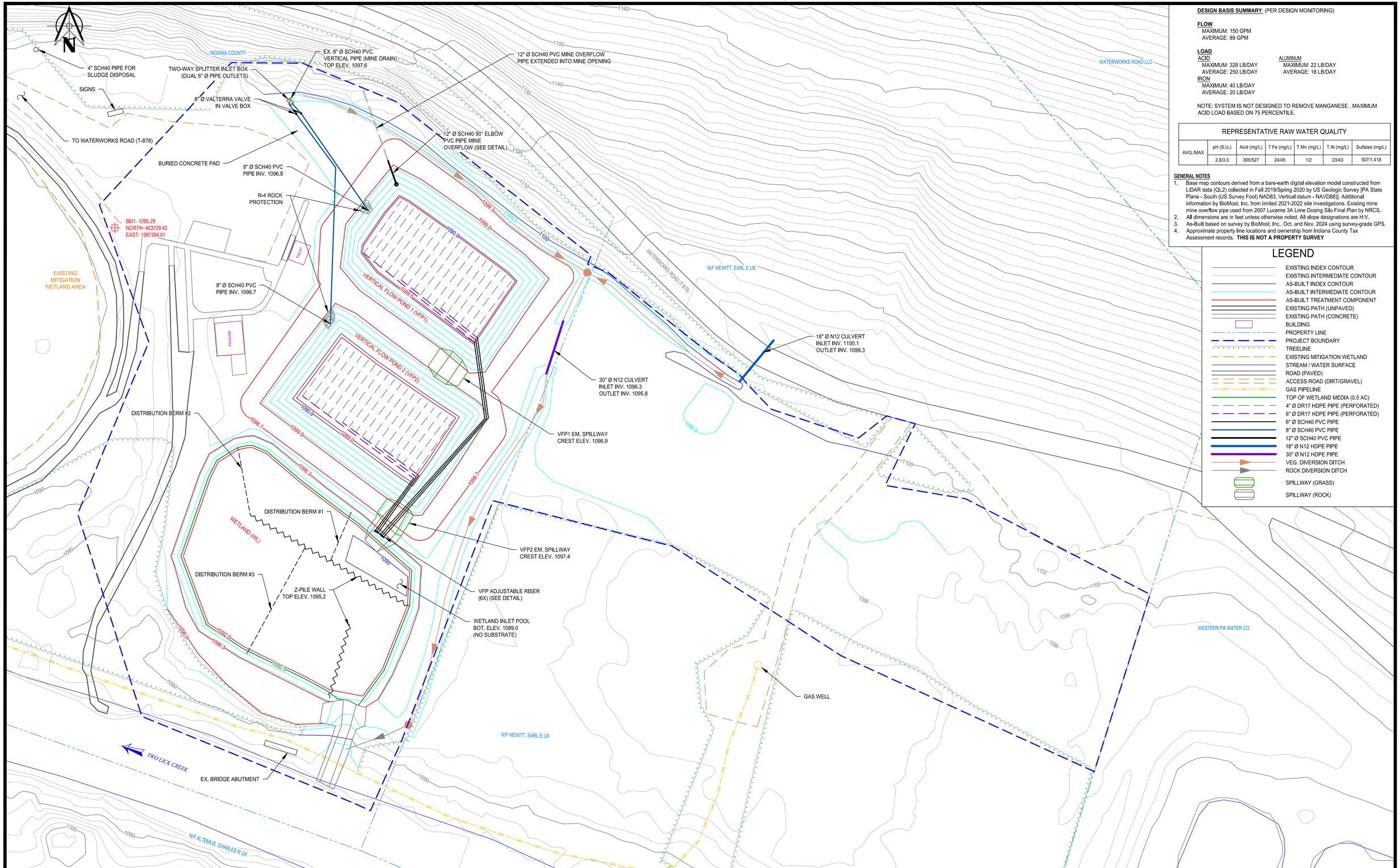

DESIGN BASIS SUMMARY: (PER DESIGN MONITORING)

FLOW
MAXIMUM: 150 GPM
AVERAGE: 89 GPM

LOAD

ACID	ALUMINUM
MAXIMUM: 328 LB/DAY	MAXIMUM: 22 LB/DAY
AVERAGE: 250 LB/DAY	AVERAGE: 18 LB/DAY

IRON
MAXIMUM: 40 LB/DAY
AVERAGE: 20 LB/DAY

NOTE: SYSTEM IS NOT DESIGNED TO REMOVE MANGANESE . MAXIMUM ACID LOAD BASED ON 75 PERCENTILE.

REPRESENTATIVE RAW WATER QUALITY

AVG./MAX	pH (S.U.)	Acid (mg/L)	T Fe (mg/L)	T Mn (mg/L)	T Al (mg/L)	Sulfates (mg/L)
	2.8/3.0	306/527	24/45	1/2	23/43	507/1,418

GENERAL NOTES
1. Base map contours derived from a bare-earth digital elevation model constructed from LiDAR data (QL2) collected in Fall 2019/Spring 2020 by US Geologic Survey [PA State Plane - South (US Survey Foot) NAD83, Vertical datum - NAVD88)]. Additional information by BioMost, Inc. from limited 2021-2022 site investigations. Existing mine mine overflow pipe used from 2007 Lucerne 3A Lime Dosing Silo Final Plan by NRCS.
2. All dimensions are in feet unless otherwise noted. All slope designations are H:V.
3. As-Built based on survey by BioMost, Inc., Oct. and Nov. 2024 using survey-grade GPS.
4. Approximate property line locations and ownership from Indiana County Tax Assessment records. **THIS IS NOT A PROPERTY SURVEY**

LEGEND

- EXISTING INDEX CONTOUR
- EXISTING INTERMEDIATE CONTOUR
- AS-BUILT INDEX CONTOUR
- AS-BUILT INTERMEDIATE CONTOUR
- AS-BUILT TREATMENT COMPONENT
- EXISTING PATH (UNPAVED)
- EXISTING PATH (CONCRETE)
- BUILDING
- PROPERTY LINE
- PROJECT BOUNDARY
- TREELINE
- EXISTING MITIGATION WETLAND
- STREAM / WATER SURFACE
- ROAD (PAVED)
- ACCESS ROAD (DIRT/GRAVEL)
- GAS PIPELINE
- TOP OF WETLAND MEDIA (0.5 AC)
- 4" Ø DR17 HDPE PIPE (PERFORATED)
- 6" Ø DR17 HDPE PIPE (PERFORATED)
- 6" Ø SCH40 PVC PIPE
- 8" Ø SCH40 PVC PIPE
- 12" Ø SCH40 PVC PIPE
- 18" Ø N12 HDPE PIPE
- 30" Ø N12 HDPE PIPE
- VEG. DIVERSION DITCH
- ROCK DIVERSION DITCH
- SPILLWAY (GRASS)
- SPILLWAY (ROCK)

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OFFICE PH: 1-724-471-4751

NO.	BY	DATE	DESCRIPTION

REVISIONS

COMMONWEALTH OF PENNSYLVANIA — REGISTERED PROFESSIONAL ENGINEER — CODY A. NEELY — PE085089

SIGNATURE / DATE
SUBMITTED BY:
CODY A. NEELY, P.E.
PROJECT DESIGNER - BioMost, Inc.

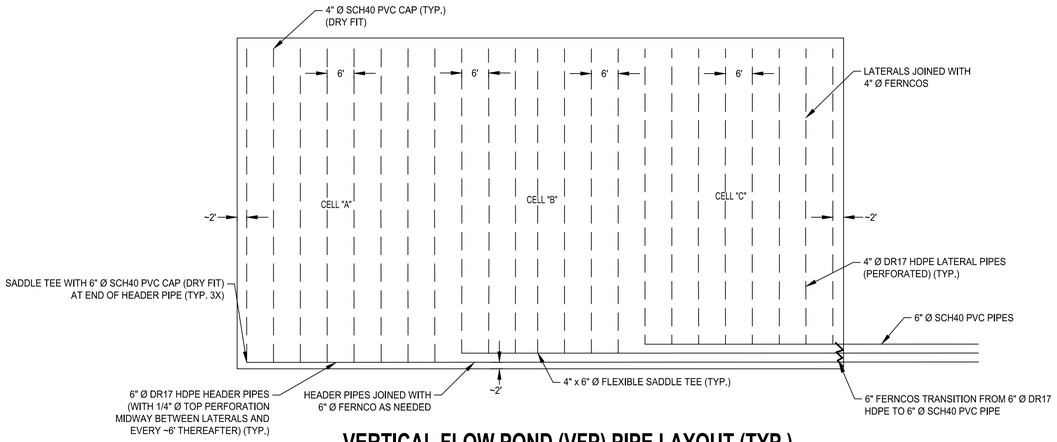
DATE: 12/06/2024
LATITUDE: 40.597855
LONGITUDE: -79.122033
SCALE: 1" = 30'
30' 15' 0 30'
DRAWN BY: LVH
CHECKED BY: TPD
UNLESS OTHERWISE NOTED
ACAD FILE NAME: 3080AB.dwg
ALL EXISTING CONDITIONS SHALL BE CHECKED AND VERIFIED BY THE CONTRACTOR AT THE SITE AS APPLICABLE

LUCERNE 3A / WATERWORKS PASSIVE TREATMENT SYSTEM

WHITE TOWNSHIP — INDIANA, PA

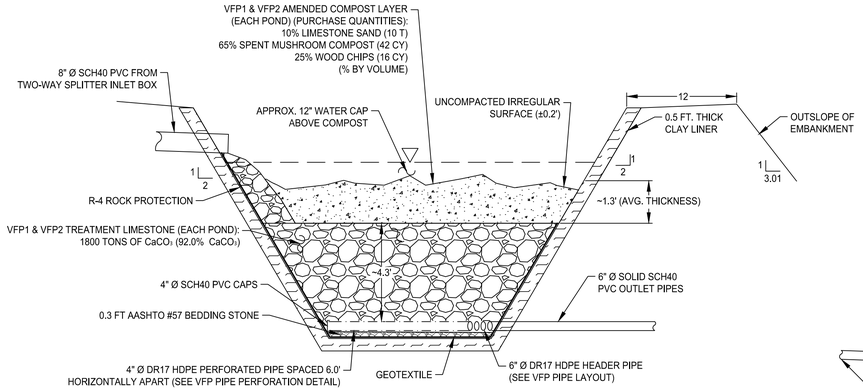
AS-BUILT PLAN

DRAWING NUMBER: 1 of 2



VERTICAL FLOW POND (VFP) PIPE LAYOUT (TYP.)

Horizontal Scale: None Vertical Scale: None



VERTICAL FLOW POND (VFP1 & VFP2)

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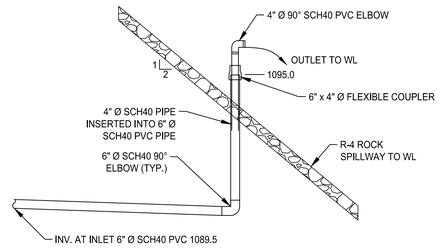

VFP ADJUSTABLE RISER OUTLET

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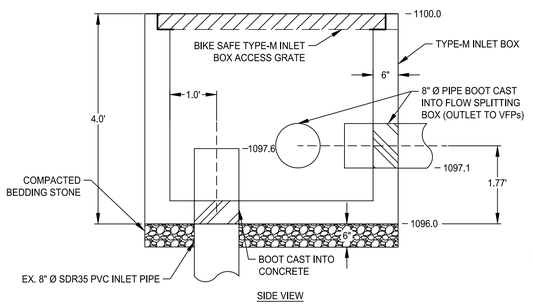

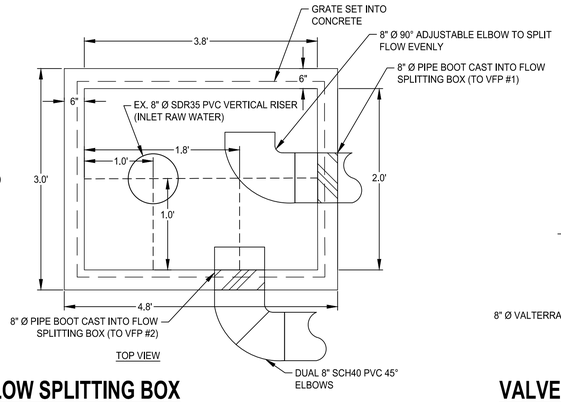

TWO-WAY FLOW SPLITTING BOX

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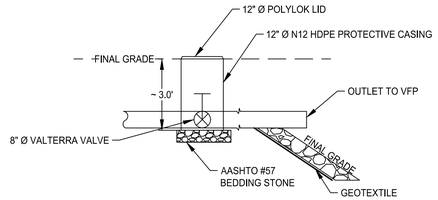

VALVE WITH PROTECTION STRUCTURE (TYP.)

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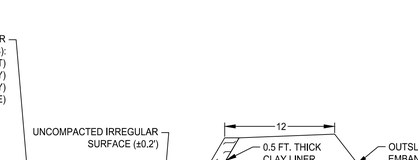
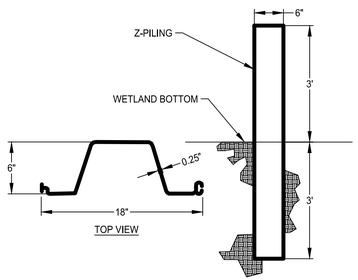


VFP HDPE PIPE PERFORATION

Horizontal Scale: None Vertical Scale: None

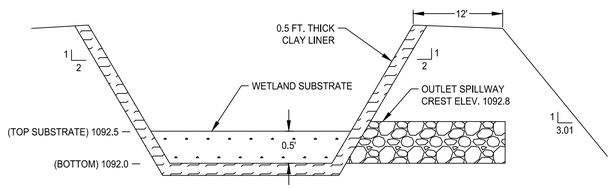
VFP1 MINE OVERFLOW PIPE

Horizontal Scale: None Vertical Scale: None



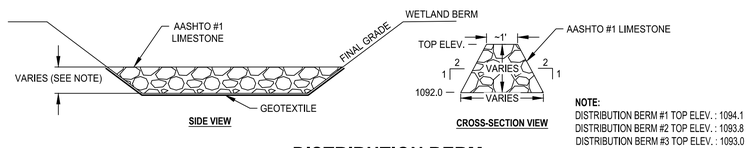
PVC Z-PILING

Horizontal Scale: None Vertical Scale: None



WETLAND (WL)

Horizontal Scale: None Vertical Scale: None



NOTE:
DISTRIBUTION BERM #1 TOP ELEV. : 1094.1
DISTRIBUTION BERM #2 TOP ELEV. : 1093.8
DISTRIBUTION BERM #3 TOP ELEV. : 1093.0

DISTRIBUTION BERM

Horizontal Scale: None Vertical Scale: None

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LUCERNE 3A / WATERWORKS
PASSIVE TREATMENT SYSTEM
WHITE TOWNSHIP INDIANA, PA

AS-BUILT DETAIL SHEET

DRAWING NUMBER: 2 of 2