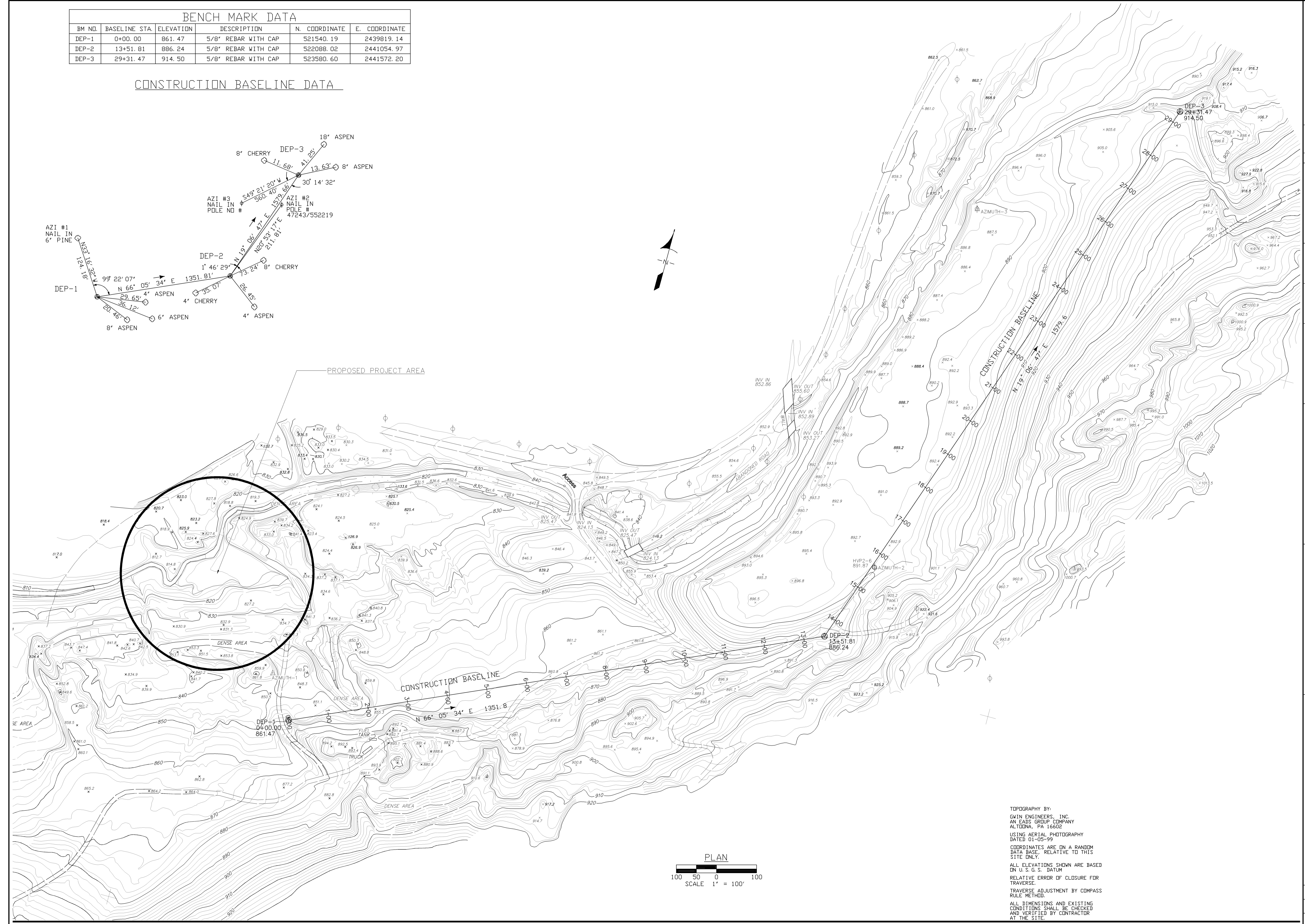
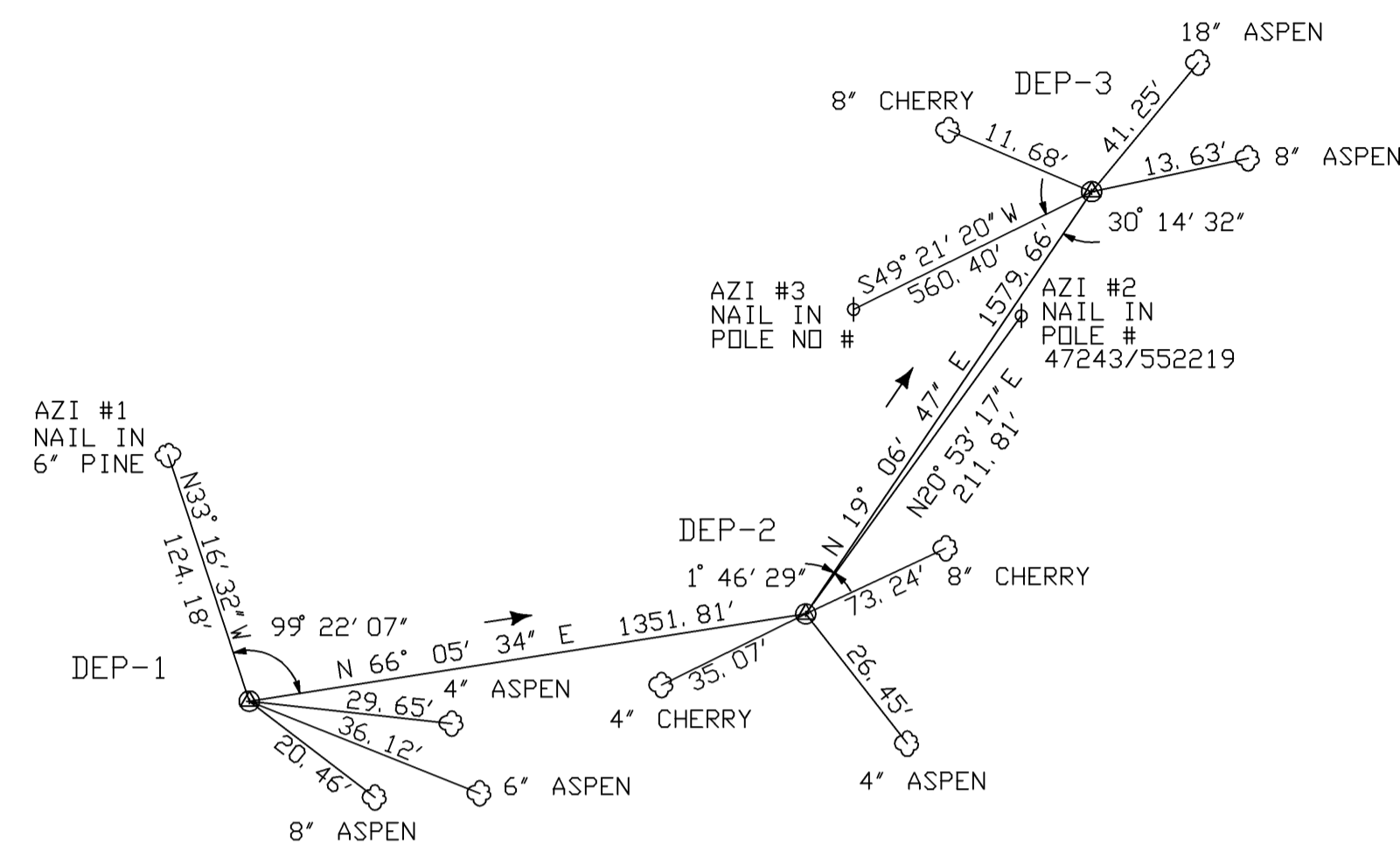


BENCH MARK DATA					
BM NO.	BASILINE STA.	ELEVATION	DESCRIPTION	N. COORDINATE	E. COORDINATE
DEP-1	0+00.00	861.47	5/8" REBAR WITH CAP	521540.19	2439819.14
DEP-2	13+51.81	886.24	5/8" REBAR WITH CAP	522088.02	2441054.97
DEP-3	29+31.47	914.50	5/8" REBAR WITH CAP	523580.60	2441572.20

CONSTRUCTION BASELINE DATA



TOPOGRAPHY BY:
 GWIN ENGINEERS, INC.
 AN EADS GROUP COMPANY
 ALTOONA, PA 16602
 USING AERIAL PHOTOGRAPHY
 DATED 01-05-99
 COORDINATES ARE ON A RANDOM
 DATA BASE, RELATIVE TO THIS
 SITE ONLY.
 ALL ELEVATIONS SHOWN ARE BASED
 ON U.S.G.S. DATUM
 RELATIVE ERROR OF CLOSURE FOR
 TRAVERSE
 TRAVERSE ADJUSTMENT BY COMPASS
 RULE METHOD.
 ALL DIMENSIONS AND EXISTING
 CONDITIONS SHALL BE CHECKED
 AND VERIFIED BY CONTRACTOR
 AT THE SITE.

OVERALL EXISTING SITE PLAN ACID MINE DRAINAGE REMEDIATION PROJECT BELL COLLIERY SITE PLAN WASHINGTON TOWNSHIP SCHUYLKILL COUNTY		CLIENT SCHUYLKILL CONSERVATION DISTRICT 1206 AG CENTER DRIVE POTTSVILLE, PA 17901 (570) 622-4124	MANAGER: DANIEL J. BECKER, PE	DESIGN BY: C. BUBECK DB	DRAWN BY: C. BUBECK	CHECKED BY: C. BUBECK	SURV. CHIEF: FELDBOOK NO.	FOR REVIEW ASSOCIATES BY:	NO. DATE	REVISION
REFERENCE: SCALE 1" = 100' 200' 300'										
DATE: JULY 2002										
SHEET NO. 1 OF 8										
DWG. NO. 024119-01										

TOPOGRAPHY BY:
 GWN ENGINEERS, INC.
 AN EADS GROUP COMPANY
 ALTOONA, PA 16602
 USING AERIAL PHOTOGRAPHY
 DATED 01-05-99

COORDINATES ARE ON A RANDOM
 DATA BASE, RELATIVE TO THIS
 SITE ONLY.
 ALL ELEVATIONS SHOWN ARE BASED
 ON U.S.G.S. DATUM

RELATIVE ERROR OF CLOSURE FOR
 TRAVERSE. ADJUSTMENT BY COMPASS

RULE METHOD.

ALL DIMENSIONS AND EXISTING
 CONDITIONS SHALL BE CHECKED
 AND VERIFIED BY CONTRACTOR
 AT THE SITE.



FOR RETIEW ASSOCIATES BY:		NO.	DATE	REVISION
SURV. CHIEF:		FELDBOOK NO.	NO.	DATE
MANAGER:	DESIGN BY:	CHKD BY:	NO.	DATE
DANIEL J. BECKER, PE	C. BUBECK DB	C. BUBECK	NO.	DATE
CLIENT:	DRAWING REFERENCE:			
SCHUYLKILL CONSERVATION DISTRICT	XREFS:			
1206 AG CENTER DRIVE	0 10' 20' 40' 60'			
POTTSVILLE, PA 17901	SCALE 1"=20'			
(570) 622-4124	0 10' 20' 40' 60'			
		Union Street Station, 101 East Union Street Pottsville, PA 17901 Phone: (570) 622-4200 • Fax: (570) 622-4260 Email: retiew@retiew.com Website: www.retiew.com Berleham, PA • Camp Hill, PA • Lancaster, PA • York, PA Engineers • Planners • Scientists • Landscape Architects • Surveyors		
EXISTING SITE PLAN	WASHINGTON TOWNSHIP		SCHUYLKILL COUNTY	
ACID MINE DRAINAGE REMEDIATION PROJECT				
BELL COLLIERY				
DATE:	JULY 2002			
SHEET NO.	2 OF 8			
DWG. NO.	024119-01			

TOPOGRAPHY BY:

GWIN ENGINEERS, INC.
AN EADS GROUP COMPANY
ALTOONA, PA 16602
USING AERIAL PHOTOGRAPHY
DATED 01-05-99

COORDINATES ARE ON A RANDOM
DATA BASE, RELATIVE TO THIS
SITE ONLY.

ALL ELEVATIONS SHOWN ARE BASED
ON U.S.G.S. DATUM

RELATIVE ERROR OF CLOSURE FOR
TRAVERSE:
TRAVERSE ADJUSTMENT BY COMPASS
RULE METHOD.

ALL DIMENSIONS AND EXISTING
CONDITIONS SHALL BE CHECKED
AND VERIFIED BY CONTRACTOR
AT THE SITE.

18.4
X

820.7
X

823.0
X

827.8
X

818.8
X

819.3
X

827.2
X

824.1
X

823.2
X

818.9
X

825.9
X

827.6
X

824.4
X

824.9
X

839.7
X

834.2
X

833.0
X

841.4
X

823.4
X

824.5
X

826.9
X

826
X

824.4
X

812.7
X

814.8
X

834.3
X

837.2
X

837.1
X

834.6
X

820
X

827.2
X

841.3
X

836.2
X

830.9
X

831.3
X

834.7
X

841.3
X

841.8
X

840.7
X

842.6
X

842.5
X

853.1
X

853.3
X

851.5
X

853.8
X

850
X

DENSE AREA

DENSE AREA

TREATMENT CELL A

TREATMENT CELL B

OVERFLOW CHANNEL SHALL BE LINED WITH
A 1" THICK LAYER OF HIGH CALCIUM LIMESTONE
R-4 RIPRAP. CONTRACTOR SHALL INSTALL
NORTH-AMERICAN GREEN P-300 GEOTEXTILE
UNDER OVERFLOW CHANNEL RIPRAP.

FLARED END SECTIONS SHALL BE CONSTRUCTED
AS TO NOT IMPEDED FLOW DURING DRAINING OF
TREATMENT SYSTEM.

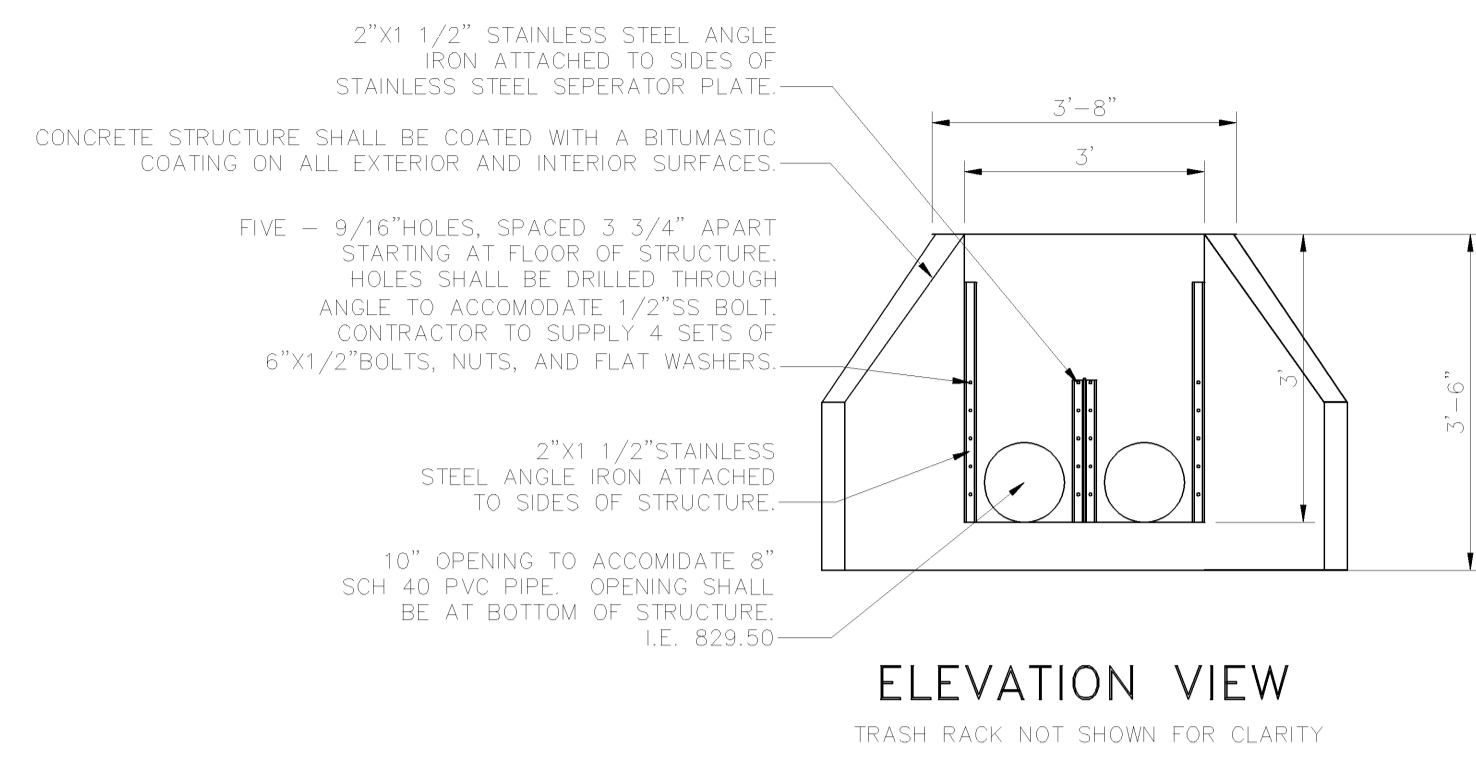
CONTRACTOR SHALL PROTECT UP AND
DOWN STREAM OF EXISTING SWALE.

HIGH CALCIUM LIMESTONE R-4 RIPRAP (TYP.)

CONTRACTOR SHALL ENSURE THAT SWALE IS GRADED
TO ACCEPT WATERS DURING PERIODS OF HIGH FLOW.

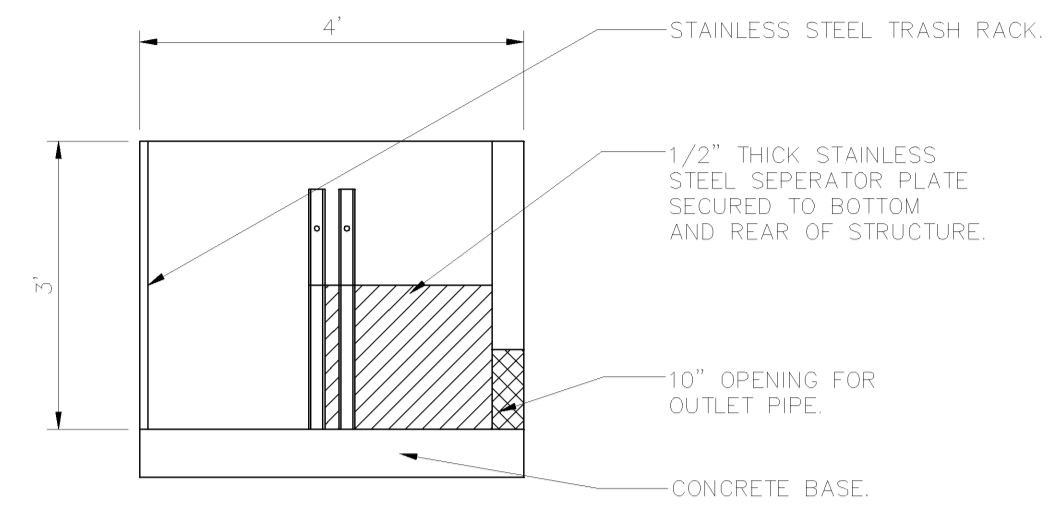
BY-PASS SWALE SHALL BE LINED WITH A 1" THICK LAYER OF
HIGH CALCIUM LIMESTONE R-4 RIPRAP. CONTRACTOR SHALL
INSTALL NORTH AMERICAN GREEN P-300 GEOTEXTILE
UNDER RIPRAP.

NO.		DATE		REVISION	
FOR RETIEW ASSOCIATES BY:					
SURV. CHIEF:		FIELDBOOK NO.:		CHD BY:	
DANIEL J. BECKER, PE		C. BUBECK		C. BUBECK	
DESIGN BY:		DRAWING REFERENCE:		XREFS:	
C. BUBECK / DB					
CLIENT:					
SCHUYLKILL CONSERVATION DISTRICT					
1206 AG CENTER DRIVE					
POTTSVILLE, PA 17901					
(570) 622-4124					
SCALE					
0 10' 20' 40' 60'					
1"=20'					
1"=40'					
1"=60'					
RETIEW ASSOCIATES, INC.					
Union Street Station, 101 East Union Street					
Pottsville, PA 17901-2222 • Fax (570) 622-4260					
Email: retiew@retiew.com Website: www.retiew.com					
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RIPRAP AND STABILIZATION PLAN					
ACID MINE DRAINAGE REMEDIATION PROJECT					
BELL COLLIERY					
WASHINGTON TOWNSHIP SCHUYLKILL COUNTY					
DATE: JULY 2002					
SHEET NO. 5 OF 8					
DWG. NO. 024119-01					



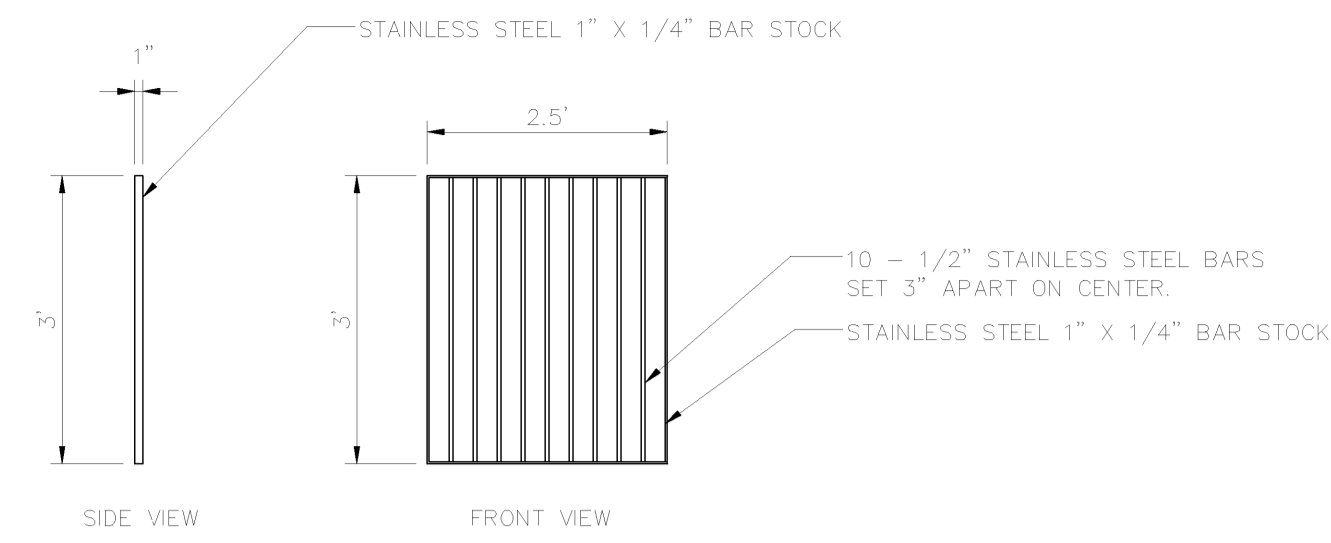
ELEVATION VIEW

TRASH RACK NOT SHOWN FOR CLARITY

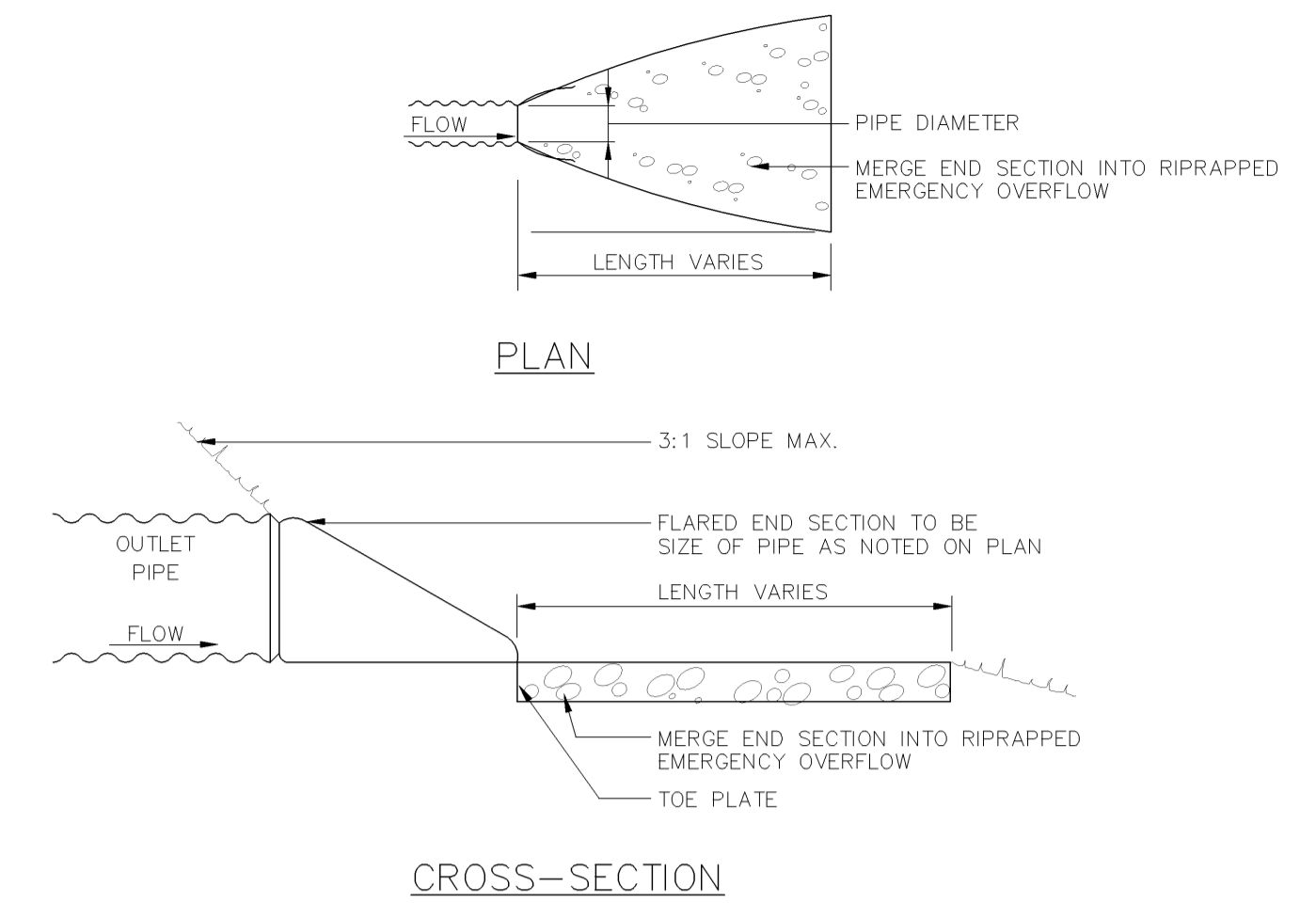


SECTION 6A-6A

WINGWALL NOT SHOWN FOR CLARITY

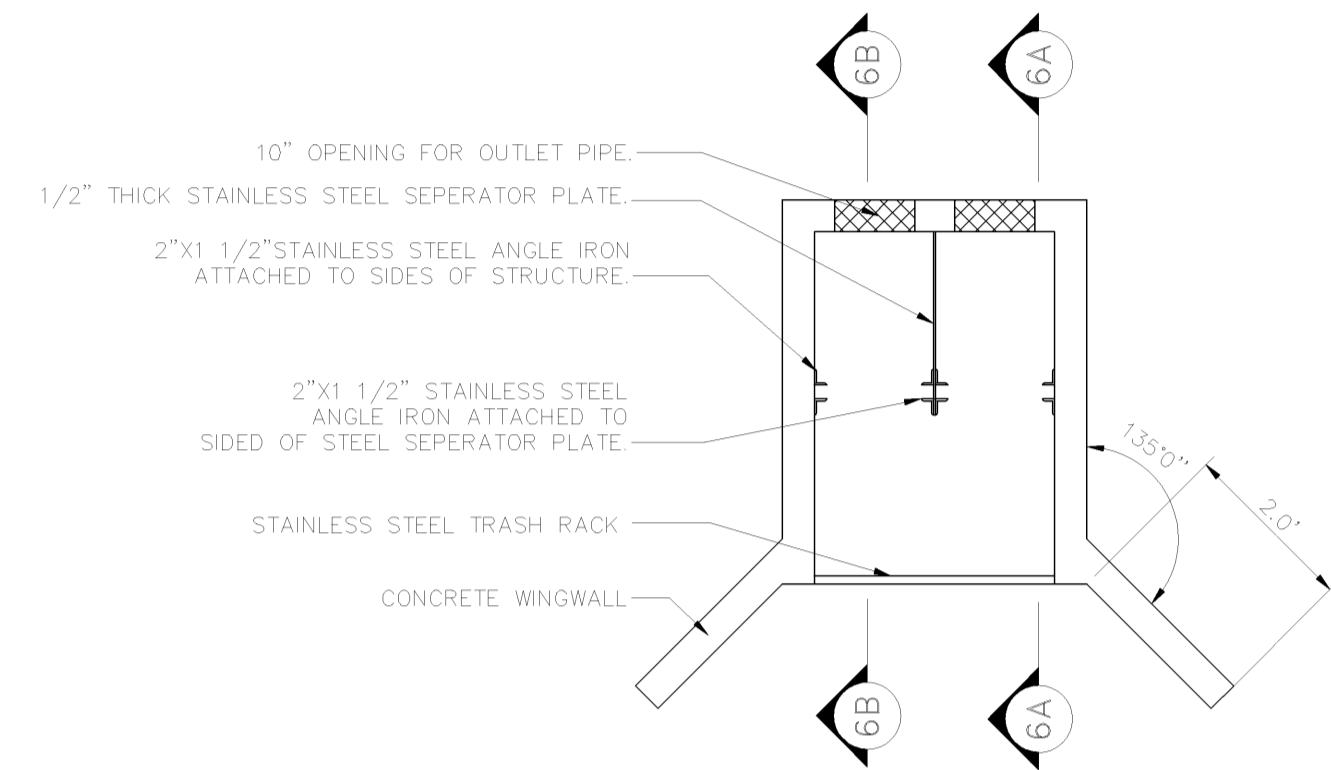


TRASH RACK DETAIL



TREATMENT CELL A & B DRAIN DISCHARGE

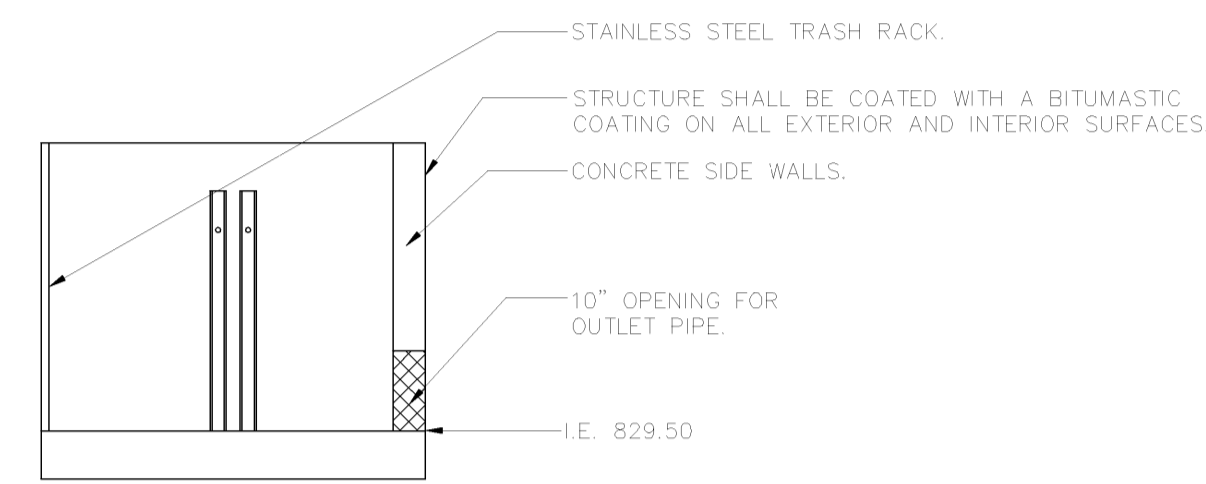
NOT TO SCALE



PLAN VIEW

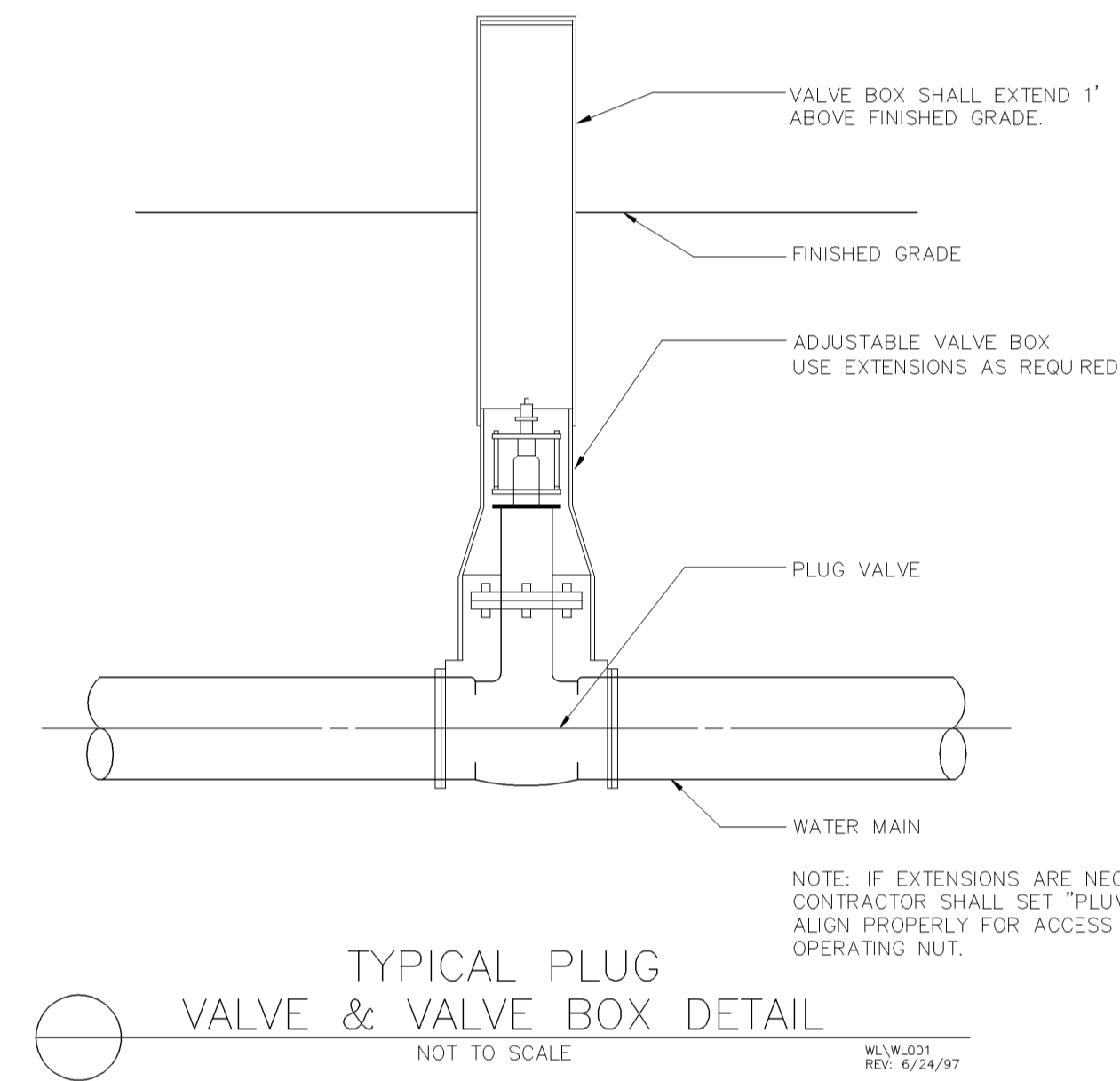
INLET/FLOW CONTROL STRUCTURE DETAIL

NOT TO SCALE



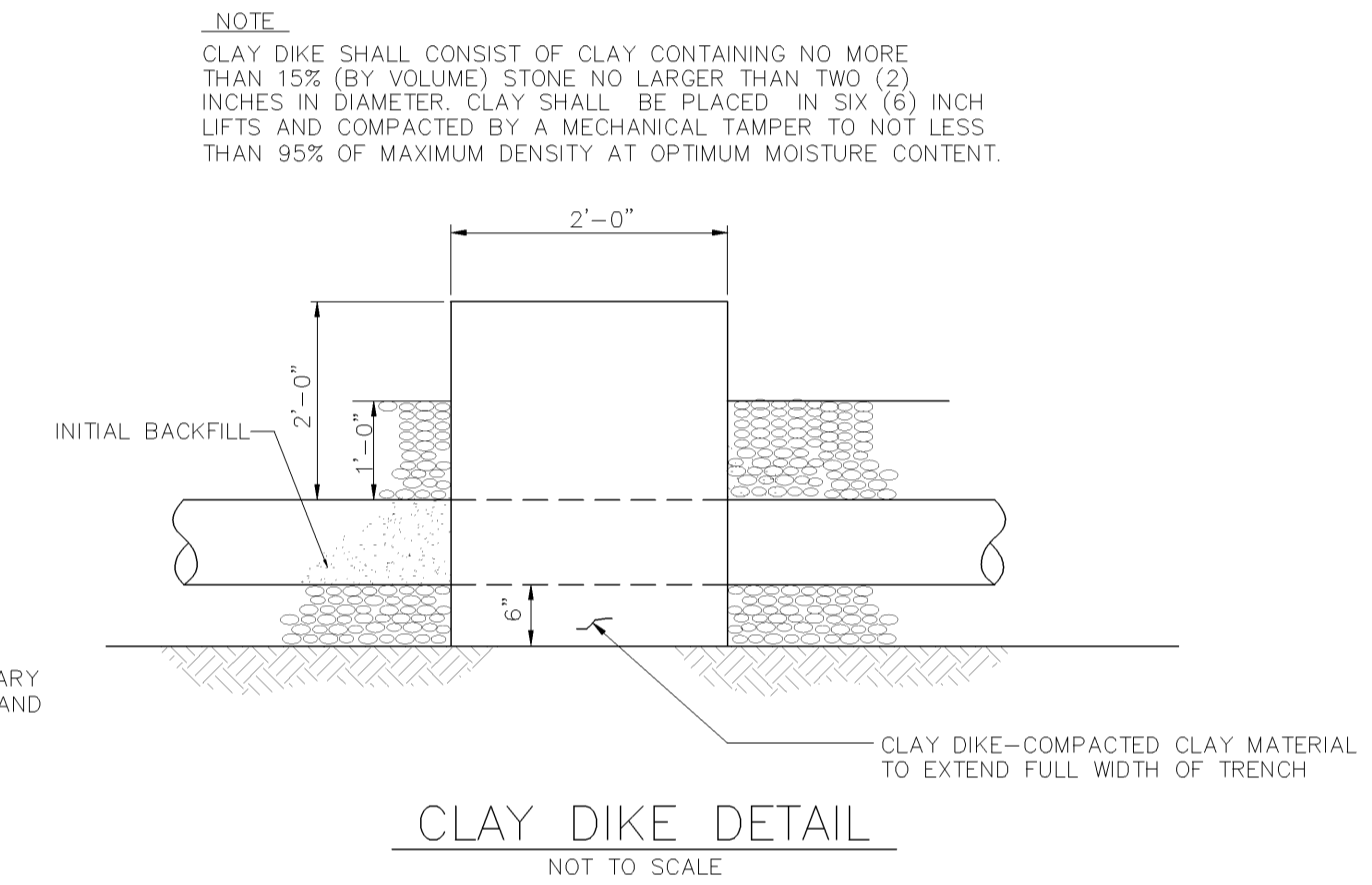
SECTION 6B-6B

WINGWALL NOT SHOWN FOR CLARITY



TYPICAL PLUG VALVE & VALVE BOX DETAIL

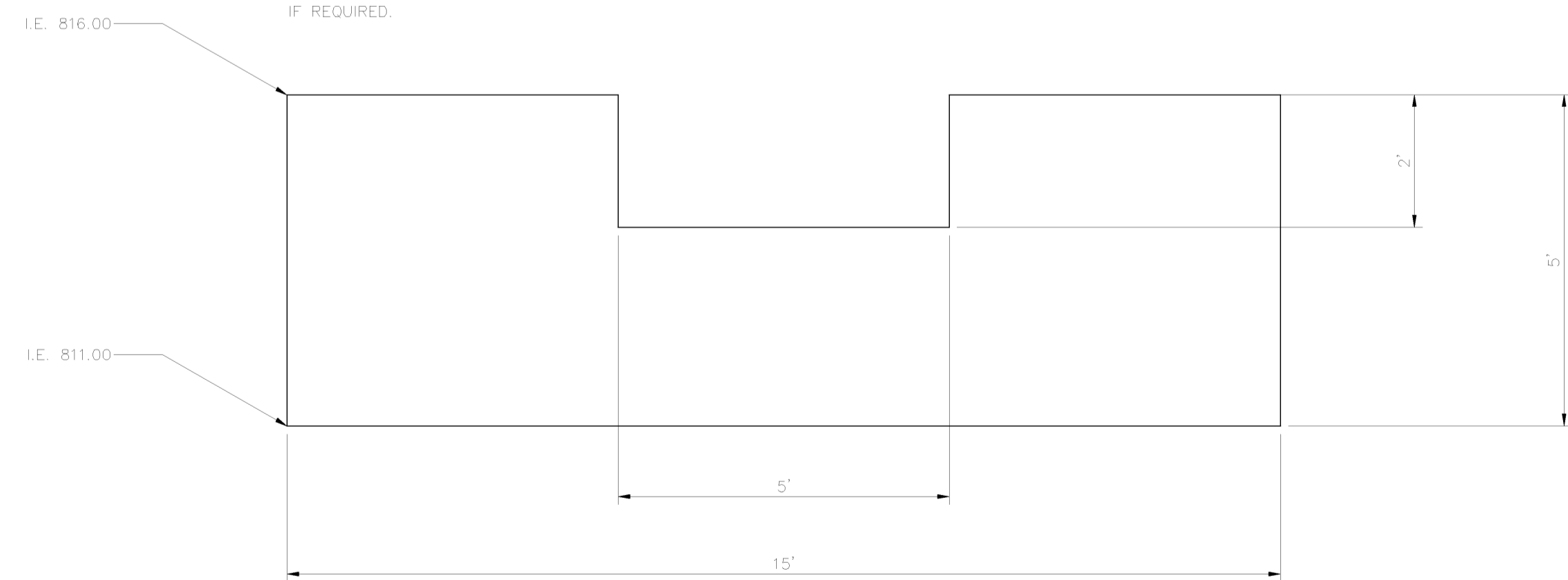
NOT TO SCALE



CLAY DIKE DETAIL

NOT TO SCALE

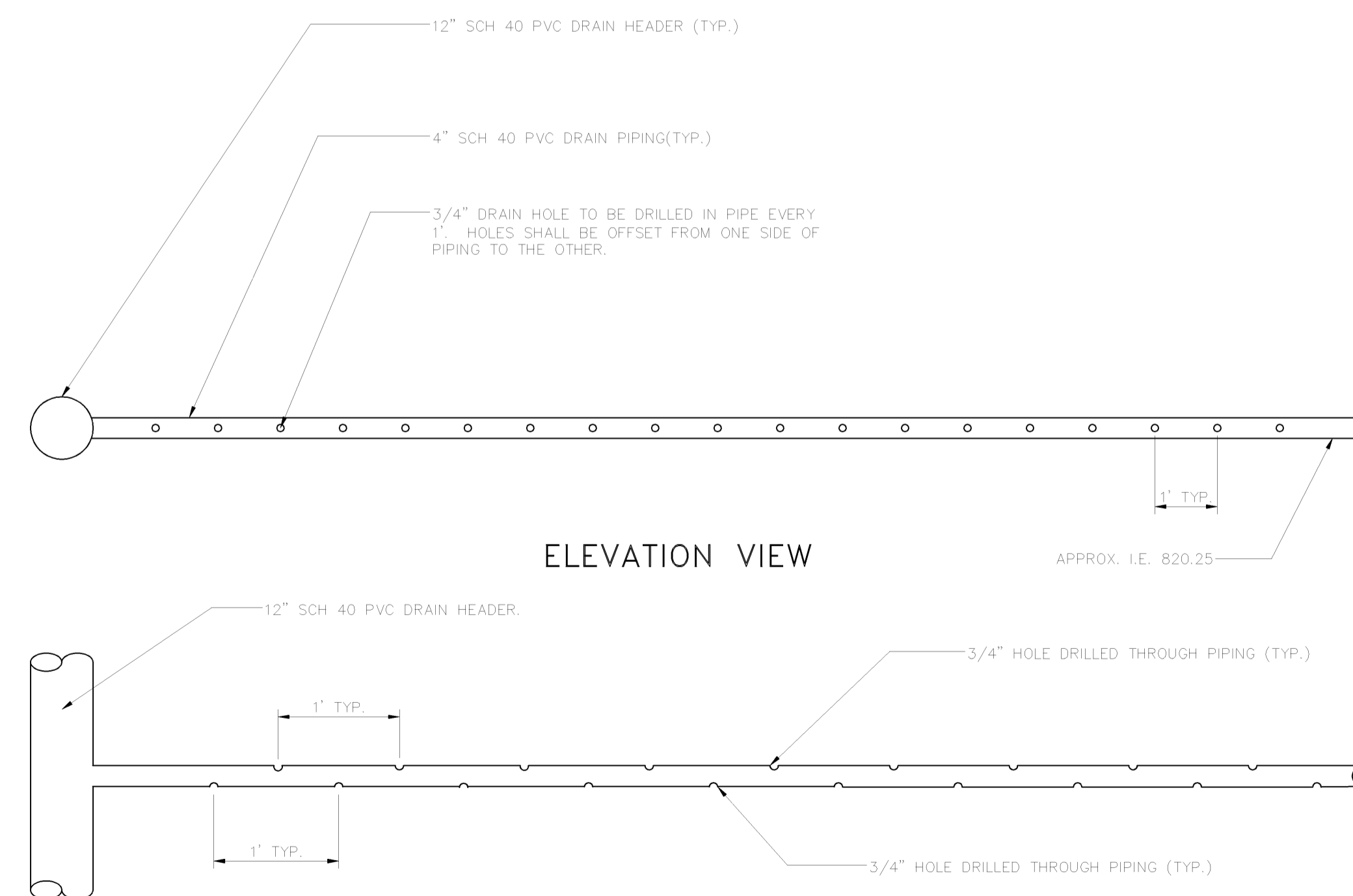
- NOTES:
- WEIR SHALL BE FABRICATED OF 3/4" THICK STEEL PLATE.
 - CONTRACTOR SHALL CONSTRUCT THE WEIR AS SO THE OUTLET HEIGHT CAN BE MODIFIED IN THE FIELD BY ADDING 6" X 5' PIECES OF STEEL INTO THE EXISTING OPENING TO ADJUST THE WATER ELEVATION IN THE SETTLING POND.
 - THE CONTRACTOR SHALL MAKE PROVISIONS IN THE CONSTRUCTION OF THE WEIR TO ALLOW FOR REMOVAL IF REQUIRED.



ELEVATION VIEW

DISCHARGE/FLOW CONTROL WEIR DETAIL

NOT TO SCALE



ELEVATION VIEW

PLAN VIEW

TREATMENT CELL DRAIN PIPING DETAIL

NOT TO SCALE

NO.	DATE	REVISION

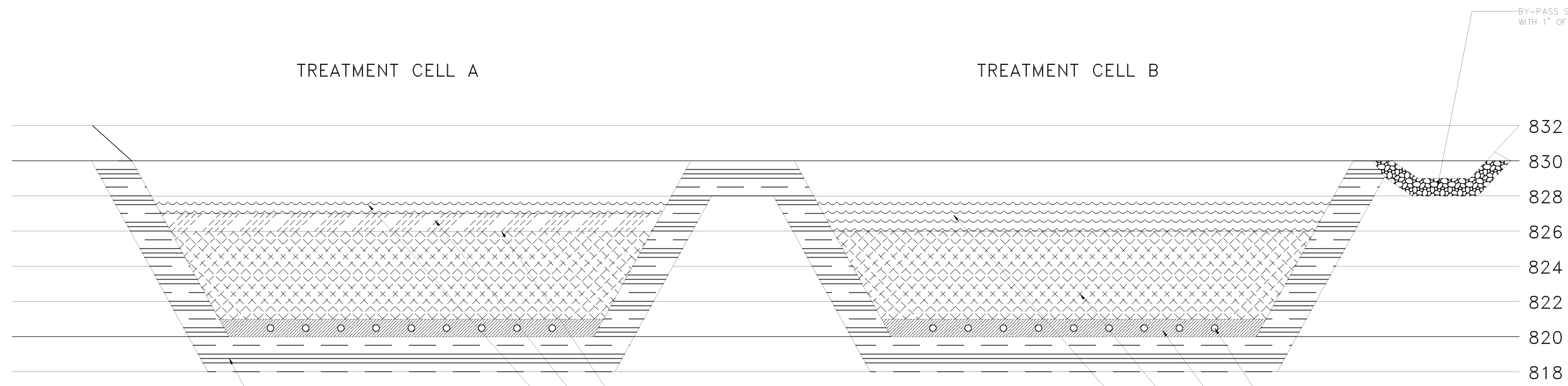
MANAGER:	DANIEL J. BECKER, PE	DESIGN BY:	CHD BY:
DESIGN BY:	C. BUBECK DB	DRAWN BY:	C. BUBECK DB
DRAWING REFERENCE:			
CLIENT:	SCHUYLKILL CONSERVATION DISTRICT 1206 AG CENTER DRIVE POTTSVILLE, PA 17901 (570) 622-4124	SCALE:	NO SCALE

FOR REVIEW ASSOCIATES BY:	
FIELDBOOK NO.:	
DATE:	JULY 2002
SHEET NO.:	6 OF 8
DWG. NO.:	024119-02

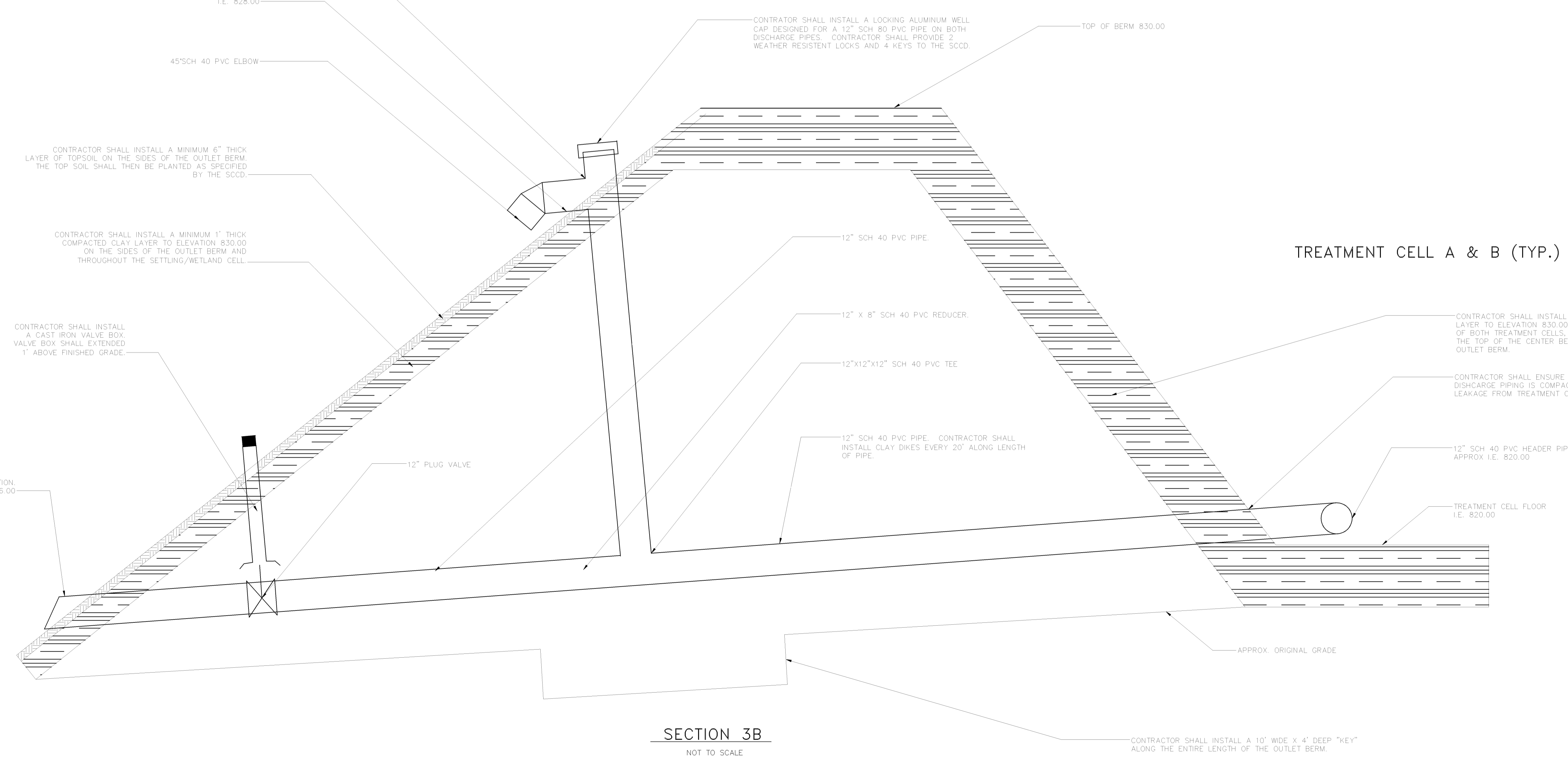
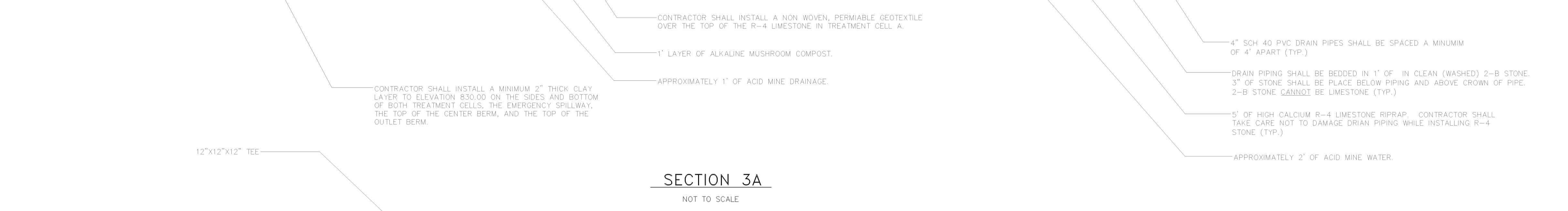
RETNAW ASSOCIATES, INC.
3020 Columbia Ave., Lancaster, PA 17603
Phone (717) 394-3721 • Fax (717) 394-1063
www.retaw.com
Bethlehem, PA • Camp Hill, PA • Pottsville, PA • York, PA
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DETAILS
ACID MINE DRAINAGE REMEDIATION PROJECT
BELL COLLIERY
WASHINGTON TOWNSHIP
SCHUYLKILL COUNTY

DATE:	JULY 2002
SHEET NO.:	6 OF 8
DWG. NO.:	024119-02



- GENERAL NOTES:**
- MATERIAL FOR CONSTRUCTING BERMS SHALL BE CLEAN FILL FREE OF ORGANIC MATERIAL AND STONES IN EXCESS OF 6" IN DIAMETER. BERMS SHALL BE CONSTRUCTED IN 6" LIFTS AND COMPACTED TO 95% PROCTOR DENSITY.
 - CLAY MATERIAL SHALL BE COMPACTED TO ELIMINATE SEEPAGE.
 - ALL LIMESTONE USED ON SITE SHALL BE HIGH CALCIUM.
 - ALL GEOTEXTILE USED ONSITE SHALL BE NORTH AMERICAN GREEN P-300.



MANAGER: DANIEL J. BECKER, PE		SURV. CHIEF: FELDBOOK NO.		FOR REVIEW ASSOCIATES BY:	
DESIGN BY: C. BUBECK DB	DRAWING REFERENCE:	DRWN BY: C. BUBECK DB	CHKD BY: DB	NO.	DATE
CLIENT: SCHUYLKILL CONSERVATION DISTRICT 1206 AG CENTER DRIVE POTTSVILLE, PA 17901 (570) 622-4124		SCALE: NO SCALE		REVISION	
		3020 Columbia Ave., Lancaster, PA 17603 Phone (717) 394-3721 • Fax (717) 394-1065 Pottsville, PA 17884 Website: www.betterinc.com Bethlehem, PA • Camp Hill, PA • Pottsville, PA • York, PA Engineers • Planners • Scientists • Landscape Architects • Surveyors		DETAILS ACID MINE DRAINAGE REMEDIATION PROJECT BELL COLLIERY WASHINGTON TOWNSHIP SCHUYLKILL COUNTY	
DATE: JULY 2002		SHEET NO. 7 OF 8		DWG. NO. 024119-01	

