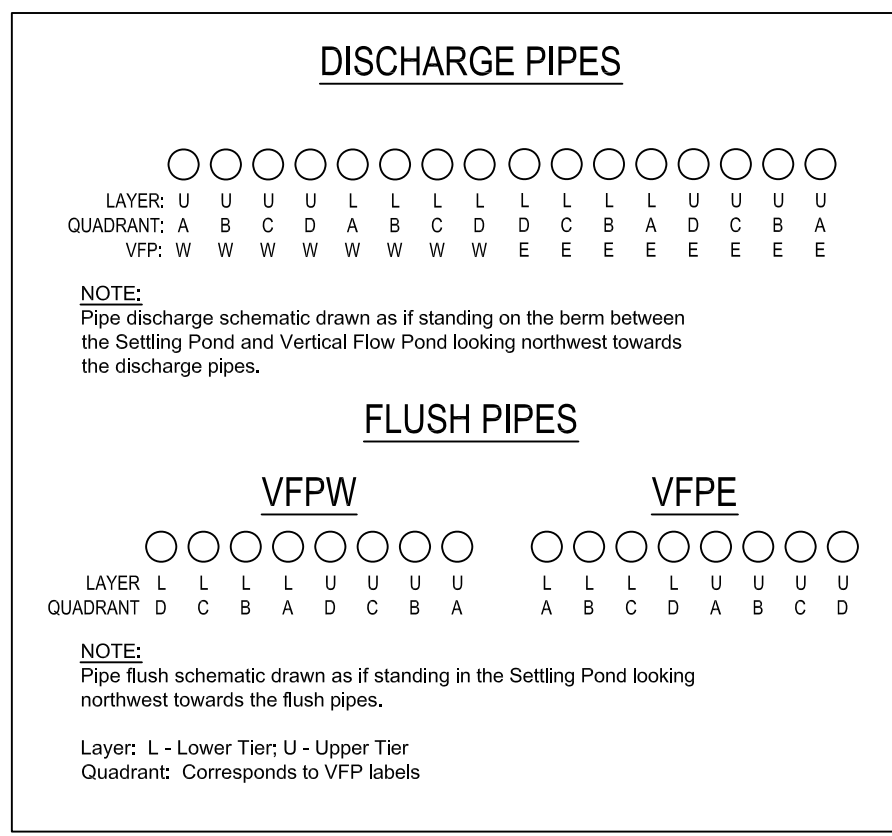


NOTE: MOST POST-CONSTRUCTION CONTOURS NOT SHOWN
 POST-CONSTRUCTION CONTOURS TO BE SHOWN ON FINAL AS-BUILT PLAN
 ONLY LOWER TIER UNDERDRAIN SHOWN - UPPER TIER IS CONSTRUCTED IN SIMILAR MANNER WITH 30' LATERALS
 UPPER TIER UNDERDRAIN WILL BE SHOWN ON FINAL AS-BUILT PLAN.

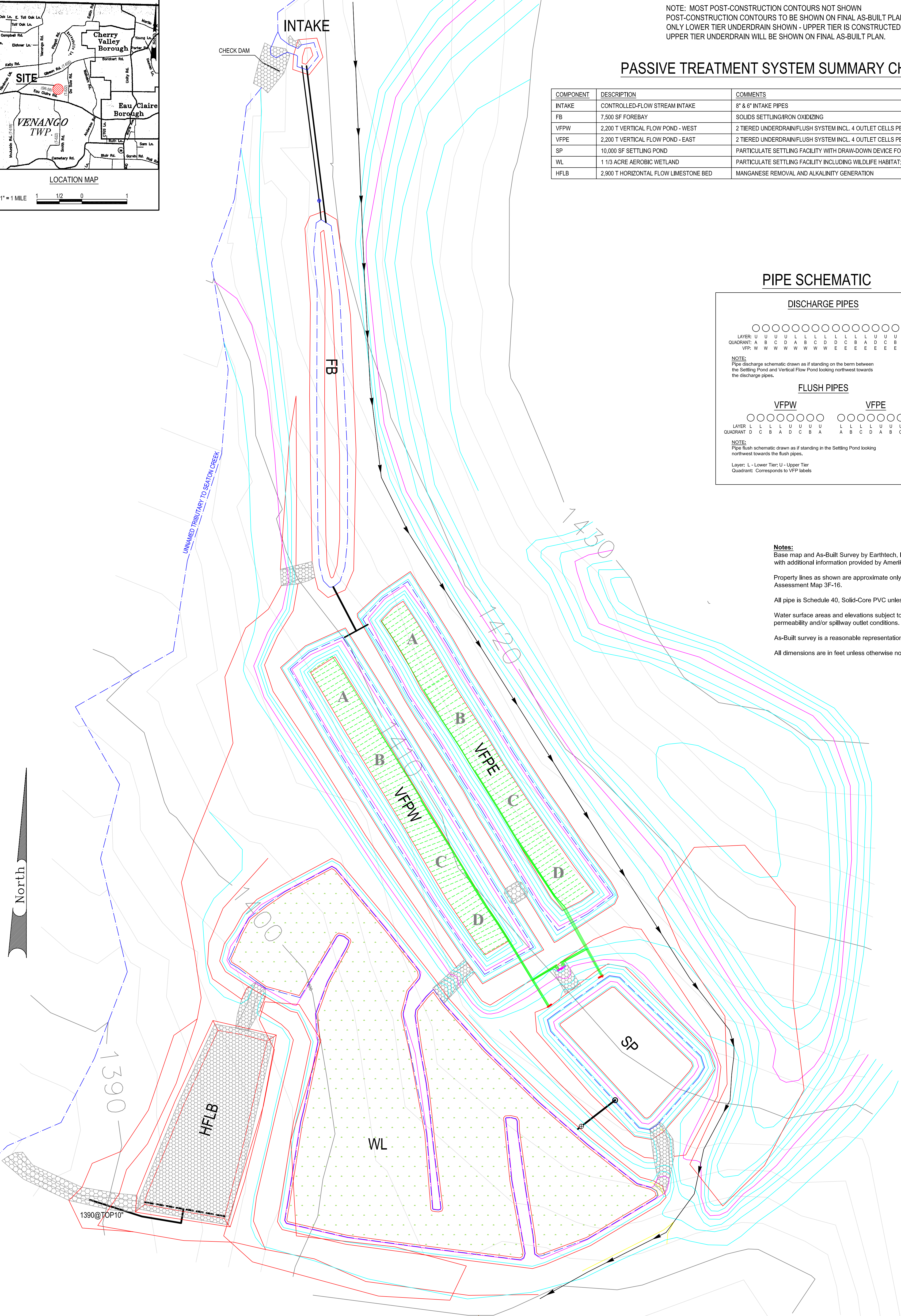
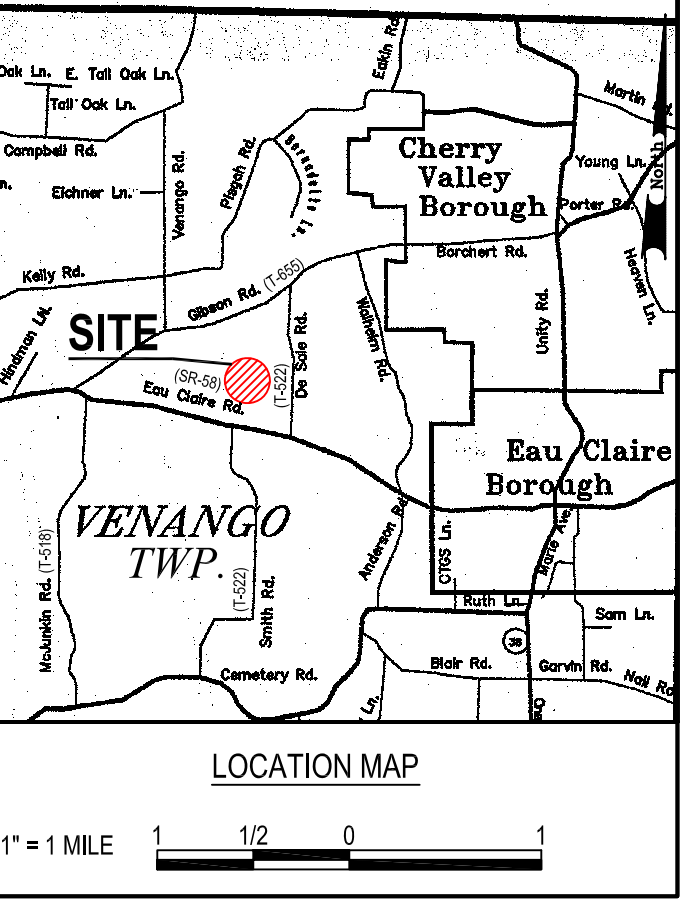
PASSIVE TREATMENT SYSTEM SUMMARY CHART

COMPONENT	DESCRIPTION	COMMENTS
INTAKE	CONTROLLED-FLOW STREAM INTAKE	8" & 6" INTAKE PIPES
FB	7,500 SF FOREBAY	SOLIDS SETTLING/IRON OXIDIZING
VFPW	2,200 T VERTICAL FLOW POND - WEST	2 TIERED UNDERDRAIN/FLUSH SYSTEM INCL. 4 OUTLET CELLS PER TIER; 90% CCE LS
VFPE	2,200 T VERTICAL FLOW POND - EAST	2 TIERED UNDERDRAIN/FLUSH SYSTEM INCL. 4 OUTLET CELLS PER TIER; 90% CCE LS
SP	10,000 SF SETTLING POND	PARTICULATE SETTLING FACILITY WITH DRAW-DOWN DEVICE FOR FLUSH EVENTS
WL	1 1/3 ACRE AEROBIC WETLAND	PARTICULATE SETTLING FACILITY INCLUDING WILDLIFE HABITAT; APPX 1050 CY WETLAND SUBSTRATE
HFLB	2,900 T HORIZONTAL FLOW LIMESTONE BED	MANGANESE REMOVAL AND ALKALINITY GENERATION

PIPE SCHEMATIC



Notes:
 Base map and As-Built Survey by Earthtech, Inc. from EDM surveys 4/00 through 9/00 with additional information provided by Amerikohl Mining, Inc. and BioMost, Inc.
 Property lines as shown are approximate only. Locations based on Butler County Tax Assessment Map 3F-16.
 All pipe is Schedule 40, Solid-Core PVC unless otherwise noted.
 Water surface areas and elevations subject to change based on passive component permeability and/or spillway outlet conditions.
 As-Built survey is a reasonable representation of field conditions.
 All dimensions are in feet unless otherwise noted.



LEGEND

- PASSIVE SYSTEM COMPONENT
- CONTOUR - INDEX (POST-CONSTRUCTION)
- CONTOUR - INTERMEDIATE (POST-CONSTRUCTION)
- WATER
- UNIMPROVED ROAD
- 4" PVC SCH 40 SOLID (UPPER TIER)
- 4" PVC SCH 40 PERFORATED (UPPER TIER)
- 4" PVC SCH 40 SOLID (LOWER TIER)
- 4" PVC SCH 40 PERFORATED (LOWER TIER)
- 10" SCH 40 PVC SOLID
- 10" SCH 40 PVC PERFORATED
- 8" PVC SCH 40 SOLID
- 6" PVC SCH 40 SOLID
- PROPERTY LINE (APPX.)
- CONTOUR - INDEX (PRE-CONSTRUCTION)
- CONTOUR - INTERMEDIATE (PRE-CONSTRUCTION)
- CONSTRUCTED WETLAND AREA
- RIP RAP (R-4)
- 30" CMP CULVERT
- 10" PERFORATED RISER
- 10" VALVE
- 6" VALVE
- 4" VALVE
- ADJUSTABLE OUTLET RISER
- WATER SAMPLE POINT
- UNDERDRAIN QUADRANT
- DIVERSION DITCH

PIPE DATA CHART

LATERAL LOCATION	LENGTH
VFPE & VFPW LOWER TIER	25'
VFPE & VFPW UPPER TIER	30'



SHEET 1 OF 2 - PLAN VIEW

**AS-BUILT (WORKING DRAWING)
 PASSIVE TREATMENT SYSTEM
 DE SALE RESTORATION AREA
 PHASE II**

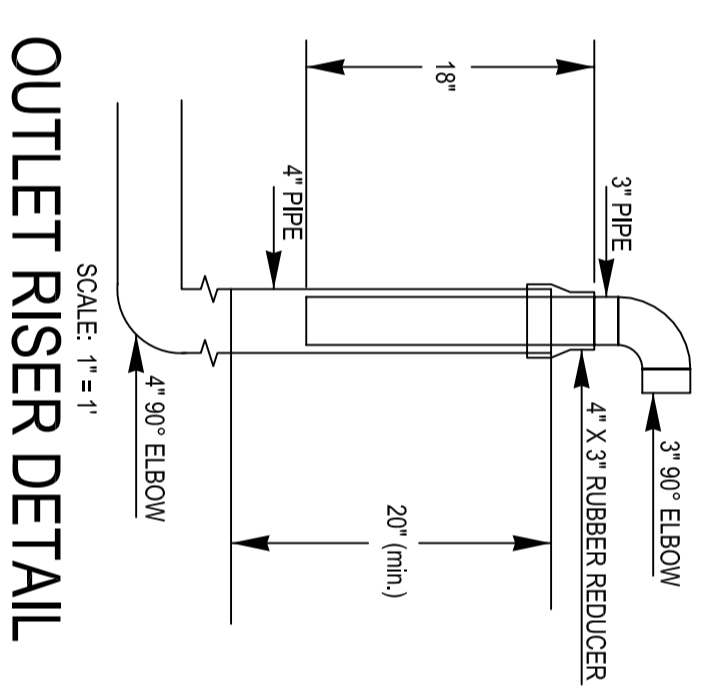
Venango Township
 Butler County, PA

Slippery Rock Watershed Coalition
 in cooperation with
 Stream Restoration Incorporated

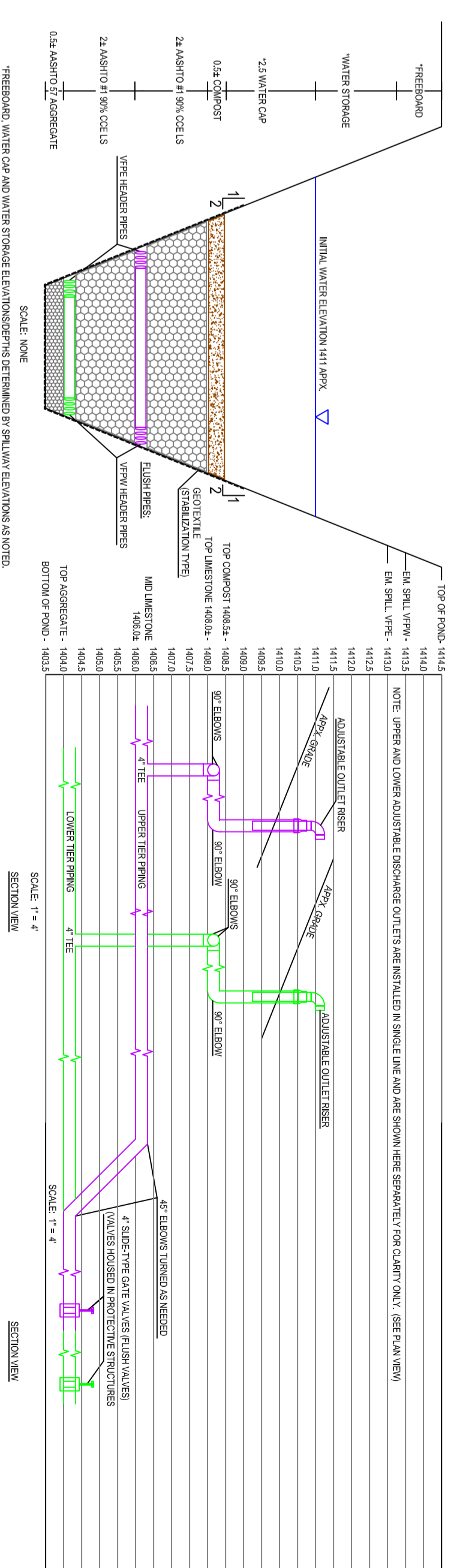
Scale: 1" = 40' Date: 6/2002
 BioMost, Inc., Cranberry Twp., PA



CHECK DAM UPSTREAM VIEW



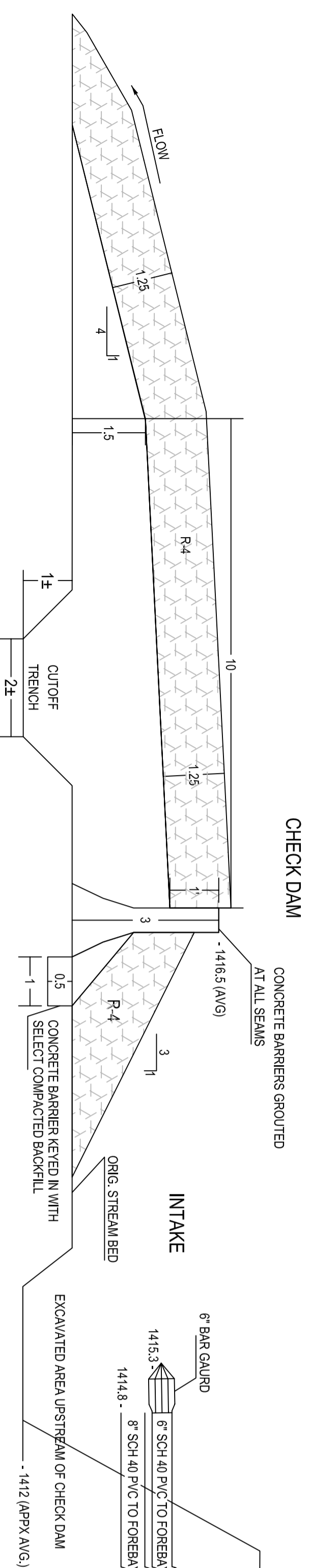
OUTLET RISER DETAIL



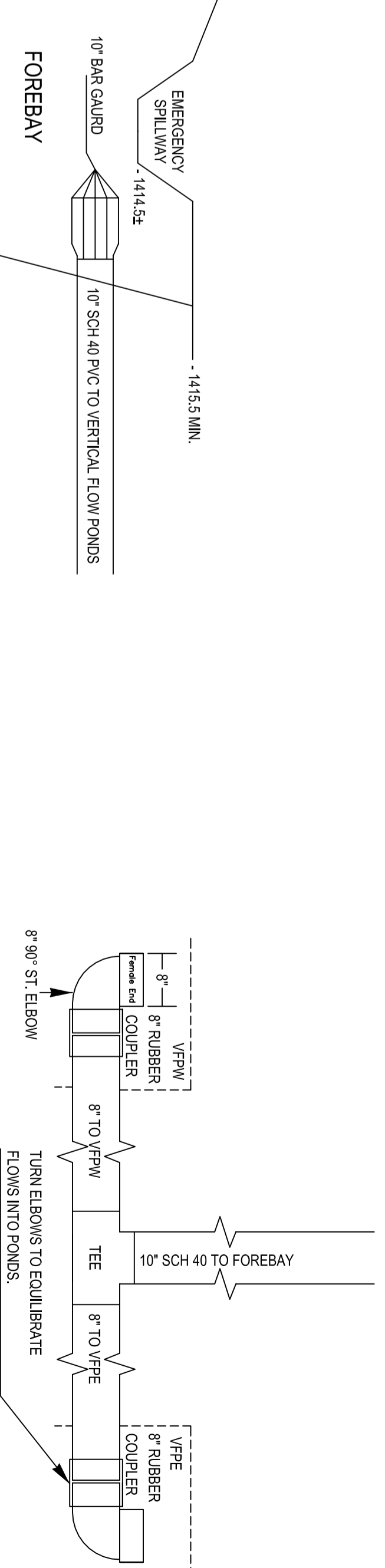
VERTICAL FLOW POND SECTION

OUTLET RISER SECTION

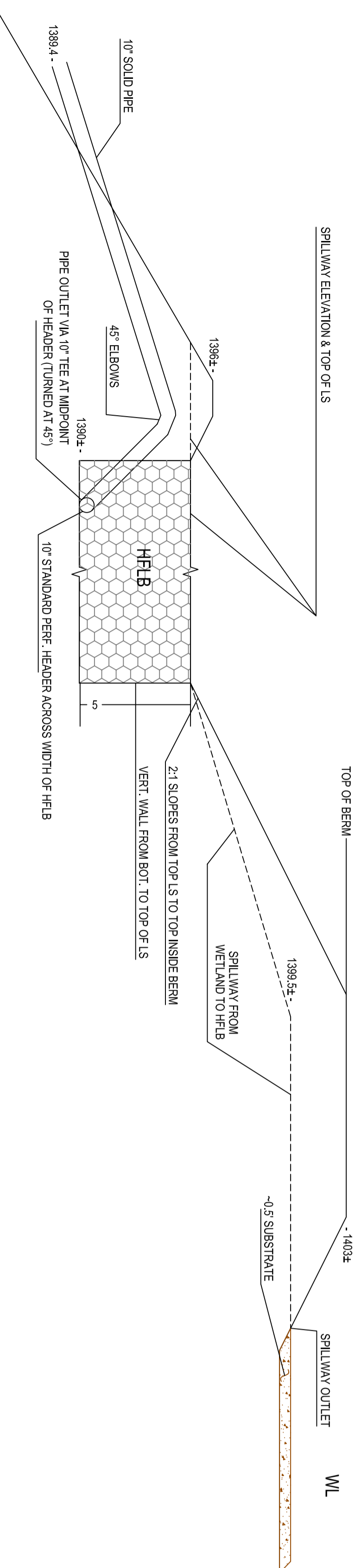
FLUSH SYSTEM SECTION



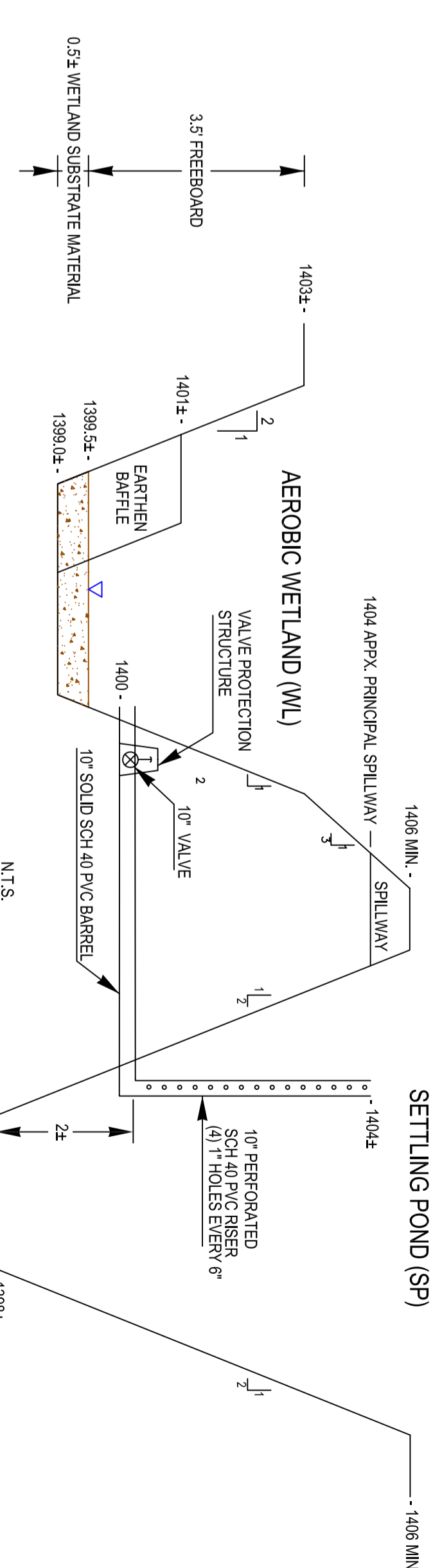
CHECK DAM SIDE VIEW



VFP INLET CONTROL DETAILS



HFLB & WL SECTION



SETTLING POND - WETLAND SECTION

SHEET 2 OF 2 - DETAILS

NOTES:

1. Easement and As-Built Survey by Earthtech, Inc. from EDM surveys 4100 through 9100 with additional information provided by Ameritech Mining, Inc. and Balfors, Inc. Property lines as shown are approximate only. Locations based on Butler County Tax Assessment Map 9F-16.

2. All pipe is Schedule 40, Solid-Core PVC unless otherwise noted.

3. Water surface areas and elevations subject to change based on passive component permeability and/or spillway outlet conditions.

4. As-Built survey is a reasonable representation of field conditions.

5. All dimensions are in feet unless otherwise noted.

AS-BUILT (WORKING DRAWING)
PASSIVE TREATMENT SYSTEM
DE SALE RESTORATION AREA
PHASE II

Venango Township
Butler County, PA
Slippery Rock Watershed Coalition
in cooperation with
Stream Restoration Incorporated

Scale: 1" = 30'
Date: 6/20/02
Brooktech, Inc., Cambridge Twp., PA

101004682