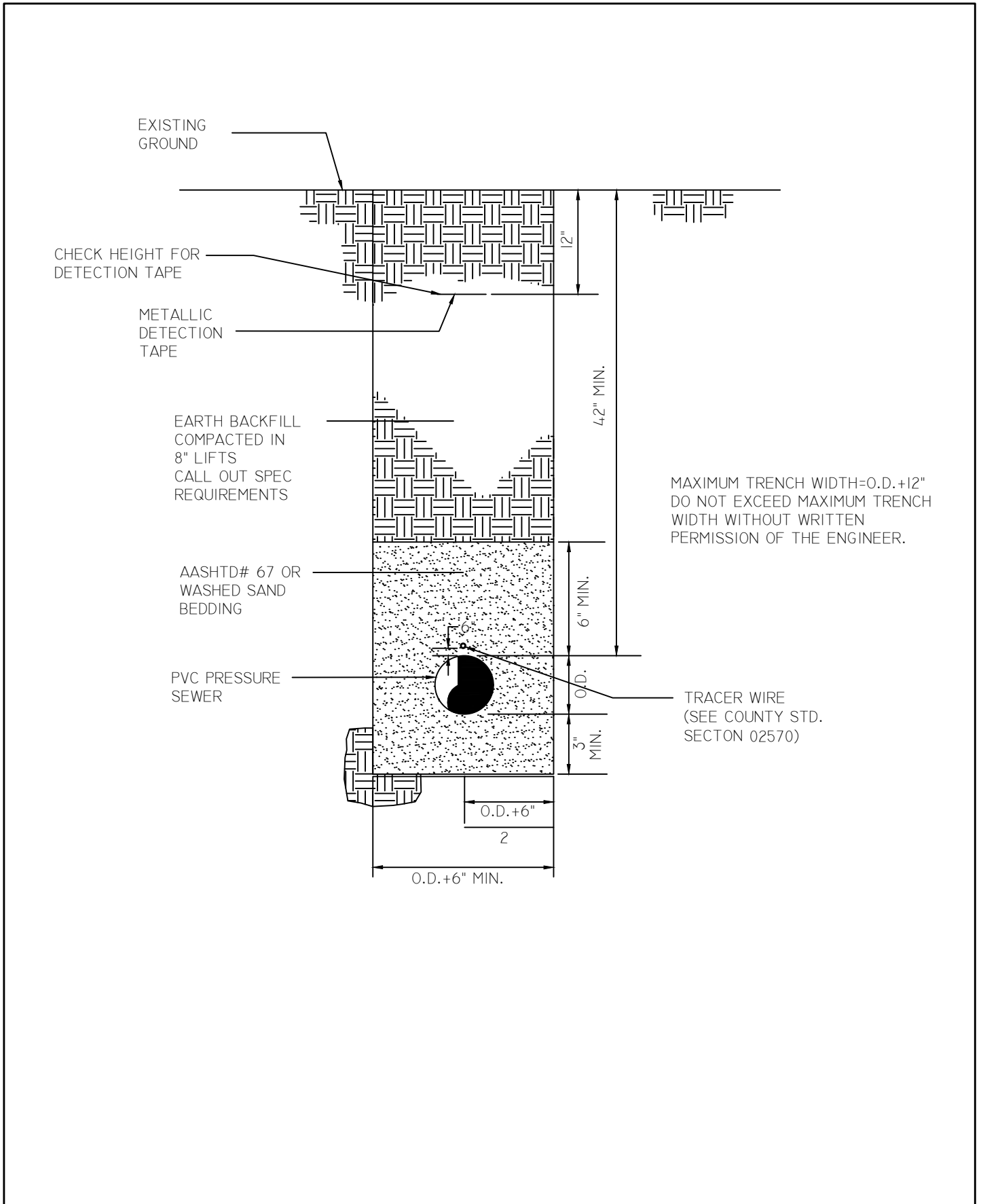
PUBLISHED: 1/99 REVISED: 3/23



FOR PRESSURE SERVICE APPLICATION:

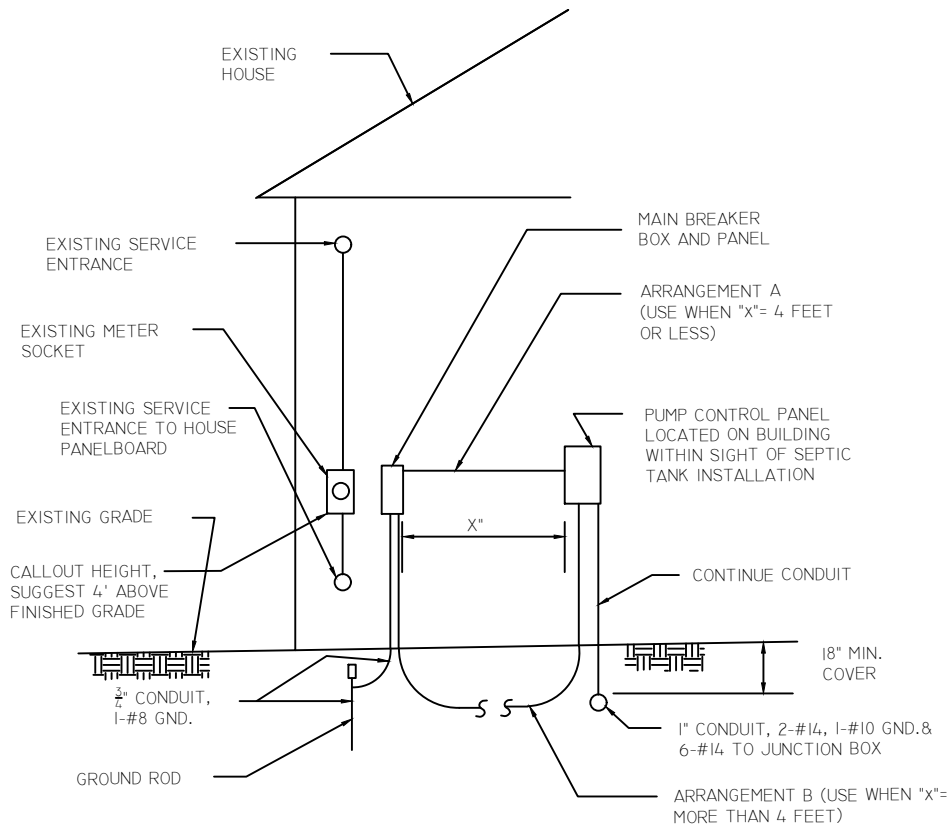
- ① 1-1/2" SCH. 40 RIGID PVC CONDUIT
- ② (1) 1-1/2" ADAPT-A-FLEX SEALING GROMMET (AK INDUSTRIES, INC.)
- ③ (4) 1-1/2" PVC BELL ENDS

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED	REFERENCE STEP & GRAVITY SEPTIC TANK DESIGN RISER AND COVER DETAIL FOR HDPE TANKS	REVISED	SS S-3
	_____ CHIEF ENGINEER		04/2024	
	_____ DESIGN ENGINEER			
	DATE:			



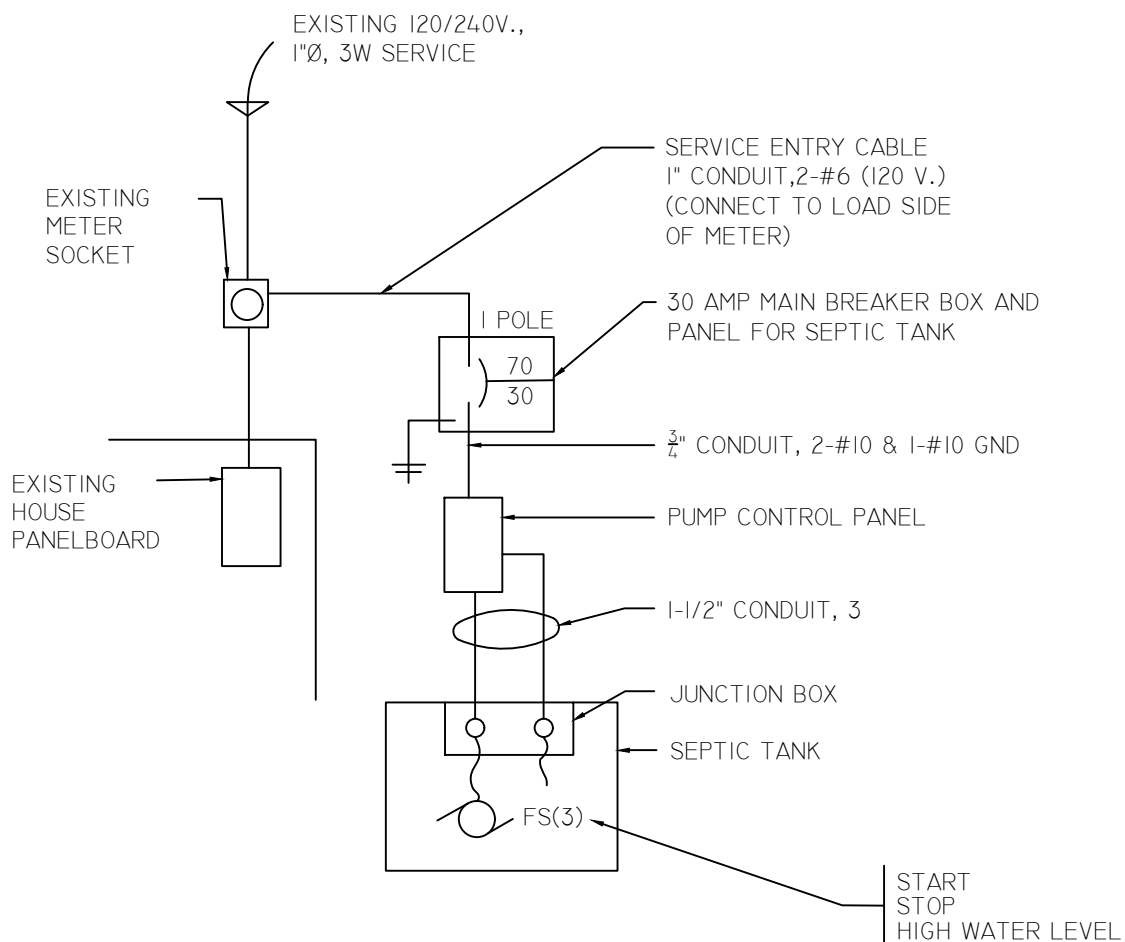
ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED	REFERENCE STEP & GRAVITY SEPTIC TANK DESIGN PIPE TRENCH BEDDING DETAIL	REVISED	SS C-1
	_____ CHIEF ENGINEER		04/2024	
	_____ DESIGN ENGINEER			
	DATE:			

FLOAT WIRING SHALL BE 2-#14
 PUMP POWER WIRING SHALL BE 1-#10



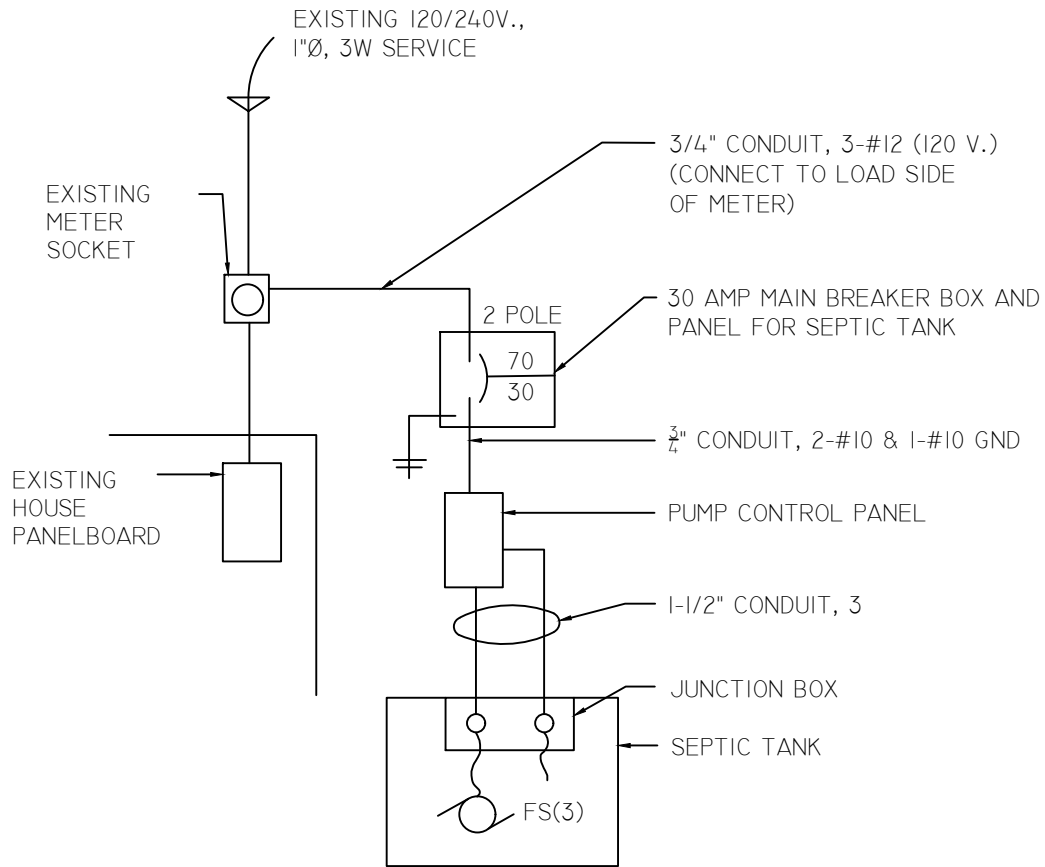
- NOTES:
1. ALL CONDUIT PENETRATIONS IN PUMP CONTROL PANEL SHALL BE AT BOTTOM
 2. ALL CONDUIT WIRING AND GROUNDING SHALL MEET ALL ELECTRICAL CODE REQUIREMENTS (TYP. ALL E SHTS)
 3. CONDUIT STOPS 18" BELOW GRADE ON DROP FROM CONTROL PANEL. ALL WIRE IS DIRECT BURY UF CABLE FROM PANEL TO JUNCTION BOX.
 4. A DISCONNECT PANEL SHALL BE SQUARE D.

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED	REFERENCE STEP & GRAVITY SEPTIC TANK DESIGN SEPTIC TANK SIMPLEX PUMP SYSTEM TYPICAL ARRANGEMENT AT RESIDENCE	REVISED	SS E-1
	_____ CHIEF ENGINEER		04/2024	
	_____ DESIGN ENGINEER			
	DATE:			



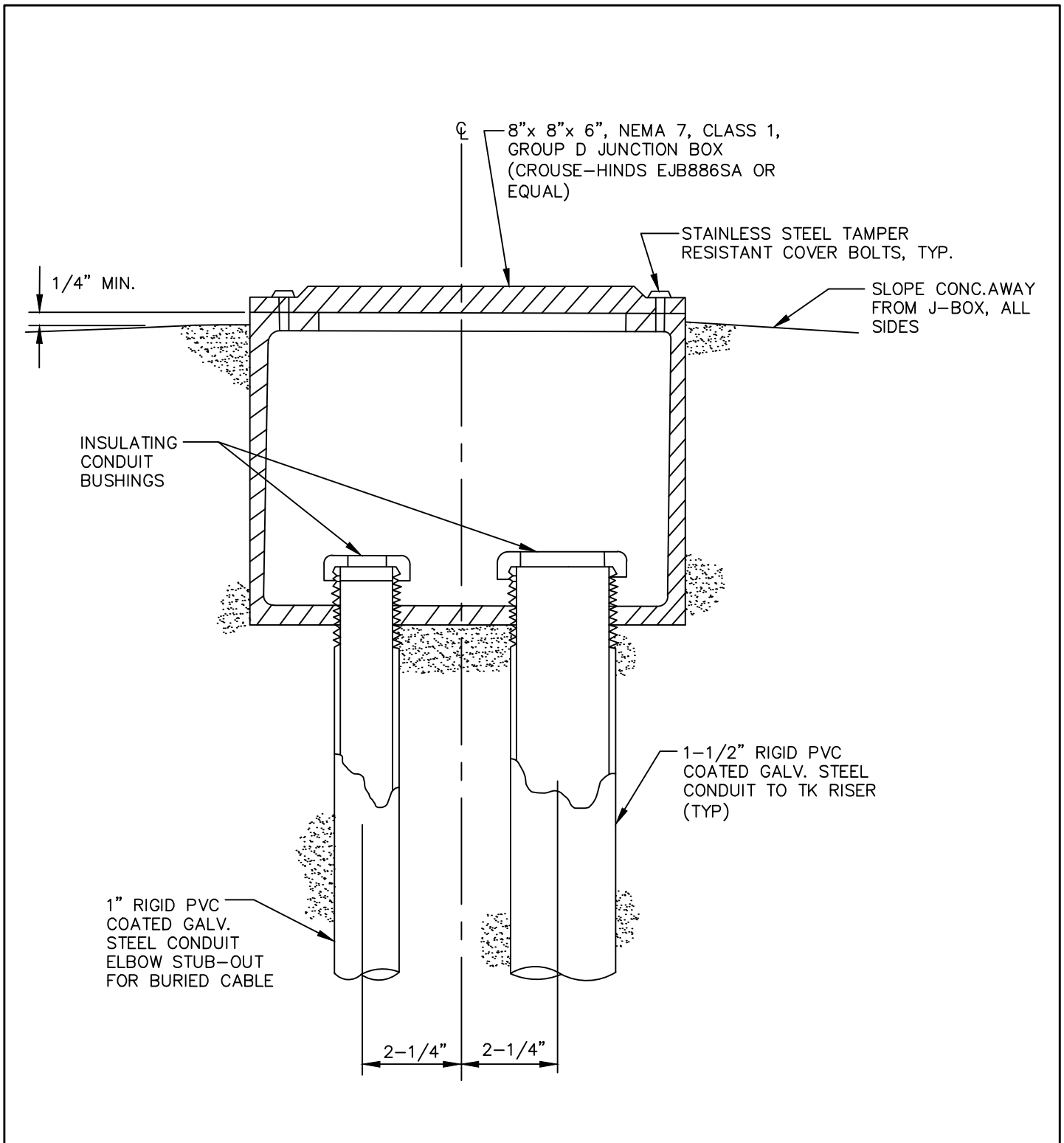
- NOTE:
1. ALL CONDUIT PENETRATIONS TO PUMP CONTROL PANEL SHALL ENTER AT BOTTOM OF PANEL.
 2. A DISCONNECT PANEL SHALL BE SQUARE D.

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED	REFERENCE STEP & GRAVITY SEPTIC TANK DESIGN	REVISED	SS E-2
	_____ CHIEF ENGINEER		04/2024	
	_____ DESIGN ENGINEER			
	DATE:			
ONE LINE DIAGRAM FOR PUMPS 1/2 HP OR LESS (115 V)				



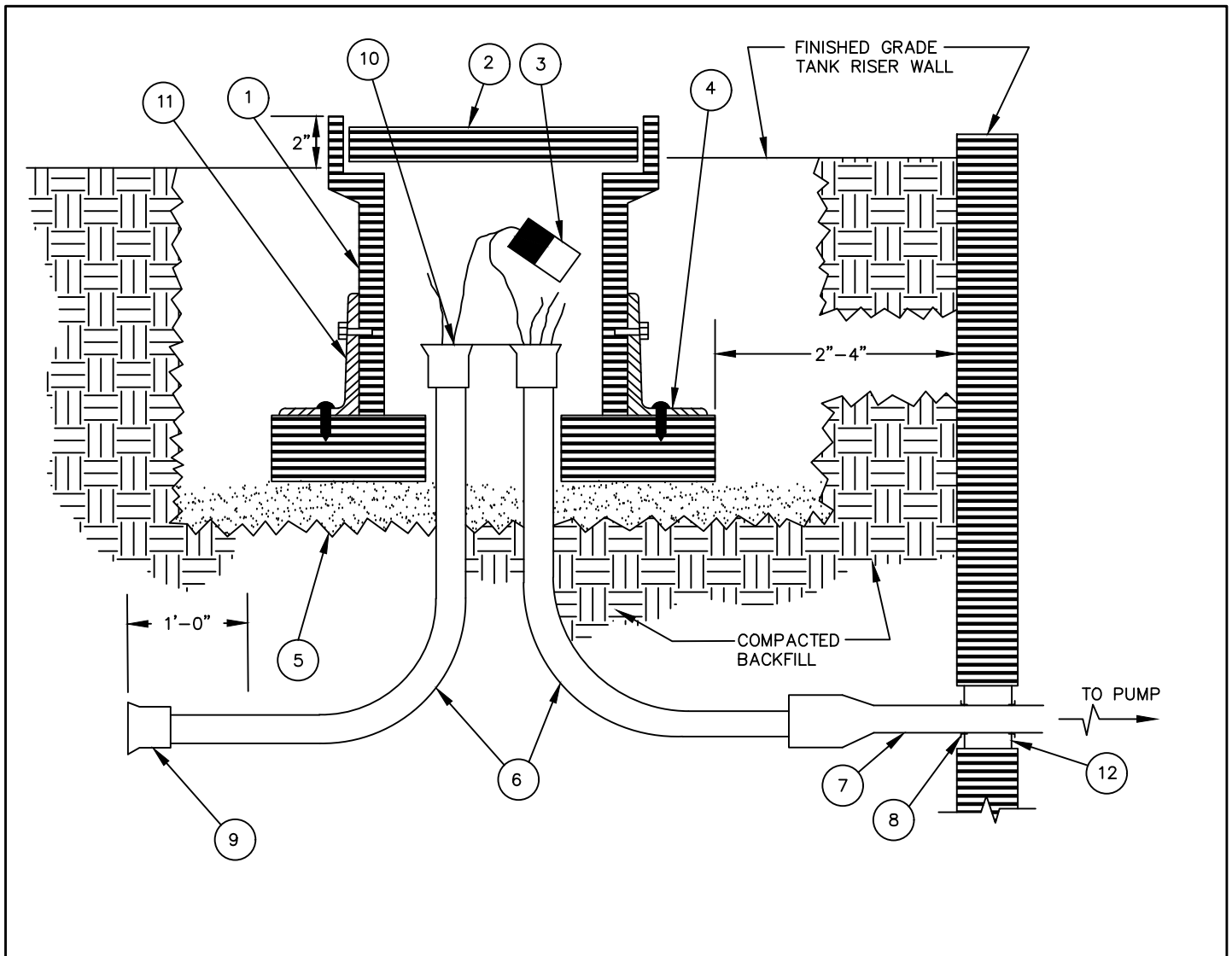
- NOTE:
1. ALL CONDUIT PENETRATIONS TO PUMP CONTROL PANEL SHALL ENTER AT BOTTOM OF PANEL.
 2. A DISCONNECT PANEL SHALL BE SQUARE D.

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED _____ CHIEF ENGINEER	REFERENCE STEP & GRAVITY SEPTIC TANK DESIGN ONE LINE DIAGRAM FOR PUMPS 1/2 HP TO 2 HP	REVISED 04/2024	SS E-3
	_____ DESIGN ENGINEER			
	DATE:			



EXPLOSION PROOF JUNCTION BOX

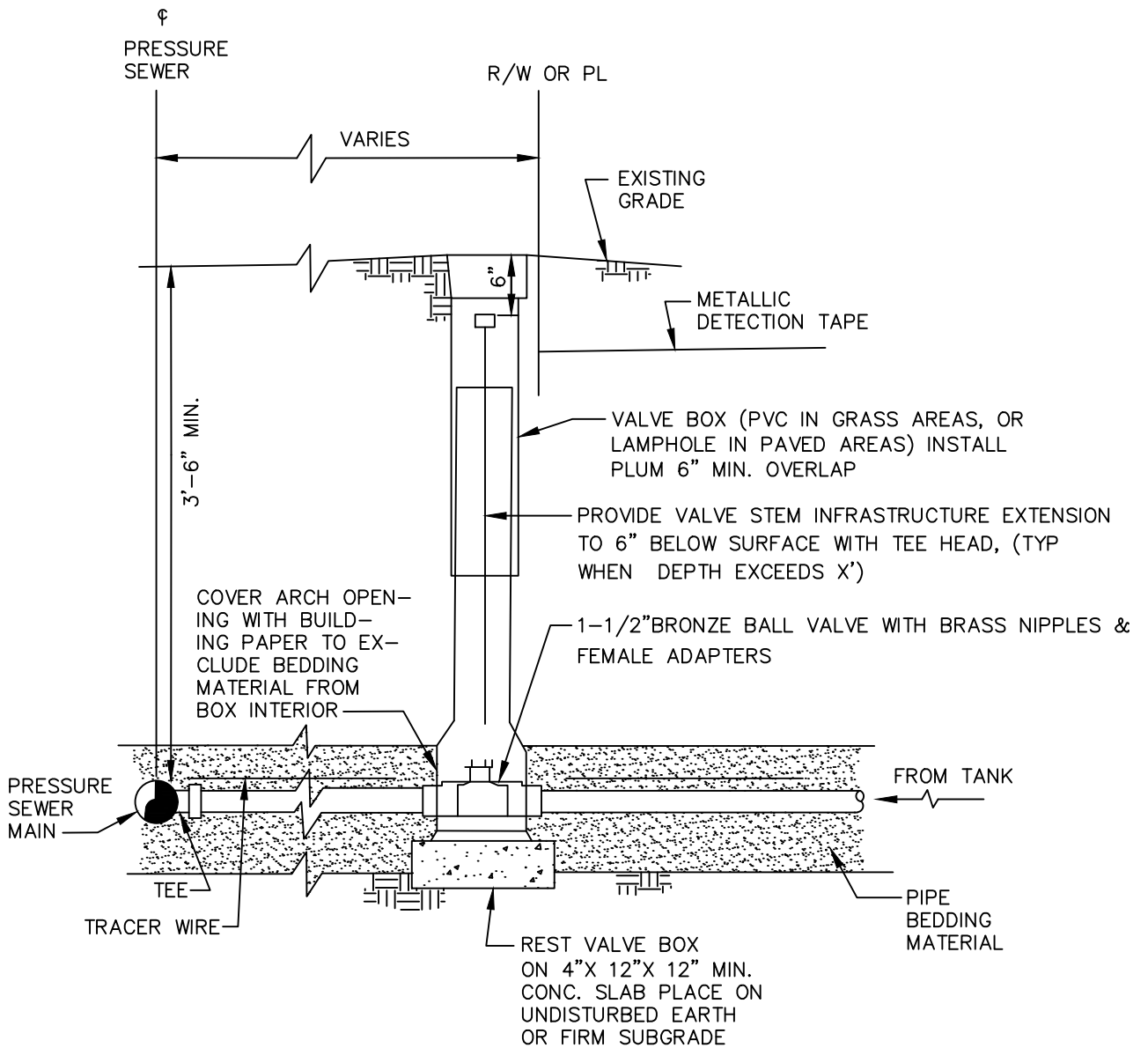
ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED _____ CHIEF ENGINEER	REFERENCE STEP & GRAVITY SEPTIC TANK DESIGN REFERENCE DRAWING EXPLOSION PROOF JUNCTION BOX	REVISED 04/2024	SS E-4
	_____ DESIGN ENGINEER		_____	
	DATE:		_____	
	_____		_____	



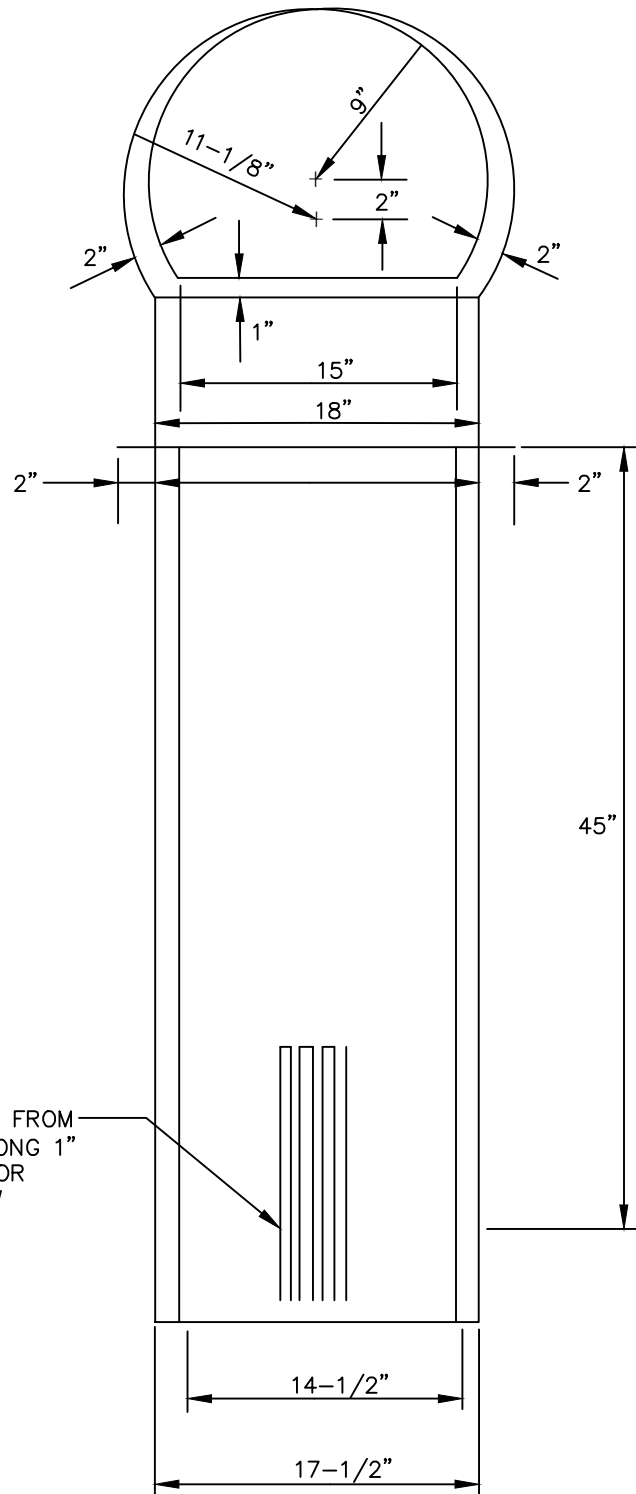
J-BOX INSTALLATION MATERIALS LIST

- | | |
|---|--|
| <p>① 6"x 8" QUAZITE COMPOSOLITE ENCLOSURE PC STYLE W/NO BASE(PART#PC06088A06)</p> <p>② 6"x8"PC STYLE QUAZITE COMPOSOLITE LID W/NO GASKET AND(2) LID BOLTS)PART#PC0608CA00), "ELECTRIC" LOGO ON LID AND PENTAHEAD BOLTS W/WASHERS.</p> <p>③ KING #40-563 AND #40-564"ONE-STEP" WATERTIGHT/RAINTIGHT SAFETY WIRE CONNECTORS OR IDEAL DB TWISTER PLUS #30-260 WATERTIGHT WIRE CONNECTORS,(TYP)</p> <p>④ (1)14x14x3 PRECAST CONCRETE MOUNTING PAD WITH 6" DIA. ROUND VOID ON CENTER.</p> <p>⑤ 2" MIN. BEDDING OF #67 STONE ON COMPACTED BACKFILL SAND</p> | <p>⑥ (2)1-1/2" SCH. 40 RIGID PVC CONDUIT LONG SWEEP ELBOWS</p> <p>⑦ 1-1/2" SCH 40 RIGID PVC CONDUIT</p> <p>⑧ (1) 1-1/2" ADAPT-A-FLEX SEALING GROMMET (AK INDUSTRIES, INC.)</p> <p>⑨ (4) 1-1/2" PVC BELL ENDS</p> <p>⑩ EACH CABLE ENTRY INSIDE J-BOX SHALL BE SEALED WITH SPEC SEAL FIRESTOP PUTTY BY STI PRODUCTS (PRODUCT #SSP100)</p> <p>⑪ (2) L3-1/2x 2-1/2x 1/4 ALUMINUM ANGLE CLIPS 2" WIDE TO SECURE QUAZITE BOX TO CONC. PAD WITH (2) 3/8-16 S.S.HEX HEAD CAP SCREWS AND (2) #14x1-1/2"S.S. PAN HEAD SHEET METAL SCREWS WITH PLASTIC ANCHORS</p> <p>⑫(1) 1-1/2" GROMMET</p> |
|---|--|

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED	REFERENCE STEP & GRAVITY SEPTIC TANK DESIGN REFERENCE DRAWING QUAZITE COMPOSOLITE ENCLOSURE	REVISED	SS E-5
	_____ CHIEF ENGINEER		04/2024	
	_____ DESIGN ENGINEER			
	DATE:			



ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED	REFERENCE STEP & GRAVITY SEPTIC TANK DESIGN CURB VALVE DETAIL	REVISED	SS M-1
	_____		04/2024	
	CHIEF ENGINEER		_____	
	DESIGN ENGINEER		_____	
DATE:	_____			



9 VERTICAL, 6" FROM
 BOTTOM, 12" LONG 1"
 APART SLITS FOR
 EFFLUENT FLOW

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED _____ CHIEF ENGINEER	REFERENCE STEP & GRAVITY SEPTIC TANK DESIGN PUMP INSERT DETAIL	REVISED 04/2024	SS M-2
	_____ DESIGN ENGINEER		_____	
	DATE:		_____	
	_____		_____	