


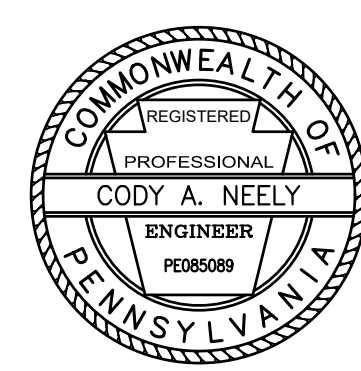
REPRESENTATIVE RAW WATER QUALITY						
	pH	Acid	T Fe	T Mn	T Al	Sulfates
Average	2.8	320	28	11	25	799

GENERAL NOTES:

1. Base map contains contours derived from a circa 2006 "As-Built" drawing provided by the PA DEP P&A State Plane - South (USGS Survey Foot) NAD83 (Vertical datum - NAVD83) (BAMR Mapping). Contours outside of BAMR Mapping area from a 2006 bare-earth digital elevation model constructed from PAMAP LIDAR elevation points by PA DCNR, Bureau of Topographic and Geological Survey (PA South Foot NAD83/NAVD83). See topographic and cultural features from 2006 PAMAP aerial photos obtained from www.passta.psu.edu and USGS 7.5 Skyview.
2. Additional information from limited 2019 & 2020 site investigations by BioKlost. All existing conditions to be field verified by the Contractor as needed.
3. The bench mark elevations provided were established by setting primary control benchmark (BM1) chiseled "X" located on a boulder along the northern side of the Settling Pond 3 embankment area, and recording that location using a Sub-Centimeter Grade JAVAD GPS unit. Any temporary benchmarks (TBM#) referenced on the drawings are referencing BM1 as the base-station.
4. Stream presence/extent determined from "blue lines" of USGS 7.5 topographic map - location revised based on LIDAR contours.
5. All dimensions are in feet unless otherwise noted. All slope designations are H:V.
5. Property line locations are assumed to be very approximate. Most locations based on Somerset County on-line property mapping information supplied by PADEP. Property line information included in June 2006 "As-Built" drawings (BAMR Mapping) with indications of select property lines. **This is not a property survey.**
6. Proposed structures may be altered as approved by the Project Engineer as needed to suit field conditions.
7. Soil unit boundaries and data from websolsurvey.nrcs.usd.gov accessed August 2020.
8. The following notes are copied from E&S Plan (Rev. 10/2020) and displayed for convenience: "Erosion and Sedimentation Control Plan Site Specific Notes," "Construction Schedule & BMP Installation Sequence," and "Temporary and Permanent Seeding Specifications".

CALL BEFORE YOU DIG!
PENNSYLVANIA LAW REQUIRES
3 WORKING DAYS NOTICE FOR
CONSTRUCTION PHASE AND 10 WORKING
DAYS IN DESIGN STAGE--STOP CALL

 **PA1** POCS SERIAL NUMBER
SYSTEM, INC. #20210042111



TEMPORARY AND PERMANENT SEEDING SPECIFICATIONS

Temporary

Species: Annual Ryegrass (PA DOT Formula E)
Pure Live Seed: 88% Application Rate: 48 LB./AC.
Fertilizer Type: None Liming Rate: 0 T./AC.
Mulch Type: Hay or Straw Mulching Rate: 3.0 T./AC.

Permanent

Ernst Native Habitat for Strip Mines Mix : (ERNMX-111)

(Mix Composition: Species - % Composition):

Big Bluestem, Niagara - 29.6; Switchgrass, Shelter - 25.0; Indiangrass, Tomahawk 18.9; Virginia Wildflower, Madison - 17.0; Blackeyed Susan - 3.0; Partridge Pea, PA Ecotype - 2.0; Oxeye Sunflower, PA Ecotype - 2.0; Showy Trillium, PA Ecotype - 1.7; Wild Bergamot, Fort Indiantown Gap, PA Ecotype - 0.3; Common Milkweed - 0.2; Panicleleaf Ticktrefoil, PA Ecotype - 0.1; Narrowleaf Mountainmint - 0.1; Canada Goldenrod, PA Ecotype - 0.1

Seeding Rate: 20 lb per acre

Min. Purity: 90% Min. Germination: 80%

Fertilizer Type: 10-20-20 Fertilizer Appl. Rate: 500 LB./AC

Liming Rate: 3.0 T./AC. Mulch Type: Hay or Straw Mulching Rate: 3.0 T./AC

Preferred Seeding Season Dates: 3/15 to 6/1; 8/1 to 10/15

SHEET 1 of 3

System Design / Plan View

LOCATION MAP, LEGEND, & NOTES

OVEN RUN B PASSIVE TREATMENT SYSTEM REDESIGN and CONSTRUCTION

for

PA DEP & S.C.R.I.P.

Oven Run Watershed

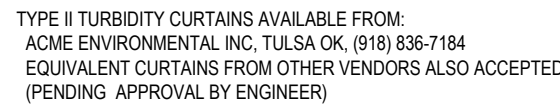
ade Township, Somerset County,

Scale: 1" = 50' January 2021

BioMost, Inc. Mining and Reclamation

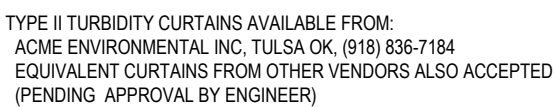
LONG: -78.912004

3000 SHEET 1



Horizontal Scale: None Vertical Scale: None

NOTES: SEE PLAN VIEW FOR BAFFLE CURTAIN LOCATION
 *BAFFLE CURTAIN LENGTH TO BE MEASURED AT THE DESIGN
 WATER LEVEL PRIOR TO CONFIRMING ORDER. FOR OPTIMIZED FIT.
 *CUT 3 SIDES FOR EACH WINDOW (TOP AND BOTH SIDES) SO
 WINDOW FLAP CAN BE TIED UP TO ALLOW FOR CUSTOMIZED
 WINDOW LOCATIONS IN THE FUTURE. SET BAFFLE CURTAIN
 ANCHORS TO ALLOW FOR THE HIGHEST DESIGN WATER LEVEL IN
 THE POND, AND ALLOW ENOUGH SLACK FOR THE CURTAIN TO DROP
 TO THE LOWEST DESIGN WATER LEVEL.



Horizontal Scale: None Vertical Scale: None

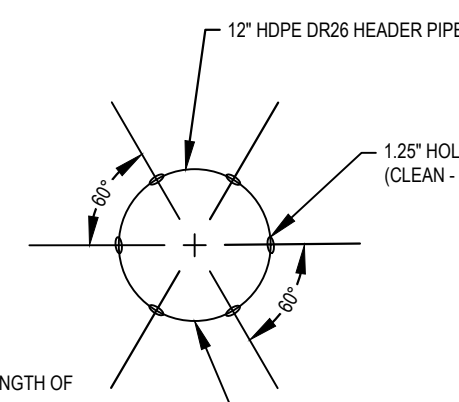
NOTES: SEE PLAN VIEW FOR BAFFLE CURTAIN LOCATIONS.
 *BAFFLE CURTAIN LENGTHS ARE TO BE MEASURED AT THE DESIGN WATER LEVEL PRIOR TO CONFIRMING ORDERS.
 *SET BAFFLE CURTAIN ANCHORS TO ALLOW FOR THE HIGHEST DESIGN WATER LEVEL IN THE POND, AND ALLOW ENOUGH SLACK FOR THE CURTAIN TO DROP TO THE LOWEST DESIGN WATER LEVEL (IF VARIABLE).



Horizontal Scale: None Vertical Scale: None



Horizontal Scale: None Vertical Scale: None



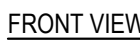
Horizontal Scale: None Vertical Scale: None



Horizontal Scale: None Vertical Scale: None



Horizontal Scale: None Vertical Scale: None



SIDE VIEW

Horizontal Scale: None Vertical Scale: None

NOTE: A STAFF GAUGE SHALL BE INSTALLED
AT THE FLUME'S MEASUREMENT POINT



TOP VIEW

Horizontal Scale: None Vertical Scale: None



Horizontal Scale: None Vertical Scale: None

POSITION THE SMART DRAIN SYSTEMS SO THAT

UP FLOW CONTROL BOX STRUCTURE IS ABOVE FINAL GRADE.
SPECIAL ORDER STAINLESS STEEL CORNER PIECES, DUE TO CORROSIVE WATER.
INSTALL CULVERT PIPE (STANDING UPRIGHT) AS PROTECTIVE CASING (PROVIDE CUSTOM BOTTOM CUT-OUTS FOR PIPE) AND BACKFILL ANNULUS EVENLY WITH INERT AGGREGATE TO FINAL GRADE
ONCE PER DAY PROGRAMMABLE FLUSHING CAPABILITY



Horizontal Scale: None Vertical Scale: None



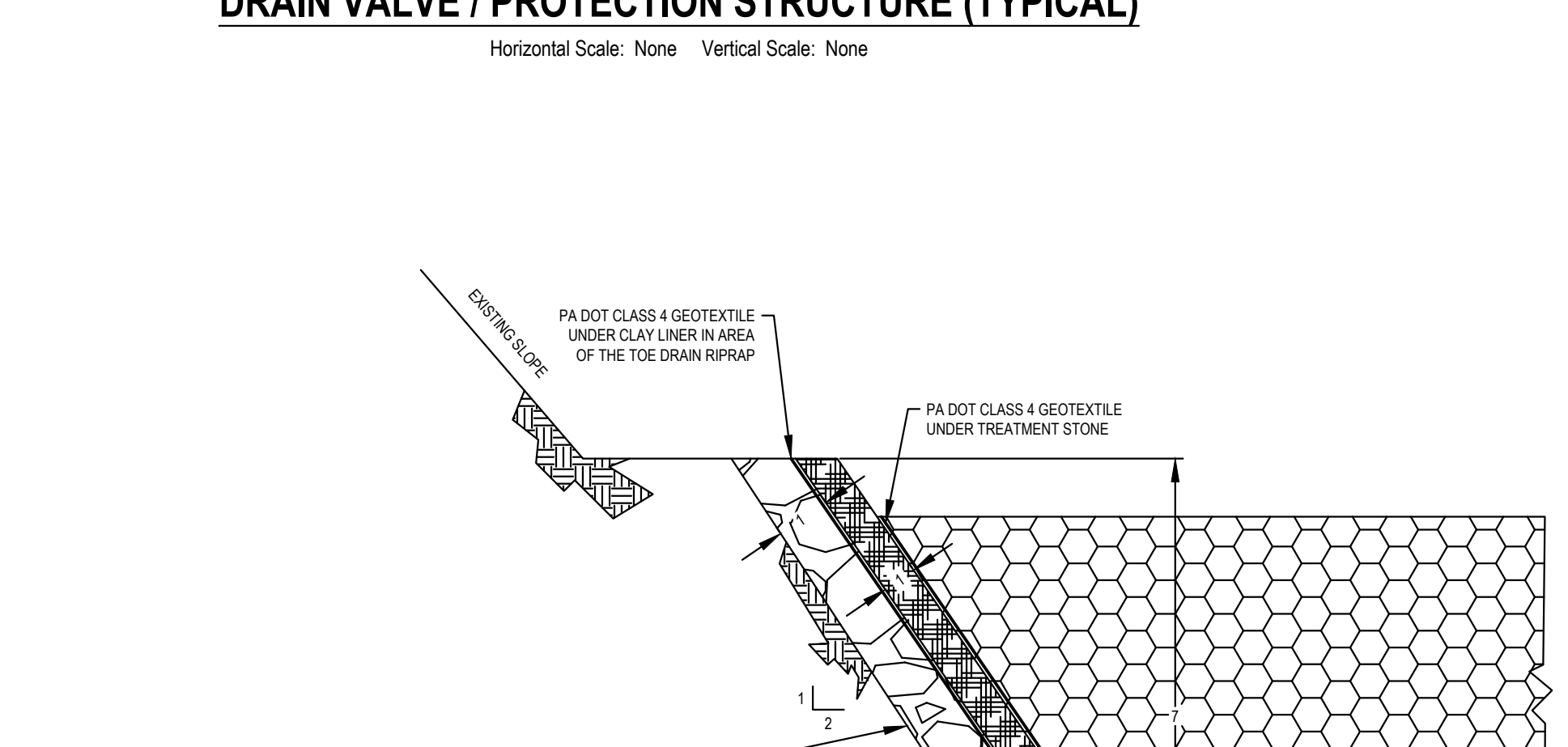
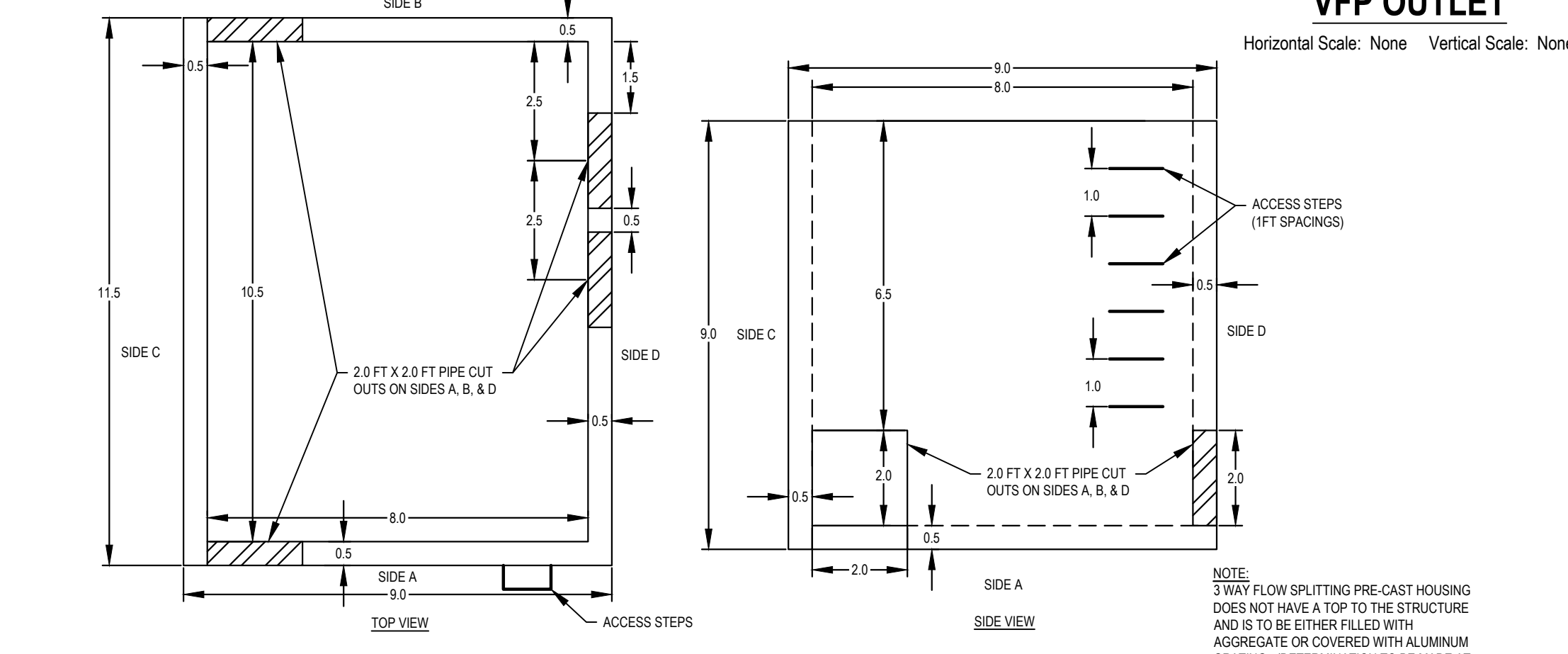
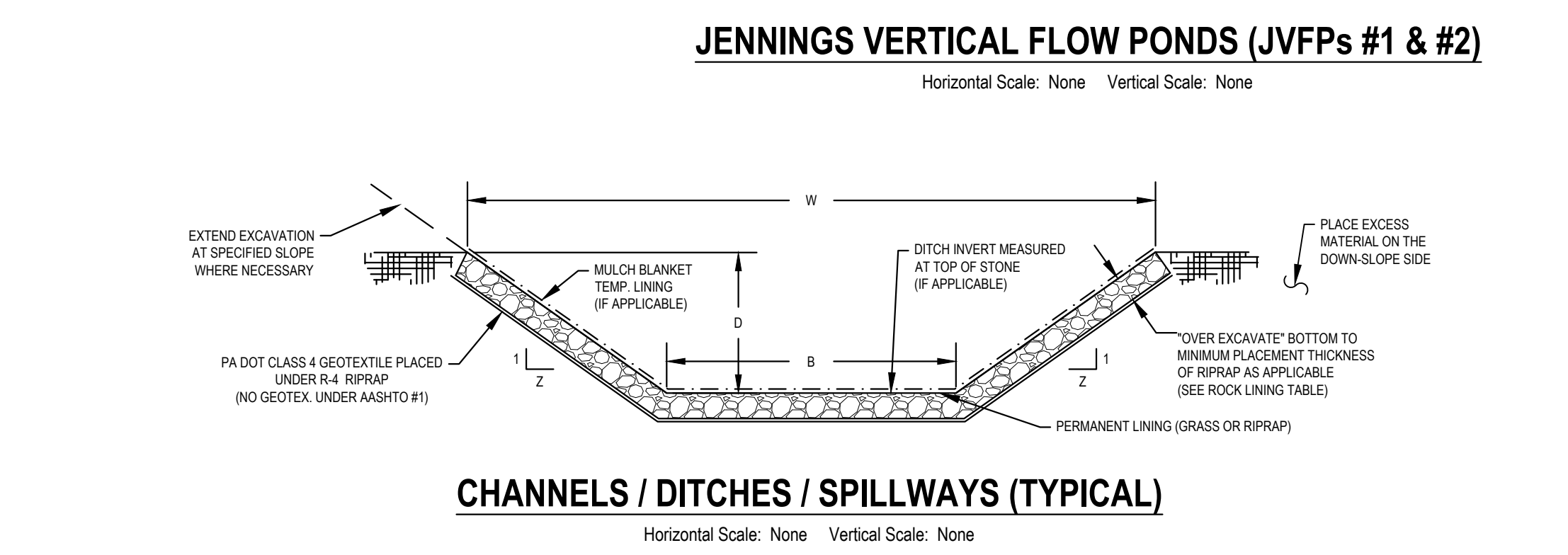
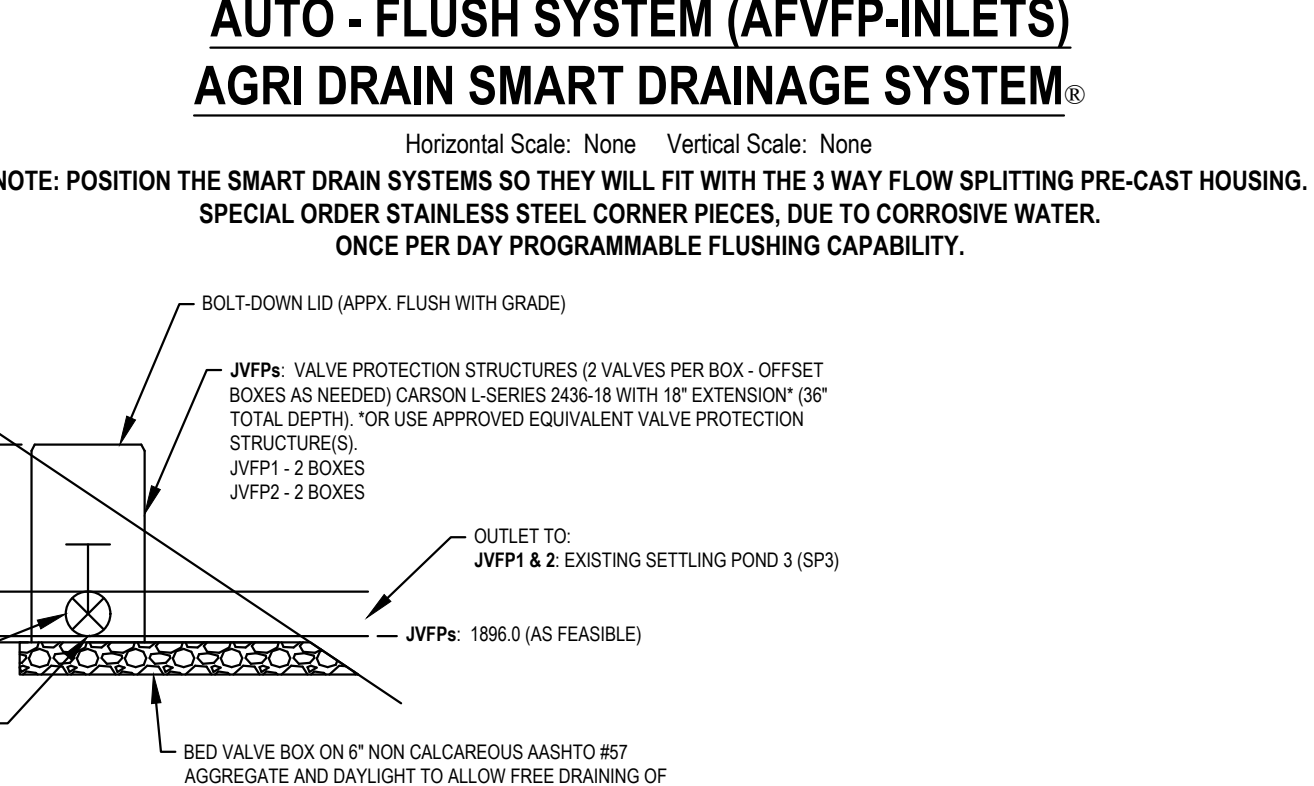
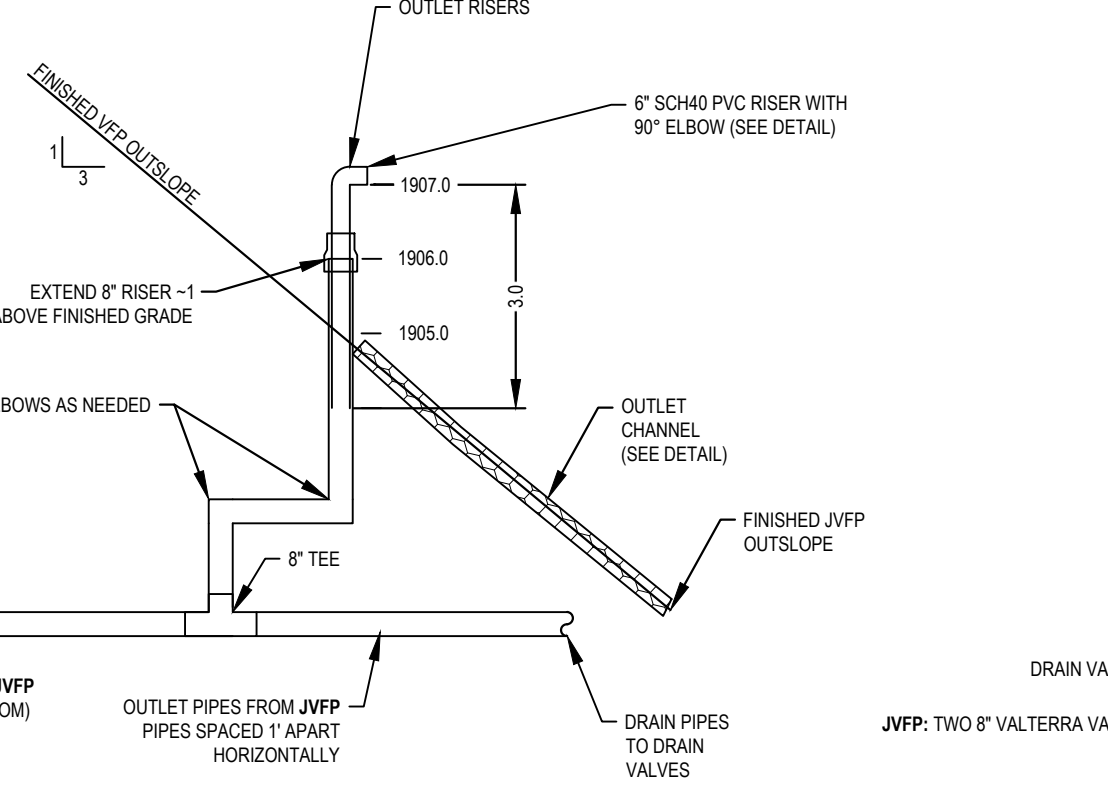
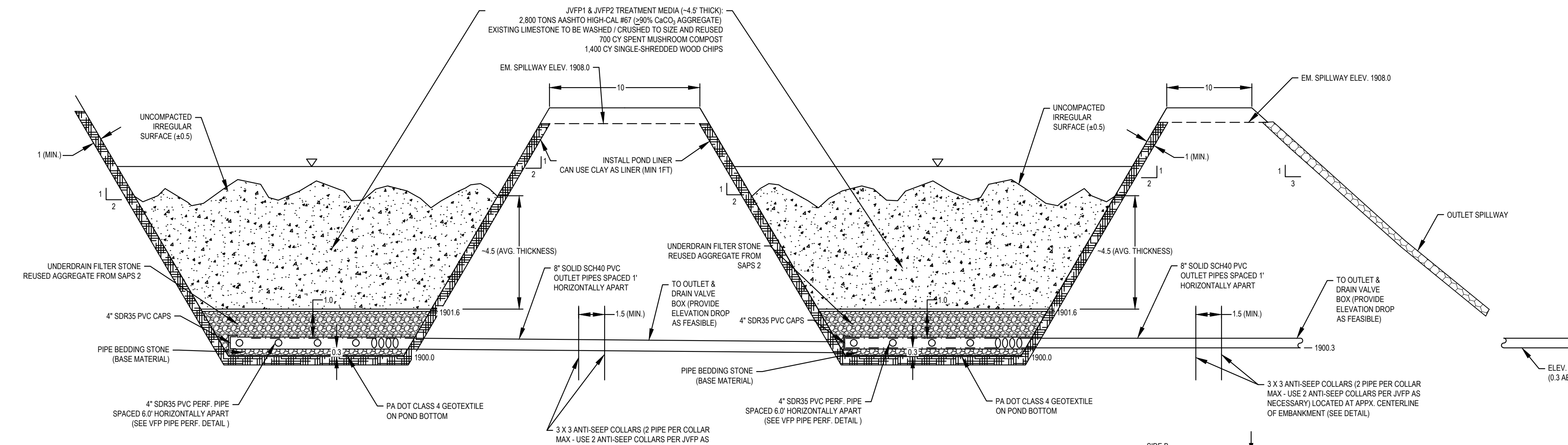
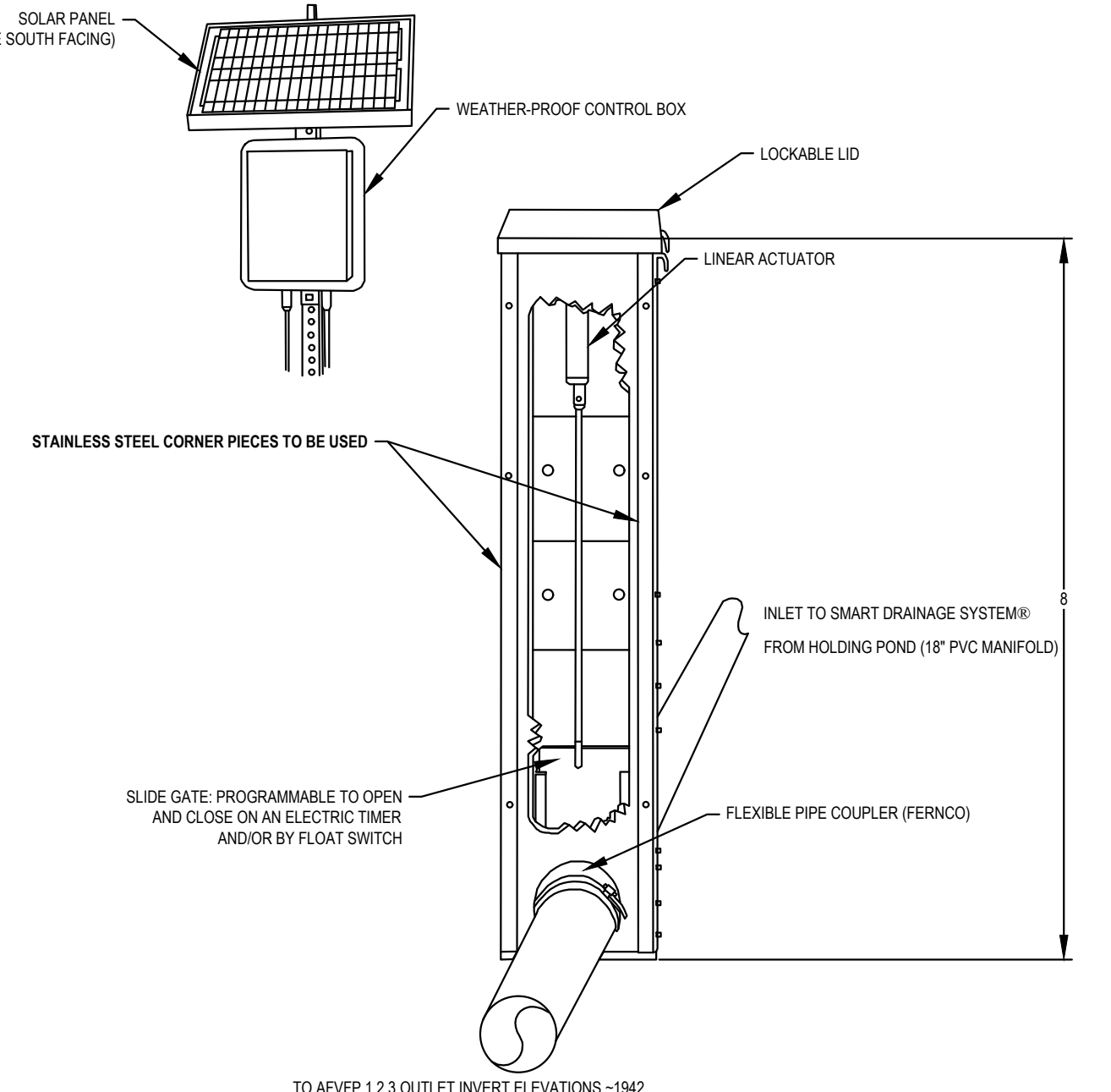
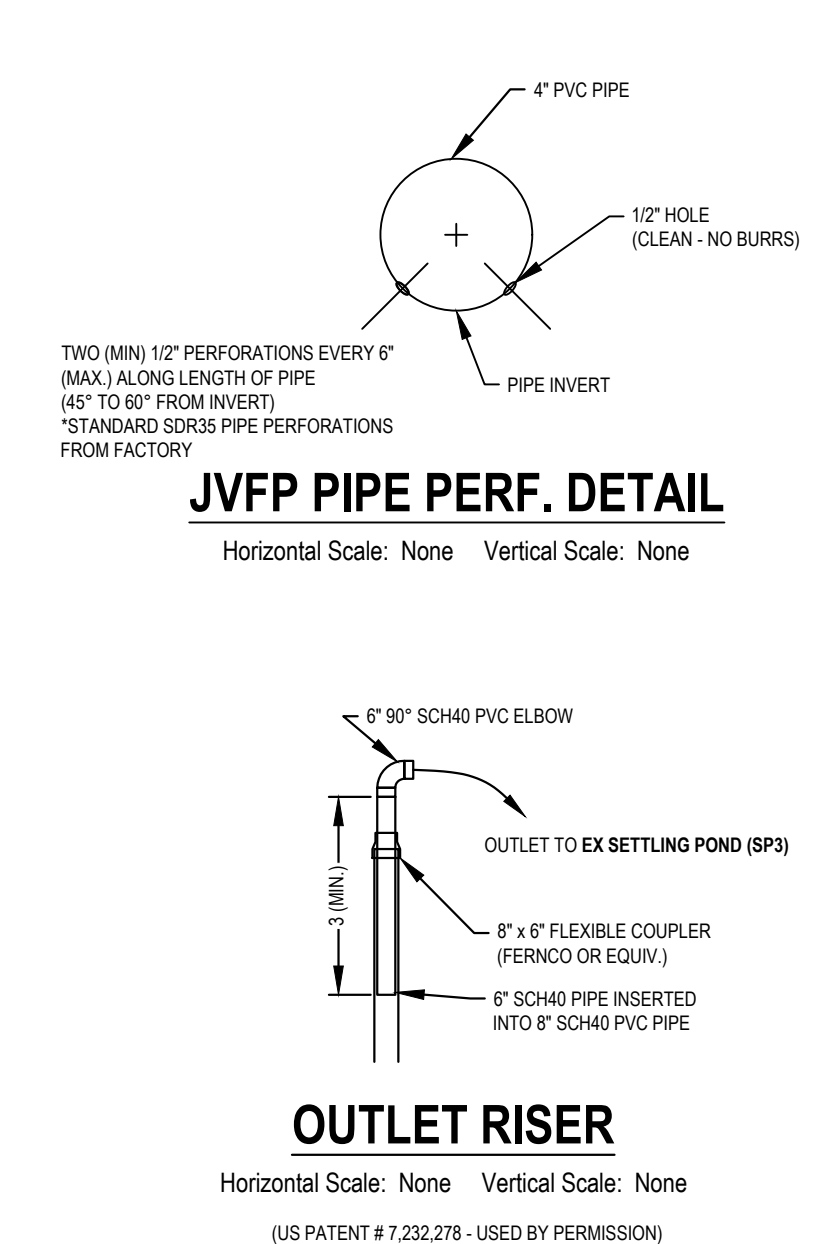
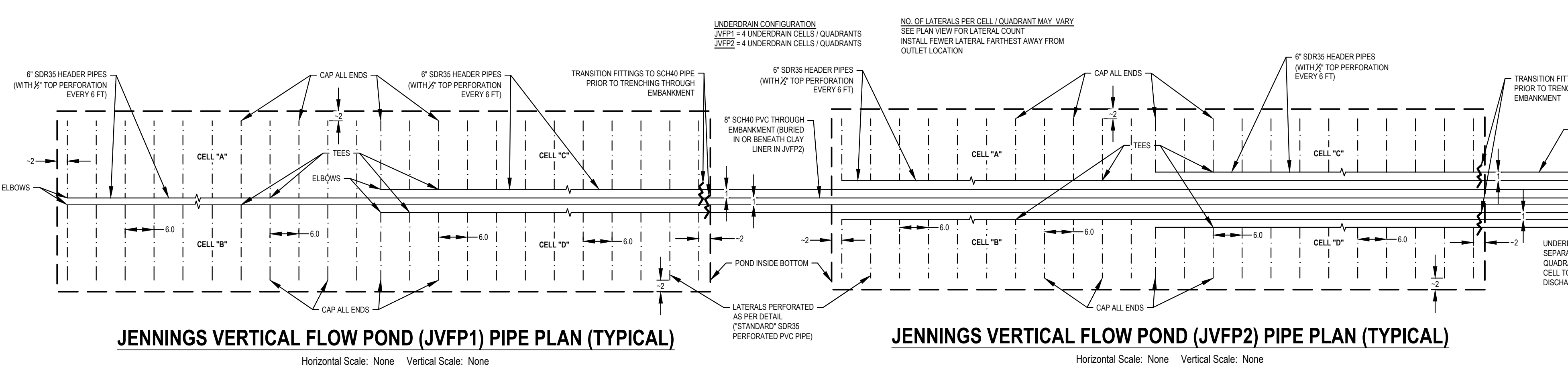
System Design / Details

for
PA DEP & S.C.R.I.P.

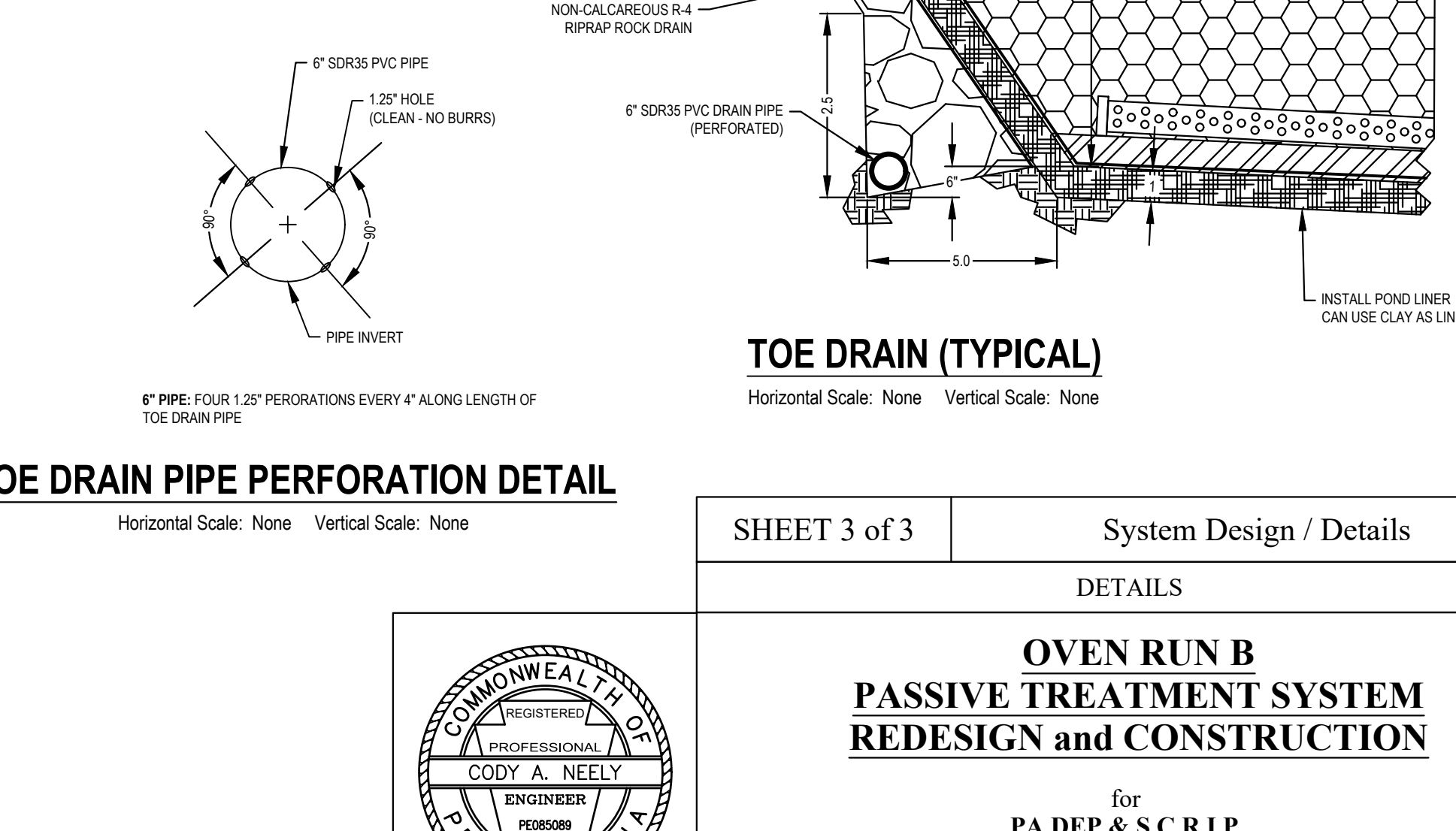
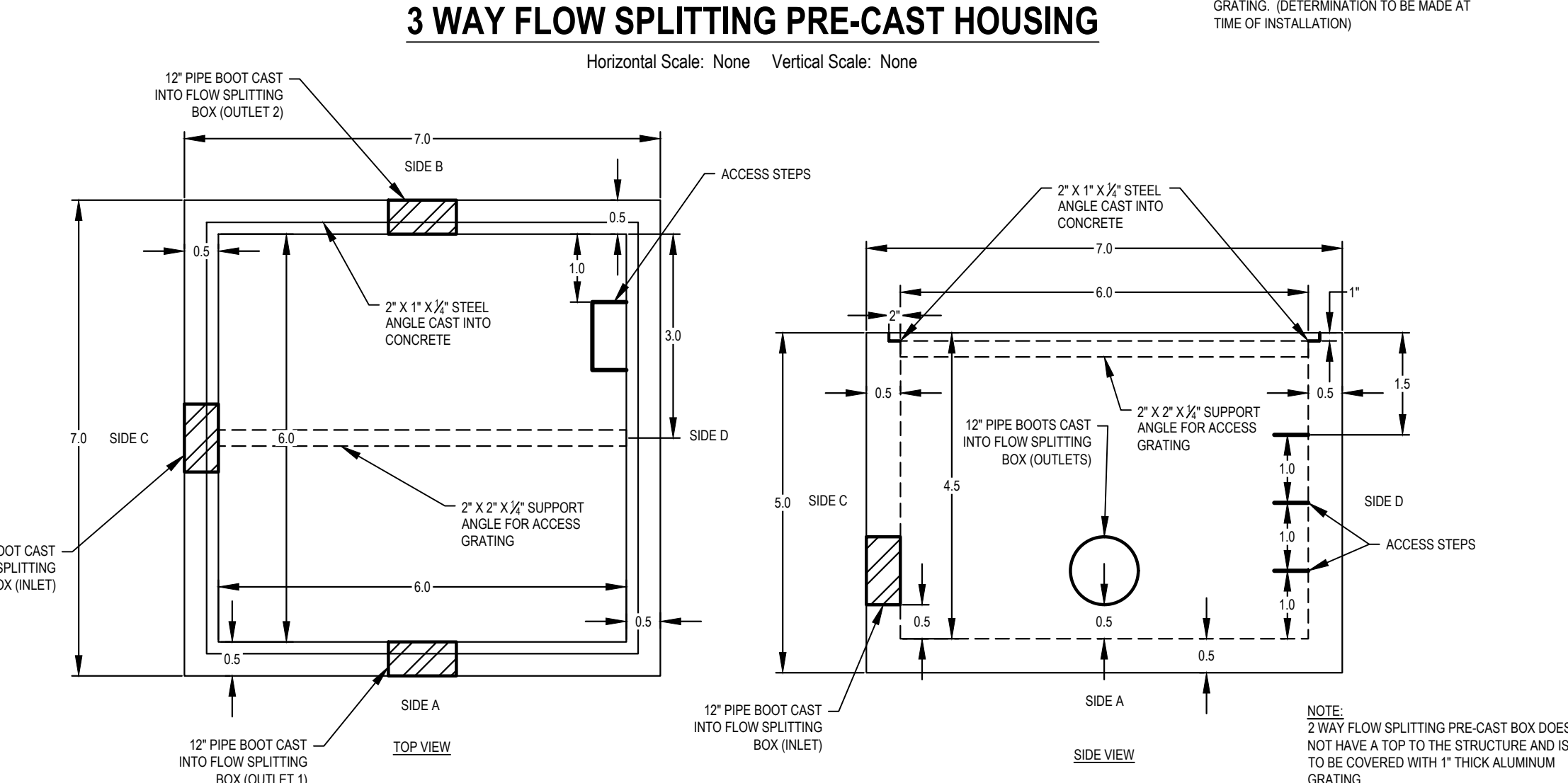
Oven Run Watershed
Shade Township, Somerset County, PA
Scale: As Shown January 2021

PROJECT CENTER
LAT: 40.112275 N
LONG: -78.912004 W

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Mars, PA www.biomost.com



CHANNEL / DITCH / SPILLWAY DATA TABLE												
PASSIVE TREATMENT SYSTEM	CHANNEL/DITCH/SPILLWAY	SEGMENT	BEGIN ELEV. (INVERT)	END ELEV. (INVERT)	LENGTH (FT)	SLOPE (%)	Z (FT) UP-SLOPE/ DOWN-SLOPE	D' (FT)	B (FT)	W'' (FT)	TEMP *** LINING	PERM LINING
	COLLECTION CHANNEL / MOAT EM SPILLWAY	FLAT SEGMENT THROUGH EMBANKMENT	1949.0	1949.0	10.0	0.0	2.0	1.0	10.0	14.0	S75 MULCH BLANKET	GRASS
	SLUDGE POND	FLAT SEGMENT THROUGH EMBANKMENT	1943.0	1943.0	68.0	0.0	2.0	1.0	10.0	14.0	S75 MULCH BLANKET	GRASS
	AFVFP1 EM SPILLWAY	FLAT SEGMENT THROUGH EMBANKMENT	1943.0	1943.0	14.0	0.0	2.0	1.0	10.0	14.0	S75 MULCH BLANKET	GRASS
	AFVFP2 EM SPILLWAY	FLAT SEGMENT THROUGH EMBANKMENT	1943.0	1943.0	14.0	0.0	2.0	1.0	10.0	14.0	S75 MULCH BLANKET	GRASS
	JVFP1 EM SPILLWAY	FLAT SEGMENT THROUGH EMBANKMENT	1908.0	1908.0	14.0	0.0	2.0	1.0	10.0	14.0	S75 MULCH BLANKET	GRASS
	JVFP2 EM SPILLWAY	FLAT SEGMENT THROUGH EMBANKMENT	1908.0	1908.0	14.0	0.0	2.0	1.0	10.0	14.0	S75 MULCH BLANKET	GRASS



E&S ROAD DITCHES (NOT SHOWN ABOVE) ARE PROVIDED ON THE SEPARATE E&S CONTROL PLAN DRAWING SET

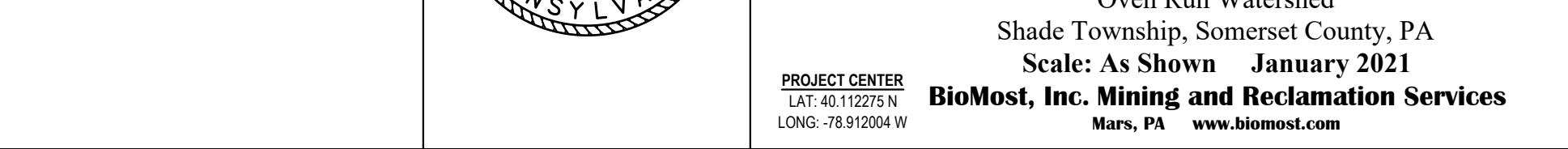
DEPTH TO TOP OF ROCK-LINED PORTION OF SPILLWAY DITCH CHANNEL. TOTAL EXCAVATION DEPTH MAY BE GREATER. CHANNEL ABOVE RIPRAP LINED PORTION TO BE GRASS LINED. DEPTHS DISPLAYED FOR DIVERSION & COLLECTION DITCHES ARE THE MINIMUM REQUIRED DEPTHS TO PASS REQUIRED FLOWS (SEE CALCULATIONS). FOR CONSTRUCTION PURPOSES THE DIMENSIONS (DEPTH AND CORRESPONDING TOP WIDTHS) CAN BE ADJUSTED LARGER FOR EASE OF CONSTRUCTION IF DESIRED.

TOP WIDTH SHOWN TO BASE ROCK-LINED SPILLWAY DITCH CHANNEL. DEPTH - ACTUAL TOP WIDTH OF GRASS-LINED PORTION MAY BE GREATER IF APPLICABLE.

SPILLWAY DITCH INVERT AT TOP OF LINING.

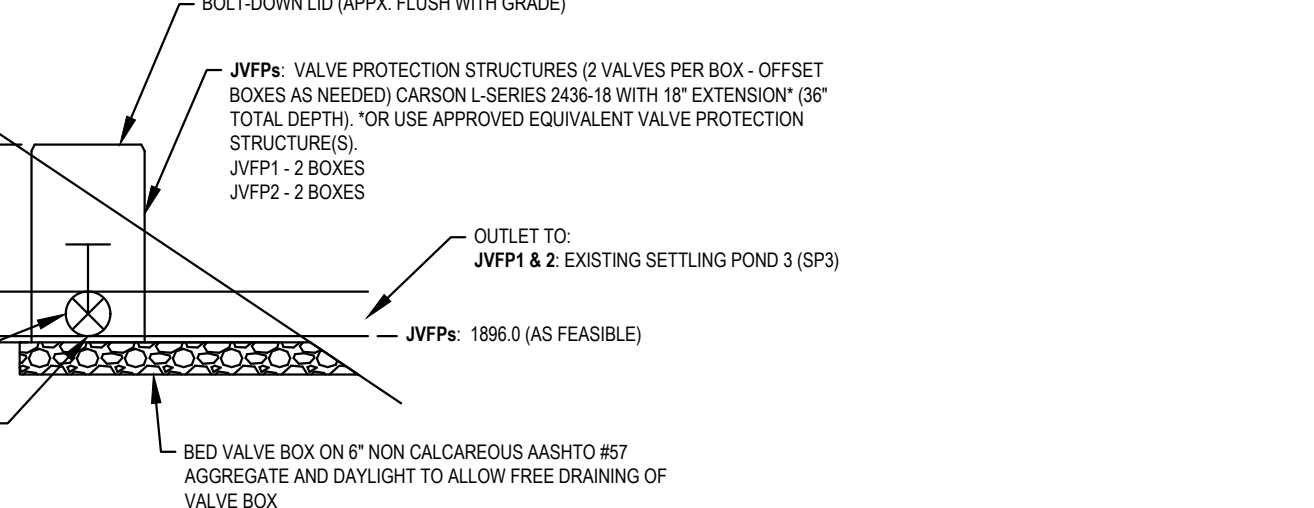
S75 MULCH BLANKET TEMPORARY LINING PER MANUFACTURER SPECIFICATIONS ALLOWS FOR HIGHER CHANNEL VELOCITY, MORE SHEAR STRESS, AND EXHIBITS A LOWER MANNINGS ROUGHNESS COEFFICIENT THAN A GRASS LINED CHANNEL. THEREFORE ANYWHERE TO RECEIVE PERMANENT GRASS LINING MAY UTILIZE S75 MULCH BLANKET FOR TEMPORARY STABILIZATION PURPOSES.

ROCK LINING TABLE		
NCSA # (AASHTO #)	AVG. STONE SIZE (d50)	MIN. DEPTH ("A")
(AASHTO #1)	NA	6"
R-3	3"	9"
R-4	6"	18"
R-5	9"	27"
R-6	12"	36"
R-7	18"	45"
*UNLESS SPECIFIED OTHERWISE		



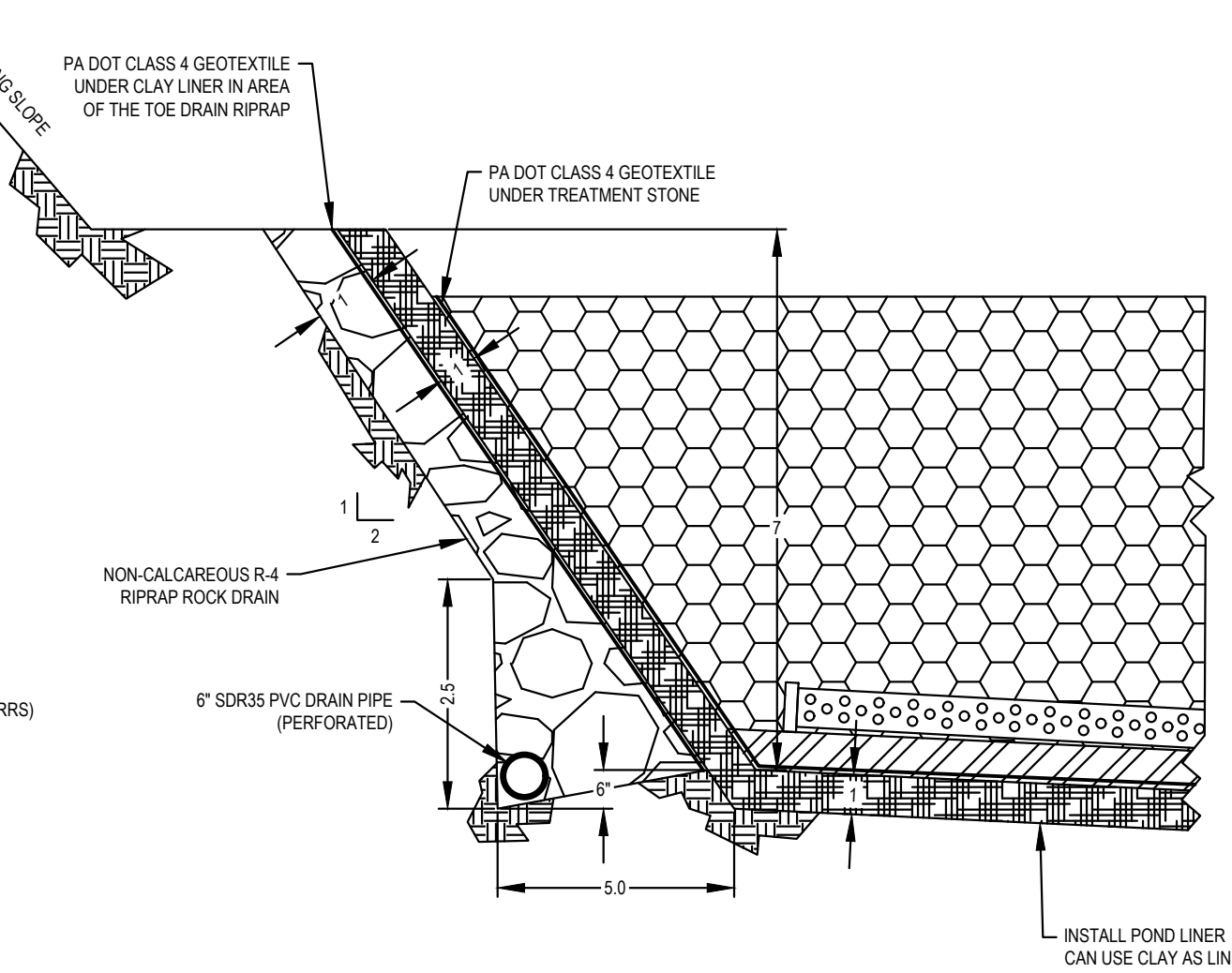
AUTO - FLUSH SYSTEM (AFVFP-INLETS) AGRI DRAIN SMART DRAINAGE SYSTEM®

NOTE: POSITION THE SMART DRAIN SYSTEMS SO THEY WILL FIT WITH THE 3 WAY FLOW SPLITTING PRE-CAST HOUSING. SPECIAL ORDER STAINLESS STEEL CORNER PIECES, DUE TO CORROSIVE WATER. ONCE PER DAY PROGRAMMABLE FLUSHING CAPABILITY.



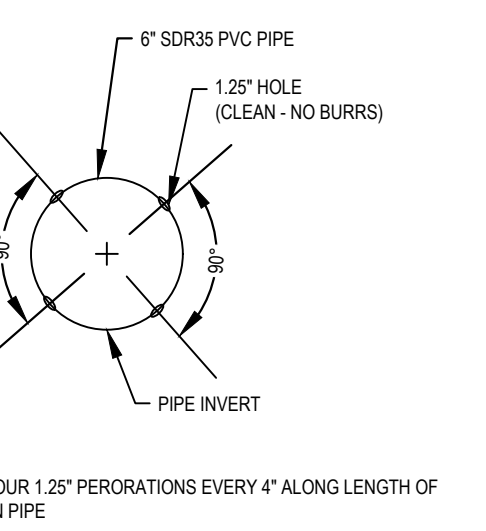
DRAIN VALVE / PROTECTION STRUCTURE (TYPICAL)

Horizontal Scale: None Vertical Scale: None



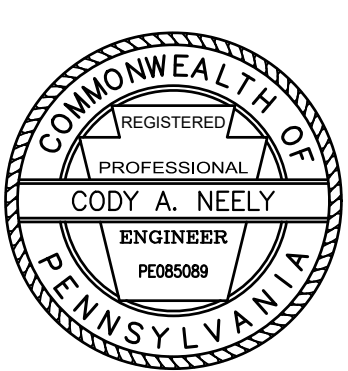
TOE DRAIN (TYPICAL)

Horizontal Scale: None Vertical Scale: None



TOE DRAIN PIPE PERFORATION DETAIL

Horizontal Scale: None Vertical Scale: None



SHEET 3 of 3

System Design / Details

DETAILS

OVEN RUN B

PASSIVE TREATMENT SYSTEM

REDESIGN AND CONSTRUCTION

for

PA DEP & S.C.R.I.P.

Oven Run Watershed

Shade Township, Somerset County, PA

Scale: As Shown January 2021

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Mars, PA www.biomost.com

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