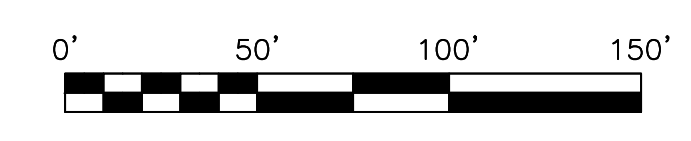


**ENLARGEMENT PLAN**  
SCALE: 1" = 10'

- NOTE:
1. THE PROPOSED LIME DOSER SILO UNIT AND CONCRETE SLAB SHALL BE AS DESIGNED BY OTHERS. GENERAL DIMENSIONS PROVIDED BY THE MANUFACTURER WERE USED IN CREATING THIS SITE PLAN.
  2. THE 3" HYDRAULIC FEED LINE SHALL BE SPLIT PRIOR TO ENTERING OR INSIDE THE SILO UNIT (SEE DETAIL ON SHEET C-3). THE VALVED SPLIT FLOW SHALL BE REDUCED TO A 2" FLEXIBLE HOSE LINE WITH A 1" VALVE AND NOZZLE ON THE END FOR USE IN CLEANING THE CONCRETE CHANNELS AND LIME DOSER EQUIPMENT AS NEEDED.
  3. THE PROPOSED POLISHING WETLAND SHALL BE PLANTED WITH CATTAILS FOR VEGETATION ESTABLISHMENT WITHIN THE WETTED AREAS UP TO ELEVATION 995.5.
  4. THE LIMIT OF DISTURBANCE FOR THIS PROJECT IS INCLUDED IN THE NPDES PERMIT THAT WAS APPROVED FOR THE FILL DISPOSAL AREA AND BIG RUN #8 PROJECTS. HOWEVER, THE ESTIMATED AREA INCLUDED IN THE PERMIT APPLICATION IS APPROXIMATELY 0.5 ACRES SMALLER THAN THE DISTURBED AREA SHOWN FOR THE PROPOSED BIG RUN #3 SYSTEM.



FILE:W:\Projects\2009 Projects\R09-0236 BCWA Big Run #3 AMD\Drawings\CADD\BR #3\_brs FINAL DESIGN June 2010.dwg

PROJECT NO.	R09-0236
DATE	JUNE 15 2010

PROJECT: R09-0236

CLIENT: SKELLY AND LOY, INC.  
ENGINEERS-ENVIRONMENTAL CONSULTANTS  
449 EISENHOWER BOULEVARD, SUITE 300  
HARRISBURG, PENNSYLVANIA 17111  
(717)232-0593 (800)892-6532 FAX (717)232-1799

ISSN	DATE
B.P.S.	6/15/10
D.T.S.M.	6/15/10
C.H.R.	6/15/10
T.W.S.	6/15/10
APPY	

SCALE: 1" = 50'

REV	DESCRIPTION	BY	DATE

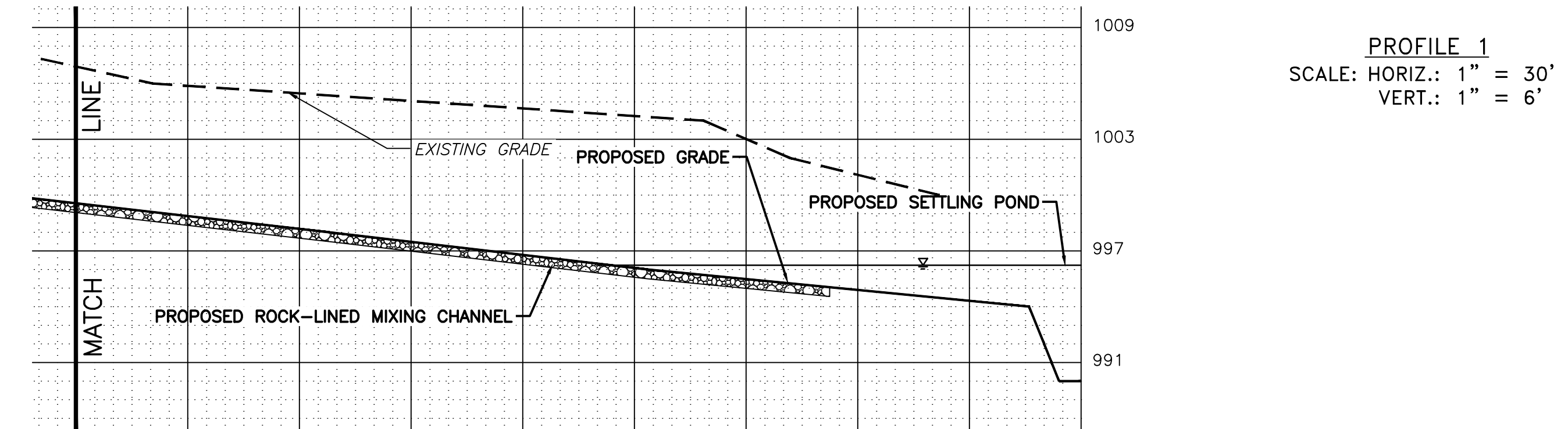
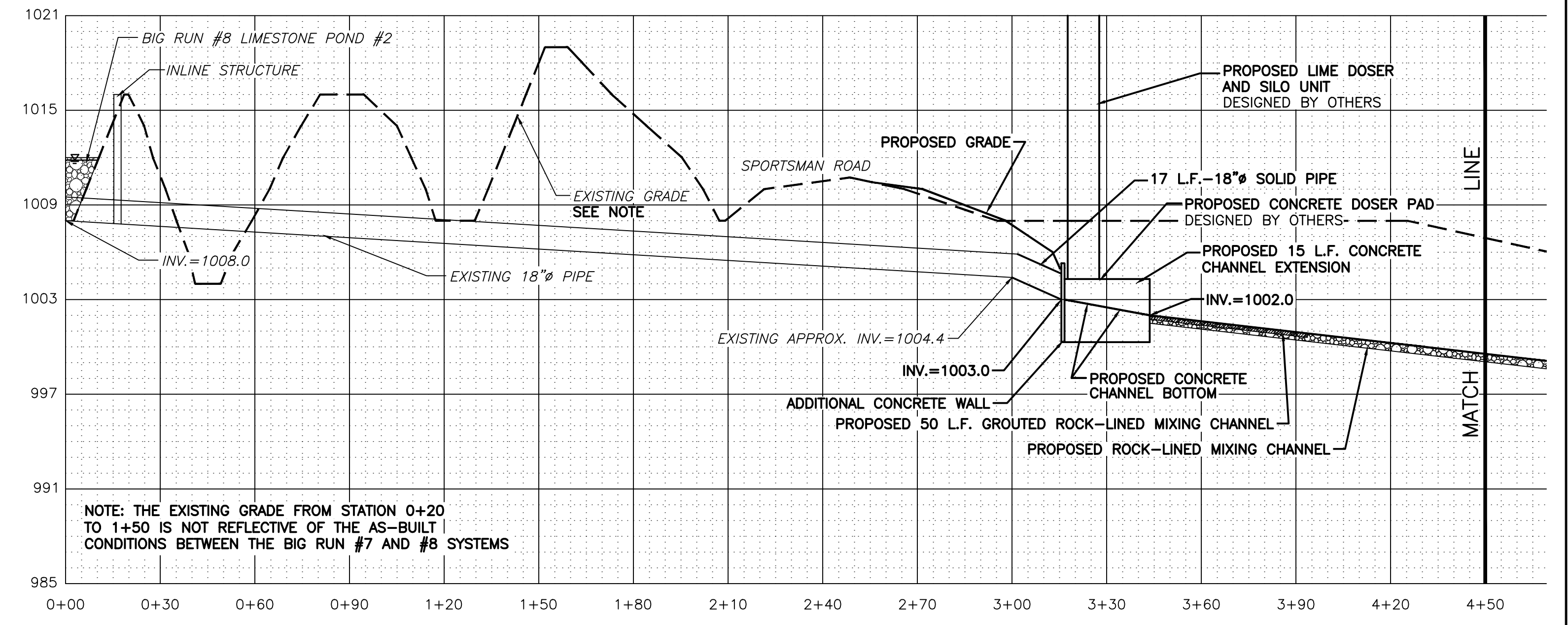
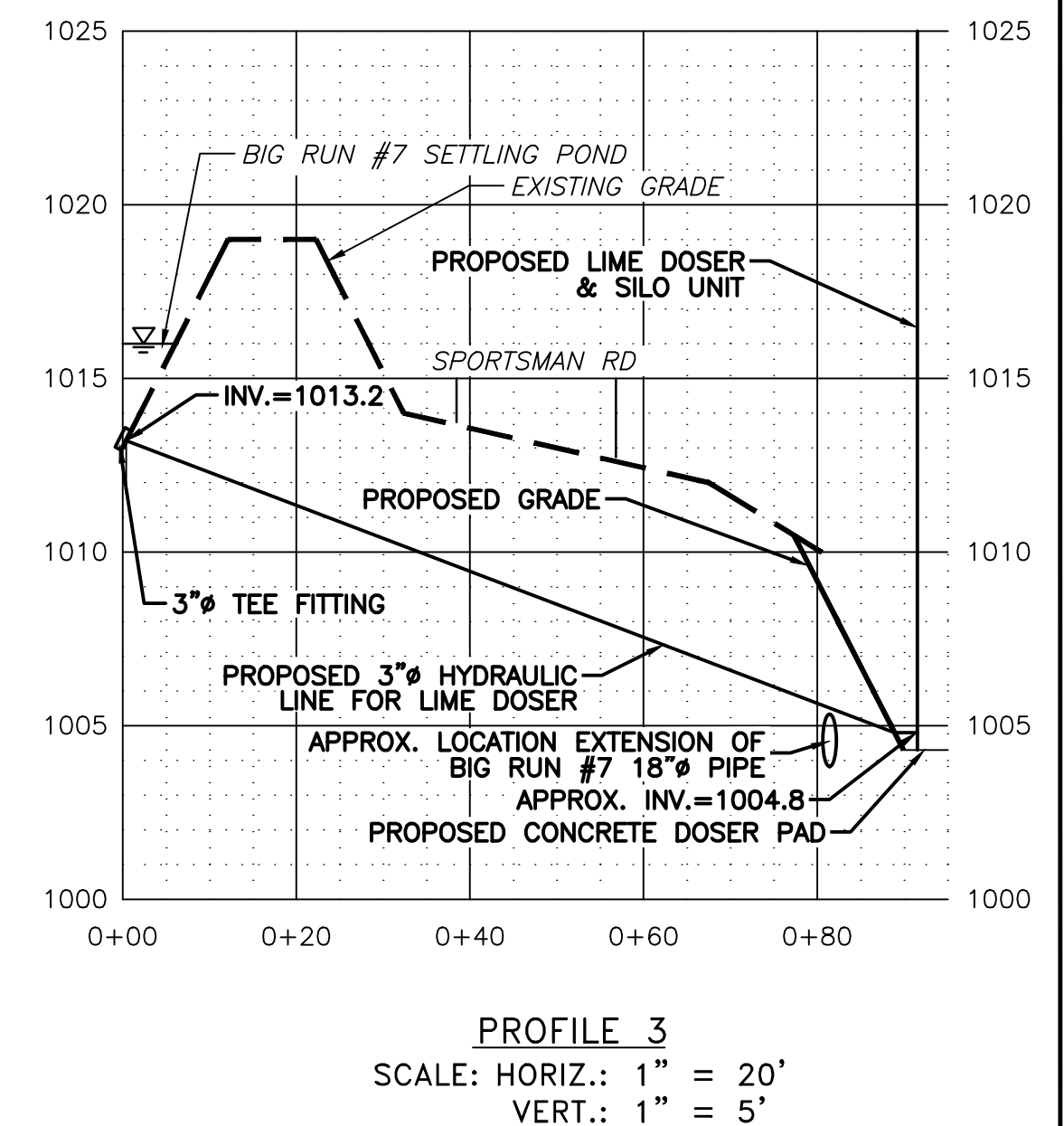
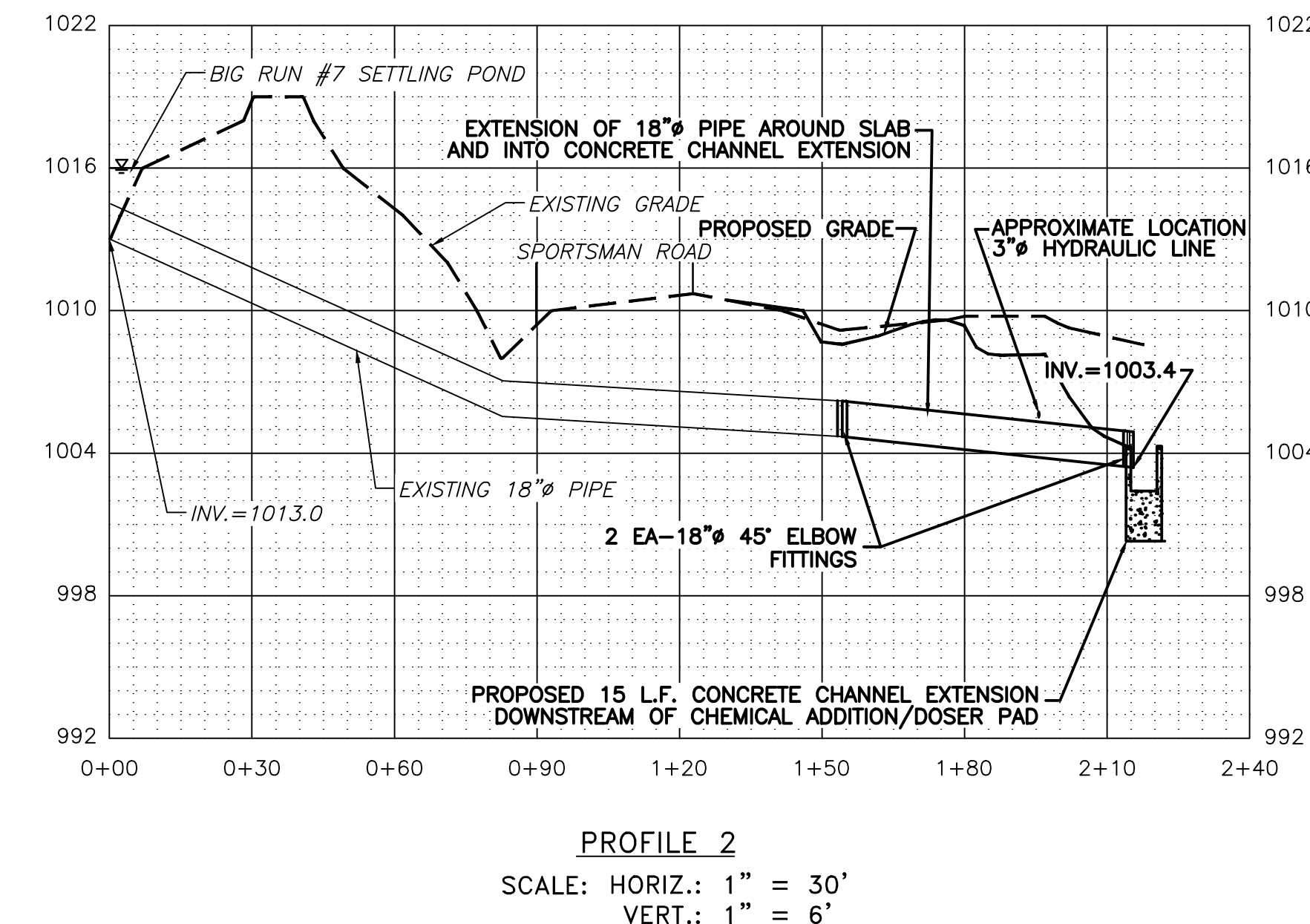
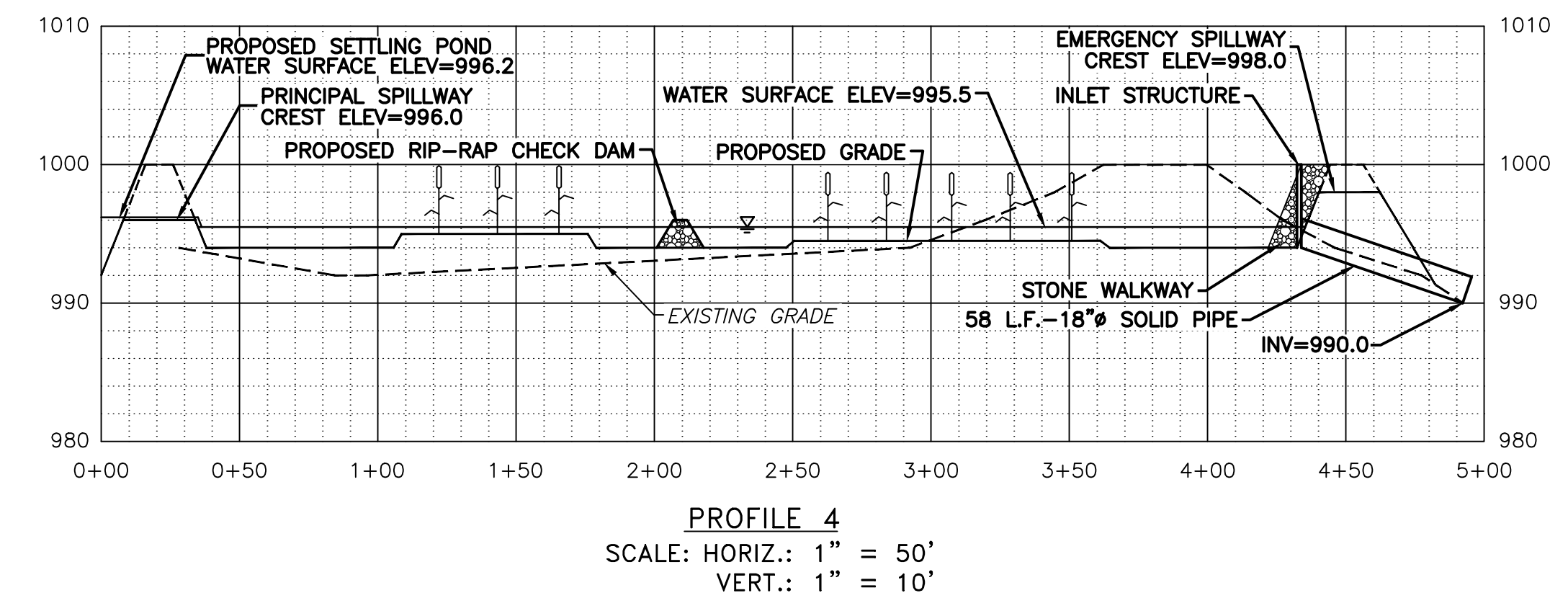
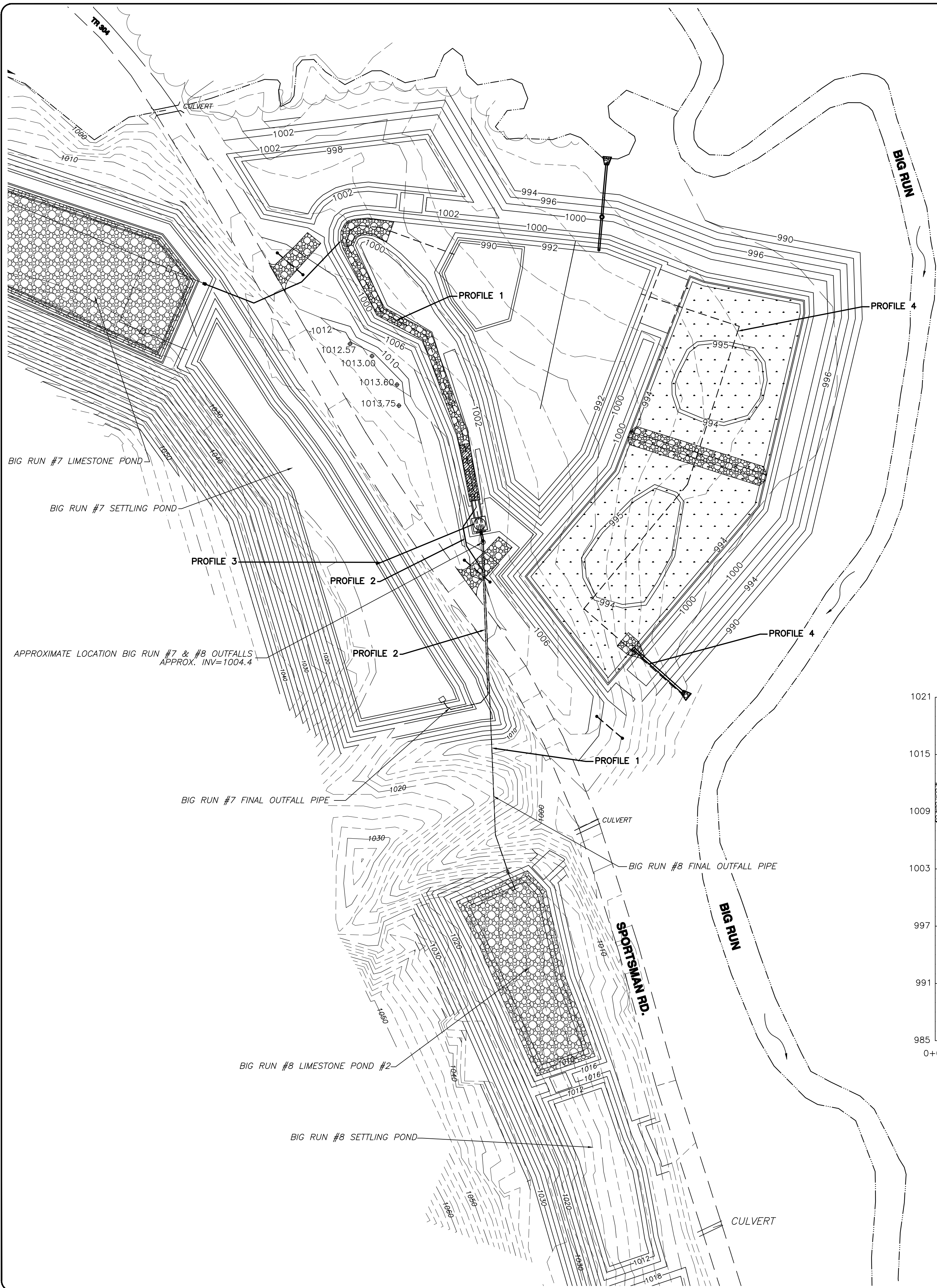
DRAWING NO. **C-1**

SHEET 1 OF 5

"PLAN" FOR **BLACKLEGS CREEK WATERSHED ASSOC.**  
BIG RUN #3 AND REMEDIATION SYSTEM  
INDIANA COUNTY, PA  
CONEMAUGH TOWNSHIP

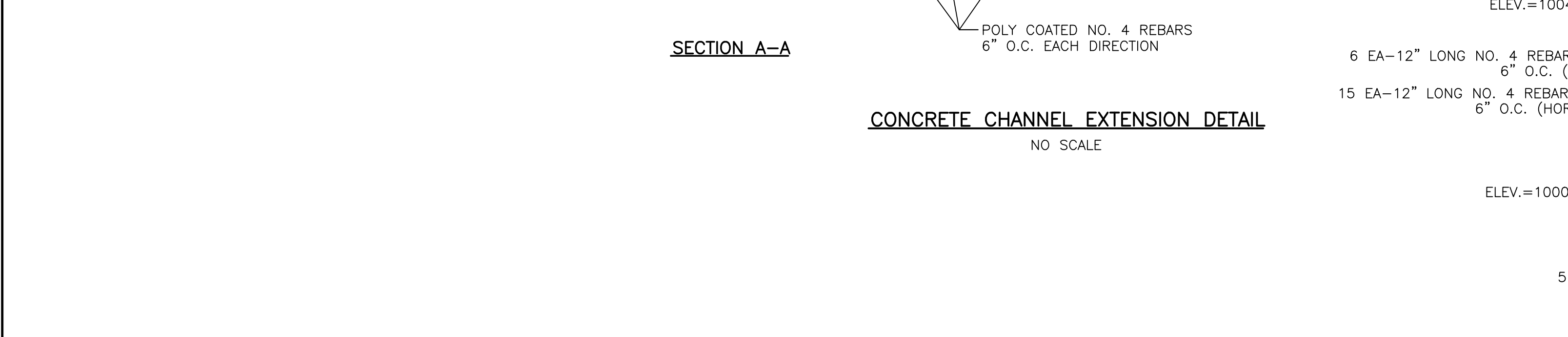
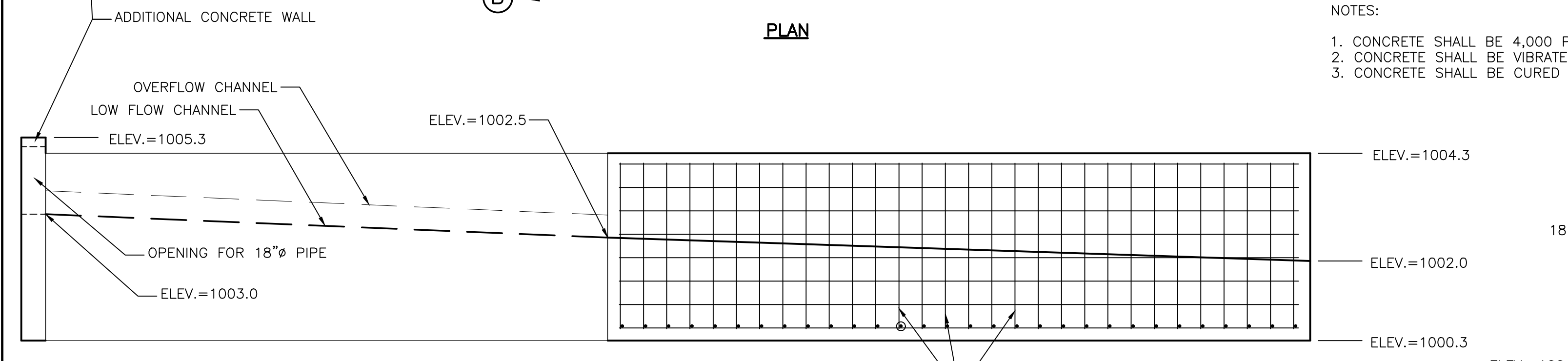
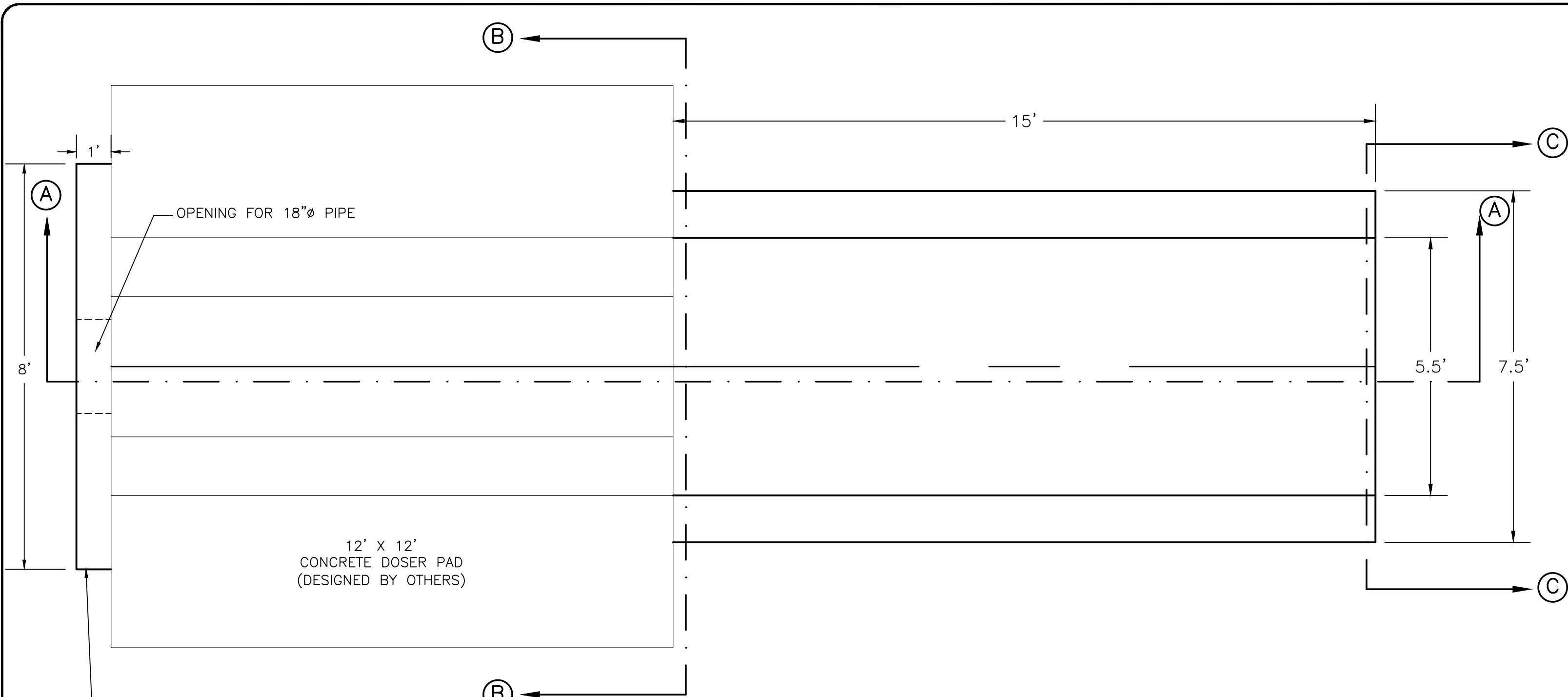
**FINAL ENGINEERING DESIGN SITE PLAN**



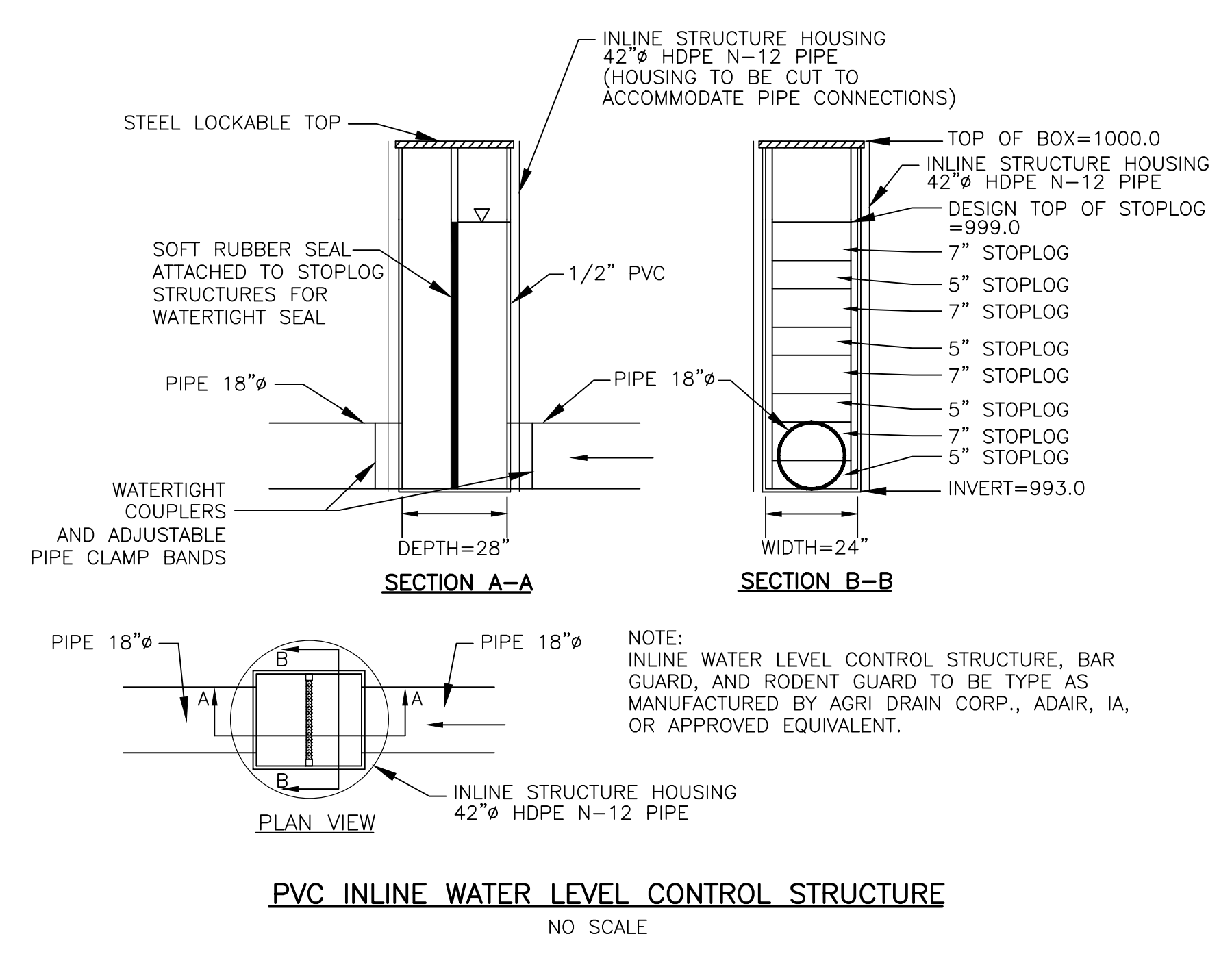
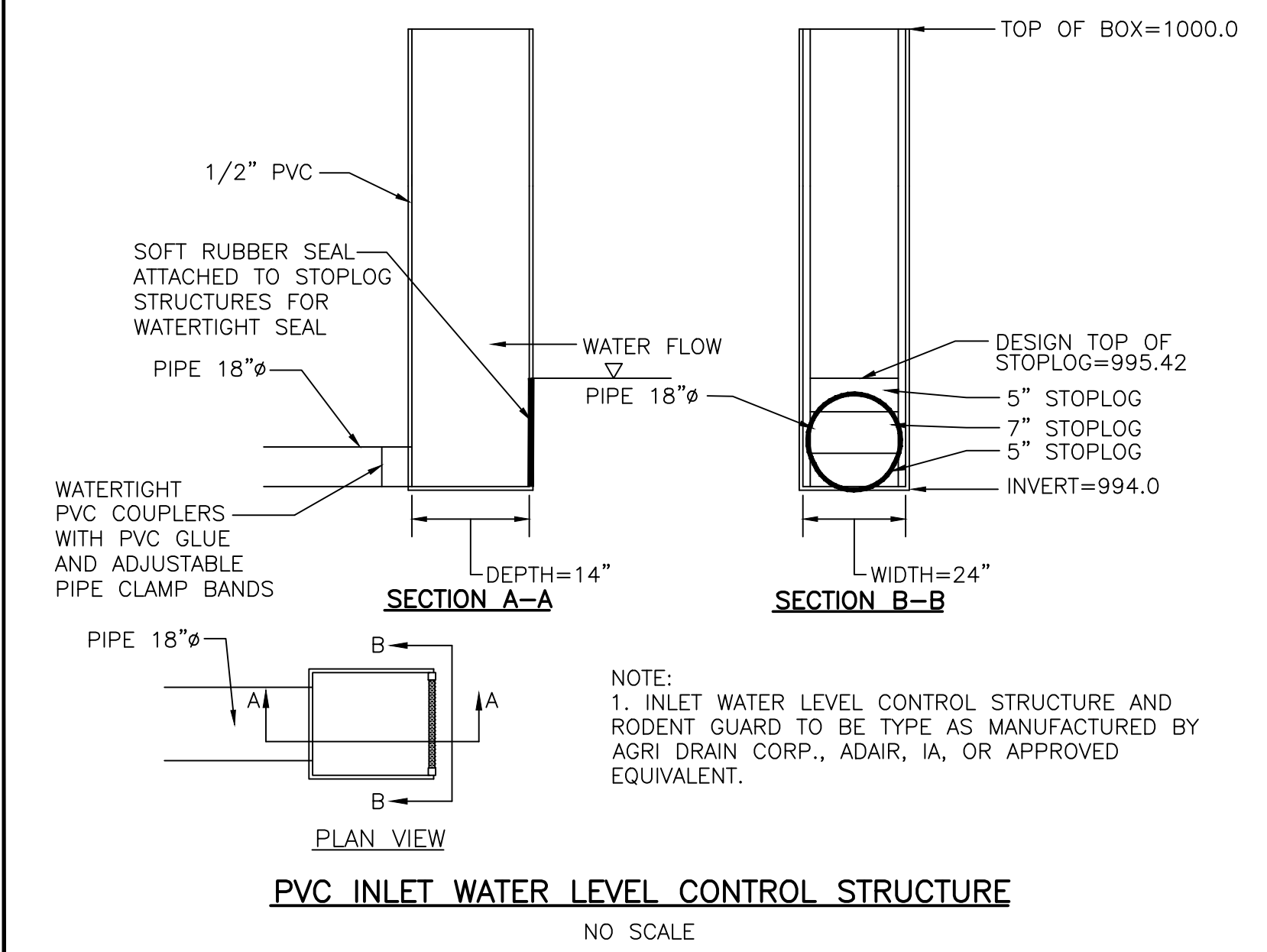
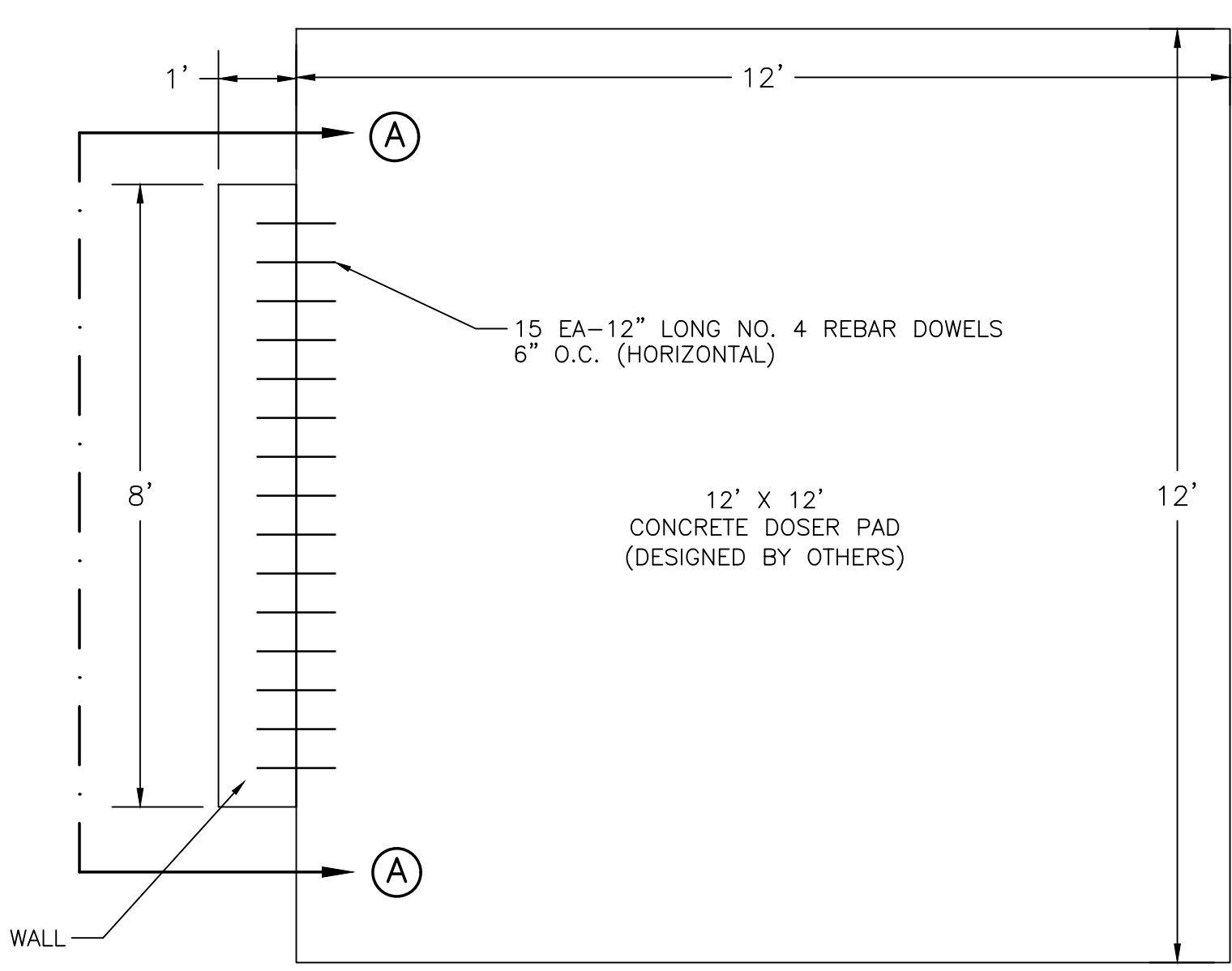
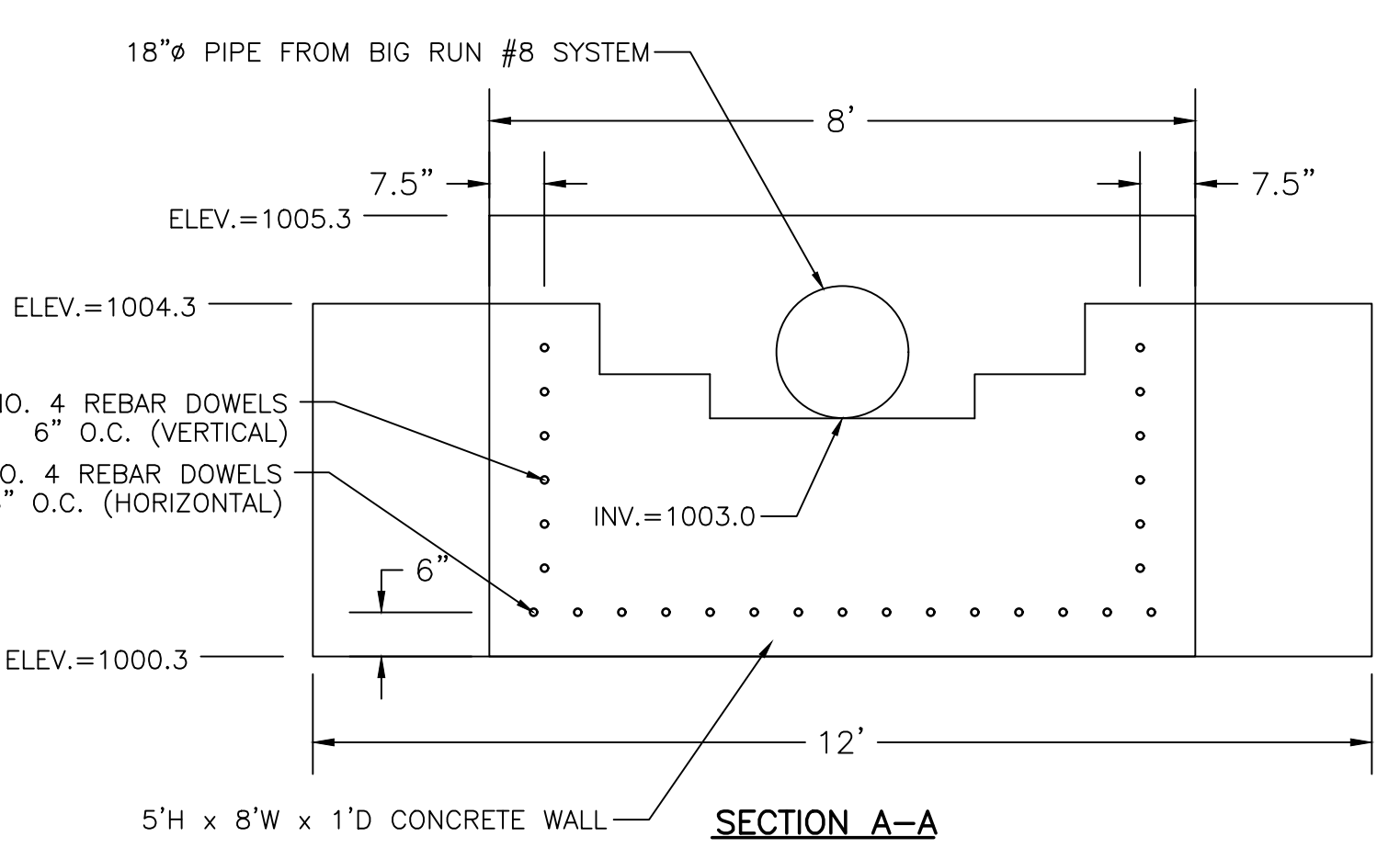
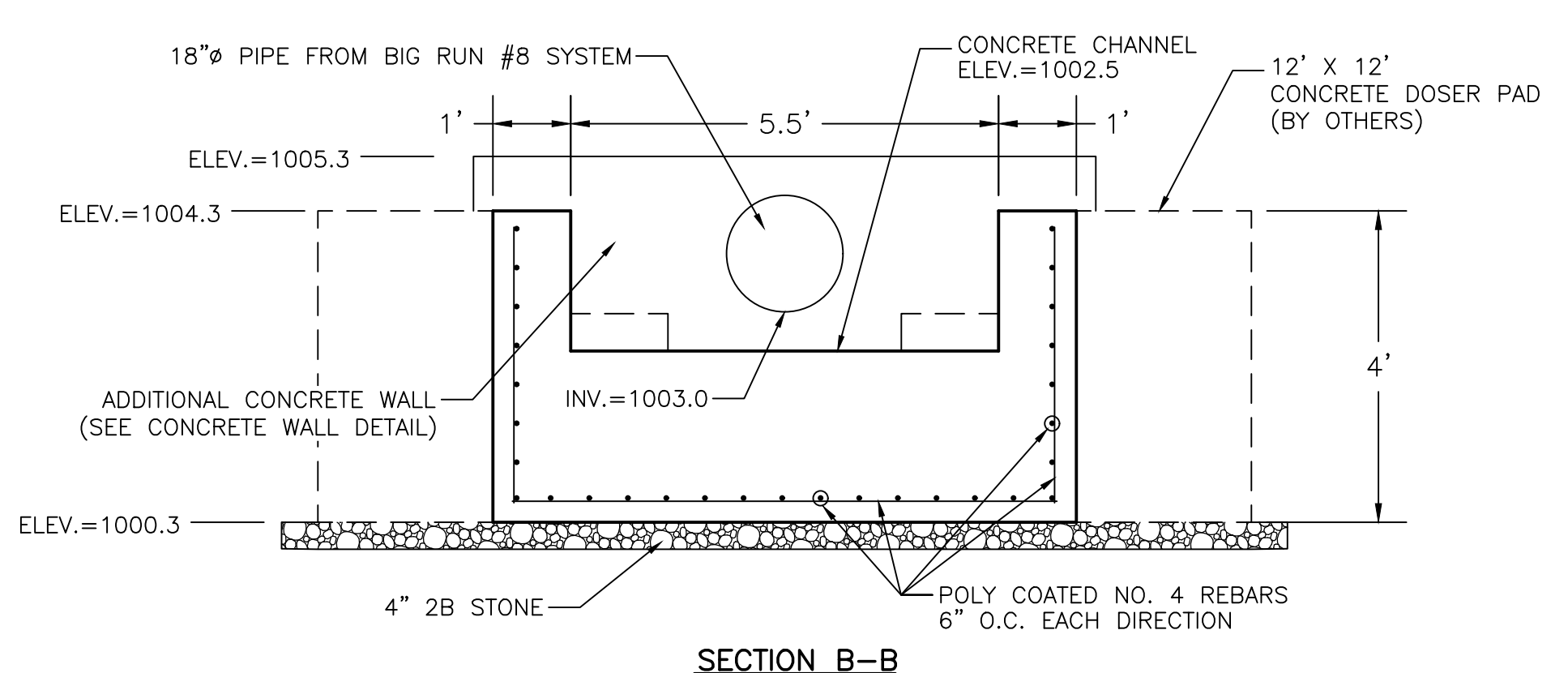
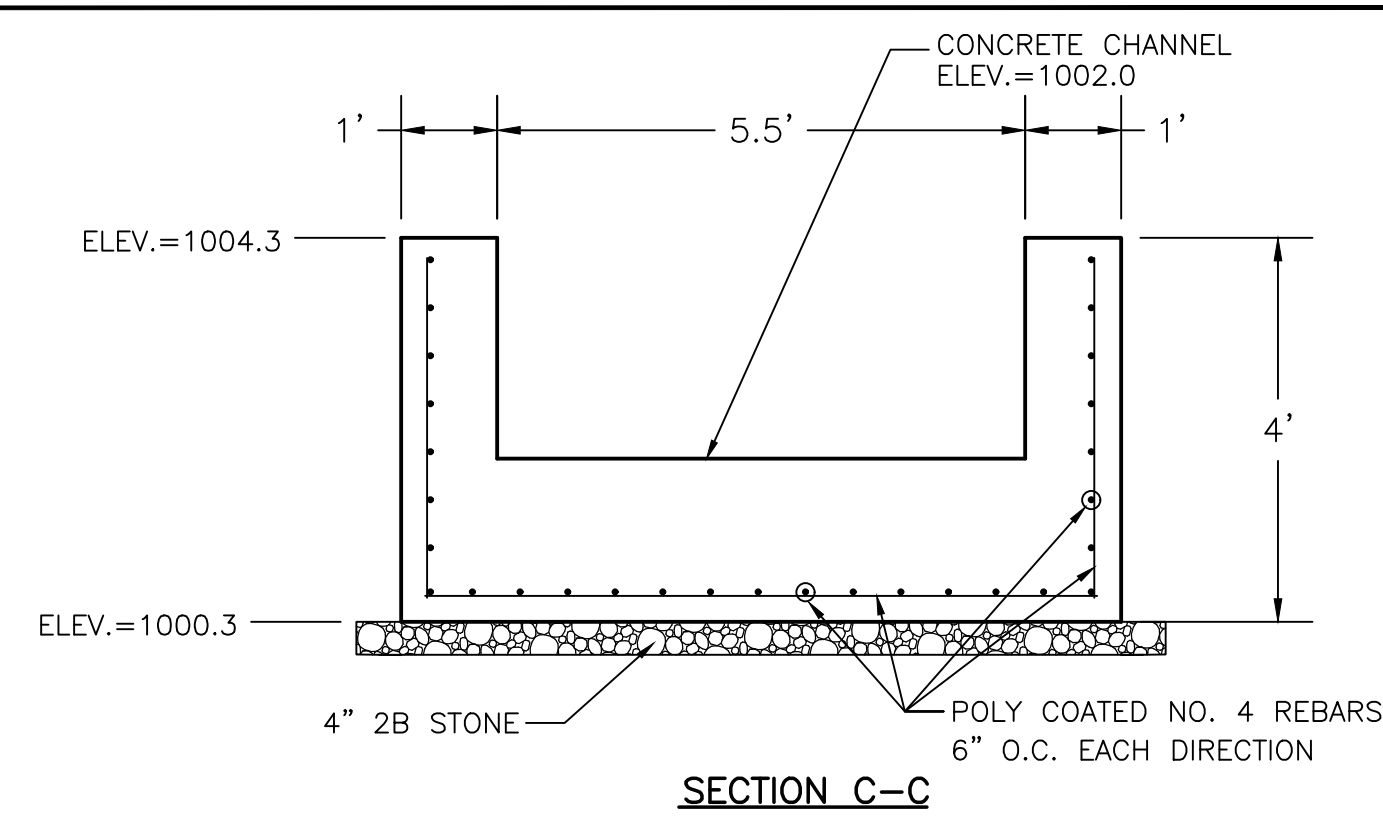


DRAWING NO. **C-2**  
 SHEET 2 OF 5  
**BLACKLEGS CREEK WATERSHED ASSOC.**  
 BIG RUN #3 AND REMEDIATION SYSTEM  
 INDIANA COUNTY, PA  
 CONEMAUGH TOWNSHIP  
**SYSTEM & PIPE PROFILES**  
 DATE: 6/15/10  
 DESIGNED BY: B.R.S.  
 CHECKED BY: B.A.S.  
 DATE: 6/15/10  
 DRAWN BY: C.H.R.  
 DATE: 6/15/10  
 SCALE: 1" = 50'  
 PROJECT NO: R09-0236  
 DATE: JUNE 15, 2010  
**SKELLY AND LOY, INC.**  
 ENGINEERS-ENVIRONMENTAL CONSULTANTS  
 449 EISENHOWER BOULEVARD, SUITE 300  
 HARRISBURG, PENNSYLVANIA 17111  
 (717)232-0593 (800)892-6532 FAX (717)232-1799

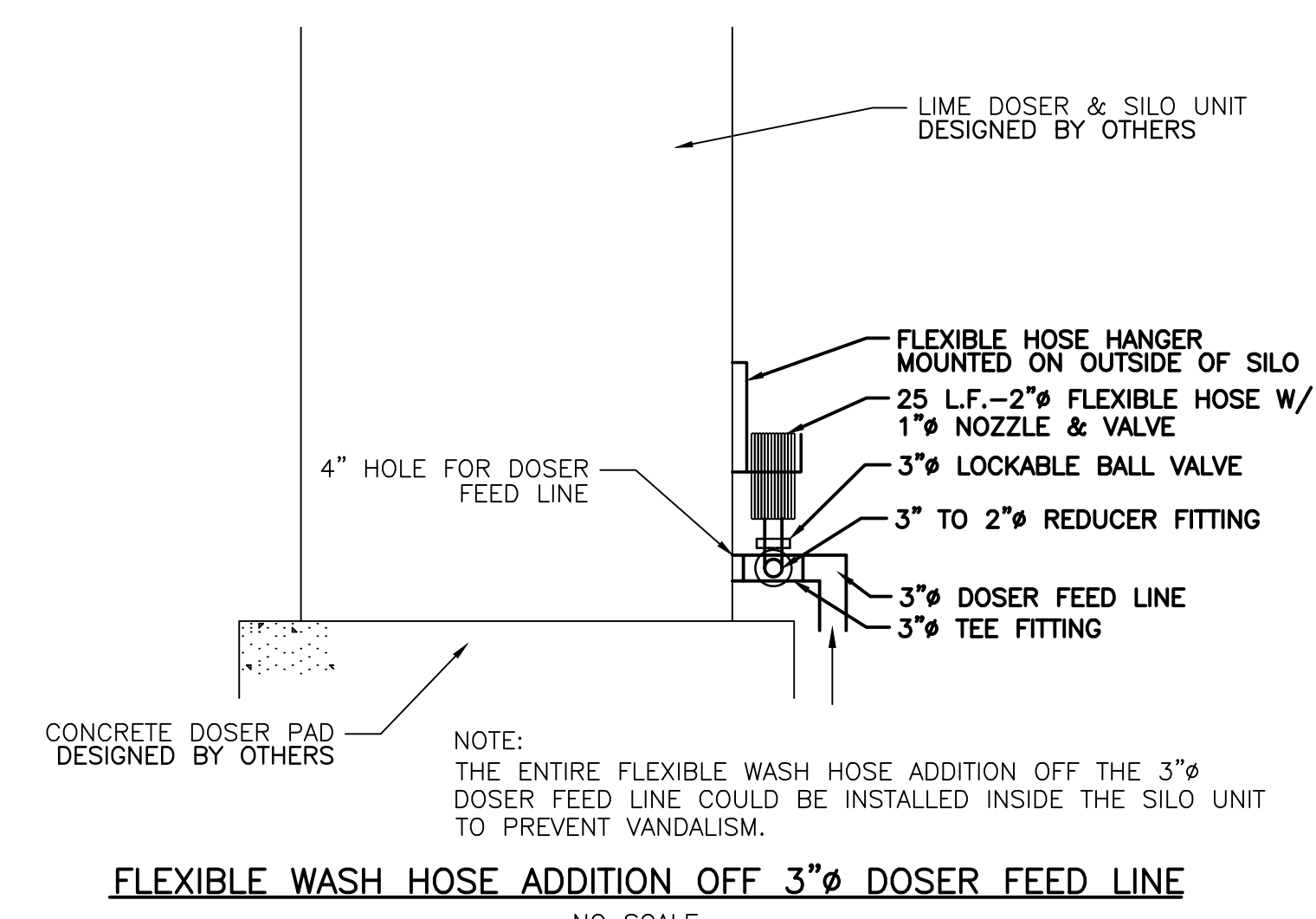
FILE:W:\Projects\2009 Projects\R09-0236 BCWA Big Run #3 AMD\Drawings\CADD\BR #3\_brs FINAL DESIGN June 2010.dwg



- NOTES:
1. CONCRETE SHALL BE 4,000 PSI.
  2. CONCRETE SHALL BE VIBRATED IN.
  3. CONCRETE SHALL BE CURED FOR 28 DAYS.



CONCRETE WALL DETAIL  
NO SCALE



DRAWING NO. **C-3** SHEET 3 OF 5

"PLAN" FOR **BLACKLEGS CREEK WATERSHED ASSOC.** BIG RUN #3 AND REMEDIATION SYSTEM INDIANA COUNTY, PA CONEMAUGH TOWNSHIP

DATE: 6/15/10  
 B.P.S.: 6/15/10  
 B.A.S.: 6/15/10  
 C.H.R.: 6/15/10  
 T.W.S.: 6/15/10  
 A.P.P.Y.: 6/15/10

SCALE: AS SHOWN

REV	DESCRIPTION	BY	DATE

FILE: W:\Projects\2009 Projects\09-0236 BCWA Big Run #3 AMD\Drawings\CADD\BIR #3\_brs FINAL DESIGN June 2010.dwg

**SKELLY AND LOY, INC.**  
 ENGINEERS-ENVIRONMENTAL CONSULTANTS  
 449 EISENHOWER BOULEVARD, SUITE 300  
 HARRISBURG, PENNSYLVANIA 17111  
 (717)232-0593 (800)892-6532 FAX (717)232-1799

R09-0236  
 DATE: JUNE 15 2010



**DETAILED SPECIFICATIONS FOR  
FLOATING BAFFLE CURTAIN**

**PART 1 GENERAL**

**1.01 Work Included in this Section**

- A. The contractor shall furnish all labor, materials, equipment and incidentals required to install, complete and ready for operation, the floating baffle curtain system indicated on the plans, and as specified herein.
- B. The intent of this item is to require an installation complete in every detail whether or not completely shown or covered by the drawings or specifications. Consequently, the contractor will be responsible for minor details that the construction may require, or for any special construction or accessories that may be found necessary to properly install, adjust, test, and place in successful and continuous operation a complete installation.

**1.02 Scope and Description**

The floating baffle curtain described below shall consist of a fabric wall that is anchored at the bottom by a galvanized chain in a sealed pocket and is floated at the top by buoyant logs that are also in a sealed pocket. The floating baffle curtain shall be constructed to lengths dependent upon the desired depth and length of the floating baffle curtain. Weight and ease of handling at the job site, shall be taken into account when determining the length of the prefabricated sections. Once the sections are delivered to the job site, the remaining fabrication shall be connecting the sections together to make the desired length. The floating baffle curtain shall be floated into position in the event the impoundment is full of fluid, or assembled on the bottom on the impoundment should the impoundment be empty.

**1.03 Manufacturer**

The floating baffle curtain shall be manufactured by Engineered Textile Products, Inc. located at 715 Loeffler Street in Mobile, Alabama 36670-0474 and may be contacted by phone at 800-222-8277, by facsimile at 888-222-8277, or via the web-site at www.etpinfo.com or approved equivalent.

**1.04 Submittals**

Shop drawings and the floating baffle manufacturer shall be submitted for approval prior to manufacture of the floating baffle curtain, complete with product data with specifications covering the materials, and instructions for the installation of the floating baffle curtain.

**1.05 Packaging**

The floating baffle curtains shall be packaged onto sturdy wooden pallets designed to be moved with a forklift or similar equipment. Each floating baffle curtain section shall be fully enclosed in heavy cardboard wrap and water-resistant film to protect from and prevent damage to the floating baffle curtain during shipment. The package shall be prominently and indelibly marked with the floating baffle curtain section number and size unless otherwise recommended by the manufacturer.

**PARTS 2 PRODUCTS**

**2.01 Flotation**

The flotation shall consist of closed cell poly foam logs, having the buoyancy of 60 pounds per cubic foot. The flotation shall be completely enclosed inside the floating baffle curtain's collar by means of a thermal seal. Each flotation log shall be sealed in its own chamber along the flotation collar.

In some cases, when added protection is required the flotation collar may be covered with an optional flexible HDPE protective cover. The HDPE protective cover is secured over the flotation collar using heavy duty, U.V. resistant, polyethylene fasteners.

The HDPE protective cover lessens the possibility of damage to the top of the flotation collar and the poly foam flotation logs as a result from pecking or chewing by wildlife, such as birds or rodents. This feature may be added if the threat of damage exists.

**2.02 Anchoring**

- A. The floating baffle curtain shall be anchored in position by a galvanized chain sealed in a thermally sealed hem at the bottom of the floating baffle curtain.
- B. The chain shall be continuous from the berm through each floating baffle curtain section. In the event of multiple sections, the chains shall be joined to each other by the use of a stainless steel rapid link. The chain shall be 3/8", hot dipped galvanized, proof coil.
- C. Concrete anchors shall be placed along the side of the anchoring chain at approximately 20' intervals. The concrete anchors shall be attached to the ballast chain using stainless steel rapid links. Cut outs in the chain pocket of the floating baffle curtain shall make the chain accessible by forming an opening for the attachment of the concrete anchor.
- D. Stainless steel bolts, 3/8" diameter, with nuts and washers shall be provided to act as chain stops at the end of each section of the floating baffle curtain.
- E. The ballast chain is not to be used as a tension member.
- F. Shore anchorage shall consist of a 48" long, four to six inch diameter auger type, screw anchor or a 6' long three inch diameter steel post embedded in concrete. The steel post may be either galvanized or stainless steel.
- G. Depending upon soil conditions, additional anchorage may be required.

**2.03 Retrieval Rope**

The retrieval rope shall be 3/8" diameter, marine grade, polypropylene rope. The rope shall be attached to each of the bottom anchor attachment points and secured to a stainless steel grommet located in the flotation collar directly above each cutout in the chain pocket.

**2.04 Baffle Connections**

When necessary to fabricate the floating baffle curtain in multiple sections, the floating baffle curtain sections shall be joined by using connectors. The connectors consist of 1/4" thick by 2" wide by 10" long stainless steel flat bar battens and 3/8" diameter by 1 1/2" long stainless steel bolts, nuts, & washers.

The battens shall be applied on the outside of each floating baffle curtain section connection hem and "sandwich" the two floating baffle curtain sections between them. Then the battens shall be secured with four 3/8" diameter by 1 1/2" long bolts thru pre-drilled holes in the battens. The ballast chain at the bottom of each connection point shall be joined together using a stainless steel rapid link.

**2.05 End Connections**

The end connection consist of 1/4" thick by 2" wide by 12" long stainless steel flat bar endplates, 3/8" diameter by 1 1/2" long stainless steel bolts, nuts, & washers, 3/8" stainless steel forged eyebolt, and a 1/2" stainless steel shackle.

The endplates shall be applied on the outside of terminating end of the floating baffle curtain and "sandwich" the end hem between them. Then the endplates shall be secured with three 3/8" diameter by 1 1/2" long bolts and one 3/8" diameter stainless steel forged eyebolt thru pre-drilled holes in the end plate battens. The ballast chain shall be connected to the bottom of the endplate to the eyebolt using a stainless steel rapid link. The 1/2" stainless steel shackle shall be attached to the end plate thru a predrilled hole, then the shackle shall be secured to the anchor point embedded in the top of the berm using a piece of stainless steel cable or galvanized chain.

**2.06 Miscellaneous Hardware**

All of the hardware used in the manufacture of the floating baffle curtain shall be stainless steel, with the exception of the ballast chain, which in most cases shall be hot dipped galvanized unless specified stainless steel.

**2.07 Baffle Curtain Material**

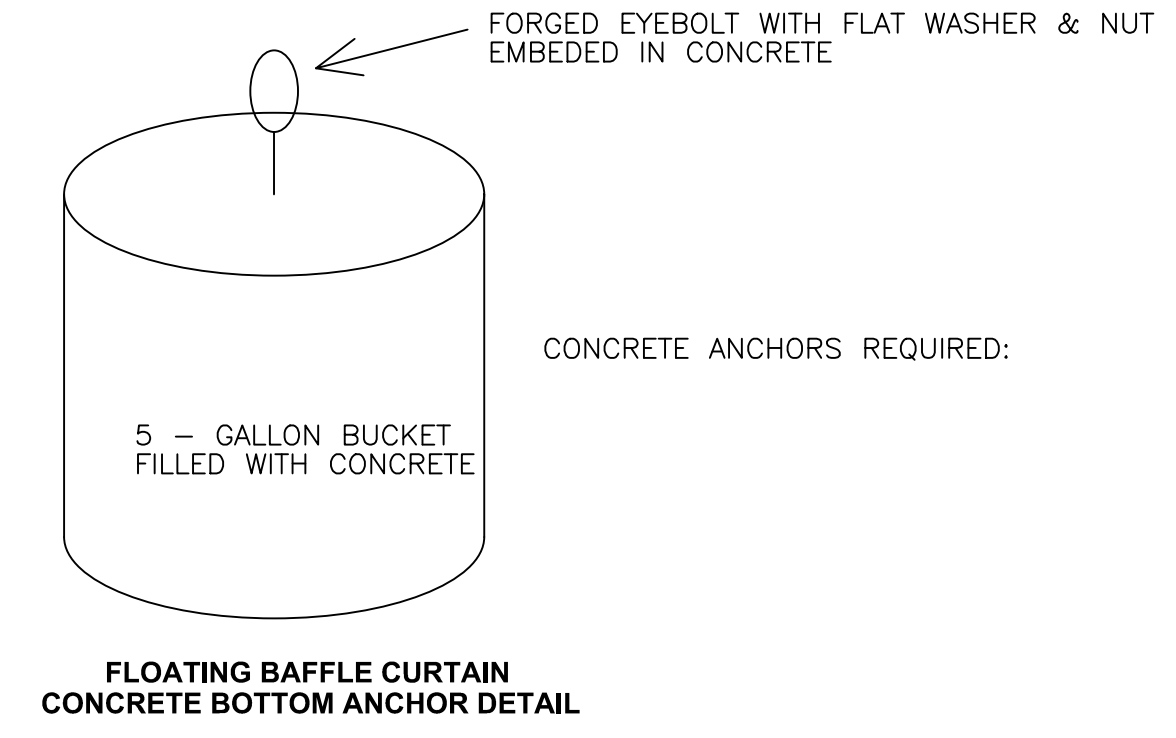
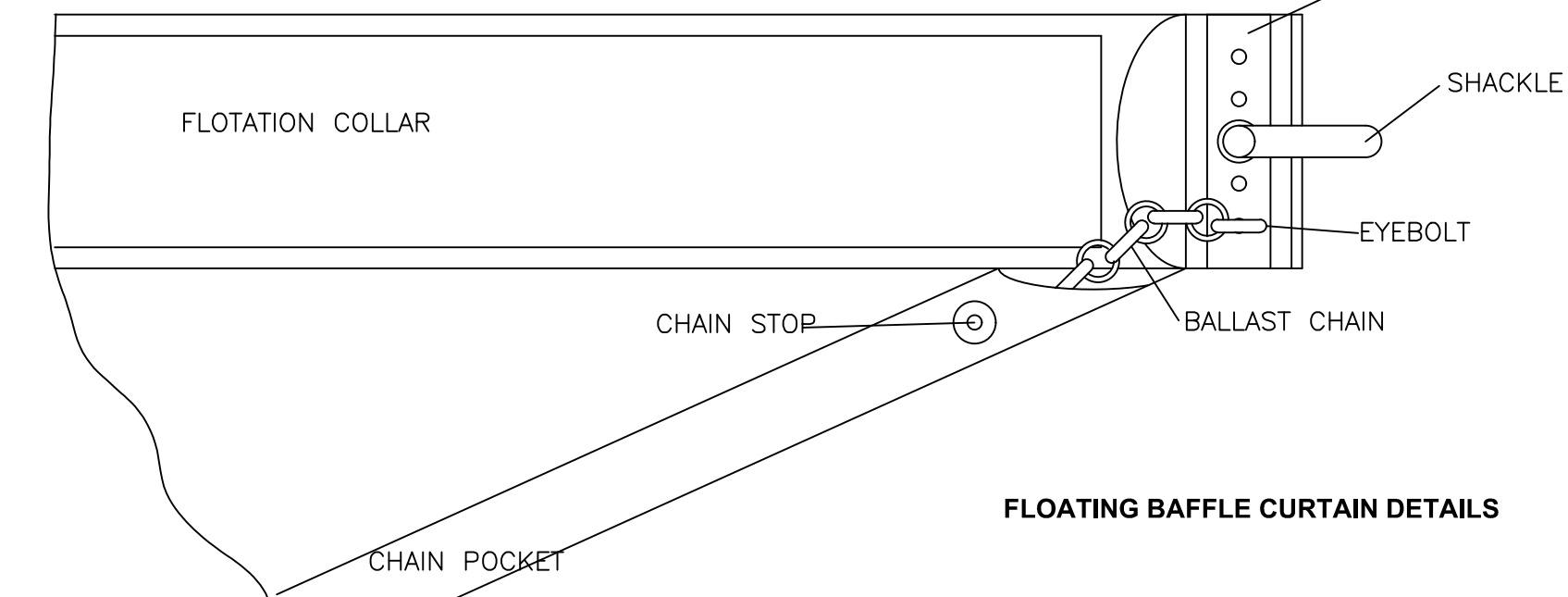
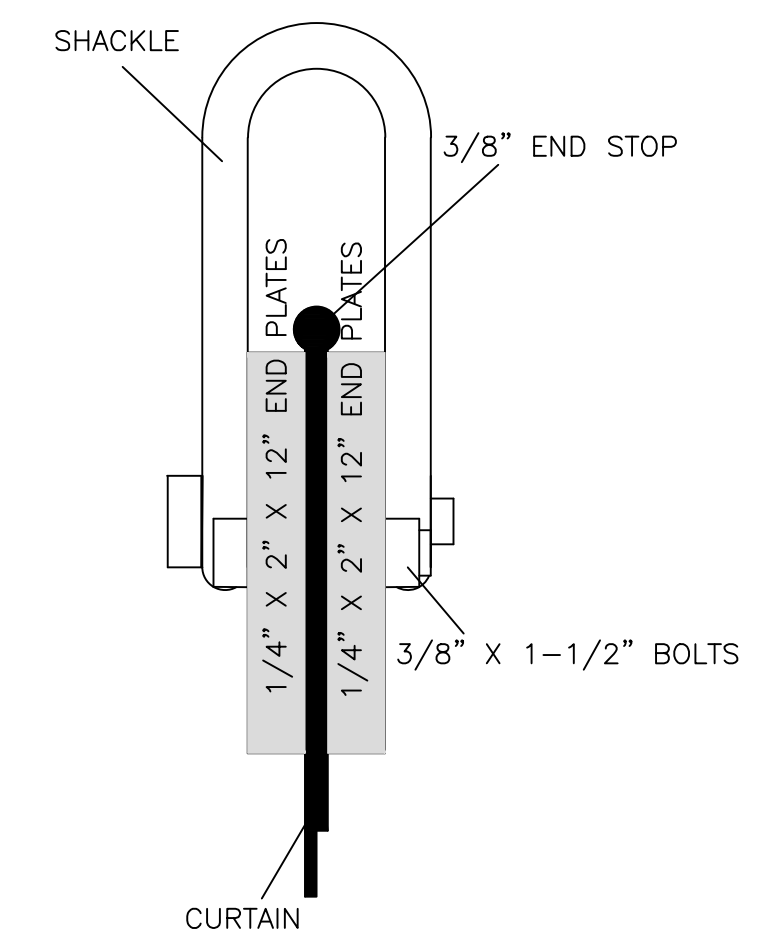
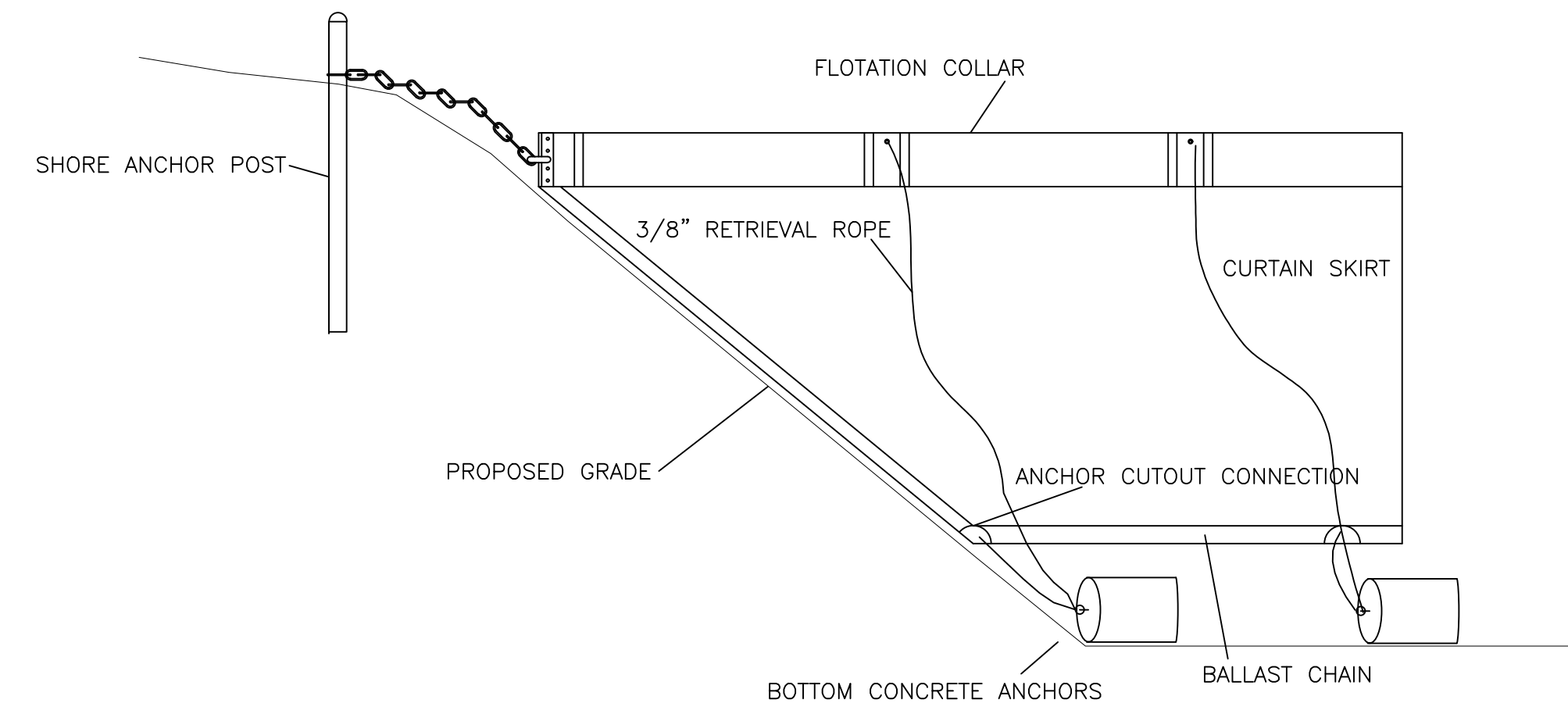
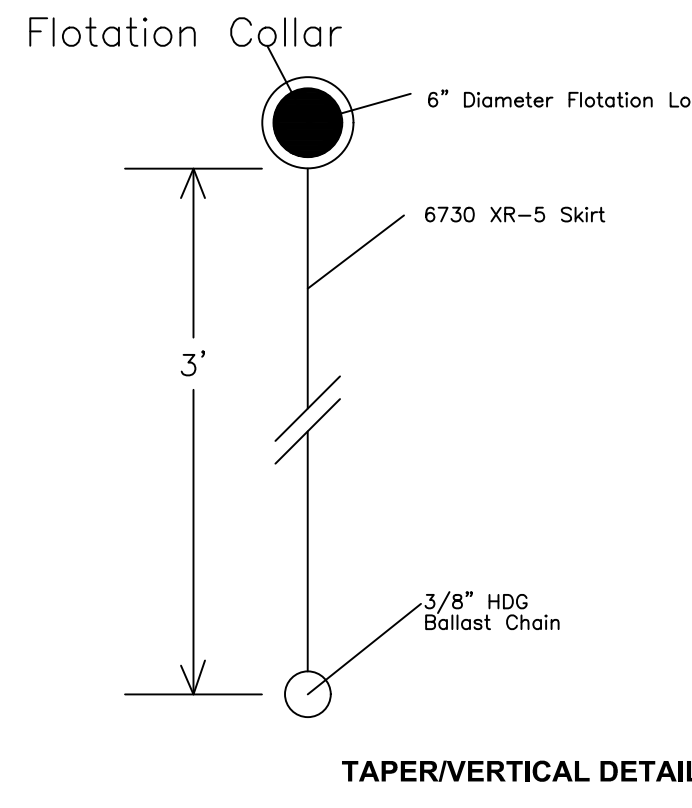
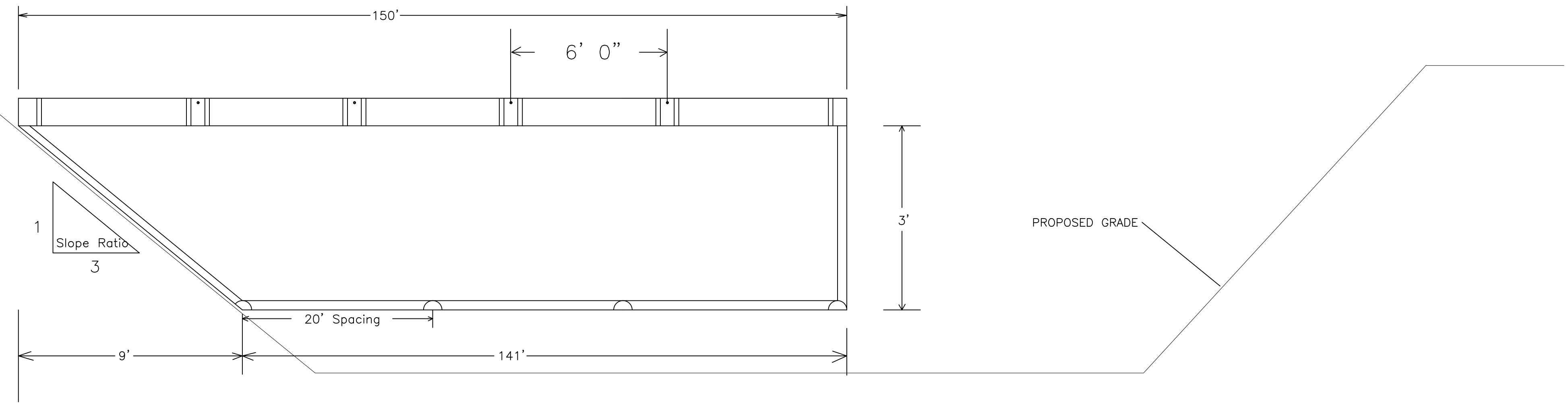
The floating baffle curtain material shall be a reinforced synthetic material. The material supplied under these specifications shall be a first quality product designed and manufactured specifically for this application and demonstrated to be suitable and durable for this purpose.

Please take note of the material sample and physical properties shown at the end of this specification.

**PART 3 EXECUTION**

**3.01 Installation**

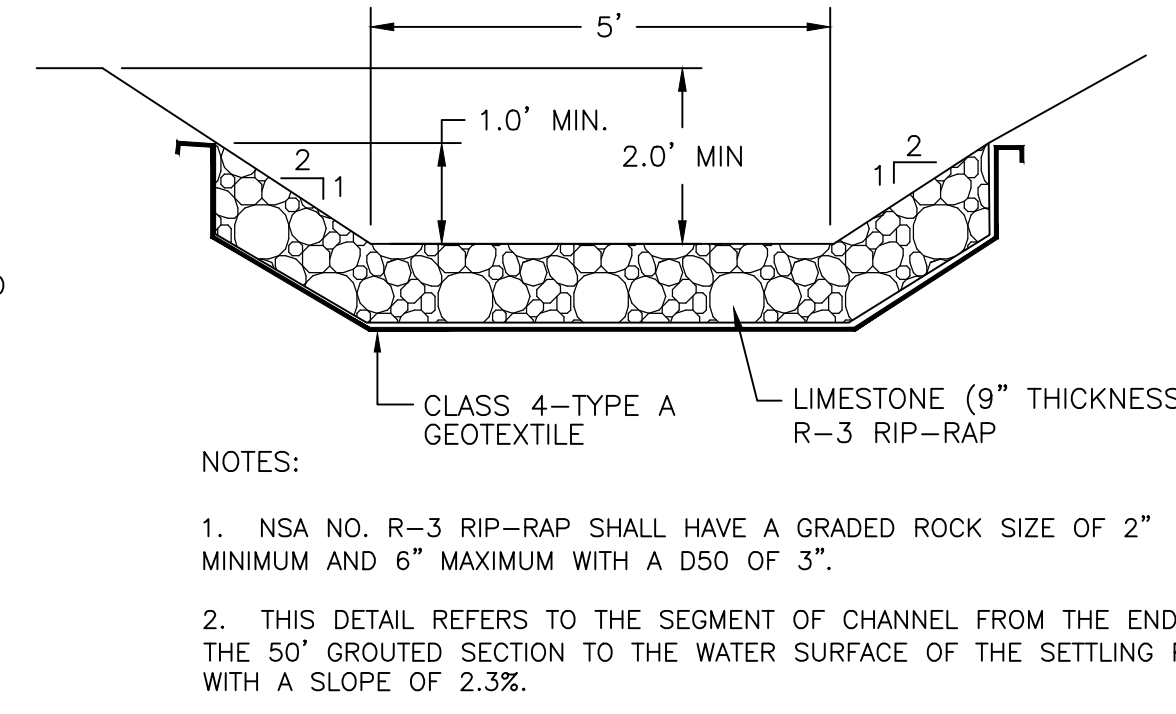
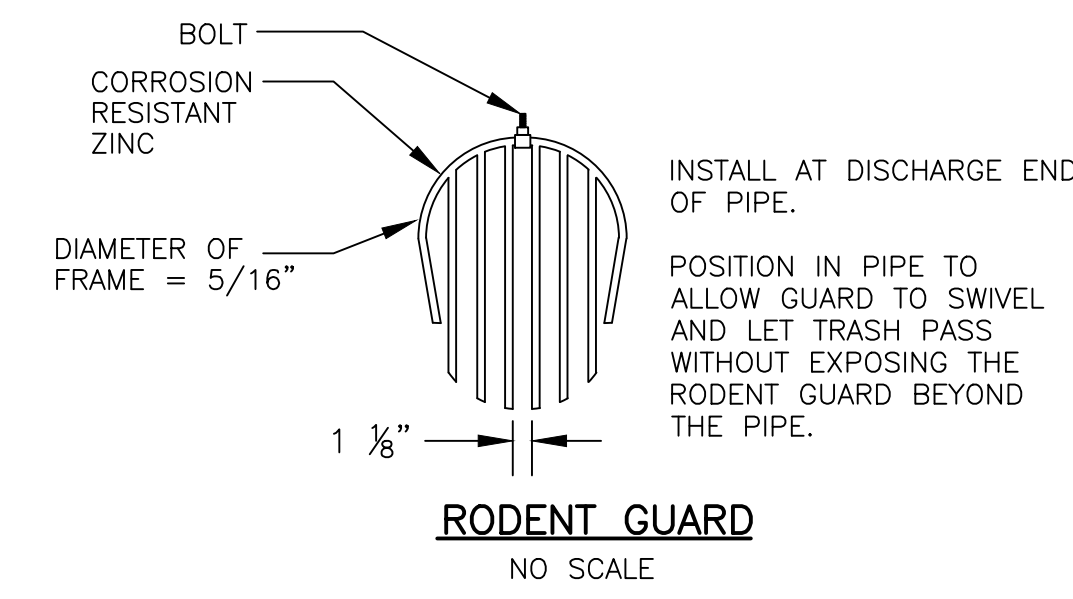
The floating baffle curtain shall be installed in position as shown on the engineer's plans. The floating baffle curtain shall be installed in accordance with the manufacturer's shop drawings, instructions, and recommendations.



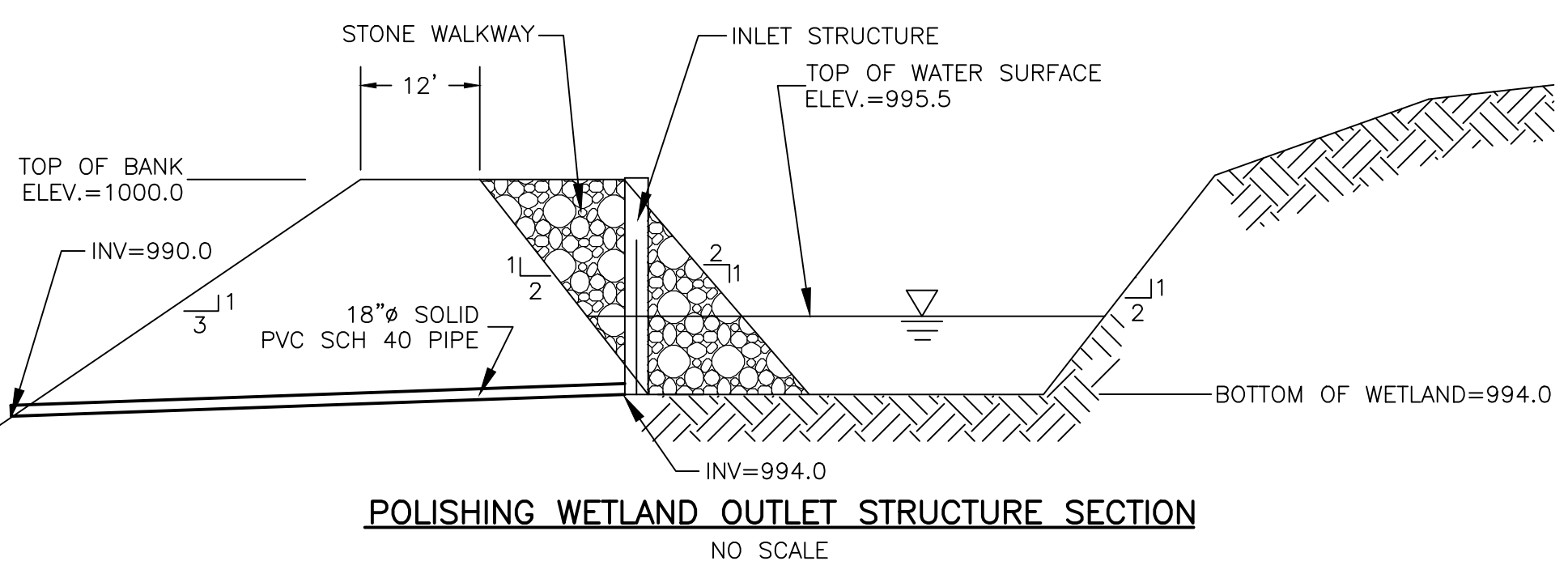
NOTE:  
1. THE FLOATING BAFFLE DETAILS AND SPECIFICATIONS SHOWN ON THIS SHEET ARE TAKEN FROM ENGINEERED TEXTILE PRODUCTS, INC. OF MOBILE, ALABAMA.  
2. CONTRACTOR SHALL USE EITHER THIS PRODUCT FROM ENGINEERED TEXTILE PRODUCTS, INC. OR APPROVED EQUAL.

PREPARED BY:  
Carter Damp  
Engineered Textile Products, Inc.  
P.O. Box 7474  
Mobile, Alabama 36670-0474  
Telephone: 800-222-8277  
24 Hr. Fax: 888-222-8277  
August 18, 2006

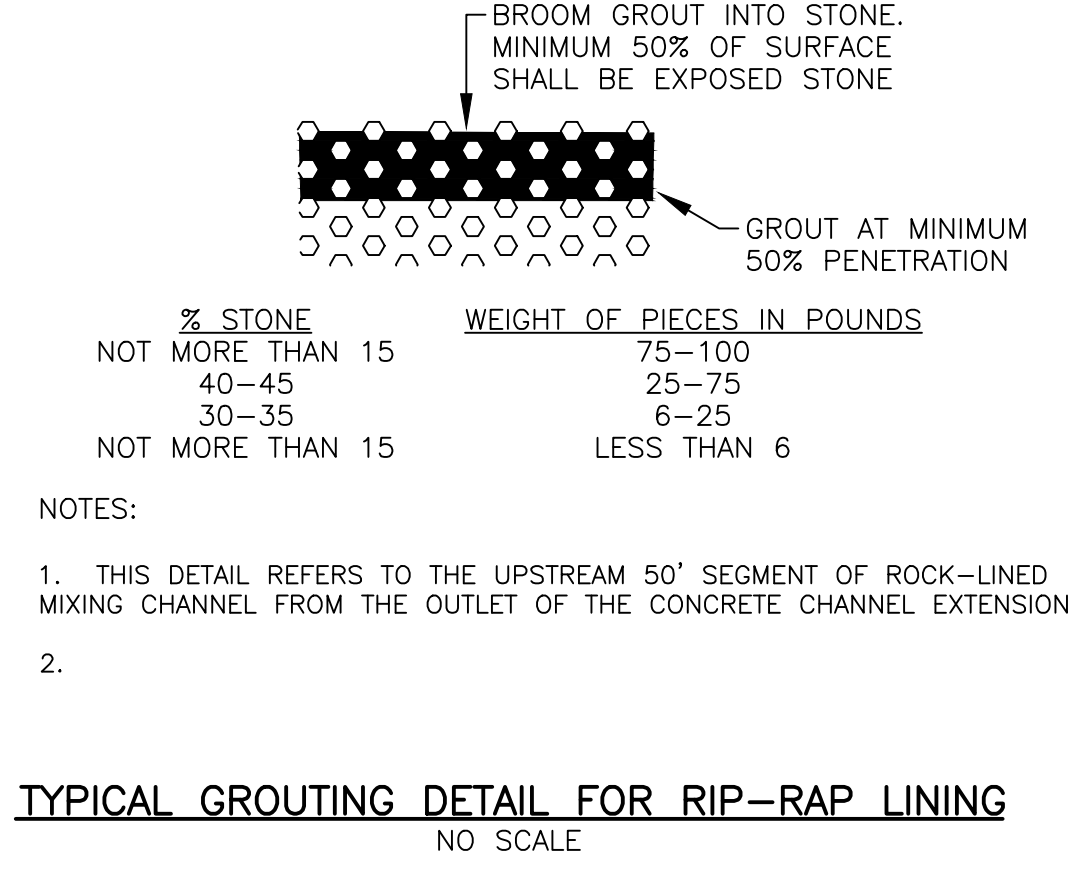
**FLOATING BAFFLE DETAIL**  
NO SCALE



NOTES:  
1. NSA NO. R-3 RIP-RAP SHALL HAVE A GRADED ROCK SIZE OF 2" MINIMUM AND 6" MAXIMUM WITH A D50 OF 3".  
2. THIS DETAIL REFERS TO THE SEGMENT OF CHANNEL FROM THE END OF THE 50' GROUDED SECTION TO THE WATER SURFACE OF THE SETTLING POND WITH A SLOPE OF 2.3%.



**POLISHING WETLAND OUTLET STRUCTURE SECTION**  
NO SCALE



NOTES:  
1. THIS DETAIL REFERS TO THE UPSTREAM 50' SEGMENT OF ROCK-LINED MIXING CHANNEL FROM THE OUTLET OF THE CONCRETE CHANNEL EXTENSION.  
2.

DRAWING NO. **C-4** SHEET 4 OF 5

"PLAN" FOR **BLACKLEGGS CREEK WATERSHED ASSOC.** BIG RUN #3 AND REMEDIATION SYSTEM INDIANA COUNTY, PA CONEMAUGH TOWNSHIP **SITE DETAILS**

ISSN	DATE	SCALE	AS SHOWN
B.R.S.	6/15/10		
D.T.S.M.	6/15/10		
B.A.S.	6/15/10		
CHR	6/15/10		
T.W.S.	6/15/10		
APPY			

REV	DESCRIPTION	BY	DATE

FILE:W:\Projects\2009 Projects\F09-0236 BCWA Big Run #3 AMD\Drawings\CADD\BR #3\_brs FINAL DESIGN June 2010.dwg

**SKELLY AND LOY, INC.**  
ENGINEERS-ENVIRONMENTAL CONSULTANTS  
449 EISENHOWER BOULEVARD, SUITE 300  
HARRISBURG, PENNSYLVANIA 17111  
(717)232-0593 (800)892-6532 FAX (717)232-1799

R09-0236  
DATE: JUNE 15 2010

