
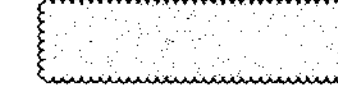
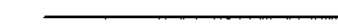



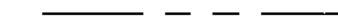




LEGEND

-  EXISTING TREE LINE
-  CONSERVATION EASEMENT
-  EXISTING ROAD
-  EXISTING BOUNDARY LINE
-  EXISTING BUILDING
-  EXISTING STREAM
-  EASEMENT
-  EXISTING FENCE
-  EXISTING WETLANDS

PERIMETER 10
 • ± 4,310' INTERNAL PERIMETER
 • NO LANDSCAPING REQUIRED

PERIMETER 5
 • ± 1,780' LANDSCAPE TYPE 'D'
 • NON-RESIDENTIAL/LOADING TO PUBLIC ROAD
 • EXISTING VEGETATION TO REMAIN IN CONSERVATION EASEMENT
 • FULL CREDIT FOR EXISTING VEGETATION PROPOSED

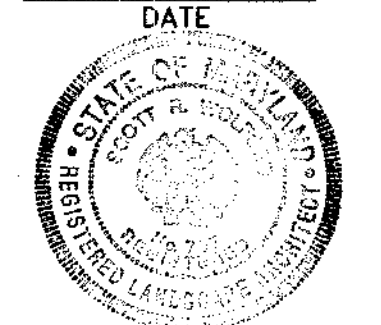
PERIMETER 4
 • ± 280' LANDSCAPE TYPE 'E'
 • PARKING/LOADING TO PUBLIC ROAD
 • PARTIAL CREDIT FOR BERM PROPOSED

PERIMETER 3
 • ± 325' LANDSCAPE TYPE 'B'
 • NON-RESIDENTIAL/FRONT-SIDE TO PUBLIC ROAD
 • PARTIAL CREDIT FOR BERM PROPOSED

PERIMETER 2
 • ± 2,700' LANDSCAPE TYPE 'C'
 • LOADING TO NON-RESIDENTIAL PROPERTY
 • 1,975' OF CREDIT FOR EXISTING VEGETATION

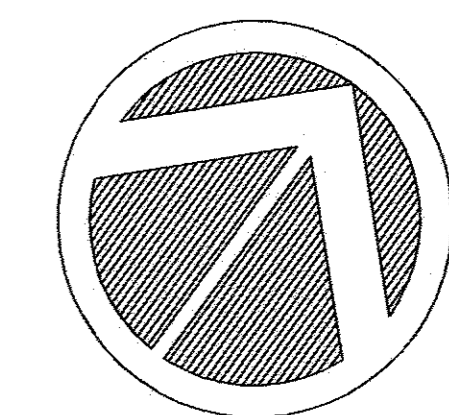
PERIMETER 1
 • ± 675' LANDSCAPE TYPE 'B'
 • NON-RESIDENTIAL/FRONT-SIDE TO PUBLIC ROAD

- NOTE:
- 1) SEE LANDSCAPE PLANS, SHEETS 22 THROUGH 24, FOR REQUIRED PLANTINGS.
 - 2) SEE SHEET 25 FOR PLANTING DETAILS, PLANT MATERIAL SCHEDULES, & COUNTY LANDSCAPE REQUIREMENT TABLES.
 - 3) LANDSCAPE BERMS-LOCATION OF CONSERVED TOPSOIL FOR FUTURE REGENERATION OF SITE FOLLOWING COMPLETION OF MINING.

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.	
DIRECTOR <i>Thomas M. Cagle</i>	DATE 3/15/04
CHIEF, DEVELOPMENT ENGINEERING DIVISION <i>Mike Dammann</i>	DATE 2/20/04
CHIEF, DIVISION OF LAND DEVELOPMENT <i>Cindy Hamstra</i>	DATE 3/11/04
DATE NO.	REVISION
DEVELOPER/OWNER:	
(OWNER) CHASE LIMITED PARTNERSHIP P.O. BOX 550 LAUREL, MD 207125 410.742.1234	(DEVELOPER) CHASE MINING LLC P.O. BOX 550 LAUREL, MD 207125 410.742.1234
PROJECT	
CHASE QUARRY	
AREA ZONED M-1 & MXD-3, TAX MAP No. 43 PARCEL 234 & P.O. 235, BLOCK 19 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND	
TITLE	
OVERALL LOCATION PLAN	
Patton Harris Rust & Associates, pc Engineers, Surveyors, Planners, Landscape Architects. 8818 Centre Park Drive Columbia, MD 21045 T 410.997.8900 F 410.997.9282	
	DESIGNED BY : D.T.D. DRAWN BY : A.J.L. CHECKED BY : D.T.D. PROJECT NO : 99092/ OVER2.DWG DATE : JANUARY 29, 2004 SCALE : 1" = 200' DRAWING NO. 2 OF 40

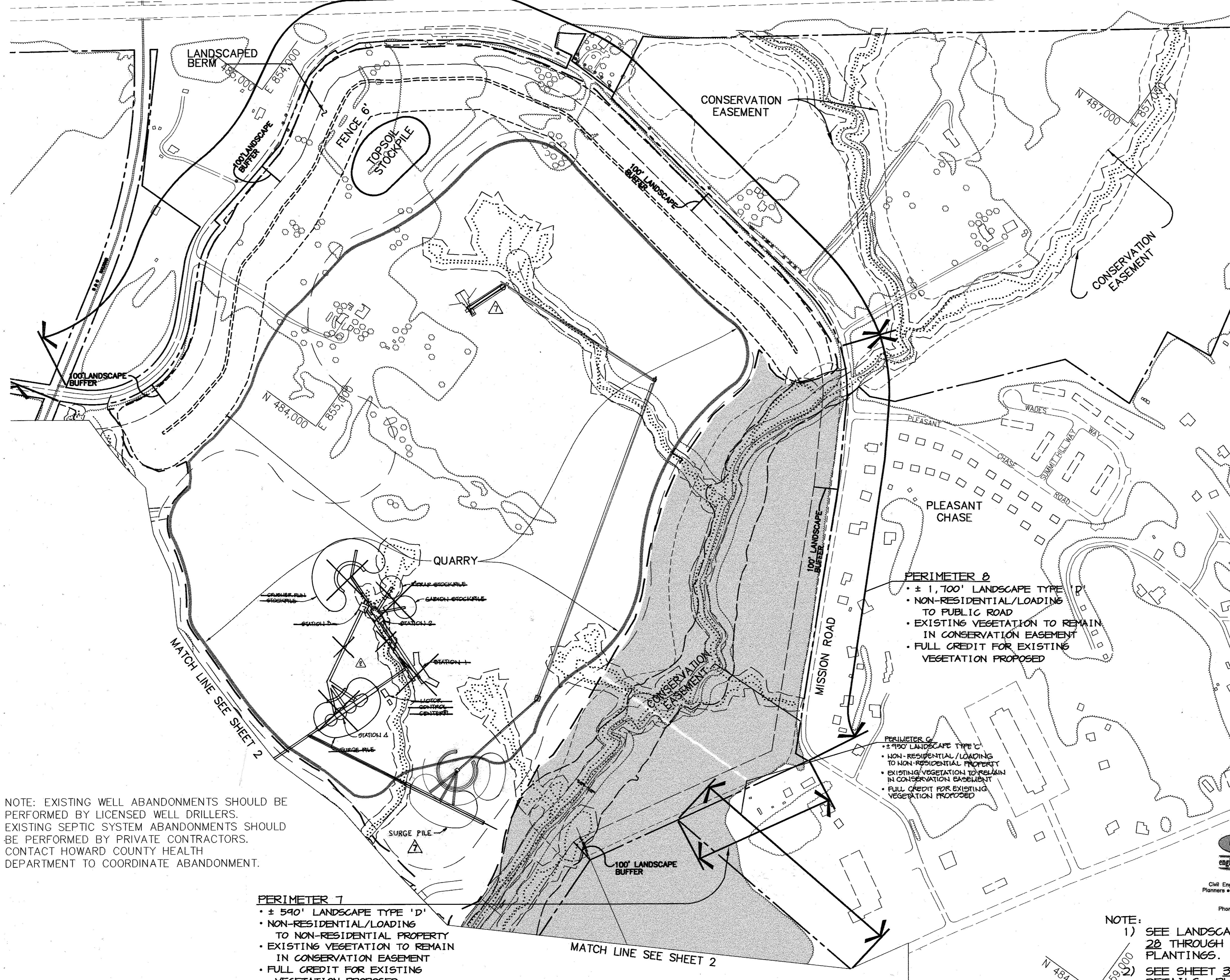
PERIMETER 4
 • ± 4,875' LANDSCAPE TYPE 'D'
 • NON-RESIDENTIAL/LOADING TO PUBLIC ROAD

INTERSTATE 95



LEGEND

- EXISTING TREE LINE
- CONSERVATION EASEMENT
- EXISTING ROAD
- EXISTING BOUNDARY LINE
- EXISTING BUILDING
- EXISTING STREAM
- APPROXIMATE LOCATION OF BENCH FOR BERM
- BERM RIDGE LINE
- EASEMENT
- EXISTING FENCE
- EXISTING WETLANDS
- QUARRY LIMITS



07-22-16	PLANT RELOCATION - CNA, INC.
6-15-05	CHANGED SHEET NUMBER
APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.	
DIRECTOR	3/15/04 DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION	2/26/04 DATE
CHIEF, DIVISION OF LAND DEVELOPMENT	2/11/04 DATE
2-21-05	ADDED PLANT LAYOUT
1-6-05	CHANGED SHEET NUMBER
DATE NO.	REVISION
DEVELOPER/OWNER:	
(OWNER) CHASE LIMITED PARTNERSHIP P.O. BOX 850 LAUREL, MD 20725 410.742.1234	(DEVELOPER) CHASE MINING LLC P.O. BOX 850 LAUREL, MD 20725 410.742.1234

FOR REVISION ONLY

PROJECT
CHASE QUARRY

AREA ZONED M-1 & MXD-3, TAX MAP No. 43
 PARCEL 234 & P.O. 235, BLOCK 14
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND



CNA
 engineers, surveyors & landscape architects

Civil Engineers • Land Surveyors • Landscape Architects
 Planners • Geotechnical Engineers • Environmental Engineers
 Forest Hill, Maryland 21050
 Phone (410) 879-7200 • Fax (410) 838-1811
 E-mail: cna@mail@cna-engineers.com

TITLE
OVERALL LOCATION PLAN
 Patton Harris Rust & Associates, PC
 Engineers, Surveyors, Planners, Landscape Architects.
 8818 Centre Park Drive
 Columbia, MD 21045
 T 410.997.8900
 F 410.997.9282

DATE	DESIGNED BY : D.T.D.
	DRAWN BY : A.J.L.
	CHECKED BY : D.T.D.
	PROJECT NO : 99092/ OVERS.DWG
	DATE : JANUARY 29, 2004
	SCALE : 1" = 200'
	DRAWING NO. 3 OF 51

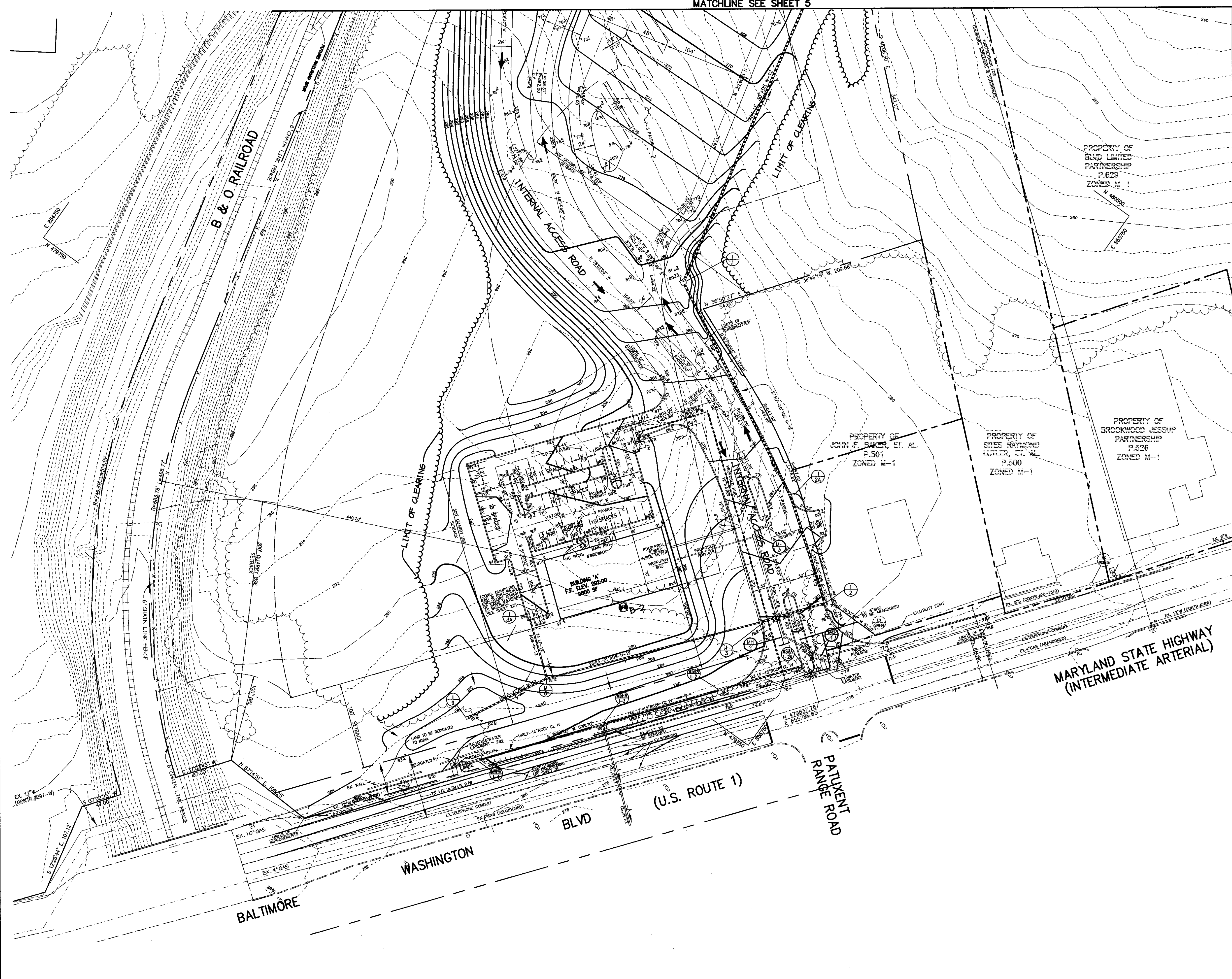
NOTE:
 1) SEE LANDSCAPE PLANS, SHEETS 28 THROUGH 34, FOR REQUIRED PLANTINGS.
 2) SEE SHEET 35 FOR PLANTING DETAILS, PLANT MATERIAL SCHEDULES, & COUNTY LANDSCAPE REQUIREMENT TABLES.

NOTE: EXISTING WELL ABANDONMENTS SHOULD BE PERFORMED BY LICENSED WELL DRILLERS. EXISTING SEPTIC SYSTEM ABANDONMENTS SHOULD BE PERFORMED BY PRIVATE CONTRACTORS. CONTACT HOWARD COUNTY HEALTH DEPARTMENT TO COORDINATE ABANDONMENT.

PERIMETER 7
 • ± 590' LANDSCAPE TYPE 'D'
 • NON-RESIDENTIAL/LOADING TO NON-RESIDENTIAL PROPERTY
 • EXISTING VEGETATION TO REMAIN IN CONSERVATION EASEMENT
 • FULL CREDIT FOR EXISTING VEGETATION PROPOSED

PERIMETER 8
 • ± 1,700' LANDSCAPE TYPE 'D'
 • NON-RESIDENTIAL/LOADING TO PUBLIC ROAD
 • EXISTING VEGETATION TO REMAIN IN CONSERVATION EASEMENT
 • FULL CREDIT FOR EXISTING VEGETATION PROPOSED

PERIMETER 6
 • ± 950' LANDSCAPE TYPE 'C'
 • NON-RESIDENTIAL/LOADING TO NON-RESIDENTIAL PROPERTY
 • EXISTING VEGETATION TO REMAIN IN CONSERVATION EASEMENT
 • FULL CREDIT FOR EXISTING VEGETATION PROPOSED



LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- EXISTING TREE LINE
- PROPOSED TREE LINE
- EXISTING ROAD
- EXISTING BOUNDARY LINE
- EXISTING BUILDING
- EXISTING WETLANDS
- APPROXIMATE LOCATION OF BENCH FOR BERM
- EASEMENT
- PROPOSED FENCE
- RIP RAP OUTLET PROTECTION
- LIMIT OF 100-YR FLOODPLAIN
- 10' BENCH
- 50' STREAM BUFFER
- WETLAND BUFFER LIMITS
- EXISTING STREAM
- P-3 PAVING
- MSHA PAVING

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR: *Mark Dr. [Signature]* 3/15/04 DATE
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 CHIEF, DIVISION OF LAND DEVELOPMENT: *Gandy [Signature]* 2/20/04 DATE
 2/11/04 DATE

DEVELOPER/OWNER:
 CHASE LIMITED PARTNERSHIP (OWNER) CHASE MINING LLC (DEVELOPER)
 F.O. BOX 950 F.O. BOX 950
 LAUREL, MD 20725 LAUREL, MD 20725
 410.742.1234 410.742.1234

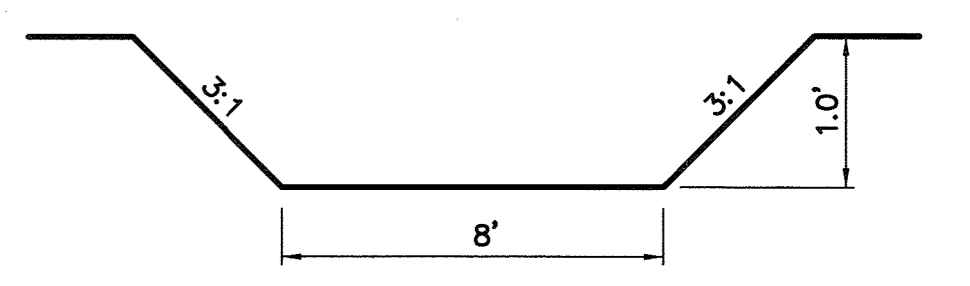
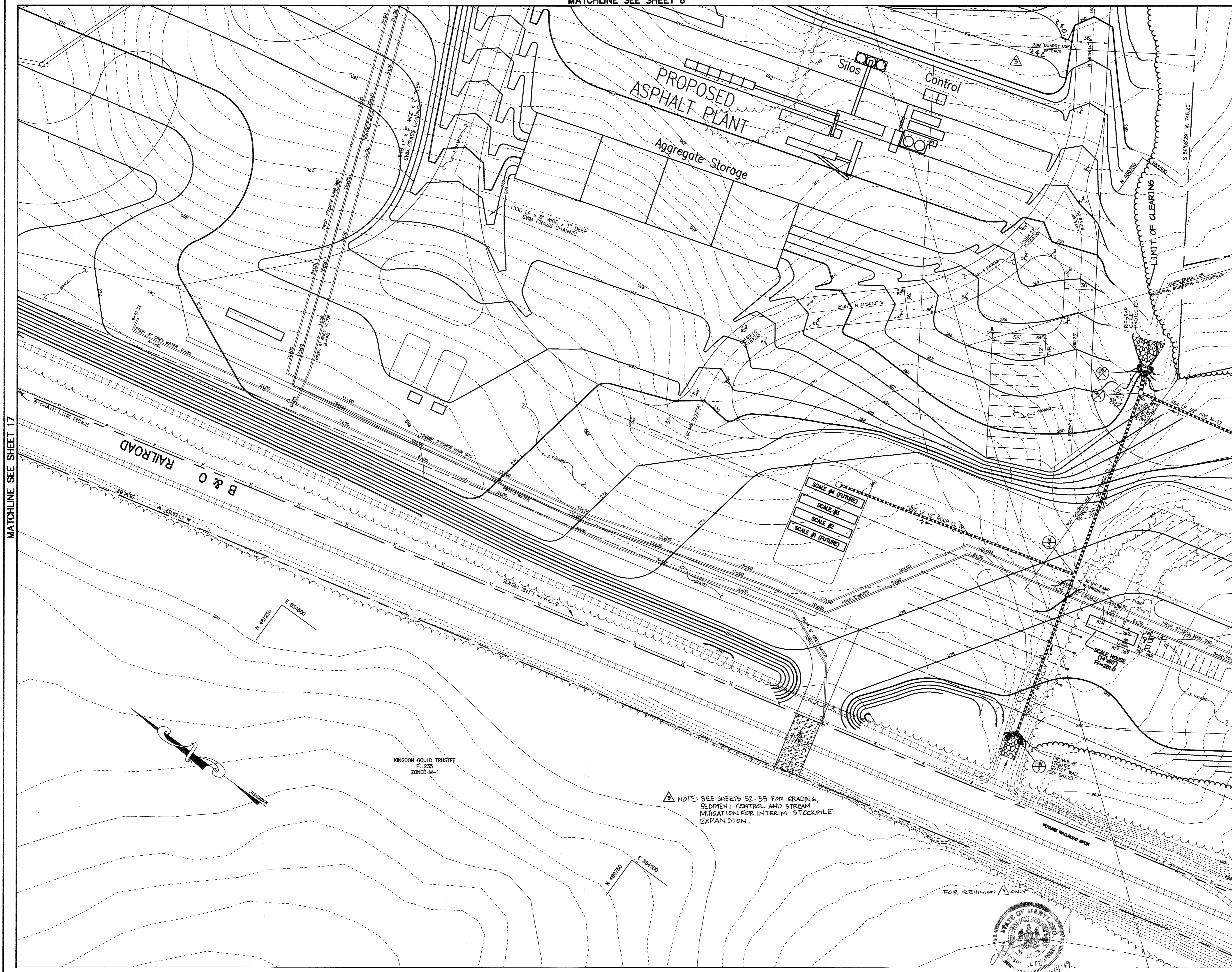
PROJECT: **CHASE QUARRY**
 AREA ZONED M-1 & MXD-3, TAX MAP No. 43
 PARCEL 234 & P.O. 235, BLOCK 19
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE: **SITE DEVELOPMENT PLAN**
 Patton Harris Rust & Associates, pc
 Engineers, Surveyors, Planners, Landscape Architects.
 8818 Centre Park Drive
 Columbia, MD 21045
 T 410.997.8900
 F 410.997.9282

DATE: 1.30.04
 DESIGNED BY: C.J.R.
 DRAWN BY: MAD
 CHECKED BY: C.J.R.
 PROJECT NO: 99092/
 SDP-4.DWG
 DATE: JANUARY 29, 2004
 SCALE: 1" = 50'
 DRAWING NO. 4 OF 40

P:\project\99092\1_01\Eng\Plans\SDP-4.dwg, Layout1, 01/29/2004 12:22:21 PM, HP1050C_Mylar.pc3, Arch D - 24 x 36 in. (landscape), 1:1

MATCHLINE SEE SHEET 6



NOTE: USE 4"-7" STONE PRESSED INTO THE SOIL A MINIMUM OF 7" WHERE SPECIFIED ON THE PLAN VIEW; OTHERWISE USE EROSION CONTROL MATTING.

LEGEND

	EXISTING CONTOURS
	PROPOSED CONTOURS
	EXISTING TREE LINE
	PROPOSED TREE LINE
	EXISTING ROAD
	EXISTING BOUNDARY LINE
	EXISTING BUILDING
	EXISTING WETLANDS
	APPROXIMATE LOCATION OF BENCH FOR BERM
	EASEMENT
	PROPOSED FENCE
	RIP RAP OUTLET PROTECTION
	LIMIT OF 100-YR FLOODPLAIN
	10' BENCH
	50' STREAM BUFFER
	WETLAND BUFFER LIMITS
	EXISTING STREAM
	P-3 PAVING
	UPDATED PROP CONTOUR

MATCHLINE SEE SHEET 17

MATCHLINE SEE SHEET 4

10-22-19	REVISED GRADING, ADDED NOTE RE STOCKPILE EXP N 51
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.	
<i>Mark D. Lytle</i>	10/23/05
DIRECTOR	DATE
<i>Alan P. ...</i>	10/23/05
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
<i>Chris ...</i>	11/6/05
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE
8/30/05	ADDED WATER & SEWER & REVISED GRADING
1/06/05	REV. ACCESS ROAD & GRADING AND ADDED SCALE HOUSE
DATE NO.	REVISION
DEVELOPER/OWNER:	
(OWNER) CHASE LIMITED PARTNERSHIP P.O. BOX 850 LAUREL, MD 20725 410.742.1234	(DEVELOPER) CHASE MINING LLC P.O. BOX 850 LAUREL, MD 20725 410.742.1234
PROJECT CHASE QUARRY	
AREA ZONED M-1 & MXD-3, TAX MAP NO. 43 PARCEL 234 & P.O. 235, BLOCK 19 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND	
TITLE REVISED SITE DEVELOPMENT PLAN	
Patton Harris Rust & Associates, PC Engineers, Surveyors, Planners, Landscape Architects. 8818 Centre Park Drive Columbia, MD 21045 T 410.997.8900 F 410.997.9282	
8-30-05 DATE	DESIGNED BY: ACR
	DRAWN BY: EMR
	CHECKED BY: ACR
	PROJECT NO: 99092/ SDP-5.DWG
	DATE: AUGUST 30, 2005
	SCALE: 1" = 50'
AIMSE C. REMINGTON #29923	DRAWING NO. 5 OF 55

MATCHLINE SEE SHEET 8

MATCHLINE SEE SHEET 7



- ### LEGEND
- EXISTING CONTOURS
 - PROPOSED CONTOURS
 - EXISTING TREE LINE
 - PROPOSED TREE LINE
 - EXISTING ROAD
 - EXISTING BOUNDARY LINE
 - EXISTING BUILDING
 - EXISTING WETLANDS
 - APPROXIMATE LOCATION OF BENCH FOR BERM
 - EASEMENT
 - PROPOSED FENCE
 - RIP RAP OUTLET PROTECTION
 - LIMIT OF 100-YR FLOODPLAIN
 - 10' BENCH
 - 50' STREAM BUFFER
 - WETLAND BUFFER LIMITS
 - EXISTING STREAM
 - P-3 PAVING
 - UPDATED WETLAND BOUNDARY
 - UPDATED BUFFER
 - UPDATED PROP. CONTOUR

FOR REVISION ONLY



PROPERTY OF
CHESAPEAKE SUPPLY
AND EQUIPMENT CO.
P.603
ZONED M-1

PROPERTY OF
BLVD LIMITED
PARTNERSHIP
P.628
ZONED M-1

10-22-19 REVISED GRADING AND WETLANDS; ADDED NOTE: STOCKPILE EXPANSION	
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.	
<i>Frank A. Longo</i>	10/21/19
DIRECTOR	DATE
<i>Chris Williams</i>	10/21/19
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
<i>Chris Harris</i>	10/21/19
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE
1/06/05 APPROVED SIGNATURE AND REVISED GRADING	
1/06/05 REVISED GRADING & SHEET NO.	
DATE NO.	REVISION
DEVELOPER/OWNER:	
(OWNER) CHASE LIMITED PARTNERSHIP P.O. BOX 850 LAUREL, MD 20725 410.142.1234	(DEVELOPER) CHASE MINING LLC P.O. BOX 850 LAUREL, MD 20725 410.142.1234
PROJECT CHASE QUARRY	
AREA ZONED M-1 & MXD-3, TAX MAP No. 43 PARCEL 234 & P.O. 235, BLOCK 19 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND	
TITLE REVISED SITE DEVELOPMENT PLAN	
Patton Harris Rust & Associates, pc Engineers, Surveyors, Planners, Landscape Architects. 8818 Centre Park Drive Columbia, MD 21045 T 410.997.8900 F 410.997.9282	
8-30-05 DATE	DESIGNED BY: ACR
	DRAWN BY: EMR
<i>Nancy C. Remington</i>	CHECKED BY: ACR
AIMEE C. REMINGTON #29923	PROJECT NO: 99092/ SDP6.DWG
	DATE: AUGUST 30, 2005
	SCALE: 1" = 50'
	DRAWING NO. 6 OF 55

NOTE: SEE SHEETS 52, 55 FOR GRADING, SEDIMENT CONTROL AND STREAM MITIGATION FOR INTERIM STOCKPILE EXPANSION.

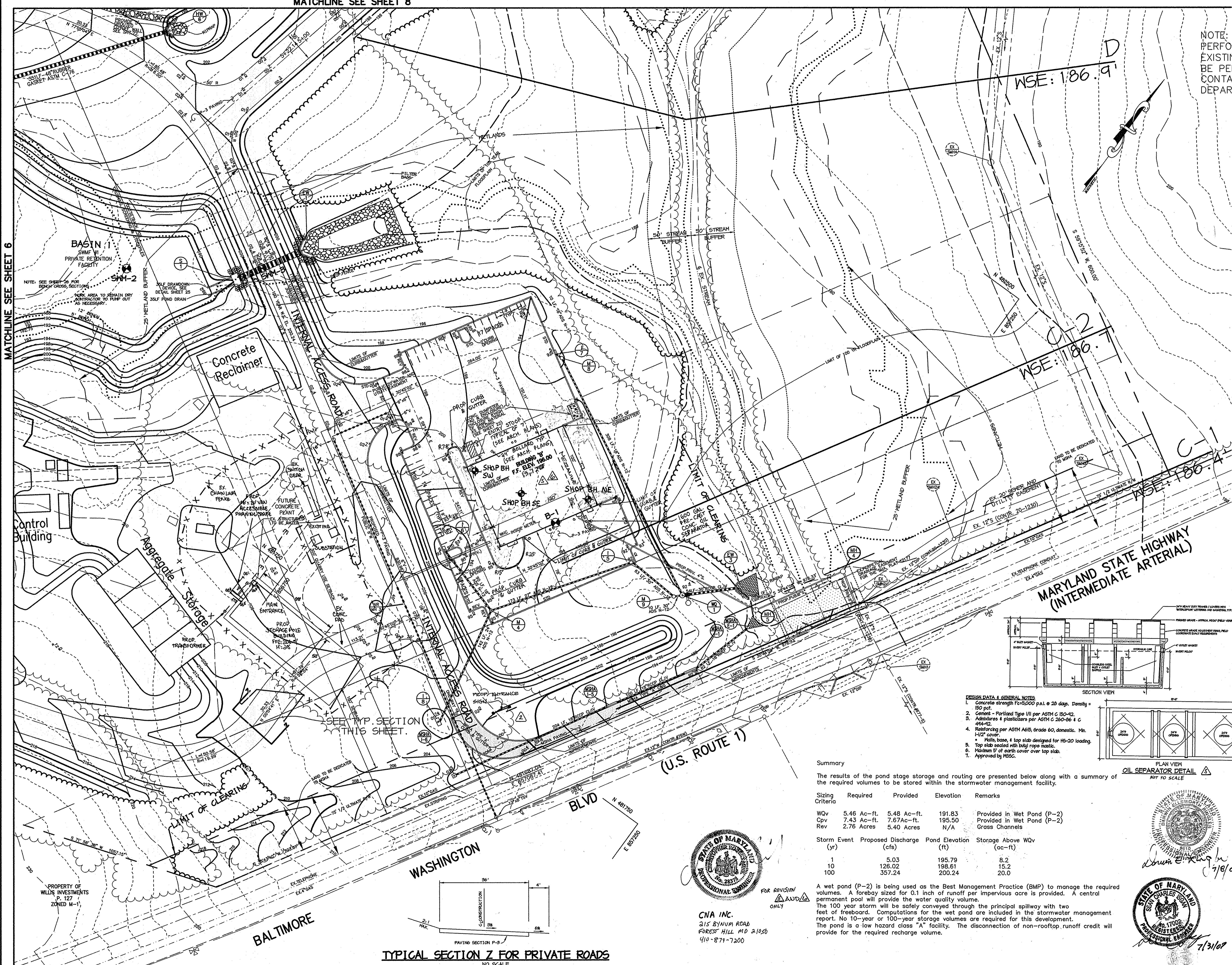
MATCHLINE SEE SHEET 18

MATCHLINE SEE SHEET 5

MATCHLINE SEE SHEET 4

MATCHLINE SEE SHEET 8

MATCHLINE SEE SHEET 6



NOTE: EXISTING WELL ABANDONMENTS SHOULD BE PERFORMED BY LICENSED WELL DRILLERS. EXISTING SEPTIC SYSTEM ABANDONMENTS SHOULD BE PERFORMED BY PRIVATE CONTRACTORS. CONTACT HOWARD COUNTY HEALTH DEPARTMENT TO COORDINATE ABANDONMENT.

3-15-16 REV. S.F. OF BLDG 'B' - CNA INC.

LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- EXISTING TREE LINE
- PROPOSED TREE LINE
- EXISTING ROAD
- EXISTING BOUNDARY LINE
- EXISTING BUILDING
- EXISTING WETLANDS
- APPROXIMATE LOCATION OF BENCH FOR BERM
- EASEMENT
- PROPOSED FENCE
- RIP RAP OUTLET PROTECTION
- LIMIT OF 100-YR FLOODPLAIN
- 10' BENCH
- 50'STREAM BUFFER
- WETLAND BUFFER LIMITS
- EXISTING STREAM
- MSHA PAVING
- P-3 PAVING

- 1-9-15 REDUCED BUILDING FOOTPRINT - CNA INC.
- 7-8-08 ADDED POLE BLDG + SUBSTATION + FENCE
- 7-31-07 ADDED SHOP BORE HOLES

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Donna DeWright 2/11/04
DIRECTOR DATE

John DeWright 2/10/04
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Chris Thuniger 7/11/04
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

6-19-05 ADDED ENTRANCE SIGNAL, CHANGED SHEET NUMBER

1-6-05 CHANGED SHEET NO.

DATE NO. REVISION

DEVELOPER/OWNER:
(OWNER) CHASE LIMITED PARTNERSHIP (DEVELOPER) CHASE MINING LLC
P.O. BOX 850 P.O. BOX 850
LAUREL, MD 207125 LAUREL, MD 207125
410.142.1234 410.142.1234

PROJECT
CHASE QUARRY

AREA ZONED M-1 & MXD-3, TAX MAP No. 43
PARCEL 234 & P.O. 235, BLOCK 19
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
SITE DEVELOPMENT PLAN

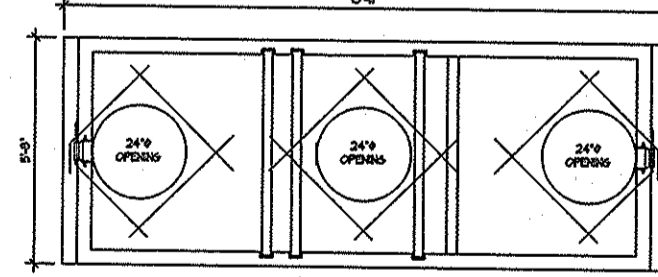
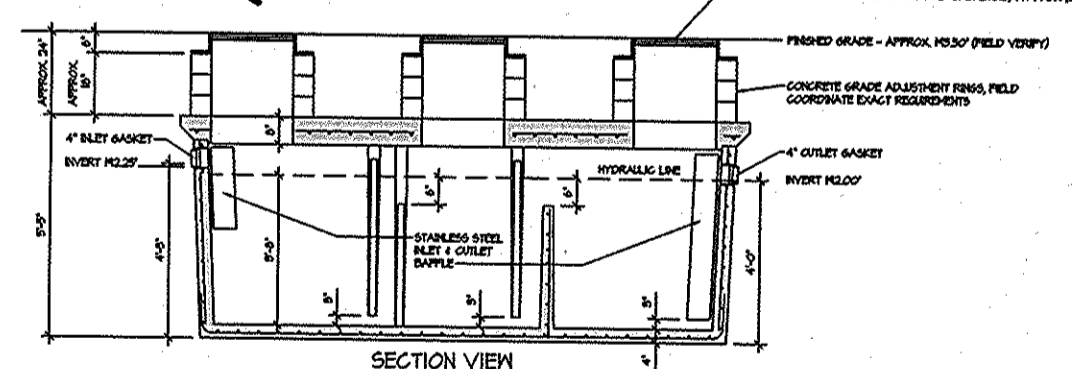
Patton Harris Rust & Associates, pc
Engineers, Surveyors, Planners, Landscape Architects.
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

DESIGNED BY: C.J.R.
DATE 1-30-04

DRAWN BY: MAD
CHECKED BY: C.J.R.

PROJECT NO: 99092/
SDP-7.DWG
DATE: JANUARY 29, 2004
SCALE: 1" = 50'

DRAWING NO. 7 OF 51
CHRISTOPHER J. REID #19949



- DESIGN DATA & GENERAL NOTES
1. Concrete strength f'c=5000 psi @ 28 days. Density = 150 pcf.
 2. Cement - Portland Type III per ASTM C 150-02.
 3. Aggregates & plasticizers per ASTM C 260-06 & C 494-02.
 4. Reinforcing per ASTM A618, Grade 60, domestic. Min. 1/2" cover.
 5. Top slab sealed with butyl rope mastic.
 6. Maximum 5" of earth cover over top slab.
 7. Approved by PE55C.

Summary
The results of the pond stage storage and routing are presented below along with a summary of the required volumes to be stored within the stormwater management facility.

Sizing Criteria	Required	Provided	Elevation	Remarks
WQv	5.46 Ac-ft.	5.48 Ac-ft.	191.83	Provided in Wet Pond (P-2)
Cpv	7.43 Ac-ft.	7.67 Ac-ft.	195.50	Provided in Wet Pond (P-2)
Rev	2.76 Acres	5.40 Acres	N/A	Grass Channels

Storm Event (yr)	Proposed Discharge (cfs)	Pond Elevation (ft)	Storage Above WQv (ac-ft)
1	5.03	195.79	8.2
10	126.02	198.61	15.2
100	357.24	200.24	20.0

A wet pond (P-2) is being used as the Best Management Practice (BMP) to manage the required volumes. A forebay sized for 0.1 inch of runoff per impervious acre is provided. A central permanent pool will provide the water quality volume. The 100 year storm will be safely conveyed through the principal spillway with two feet of freeboard. Computations for the wet pond are included in the stormwater management report. No 10-year or 100-year storage volumes are required for this development. The pond is a low hazard class "A" facility. The disconnection of non-rooftop runoff credit will provide for the required recharge volume.



CNA INC.
215 BUNUM ROAD
FOREST HILL MD 21050
410-879-7200

TYPICAL SECTION Z FOR PRIVATE ROADS
NO SCALE

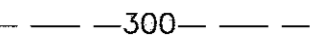
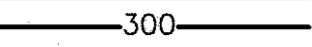


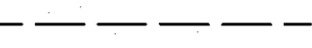
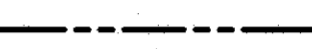

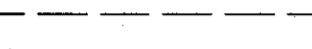

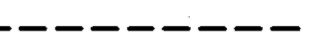
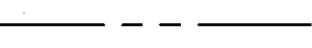


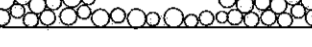
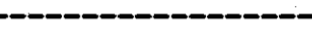




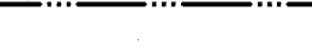
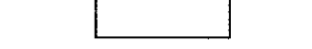
MATCHLINE SEE SHEET 9

MATCHLINE SEE SHEET 18

MATCHLINE SEE SHEET 6

MATCHLINE SEE SHEET 7

LEGEND

-  300 EXISTING CONTOURS
-  300 PROPOSED CONTOURS
-  EXISTING TREE LINE
-  PROPOSED TREE LINE
-  EXISTING ROAD
-  EXISTING BOUNDARY LINE
-  EXISTING BUILDING
-  EXISTING WETLANDS
-  APPROXIMATE LOCATION OF BENCH FOR BERM
-  EASEMENT
-  PROPOSED FENCE
-  RIP RAP OUTLET PROTECTION
-  LIMIT OF 100-YR FLOODPLAIN
-  10' BENCH
-  50' STREAM BUFFER
-  WETLAND BUFFER LIMITS
-  EXISTING STREAM
-  P-3 PAVING
-  2' CONTOUR
-  10' CONTOUR
-  DRAINAGE AREA

07-22-16 PLANT RELOCATION - CNA, INC.

PRIVATELY OWNED AND MAINTAINED SEDIMENT/SETTLING BASIN 2- DESIGN SUMMARY

DESIGN STORM (YR.)	ALLOWABLE RELEASE (C.F.S.)	POND # STUDY POINT #2 FACILITY DISCHARGE (C.F.S.)	WATER SURFACE ELEVATION (FT.)	STORAGE VOLUME (AC. FT.)
2	56.5	23.7	144.5	10.0
10	140.9	123.8	146.4	16.9
100	372.3	276.7	148.1	23.1

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Paul A. Gyle 10/20/05
DIRECTOR DATE

Michael Danner 10/23/05
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Carla Horvath 11/6/05
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

8/30/05 REVISION 1: ASSESS WATER & SEWER AND REVISED GRADING

1/06/05 REVISION 2: REVISED GRADING & SHEET NO.

DATE	NO.	REVISION

DEVELOPER/OWNER:

(OWNER) CHASE LIMITED PARTNERSHIP P.O. BOX 850 LAUREL, MD 20725 410.742.7234

(DEVELOPER) CHASE HINING LLC P.O. BOX 850 LAUREL, MD 20725 410.742.7234

PROJECT: CHASE QUARRY

AREA ZONED M-1 & MXP-3, TAX MAP No. 43 PARCEL 234 & P.O. 235, BLOCK 14 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE: Revised SITE DEVELOPMENT PLAN

Patton Harris Rust & Associates, p.c.
Engineers, Surveyors, Planners, Landscape Architects.
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

PHRA

8-30-05 DATE

DESIGNED BY: ACR

DESIGNED BY: ACR

DRAWN BY: EMR

CHECKED BY: ACR

PROJECT NO: 99092/SDP8.DWG

DATE: AUGUST 30, 2005

SCALE: 1" = 50'

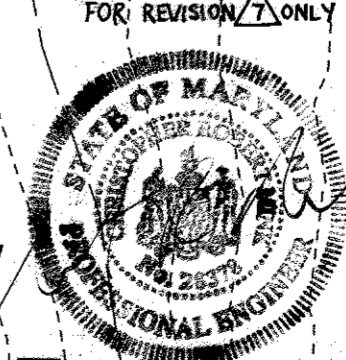
DRAWING NO. 8 OF 51

Aimee C. Remington
AIMEE C. REMINGTON #28923

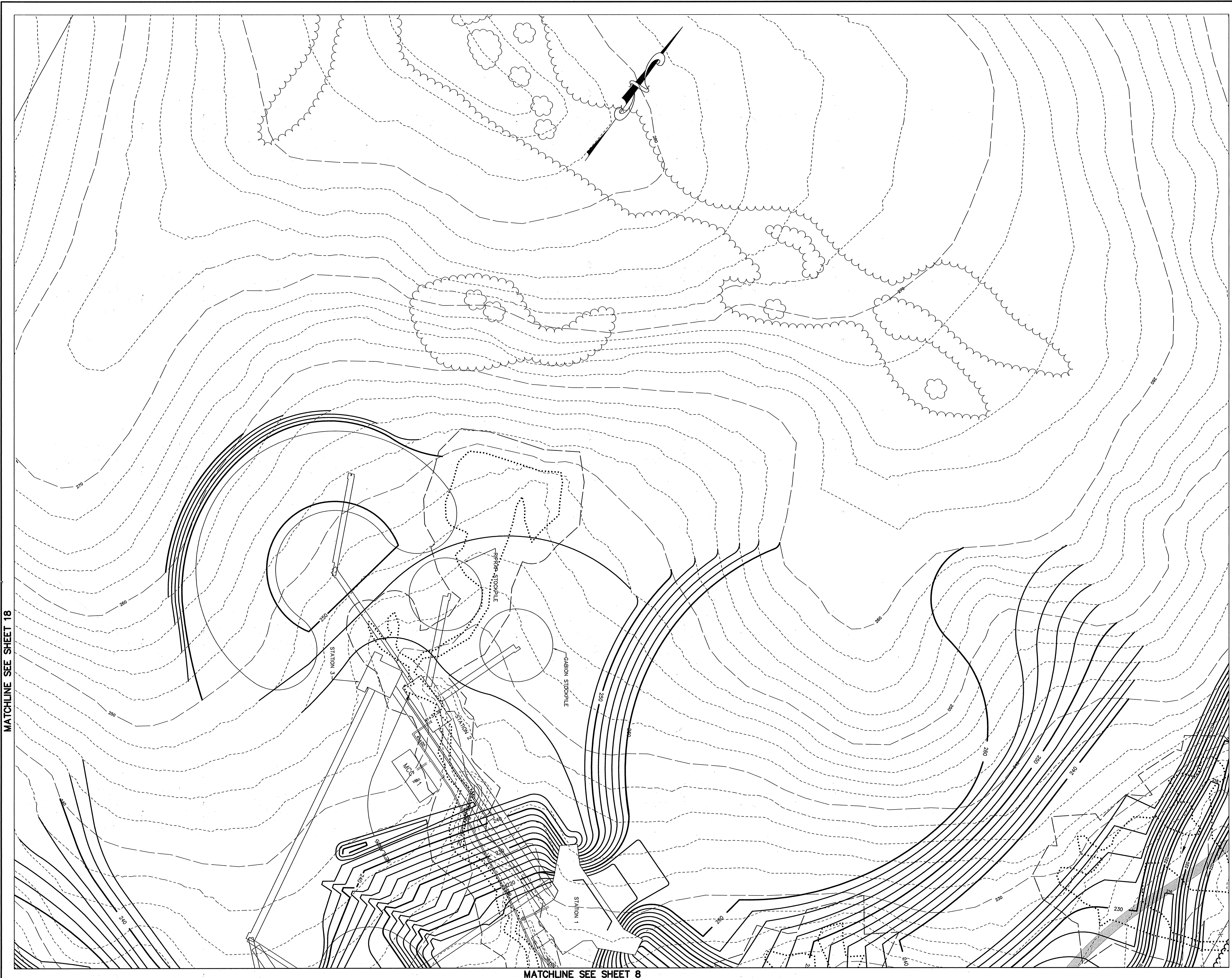
CNA
engineers, surveyors & landscape architects

Civil Engineers • Land Surveyors • Landscape Architects
Planners • Geotechnical Engineers • Environmental Engineers

Forest Hill, Maryland 21090
Phone (410) 879-7200 • Fax (410) 838-1811
E-mail: cnamail@cna-engineers.com

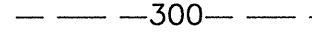
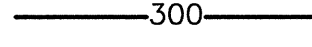


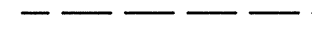
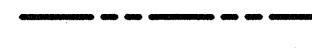

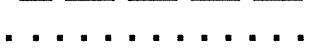

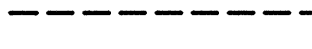
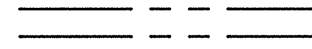
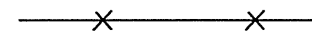
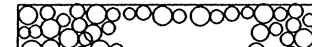
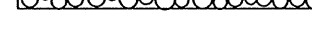


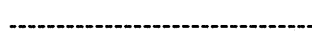


MATCHLINE SEE SHEET 18



MATCHLINE SEE SHEET 8

LEGEND

-  300 EXISTING CONTOURS
-  300 PROPOSED CONTOURS
-  EXISTING TREE LINE
-  PROPOSED TREE LINE
-  EXISTING ROAD
-  EXISTING BOUNDARY LINE
-  EXISTING BUILDING
-  EXISTING WETLANDS
-  APPROXIMATE LOCATION OF BENCH FOR BERM
-  EASEMENT
-  PROPOSED FENCE
-  RIP RAP OUTLET PROTECTION
-  LIMIT OF 100-YR FLOODPLAIN
-  10' BENCH
-  50'STREAM BUFFER
-  WETLAND BUFFER LIMITS
-  EXISTING STREAM

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Frank L. Coyle 10/7/05
 DIRECTOR DATE

Chris DeMunn 10/3/05
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Carla Kinosh 10/6/05
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DATE	NO.	REVISION

DEVELOPER/OWNER:

(OWNER) CHASE LIMITED PARTNERSHIP P.O. BOX 850 LAUREL, MD 20725 410.742.1234	(DEVELOPER) CHASE MINING LLC P.O. BOX 850 LAUREL, MD 20725 410.742.1234
--	---

PROJECT
CHASE QUARRY

AREA ZONED M-1 & MXP-3, TAX MAP No. 43
 PARCEL 234 & P.O. 235, BLOCK 14
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE
SITE DEVELOPMENT PLAN

Patton Harris Rust & Associates, PC
 Engineers, Surveyors, Planners, Landscape Architects.
 8818 Centre Park Drive
 Columbia, MD 21045
 T 410.997.8900
 F 410.997.9282

8-30-05
 DATE

DESIGNED BY : ACR

DRAWN BY : EMR

CHECKED BY : ACR

PROJECT NO : 99092/
 SDP8ADWG

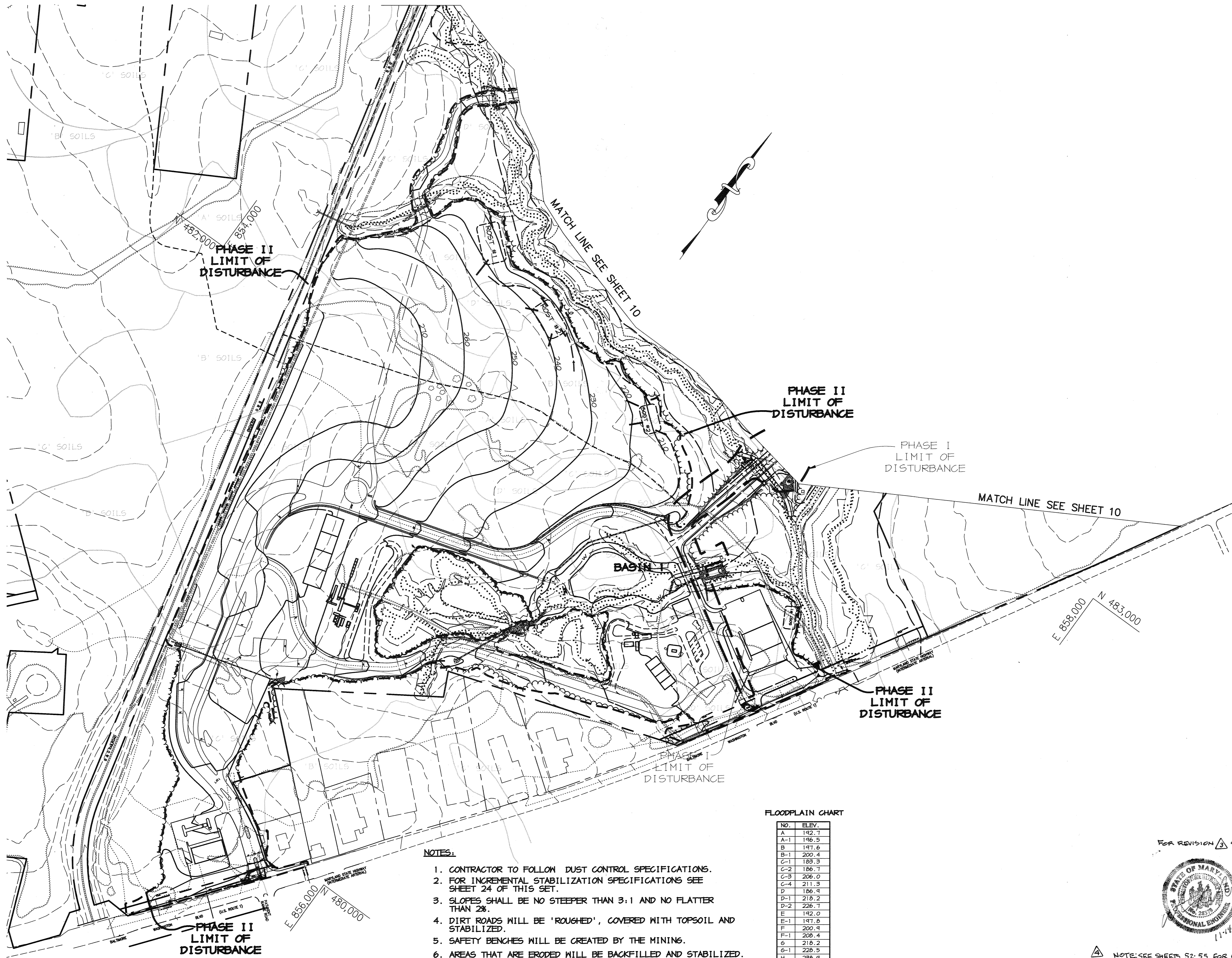
DATE : AUGUST 30, 2005

SCALE : 1" = 50'

DRAWING NO. 9 OF 51

Aimee C. Remington
 AIMEE C. REMINGTON #29923





LEGEND

- 300 EXISTING CONTOURS
- 300 PROPOSED CONTOURS
- EXISTING TREE LINE
- PROPOSED TREE LINE
- EXISTING ROAD
- EXISTING BOUNDARY LINE
- EXISTING BUILDING
- EXISTING WETLANDS
- APPROXIMATE LOCATION OF BENCH FOR BERM
- EXISTING SOILS
- EASEMENT
- PROPOSED FENCE
- DRAINAGE AREA DIVIDE TO INLETS
- LIMIT OF DISTURBANCE, PHASE I
- LIMIT OF DISTURBANCE, PHASE II
- EROSION CONTROL MATTING
- SILT FENCE
- SUPER SILT FENCE
- RIP RAP OUTLET PROTECTION
- GABION INFLOW PROTECTION
- EARTH DIKE
- TEMPORARY SWALE
- WET BUFFER LIMITS
- REMOVABLE PUMPING STATION
- 100-YR FLOODPLAIN LIMITS
- 50'STREAM BUFFER
- EXISTING STREAM
- W - UPDATED WETLAND BOUNDARY

- NOTES:**
1. CONTRACTOR TO FOLLOW DUST CONTROL SPECIFICATIONS.
 2. FOR INCREMENTAL STABILIZATION SPECIFICATIONS SEE SHEET 24 OF THIS SET.
 3. SLOPES SHALL BE NO STEEPER THAN 3:1 AND NO FLATTER THAN 2%.
 4. DIRT ROADS WILL BE 'ROUGHED', COVERED WITH TOPSOIL AND STABILIZED.
 5. SAFETY BENCHES WILL BE CREATED BY THE MINING.
 6. AREAS THAT ARE ERODED WILL BE BACKFILLED AND STABILIZED.
 7. TOPSOIL WILL BE PLACED AS THE SLOPES ARE CREATED.

FLOODPLAIN CHART

NO.	ELEV.
A	192.7
A-1	196.5
B	191.6
B-1	200.4
C-1	189.3
C-2	186.7
C-3	206.0
C-4	211.3
D	186.9
D-1	218.2
D-2	226.7
E	192.0
E-1	187.8
F	200.9
F-1	208.4
G	218.2
G-1	228.5
H	238.9
H-1	246.0

0-22-19 REV. LIMIT OF DISTURBANCE RE WETLANDS, ADDED NOTE RE E.C. STABILIZATION PLAN

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

David D. Laughlin 2/15/04
DIRECTOR DATE

Alan Dammann 2/20/04
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Cindy Hamilton 9/11/04
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

6-15-05 CHANGED SHEET NO.

1-0-05 CHANGED SHEET NO.

DATE	NO.	REVISION

DEVELOPER/OWNER:

(OWNER) CHASE LIMITED PARTNERSHIP P.O. BOX 850 LAUREL, MD 207125 410.742.1234	(DEVELOPER) CHASE MINING LLC P.O. BOX 850 LAUREL, MD 207125 410.742.1234
---	--

PROJECT
CHASE QUARRY

AREA ZONED M-1 & MXD-3, TAX MAP No. 43
PARCEL 234 & P.O. 235, BLOCK 19
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
OVERALL EROSION & SEDIMENT CONTROL PLAN

Patton Harris Rust & Associates, p.c.
Engineers, Surveyors, Planners, Landscape Architects.
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

PHRA

1-30-04
DATE

DESIGNED BY: C.J.R.

DRAWN BY:

CHECKED BY: C.J.R.

PROJECT NO: 99092/
OVERALL.DWG

DATE: JANUARY 29, 2004

SCALE: 1" = 200'

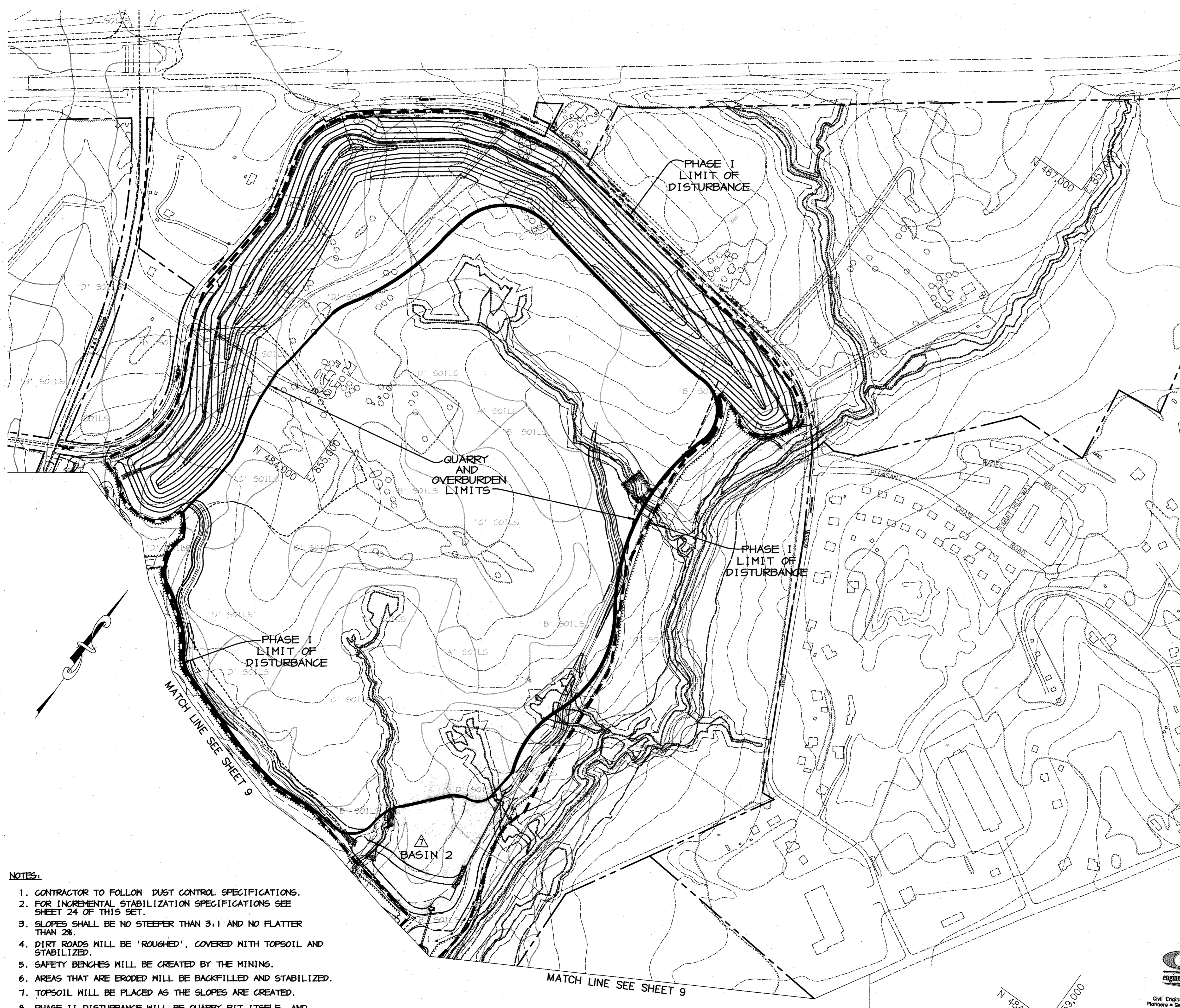
DRAWING NO. 10 OF 55

CHRISTOPHER J. REID #19949

FOR REVISION ONLY



NOTE: SEE SHEETS S2-S5 FOR GRADING, SEDIMENT CONTROL AND STREAM MITIGATION FOR INTERIM STOCKPILE EXPANSION.



LEGEND

- 300 EXISTING CONTOURS
- 300 PROPOSED CONTOURS
- EXISTING TREE LINE
- PROPOSED TREE LINE
- EXISTING ROAD
- EXISTING BOUNDARY LINE
- EXISTING BUILDING
- EXISTING WETLANDS
- APPROXIMATE LOCATION OF BENCH FOR BERM
- EXISTING SOILS
- EASEMENT
- EXISTING FENCE
- DRAINAGE AREA DIVIDE TO INLETS
- LIMIT OF DISTURBANCE, PHASE I
- EROSION CONTROL MATTING
- SILT FENCE
- SUPER SILT FENCE
- RIP RAP OUTLET PROTECTION
- GABION INFLOW PROTECTION
- EARTH DIKE
- TEMPORARY SWALE
- LIMIT OF 100-YR FLOODPLAIN
- REMOVABLE PUMPING STATION
- 10' BENCH ALONG LANDSCAPE BERM
- 50' STREAM BUFFER
- WETLAND BUFFER LIMITS
- EXISTING STREAM

- NOTES:**
1. CONTRACTOR TO FOLLOW DUST CONTROL SPECIFICATIONS.
 2. FOR INCREMENTAL STABILIZATION SPECIFICATIONS SEE SHEET 24 OF THIS SET.
 3. SLOPES SHALL BE NO STEEPER THAN 3:1 AND NO FLATTER THAN 2%.
 4. DIRT ROADS WILL BE 'ROUGHED', COVERED WITH TOPSOIL AND STABILIZED.
 5. SAFETY BENCHES WILL BE CREATED BY THE MINING.
 6. AREAS THAT ARE ERODED WILL BE BACKFILLED AND STABILIZED.
 7. TOPSOIL WILL BE PLACED AS THE SLOPES ARE CREATED.
 8. PHASE II DISTURBANCE WILL BE QUARRY PIT ITSELF, AND WILL INCLUDE ALL QUARRYING ACTIVITY WITHIN THE PIT.

07-22-16 PLANT RELOCATION - CNA, INC.	
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.	
<i>David A. Taylor</i>	0/15/14
DIRECTOR	DATE
<i>Chris Deane</i>	2/20/14
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
<i>Andy Kerwin</i>	3/11/14
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE
6-15-05 CHANGED SHEET NO.	
1-6-09 CHANGED SHEET NO.	
DATE NO.	REVISION
DEVELOPER/OWNER:	
(OWNER) CHASE LIMITED PARTNERSHIP P.O. BOX 850 LAUREL, MD 20725 410.142.1234	(DEVELOPER) CHASE MINING LLC P.O. BOX 850 LAUREL, MD 20725 410.142.1234
PROJECT	
CHASE QUARRY	
AREA ZONED M-1 & MXD-3, TAX MAP No. 43 PARCEL 234 & P.O. 235, BLOCK 19 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND	
TITLE	
OVERALL EROSION & SEDIMENT CONTROL PLAN	
Patton Harris Rust & Associates, pc Engineers, Surveyors, Planners, Landscape Architects. 8818 Centre Park Drive Columbia, MD 21045 T 410.997.8900 F 410.997.9282	
PHRA	
1-30-04 DATE	DESIGNED BY: C.J.R.
	DRAWN BY:
	CHECKED BY: C.J.R.
	PROJECT NO: 99092/ OVER10.DWG
	DATE: JANUARY 29, 2004
SCALE: 1" = 200'	DRAWING NO. 11 OF 51
CHRISTOPHER J. REID #19949	

FOR REVISION

CNA
engineers, surveyors & landscape architects

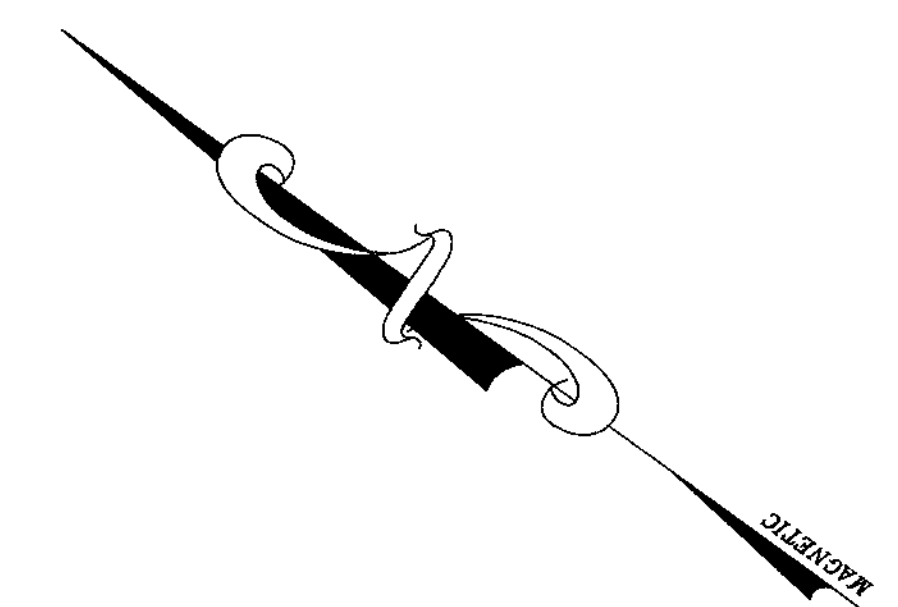
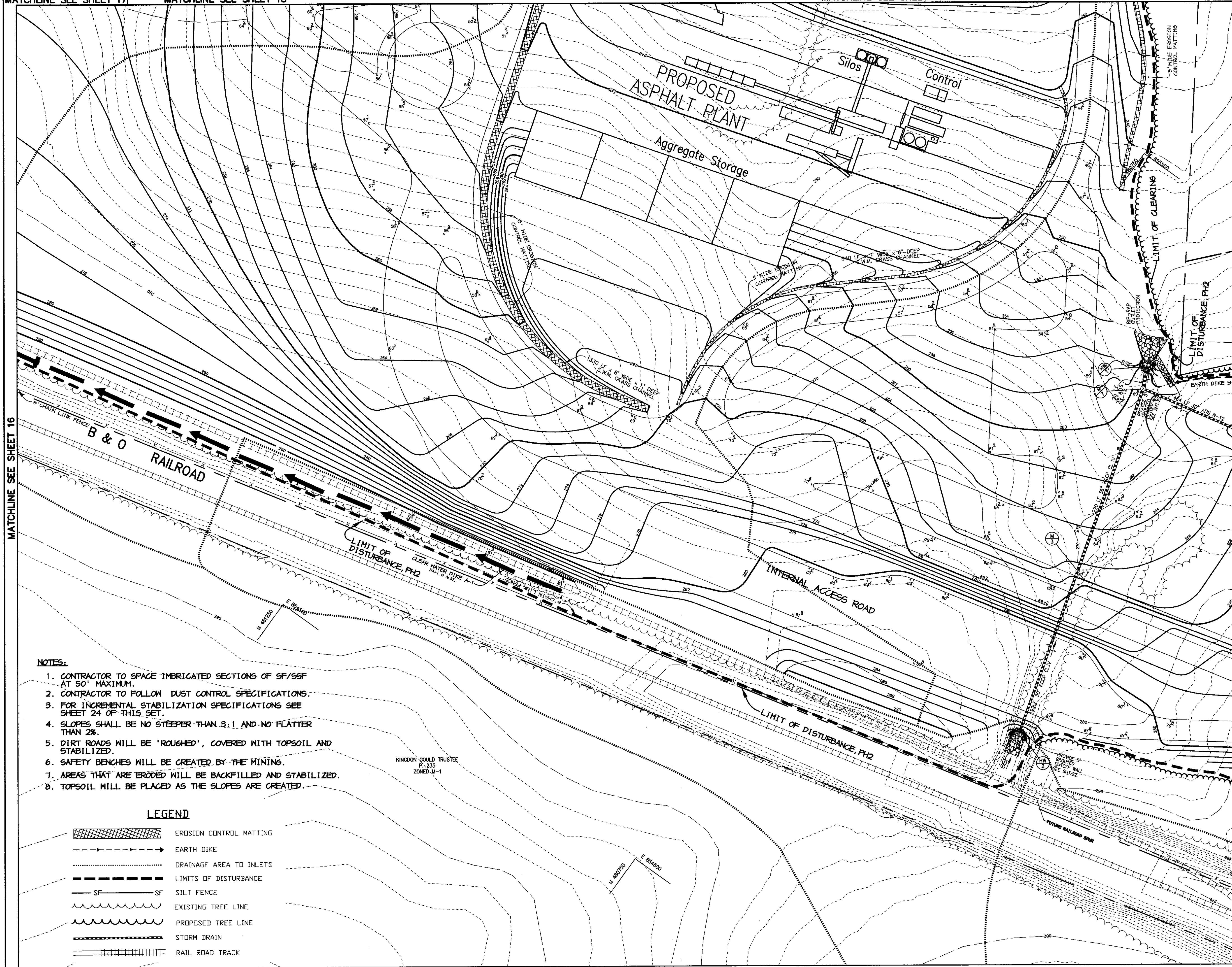
Civil Engineers • Land Surveyors • Landscape Architects
Planners • Geotechnical Engineers • Environmental Engineers
215 Gynum Road
Forest Hill, Maryland 21050
Phone (410) 879-7200 • Fax (410) 838-1811
E-mail: cna@cna-engineers.com

P:\project\980921-01\Engr\Plans\OVER10.dwg, Layout1, 01/29/2004, 12:28:26 PM, HP1050C_Mylar.pc3, Arch D, 24 x 36 in. (landscape), 11

MATCHLINE SEE SHEET 17

MATCHLINE SEE SHEET 13

MATCHLINE SEE SHEET 13



BY THE DEVELOPER :

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Timothy J. Schmidt 1-30-04
DEVELOPER DATE

BY THE ENGINEER :

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Cheryl J. Reed 1-30-04
ENGINEER DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

Jim Mays/Gos 2/17/04
NATURAL RESOURCES CONSERVATION SERVICE DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

John Selig 2/17/04
HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

David A. Taylor 3/15/04
DIRECTOR DATE

John Deane 2/20/04
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Wanda Hamstra 2/11/04
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DATE	NO.	REVISION
DEVELOPER/OWNER:		
(OWNER) CHASE LIMITED PARTNERSHIP P.O. BOX 850 LAUREL, MD 20725 410.792.1234		(DEVELOPER) CHASE MINING LLC P.O. BOX 850 LAUREL, MD 20725 410.792.1234

PROJECT

CHASE QUARRY

AREA ZONED M-1 & MXD-3, TAX MAP No. 43
PARCEL 234 & P.O. 235, BLOCK 19
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE

**GRADING, SEDIMENT CONTROL
& DRAINAGE AREA MAP**

Patton Harris Rust & Associates, pc
Engineers, Surveyors, Planners, Landscape Architects.
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

1-30-04
DATE

DESIGNED BY : C.J.R.

DRAWN BY : MAD

CHECKED BY : C.J.R.

PROJECT NO : 99092/
SEDIME.DWG

DATE : JANUARY 29, 2004

SCALE : 1" = 50'

DRAWING NO. 12 OF 40

CHRISTOPHER J. REID #19949

- NOTES:
1. CONTRACTOR TO SPACE IMBERICATED SECTIONS OF SF/SF AT 50' MAXIMUM.
 2. CONTRACTOR TO FOLLOW DUST CONTROL SPECIFICATIONS.
 3. FOR INCREMENTAL STABILIZATION SPECIFICATIONS SEE SHEET 24 OF THIS SET.
 4. SLOPES SHALL BE NO STEEPER THAN 3:1 AND NO FLATTER THAN 2%.
 5. DIRT ROADS WILL BE 'ROUGHED', COVERED WITH TOPSOIL AND STABILIZED.
 6. SAFETY BENCHES WILL BE CREATED BY THE MINING.
 7. AREAS THAT ARE ERODED WILL BE BACKFILLED AND STABILIZED.
 8. TOPSOIL WILL BE PLACED AS THE SLOPES ARE CREATED.

LEGEND

- EROSION CONTROL MATTING
- EARTH DIKE
- DRAINAGE AREA TO INLETS
- LIMITS OF DISTURBANCE
- SILT FENCE
- EXISTING TREE LINE
- PROPOSED TREE LINE
- STORM DRAIN
- RAIL ROAD TRACK

KINGDON GOULD TRUSTEE
P. 235
ZONED-M-1

SEDIMENT BASIN 1 DATA

DRAINAGE AREA	92.40 ACRES
STORAGE VOLUME REQUIRED	332,640 CF
STORAGE VOLUME PROVIDED	573,032 CF
BOTTOM ELEVATION	189.00
BOTTOM DIMENSIONS	VARIABLE
NET ELEVATION/VOL	191.0/166,320 CF
RISER CREST/DRY ELEVATION/VOL	195.50/413,412 CF
TOP OF DAM	202.60
CLEANOUT ELEVATION	189.60
2 YEAR MS EL.	196.32
10 YEAR MS EL.	198.45
Q ₁₀₀ =33.55cfs	
Q _{1prop} =5.03cfs	

BASIN 1

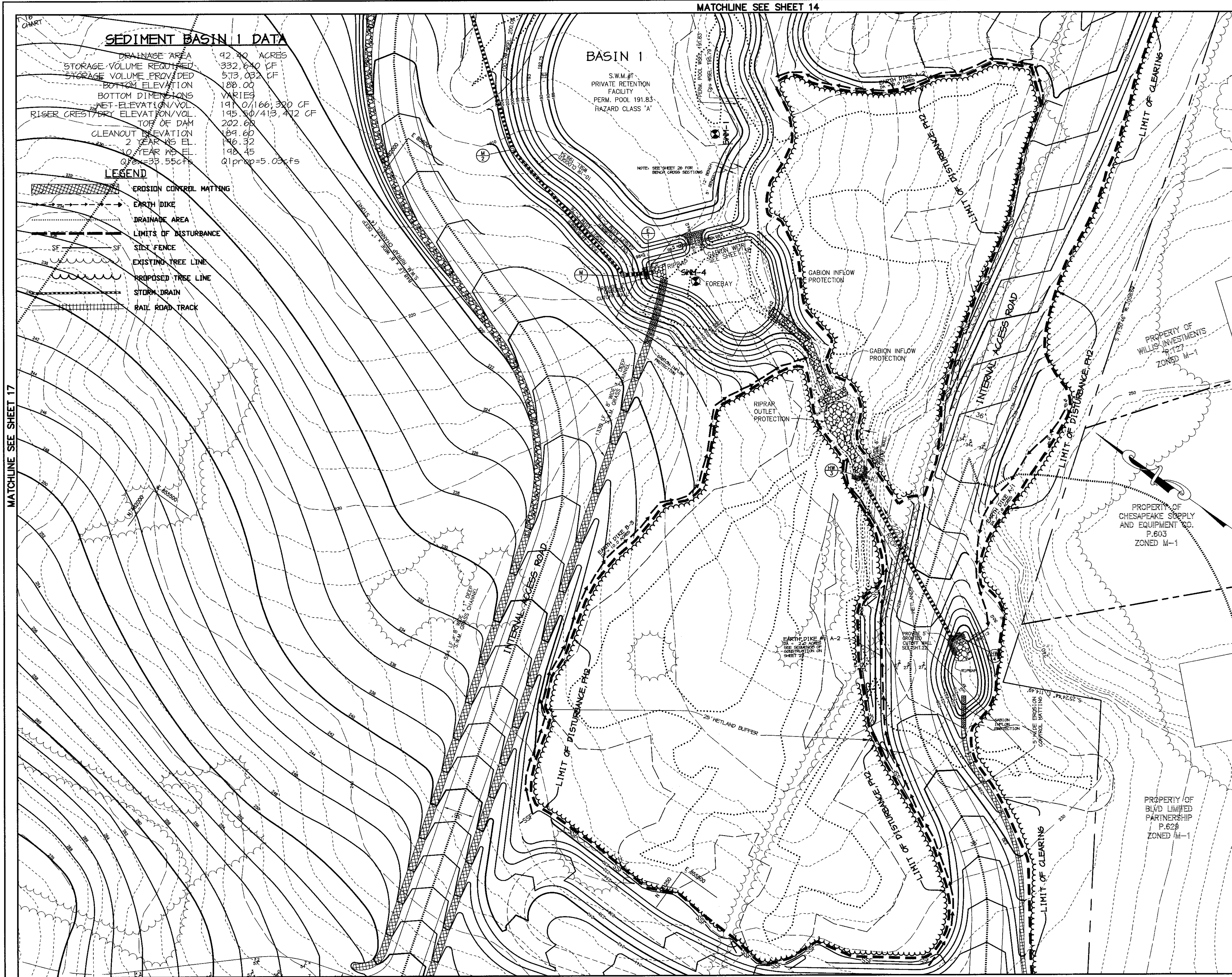
S.W.M.#1
PRIVATE RETENTION
FACILITY
PERM. POOL 191.83
HAZARD CLASS 'A'

NOTE: SEE SHEET 26 FOR
DETAILED CROSS SECTIONS

LEGEND

- EROSION CONTROL MATTING
- EARTH DIKE
- DRAINAGE AREA
- LIMITS OF DISTURBANCE
- SILT FENCE
- EXISTING TREE LINE
- PROPOSED TREE LINE
- STORM DRAIN
- RAIL ROAD TRACK

MATCHLINE SEE SHEET 17



NOTES:

1. CONTRACTOR TO SPACE IMBERGATED SECTIONS OF SF/SEF AT 50" MAXIMUM.
2. CONTRACTOR TO FOLLOW DUST CONTROL SPECIFICATIONS.
3. FOR INCREMENTAL STABILIZATION SPECIFICATIONS SEE SHEET 24 OF THIS SET.
4. SLOPES WILL BE NO STEEPER THAN 3:1 AND NO FLATTER THAN 2:8.
5. DIRT ROADS WILL BE 'ROUGHED', COVERED WITH TOPSOIL AND STABILIZED.
6. SAFETY BENCHES WILL BE CREATED BY THE MINING.
7. AREAS THAT ARE ERODED WILL BE BACKFILLED AND STABILIZED.
8. TOPSOIL WILL BE PLACED AS THE SLOPES ARE CREATED.

BY THE DEVELOPER :

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Timothy J. Belmont 1-30-04
DEVELOPER DATE

BY THE ENGINEER :

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Chris J. Raw 1-30-04
ENGINEER DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

Jim Mynas 2/1/04
NATURAL RESOURCES CONSERVATION SERVICE DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

Shirley Lee 2/1/04
HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Paula D. Light 2/15/04
DIRECTOR DATE

Mike Dammann 2/20/04
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Cindy Hamaker 2/1/04
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DATE NO.	REVISION

DEVELOPER/OWNER:	
(OWNER) CHASE LIMITED PARTNERSHIP P.O. BOX 850 LAUREL, MD 20725 410.742.1234	(DEVELOPER) CHASE MINING LLC P.O. BOX 850 LAUREL, MD 20725 410.742.1234

PROJECT
CHASE QUARRY
AREA ZONED M-1 & MXD-3, TAX MAP No. 43
PARCEL 234 & P.O. 235, BLOCK 19
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

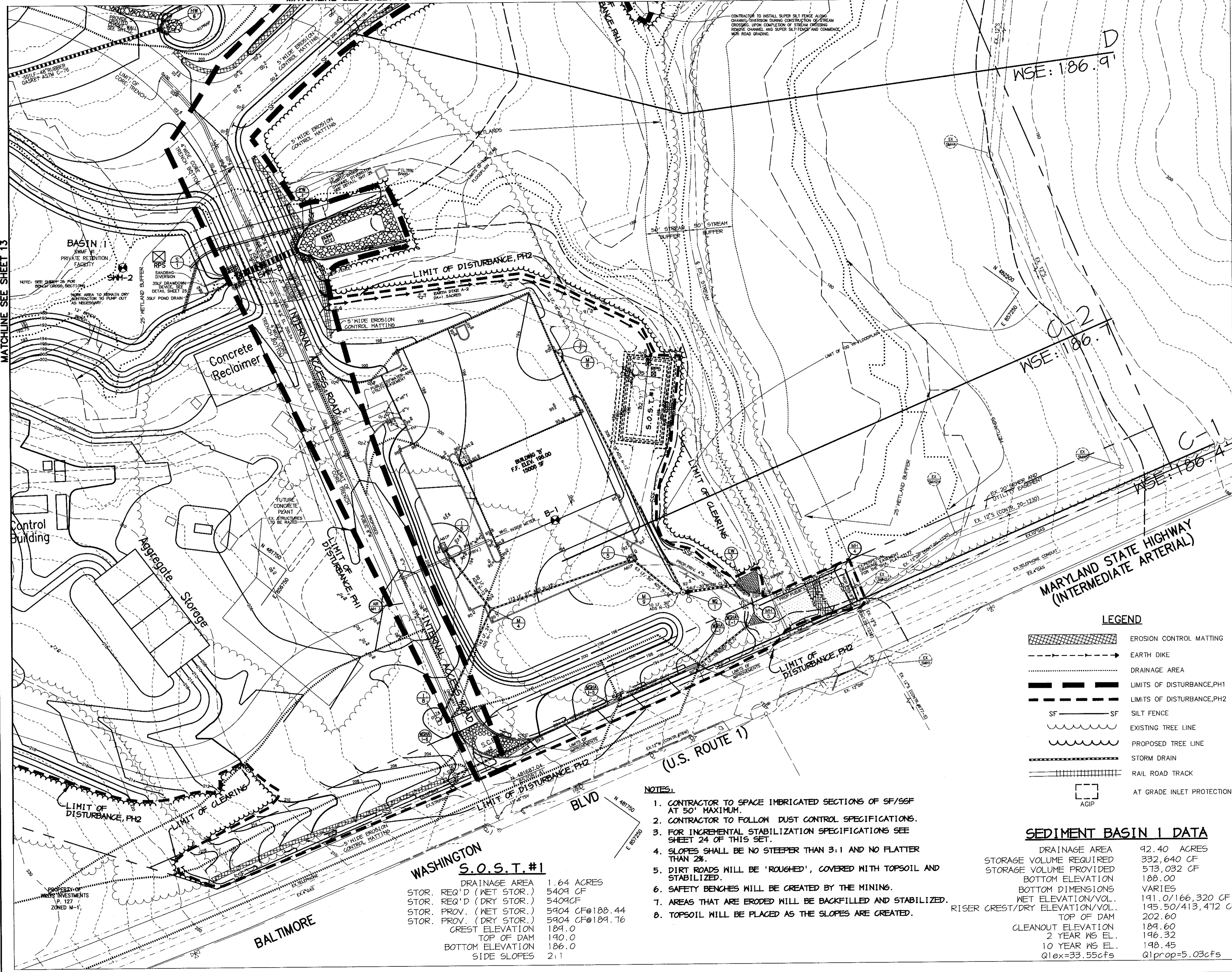
TITLE
GRADING, SEDIMENT CONTROL & DRAINAGE AREA MAP

Patton Harris Rust & Associates, pc
Engineers, Surveyors, Planners, Landscape Architects.
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

1-30-04 DATE	DESIGNED BY : C.J.R.
	DRAWN BY : MAD
	CHECKED BY : C.J.R.
	PROJECT NO : 99092/ SEDIM3.DWG
	DATE : JANUARY 29, 2004
	SCALE : 1" = 50'
CHRISTOPHER J. REID #19949	DRAWING NO. 13 OF 40

P:\project\99092\1-0\Engr\Plans\Seems.dwg, Layout, 01/29/2004 12:33:33 PM, HP1050C, Mylar.pc3, Arch D - 24 x 36 in. (landscape), 1:1

MATCHLINE SEE SHEET 15



CONTRACTOR TO INSTALL SUPER SILT FENCE ALONG CHANNEL DIVISION DURING CONSTRUCTION OF STREAM CHANNEL. UPON COMPLETION OF STREAM CROSSING REMOVE CHANNEL AND SUPER SILT FENCE AND COMMENCE WITH ROAD GRADING.

BY THE DEVELOPER :
 I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.
 Timothy J. Schmitt 1-30-04
 DEVELOPER DATE

BY THE ENGINEER :
 I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
 Chris J. Reid 1-30-04
 ENGINEER DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.
 Jim Myers 2/7/04
 NATURAL RESOURCE CONSERVATION SERVICE DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 [Signature] 2/7/04
 HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
 [Signature] 2/15/04
 DIRECTOR DATE
 [Signature] 2/20/04
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE
 [Signature] 2/11/04
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DATE	NO.	REVISION

DEVELOPER/OWNER:
 CHASE LIMITED PARTNERSHIP (DEVELOPER)
 P.O. BOX 850 CHASE MINING LLC
 LAUREL, MD 207125 LAUREL, MD 207125
 410.742.7234 410.742.7234

PROJECT
CHASE QUARRY
 AREA ZONED M-1 & MXD-3, TAX MAP No. 43
 PARCEL 234 & P.O. 235, BLOCK 14
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE
GRADING, SEDIMENT CONTROL & DRAINAGE AREA MAP
 Patton Harris Rust & Associates, PC
 Engineers, Surveyors, Planners, Landscape Architects.
 8818 Centre Park Drive
 Columbia, MD 21045
 T 410.997.8900
 F 410.997.9282

1-30-04
 DATE
 DESIGNED BY : C.J.R.
 DRAWN BY : MAD
 CHECKED BY : C.J.R.
 PROJECT NO : 99092/
 SEDIM4.DWG
 DATE : JANUARY 29, 2004
 SCALE : 1" = 50'
 DRAWING NO. 14 OF 40
 CHRISTOPHER J. REID #19949

LEGEND

- EROSION CONTROL MATTING
- EARTH DIKE
- DRAINAGE AREA
- LIMITS OF DISTURBANCE, PH1
- LIMITS OF DISTURBANCE, PH2
- SF SILT FENCE
- EXISTING TREE LINE
- PROPOSED TREE LINE
- STORM DRAIN
- RAIL ROAD TRACK
- AT GRADE INLET PROTECTION

SEDIMENT BASIN 1 DATA

DRAINAGE AREA	42.40 ACRES
STORAGE VOLUME REQUIRED	332,640 CF
STORAGE VOLUME PROVIDED	573,032 CF
BOTTOM ELEVATION	188.00
BOTTOM DIMENSIONS	VARIABLES
NET ELEVATION/VOL.	191.0/166,320 CF
RISER CREST/DRY ELEVATION/VOL.	195.50/413,472 CF
TOP OF DAM	202.60
CLEANOUT ELEVATION	189.60
2 YEAR WS EL.	196.32
10 YEAR WS EL.	198.45
Q1ex=33.55cfs	Q1prop=5.03cfs

- NOTES:**
- CONTRACTOR TO SPACE IMBRICATED SECTIONS OF SF/SF AT 50' MAXIMUM.
 - CONTRACTOR TO FOLLOW DUST CONTROL SPECIFICATIONS.
 - FOR INCREMENTAL STABILIZATION SPECIFICATIONS SEE SHEET 24 OF THIS SET.
 - SLOPES SHALL BE NO STEEPER THAN 3:1 AND NO FLATTER THAN 2%.
 - DIRT ROADS WILL BE 'ROUGHED', COVERED WITH TOPSOIL AND STABILIZED.
 - SAFETY BENCHES WILL BE CREATED BY THE MINING.
 - AREAS THAT ARE ERODED WILL BE BACKFILLED AND STABILIZED.
 - TOPSOIL WILL BE PLACED AS THE SLOPES ARE CREATED.

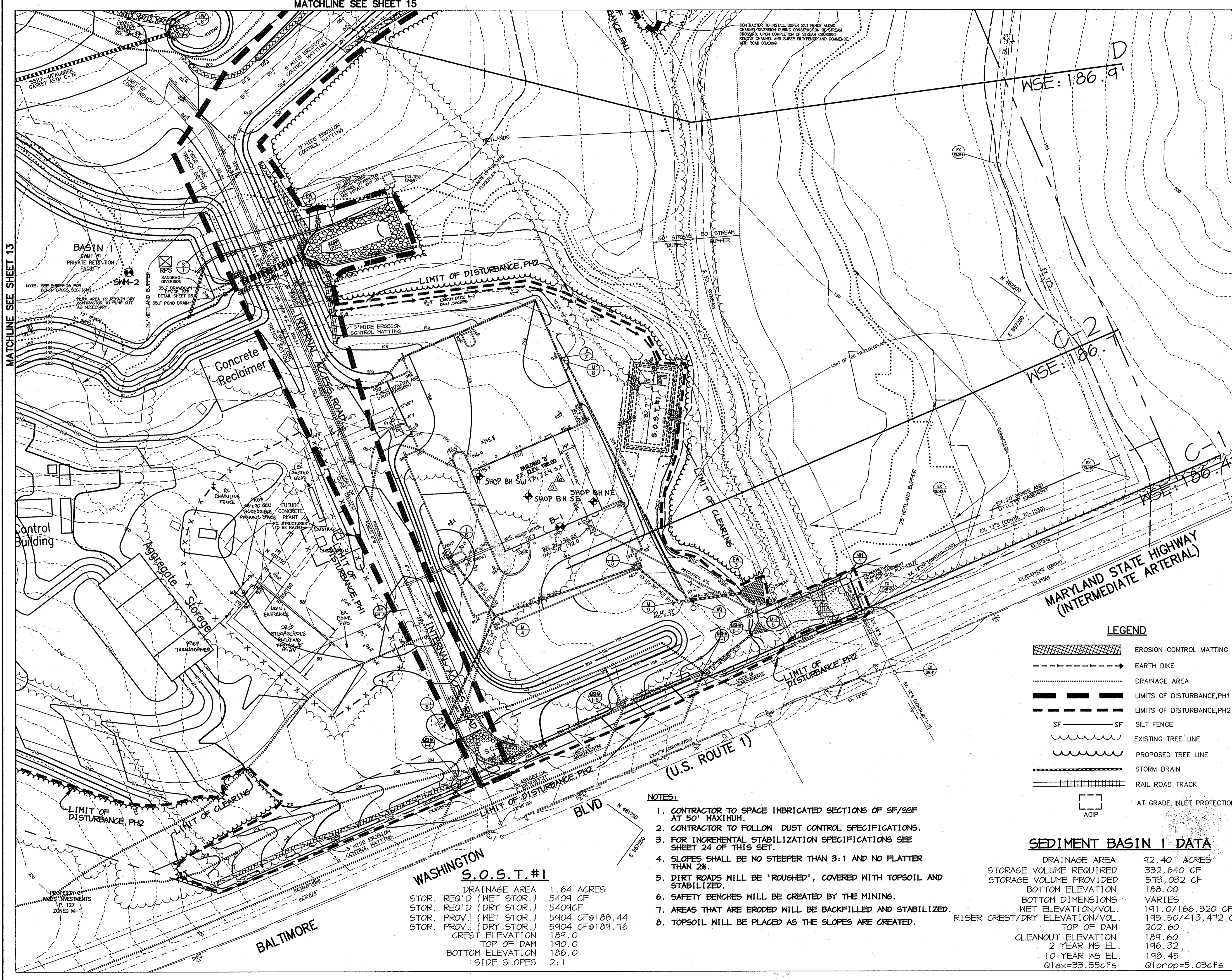
S.O.S.T. #1

STOR.	REQ'D (NET STOR.)	5409 CF
STOR. REQ'D (DRY STOR.)	5404 CF	
STOR. PROV. (NET STOR.)	5904 CF @ 188.44	
STOR. PROV. (DRY STOR.)	5904 CF @ 189.76	
	CREST ELEVATION	189.0
	TOP OF DAM	190.0
	BOTTOM ELEVATION	186.0
	SIDE SLOPES	2:1

P:\projects\99092\1-01\Eng\Plans\Sedim4.dwg, Layout1, 01/29/2004 12:34:10 PM, HP-056C_Mylar.pc3, Arch D - 24 x 36 in. (landscape), 1:1

MATCHLINE SEE SHEET 15

MATCHLINE SEE SHEET 13



CNA INC.
 215 BRYAN ROAD
 FOREST HILL MD 21050
 410-879-7200

FOR REVISION ONLY AND



3-15-16	REV. SF OF BLDG 'E'
1-9-15	REDUCED BUILDING FOOTPRINT
7-8-08	ADDED POLE BLDG + SUBSTATION + FENCE
7-31-07	ADDED SHOP BOREHOLES

BY THE DEVELOPER:
 I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Timothy J. Schmidt 1-30-04
 DEVELOPER DATE

BY THE ENGINEER:
 I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Chad J. Reed 1-30-04
 ENGINEER DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

Jim Munn 2/17/04
 NATURAL RESOURCES CONSERVATION SERVICE DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

Mark A. Coughlin 2/17/04
 HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Mark A. Coughlin 2/15/04
 DIRECTOR DATE

John Dammann 2/28/04
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Cindy Hamstra 2/11/04
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

6-15-05	CHANGED SHEET NO.
1-6-09	CHANGED SHEET NO.

DATE	NO.	REVISION
DEVELOPER/OWNER:		
	(OWNER)	(DEVELOPER)
	CHASE LIMITED PARTNERSHIP	CHASE MINING LLC
	P.O. BOX 850	P.O. BOX 850
	LAUREL, MD 20725	LAUREL, MD 20725
	410.142.1234	410.142.1234

PROJECT - CHASE QUARRY

AREA ZONED M-1 & MXD-3, TAX MAP No. 43
 PARCEL 234 & P.O. 235, BLOCK 19
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE GRADING, SEDIMENT CONTROL & DRAINAGE AREA MAP

Patton Harris Rust & Associates, pc
 Engineers, Surveyors, Planners, Landscape Architects.
 8818 Centre Park Drive
 Columbia, MD 21045
 T 410.997.8900
 F 410.997.9282

1-30-04
 DATE

DESIGNED BY: C.J.R.
 DRAWN BY: MAD
 CHECKED BY: C.J.R.
 PROJECT NO: 99092/SEDI4.DWG
 DATE: JANUARY 29, 2004
 SCALE: 1" = 50'
 DRAWING NO. 15 OF 21

CHRISTOPHER J. REID #19949
 SDP-99-134

LEGEND

- EROSION CONTROL MATTING
- EARTH DIKE
- DRAINAGE AREA
- LIMITS OF DISTURBANCE, PH1
- LIMITS OF DISTURBANCE, PH2
- SILT FENCE
- EXISTING TREE LINE
- PROPOSED TREE LINE
- STORM DRAIN
- RAIL ROAD TRACK
- AT GRADE INLET PROTECTION

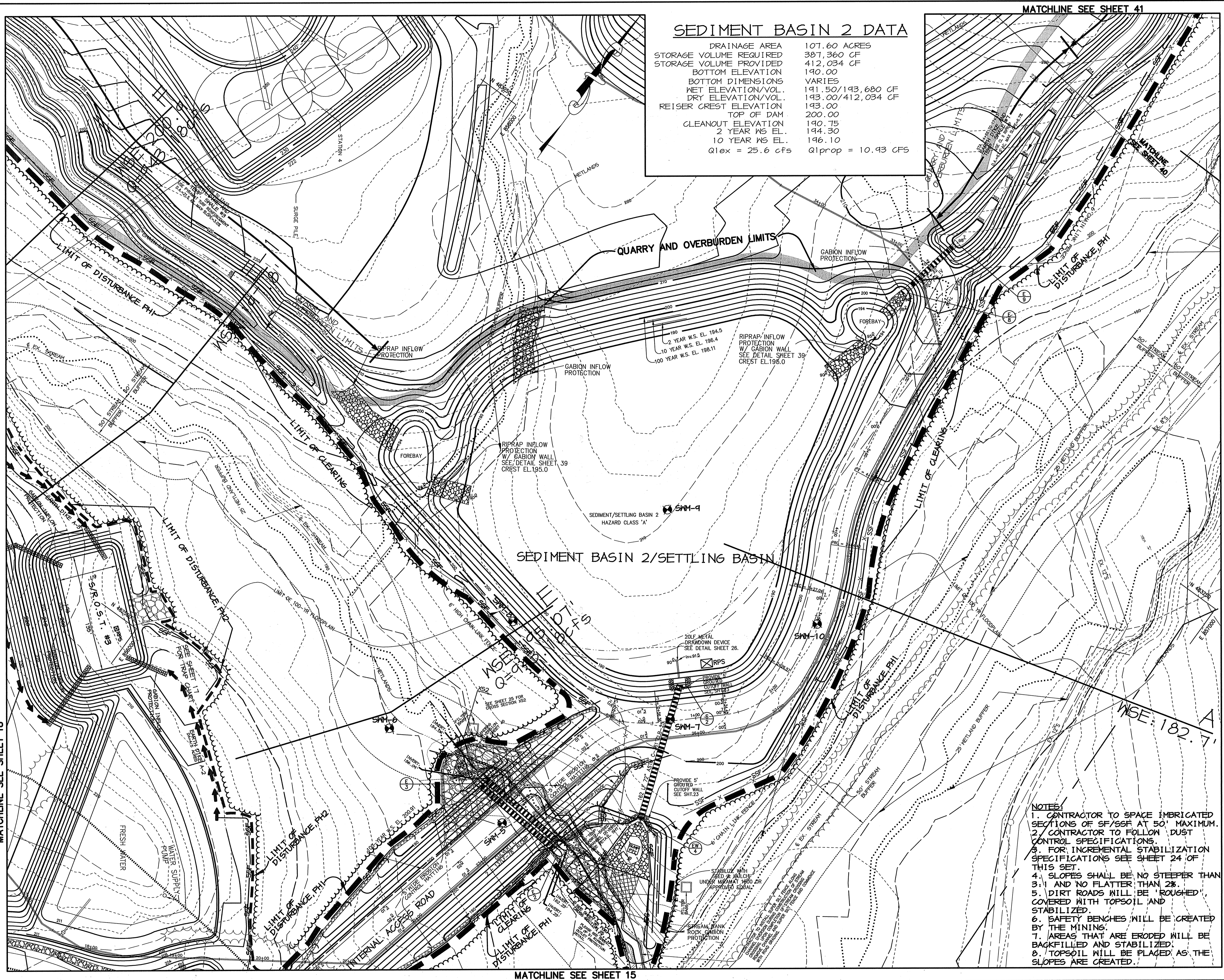
SEDIMENT BASIN 1 DATA

DRAINAGE AREA	92.40 ACRES
STORAGE VOLUME REQUIRED	332,640 CF
STORAGE VOLUME PROVIDED	573,032 CF
BOTTOM ELEVATION	188.00
BOTTOM DIMENSIONS	VARIABLES
NET ELEVATION/VOL.	141.0/166,320 CF
RISER CREST/DRY ELEVATION/VOL.	145.50/413,472 CF
TOP OF DAM	202.60
CLEANOUT ELEVATION	189.60
2 YEAR WS EL.	196.32
10 YEAR WS EL.	198.45
Q1ex=33.55cfs	Q1prop=5.03cfs

- NOTES:**
- CONTRACTOR TO SPACE IMBRICATED SECTIONS OF SF/SSF AT 50" MAXIMUM.
 - CONTRACTOR TO FOLLOW DUST CONTROL SPECIFICATIONS.
 - FOR INCREMENTAL STABILIZATION SPECIFICATIONS SEE SHEET 24 OF THIS SET.
 - SLOPES SHALL BE NO STEEPER THAN 3:1 AND NO FLATTER THAN 2%.
 - DIRT ROADS WILL BE 'ROUGHED', COVERED WITH TOPSOIL AND STABILIZED.
 - SAFETY BENCHES WILL BE CREATED BY THE MINING.
 - AREAS THAT ARE ERODED WILL BE BACKFILLED AND STABILIZED.
 - TOPSOIL WILL BE PLACED AS THE SLOPES ARE CREATED.

WASHINGTON S.O.S.T. #1

DRAINAGE AREA	1.64 ACRES
STOR. REQ'D (NET STOR.)	5409 CF
STOR. REQ'D (DRY STOR.)	5409CF
STOR. PROV. (NET STOR.)	5904 CF@188.44
STOR. PROV. (DRY STOR.)	5904 CF@189.76
CREST ELEVATION	189.0
TOP OF DAM	190.0
BOTTOM ELEVATION	186.0
SIDE SLOPES	2:1



SEDIMENT BASIN 2 DATA

DRAINAGE AREA	107.60 ACRES
STORAGE VOLUME REQUIRED	387,360 CF
STORAGE VOLUME PROVIDED	412,034 CF
BOTTOM ELEVATION	140.00
BOTTOM DIMENSIONS	VARIABLES
NET ELEVATION/VOL.	141.50/193,680 CF
DRY ELEVATION/VOL.	143.00/412,034 CF
REISER CREST ELEVATION	143.00
TOP OF DAM	200.00
CLEANOUT ELEVATION	190.75
2 YEAR WS EL.	194.30
10 YEAR WS EL.	196.10
$Q_{lex} = 25.6$ cfs	$Q_{lprop} = 10.93$ CFS

MATCHLINE SEE SHEET 41

LEGEND

	TEMPORARY SWALE
	EROSION CONTROL MATTING
	EARTH DIKE
	DRAINAGE AREA
	LIMITS OF DISTURBANCE, PH1
	LIMITS OF DISTURBANCE, PH2
	SF FENCE
	EXISTING TREE LINE
	PROPOSED TREE LINE
	STORM DRAIN
	RAIL ROAD TRACK
	PYRAMID REINFORCED MATTING

8/30/05 REVISED EARTH CROSSINGS & GRADING

BY THE DEVELOPER :
 I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.
 Timothy J. Schmitt 8/30/05
 DEVELOPER DATE

BY THE ENGINEER :
 I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
 Aimee C. Remington 8/30/05
 ENGINEER DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.
 Jim Myers 9/6/05
 NATURAL RESOURCES CONSERVATION SERVICE DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 [Signature] 9/6/05
 HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
 [Signature] 10/2/05
 DIRECTOR DATE
 [Signature] 10/3/05
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE
 [Signature] 10/4/05
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE
 2/21/05 ADDED CRUSHER PLANT LAYOUT
 1/06/05 REVISED EARTH DIKE AND SWALE

DATE	NO.	REVISION

DEVELOPER/OWNER:
 (OWNER) CHASE LIMITED PARTNERSHIP
 P.O. BOX 850
 LAUREL, MD 207125
 410.742.1234
 (DEVELOPER) CHASE MINING LLC
 P.O. BOX 850
 LAUREL, MD 207125
 410.742.1234

PROJECT
CHASE QUARRY

AREA ZONED M-1 & MXD-3, TAX MAP No. 43
 PARCEL 234 & P.O. 235, BLOCK 19
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE
GRADING, SEDIMENT CONTROL & DRAINAGE AREA MAP

Patton Harris Rust & Associates, pc
 Engineers, Surveyors, Planners, Landscape Architects.
 8818 Centre Park Drive
 Columbia, MD 21045
 T 410.997.8900
 F 410.997.9282

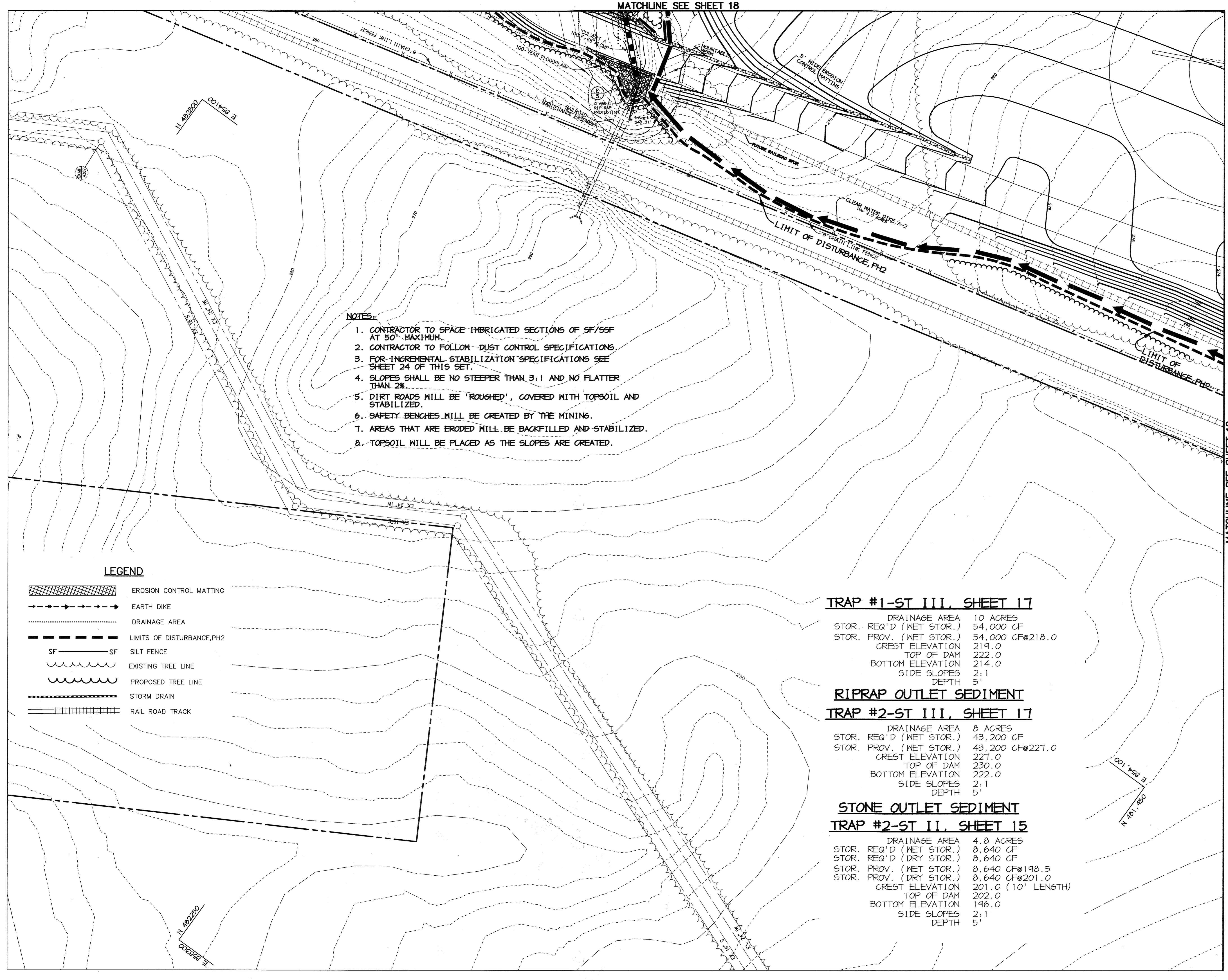
8-30-05
 DATE
 DESIGNED BY : ACR
 DRAWN BY : EMR
 CHECKED BY : ACR
 PROJECT NO : 99092/
 SEDIMS.DWG
 DATE : AUGUST 30, 2005
 SCALE : 1" = 50'
 DRAWING NO. 16 OF 51

- NOTES:
 1. CONTRACTOR TO SPACE IMBRICATED SECTIONS OF SF/SSF AT 50' MAXIMUM.
 2. CONTRACTOR TO FOLLOW DUST CONTROL SPECIFICATIONS.
 3. FOR INCREMENTAL STABILIZATION SPECIFICATIONS SEE SHEET 24 OF THIS SET.
 4. SLOPES SHALL BE NO STEEPER THAN 3:1 AND NO FLATTER THAN 2:1.
 5. DIRT ROADS WILL BE 'ROUGHED', COVERED WITH TOPSOIL AND STABILIZED.
 6. SAFETY BENCHES WILL BE CREATED BY THE MINING.
 7. AREAS THAT ARE ERODED WILL BE BACKFILLED AND STABILIZED.
 8. TOPSOIL WILL BE PLACED AS THE SLOPES ARE CREATED.

MATCHLINE SEE SHEET 18

MATCHLINE SEE SHEET 15

MATCHLINE SEE SHEET 18



- NOTES:**
1. CONTRACTOR TO SPACE IMBRICATED SECTIONS OF SF/SF AT 50' MAXIMUM.
 2. CONTRACTOR TO FOLLOW DUST CONTROL SPECIFICATIONS.
 3. FOR INCREMENTAL STABILIZATION SPECIFICATIONS SEE SHEET 24 OF THIS SET.
 4. SLOPES SHALL BE NO STEEPER THAN 3:1 AND NO FLATTER THAN 2%.
 5. DIRT ROADS WILL BE 'ROUGHED', COVERED WITH TOPSOIL AND STABILIZED.
 6. SAFETY BENCHES WILL BE CREATED BY THE MINING.
 7. AREAS THAT ARE ERODED WILL BE BACKFILLED AND STABILIZED.
 8. TOPSOIL WILL BE PLACED AS THE SLOPES ARE CREATED.

LEGEND

	EROSION CONTROL MATTING
	EARTH DIKE
	DRAINAGE AREA
	LIMITS OF DISTURBANCE, PH2
	SF ——— SF
	EXISTING TREE LINE
	PROPOSED TREE LINE
	STORM DRAIN
	RAIL ROAD TRACK

TRAP #1-ST III, SHEET 17

DRAINAGE AREA	10 ACRES
STOR. REQ'D (WET STOR.)	54,000 CF
STOR. PROV. (WET STOR.)	54,000 CF@218.0
CREST ELEVATION	219.0
TOP OF DAM	222.0
BOTTOM ELEVATION	214.0
SIDE SLOPES	2:1
DEPTH	5'

RIPRAP OUTLET SEDIMENT

TRAP #2-ST III, SHEET 17

DRAINAGE AREA	8 ACRES
STOR. REQ'D (WET STOR.)	43,200 CF
STOR. PROV. (WET STOR.)	43,200 CF@221.0
CREST ELEVATION	221.0
TOP OF DAM	230.0
BOTTOM ELEVATION	222.0
SIDE SLOPES	2:1
DEPTH	5'

STONE OUTLET SEDIMENT

TRAP #2-ST II, SHEET 15

DRAINAGE AREA	4.8 ACRES
STOR. REQ'D (WET STOR.)	8,640 CF
STOR. REQ'D (DRY STOR.)	8,640 CF
STOR. PROV. (WET STOR.)	8,640 CF@198.5
STOR. PROV. (DRY STOR.)	8,640 CF@201.0
CREST ELEVATION	201.0 (10' LENGTH)
TOP OF DAM	202.0
BOTTOM ELEVATION	196.0
SIDE SLOPES	2:1
DEPTH	5'

BY THE DEVELOPER :

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Imoly J. Schmitt 8/30/05
DEVELOPER DATE

BY THE ENGINEER :

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Aimee C. Remington 8-30-05
ENGINEER DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

Jim Mays 9/4/05
NATURAL RESOURCES CONSERVATION SERVICE DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

Chaffin 9/4/05
HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

David L. Layle 10/2/05
DIRECTOR DATE

David L. Layle 10/2/05
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Quincy Stewart 10/6/05
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

3/30/05 ^{NEW SHEET AND} ~~REVISED~~ STREAM CROSSING & GRADING
1/06/05 ^{REVISED} GRADING & ACCESS ROAD

DATE NO.	REVISION

DEVELOPER/OWNER:

(OWNER) CHASE LIMITED PARTNERSHIP P.O. BOX 850 LAUREL, MD 20725 410.742.1294	(DEVELOPER) CHASE MINING LLC P.O. BOX 850 LAUREL, MD 20725 410.742.1294
--	---

PROJECT

CHASE QUARRY

AREA ZONED M-1 & MXD-3, TAX MAP No. 43
PARCEL 234 & P.O. 235, BLOCK 19
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE **GRADING, SEDIMENT CONTROL & DRAINAGE AREA MAP**

Patton Harris Rust & Associates, pc
Engineers, Surveyors, Planners, Landscape Architects.
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

PHRA

8-30-05
DATE

DESIGNED BY : ACR

DRAWN BY : EMR

CHECKED BY : ACR

PROJECT NO : 99092/
SEDIME.DWG

DATE : AUGUST 30, 2005

SCALE : 1" = 50'

Aimee C. Remington
AIMEE C. REMINGTON #29923

DRAWING NO. 17 OF 55

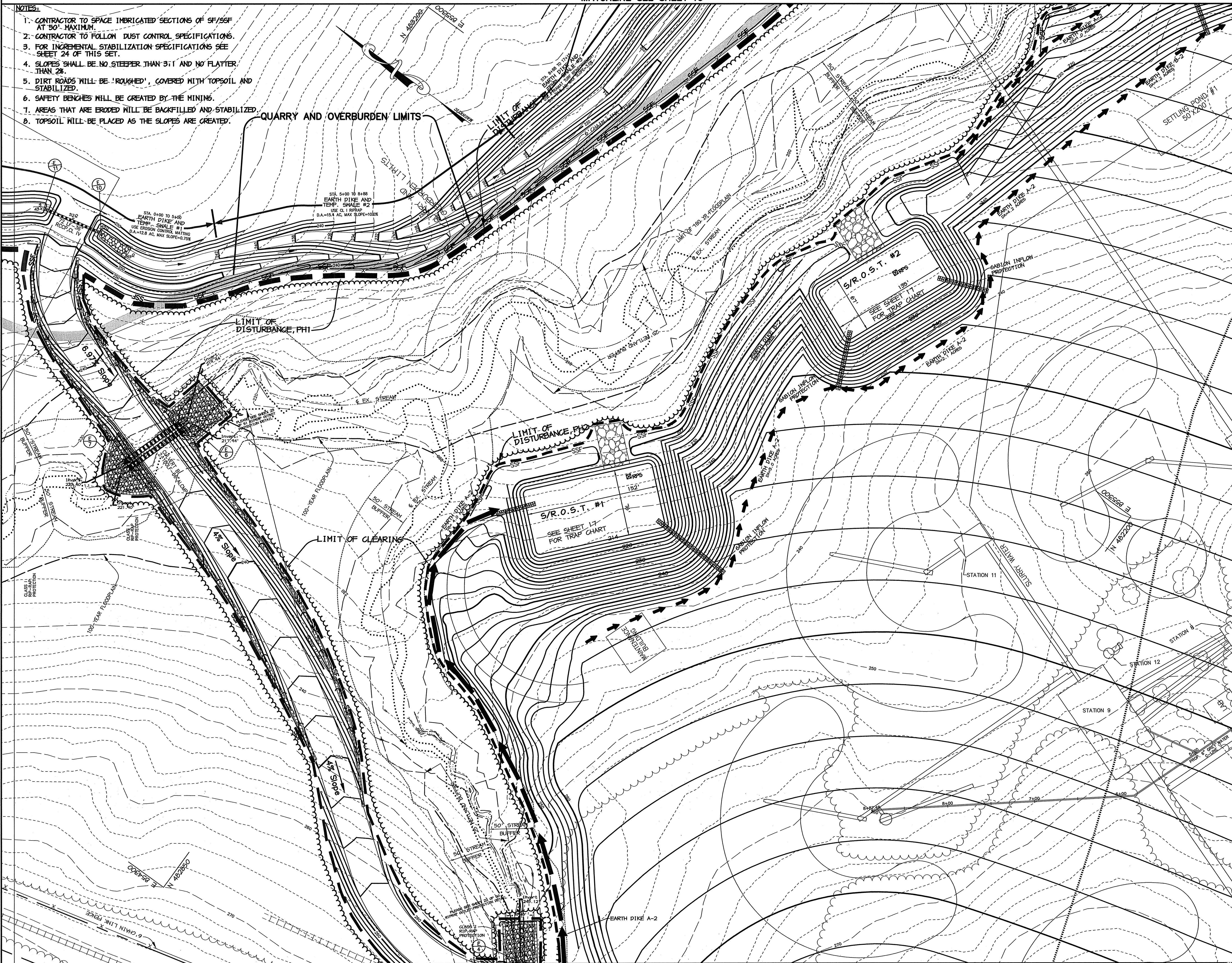
MATCHLINE SEE SHEET 12

MATCHLINE SEE SHEET 16

NOTES:

1. CONTRACTOR TO SPACE IMBERIGATED SECTIONS OF SF/SF AT 50' MAXIMUM.
2. CONTRACTOR TO FOLLOW DUST CONTROL SPECIFICATIONS.
3. FOR INCREMENTAL STABILIZATION SPECIFICATIONS SEE SHEET 24 OF THIS SET.
4. SLOPES SHALL BE NO STEEPER THAN 3:1 AND NO FLATTER THAN 2%.
5. DIRT ROADS WILL BE 'ROUGHED', COVERED WITH TOPSOIL AND STABILIZED.
6. SAFETY BENCHES WILL BE CREATED BY THE MINING.
7. AREAS THAT ARE ERODED WILL BE BACKFILLED AND STABILIZED.
8. TOPSOIL WILL BE PLACED AS THE SLOPES ARE CREATED.

QUARRY AND OVERBURDEN LIMITS



LEGEND

	TEMPORARY SWALE
	DRAINAGE AREA TO INLETS
	LIMITS OF DISTURBANCE, PHI
	LIMITS OF DISTURBANCE, PH2
	SF
	SILT FENCE
	EXISTING TREE LINE
	PROPOSED TREE LINE
	STORM DRAIN
	RAIL ROAD TRACK
	EARTH DIKE
	PYRAMAT REINFORCED MATTING

8/30/05 **REVISED EARTH DIKE, SWALE & ACCESS ROAD**

BY THE DEVELOPER :

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Timothy J. Schmitt 8/30/05
 DEVELOPER DATE

BY THE ENGINEER :

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Aimee C. Remington 8-30-05
 ENGINEER DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

Jim Meyer 9/4/05
 NATURAL RESOURCES CONSERVATION SERVICE DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

Gallo 9/4/05
 HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

David J. Unger 10/1/05
 DIRECTOR DATE

David J. Unger 10/13/05
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Cindy Kincaid 10/6/05
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

2/21/05 **ADDED PLANT LAYOUT**
 1/06/05 **REVISED EARTH DIKE, SWALE & ACCESS ROAD**

DATE	NO.	REVISION

DEVELOPER/OWNER:

(OWNER) CHASE LIMITED PARTNERSHIP P.O. BOX 850 LAUREL, MD 20725 410.742.1234	(DEVELOPER) CHASE MINING LLC P.O. BOX 850 LAUREL, MD 20725 410.742.1234
--	---

PROJECT
CHASE QUARRY

AREA ZONED M-1 & MXD-3, TAX MAP No. 43
 PARCEL 234 & P.O. 235, BLOCK 14
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

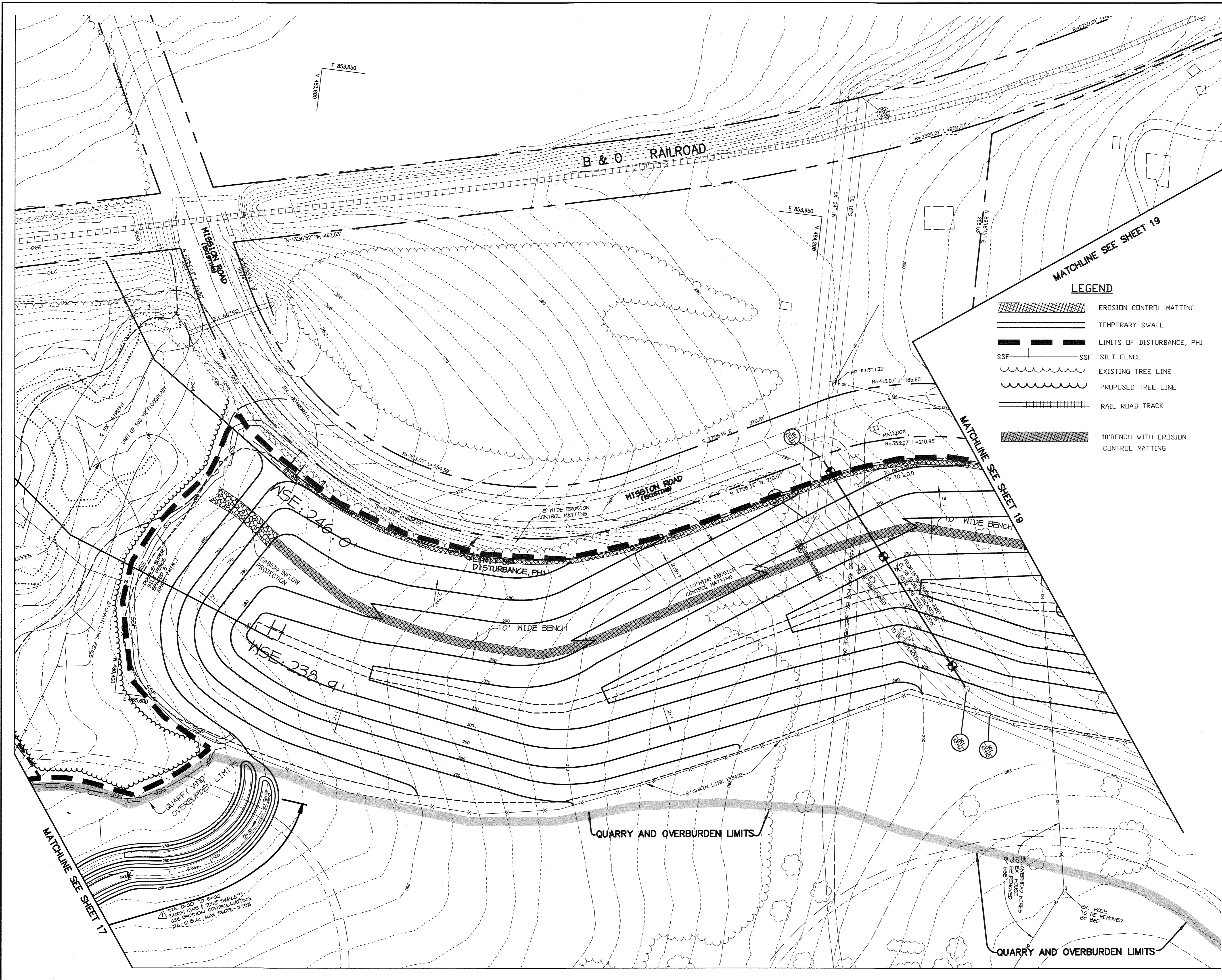
TITLE
GRADING, SEDIMENT CONTROL & DRAINAGE AREA MAP

Patton Harris Rust & Associates, P.C.
 Engineers, Surveyors, Planners, Landscape Architects.
 8818 Centre Park Drive
 Columbia, MD 21045
 T 410.997.8900
 F 410.997.9282

8-30-05	DATE
ACR	DESIGNED BY :
EMR	DRAWN BY :
ACR	CHECKED BY :
99092/SEDIM7.DWG	PROJECT NO. :
AUGUST 30, 2005	DATE :
1" = 50'	SCALE :
18 OF 51	DRAWING NO. :

Aimee C. Remington 8/30/05
 AIMEE C. REMINGTON #19923

MATCHLINE SEE SHEET 17



- NOTES:**
1. CONTRACTOR TO SPACE IMBERICATED SECTIONS OF SF/SSF AT 50' MAXIMUM.
 2. CONTRACTOR TO FOLLOW DUST CONTROL SPECIFICATIONS.
 3. FOR INCREMENTAL STABILIZATION SPECIFICATIONS SEE SHEET 24 OF THIS SET.
 4. SLOPES SHALL BE NO STEEPER THAN 3:1 AND NO FLATTER THAN 2%.
 5. DIRT ROADS WILL BE 'ROUGHED', COVERED WITH TOPSOIL AND STABILIZED.
 6. SAFETY BENCHES WILL BE CREATED BY THE MINING.
 7. AREAS THAT ARE ERODED WILL BE BACKFILLED AND STABILIZED.
 8. TOPSOIL WILL BE PLACED AS THE SLOPES ARE CREATED.

BY THE DEVELOPER :

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Imothy J. Schmidt 1-30-04
 DEVELOPER DATE

BY THE ENGINEER :

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Christy S. Reid 1-30-04
 ENGINEER DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

Jim Myer 2/2/04
 NATURAL RESOURCES CONSERVATION SERVICE DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

Paul Shing 2/2/04
 HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Mark deWright 3/15/04
 DIRECTOR DATE

John D. ... 2/20/04
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Chris ... 2/1/04
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

6-13-05 CHANGED SHEET NO.
 1-6-05 REV. EARTH DIKE & SWALE & SHEET NO.

DEVELOPER/OWNER:

(OWNER) CHASE LIMITED PARTNERSHIP P.O. BOX 850 LAUREL, MD 20725 410.742.1234	(DEVELOPER) CHASE MINING LLC P.O. BOX 850 LAUREL, MD 20725 410.742.1234
--	---

PROJECT
CHASE QUARRY

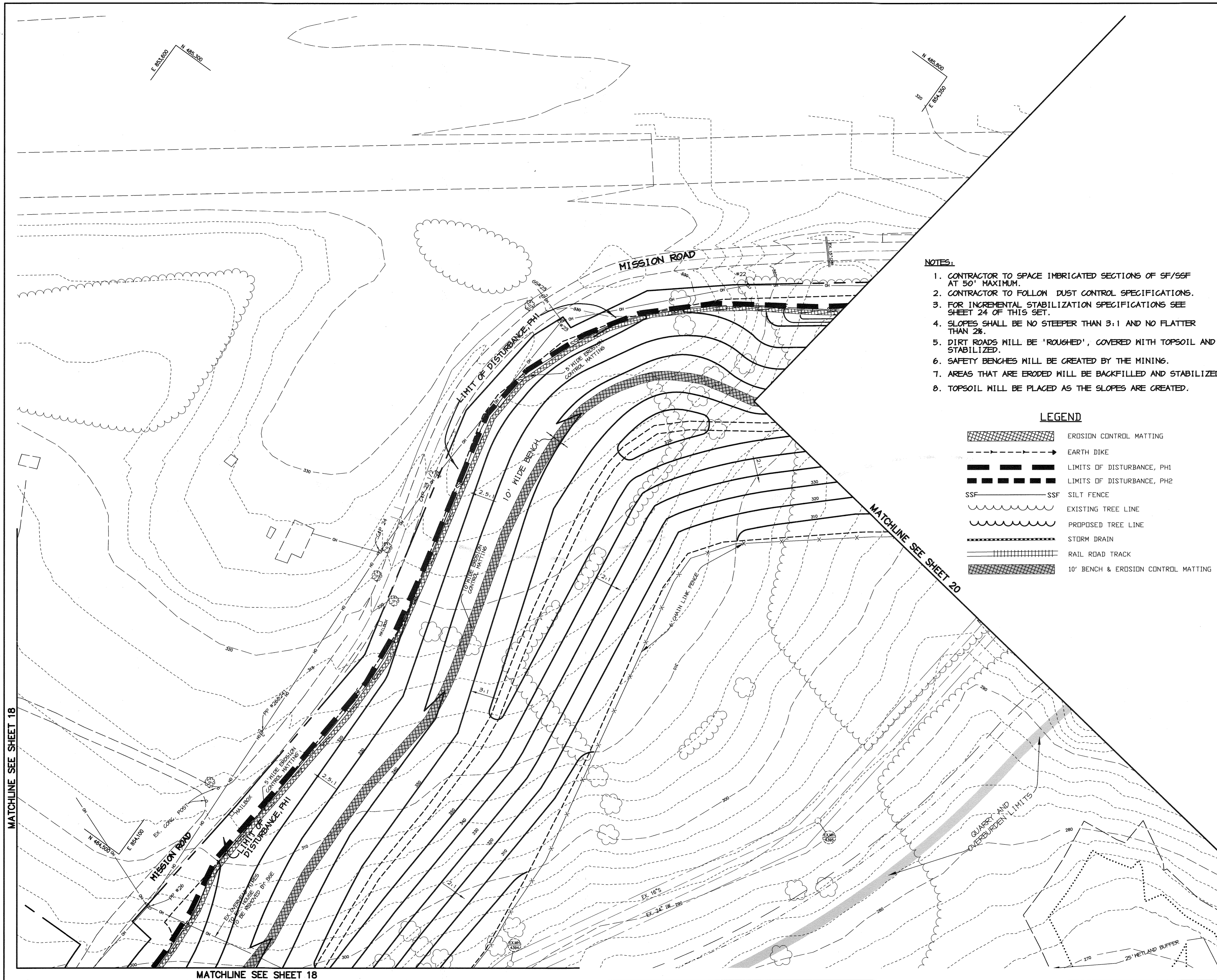
AREA ZONED M-1 & MXD-3, TAX MAP No. 43
 PARCEL 234 & P.O. 235, BLOCK 19
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE
GRADING, SEDIMENT CONTROL & DRAINAGE AREA MAP

Patton Harris Rust & Associates, pc
 Engineers, Surveyors, Planners, Landscape Architects.
 8818 Centre Park Drive
 Columbia, MD 21045
 T 410.997.8900
 F 410.997.9282

1-30-04
 DATE
 DESIGNED BY : C.J.R.
 DRAWN BY : MAD
 CHECKED BY : C.J.R.
 PROJECT NO : 99092 / SEDIMB.DWG
 DATE : JANUARY 29, 2004
 SCALE : 1" = 50'
 DRAWING NO. 19 OF 25





NOTES:

1. CONTRACTOR TO SPACE IMBRIGATED SECTIONS OF SF/SSF AT 50' MAXIMUM.
2. CONTRACTOR TO FOLLOW DUST CONTROL SPECIFICATIONS.
3. FOR INCREMENTAL STABILIZATION SPECIFICATIONS SEE SHEET 24 OF THIS SET.
4. SLOPES SHALL BE NO STEEPER THAN 3:1 AND NO FLATTER THAN 2%.
5. DIRT ROADS WILL BE 'ROUGHED', COVERED WITH TOPSOIL AND STABILIZED.
6. SAFETY BENCHES WILL BE CREATED BY THE MINING.
7. AREAS THAT ARE ERODED WILL BE BACKFILLED AND STABILIZED.
8. TOPSOIL WILL BE PLACED AS THE SLOPES ARE CREATED.

LEGEND

- EROSION CONTROL MATTING
- EARTH DIKE
- LIMITS OF DISTURBANCE, PH1
- LIMITS OF DISTURBANCE, PH2
- SSF
- EXISTING TREE LINE
- PROPOSED TREE LINE
- STORM DRAIN
- RAIL ROAD TRACK
- 10' BENCH & EROSION CONTROL MATTING

MATCHLINE SEE SHEET 18

MATCHLINE SEE SHEET 18

MATCHLINE SEE SHEET 20




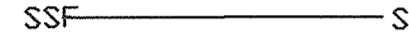



<p>BY THE DEVELOPER :</p> <p>I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.</p> <p><i>Timothy J. Schmidt</i> 1-30-04 DEVELOPER DATE</p>	
<p>BY THE ENGINEER :</p> <p>I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.</p> <p><i>Chris J. Reid</i> 1-30-04 ENGINEER DATE</p>	
<p>THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.</p> <p><i>Jim Myers</i> 2/7/04 NATURAL RESOURCES CONSERVATION SERVICE DATE</p>	
<p>THIS SEDIMENTATION PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.</p> <p><i>Shirley Hill</i> 2/7/04 HOWARD SOIL CONSERVATION DISTRICT DATE</p>	
<p>APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.</p> <p><i>David A. Doyle</i> 3/15/04 DIRECTOR DATE</p> <p><i>Mike DeMunnich</i> 2/20/04 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE</p> <p><i>Cynthia Hamstra</i> 3/11/04 CHIEF, DIVISION OF LAND DEVELOPMENT DATE</p>	
<p>6-15-05 CHANGED SHEET NO.</p> <p>1-6-06 CHANGED SHEET NO.</p>	
DATE NO.	REVISION
<p>DEVELOPER/OWNER:</p> <p>(OWNER) CHASE LIMITED PARTNERSHIP P.O. BOX 850 LAUREL, MD 207125 410.142.1234</p> <p>(DEVELOPER) CHASE MINING LLC P.O. BOX 850 LAUREL, MD 207125 410.142.1234</p>	
<p>PROJECT</p> <p style="text-align: center;">CHASE QUARRY</p>	
<p>AREA ZONED M-1 & MXD-3, TAX MAP No. 43 PARCEL 234 & P.O. 235, BLOCK 19 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND</p>	
<p>TITLE</p> <p style="text-align: center;">GRADING, SEDIMENT CONTROL & DRAINAGE AREA MAP</p>	
<p>Patton Harris Rust & Associates, P.C. Engineers, Surveyors, Planners, Landscape Architects. 8818 Centre Park Drive Columbia, MD 21045 T 410.997.8900 F 410.997.9282</p> <p style="text-align: center;">PHRA</p>	
<p>DATE 1-29-04</p> <p></p> <p>CHRISTOPHER J. REID #19949</p>	<p>DESIGNED BY : C.J.R.</p> <p>DRAWN BY : MAD</p> <p>CHECKED BY : C.J.R.</p> <p>PROJECT NO : 99092/ SEDIM9.DWG</p> <p>DATE : JANUARY 29, 2004</p> <p>SCALE : 1" = 50'</p> <p>DRAWING NO. 20 OF 55</p>

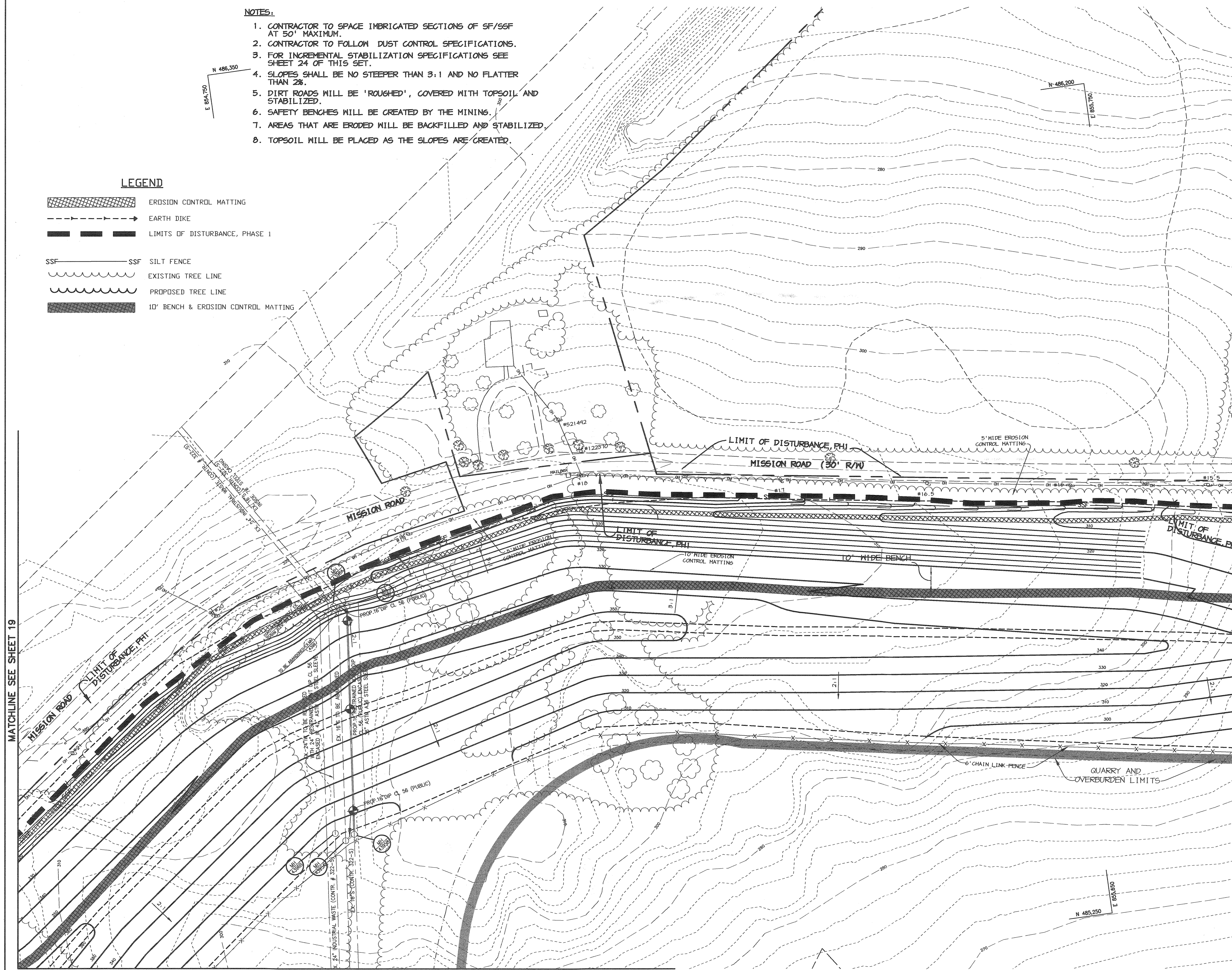
P:\project\99092\1-0\Engr\Plans\Sedim9.dwg, Layout1, 01/29/2004 12:40:27 PM, HP1050C, Mylar.pc3, Arch D - 24 x 36 in. (landscape), 1:1

NOTES:

1. CONTRACTOR TO SPACE IMBRICATED SECTIONS OF SF/SSF AT 50' MAXIMUM.
2. CONTRACTOR TO FOLLOW DUST CONTROL SPECIFICATIONS.
3. FOR INCREMENTAL STABILIZATION SPECIFICATIONS SEE SHEET 24 OF THIS SET.
4. SLOPES SHALL BE NO STEEPER THAN 3:1 AND NO FLATTER THAN 2%.
5. DIRT ROADS WILL BE 'ROUGHED', COVERED WITH TOPSOIL AND STABILIZED.
6. SAFETY BENCHES WILL BE CREATED BY THE MINING.
7. AREAS THAT ARE ERODED WILL BE BACKFILLED AND STABILIZED.
8. TOPSOIL WILL BE PLACED AS THE SLOPES ARE CREATED.

LEGEND

-  EROSION CONTROL MATTING
-  EARTH DIKE
-  LIMITS OF DISTURBANCE, PHASE I
-  SSF
-  EXISTING TREE LINE
-  PROPOSED TREE LINE
-  10' BENCH & EROSION CONTROL MATTING



BY THE DEVELOPER :

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Timothy J. Schmidt 1-30-04
DEVELOPER DATE

BY THE ENGINEER :

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Christy J. Reas 1-30-04
ENGINEER DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

Jim Mynal 2/10/04
NATURAL RESOURCES CONSERVATION SERVICE DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.



Paul Shy 2/10/04
HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Dawnie deLough 2/15/04
DIRECTOR DATE

Chad Williams 2/22/04
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Carly Womack 2/1/04
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

6-15-03  CHANGED SHEET NO.
1-0-02  CHANGED SHEET NO.

DATE NO. REVISION

DEVELOPER/OWNER:

(OWNER) CHASE LIMITED PARTNERSHIP P.O. BOX 250 LAUREL, MD 20725 410.742.7234	(DEVELOPER) CHASE MINING LLC P.O. BOX 250 LAUREL, MD 20725 410.742.7234
--	---

PROJECT

CHASE QUARRY

AREA ZONED M-1 & MXD-3, TAX MAP No. 43
PARCEL 234 & P.O. 235, BLOCK 14
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE

GRADING, SEDIMENT CONTROL & DRAINAGE AREA MAP

Patton Harris Rust & Associates, PC
Engineers, Surveyors, Planners, Landscape Architects.
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

CHRISTOPHER J. REID
1-30-04
DATE

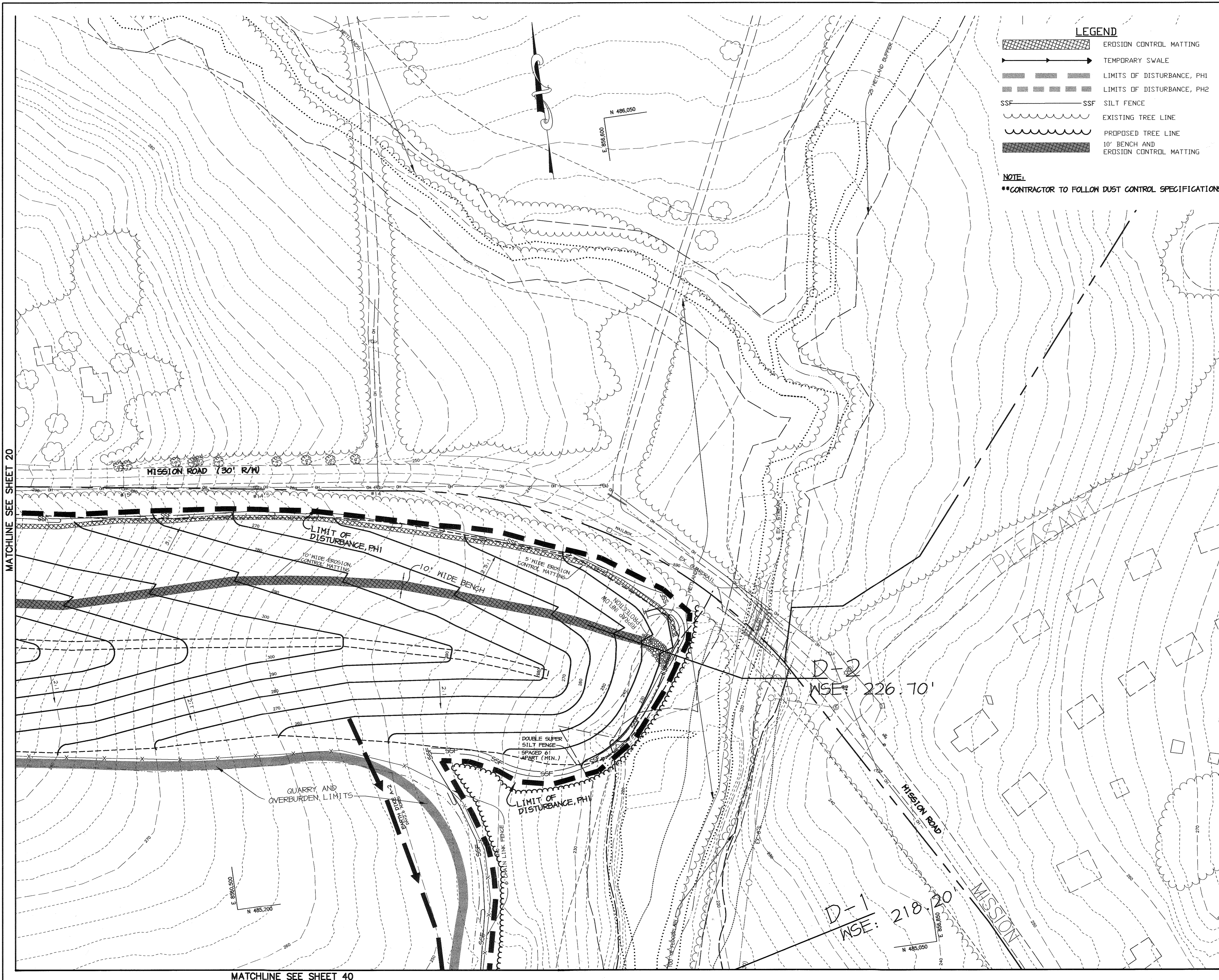
DESIGNED BY : C.J.R.
DRAWN BY : MAD
CHECKED BY : C.J.R.
PROJECT NO : 99092/
SEDIM10.DWG
DATE : JANUARY 29, 2004
SCALE : 1" = 50'
DRAWING NO. 21 OF 55

CHRISTOPHER J. REID #19949

MATCHLINE SEE SHEET 19

MATCHLINE SEE SHEET 21

MATCHLINE SEE SHEET 19



- LEGEND**
- EROSION CONTROL MATTING
 - TEMPORARY SWALE
 - LIMITS OF DISTURBANCE, PH1
 - LIMITS OF DISTURBANCE, PH2
 - SSF
 - EXISTING TREE LINE
 - PROPOSED TREE LINE
 - 10' BENCH AND EROSION CONTROL MATTING

NOTE:
 **CONTRACTOR TO FOLLOW DUST CONTROL SPECIFICATIONS.

- NOTES:**
1. CONTRACTOR TO SPACE IMBERGATED SECTIONS OF SF/SSF AT 50' MAXIMUM.
 2. CONTRACTOR TO FOLLOW DUST CONTROL SPECIFICATIONS.
 3. FOR INCREMENTAL STABILIZATION SPECIFICATIONS SEE SHEET 24 OF THIS SET.
 4. SLOPES SHALL BE NO STEEPER THAN 3:1 AND NO FLATTER THAN 2%.
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BY THE DEVELOPER :

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Timothy J. Schmidt 1-30-04
 DEVELOPER DATE

BY THE ENGINEER :

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Cheryl J. Rees 1-30-04
 ENGINEER DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

Jill Brown 2/10/04
 NATURAL RESOURCES CONSERVATION SERVICE DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

John Selig 2/10/04
 HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Wanda D. Unger 2/15/04
 DIRECTOR DATE

Chris Drummond 2/20/04
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Carole Hamilton 2/11/04
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

6-15-05 CHANGED SHEET NO.
 1-0-05 CHANGED SHEET NO.

DATE	NO.	REVISION

DEVELOPER/OWNER:

(OWNER) CHASE LIMITED PARTNERSHIP P.O. BOX 850 LAUREL, MD 20125 410.742.7234	(DEVELOPER) CHASE MINING LLC P.O. BOX 850 LAUREL, MD 20125 410.742.7234
--	---

PROJECT

CHASE QUARRY

AREA ZONED M-1 & MXD-3, TAX MAP No. 43
 PARCEL 234 & P.O. 235, BLOCK 19
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE

GRADING, SEDIMENT CONTROL & DRAINAGE AREA MAP

Patton Harris Rust & Associates, pc
 Engineers, Surveyors, Planners, Landscape Architects.
 8818 Centre Park Drive
 Columbia, MD 21045
 T 410.997.8900
 F 410.997.9282

1-30-04
 DATE

DESIGNED BY : C.J.R.

DRAWN BY : MAD

CHECKED BY : C.J.R.

PROJECT NO : 99092/
 SEDIM1.DWG

DATE : JANUARY 29, 2004

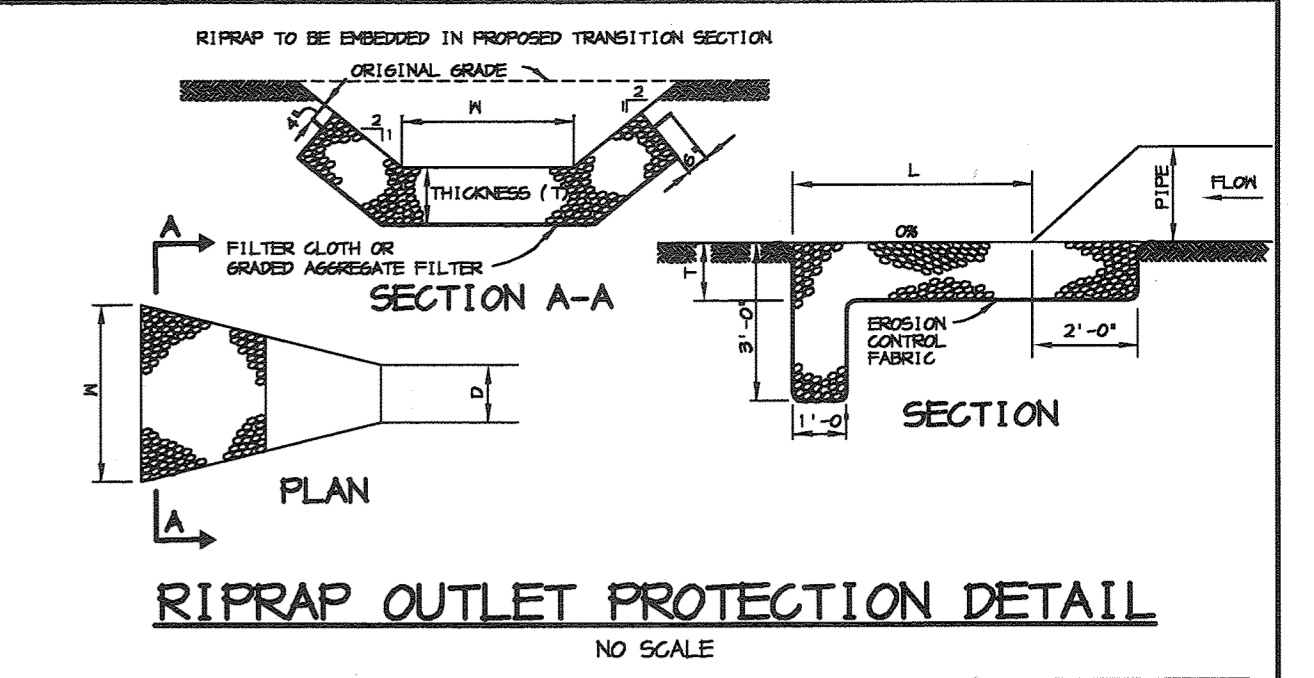
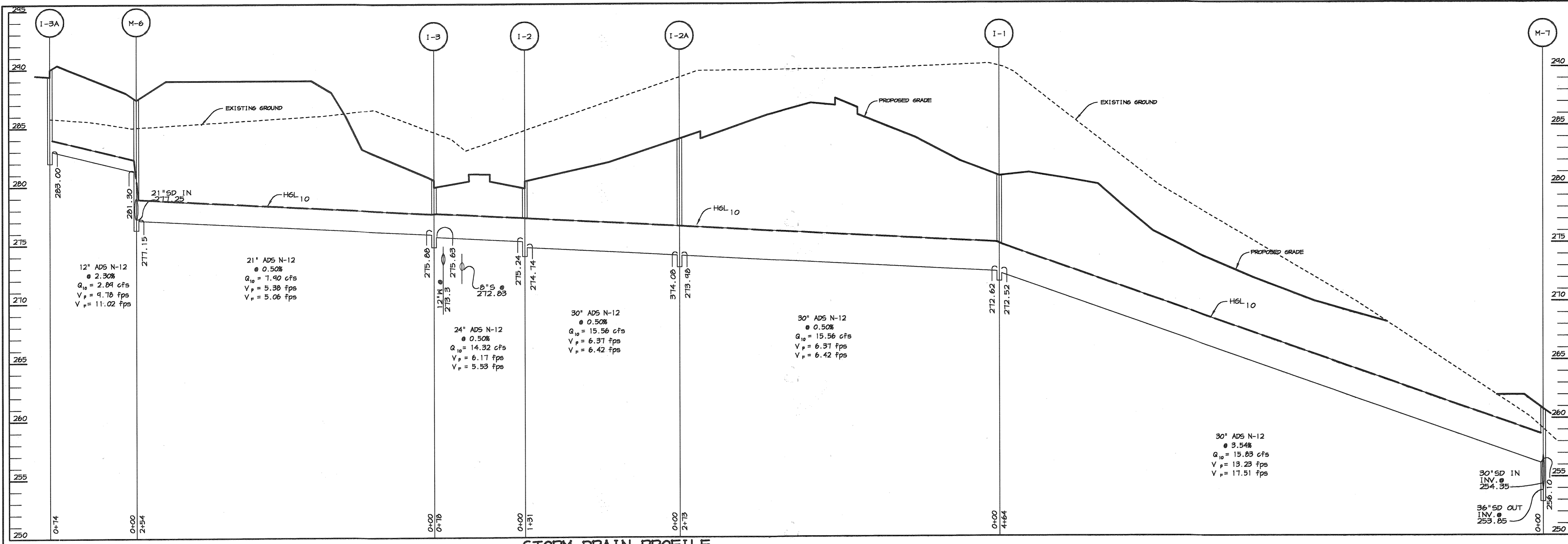
SCALE : 1" = 50'

DRAWING NO. 22 OF 55

CHRISTOPHER J. REID #19949

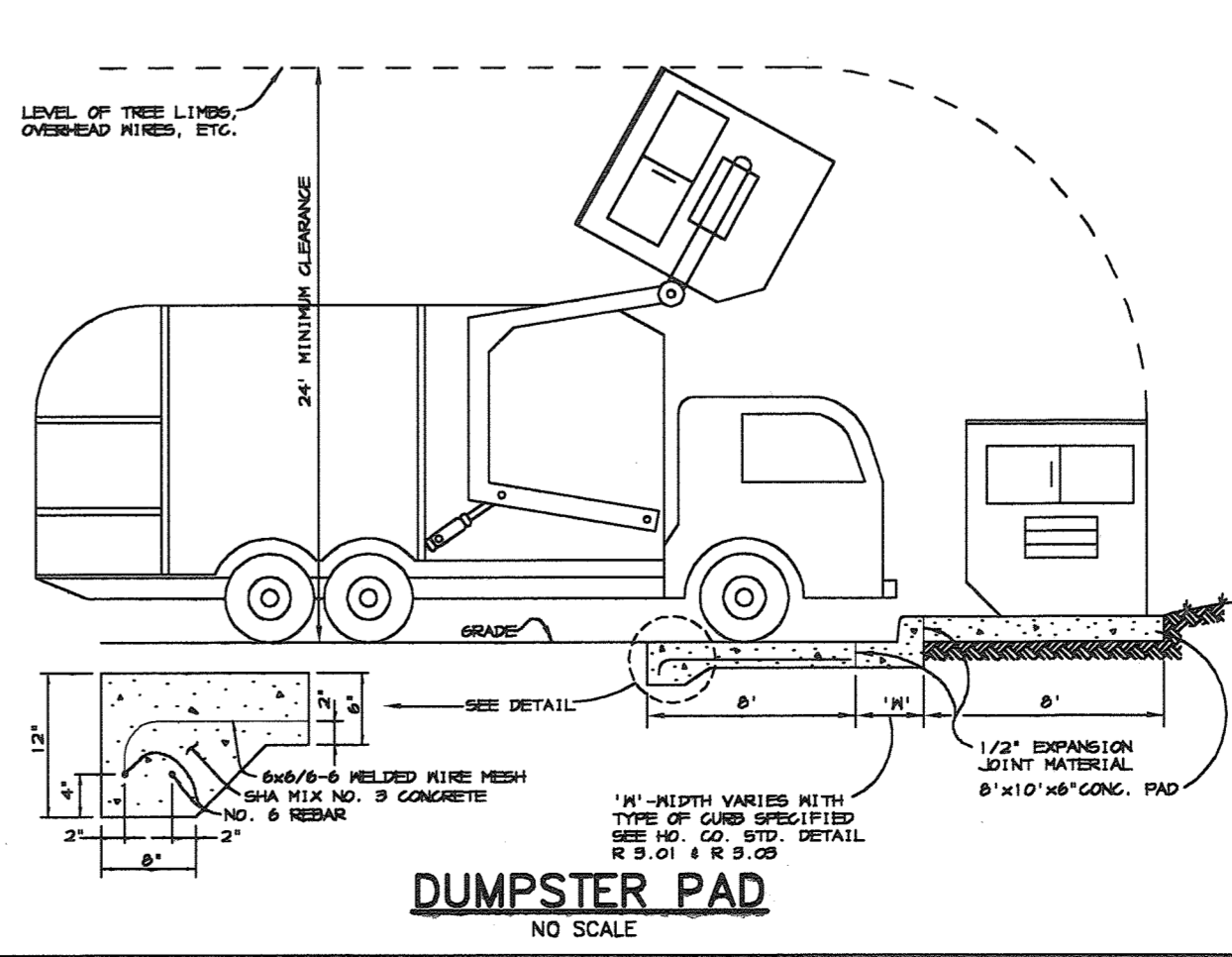
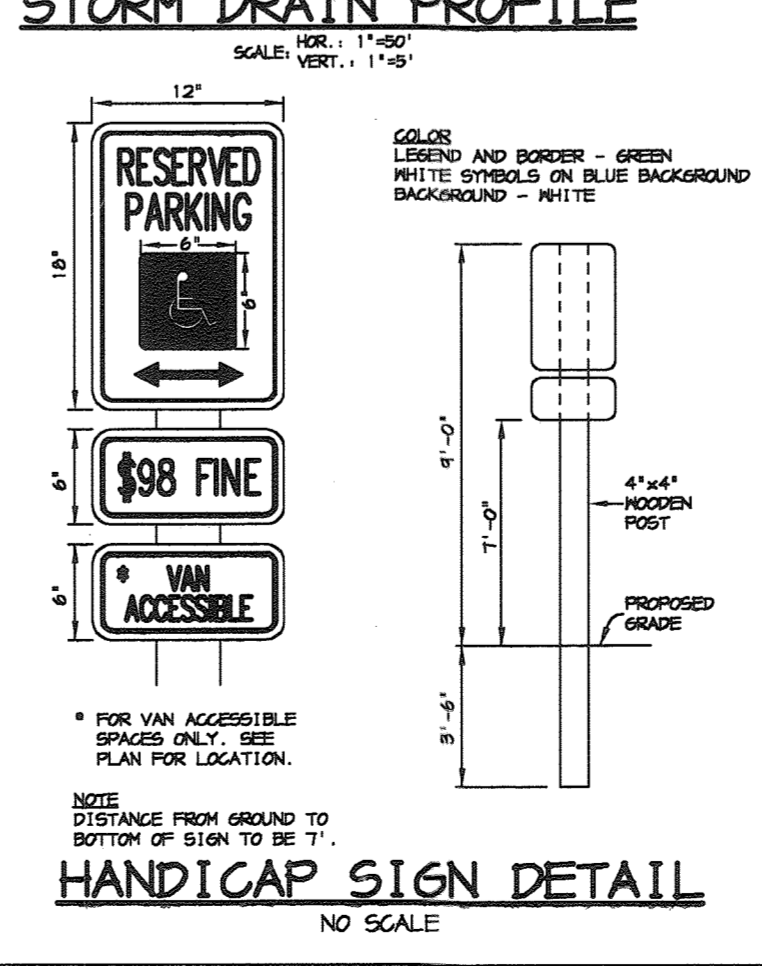
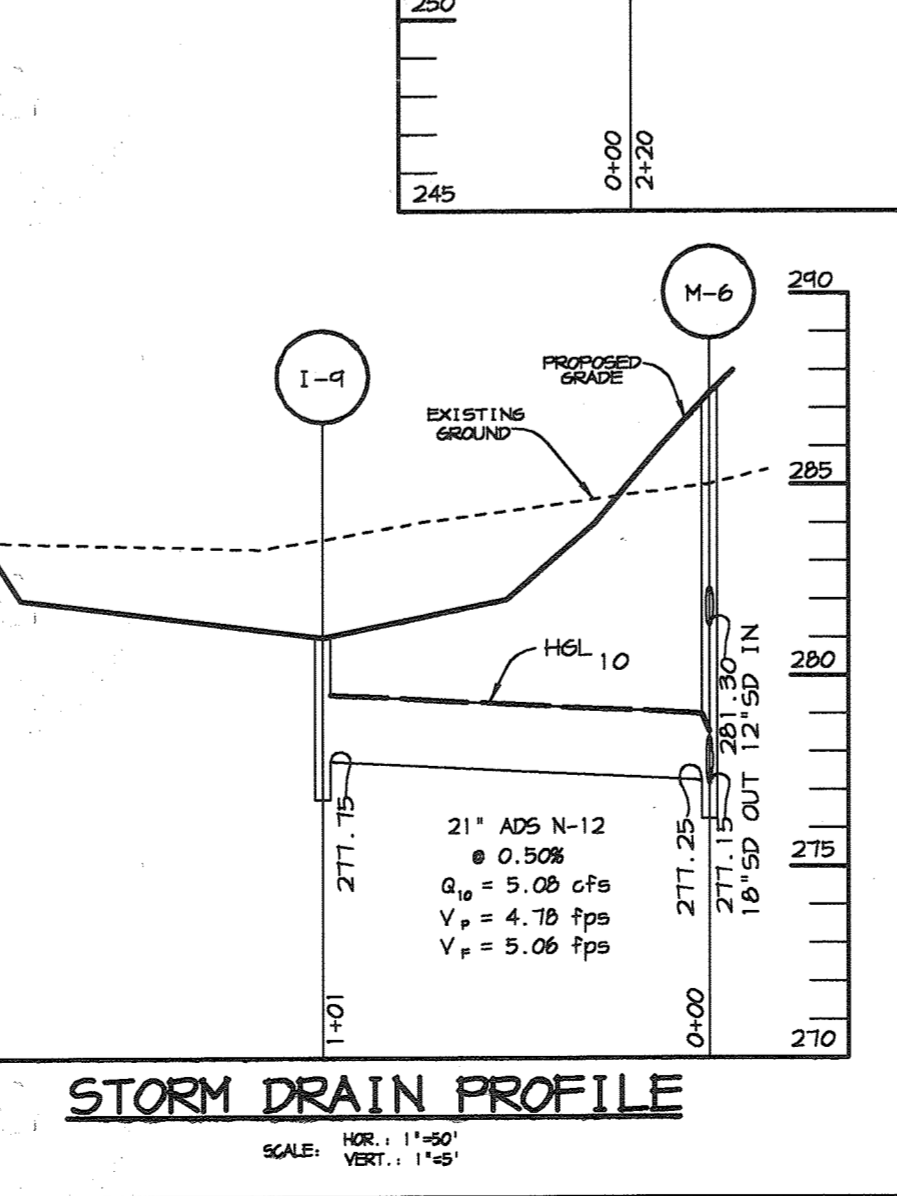
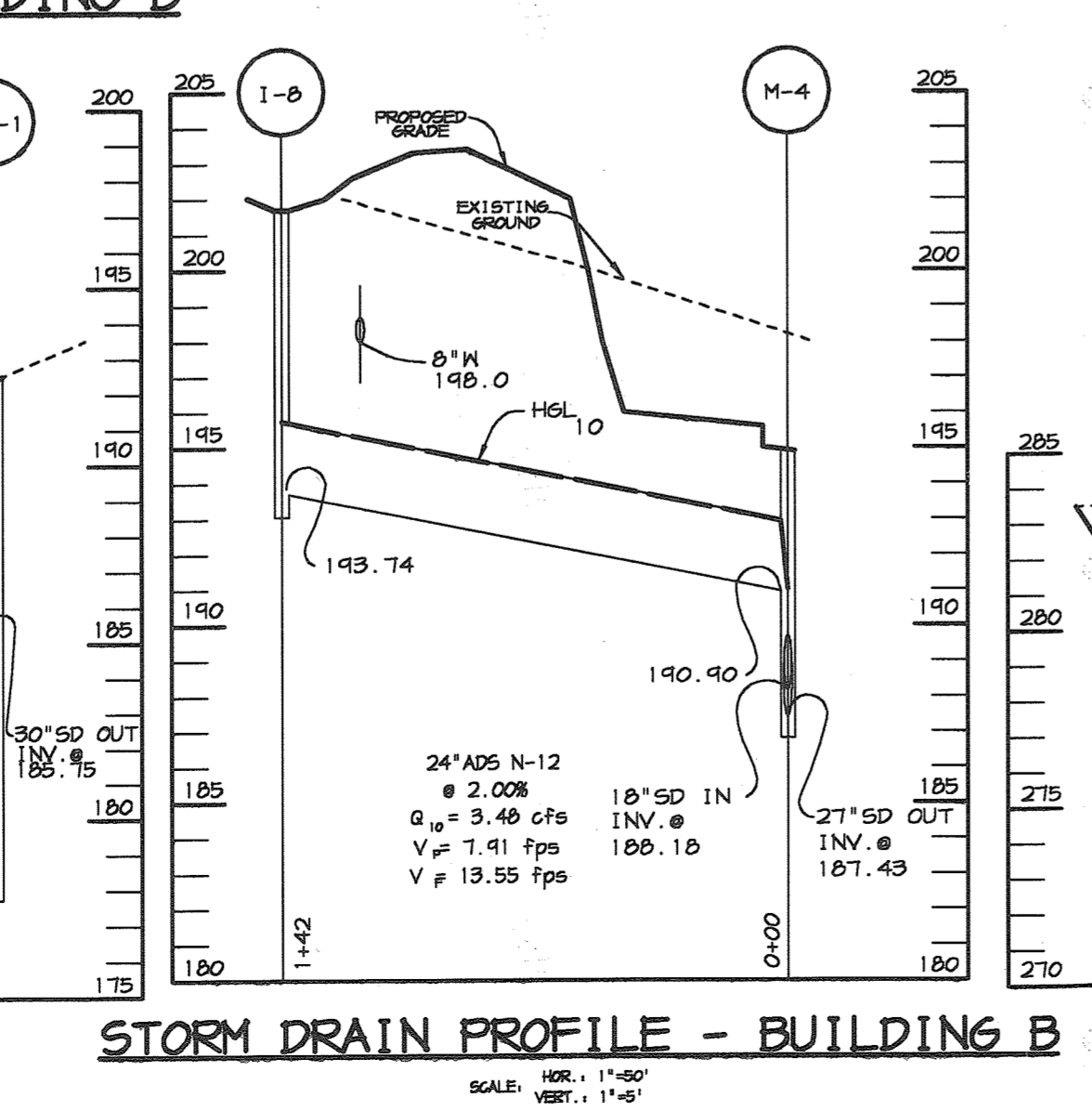
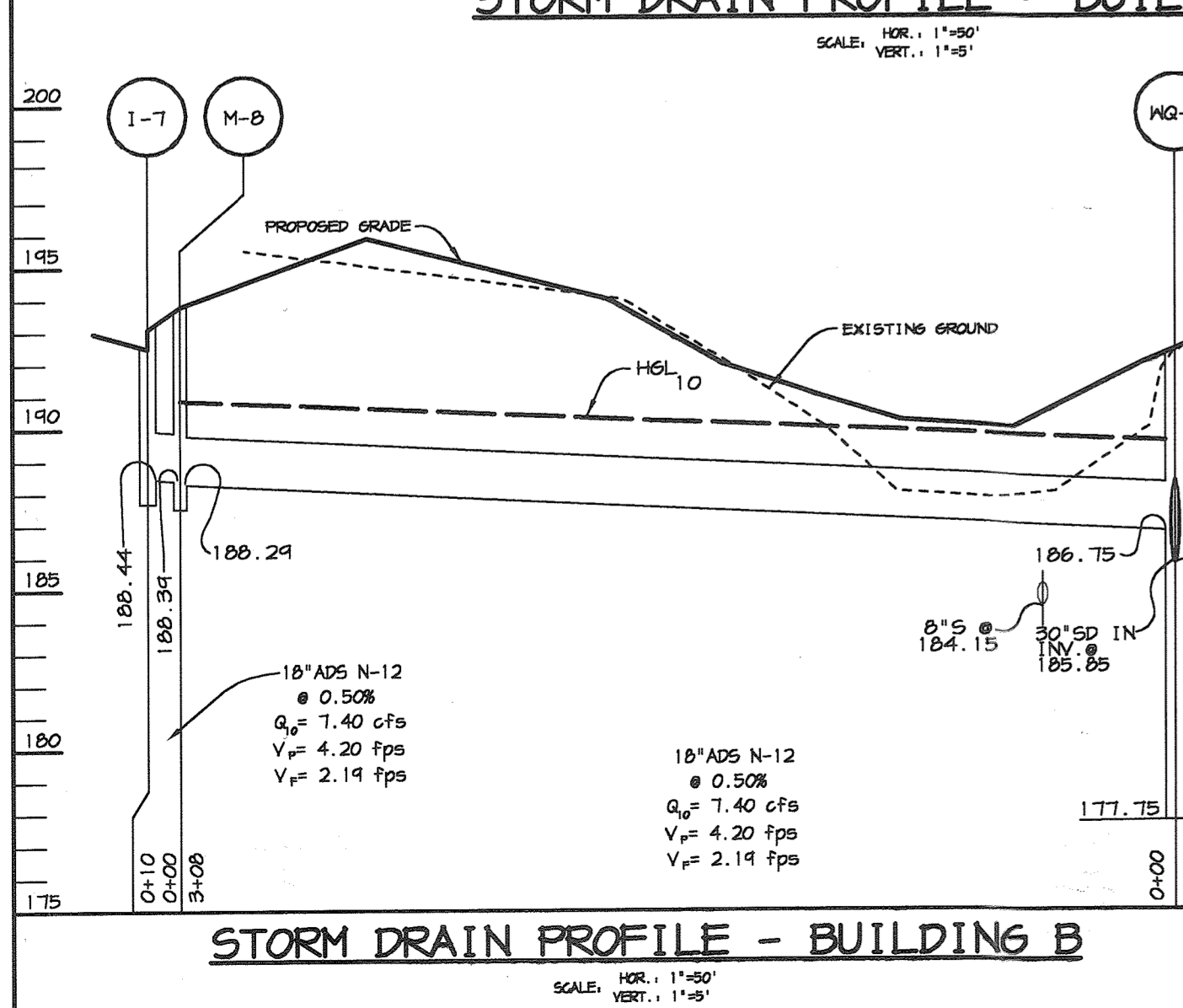
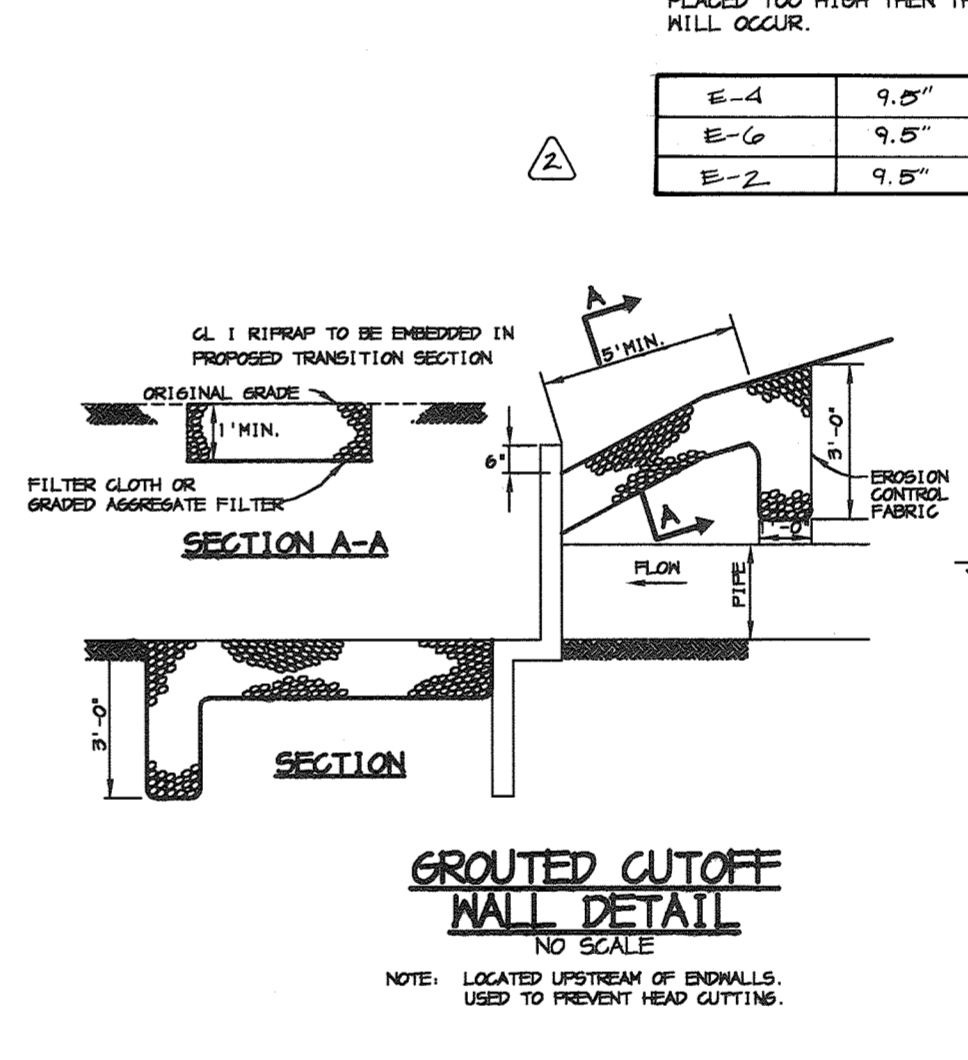
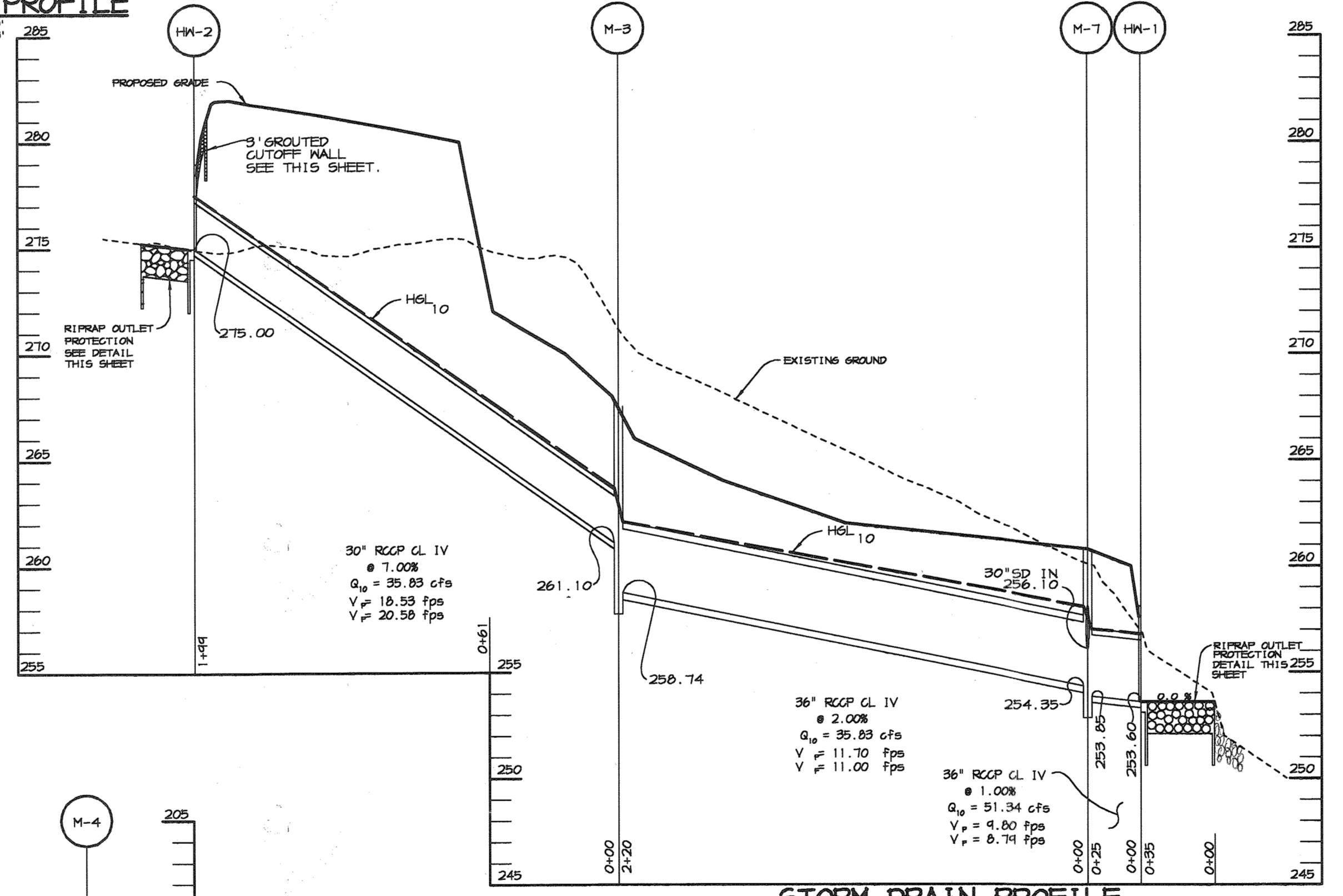
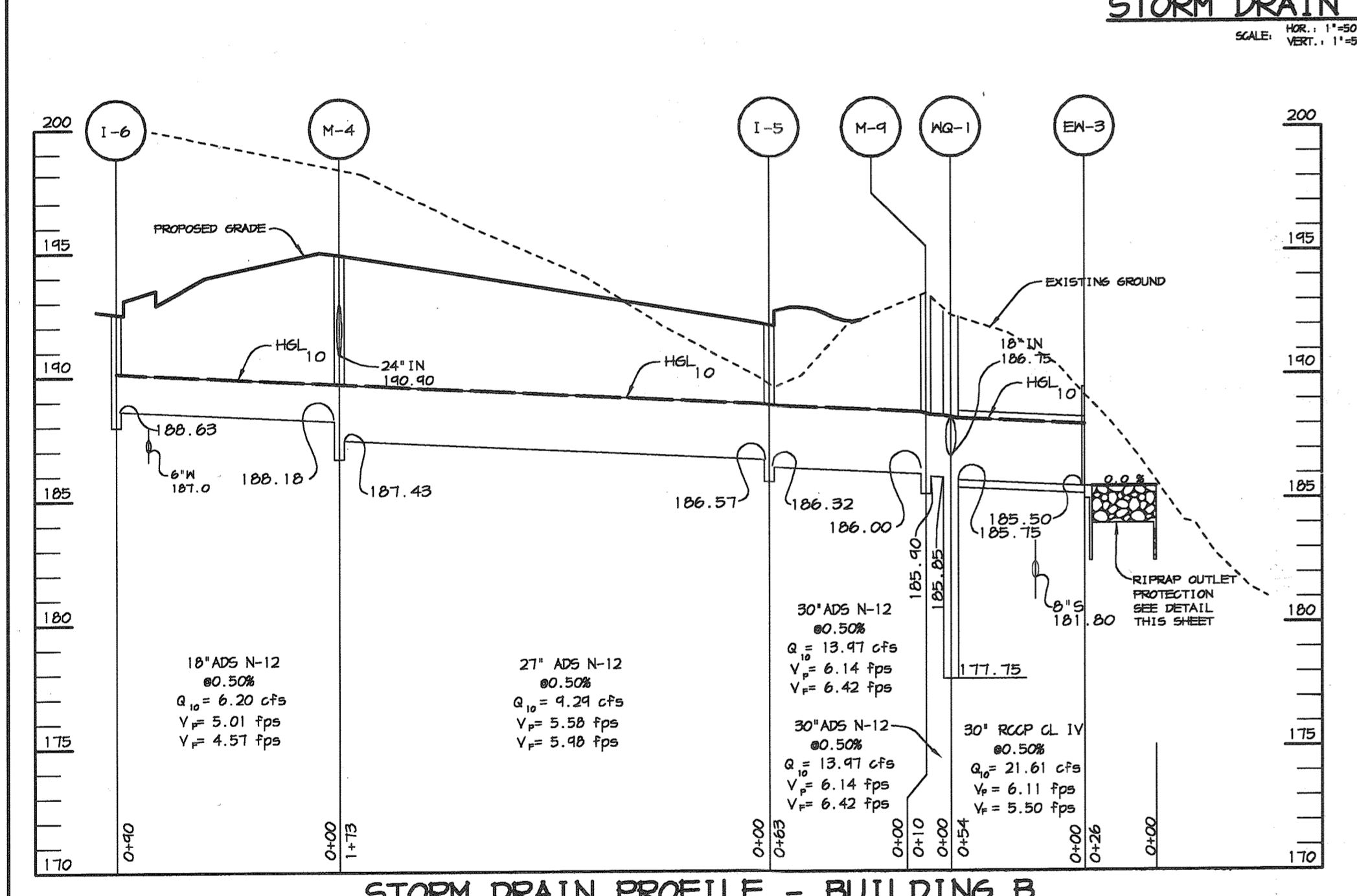
MATCHLINE SEE SHEET 20

MATCHLINE SEE SHEET 40



STRUCTURE	STONE DIA.	SHA CLASS	LENGTH (L)	WIDTH (W)	THICKNESS (T)	Q ₁₀	V ₁₀	d ₅₀
E-1	4.5"	I	16'	14'	14"	48.9	7.82	1.18'
EK-1	4.5"	I	118'	55'	14"	126.02	10.52	2.48'
HW-6	4.5"	I	22'	15'	14"	-	-	-
EW-3	4.5"	I	26'	25.5'	14"	32.22	6.56	0.36'
HW-1	4.5"	I	35'	35'	14"	45.60	6.45	1.13'
HW-2	4.5"	I	25'	17'	14"	35.0	-	-
HW-3	16"	II	80'	39'	32"	101.4	-	-
HW-4	16"	II	21'	20'	32"	40.0	-	-
E-2	9.5"	I	41'	19'	19"	271.0	8.03	1.60'
E-10	9.5"	I	40'	12'	14"	82.0	11.0	2.5'
HW-1	4.5"	I	10'	12'	14"	-	-	-

- CONSTRUCTION SPECIFICATIONS**
- THE SUBGRADE FOR THE FILTER, RIP-RAP, OR GABION SHALL BE PREPARED TO THE REQUIRED LINES AND GRADES. ANY FILL REQUIRED IN THE SUBGRADE SHALL BE COMPACTED TO A DENSITY OF APPROXIMATELY THAT OF THE SURROUNDING UNDISTURBED MATERIAL.
 - THE ROCK OR GRAVEL SHALL CONFORM TO THE SPECIFIED GRADING LIMITS WHEN INSTALLED RESPECTIVELY IN THE RIP-RAP OR FILTER.
 - GEOTEXTILE CLASS C OR BETTER SHALL BE PROTECTED FROM PUNCHING, CUTTING, OR TEARING. ANY DAMAGE OTHER THAN AN OCCASIONAL SMALL HOLE SHALL BE REPAIRED BY PLACING ANOTHER PIECE OF GEOTEXTILE FABRIC OVER THE DAMAGED AREA WHETHER FOR REPAIRS OR FOR JOINING TWO PIECES OF GEOTEXTILE FABRIC SHALL BE A MINIMUM OF ONE FOOT.
 - STONE FOR THE RIP-RAP OR GABION OUTLETS MAY BE FLAGGED BY EQUIPMENT. THEY SHALL BE CONSTRUCTED TO THE FULL COURSE THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO AVOID DISPLACEMENT OF UNDERLYING MATERIALS. THE STONE FOR RIP-RAP OR GABION OUTLETS SHALL BE DELIVERED AND PLACED IN A MANNER THAT WILL ENSURE THAT IT IS REASONABLY HOMOGENEOUS WITH THE SMALLER STONES AND SPALLS FILLING THE VOIDS BETWEEN THE LARGER STONES. RIP-RAP SHALL BE PLACED IN A MANNER TO PREVENT DAMAGE TO THE FILTER BLANKET OR GEOTEXTILE FABRIC. HAND PLACEMENT WILL BE REQUIRED TO THE EXTENT NECESSARY TO PREVENT DAMAGE TO THE PERMANENT WORKS.
 - THE STONE SHALL BE PLACED SO THAT IT BLENDS IN WITH THE EXISTING GROUND. IF THE STONE IS FLAGGED TOO HIGH THEN THE FLOW WILL BE FORCED OUT OF THE CHANNEL AND SCOUR ADJACENT TO THE STONE WILL OCCUR.



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Director: *Mark Laughlin* 3/5/04 DATE

Chief, Development Engineering Division: *Chris Danvers* 2/20/04 DATE

Chief, Division of Land Development: *Chris Danvers* 2/11/04 DATE

6-15-05 REV. RIPRAP OUTLET CHART, CHANGED SHEET NO.

1-0-05 REV. RIPRAP DETAIL, SHEET NO.

DATE NO. REVISION

DEVELOPER/OWNER:
(OWNER) CHASE LIMITED PARTNERSHIP
P.O. BOX 850
LAUREL, MD 207125
410.742.1234
(DEVELOPER) CHASE MINING LLC
P.O. BOX 850
LAUREL, MD 207125
410.742.1234

PROJECT: **CHASE QUARRY**

AREA ZONED M-1 & MXD-3, TAX MAP No. 43
PARCEL 234 & P.O. 235 BLOCK 19
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

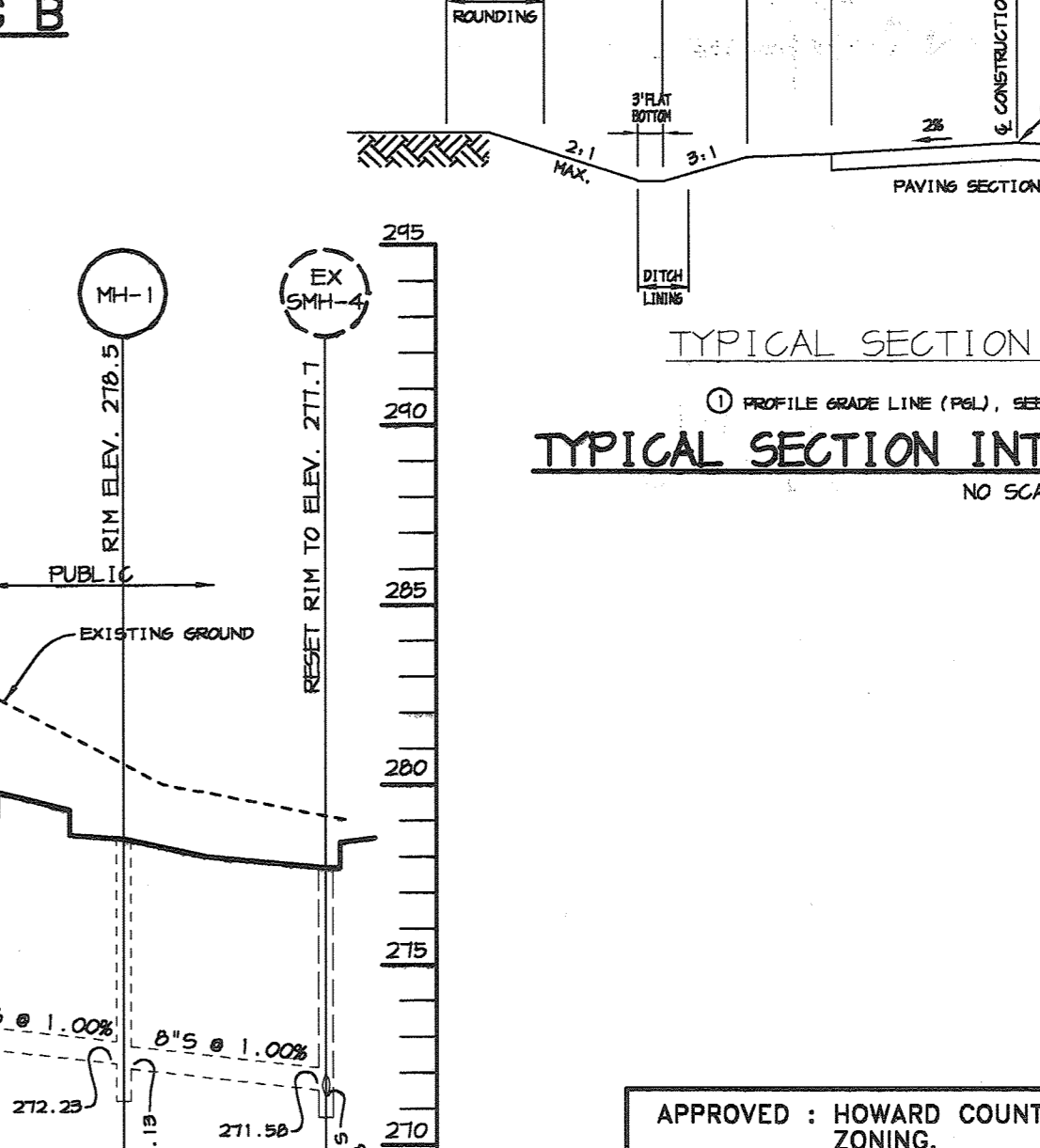
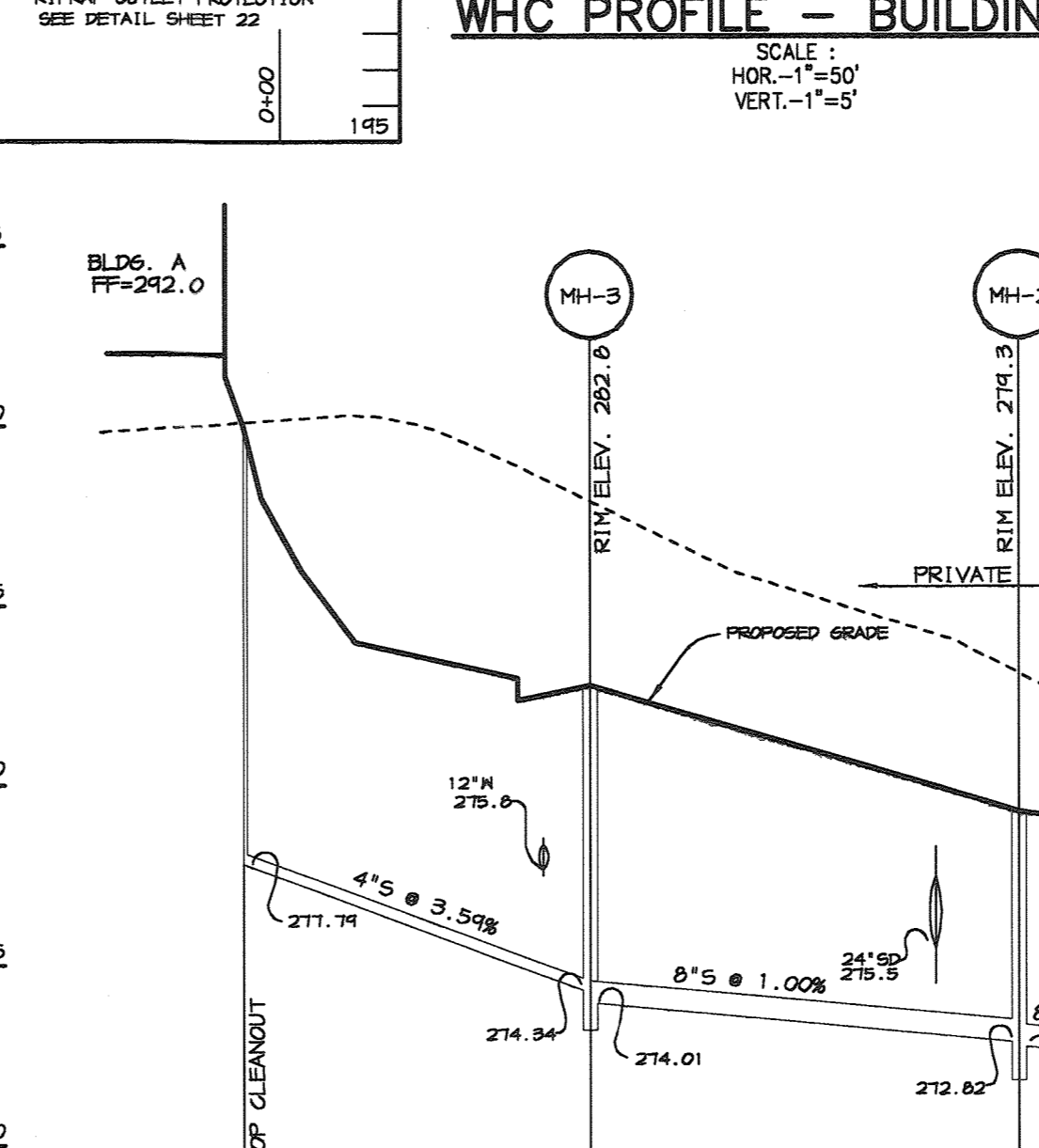
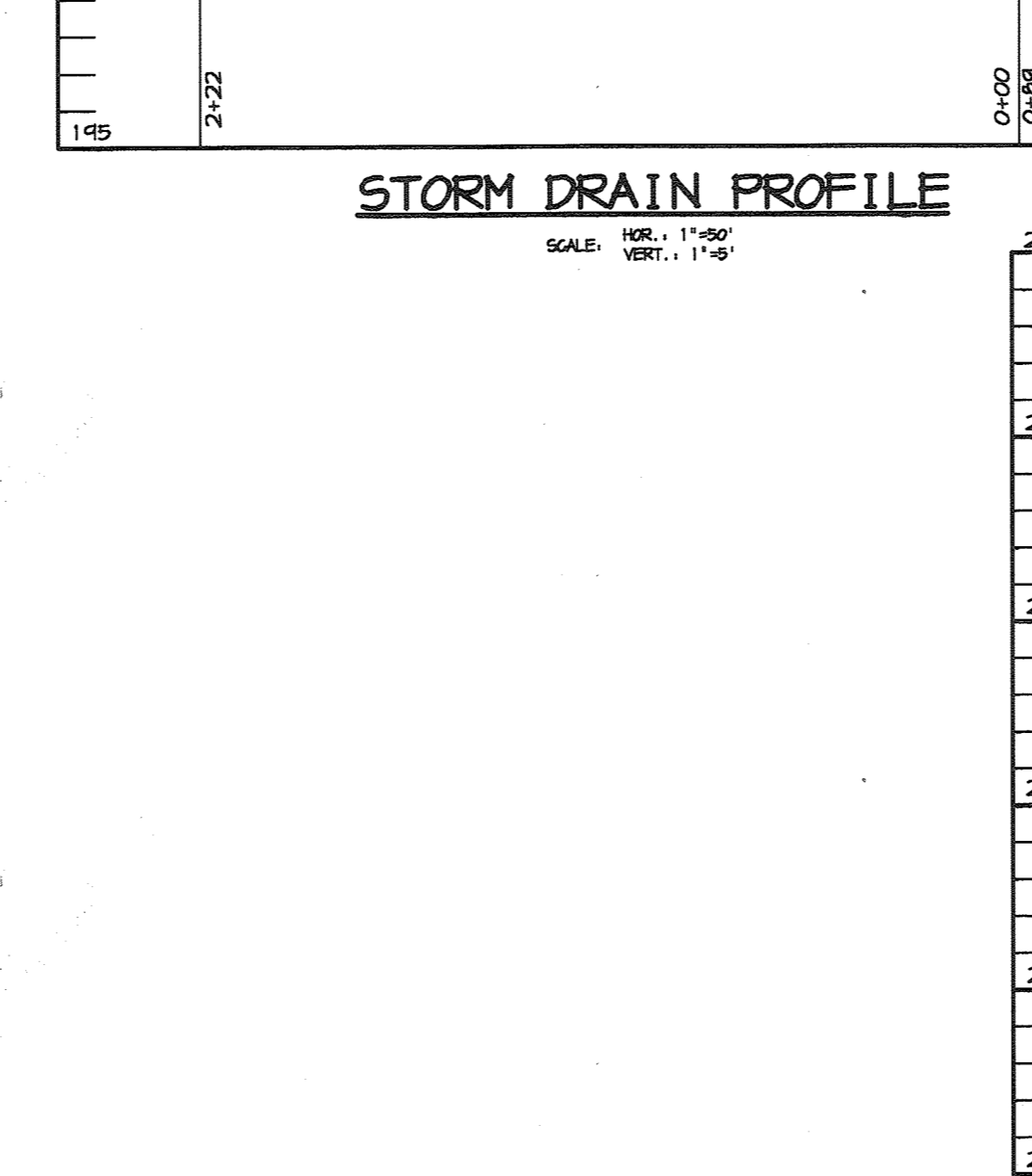
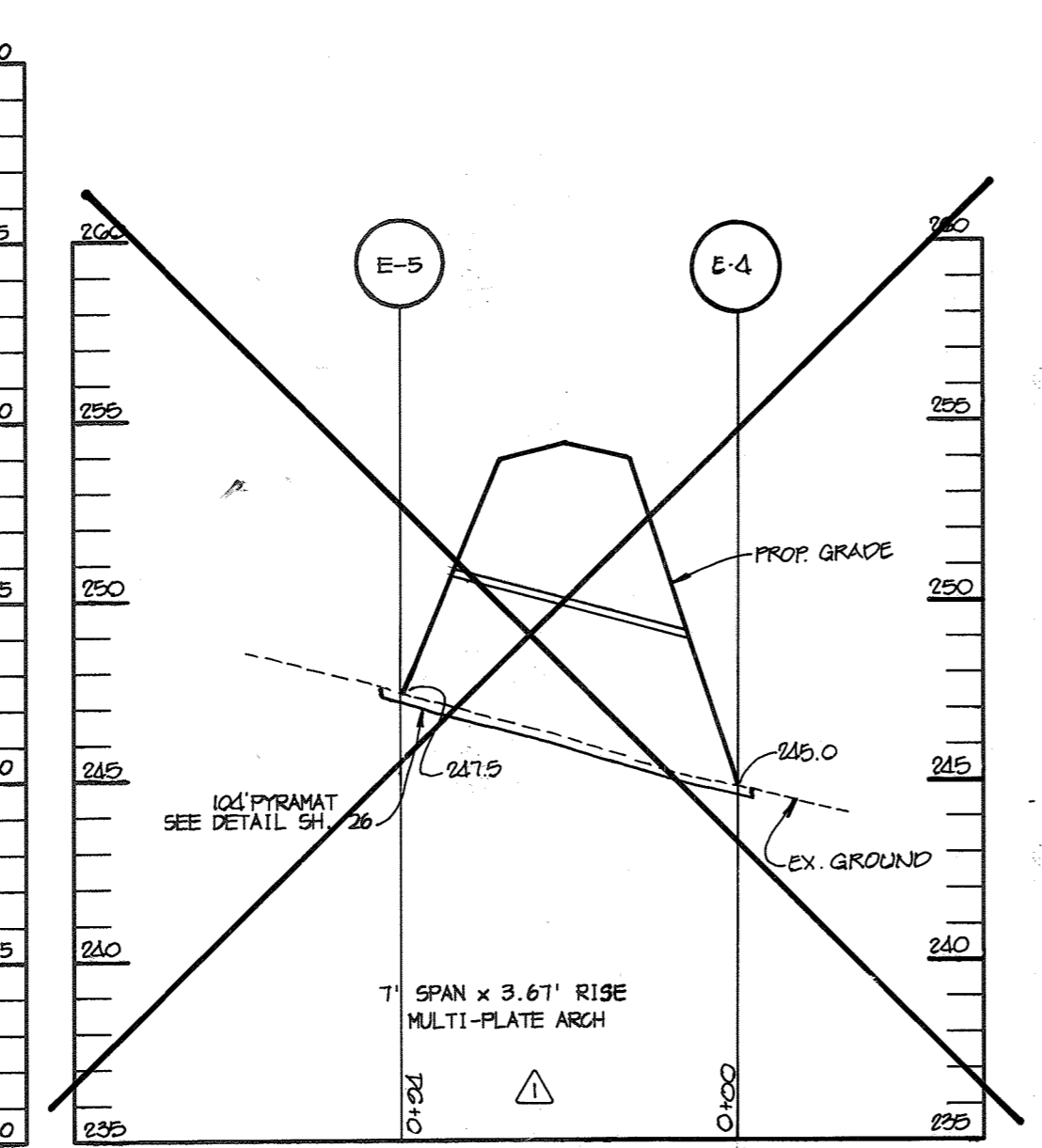
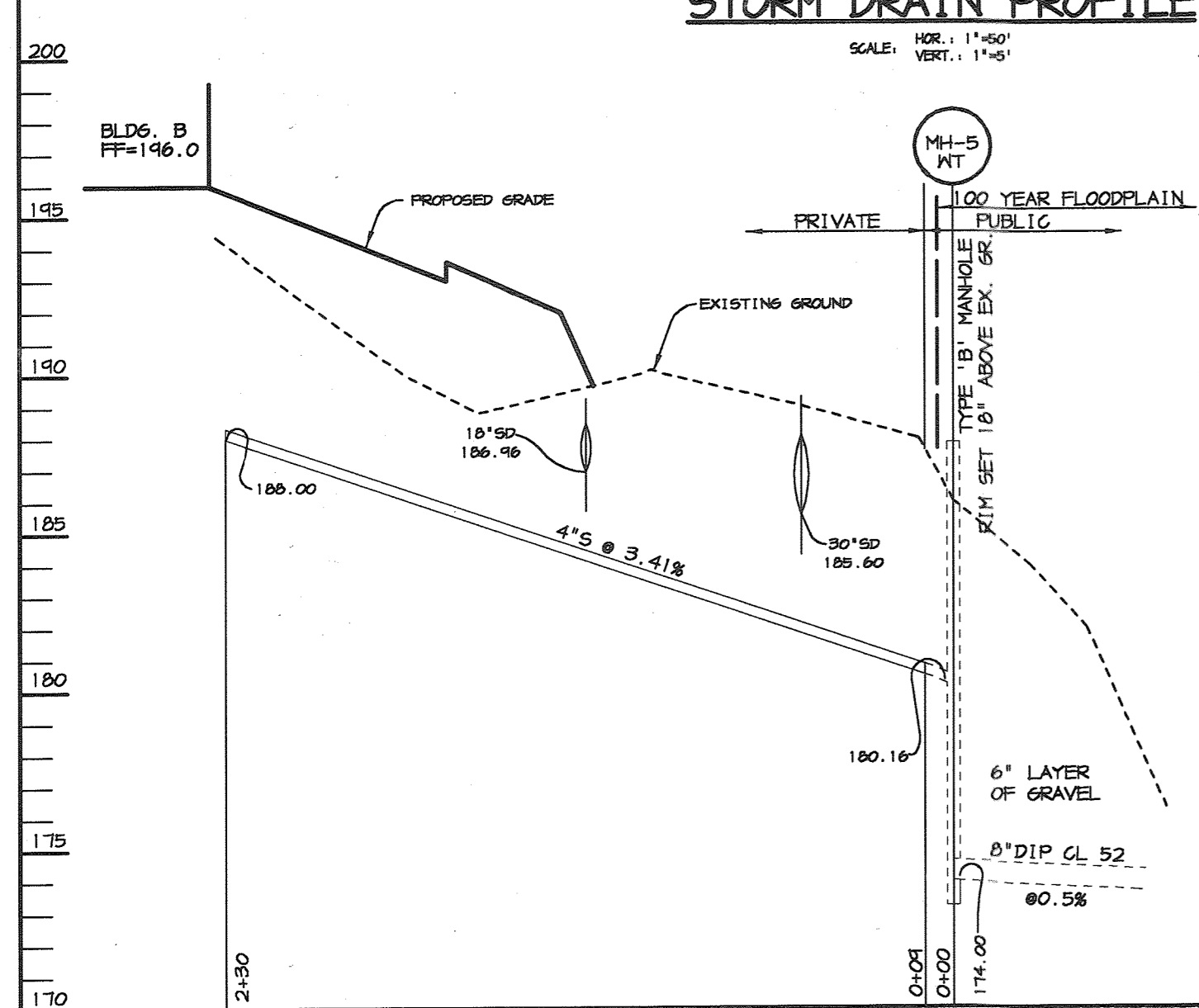
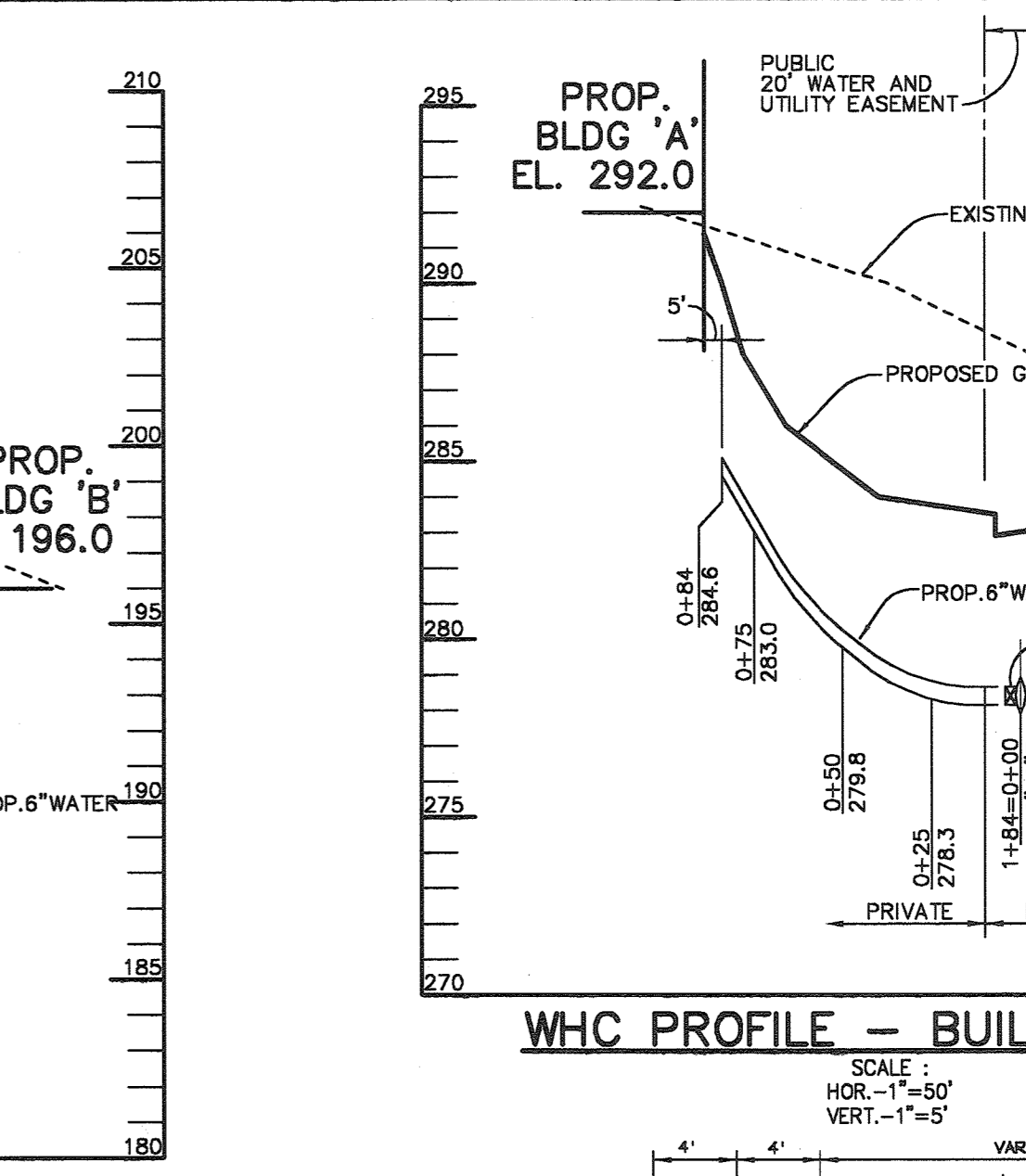
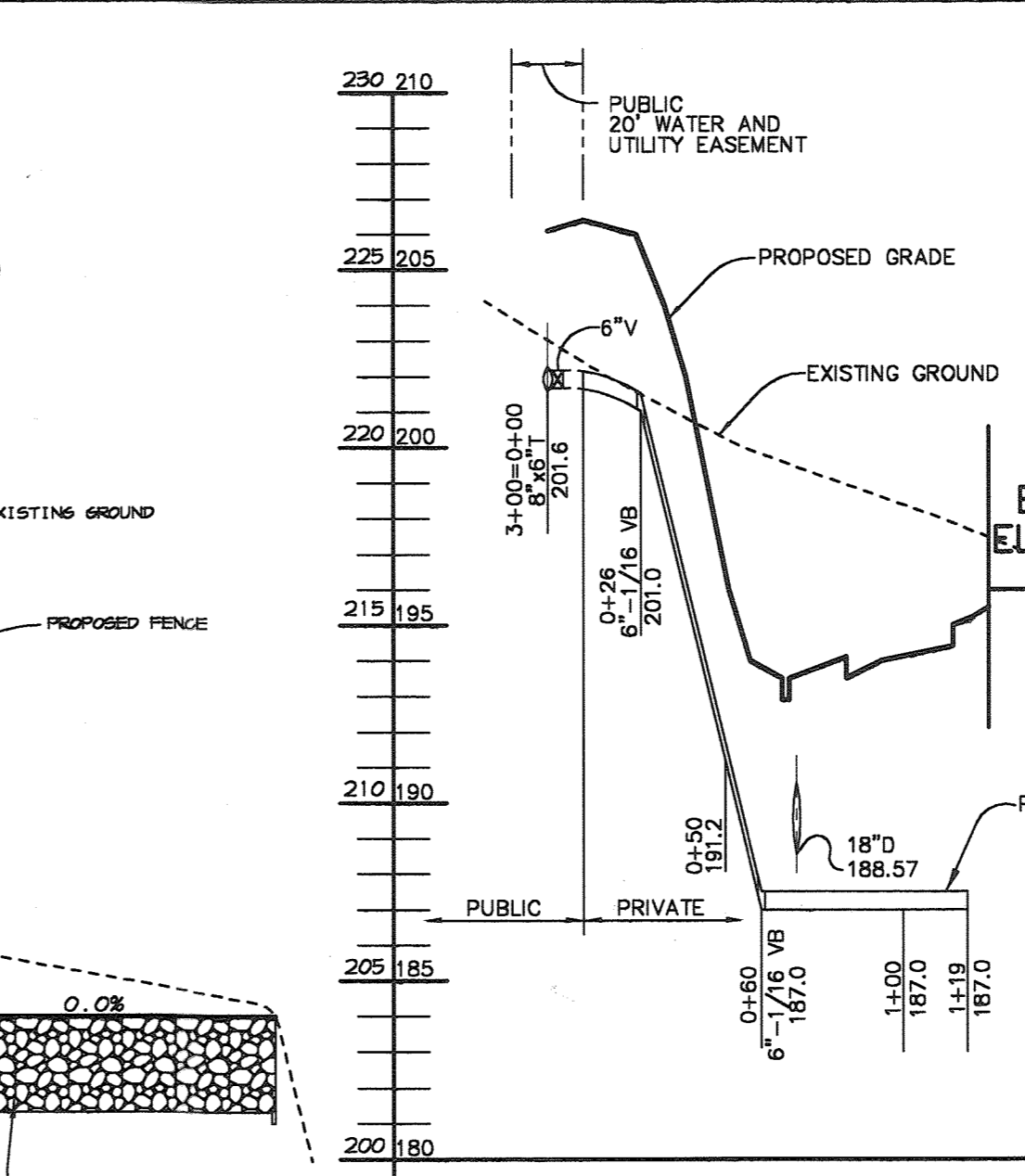
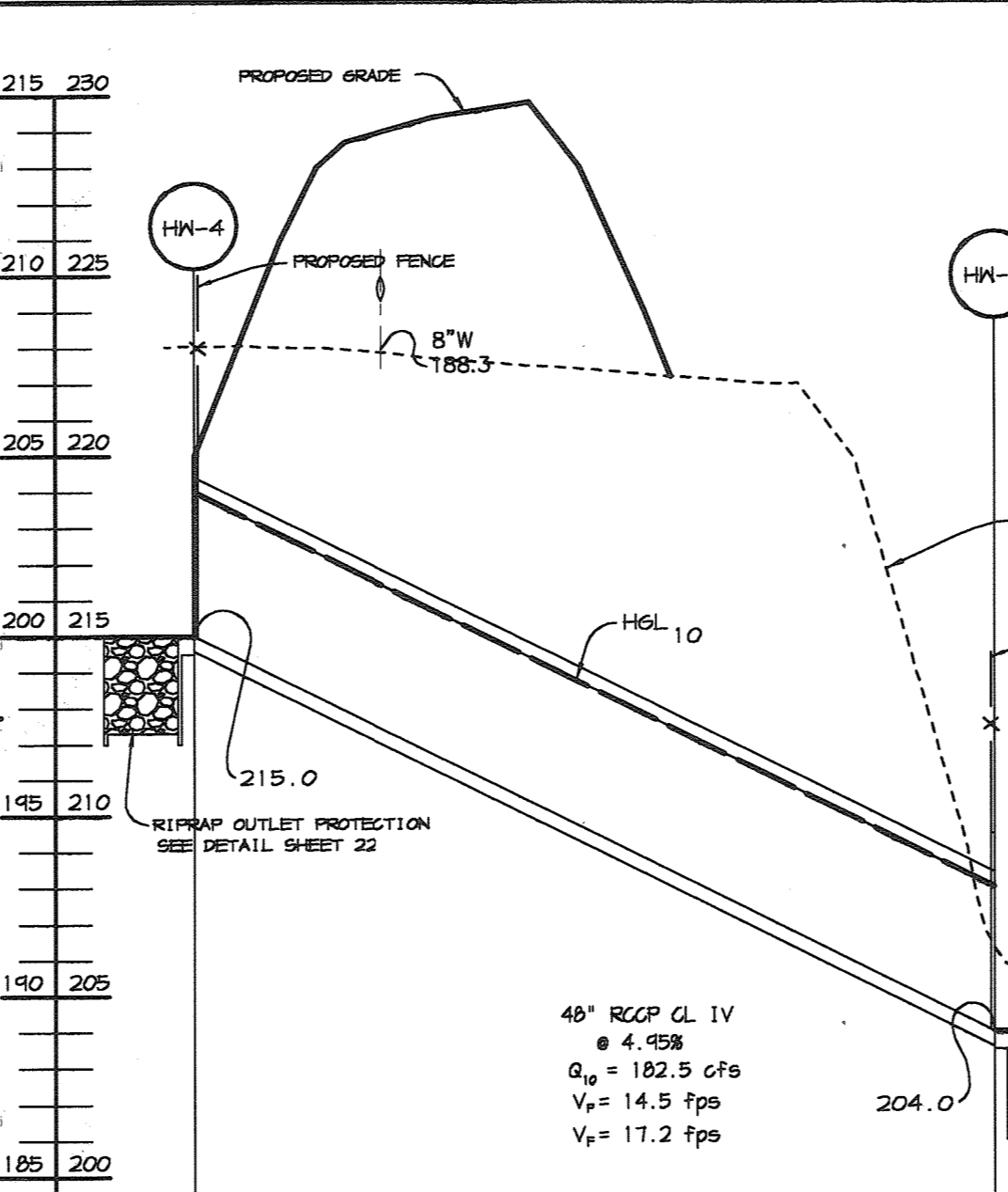
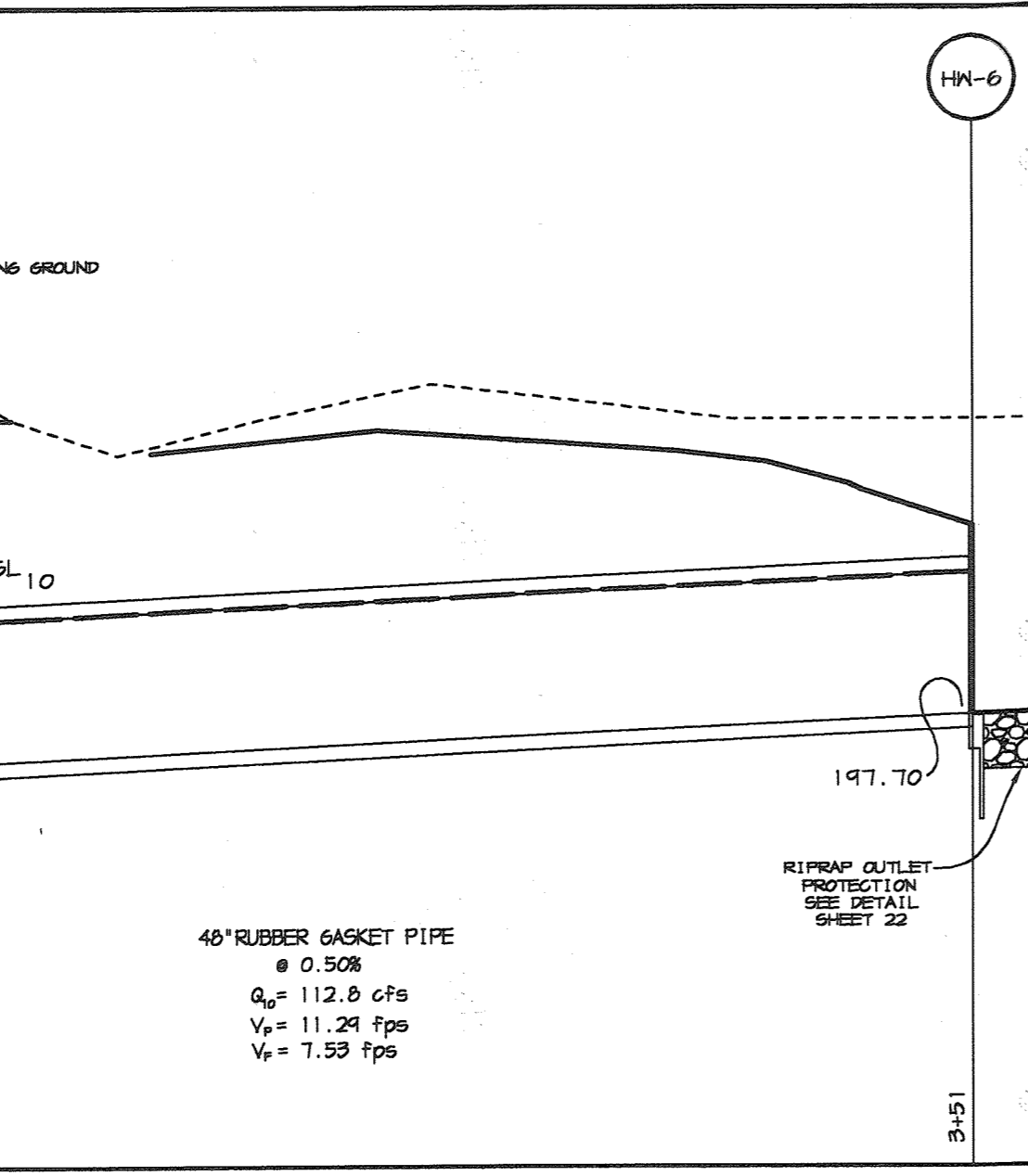
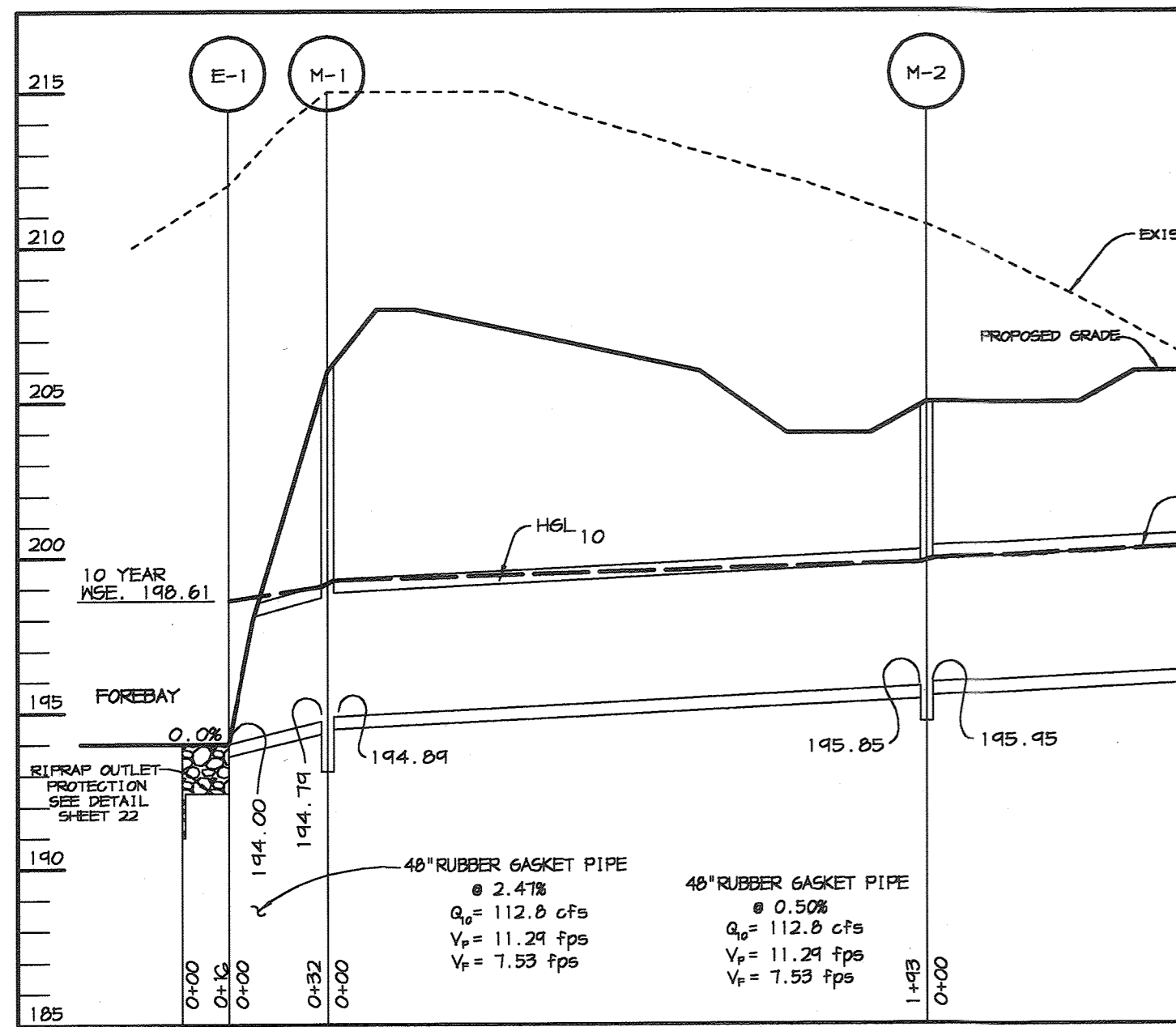
TITLE: **PROFILES AND DETAILS**

Patton Harris Rust & Associates, PC
Engineers, Surveyors, Planners, Landscape Architects.
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

1-30-04 DATE

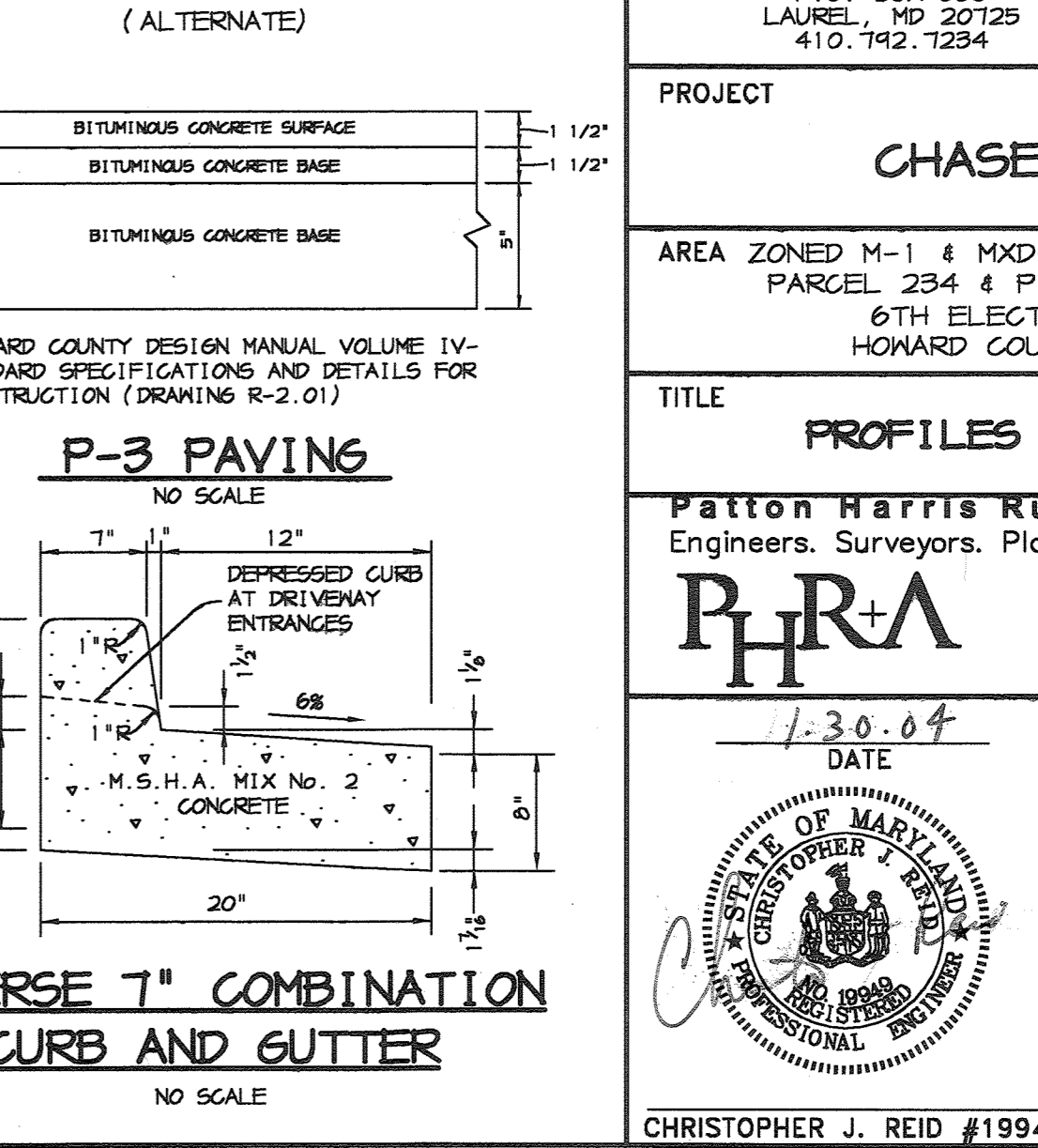
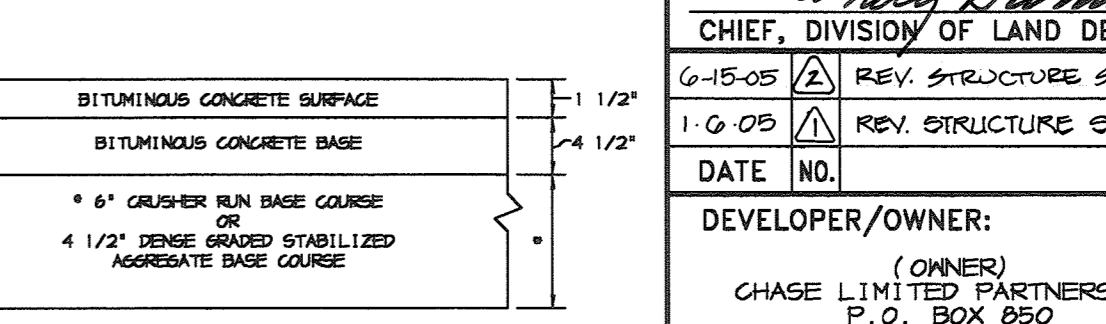
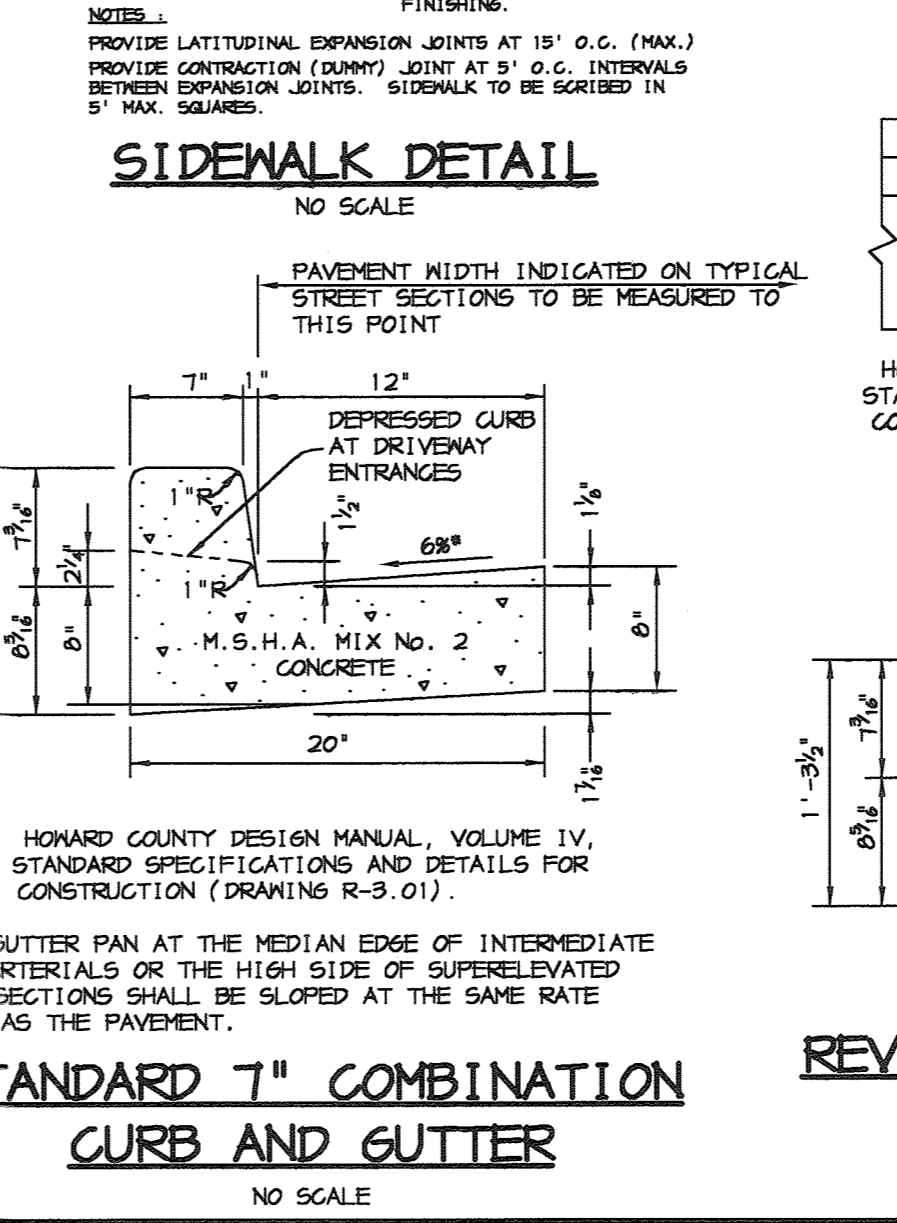
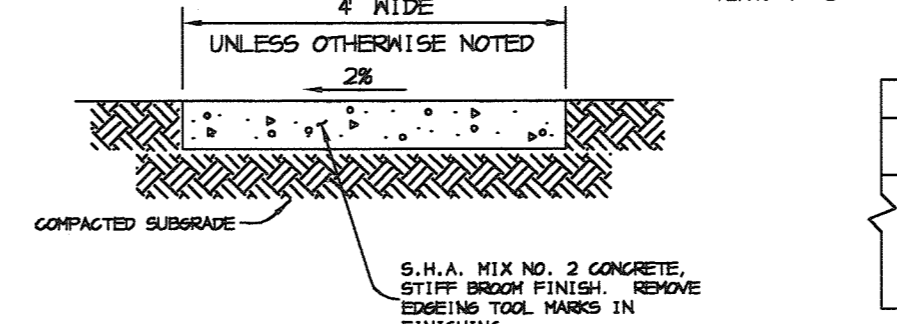
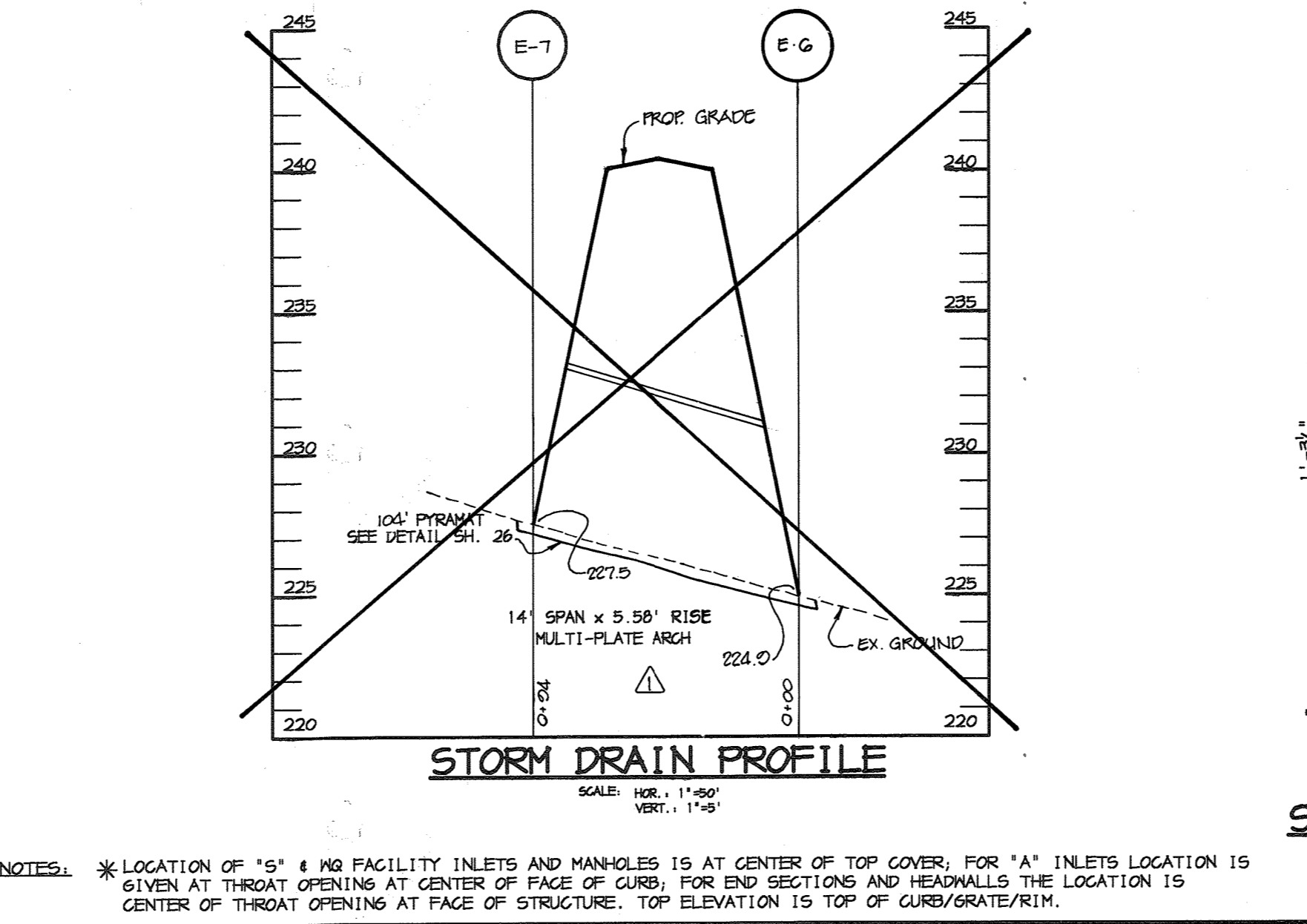
DESIGNED BY: C.J.R.
DRAWN BY: MAD
CHECKED BY: C.J.R.
PROJECT NO: 99092/
PROFILE.DWG
DATE: JANUARY 29, 2004
SCALE: AS SHOWN
DRAWING NO. 23 OF 55

CHRISTOPHER J. REID #19949



STRUCTURE	TYPE	LOCATION	INV. IN	INV. OUT	TOP	REMARKS
I-1	K	N 480,136 E 855,378	212.62 (30")	212.52 (30")	280.73	HOGO STD. DETAIL SD 4.13
I-2	A-5	N 479,933 E 855,124	215.24 (24")	214.74 (30")	280.40	HOGO STD. DETAIL SD 4.40
I-2A	A-5	N 480,010 E 855,614	214.08 (30")	213.48 (30")	284.00	HOGO STD. DETAIL SD 4.40
I-3	A-5	N 479,674 E 855,674	215.88 (21")	215.63 (24")	280.50	HOGO STD. DETAIL SD 4.40
I-3A	S-COMBINATION	N 479,674 E 855,488	-	283.00 (12")	284.40	HOGO STD. DETAIL SD 4.32
HN-6	48" TYPE A HM	N 482,173 E 856,271	-	197.70 (48")	-	HOGO STD. DETAIL SD 5.11
I-5	MOD. DOUBLE-S	N 481,940 E 857,068	186.57 (21")	186.32 (30")	192.00	SEE DETAIL M-SD 423 SHEET 34
I-6	S-COMBINATION	N 481,875 E 856,881	-	188.73 (18")	192.60	HOGO STD. DETAIL SD 4.32
I-7	A-5	N 482,135 E 856,852	-	188.44 (18")	192.50	HOGO STD. DETAIL SD 4.40
I-8	DOUBLE-S	N 481,710 E 856,493	-	193.74 (24")	201.74	HOGO STD. DETAIL SD 4.23
I-9	DOUBLE-S	N 479,588 E 855,464	-	211.75 (21")	281.00	HOGO STD. DETAIL SD 4.23
M-1	6" BRICK MH	N 481,107 E 856,018	194.84	194.74	206.00	HOGO STD. DETAIL G 5.03
M-2	6" BRICK MH	N 481,845 E 856,054	195.45	194.85	203.00	HOGO STD. DETAIL G 5.03
M-3	5' PRECAST MH	N 480,930 E 855,065	207.10 (30")	258.74 (36")	216.00	HOGO STD. DETAIL G 5.13
M-4	5' PRECAST MH	N 481,850 E 856,468	188.18 (18") 190.90 (24")	186.43 (21")	194.43	HOGO STD. DETAIL G 5.13
E-5	ALC/MP END	N 482,420 E 854,460	-	248.51	-	CONTECH SLOPE COLLAR
M-6	4' PRECAST MH	N 479,671 E 855,516	281.30 (12") 271.23 (18")	271.15 (21")	287.40	HOGO STD. DETAIL G 5.12
M-7	6' PRECAST MH	N 480,542 E 855,280	288.10 (30") 284.35 (36")	253.85 (36")	260.80	HOGO STD. DETAIL G 5.03
MQ-1	BAYSAYER	N 481,944 E 857,136	-	-	-	SEE SHEET 37
HN-1	36" TYPE A HM	N 480,603 E 855,303	-	253.60 (36")	-	HOGO STD. DETAIL SD 5.11
HN-2	30" TYPE A HM	N 480,476 E 854,875	-	275.00 (30")	-	HOGO STD. DETAIL SD 5.11
HN-3	48" TYPE A HM	N 481,351 E 855,490	-	204.00	-	HOGO STD. DETAIL SD 5.11
HN-4	48" TYPE 'E'	N 481,152 E 855,846	-	215.00	-	HOGO STD. DETAIL SD 5.31
E-3	ALC/MP END	N 482,884 E 856,432	-	184.04 184.04	-	CONTECH SLOPE COLLAR
E-1	48" CONC. END SEC.	N 481,682 E 856,038	-	194.00	-	HOGO STD. DETAIL SD 5.51
S-1	CONTROL STRUCTURE	N 481,487 E 856504	-	-	-	SEE DETAIL SHEET 26
S-2	CONTROL STRUCTURE	N 482,818 E 856,546	-	-	-	SEE DETAIL SHEET 26
EN-1	84" HM	N 482,057 E 856,546	186.50	-	-	SHA DETAIL MD-352.02
E-2	ALC/MP END	N 482,553 E 856,838	-	182.23 184.23	-	CONTECH SLOPE COLLAR
EN-3	30" TYPE A HM	N 482,037 E 857,181	-	189.50	-	HOGO STD. DETAIL SD 5.11
EN-4	72" HM	N 482,861 E 856,603	-	184.00	-	SHA DETAIL MD-352.02
E-4	ALC/MP END	N 482,468 E 854,848	-	245.12	-	CONTECH SLOPE COLLAR
E-6	ALC/MP END	N 483,181 E 854,648	-	217.44 214.44	-	CONTECH SLOPE COLLAR
E-7	ALC/MP END	N 483,247 E 854,848	-	241.47 222.40	-	CONTECH SLOPE COLLAR
M-8	4' PRECAST MH	N 482,135 E 856,862	188.39 (18")	188.29 (18")	193.80	HOGO STD. DETAIL G 5.12
M-4	4' PRECAST MH	N 481,487 E 857,124	186.00 (30")	185.90 (30")	193.30	HOGO STD. DETAIL G 5.12

STRUCTURE	TYPE	LOCATION	INV. IN	INV. OUT	REMARKS
E-8	72" CONC. END	N 482,542 E 855,404	-	198.7 (12")	HOGO STD. DETAIL SD 5.51
E-9	72" CONC. END	N 482,406 E 855,506	198.2 (12")	-	HOGO STD. DETAIL SD 5.51
E-10	30" CONC. END	N 482,282 E 854,868	-	242.7 (30")	HOGO STD. DETAIL SD 5.51
E-11	30" CONC. END	N 482,422 E 854,852	245.4 (30")	-	HOGO STD. DETAIL SD 5.51



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Frank R. Knight 3/15/04
DIRECTOR DATE

Mike Cummings 2/20/04
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Windy Samuels 3/11/04
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

6-15-05 Δ REV. STRUCTURE SCHEDULE & REMOVED PROFILES
1-6-05 Δ REV. STRUCTURE SCHEDULE & PROFILES

DATE NO.	REVISION

DEVELOPER/OWNER:
CHASE LIMITED PARTNERSHIP (DEVELOPER)
P.O. BOX 850 CHASE MINING LLC
LAUREL, MD 207125 LAUREL, MD 207125
410.742.1234 410.742.1234

PROJECT: **CHASE QUARRY**

AREA ZONED M-1 & MXD-3, TAX MAP No. 43
PARCEL 234 & P.O. 235, BLOCK 19
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

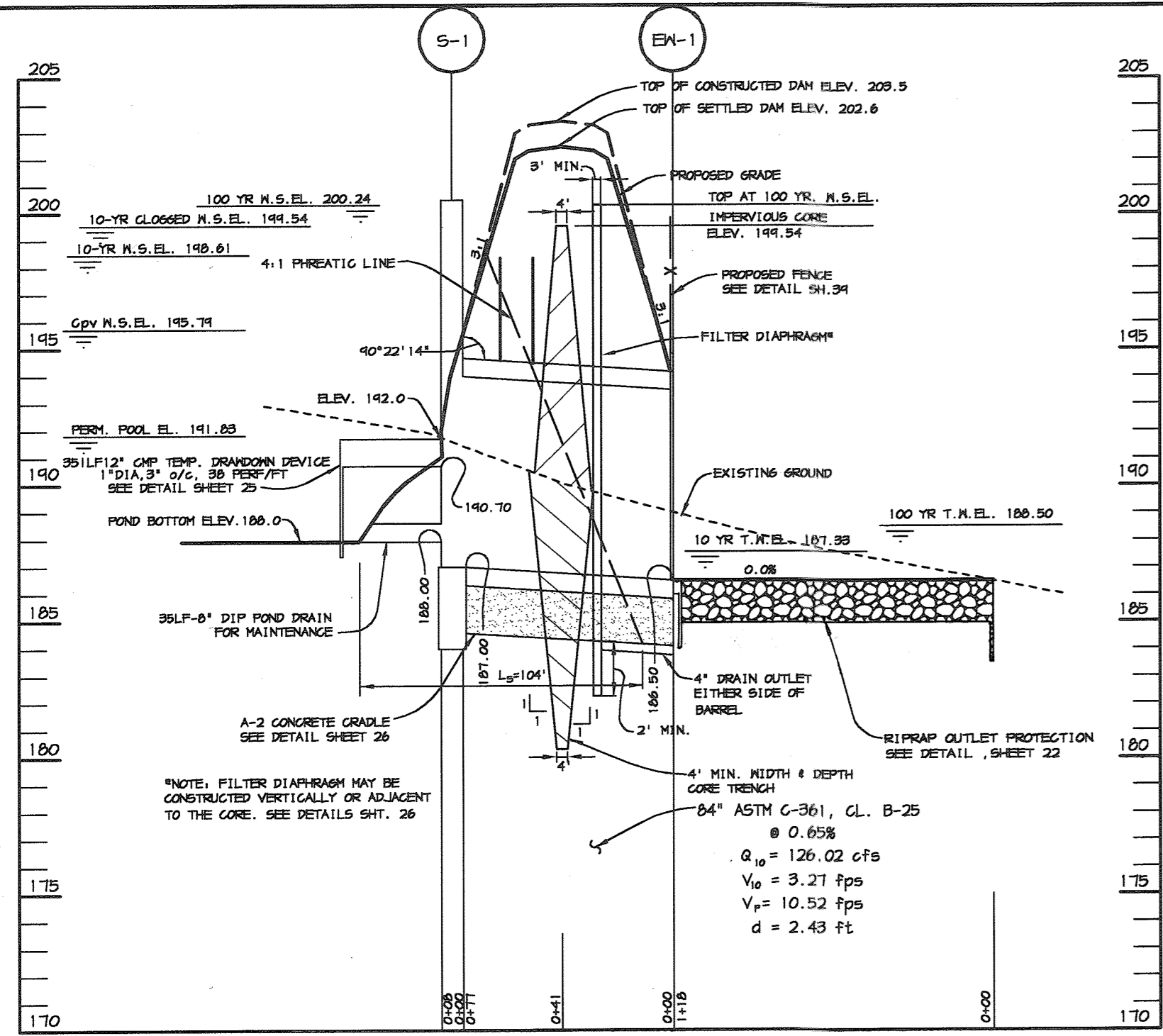
TITLE: **PROFILES AND DETAILS**

Patton Harris Rust & Associates, PC
Engineers. Surveyors. Planners. Landscape Architects.
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

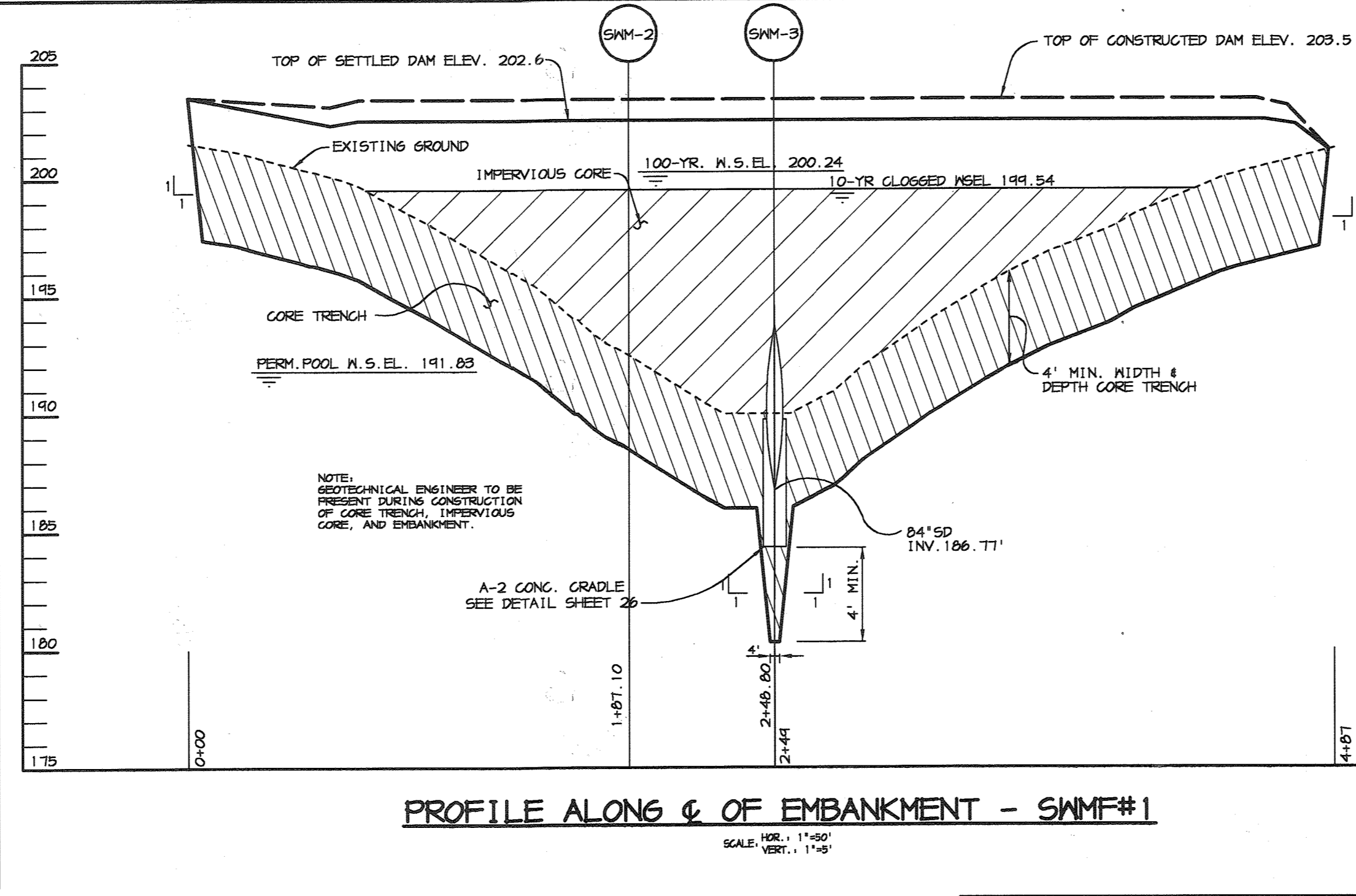
1.30.04
DATE

DESIGNED BY: C.J.R.
DRAWN BY: MAD
CHECKED BY: C.J.R.
PROJECT NO: 99092/
PROFILE2.DWG
DATE: JANUARY 29, 2004
SCALE: AS SHOWN
DRAWING NO. 24 OF 55

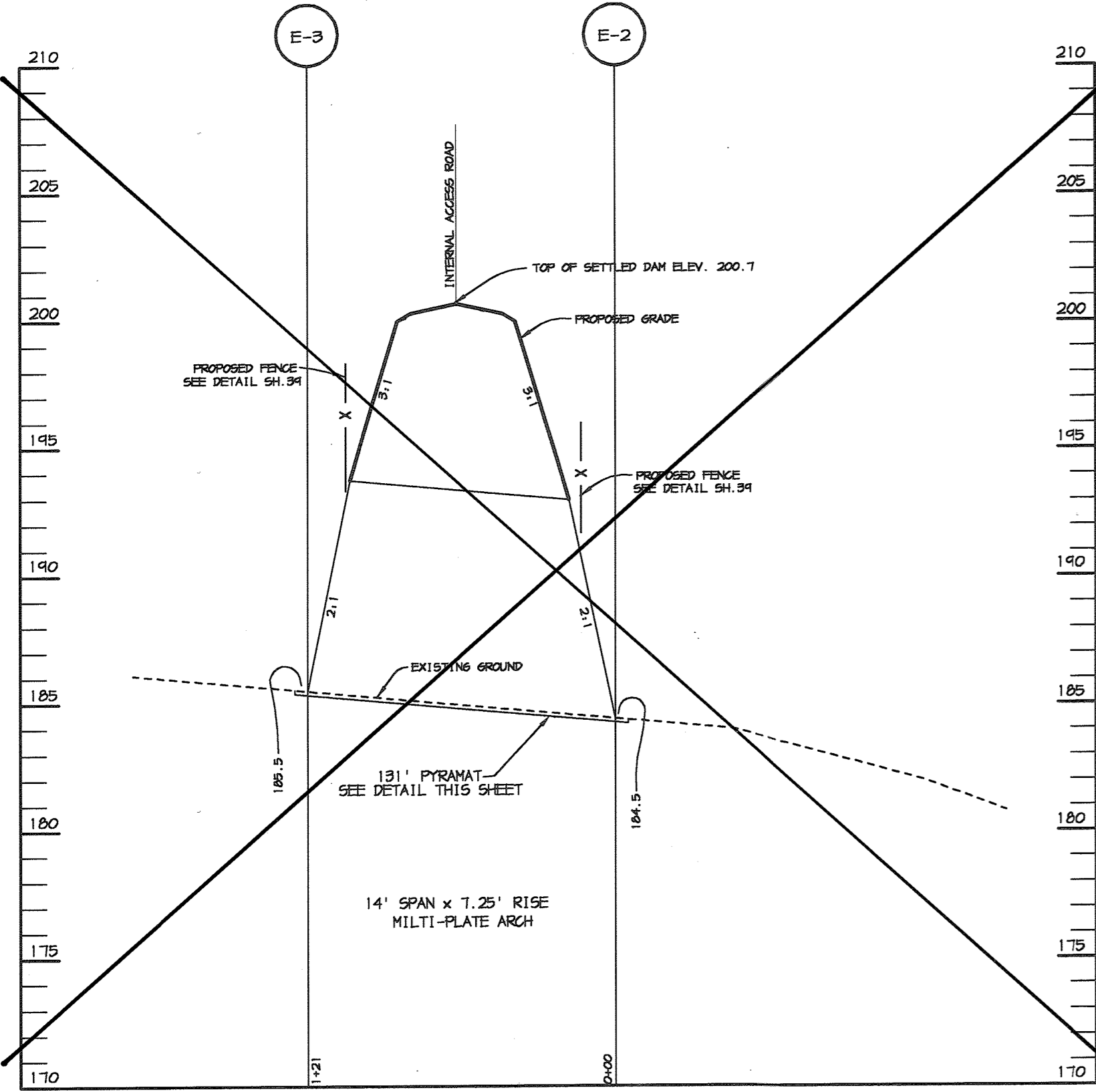
CHRISTOPHER J. REID #19949



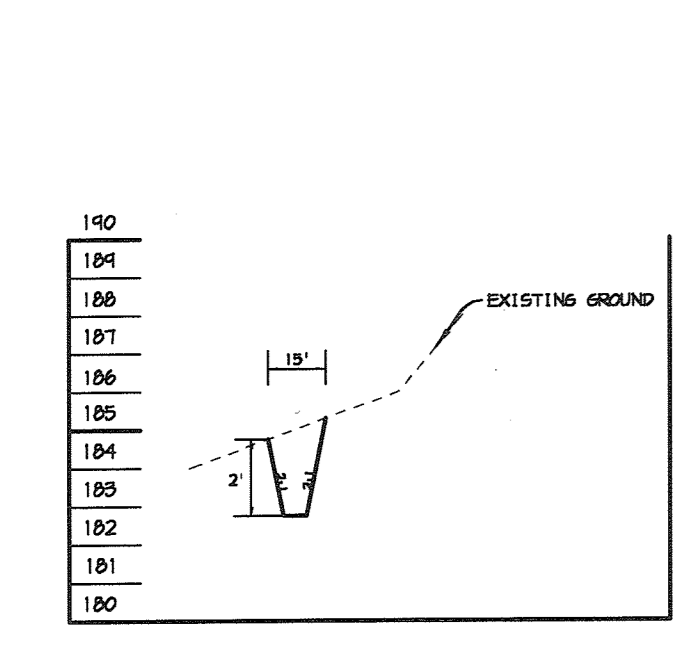
PROFILE THRU PRINCIPAL SPILLWAY - SWMF#1
SCALE: HOR. 1"=50'
VERT. 1"=5'



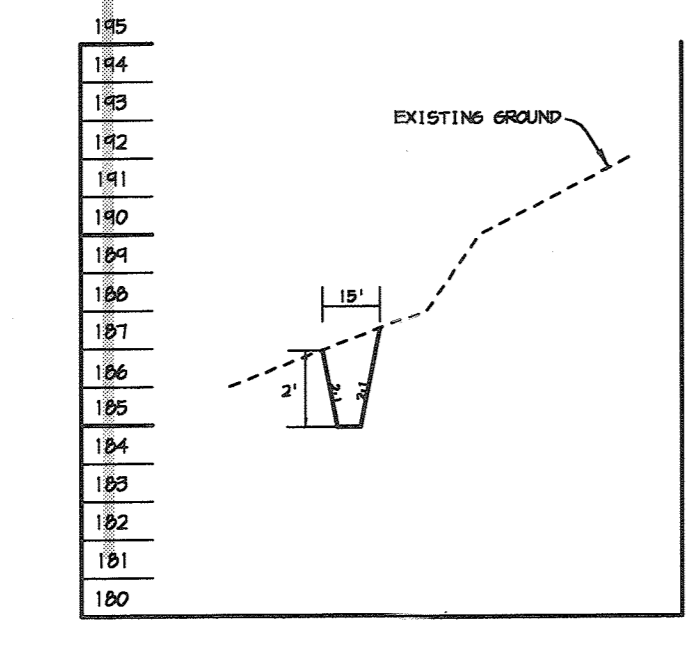
PROFILE ALONG & OF EMBANKMENT - SWMF#1
SCALE: HOR. 1"=50'
VERT. 1"=5'



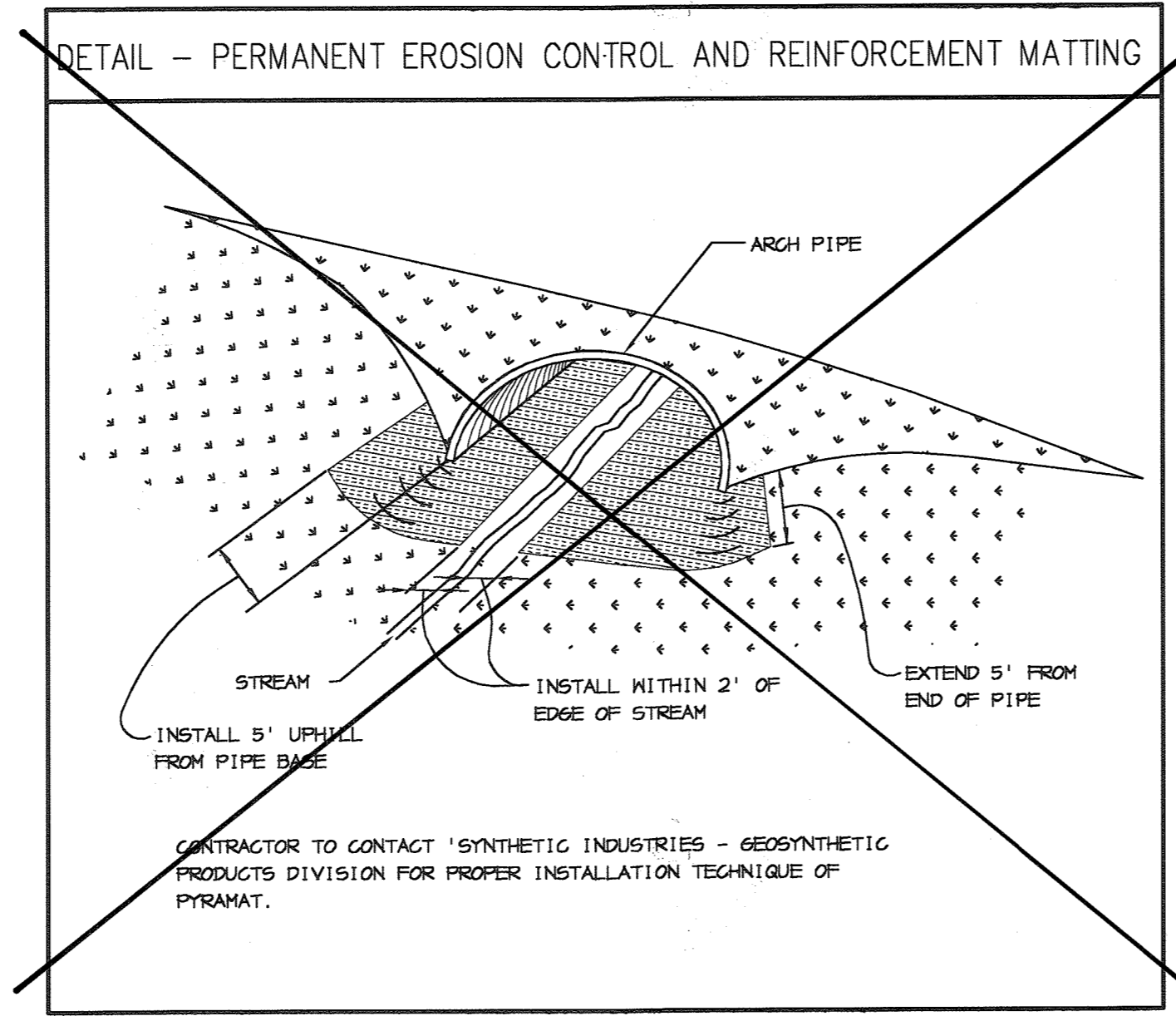
PROFILE E-3 TO E-2
SCALE: HOR. 1"=50'
VERT. 1"=5'



CROSS SECTION X5 AT TEMP. CHANNEL DIVERSION.
SCALE: HOR. 1"=50'
VERT. 1"=5'



CROSS SECTION X62 AT TEMP. CHANNEL DIVERSION.
SCALE: HOR. 1"=50'
VERT. 1"=5'



INCREMENTAL STABILIZATION OF EMBANKMENTS - FILL SLOPES

- EMBANKMENTS SHALL BE CONSTRUCTED IN LIFTS AS PRESCRIBED ON THE PLANS.
- SLOPES SHALL BE STABILIZED IMMEDIATELY WHEN THE VERTICAL HEIGHT OF THE MULTIPLE LIFTS REACHES 15', OR WHEN THE GRADING OPERATION CEASES PRESCRIBED IN THE PLANS.
- AT THE END OF EACH DAY, TEMPORARY SMALES AND PIPE SLOPE DRAINS SHOULD BE CONSTRUCTED ALONG THE TOP EDGE OF THE EMBANKMENT TO INTERCEPT SURFACE RUNOFF AND CONVEY IT DOWN THE SLOPE IN A NON-EROSIVE MANNER TO A SEDIMENT TRAPPING DEVICE.
- CONSTRUCTION SEQUENCE: REFER TO FIGURE 5 (BELOW)
 - EXCAVATE AND STABILIZE ALL TEMPORARY SMALES, SIDE DITCHES, OR BERMS THAT WILL BE USED TO DIVERT RUNOFF AROUND THE FILL. CONSTRUCT SLOPE SILT FENCE ON THE LOW SIDE OF THE FILL AS SHOWN IN FIGURE 5, UNLESS OTHER METHODS SHOWN ON THE PLANS ADDRESS THIS AREA.
 - PLACE PHASE 1 EMBANKMENT, DRESS AND STABILIZE.
 - PLACE PHASE 2 EMBANKMENT, DRESS AND STABILIZE.
 - PLACE FINAL PHASE EMBANKMENT, DRESS AND STABILIZE. OVERSEED PREVIOUSLY SEEDED AREAS AS NECESSARY.

NOTE: ONCE THE PLACEMENT OF FILL HAS BEGUN THE OPERATION SHOULD BE CONTINUOUS FROM GRUBBING THROUGH THE COMPLETION OF GRADING AND PLACEMENT OF TOPSOIL (IF REQUIRED) AND PERMANENT SEED AND MULCH. ANY INTERRUPTIONS IN THE OPERATION OR COMPLETING THE OPERATION OUT OF THE SEEDING SEASON WILL NECESSITATE THE APPLICATION OF TEMPORARY STABILIZATION.

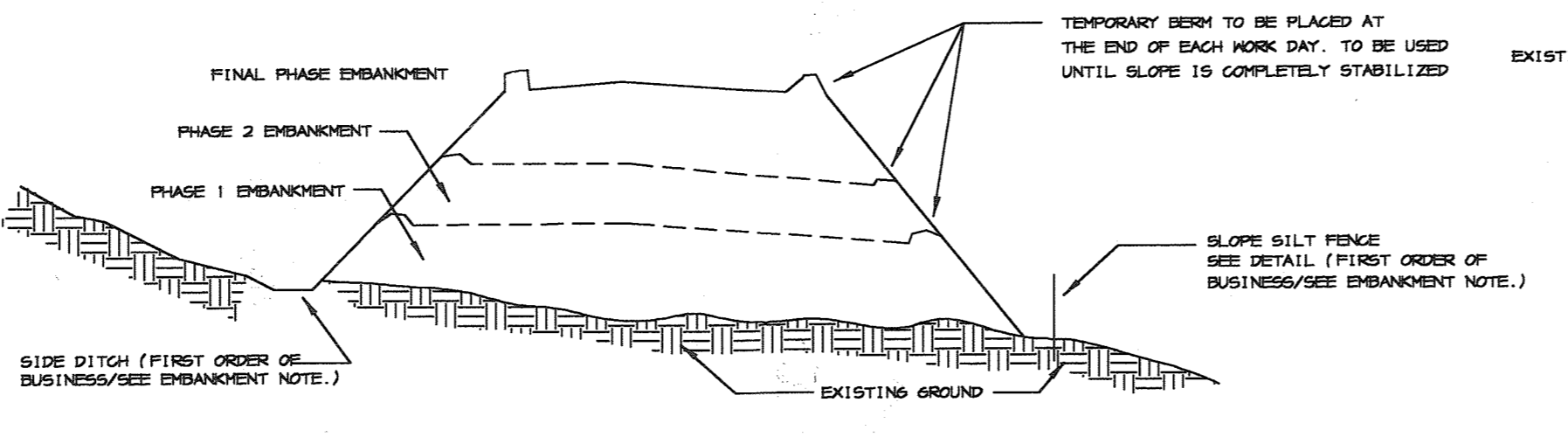
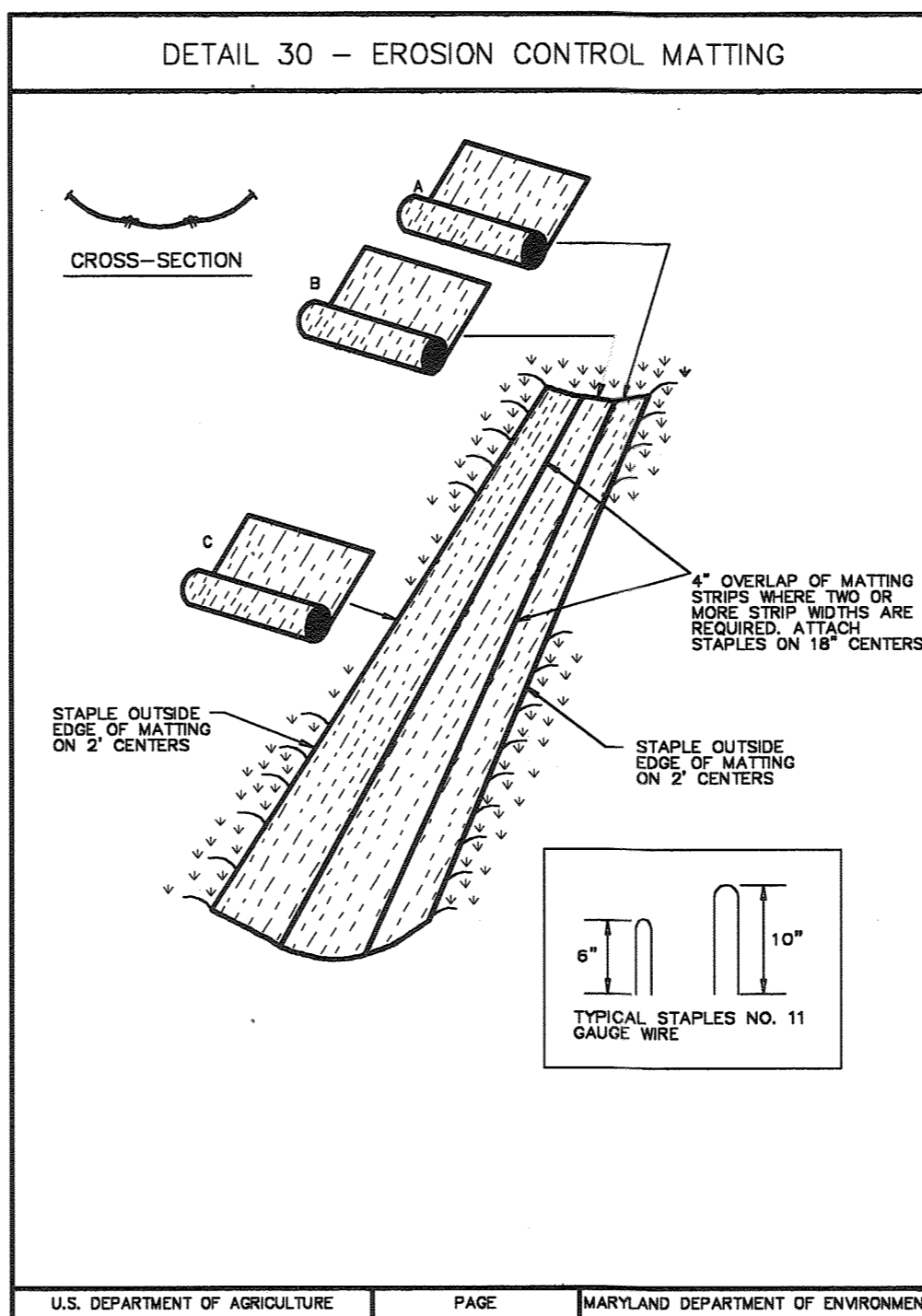


FIGURE 5 - INCREMENTAL STABILIZATION - FILL
NO SCALE



U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE 2-9-2 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

INCREMENTAL STABILIZATION OF EMBANKMENTS - CUT SLOPES

- ALL CUT SLOPES SHALL BE DRESSED, PREPARED AND MULCHED AS THE WORK PROGRESSES SLOPES SHALL BE EXCAVATED AND STABILIZED IN EQUAL INCREMENTS NOT TO EXCEED 15'.
 - EXCAVATE AND STABILIZE ALL TEMPORARY SMALES, SIDE DITCHES, OR BERMS THAT WILL BE USED TO CONVEY RUNOFF FROM THE EXCAVATION.
 - PERFORM PHASE 1 EXCAVATION, DRESS AND STABILIZE.
 - PERFORM PHASE 2 EXCAVATION, DRESS AND STABILIZE. OVERSEED PHASE 1 AREAS AS NECESSARY.
 - PERFORM FINAL PHASE EXCAVATION, DRESS AND STABILIZE. OVERSEED PREVIOUSLY SEEDED AREAS AS NECESSARY.
- CONSTRUCTION SEQUENCE: REFER TO FIGURE 4 (BELOW)
 - EXCAVATE AND STABILIZE ALL TEMPORARY SMALES, SIDE DITCHES, OR BERMS THAT WILL BE USED TO CONVEY RUNOFF FROM THE EXCAVATION.
 - PERFORM PHASE 1 EXCAVATION, DRESS AND STABILIZE.
 - PERFORM PHASE 2 EXCAVATION, DRESS AND STABILIZE. OVERSEED PHASE 1 AREAS AS NECESSARY.
 - PERFORM FINAL PHASE EXCAVATION, DRESS AND STABILIZE. OVERSEED PREVIOUSLY SEEDED AREAS AS NECESSARY.

NOTE: ONCE EXCAVATION HAS BEGUN, THE OPERATION SHOULD BE CONTINUOUS FROM GRUBBING THROUGH THE COMPLETION OF GRADING AND PLACEMENT OF TOPSOIL (IF REQUIRED) AND PERMANENT SEED AND MULCH. ANY INTERRUPTIONS IN THE OPERATION OR COMPLETING THE OPERATION OUT OF THE SEEDING SEASON WILL NECESSITATE THE APPLICATION OF TEMPORARY STABILIZATION.

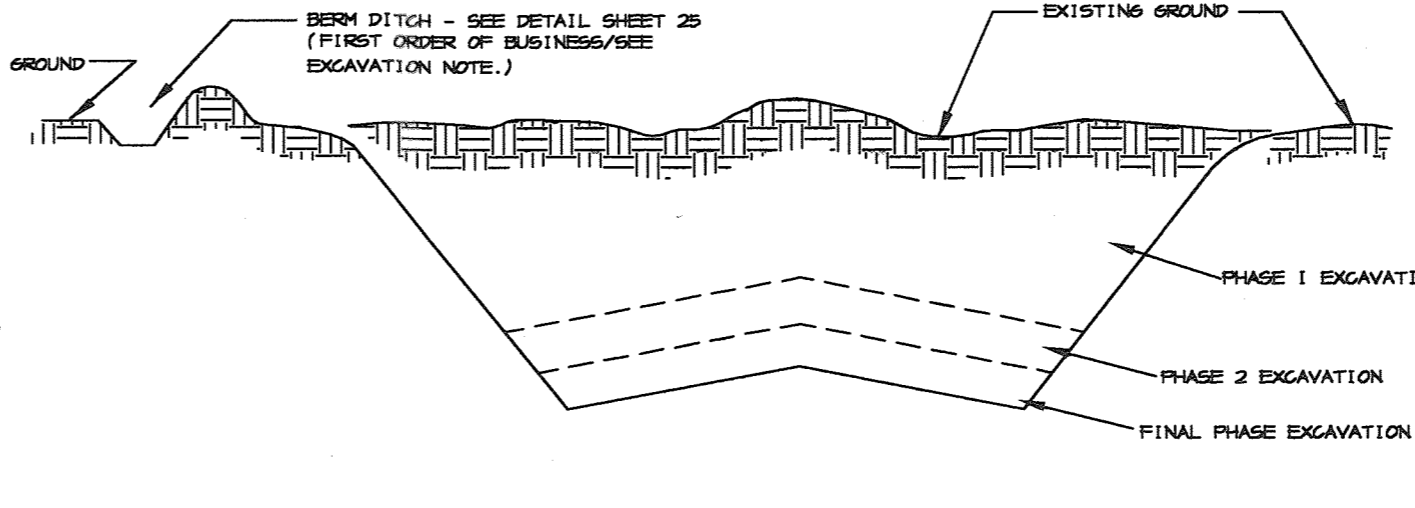
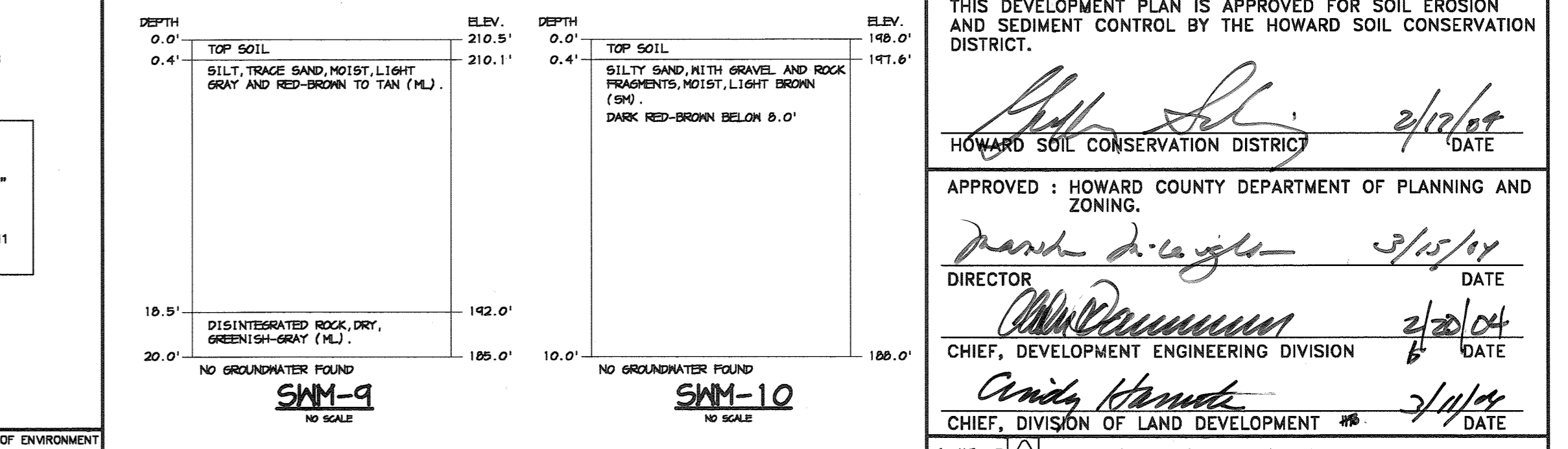
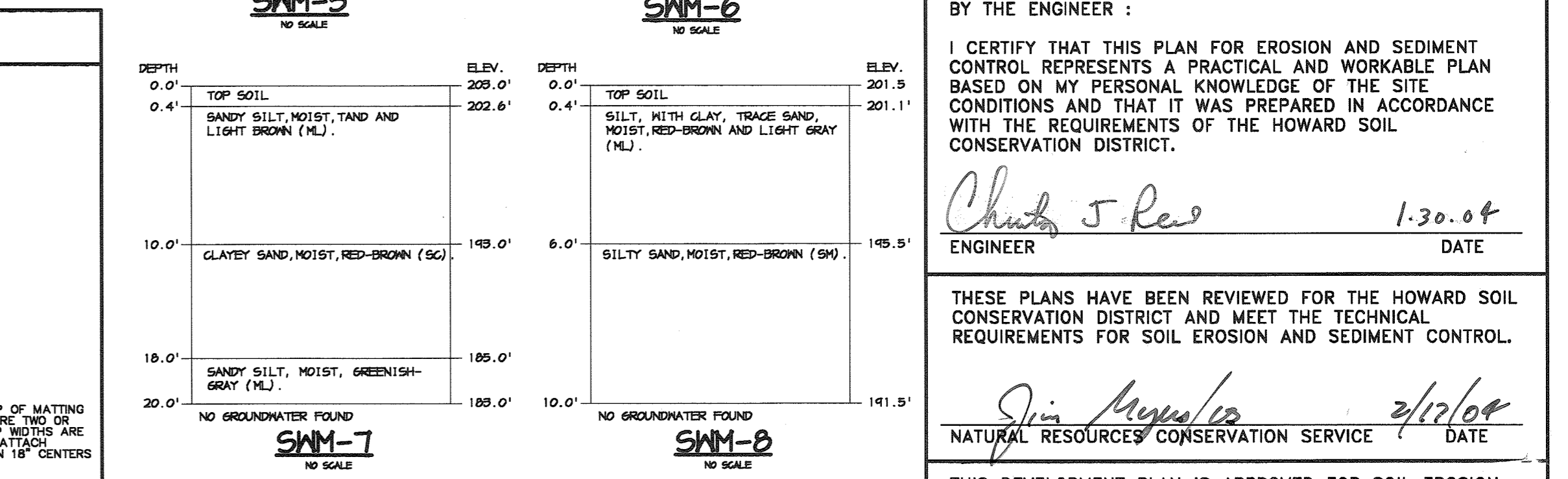
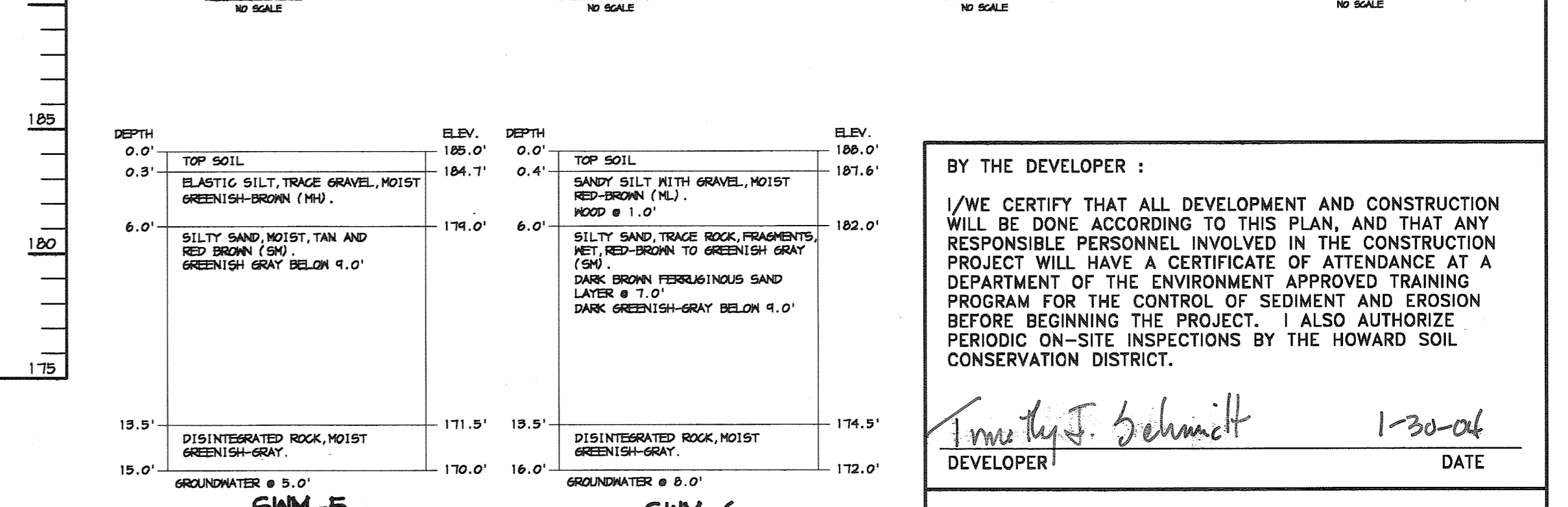
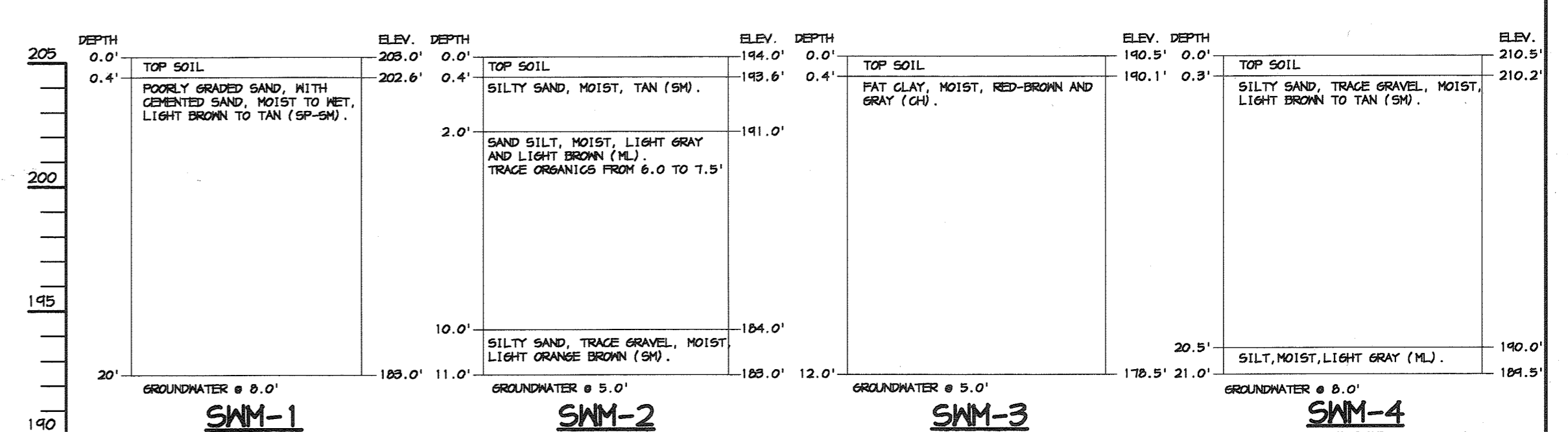


FIGURE 4 - INCREMENTAL STABILIZATION - CUT
NO SCALE



BY THE DEVELOPER:
I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.
Timothy J. Schmidt 1-30-04
DEVELOPER DATE

BY THE ENGINEER:
I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
Chris J. Rew 1-30-04
ENGINEER DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.
Jim Myer 2/17/04
NATURAL RESOURCES CONSERVATION SERVICE DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
John Selig 2/16/04
HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
Mark D. Eagle 2/15/04
DIRECTOR DATE
William Cummings 2/20/04
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE
Cindy Horvath 2/16/04
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

6-15-05	REMOVED PROFILES AND DETAIL	
1-6-05	REV. RIPRAP AT EW-1 SHEET NO.	
DATE	NO.	REVISION

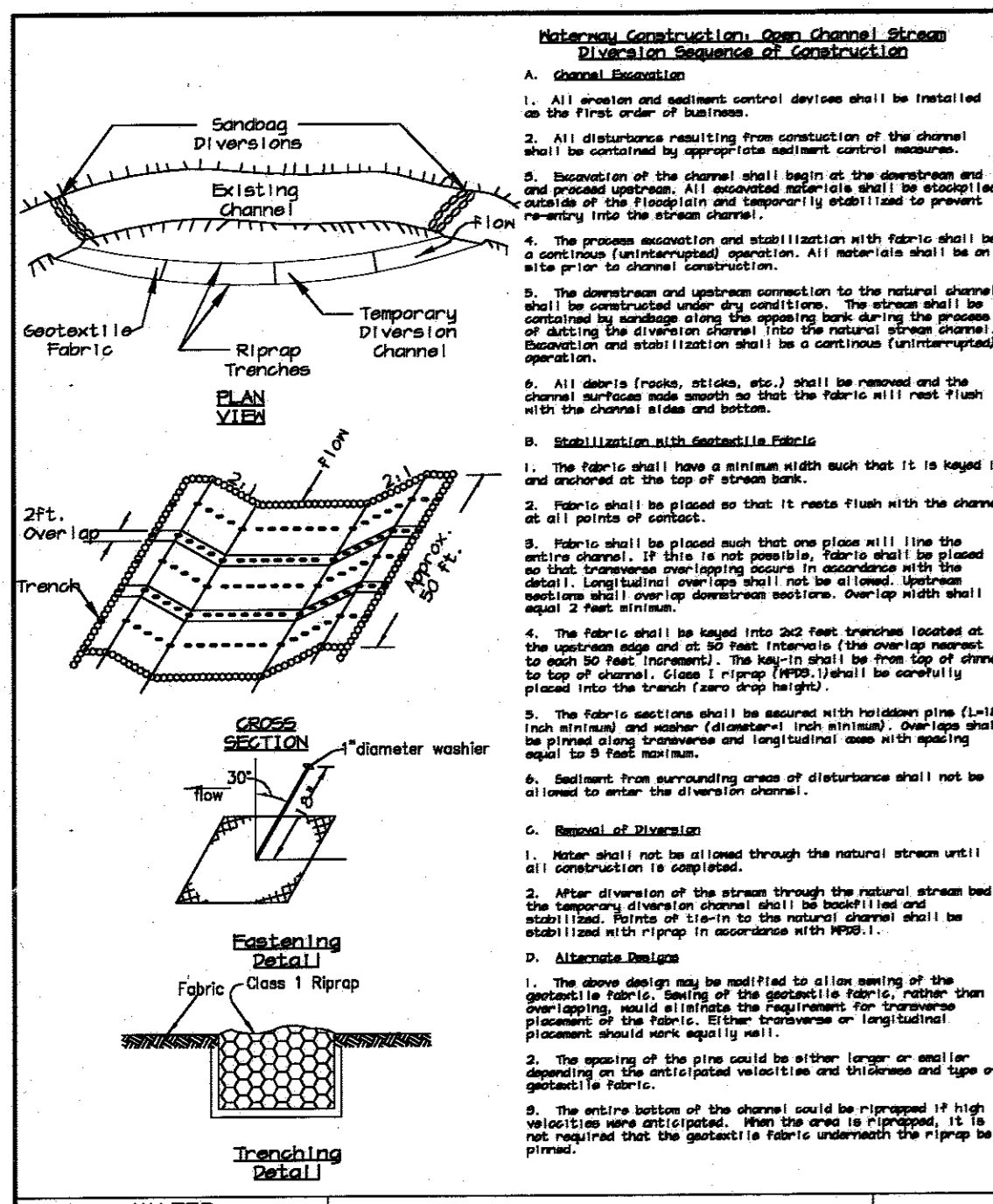
DEVELOPER/OWNER:
(OWNER) CHASE LIMITED PARTNERSHIP
P.O. BOX 850 LAUREL, MD 207125 410.742.1234
(DEVELOPER) CHASE MINING LLC
P.O. BOX 850 LAUREL, MD 207125 410.742.1234

PROJECT
CHASE QUARRY

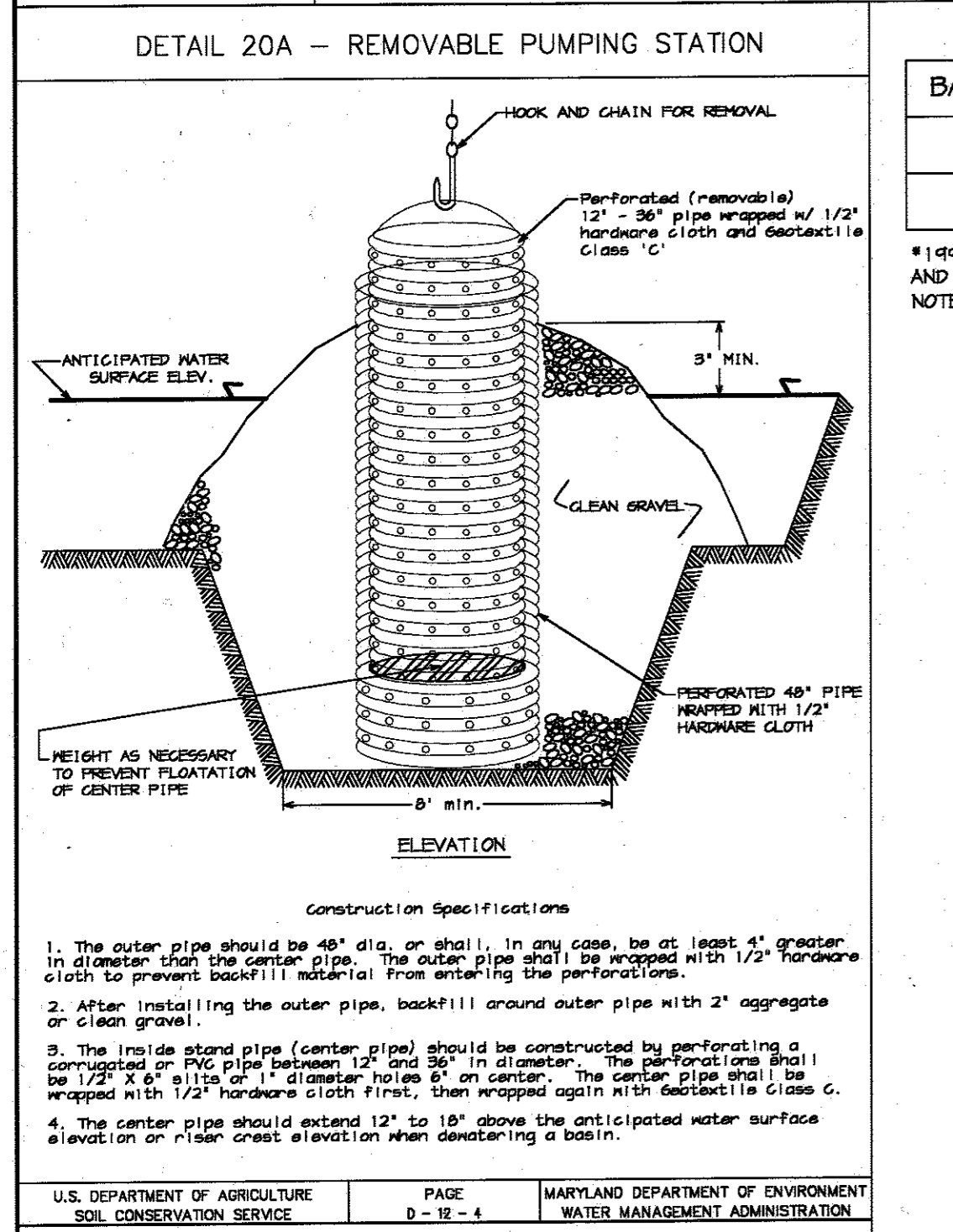
AREA ZONED M-1 & MXD-3, TAX MAP NO. 43
PARCEL 234 & P.O. 235, BLOCK 19
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE **S.W.M. PROFILES, SEDIMENT & EROSION CONTROL NOTES & DETAILS**
PHRA
Patton Harris Rust & Associates, PC
Engineers, Surveyors, Planners, Landscape Architects.
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

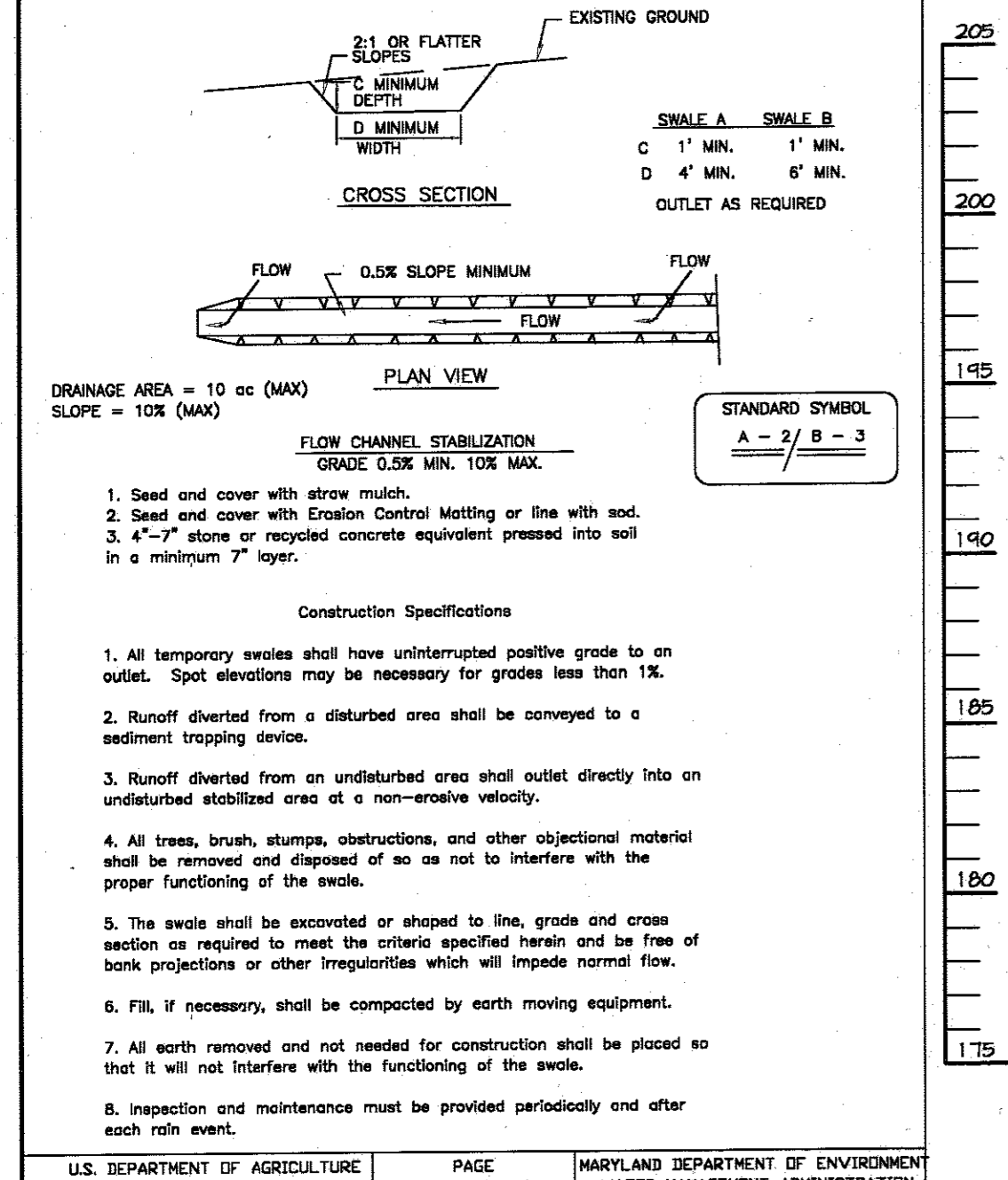
DESIGNED BY: C.J.R.
DRAWN BY: MAD
CHECKED BY: C.J.R.
PROJECT NO: 99092/
PROFILES.DWG
DATE: JANUARY 29, 2004
SCALE: AS SHOWN
DRAWING NO. 25 OF 55
CHRISTOPHER J. REID #19949



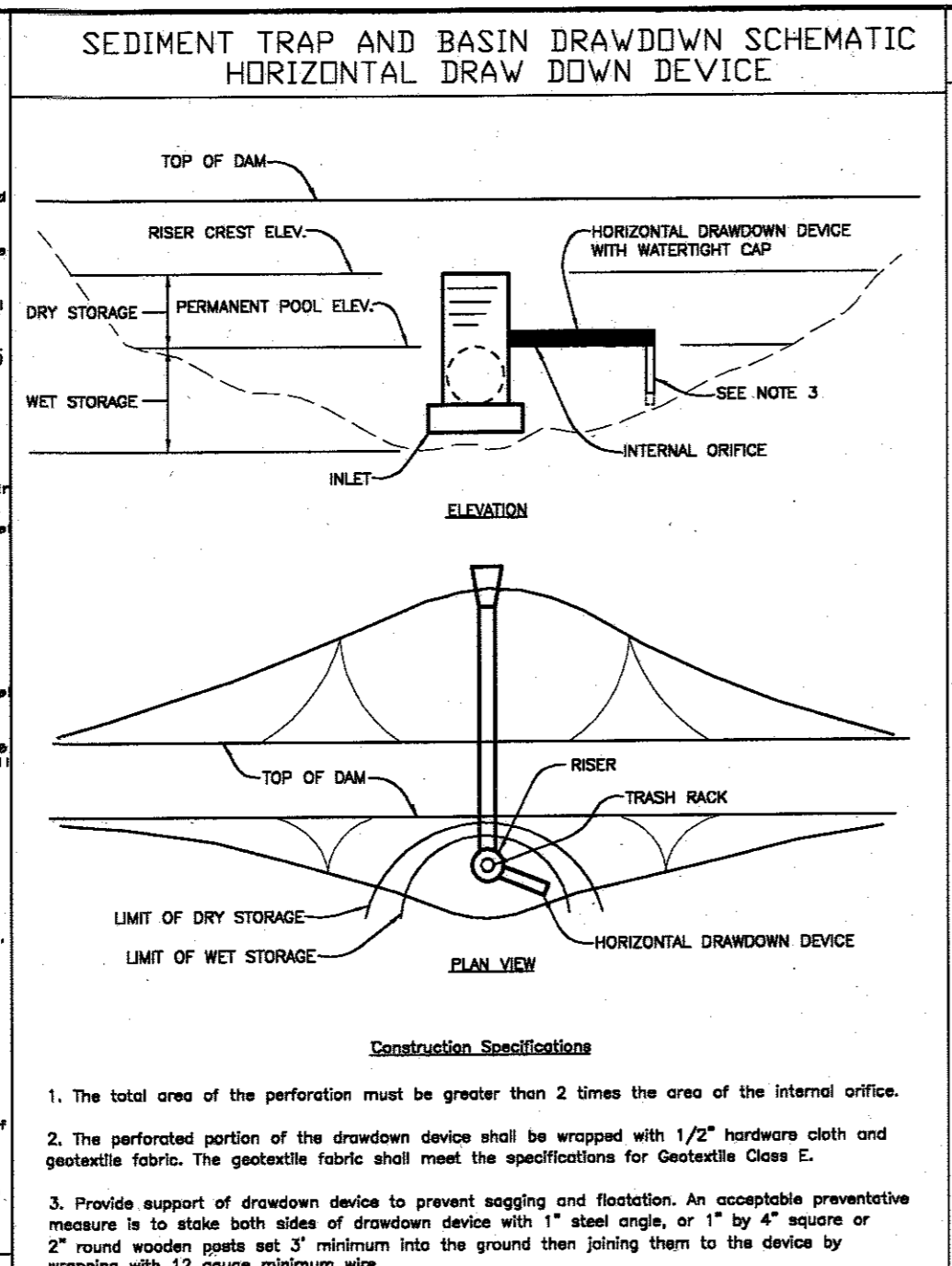
WATER RESOURCES ADMINISTRATION Fabric-Based Channel Diversion WPD 2.4



U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE D-18-4 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION



U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE A-8-4 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION



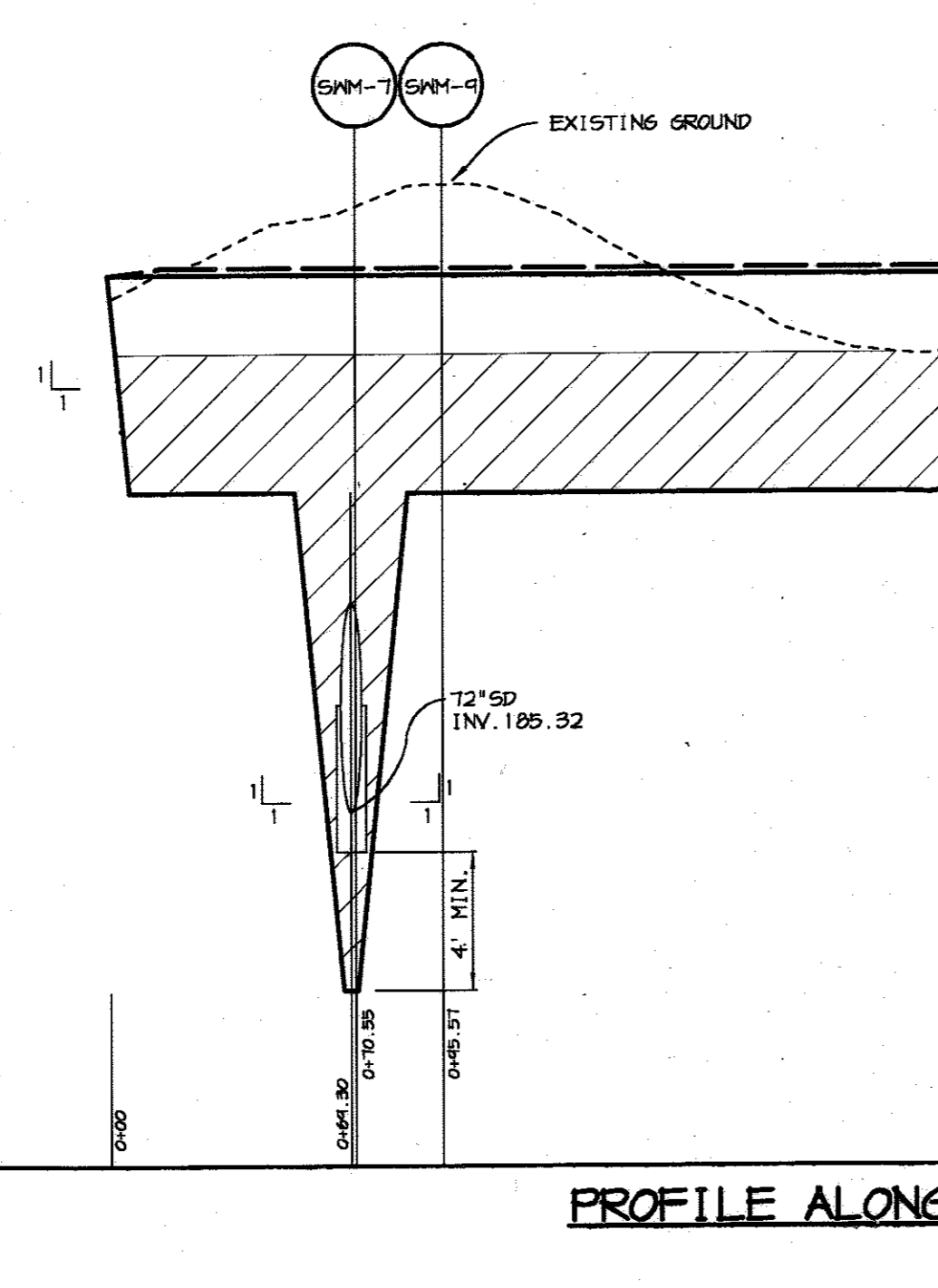
U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE C-10-29 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DRAWDOWN DEVICE TABLE

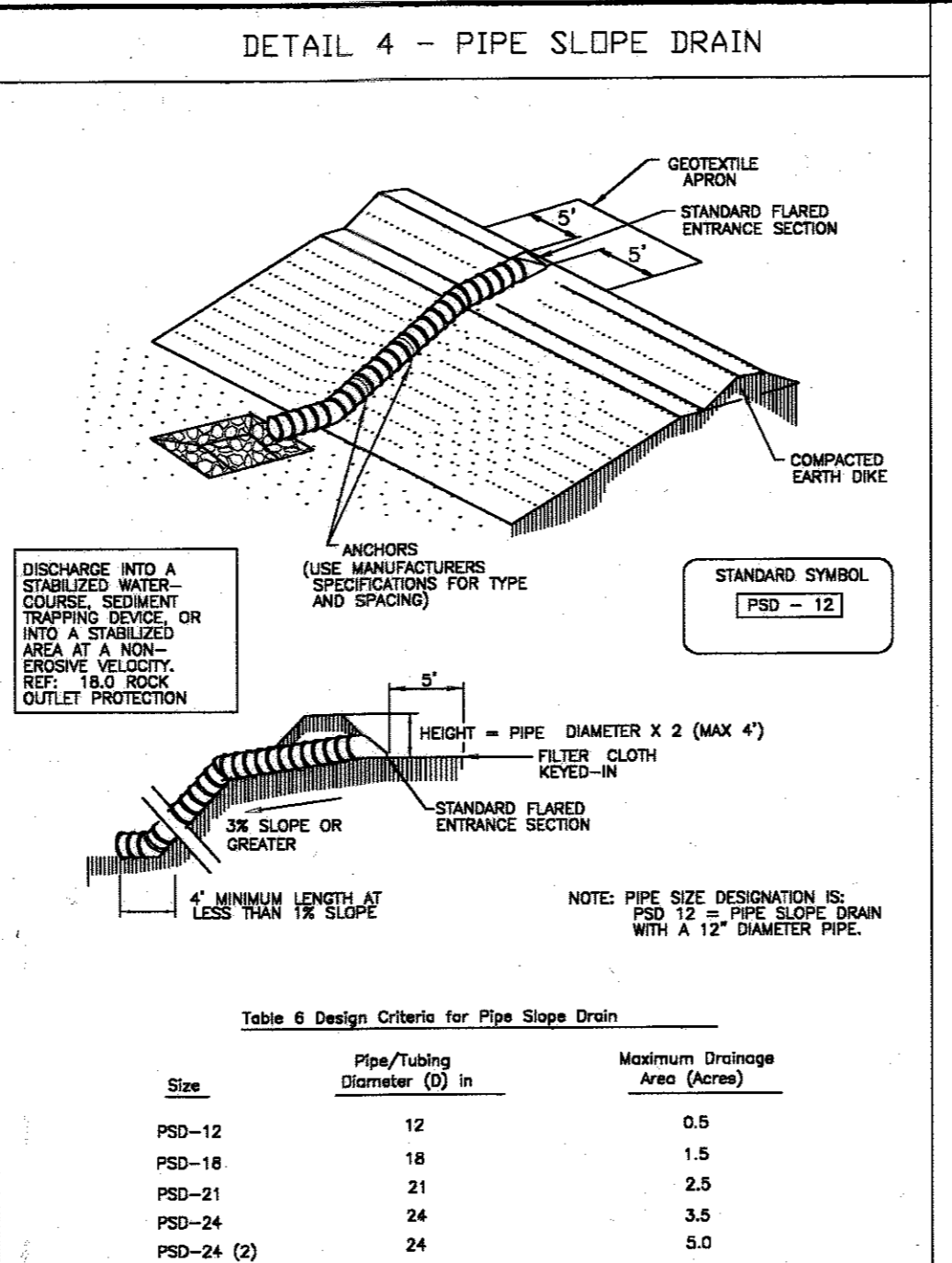
BASIN	SIZE	SLOPE	INVERT	*DETAIL
1	12" CMP	0.0 %	191.00	1" DIA., 30 PERFF/FT 3" O/C SEE DET. THIS SH.
2	15" CMP	0.0 %	191.50	1" DIA., 24 PERFF/FT 3" O/C SEE DET. THIS SH.

*1494 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. NOTE: FOR SEDIMENT CONTROL PHASE ONLY.

NOTES: 1. LOCATE COLLAR A MINIMUM OF TWO FEET FROM PIPE JOINT.
2. COLLAR/PIPE CONNECTION SHALL BE WATER TIGHT.



U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE A-8-4 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

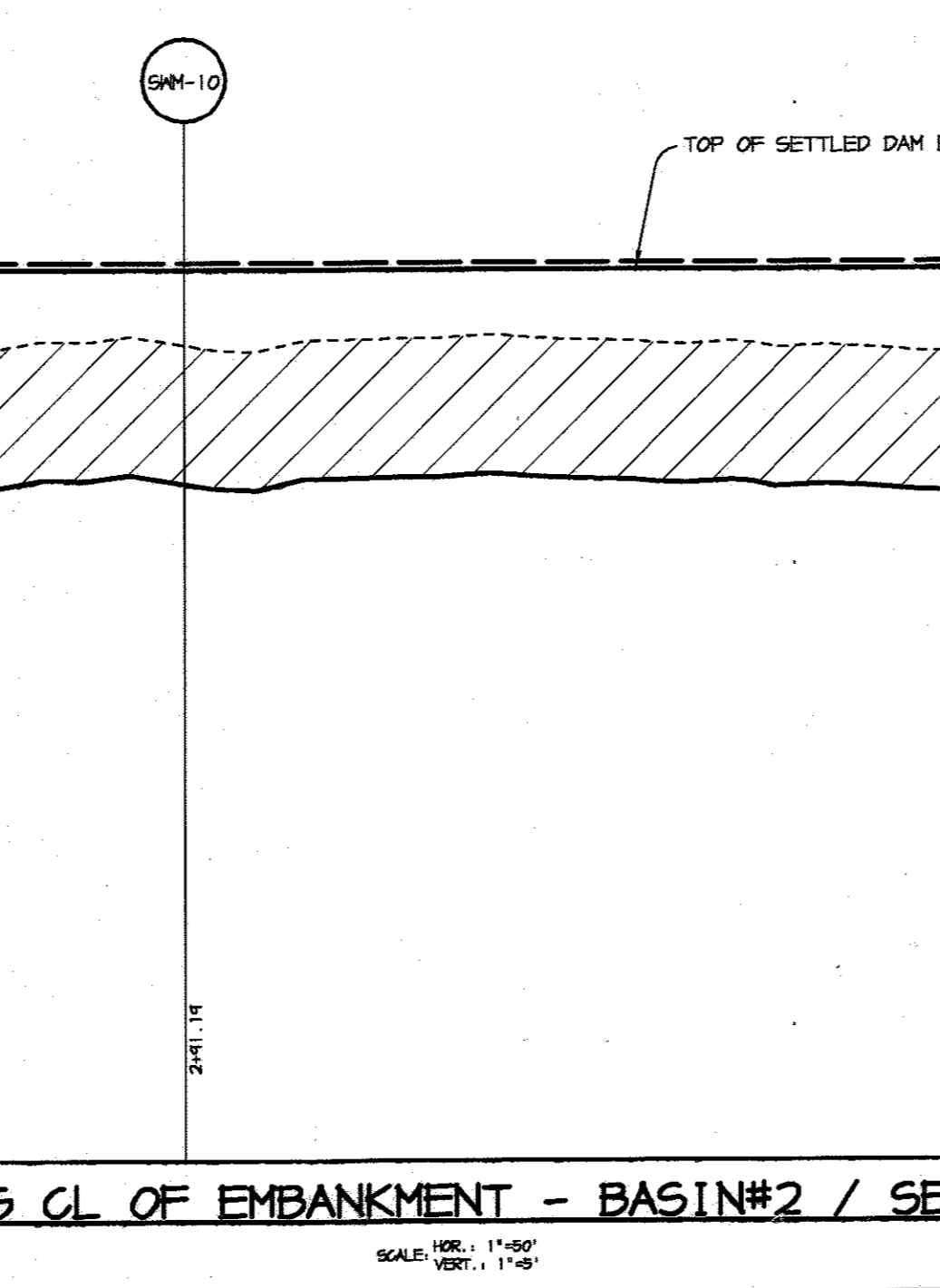


U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE B-3-4 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

PIPE SLOPE DRAIN

Construction Specifications - Pipe Slope Drain

1. The Pipe Slope Drain (PSD) shall have a slope of 3 percent or steeper.
2. The top of the earth dike over the inlet pipe shall be at least 2 times the pipe diameter measured at the invert of the pipe.
3. Flexible tubing is preferred. However, compacted metal pipe or equivalent PVC pipe can be used. All connections shall be watertight.
4. A flared end section shall be attached to the inlet end of pipe with a watertight connection. Filter cloth shall be placed under the inlet of the pipe slope drain and shall extend out 5' from the inlet. The filter cloth shall be "keyed in" on all sides.
5. The Pipe Slope Drain shall be securely anchored to the slope by staking at the grout/mortar provided. Spacing for anchors shall be as provided by manufacturer's specification. In no case shall less than two (2) anchors be provided, equally spaced along the length of pipe. These details should be provided by pipe suppliers.
6. The soil around and under the pipe and end section shall be hand tamped in 4 inch lifts to the top of the earth dike.
7. All pipe connections shall be watertight.
8. Whenever possible where a PSD drains an unstabilized area, it shall outlet into a sediment trap or basin. If this is not possible then the slope drain will discharge into a stable conveyance that leads to a sediment trap or basin. When discharging into a trap or basin the PSD shall discharge at the same elevation as the wet pool elevation. The discharge from the PSD must be as far away from the sediment control outlet as possible.
9. When the drainage area is stabilized, the PSD shall discharge onto a stabilized area at a non-erosive velocity.
10. Inspection and any required maintenance shall be performed periodically and after each rain event.
11. The inlet must be kept open at all times.

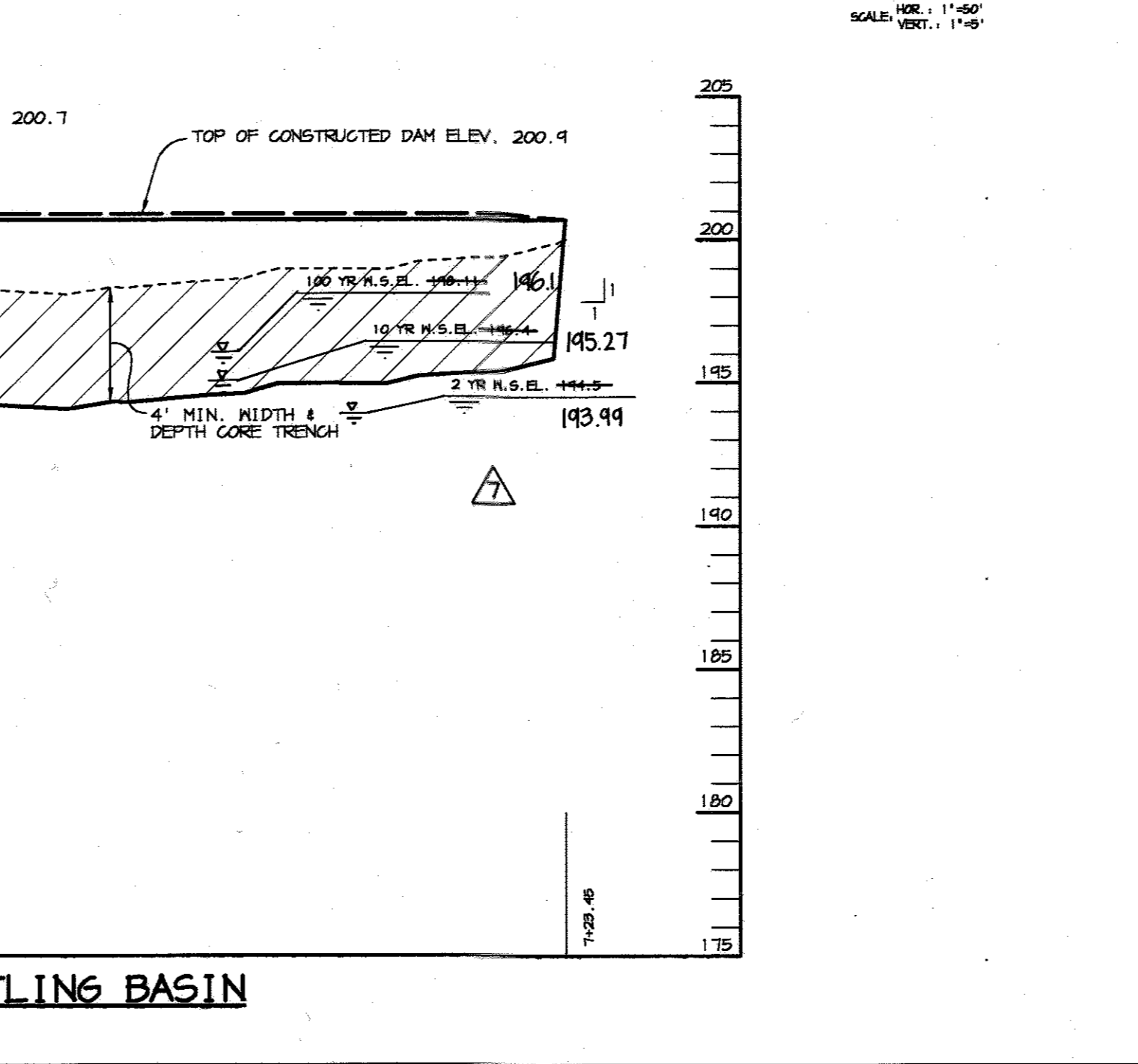
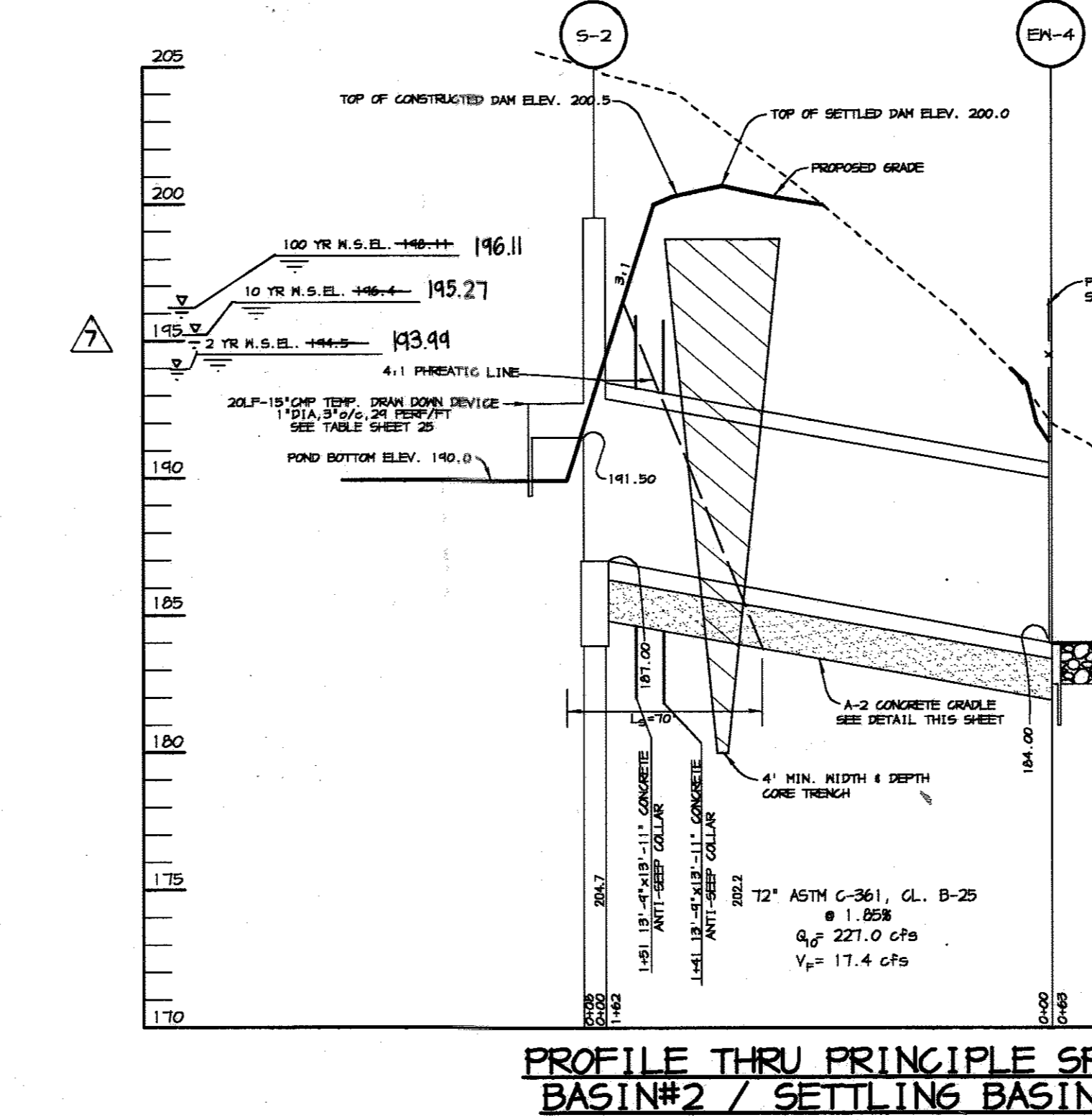


U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE B-5-4A MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

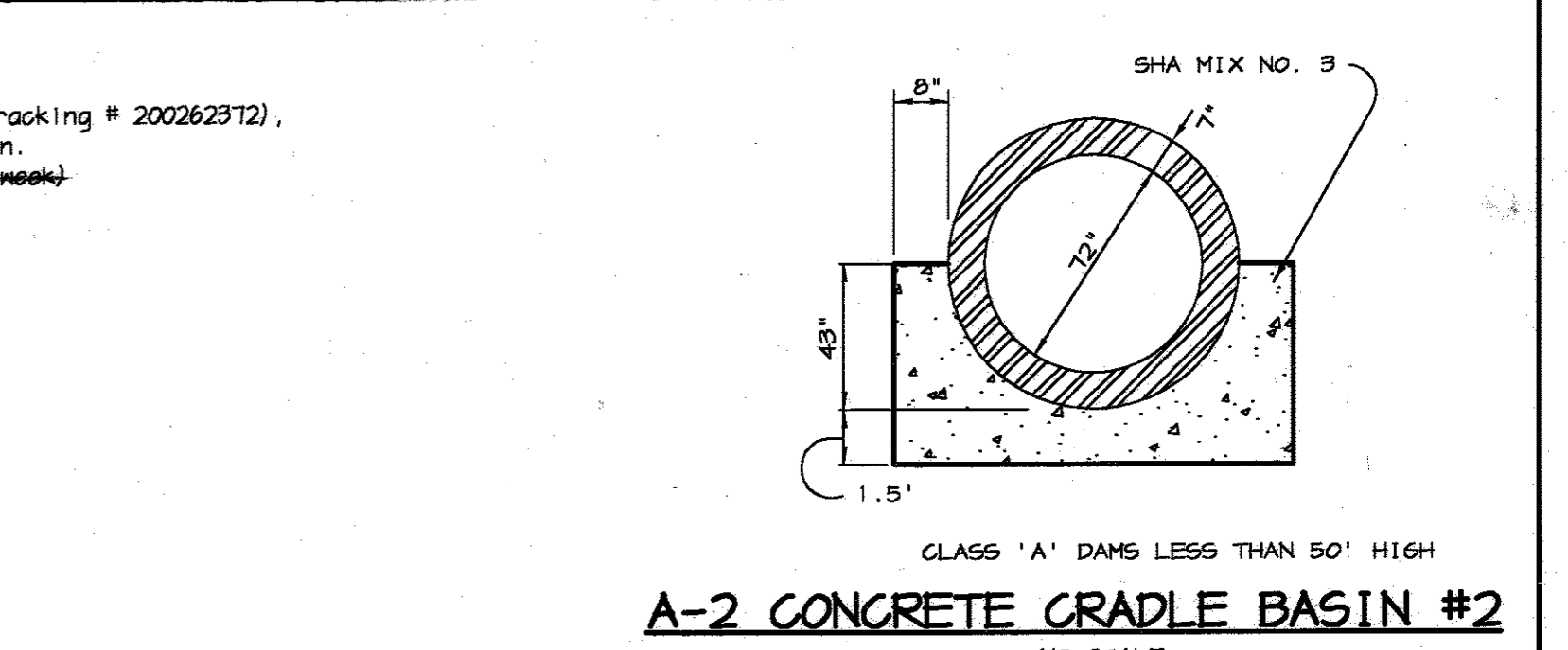
SEQUENCE OF CONSTRUCTION (BOTH AREAS WILL BE ACTIVE CONCURRENTLY)

- #### AREA I - QUARRY AREA
1. Obtain a Grading Permit (400-0000), State Mining Permit (MP-02-SP-0599), Non-Tidal Wetland Permit (Tracking # 200262312), Dam Safety Permit (Tracking # 200262312), and other necessary permits prior to beginning construction.
 2. Clear and grub for and install silt fence, supersilt fence. (5 days)
 3. Install stream diversion, S&F and install crossings for access to quarry area. Contractor to use filter bags and sump pits for dewatering during construction of crossings.
 4. Clear and grub for installation of SEC Basin #2, and stabilize construction entrances. (3 weeks)
 5. Construct SEC basin #2. (3 weeks)
 6. Clear and grub for diversion swales, earth berms. (2 weeks)
 7. Construct diversion swales (beginning at basin) and earth berms. Fill stream channel only after diversion swales have been constructed. (2 weeks)
 8. With permission of the MDE Inspector, begin clearing grubbing and removal of overburden within quarry area. Contractor to follow dust control specifications. Construct berm along Mission Road using the overburden spoil. (1 year)
Note that a 20-acre maximum of land shall be disturbed at any one time.
 9. Install landscaping along completed earth berm. (4 weeks)
 10. Refer to incremental stabilization specifications for berm and stockpile areas.

- #### AREA II - OPERATION PLANTS, UTILITIES, ROADS
1. Clear and grub for SEC perimeter controls (silt fence, earth dikes, SEC basin #1). 2 weeks
 2. Construct perimeter controls and basin #1. Install pipe from M5-EM-5 in lengths that can be stabilized by the end of every day.
 3. With permission of the MDE Inspector, clear and grub and begin grading remainder of site. (3 months)
Note that a 20-acre maximum of land shall be disturbed at any one time.
 4. Begin construction of building and operation facilities. (6 months)
 5. When subgrade has been reached, construct utilities & storm drains. (6 weeks)
 6. Install paving. (4 weeks)
 7. Complete building & operation facilities. (1 week)
 8. With permission of MDE Inspector, remove remaining SEC controls and stabilize area. (1 week)
 9. Install landscaping, signs, and guard rails. (1 week)
 10. With permission of MDE Inspector, convert SEC basin into a permanent SHM wet pond. (2 weeks)
- NOTE: THE THREE STREAM CROSSINGS SHALL BE REMOVED AT THE COMPLETION OF MINING & STREAM RESTORATION COMPLETED BEFORE THE BOND AND PERMIT ARE RELEASED.



U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE B-5-4A MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION



07-22-16 PLANT RELOCATION - CNA, INC.
BY THE DEVELOPER:
I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.
Timothy J. Schmidt 1-30-04
DEVELOPER DATE

BY THE ENGINEER:
I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
Cheryl J. Reid 1-30-04
ENGINEER DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.
Jim Rogers 9/27/05
NATURAL RESOURCES CONSERVATION SERVICE DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
Cheryl J. Reid 9/27/05
HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
Marie L. Cagle 3/17/04
DIRECTOR DATE
Chris Damman 2/20/04
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE
Cindy Horvath 5/11/04
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

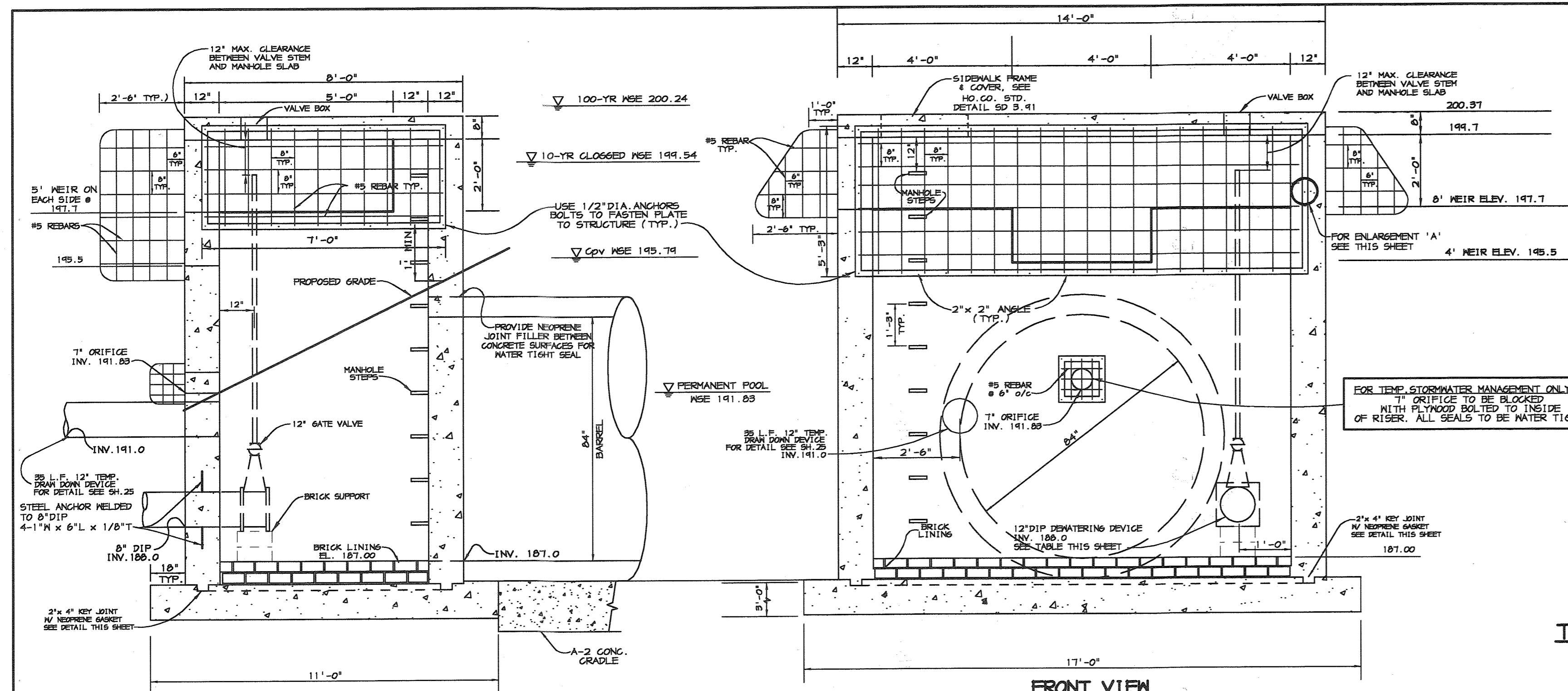
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1-0-05 CHANGED SHEET NO.
DATE NO. REVISION

DEVELOPER/OWNER:
(OWNER) CHASE LIMITED PARTNERSHIP
P.O. BOX 850
LAUREL, MD 20712
410.142.1234
(DEVELOPER) CHASE MINING LLC
P.O. BOX 850
LAUREL, MD 20712
410.142.1234

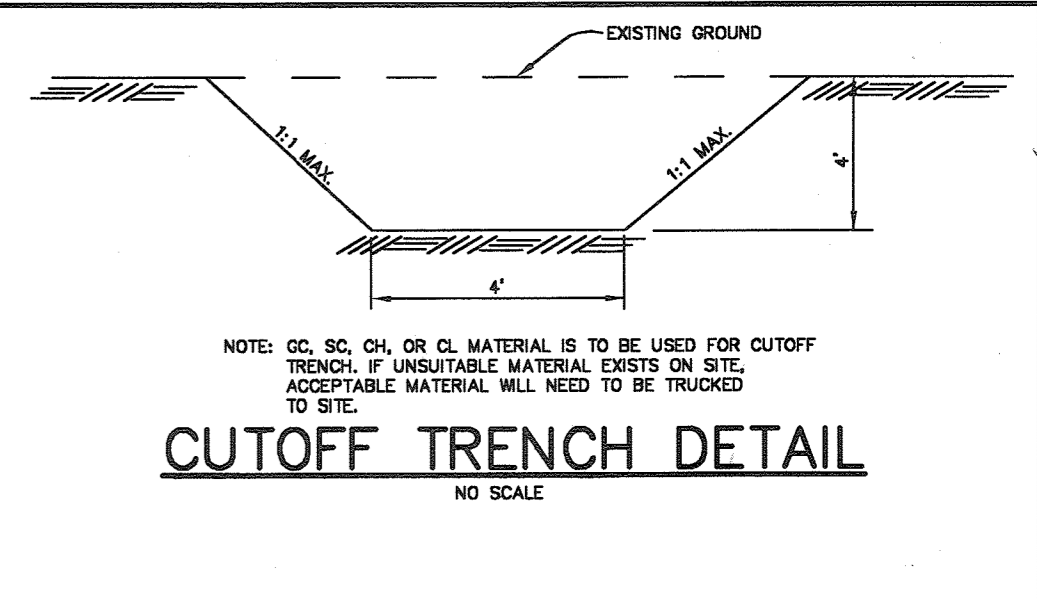
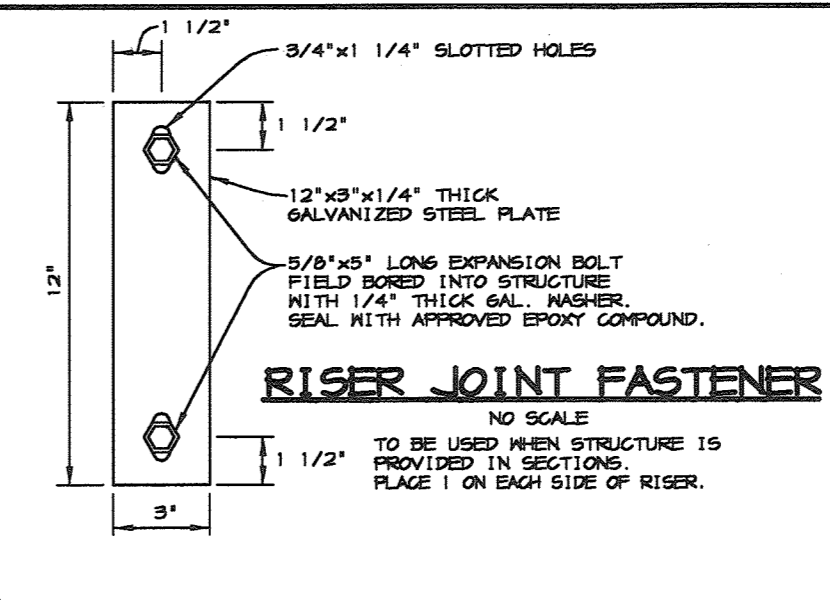
PROJECT: CHASE QUARRY
AREA ZONED M-1 & MXD-3, TAX MAP No. 43
PARCEL 234 & P.O. 235, BLOCK 19
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: S.W.M. PROFILES, SEDIMENT & EROSION CONTROL DETAILS
Patton Harris Rust & Associates, pc
Engineers, Surveyors, Planners, Landscape Architects.
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282
DATE: 1-30-04
DESIGNED BY: C.J.R.
DRAWN BY: MAD
CHECKED BY: C.J.R.
PROJECT NO: 99092/PROFILE4.DWG
DATE: JANUARY 29, 2004
SCALE: AS SHOWN
DRAWING NO. 26 OF 51
CHRISTOPHER J. REID #19949

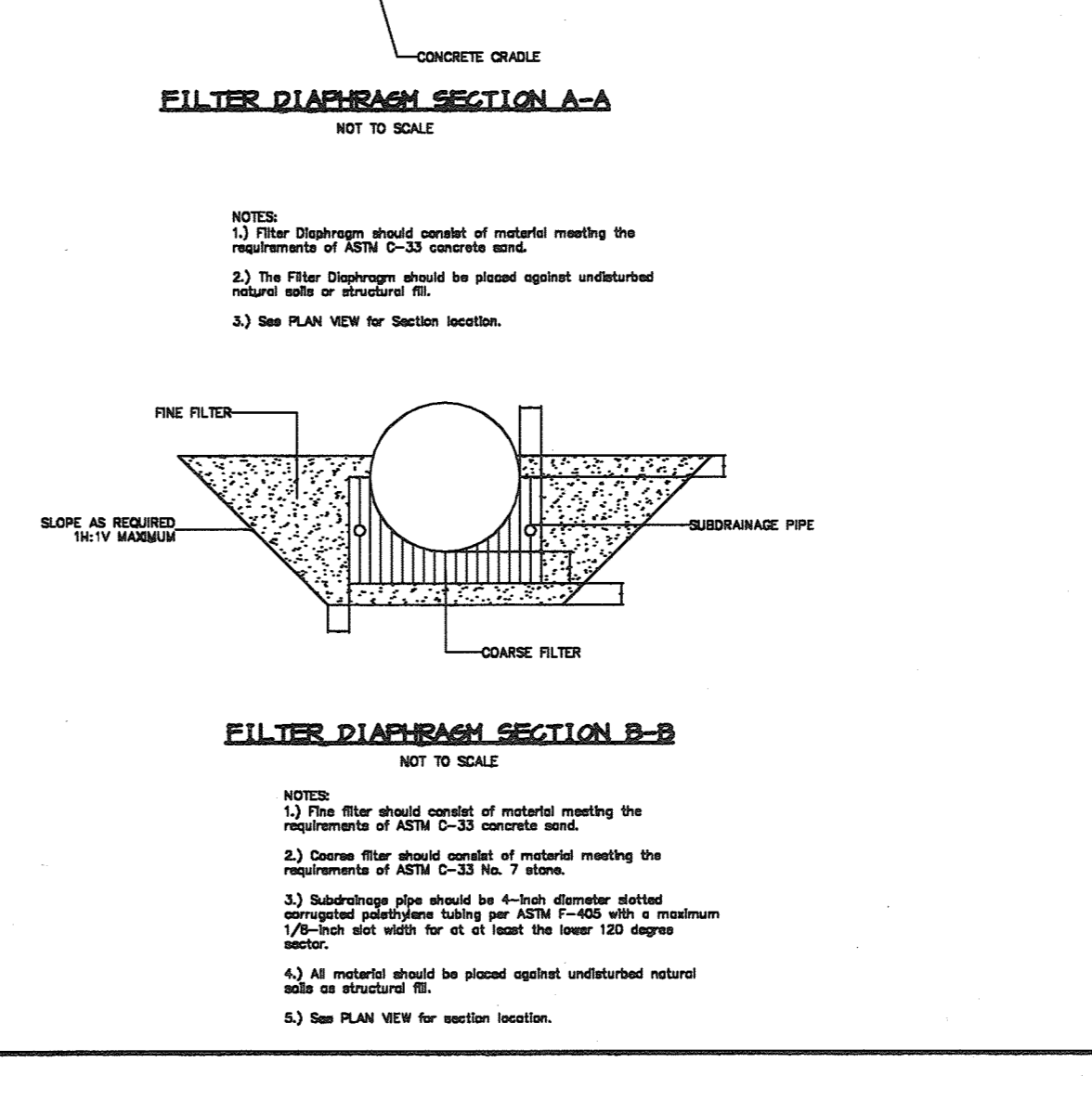
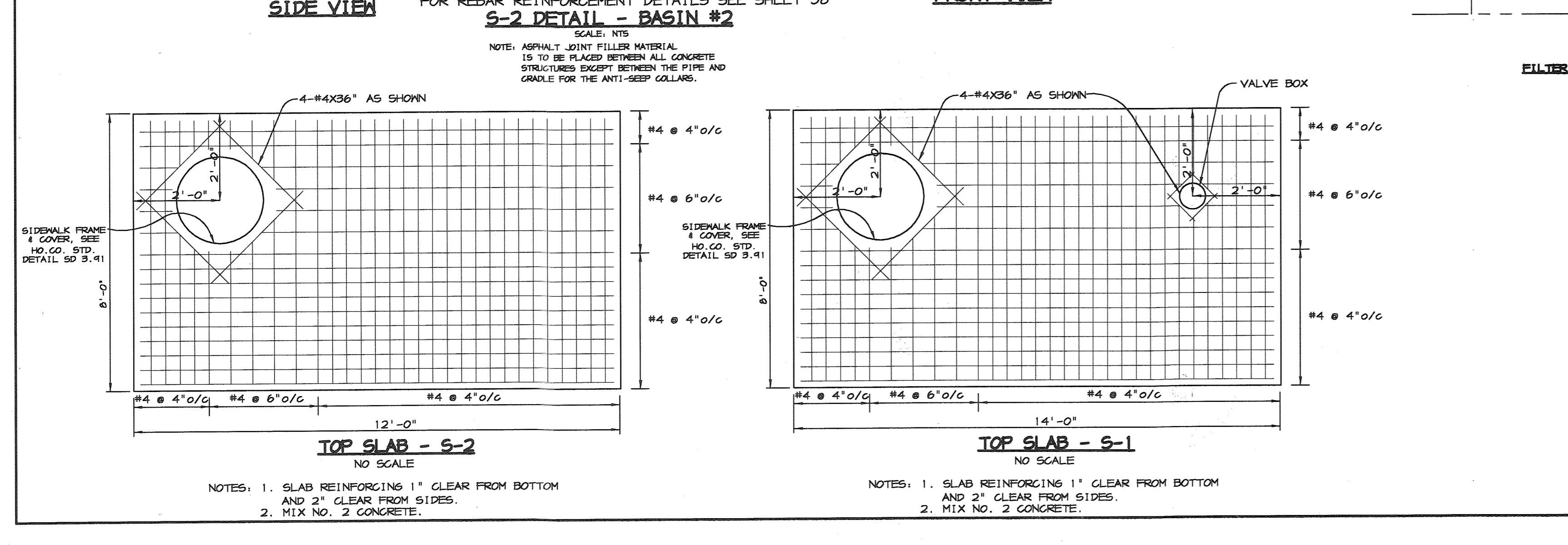
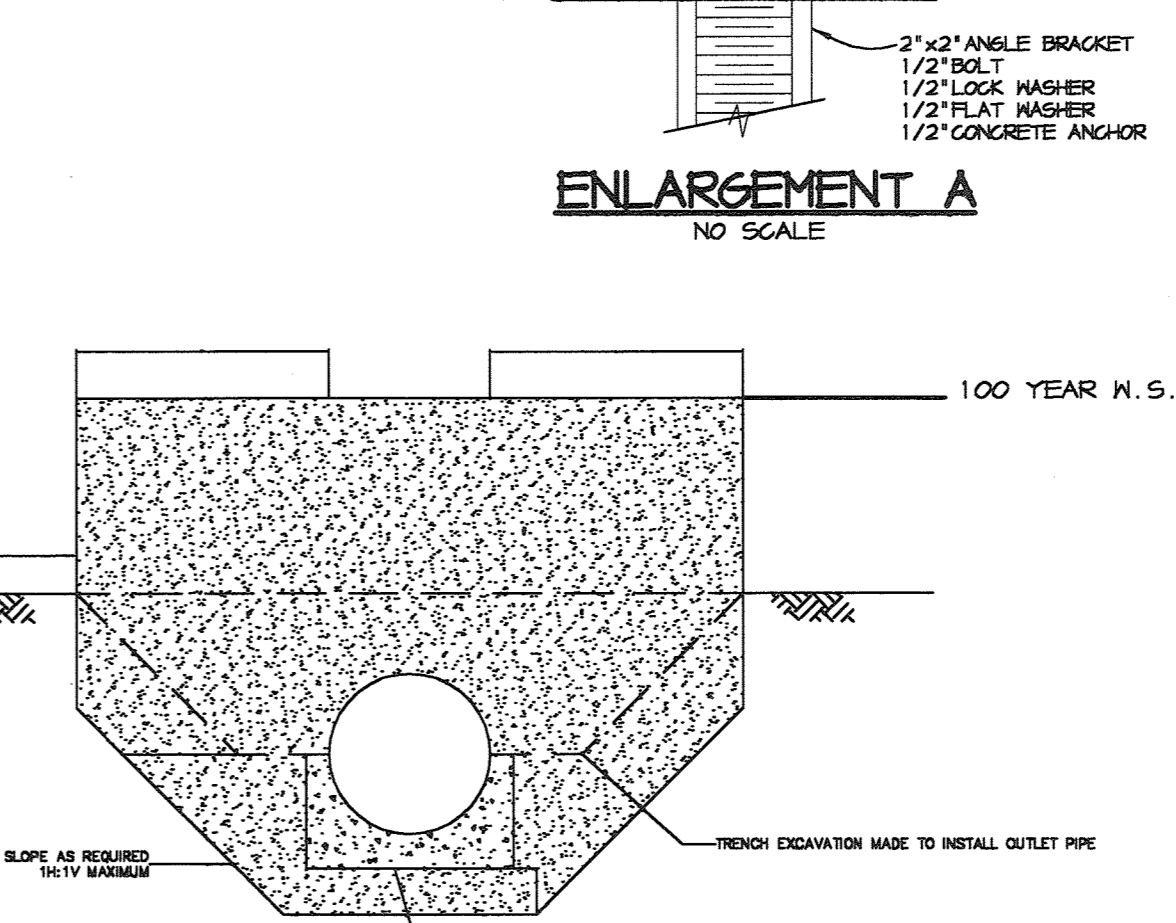
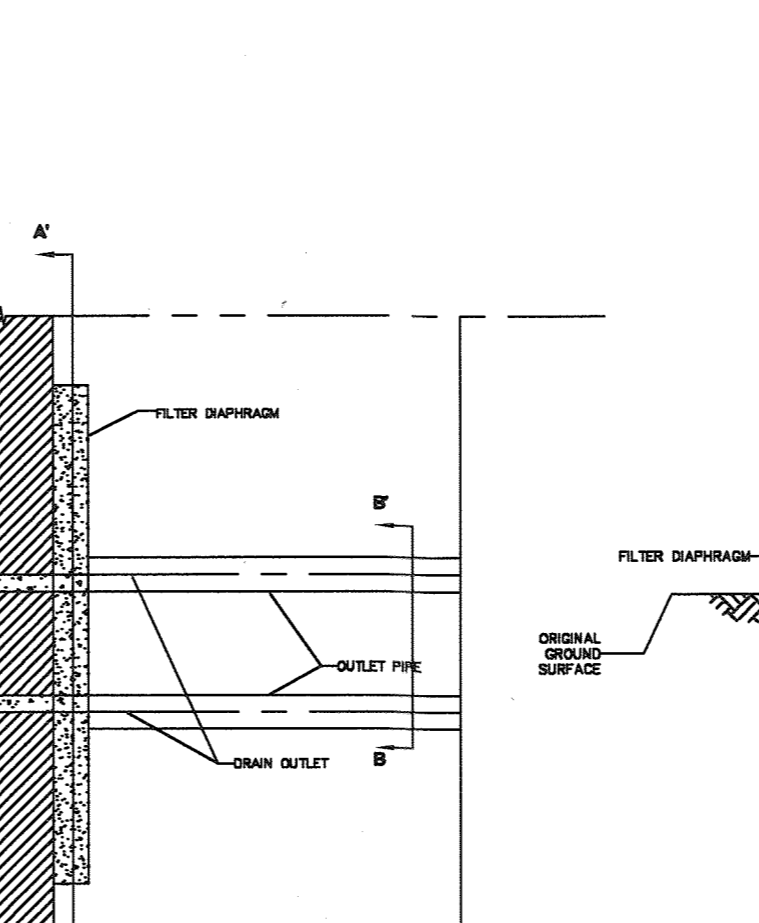
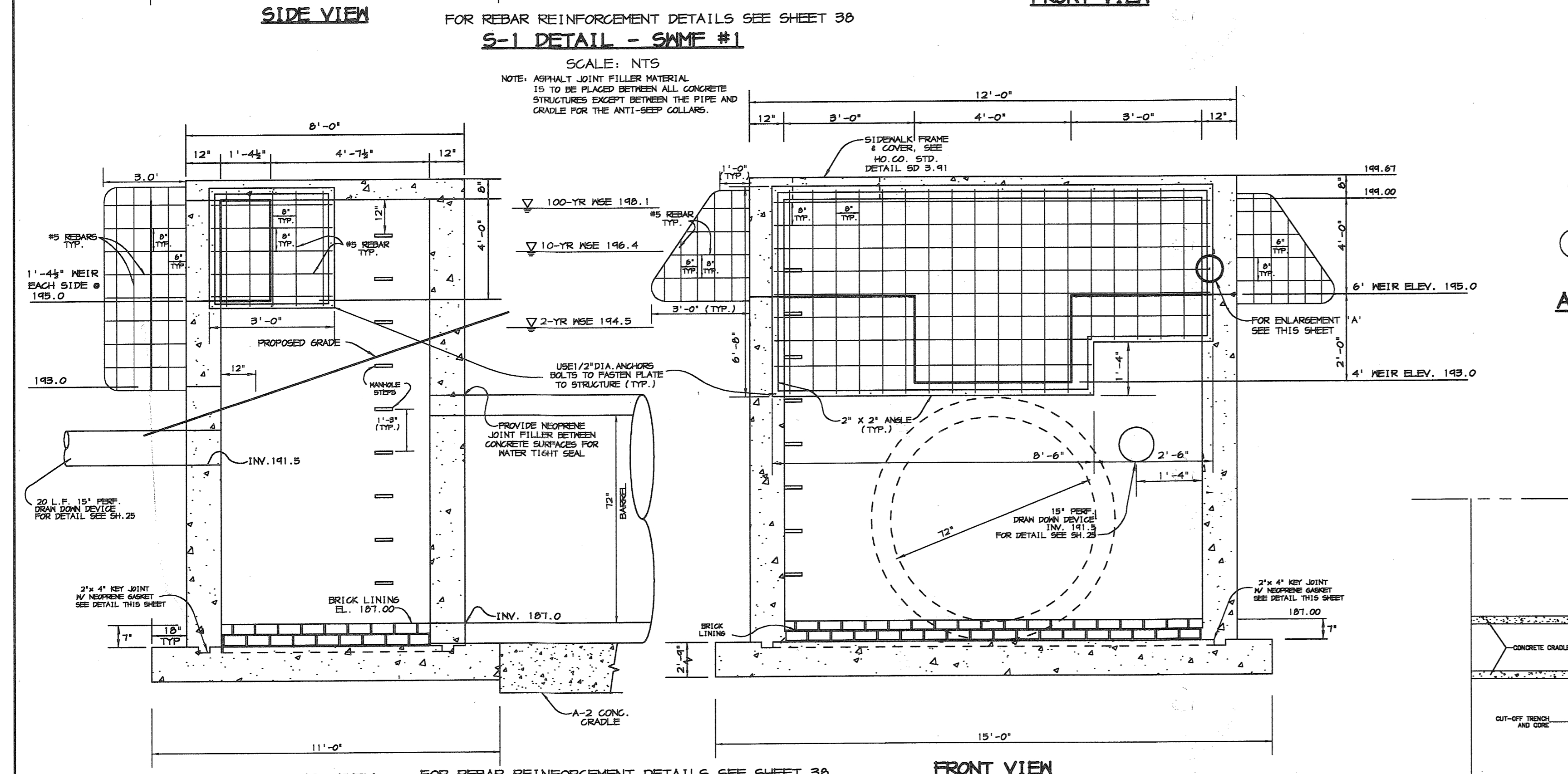
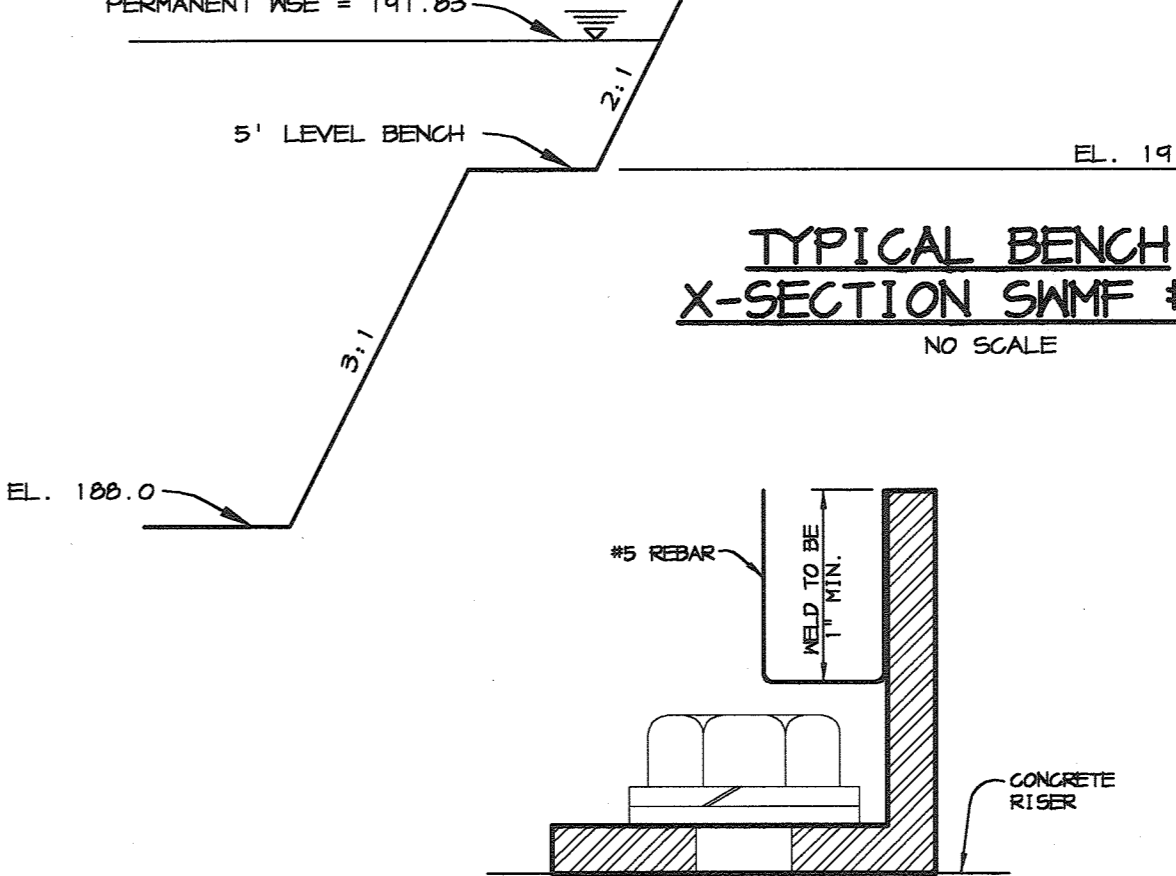
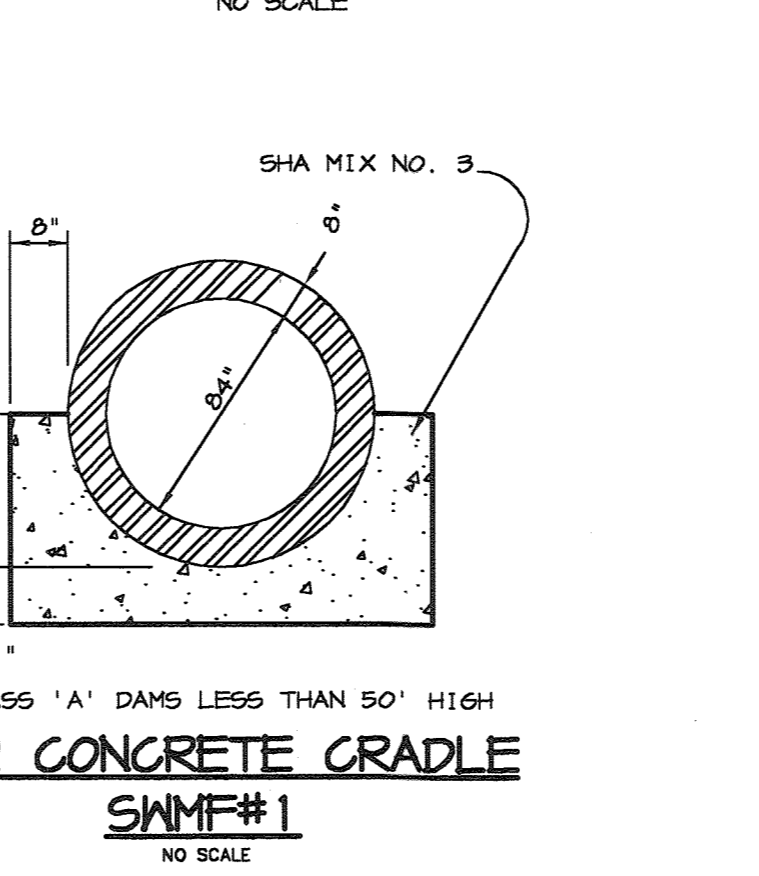
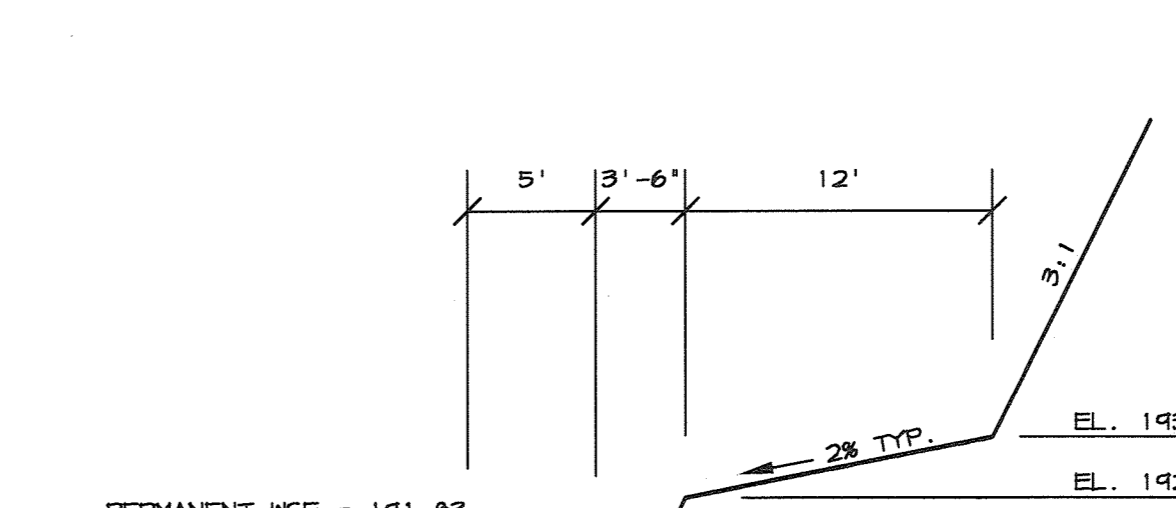
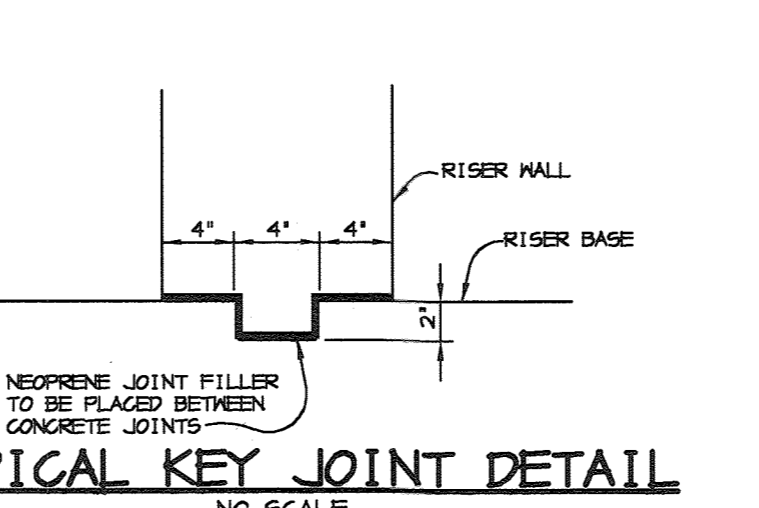




- RISER STRUCTURE NOTES FOR S-1 & S-2:**
- RISER TO BE CAST IN PLACE. SHOP DRAWINGS FOR THIS CONCRETE STRUCTURE SHALL MEET THE MINIMUM ASTM REQUIREMENTS FOR CAST IN PLACE STRUCTURES. A SHOP DRAWING SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO FABRICATION AND SHALL BE SIGNED AND SEALED BY A MARYLAND REGISTERED PROFESSIONAL ENGINEER.
 - SEE SHEET 30 FOR REINFORCEMENT DETAILS.
 - CONCRETE SHALL BE MSHA MIX NO. 3 (FC=3,500 PSI MINIMUM).
 - WHEN POND IS CONVERTED INTO A PERMANENT FACILITY, THE DRAINDOWN DEVICE HOLE SHALL BE REMOVED.
 - REFER TO HOWARD COUNTY STD. 6-5.21 FOR MANHOLE STEP DETAILS.
 - RISER JOINTS SHALL BE WATERTIGHT USING NEOPRENE GASKETS.
 - A TWO FOOT STUB OF THE RCP SHALL BE PRECAST WITH RISER. ALL PIPE CONNECTIONS SHALL PROVIDE RUBBER GASKET FOR WATERTIGHTNESS.
 - RISER SHALL BE PLACED ON A FIRMLY COMPACTED SUBGRADE AND SHALL BE APPROVED BY A GEOTECHNICAL ENGINEER.
 - A 6" OPEN LEFT GATE VALVE (ANNA G-159, CL. 350) SHALL BE CONNECTED TO THE RISER WALL WITH ALL-THREADED ROD AND A FLANGE JOINT. PROVIDE A STEM EXTENSION ON THE GATE VALVE AND FIRMLY SECURE TO RISER WALL WITH BRACKET(S). PROVIDE A STANDARD VALVE BOX AND COVER IN THE TOP SLAB DIRECTLY OVERTOP THE GATE VALVE.



- REMOVABLE TRASH RACK NOTES:**
- STEEL TO CONFORM TO ASTM A-36. #5 BARS TO BE SMOOTH. SEE DETAIL FOR SPACING.
 - ALL REBAR TO BE WELDED AT ALL INTERSECTIONS.
 - ALL BENDS TO BE 2" RADIUS. 2" x 2" ANGLE IRON AND 1/2" DIAMETER ANCHOR BOLTS TO BE USED FOR TRASH RACK FRAME.
 - GALVANIZE TRASH RACK AFTER FABRICATION AND PAINT BATTLESHIP GRAY.



BY THE DEVELOPER:	
I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.	
Smoly J. Schmidt DEVELOPER	1-30-04 DATE
BY THE ENGINEER:	
I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.	
Chudy J. Lee ENGINEER	1-30-04 DATE
THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.	
Jim Myranda NATURAL RESOURCES CONSERVATION SERVICE	2/12/04 DATE
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.	
John S. ... HOWARD SOIL CONSERVATION DISTRICT	2/12/04 DATE
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.	
Marcus ... DIRECTOR	2/15/04 DATE
Chris ... CHIEF, DEVELOPMENT ENGINEERING DIVISION	2/20/04 DATE
Chris ... CHIEF, DIVISION OF LAND DEVELOPMENT	3/11/04 DATE
6-15-05 CHANGED SHEET NO.	
1-9-05 CHANGED SHEET NO.	
DATE NO.	REVISION
DEVELOPER/OWNER:	
(OWNER) CHASE LIMITED PARTNERSHIP P.O. BOX 850 LAUREL, MD 20725 410.742.1234	(DEVELOPER) CHASE MINING LLC P.O. BOX 850 LAUREL, MD 20725 410.742.1234
PROJECT	
CHASE QUARRY	
AREA ZONED M-1 & MXD-3, TAX MAP No. 43 PARCEL 234 & P.O. 235, BLOCK 19 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND	
TITLE	
SWM PROFILES AND DETAILS	
Patton Harris Rust & Associates, PC Engineers, Surveyors, Planners, Landscape Architects. 8818 Centre Park Drive Columbia, MD 21045 T 410.997.8900 F 410.997.9282	
1-30-04 DATE	DESIGNED BY: C.J.R.
	DRAWN BY: MAD
	CHECKED BY: C.J.R.
	PROJECT NO: 99092/ SWM-DET.DWG
	DATE: JANUARY 29, 2004
	SCALE: AS SHOWN
CHRISTOPHER J. REID #19949	DRAWING NO. 27 OF 35

MD-370 STANDARDS AND SPECIFICATIONS

These specifications are appropriate to all ponds within the scope of the Standard for practice MD-370. All references to ASTM and AASHTO specifications apply to the most recent version.

- SITE PREPARATION**
- Areas designated for borrow areas, embankment, and structural works shall be cleared, grubbed and stripped of topsoil. All trees, vegetation, roots and other objectionable material shall be removed. Channel banks and sharp breaks shall be sloped to steeper than 1:1. All trees shall be cleared and grubbed within 15 feet of the toe of the embankment.
- Areas to be covered by the reservoir will be cleared of all trees, brush, logs, fences, rubbish and other objectionable material unless otherwise designated on the plans. Trees shall be cut approximately level with the ground surface. For dry stormwater management ponds, a minimum of a 25-foot radius around the inlet structure shall be cleared.
- All cleared and grubbed material shall be disposed of outside and below the limits of the dam and reservoir as directed by the owner or his representative. When specified, a sufficient quantity of topsoil will be stockpiled in a suitable location for use on the embankment and other designated areas.
- EMBANKMENT**
- Material - The fill material shall be taken from approved designated borrow areas. It shall be free of roots, stumps, wood, rubbish, stones greater than 6". Frozen or other objectionable material shall be removed. The fill material shall be placed in layers, and each layer shall be compacted and tested in accordance with the following specifications:
1. The fill material shall be placed in layers which are to be continuous over the entire length of the fill. The most permeable borrow material shall be placed in the downstream portion of the embankment. The principal spillway must be installed concurrently with fill placement and not excavated into the embankment.
2. Compaction - The movement of the hauling and spreading equipment over the fill shall be controlled so that the entire surface of each lift shall be traversed a minimum of four times. The equipment used for spreading shall be equipped with a minimum of four complete passes of a sheepsfoot, rubber tire or vibrating roller. The equipment shall be adjusted to produce the required degree of compaction will be obtained with the equipment used. The fill material shall contain sufficient moisture so that if formed into a ball it will not crumble when the ball is dropped from a height of 3 feet.
3. When required by the reviewing agency the minimum required density shall not be less than that specified with a moisture content within 1/2% - 2% of the optimum. Each layer of fill shall be compacted as necessary to obtain that density, and is to be certified by the Engineer at the time of construction. All compaction is to be determined by AASHTO Method T-99 (Standard Proctor).
4. Gutter trench - The gutter trench shall be excavated into laparvular material along or parallel to the centerline of the embankment as shown on the plans. The bottom shall be sloped to the centerline by the equipment used for excavation, with the minimum width being 4 feet. The depth shall be at least four feet below existing grade or as shown on the plans. The side slopes of the gutter trench shall be 1:1 or flatter. The backfill shall be compacted with construction equipment, rollers, or hand tampers to assure maximum density and minimum permeability. In addition, the core shall be placed concurrently with the outer shell of the embankment.

- STRUCTURE BACKFILL**
- Backfill adjacent to pipes or structures shall be of the type and quality conforming to that specified for the adjoining fill material. The fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other manually directed compaction equipment. The material needs to fill completely all spaces under the pipe. No time shall be lost during the backfilling operation shall be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall equipment be allowed to operate closer than four feet horizontally, to any part of a structure. Under no circumstances shall equipment be allowed to operate closer than four feet horizontally, to any part of a structure. Under no circumstances shall equipment be allowed to operate closer than four feet horizontally, to any part of a structure. Under no circumstances shall equipment be allowed to operate closer than four feet horizontally, to any part of a structure. Under no circumstances shall equipment be allowed to operate closer than four feet horizontally, to any part of a structure. Under no circumstances shall equipment be allowed to operate closer than four feet horizontally, to any part of a structure.

- PIPE CONDUITS**
- All pipes shall be circular in cross section.
- Corrugated Metal Pipe - All of the following criteria shall apply for corrugated metal pipe:
- Materials - (Polymer coated steel pipe) - Steel pipes with polymeric coatings shall have a minimum coating thickness of 0.01 inch (1mil) on both sides of the pipe. This pipe and its appurtenances shall conform to the requirements of AASHTO Specifications M-245 & M-246 with watertight coupling bands or flanges.
 - Materials - (Aluminum coated steel pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specifications M-214 with watertight coupling bands or flanges. Aluminum coated steel pipe, when used with flowable fill or when soil and/or water conditions warrant the need for increased durability, shall be fully bituminous coated per requirements of AASHTO Specification M-180 Type A. All aluminum coating damaged or worn shall be replaced with cold applied bituminous coating compound. Aluminum surfaces that are to be in contact with concrete shall be primed with one coat of zinc chromate primer or two coats of asphalt.
 - Materials - (Aluminum pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specifications M-146 or M-211 with watertight coupling bands or flanges. Aluminum pipe, when used with flowable fill or when soil and/or water conditions warrant the need for increased durability, shall be fully bituminous coated per requirements of AASHTO Specification M-180 Type A. All aluminum coating damaged or worn shall be replaced with cold applied bituminous coating compound. Aluminum surfaces that are to be in contact with concrete shall be primed with one coat of zinc chromate primer or two coats of asphalt.

- Coupling bands, anti-seep collars, and sections, etc., must be composed of the same material and coated as the pipe. Metals must be insulated from dissimilar materials with use of rubber or plastic insulating materials at least 24 mils in thickness.
 - Connections - All connections with pipes must be completely watertight. The drain pipe or barrel connection to the riser shall be sealed all around when the pipe and riser are metal. Anti-seep collars shall be applied to the pipe in such a manner as to be completely watertight. Connections are not considered to be watertight.
 - All connections shall use a rubber or neoprene gasket when joining pipe sections. The end of each pipe shall be re-rolled on adequate number of coatings to accommodate the bond width. The following dimensions are acceptable for flange pipe less than 24" in diameter: flanges on both ends of the pipe with a circular 3/8 inch closed coil neoprene gasket, prepared to the flange bolt circle, sandwiched between adjacent flanges, a 2 inch wide standard top layer band with 1/2 inch wide by 3/8 inch thick closed coil circular neoprene gasket, and a 12 inch wide by 4 foot long standard top layer band having a minimum diameter of 1/2 inch greater than the corrugation depth. Pipes 24 inches in diameter and larger shall be connected by a 24 inch long standard top layer band with 1/2 inch wide by 3/8 inch thick closed coil circular neoprene gasket. A 24 inch wide by 3/8 inch thick closed coil circular neoprene gasket will be installed on each side of the pipe. Flanged joints with 3/8 inch closed coil gaskets the full width of the flange is also acceptable.
 - Helically corrugated pipe shall have either continuously welded seams or have lock seams with internal caulking or a neoprene bead.
 - Bedding - The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.
 - Backfilling shall conform to "Structure Backfill."
 - Other details (anti-seep collars, valves, etc.) shall be shown on the drawings.
- Reinforced concrete pipe - All of the following criteria shall apply for reinforced concrete pipe:
- Materials - Reinforced concrete pipe shall have bell and gasket joints with rubber gaskets and shall equal or exceed ASTM Designation C-310.
 - Bedding - All reinforced concrete pipe conduits shall be laid in a concrete bedding/course for their entire length. This bedding/course shall consist of high slump concrete placed under the pipe and up the side of the pipe at least 50% of its outside diameter with a minimum thickness of 6 inches. Where a concrete grade is not needed for structural reasons, flowable fill may be used as described in the "Structure Backfill" section of this standard. gravel bedding is not permitted.

- Laying pipe - Bell and spigot pipe shall be placed with the bell and upstream. Joints shall be made in accordance with recommendations of the manufacturer of the material. After the joints are sealed for the entire line, the bedding shall be placed so that all spaces under the pipe are filled. Care shall be exercised to prevent any deviation from the original line and grade of the pipe. The first joint must be located within 4 feet from the riser.
 - Backfilling shall conform to "Structure Backfill."
 - Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.
- Plastic Pipe - The following criteria shall apply for pipe:
- Materials - PVC pipe shall be PVC-1120 or PVC-1220 conforming to ASTM D-1785 or ASTM D-2241. Corrugated High Density Polyethylene (HDPE) pipe couplings and fittings shall conform to the following: 4 - 10 inch pipe shall meet the requirements of AASHTO M262 Type B, and 12" through 24" shall meet the requirements of AASHTO M214 Type S.
 - Joints and connections to anti-seep collars shall be completely watertight.
 - Bedding - The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.
 - Backfilling shall conform to "Structure Backfill".
 - Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

- CONCRETE**
- Concrete shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 4.14, Mix No. 3.
- ROCK RIPRAP**
- Rock riprap shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 3.11.
- GEOTEXTILE**
- Geotextile shall be placed under all riprap and shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 4.14, Mix No. 3.
- CARE OF WATER DURING CONSTRUCTION**
- All work on permanent structures shall be carried out in areas free from water. The contractor shall construct and maintain all temporary dikes, levees, cofferdams, drainage channels, and stream diversions necessary to protect the work to be completed by the permanent works. The contractor shall also furnish, install, operate, and maintain all necessary pumping and other equipment required for removal of water from the various parts of the work and for maintaining the excavations, foundation, and other parts of the work free from water as required or directed by the engineer for constructing each part of the work. After having served their purpose, all temporary protective works shall be removed or levelled graded to the extent required to prevent obstruction in any degree whatsoever of the flow of water to the spillway or outlet works and as to not interfere in any way with the operation or maintenance of the structure. Stream diversions shall be maintained until the full flow can be passed through the permanent works. The removal of water from the required excavation and foundation shall be accomplished in a manner and to the extent that will maintain stability of the excavated slopes and bottom of required excavations and will allow satisfactory performance of all construction operations. During the placing and compacting of material in required excavations, the water level at the locations being refilled shall be maintained below the bottom of the excavation so as at such locations which may require draining the water to seeps from which the water shall be pumped.
- STABILIZATION**
- All borrow areas shall be graded to provide proper drainage and left in a slightly condition. All exposed surfaces of the embankment, spillway, soil and borrow areas, and berms shall be stabilized by seeding, lining, fertilizing and mulching in accordance with the Natural Resources Conservation Service Standards and Specifications for Critical Area Planting (MD-342) or as shown on the accompanying drawings.
- EROSION AND SEDIMENT CONTROL**
- Construction operations will be carried out in such a manner that erosion will be controlled and water and air pollution minimized. State and local laws concerning silt control shall be followed. Construction plans shall detail erosion and sediment control measures.
- Refer to the 1944 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.

STANDARD SEDIMENT CONTROL NOTES

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (313-1855) AND THE MDE MINING PERMIT INSPECTION DIVISION.
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1944 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERETO.
- FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3:1; B) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THE PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 7, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1944 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING, SO, TEMPORARY SEEDING AND MULCHING (SEE, GEG. 6). TEMPORARY STABILIZATION WITH MULCH ALONE SHALL ONLY BE DONE WHERE RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHED OF GRASSES.
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMITS FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR AND MDE. MINING PERMIT INSPECTION DIVISION.
- SITE ANALYSIS:

TOTAL AREA OF SUBMISSION	321.75 ACRES
AREA DISTURBED	241.7 ACRES
AREA TO BE ROOFED OR PAVED	11 ACRES
AREA TO BE VEGETATIVELY STABILIZED	230.6 ACRES
TOTAL CUT	50000 CU. YARDS
TOTAL FILL	50000 CU. YARDS
- ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE MDE INSPECTOR.
- ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
- TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.
- SITE GRADING MUST BEGIN ONLY AFTER ALL PERIMETER SEDIMENT CONTROL MEASURES HAVE BEEN INSTALLED AND ARE IN A FUNCTIONING CONDITION.
- SEDIMENT WILL BE REMOVED FROM TRAPS WHEN ITS DEPTH REACHES CLEAN OUT ELEVATION SHOWN ON THE PLANS.
- CUT AND FILL QUANTITIES PREPARED FOR THE SITE DEVELOPMENT PLAN AND PROVIDED UNDER SITE ANALYSIS DO NOT REPRESENT BID QUANTITIES. THESE QUANTITIES DO NOT DISTINGUISH BETWEEN TOPSOIL, STRUCTURAL FILL OR EMBANKMENT MATERIAL, NOR DO THEY REFLECT CONSIDERATION OF UNDERCUTTING OR REMOVAL OF UNSUITABLE MATERIAL. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH SITE CONDITIONS WHICH MAY AFFECT THE WORK.

TEMPORARY SEEDING NOTES

- Apply to graded or cleared areas likely to be redistributed where a short-term vegetative cover is needed.
- Seeded Preparation -** Loosen upper three inches of soil by raking, discing or other acceptable means before seeding, if not previously loosened.
- Soil Amendments -** Apply 600 lbs. per acre 10-10-10 fertilizer (14 lbs. per 1000 sq. ft.).
- Seeding -** For periods March 1 through April 30 and from August 15 through November 15, seed with 2-1/2 bushels per acre of annual ryegrass (3.2 lbs. per 1000 sq. ft.). For the period May 1 through August 14, seed with 3 lbs. per acre of seeding leucopagus (3.07 lbs. per 1000 sq. ft.). For the period November 16 through February 26, protect site by applying 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring, or use sod.
- Mulching -** Apply 1-1/2 to 2 tons per acre (70 to 90 lbs. per 1000 sq. ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 2lb gal. per acre (5 gal. per 1000 sq. ft.) of emulsified asphalt on flat areas. On slopes, 5 ft. or higher, use 34T gal. per acre (8 gal. per 1000 sq. ft.) for anchoring.
- Refer to the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.

PERMANENT SEEDING NOTES

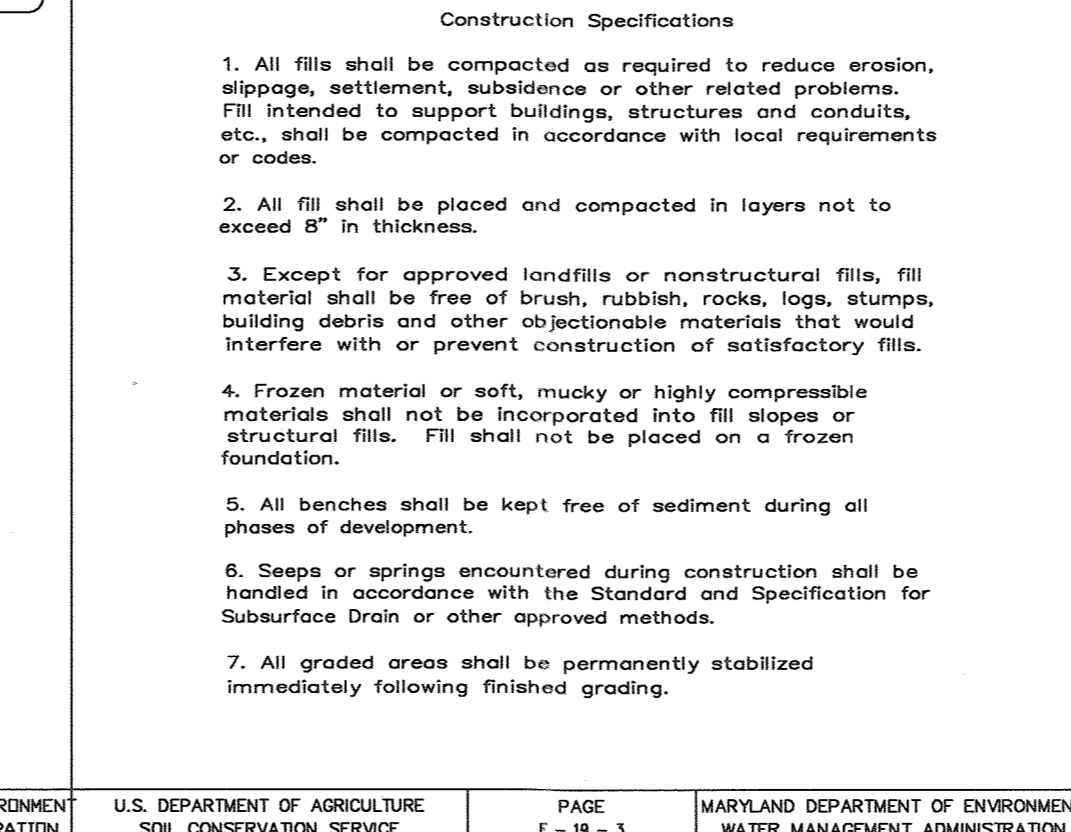
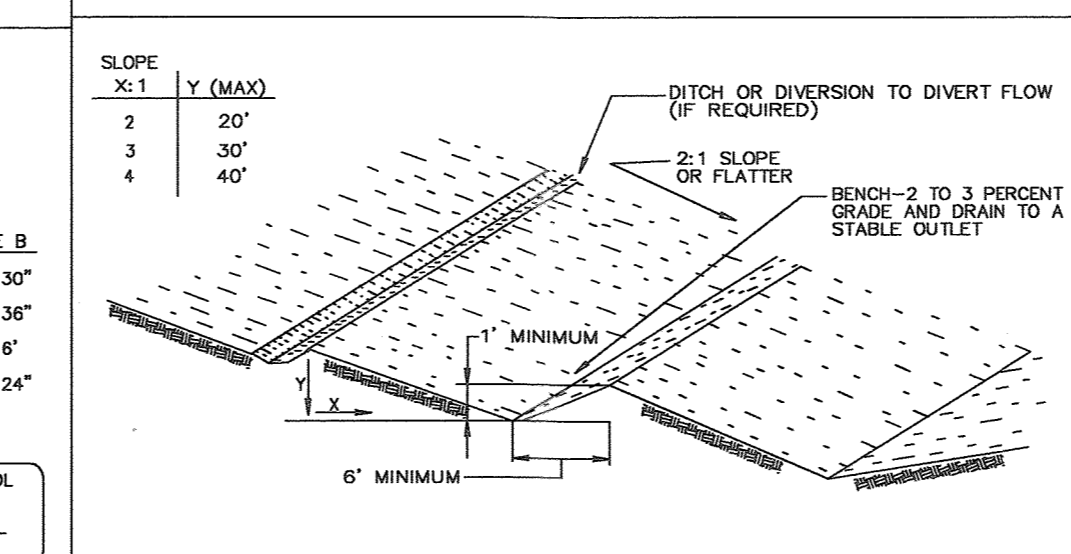
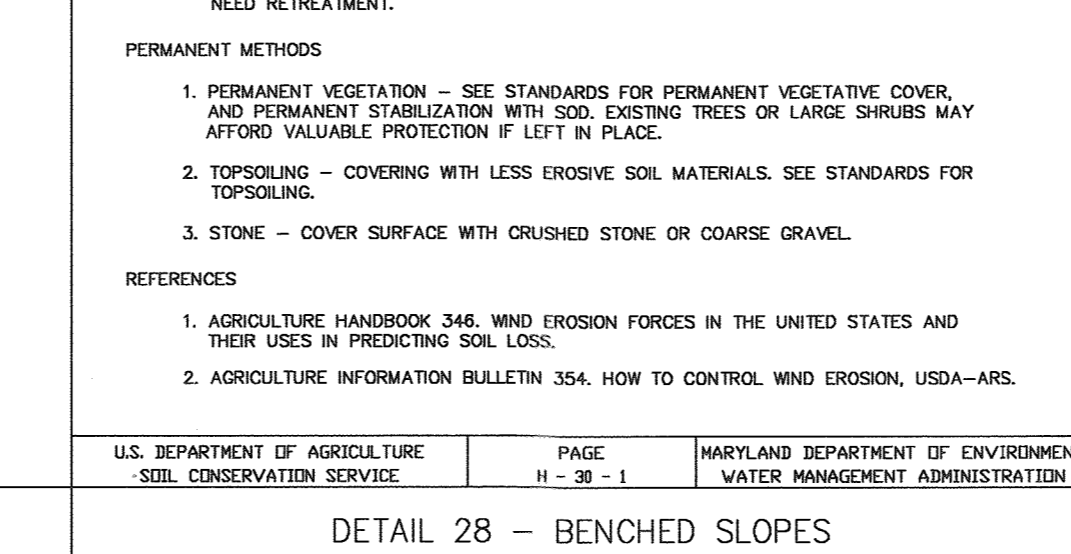
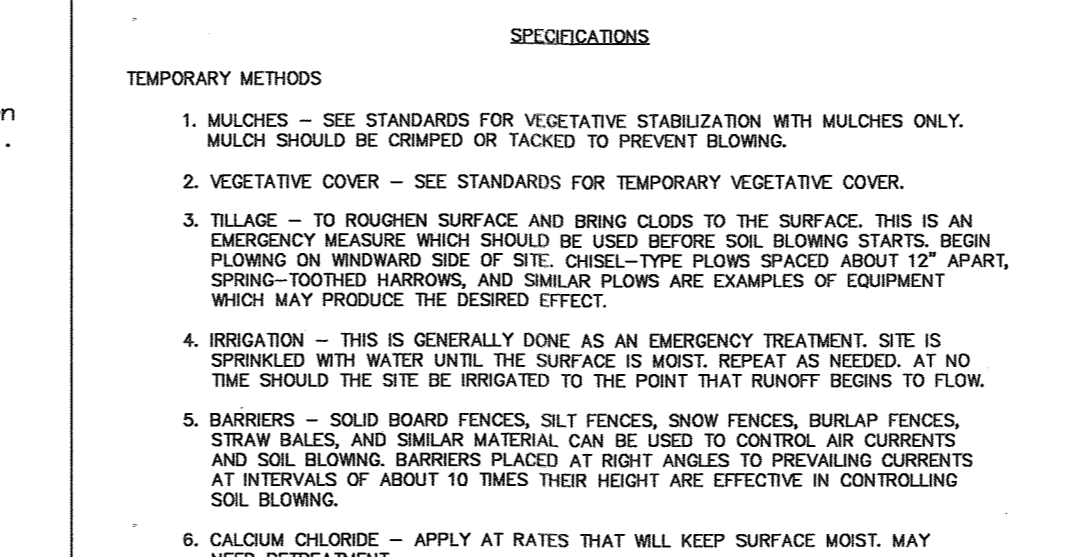
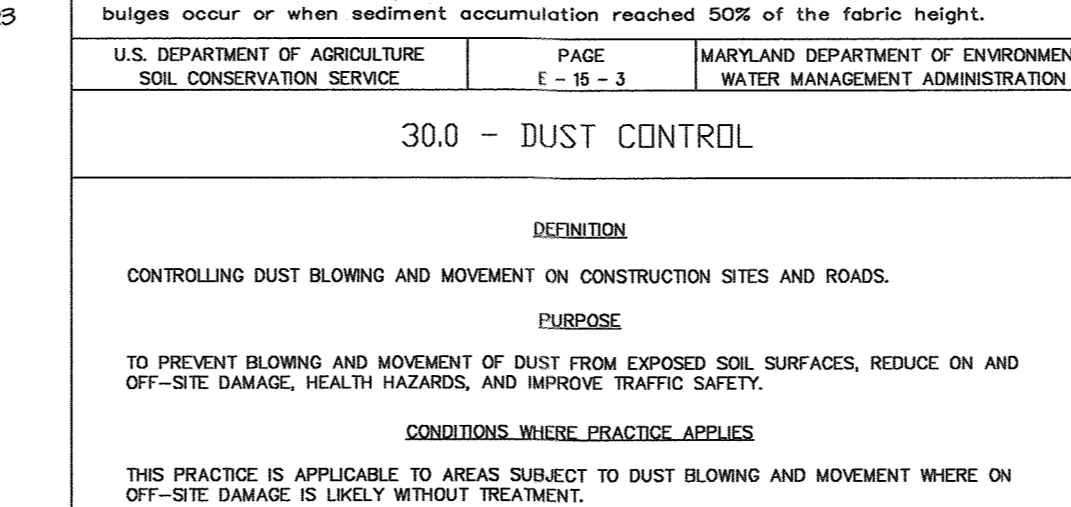
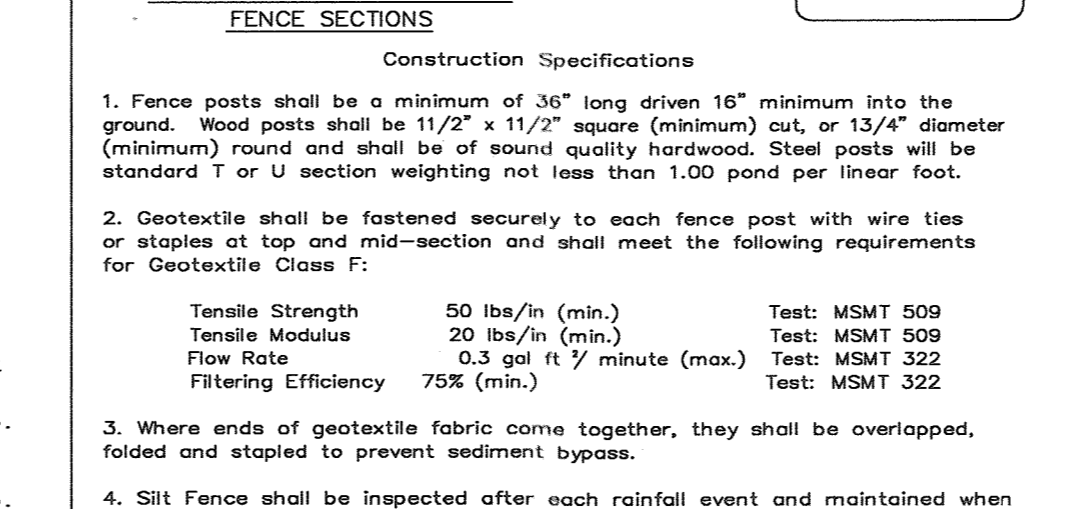
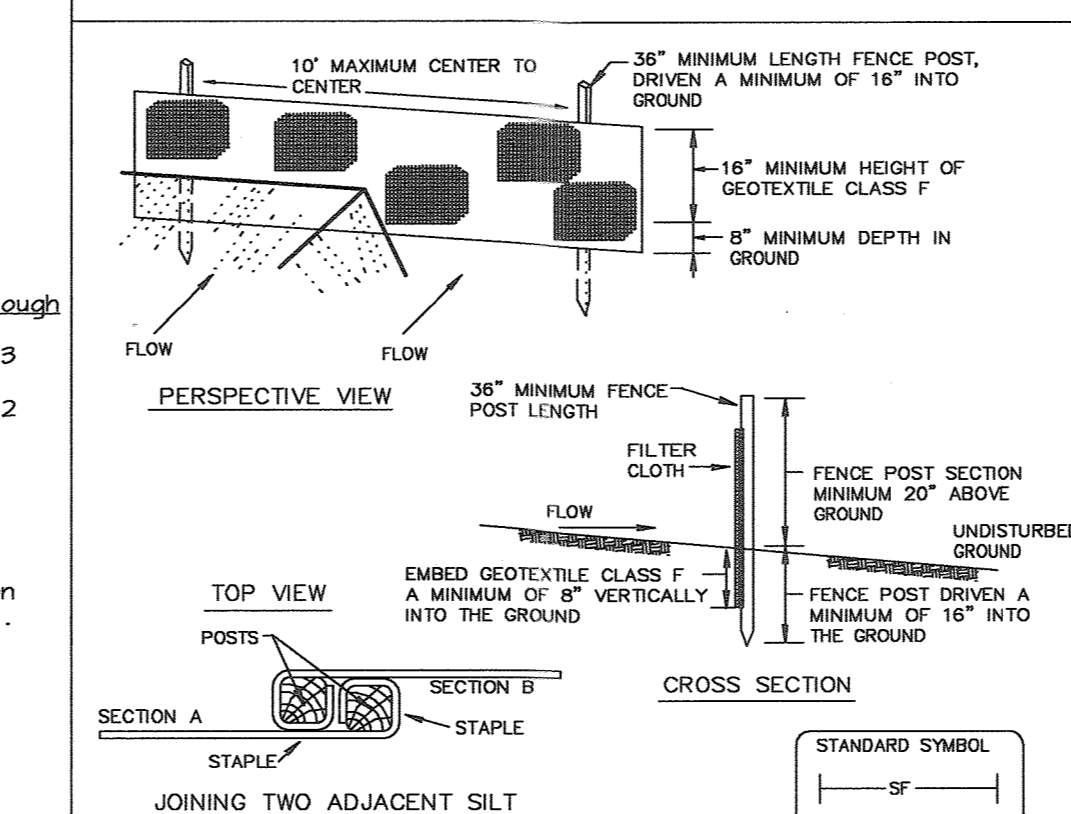
- Apply to graded or cleared areas not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.
- Seeded Preparation -** Loosen upper three inches of soil by raking, discing or other acceptable means before seeding, if not previously loosened.
- Soil Amendments -** In lieu of soil test recommendations, use one of the following schedules:
- | | | |
|----------------------|-----------------------------|----------------|
| Tensile Strength | 50 lbs/in (min.) | Test: MSMT 509 |
| Tensile Modulus | 20 lbs/in (min.) | Test: MSMT 509 |
| Filter Rate | 0.3 gal / 1/2 minute (max.) | Test: MSMT 322 |
| Filtering Efficiency | 75% (min.) | Test: MSMT 322 |
- Preferred - Apply 2 tons per acre dolomitic limestone (42 lbs. per 1000 sq. ft.) and 600 lbs. per acre 10-10-10 fertilizer (14 lbs. per 1000 sq. ft.) and 600 lbs. per acre 10-10-10 fertilizer (14 lbs. per 1000 sq. ft.) before seeding. Harrow or disc into upper three inches of soil. At time of seeding, apply 400 lbs. per acre 30-0-0 ureaform fertilizer (4 lbs. per 1000 sq. ft.).
 - Acceptable - Apply 2 tons per acre dolomitic limestone (42 lbs. per 1000 sq. ft.) and 1000 lbs. per acre 10-10-10 fertilizer (23 lbs. per 1000 sq. ft.) before seeding. Harrow or disc into upper three inches of soil.
- Seeding -** For the period March 1 through April 30 and from August 1 through October 15, seed with the following:
- Grasses - 60 lbs. per acre (1.4 lbs. per 1000 sq. ft.) of Orchard Grass and 2 lbs. per acre (0.05 lbs. per 1000 sq. ft.) of meadow fescuegrass.
 - Nurse Crop - 2.5 bushels per acre of Annual Rye.
- For the period May 1 through July 31, seed with the following:
- Grasses - 60 lbs. per acre (1.4 lbs. per 1000 sq. ft.) of Orchard Grass.
 - Legumes - 20 lbs. per acre of Flatpea or 10 lbs. per acre of Birdfoot Trefoil.
 - Nurse Crop - 2.5 bushels per acre of Annual Rye.
- Mulching -** Apply 1-1/2 to 2 tons per acre (70 to 90 lbs. per 1000 sq. ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 2lb gal. per acre (5 gal. per 1000 sq. ft.) of emulsified asphalt on flat areas. On slopes, 5 ft. or higher, use 34T gal. per acre (8 gal. per 1000 sq. ft.) for anchoring.
- Maintenance -** Inspect all seeded areas and make needed repairs, replacements and reseedings.

- EROSION AND SEDIMENT CONTROL**
- Construction operations will be carried out in such a manner that erosion will be controlled and water and air pollution minimized. State and local laws concerning silt control shall be followed. Construction plans shall detail erosion and sediment control measures.
- Refer to the 1944 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.

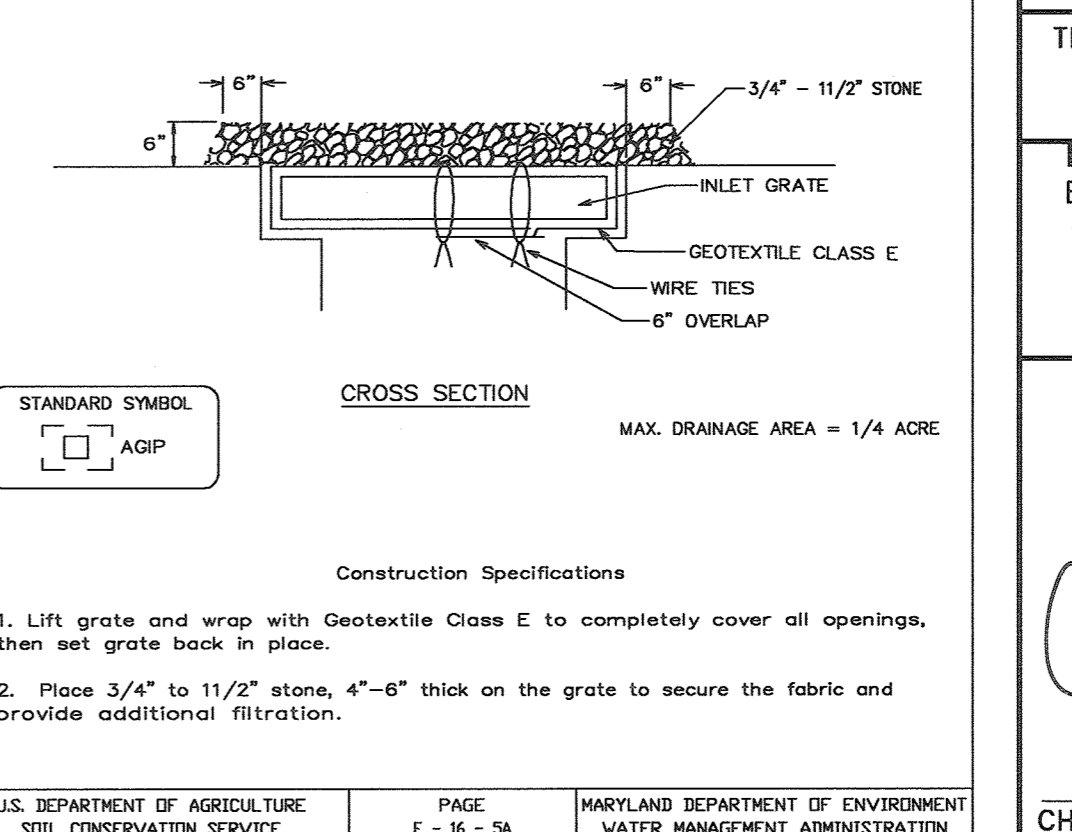
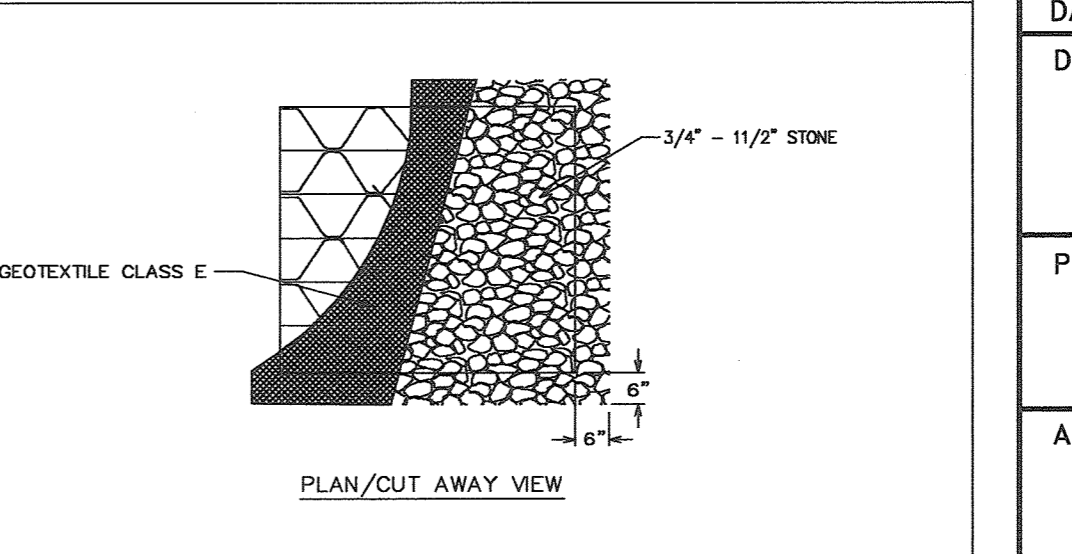
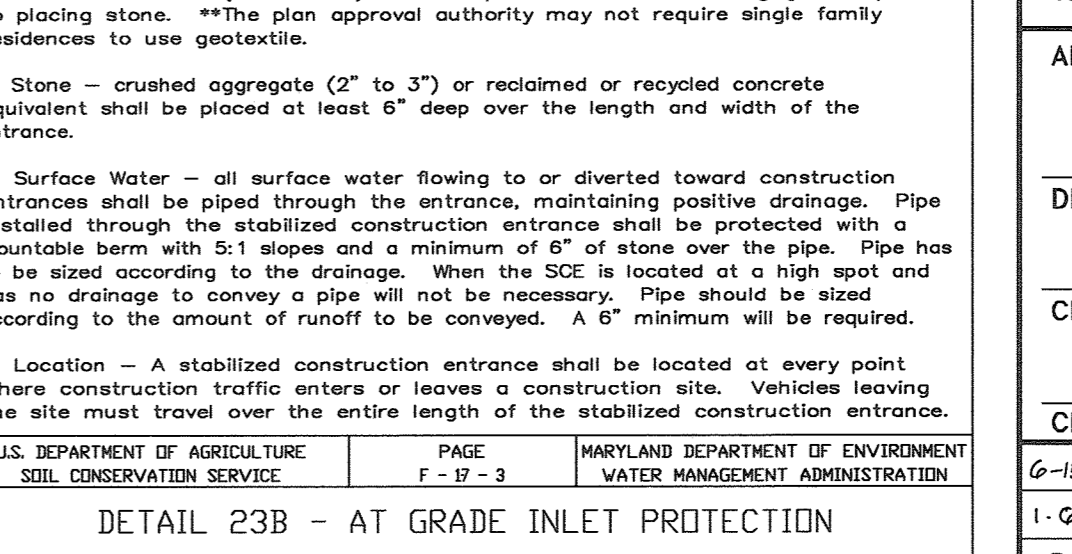
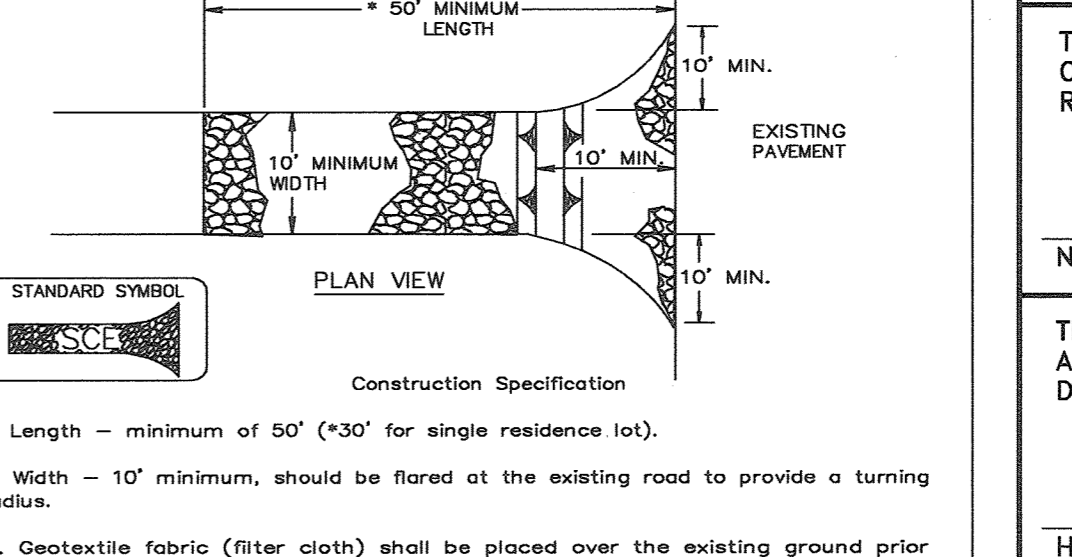
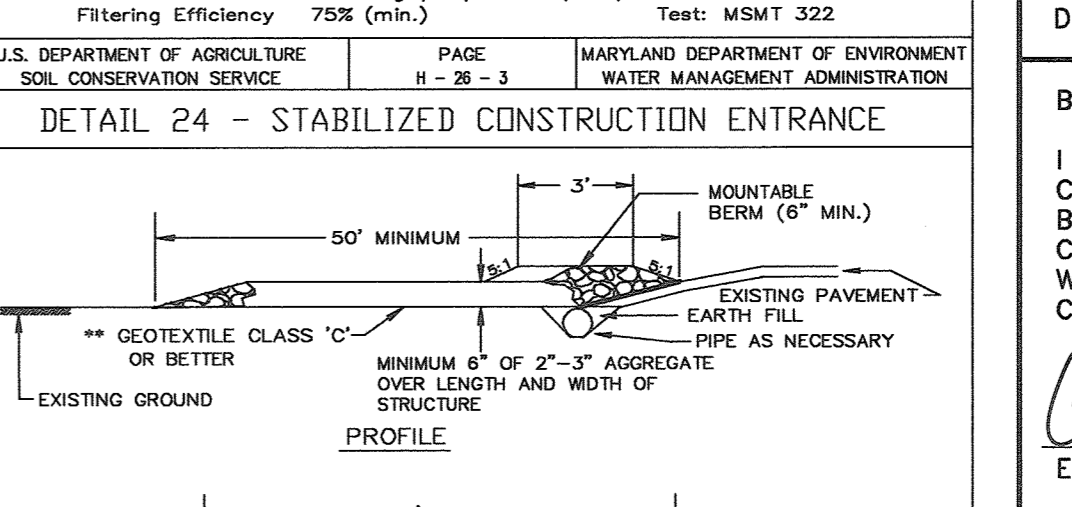
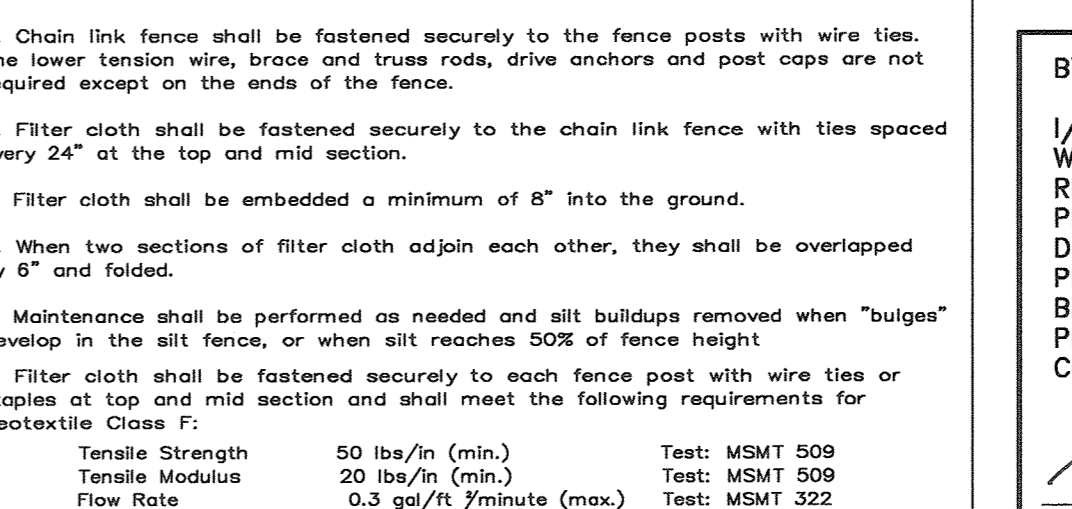
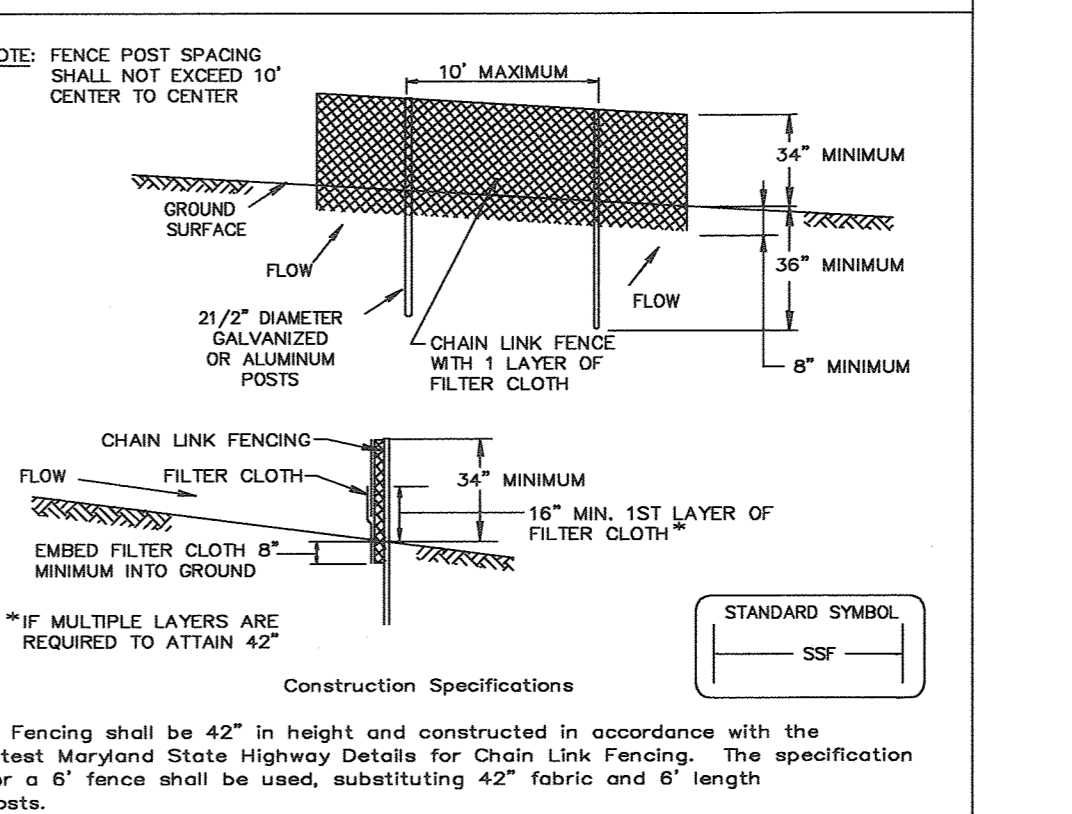
TEMPORARY SEEDING NOTES

- MULCHES - SEE STANDARDS FOR VEGETATIVE STABILIZATION WITH MULCHES ONLY. MULCH SHOULD BE CRIMPED OR TYPED TO PREVENT BLOWING.
 - VEGETATIVE COVER - SEE STANDARDS FOR TEMPORARY VEGETATIVE COVER.
 - TILLAGE - TO ROUGHEN SURFACE AND BRING CLDS TO THE SURFACE. THIS IS AN EMERGENCY MEASURE WHICH SHOULD BE USED BEFORE SOIL BLOWING STARTS. FIRM FLOWING ON WINDWARD SIDE OF SITE. CHISEL-TYPE PLOWS SPACED ABOUT 12" APART, STRIP-TILLAGE HARROWS, AND SIMILAR PLOWS ARE EXAMPLES OF EQUIPMENT WHICH MAY PRODUCE THE DESIRED EFFECT.
 - IRRIGATION - THIS IS GENERALLY DONE AS AN EMERGENCY TREATMENT. SITE IS SPRINKLED WITH WATER UNTIL THE SURFACE IS MOIST. REPEAT AS NEEDED. AT NO TIME SHOULD THE SITE BE IRRIGATED TO THE POINT THAT RUNOFF BEGINS TO FLOW.
 - BARRIERS - SOLD BOARD FENCES, SILT FENCES, SNOW FENCES, BURIAL FENCES, STRAW BALES, AND SIMILAR MATERIAL CAN BE USED TO CONTROL AIR CURRENTS AND SOIL BLOWING. BARRIERS PLACED AT RIGHT ANGLES TO PREVAILING CURRENTS AT INTERVALS OF ABOUT 10 TIMES THEIR HEIGHT ARE EFFECTIVE IN CONTROLLING SOIL BLOWING.
 - CALCIUM CHLORIDE - APPLY AT RATES THAT WILL KEEP SURFACE MOSTLY WET. NEED RETREATMENT.
- PERMANENT METHODS**
- PERMANENT VEGETATION - SEE STANDARDS FOR PERMANENT VEGETATIVE COVER, AND PERMANENT STABILIZATION WITH SOD. EXISTING TREES OR LARGE SHRUBS MAY AFFORD VALUABLE PROTECTION IF LEFT IN PLACE.
 - TOPSOILING - COVERING WITH LESS EROSION-SOIL MATERIALS. SEE STANDARDS FOR TOPSOILING.
 - STONE - COVER SURFACE WITH CRUSHED STONE OR COARSE GRAVEL.
- REFERENCES**
- AGRICULTURE HANDBOOK 346. WIND EROSION FORCES IN THE UNITED STATES AND THEIR USES IN PREVENTING SOIL LOSS.
 - AGRICULTURE INFORMATION BULLETIN 354. HOW TO CONTROL WIND EROSION. USDA-ARS.
- U.S. DEPARTMENT OF AGRICULTURE, PAGE: 11-28-3 MARYLAND DEPARTMENT OF ENVIRONMENT, SOIL CONSERVATION SERVICE, WATER MANAGEMENT ADMINISTRATION

DETAIL 22 - SILT FENCE



DETAIL 33 - SUPER SILT FENCE



BY THE DEVELOPER:

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Timothy J. Schmidt DEVELOPER *1-30-04* DATE

BY THE ENGINEER:

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Chris J. Reid ENGINEER *1-30-04* DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

Jim Mays 2/10/04 DATE
NATURAL RESOURCES CONSERVATION SERVICE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

Scott Salvi 2/17/04 DATE
HOWARD SOIL CONSERVATION DISTRICT

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Mark L. Eagle 2/15/04 DATE
DIRECTOR

Chris J. Reid 2/20/04 DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION

Cindy Hamata 3/1/04 DATE
CHIEF, DIVISION OF LAND DEVELOPMENT

G-18-08 CHANGED SHEET NO.
1-G-05 CHANGED SHEET NO.

DATE NO. REVISION

DEVELOPER/OWNER:

(OWNER) CHASE LIMITED PARTNERSHIP
801 FOX OAK BLVD. BOX 250
LAUREL, MD 20725 410.742.1234

(DEVELOPER) CHASE MINING LLC
801 FOX OAK BLVD. BOX 250
LAUREL, MD 20725 410.742.1234

PROJECT

CHASE QUARRY

AREA ZONED M-1 & MXD-3, TAX MAP No. 43
PARCEL 234 & P.O. 235, BLOCK 19
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE

SWM & SEDIMENT CONTROL NOTES & DETAILS

Patton Harris Rust & Associates, P.C.
Engineers, Surveyors, Planners, Landscape Architects.
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

1-30-04 DATE
DESIGNED BY: C.J.R.

MAD CHECKED BY: C.J.R.

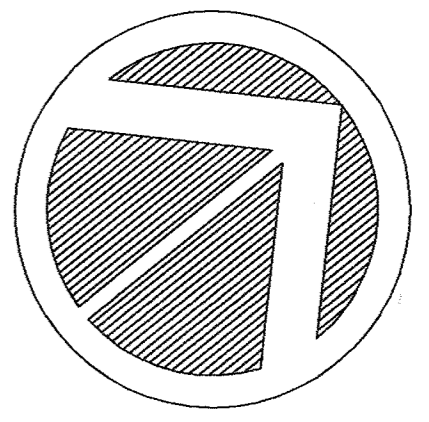
PROJECT NO: 99092/ SEDNOTES.DWG

DATE: JANUARY 29, 2004

SCALE: AS SHOWN

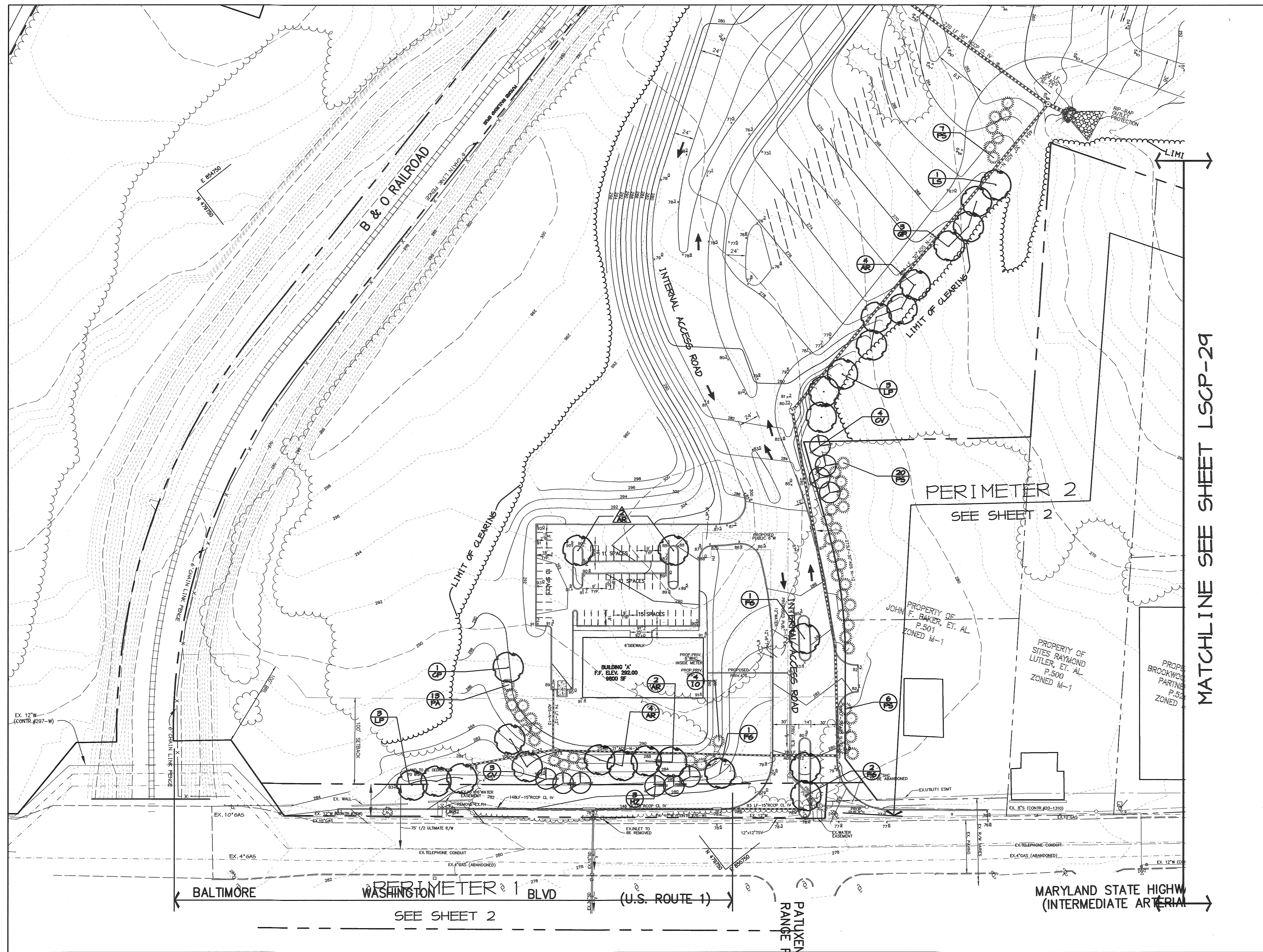
CHRISTOPHER J. REID #19949 DRAWING NO. 28 OF 55

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LEGEND

- 300 EXISTING CONTOURS
- EXISTING TREE LINE
- PROPOSED TREE LINE
- EXISTING ROAD
- EXISTING BOUNDARY LINE
- EXISTING BUILDING
- EXISTING STREAM
- APPROXIMATE LOCATION OF BENCH FOR BERM
- BERM RIDGE LINE
- EXISTING SOILS
- EASEMENT
- EXISTING FENCE
- PERIMETER PLANTING NOT REQUIRED BY HOWARD COUNTY & NOT BONDED
- PERIMETER PLANTING REQUIRED BY HOWARD COUNTY & BONDED
- PARKING LOT PLANT MATERIAL REQUIRED BY HOWARD COUNTY & BONDED



MATCHLINE SEE SHEET LSCP-29

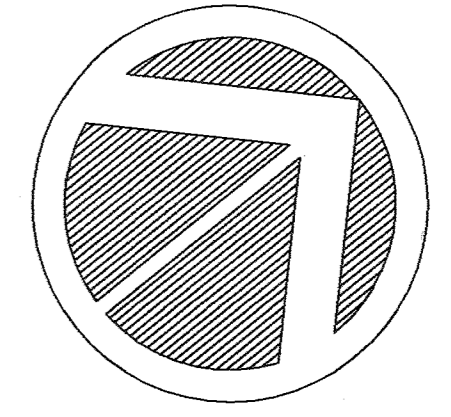
APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.	
DIRECTOR <i>Mark D. Wright</i>	DATE 3/15/04
CHIEF, DEVELOPMENT ENGINEERING DIVISION <i>John Demme</i>	DATE 2/20/04
CHIEF, DIVISION OF LAND DEVELOPMENT <i>Wanda Hamstra</i>	DATE 2/11/04
6-15-05 CHANGED SHEET NO.	
1-6-05 CHANGED SHEET NO.	
DATE NO.	REVISION
DEVELOPER/OWNER:	
(OWNER) CHASE LIMITED PARTNERSHIP P.O. BOX 250 LAUREL, MD 20725 410.742.1234	(DEVELOPER) CHASE MINING LLC P.O. BOX 250 LAUREL, MD 20725 410.742.1234
PROJECT CHASE QUARRY	
AREA ZONED M-1 & MXP-3, TAX MAP No. 43 PARCEL 234 & P.O. 235, BLOCK 19 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND	
TITLE LANDSCAPE PLAN	
Patton Harris Rust & Associates, pc Engineers, Surveyors, Planners, Landscape Architects. 8818 Centre Park Drive Columbia, MD 21045 T 410.997.8900 F 410.997.9282	
DESIGNED BY : D.T.D.	
DRAWN BY : A.J.L.	
CHECKED BY : D.T.D.	
PROJECT NO : 99092/ L-26.DWG	
DATE : JANUARY 29, 2004	
SCALE : 1" = 50'	
DRAWING NO. 29 OF 25	

NOTE 1.)
SEE SHEETS 2 AND 3 FOR
OVERALL PERIMETER DISPLAY

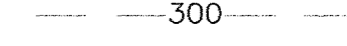








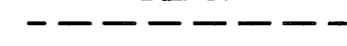


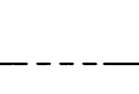
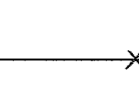
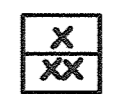
NOTE 2)
SEE SHEET 35 FOR PLANTING
DETAILS, PLANT MATERIAL
SCHEDULES, COUNTY LANDSCAPE
REQUIREMENT TABLES.



Scott R. Wright



LEGEND

-  300 EXISTING CONTOURS
-  EXISTING TREE LINE
-  PROPOSED TREE LINE
-  EXISTING ROAD
-  EXISTING BOUNDARY LINE
-  EXISTING BUILDING
-  EXISTING STREAM
-  APPROXIMATE LOCATION OF BENCH FOR BERM
-  BERM RIDGE LINE
-  EXISTING SOILS
-  EASEMENT
-  EXISTING FENCE
-  PERIMETER PLANTING NOT REQUIRED BY HOWARD COUNTY & NOT BONDED
-  PERIMETER PLANTING REQUIRED BY HOWARD COUNTY & BONDED
-  PARKING LOT PLANT MATERIAL REQUIRED BY HOWARD COUNTY & BONDED






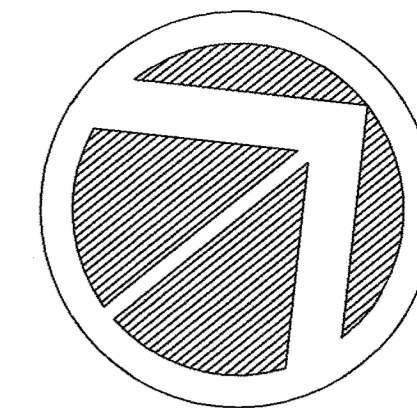
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MATCHLINE SEE SHEET LSCP-30










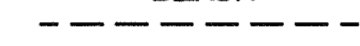



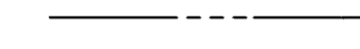

NOTE 1.)
SEE SHEETS 2 AND 3 FOR
OVERALL PERIMETER DISPLAY

NOTE 2.)
SEE SHEET 35 FOR PLANTING
DETAILS, PLANT MATERIAL
SCHEDULES, COUNTY LANDSCAPE
REQUIREMENT TABLES.

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.	
DIRECTOR <i>Mark D. English</i>	DATE 2/15/04
CHIEF, DEVELOPMENT ENGINEERING DIVISION <i>Mike Damann</i>	DATE 2/20/04
CHIEF, DIVISION OF LAND DEVELOPMENT <i>Cindy Hamata</i>	DATE 2/11/04
6-15-03  CHANGED SHEET NO.	
1-6-03  CHANGED SHEET NO.	
DATE NO.	REVISION
DEVELOPER/OWNER:	
(OWNER) CHASE LIMITED PARTNERSHIP P.O. BOX 250 LAUREL, MD 20725 410.742.7234	(DEVELOPER) CHASE MINING LLC P.O. BOX 250 LAUREL, MD 20725 410.742.7234
PROJECT CHASE QUARRY	
AREA ZONED M-1 & MXD-3, TAX MAP No. 43 PARCEL 234 & P.O. 235, BLOCK 19 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND	
TITLE LANDSCAPE PLAN	
Patton Harris Rust & Associates, pc Engineers, Surveyors, Planners, Landscape Architects. 8818 Centre Park Drive Columbia, MD 21045 T 410.997.8900 F 410.997.9282	
	
DESIGNED BY : D.T.D.	DRAWN BY : A.J.L.
CHECKED BY : D.T.D.	PROJECT NO : 99092/ L-29.DWG
DATE : JANUARY 29, 2004	SCALE : 1" = 50'
DRAWING NO. 30 OF 33	

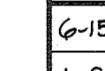
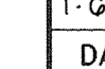


LEGEND

-  300 EXISTING CONTOURS
-  EXISTING TREE LINE
-  PROPOSED TREE LINE
-  EXISTING ROAD
-  EXISTING BOUNDARY LINE
-  EXISTING BUILDING
-  EXISTING STREAM
-  APPROXIMATE LOCATION OF BENCH FOR BERM
-  BERM RIDGE LINE
-  EXISTING SOILS
-  EASEMENT
-  EXISTING FENCE
-  PERIMETER PLANTING NOT REQUIRED BY HOWARD COUNTY & NOT BONDED
-  PERIMETER PLANTING REQUIRED BY HOWARD COUNTY & BONDED
-  PARKING LOT PLANT MATERIAL REQUIRED BY HOWARD COUNTY & BONDED

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR *Martha D. Taylor* DATE *3/15/04*
 CHIEF, DEVELOPMENT ENGINEERING DIVISION *John D. Harrison* DATE *2/20/04*
 CHIEF, DIVISION OF LAND DEVELOPMENT *Andr. Standa* DATE *2/11/04*

6-15-05  CHANGED SHEET NO.
 1-0-05  CHANGED SHEET NO.

DATE NO. REVISION

DEVELOPER/OWNER:
 (OWNER) CHASE LIMITED PARTNERSHIP (DEVELOPER) CHASE MINING LLC
 P.O. BOX 250 P.O. BOX 250
 LAUREL, MD 21025 LAUREL, MD 21025
 410.742.7234 410.742.7234

PROJECT
CHASE QUARRY

AREA ZONED M-1 & MXD-3, TAX MAP No. 43
 PARCEL 234 & P.O. 235, BLOCK 14
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

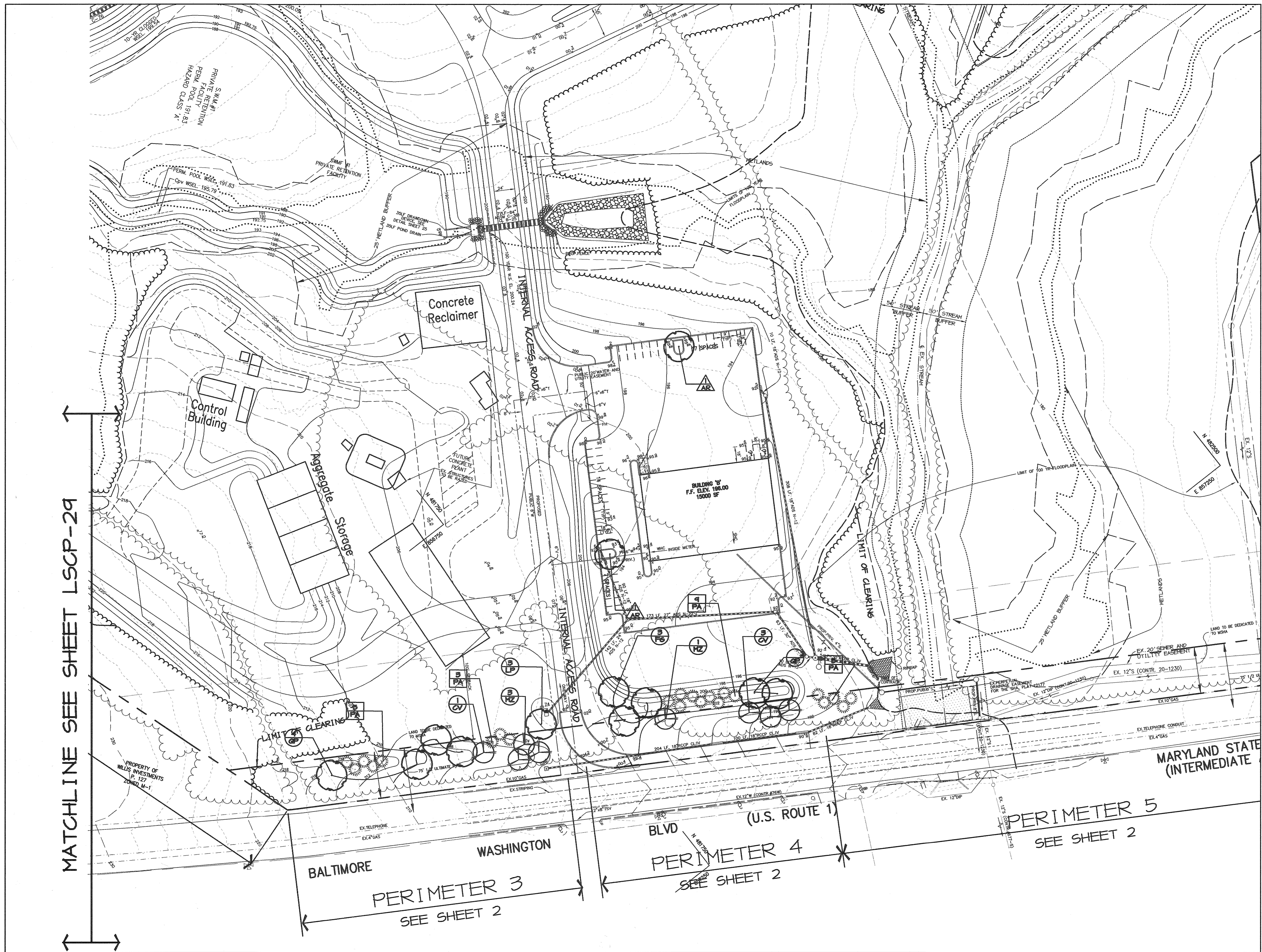
TITLE
LANDSCAPE PLAN

Patton Harris Rust & Associates, PC
 Engineers, Surveyors, Planners, Landscape Architects.
 8818 Centre Park Drive
 Columbia, MD 21045
 T 410.997.8900
 F 410.997.9282

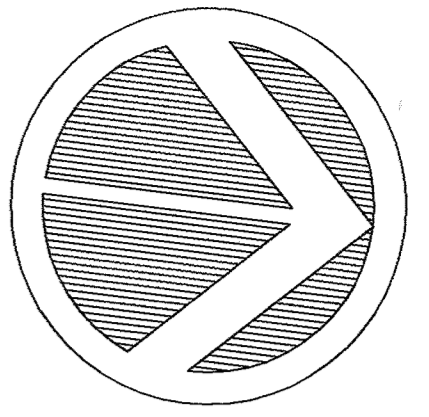
DESIGNED BY : D.T.D.
 DRAWN BY : A.J.L.
 CHECKED BY : D.T.D.
 PROJECT NO : 99092/
 L-30.DWG
 DATE : JANUARY 29, 2004
 SCALE : 1" = 50'
 DRAWING NO. 31 OF 35



MATCHLINE SEE SHEET LSCP-29

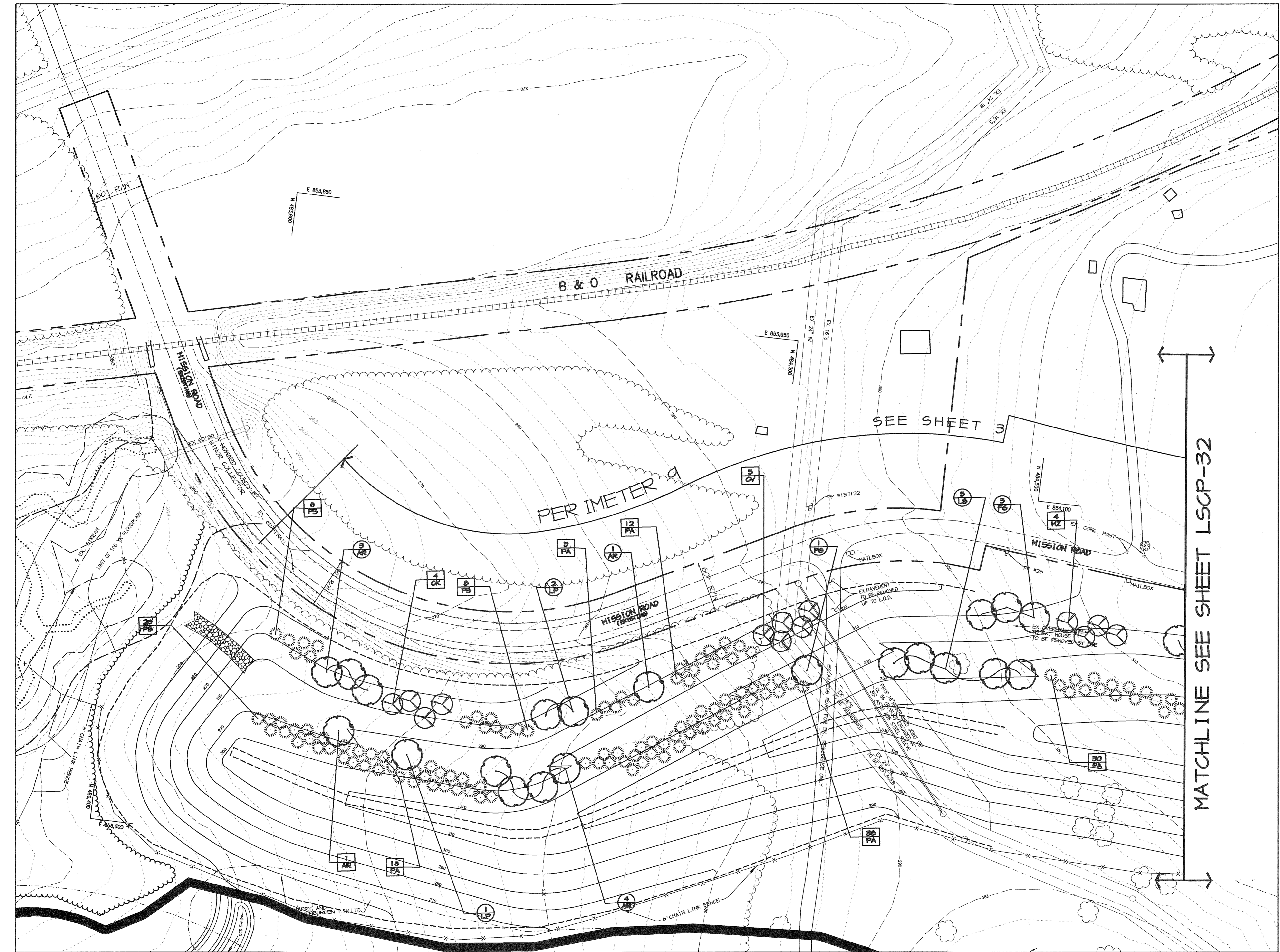


NOTE 1.)
 SEE SHEETS 2 AND 3 FOR
 OVERALL PERIMETER DISPLAY
 NOTE 2)
 SEE SHEET 35 FOR PLANTING
 DETAILS, PLANT MATERIAL
 SCHEDULES, COUNTY LANDSCAPE
 REQUIREMENT TABLES.



LEGEND

- 300 EXISTING CONTOURS
- EXISTING TREE LINE
- PROPOSED TREE LINE
- EXISTING ROAD
- EXISTING BOUNDARY LINE
- EXISTING BUILDING
- EXISTING STREAM
- APPROXIMATE LOCATION OF BENCH FOR BERM
- BERM RIDGE LINE
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- EASEMENT
- EXISTING FENCE
- PERIMETER PLANTING NOT REQUIRED BY HOWARD COUNTY & NOT BONDED
- PERIMETER PLANTING REQUIRED BY HOWARD COUNTY & BONDED
- PARKING LOT PLANT MATERIAL REQUIRED BY HOWARD COUNTY & BONDED



SEE SHEET 3

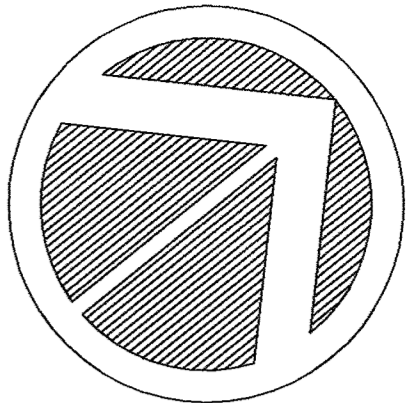
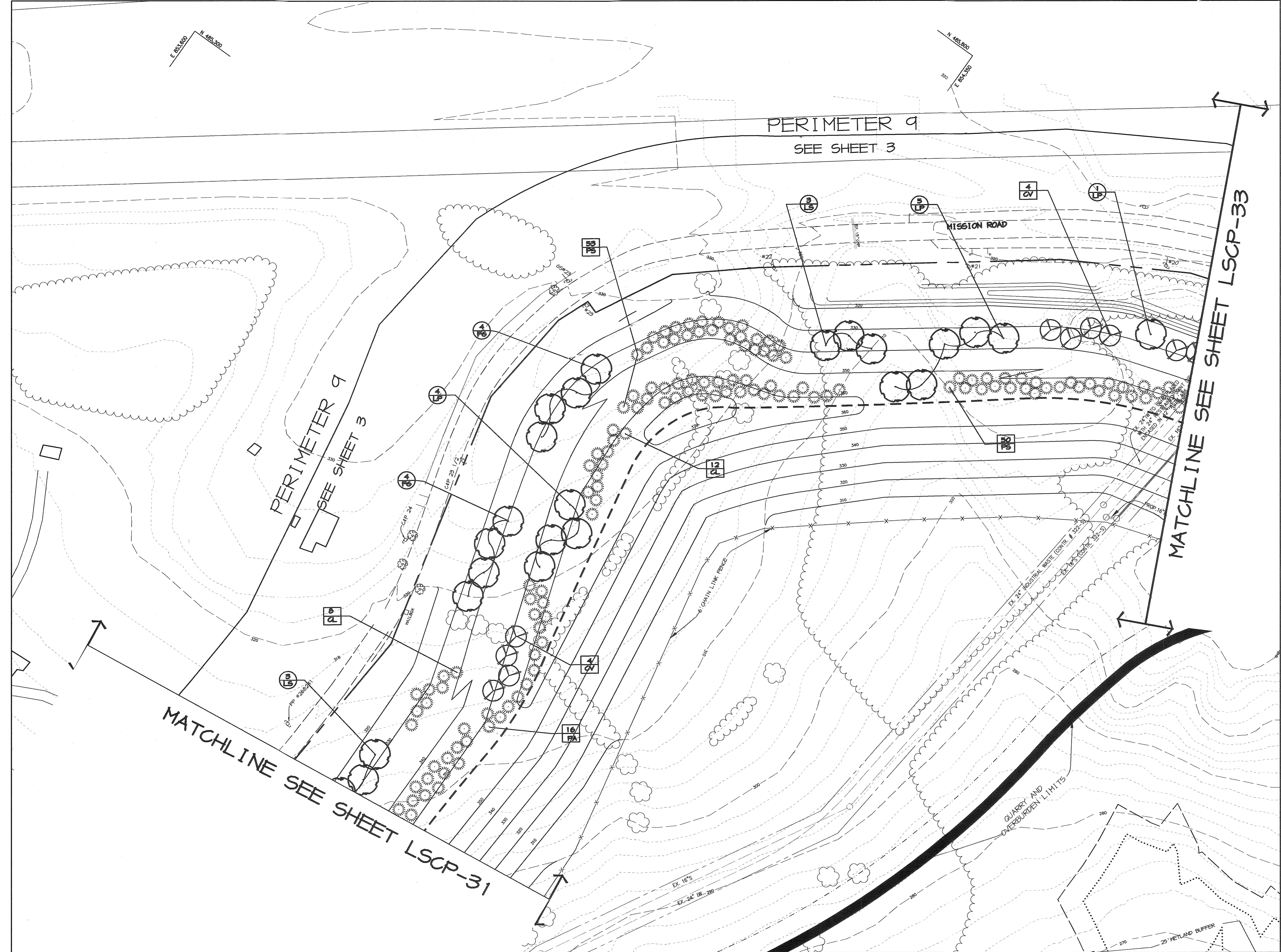
MATCHLINE SEE SHEET LSCP-32

NOTE 1.)
SEE SHEETS 2 AND 3 FOR
OVERALL PERIMETER DISPLAY

NOTE 2)
SEE SHEET 35 FOR PLANTING
DETAILS, PLANT MATERIAL
SCHEDULES, COUNTY LANDSCAPE
REQUIREMENT TABLES.

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.	
<i>Denise L. Wright</i>	3/15/04
DIRECTOR	DATE
<i>Chad Deussen</i>	2/20/04
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
<i>Janis Hamilton</i>	2/11/04
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE
6-20-05 CHANGED SHEET NO.	
1-0-05 CHANGED SHEET NO.	
DATE NO.	REVISION
DEVELOPER/OWNER:	
(OWNER) CHASE LIMITED PARTNERSHIP P.O. BOX 850 LAUREL, MD 207125 410.742.7234	(DEVELOPER) CHASE MINING LLC P.O. BOX 850 LAUREL, MD 207125 410.742.7234
PROJECT CHASE QUARRY	
AREA ZONED M-1 & MXD-3, TAX MAP No. 43 PARCEL 234 & P.O. 235, BLOCK 14 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND	
TITLE LANDSCAPE PLAN	
Patton Harris Rust & Associates, PC Engineers, Surveyors, Planners, Landscape Architects. 8818 Centre Park Drive Columbia, MD 21045 T 410.997.8900 F 410.997.9282	
DESIGNED BY : D.T.D.	
DRAWN BY : A.J.L.	
CHECKED BY : D.T.D.	
PROJECT NO : 99092/ L-31.DWG	
DATE : JANUARY 29, 2004	
SCALE : 1" = 50'	
DRAWING NO. 32 OF 35	

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LEGEND

- 300 EXISTING CONTOURS
- EXISTING TREE LINE
- PROPOSED TREE LINE
- EXISTING ROAD
- EXISTING BOUNDARY LINE
- EXISTING BUILDING
- EXISTING STREAM
- APPROXIMATE LOCATION OF BENCH FOR BERM
- BERM RIDGE LINE
- EXISTING SOILS
- EASEMENT
- EXISTING FENCE
- PERIMETER PLANTING NOT REQUIRED BY HOWARD COUNTY & NOT BONDED
- PERIMETER PLANTING REQUIRED BY HOWARD COUNTY & BONDED
- PARKING LOT PLANT MATERIAL REQUIRED BY HOWARD COUNTY & BONDED

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
 DIRECTOR *David H. Laughlin* DATE 2/10/04
 CHIEF, DEVELOPMENT ENGINEERING DIVISION *Mike Dammann* DATE 2/20/04
 CHIEF, DIVISION OF LAND DEVELOPMENT *Chris Hamilton* DATE 2/11/04

6-20-05 CHANGED SHEET NO.
 1-6-05 CHANGED SHEET NO.

DEVELOPER/OWNER:
 (OWNER) CHASE LIMITED PARTNERSHIP (DEVELOPER) CHASE MINING LLC
 P.O. BOX 250 P.O. BOX 250
 LAUREL, MD 20725 LAUREL, MD 20725
 410.742.7234 410.742.7234

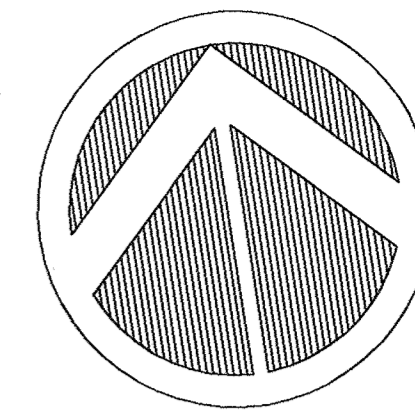
PROJECT
CHASE QUARRY
 AREA ZONED M-1 & MXP-3, TAX MAP No. 43
 PARCEL 234 & P.O. 235, BLOCK 14
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE
LANDSCAPE PLAN
Patton Harris Rust & Associates, PC
 Engineers, Surveyors, Planners, Landscape Architects.
 8818 Centre Park Drive
 Columbia, MD 21045
 T 410.997.8900
 F 410.997.9282

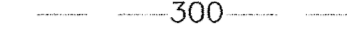








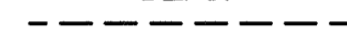


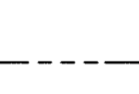
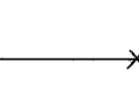
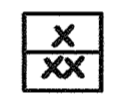
DESIGNED BY : D.T.D.
 DRAWN BY : A.J.L.
 CHECKED BY : D.T.D.
 PROJECT NO : 99092/
 L-32.DWG
 DATE : JANUARY 29, 2004
 SCALE : 1" = 50'
 DRAWING NO. 33 OF 35

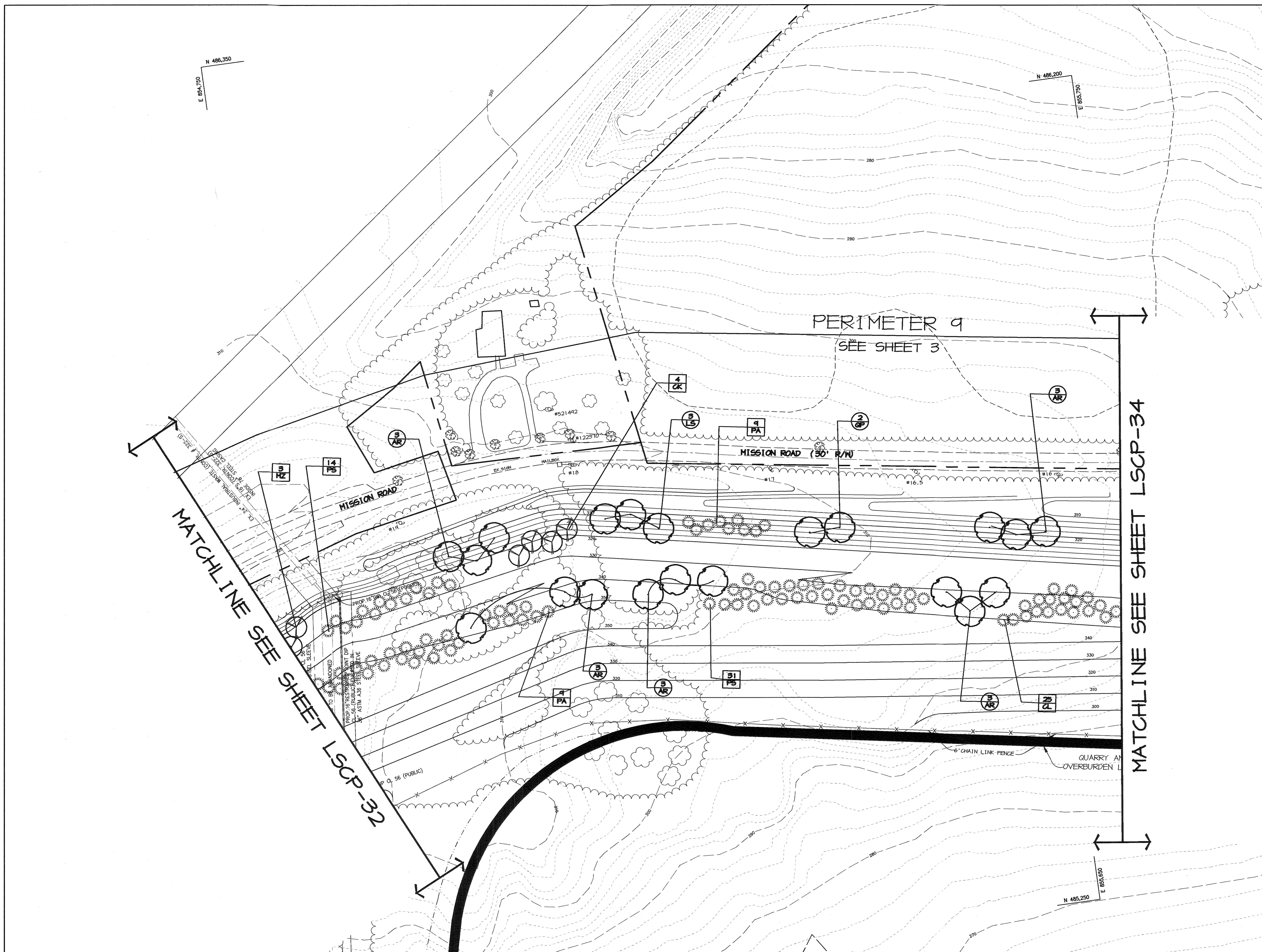


NOTE 1.)
 SEE SHEETS 2 AND 3 FOR
 OVERALL PERIMETER DISPLAY
 NOTE 2)
 SEE SHEET 35 FOR PLANTING
 DETAILS, PLANT MATERIAL
 SCHEDULES, COUNTY LANDSCAPE
 REQUIREMENT TABLES.



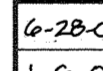
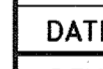
LEGEND

-  300 EXISTING CONTOURS
-  EXISTING TREE LINE
-  PROPOSED TREE LINE
-  EXISTING ROAD
-  EXISTING BOUNDARY LINE
-  EXISTING BUILDING
-  EXISTING STREAM
-  APPROXIMATE LOCATION OF BENCH FOR BERM
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-  PERIMETER PLANTING NOT REQUIRED BY HOWARD COUNTY & NOT BONDED
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-  PARKING LOT PLANT MATERIAL REQUIRED BY HOWARD COUNTY & BONDED



NOTE 1.)
SEE SHEETS 2 AND 3 FOR
OVERALL PERIMETER DISPLAY

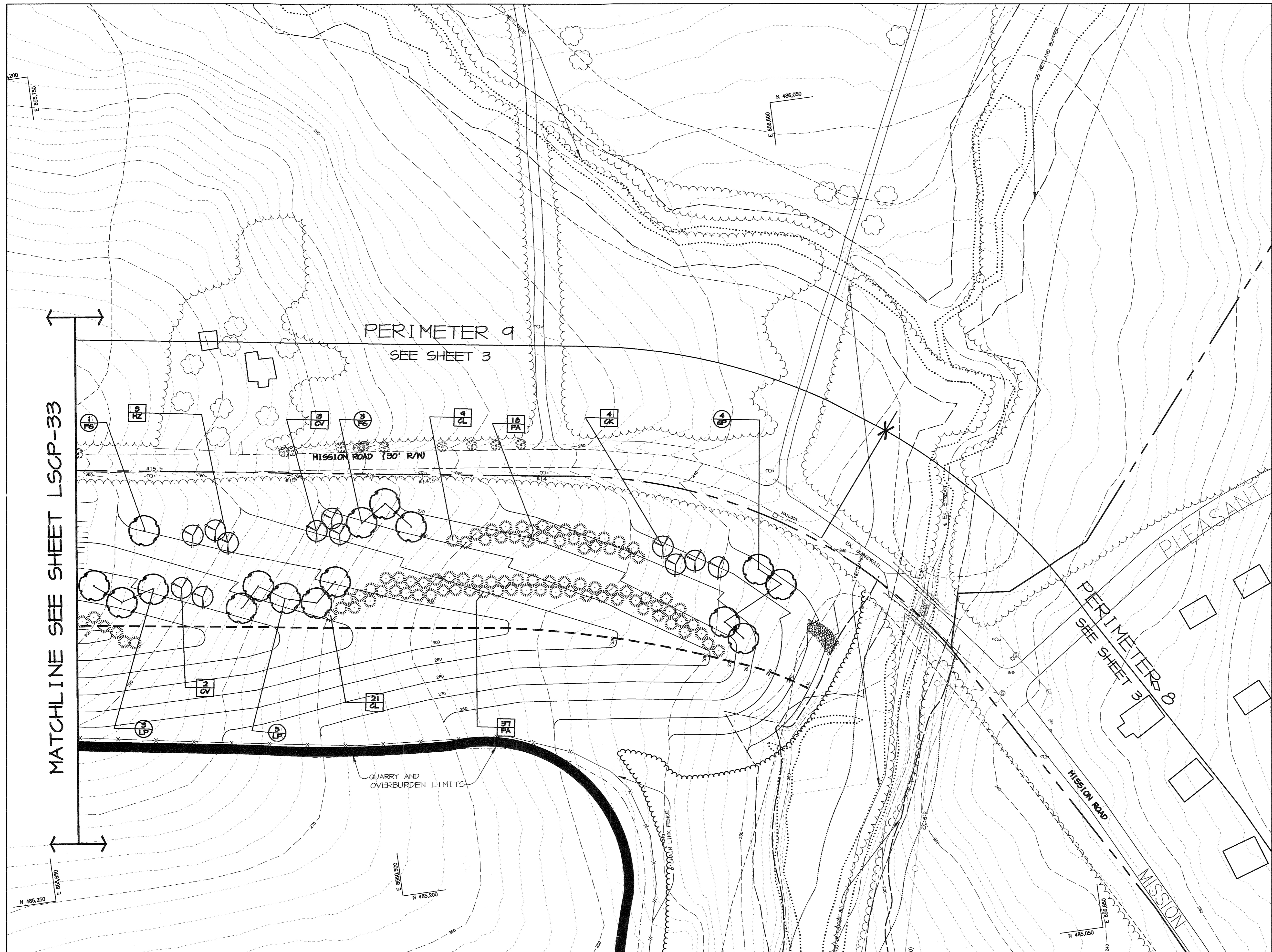
NOTE 2.)
SEE SHEET 35 FOR PLANTING
DETAILS, PLANT MATERIAL
SCHEDULES, COUNTY LANDSCAPE
REQUIREMENT TABLES.

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.	
<i>Dwight L. Taylor</i>	3/15/04 DATE
<i>John Dammann</i>	2/28/04 DATE
<i>Janis Kramida</i>	3/11/04 DATE
6-28-05  CHANGED SHEET NO.	
1-6-05  CHANGED SHEET NO.	
DATE NO.	REVISION
DEVELOPER/OWNER:	
(OWNER) CHASE LIMITED PARTNERSHIP P.O. BOX 850 LAUREL, MD 20725 410.742.7234	(DEVELOPER) CHASE MINING LLC P.O. BOX 850 LAUREL, MD 20725 410.742.7234
PROJECT CHASE QUARRY	
AREA ZONED M-1 & MXD-3, TAX MAP No. 43 PARCEL 234 & P.O. 235, BLOCK 14 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND	
TITLE LANDSCAPE PLAN	
Patton Harris Rust & Associates, pc Engineers, Surveyors, Planners, Landscape Architects. 8818 Centre Park Drive Columbia, MD 21045 T 410.997.8900 F 410.997.9282	
DESIGNED BY : D.T.D.	
DRAWN BY : A.J.L.	
CHECKED BY : D.T.D.	
PROJECT NO : 99092/ L-33.DWG	
DATE : JANUARY 29, 2004	
SCALE : 1" = 50'	
DRAWING NO. 34 OF 35	



Scott R. Welford

P:\project\99092\1-0\Eng\Plans\L-33.dwg, Layout1, 01/29/2004 11:33:22 AM, HP750C(6).pc3, Arch D - 24 x 36 in. (landscape), 1:1



MATCHLINE SEE SHEET LSCP-33

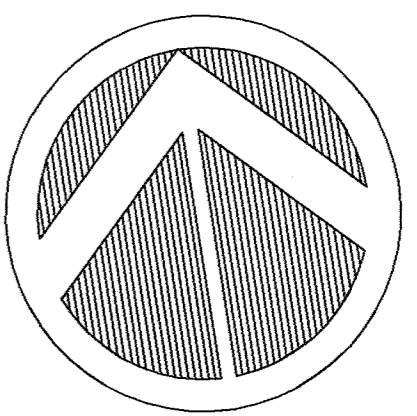
PERIMETER 9
SEE SHEET 3

PERIMETER 8
SEE SHEET 3












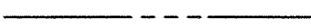



MISSION ROAD

PLEASANT

MATCHLINE SEE SHEET LSCP-33



LEGEND



-  EXISTING CONTOURS
-  EXISTING TREE LINE
-  PROPOSED TREE LINE
-  EXISTING ROAD
-  EXISTING BOUNDARY LINE
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-  PERIMETER PLANTING NOT REQUIRED BY HOWARD COUNTY & NOT BONDED
-  PERIMETER PLANTING REQUIRED BY HOWARD COUNTY & BONDED
-  PARKING LOT PLANT MATERIAL REQUIRED BY HOWARD COUNTY & BONDED

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Maude L. Laughlin 5/15/04
DIRECTOR DATE

John DeWitt 2/20/04
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Cindy Hamilton 3/11/04
CHIEF, DIVISION OF LAND DEVELOPMENT #8 DATE

6-28-03  CHANGED SHEET NO.
1-6-05  CHANGED SHEET NO.

DATE NO.	REVISION

DEVELOPER/OWNER:


(OWNER) CHASE LIMITED PARTNERSHIP P.O. BOX 950 LAUREL, MD 207125 410.742.7234	(DEVELOPER) CHASE MINING LLC P.O. BOX 950 LAUREL, MD 207125 410.742.7234
---	--

PROJECT
CHASE QUARRY

AREA ZONED M-1 & MXP-3, TAX MAP No. 43
PARCEL 234 & P.O. 235, BLOCK 19
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
LANDSCAPE PLAN

Patton Harris Rust & Associates, PC
Engineers, Surveyors, Planners, Landscape Architects.
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

	DESIGNED BY : D.T.D.
	DRAWN BY : A.J.L.
	CHECKED BY : D.T.D.
	PROJECT NO : 99092/ L-34.DWG
	DATE : JANUARY 29, 2004
	SCALE : 1" = 50'
	DRAWING NO. 35 OF 35

NOTE 1.)
SEE SHEETS 2 AND 3 FOR
OVERALL PERIMETER DISPLAY

NOTE 2.)
SEE SHEET 35 FOR PLANTING
DETAILS, PLANT MATERIAL
SCHEDULES, COUNTY LANDSCAPE
REQUIREMENT TABLES.

PLANTING SPECIFICATIONS

- Plants, related material, and operations shall meet the detailed description as given on the plans and as described herein.
- All plant material, unless otherwise specified, shall be nursery grown, uniformly branched, have a vigorous root system, and shall conform to American Association of Nurserymen (AAN) Standards. Plant material shall be healthy, vigorous, free from defects, decay, disfiguring roots, sunscald injuries, abrasions of the bark, plant disease, insect pest eggs, borers and all forms of insect infestations or objectionable disfigurements. Plant material that is weak or which has been cut back from larger grades to meet specified requirements will be rejected. Trees with forked leaders will not be accepted. All plants shall be freshly dug; no healed-in plants or plants from cold storage will be accepted.
- Unless otherwise specified, all general conditions, planting operations, details and planting specification shall conform to "Landscape Specification Guidelines for Baltimore-Washington Metropolitan Areas", (hereinafter "Landscape Guidelines") approved by the Landscape Contractors Association of Metropolitan Washington and the Potomac Chapter of the American Society of Landscape Architect, latest edition, including all agenda.
- Contractor shall be required to guarantee all plant material for a period of one year after date of acceptance in accordance with the appropriate section of the Landscape Guidelines. Contractor's attention is directed to the maintenance requirements found within the one year specifications including watering and replacement of specified plant material.
- Contractor shall be responsible for notifying utility companies, utility contractors and "Miss Utility" a minimum of 48 hours prior to beginning any work. Contractor may make minor adjustments in spacing and location of plant material to avoid conflicts with utilities. Damage to existing structure and utilities shall be repaired at the expense of the Contractor.
- Protection of existing vegetation to remain shall be accomplished by the temporary installation of 4 foot high snow fence at the drip line.
- Contractor is responsible for installing all material in the proper planting season for each plant type. All planting is to be completed within growing season of completion of site construction.
- Bid shall be based on actual site conditions. No extra payment shall be made for work arising from site conditions differing from those indicated on drawings and specifications.
- Plant quantities are provided for the convenience of the contractor only. If discrepancies exist between quantities shown on plan and those shown on the plant list, the quantities on the plan take precedence.
- All shrubs and groundcover areas shall be planted in continuous prepared planting beds mulched with composted hardwood mulch as detailed and specified except where noted on plans.
- Positive drainage shall be maintained in planting beds (minimum 2 percent slope).
- Planting mix shall be as follows: Deciduous Plants - Two parts topsoil, one part well-rotted cow or horse manure. Add 3 lbs of standard fertilizer per cubic yard of planting mix. Evergreen Plants - two parts topsoil, one part humus or other approved organic material. Add 3 lbs. of evergreen (acidic) fertilizer per cubic yard of planting mix. Topsoil shall conform to the Landscape Guidelines.
- Weed Control: Incorporate a pre-emergent herbicide into the planting bed following recommended rates on the label. Caution: Be sure to carefully check the chemical used to assure its adaptability to the specific groundcover to be treated.
- Mulch: Groundcover beds should be mulched with minimum 2 inches of shredded composted hardwood, or as specified on the details, whichever is greater.
- All areas within contract limits disturbed during or prior to construction not designated to receive plants and mulch shall be fine graded and seeded.
- This plan is intended for landscape use only. See other plan sheets for more information on grading, sediment control, layout, etc.

HOWARD COUNTY REQUIRED & BONDED PLANT MATERIAL						
KEY	QTY	BOTANICAL + COMMON NAME	SIZE	ROOT	REMARKS	
AR	41	Acer rubrum 'October Glory'	2 1/2" - 3" Cal.	B & B	Full Crown Central Leader	
LS	17	Liquidambar styraciflua American Sweetgum	2 1/2" - 3" Cal.	B & B	Full Crown Central Leader	
QP	15	Quercus palustris Pin Oak	2 1/2" - 3" Cal.	B & B	Full Crown Central Leader	
F6	23	Fagus grandifolia American Beech	2 1/2" - 3" Cal.	B & B	Full Crown Central Leader	
LP	28	Plantanus x acerifolia 'Bloodgood'	2 1/2" - 3" Cal.	B & B	Specimen	
IO	4	Ilex opaca American Holly	6' - 8' Ht.	B & B	Full Form Central Leader	
PA	17	Picea abies Norway Spruce	6' - 8' Ht.	B & B	Full Form Central Leader	
PS	33	Pinus strobus White Pine	6' - 8' Ht.	B & B	Sheared Full Form	
CV	8	Creataegus var 'Wintering' Wintering Hawthorn	1 1/2" - 2" Cal.	B & B	Specimen	
MZ	6	Malus x 'Profusion' Profusion Crabapple	1 1/2" - 2" Cal.	B & B	Specimen	

HOWARD COUNTY NON-REQUIRED & NON-BONDED PLANT MATERIAL						
KEY	QTY	BOTANICAL + COMMON NAME	SIZE	ROOT	REMARKS	
AR	-	Acer rubrum 'October Glory'	2 1/2" - 3" Cal.	B & B	Full Crown Central Leader	
LS	-	Liquidambar styraciflua American Sweetgum	2 1/2" - 3" Cal.	B & B	Full Crown Central Leader	
QP	-	Quercus palustris Pin Oak	2 1/2" - 3" Cal.	B & B	Full Crown Central Leader	
F6	-	Fagus grandifolia American Beech	2 1/2" - 3" Cal.	B & B	Full Crown Central Leader	
LP	-	Plantanus x acerifolia 'Bloodgood'	2 1/2" - 3" Cal.	B & B	Full Crown Central Leader	
CL	83	Cupressocyparis leylandii Leyland Cypress	6' - 8' Ht.	B & B	Full Form Central Leader	
PA	245	Picea abies Norway Spruce	6' - 8' Ht.	B & B	Full Form Central Leader	
PS	162	Pinus strobus White Pine	6' - 8' Ht.	B & B	Sheared Full Form	
CK	12	Cornus kousa Chinese Dogwood	1 1/2" - 2" Cal.	B & B	Specimen	
CV	18	Creataegus var. 'Wintering' Wintering Hawthorn	1 1/2" - 2" Cal.	B & B	Specimen	
MZ	10	Malus x 'Profusion' Profusion Crabapple	1 1/2" - 2" Cal.	B & B	Specimen	

PARKING LOT INTERNAL LANDSCAPING		
PARKING LOT	1	2
NUMBER OF PARKING SPACES	50 SP.	45 SP.
NUMBER OF SHADE TREES/ISLANDS* REQUIRED (1/20 SPACES)	2	2
NUMBER OF TREES PROVIDED		
SHADE TREES	2	2
OTHER TREES (2:1 SUBSTITUTION)	-	-
NUMBER OF ISLANDS REQUIRED	2	2
NUMBER OF ISLANDS PROVIDED	11	2

* 200 SF PLANTING AREA / ISLAND

PERIMETER	ADJACENT TO PERIMETER PROPERTIES				ADJACENT TO ROADWAYS					
	2	6	7	10 **	1	3	4	5	8	9
LANDSCAPE TYPE	C	C	C	-	B	B	E	D	D	D
LINEAR FEET OF ROADWAY FRONTAGE/ PERIMETER	± 2,700'	± 450'	± 540'	-	± 675'	± 325'	± 280'	± 1,780'	± 1,700'	± 4,875'
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	YES 1,975'	YES 450'	YES 540'	NO	NO	NO	NO	YES 1,780'	YES 1,700'	NO
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	NO	NO	NO	NO	YES ± 325'	YES ± 280'	NO	NO	YES ± 4,875'
NUMBER OF PLANTS REQUIRED										
SHADE TREES	±1/40' = 18	N/A ***	N/A ***	N/A	±1/50' = 14	±1/50' = 7	±1/40' = 7	N/A ***	N/A ***	±1/60' = 81
EVERGREEN TREES	±1/20' = 37	-	-	-	±1/40' = 17	-	-	-	-	N/A *
SHRUBS	-	-	-	-	-	-	-	-	-	-
NUMBER OF PLANTS PROVIDED										
SHADE TREES	16	-	-	-	11	5	5	-	-	81
EVERGREEN TREES	37	-	-	-	17	4	4	-	-	448
SMALL FLOWERING TREES	4	-	-	-	6	4	4	-	-	40
SHRUBS	-	-	-	-	-	-	-	-	-	-

PERIMETER NOTES:

- * BERMS MAY BE SUBSTITUTED FOR EVERGREEN TREES OR SHRUBS IN MEETING OTHER PERIMETER LANDSCAPE REQUIREMENTS. IN NO INSTANCES WILL BERMS BE SUBSTITUTED FOR REQUIRED SHADE TREE PLANTINGS. [PAGE 25 OF THE HOWARD COUNTY LANDSCAPE MANUAL] HOWEVER, WE ARE PROVIDING EVERGREEN TREES AND SHRUBS AS FOLLOWS:
 PERIMETER 3:
 IF BERM WERE NOT INSTALLED, (8) EVERGREEN TREES WOULD BE REQUIRED.
 PERIMETER 4:
 IF BERM WERE NOT INSTALLED, (70) SHRUBS OR 14 EVERGREEN TREES WOULD BE REQUIRED.
 PERIMETER 9:
 IF BERM WERE NOT INSTALLED, (488) EVERGREEN TREES WOULD BE REQUIRED.
- ** THE REGULATIONS DO NOT REQUIRE LANDSCAPED EDGES, BUFFERING, OR SCREENING BETWEEN INTERNAL LOTS OR PARCELS WITHIN THE SAME DEVELOPMENT.
- *** "UP TO 100% OF THE PLANTING REQUIREMENT MAY BE MET BY PRESERVING EXISTING VEGETATION." (p.24 OF THE HOWARD COUNTY LANDSCAPE MANUAL)

SUBSTITUTION NOTES:

- PERIMETER 1:
(6) FLOWERING TREES WERE SUBSTITUTED FOR (3) SHADE TREES.
- PERIMETER 2:
(4) FLOWERING TREES WERE SUBSTITUTED FOR (2) SHADE TREES.
- PERIMETER 3:
(4) FLOWERING TREES WERE SUBSTITUTED FOR (2) SHADE TREES.
- PERIMETER 4:
(4) FLOWERING TREES WERE SUBSTITUTED FOR (2) SHADE TREES.

NOTES:

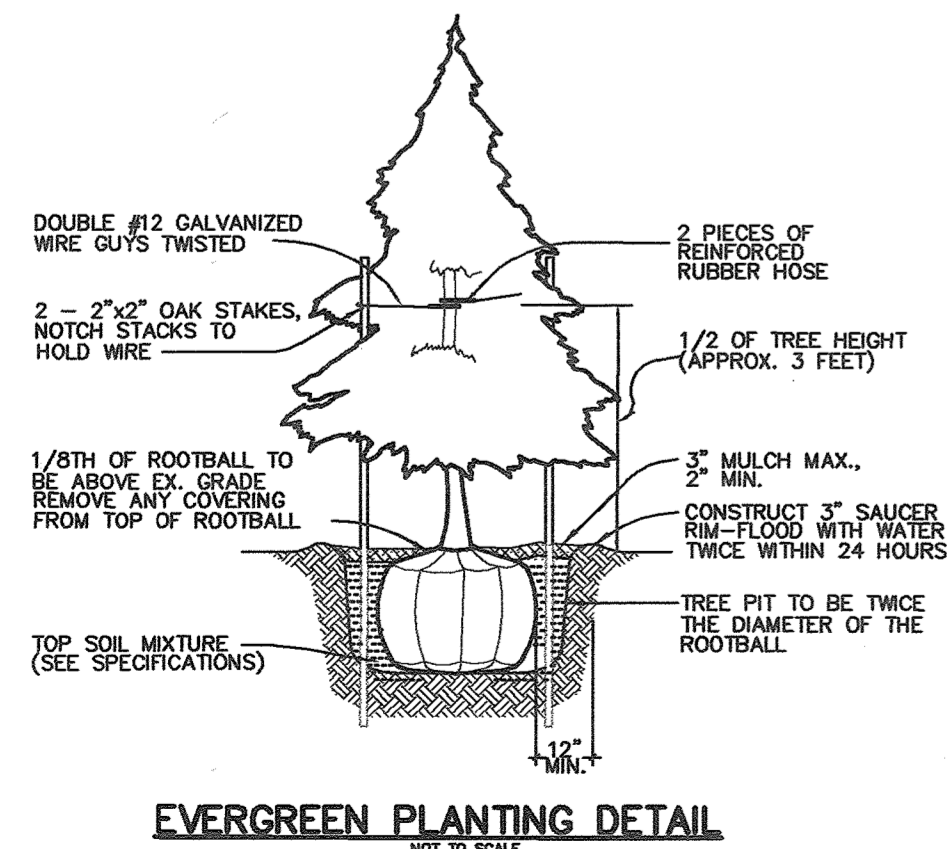
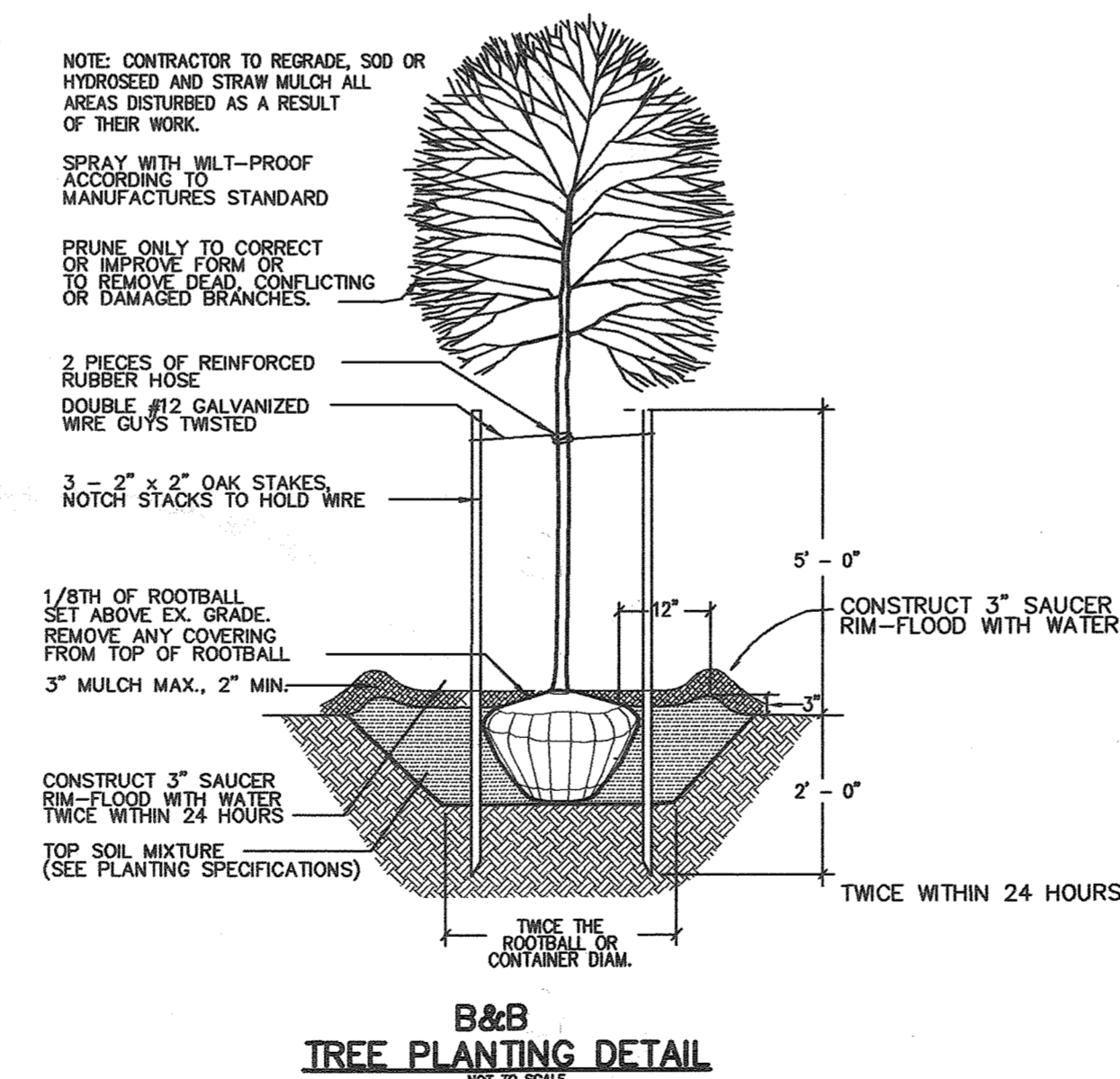
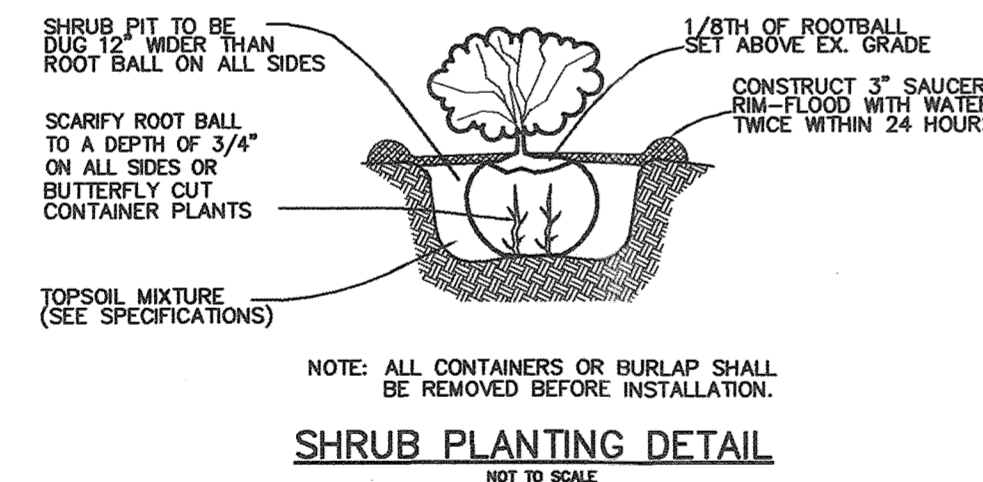
- "THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE ALTERNATE COMPLIANCE WITH THE HOWARD COUNTY RESEARCH AND DEVELOPMENT.
- "FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING WILL BE POSTED WITH THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$ 47,400.
- THIS PLAN IS FOR LANDSCAPING PURPOSES ONLY.
- CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, AND SAFETY PRECAUTIONS AND PROGRAMS.

DEVELOPER'S/BUILDER'S CERTIFICATE:

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

Timothy J. Schmidt
 NAME

1-30-04
 DATE



GENERAL NOTES:

- SEE SHEET 2 & 3 FOR OVERALL PERIMETER DISPLAY.
- SEE SHEETS 28 THROUGH 34 FOR PLANTING PLANS.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Marsha J. Laughlin 2/10/04
 DIRECTOR DATE

John J. ... 2/10/04
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Andy ... 2/10/04
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

6-28-05 CHANGED SHEET NO.
 1-0-05 CHANGED SHEET NO.

DATE NO. REVISION

DEVELOPER/OWNER:
 (OWNER) CHASE LIMITED PARTNERSHIP
 P.O. BOX 250
 LAUREL MD 20725
 410.742.7234
 (DEVELOPER) CHASE MINING LLC
 P.O. BOX 250
 LAUREL MD 20725
 410.742.7234

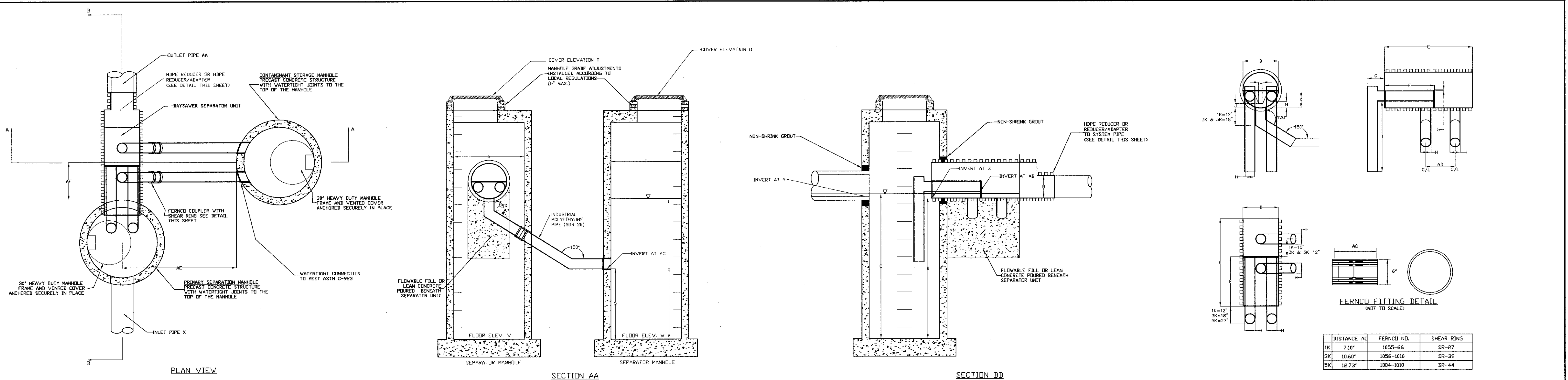
PROJECT
CHASE QUARRY

AREA ZONED M-1 & MXD-3, TAX MAP No. 43
 PARCEL 234 & P.O. 235, BLOCK 19
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE
LANDSCAPE PLAN SPECIFICATIONS & DETAILS
Patton Harris Rust & Associates, pc
 Engineers, Surveyors, Planners, Landscape Architects.
 8818 Centre Park Drive
 Columbia, MD 21045
 T 410.997.8900
 F 410.997.9282

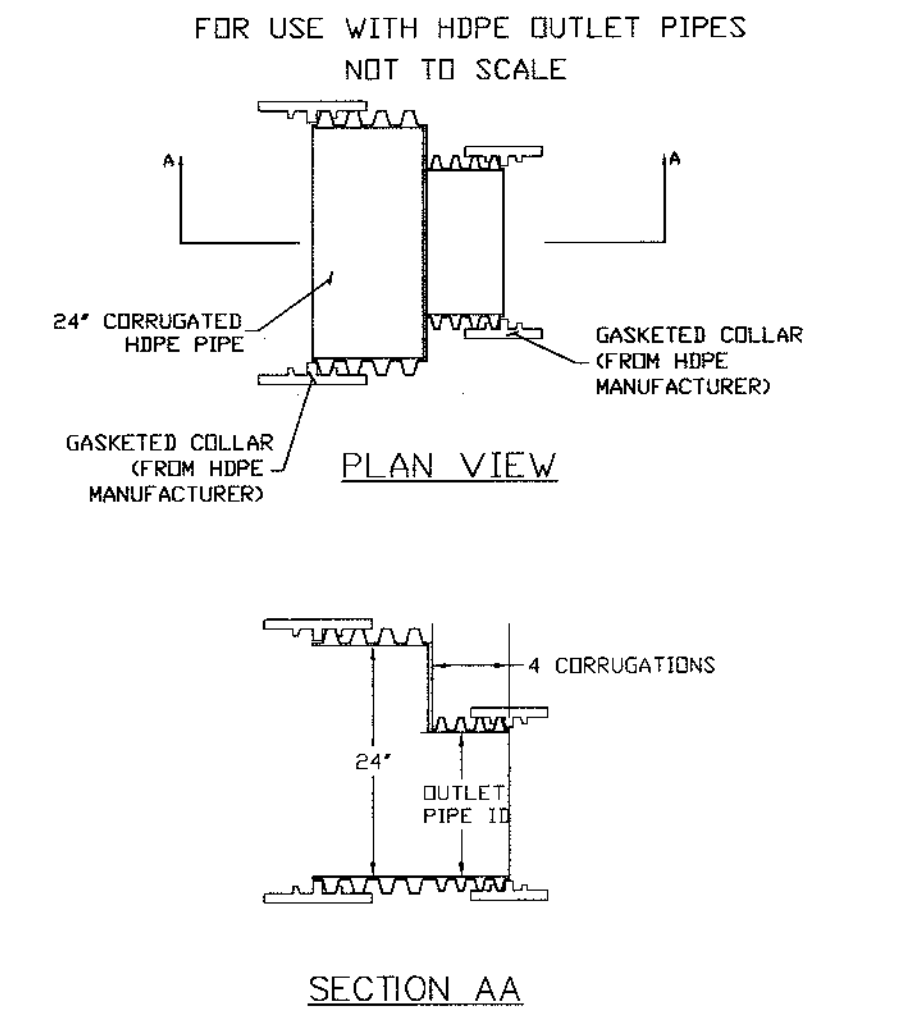
DESIGNED BY: D.T.D.
 DRAWN BY: A.J.L.
 CHECKED BY: D.T.D.
 PROJECT NO: 99092/L-35.DWG
 DATE: JANUARY 29, 2004
 SCALE: NO SCALE
 DRAWING NO. 36 OF 55

Scott P. ...

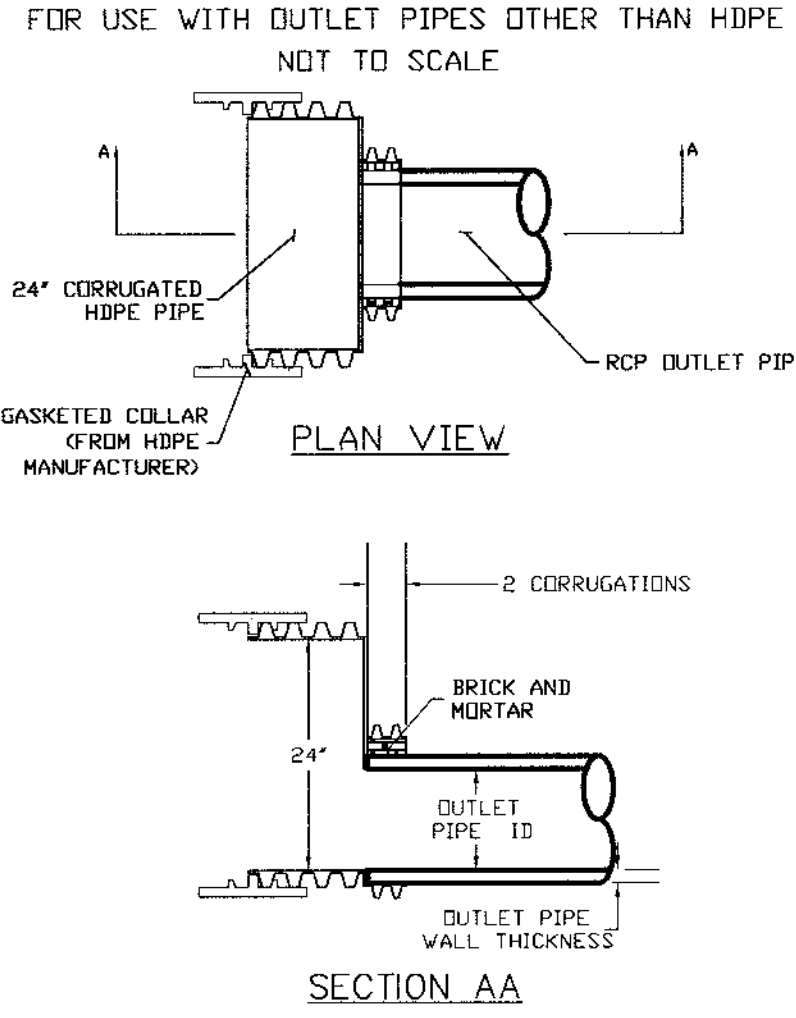


DISTANCE AC	FERNCO NO.	SHEAR RING
1K 7.10'	1055-66	SR-27
3K 10.60'	1056-1010	SR-39
5K 12.73'	1004-1010	SR-44

HDPE-HDPE REDUCER DETAIL



REDUCER/ADAPTER DETAIL



- GENERAL CONSTRUCTION NOTES**
- ALL WORK MUST BE DONE WITH REGARD TO THE SAFETY OF THE CONSTRUCTION CREW.
 - ALL WORK AND MATERIALS MUST COMPLY WITH APPLICABLE STATE AND LOCAL REGULATIONS.
 - KNOW THE LOCATION AND DEPTH OF ANY UNDERGROUND UTILITIES BEFORE EXCAVATION BEGINS.

- BAYSAYER MAINTENANCE**
- BAYSAYER SYSTEMS MUST BE INSPECTED AND MAINTAINED PERIODICALLY. INSPECTION IS MADE BY CHECKING THE DEPTH OF SEDIMENT IN EACH MANHOLE WITH A GRADE STICK OR SIMILAR DEVICE. MAINTENANCE IS REQUIRED WHEN THE SEDIMENT DEPTH IN EITHER MANHOLE EXCEEDS 2 FEET. MINIMUM INSPECTION IS REQUIRED TWICE A YEAR TO MAINTAIN OPERATION AND FUNCTION OF BAYSAYER.
- MAINTENANCE CONSISTS OF THE FOLLOWING:
- A. CONTAMINANT STORAGE MANHOLE**
- REMOVE THE ENTIRE VOLUME OF THE CONTAMINATED WATER BY VACUUM TRUCK.
 - CLEAN THE MANHOLE WALLS AND FLUSH OUT THE MANHOLE USING A HIGH PRESSURE HOSE AND REMOVE FLUSHING WATER BY VACUUM TRUCK. MAKE CERTAIN MANHOLE IS CLEAN.
- B. PRIMARY SEPARATION MANHOLE**
- USING A SUBMERSIBLE PUMP, PUMP THE CLEAN WATER FROM THE CENTER OF THE MANHOLE DIRECTLY INTO THE EMPTY STORAGE MANHOLE UNTIL THE WATER LEVEL FALLS TO 1 FOOT ABOVE THE SEDIMENT LAYER.
 - REMOVE THE SETTLED SEDIMENT AND REMAINING WATER BY VACUUM TRUCK.
 - CLEAN THE MANHOLE WALLS AND FLUSH OUT THE MANHOLE USING A HIGH PRESSURE HOSE AND REMOVE FLUSHING WATER BY VACUUM TRUCK. MAKE CERTAIN MANHOLE IS CLEAN.
 - CONTAMINATED MATERIAL REMOVED FROM THE MANHOLES MUST BE DISPOSED OF RESPONSIBLY AND LEGALLY BY THE OPERATOR OF THE VACUUM TRUCK.

- BAYSAYER INSTALLATION INSTRUCTIONS**
- EXCAVATION MUST PROVIDE ADEQUATE SPACE TO CONNECT INLET AND OUTLET PIPES TO SEPARATOR MANHOLE AND BAYSAYER UNIT. INSTALL PRECAST DROP STRUCTURES ON SOLID GROUND AS VERIFIED BY A GEOTECHNICAL ENGINEER.
 - VERIFY THE SUBGRADE ELEVATION AGAINST THE MANHOLE DIMENSIONS AND CONNECTING STORM DRAIN INVERTS.
 - MAKING SURE THE BASES ARE LEVEL AND THE STORAGE MANHOLE OPENINGS ARE ALIGNED WITH THE SEPARATOR UNIT, INSTALL PRIMARY AND STORAGE MANHOLES. INSTALL RUBBER GASKETS ON BASE UNITS AND COAT WITH LUBRICATING GREASE. INSTALL ADDITIONAL MANHOLE SECTIONS AS REQUIRED. SEAL LIFT HOLES WITH NON-SHRINK GROUT.
 - BACKFILL BASE SECTIONS OF MANHOLES TO INVERT OF STORAGE MANHOLE CONNECTING PIPES. USING APPROVED BACKFILL MATERIAL, BACKFILL AND COMPACT IN 8 INCH LIFTS. BACKFILL AND COMPACTION SHOULD BE MONITORED BY A GEOTECHNICAL ENGINEER.
 - INSTALL BAYSAYER SEPARATOR UNIT AND CONNECTING PIPES. SEAL ALL CONNECTING JOINTS AND INSTALL SEPARATOR UNIT/STORM DRAIN JOINT COLLAR. CUT EXCESS LENGTH OFF CONNECTING PIPES INSIDE STORAGE MANHOLE.
 - BACKFILL SEPARATOR UNIT AND MANHOLES. AREAS NOT ACCESSIBLE TO COMPACTION EQUIPMENT MUST BE BACKFILLED WITH LEAN CONCRETE OR FLOWABLE FILL.
 - INSTALL AND SET MANHOLE COVER GRADE ADJUSTMENT RINGS AS NECESSARY.
 - INSTALL AND SET MANHOLE FRAME AND COVER UNITS.

BAYSAYER SYSTEM DIMENSIONS

DESCRIPTION	1K SYSTEM	3K SYSTEM	5K SYSTEM
SEPARATOR MANHOLE DIMENSIONS			
A PRIMARY MANHOLE DIAMETER	48"	60"	72"
B MANHOLE DEPTH BELOW OUTLET	8' - 0"	8' - 0"	8' - 0"
C MINIMUM FLUID DEPTH	8' - 3"	8' - 4 1/2"	8' - 6"
STANDARD SEPARATOR UNIT DIMENSIONS			
D SEPARATOR UNIT ID	24"	36"	48"
E SEPARATOR UNIT LENGTH	60"	78.2"	75.4"
F BYPASS PLATE LENGTH	34"	45"	45"
G WEIR/BYPASS PLATE THICKNESS	3/4"	3/4"	3/4"
H ELBOW AND CONNECTING PIPE OD	7.125"	10.75"	12.75"
I ELBOW LENGTH	48"	48"	48"
J WEIR HEIGHT ABOVE INVERT	3"	4"	6"
K BYPASS PLATE HEIGHT ABOVE INVERT	12"	18"	24"
L WIDTH OF WEIR AT BASE	3"	4 1/2"	6"
M OUTLET PIPE DIAMETER	M	M	M
N ELBOW INVERT HEIGHT ABOVE UNIT INVERT	4 1/2"	7 1/2"	11"
O ELBOW PIPE OVERHANG	12"	18"	24"
STORAGE MANHOLE DIMENSIONS			
P STORAGE MANHOLE DIAMETER	48"	60"	72"
Q MANHOLE DEPTH BELOW INLET/OUTLET	48"	48"	48"
R FLUID DEPTH	8' - 0"	8' - 0"	8' - 0"
S TOTAL STORAGE VOLUME	200 CF	300 CF	450 CF
SYSTEM DIMENSIONS AND ELEVATIONS			
T SEPARATOR MANHOLE COVER ELEVATION	T	T	T
U STORAGE MANHOLE COVER ELEVATION	U	U	U
V SEPARATOR MANHOLE FLOOR ELEVATION	V	V	V
W STORAGE MANHOLE FLOOR ELEVATION	W	W	W
X INLET PIPE ID AND MATERIAL	X1 X2	X1 X2	X1 X2
Y INLET PIPE INVERT	Y1 Y2	Y1 Y2	Y1 Y2
Z SEPARATOR UNIT INVERT	Z	Z	Z
AA OUTLET PIPE ID AND MATERIAL	AA	AA	AA
AB ELBOW INVERT ELEVATION	AB	AB	AB
AC CONNECTING PIPE INVERT ELEVATION	AC	AC	AC
AD CONNECTION PIPE SPACING	20'	24'	24'
AE STORAGE MANHOLE SIDE OFFSET	72 ± 6'	72 ± 6'	72 ± 6'
AF STORAGE MANHOLE DOWNSTREAM OFFSET	23'	31'	25'

SEQUENCE OF CONSTRUCTION AND INSPECTOR'S CHECK-OFF LIST FOR DUAL MANHOLE SEPARATORS

Stage (X = Approval Required)	Developer's/Engineer Approval		Inspector		Geotechnical Engineer	
	Initials	Date	Initials	Date	Initials	Date
1. Pre-Construction Meeting.	X		X		X	
2. Install Manholes and associated storm drainage: a. Obtain approval of subgrade from Geotechnical Engineer. (Subgrade to have a minimum of 95% compaction)					X	
b. Installation of precast base, lower tank and lower piping.	X		X			
c. Backfill and min. 95% compaction around lower tank and lower piping.					X	
d. Installation of precast middle section(s) with separator unit and remaining piping.	X		X			
e. Installation of precast top slab.	X		X			
f. Installation of adjustment rings and frame and cover.	X		X			
g. Installation of flowable fill or concrete backfill.					X	
3. Backfilling operation and compaction.					X	
4. Site is permanently stabilized. Sediment control measures removed and all sediment and debris removed from dual manhole separators.				X		
5. Final inspection.				X		

NOTE:

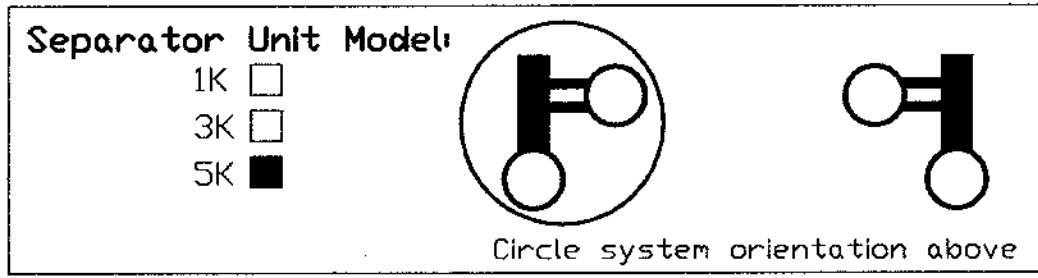
BAYSAYERS ARE TO BE INSTALLED WITH THE STORM DRAIN SYSTEM AND WILL FUNCTION AS SECONDARY SEDIMENT CONTROL DEVICES.

UPON COMPLETION OF SITE STABILIZATION, EACH BAYSAYER SYSTEM SHALL BE FLUSHED CLEAN & THE MANHOLES CLEANED OUT AND REFILLED WITH CLEAN WATER.

Baysaver Separator Unit	Baysaver Manhole Sizes (prim. x stor.)	Maximum Treatment (cfs)*1	Maximum Treatment (gpm)*1	Impervious Area (acres)
1K Baysaver Separator	48x48	2.4	1076	1.2
	48x50	2.4	1076	1.4
	48x72	2.4	1076	1.6
	60x60	2.4	1076	1.5
3K Baysaver Separator	60x60	7.2	3231	3.6
	60x72	7.2	3231	4.1
	60x84	7.2	3231	4.6
	72x72	7.2	3231	4.4
5K Baysaver Separator	72x72	11.1	4981	5.5
	72x84	11.1	4981	6.5
	72x96	11.1	4981	7.5
	96x96	11.1	4981	8.0

NOTE: DIMENSIONAL SHOP DRAWINGS ARE TO BE APPROVED BY THE DESIGN ENGINEER

Project: CHASE QUARRY Designer: RMA, INC.
 Address: _____ Contact: CHRIS REID
 Phone: (410) 997-8900
 Fax: (410) 997-9282
 Delivery Date: _____
 Owner: _____ Contractor: _____
 Contact: _____ Address: _____
 Address: _____ Contact: _____
 Phone: _____ Fax: _____



Manhole Specifications:

Primary Manhole Diameter: 72 inches
 Storage Manhole Diameter: 72 inches

Floor Elevations:
 Primary Manhole: 177.75
 Storage Manhole: 177.75

Primary Manhole Inverts:
 Separator Unit: 185.75 (30" OUT)
 Inlet Pipe(s): 185.85 (30")
 186.75 (18")

Please show orientation (including angle), size and material of inlet pipes above.

Cover Elevations:
 Primary Manhole: 192.40
 Storage Manhole: 192.40

NQ-1/NQ-1A

This order can be faxed to Bay Saver, Inc. at (301) 829-3747

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Mark A. Leight 2/15/14 DATE
 DIRECTOR
Chris Reid 2/20/04 DATE
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
Chris Reid 2/11/04 DATE
 CHIEF, DIVISION OF LAND DEVELOPMENT

DATE NO. _____ REVISION _____

DEVELOPER/OWNER:
 (OWNER) CHASE LIMITED PARTNERSHIP (DEVELOPER) CHASE MINING LLC
 P.O. BOX 850 P.O. BOX 850
 LAUREL, MD 20725 LAUREL, MD 20725
 410.742.7234 410.742.7234

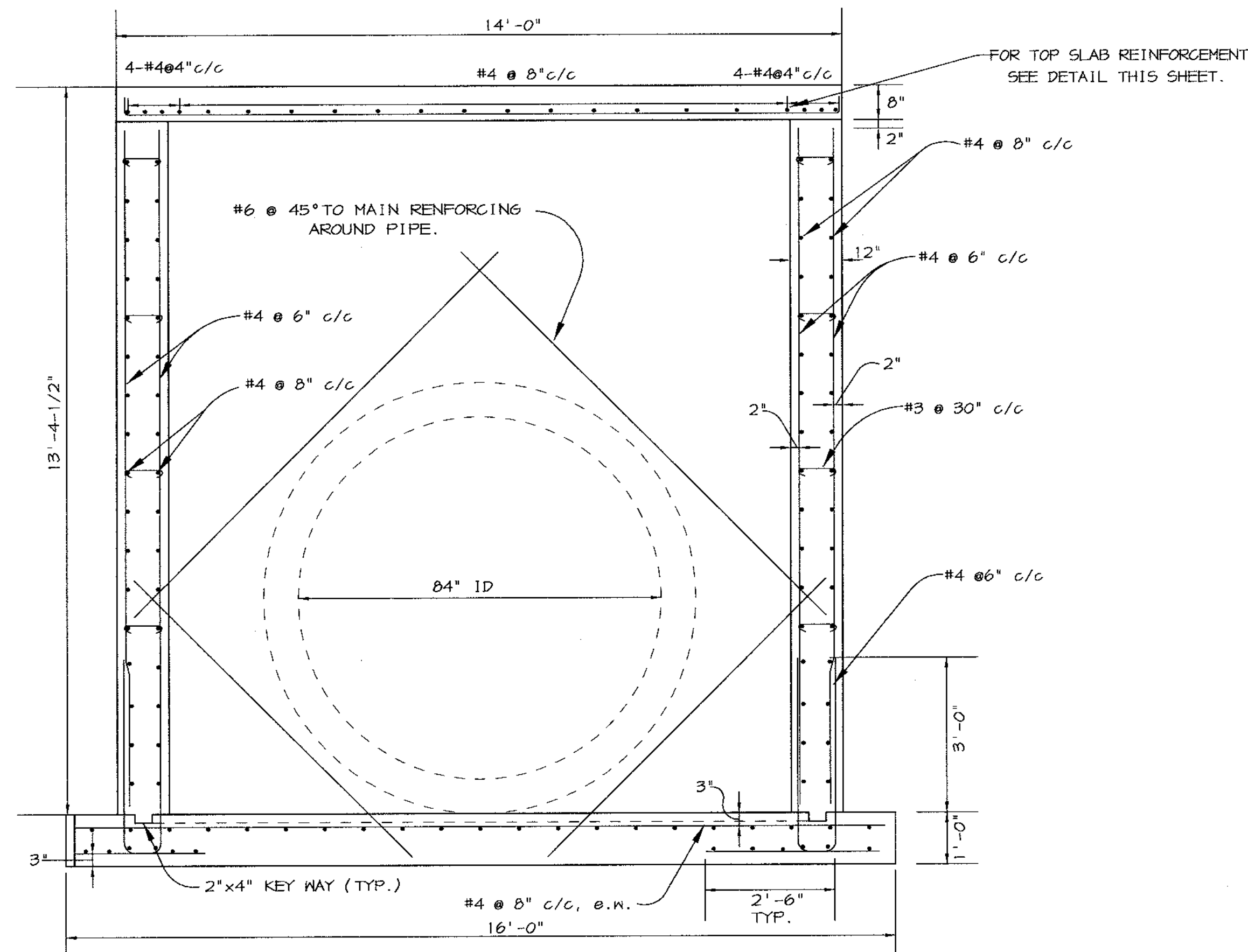
PROJECT: CHASE QUARRY

AREA ZONED M-1 & MXD-3, TAX MAP No. 43
 PARCEL 234 & P.O. 235, BLOCK 19
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

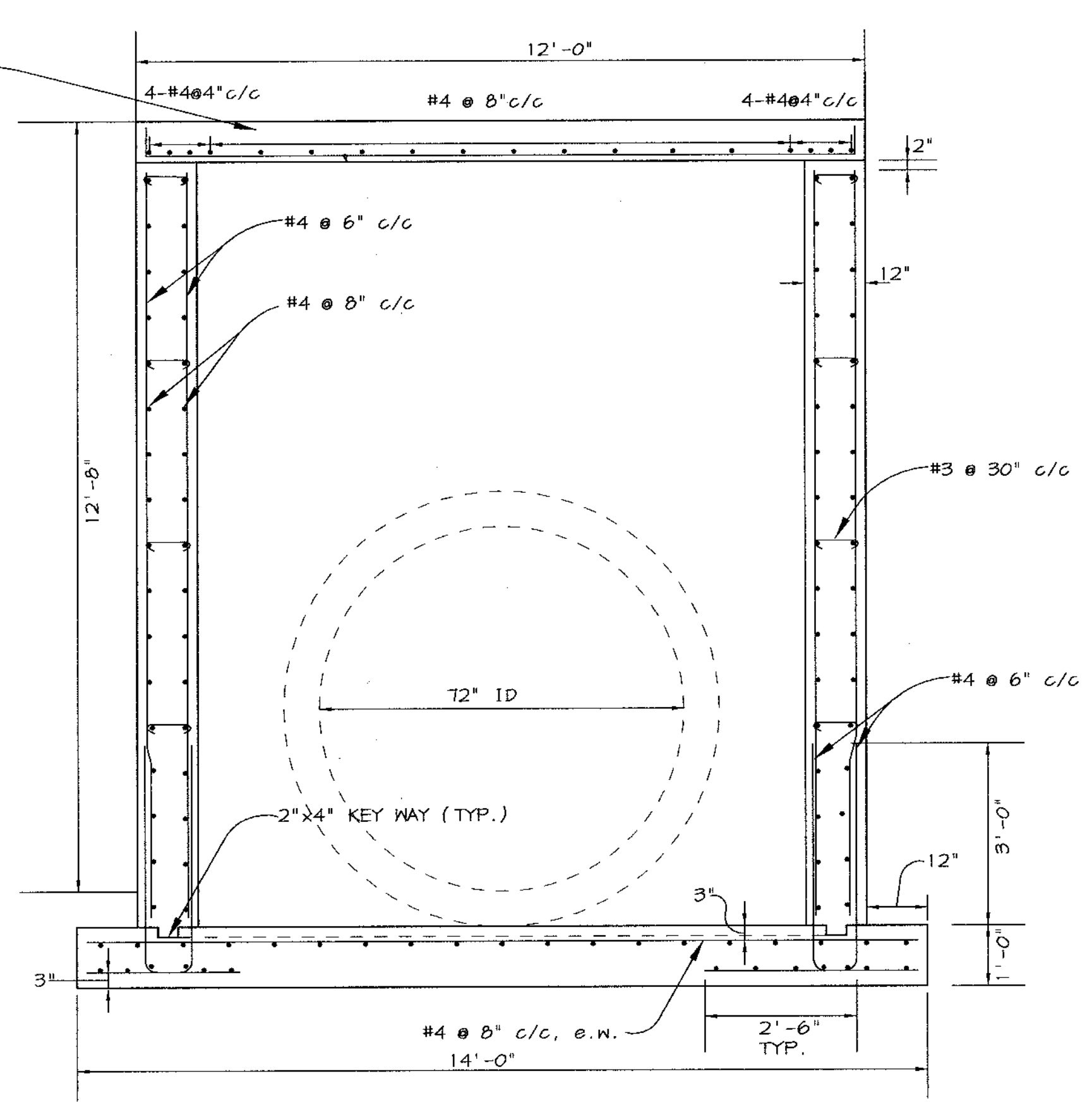
TITLE: BAYSAYER DETAILS & NOTES

Patton Harris Rust & Associates, pc
 Engineers, Surveyors, Planners, Landscape Architects.
 8818 Centre Park Drive
 Columbia, MD 21045
 T 410.997.8900
 F 410.997.9282

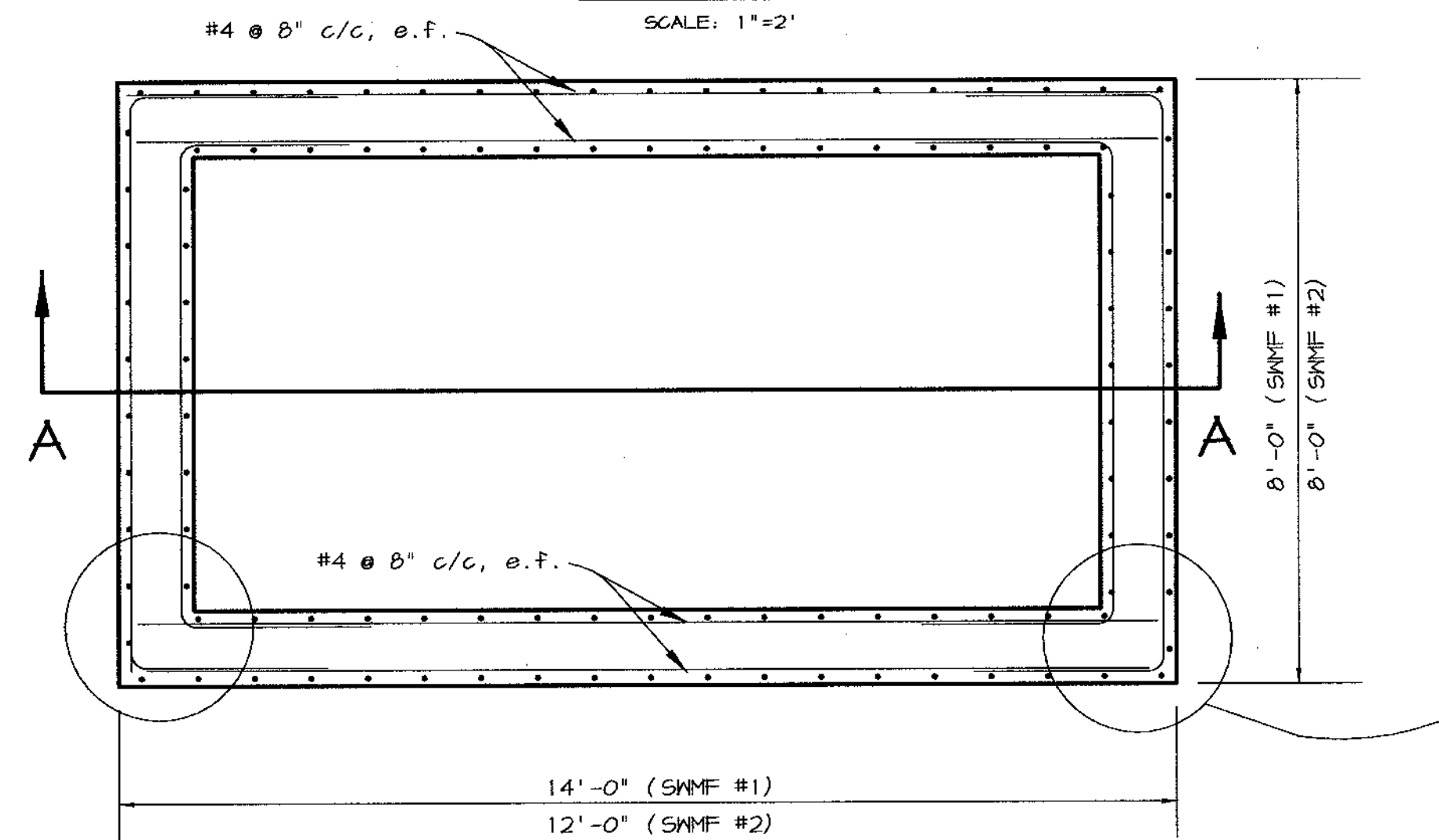
1-30-04 DATE
 DESIGNED BY: C.J.R.
 DRAWN BY: _____
 CHECKED BY: C.J.R.
 PROJECT NO: 99092/BAYSAYER.DWG
 DATE: JANUARY 29, 2004
 SCALE: AS SHOWN
 DRAWING NO. 37 OF 40
 CHRISTOPHER J. REID #19949



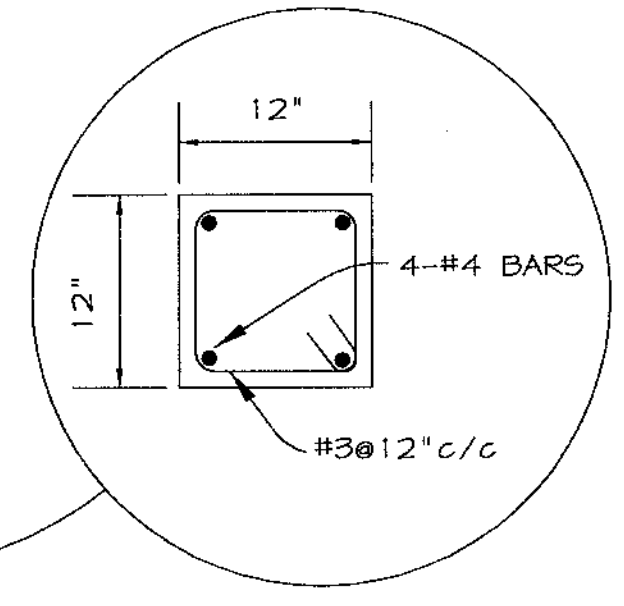
SWMF #1
SECTION A-A
SCALE: 1"=2'



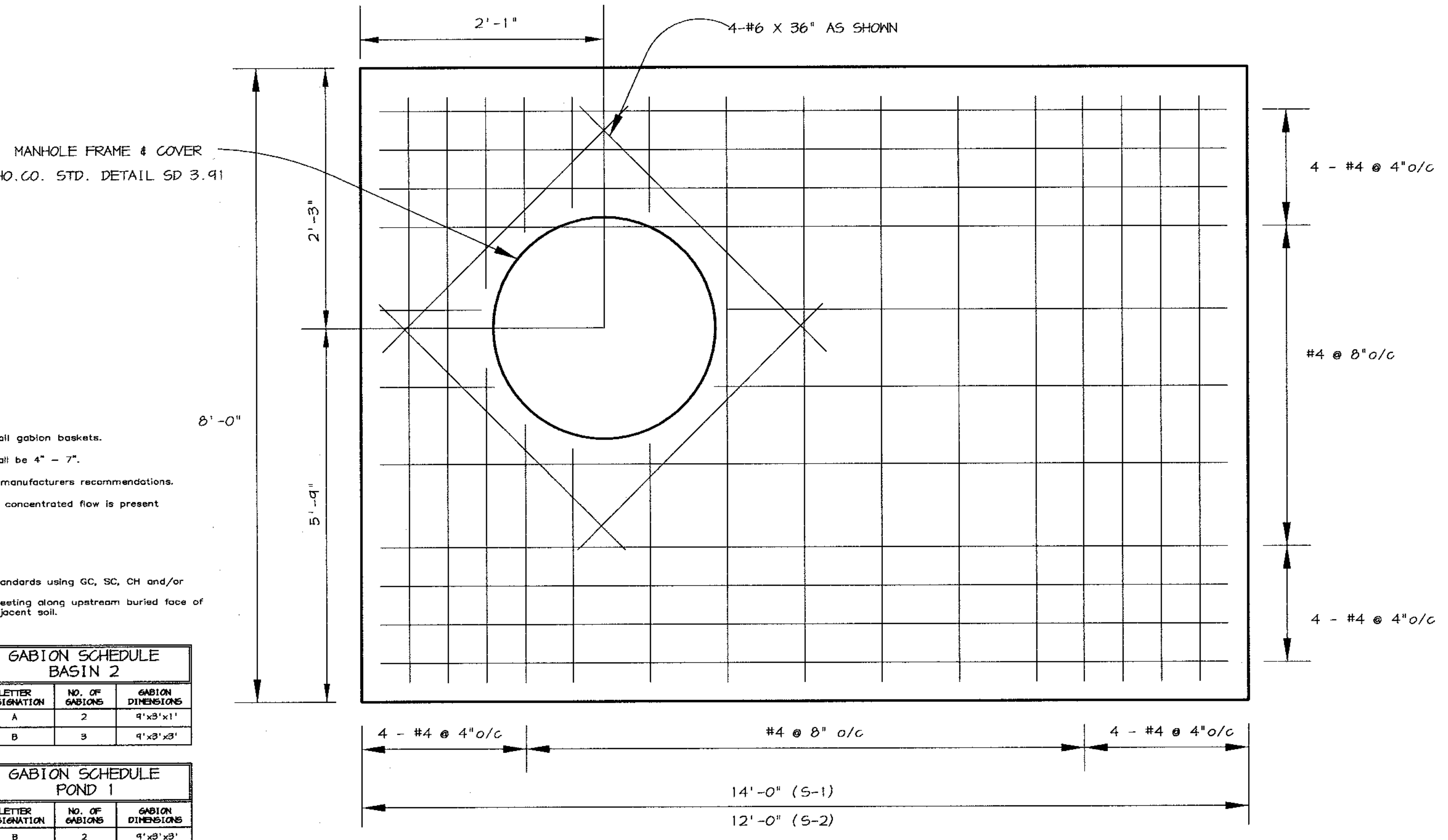
BASIN #2
SECTION A-A
SCALE: 1"=2'



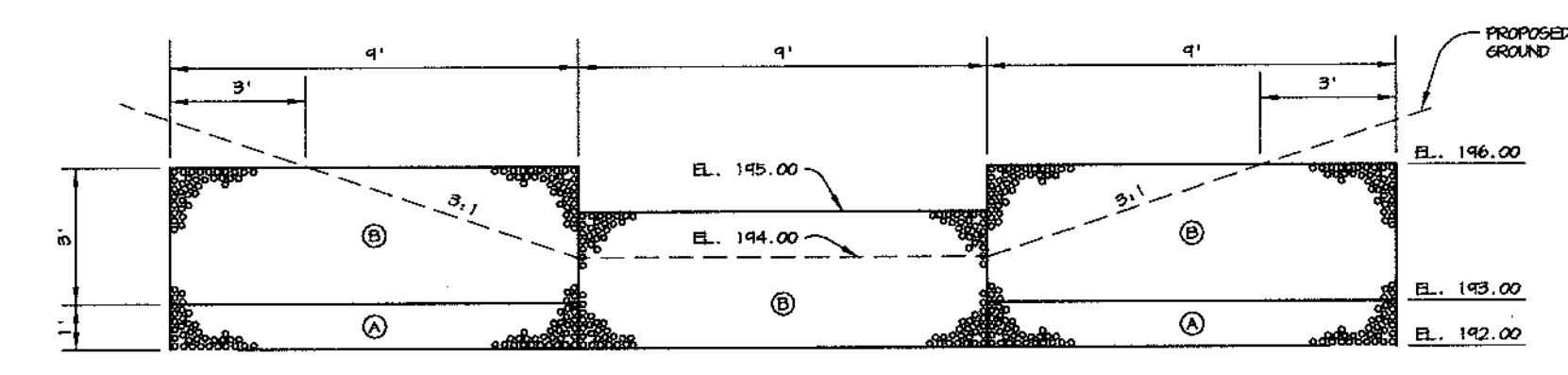
SWMF #1 & BASIN #2 PLAN VIEW
N.T.S.



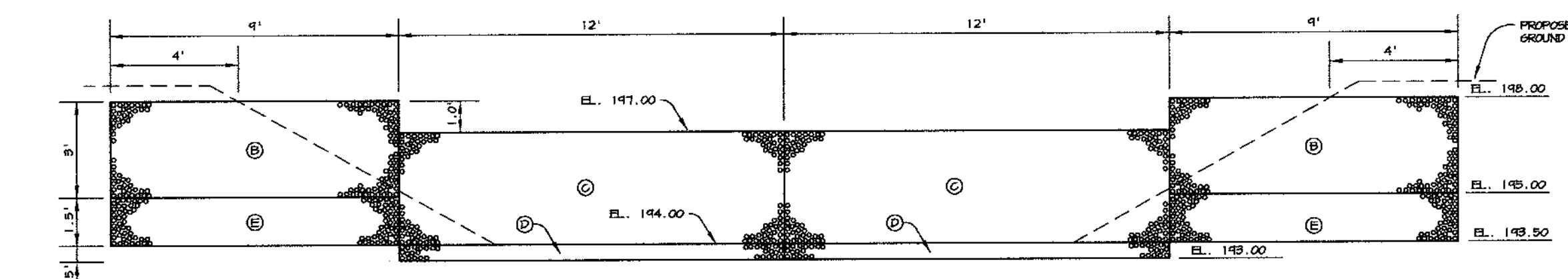
DETAIL SLAB SUPPORT
N.T.S.



TOP SLAB - S-1 & S-2
NOT TO SCALE



BASIN 2 GABION WALL SECTION
SCALE: 1"=4'



POND 1 GABION WALL SECTION
SCALE: 1"=4'

- GABION FOREBAY NOTES**
1. Geotextile Class C shall be installed under all gabion baskets.
 2. The stone used to fill the gabion baskets shall be 4" - 7".
 3. Gabions shall be installed in accordance with manufacturers recommendations.
 4. Gabion Inflow Protection shall be used where concentrated flow is present on slopes steeper than 4:1.
 5. Gabions to be PVC coated.
 6. Gabions to be fastened together.
 7. Compact forebay embankment to MD 378 Standards using GC, SC, CH and/or CL soils.
 8. Contractor shall place 10 mil. (min.) vinyl sheeting along upstream buried face of gabions w/4" overlap and buried 12" into adjacent soil.

GABION SCHEDULE BASIN 2		
LETTER DESIGNATION	NO. OF GABIONS	GABION DIMENSIONS
A	2	4'x3'x1'
B	3	4'x3'x3'

GABION SCHEDULE POND 1		
LETTER DESIGNATION	NO. OF GABIONS	GABION DIMENSIONS
B	2	4'x3'x3'
C	2	12'x3'x3'
D	2	12'x3'x1'
E	2	4'x3'x1'x1'

- NOTES:**
1. CONCRETE SHALL BE MSHA MIX NO. 3 (fc = 3,500 psi)
 2. ALL CONSTRUCTION TO MEET HO. CO. STANDARD SPECIFICATIONS.
 3. REINFORCEMENT TO BE DEFORMED BAR AND MEET ASTM A-615, GRADE 60.
 4. ALL REINFORCEMENT TO HAVE 2" MINIMUM COVER EXCEPT AS SHOWN ON DRAWINGS.
 5. ALL SPLICES NOT SHOWN SHALL BE LAPPED AS PER BAR LAP CHARTS.
 6. ALL HORIZONTAL REINFORCING TO BE CONTINUOUS AT ALL CORNERS.

- TOP SLAB NOTES:**
1. TOP SLAB TO BE SEPARATE FROM RISER STRUCTURE FASTENED TO RISER STRUCTURE.
 2. REFER TO HOWARD COUNTY STD. 6-5.52 FOR MANHOLE FRAME & COVER.
 3. CONCRETE TO BE MIX NO. 3
 4. SLAB REINFORCING SHALL HAVE 2" MINIMUM COVER.

BY THE DEVELOPER :
I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Timothy J. Schmidt 1-30-04
DEVELOPER DATE

BY THE ENGINEER :
I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Chad J. Ruse 1-30-04
ENGINEER DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

NATURAL RESOURCES CONSERVATION SERVICE DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Director 3/07/02 DATE
Chief, Development Engineering Division 2/20/04 DATE
Chief, Division of Land Development 2/11/04 DATE

DATE	NO.	REVISION

DEVELOPER/OWNER:
(OWNER) CHASE LIMITED PARTNERSHIP (DEVELOPER) CHASE MINING LLC
P.O. BOX 850 P.O. BOX 850
LAUREL, MD 20725 LAUREL, MD 20725
410.742.1234 410.742.1234

PROJECT
CHASE QUARRY

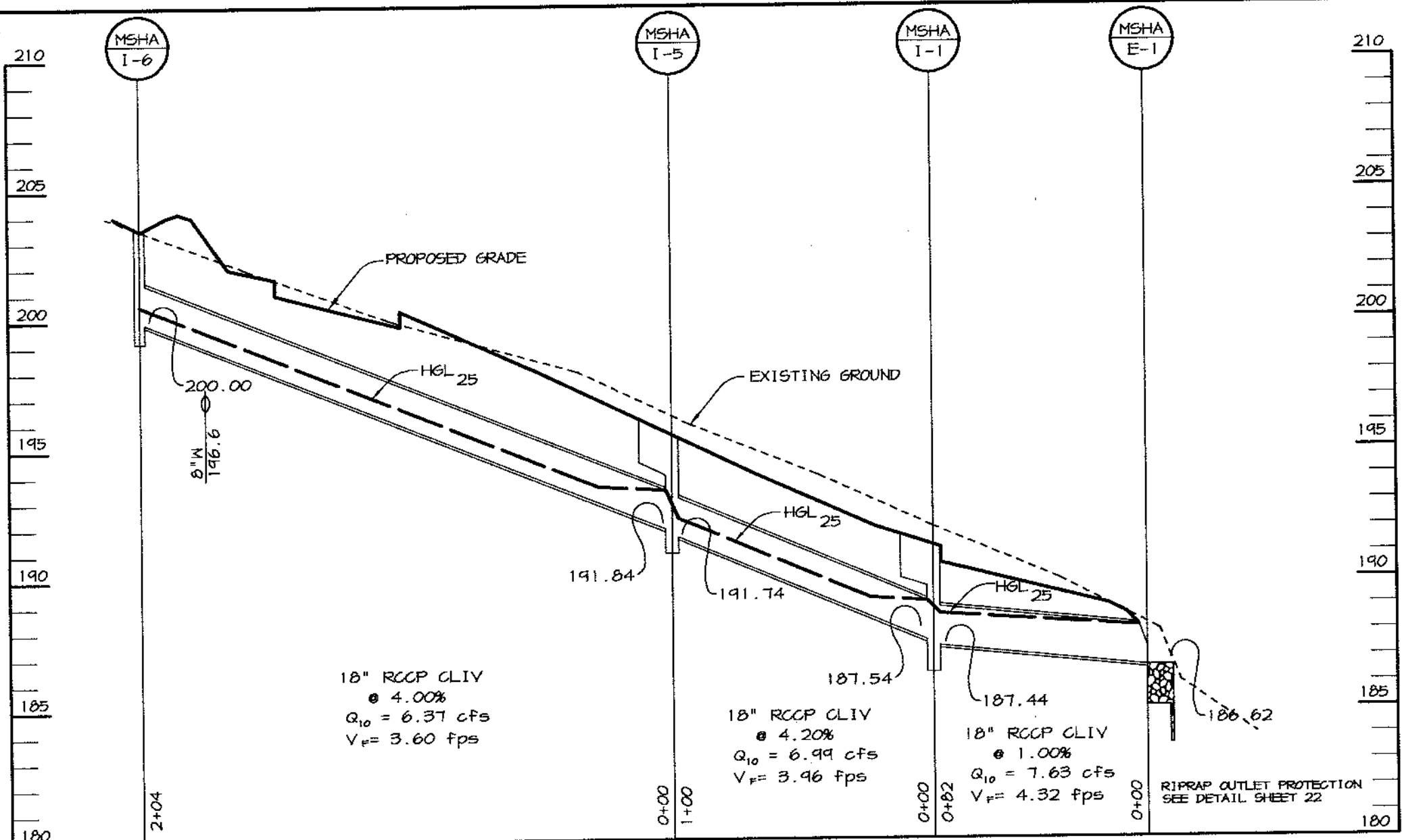
AREA ZONED M-1 & MXD-3, TAX MAP No. 43
PARCEL 234 & P.O. 235, BLOCK 19
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
REINFORCEMENT DETAILS & PROFILES

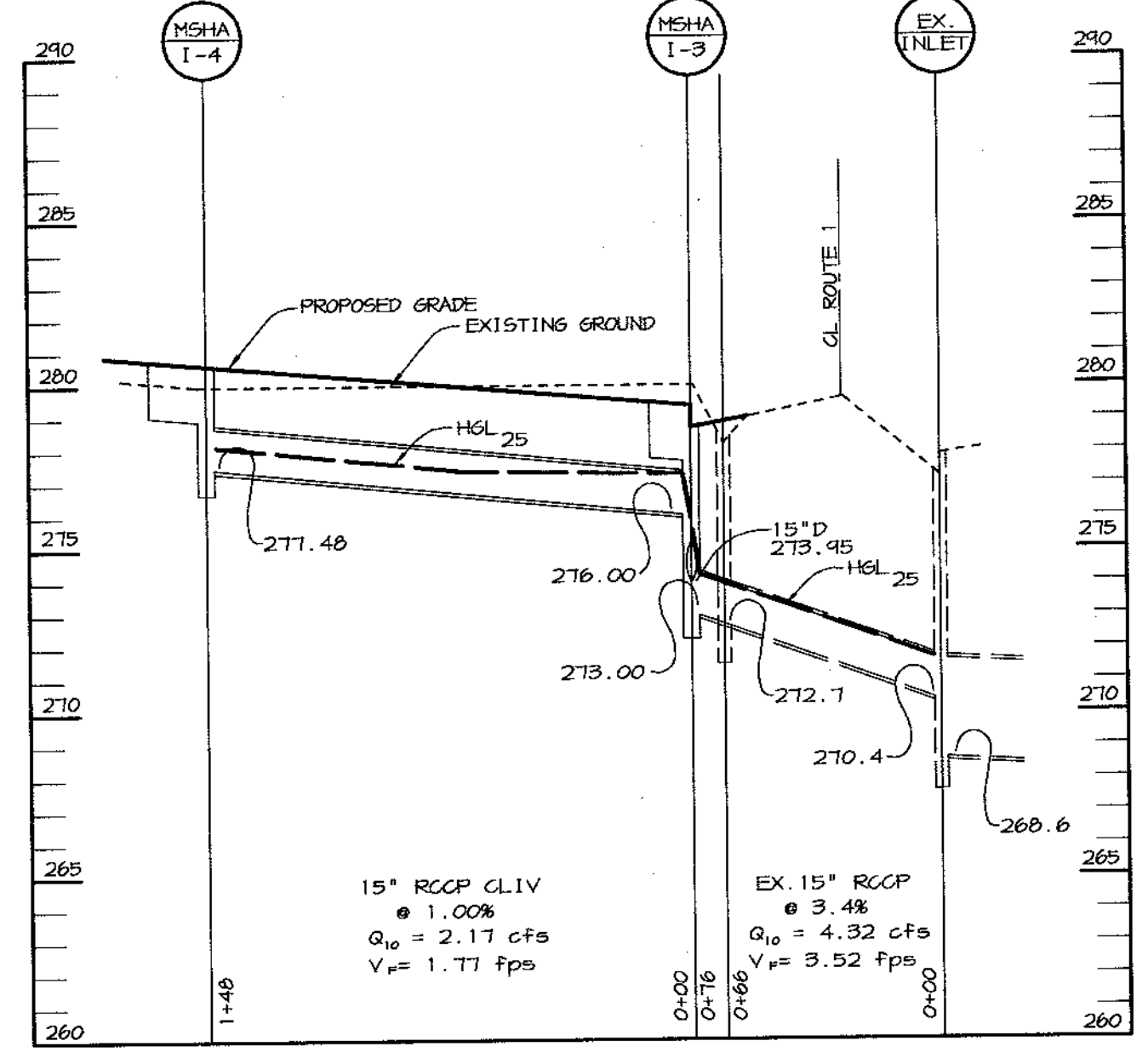
Patton Harris Rust & Associates, pc
Engineers, Surveyors, Planners, Landscape Architects.
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

1-30-04 DATE
DESIGNED BY : C.J.R.
DRAWN BY : MAD
CHECKED BY : C.J.R.
PROJECT NO : 99092/
RNF-R-DT.DWG
DATE : JANUARY 29, 2004
SCALE : AS SHOWN
DRAWING NO. 36 OF 40

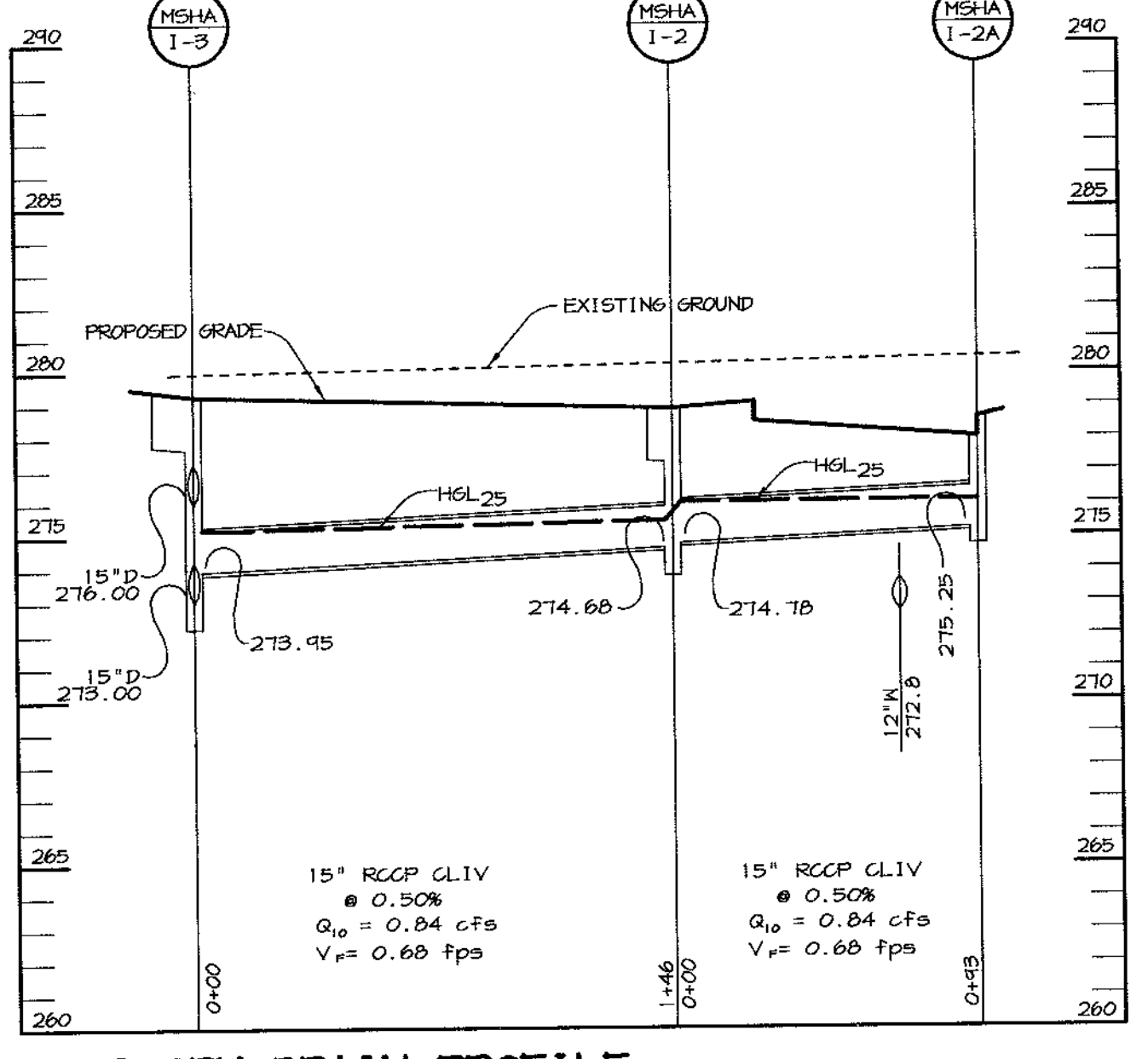
CHRISTOPHER J. REID #19949



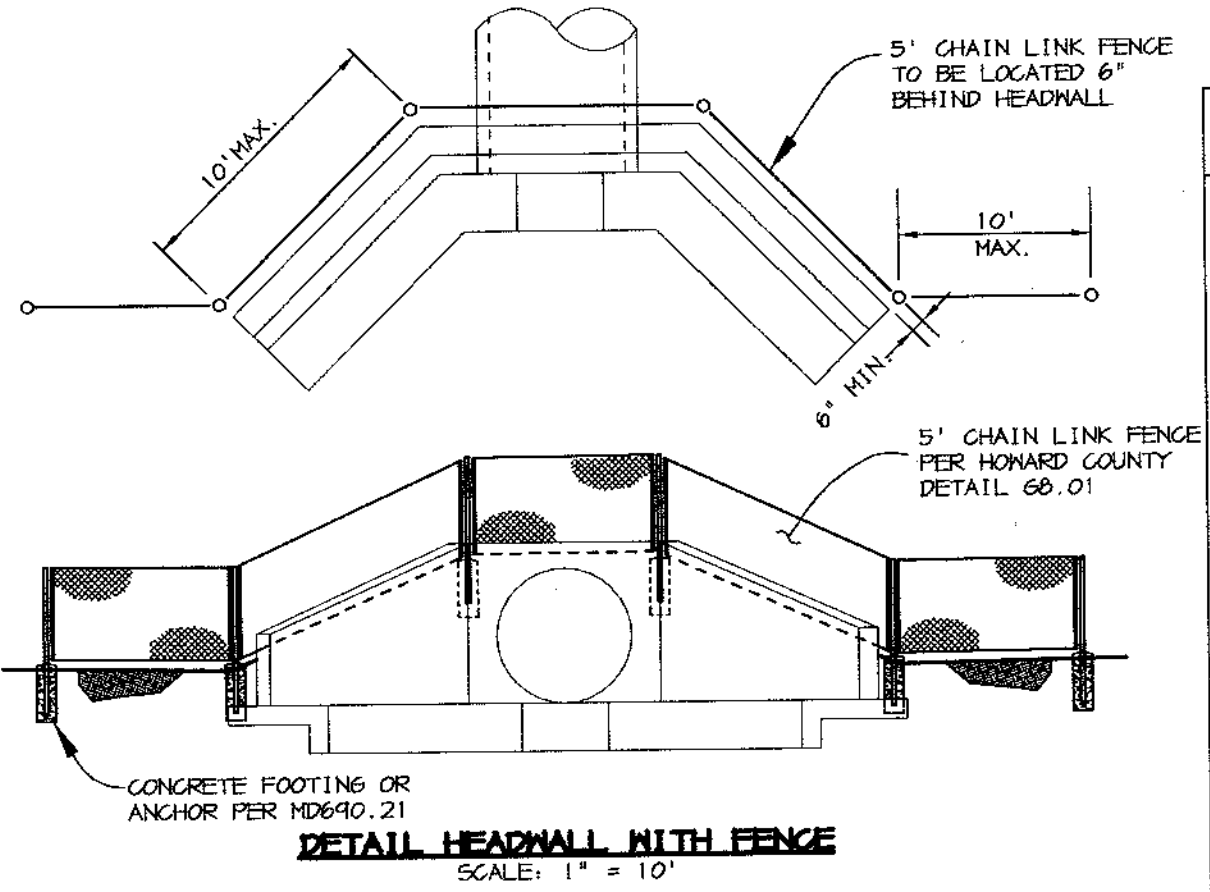
STORM DRAIN PROFILE
SCALE: HOR. 1"=50'
VERT. 1"=5'



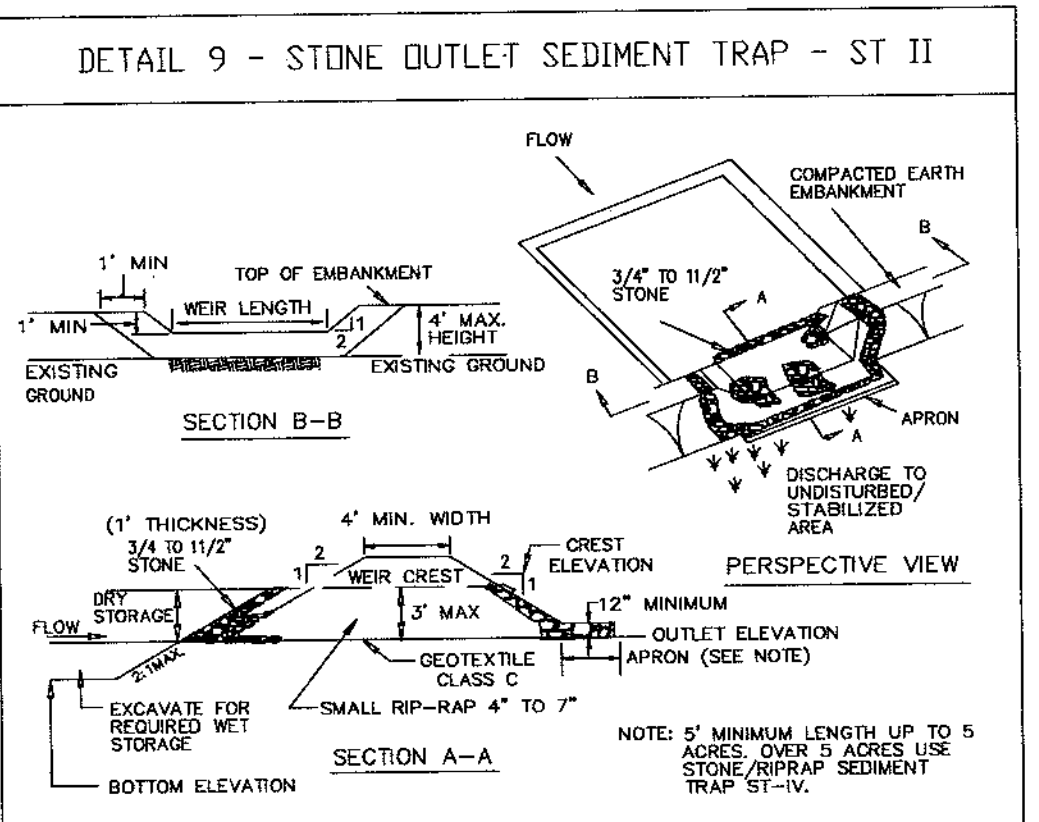
STORM DRAIN PROFILE
SCALE: HOR. 1"=50'
VERT. 1"=5'



STORM DRAIN PROFILE
SCALE: HOR. 1"=50'
VERT. 1"=5'



DETAIL HEADWALL WITH FENCE
SCALE: 1" = 10'

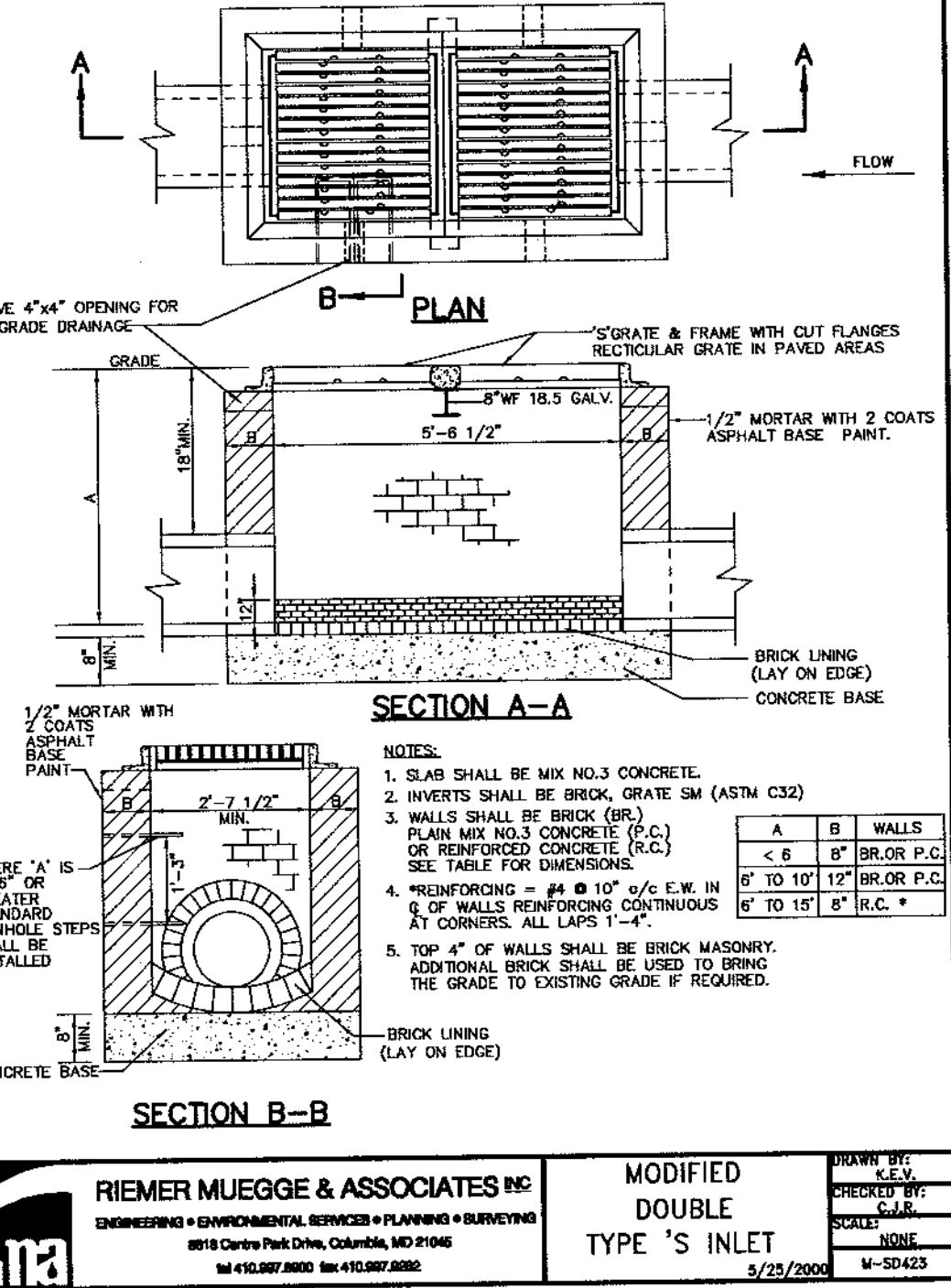
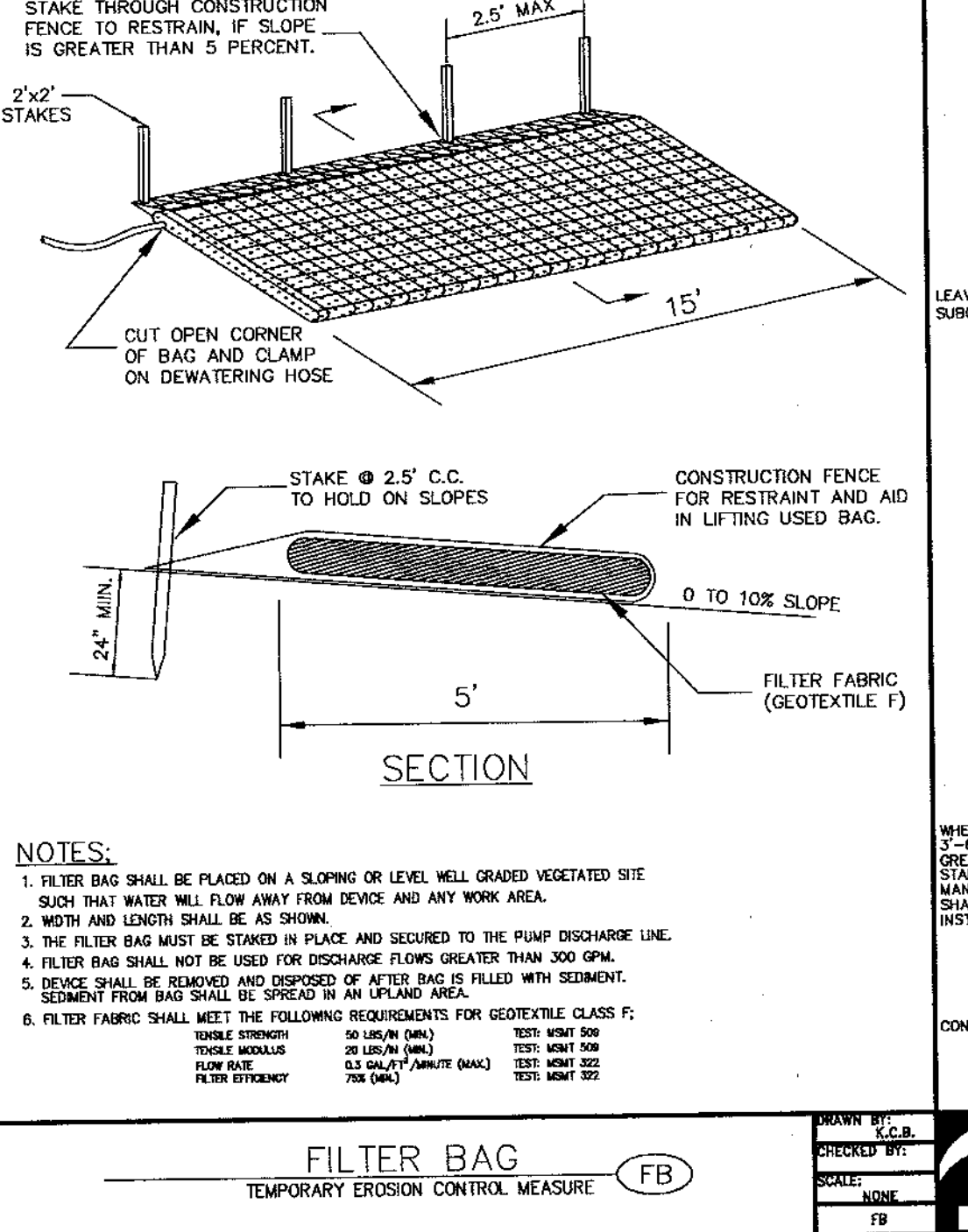
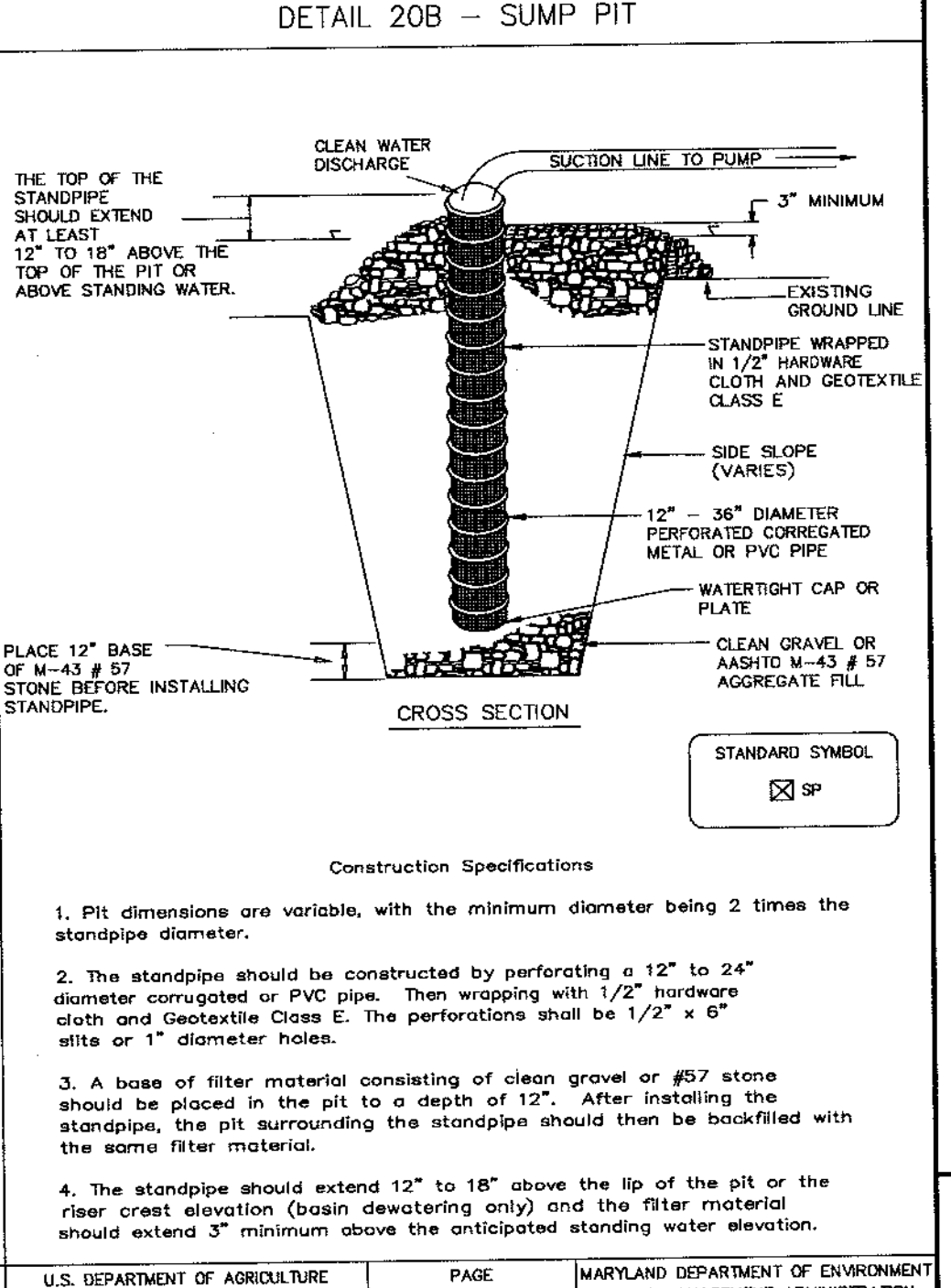
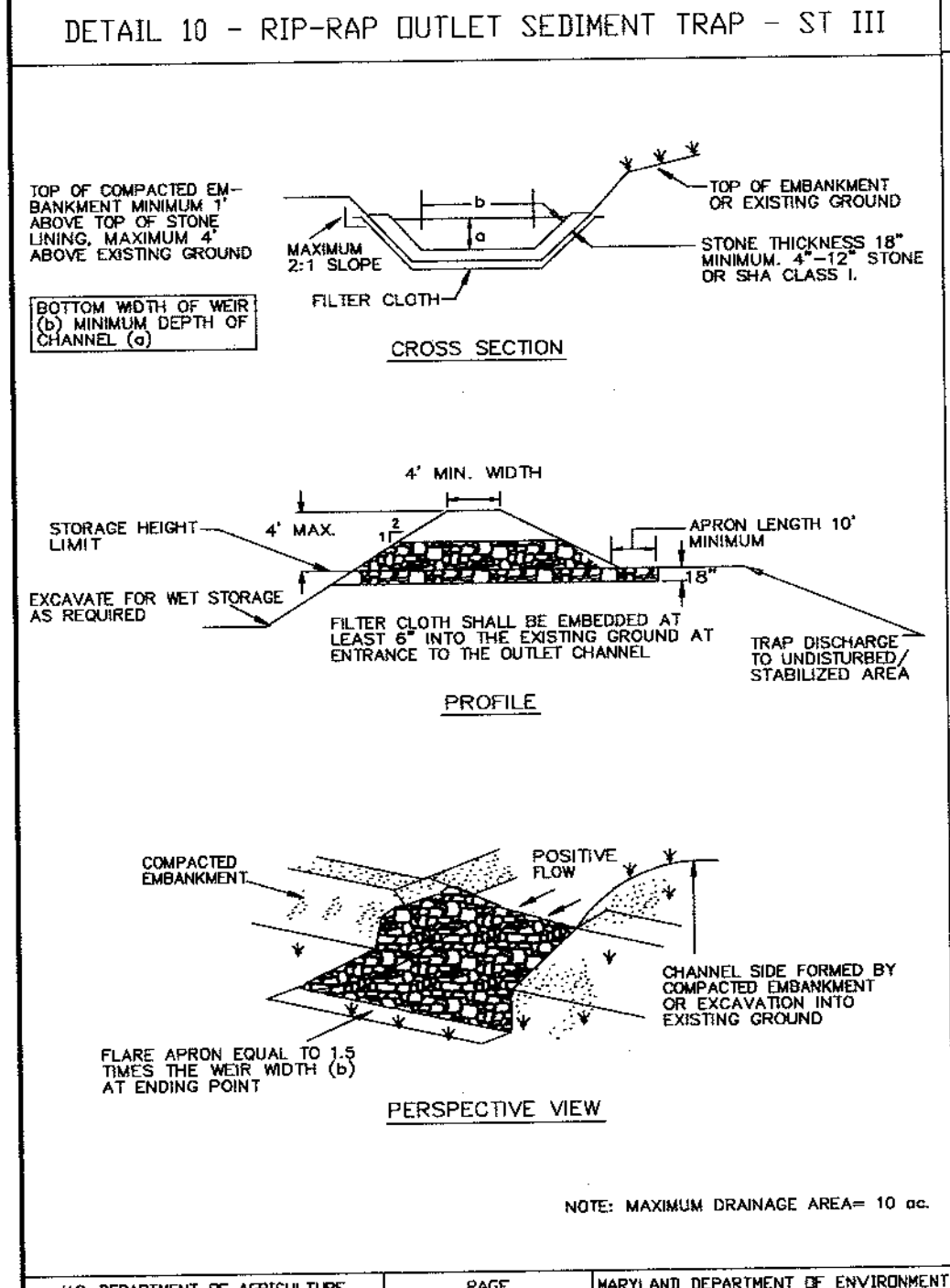


DETAIL 9 - STONE OUTLET SEDIMENT TRAP - ST II

21.0 STANDARD AND SPECIFICATIONS
TOPSOIL
Definition
Placement of topsoil over a prepared subsoil prior to establishment of permanent vegetation.
Purpose
To provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.
Conditions Where Practice Applies
1. This practice is limited to areas having 2:1 or flatter slopes where:
a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
c. The original soil to be vegetated contains material toxic to plant growth.
d. The soil is so acidic that treatment with limestone is not feasible.
2. For the purpose of these Standards and Specifications, areas having slopes steeper than 2:1 require special consideration and design for adequate stabilization. Areas having slopes steeper than 2:1 shall have the appropriate stabilization shown on the plan.
Construction and Material Specifications
1. Topsoil salvaged from the existing site may be used provided that it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-SCS in cooperation with Maryland Agricultural Experiment Station.
2. Topsoil specifications - soil to be used as topsoil must meet the following:
a. Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting textured subsoils and shall contain less than 5% by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1 1/2" in diameter.
b. Topsoil must be free of plants or plant parts such as bermuda grass, quackgrass, Johnsongrass, nutgrass, poison ivy, thistle, or others as specified.
c. If the subsoil is either highly acidic or composed of heavy clay, ground limestone shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures.
For sites having disturbed areas under 5 acres:
1. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.
For sites having disturbed areas over 5 acres:
1. On soil meeting topsoil specifications, obtain test results dictating fertilizer and lime operations required to bring the soil into compliance with the following:
a. pH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise the pH to 6.5 or higher.
b. Organic content of topsoil shall be not less than 1.5 percent by weight.
c. Topsoil having soluble salt content greater than 500 parts per million shall not be used.
d. No seed or weed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phytotoxic materials.
Note: Topsoil substitutes to amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority may be used in lieu of natural topsoil.
2. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.
3. Topsoil Application
a. When topsoiling, maintain needed erosion and sediment control practices such as diversions, grade stabilization structures, earth dikes, slope silt fence and sediment traps and barriers.
b. Grade on the areas to be topsoiled, which have been previously established, shall be maintained, albeit 4" - 8" higher in elevation.
c. Topsoil shall be uniformly distributed in a 4" - 8" layer and lightly compacted to a minimum thickness of 4". Spreading shall be performed in such a manner that seeding or sodding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or "hot" pockets.
4. Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.
5. Alternative for Permanent Seeding - Instead of applying the full amounts of lime and commercial fertilizer, composted sludge and amendments may be applied as specified below:
a. Composted Sludge Material for use as a soil conditioner for sites having disturbed areas over 5 acres shall conform to the following requirements:
1. Composted sludge shall be supplied by, or originate from, a person or persons that are permitted (at the time of acquisition of the compost) by the Maryland Department of the Environment under COMAR 26.04.06.
2. Composted sludge shall contain at least 1 percent nitrogen, 1.5 percent phosphorus, and 0.2 percent potassium and have a pH of 7.0 to 8.0. If compost does not meet these requirements, the appropriate constituents must be added to meet the requirements prior to use.
3. Composted sludge shall be applied at a rate of 1 ton/1,000 square feet.
4. Composted sludge shall be amended with a potassium fertilizer applied at the rate of 4 lb/1,000 square feet, and 1/3 the normal lime application rate.
References: guideline Specifications, Soil Preparation and Seeding, MD-WA, Pub. #1, Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institution. Revised 1979.

STRUCTURE SCHEDULE

STRUCTURE	TYPE	LOCATION	INV. IN	INV. OUT	TOP	REMARKS	
MSHA 1-1	COG15	N 481921.30 E 897143.00	N 481930.31 E 897200.40	187.54	187.44	191.66 191.02	MSHA STD DETAIL MD-374.31
MSHA 1-2	COG10	N 478780.84 E 895866.04	N 478780.51 E 895843.26	214.78	214.68	214.00	MSHA STD DETAIL MD-374.31
MSHA 1-2A	COG5	N 478661.62 E 895714.88	N 478660.54 E 895740.81	-	215.25	218.70	MSHA STD DETAIL MD-374.31
MSHA 1-3	COG15	N 478661.82 E 895642.47	N 478678.12 E 895601.73	218.00	218.00	219.40	MSHA STD DETAIL MD-374.31
MSHA 1-4	COG20	N 478640.48 E 895447.83	N 478657.28 E 895512.85	-	217.48	280.90	MSHA STD DETAIL MD-374.31
MSHA 1-5	COG15	N 481895.97 E 897141.08	N 481891.46 E 897141.45	191.84	191.74	198.10 198.37	MSHA STD DETAIL MD-374.31
MSHA 1-6	NR	N 482009 E 897049	-	-	200.00	-	MSHA STD DETAIL MD-374.23
MSHA E-1	18" RCCP	N 482220 E 897220	-	-	186.62	-	MSHA STD DETAIL MD-368.01



BY THE DEVELOPER:
I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.
Timothy J. Schmidt
DEVELOPER
1-30-04
DATE

BY THE ENGINEER:
I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
Chad J. Rees
ENGINEER
1-30-04
DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.
Jin Mouslos
2/12/04
DATE
NATURAL RESOURCES CONSERVATION SERVICE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
Paul Se...
2/12/04
DATE
HOWARD SOIL CONSERVATION DISTRICT

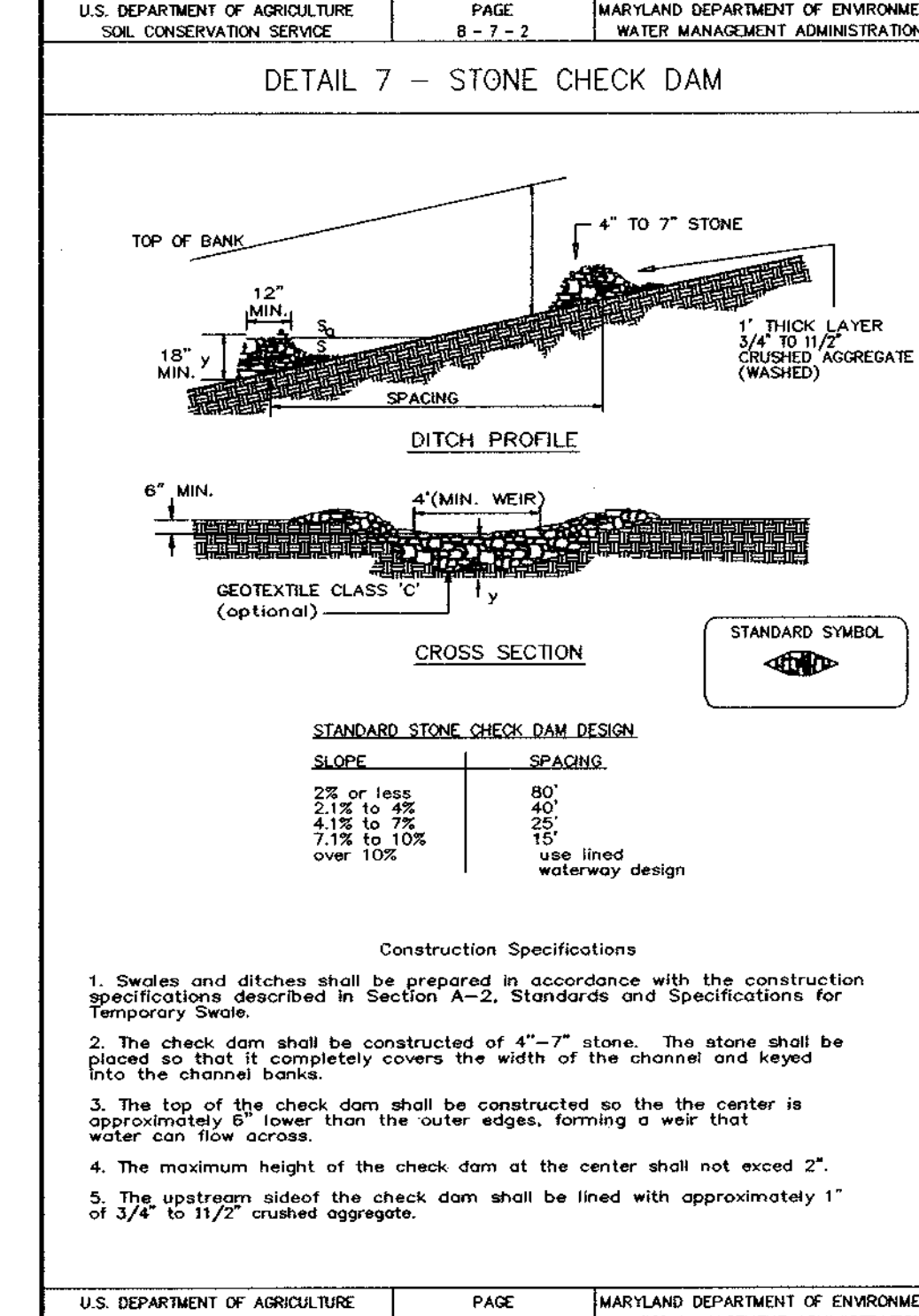
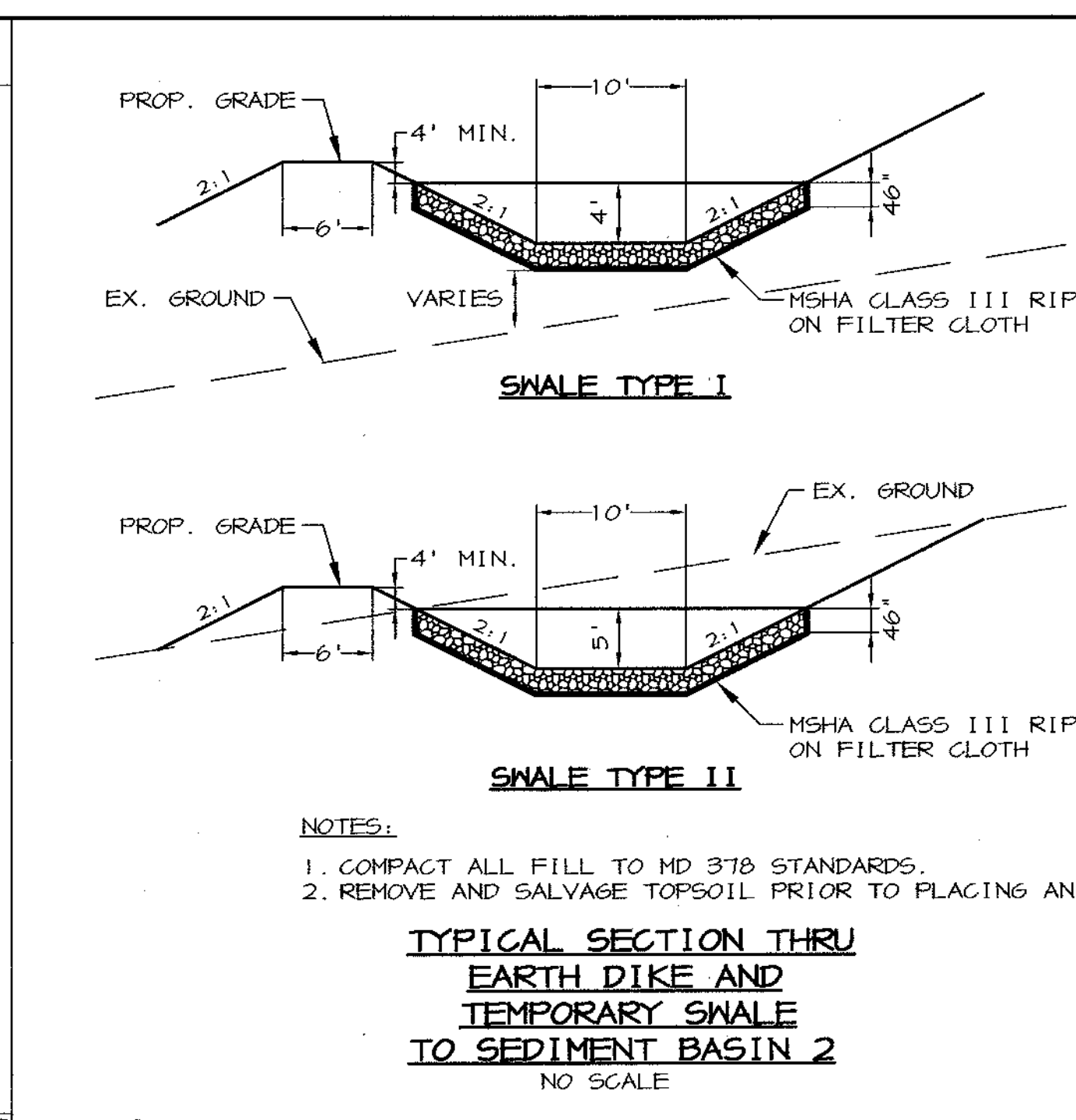
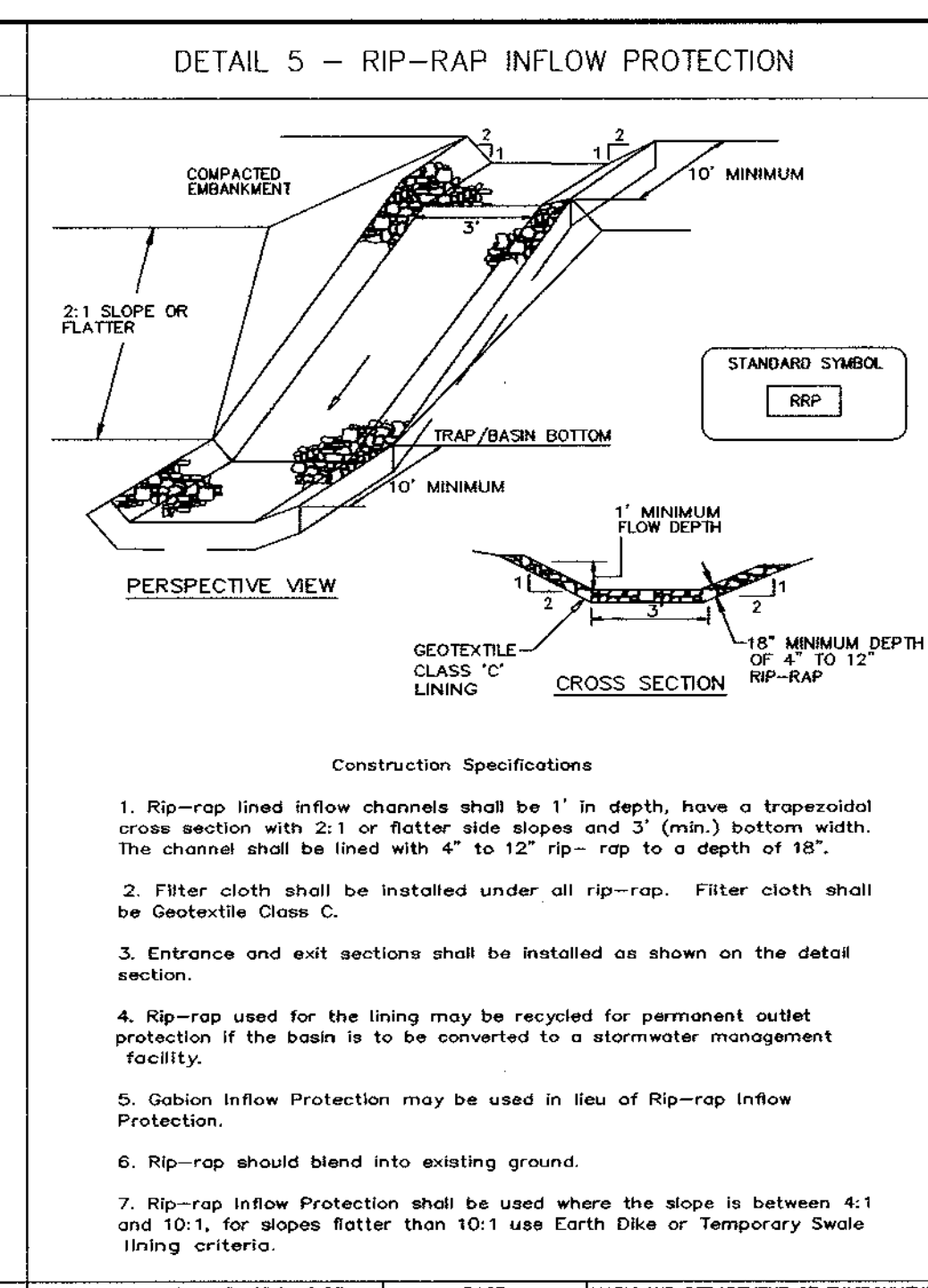
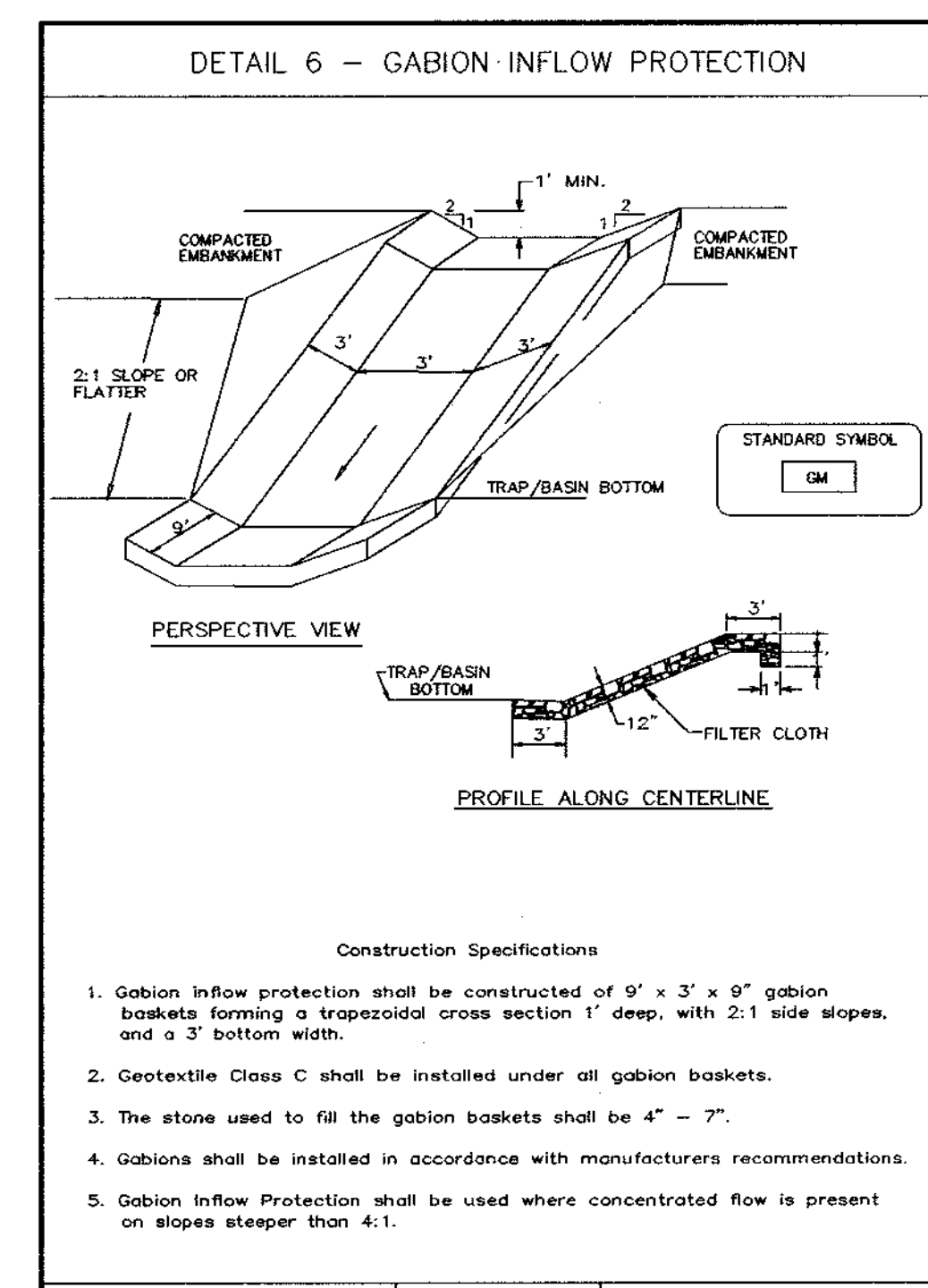
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
Dan K. W...
3/10/04
DATE
DIRECTOR
W. Dammann
2/20/04
DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION
Gandy Ham...
2/11/04
DATE
CHIEF, DIVISION OF LAND DEVELOPMENT

DATE	NO.	REVISION

DEVELOPER/OWNER:
(OWNER)
CHASE LIMITED PARTNERSHIP
P.O. BOX 850
LAUREL, MD 20725
410.142.1234
(DEVELOPER)
CHASE MINING LLC
P.O. BOX 850
LAUREL, MD 20725
410.142.1234

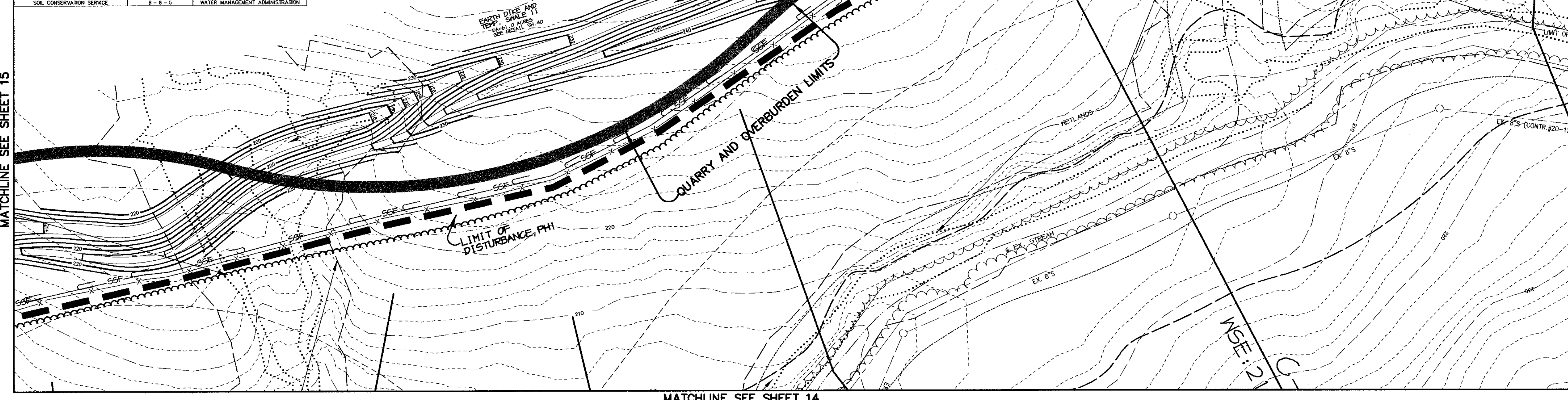
PROJECT
CHASE QUARRY
AREA ZONED M-1 & MXD-3, TAX MAP No. 43
PARCEL 234 & P.O. 235, BLOCK 19
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
PROFILES
Patton Harris Rust & Associates, pc
Engineers, Surveyors, Planners, Landscape Architects.
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282
DESIGNED BY: C.J.R.
DRAWN BY: MAD
CHECKED BY: C.J.R.
PROJECT NO: 99092/
PROFILE6.DWG
DATE: JANUARY 29, 2004
SCALE: AS SHOWN
DRAWING NO. 39 OF 40
CHRYSTOPHER J. REID #19949
SDP-99-134



STONE OUTLET SEDIMENT TRAP #3-ST II

DRAINAGE AREA	3.8 ACRES
STOR. REQ'D (WET STOR.)	6,840 CF
STOR. REQ'D (DRY STOR.)	6,840 CF
STOR. PROV. (WET STOR.)	8,640 CF@233.5
STOR. PROV. (DRY STOR.)	8,640 CF@225.0
CREST ELEVATION	225.0 (20' LENGTH)
TOP OF DAM	226.0
BOTTOM ELEVATION	222.0
SIDE SLOPES	2:1
DEPTH	3'



LEGEND

	TEMPORARY SWALE
	EROSION CONTROL MATTING
	EARTH DIKE
	DRAINAGE AREA
	LIMITS OF DISTURBANCE, PHI
	LIMITS OF DISTURBANCE, PH2
	SILT FENCE
	EXISTING TREE LINE
	PROPOSED TREE LINE
	STORM DRAIN
	RAIL ROAD TRACK

BY THE DEVELOPER:

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Timothy J. Schmidt 1-30-04
DEVELOPER DATE

BY THE ENGINEER:

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Christy J. Reid 1-30-04
ENGINEER DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

Jim Myers 2/10/04
NATURAL RESOURCES CONSERVATION SERVICE DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

Paul S. ... 2/10/04
HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

David ... 2/15/04
DIRECTOR DATE

Mike ... 2/20/04
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Chris ... 3/11/04
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DATE NO.	REVISION

DEVELOPER/OWNER:

(OWNER) CHASE LIMITED PARTNERSHIP P.O. BOX 850 LAUREL, MD 20725 410.792.7234	(DEVELOPER) CHASE MINING LLC P.O. BOX 850 LAUREL, MD 20725 410.792.7234
--	---

PROJECT: CHASE QUARRY

AREA ZONED M-1 & MXD-3, TAX MAP No. 43
PARCEL 234 & P.O. 235, BLOCK 19
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: GRADING, SEDIMENT CONTROL & DRAINAGE AREA MAP AND DETAILS

Patton Harris Rust & Associates, pc
Engineers, Surveyors, Planners, Landscape Architects.
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

1-30-04
DATE

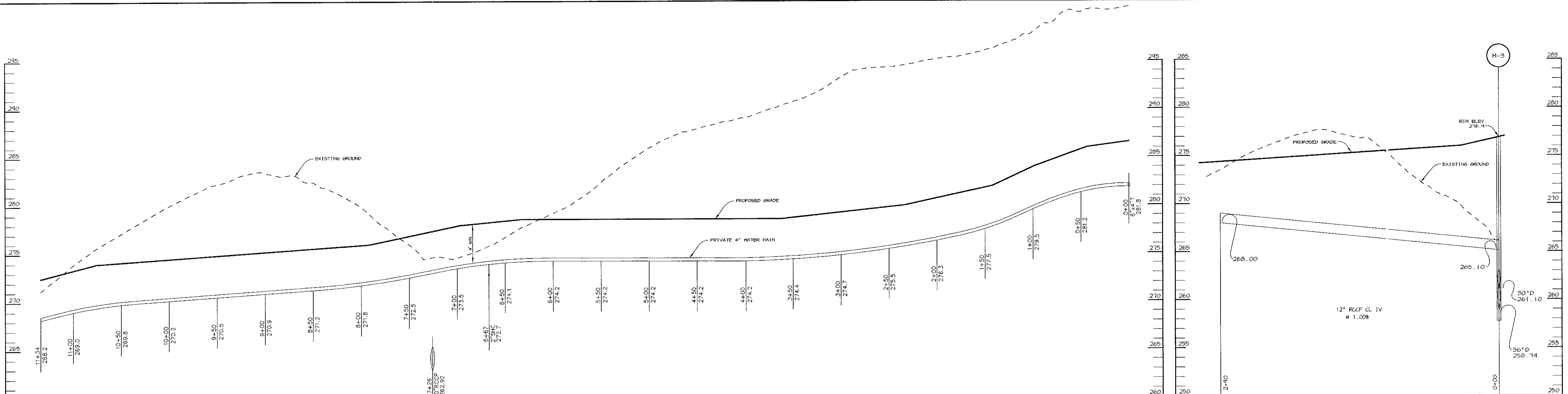
DESIGNED BY: C.J.R.
DRAWN BY: MAD
CHECKED BY: C.J.R.
PROJECT NO: 99092/
DATE: JANUARY 29, 2004
SCALE: 1" = 50'
DRAWING NO. 40 OF 40

CHRISTOPHER J. REID #19949

MATCHLINE SEE SHEET 15

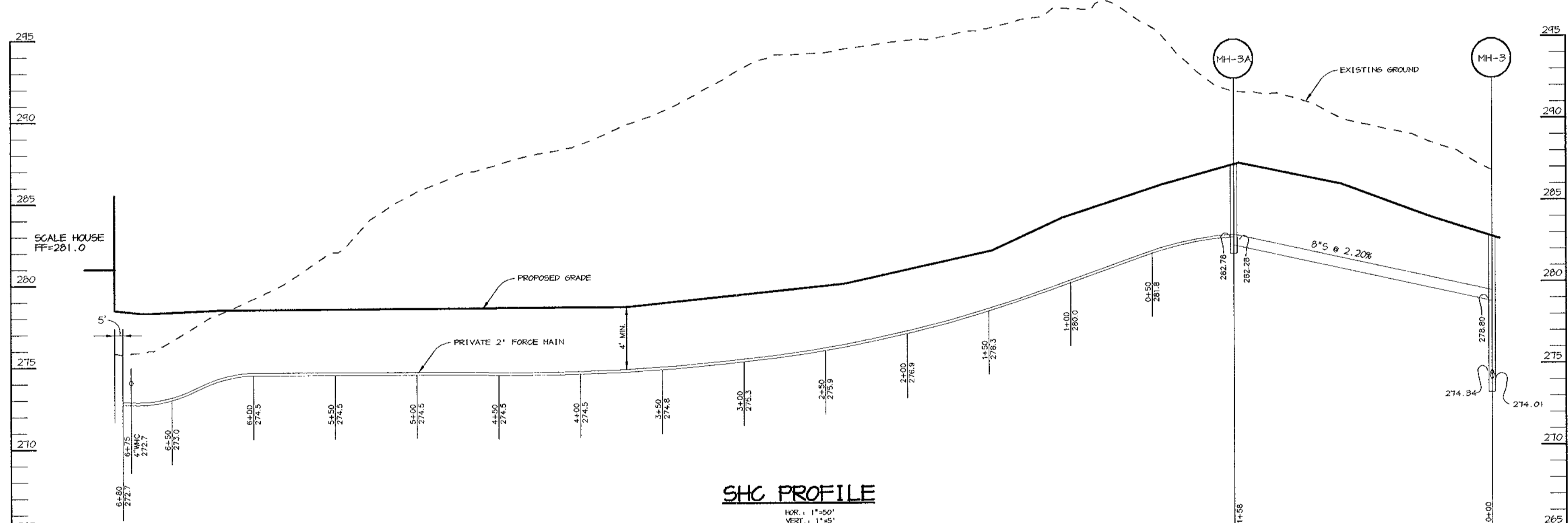
MATCHLINE SEE SHEET 21

MATCHLINE SEE SHEET 14



NHC PROFILE
 HOR. : 1" = 50'
 VERT. : 1" = 10'

STORM DRAIN PROFILE
 HOR. : 1" = 50'
 VERT. : 1" = 10'



SHC PROFILE
 HOR. : 1" = 50'
 VERT. : 1" = 10'

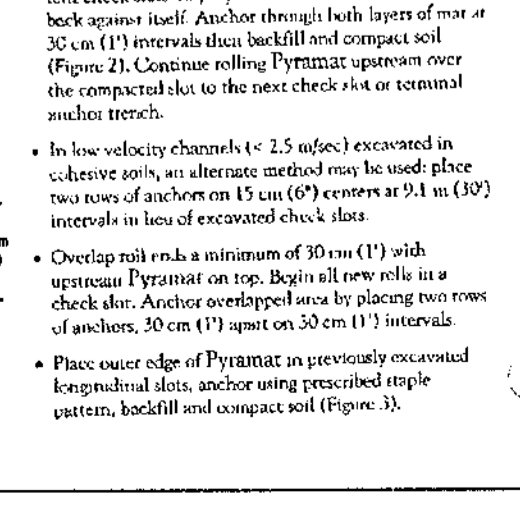
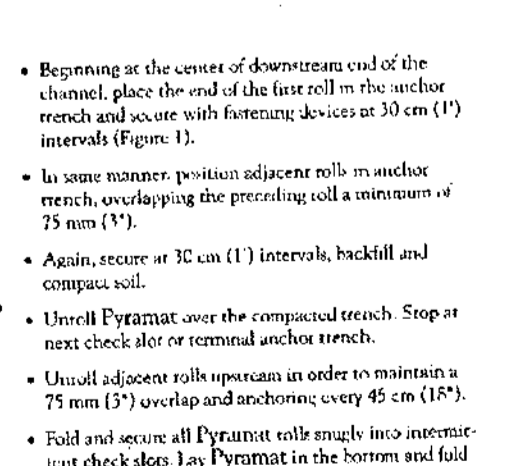
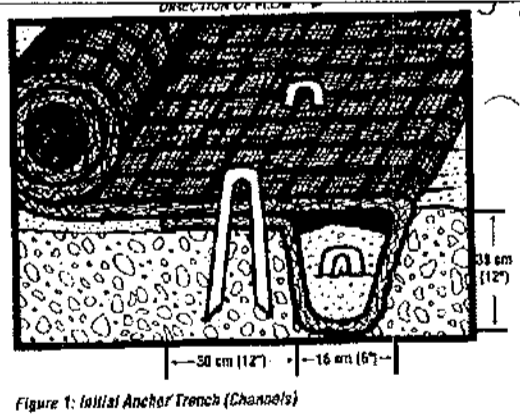
Pyramat Erosion Matrix
 Installation Guidelines

- Site Preparation**
- Grade and compact area of installation.
 - Prepare toolshed by loosening 50-75 mm (2"-3") of topsoil above final grade.
 - Incorporate amendments such as lime and fertilizer into soil.
 - Remove all rocks, clods, vegetation or other obstructions so that the installed Pyramat[®] will have direct contact with soil surface.
 - Do not attach areas where mat is to be placed.
- Seeding**
- Apply seed to the soil surface before installing Pyramat or after installation for enhanced performance prior to soil filling (if preferable).
 - When seeding prior to Pyramat installation, all check slots and other areas disturbed must also be reseeded.
 - When soil filling, seed Pyramat and entire disturbed area after installation, prior to filling mat with soil.
 - Contact your local H.S. Natural Resource Conservation Service (NRCS) Plant Materials Specialist or other resource for seed recommendations.

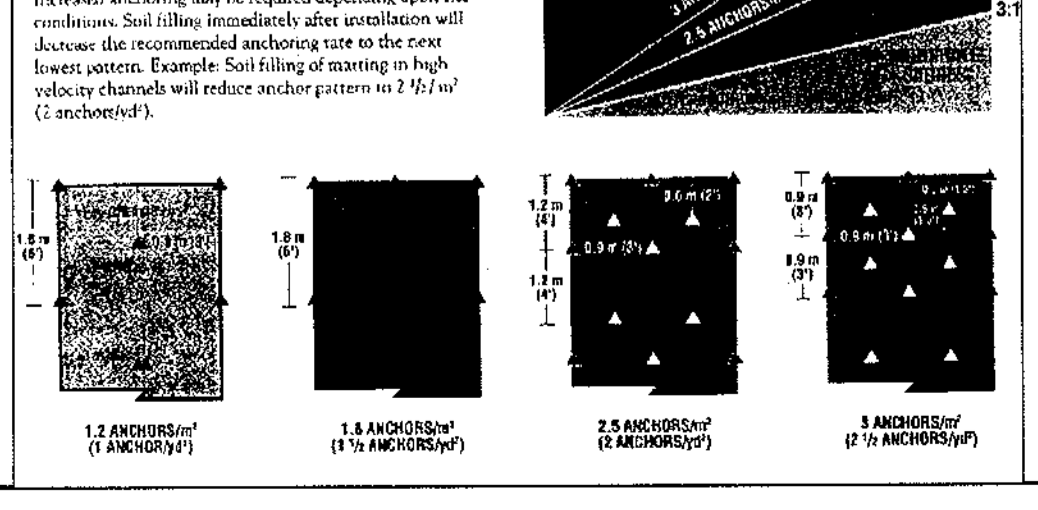
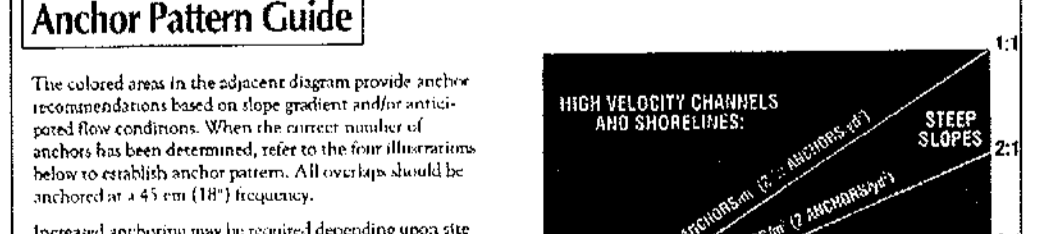
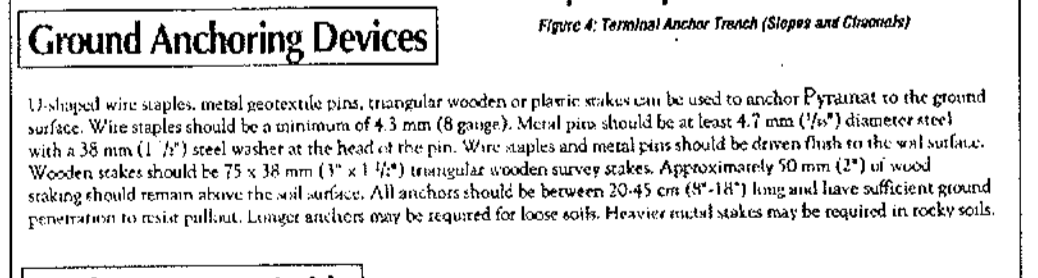
- PYRAMAT[®] Placement: Banks and Slopes**
- Excavate Pyramat 60-90 cm (2'-3') over crest of slope and excavate a 30 x 15 cm (12" x 6") terminal anchor trench (Figure 4 on page 3).
 - Anchor Pyramat in trench on 30 cm (12") spacing, backfill and compact soil.
 - Lay out Pyramat down slope.
 - Overlap adjacent rolls at least 75 mm (3") and anchor every 45 cm (18").
 - Lay Pyramat loose to maintain direct contact with soil. (Do not pull Pyramat out. This may allow basing of soil surface.)
 - Secure Pyramat to ground surface using U-shaped wire staples (preferred), geotextile pins or wooden stakes. (See ground anchoring devices on page 1.)
 - Refer to anchor pattern guide on page 3 for appropriate number and pattern of anchors.

PYRAMAT[®] Placement: Channels

- Excavate an initial anchor trench 30 cm (12") deep and 15 cm (6") wide across the channel at the lower end of the project area (Figure 1).
- Excavate intermittent check slots 15 cm (6") deep and 15 cm (6") wide across the channel at 30 m (100') intervals along the channel (Figure 2).
- Cut longitudinal channel anchor slots 10 cm (4") deep and 10 cm (4") wide along both sides of the installation to bury edges of Pyramat (Figure 3). Wherever possible, extend mat 60-90 cm (2'-3') above crest of channel side slopes.



- Anchor, backfill and compact upstream end of Pyramat[®] in a 30 x 15 cm (12" x 6") terminal trench (Figure 4).
- Secure Pyramat to ground surface using U-shaped wire staples, geotextile pins or wooden stakes (see ground anchoring device below).
- Refer to anchor pattern guide below for appropriate number and pattern of anchors.
- Seed and fill Pyramat with soil for enhanced performance.
- When using Pyramat with a geotextile underlath, always seed after installing mat, then fill with soil.

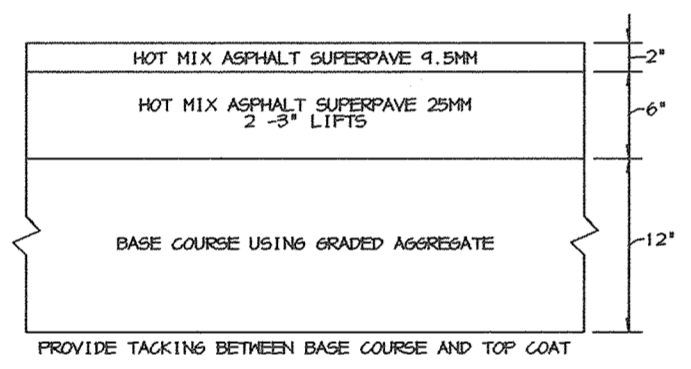
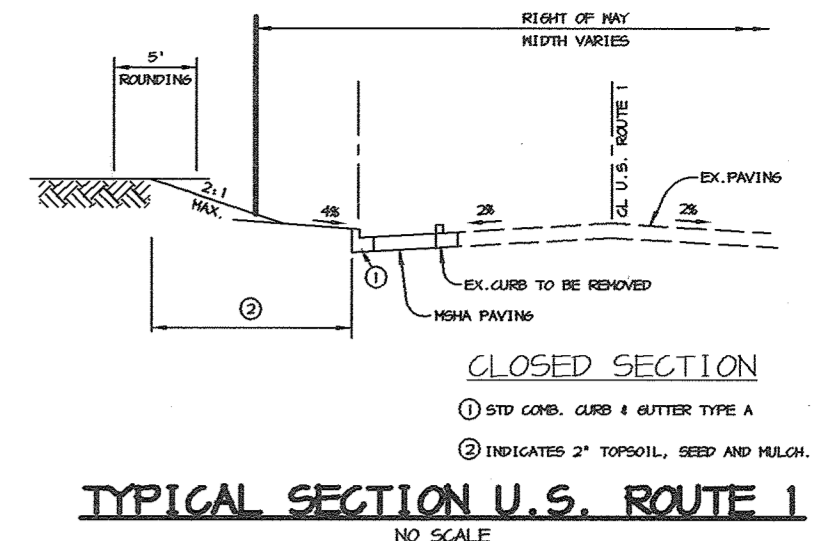
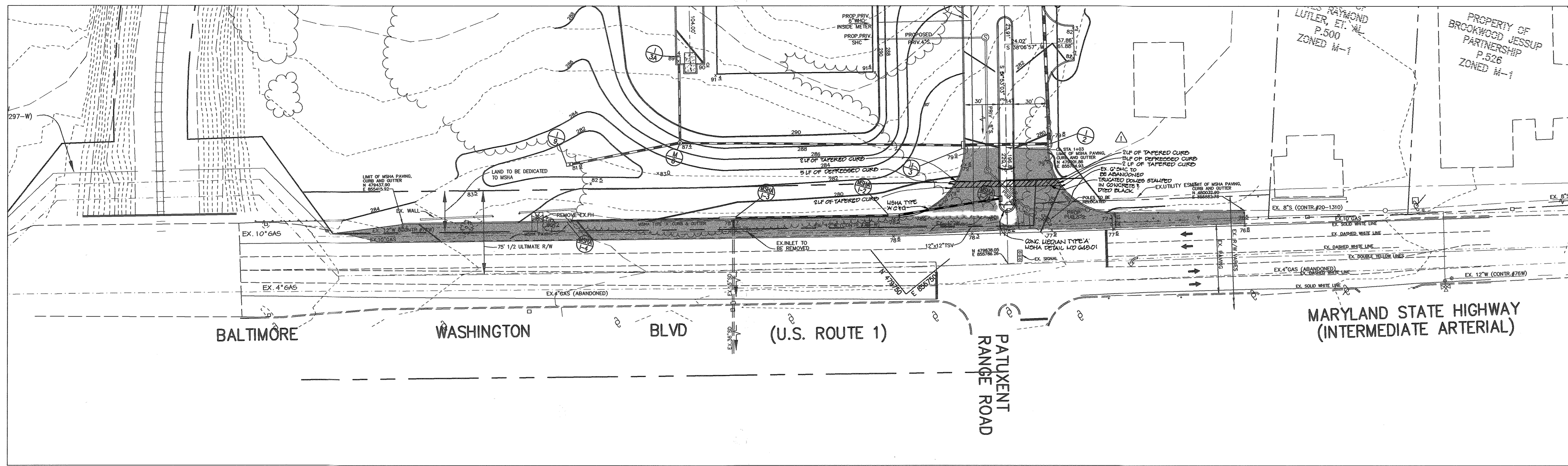


- Ground Anchoring Devices**
- U-shaped wire staples, metal post-tension zinc, rectangular wooden or plastic stakes can be used to anchor Pyramat to the ground surface. Wire staples should be continuous of 6.3 mm (1/4") galvanized steel. Metal pins should be at least 4.7 mm (3/16") diameter steel with a 38 mm (1 1/2") steel washer at the head of the pin. Wire staples and metal pins should be driven flush to the soil surface. Wooden stakes should be 75 x 38 mm (1 1/2" x 1 1/2") rectangular wooden survey stakes. Approximately 10 mm (2") of wood railing should remain above the soil surface. All anchors should be between 30-45 cm (12"-18") long and have sufficient ground penetration to resist pull-out. Longer anchors may be required for loose soil. Heavier metal stakes may be required in rocky soils.

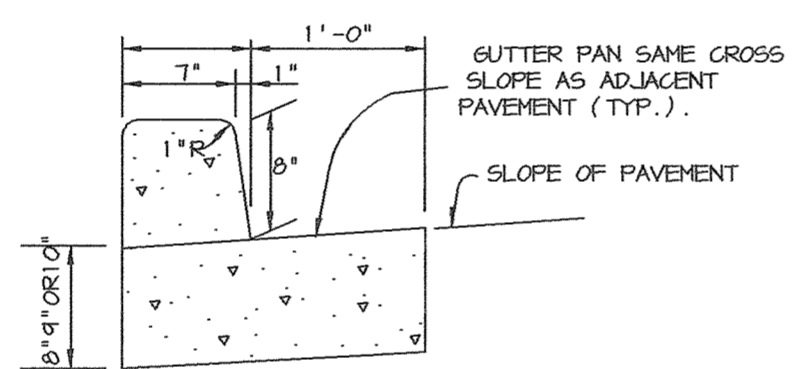
- Anchor Pattern Guide**
- The colored areas in the adjacent diagram provide anchor recommendations based on slope gradient and anticipated flow conditions. When the correct number of anchors has been determined, refer to the four illustrations below to establish anchor pattern. All anchors should be anchored to a 45 cm (18") frequency.
- Increased anchoring may be required depending upon site conditions. Soil filling immediately after installation will also cover the recommended anchoring rate to the zone below pattern. Example: Soil filling of matting in high velocity channels will reduce anchor pattern to 1.5/m² (2 anchors/m²).

- Soil Filling**
- Pyramat[®] is designed to be filled with soil after installation. This maximizes performance of the product.
 - After seeding, spread and lightly rake 15-20 mm (5/8"-3/4") of fine topsoil into the Pyramat and completely fill the voids. Use backhoe or rake or other tool to ensure a smooth soil-filled surface.
 - Pyramat will withstand lightweight maintenance construction equipment. No tracked equipment or sharp turns should be made on the mat.
 - Avoid any traffic over Pyramat or even foot or wet soil conditions.
 - Use shovels, rakes or hoes for fine grading and fielding.
 - Remove additional seed and mulch above the soil filled Pyramat, if desired.
 - If possible, water as necessary to enhance growth.
 - CONSULT MANUFACTURER'S TECHNICAL REPRESENTATIVE OR LOCAL DISTRIBUTOR FOR INSTALLATION ASSISTANCE, PARTICULARLY IF UNUSUAL CONDITIONS APPLY (E.G. FINE SANDY SOILS, INFERTILE ENVIRONMENTS).

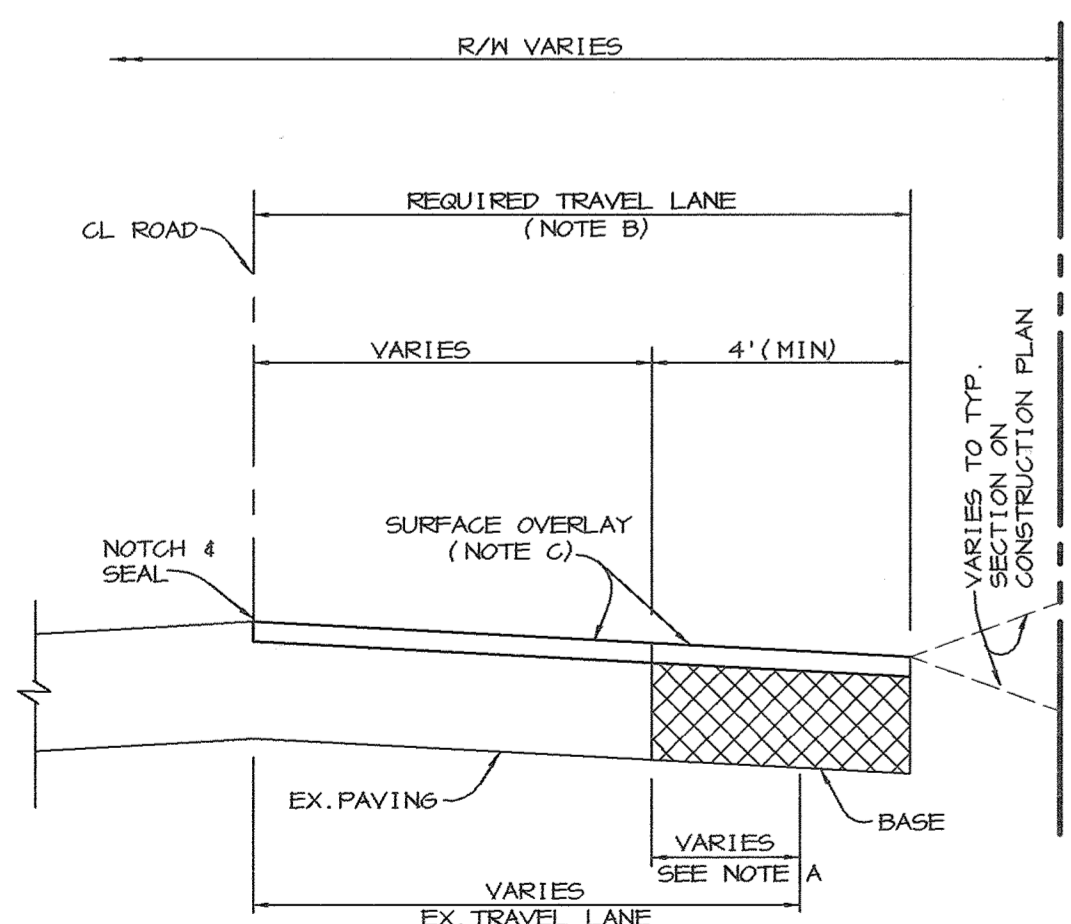
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.	
<i>Mark D. Leggett</i>	12/8/04
DIRECTOR	DATE
<i>Chris Brummon</i>	12/6/04
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
<i>Paula J. Amitta</i>	12/7/04
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE
11-11-04	ADDITIONAL SHEET PER RECLINE APPROVAL
DATE	NO. REVISION
DEVELOPER/OWNER:	
CHASE LIMITED PARTNERSHIP P.O. BOX 850 LAUREL, MD 20725 410.742.1234	(DEVELOPER) CHASE MINING, LLC P.O. BOX 850 LAUREL, MD 20725 410.742.1234
PROJECT	
CHASE QUARRY	
AREA ZONED M-1 & M-D-3, TAX MAP No. 43 PARCEL 234 & P.O. 235, BLOCK 19 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND	
TITLE	
PROFILES	
Patton Harris Rust & Associates, pc Engineers, Surveyors, Planners, Landscape Architects. 8818 Centre Park Drive Columbia, MD 21045 T 410.997.8900 F 410.997.9282	
11-11-04 DATE	
DESIGNED BY: C.J.R.	
DRAWN BY: MAD	
CHECKED BY: C.J.R.	
PROJECT NO: 99092/ PROFILE7.DWG	
DATE: NOVEMBER 11, 2004	
SCALE: AS SHOWN	
DRAWING NO. 41 OF 41	
CHRISTOPHER J. REID #19949	



M.S.H.A. PAVING SECTION
NO SCALE



M.S.H.A. TYPE 'A' CURB AND GUTTER
NO SCALE



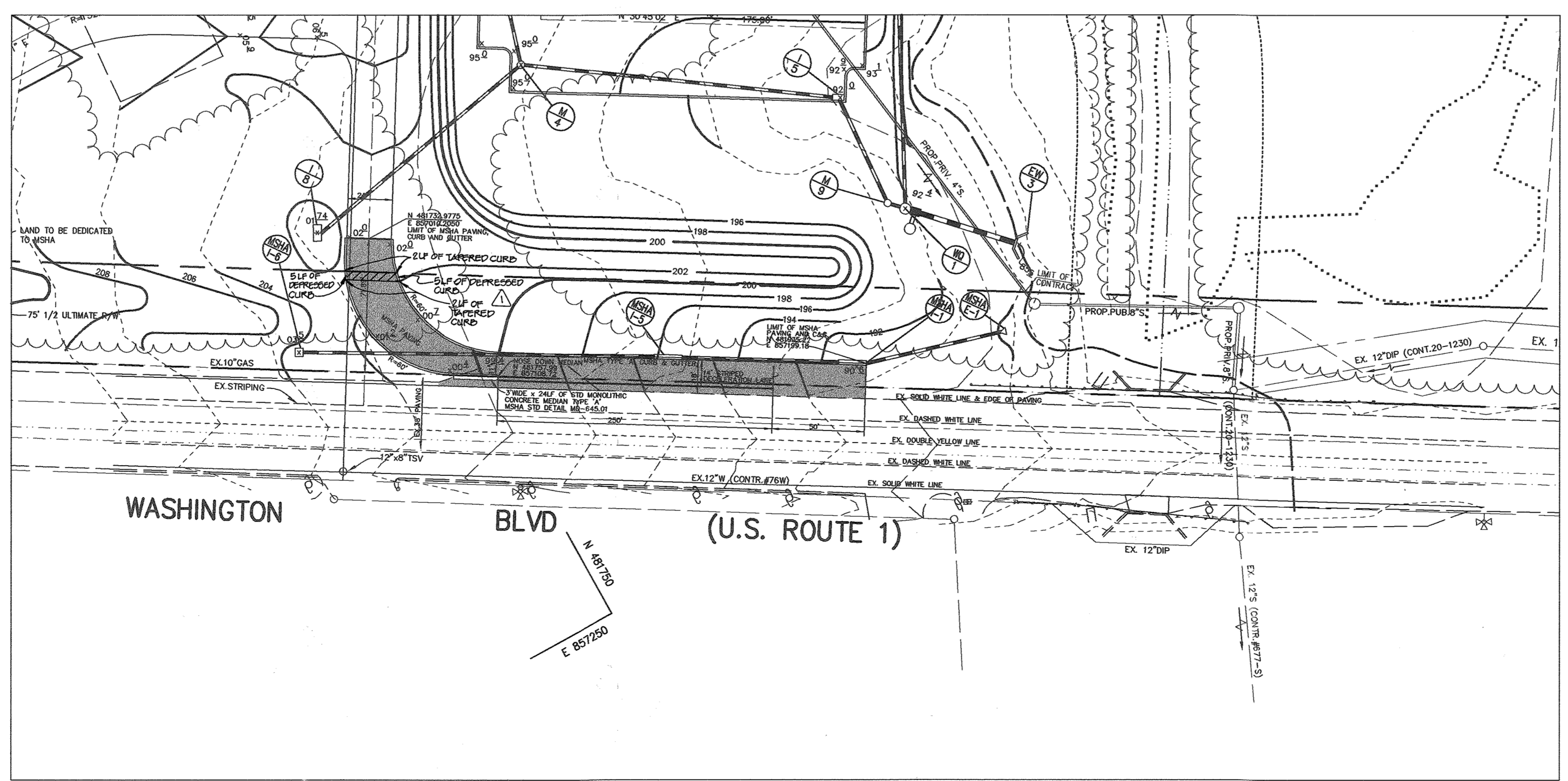
NOTE A - WHEN EXISTING TRAVEL LANE IS LESS THAN THE REQUIRED CONTRACTOR SHALL REMOVE ENOUGH OF THE EXISTING ROAD BED TO PROVIDE A MINIMUM BASE WIDENING OF 4'.

NOTE B - THE SURFACE OVERLAY SHALL BE CARRIED TO THE CL OF THE ROAD AND NOTCHED AND SEALED.

NOTE C - SURFACE OVERLAY COURSE TO BE EQUAL TO SURFACE COURSE OF TYPICAL PAVING SECTION OF SUBDIVISION.

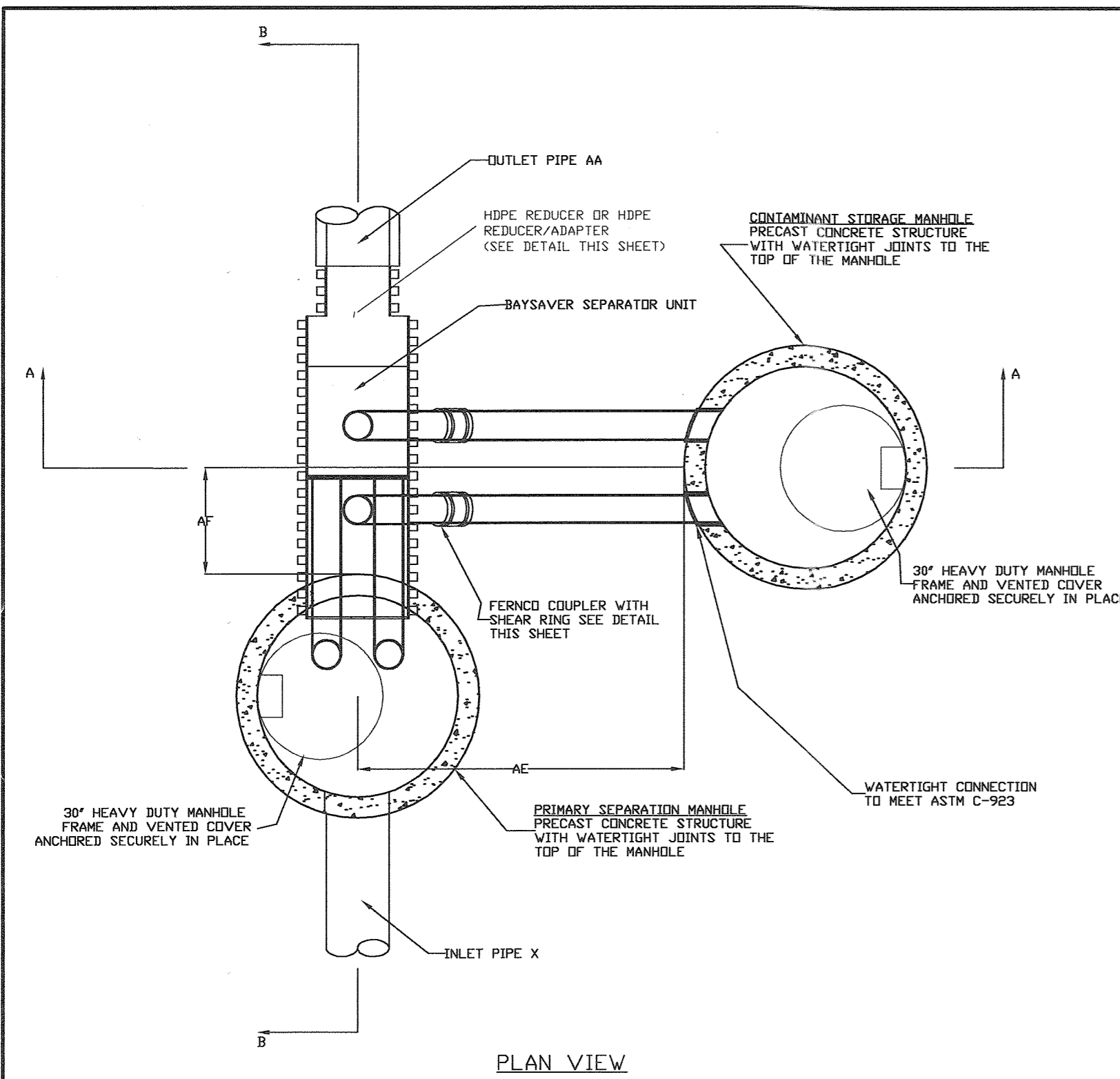
NOTE D - CL OF ROAD TO BE MILLED AT DEPTH OF 1 1/2"x1' WIDE USING A MILLING MACHINE.

WIDENING STRIPS ALONG EXISTING ROADWAYS
NO SCALE

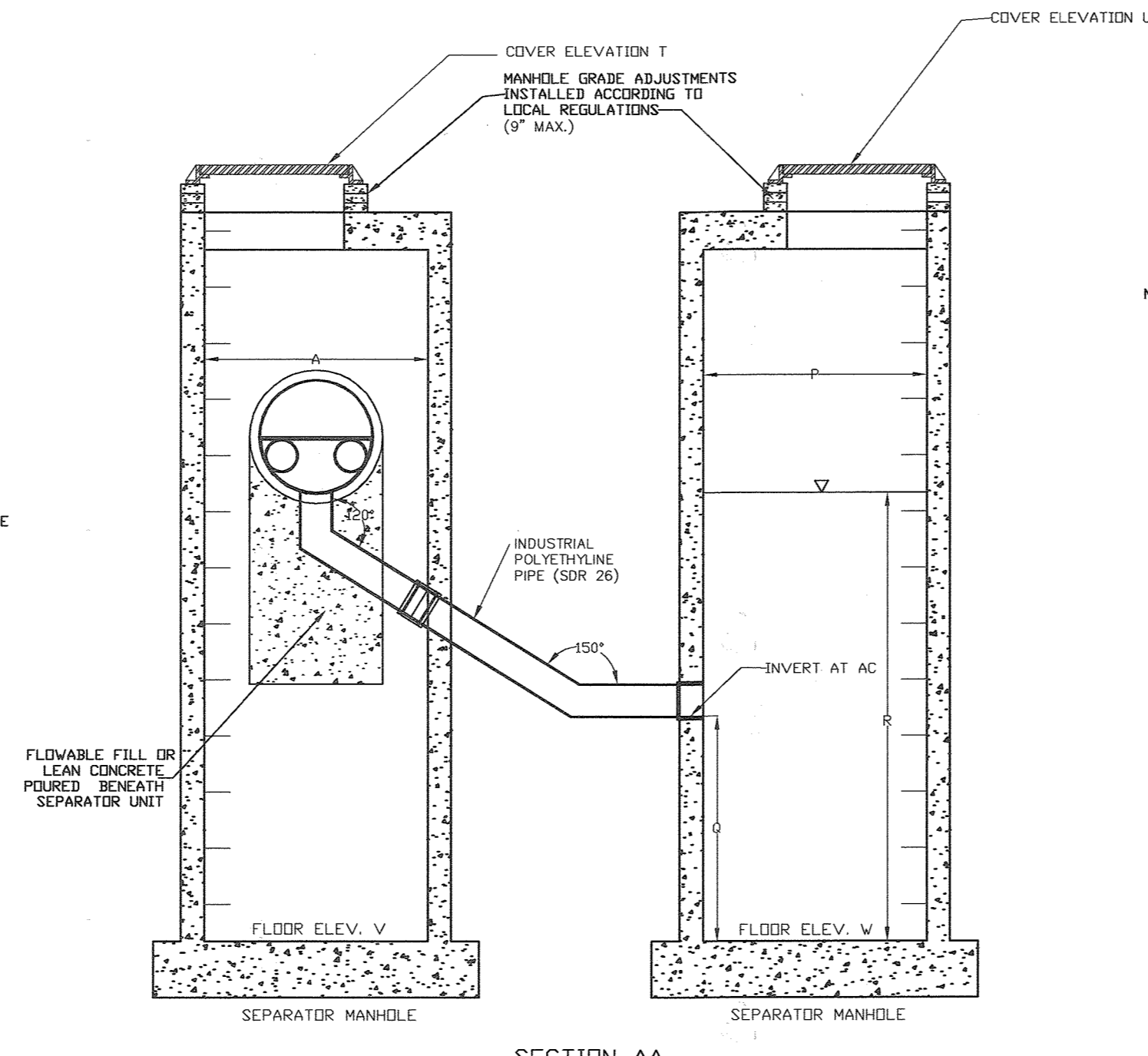


APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.	
<i>David A. Wright</i>	3/1/04 DATE
<i>John Dammann</i>	2/20/04 DATE
<i>Grady Hamner</i>	3/11/04 DATE
6-28-05 CHANGED SHEET NO.	
1-9-05 ADDED HC ACCESS ACROSS ENTRANCES	
DATE NO.	REVISION
DEVELOPER/OWNER:	
(OWNER) CHASE LIMITED PARTNERSHIP P.O. BOX 850 LAUREL, MD 207125 410.742.1234	(DEVELOPER) CHASE MINING LLC P.O. BOX 850 LAUREL, MD 207125 410.742.1234
PROJECT CHASE QUARRY	
AREA ZONED M-1 & MXD-3, TAX MAP No. 43 PARCEL 234 & P.O. 235, BLOCK 19 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND	
TITLE U.S. ROUTE 1 ROAD WIDENING PLAN	
Patton Harris Rust & Associates, PC Engineers. Surveyors. Planners. Landscape Architects. 8818 Centre Park Drive Columbia, MD 21045 T 410.997.8900 F 410.997.9282	
1-30-04 DATE	
DESIGNED BY : C.J.R.	
DRAWN BY : MAD	
CHECKED BY : C.J.R.	
PROJECT NO : 99092/ STATE-LDWG	
DATE : JANUARY 29, 2004	
SCALE : 1" = 50'	
DRAWING NO. 37 OF 35	
CHRISTOPHER J. REID #19949	

P:\project\99092-1-0\dwg\Plans\STATE-1.dwg, Layout1, 01/29/2004 12:18:51 PM, HP750C(36).pc3, Arch D - 24 x 36 in. (landscape), 1:50

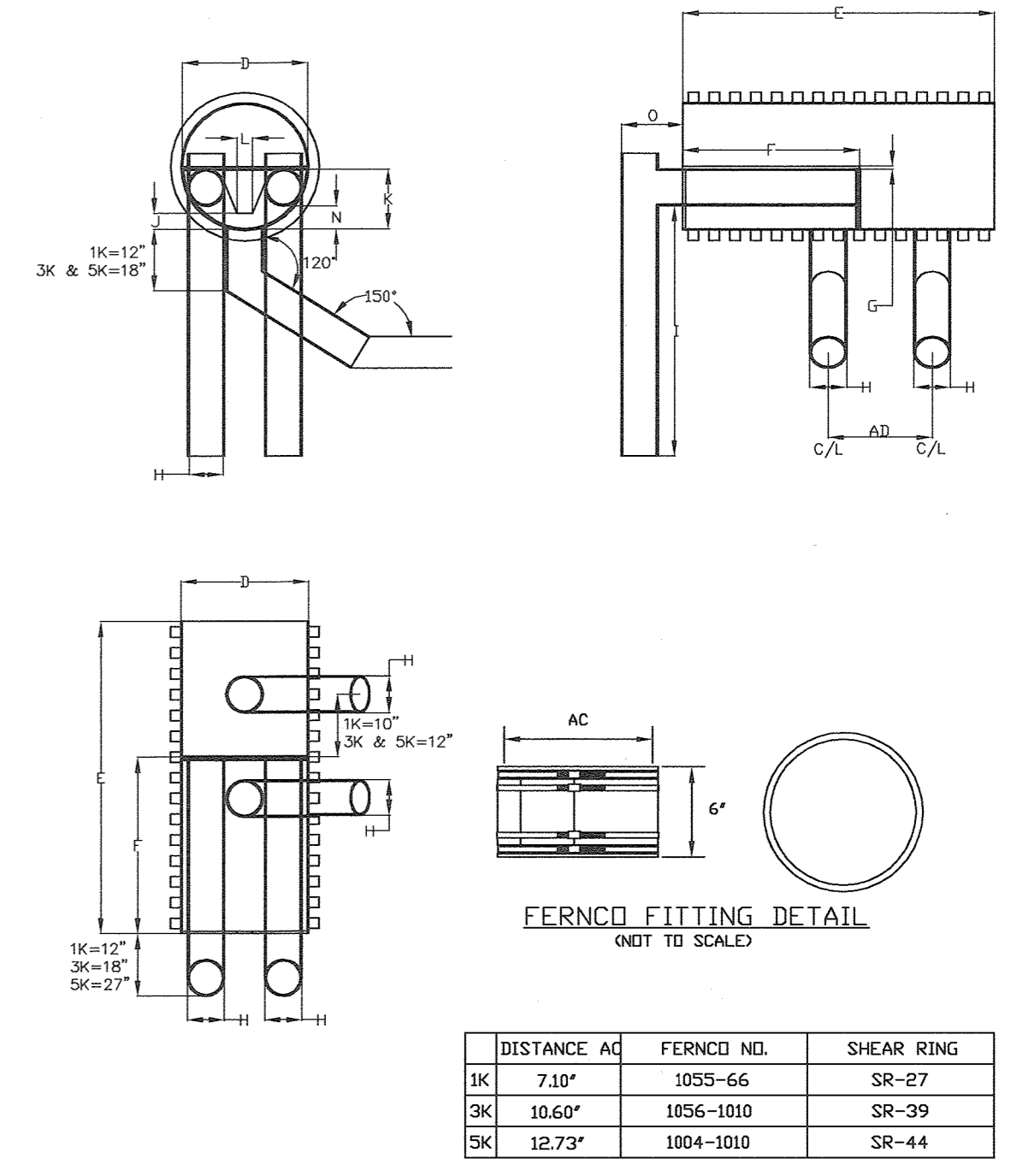
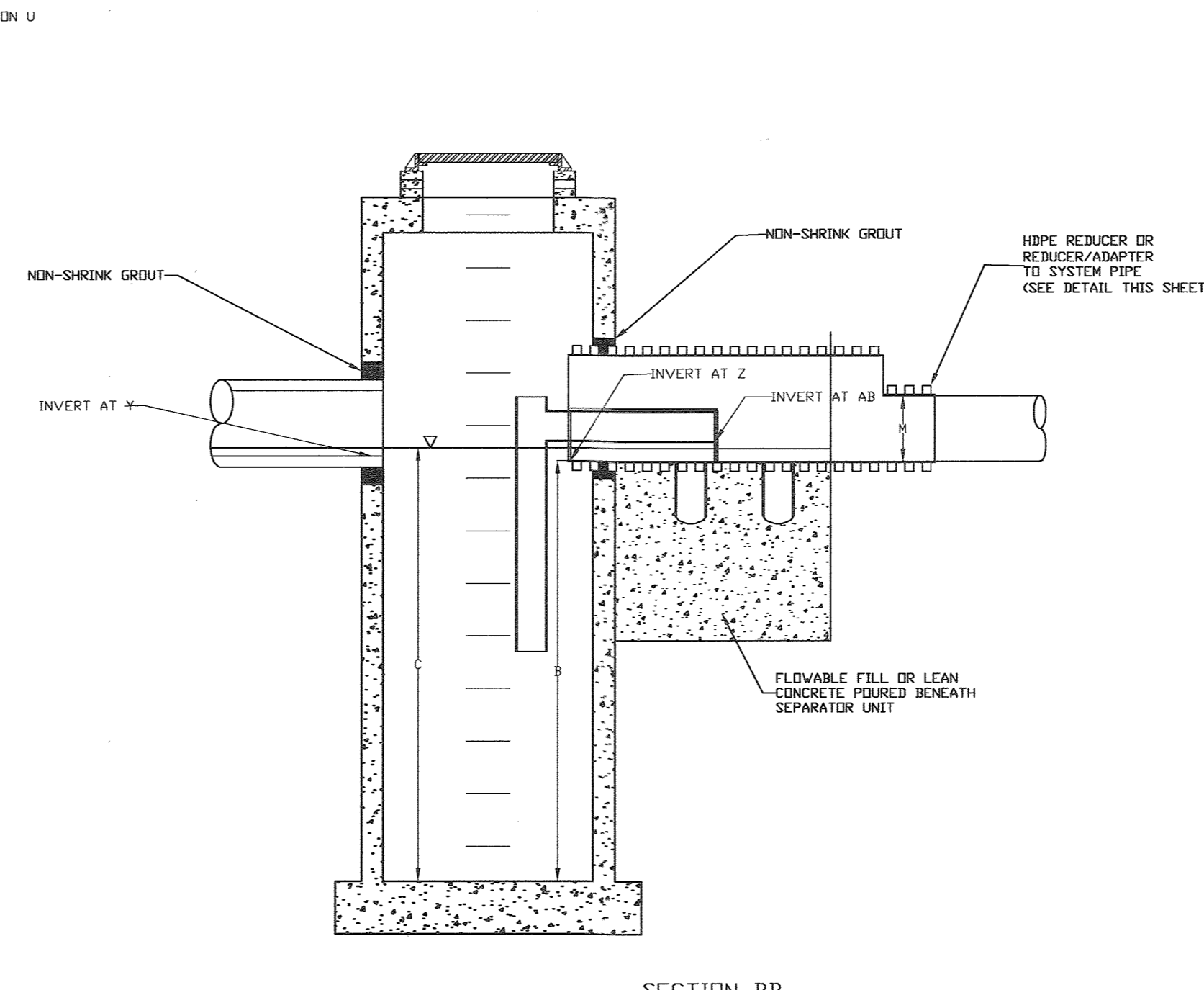


PLAN VIEW



SECTION AA

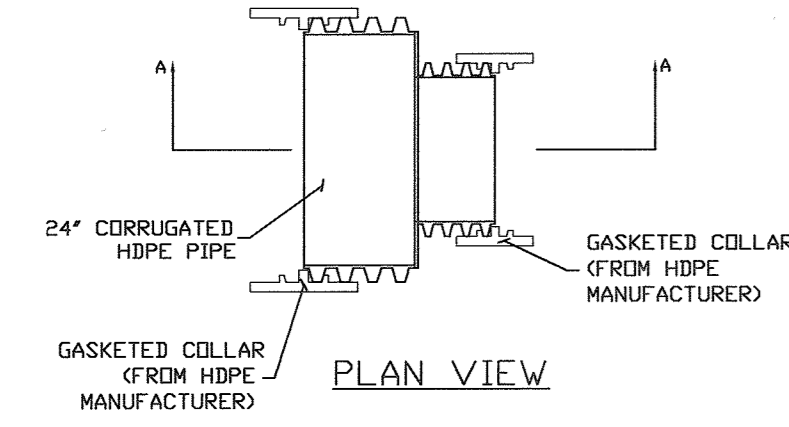
SECTION BB



DISTANCE AC	FERNCO NO.	SHEAR RING
1K 7.10"	1055-66	SR-27
3K 10.60"	1056-1010	SR-39
5K 12.73"	1004-1010	SR-44

HDPE-HDPE REDUCER DETAIL

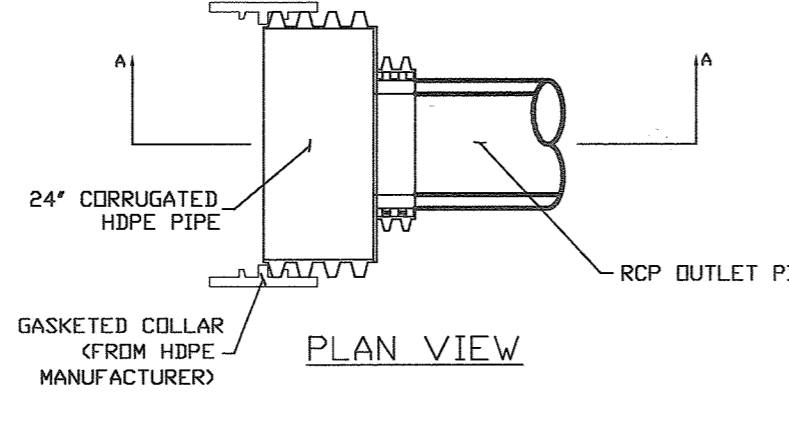
FOR USE WITH HDPE OUTLET PIPES
NOT TO SCALE



SECTION AA

REDUCER/ADAPTER DETAIL

FOR USE WITH OUTLET PIPES OTHER THAN HDPE
NOT TO SCALE



SECTION AA

- GENERAL CONSTRUCTION NOTES**
- ALL WORK MUST BE DONE WITH REGARD FOR THE SAFETY OF THE CONSTRUCTION CREW.
 - ALL WORK AND MATERIALS MUST COMPLY WITH APPLICABLE STATE AND LOCAL REGULATIONS.
 - KNOW THE LOCATION AND DEPTH OF ANY UNDERGROUND UTILITIES BEFORE EXCAVATION BEGINS.

- BAYSAVER MAINTENANCE**
- BAYSAVER SYSTEMS MUST BE INSPECTED AND MAINTAINED PERIODICALLY. INSPECTION IS MADE BY CHECKING THE DEPTH OF SEDIMENT IN EACH MANHOLE WITH A GRADE STICK OR SIMILAR DEVICE. MAINTENANCE IS REQUIRED WHEN THE SEDIMENT DEPTH IN EITHER MANHOLE EXCEEDS 2 FEET. MINIMUM INSPECTION IS REQUIRED TWICE A YEAR TO MAINTAIN OPERATION AND FUNCTION OF BAYSAVER.
- MAINTENANCE CONSISTS OF THE FOLLOWING:

- A. CONTAMINANT STORAGE MANHOLE**
- REMOVE THE ENTIRE VOLUME OF THE CONTAMINATED WATER BY VACUUM TRUCK.
 - CLEAN THE MANHOLE WALLS AND FLUSH OUT THE MANHOLE USING A HIGH PRESSURE HOSE AND REMOVE FLUSHING WATER BY VACUUM TRUCK. MAKE CERTAIN MANHOLE IS CLEAN.
- B. PRIMARY SEPARATION MANHOLE**
- USING A SUBMERSIBLE PUMP, PUMP THE CLEAN WATER FROM THE CENTER OF THE MANHOLE DIRECTLY INTO THE EMPTY STORAGE MANHOLE UNTIL THE WATER LEVEL FALLS TO 1 FOOT ABOVE THE SEDIMENT LAYER.
 - REMOVE THE SETTLED SEDIMENT AND REMAINING WATER BY VACUUM TRUCK.
 - CLEAN THE MANHOLE WALLS AND FLUSH OUT THE MANHOLE USING A HIGH PRESSURE HOSE AND REMOVE FLUSHING WATER BY VACUUM TRUCK. MAKE CERTAIN MANHOLE IS CLEAN.
 - CONTAMINATED MATERIAL REMOVED FROM THE MANHOLES MUST BE DISPOSED OF RESPONSIBLY AND LEGALLY BY THE OPERATOR OF THE VACUUM TRUCK.

- BAYSAVER INSTALLATION INSTRUCTIONS**
- EXCAVATION MUST PROVIDE ADEQUATE SPACE TO CONNECT INLET AND OUTLET PIPES TO SEPARATOR MANHOLE AND BAYSAVER UNIT. INSTALL PRECAST DROP STRUCTURES ON SOLID GROUND AS VERIFIED BY A GEOTECHNICAL ENGINEER.
 - VERIFY THE SUBGRADE ELEVATION AGAINST THE MANHOLE DIMENSIONS AND CONNECTING STORM DRAIN INVERTS.
 - MAKING SURE THE BASES ARE LEVEL AND THE STORAGE MANHOLE OPENINGS ARE ALIGNED WITH THE SEPARATOR UNIT, INSTALL PRIMARY AND STORAGE MANHOLES. INSTALL RUBBER GASKETS ON BASE UNITS AND COAT WITH LUBRICATING GREASE. INSTALL ADDITIONAL MANHOLE SECTIONS AS REQUIRED. SEAL LIFT HOLES WITH NON-SHRINK GROUT.
 - BACKFILL BASE SECTIONS OF MANHOLES TO INVERT OF STORAGE MANHOLE CONNECTING PIPES. USING APPROVED BACKFILL MATERIAL, BACKFILL AND COMPACT IN 8 INCH LIFTS. BACKFILL AND COMPACTION SHOULD BE MONITORED BY A GEOTECHNICAL ENGINEER.
 - INSTALL BAYSAVER SEPARATOR UNIT AND CONNECTING PIPES. SEAL ALL CONNECTING JOINTS AND INSTALL SEPARATOR UNIT/STORM DRAIN JOINT COLLAR. CUT EXCESS LENGTH OFF CONNECTING PIPES INSIDE STORAGE MANHOLE.
 - BACKFILL SEPARATOR UNIT AND MANHOLES. AREAS NOT ACCESSIBLE TO COMPACTION EQUIPMENT MUST BE BACKFILLED WITH LEAN CONCRETE OR FLOWABLE FILL.
 - INSTALL AND SET MANHOLE COVER GRADE ADJUSTMENT RINGS AS NECESSARY.
 - INSTALL AND SET MANHOLE FRAME AND COVER UNITS.

BAYSAVER SYSTEM DIMENSIONS

DESCRIPTION	1K SYSTEM	3K SYSTEM	5K SYSTEM
SEPARATOR MANHOLE DIMENSIONS			
A PRIMARY MANHOLE DIAMETER	48"	60"	72"
B MANHOLE DEPTH BELOW OUTLET	8' - 0"	8' - 0"	8' - 0"
C MINIMUM FLUID DEPTH	8' - 3"	8' - 4 1/2"	8' - 6"
STANDARD SEPARATOR UNIT DIMENSIONS			
D SEPARATOR UNIT ID	24"	36"	48"
E SEPARATOR UNIT LENGTH	60"	78.2"	75.4"
F BYPASS PLATE LENGTH	34"	45"	45"
G WEIR/BYPASS PLATE THICKNESS	3/4"	3/4"	3/4"
H ELBOW AND CONNECTING PIPE OD	7.125"	10.75"	12.75"
I ELBOW LENGTH	48"	48"	48"
J WEIR HEIGHT ABOVE INVERT	3'	4'	6'
K BYPASS PLATE HEIGHT ABOVE INVERT	12'	18'	24'
L WIDTH OF WEIR AT BASE	3'	4 1/2"	6'
M OUTLET PIPE DIAMETER	M	M	M
N ELBOW INVERT HEIGHT ABOVE UNIT INVERT	4 1/2"	7 1/2"	11"
O ELBOW PIPE OVERHANG	12"	18"	24"
STORAGE MANHOLE DIMENSIONS			
P STORAGE MANHOLE DIAMETER	48"	60"	72"
Q MANHOLE DEPTH BELOW INLET/OUTLET	48"	48"	48"
R FLUID DEPTH	8' - 0"	8' - 0"	8' - 0"
S TOTAL STORAGE VOLUME	200 CF	300 CF	450 CF
SYSTEM DIMENSIONS AND ELEVATIONS			
T SEPARATOR MANHOLE COVER ELEVATION	T	T	T
U STORAGE MANHOLE COVER ELEVATION	U	U	U
V SEPARATOR MANHOLE FLOOR ELEVATION	V	V	V
W STORAGE MANHOLE FLOOR ELEVATION	W	W	W
X INLET PIPE ID AND MATERIAL	X1 X2	X1 X2	X1 X2
Y INLET PIPE INVERT	Y1 Y2	Y1 Y2	Y1 Y2
Z SEPARATOR UNIT INVERT	Z	Z	Z
AA OUTLET PIPE ID AND MATERIAL	AA	AA	AA
AB ELBOW INVERT ELEVATION	AB	AB	AB
AC CONNECTING PIPE INVERT ELEVATION	AC	AC	AC
AD CONNECTION PIPE SPACING	20"	24"	24"
AE STORAGE MANHOLE SIDE OFFSET	72 ± 6"	72 ± 6"	72 ± 6"
AF STORAGE MANHOLE DOWNSTREAM OFFSET	23"	31"	25"

SEQUENCE OF CONSTRUCTION AND INSPECTOR'S CHECK-OFF LIST FOR DUAL MANHOLE SEPARATORS

Stage (X = Approval Required)	Developer's/Engineer Approval		Inspector		Geotechnical Engineer	
	Initials	Date	Initials	Date	Initials	Date
1. Pre-Construction Meeting.	X		X		X	
2. Install Manholes and associated storm drainages: a. Obtain approval of subgrade from Geotechnical Engineer. (Subgrade to have a minimum of 95% compaction)					X	
b. Installation of precast base, lower tank and lower piping.	X		X			
c. Backfill and min. 95% compaction around lower tank and lower piping.					X	
d. Installation of precast middle section(s) with separator unit and remaining piping.	X		X			
e. Installation of precast top slab.	X		X			
f. Installation of adjustment rings and frame and cover.	X		X			
g. Installation of flowable fill or concrete backfill.					X	
3. Backfilling operation and compaction.					X	
4. Site is permanently stabilized. Sediment control measures removed and all sediment and debris removed from dual manhole separators.			X			
5. Final inspection.			X			

NOTE: BAYSAVERS ARE TO BE INSTALLED WITH THE STORM DRAIN SYSTEM AND WILL FUNCTION AS SECONDARY SEDIMENT CONTROL DEVICES. UPON COMPLETION OF SITE STABILIZATION, EACH BAYSAVER SYSTEM SHALL BE FLUSHED CLEAN & THE MANHOLES CLEANED OUT AND REFILLED WITH CLEAN WATER.

Baysaver Separator Unit	Baysaver Manhole Sizes (prim. x stor.)	Maximum Treatment (cfs)*1	Maximum Treatment (gpm)*1	Impervious Area (acres)
1K Baysaver Separator	48x48	2.4	1076	1.2
	48x50	2.4	1076	1.4
	60x60	2.4	1076	1.6
3K Baysaver Separator	60x60	7.2	3231	3.6
	60x72	7.2	3231	4.1
	60x84	7.2	3231	4.6
5K Baysaver Separator	72x72	11.1	4981	5.5
	72x84	11.1	4981	6.5
	96x96	11.1	4981	8.0

NOTE: DIMENSIONAL SHOP DRAWINGS ARE TO BE APPROVED BY THE DESIGN ENGINEER

Project: CHASE QUARRY Designer: RMA, INC.
 Address: _____ Contact: CHRIS REID
 Phone: (410) 997-8900
 Fax: (410) 997-9282
 Delivery Date: _____
 Owner: _____ Contractor: _____
 Contact: _____ Address: _____
 Address: _____ Contact: _____
 Phone: _____ Fax: _____

Separator Unit Model:

1K 3K 5K

Circle system orientation above

Manhole Specifications:

Primary Manhole Diameter: 72 inches
 Storage Manhole Diameter: 72 inches
 Floor Elevations:
 Primary Manhole: 177.75
 Storage Manhole: 177.75
 Primary Manhole Inverts:
 Separator Unit: 189.75 (30" OUT)
 Inlet Pipe(s): 189.05 (30")
 186.75 (18")
 Please show orientation (including angle), size and material of inlet pipes above.
 Cover Elevations:
 Primary Manhole: 192.40
 Storage Manhole: 192.40
 NQ-1 / NQ-1A

This order can be faxed to Bay Saver, Inc. at (301) 829-3747

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR: *Howard County* 3/15/04 DATE
 CHIEF, DEVELOPMENT ENGINEERING DIVISION 2/20/04 DATE
 CHIEF, DIVISION OF LAND DEVELOPMENT 3/11/04 DATE

6-20-05 CHANGED SHEET NO.
 1-0-08 CHANGED SHEET NO.

DATE NO. REVISION

DEVELOPER/OWNER:
 CHASE LIMITED PARTNERSHIP (DEVELOPER)
 P.O. BOX 850 CHASE MINING LLC
 LAUREL, MD 207125 LAUREL, MD 207125
 410.742.1234 410.742.1234

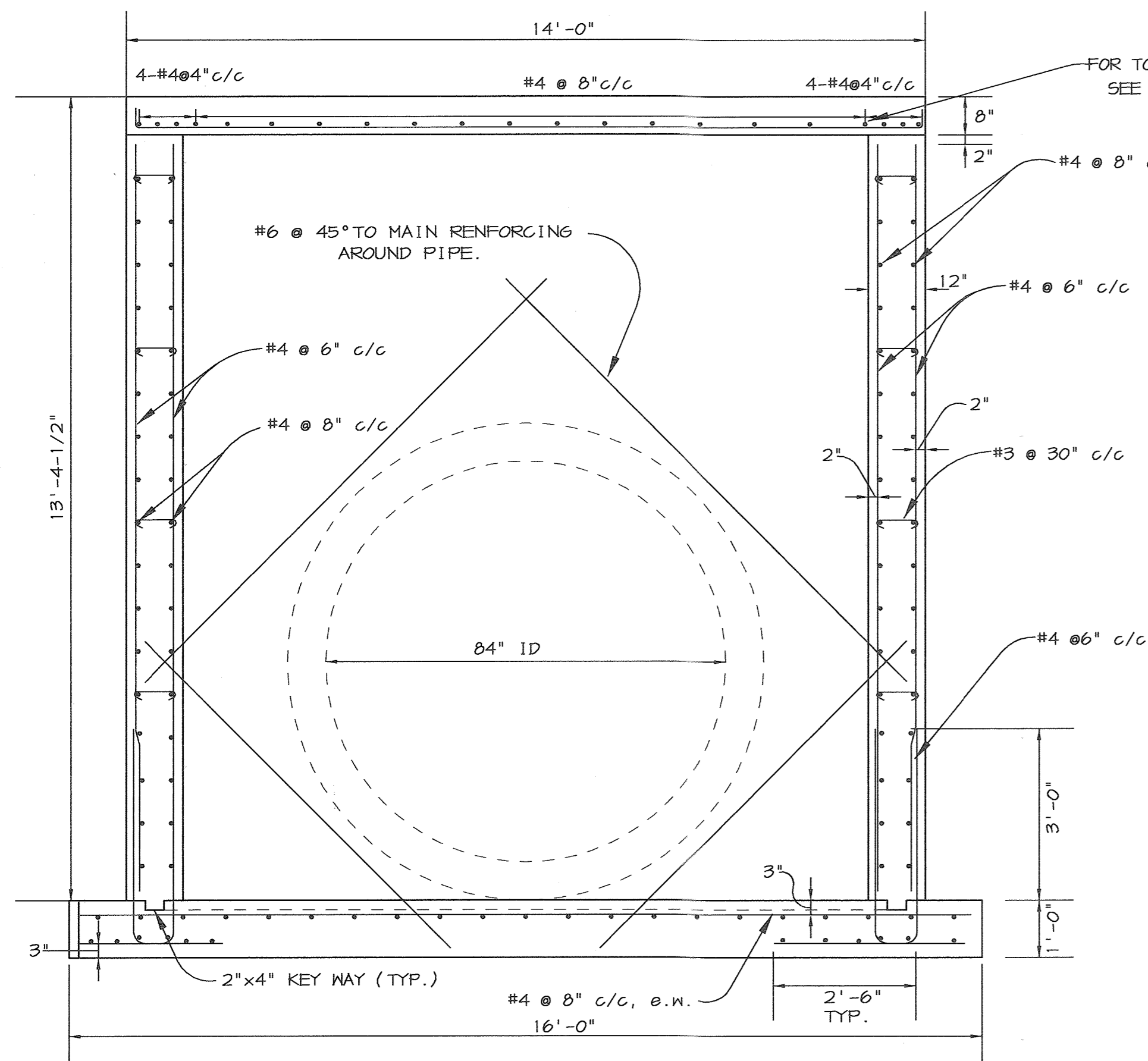
PROJECT: CHASE QUARRY

AREA ZONED M-1 & MXD-3, TAX MAP No. 43
 PARCEL 234 & P.O. 235, BLOCK 19
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

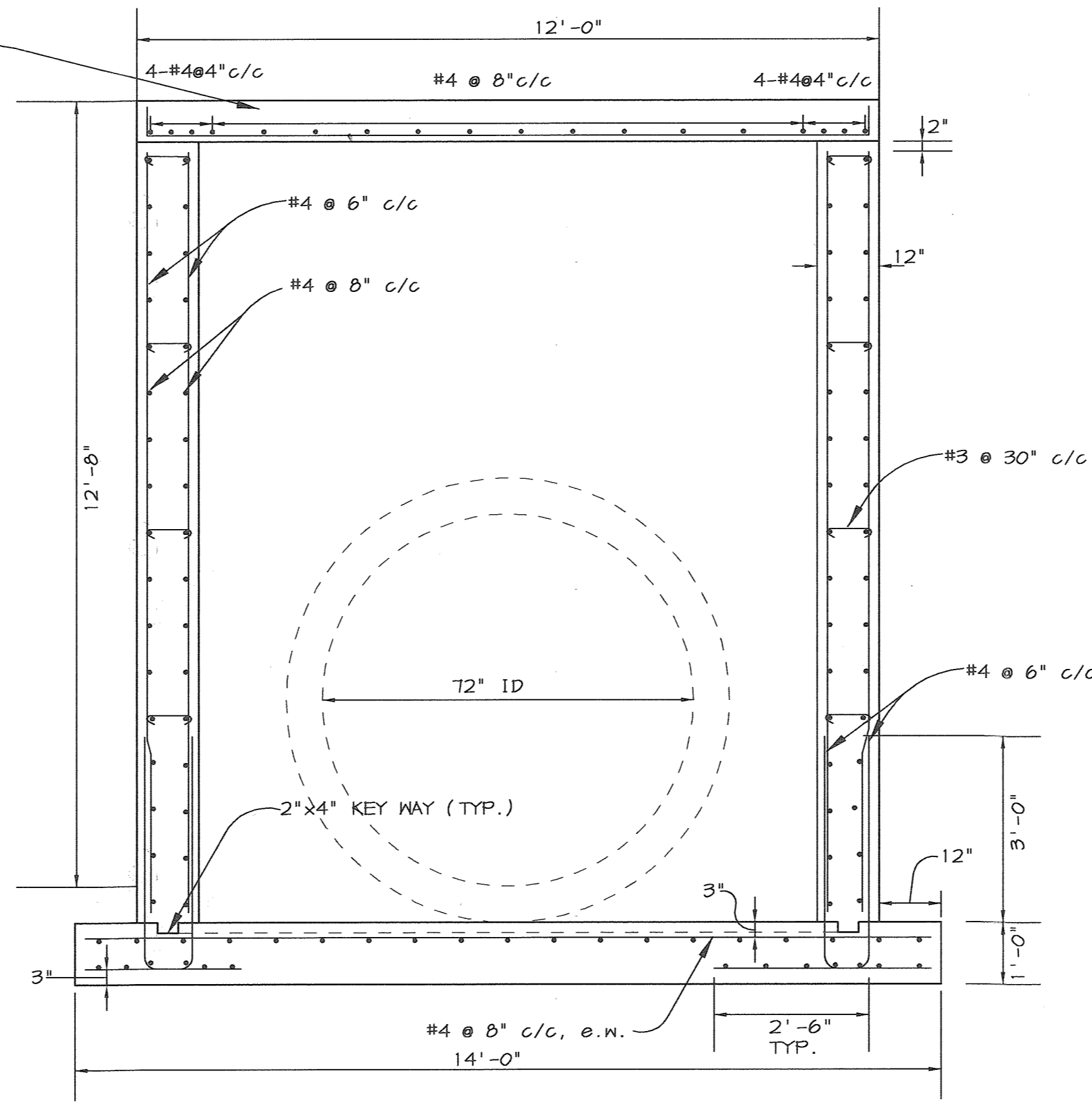
TITLE: BAYSAVER DETAILS & NOTES

Patton Harris Rust & Associates, pc
 Engineers, Surveyors, Planners, Landscape Architects.
 8818 Centre Park Drive
 Columbia, MD 21045
 T 410.997.8900
 F 410.997.9282

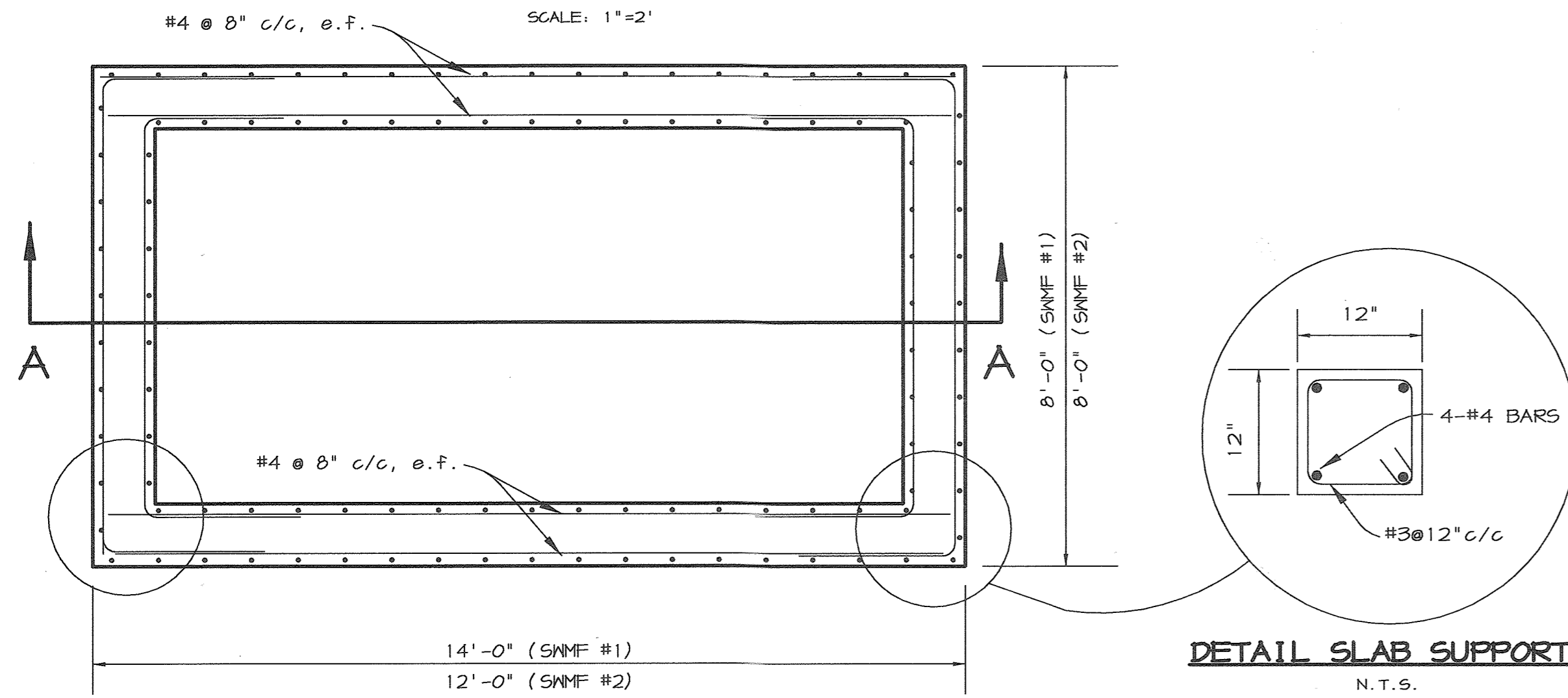
1-30-04 DATE
 DESIGNED BY: C.J.R.
 DRAWN BY:
 CHECKED BY: C.J.R.
 PROJECT NO: 99092/
 BAYSAVER.DWG
 DATE: JANUARY 29, 2004
 SCALE: AS SHOWN
 DRAWING NO. 38 OF 55
 CHRISTOPHER J. REID #19949



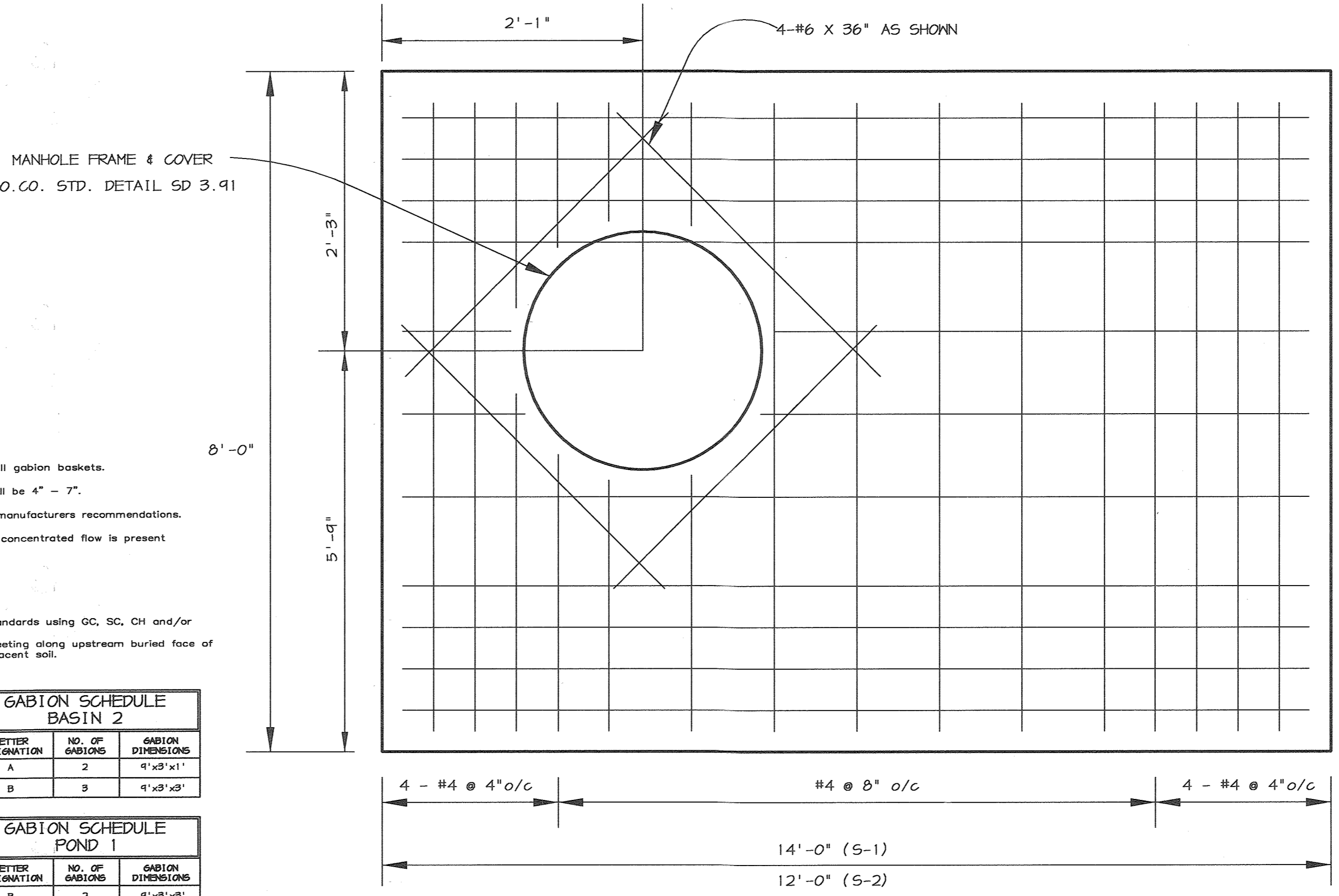
SWMF #1
SECTION A-A
SCALE: 1"=2'



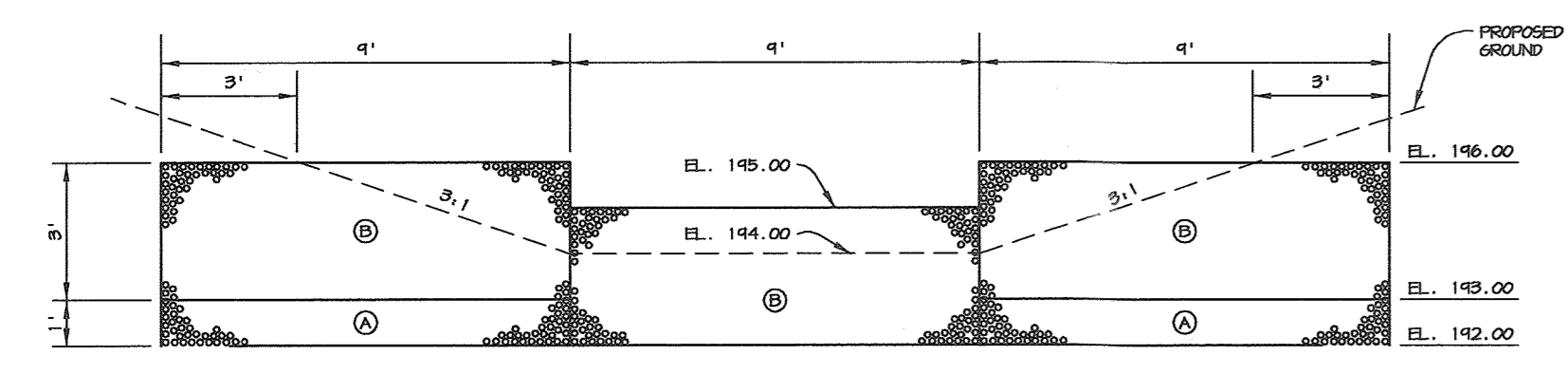
BASIN #2
SECTION A-A
SCALE: 1"=2'



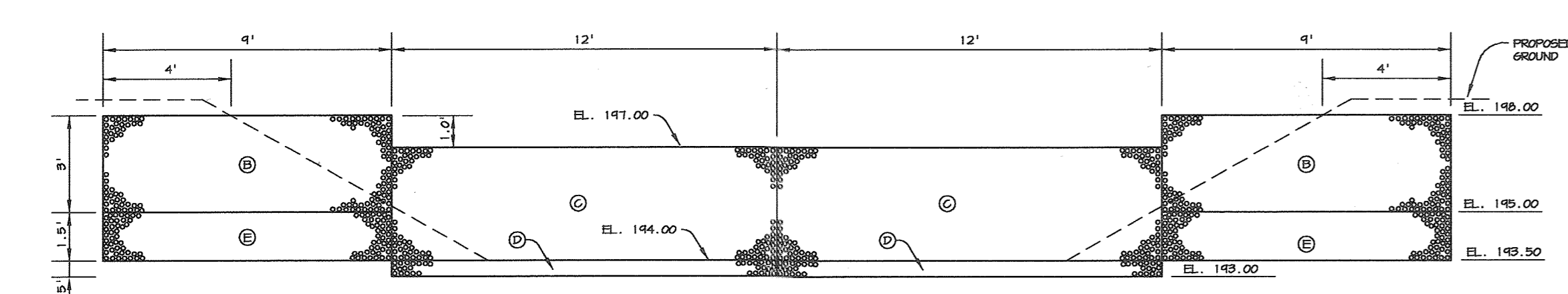
SWMF #1 & BASIN #2 PLAN VIEW
N.T.S.



TOP SLAB - S-1 & S-2
NOT TO SCALE



BASIN 2 GABION WALL SECTION
SCALE: 1"=4'



POND 1 GABION WALL SECTION
SCALE: 1"=4'

- GABION FOREBAY NOTES**
1. Geotextile Class C shall be installed under all gabion baskets.
 2. The stone used to fill the gabion baskets shall be 4" - 7".
 3. Gabions shall be installed in accordance with manufacturers recommendations.
 4. Gabion Inflow Protection shall be used where concentrated flow is present on slopes steeper than 4:1.
 5. Gabions to be PVC coated.
 6. Gabions to be fastened together.
 7. Compact forebay embankment to MD 378 Standards using GC, SC, CH and/or CL soils.
 8. Contractor shall place 10 mil. (min.) vinyl sheeting along upstream buried face of gabions w/4" overlap and buried 12" into adjacent soil.

GABION SCHEDULE BASIN 2		
LETTER DESIGNATION	NO. OF GABIONS	GABION DIMENSIONS
A	2	9'x3'x1'
B	3	9'x3'x3'

GABION SCHEDULE POND 1		
LETTER DESIGNATION	NO. OF GABIONS	GABION DIMENSIONS
B	2	9'x3'x3'
C	2	12'x3'x3'
D	2	12'x3'x1'
E	2	9'x3'x1.5'

- NOTES:**
1. CONCRETE SHALL BE MSHA MIX NO. 3 (F_c = 3,500 psi)
 2. ALL CONSTRUCTION TO MEET HO. CO. STANDARD SPECIFICATIONS.
 3. REINFORCEMENT TO BE DEFORMED BAR AND MEET ASTM A-615, GRADE 60.
 4. ALL REINFORCEMENT TO HAVE 2" MINIMUM COVER EXCEPT AS SHOWN ON DRAWING.
 5. ALL SPLICES NOT SHOWN SHALL BE LAPPED AS PER BAR LAP CHARTS.
 6. ALL HORIZONTAL REINFORCING TO BE CONTINUOUS AT ALL CORNERS.

- TOP SLAB NOTES:**
1. TOP SLAB TO BE SEPARATE FROM RISER STRUCTURE FASTENED TO RISER STRUCTURE.
 2. REFER TO HOWARD COUNTY STD. 6-5.52 FOR MANHOLE FRAME & COVER.
 3. CONCRETE TO BE MIX NO. 3
 4. SLAB REINFORCING SHALL HAVE 2" MINIMUM COVER.

BY THE DEVELOPER :

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Timothy J. Schmidt 1-30-04
DEVELOPER | DATE

BY THE ENGINEER :

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Chad J. Reed 1-30-04
ENGINEER | DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

NATURAL RESOURCES CONSERVATION SERVICE | DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

HOWARD SOIL CONSERVATION DISTRICT | DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Paul A. Wright 2/07/04 | DATE
DIRECTOR

Mark Damann 2/20/04 | DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION

Candy Hamstra 2/11/04 | DATE
CHIEF, DIVISION OF LAND DEVELOPMENT

6-28-05 CHANGED SHEET NO. 2
1-6-05 CHANGED SHEET NO. 1

DATE NO. REVISION

DEVELOPER/OWNER:

(OWNER) CHASE LIMITED PARTNERSHIP
P.O. BOX 250
LAUREL, MD 20725

(DEVELOPER) CHASE MINING LLC
P.O. BOX 250
LAUREL, MD 20725

PROJECT

CHASE QUARRY

AREA ZONED M-1 & MXD-3, TAX MAP No. 43
PARCEL 234 & P.O. 235, BLOCK 19
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE

REINFORCEMENT DETAILS & PROFILES

Patton Harris Rust & Associates, pc
Engineers. Surveyors. Planners. Landscape Architects.
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

1-30-04
DATE

DESIGNED BY : C.J.R.

DRAWN BY : MAD

CHECKED BY : C.J.R.

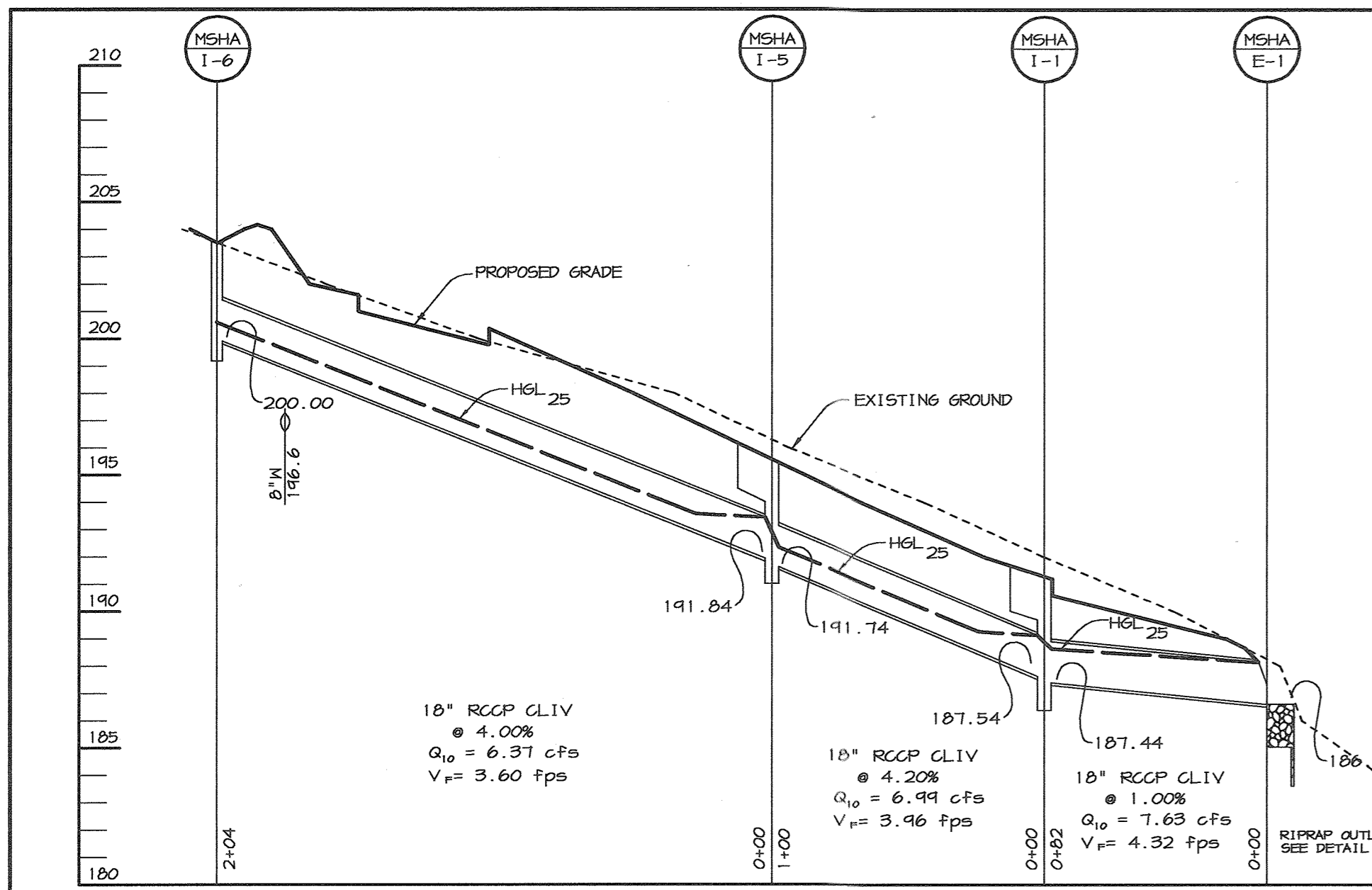
PROJECT NO : 99092/
RNR-DT.DWG

DATE : JANUARY 29, 2004

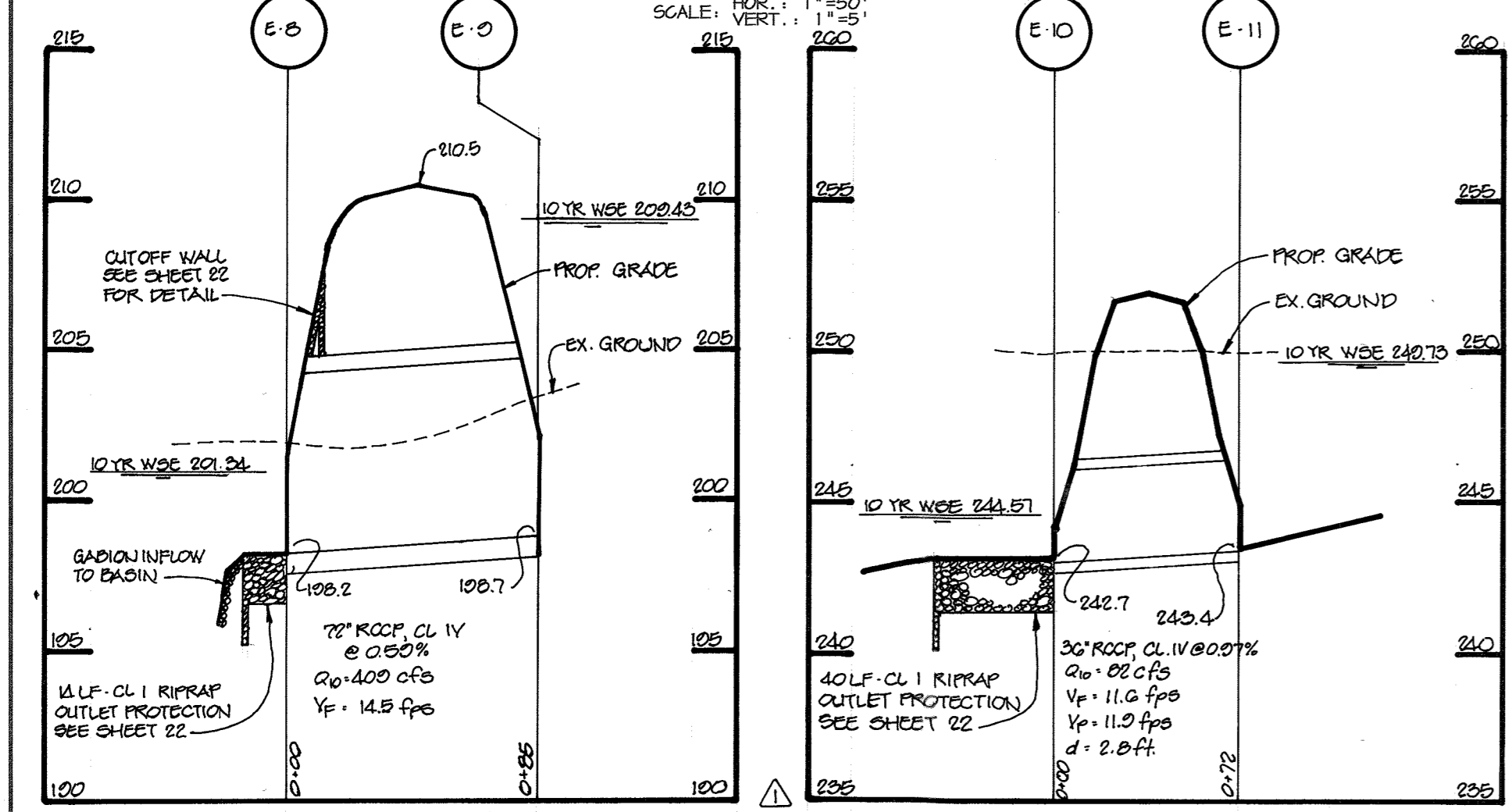
SCALE : AS SHOWN

DRAWING NO. 39 OF 55

CHRISTOPHER J. REID #19949



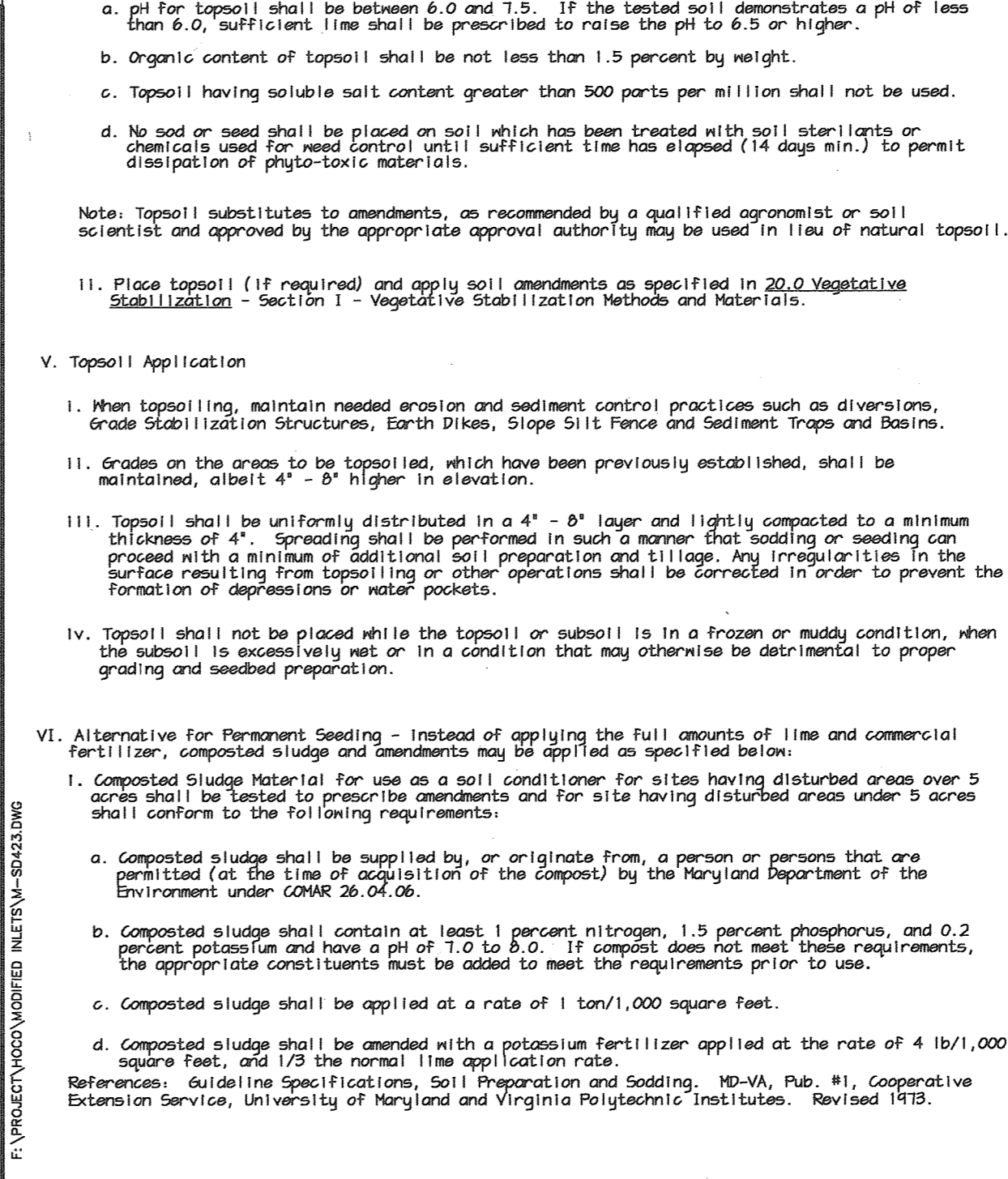
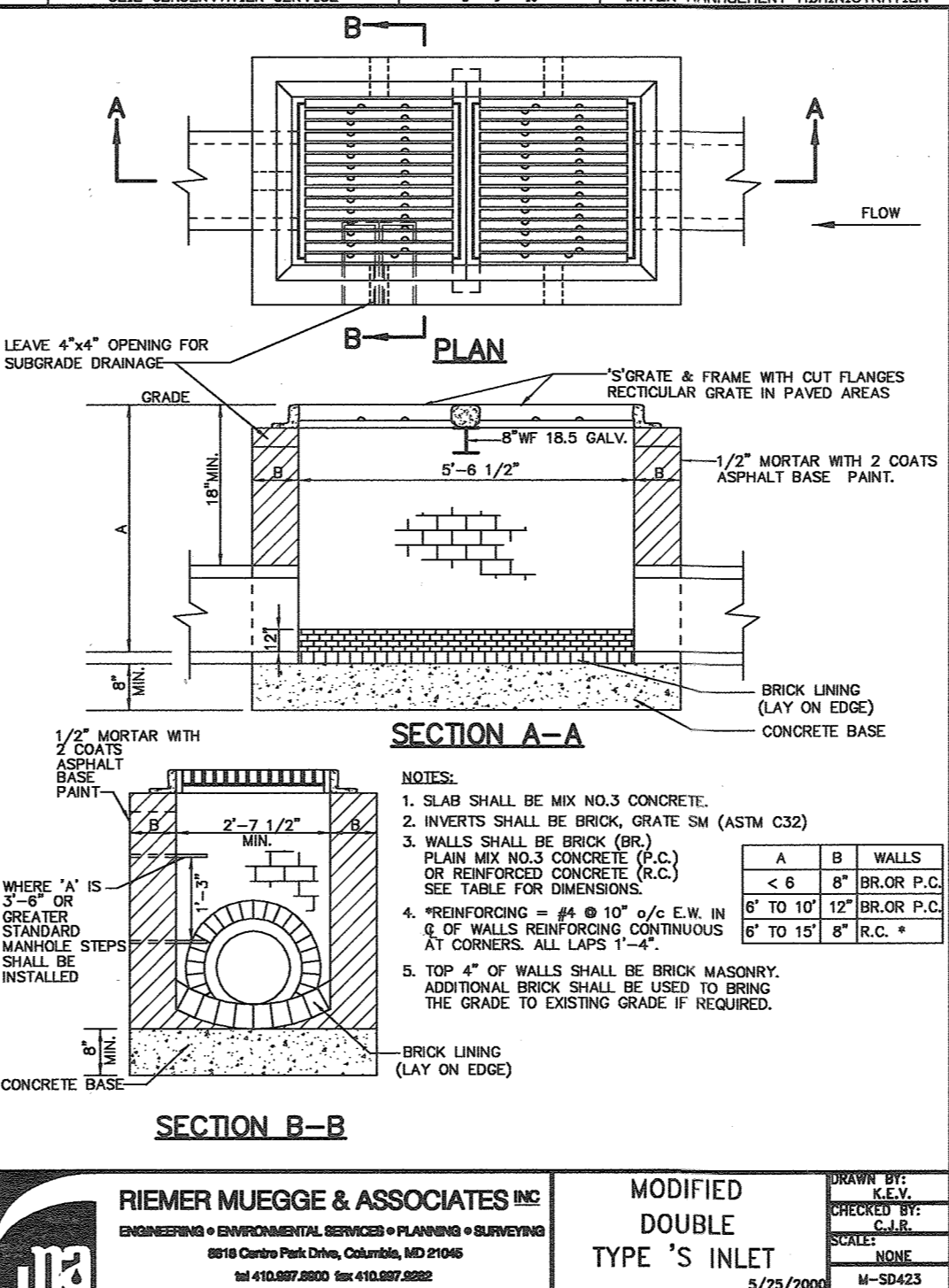
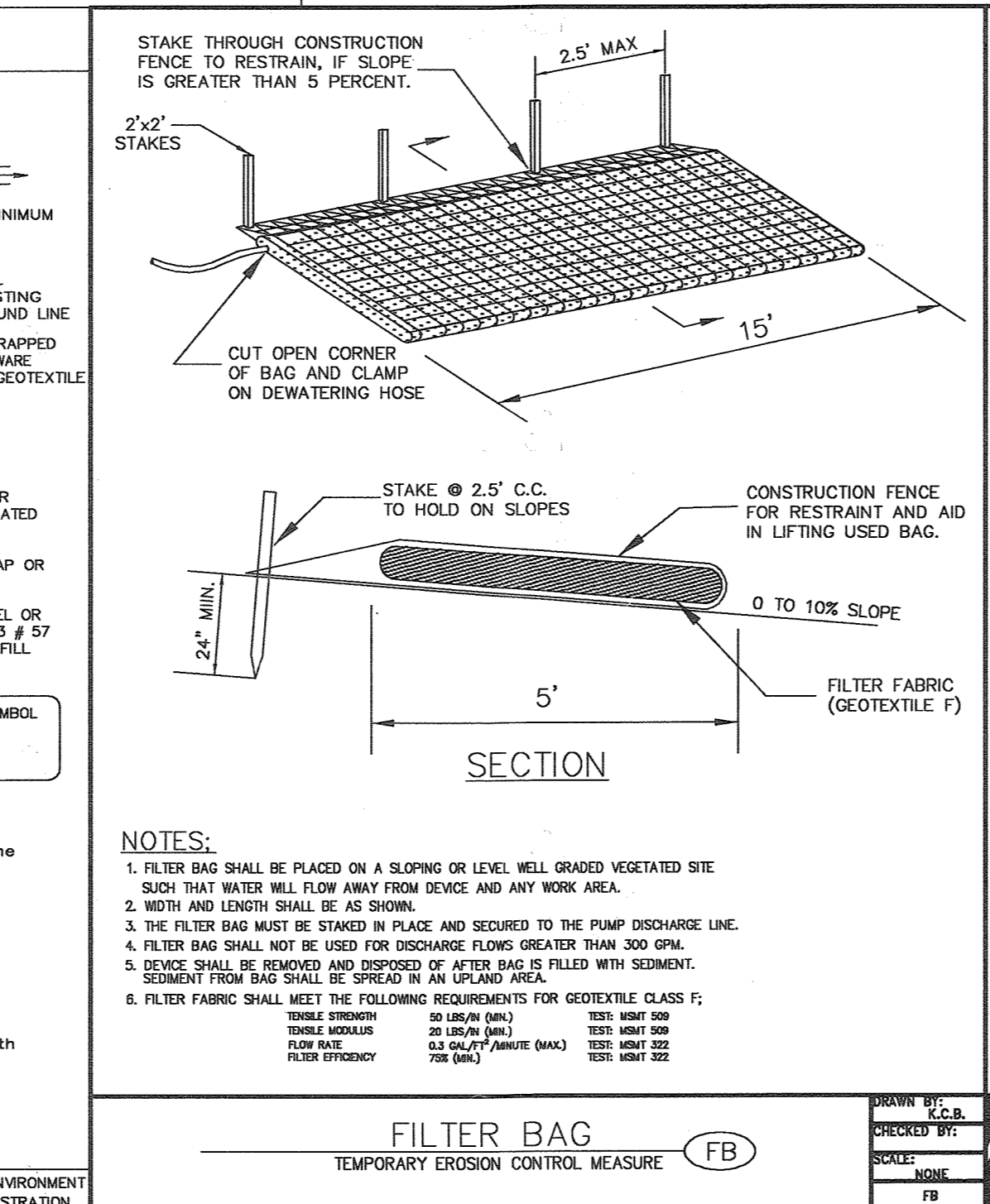
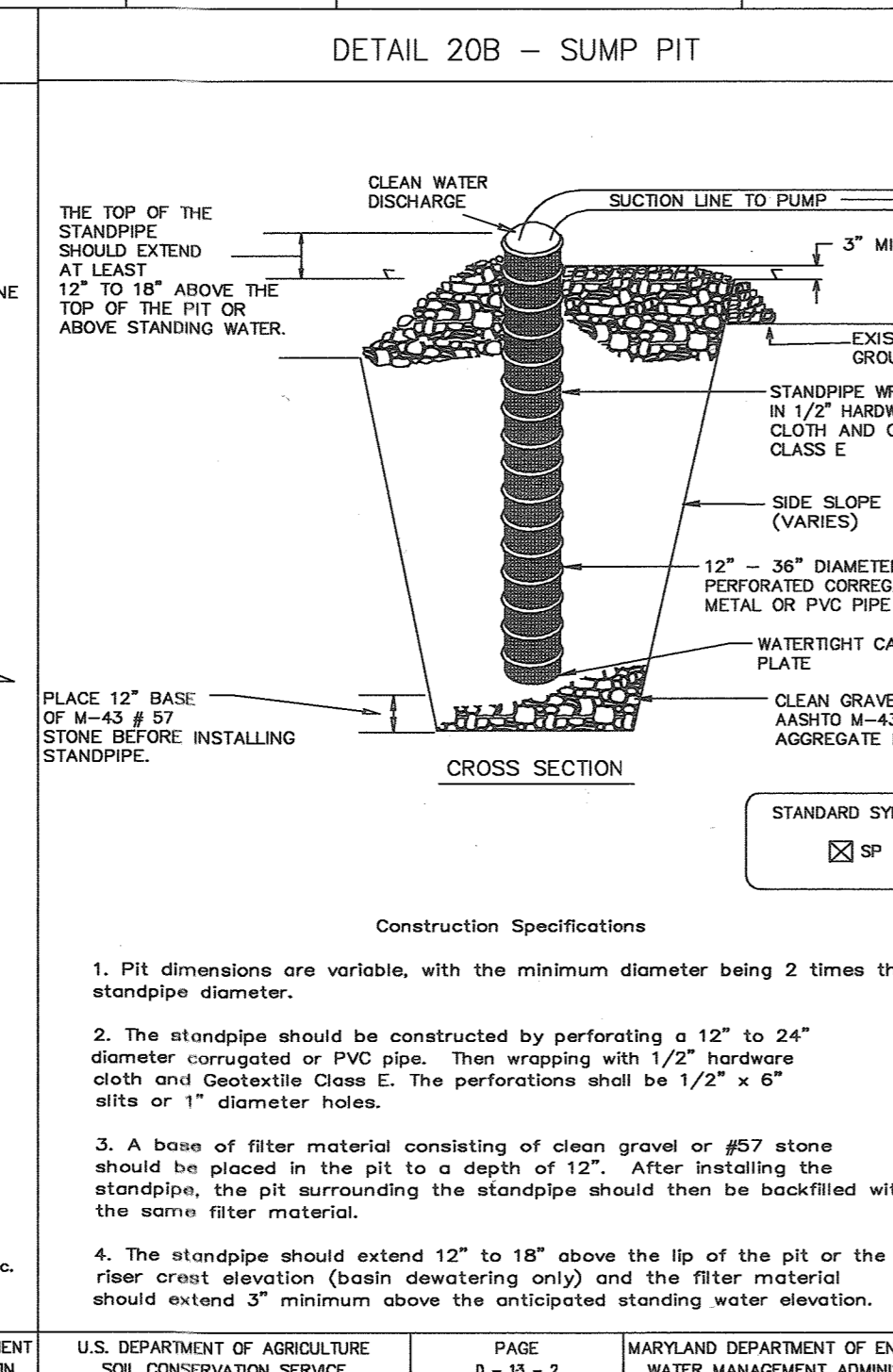
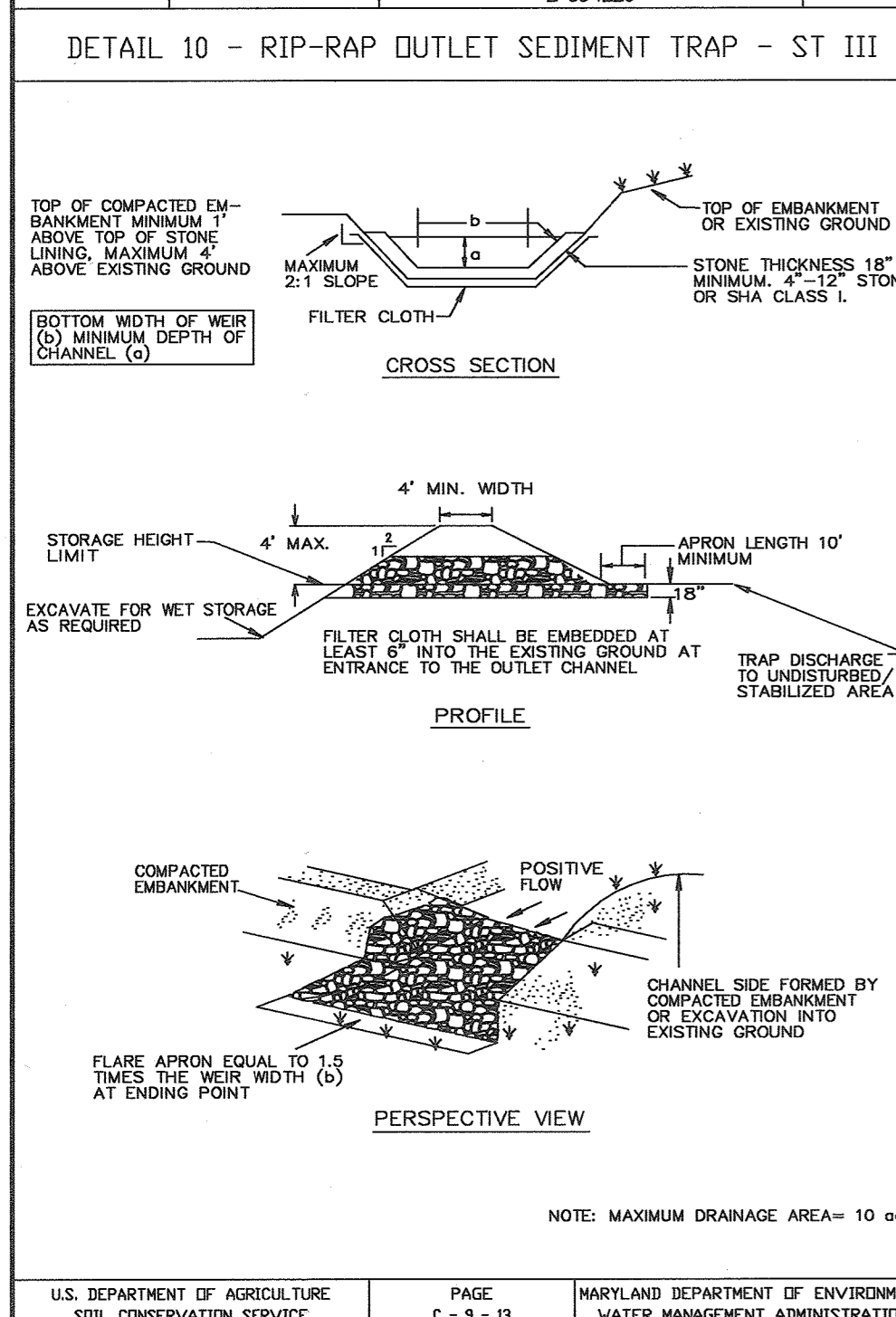
STORM DRAIN PROFILE
SCALE: HOR. 1"=50', VERT. 1"=5'



STORM DRAIN PROFILE
SCALE: HOR. 1"=50', VERT. 1"=5'

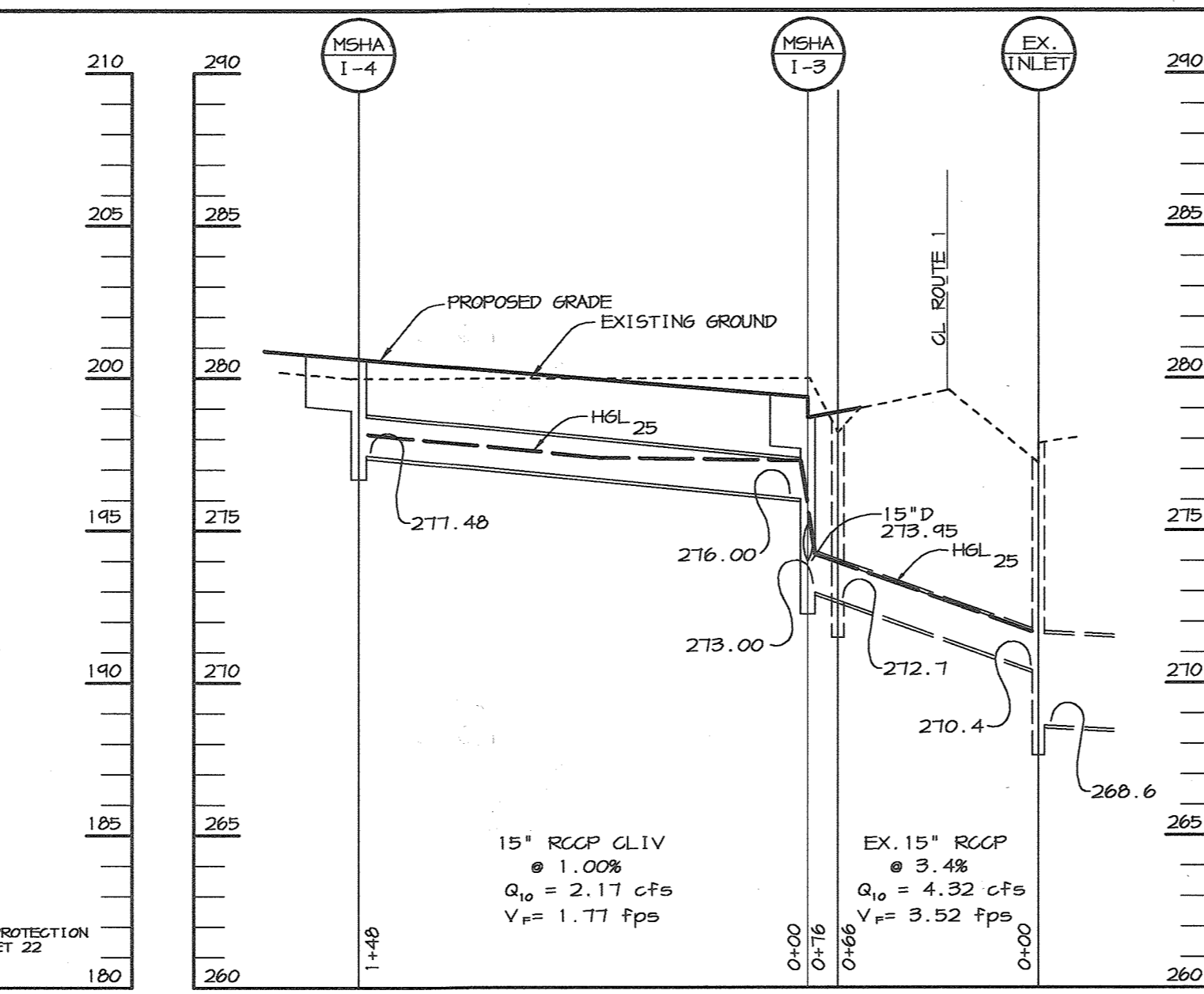
STRUCTURE SCHEDULE

STRUCTURE	TYPE	LOCATION	INV. IN	INV. OUT	TOP	REMARKS
MSHA 1-1	COG15	N 481921.20 E 851142.00	N 481495.31 E 851200.40	187.54	187.44	MSHA STD DETAIL MD-374.31
MSHA 1-2	COG10	N 478760.64 E 855666.04	N 478760.31 E 855642.26	214.78	214.68	MSHA STD DETAIL MD-374.31
MSHA 1-2A	COG5	N 478861.62 E 855744.88	N 478858.54 E 855745.81	-	275.25	MSHA STD DETAIL MD-374.31
MSHA 1-3	COG15	N 478661.82 E 855842.47	N 478679.12 E 855801.75	276.00	273.95	MSHA STD DETAIL MD-374.31
MSHA 1-4	COG20	N 478540.48 E 855947.65	N 478591.28 E 855912.85	-	271.48	MSHA STD DETAIL MD-374.31
MSHA 1-5	COG15	N 481035.57 E 857141.68	N 481044.68 E 857144.49	191.74	191.57	MSHA STD DETAIL MD-374.31
MSHA 1-6	HR	N 481070 E 857045	-	200.00	203.5	MSHA STD DETAIL MD-374.23
MSHA E-1	18" RCCP	N 481220 E 857220	-	106.62	-	MSHA STD DETAIL MD-368.01

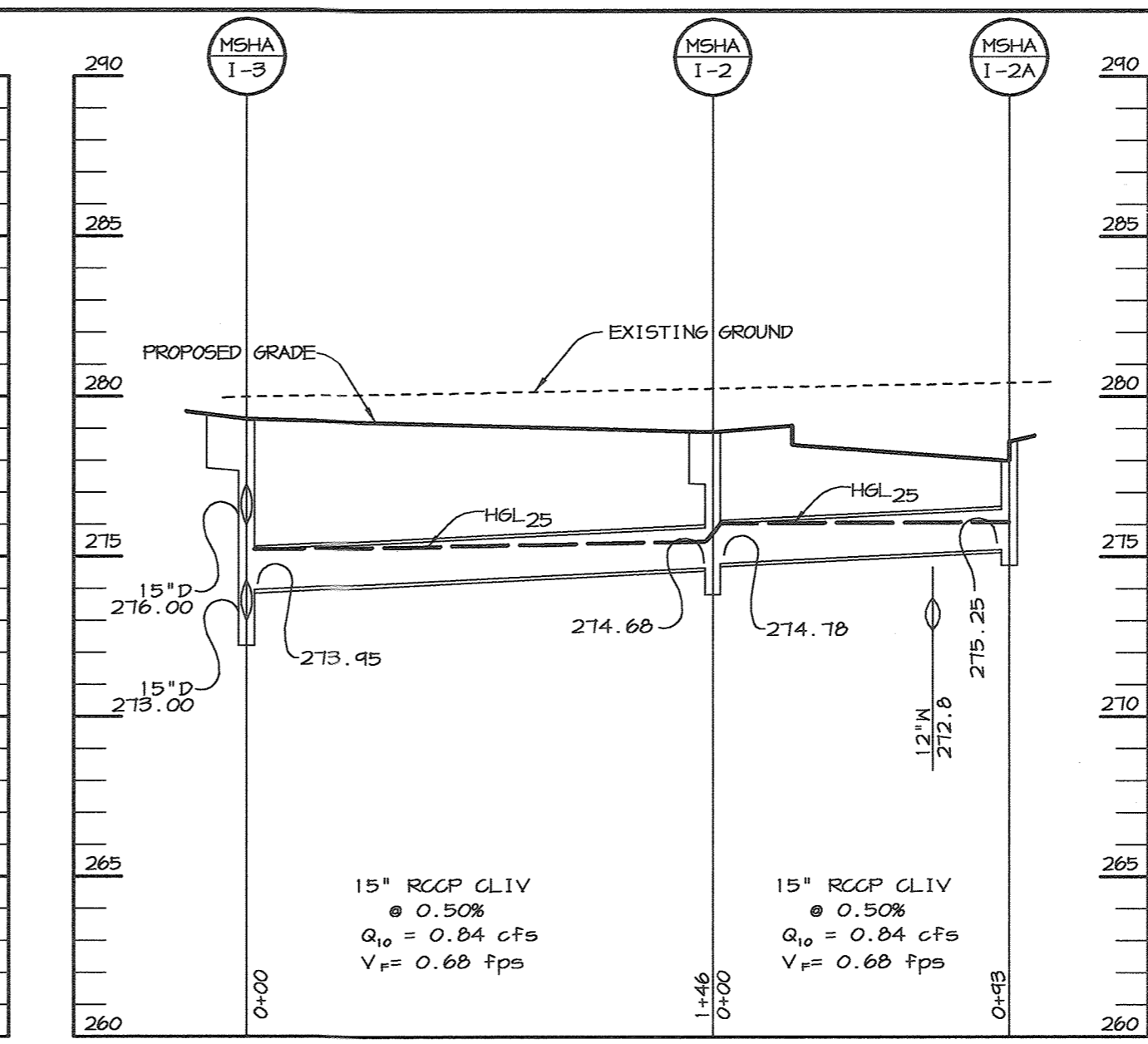


CONSTRUCTION SPECIFICATIONS

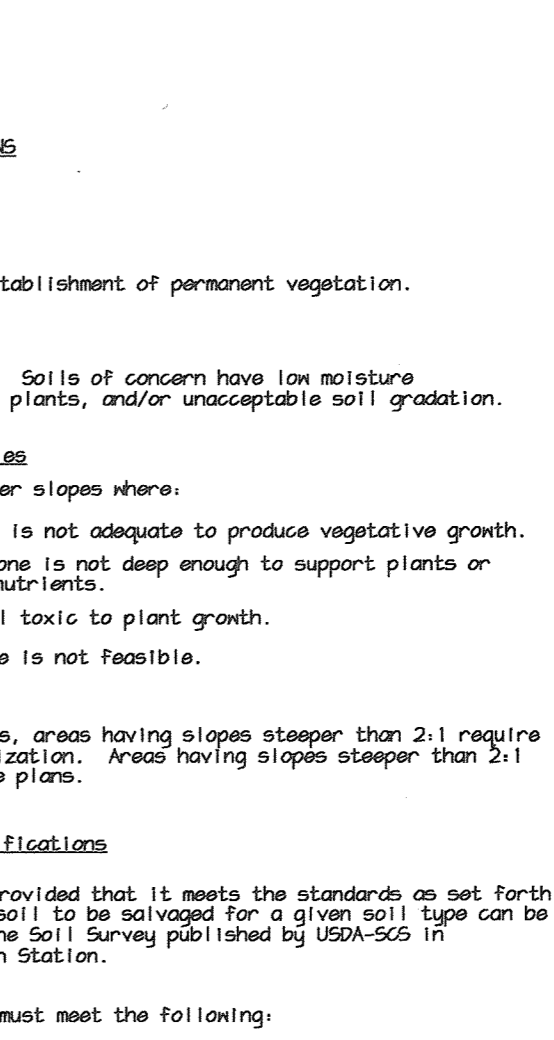
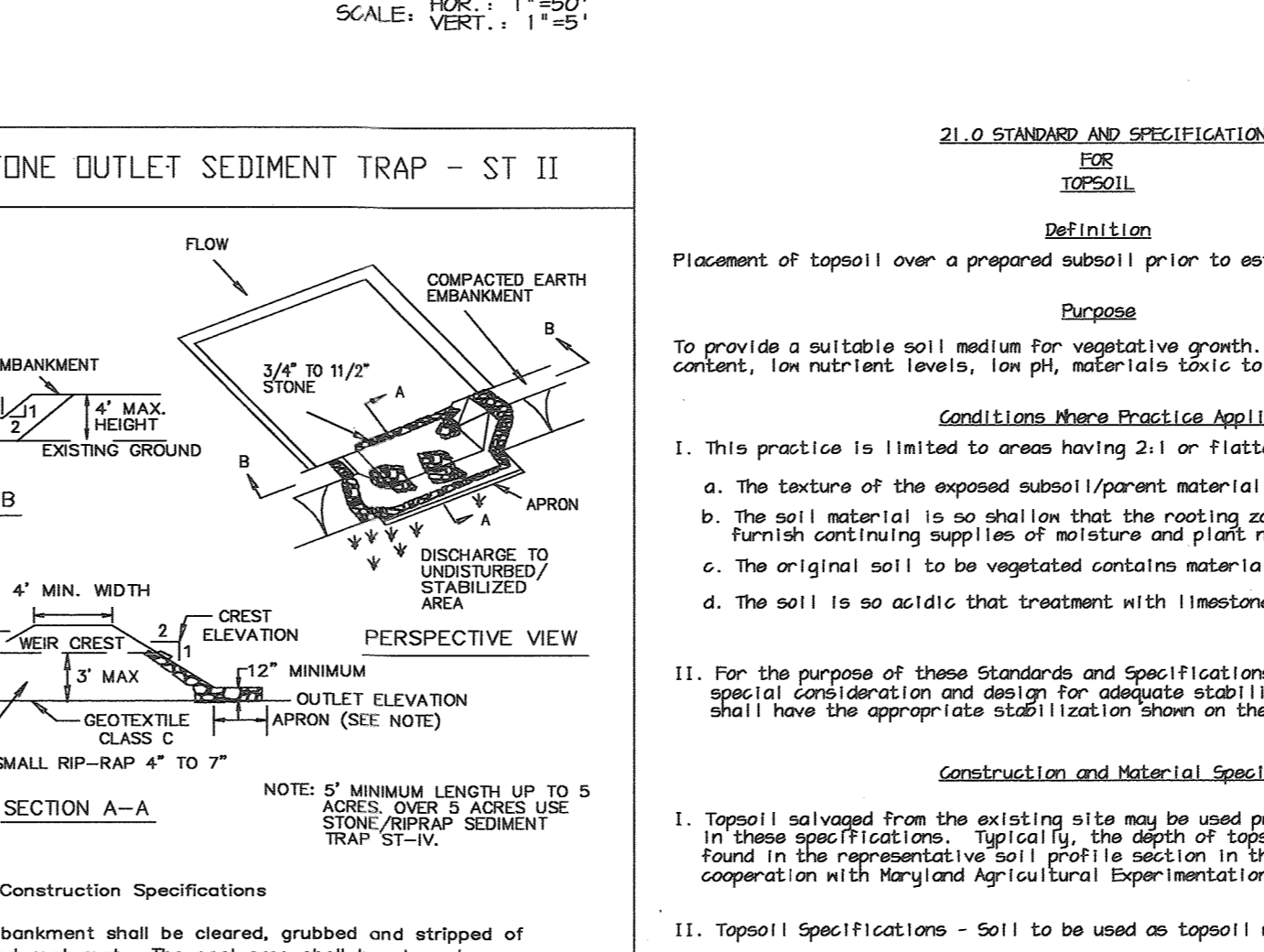
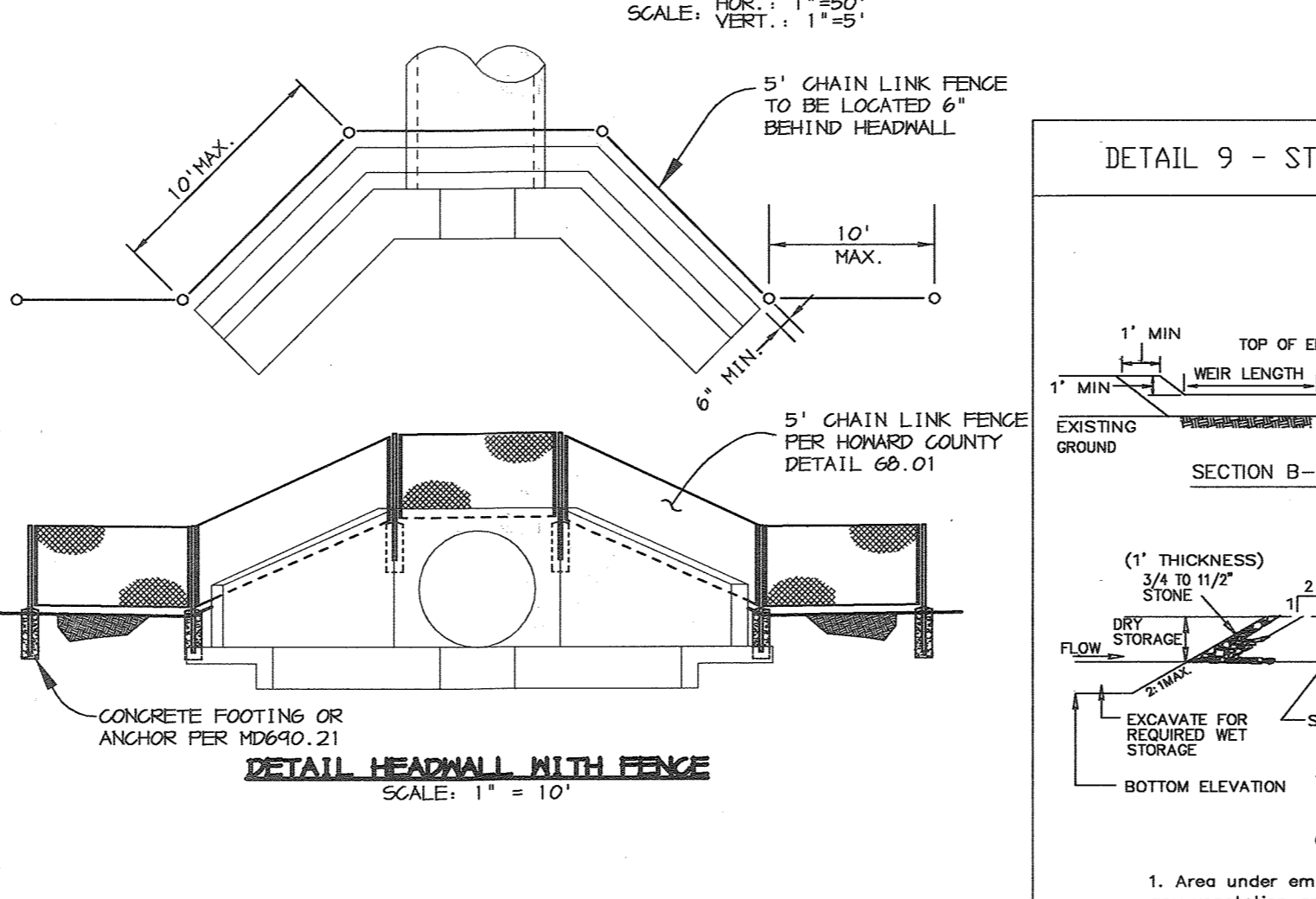
- Pit dimensions are variable, with the minimum diameter being 2 times the standpipe diameter.
- The standpipe should be constructed by perforating a 12" to 24" diameter corrugated or PVC pipe. Then wrapping with 1/2" hardware cloth and Geotextile Class E. The perforations shall be 1/2" x 6" slits or 1" diameter holes.
- A base of filter material consisting of clean gravel or #57 stone should be placed in the pit to a depth of 12". After installing the standpipe, the pit surrounding the standpipe should then be backfilled with the same filter material.
- The standpipe should extend 12" to 18" above the lip of the pit or the riser crest elevation (basin dewatering only) and the filter material should extend 3" minimum above the anticipated standing water elevation.



STORM DRAIN PROFILE
SCALE: HOR. 1"=50', VERT. 1"=5'



STORM DRAIN PROFILE
SCALE: HOR. 1"=50', VERT. 1"=5'



BY THE DEVELOPER:
I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Timothy J. Schmidt 1-30-04
DEVELOPER DATE

BY THE ENGINEER:
I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Chad J. Rees 1-30-04
ENGINEER DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

Jim Hays 2/1/04
NATURAL RESOURCES CONSERVATION SERVICE DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

Shawn S. 2/1/04
HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Dan K. 3/15/04
DIRECTOR DATE

Michael 2/20/04
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Linda 3/11/04
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

6-28-05 CHANGED SHEET NO.
1-0-05 ADDED STORM DRAIN PROFILES E-9 THRU E-11
DATE NO. REVISION

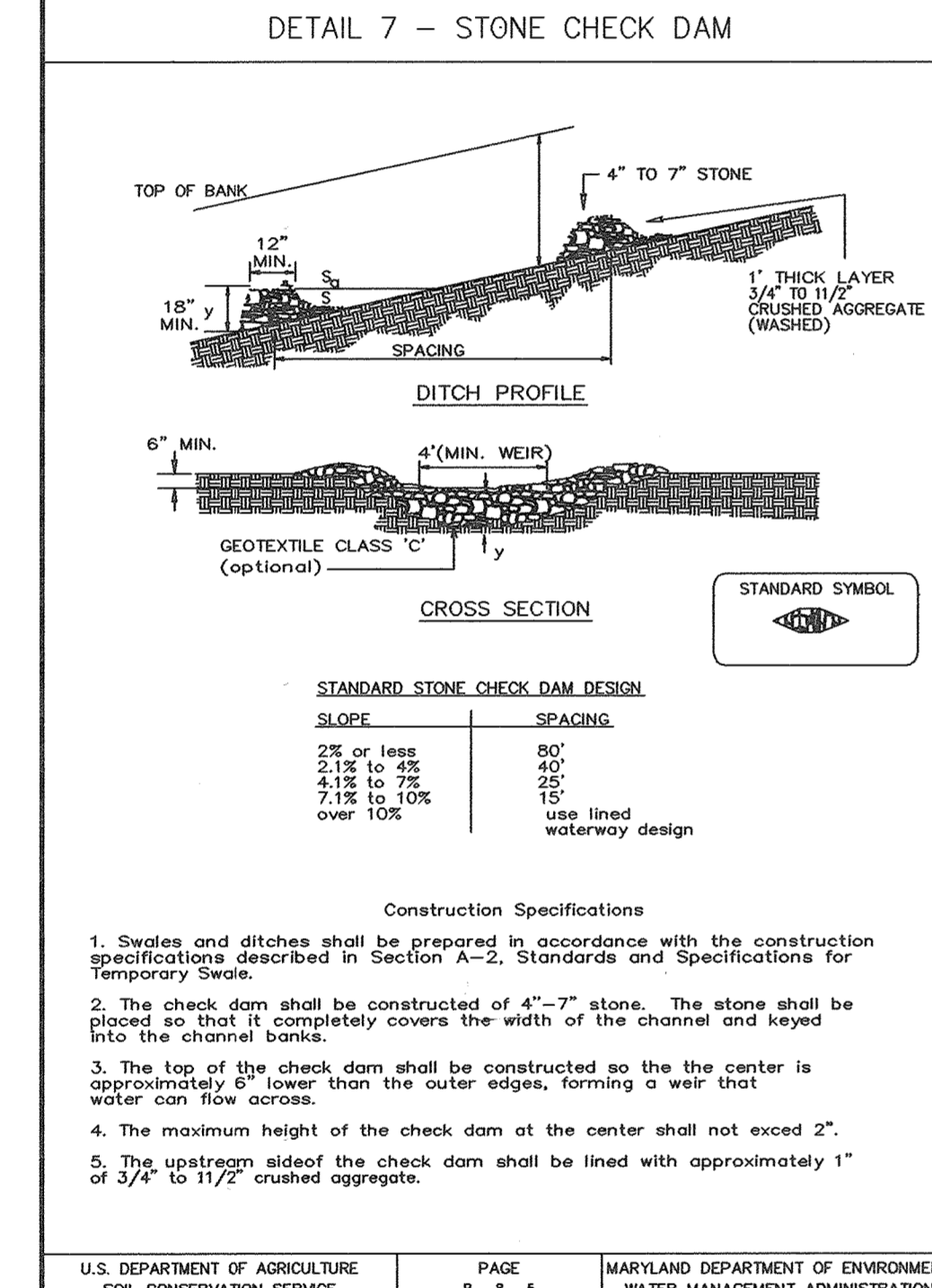
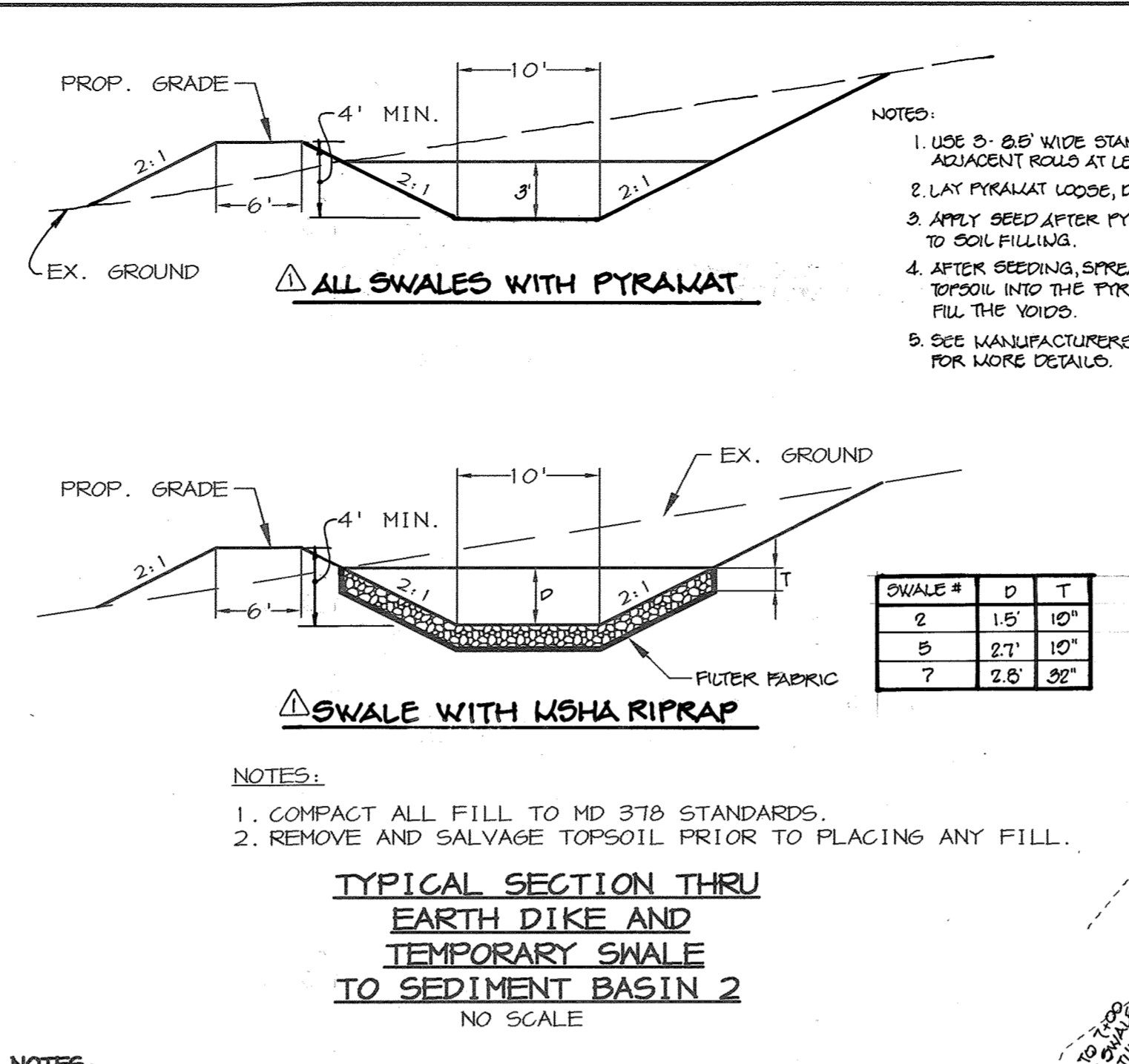
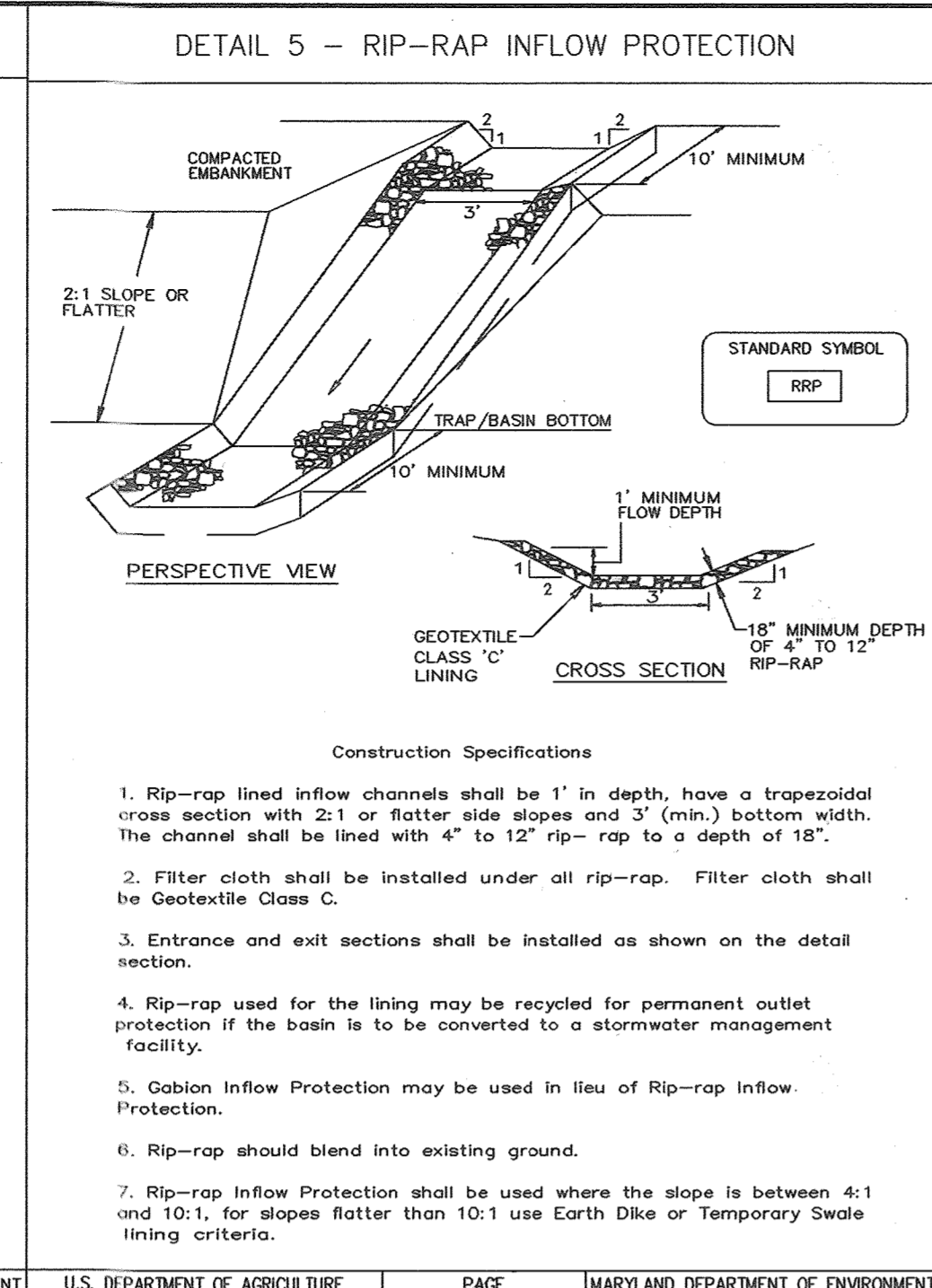
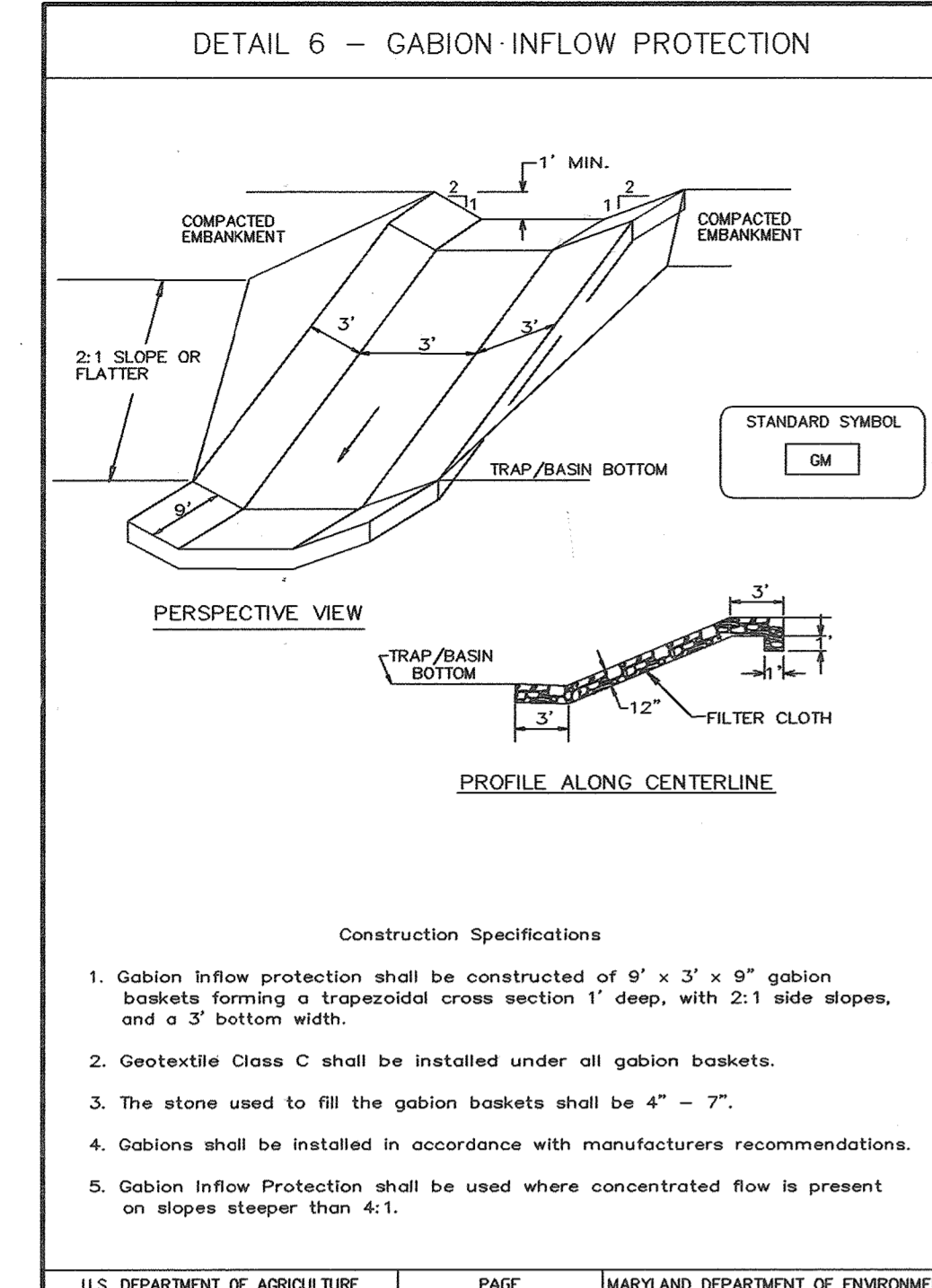
DEVELOPER/OWNER:
(OWNER) CHASE LIMITED PARTNERSHIP (DEVELOPER) CHASE MINING LLC
P.O. BOX 250 LAUREL, MD 20725 P.O. BOX 250 LAUREL, MD 20725
410.742.1234 410.742.1234

PROJECT: CHASE QUARRY
AREA ZONED M-1 & MXD-3, TAX MAP No. 43 PARCEL 234 & P.O. 235, BLOCK 19 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE: PROFILES

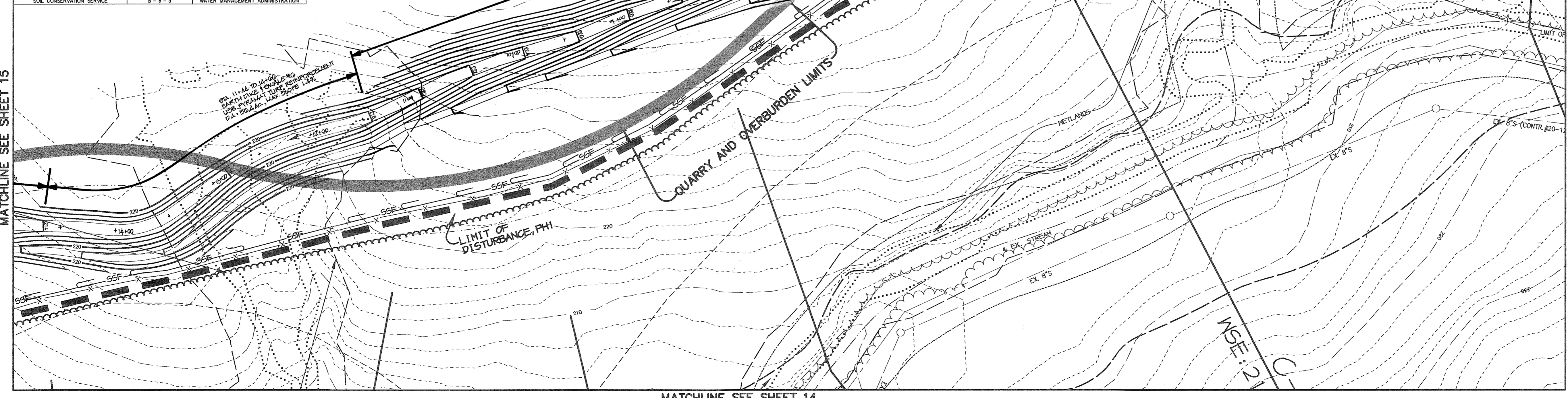
Patton Harris Rust & Associates, pc
Engineers, Surveyors, Planners, Landscape Architects.
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

1-30-04 DATE
DESIGNED BY: C.J.R.
DRAWN BY: MAD
CHECKED BY: C.J.R.
PROJECT NO: 99092/PROFILE.DWG
DATE: JANUARY 29, 2004
SCALE: AS SHOWN
DRAWING NO. 40 OF 55
SDP-99-134



STONE OUTLET SEDIMENT TRAP #3-ST II

DRAINAGE AREA	3.8 ACRES
STOR. REQ'D (NET STOR.)	6,840 CF
STOR. REQ'D (DRY STOR.)	6,840 CF
STOR. PROV. (NET STOR.)	8,640 CF@233.5
STOR. PROV. (DRY STOR.)	8,640 CF@225.0
GREST ELEVATION	225.0 (20' LENGTH)
TOP OF DAM	226.0
BOTTOM ELEVATION	222.0
SIDE SLOPES	2:1
DEPTH	3'



LEGEND

	TEMPORARY SWALE
	EROSION CONTROL MATTING
	EARTH DIKE
	DRAINAGE AREA
	LIMITS OF DISTURBANCE, PH1
	LIMITS OF DISTURBANCE, PH2
	SILT FENCE
	EXISTING TREE LINE
	PROPOSED TREE LINE
	STORM DRAIN
	RAIL ROAD TRACK

BY THE DEVELOPER :

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Timothy J. Schmidt 1-30-04
DEVELOPER DATE

BY THE ENGINEER :

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Chris J. Reed 1-30-04
ENGINEER DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

Jim Nguyen 2/12/04
NATURAL RESOURCES CONSERVATION SERVICE DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

Scott A. ... 2/12/04
HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

David A. ... 2/12/04
DIRECTOR DATE

Mark ... 2/20/04
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Cindy ... 3/11/04
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

6-28-05 CHANGED SHEET NO.

1-0-05 REVISED EARTH DIKE & SWALE

DATE NO.	REVISION

DEVELOPER/OWNER:

(OWNER)	(DEVELOPER)
CHASE LIMITED PARTNERSHIP	CHASE MINING LLC
P.O. BOX 850	P.O. BOX 850
LAUREL, MD 20725	LAUREL, MD 20725
410.742.7234	410.742.7234

PROJECT

CHASE QUARRY

AREA ZONED M-1 & MXD-3, TAX MAP No. 43
PARCEL 234 & P.O. 235, BLOCK 19
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE

GRADING, SEDIMENT CONTROL & DRAINAGE AREA MAP AND DETAILS

Patton Harris Rust & Associates, PC
Engineers, Surveyors, Planners, Landscape Architects.
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

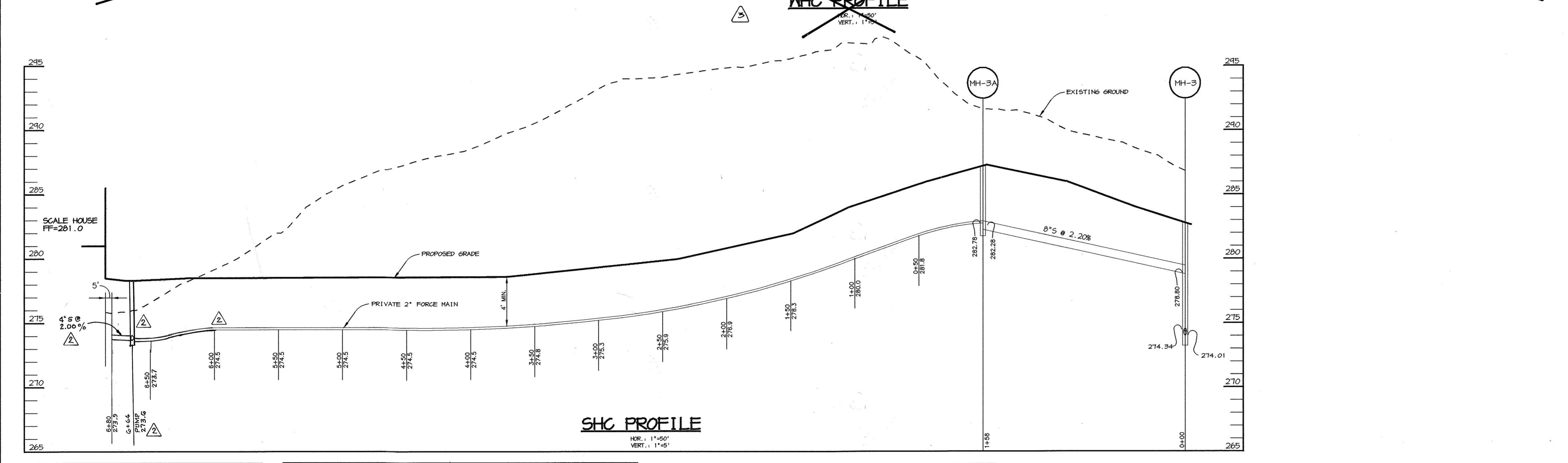
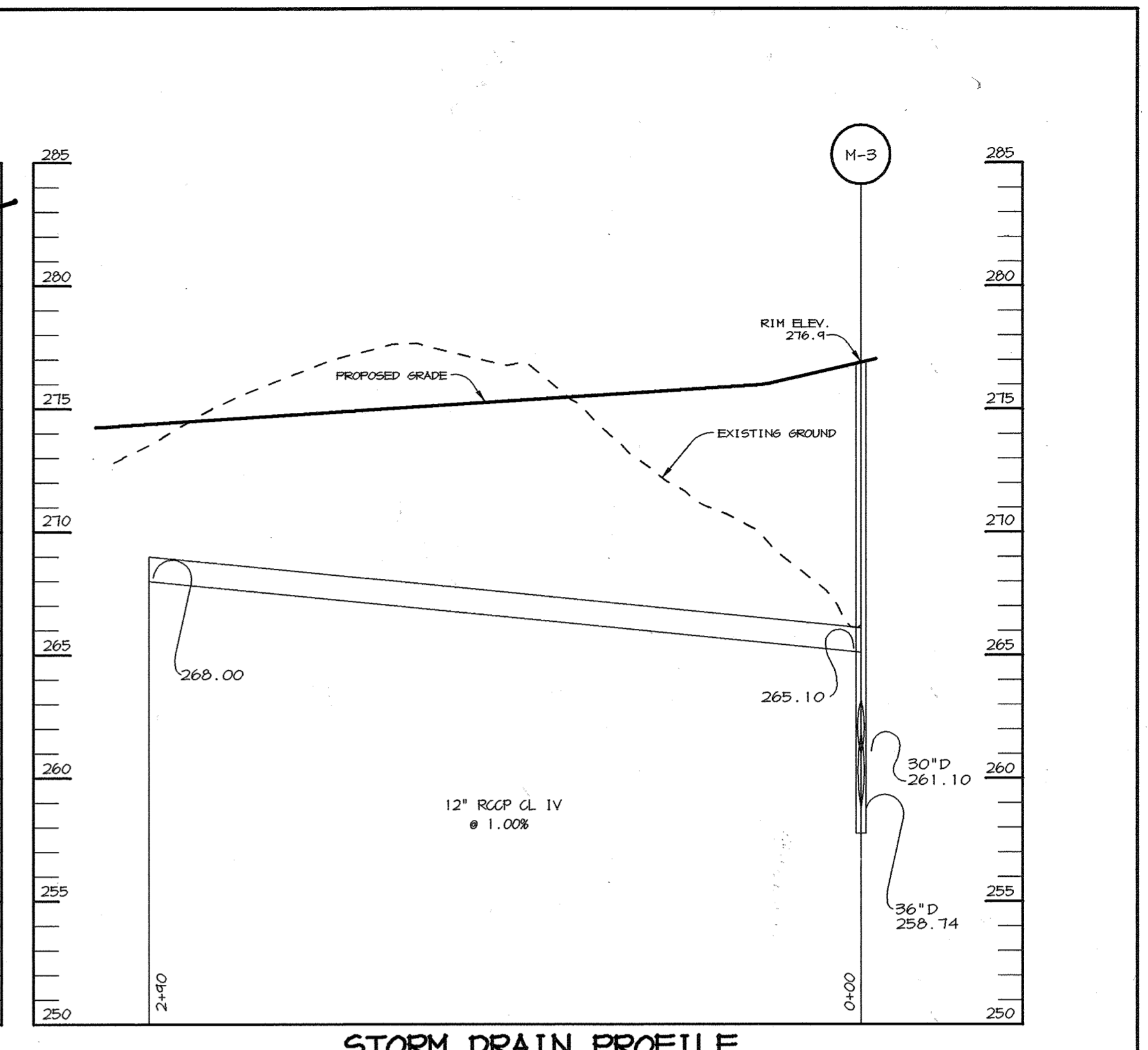
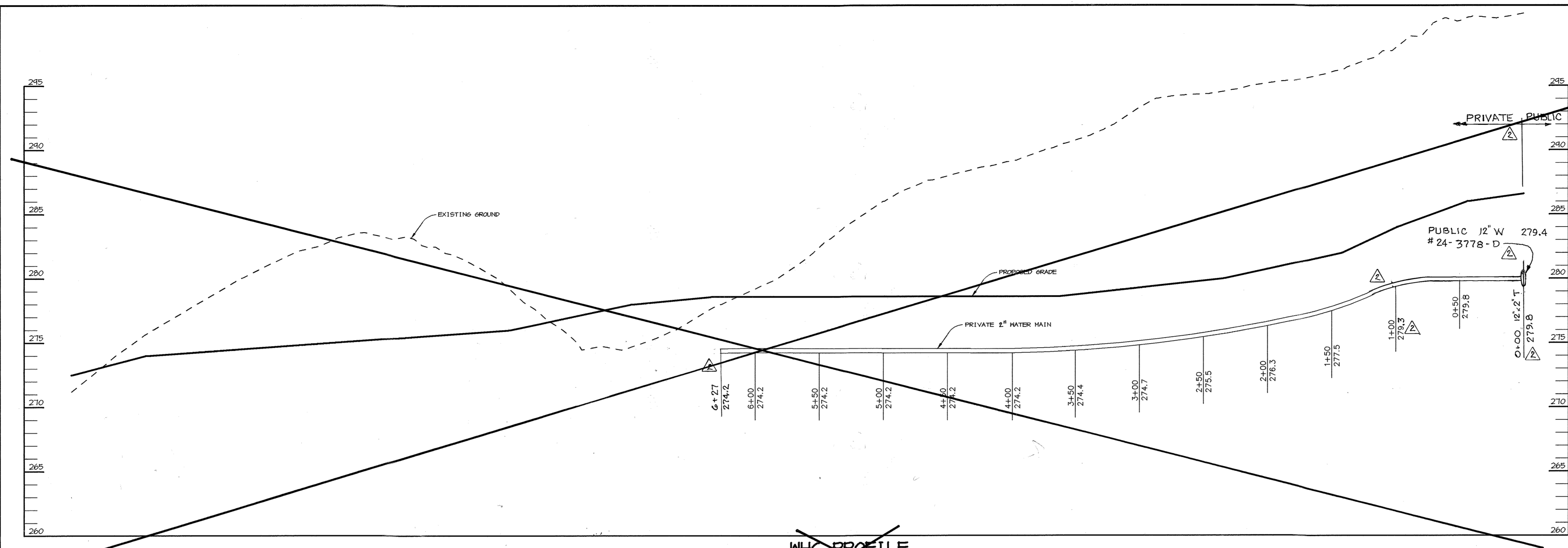
1-30-04
DATE

DESIGNED BY : C.J.R.
DRAWN BY : MAD
CHECKED BY : C.J.R.
PROJECT NO : 99092/
SEDIM12.DWG
DATE : JANUARY 29, 2004
SCALE : 1" = 50'
DRAWING NO. 41 OF 55

MATCHLINE SEE SHEET 15

MATCHLINE SEE SHEET 21

MATCHLINE SEE SHEET 14



Pyramat Erosion Matrix Installation Guidelines

Site Preparation

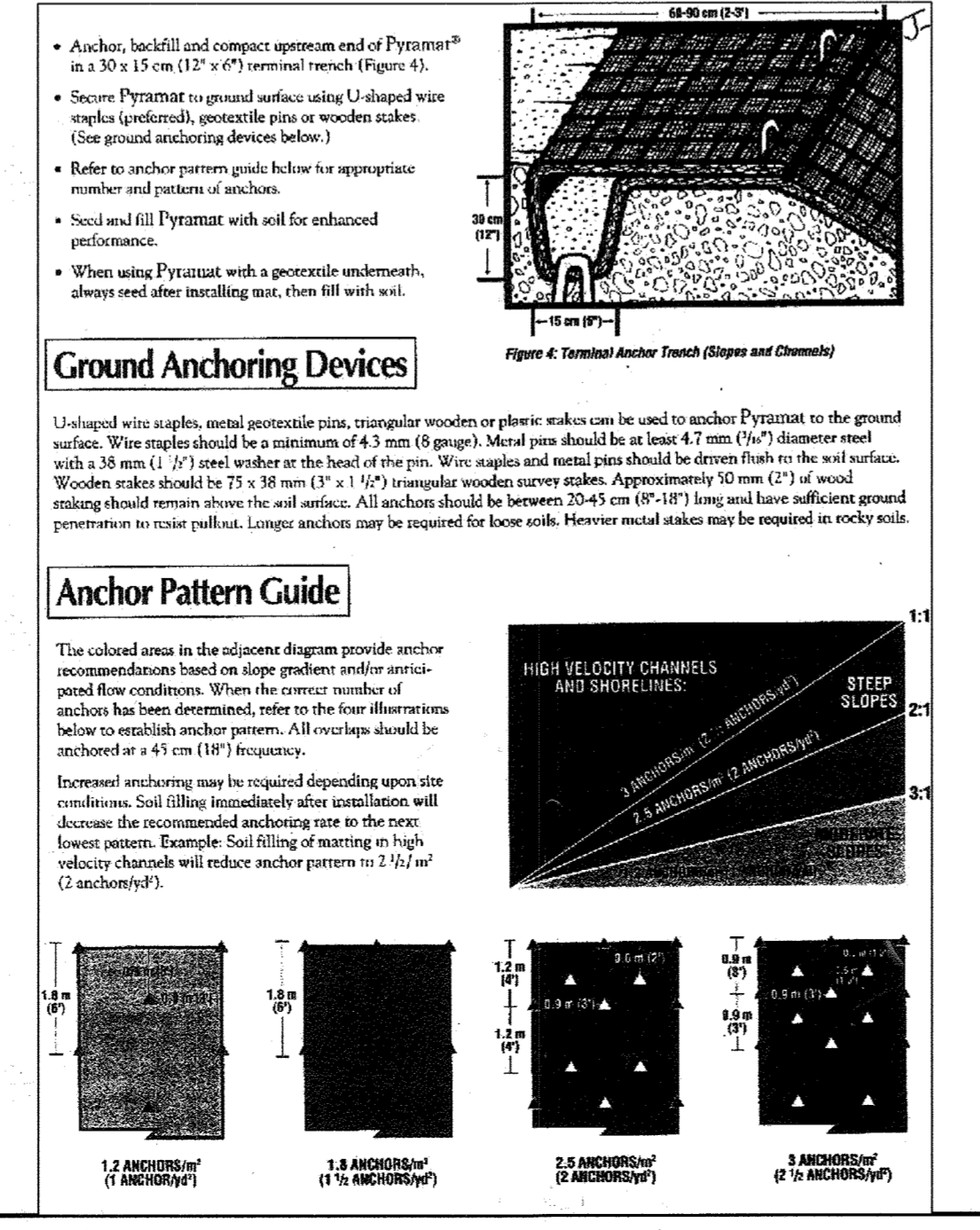
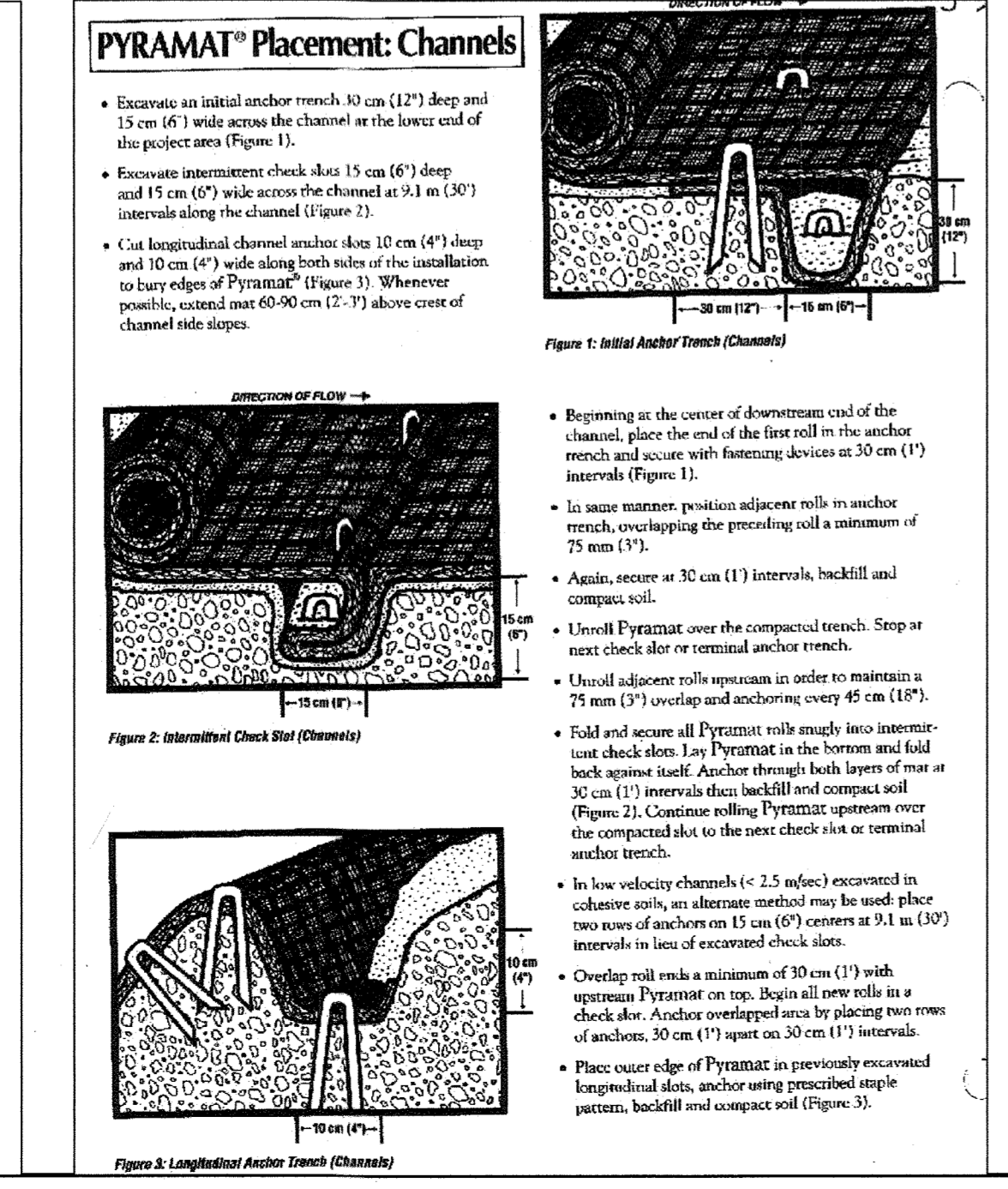
- Grub and compact area of installation.
- Prepare seedbed by loosening 50-75 mm (2-3") of topsoil above final grade.
- Incorporate amendments such as lime and fertilizer into soil.
- Remove all rocks, clods, vegetation or other obstructions so that the installed Pyramat will have direct contact with soil surface.
- Do not mulch areas where mat is to be placed.

Seeding

- Apply seed to the soil surface before installing Pyramat or after installation for enhanced performance prior to soil filling (preferable).
- When seeding prior to Pyramat installation, all check slots and other areas disturbed must also be seeded.
- When soil filling, seed Pyramat and entire disturbed area after installation, prior to filling mat with soil.
- Contact your local M.S. Natural Resource Conservation Service (NRCS) Plant Materials Specialist or other resource for seed recommendations.

PYRAMAT Placement: Banks and Slopes

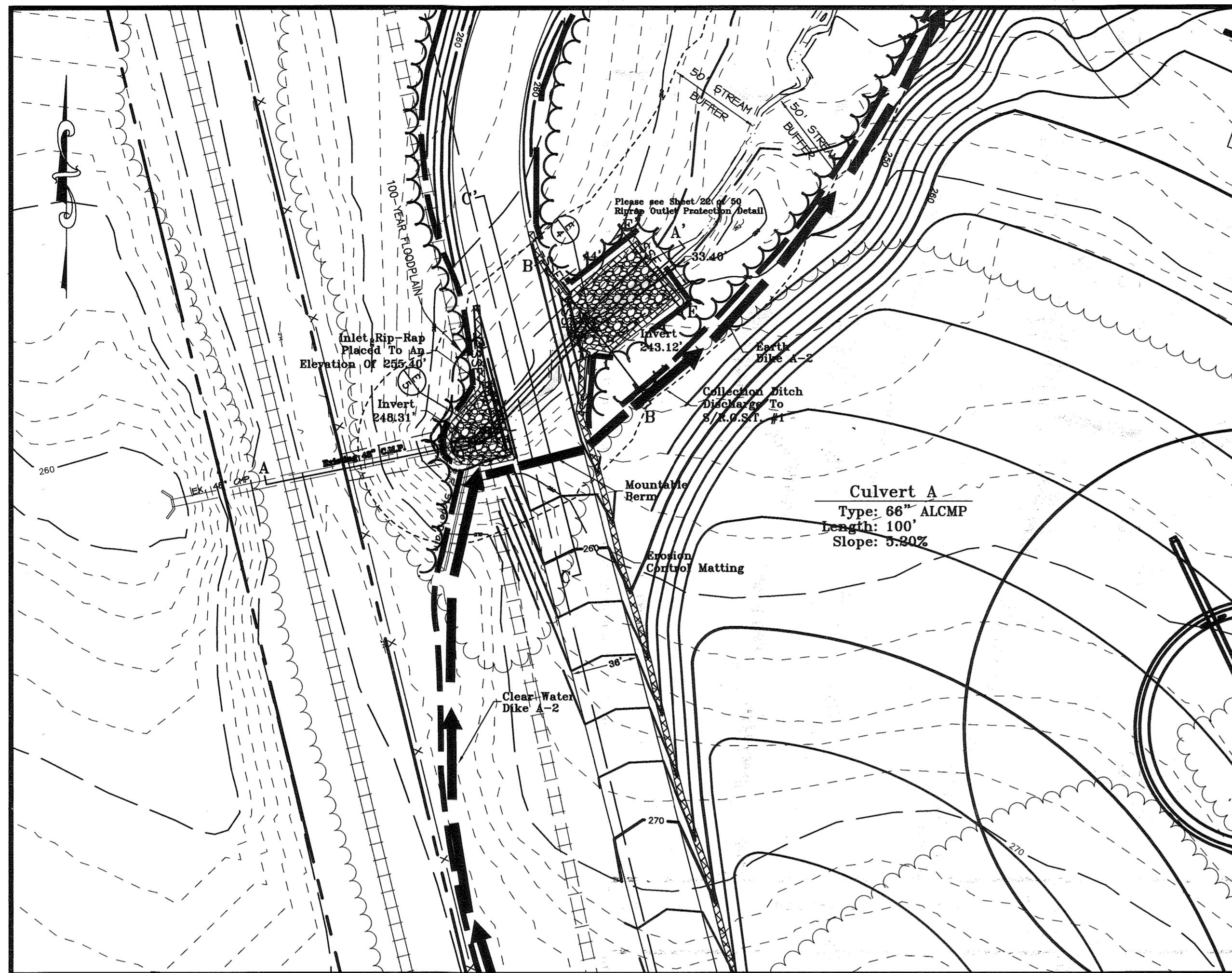
- Excavate Pyramat 60-90 cm (2-3') over crest of slope and excavate a 30 x 15 cm (12" x 6") terminal anchor trench (Figure 4 on page 3).
- Anchor Pyramat in trench on 30 cm (12") spacing, backfill and compact soil.
- Unroll Pyramat down slope.
- Overlap adjacent rolls at least 75 mm (3") and anchor every 45 cm (18").
- Lay Pyramat loose to maintain direct contact with soil. (Do not pull Pyramat mat. This may allow backing of soil surface.)
- Secure Pyramat to ground surface using U-shaped wire staples (preferred), geostrip pins or wooden stakes. (See ground anchoring devices on page 3.)
- Refer to anchor pattern guide on page 3 for appropriate number and pattern of anchors.



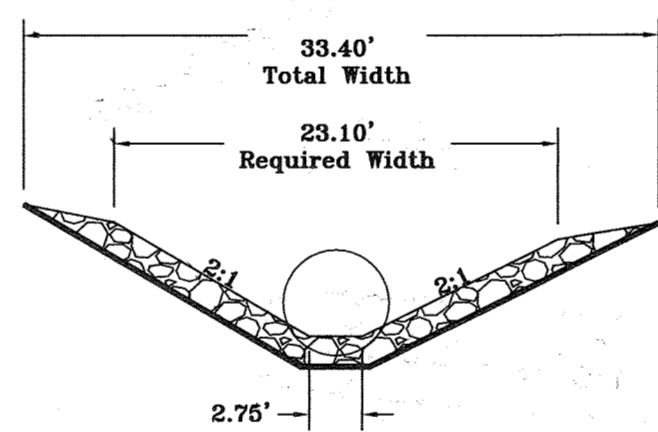
Soil Filling

- Pyramat is designed to be filled with soil after installation. This maximizes performance of the product. Do not place excessive soil above the mat.
- After seeding, spread and lightly rake 12-19 mm (1/2"-3/4") of fine topsoil into the Pyramat and completely fill the voids. Use backside of rake or other fine tool to ensure a smooth soil-filled surface.
- Pyramat will withstand high-weight rubber-tired construction equipment. No tracked equipment or sharp turns should be made on the mat.
- Avoid any traffic over Pyramat if very loose or wet soil conditions exist.
- Use shovels, rakes or brooms for fine grading and final matting.
- Smooth soil fill in order to just expose the top of mat. Do not place excessive soil above the mat.
- Breakfast additional soil and mulch above the soil-filled Pyramat, if desired.
- If possible, water as necessary to enhance growth.
- CONSULT MANUFACTURER'S TECHNICAL REPRESENTATIVE OR LOCAL DISTRIBUTOR FOR INSTALLATION ASSISTANCE. PARTICULARLY IF UNUSUAL CONDITIONS APPLY (E.G. HEAVY SOILS, INFERTILE ENVIRONMENTS).

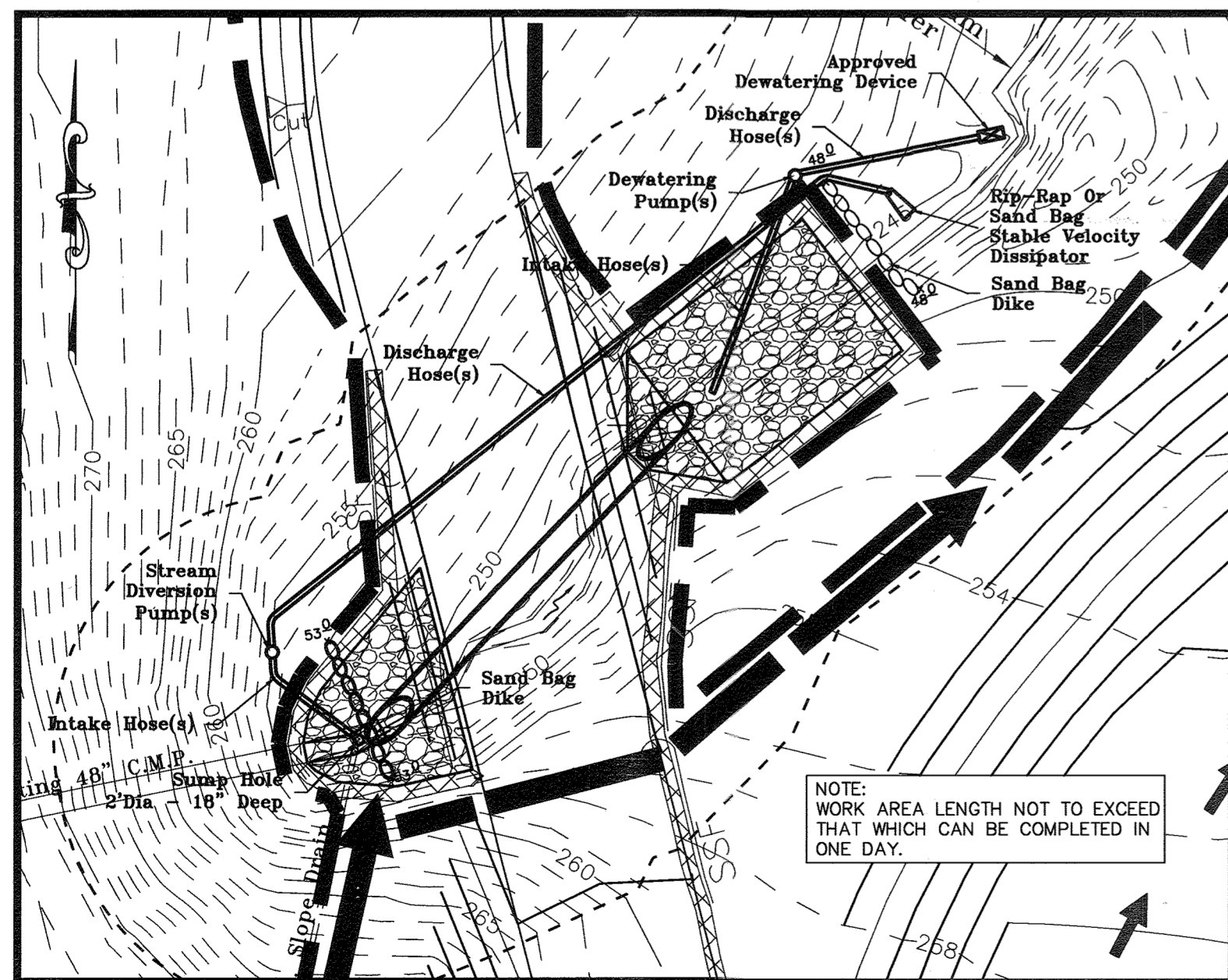
6-28-05 (A) REMOVED WATER PROFILE, CHANGED SHEET NO.	
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.	
DIRECTOR	DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE
5-26-05 (A) REV. WHC PROFILE & SHC PROFILE	
11-11-04 (A) ADDITIONAL SHEET PER REDLINE APPROVAL	
DATE NO.	REVISION
DEVELOPER/OWNER:	
(OWNER) CHASE LIMITED PARTNERSHIP P.O. BOX 850 LAUREL, MD 20725 410.742.7234	(DEVELOPER) CHASE MINING LLC P.O. BOX 850 LAUREL, MD 20725 410.742.7234
PROJECT CHASE QUARRY	
AREA ZONED M-1 & MXD-3, TAX MAP No. 43 PARCEL 234 & P.O. 235, BLOCK 19 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND	
TITLE PROFILES	
Patton Harris Rust & Associates, pc Engineers, Surveyors, Planners, Landscape Architects. 8818 Centre Park Drive Columbia, MD 21045 T 410.997.8900 F 410.997.9282	
DATE 11-11-04	DESIGNED BY: C.J.R.
	DRAWN BY: MAD
	CHECKED BY: C.J.R.
	PROJECT NO: 99092/ PROFILE7.DWG
	DATE: NOVEMBER 11, 2004
	SCALE: AS SHOWN
CHRISTOPHER J. REID #19949	DRAWING NO. 42 OF 55
	SDP-99-134



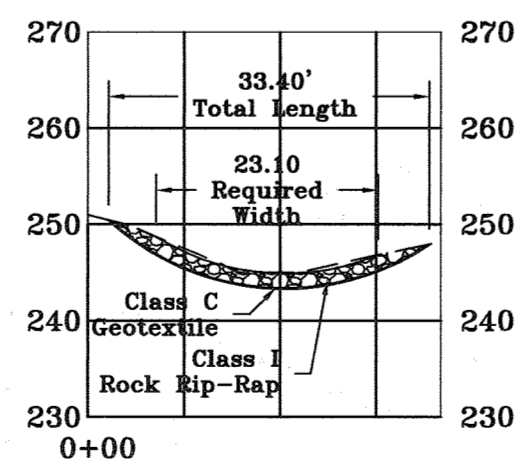
Plan View
Scale: 1"=50'



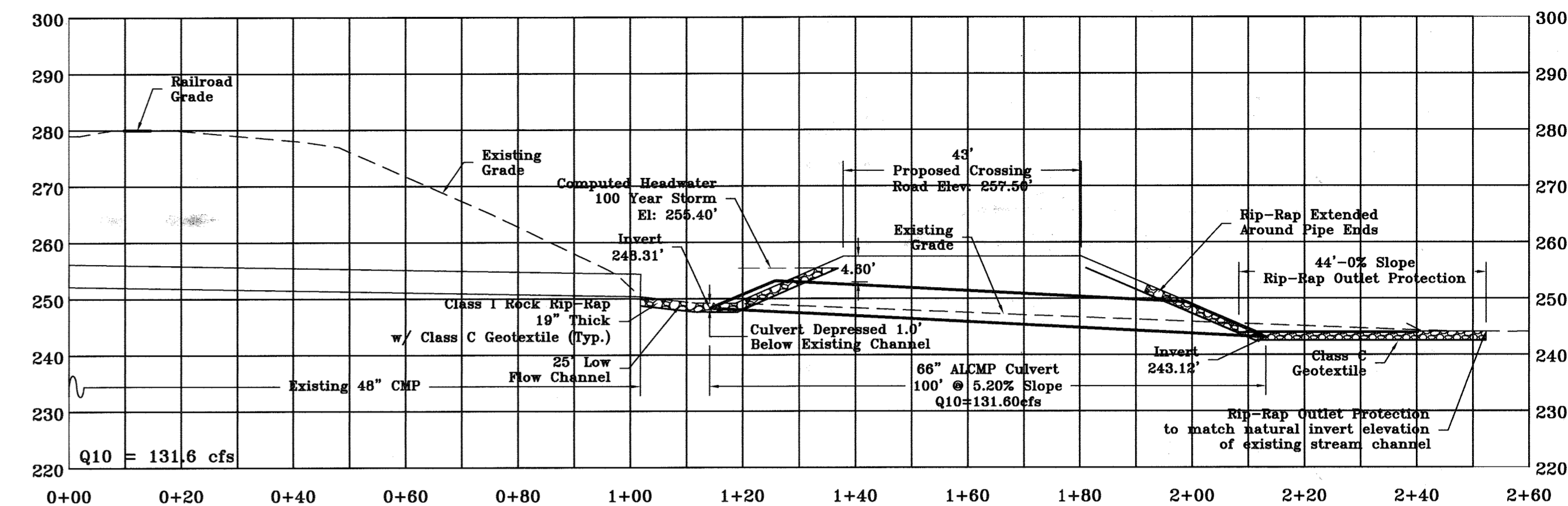
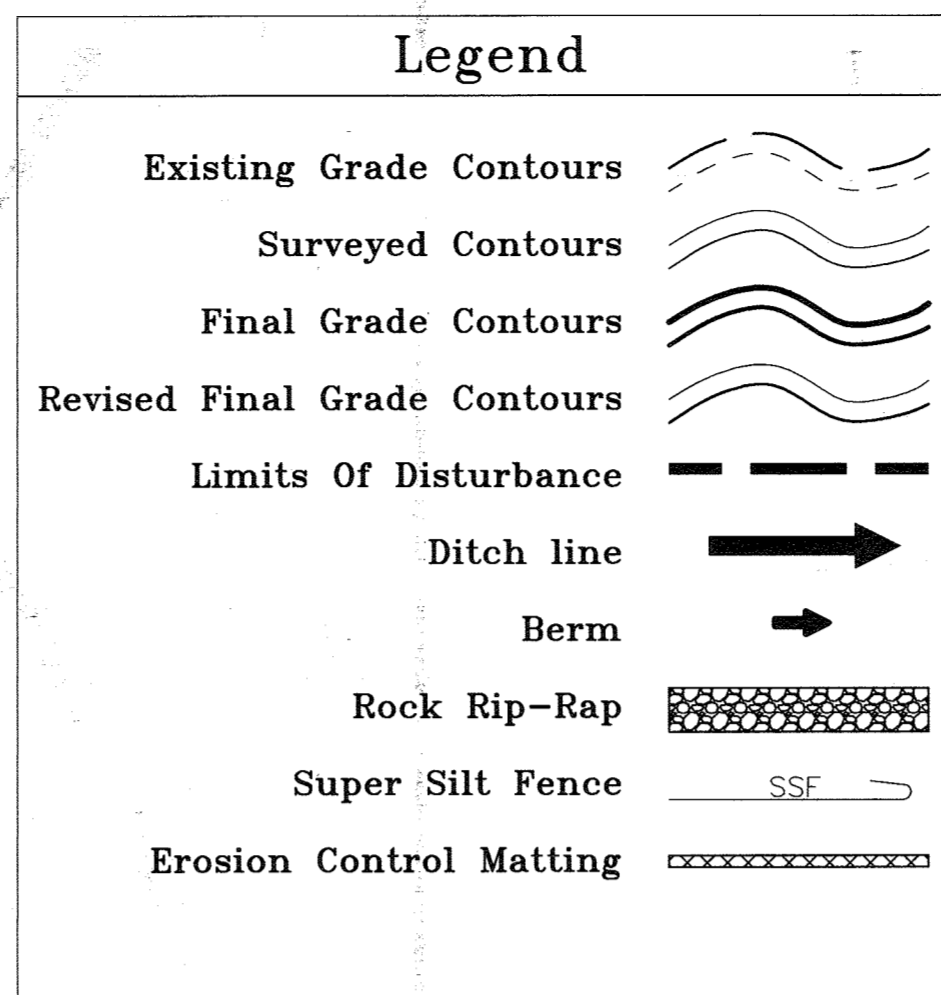
Detail #1
Scale: 1"=10'



Temporary Instream Construction Measures
Plan View
Scale: 1"=30'

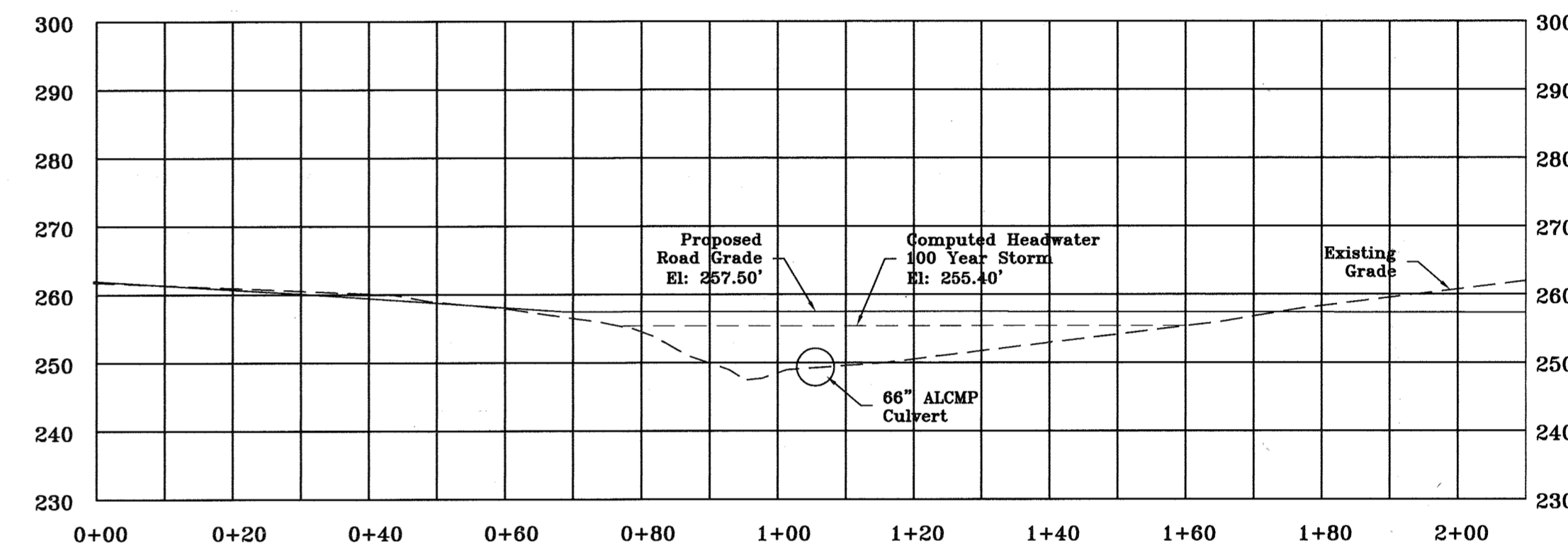
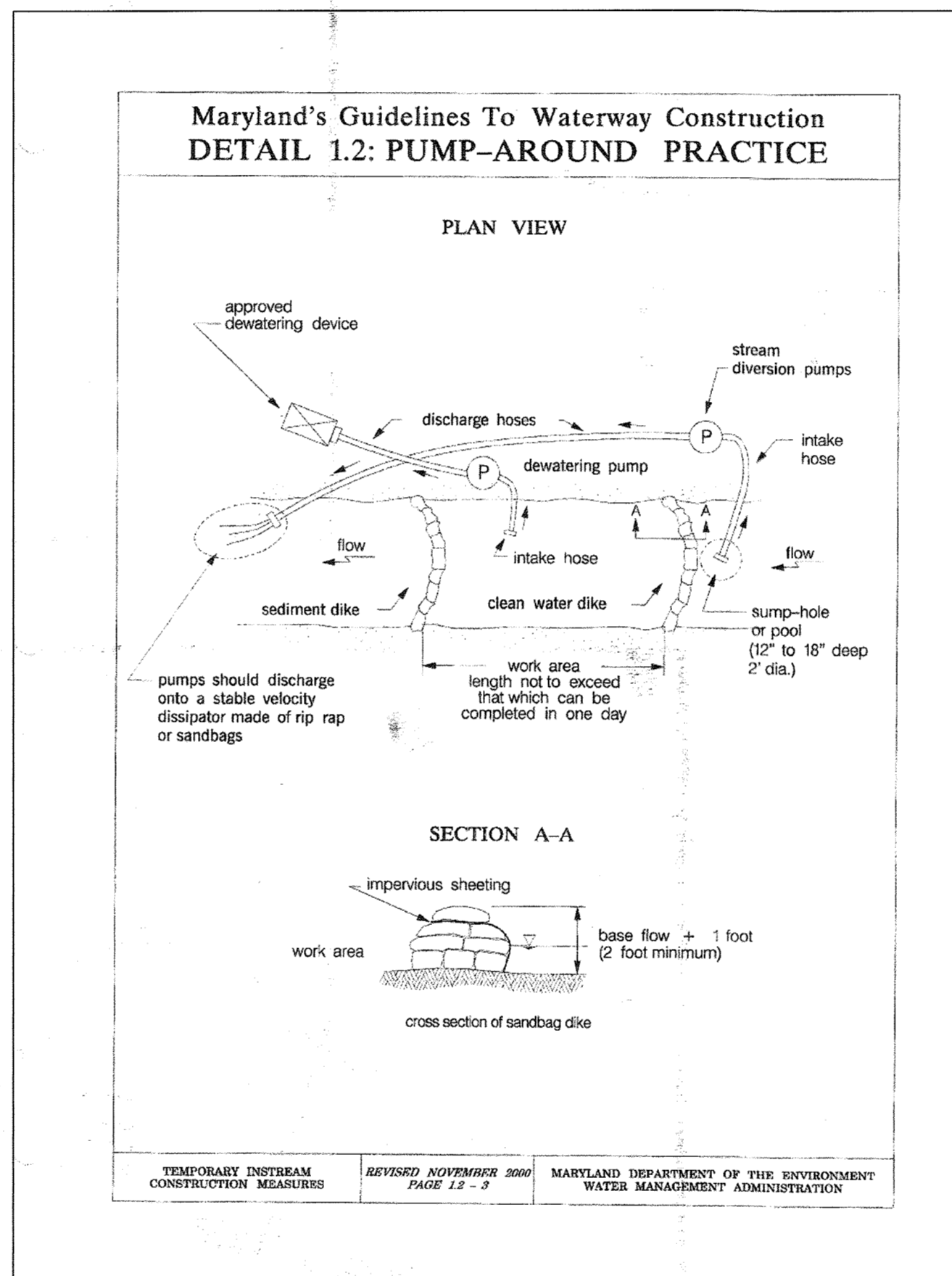


Section E - E'
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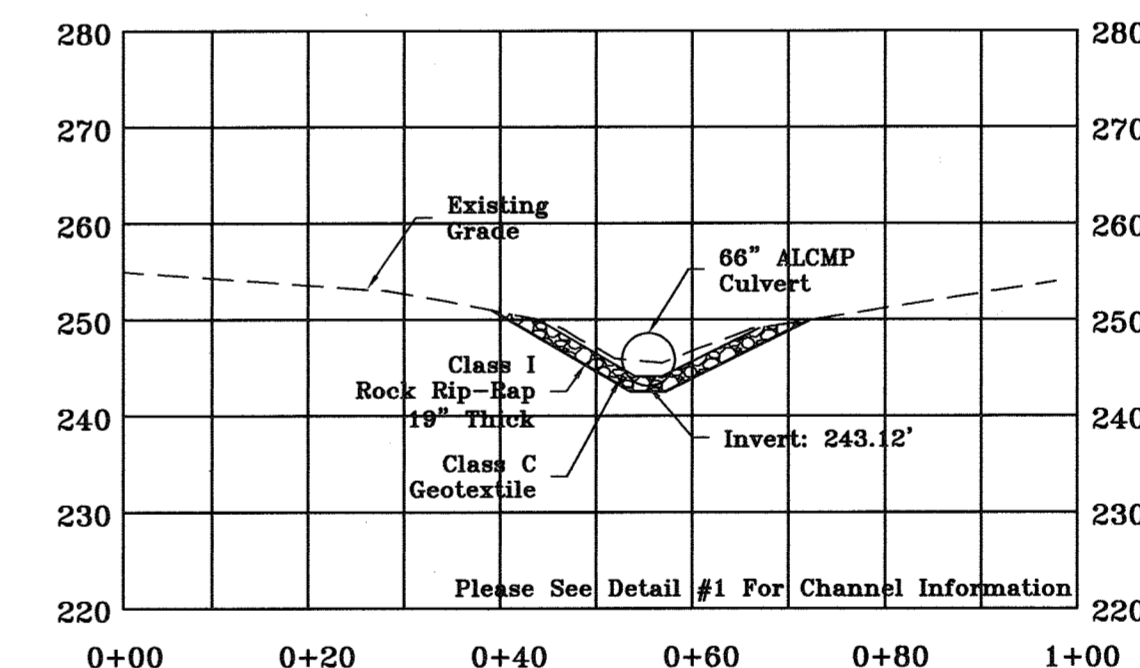


Notes:
Design Load = 360,000lbs
Min. Cover = 4'
Max. Road Grade = 7%

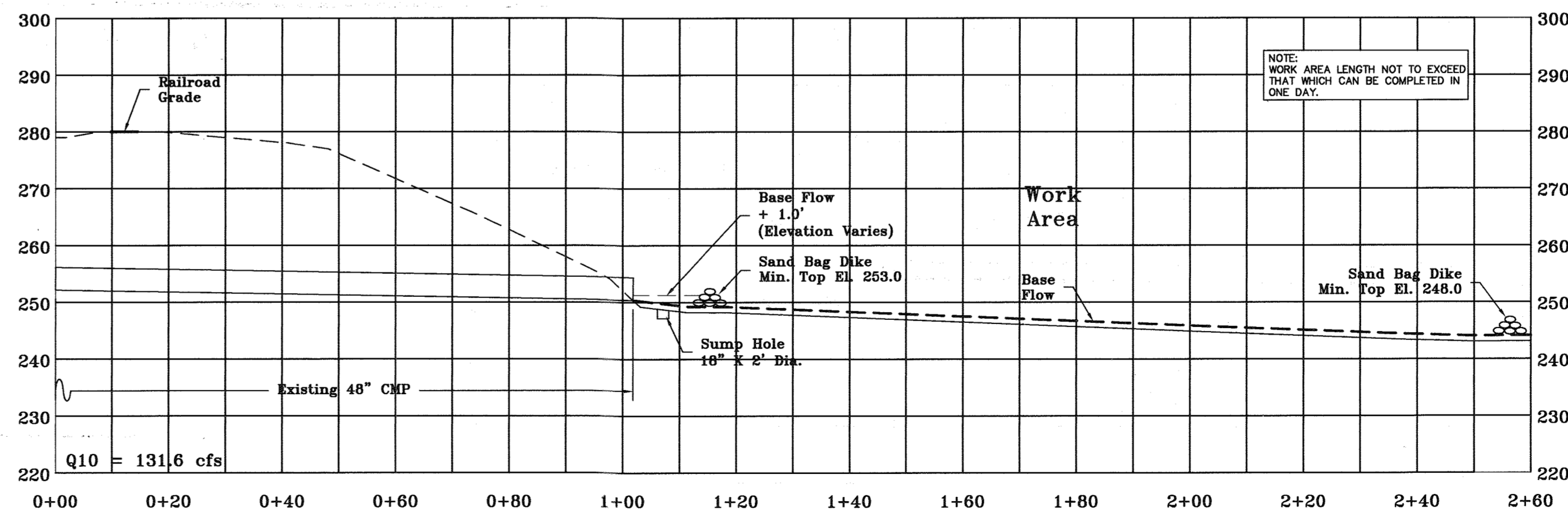
E-4 TO E-5 PROFILE
Section A - A
Scale: 1"=20'



Section C - C'
Scale: 1"=20'



Section B - B'
Scale: 1"=20'



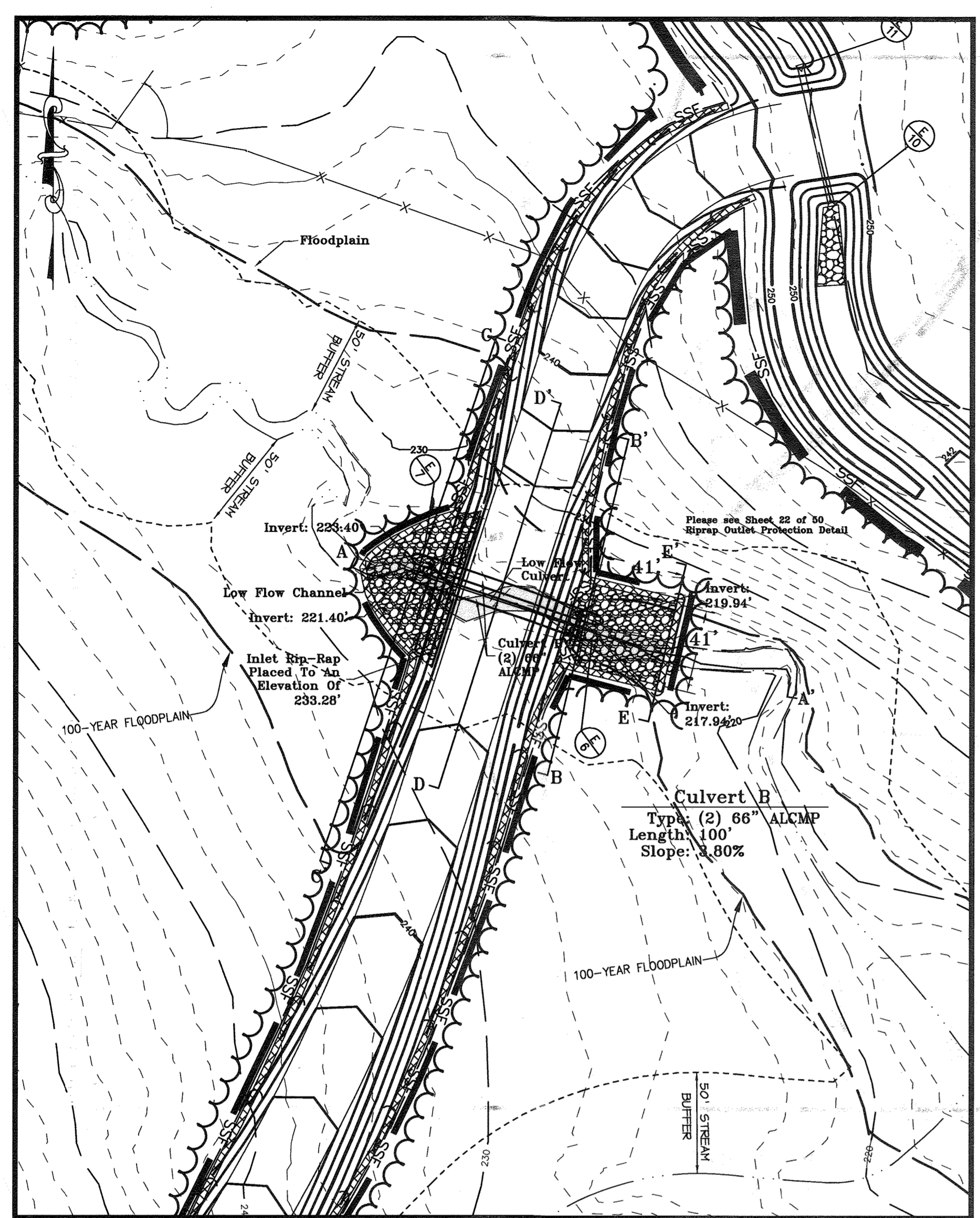
Culvert A - Profile
Temporary Instream Construction Measures
Pump-Around Practice
Scale: 1"=20'

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING	
<i>Derek J. Coyle</i>	10/21/05
DIRECTOR	DATE
<i>John P. ...</i>	10/21/05
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
<i>Cathy ...</i>	10/21/05
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE

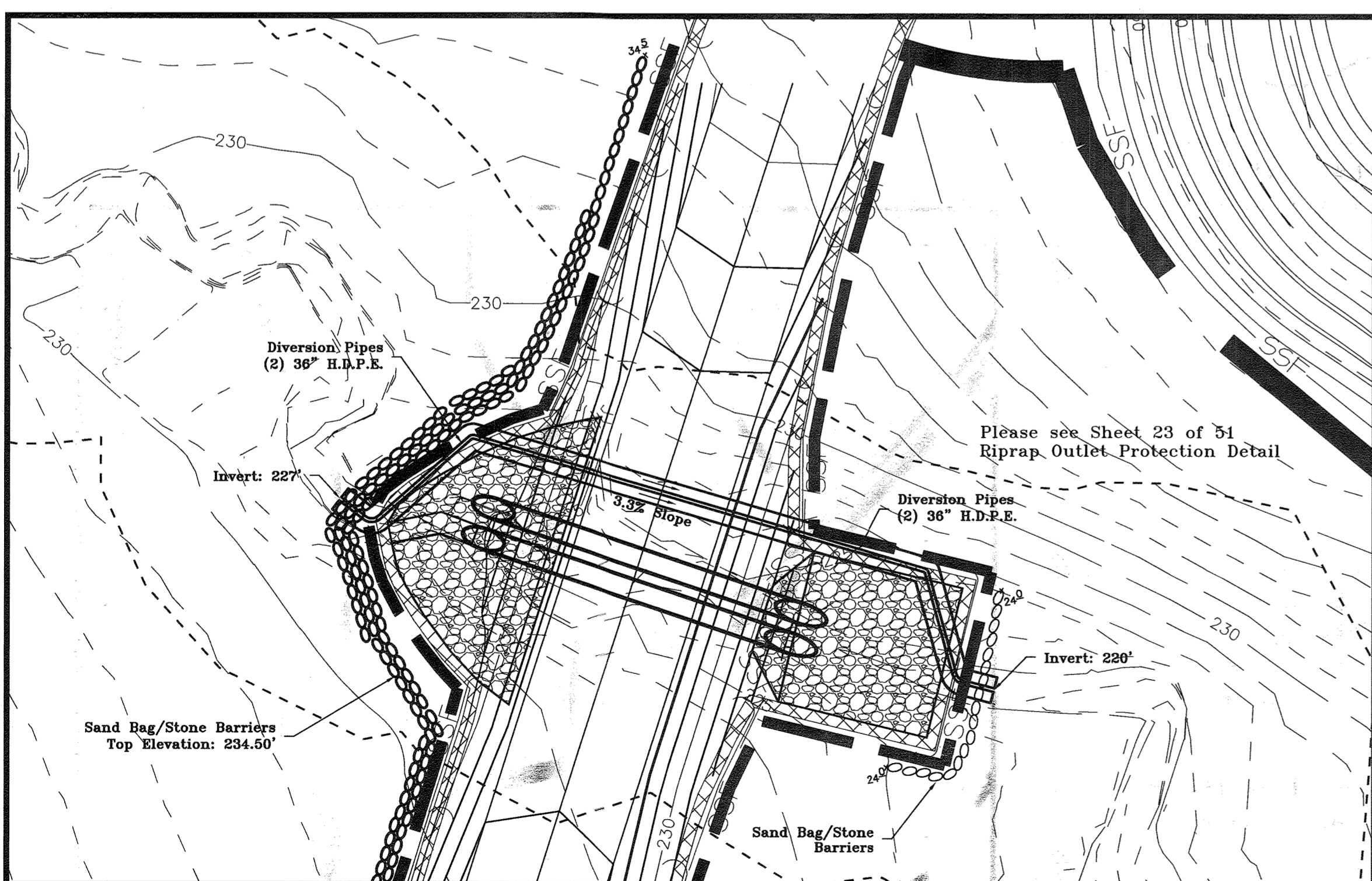
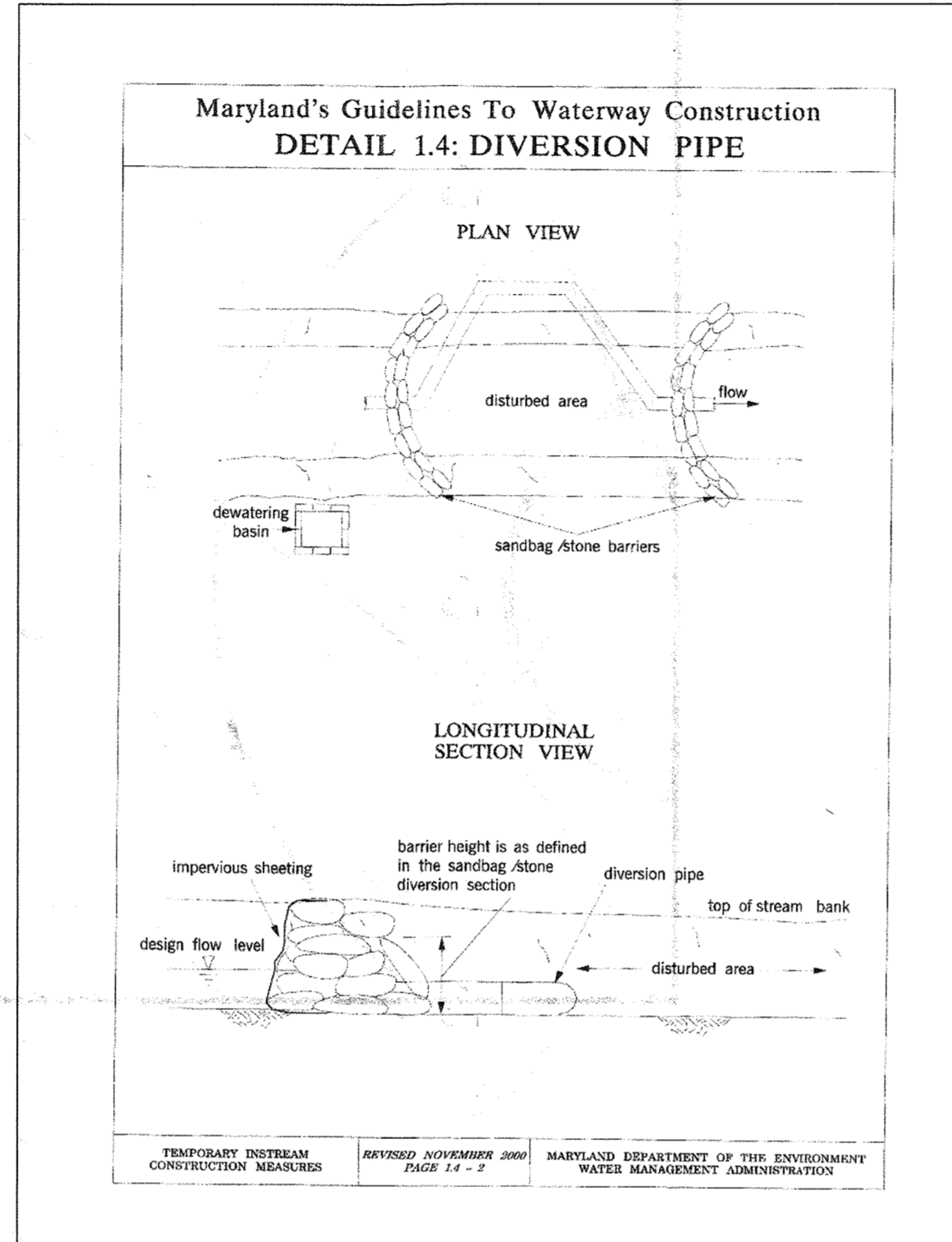
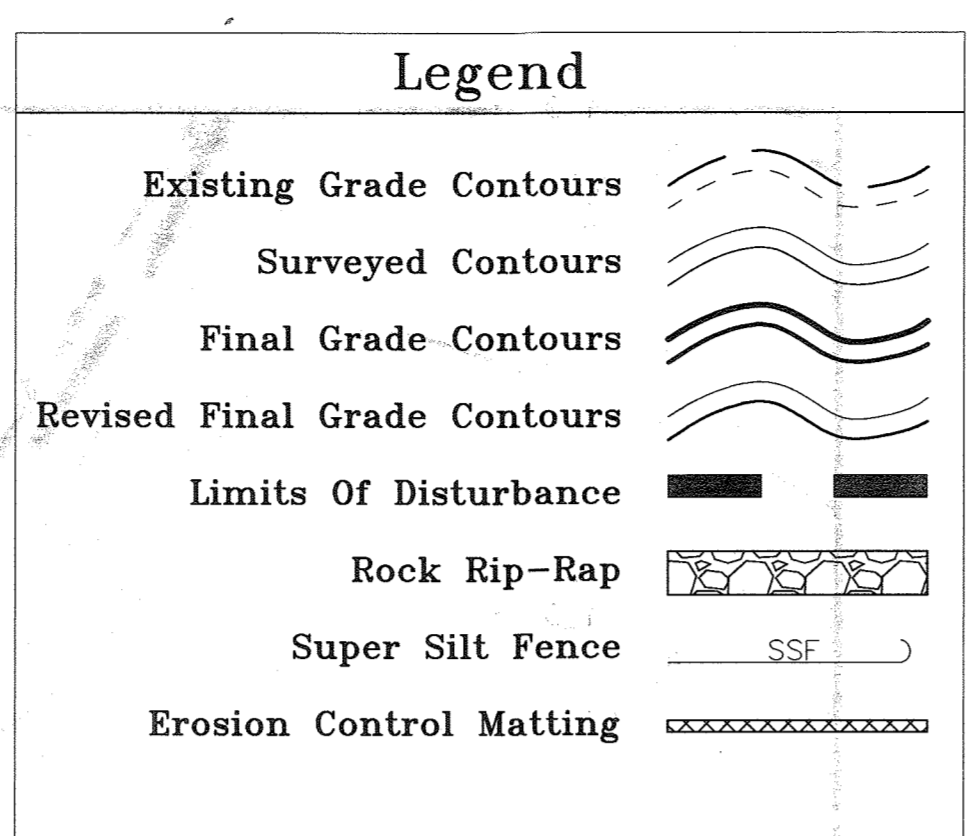
DATE NO.	REVISION
DEVELOPER/OWNER:	
(OWNER) CHASE LIMITED PARTNERSHIP P.O. BOX 250 LAUREL, MD 20725 410.742.1234	(DEVELOPER) CHASE MINING LLC P.O. BOX 250 LAUREL, MD 20725 410.742.1234
PROJECT CHASE QUARRY	
AREA ZONED M-1 & MXD-3, TAX MAP No. 43 PARCEL 234 & P.O. 235, BLOCK 14 6TH ELECTION DISTRICT HONARD COUNTY, MARYLAND	
TITLE CULVERT A PLAN AND PROFILES	

CME ENGINEERING
Civil Mining Environmental Engineering, Inc.
12 Village Parkway, Frostburg, MD 21532
301-659-1700 Fax: 301-659-5177 E-Mail: info@cmeeng.com

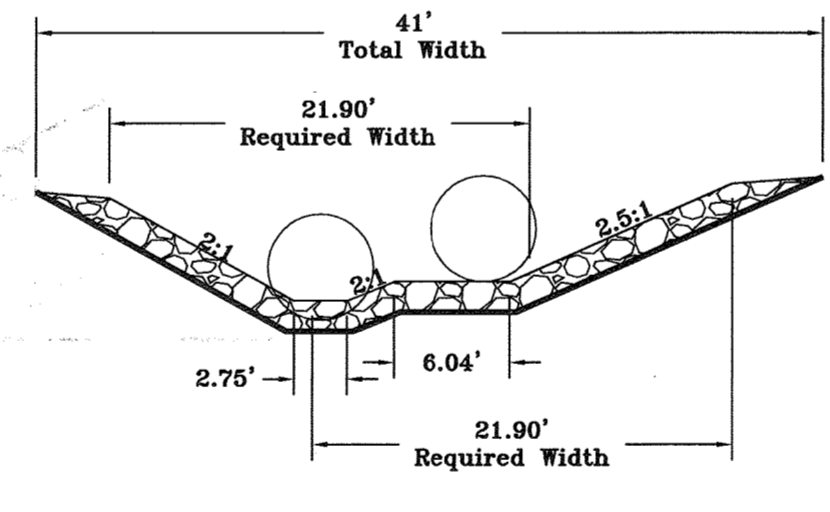
DATE: 8/28/05
DESIGNED BY :
DRAWN BY : DJW
CHECKED BY : WEL
PROJECT NO : 99092/
DETAIL-CME
DATE : AUGUST 30, 2005
SCALE : AS SHOWN
DRAWING NO. 43 OF 55



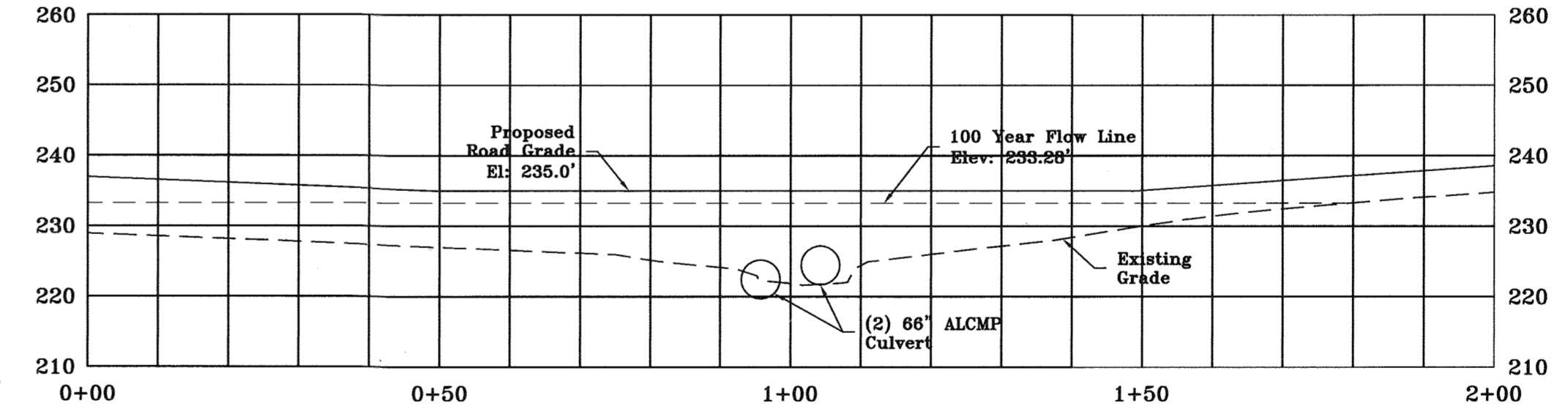
Affected Stream 1,717.80 Sq.Ft. Plan View Scale: 1"=50'



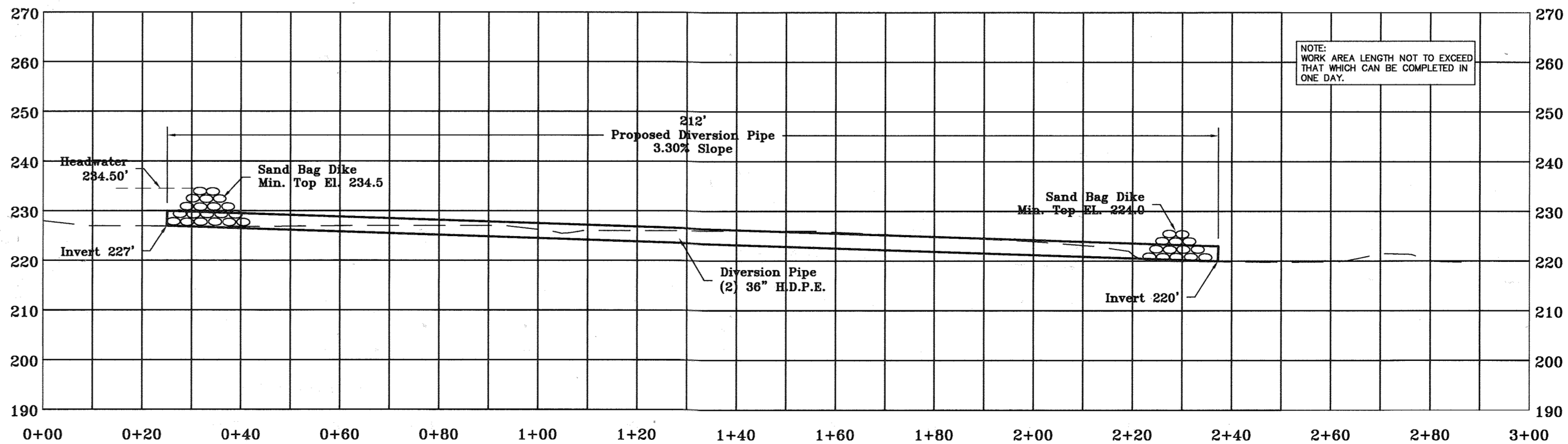
Temporary Instream Construction Measures Plan View Scale: 1"=30'



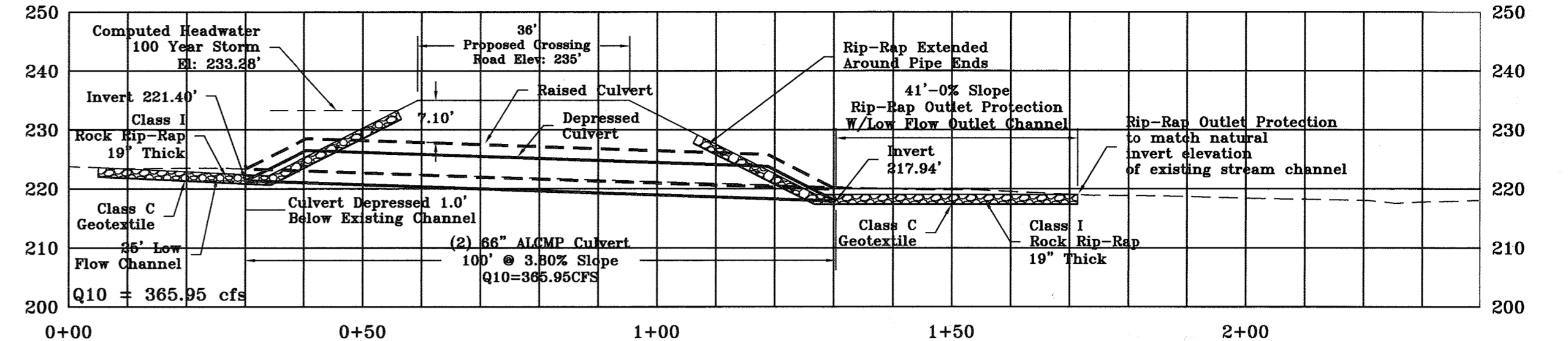
Detail #1 Scale: 1"=10'



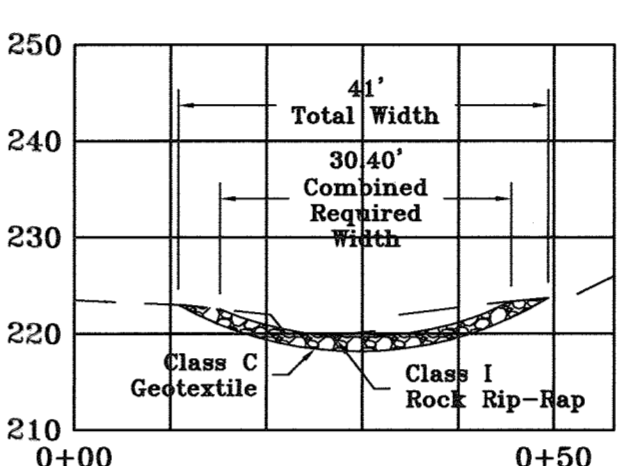
Section D - D' Scale: 1"=20'



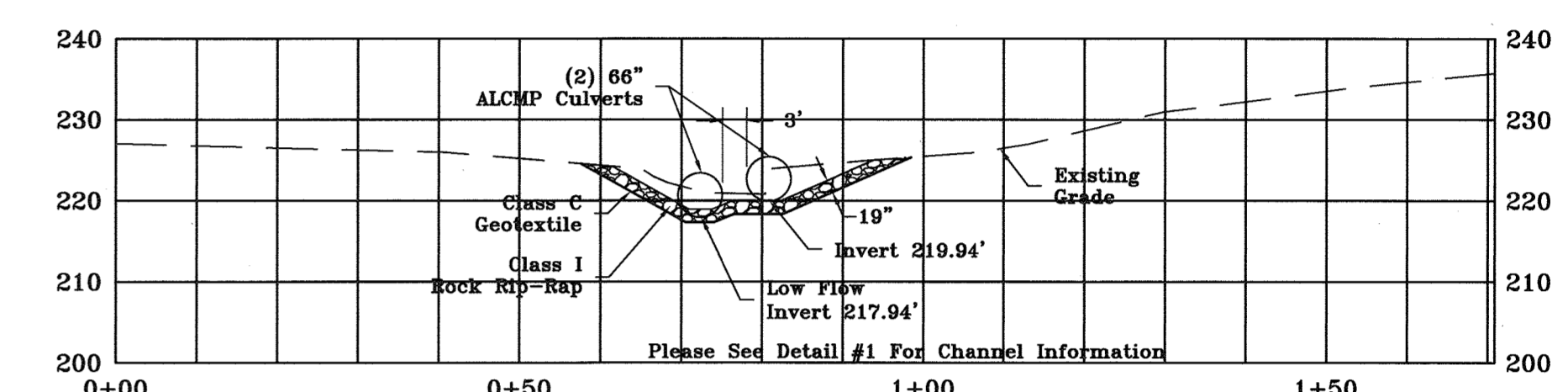
Culvert B - Profile Temporary Instream Construction Measures Diversion Pipe Scale: 1"=20'



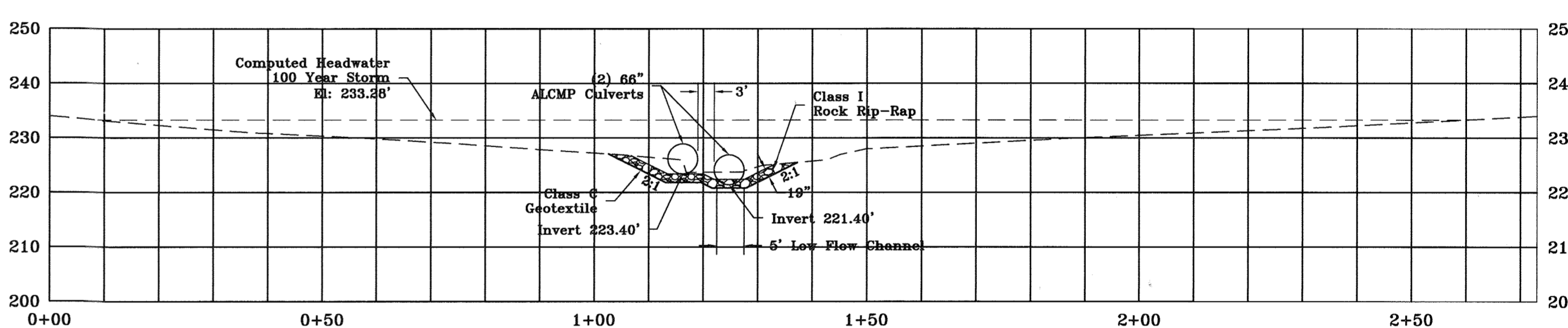
E-6 TO E-7 PROFILE Section A - A' Scale: 1"=20'



Section E - E' Scale: 1"=20'

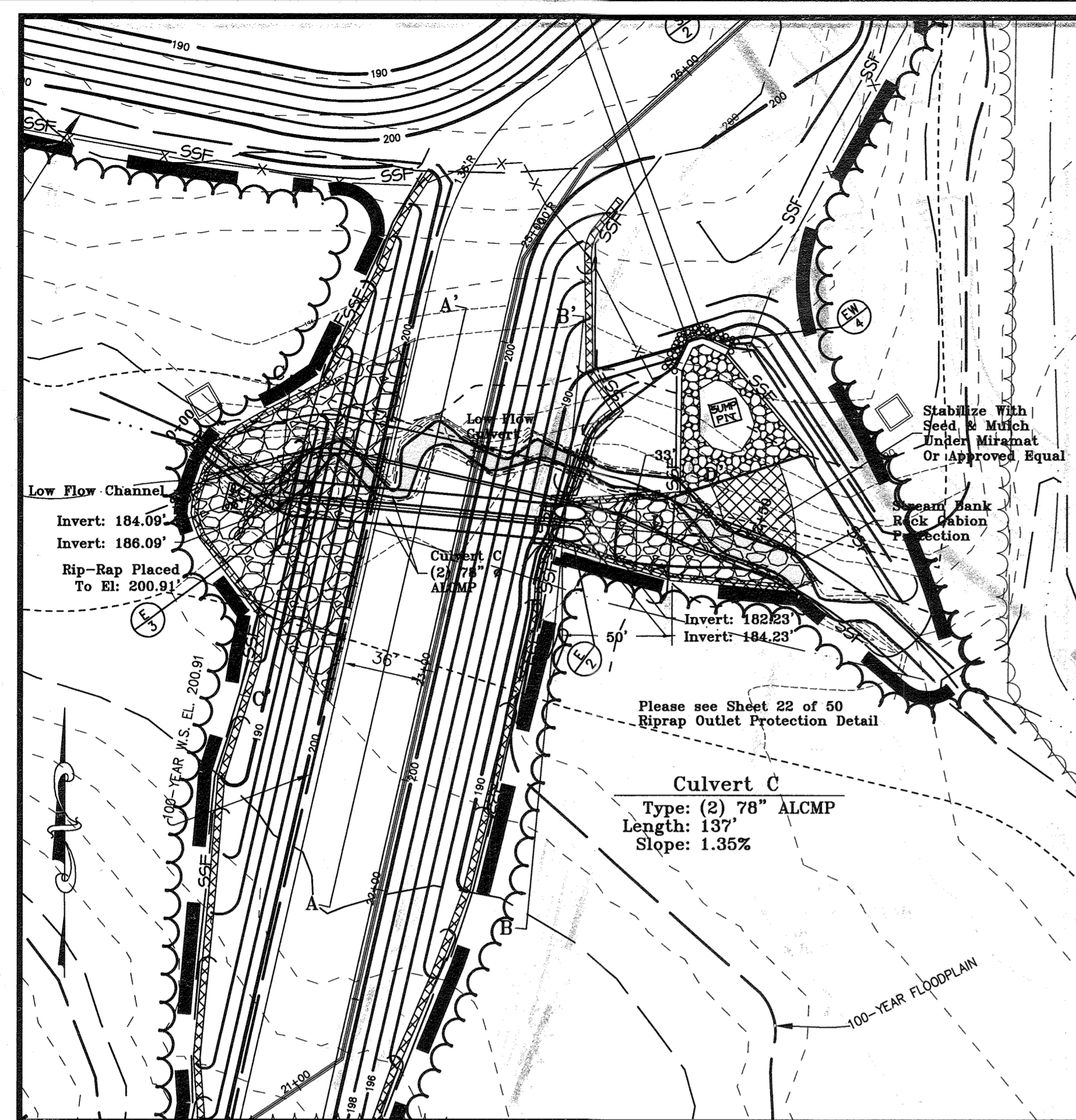


Section B - B' Scale: 1"=20'

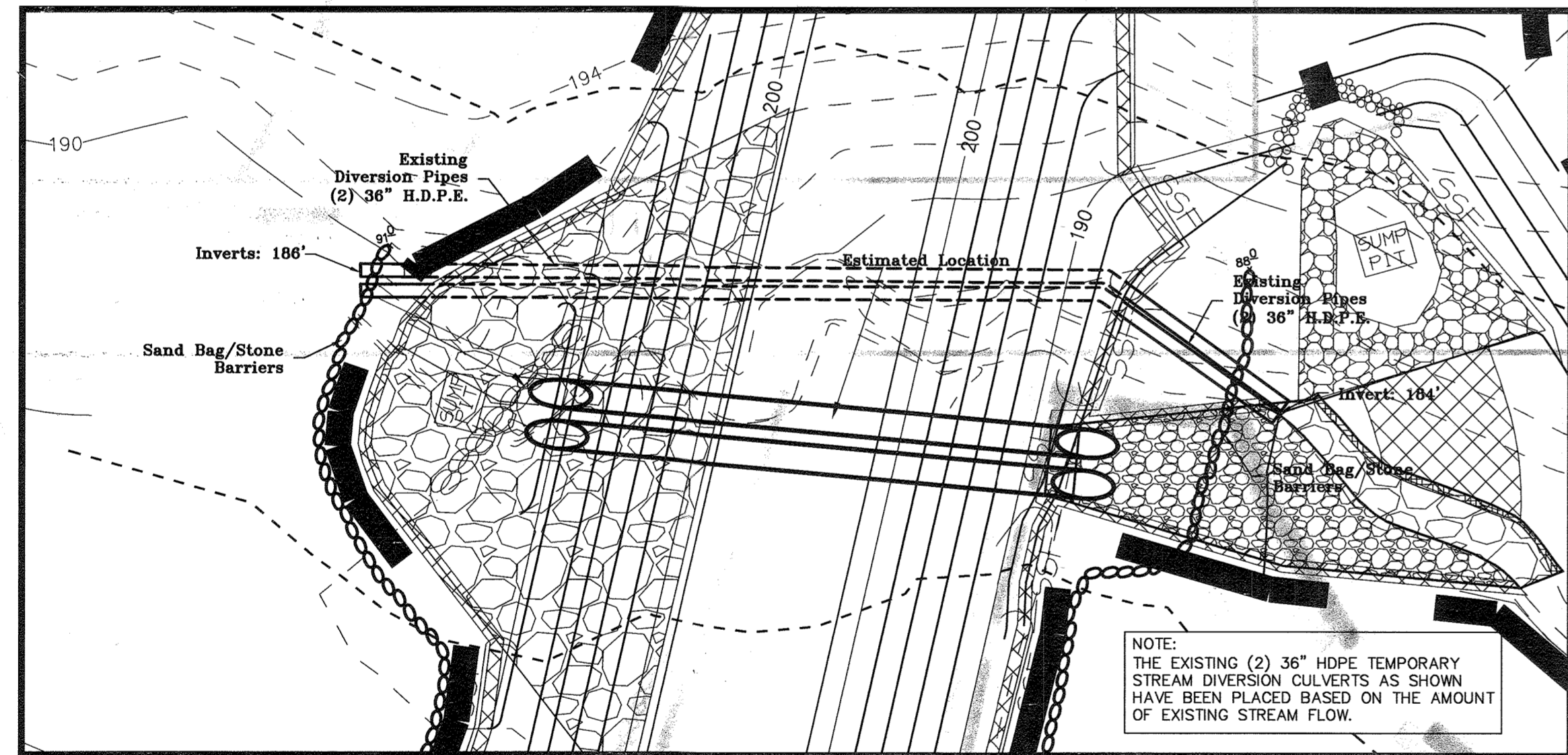


Section C - C' Scale: 1"=20'

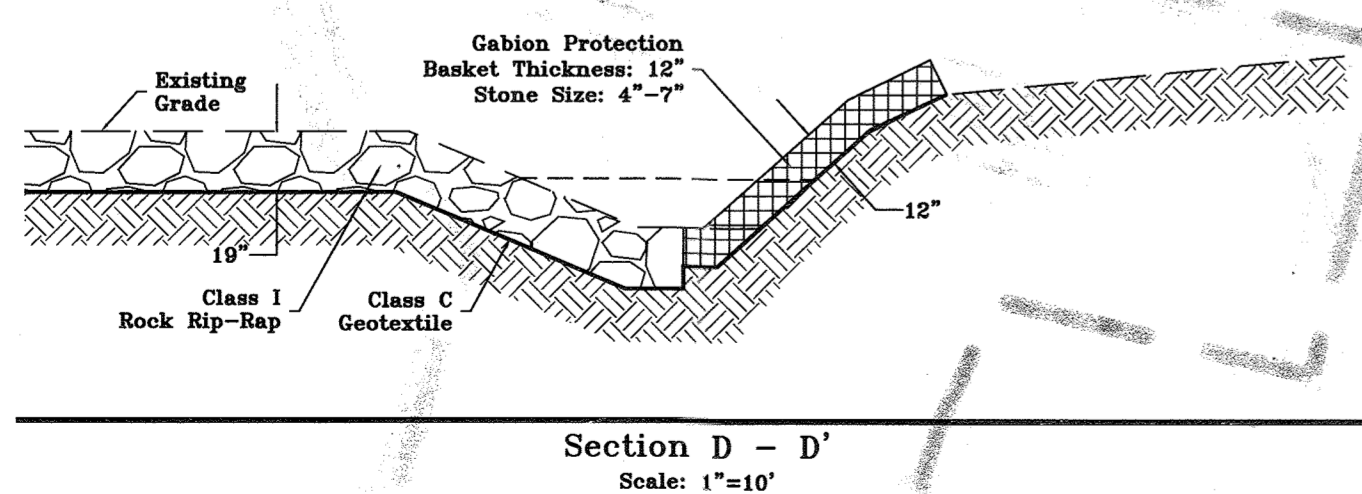
APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.	
<i>David L. Eagle</i>	10/3/05 DATE
DIRECTOR	
<i>John Deamus</i>	10/3/05 DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION	
<i>Cindy Horvath</i>	1/6/05 DATE
CHIEF, DIVISION OF LAND DEVELOPMENT	
DATE NO.	REVISION
DEVELOPER/OWNER:	
(OWNER) CHASE LIMITED PARTNERSHIP P.O. BOX 850 LAUREL, MD 207125 410.142.7234	(DEVELOPER) CHASE MINING LLC P.O. BOX 850 LAUREL, MD 207125 410.142.7234
PROJECT CHASE QUARRY	
AREA ZONED M-1 & MXD-3, TAX MAP No. 43 PARCEL 234 & P.O. 235, BLOCK 14 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND	
TITLE CULVERT B PLAN AND PROFILES	
 Civil Mining Environmental Engineering, Inc. 12 Village Parkway, Freeburg, MD 21320 301-888-1700 Fax: 301-888-0177 E-Mail: info@cmeinc.com	
DATE 8/30/05	DESIGNED BY :
	DRAWN BY : DJW
	CHECKED BY : WEL
	PROJECT NO : 99092/ DETAIL-CME
	DATE : AUGUST 30, 2005
	SCALE : AS SHOWN
	DRAWING NO. 44 OF 53



Affected Stream 2,080.38 Sq.Ft. Plan View
Scale: 1"=50'

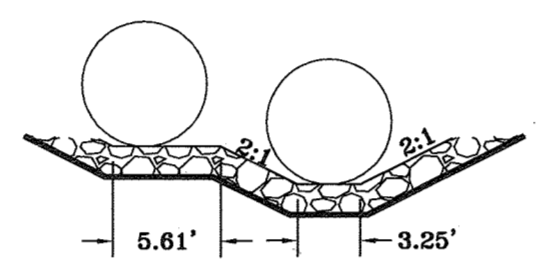
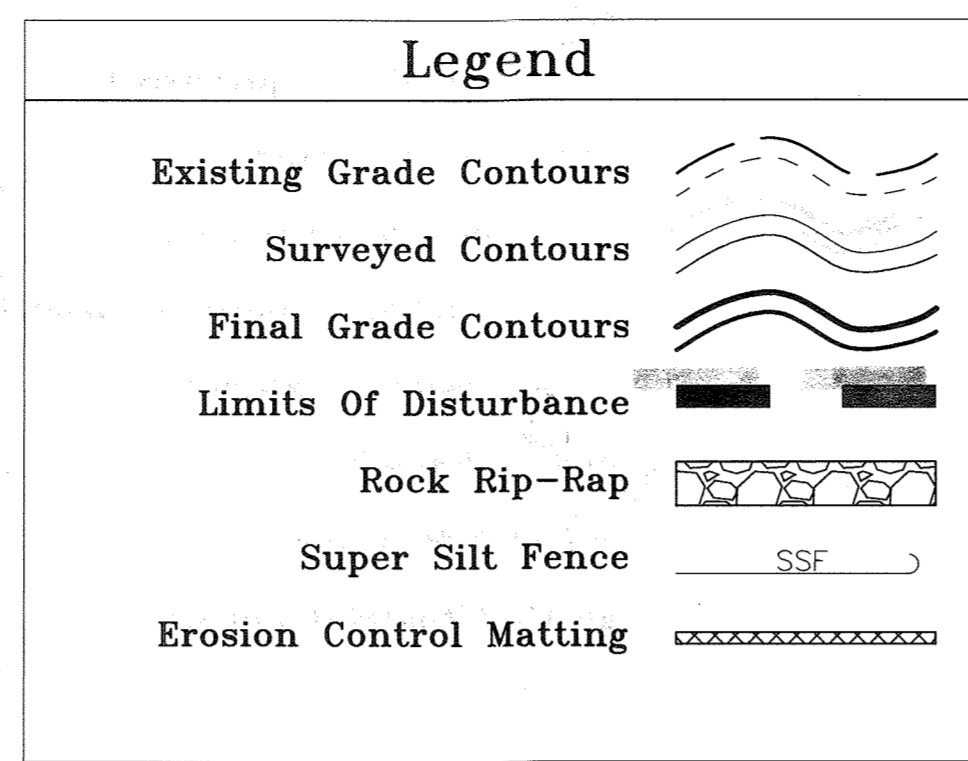


Temporary Instream Construction Measures
Plan View
Scale: 1"=30'

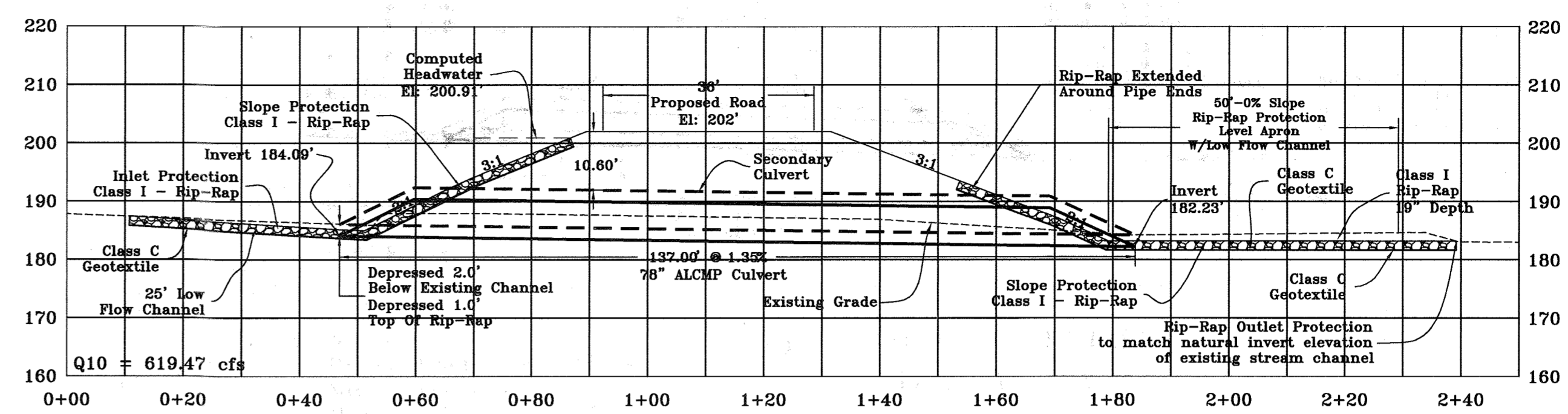


Section D - D'
Scale: 1"=10'

Notes:
1. The maximum lined dimension of the mesh opening shall not exceed 4 1/2 inches.
2. The area of the mesh opening shall not exceed 100 sq. ft. per 100 sq. ft. of area.
3. The gabions shall be fabricated in such a manner that the sides, end, and lid can be assembled at the construction site into a rectangular basket of the specified size.
4. The gabions shall be of a single unit construction and shall be installed according to the manufacturer's specifications.

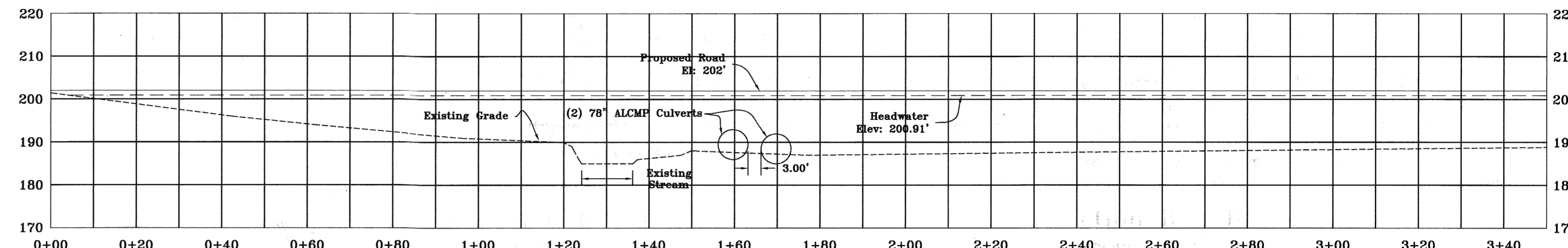


Detail #1
Scale: 1"=10'

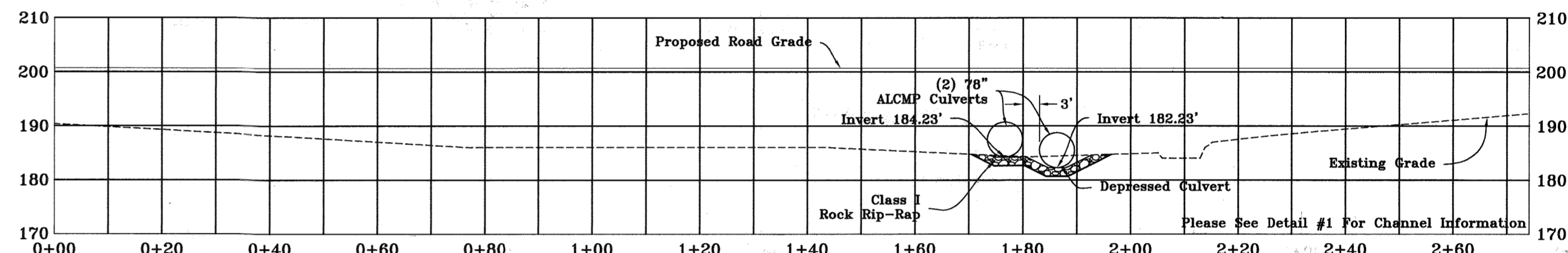


E-2 TO E-3 PROFILE
Scale: 1"=20'

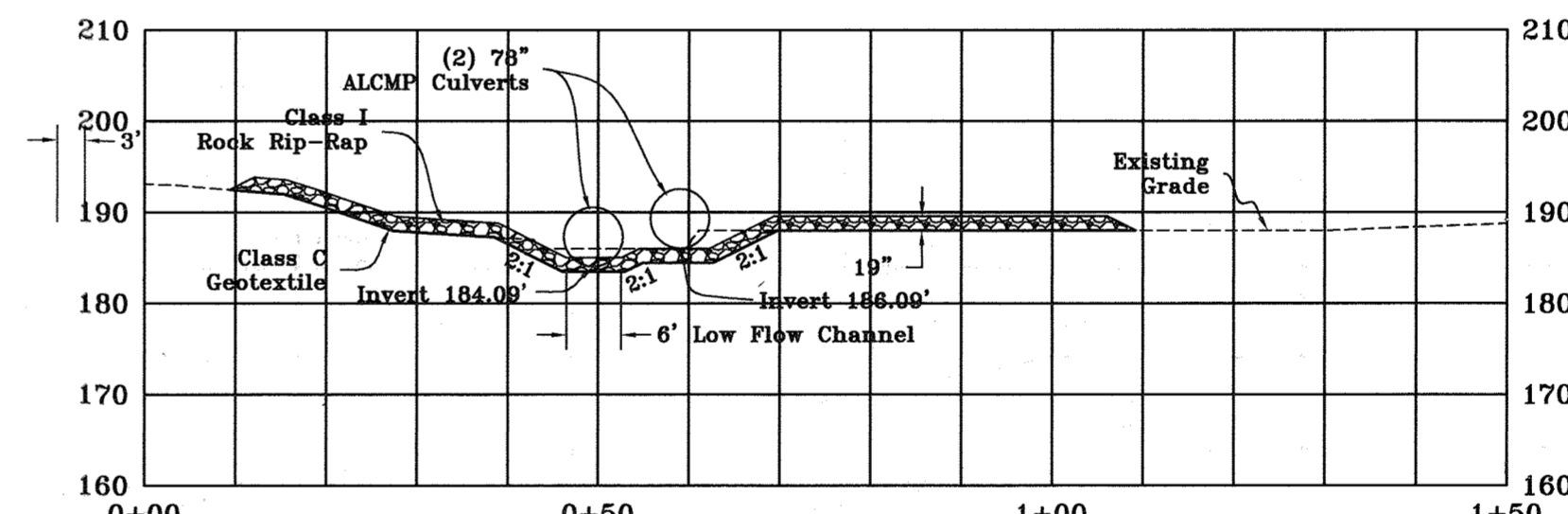
Notes:
Design Load = 360,000lbs
Min. Cover = 4'
Max. Road Grade = 7%



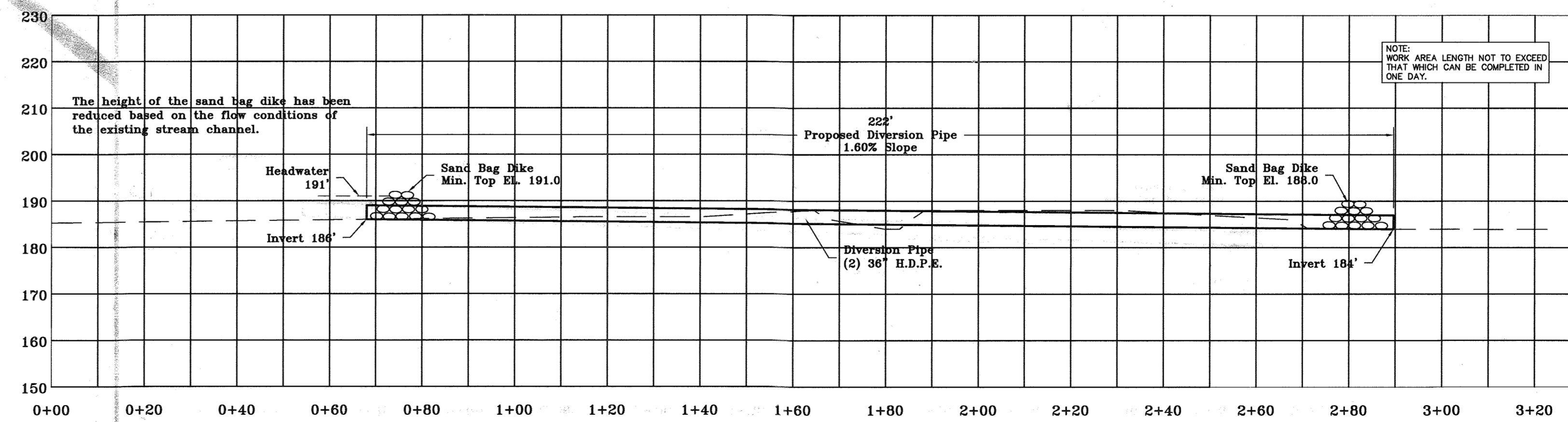
Section A - A'
Scale: 1"=20'



Section B - B'
Scale: 1"=20'



Section C - C'
Scale: 1"=20'



Culvert C - Profile
Temporary Instream Construction Measures
Diversion Pipe
Scale: 1"=20'

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.	
<i>David L. Gault</i>	12/15
DIRECTOR	DATE
<i>Chad Dammann</i>	10/3/05
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
<i>Candy Hammett</i>	9/16/05
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE

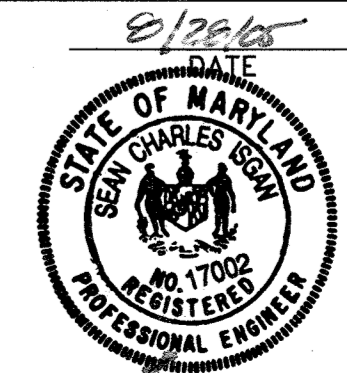
DATE	NO.	REVISION

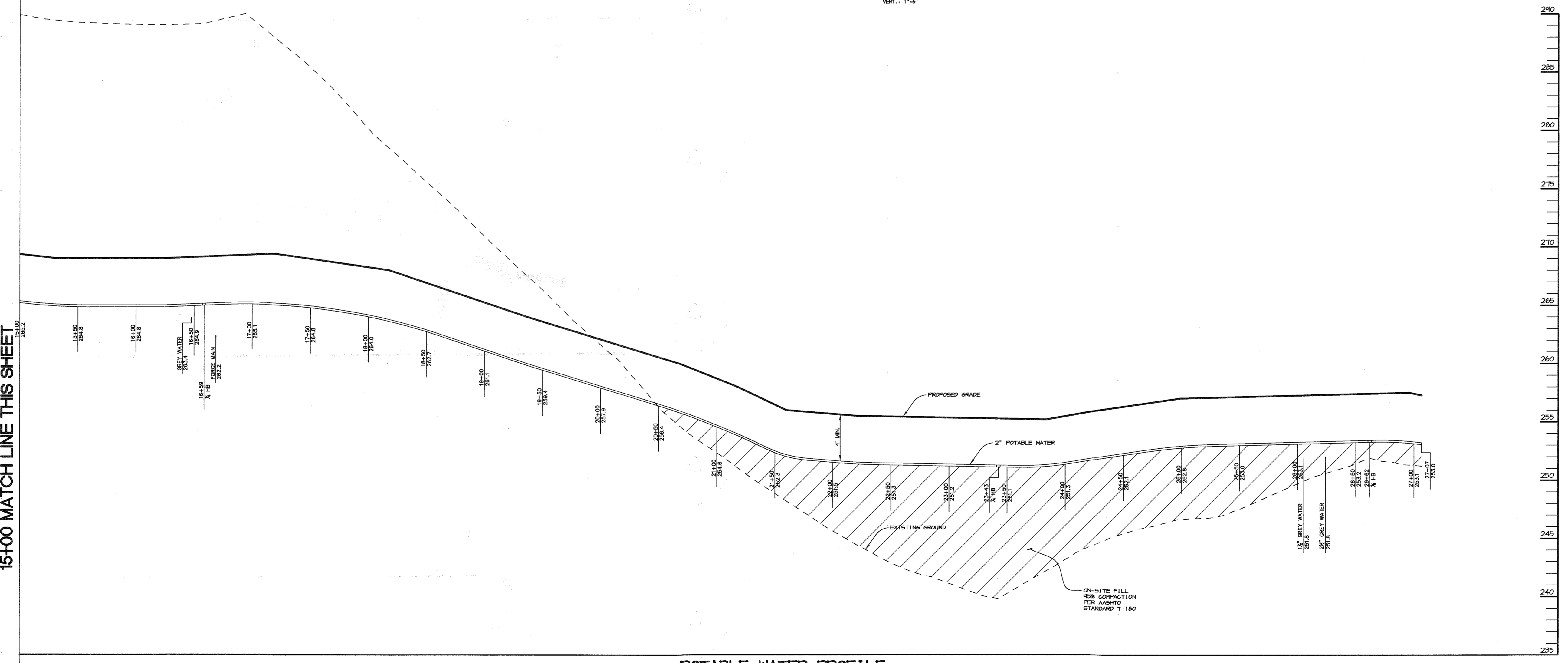
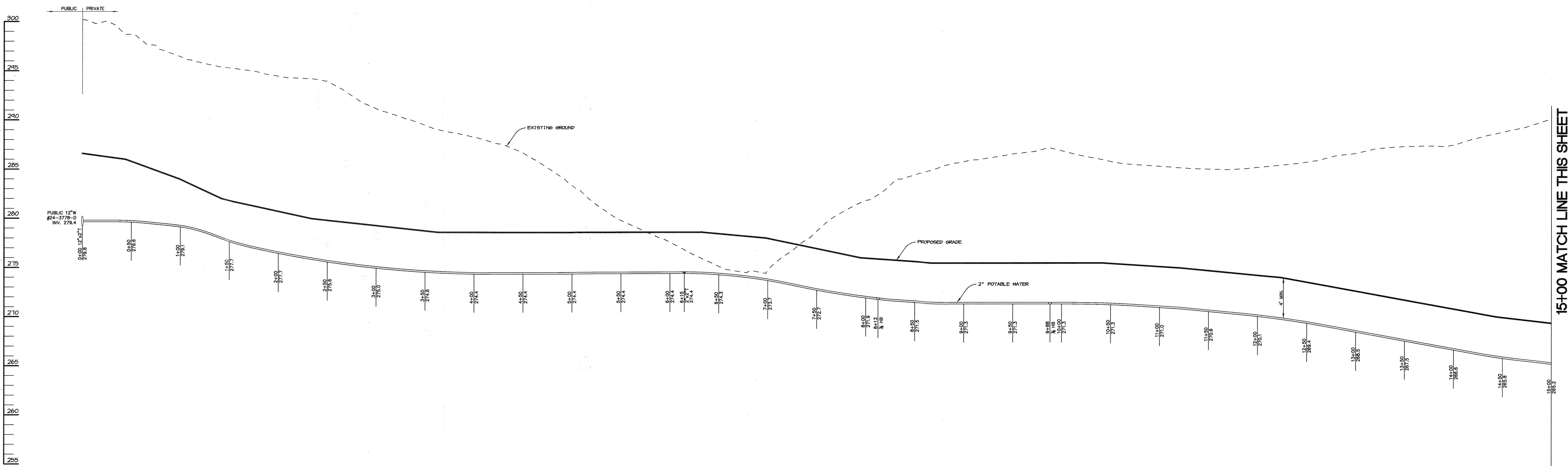
DEVELOPER/OWNER:	(DEVELOPER)
CHASE LIMITED PARTNERSHIP	CHASE MINING LLC
P.O. BOX 850	P.O. BOX 850
LAUREL, MD 207125	LAUREL, MD 207125
410.742.7234	410.742.7234

PROJECT
CHASE QUARRY

AREA ZONED M-1 & MXD-3, TAX MAP No. 43
PARCEL 234 & P.O. 235, BLOCK 19
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE CULVERT C PLAN AND PROFILES	
 Civil Mining Environmental Engineering, Inc. 12 Village Parkway, Frostburg, MD 21532 301-288-1700 Fax 301-288-5177 E-Mail: info@cmeinc.com	
DESIGNED BY :	
DRAWN BY : DJW	
CHECKED BY : WEL	
PROJECT NO : 99092/ DETAIL-CME	
DATE : AUGUST 30, 2005	
SCALE : AS SHOWN	
DRAWING NO. 45 OF 55	





15+00 MATCH LINE THIS SHEET

15+00 MATCH LINE THIS SHEET

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.	
<i>David L. Lyell</i>	1/3/05
DIRECTOR	DATE
<i>John Dammann</i>	10/2/05
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
<i>Cindy Hanna</i>	1/16/05
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE

DATE	NO.	REVISION

DEVELOPER/OWNER:
 CHASE LIMITED PARTNERSHIP (OWNER)
 P.O. BOX 050
 LAUREL, MD 20725
 410.742.1234
 CHASE MINING LLC (DEVELOPER)
 P.O. BOX 050
 LAUREL, MD 20725
 410.742.1234

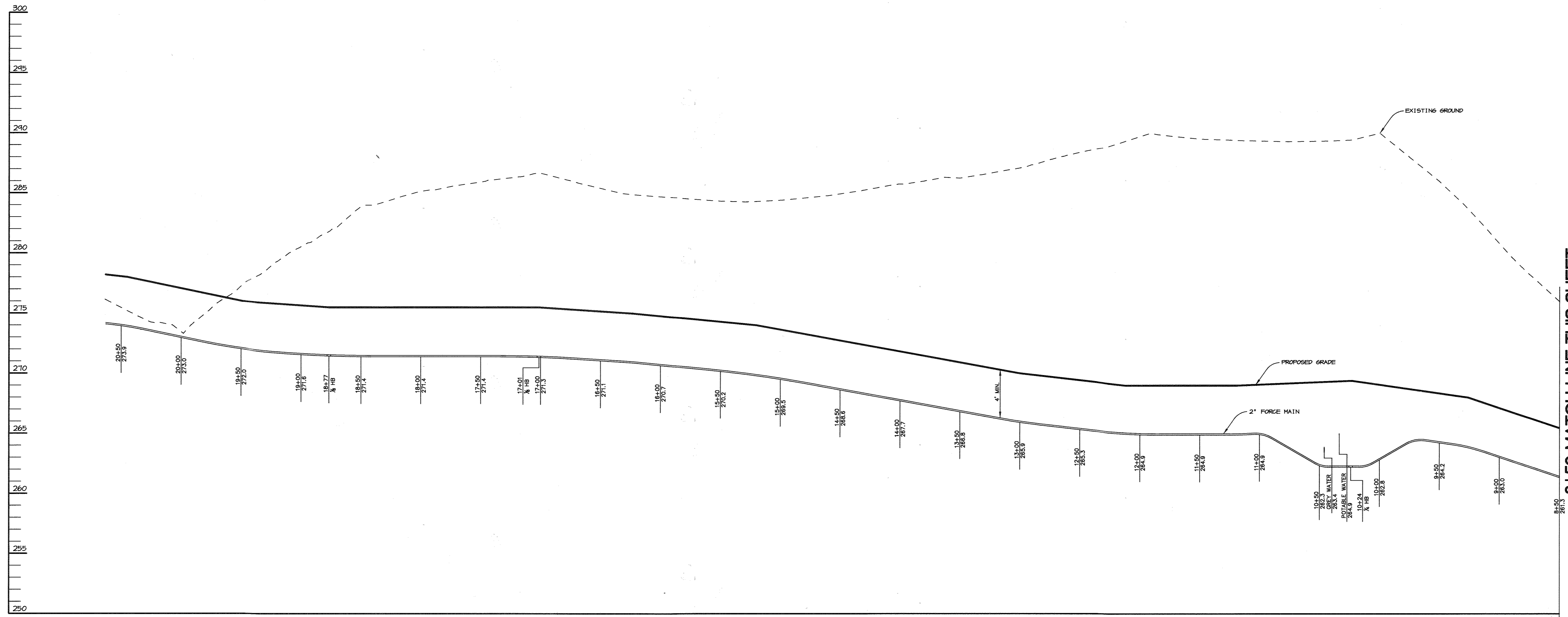
PROJECT
CHASE QUARRY

AREA ZONED M-1 & MXD-3, TAX MAP No. 43
 PARCEL 234 & P.O. 235, BLOCK 14
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE
PROFILES

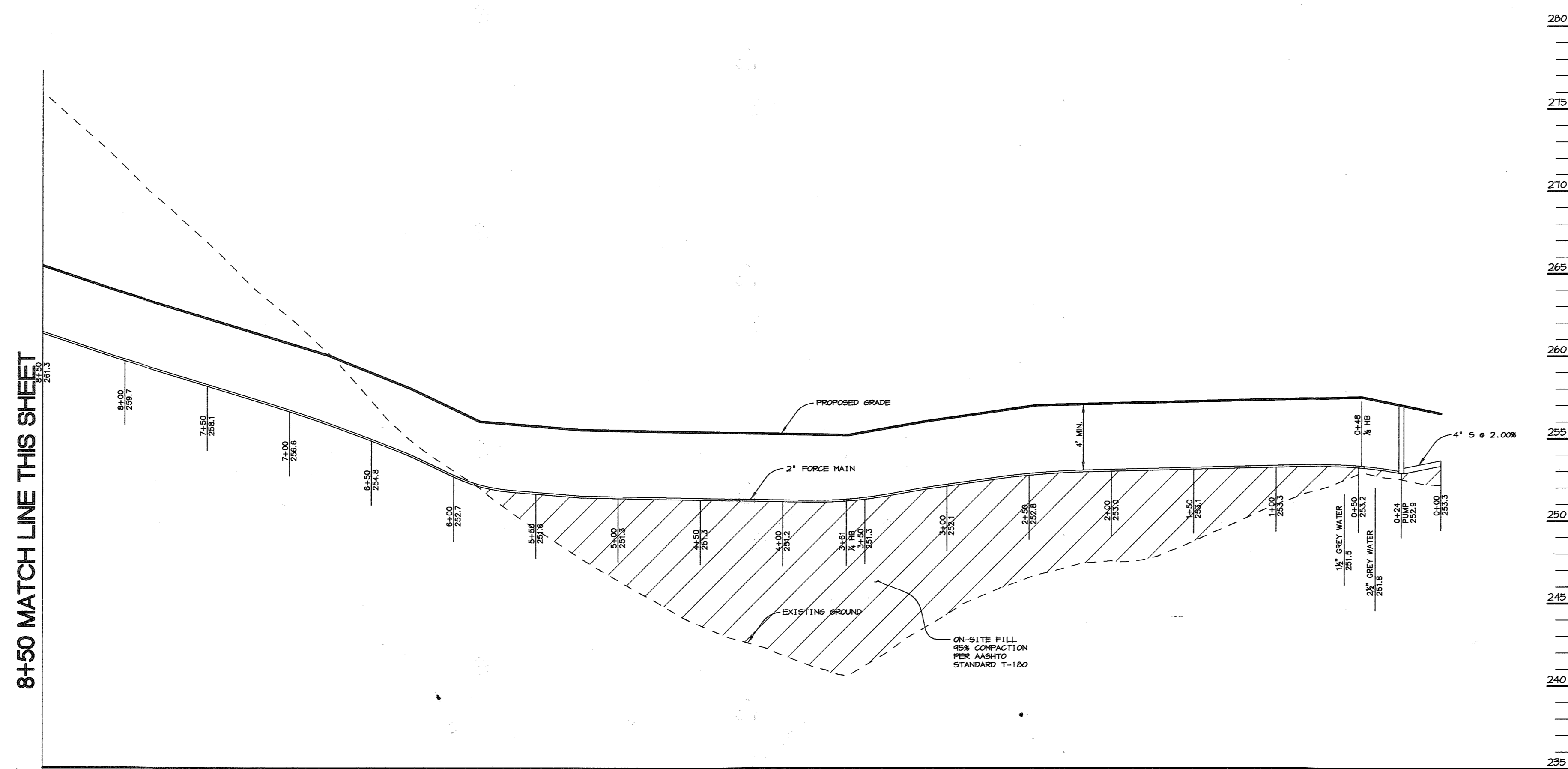
Patton Harris Rust & Associates, pc
 Engineers. Surveyors. Planners. Landscape Architects.
 8818 Centre Park Drive
 Columbia, MD 21045
 T 410.997.8900
 F 410.997.9282

8-30-05 DATE	DESIGNED BY : ACR
	DRAWN BY : EMR
	CHECKED BY : ACR
	PROJECT NO : 99092/ PROFILES-W&S
	DATE : AUGUST 30, 2005
	SCALE : AS SHOWN
<i>Aimee C. Remington</i> AIMEE C. REMINGTON #29923	DRAWING NO. 46 OF 55



FORCE MAIN PROFILE
 HOR. : 1"=50'
 VERT. : 1"=5'

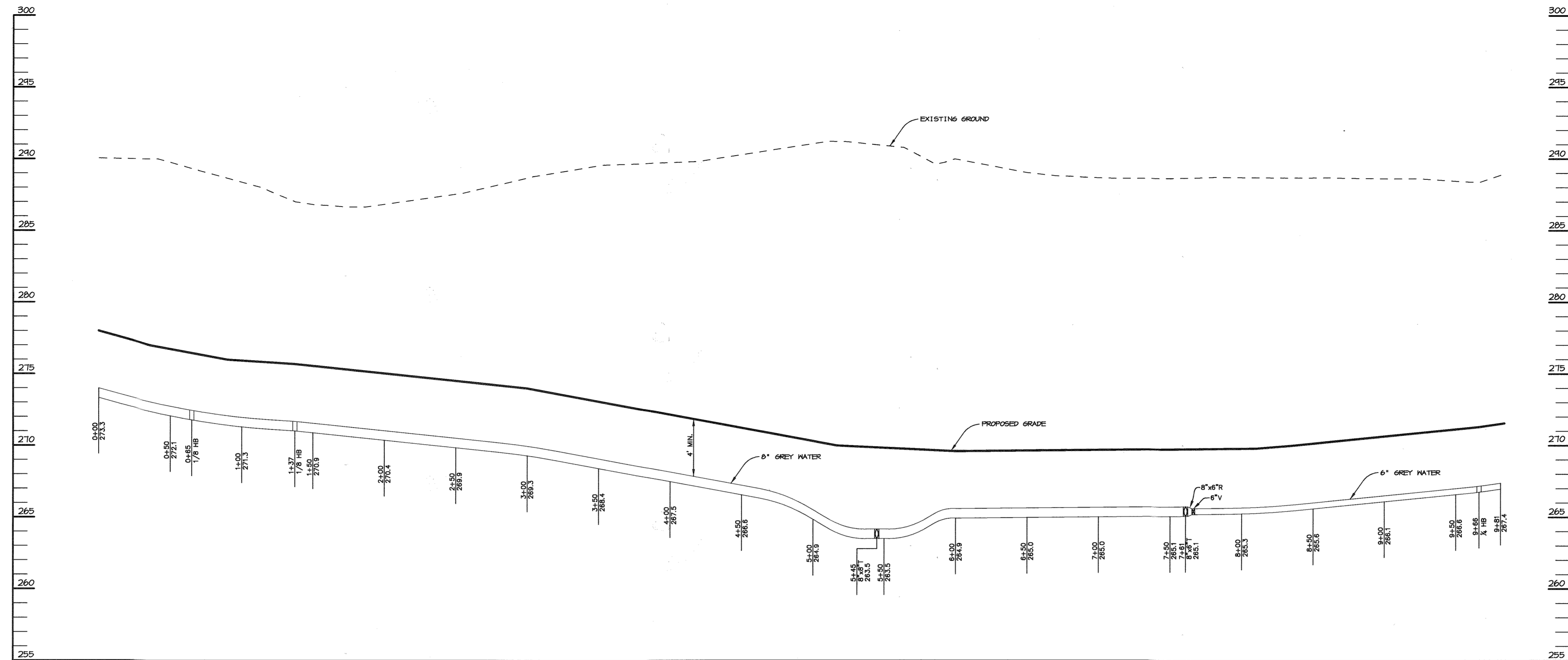
8+50 MATCH LINE THIS SHEET



FORCE MAIN PROFILE
 HOR. : 1"=50'
 VERT. : 1"=5'

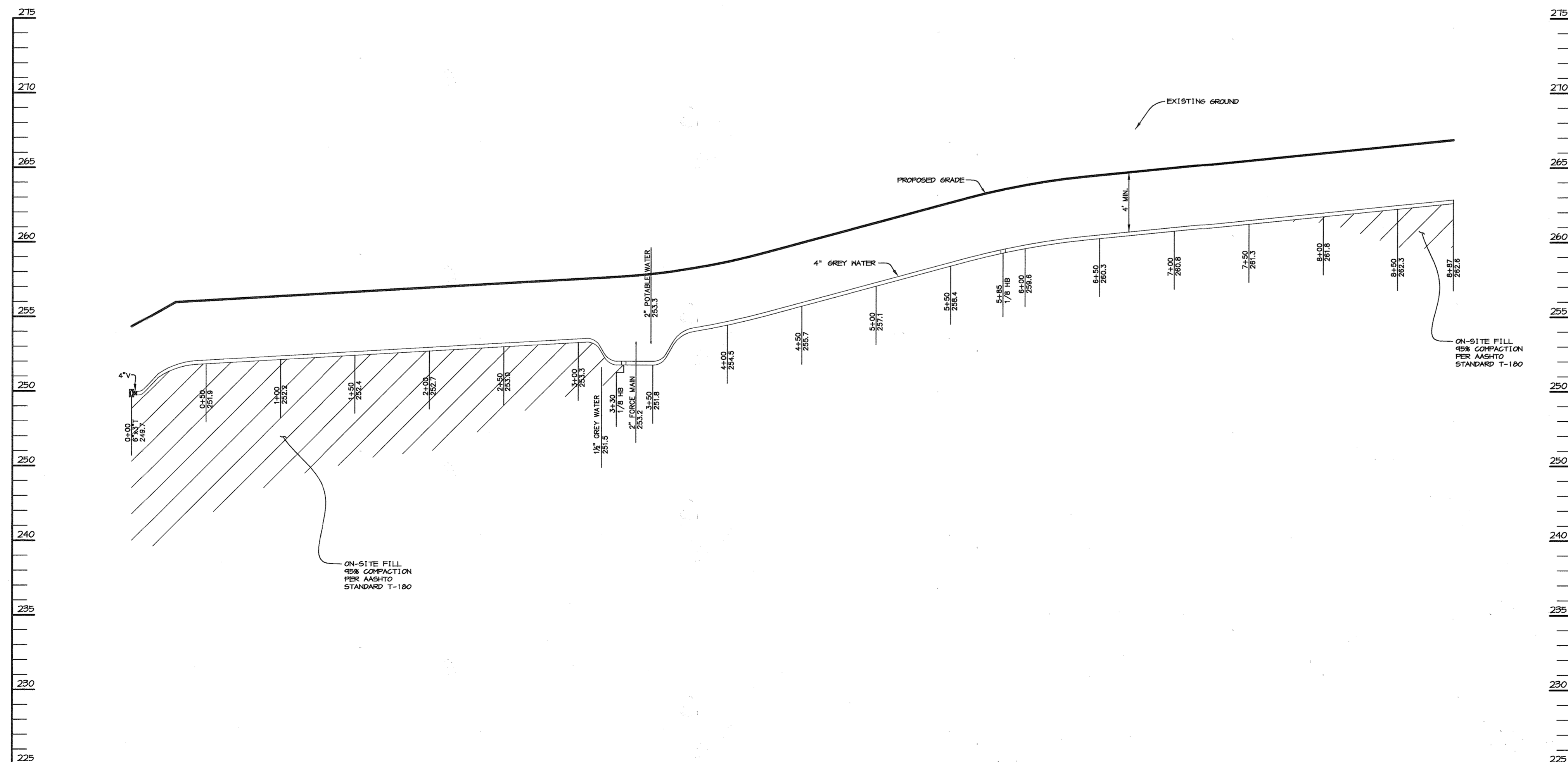
8+50 MATCH LINE THIS SHEET

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.	
DIRECTOR <i>Mark McCayle</i>	DATE 10/15/05
CHIEF, DEVELOPMENT ENGINEERING DIVISION <i>Anna Roman</i>	DATE 10/3/05
CHIEF, DIVISION OF LAND DEVELOPMENT <i>Cindy Hamer</i>	DATE 10/6/05
DATE NO.	REVISION
DEVELOPER/OWNER:	
(OWNER) CHASE LIMITED PARTNERSHIP P.O. BOX 850 LAUREL, MD 20725 410.792.7234	(DEVELOPER) CHASE MINING LLC P.O. BOX 850 LAUREL, MD 20725 410.792.7234
PROJECT CHASE QUARRY	
AREA ZONED M-1 & MXD-3, TAX MAP No. 43 PARCEL 234 & P.O. 235, BLOCK 19 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND	
TITLE PROFILES	
Patton Harris Rust & Associates, pc Engineers, Surveyors, Planners, Landscape Architects. 8818 Centre Park Drive Columbia, MD 21045 T 410.997.8900 F 410.997.9282	
DATE 8-30-05	DESIGNED BY : ACR
	DRAWN BY : EMR
	CHECKED BY : ACR
	PROJECT NO : 99092/ PROFILE6-W&S
	DATE : AUGUST 30, 2005
SCALE : AS SHOWN	DRAWING NO. 47 OF 55



GREY WATER A-LINE PROFILE

HORIZ. : 1"=50'
VERT. : 1"=5'



GREY WATER C-LINE PROFILE

HORIZ. : 1"=50'
VERT. : 1"=5'

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Mark L. Lytle 11/2/05
DIRECTOR DATE

Chris Drummond 10/3/05
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Cindy Harmon 10/6/05
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DATE NO. REVISION

DEVELOPER/OWNER:
(OWNER) CHASE LIMITED PARTNERSHIP
P.O. BOX 850 LAUREL, MD 207125 410.792.1234
(DEVELOPER) CHASE MINING LLC
P.O. BOX 850 LAUREL, MD 207125 410.792.1234

PROJECT
CHASE QUARRY

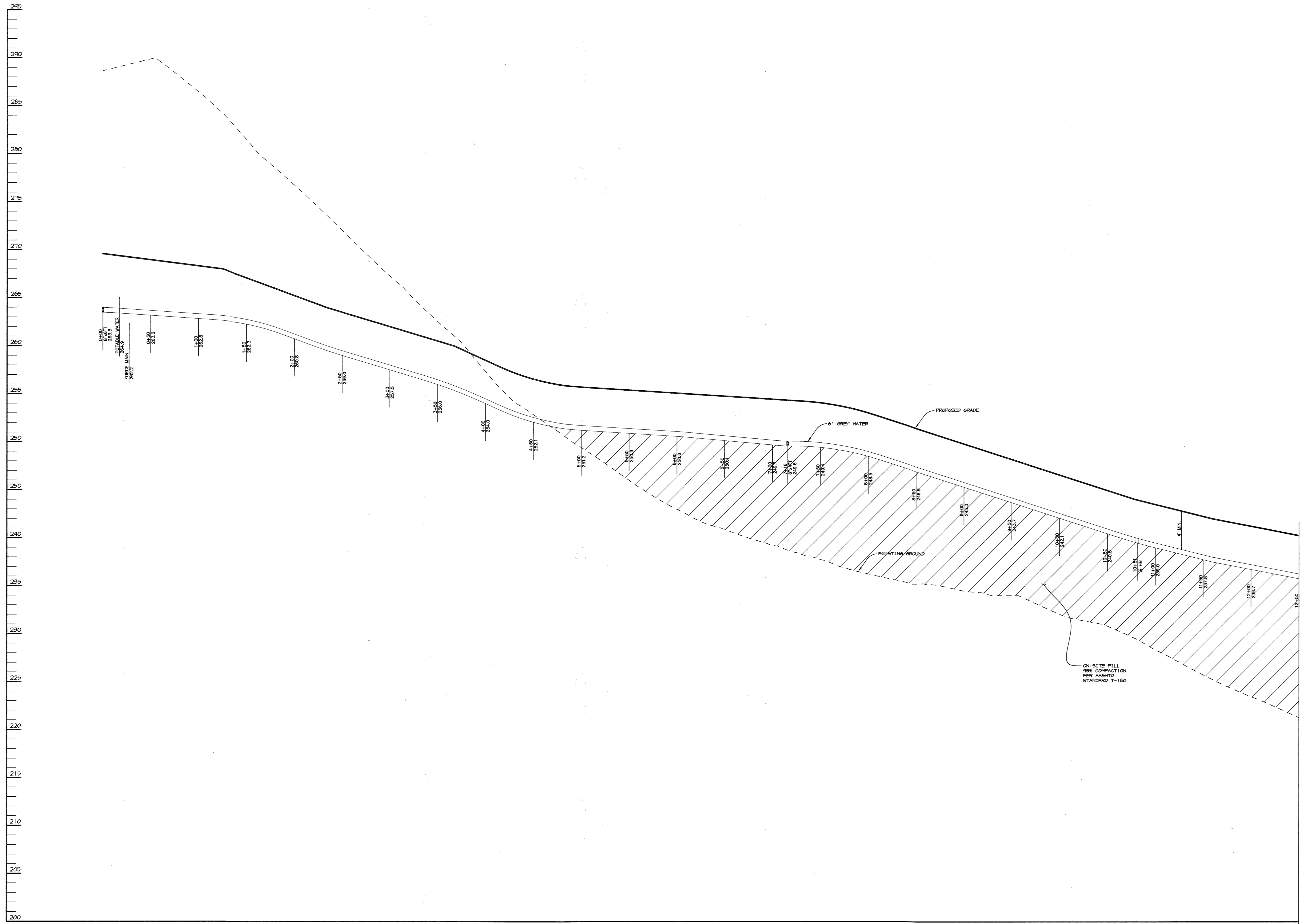
AREA ZONED M-1 & MXD-3, TAX MAP No. 43
PARCEL 234 & P.O. 235, BLOCK 19
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
PROFILES

Patton Harris Rust & Associates, pc
Engineers. Surveyors. Planners. Landscape Architects.
PHRA
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

8-30-05
DATE
DESIGNED BY : ACR
DRAWN BY : EMR
CHECKED BY : ACR
PROJECT NO : 99092/
PROFILES-W&S
DATE : AUGUST 30, 2005
SCALE : AS SHOWN
DRAWING NO. 48 OF 55

Aimee C. Remington
AIMEE C. REMINGTON #29923

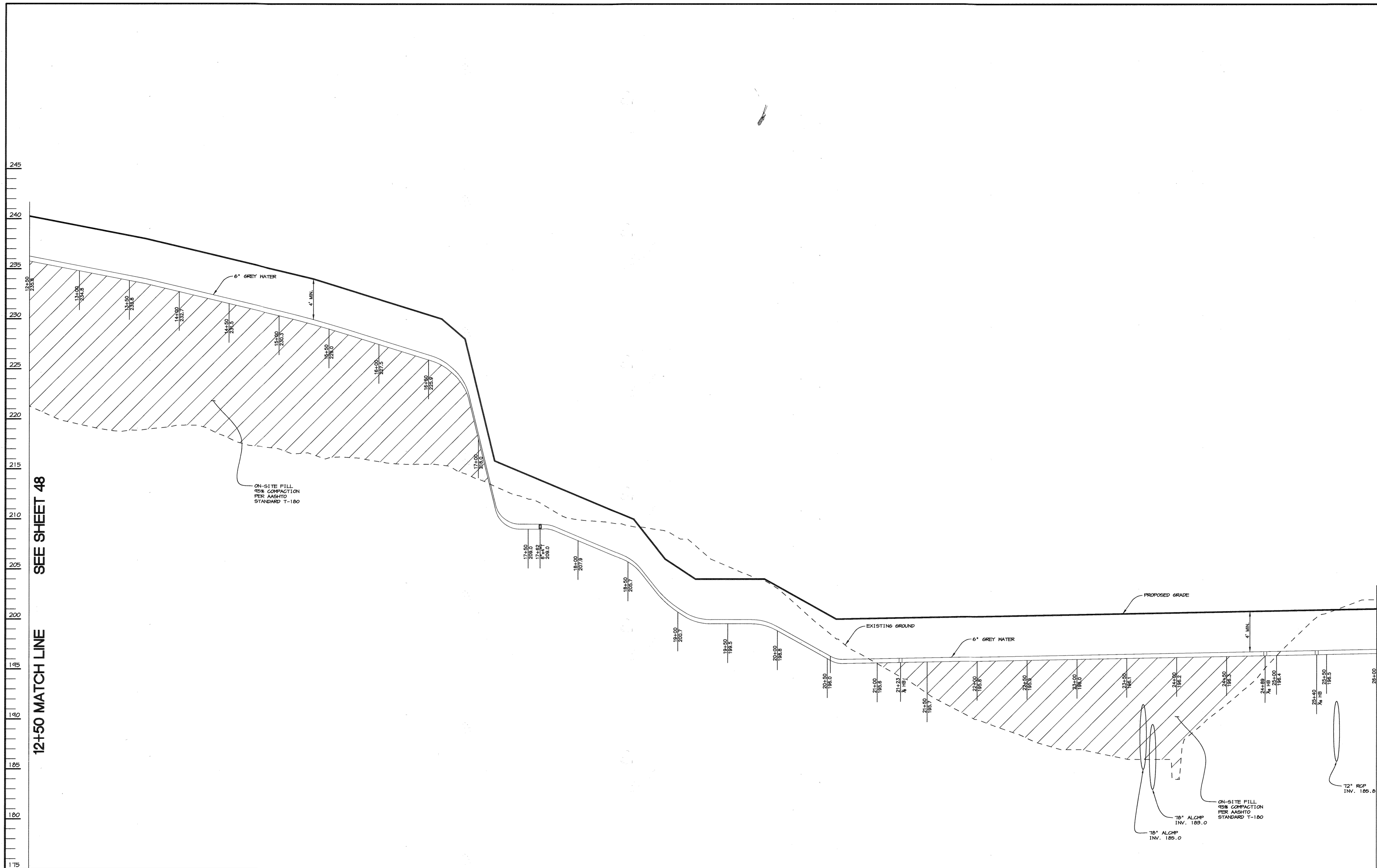


GREY WATER B-LINE PROFILE

HR. 11'-00"
VERT. 1"=5'

12+50 MATCH LINE SEE SHEET 49

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.	
<i>Frank D. Luyck</i>	1/5/05
DIRECTOR	DATE
<i>William J. ...</i>	10/3/05
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
<i>Cindy ...</i>	1/6/05
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE
DATE NO.	REVISION
DEVELOPER/OWNER:	
(OWNER) CHASE LIMITED PARTNERSHIP P.O. BOX 850 LAUREL, MD 20725 410.792.7234	(DEVELOPER) CHASE MINING LLC P.O. BOX 850 LAUREL, MD 20725 410.792.7234
PROJECT CHASE QUARRY	
AREA ZONED M-1 & MXD-3, TAX MAP No. 43 PARCEL 234 & P.O. 235, BLOCK 19 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND	
TITLE PROFILES	
Patton Harris Rust & Associates, pc Engineers, Surveyors, Planners, Landscape Architects. 8818 Centre Park Drive Columbia, MD 21045 T 410.997.8900 F 410.997.9282	
8-30-05 DATE	DESIGNED BY : ACR
	DRAWN BY : EMR
	CHECKED BY : ACR
	PROJECT NO : 99092/ PROFILES-W&S
	DATE : AUGUST 30, 2005
	SCALE : AS SHOWN
<i>Aimee G. Remington</i> AIMEE G. REMINGTON #239923	DRAWING NO. 49 OF 55

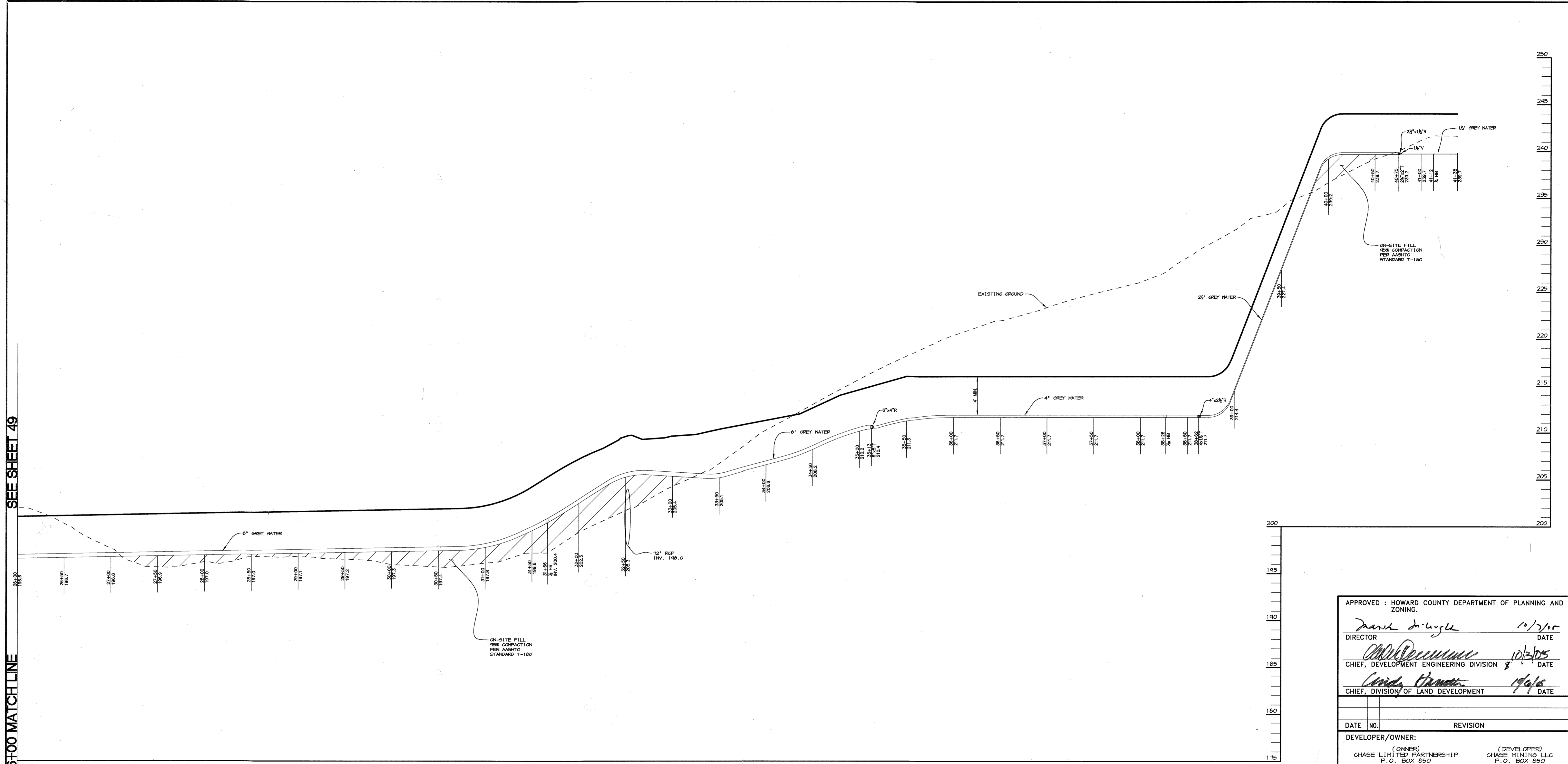


GREY WATER B-LINE PROFILE

HOR.: 1"=50'
VERT.: 1"=5'

SEE SHEET 48
SEE SHEET 50

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.	
<i>David Lyle</i> DIRECTOR	12/15 DATE
<i>Chris Hamilton</i> CHIEF, DEVELOPMENT ENGINEERING DIVISION	10/3/05 DATE
<i>Chris Hamilton</i> CHIEF, DIVISION OF LAND DEVELOPMENT	10/6/05 DATE
DATE NO.	REVISION
DEVELOPER/OWNER:	
(OWNER) CHASE LIMITED PARTNERSHIP P.O. BOX 850 LAUREL, MD 207125 410.192.1234	(DEVELOPER) CHASE MINING LLC P.O. BOX 850 LAUREL, MD 207125 410.192.1234
PROJECT CHASE QUARRY	
AREA ZONED M-1 & MXD-3, TAX MAP No. 43 PARCEL 234 & P.O. 235, BLOCK 19 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND	
TITLE PROFILES	
Patton Harris Rust & Associates, pc Engineers, Surveyors, Planners, Landscape Architects. 8818 Centre Park Drive Columbia, MD 21045 T 410.997.8900 F 410.997.9282	
8-30-05 DATE	DESIGNED BY : ACR
	DRAWN BY : EMR
	CHECKED BY : ACR
	PROJECT NO : 99092/ PROFILE8-W&S
	DATE : AUGUST 30, 2005
<i>Aimee C. Remington</i> AIMEE C. REMINGTON #29923	SCALE : AS SHOWN
	DRAWING NO. 50 OF 55



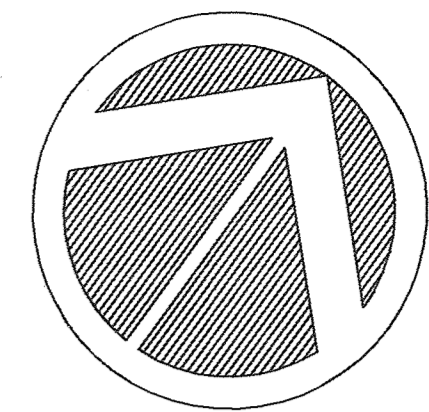
SEE SHEET 49

26+00 MATCHLINE

GREY WATER B-LINE PROFILE

HORIZ. 1"=50'
VERT. 1"=5'

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.	
<i>Frank A. Lynch</i> DIRECTOR	8/2/05 DATE
<i>Mark DeCunzio</i> CHIEF, DEVELOPMENT ENGINEERING DIVISION	10/3/05 DATE
<i>Conrad Thomas</i> CHIEF, DIVISION OF LAND DEVELOPMENT	10/6/05 DATE
DATE NO.	REVISION
DEVELOPER/OWNER:	
(OWNER) CHASE LIMITED PARTNERSHIP P.O. BOX 850 LAUREL, MD 207125 410.792.1234	(DEVELOPER) CHASE MINING LLC P.O. BOX 850 LAUREL, MD 207125 410.792.1234
PROJECT CHASE QUARRY	
AREA ZONED M-1 & MXD-3, TAX MAP No. 43 PARCEL 234 & P.O. 235, BLOCK 19 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND	
TITLE PROFILES	
Patton Harris Rust & Associates, pc Engineers, Surveyors, Planners, Landscape Architects. 8818 Centre Park Drive Columbia, MD 21045 T 410.997.8900 F 410.997.9282	
<i>8-30-05</i> DATE	DESIGNED BY : ACR
	DRAWN BY : EMR
	CHECKED BY : ACR
<i>Aimee C. Remington</i> AIMEE C. REMINGTON #29923	PROJECT NO : 99092/ PROFILE8-W&S
	DATE : AUGUST 30, 2005
	SCALE : AS SHOWN
	DRAWING NO. 51 OF 55



LEGEND

- EXISTING TREE LINE
 - ▨ CONSERVATION EASEMENT
 - EXISTING ROAD
 - - - EXISTING BOUNDARY LINE
 - ▭ EXISTING BUILDING
 - EXISTING STREAM
 - - - EASEMENT
 - x — EXISTING FENCE
 - ⋯ EXISTING WETLANDS
- FOR REVISION ONLY



10-22-19	△	REV. LIMIT OF DISTURBANCE; REV. WETLANDS; EXPANDED LOD FOR STREAM MITIGATION
6-15-05	△	CHANGED SHEET NUMBER
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.		
DIRECTOR	<i>Donna Dr. Long</i>	2/15/04 DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION	<i>Mike D...</i>	2/20/04 DATE
CHIEF, DIVISION OF LAND DEVELOPMENT	<i>Chris Har...</i>	3/11/04 DATE
2-21-05	△	ADDED LAYOUT FOR PLANT
1-0-05	△	CHANGED SHEET NUMBER
DATE NO.		REVISION
DEVELOPER/OWNER:		
(OWNER)	(DEVELOPER)	
CHASE LIMITED PARTNERSHIP	CHASE MINING LLC	
P.O. BOX 850	P.O. BOX 850	
LAUREL, MD 20725	LAUREL, MD 20725	
410.742.1234	410.742.1234	
PROJECT		
CHASE QUARRY		
AREA ZONED M-1 & MXD-3, TAX MAP No. 43 PARCEL 234 & P.O. 235, BLOCK 19 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND		
TITLE		
OVERALL LOCATION PLAN		
Patton Harris Rust & Associates, p.c. Engineers, Surveyors, Planners, Landscape Architects. 8818 Centre Park Drive Columbia, MD 21045 T 410.997.8900 F 410.997.9282		
DATE	DESIGNED BY : D.T.D.	
	DRAWN BY : A.J.L.	
	CHECKED BY : D.T.D.	
	PROJECT NO : 99092/ OVER2.DWG	
	DATE : JANUARY 29, 2004	
	SCALE : 1" = 200'	
	DRAWING NO. 2 OF 55	

PERIMETER 10
 • ± 4,310' INTERNAL PERIMETER
 • NO LANDSCAPING REQUIRED

PERIMETER 5
 • ± 1,780' LANDSCAPE TYPE 'D'
 • NON-RESIDENTIAL/LOADING TO PUBLIC ROAD
 • EXISTING VEGETATION TO REMAIN IN CONSERVATION EASEMENT
 • FULL CREDIT FOR EXISTING VEGETATION PROPOSED

PERIMETER 4
 • ± 280' LANDSCAPE TYPE 'E'
 • PARKING/LOADING TO PUBLIC ROAD
 • PARTIAL CREDIT FOR BERM PROPOSED

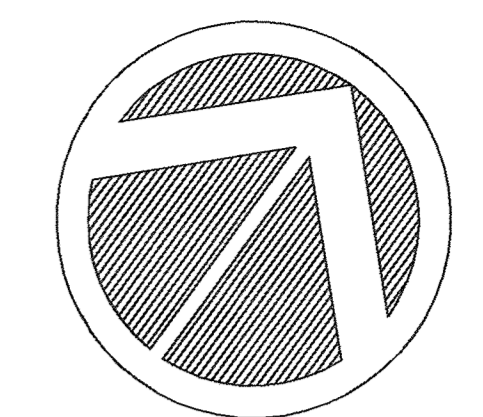
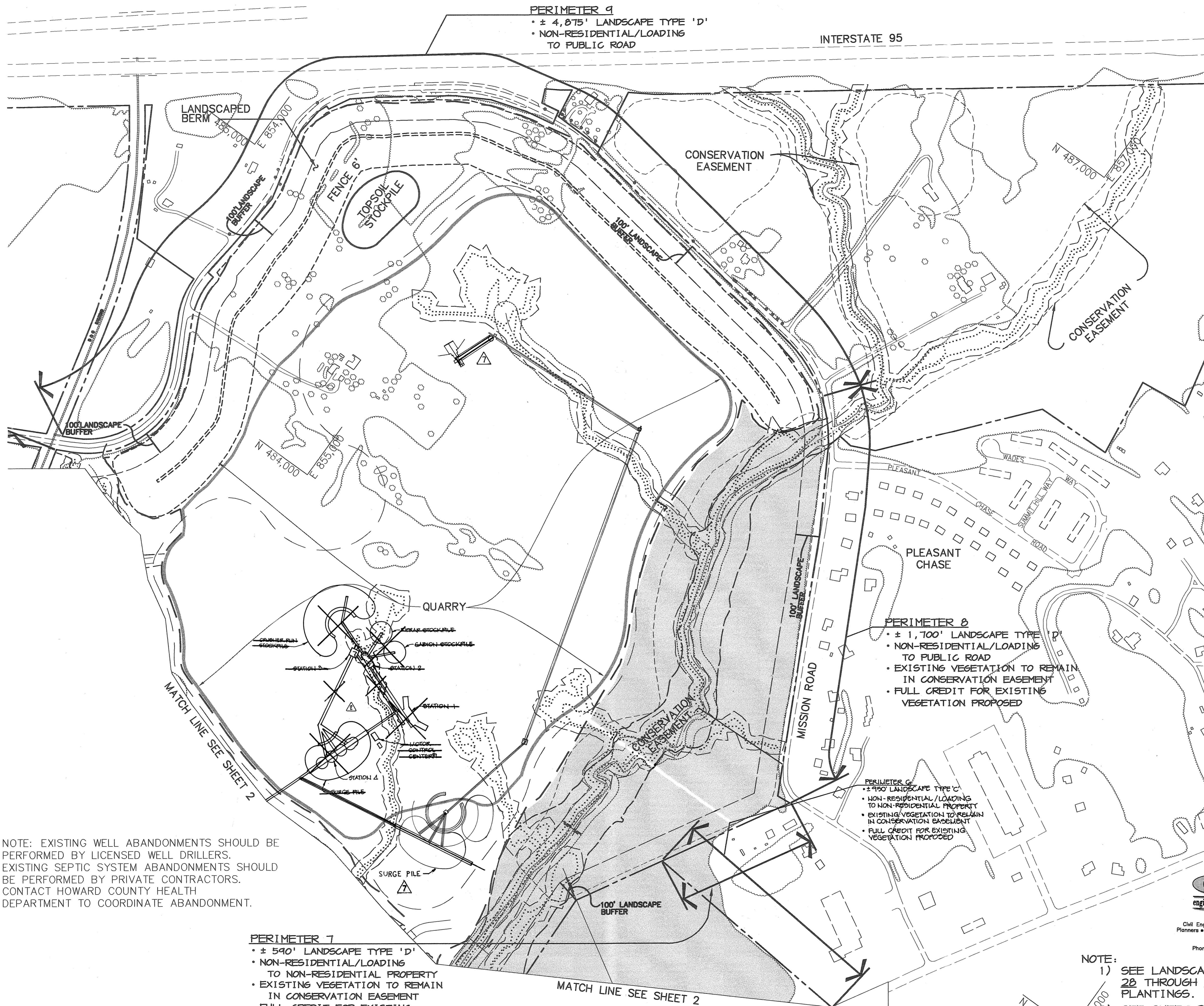
PERIMETER 3
 • ± 325' LANDSCAPE TYPE 'B'
 • NON-RESIDENTIAL/FRONT-SIDE TO PUBLIC ROAD
 • PARTIAL CREDIT FOR BERM PROPOSED

PERIMETER 2
 • ± 2,700' LANDSCAPE TYPE 'C'
 • LOADING TO NON-RESIDENTIAL PROPERTY
 • 1,975' OF CREDIT FOR EXISTING VEGETATION

PERIMETER 1
 • ± 675' LANDSCAPE TYPE 'B'
 • NON-RESIDENTIAL/FRONT-SIDE TO PUBLIC ROAD

- NOTE:**
- SEE LANDSCAPE PLANS, SHEETS 22 THROUGH 24, FOR REQUIRED PLANTINGS.
 - SEE SHEET 25 FOR PLANTING DETAILS, PLANT MATERIAL SCHEDULES, & COUNTY LANDSCAPE REQUIREMENT TABLES.
 - LANDSCAPE BERMS-LOCATION OF CONSERVED TOPSOIL FOR FUTURE REGENERATION OF SITE FOLLOWING COMPLETION OF MINING.

P:\project\99092\1-0\Eng\Plans\Over2.dwg, Layout1, 01/29/2004 10:55:22 AM, HP750C(90).pc3, Arch D - 24 x 36 in. (landscape), 1:1



LEGEND

- EXISTING TREE LINE
- CONSERVATION EASEMENT
- EXISTING ROAD
- EXISTING BOUNDARY LINE
- EXISTING BUILDING
- EXISTING STREAM
- APPROXIMATE LOCATION OF BENCH FOR BERM
- BERM RIDGE LINE
- EASEMENT
- EXISTING FENCE
- EXISTING WETLANDS
- QUARRY LIMITS

07-22-16	A	PLANT RELOCATION - CNA, INC.
6-15-05	A	CHANGED SHEET NUMBER
APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.		
DIRECTOR		3/15/04 DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION		2/20/04 DATE
CHIEF, DIVISION OF LAND DEVELOPMENT		3/11/04 DATE
2-21-05	A	ADDED PLANT LAYOUT
1-0-05	A	CHANGED SHEET NUMBER
DATE NO.		REVISION
DEVELOPER/OWNER:		
(OWNER)		
CHASE LIMITED PARTNERSHIP		(DEVELOPER) CHASE MINING LLC
P.O. BOX 850 LAUREL, MD 20725		P.O. BOX 850 LAUREL, MD 20725
410.742.1234		410.742.1234
PROJECT		
CHASE QUARRY		
AREA ZONED M-1 & MXP-3, TAX MAP No. 43 PARCEL 234 & P.O. 235, BLOCK 19 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND		
TITLE		
OVERALL LOCATION PLAN		
Patton Harris Rust & Associates, pc Engineers, Surveyors, Planners, Landscape Architects. 8818 Centre Park Drive Columbia, MD 21045 T 410.997.8900 F 410.997.9282		
PHRA		
DATE	DESIGNED BY : D.T.D.	
	DRAWN BY : A.J.L.	
	CHECKED BY : D.T.D.	
	PROJECT NO : 99092/ OVERS.DWG	
	DATE : JANUARY 29, 2004	
	SCALE : 1" = 200'	
	DRAWING NO. 3 OF 55	

NOTE: EXISTING WELL ABANDONMENTS SHOULD BE PERFORMED BY LICENSED WELL DRILLERS. EXISTING SEPTIC SYSTEM ABANDONMENTS SHOULD BE PERFORMED BY PRIVATE CONTRACTORS. CONTACT HOWARD COUNTY HEALTH DEPARTMENT TO COORDINATE ABANDONMENT.

PERIMETER 7
 • ± 590' LANDSCAPE TYPE 'D'
 • NON-RESIDENTIAL/LOADING TO NON-RESIDENTIAL PROPERTY
 • EXISTING VEGETATION TO REMAIN IN CONSERVATION EASEMENT
 • FULL CREDIT FOR EXISTING VEGETATION PROPOSED

PERIMETER 8
 • ± 1,700' LANDSCAPE TYPE 'D'
 • NON-RESIDENTIAL/LOADING TO PUBLIC ROAD
 • EXISTING VEGETATION TO REMAIN IN CONSERVATION EASEMENT
 • FULL CREDIT FOR EXISTING VEGETATION PROPOSED

PERIMETER 9
 • ± 950' LANDSCAPE TYPE 'C'
 • NON-RESIDENTIAL/LOADING TO NON-RESIDENTIAL PROPERTY
 • EXISTING VEGETATION TO REMAIN IN CONSERVATION EASEMENT
 • FULL CREDIT FOR EXISTING VEGETATION PROPOSED

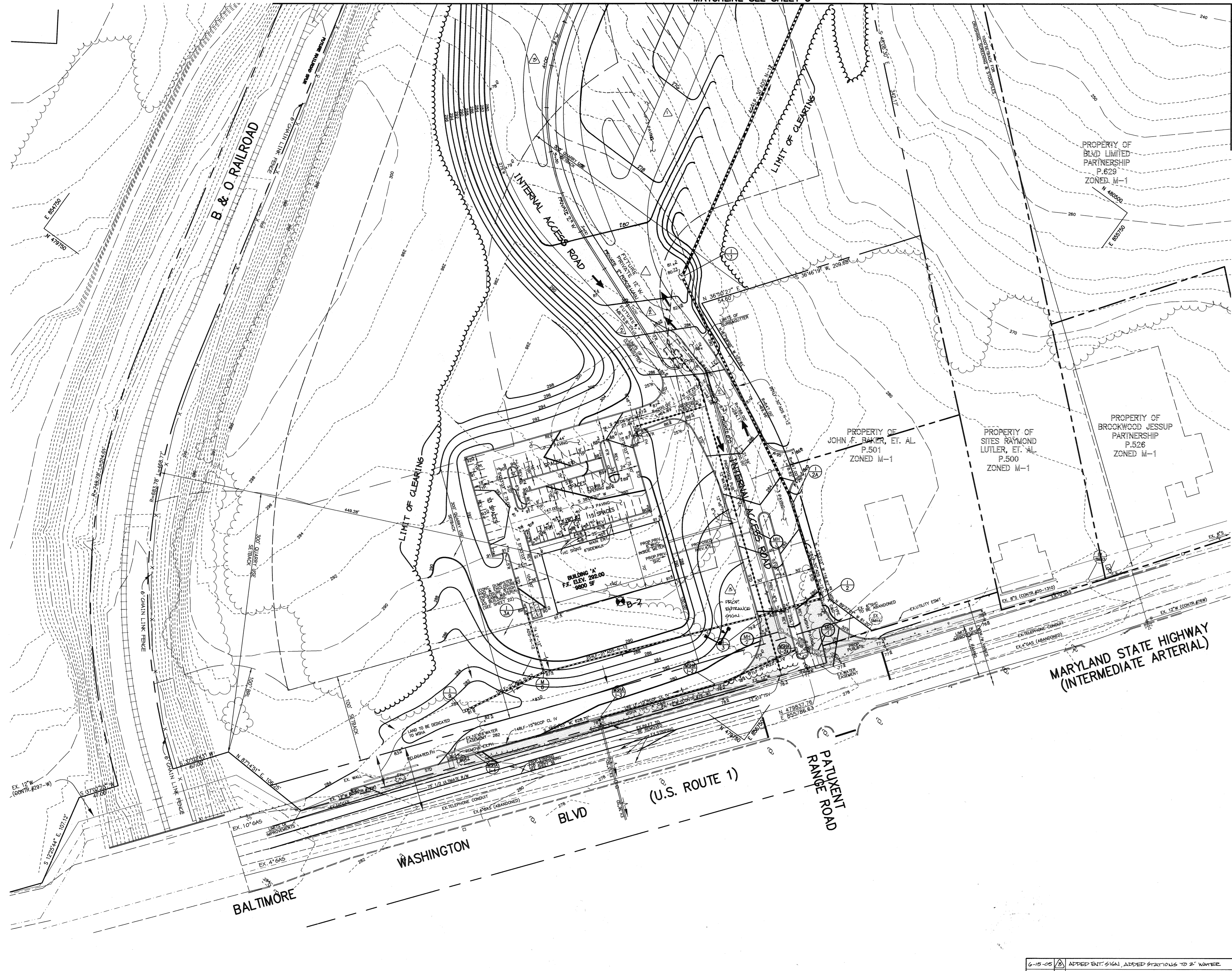
PERIMETER 9
 • ± 4,875' LANDSCAPE TYPE 'D'
 • NON-RESIDENTIAL/LOADING TO PUBLIC ROAD

NOTE:
 1) SEE LANDSCAPE PLANS, SHEETS 28 THROUGH 34, FOR REQUIRED PLANTINGS.
 2) SEE SHEET 35 FOR PLANTING DETAILS, PLANT MATERIAL SCHEDULES, & COUNTY LANDSCAPE REQUIREMENT TABLES.



CNA
 engineers, surveyors & landscape architects

Civil Engineers • Land Surveyors • Landscape Architects
 Planners • Geotechnical Engineers • Environmental Engineers
 Forest Hill, Maryland 21050
 Phone (410) 879-7200 • Fax (410) 838-1811
 E-mail: cna@mail@cna-engineers.com



LEGEND

	EXISTING CONTOURS
	PROPOSED CONTOURS
	EXISTING TREE LINE
	PROPOSED TREE LINE
	EXISTING ROAD
	EXISTING BOUNDARY LINE
	EXISTING BUILDING
	EXISTING WETLANDS
	APPROXIMATE LOCATION OF BENCH FOR BERM
	EASEMENT
	PROPOSED FENCE
	RIP RAP OUTLET PROTECTION
	LIMIT OF 100-YR FLOODPLAIN
	10' BENCH
	50'STREAM BUFFER
	WETLAND BUFFER LIMITS
	EXISTING STREAM
	P-3 PAVING
	MSHA PAVING

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

	3/15/04
DIRECTOR	DATE
	2/26/04
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
	2/11/04
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE

5-26-05 REV. WATER & SEWER, WATER ESMNT. & ADDED WATER METER
 1-6-05 REV. ACCESS ROAD & GRADING

DATE	NO.	REVISION

DEVELOPER/OWNER:

(OWNER)	(DEVELOPER)
CHASE LIMITED PARTNERSHIP	CHASE MINING LLC
P. O. BOX 850	P. O. BOX 850
LAUREL, MD 20725	LAUREL, MD 20725
410.142.1234	410.142.1234

PROJECT
CHASE QUARRY

AREA ZONED M-1 & MXD-3, TAX MAP No. 43
 PARCEL 234 & P.O. 235, BLOCK 14
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE
SITE DEVELOPMENT PLAN

Patton Harris Rust & Associates, PC
 Engineers, Surveyors, Planners, Landscape Architects.
 8818 Centre Park Drive
 Columbia, MD 21045
 T 410.997.8900
 F 410.997.9282

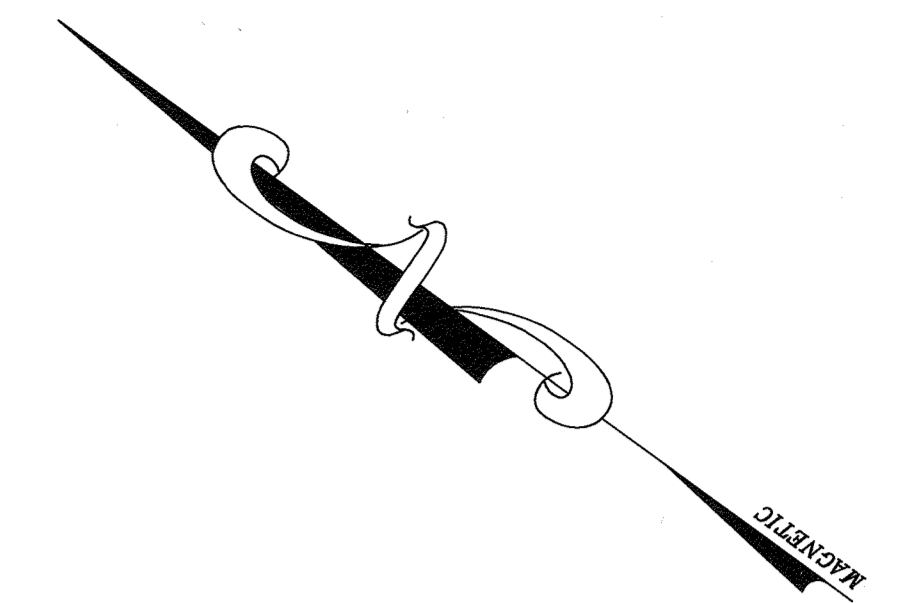
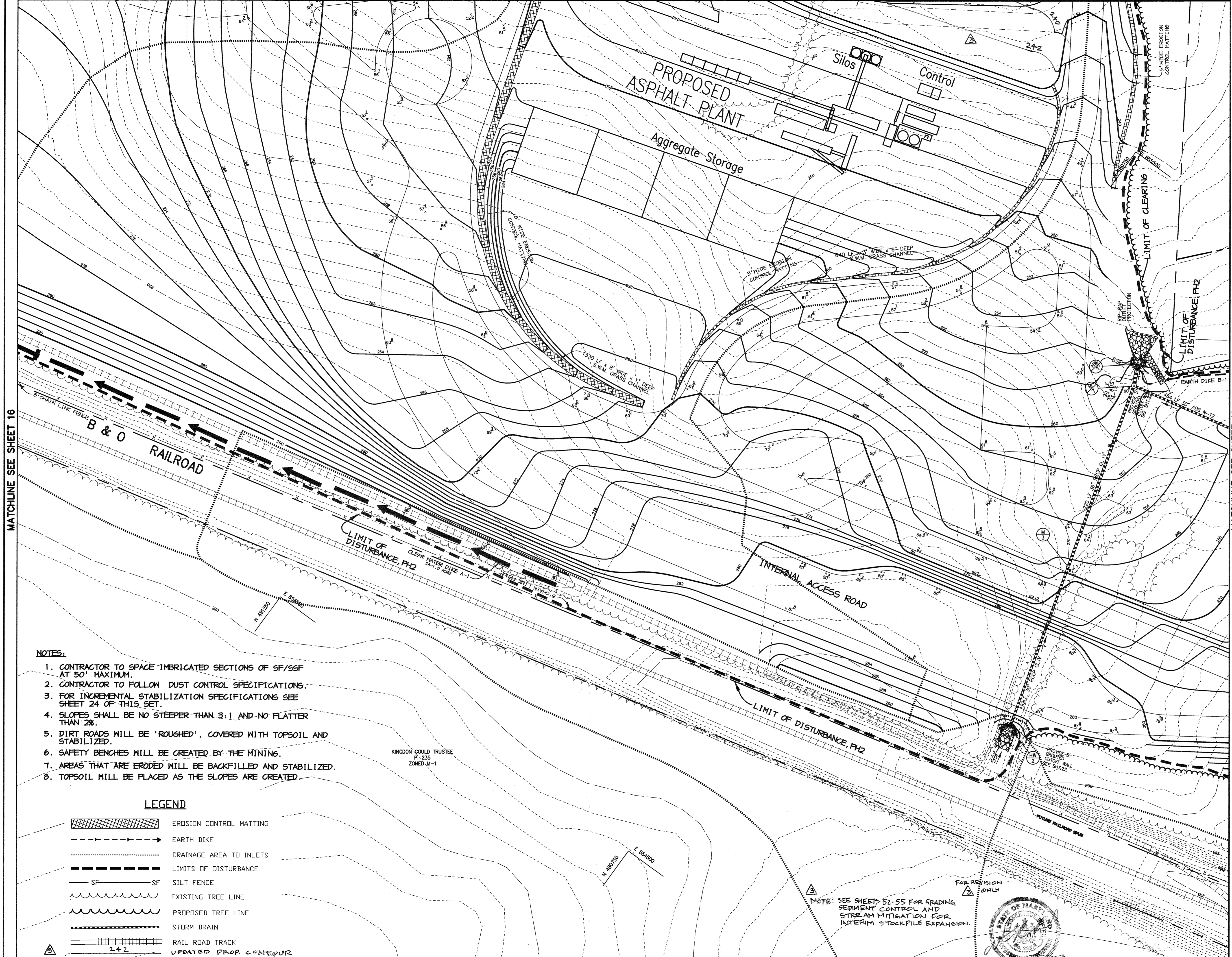
1-30-04	DESIGNED BY : C.J.R.
DATE	
	DRAWN BY : MAD
	CHECKED BY : C.J.R.
	PROJECT NO : 99092/ SDP-4.DWG
	DATE : JANUARY 29, 2004
	SCALE : 1" = 50'
	DRAWING NO. 4 OF 55

6-15-05		ADDED BMT SIGN, ADDED STATIONS TO 2" WATER
DATE	NO.	REVISION

MATCHLINE SEE SHEET 17

MATCHLINE SEE SHEET 13

MATCHLINE SEE SHEET 13



10-22-19 REVISED GRADING AND WETLANDS; ADDED NOTE RE: ESC PLAN FOR STOCKPILE

NOTE: THIS PLAN IS FOR SEDIMENT CONTROL AND DRAINAGE AREA INFORMATION ONLY. SEE SHEET 5 FOR GRADING.

BY THE DEVELOPER :

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Timothy J. Schmidt 1-30-04
DEVELOPER DATE

BY THE ENGINEER :

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Chris J. Reid 1-30-04
ENGINEER DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

Jim Morales 2/12/04
NATURAL RESOURCES CONSERVATION SERVICE DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

John J. Kelly 2/12/04
HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Mark A. Langer 3/15/04
DIRECTOR DATE

Mike Dorman 2/20/04
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

David Hamilton 2/11/04
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

6-15-05 CHANGED SHEET NO.

1-9-05 ADDED NOTE

DATE	NO.	REVISION
		DEVELOPER/OWNER:
		(OWNER) CHASE LIMITED PARTNERSHIP P. O. BOX 850 LAUREL, MD 20712 410.142.1294
		(DEVELOPER) CHASE MINING LLC P. O. BOX 850 LAUREL, MD 20712 410.142.1294

PROJECT

CHASE QUARRY

AREA ZONED M-1 & MXD-3, TAX MAP No. 43
PARCEL 234 & P.O. BLOCK 19
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE **GRADING, SEDIMENT CONTROL & DRAINAGE AREA MAP**

Patton Harris Rust & Associates, PC
Engineers, Surveyors, Planners, Landscape Architects.
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

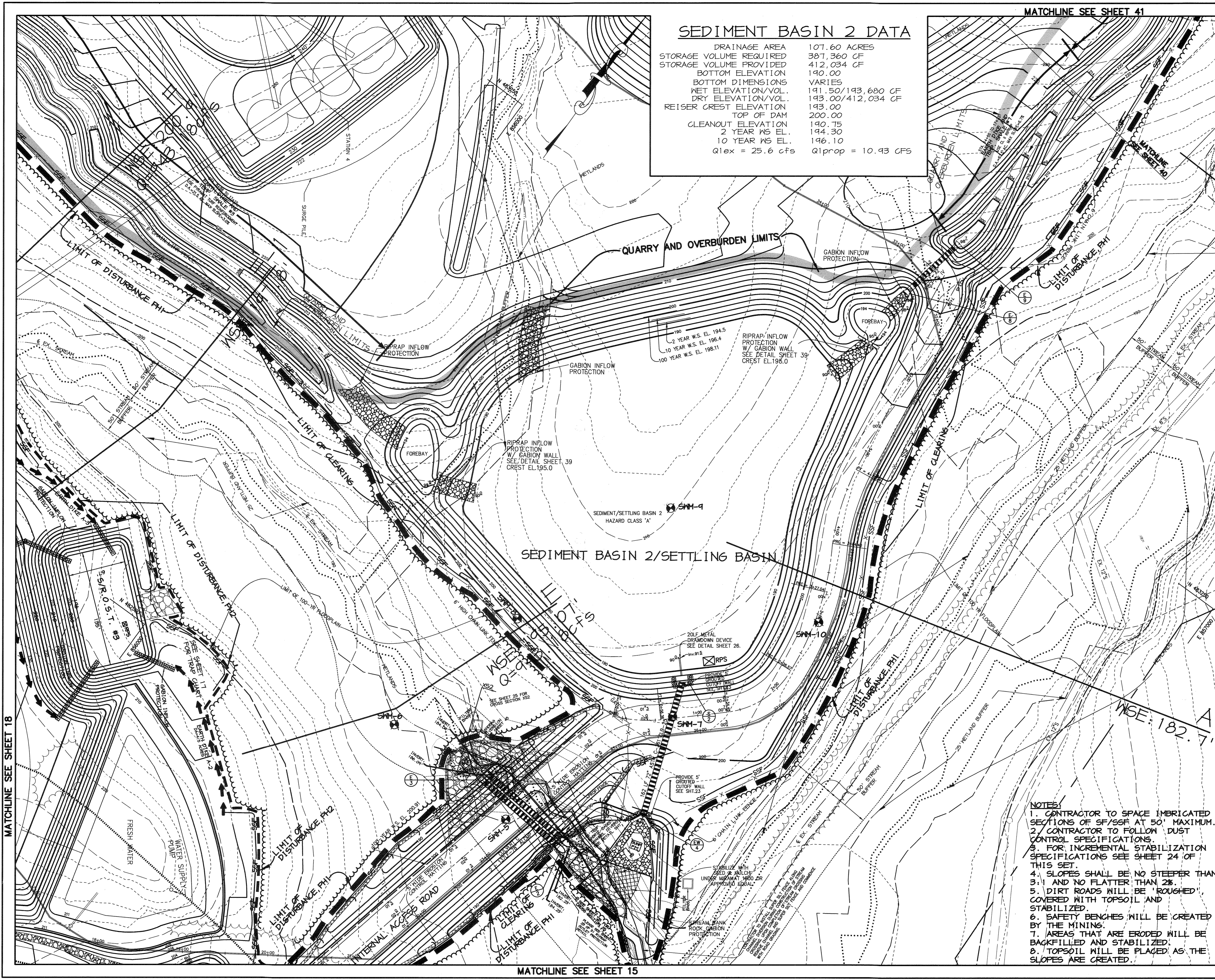
1-30-04 DATE	DESIGNED BY : C.J.R.
	DRAWN BY : MAD
	CHECKED BY : C.J.R.
	PROJECT NO : 99092/ SEDIME.DWG
	DATE : JANUARY 29, 2004
	SCALE : 1" = 50'
CHRISTOPHER J. REID #19949	DRAWING NO. 13 OF 55

- NOTES:
1. CONTRACTOR TO SPACE IMBERICATED SECTIONS OF SF/SF AT 50' MAXIMUM.
 2. CONTRACTOR TO FOLLOW DUST CONTROL SPECIFICATIONS.
 3. FOR INCREMENTAL STABILIZATION SPECIFICATIONS SEE SHEET 24 OF THIS SET.
 4. SLOPES SHALL BE NO STEEPER THAN 3:1 AND NO FLATTER THAN 2%.
 5. DIRT ROADS WILL BE 'ROUGHED', COVERED WITH TOPSOIL AND STABILIZED.
 6. SAFETY BENCHES WILL BE CREATED BY THE MINING.
 7. AREAS THAT ARE ERODED WILL BE BACKFILLED AND STABILIZED.
 8. TOPSOIL WILL BE PLACED AS THE SLOPES ARE CREATED.

- LEGEND
- EROSION CONTROL MATTING
 - EARTH DIKE
 - DRAINAGE AREA TO INLETS
 - LIMITS OF DISTURBANCE
 - SILT FENCE
 - EXISTING TREE LINE
 - PROPOSED TREE LINE
 - STORM DRAIN
 - RAIL ROAD TRACK
 - UPDATED PROP. CONTOUR

NOTE: SEE SHEETS 52-55 FOR GRADING, SEDIMENT CONTROL AND STREAM MITIGATION FOR INTERIM STOCKPILE EXPANSION.





SEDIMENT BASIN 2 DATA

DRAINAGE AREA	107.60 ACRES
STORAGE VOLUME REQUIRED	387,360 CF
STORAGE VOLUME PROVIDED	412,034 CF
BOTTOM ELEVATION	190.00
BOTTOM DIMENSIONS	VARIES
NET ELEVATION/VOL.	141.50/193,680 CF
DRY ELEVATION/VOL.	193.00/412,034 CF
REISER CREST ELEVATION	193.00
TOP OF DAM	200.00
CLEANOUT ELEVATION	190.75
2 YEAR WS EL.	194.30
10 YEAR WS EL.	196.10
$Q_{1ex} = 25.6$ cfs	$Q_{1prop} = 10.93$ cfs

MATCHLINE SEE SHEET 41

LEGEND

- TEMPORARY SWALE
- EROSION CONTROL MATTING
- EARTH DIKE
- DRAINAGE AREA
- LIMITS OF DISTURBANCE, PH1
- LIMITS OF DISTURBANCE, PH2
- SILT FENCE
- EXISTING TREE LINE
- PROPOSED TREE LINE
- STORM DRAIN
- RAIL ROAD TRACK
- PYRAMAT REINFORCED MATTING

8/30/05 REVISED EARTH DIKE AND SWALE

BY THE DEVELOPER :
 I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.
Timothy J. Schmitt 8/30/05
 DEVELOPER DATE

BY THE ENGINEER :
 I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
Aimee C. Remington 8-30-05
 ENGINEER DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.
Jim Meyer 9/6/05
 NATURAL RESOURCES CONSERVATION SERVICE DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
Mark A. ... 9/6/05
 HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
Mark A. ... 10/2/05
 DIRECTOR DATE
William ... 10/2/05
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE
Chris ... 9/6/05
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

2/21/05 ADDED CRUSHER PLANT LAYOUT
 1/06/05 REVISED EARTH DIKE AND SWALE

DATE NO. REVISION

DEVELOPER/OWNER:
 CHASE LIMITED PARTNERSHIP (OWNER) CHASE MINING LLC (DEVELOPER)
 P.O. BOX 850 P.O. BOX 850
 LAUREL, MD 20725 LAUREL, MD 20725
 410.742.1234 410.742.1234

PROJECT
CHASE QUARRY

AREA ZONED M-1 & MXD-3, TAX MAP No. 43
 PARCEL 234 & P.O. 235, BLOCK 14
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE **GRADING, SEDIMENT CONTROL & DRAINAGE AREA MAP**
 Patton Harris Rust & Associates, pc
 Engineers, Surveyors, Planners, Landscape Architects.
 8818 Centre Park Drive
 Columbia, MD 21045
 T 410.997.8900
 F 410.997.9282

DESIGNED BY : ACR
 DRAWN BY : EMR
 CHECKED BY : ACR
 PROJECT NO : 99092/SEDIMS.DWG
 DATE : AUGUST 30, 2005
 SCALE : 1" = 50'
 DRAWING NO. 16 OF 55
Aimee C. Remington 8-30-05
 AIMEE C. REMINGTON #29923

- NOTES:**
- CONTRACTOR TO SPACE IMBRICATED SECTIONS OF SF/SSF AT 50' MAXIMUM.
 - CONTRACTOR TO FOLLOW DUST CONTROL SPECIFICATIONS.
 - FOR INCREMENTAL STABILIZATION SPECIFICATIONS SEE SHEET 24 OF THIS SET.
 - SLOPES SHALL BE NO STEEPER THAN 3:1 AND NO FLATTER THAN 2%.
 - DIRT ROADS WILL BE 'ROUGHED' COVERED WITH TOPSOIL AND STABILIZED.
 - SAFETY BENCHES WILL BE CREATED BY THE MINING.
 - AREAS THAT ARE ERODED WILL BE BACKFILLED AND STABILIZED.
 - TOPSOIL WILL BE PLACED AS THE SLOPES ARE CREATED.

MATCHLINE SEE SHEET 18

MATCHLINE SEE SHEET 15

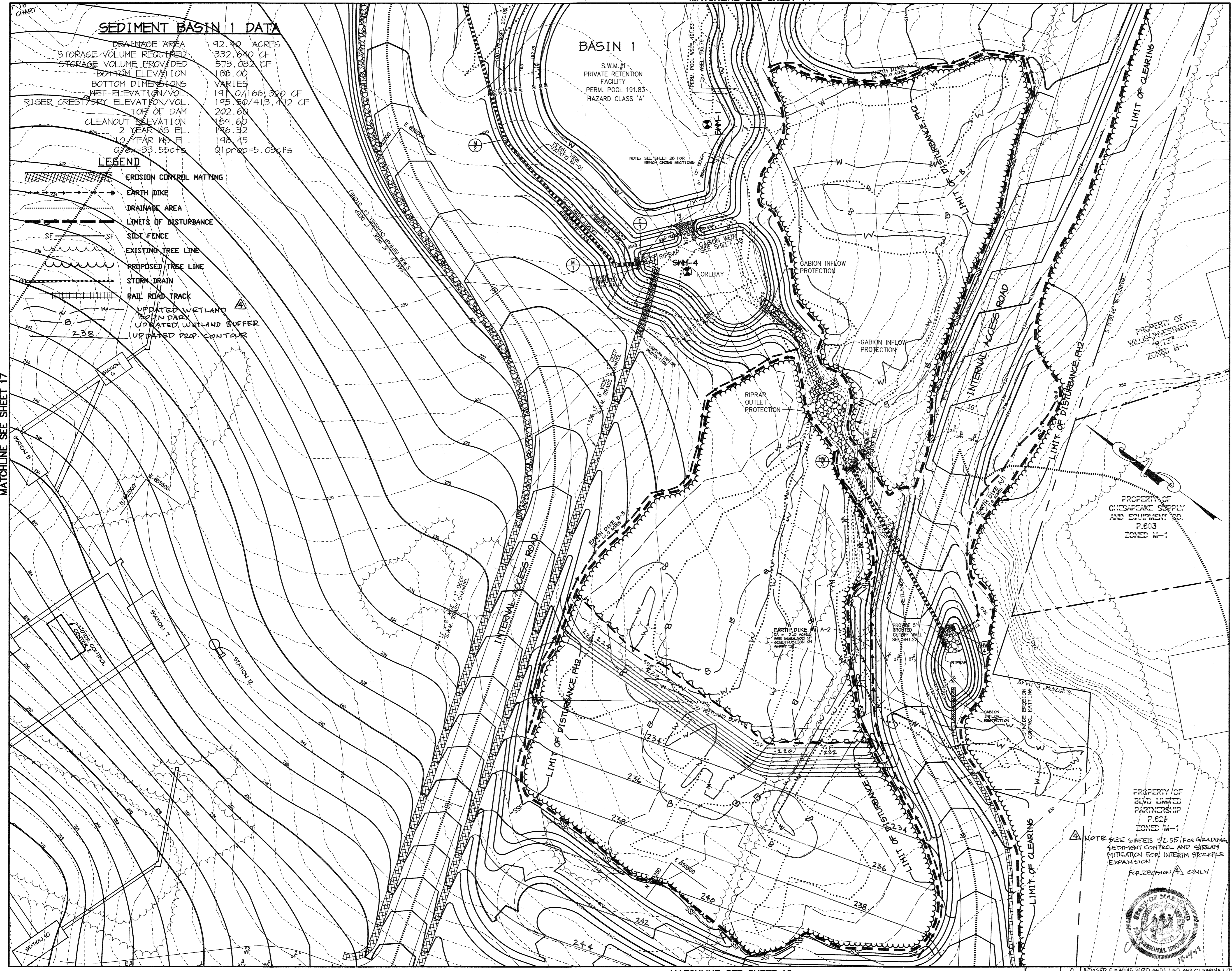
SEDIMENT BASIN 1 DATA

DRAINAGE AREA	92.40 ACRES
STORAGE VOLUME REQUIRED	332,640 CF
STORAGE VOLUME PROVIDED	573,032 CF
BOTTOM ELEVATION	188.00
BOTTOM DIMENSIONS	VARIABLES
WET ELEVATION/VOL.	191.0/166,320 CF
RISER CREST DRY ELEVATION/VOL.	195.50/413,472 CF
TOP OF DAM	202.00
CLEANOUT ELEVATION	89.60
2 YEAR PG EL.	146.32
10 YEAR PG EL.	198.45
Q ₅₀ =33.55cfs	Q ₁₀₀ =5.05cfs

BASIN 1
 S.W.M.#1
 PRIVATE RETENTION FACILITY
 PERM. POOL 191.83
 HAZARD CLASS 'A'

- LEGEND**
- EROSION CONTROL MATTING
 - EARTH DIKE
 - DRAINAGE AREA
 - LIMITS OF DISTURBANCE
 - SILT FENCE
 - EXISTING TREE LINE
 - PROPOSED TREE LINE
 - STORM DRAIN
 - RAIL ROAD TRACK
 - UPDATED WETLAND BOUNDARY
 - UPDATED WETLAND BUFFER
 - UPDATED PROP. CONTOUR

MATCHLINE SEE SHEET 17



NOTE: THIS PLAN IS FOR SEDIMENT CONTROL AND DRAINAGE AREA INFORMATION ONLY. SEE SHEET 6 FOR GRADING.

6-15-05 [Symbol] ADDED NOTE, CHANGED SHEET NO.

NOTES:

- CONTRACTOR TO SPACE IMBERIGATED SECTIONS OF SF/SF AT 50' MAXIMUM.
- CONTRACTOR TO FOLLOW DUST CONTROL SPECIFICATIONS.
- FOR INCREMENTAL STABILIZATION SPECIFICATIONS SEE SHEET 24 OF THIS SET.
- SLOPES SHALL BE NO STEEPER THAN 3:1 AND NO FLATTER THAN 2%.
- DIRT ROADS WILL BE 'ROUGHED', COVERED WITH TOPSOIL AND STABILIZED.
- SAFETY BENCHES WILL BE CREATED BY THE MINING.
- AREAS THAT ARE ERODED WILL BE BACKFILLED AND STABILIZED.
- TOPSOIL WILL BE PLACED AS THE SLOPES ARE CREATED.

BY THE DEVELOPER :

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Timothy J. Schmidt 1-30-04
 DEVELOPER DATE

BY THE ENGINEER :

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Chris J. Reid 1-30-04
 ENGINEER DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

Jim Myers 2/10/04
 NATURAL RESOURCES CONSERVATION SERVICE DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

John A. [Signature] 2/10/04
 HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Dan [Signature] 2/10/04
 DIRECTOR DATE

Mike [Signature] 2/20/04
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Cindy [Signature] 2/11/04
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

2-21-05 [Symbol] ADDED PLANT LAYOUT
 1-10-05 [Symbol] REV. GRADING & SHEET NO.

DATE NO. REVISION

DEVELOPER/OWNER:

(OWNER) CHASE LIMITED PARTNERSHIP P.O. BOX 850 LAUREL, MD 207125 410.742.1234	(DEVELOPER) CHASE MINING LLC P.O. BOX 850 LAUREL, MD 207125 410.742.1234
---	--

PROJECT
CHASE QUARRY

AREA ZONED M-1 & MXD-3, TAX MAP No. 43
 PARCEL 234 & P.O. 235 BLOCK 19
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE
GRADING, SEDIMENT CONTROL & DRAINAGE AREA MAP

Patton Harris Rust & Associates, PC
 Engineers, Surveyors, Planners, Landscape Architects.
 8818 Centre Park Drive
 Columbia, MD 21045
 T 410.997.8900
 F 410.997.9282

PHRA

1-30-04
 DATE

DESIGNED BY : C.J.R.
 DRAWN BY : MAD
 CHECKED BY : C.J.R.
 PROJECT NO : 99092/
 SEDIM3.DWG
 DATE : JANUARY 29, 2004
 SCALE : 1" = 50'

DRAWING NO. 14 OF 55
 CHRISTOPHER J. REID #19949

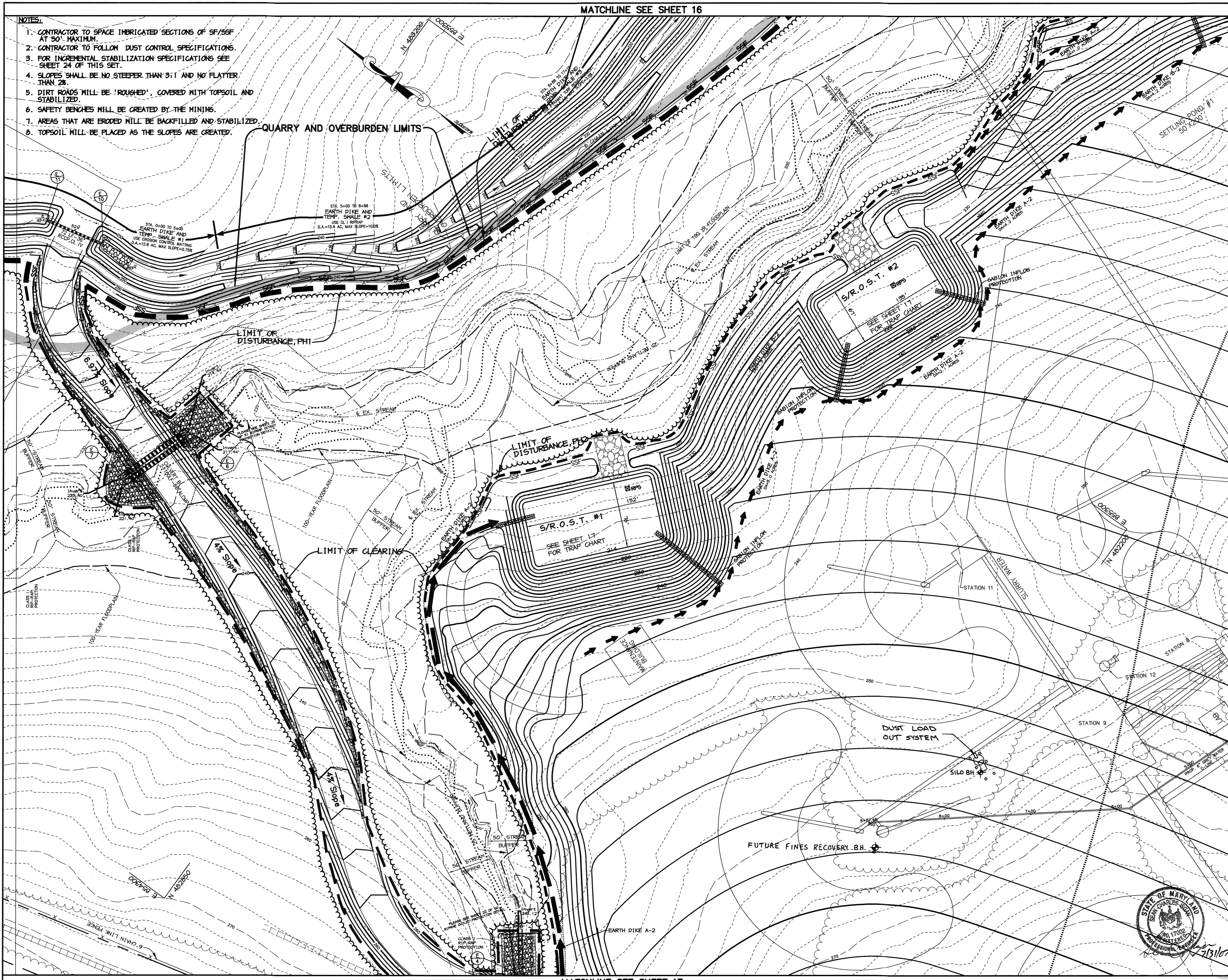
10-22-19 [Symbol] REVISED GRADING, WETLANDS, LOD AND CLEANING LIMITS, ADDED NOTE RE: ESC PLAN FOR STOCKPILE.
 FOR REVISION ONLY

P:\project\99092\1-0\Engr\Plans\Sedim3.dwg, Layout1, 01/29/2004 12:33:33 PM, HP1050C_Mylar.pcs3, Arch D - 24 x 36 in. (landscape), 1:1

MATCHLINE SEE SHEET 16

NOTES:

1. CONTRACTOR TO SPACE IMBERICATED SECTIONS OF SF/SF AT 30' MAXIMUM.
2. CONTRACTOR TO FOLLOW DUST CONTROL SPECIFICATIONS.
3. FOR INCREMENTAL STABILIZATION SPECIFICATIONS SEE SHEET 24 OF THIS SET.
4. SLOPES SHALL BE NO STEEPER THAN 3:1 AND NO FLATTER THAN 2%.
5. DIRT ROADS WILL BE 'ROUGHED', COVERED WITH TOPSOIL AND STABILIZED.
6. SAFETY BENCHES WILL BE CREATED BY THE MINING.
7. AREAS THAT ARE ERODED WILL BE BACKFILLED AND STABILIZED.
8. TOPSOIL WILL BE PLACED AS THE SLOPES ARE CREATED.



LEGEND

- TEMPORARY SWALE
- DRAINAGE AREA TO INLETS
- LIMITS OF DISTURBANCE,PH1
- LIMITS OF DISTURBANCE,PH2
- SF
- SILT FENCE
- EXISTING TREE LINE
- PROPOSED TREE LINE
- STORM DRAIN
- RAIL ROAD TRACK
- EARTH DIKE
- PYRAMAT REINFORCED MATTING

7/31/07 **ADDED DUST LOAD OUT SYSTEM**
 8/30/05 **REVISED EARTH DIKE, SWALE & ACCESS ROAD**

BY THE DEVELOPER :
 I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.
Timothy J. Schmitt 8/30/05
 DEVELOPER DATE

BY THE ENGINEER :
 I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
Aimee C. Remington 8/30/05
 ENGINEER DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.
Jim Moore, Jr. 9/4/05
 NATURAL RESOURCES CONSERVATION SERVICE DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
John A. ... 9/4/05
 HOWARD SOIL CONSERVATION DISTRICT DATE

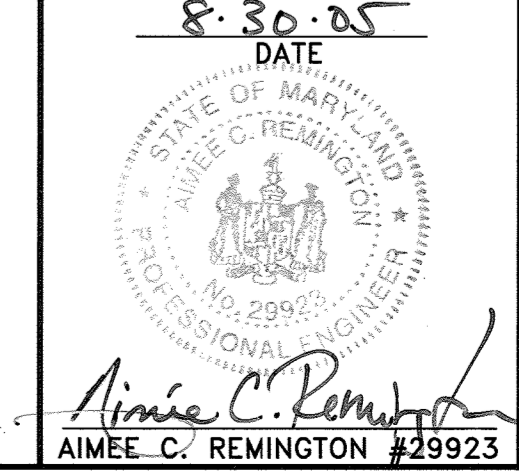
APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
David ... 10/14/05
 DIRECTOR DATE
... 10/13/05
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE
... 10/6/05
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

2/21/05 **ADDED PLANT LAYOUT**
 1/06/05 **REVISED EARTH DIKE, SWALE & ACCESS ROAD**
 DATE NO. REVISION
 DEVELOPER/OWNER:
 CHASE LIMITED PARTNERSHIP (OWNER)
 P.O. BOX 850
 LAUREL, MD 20725
 410.742.1234
 CHASE MINING, LLC (DEVELOPER)
 P.O. BOX 850
 LAUREL, MD 20725
 410.742.1234

PROJECT
CHASE QUARRY
 AREA ZONED M-1 & MXD-3, TAX MAP No. 43
 PARCEL 234 & P.O. 235, BLOCK 19
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

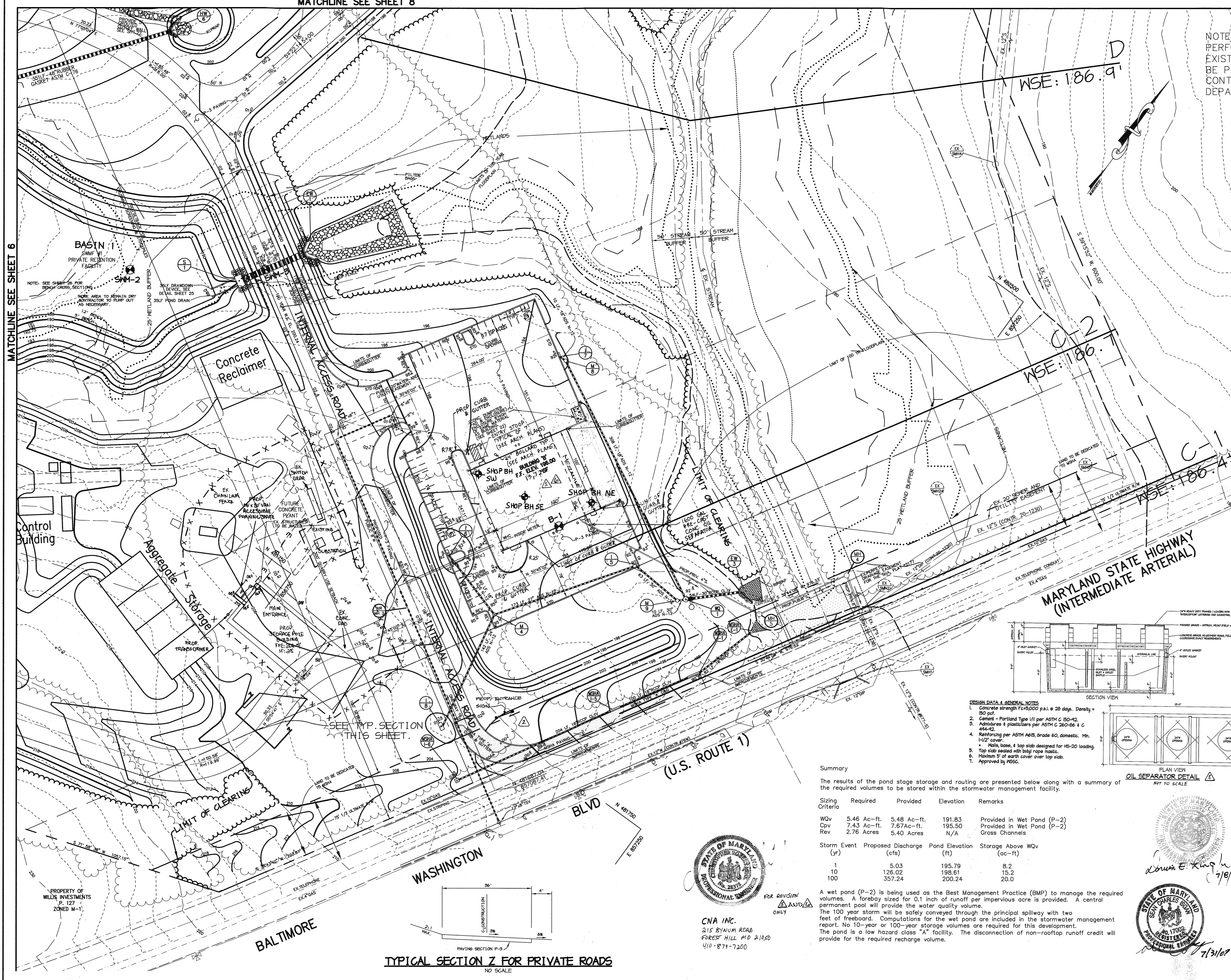
TITLE
GRADING, SEDIMENT CONTROL & DRAINAGE AREA MAP
 Patton Harris Rust & Associates, PC
 Engineers, Surveyors, Planners, Landscape Architects.
 8818 Centre Park Drive
 Columbia, MD 21045
 T 410.997.8900
 F 410.997.9282

8-30-05
 DATE
 DESIGNED BY : ACR
 DRAWN BY : EMR
 CHECKED BY : ACR
 PROJECT NO : 99092/
 SEDIM7.DWG
 DATE : AUGUST 30, 2005
 SCALE : 1" = 50'
 DRAWING NO. 18 OF 55



MATCHLINE SEE SHEET 17

MATCHLINE SEE SHEET 8



NOTE: EXISTING WELL ABANDONMENTS SHOULD BE PERFORMED BY LICENSED WELL DRILLERS. EXISTING SEPTIC SYSTEM ABANDONMENTS SHOULD BE PERFORMED BY PRIVATE CONTRACTORS. CONTACT HOWARD COUNTY HEALTH DEPARTMENT TO COORDINATE ABANDONMENT.

3-15-16 REV. S.F. OF BLDG 'B' - CNA INC.

LEGEND

- 300 --- EXISTING CONTOURS
- 300 --- PROPOSED CONTOURS
- EXISTING TREE LINE
- PROPOSED TREE LINE
- EXISTING ROAD
- EXISTING BOUNDARY LINE
- EXISTING BUILDING
- EXISTING WETLANDS
- APPROXIMATE LOCATION OF BENCH FOR BERM
- EASEMENT
- PROPOSED FENCE
- RIP RAP OUTLET PROTECTION
- LIMIT OF 100-YR FLOODPLAIN
- 10' BENCH
- 50' STREAM BUFFER
- WETLAND BUFFER LIMITS
- EXISTING STREAM
- MSHA PAVING
- P-3 PAVING

- 1-9-15 REDUCED BUILDING FOOTPRINT - CNA INC.
- 7-8-08 ADDED POLE BLDG + SUBSTATION + FENCE
- 7-31-07 ADDED SHOP BORE HOLES

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Mark DeLong 2/10/04
DIRECTOR DATE

Chris DeLong 2/2/04
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Chris DeLong 7/11/04
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

6-15-05 ADDED ENTRANCE SIGNAL, CHANGED SHEET NUMBER

1-6-05 CHANGED SHEET NO.

DATE NO.	REVISION

DEVELOPER/OWNER:

(OWNER)	(DEVELOPER)
CHASE LIMITED PARTNERSHIP	CHASE MINING LLC
P. O. BOX 850	P. O. BOX 850
LAUREL, MD 207125	LAUREL, MD 207125
410.142.1224	410.142.1224

PROJECT

CHASE QUARRY

AREA ZONED M-1 & MXD-3, TAX MAP No. 43
PARCEL 234 & P.O. 235, BLOCK 19
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

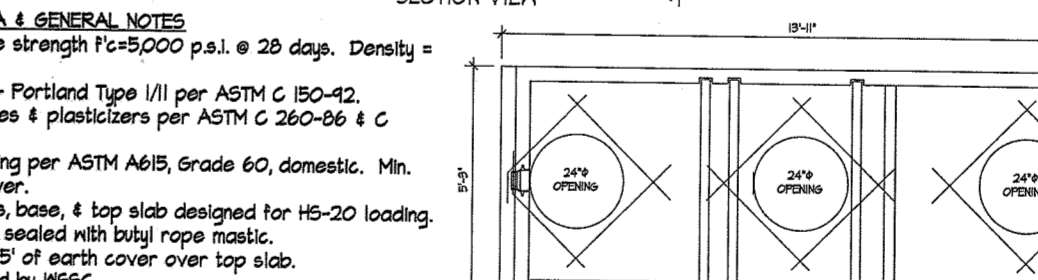
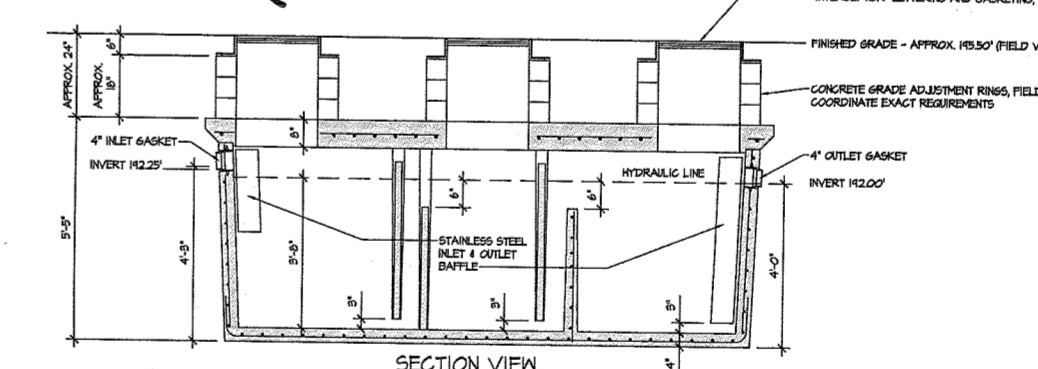
TITLE

SITE DEVELOPMENT PLAN

Patton Harris Rust & Associates, p.c.
Engineers, Surveyors, Planners, Landscape Architects.
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

DATE	DESIGNED BY: C.J.R.
1.30.04	DRAWN BY: MAD
	CHECKED BY: C.J.R.
	PROJECT NO: 99092/SDP-7DWG
	DATE: JANUARY 29, 2004
	SCALE: 1" = 50'
	DRAWING NO. 7 OF 55

CHRISTOPHER J. REID #19949



- DESIGN DATA & GENERAL NOTES
- Concrete strength: f'c=3000 psi @ 28 days. Density = 150 pcf.
 - Concrete - Portland Type I/II per ASTM C 150-12.
 - Admixtures & plasticizers per ASTM C 260-06 & C 494-12.
 - Reinforcing per ASTM A615, Grade 60, domestic. Min. 1/2" cover.
 - Walls, base, & top slabs designed for HS-20 loading.
 - Top slab sealed with butyl rope mastic.
 - Maximum 9" of earth cover over top slab.
 - Approved by MESC.

Summary

The results of the pond stage storage and routing are presented below along with a summary of the required volumes to be stored within the stormwater management facility.

Sizing Criteria	Required	Provided	Elevation	Remarks
WQv	5.46 Ac-ft.	5.48 Ac-ft.	191.83	Provided in Wet Pond (P-2)
Cpv	7.43 Ac-ft.	7.67 Ac-ft.	195.50	Provided in Wet Pond (P-2)
Rev	2.76 Acres	5.40 Acres	N/A	Gross Channels

Storm Event (yr)	Proposed Discharge (cfs)	Pond Elevation (ft)	Storage Above WQv (ac-ft)
1	5.03	195.79	8.2
10	126.02	198.51	15.2
100	357.24	200.24	20.0

A wet pond (P-2) is being used as the Best Management Practice (BMP) to manage the required volumes. A forebay sized for 0.1 inch of runoff per impervious acre is provided. A central permanent pool will provide the water quality volumes. The 100 year storm will be safely conveyed through the principal spillway with two feet of freeboard. Computations for the wet pond are included in the stormwater management report. No 10-year or 100-year storage volumes are required for this development. The pond is a low hazard class "A" facility. The disconnection of non-rooftop runoff credit will provide for the required recharge volume.



CNA INC.
315 BYNUM ROAD
FOREST HILL MD 21050
410-879-7200

TYPICAL SECTION Z FOR PRIVATE ROADS NO SCALE

MATCHLINE SEE SHEET 6

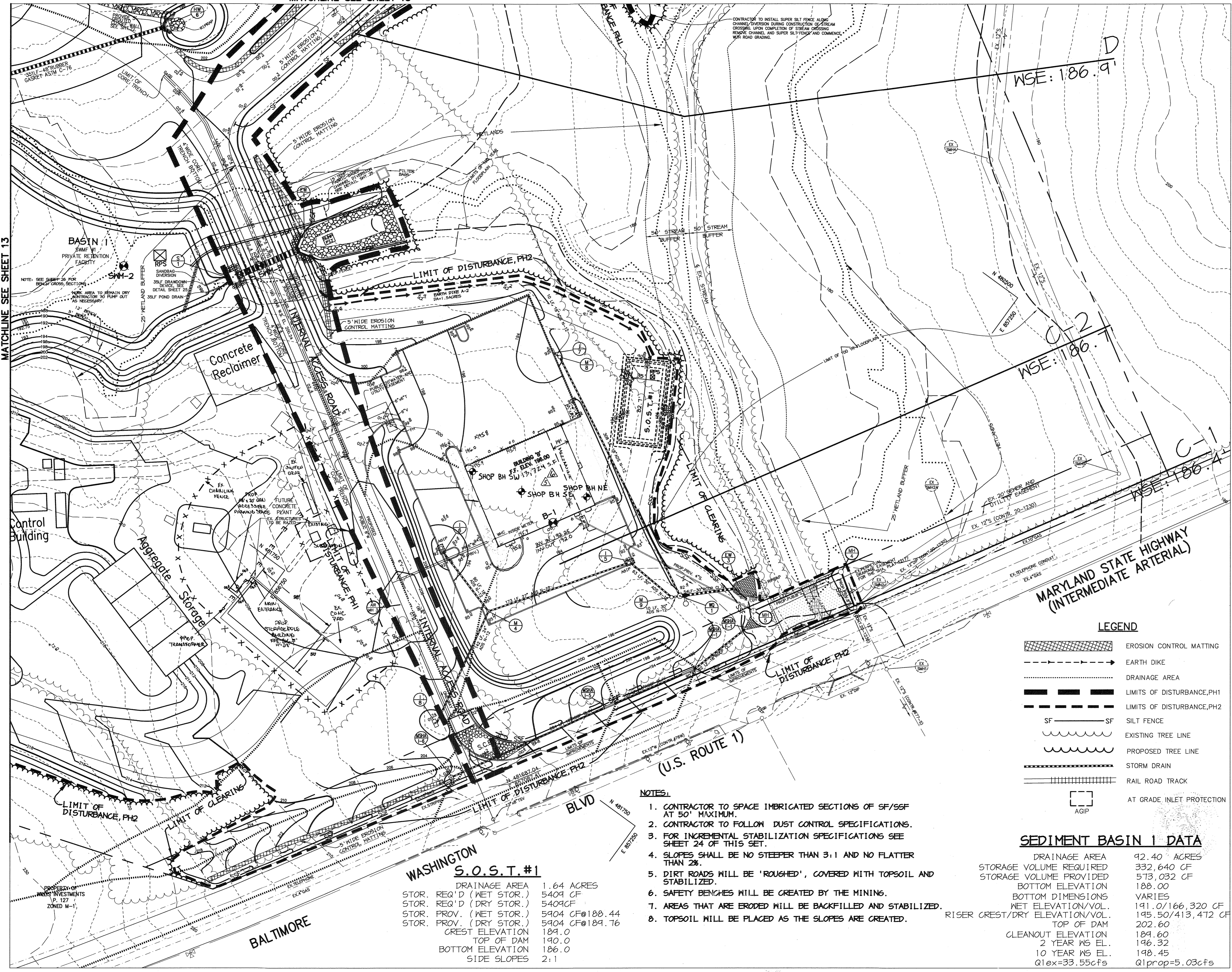
MARYLAND STATE HIGHWAY (INTERMEDIATE ARTERIAL)

(U.S. ROUTE 1)

WASHINGTON BLVD

BALTIMORE

P:\project\99092\1-0\Engr\Plans\SDP-7.dwg, Layout1, 01/29/2004, 12:25:54 PM, HP1050C, Mylar.pc3, Arch D - 24 x 36 in. (landscape), 1:1



CNA INC.
215 BYNUM ROAD
FOREST HILL MD 21050
410-879-7200
FOR REVISION ONLY AND

Professional Engineer Seal: David E. Ziegler 1/18/08

3-15-16	REV. SF OF BLDG 'E'
1-9-15	REDUCED BUILDING FOOTPRINT
7-8-08	ADDED POLE BLDG + SUBSTATION + FENCE
7-31-07	ADDED SHOP BOREHOLES

BY THE DEVELOPER:

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Timothy J. Schmitt 1/30/04
DEVELOPER DATE

BY THE ENGINEER:

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Chris J. Reid 1.30.04
ENGINEER DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

Jim Munnis 2/17/04
NATURAL RESOURCES CONSERVATION SERVICE DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

Steve Hill 2/16/04
HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

March 2, 2004 - 2/15/04
DIRECTOR DATE

John Dammann 2/20/04
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Chris Hamilton 7/11/04
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

6-15-05	CHANGED SHEET NO.
1-6-09	CHANGED SHEET NO.

DATE	NO.	REVISION
DEVELOPER/OWNER:		
	(OWNER)	(DEVELOPER)
	CHASE LIMITED PARTNERSHIP	CHASE MINING LLC
	P.O. BOX 850	P.O. BOX 850
	LAUREL, MD 20725	LAUREL, MD 20725
	410.142.1234	410.142.1234

PROJECT: CHASE QUARRY

AREA ZONED M-1 & MXD-3, TAX MAP No. 43
PARCELS 234 & P.O. 235, BLOCK 14
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: GRADING, SEDIMENT CONTROL & DRAINAGE AREA MAP

Patton Harris Rust & Associates, PC
Engineers, Surveyors, Planners, Landscape Architects.
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

RHR+A

1-30-04
DATE

DESIGNED BY: C.J.R.

DRAWN BY: MAD

CHECKED BY: C.J.R.

PROJECT NO.: 99092/
SEDIM4.DWG

DATE: JANUARY 29, 2004

SCALE: 1" = 50'

DRAWING NO. 15 OF 25

CHRISTOPHER J. REID #19949

LEGEND

- EROSION CONTROL MATTING
- EARTH DIKE
- DRAINAGE AREA
- LIMITS OF DISTURBANCE, PH1
- LIMITS OF DISTURBANCE, PH2
- SILT FENCE
- EXISTING TREE LINE
- PROPOSED TREE LINE
- STORM DRAIN
- RAIL ROAD TRACK
- AT GRADE INLET PROTECTION

SEDIMENT BASIN 1 DATA

DRAINAGE AREA	92.40 ACRES
STORAGE VOLUME REQUIRED	332,640 CF
STORAGE VOLUME PROVIDED	573,032 CF
BOTTOM ELEVATION	188.00
BOTTOM DIMENSIONS	VARIABLES
NET ELEVATION/VOL.	191.0/166,320 CF
RISER CREST/DRY ELEVATION/VOL.	195.50/413,472 CF
TOP OF DAM	202.60
CLEANOUT ELEVATION	189.60
2 YEAR WS EL.	196.32
10 YEAR WS EL.	198.45
Q _{1ex} =33.55cfs	Q _{1prop} =5.03cfs

- NOTES:**
- CONTRACTOR TO SPACE IMBRICATED SECTIONS OF SF/SFF AT 50' MAXIMUM.
 - CONTRACTOR TO FOLLOW DUST CONTROL SPECIFICATIONS.
 - FOR INCREMENTAL STABILIZATION SPECIFICATIONS SEE SHEET 24 OF THIS SET.
 - SLOPES SHALL BE NO STEEPER THAN 3:1 AND NO FLATTER THAN 2%.
 - DIRT ROADS WILL BE 'ROUGHED', COVERED WITH TOPSOIL AND STABILIZED.
 - SAFETY BENCHES WILL BE CREATED BY THE MINING.
 - AREAS THAT ARE ERODED WILL BE BACKFILLED AND STABILIZED.
 - TOPSOIL WILL BE PLACED AS THE SLOPES ARE CREATED.

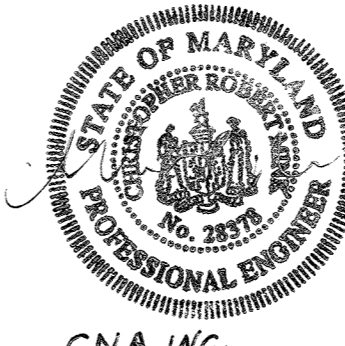
S.O.S.T. #1

DRAINAGE AREA	1.64 ACRES
STOR. REQ'D (WET STOR.)	5409 CF
STOR. REQ'D (DRY STOR.)	5409 CF
STOR. PROV. (WET STOR.)	5904 CF @ 188.44
STOR. PROV. (DRY STOR.)	5904 CF @ 189.76
CREST ELEVATION	189.0
TOP OF DAM	190.0
BOTTOM ELEVATION	186.0
SIDE SLOPES	2:1

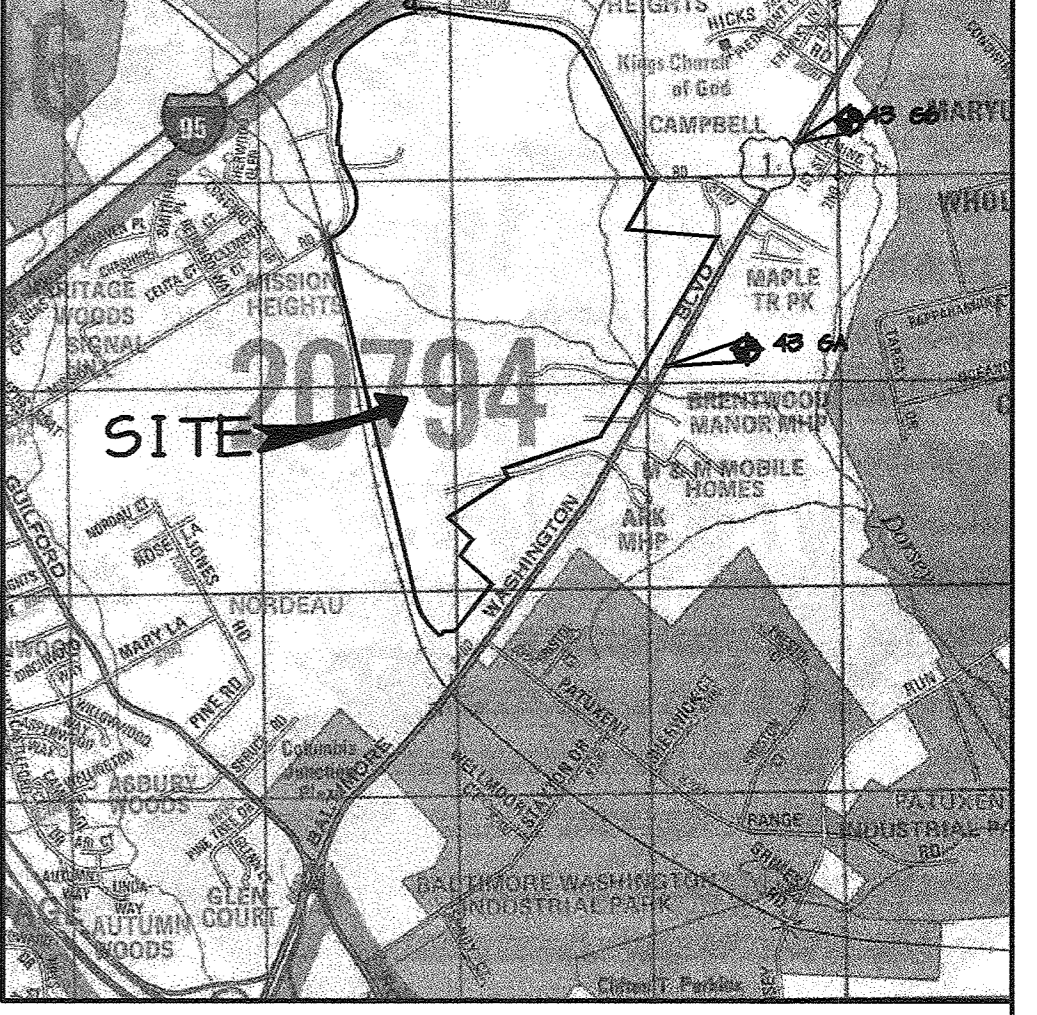
MATCHLINE SEE SHEET 13

SHEET INDEX			
NO	DESCRIPTION	NO	DESCRIPTION
1	TITLE SHEET	22	GRADING, SEDIMENT CONTROL & DRAINAGE AREA MAP
2	OVERALL LOCATION PLAN	23	PROFILES AND DETAILS
3	OVERALL LOCATION PLAN	24	PROFILES AND DETAILS
4	SITE DEVELOPMENT PLAN	25	SM PROFILES, SEDIMENT & EROSION CONTROL NOTES & DETAILS
5	SITE DEVELOPMENT PLAN	26	SM PROFILES, SEDIMENT & EROSION CONTROL DETAILS
6	SITE DEVELOPMENT PLAN	27	SM PROFILES & DETAILS
7	SITE DEVELOPMENT PLAN	28	SM AND SEDIMENT CONTROL NOTES & DETAILS
8	SITE DEVELOPMENT PLAN	29	LANDSCAPE PLAN
9	SITE DEVELOPMENT PLAN	30	LANDSCAPE PLAN
10	OVERALL GRADING, SEDIMENT CONTROL & DRAINAGE AREA MAP	31	LANDSCAPE PLAN
11	GRADING, SEDIMENT CONTROL & DRAINAGE AREA MAP	32	LANDSCAPE PLAN
12	GRADING, SEDIMENT CONTROL & DRAINAGE AREA MAP	34	LANDSCAPE PLAN
13	GRADING, SEDIMENT CONTROL & DRAINAGE AREA MAP	35	LANDSCAPE PLAN
14	GRADING, SEDIMENT CONTROL & DRAINAGE AREA MAP	36	LANDSCAPE PLAN SPECIFICATIONS AND DETAILS
15	GRADING, SEDIMENT CONTROL & DRAINAGE AREA MAP	37	U.S. ROUTE 1 ROAD HIDDENING PLAN
16	GRADING, SEDIMENT CONTROL & DRAINAGE AREA MAP	38	BAYSAYER DETAILS & NOTES
17	GRADING, SEDIMENT CONTROL & DRAINAGE AREA MAP	39	REINFORCEMENT DETAILS AND PROFILES
18	GRADING, SEDIMENT CONTROL & DRAINAGE AREA MAP	40	PROFILES AND DETAILS
19	GRADING, SEDIMENT CONTROL & DRAINAGE AREA MAP	41	GRADING, SEDIMENT CONTROL & DRAINAGE AREA MAP AND DETAILS
20	GRADING, SEDIMENT CONTROL & DRAINAGE AREA MAP	42	PROFILES

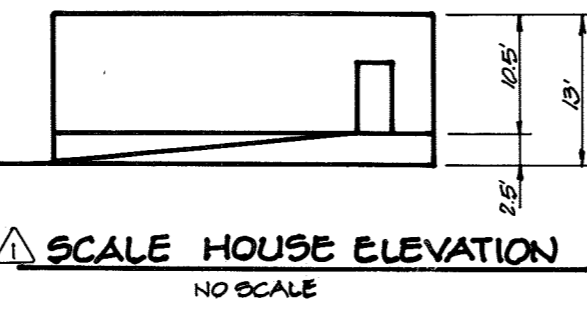
SITE DEVELOPMENT PLAN CHASE QUARRY 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND



BENCH MARKS	
NO. CO. SURVEY CONTROL STATION: 436A	N 541, 740, 136 E 1, 564, 162, 220
ELEVATION: 134.51'	
NO. CO. SURVEY CONTROL STATION: 436B	N 541, 118, 629 E 1, 570, 553, 547
ELEVATION: 112.94'	



SHEET INDEX (CONT.)			
NO	DESCRIPTION	NO	DESCRIPTION
43	CULVERT A PLAN AND PROFILES	48	PROFILES
44	CULVERT B PLAN AND PROFILES	49	PROFILES
45	CULVERT C PLAN AND PROFILES	50	PROFILES
46	PROFILES	51	PROFILES
47	PROFILES	52	INTERIM STOCKPILE & STREAM MITIGATION ESC PLAN
		53	INTERIM STOCKPILE & STREAM MITIGATION ESC PLAN & DETAILS
		54	NOTES & DETAILS
		55	PROFILE, NOTES & DETAILS



SCALE HOUSE ELEVATION
NO SCALE

GENERAL NOTES cont.
36. WF-04-68 was approved on 12/18/03, waiving Section 16.155a.(4), which requires approval of a site plan prior to issuance of a grading permit. The grading is limited to the proposed access points on Routes 4, as shown on the waiver exhibit. Approval was subject to 4 conditions of approval.

GENERAL NOTES
1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.
2. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
3. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
4. TRAFFIC CONTROL DEVICES, MARKINGS, AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
5. ALL PLAN DIMENSIONS ARE TO FACE OF CURB AND FACE OF BUILDING UNLESS OTHERWISE NOTED.
6. THE EXISTING TOPOGRAPHY IS TAKEN FROM AERIAL SURVEY WITH MAXIMUM TWO FOOT CONTOUR INTERVALS PREPARED BY W.R.A., INC. DATED APRIL, 1985.
7. THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 4806 AND 4848 WERE USED FOR THIS PROJECT.
8. WATER IS PUBLIC. CONTRACT NO. 44-3778-D
9. SEWER IS PUBLIC. SEWER DRAINAGE AREA: PATUXENT CONTRACT NO. 20-1230 & 20-1310
10. THE STORMWATER MANAGEMENT FOR THIS SITE IS PROVIDED VIA GRASS CHANNEL CREDIT FOR RECHARGE VOLUME AND A WET POND FOR WATER QUALITY AND CHANNEL PROTECTION VOLUMES. MANAGEMENT OF THE 10-YEAR AND 100-YEAR STORM EVENTS ARE NOT REQUIRED. THE FACILITIES WILL BE PRIVATELY MAINTAINED.
11. APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE. EXISTING UTILITIES ARE SHOWN BASED ON THE BEST AVAILABLE INFORMATION.
12. THE 100-YEAR FLOODPLAIN IS DELINEATED FOR THIS PROJECT USING THE HOWARD COUNTY DORSEY RUN STUDY.
13. WETLANDS ARE SHOWN PER DELINEATION BY WKA, INC., OCT 1997.
14. A CHAPTER 5 TRAFFIC STUDY HAS BEEN PREPARED BY GOROVE/SLADE ASSOCIATES, INC., DATED APRIL 1999.
15. A NOISE STUDY IS NOT REQUIRED FOR THIS PROJECT.
16. A GEOTECHNICAL CORE STUDY HAS BEEN PREPARED BY BOART LONGYEAR DRILLING CO. IN 1995.
17. THE BOUNDARY FOR THIS PROJECT IS SHOWN PER "BOUNDARY SURVEY THE CHASE PROPERTY" BY WHITMAN REQUART & ASSOC. DATED APRIL 1985.
18. SUBJECT PROPERTY ZONED M-1 & MXD-3 PER 10-18-93 COMPREHENSIVE ZONING PLAN.
19. ALL ELEVATIONS SHOWN ARE BASED ON THE U.S.C. AND G.S. MEAN SEA LEVEL DATUM, 1929.
20. SEE DEPARTMENT OF PLANNING AND ZONING FILE NOS BA 95-58E, WP-00-34, GP-04-11 AND WP-04-68
21. THE CONTRACTOR SHALL TEST PIT EXISTING UTILITIES AT LEAST (5) DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS.
22. CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, AND SAFETY PRECAUTIONS AND PROGRAMS.
23. NO PIPE SHALL BE LAID UNTIL LINES OF EXCAVATION HAVE BEEN BROUGHT WITHIN 6" OF FINISHED GRADE.
24. ALL STORM DRAIN PIPE BEDDING SHALL BE CLASS "C" AS SHOWN IN FIG. 11.4, VOLUME 1 OF HOWARD COUNTY DESIGN MANUAL UNLESS OTHERWISE NOTED.
25. ALL INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY STANDARDS.
26. ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
27. PROFILES STATIONS SHALL BE ADJUSTED AS NECESSARY TO CONFORM TO PLAN DIMENSIONS.
28. ALL FILL AREAS WITHIN ROADWAY AND UNDER STRUCTURES TO BE COMPACTED TO A MINIMUM OF 95% COMPACTION OF AASHTO 1180.
29. THE PAVEMENT DETAILS SHOWN FOR THIS SITE REFLECT THE HOWARD COUNTY STANDARD PAVEMENT SECTIONS AND ARE NOT BASED ON SITE SPECIFIC CONDITIONS. PRIOR TO PAVING THE FINAL PAVEMENT SECTIONS SHALL BE DETERMINED BY A QUALIFIED GEOTECHNICAL ENGINEER BASED ON IN-SITU TESTING OF THE FINISHED SUBGRADE.
30. THIS PROJECT IS EXEMPT FROM THE REQUIREMENTS FOR FOREST CONSERVATION UNDER SECTION 16.12022.1.b. OF THE SUBDIVISION REGULATIONS. A RECLAMATION PLAN WILL BE ENACTED AFTER CESSATION OF THE QUARRY ACTIVITIES, IN CONJUNCTION WITH MDE PERMIT NO.(S), 02-9F-0599, APPROVED ON DECEMBER 22, 2005.
31. SEDIMENT CONTROL PLAN FOR THIS PROJECT IS VALID FOR A PERIOD OF TWO YEARS AFTER HSOD SIGNATURES, AND MUST BE RESUBMITTED BEFORE EXPIRATION FOR ASSESSMENT AND APPROVAL.
32. WP-00-34 A WAIVER PETITION REQUEST TO WAIVE SECTIONS 16.115 AND 16.116(a) WAS APPROVED ON APRIL 10, 2000 SUBJECT TO THE FOLLOWING CONDITIONS:
1. THIS WAIVER APPROVAL APPLIES ONLY TO THE PROPOSED AREAS OF ENVIRONMENTAL DISTURBANCES IDENTIFIED AS "AREAS #1-6" (WETLAND AND STREAM DISTURBANCES) AND FLOODPLAIN AREAS #1-3" (FLOODPLAIN AND STREAM DISTURBANCES) AS SHOWN ON THE WAIVER PETITION EXHIBIT RECEIVED BY THE DEPARTMENT OF PLANNING AND ZONING ON 2/24/2000.
2. THE PETITIONER MUST OBTAIN APPROVAL OF THE SITE DEVELOPMENT PLAN (SDP-99-134) PRIOR TO ISSUANCE OF ANY PERMITS FOR CONSTRUCTION OR GRADING ON SITE.
3. ALL GRADING AND CLEARING WITHIN THE FLOODPLAINS, WETLANDS, WETLAND BUFFERS, AND STREAM BUFFERS SHALL BE MINIMIZED AND SHALL COMPLY WITH THE APPROVED GRADING AND SEDIMENT EROSION CONTROL PLAN SHEETS, WHICH ARE TO BE PART OF SDP-99-134. STABILIZATION SHALL BE INITIATED IMMEDIATELY FOLLOWING THE GRADING AND CLEARING.
4. THE PETITIONER SHALL OBTAIN ALL APPLICABLE PERMITS FROM THE MARYLAND DEPARTMENT OF ENVIRONMENT AND ANR OR THE DEPARTMENT OF NATURAL RESOURCES, PRIOR TO COMMENCEMENT OF ANY DISTURBANCE TO THE ENVIRONMENT AREAS ON SITE.
33. NO QUARRY OR MINING SHALL OCCUR UNDER THIS PLAN. THIS PLAN IS FOR THE CONSTRUCTION OF OPERATION AREA AND REMOVAL OF OVERBURDEN ONLY.
34. A WETLANDS PERMIT HAS BEEN APPLIED FOR UNDER TRACKING NUMBER 200262372.
35. THE WHITE FAMILY CEMETARY HAS BEEN RELOCATED FROM THE SITE PER STATE OF MARYLAND GUIDELINES.

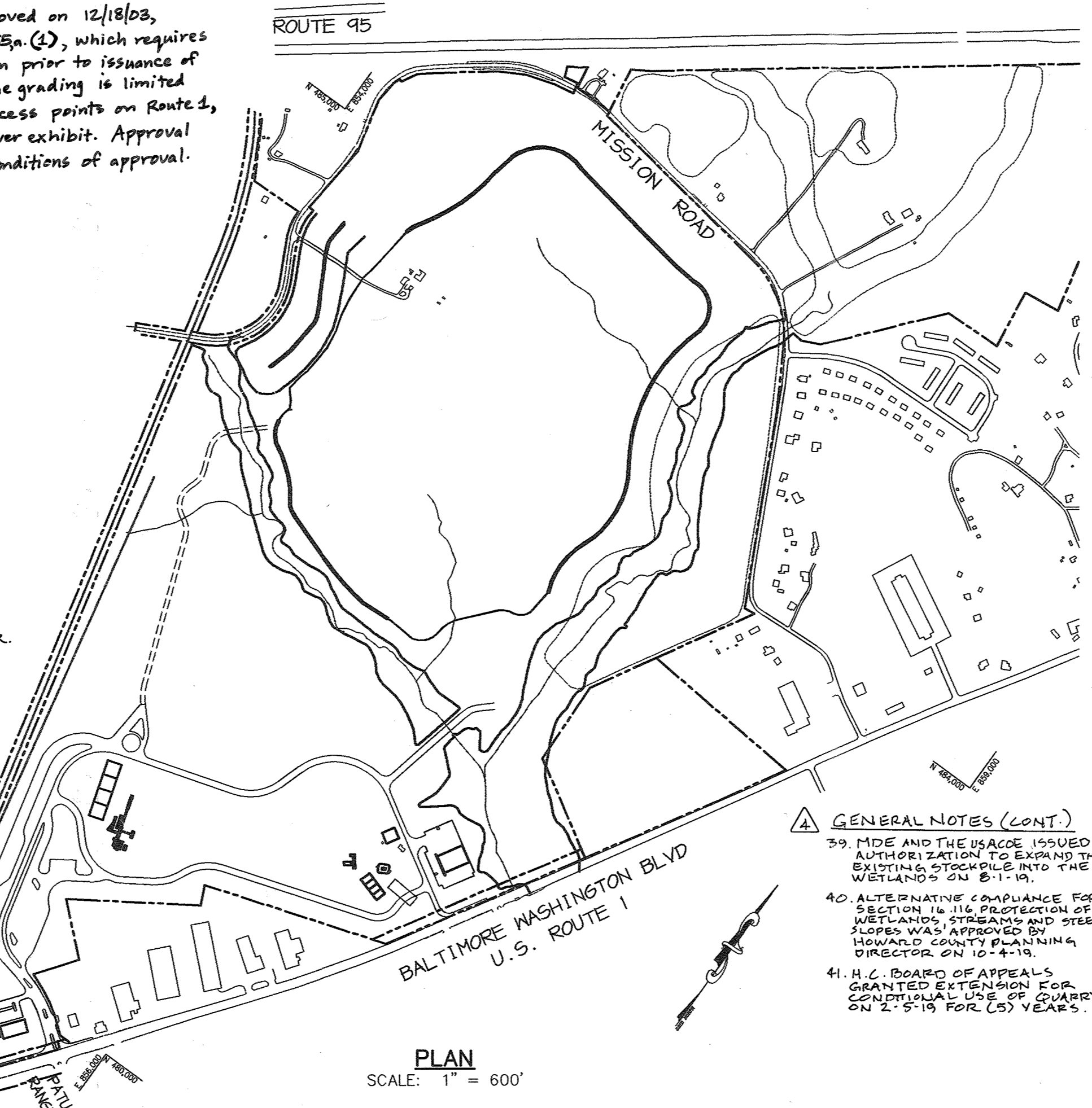
ADDRESS CHART	
BUILDING	STREET ADDRESS
STATION 1	8424 WASHINGTON BOULEVARD
STATION 2	8420 WASHINGTON BOULEVARD
STATION 3	8428 WASHINGTON BOULEVARD
STATION 4	8420 WASHINGTON BOULEVARD
STATION 5	8432 WASHINGTON BOULEVARD
STATION 6	8436 WASHINGTON BOULEVARD
STATION 7	8436 WASHINGTON BOULEVARD
STATION 8	8436 WASHINGTON BOULEVARD
STATION 9	8440 WASHINGTON BOULEVARD
STATION 10	8442 WASHINGTON BOULEVARD
STATION 11	8444 WASHINGTON BOULEVARD
STATION 12	8446 WASHINGTON BOULEVARD
LCC #1	8442 WASHINGTON BOULEVARD
LCC #2	8430 WASHINGTON BOULEVARD
LAD	8442 WASHINGTON BOULEVARD

NOTE: LCC STANDS FOR MOTOR CONTROL CENTER.

GENERAL NOTES (CONT.)
37. THE THREE STREAM CROSSINGS FROM THE PLANT AREA TO THE QUARRY AREA WILL BE REMOVED AT THE COMPLETION OF MINING. THE BIOENGINEERS OF THE STREAMS WILL BE DESIGNED AND APPROVED BY THE APPROPRIATE AGENCIES BEFORE THE CULVERTS ARE REMOVED. THE DESIGN IS BEING DEFERRED BECAUSE THE MINING WILL LAST FOR 25 YEARS AND THE FIVE AND SEVEN AND EIGHT WETLANDS WILL CHANGE IN THE INTERIM. EACH YEAR A COPY OF THE ANNUAL MINING REPORT WILL BE SENT TO THE CORPS OF ENGINEERS, HOWARD COUNTY CONSERVATION DISTRICT, AND THE MDE WETLANDS PERMIT SECTION. THIS WILL BE DONE SO THAT THESE AGENCIES MAY TRACK THE RECLAMATION FOR THE 25 YEARS. THE FINAL RECLAMATION REPORT WILL BE SUBMITTED TO THE STREAM RESTORATION IS COMPLETED BEFORE THE ROAD AND PERMIT ARE RELEASED.

GENERAL NOTES (CONT.)
38. FOUR SHEETS, 52-55, WERE ADDED TO THIS SDP FOR THE INTERIM STOCKPILE EXPANSION MCD APPROVED GP-04-11 ON 9-4-19

The Decision and Order for BOA Case No. BA95-58E has the following approval conditions:
1. The special exception shall apply only to the proposed stone, sand, gravel, clay and fill-dirt quarry and accessory asphalt and concrete plant uses as described in the petition, and as depicted on the special exception plan for Chase Limited Partnership submitted on September 22, 1995, consisting of an Existing Zoning and Utilities Plan, Land Use Plan, Operations Plan, Reclamation Plan, and Reclamation Cross Sections ("Special Exception Plan") as amended by this Decision and Order, and not to any other activities, uses, or structures on the subject property.
2. Areas on the site which are regraded during the Reclamation Plan phase shall be covered with suitable soil to sustain growth, then vegetatively stabilized using a perennial cover species as recommended by the county soil conservation District.
3. Upon the abandonment of excavation operations on the site or on any portion of the site, all access roads shall be suitably barricaded to prevent the passage of vehicles either into or out of the abandoned area, except such access as needed for vehicles engaged in rehabilitation work, until the plan for rehabilitation has been completed and other uses necessitating access have commenced on the property.
4. The Petitioner shall submit detailed engineering studies setting forth the estimated cost of the accepted plan for rehabilitation for the approval of the Board of Appeals prior to the final approval of the site development plan for the use. These studies shall be subject to periodic review by the Board of Appeals every five years with final approval of the site development plan. A bond shall be provided, or adequate collateral shall be kept in escrow, drawing interest to the benefit of the Petitioner, to cover the approved estimated cost of the accepted plan for rehabilitation. Said bond or escrow shall be established in a manner acceptable to the Board and the county prior to the approval of the site development plan for the use and reviewed every five years thereafter. Said bond or escrow shall not be released unless it is determined that the Petitioner has achieved successful completion of the rehabilitation program.



PLAN
SCALE: 1" = 600'

GENERAL NOTES (CONT.)
39. MDE AND THE USAGE ISSUED AUTHORIZATION TO EXPAND THE EXISTING STOCKPILE INTO THE WETLANDS ON 8-1-10.
40. ALTERNATIVE COMPLIANCE FOR SECTION 16.116 PROTECTION OF WETLANDS, STREAMS AND TREE SLOPES WAS APPROVED BY HOWARD COUNTY PLANNING DIRECTOR ON 10-4-19.
41. H.C. BOARD OF APPEALS GRANTED EXTENSION FOR ADDITIONAL USE OF QUARRY ON 2-5-19 FOR (5) YEARS.
10-22-19 REV. NOTE: REVISED SITE ANALYSIS, SHEET INDEX, ADDED GENERAL NOTES, 38-41.
5. Prior to the approval of the site development plan for the use, the Petitioner shall warrant and shall provide documentation that all persons having an interest of record in said land shall cause to be recorded among the land records of the County:
(a) A description of the area included within the special exception area, (b) the application number (BOA Case No. 95-58E) and the date of this Decision and Order, (c) A statement indicating that use of the land will be in accordance with the site development plan submitted for approval and the Special Exception Plan, including the Reclamation Plan as approved herein, and (d) A declaration binding their heirs and assigns to utilize the land in accordance with said site development plan and the Special Exception Plan, including the Reclamation Plan until excavation, processing or filling operations cease and rehabilitation of the land is completed.
6. Prior to the approval of the site development plan for the use, the Petitioner shall enter into an agreement with the County which provides that, if the quarry is cited as operating in violation of any of the provisions or conditions of the special exception including failure to comply with the approved Reclamation Plan, in such a way as to require corrective action, the Petitioner shall cause the corrective action to be taken. The agreement shall also stipulate that if the Petitioner fails to take the necessary corrective action within 30 days or written notice from the County to do so, the required bonds or collateral noted above will be forfeited and the County may cause corrective actions to be commenced. The agreement shall also provide that the Petitioner shall agree to pay any costs for corrective action which exceed the bond or collateral amount.
7. Any exterior lighting shall be shielded and directed so that it does not illuminate residential properties, does not shine directly onto any adjacent properties, and does not produce glare which would cause a hazard for motor vehicle operators in the vicinity of the site.
8. Public water will be provided on site as required by the Department of Fire and Rescue Services.
9. The Petitioner shall make a good faith effort working with the community and CSX Railroad to construct a security fence along the western boundary to prevent access to the stockpile area.
10. Prior to the commencement of quarry operations, the Petitioner shall donate approximately 7 acres of land on Mission Road, as shown on the land use plan, to the Ridgely's Run Community Association for use as a community center. The Petitioner will construct on the 7 acres, at its own expense, (i) a community center building of approximately 5,000 square feet with parking, (ii) an exterior all-purpose basketball court, (iii) two tennis courts with nets and fencing, and (iv) grading for a little league baseball diamond and provide a little league baseball backstop. Construction will begin prior to commencement of quarry operations, and the Petitioner will diligently pursue completion of construction.
11. During each year of quarry operation, the Petitioner shall donate to the Ridgely's Run Community Association Five cents (5¢) per ton of marketable stone produce shipped from the project operations, with a minimum donation of \$50,000.00 per year to be used for the programs of the community center for the betterment and welfare of the community.
12. The Petitioner will warrant that existing wells will not be affected by quarry operations. Tests will be done prior to development and subsequent well monitoring will occur with a sampling program by an independent environmental consultant.
13. The Petitioner shall establish and implement procedures for the investigation and reporting of vibration and damages attributable to the quarry operations on all homes within 1,000 feet of the quarry excavation area and the 12 Heritage Woods homes identified in the Petitioner's testimony.
14. The Petitioner will fill the existing quarry at the back of Pine Road using overburden from the new quarry and other material.
15. Structures shall not exceed a height of 65 feet; stockpiles shall not exceed a height of 60 feet; and berms shall not exceed a height of 40 feet.
16. Trees removed for construction of berms shall be replaced by adequate landscaping, reforestation, and seeding or sodding of the berms.
17. Dust emissions will be controlled and maintained within the confines of the site in accordance with applicable State regulations.
18. Blasting will occur no more than 10 seconds per month. No blasting will occur between the hours of 6:00 p.m. and 1:30 a.m. on any day.
19. The Petitioner shall provide adequate security to control unauthorized entry to the site along the entire perimeter, including the perimeter on duty on the site 24 hours each day. The quarry will be fenced with a durable galvanized fence 6' high, located not less than 20 feet from the edge of excavation. The County shall have the right to enter and repair or maintain such fence whenever the property owner shall fail to do so. The property owner shall be liable to the County for the cost of the repairs or maintenance.
20. The Petitioner shall prohibit trucks from using Mission Road to enter or leave the quarry operation.
21. The northern entrance to the site shall be restricted to right-turns only from southbound Route 1, and a deceleration lane shall be installed. An acceleration lane shall be installed for southbound traffic exiting the southern entrance at Patuxent Range Drive.
22. The posted speed limit on U.S. Route 1 between Route 175 and Route 32 shall be reduced to no more than 40 miles per hour. (MSHA will not grant approval)
23. The special exception granted herein shall be subject to renewal five years from the date of approval of the final site development plan for the project, and every five year thereafter, in accordance with Section 131.H.2 of the Zoning Regulations; except that the special exception shall terminate without right of renewal 25 years from the date on which all necessary excavation permits for the project have been obtained.
24. The Petitioner shall comply with all applicable Federal, State, and County laws and regulations.

SITE ANALYSIS
TOTAL SITE AREA: 536.1 ACRES
AREA OF SUBMISSION (SPECIAL EXCEPTION AREA): 330.16 ACRES
LIMIT OF DISTURBANCE FOR DEVELOPED AREA: 64.7 ACRES
CURRENT ZONING: M-1 & MXD-3
PROPOSED USE: QUARRY W/ ASSOCIATED USES
EXISTING USE: VACANT LAND / RESIDENCE
PROPOSED BUILDINGS:
BUILDING A - OFFICE: 7,800 S.F.
BUILDING B - MAINTENANCE AND STORAGE: 19,724 S.F.
PARKING REQUIREMENTS:
OFFICE BUILDING A: 26 SPACES
MAINTENANCE BUILDING B: 18 SPACES
OFFICE BUILDING A: 50 SPACES (INCL 2 H.C.)
MAINTENANCE BUILDING B: 39 SPACES (INCL 1 H.C.)
BUILDING COVERAGE: 19,800 S.F. (0.45 AC.) (0.1% OF SITE)
DPZ REFERENCES: BA 95-58E & NP-00-34, WP-04-68 GP-04-11

SETBACK SUMMARY
1. 100' LANDSCAPE BUFFER AROUND SPECIAL EXCEPTION BOUNDARY.
2. 300' SETBACK FROM SPECIAL EXCEPTION BOUNDARY FOR QUARRY USE. THIS DOES NOT APPLY TO THE OFFICE BUILDING AND MAINTENANCE SHOP.
3. 1000' SETBACK FROM US RTE 1 CRUSHING, SCREENING AND STOCKPILES.
4. 100' SETBACK FROM ANY PROPERTY LINE FOR THE 6' FENCE AROUND THE QUARRY PIT. FENCE SHALL BE A MINIMUM 20' FROM THE EXCAVATION LINE FOR THE PIT.
5. 100' SETBACK FROM ROUTE 1 FOR THE SEDIMENT POND.
6. HEIGHT LIMITS: SEE CONDITION OF APPROVAL #15 FOR BA95-58E.
7. 100' SETBACK FROM ROUTE 1 FOR OFFICE BUILDING, MAINTENANCE BUILDING AND PARKING LOTS.

OPERATION AND MAINTENANCE SCHEDULE OF PRIVATELY OWNED AND MAINTAINED STORMWATER MANAGEMENT FACILITY RETENTION POND #1 & 3
ROUTINE MAINTENANCE

1. Facility shall be inspected annually and after major storms. Inspections should be performed during wet weather to determine if the pond is functioning properly.
2. Top and side slopes of the embankment shall be moved a minimum of two (2) times a year, once in June and once in September. Other side slopes, the bottom of the pond, and maintenance access should be moved as needed.
3. Debris and litter shall be removed during regular mowing operations and as needed. 4. Visible signs of erosion in the pond as well as riprap outlet area shall be repaired as soon as it is noticed.

NON-ROUTINE MAINTENANCE
1. Structural components of the pond such as the dam, the riser, and the pipes shall be repaired upon the detection of any damage. The components should be inspected during routine maintenance operations.
2. Sediment should be removed from the pond, and forebay, no later than when the capacity of the pond, or forebay, is half full of sediment, or, when deemed necessary for aesthetic reasons, upon approval from the Department of Public Works.
OPERATION AND MAINTENANCE SCHEDULE OF PRIVATELY OWNED AND MAINTAINED STORMWATER MANAGEMENT FACILITY DETENTION POND #2 ROUTINE MAINTENANCE

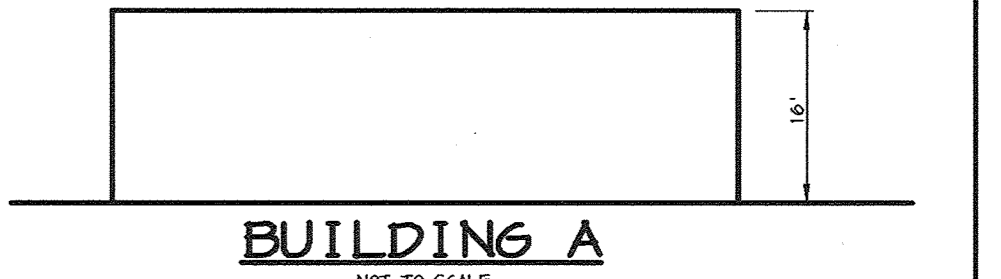
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18. Blasting will occur no more than 10 seconds per month. No blasting will occur between the hours of 6:00 p.m. and 1:30 a.m. on any day.
19. The Petitioner shall provide adequate security to control unauthorized entry to the site along the entire perimeter, including the perimeter on duty on the site 24 hours each day. The quarry will be fenced with a durable galvanized fence 6' high, located not less than 20 feet from the edge of excavation. The County shall have the right to enter and repair or maintain such fence whenever the property owner shall fail to do so. The property owner shall be liable to the County for the cost of the repairs or maintenance.
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21. The northern entrance to the site shall be restricted to right-turns only from southbound Route 1, and a deceleration lane shall be installed. An acceleration lane shall be installed for southbound traffic exiting the southern entrance at Patuxent Range Drive.
22. The posted speed limit on U.S. Route 1 between Route 175 and Route 32 shall be reduced to no more than 40 miles per hour. (MSHA will not grant approval)
23. The special exception granted herein shall be subject to renewal five years from the date of approval of the final site development plan for the project, and every five year thereafter, in accordance with Section 131.H.2 of the Zoning Regulations; except that the special exception shall terminate without right of renewal 25 years from the date on which all necessary excavation permits for the project have been obtained.
24. The Petitioner shall comply with all applicable Federal, State, and County laws and regulations.

SUBDIVISION NAME -	CHASE QUARRY	SECT./AREA -	PARCEL -
			234 & P.0.235
PLAT # -	BLOCK #	ZONE	TAX MAP NO./ELECT. DIST./CENSUS TR.
	19	M-1 & MXD-3	43 6th 6069.01
WATER CODE -	B02	SEWER CODE -	4200000

VICINITY MAP
SCALE: 1" = 2000'
COPYRIGHT, ADC 'THE MAP PEOPLE'
PERMITTED USE NO. 20844285



BUILDING A
NOT TO SCALE
07-21-16 PLANT RELOCATION - CNA, INC.



BUILDING B
NOT TO SCALE

3-15-16 REV. S.F. OF BUILDING 'B' - CNA, INC.
1-9-15 REDUCED BUILDING FOOTPRINT - CNA, INC.
6-15-05 REV. SHEET INDEX, REV. GEN. NOTES, ADDED GEN. NOTE #37
APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS - HOWARD COUNTY HEALTH DEPARTMENT.

HEALTH OFFICER: _____ DATE: _____

ADDRESS CHART

BUILDING	STREET ADDRESS
A	8420 WASHINGTON BLVD
B	8418 WASHINGTON BLVD
SCALE HOUSE	8422 WASHINGTON BLVD

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR: _____ DATE: _____

CHIEF, DEVELOPMENT ENGINEERING DIVISION: _____ DATE: _____

CHIEF, DIVISION OF LAND DEVELOPMENT: _____ DATE: _____

ADDED ADDRESS INFORMATION FOR PLANT: _____

ADDED BUILDING ELEV.: REV. SHEET INDEX: _____

DATE NO.	REVISION

DEVELOPER/OWNER:

(OWNER) CHASE LIMITED PARTNERSHIP P.O. BOX 250 LAUREL, MD 20725 410.742.7234	(DEVELOPER) CHASE MINING LLC P.O. BOX 250 LAUREL, MD 20725 410.742.7234
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CHASE QUARRY
AREA ZONED M-1 & MXD-3, TAX MAP No. 43
PARCEL 234 & P.O. 235, BLOCK 19
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE SHEET

Patton Harris Rust & Associates, pc
Engineers, Surveyors, Planners, Landscape Architects.
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

DESIGNED BY: C.J.R.

DRAWN BY: MAD

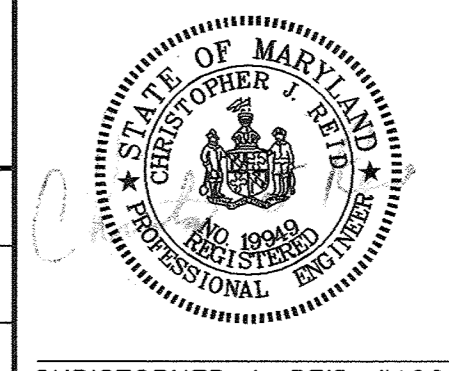
CHECKED BY: C.J.R.

PROJECT NO: 99092/
COVER, DWG

DATE: JANUARY 29, 2004

SCALE: AS SHOWN

DRAWING NO. 1 OF 55
SDP-99-134



CHRISTOPHER J. REID #19949

MATCHLINE SEE SHEET 9

MATCHLINE SEE SHEET 18

MATCHLINE SEE SHEET 6

MATCHLINE SEE SHEET 7

LEGEND

- 300 EXISTING CONTOURS
- 300 PROPOSED CONTOURS
- EXISTING TREE LINE
- PROPOSED TREE LINE
- EXISTING ROAD
- EXISTING BOUNDARY LINE
- EXISTING BUILDING
- EXISTING WETLANDS
- APPROXIMATE LOCATION OF BENCH FOR BERM
- EASEMENT
- PROPOSED FENCE
- RIP RAP OUTLET PROTECTION
- LIMIT OF 100-YR FLOODPLAIN
- 10' BENCH
- 50' STREAM BUFFER
- WETLAND BUFFER LIMITS
- EXISTING STREAM
- P-3 PAVING
- 2' CONTOUR
- 10' CONTOUR
- DRAINAGE AREA

97-22-16 PLANT RELOCATION - CNA, INC.

PRIVATELY OWNED AND MAINTAINED SEDIMENT/SETTLING BASIN 2- DESIGN SUMMARY

DESIGN STORM (YR.)	ALLOWABLE RELEASE (C.F.S.)	POND # STUDY POINT #2 FACILITY DISCHARGE (C.F.S.)	WATER SURFACE ELEVATION (FT.)	STORAGE VOLUME (AC. FT.)
2	56.5	23.7	194.5	10.0
10	140.9	123.8	196.4	16.9
100	372.3	276.7	198.1	23.1

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Paul A. Cagle 10/20/05
DIRECTOR DATE

William J. ... 10/23/05
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Carla ... 10/6/05
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

8/30/05 Added WATER & SEWER AND Revised GRADING
1/06/05 Revised GRADING & SHEET NO.

DATE NO.	REVISION

DEVELOPER/OWNER:

(OWNER) CHASE LIMITED PARTNERSHIP P.O. BOX 850 LAUREL, MD 20725 410.742.1294	(DEVELOPER) CHASE MINING LLC P.O. BOX 850 LAUREL, MD 20725 410.742.1294
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PROJECT
CHASE QUARRY

AREA ZONED M-1 & MXD-3, TAX MAP No. 43
PARCEL 234 & P.O. 235, BLOCK 19
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
REVISED SITE DEVELOPMENT PLAN

Patton Harris Rust & Associates, p.c.
Engineers, Surveyors, Planners, Landscape Architects.
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

8-30-05 DATE

DESIGNED BY : ACR

DRAWN BY : EMR

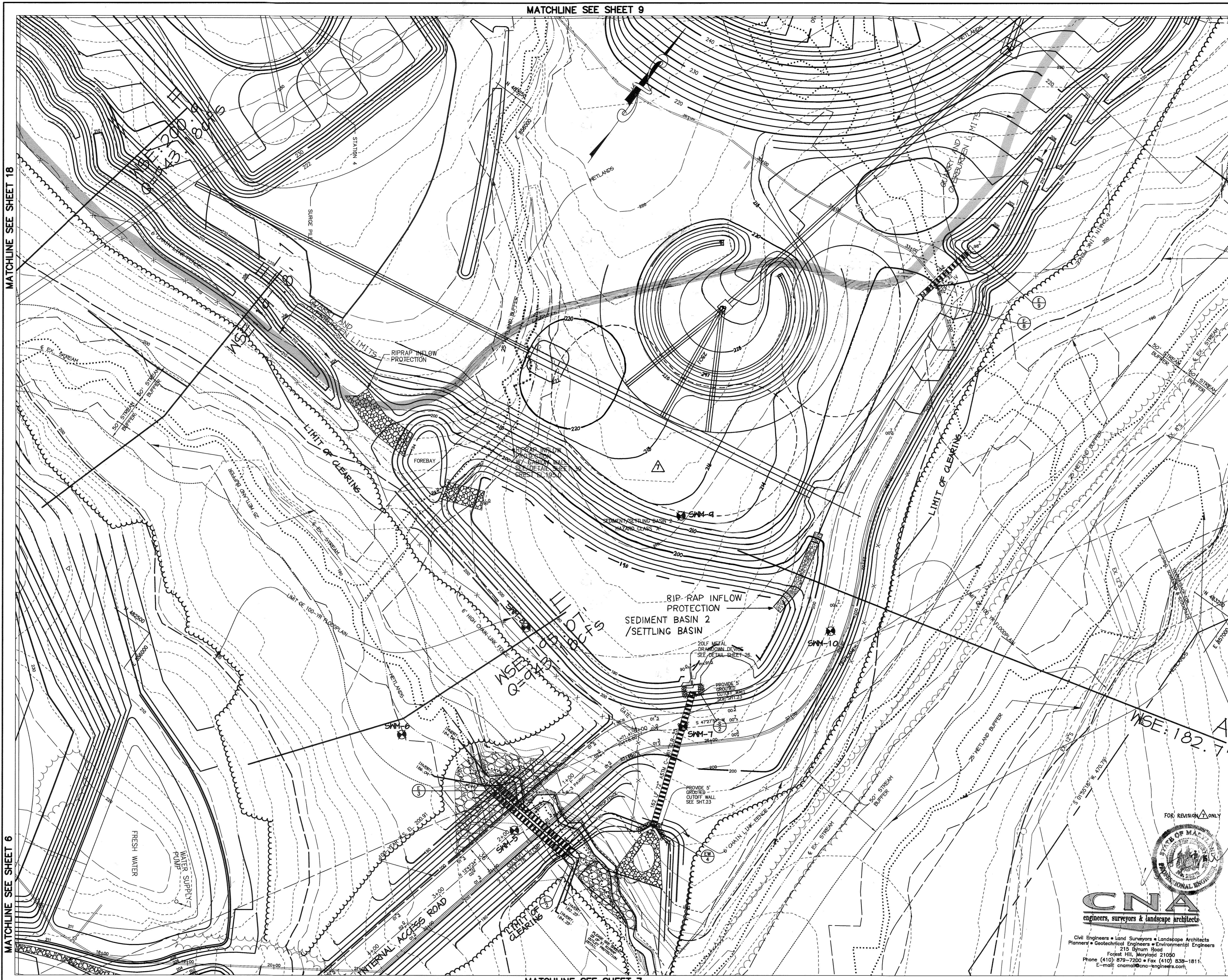
CHECKED BY : ACR

PROJECT NO : 99092/
SDPB.DWG

DATE : AUGUST 30, 2005

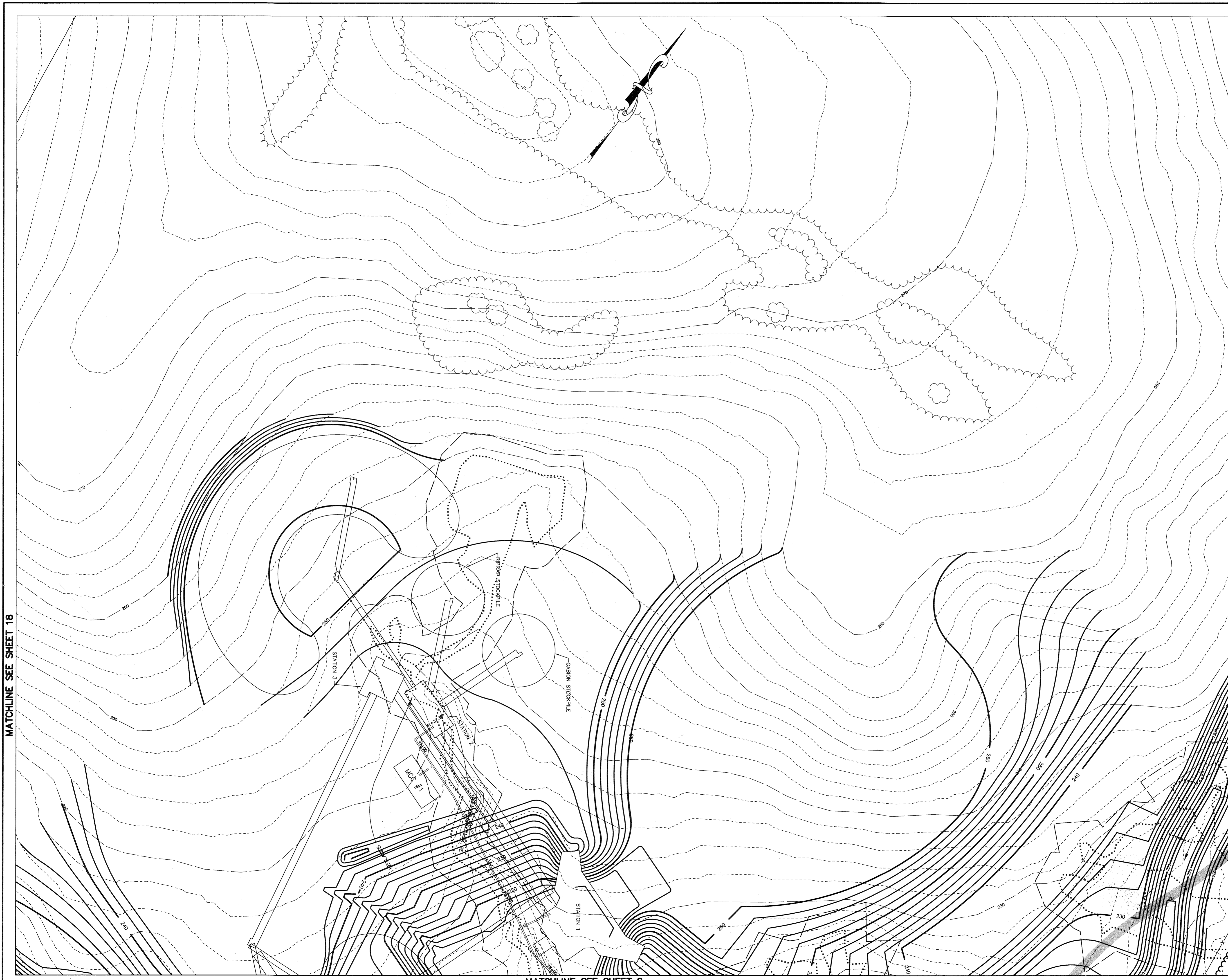
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AIMEE-C. REMINGTON #28923 DRAWING NO. 8 OF 55

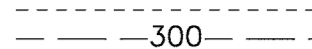
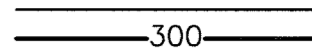




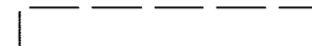


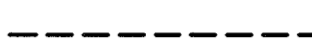
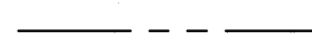


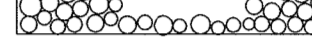
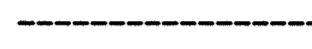




CNA
engineers, surveyors & landscape architects

Civil Engineers • Land Surveyors • Landscape Architects
Planners • Geotechnical Engineers • Environmental Engineers
215 Summit Road
Forest Hill, Maryland 21050
Phone (410) 879-7200 • Fax (410) 838-1811
E-mail: cna@cna-engineers.com

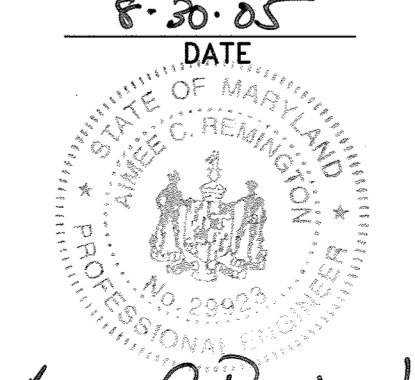


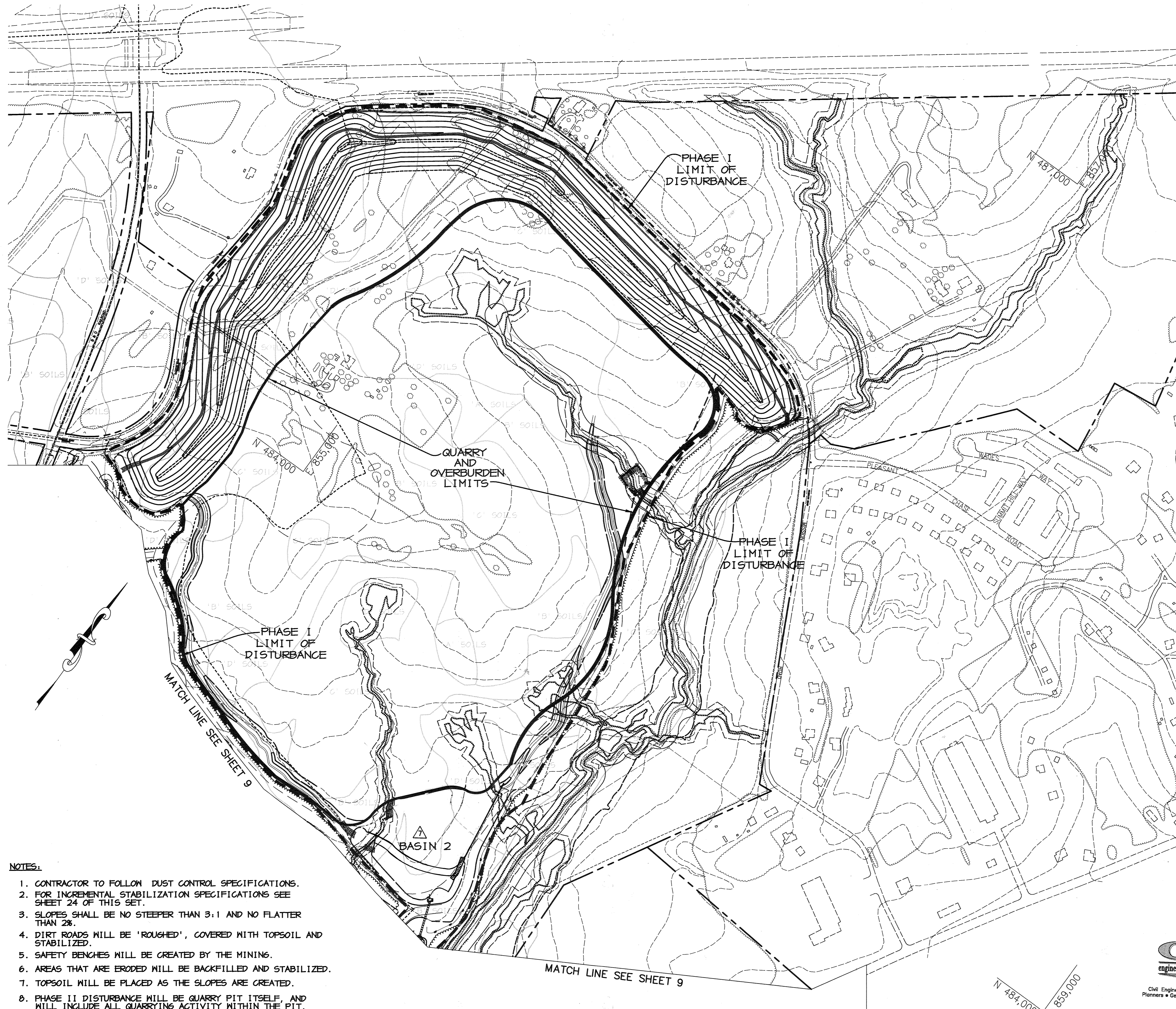
LEGEND

-  300 EXISTING CONTOURS
-  300 PROPOSED CONTOURS
-  EXISTING TREE LINE
-  PROPOSED TREE LINE
-  EXISTING ROAD
-  EXISTING BOUNDARY LINE
-  EXISTING BUILDING
-  EXISTING WETLANDS
-  APPROXIMATE LOCATION OF BENCH FOR BERM
-  EASEMENT
-  PROPOSED FENCE
-  RIP RAP OUTLET PROTECTION
-  LIMIT OF 100-YR FLOODPLAIN
-  10' BENCH
-  50'STREAM BUFFER
-  WETLAND BUFFER LIMITS
-  EXISTING STREAM

MATCHLINE SEE SHEET 18

MATCHLINE SEE SHEET 8

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.	
<i>Frank L. Coyle</i> DIRECTOR	10/2/05 DATE
<i>Chase</i> CHIEF, DEVELOPMENT ENGINEERING DIVISION	10/3/05 DATE
<i>Carla</i> CHIEF, DIVISION OF LAND DEVELOPMENT	10/6/05 DATE
DATE	NO.
REVISION	
DEVELOPER/OWNER:	
(OWNER) CHASE LIMITED PARTNERSHIP P.O. BOX 850 LAUREL, MD 20725 410.742.1234	(DEVELOPER) CHASE MINING LLC P.O. BOX 850 LAUREL, MD 20725 410.742.1234
PROJECT CHASE QUARRY	
AREA ZONED M-1 & MXD-3, TAX MAP No. 43 PARCEL 234 & P.O. 235, BLOCK 14 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND	
TITLE SITE DEVELOPMENT PLAN	
Patton Harris Rust & Associates, p.c. Engineers, Surveyors, Planners, Landscape Architects. 8818 Centre Park Drive Columbia, MD 21045 T 410.997.8900 F 410.997.9282	
<i>8-30-05</i> DATE	DESIGNED BY : ACR
	DRAWN BY : EMR
	CHECKED BY : ACR
	PROJECT NO : 99092/ SDP8ADWG
	DATE : AUGUST 30, 2005
SCALE : 1" = 50'	DRAWING NO. 9 OF 55
<i>Aimee C. Remington</i> AIMEE C. REMINGTON #29923	SDP-99-134



LEGEND

	EXISTING CONTOURS
	PROPOSED CONTOURS
	EXISTING TREE LINE
	PROPOSED TREE LINE
	EXISTING ROAD
	EXISTING BOUNDARY LINE
	EXISTING BUILDING
	EXISTING WETLANDS
	APPROXIMATE LOCATION OF BENCH FOR BERM
	EXISTING SOILS
	EASEMENT
	EXISTING FENCE
	DRAINAGE AREA DIVIDE TO INLETS
	LIMIT OF DISTURBANCE, PHASE I
	EROSION CONTROL MATTING
	SILT FENCE
	SUPER SILT FENCE
	RIP RAP OUTLET PROTECTION
	GABION INFLOW PROTECTION
	EARTH DIKE
	TEMPORARY SWALE
	LIMIT OF 100-YR FLOODPLAIN
	REMOVABLE PUMPING STATION
	10' BENCH ALONG LANDSCAPE BERM
	50' STREAM BUFFER
	WETLAND BUFFER LIMITS
	EXISTING STREAM

- NOTES:**
1. CONTRACTOR TO FOLLOW DUST CONTROL SPECIFICATIONS.
 2. FOR INCREMENTAL STABILIZATION SPECIFICATIONS SEE SHEET 24 OF THIS SET.
 3. SLOPES SHALL BE NO STEEPER THAN 3:1 AND NO FLATTER THAN 2%.
 4. DIRT ROADS WILL BE 'ROUGHED', COVERED WITH TOPSOIL AND STABILIZED.
 5. SAFETY BENCHES WILL BE CREATED BY THE MINING.
 6. AREAS THAT ARE ERODED WILL BE BACKFILLED AND STABILIZED.
 7. TOPSOIL WILL BE PLACED AS THE SLOPES ARE CREATED.
 8. PHASE II DISTURBANCE WILL BE QUARRY PIT ITSELF, AND WILL INCLUDE ALL QUARRYING ACTIVITY WITHIN THE PIT.

07-22-16 PLANT RELOCATION - CNA, INC.	
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.	
<i>David D. Taylor</i>	2/25/14
DIRECTOR	DATE
<i>Chris Horvath</i>	2/20/14
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
<i>Chris Horvath</i>	2/11/14
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE
6-15-05 CHANGED SHEET NO.	
1-6-05 CHANGED SHEET NO.	
DATE NO.	REVISION
DEVELOPER/OWNER:	
(OWNER) CHASE LIMITED PARTNERSHIP P.O. BOX 850 LAUREL, MD 207125 410.142.1234	(DEVELOPER) CHASE MINING LLC P.O. BOX 850 LAUREL, MD 207125 410.142.1234
PROJECT	
CHASE QUARRY	
AREA ZONED M-1 & MXD-3, TAX MAP No. 43 PARCEL 234 & P.O. 235, BLOCK 19 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND	
TITLE	
OVERALL EROSION & SEDIMENT CONTROL PLAN	
Patton Harris Rust & Associates, PC Engineers, Surveyors, Planners, Landscape Architects. 8818 Centre Park Drive Columbia, MD 21045 T 410.997.8900 F 410.997.9282	
1-30-04	DATE
	DESIGNED BY: C.J.R.
	DRAWN BY:
	CHECKED BY: C.J.R.
	PROJECT NO: 99092/ OVER10.DWG
	DATE: JANUARY 29, 2004
	SCALE: 1" = 200'
	DRAWING NO. 11 OF 55
CHRISTOPHER J. REID #19949	

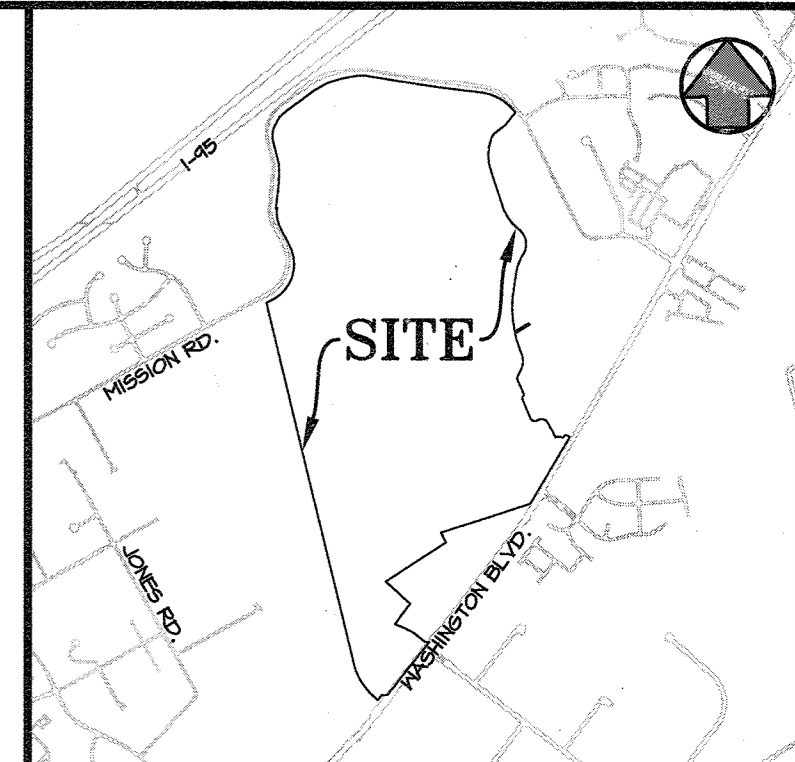
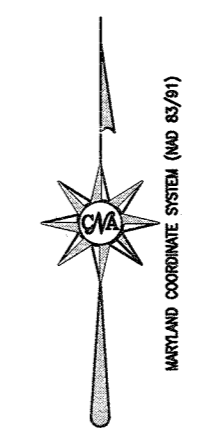
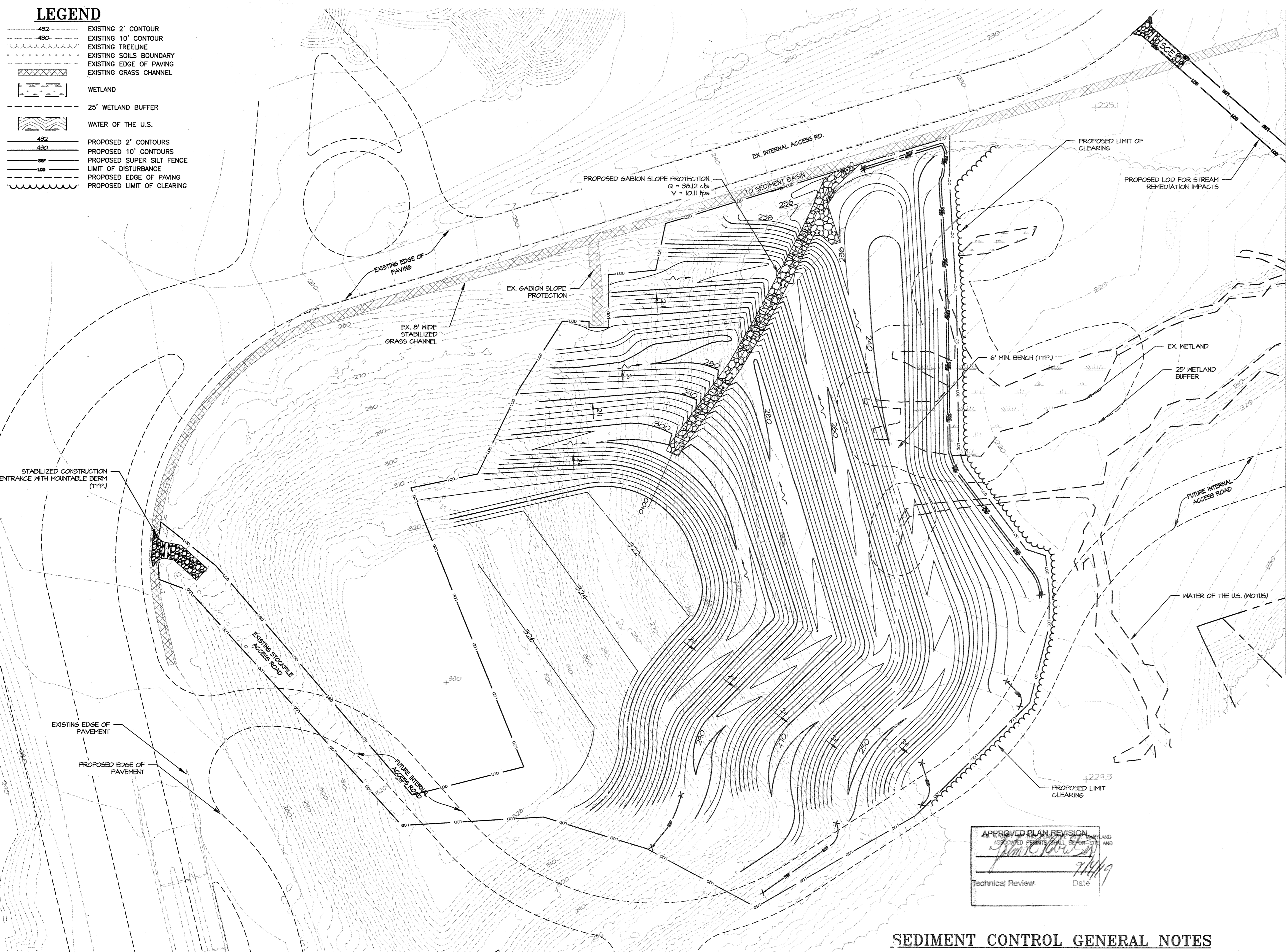
FOR REVISION ONLY

Civil Engineers • Land Surveyors • Landscape Architects
Planners • Geotechnical Engineers • Environmental Engineers
Forest Hill, Maryland 21050
Phone (410) 879-7200 • Fax (410) 838-1811
E-mail: cna@mail@cna-engineers.com

P:\project\99092\1-0\Engr\Plans\OVER10.dwg - Layout1_01/29/2004 12:28:26 PM, HP1050C_Mylar.pc3, Arch D - 24 x 36 in. (landscape), 1:1

LEGEND

	EXISTING 2' CONTOUR
	EXISTING 10' CONTOUR
	EXISTING TREELINE
	EXISTING SOILS BOUNDARY
	EXISTING EDGE OF PAVING
	EXISTING GRASS CHANNEL
	WETLAND
	25' WETLAND BUFFER
	WATER OF THE U.S.
	PROPOSED 2' CONTOURS
	PROPOSED 10' CONTOURS
	PROPOSED SUPER SILT FENCE
	LIMIT OF DISTURBANCE
	PROPOSED EDGE OF PAVING
	PROPOSED LIMIT OF CLEARING



LOCATION MAP
SCALE: 1" = 2000'

MAINTENANCE NOTE

CONTRACTOR SHALL INSPECT AND MAINTAIN ALL SEDIMENT CONTROL MEASURES AND DEVICES AFTER EVERY STORM EVENT. MAINTENANCE SHALL INCLUDE, BUT NOT BE LIMITED TO THE REMOVAL OF ALL ACCUMULATED SEDIMENT, GEOTEXTILE FABRIC SHALL BE REPLACED AS NEEDED TO ENSURE PROPER FUNCTION.

**HOWARD SOIL CONSERVATION DISTRICT (HSCD)
STANDARD SEDIMENT CONTROL NOTES**

- A PRE-CONSTRUCTION MEETING MUST OCCUR WITH THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS, CONSTRUCTION INSPECTION DIVISION (CID), 410-313-1855 AFTER THE FUTURE LOD AND PROTECTED AREAS ARE MARKED CLEARLY IN THE FIELD. A MINIMUM OF 48 HOUR NOTICE TO CID MUST BE GIVEN AT THE FOLLOWING STAGES:
 - PRIOR TO THE START OF EARTH DISTURBANCE.
 - UPON COMPLETION OF THE INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING.
 - PRIOR TO THE START OF ANOTHER PHASE OF CONSTRUCTION OR OPENING OF ANOTHER GRADING UNIT.
 - PRIOR TO THE REMOVAL OR MODIFICATION OF SEDIMENT CONTROL PRACTICES.
- OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE. OTHER RELATED STATE AND FEDERAL PERMITS SHALL BE REFERENCED, TO ENSURE COORDINATION AND TO AVOID CONFLICTS WITH THIS PLAN.
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND REVISIONS THERETO.
- FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION IS REQUIRED WITHIN THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED AREAS ON THE PROJECT SITE EXCEPT FOR THOSE AREAS UNDER ACTIVE GRADING.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR TOPSOIL (SEC. 8-4-2), PERMANENT SEEDING (SEC. 8-4-3), TEMPORARY SEEDING (SEC. 8-4-4) AND MULCHING (SEC. 8-4-5). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES IF THE GROUND IS FROZEN. INCREMENTAL STABILIZATION (SEC. 8-4-1) SPECIFICATIONS SHALL BE ENFORCED IN AREAS WITH >15 OF CUT AND/OR FILL STOCKPILES (SEC. 8-4-8) IN EXCESS OF 20 FT. MUST BE BENCHED WITH STABLE OUTLET. ALL CONCENTRATED FLOW, STEEP SLOPE, AND HIGHLY ERODIBLE AREAS SHALL RECEIVE SOIL STABILIZATION MATTING (SEC. 8-4-6).
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE, AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE CID.
- SITE ANALYSIS:**

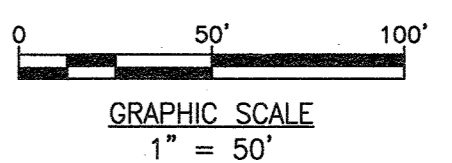
TOTAL AREA OF SITE:	6.89 ACRES
AREA TO BE ROOFED OR PAVED:	0 ACRES
AREA TO BE VEGETATIVELY STABILIZED:	6.89 ACRES
TOTAL CUT:	619.59 CU. YDS.
TOTAL FILL:	213,418 CU. YDS.
OFFSITE WASTE/BORROW AREA LOCATION:	18D
- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE CID. THE SITE AND ALL CONTROLS SHALL BE INSPECTED BY THE CONTRACTOR WEEKLY; AND THE NEXT DAY AFTER EACH RAIN EVENT. A WRITTEN REPORT BY THE CONTRACTOR, MADE AVAILABLE UPON REQUEST, IS PART OF EVERY INSPECTION AND SHOULD INCLUDE:
 - INSPECTION DATE
 - INSPECTION TYPE (ROUTINE, PRE-STORM EVENT, DURING RAIN EVENT)
 - NAME AND TITLE OF INSPECTOR
 - WEATHER INFORMATION (CURRENT CONDITIONS AS WELL AS TIME AND AMOUNT OF LAST RECORDED PRECIPITATION)
 - BRIEF DESCRIPTION OF PROJECT'S STATUS (E.G., PERCENT COMPLETE) AND/OR CURRENT ACTIVITIES
 - EVIDENCE OF SEDIMENT DISCHARGES
 - IDENTIFICATION OF PLAN DEFICIENCIES
 - IDENTIFICATION OF SEDIMENT CONTROLS THAT REQUIRE MAINTENANCE
 - IDENTIFICATION OF MISSING OR IMPROPERLY INSTALLED SEDIMENT CONTROLS
 - COMPLIANCE STATUS REGARDING THE SEQUENCE OF CONSTRUCTION AND STABILIZATION REQUIREMENTS
 - PHOTOGRAPHS
 - MONITORING/SAMPLING
 - MAINTENANCE AND/OR CORRECTIVE ACTION PERFORMED
 - OTHER INSPECTION ITEMS AS REQUIRED BY THE GENERAL PERMIT FOR STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES (NPDES, MDE).
- TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN AND SHALL BE BACK-FILLED AND STABILIZED BY THE END OF EACH WORKDAY, WHICHEVER IS SHORTER.
- ANY MAJOR CHANGES OR REVISIONS TO THE PLAN OR SEQUENCE OF CONSTRUCTION MUST BE REVIEWED AND APPROVED BY THE HSCD PRIOR TO PROCEEDING WITH CONSTRUCTION. MINOR REVISIONS MAY ALLOWED BY THE CID PER THE LIST OF HSCD-APPROVED FIELD CHANGES.
- DISTURBANCE SHALL NOT OCCUR OUTSIDE THE L.O.D. THE PROJECT IS TO BE SEQUENCED SO THAT GRADING ACTIVITIES BEGIN ON ONE GRADING UNIT (MAXIMUM ACREAGE OF 20 AC. PER GRADING UNIT) AT A TIME. WORK MAY PROCEED TO A SUBSEQUENT GRADING UNIT WHEN AT LEAST 50 PERCENT OF THE DISTURBED AREA IN THE PRECEDING GRADING UNIT HAS BEEN STABILIZED AND APPROVED BY THE CID. UNLESS OTHERWISE SPECIFIED AND APPROVED BY THE HSCD, NO MORE THAN 30 ACRES CUMULATIVELY MAY BE DISTURBED AT A GIVEN TIME.
- WASH WATER FROM ANY EQUIPMENT, VEHICLES, WHEELS, PAVEMENT, AND OTHER SOURCES MUST BE TREATED IN A SEDIMENT BASIN OR OTHER APPROVED WASHOUT STRUCTURE.
- TOPSOIL SHALL BE STOCKPILED AND PRESERVED ON-SITE FOR REDISTRIBUTION ONTO FINAL GRADE.
- ALL SILT FENCE AND SUPER SILT FENCE SHALL BE PLACED ON-THE-CONTOUR, AND BE IMBRICATED AT 25 MINUTE INTERVALS, WITH LOWER ENDS CURLED UPHILL BY 2 IN ELEVATION.
- STREAM CHANNELS MUST NOT BE DISTURBED DURING THE FOLLOWING RESTRICTED TIME PERIODS (INCLUSIVE):
 - USE I AND II MARCH 1 - JUNE 15
 - USE III AND IV OCTOBER 1 - APRIL 30
 - USE V MARCH 1 - MAY 31
- A COPY OF THIS PLAN, THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND ASSOCIATED PERMITS SHALL BE ON-SITE AND AVAILABLE WHEN THE SITE IS ACTIVE.

MATCHLINE A - SEE SHEET 2

APPROVED PLAN REVISION
ASSIGNED PERMITS SHALL BE FOR THE USE AND
DATE: 7/14/19
Technical Review Date

OWNER/DEVELOPER
SAVAGE STONE, LLC
P.O. BOX 850
LAUREL, MD 20725
ATTN: COLLIN SUMPTER

APPROVED BY HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
DIRECTOR: [Signature] DATE: 12-18-19
CHIEF, DEVELOPMENT ENGINEERING DIVISION: [Signature] DATE: 12-6-19
CHIEF, DIVISION OF LAND DEVELOPMENT: [Signature] DATE: 12/18/19



SEQUENCE OF CONSTRUCTION

- NOTIFY MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) INSPECTION AND COMPLIANCE PROGRAM (ICP) AT (410) 537-3510, SAVAGE STONE, LLC AT (410)792-7234, AND THE ENGINEER AT (410) 879-7200 AT LEAST 5 DAYS PRIOR TO BEGINNING WORK.
- CLEAR AND GRUB FOR SEDIMENT AND EROSION CONTROL MEASURES OR DEVICES ONLY.
- INSTALL ALL SEDIMENT AND EROSION CONTROL MEASURES AND DEVICES. USAGE AND LOCATION OF STABILIZED CONSTRUCTION ENTRANCE SHALL BE AT THE DISCRETION OF THE SEDIMENT CONTROL INSPECTOR.
- NOTIFY MARYLAND DEPARTMENT OF THE ENVIRONMENT INSPECTIONS AND COMPLIANCE PROGRAM UPON COMPLETION OF SAID INSTALLATION.
- WITH THE APPROVAL OF MDE-ICP INSPECTOR, BEGIN WORK.
- BEGIN STOCKPILING MATERIAL TO ELEVATION OF FIRST BENCH. AS STOCKPILE INCREASES IN ELEVATION, INSTALL GABION SLOPE PROTECTION SO RUNOFF CAN BE DIRECTED TO THE SEDIMENT BASIN. INSTALL ACCESS DRIVE IN STOCKPILE CONCURRENTLY WITH BENCHES. ONCE BENCH IS COMPLETE, GRADING FOR THE NEXT BENCH CAN BEGIN. GABION SLOPE PROTECTION MUST BE MAINTAINED AND MUST BE INSTALLED CONCURRENTLY WITH BENCHES.
- STREAM STABILIZATION WORK SHALL BE PERFORMED PRIOR TO OR CONCURRENT WITH STOCKPILE EXPANSION ACTIVITIES.
- STABILIZE MATERIAL IN ACCORDANCE WITH VEGETATIVE SPECIFICATIONS.
- UPON STABILIZATION OF THE STOCKPILE WITH ESTABLISHED VEGETATION AND WITH PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT CONTROL MEASURES AND STABILIZE THOSE AREAS DISTURBED BY THIS PROCESS.

INTERIM STOCKPILE ESC PLAN
SCALE: 1" = 50'

OVERALL SEDIMENT CONTROL QUANTITIES

EARTH DIKE:	0 L.F.±
CLEAN WATER EARTH DIKE:	0 L.F.±
SUPER SILT FENCE:	1,293 L.F.±
SILT FENCE:	0 L.F.±
MOUNTABLE BERM:	2 EA.
STABILIZED CONSTRUCTION ENTRANCE:	2 EA.
AREA TO BE PERMANENTLY STABILIZED:	6.89 AC.
SEDIMENT BASIN:	0 EA.
SEDIMENT TRAP:	0 EA.

OVERALL SITE ANALYSIS

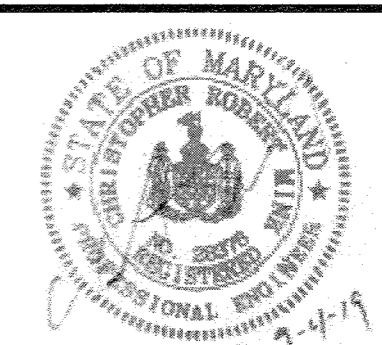
TOTAL AREA OF SITE:	300,259 Sq Ft±/6.89 Ac±
AREA TO BE CLEARED:	116,340 Sq Ft±/2.67 Ac±
AREA DISTURBED:	300,259 Sq Ft±/6.89 Ac±
AREA TO BE VEGETATIVELY STABILIZED:	619.59 Cu Yds
TOTAL CUT:	619.59 Cu Yds
TOTAL FILL:	213,418 Cu Yds

SEDIMENT CONTROL GENERAL NOTES

- REFER TO "2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL" FOR STANDARD DETAILS AND DETAILED SPECIFICATIONS OF EACH PRACTICE SPECIFIED HEREIN.
- WITH THE APPROVAL OF THE SEDIMENT CONTROL INSPECTOR, MINOR FIELD ADJUSTMENTS CAN AND WILL BE MADE TO INSURE THE CONTROL OF ANY SEDIMENT. CHANGES IN SEDIMENT CONTROL PRACTICES REQUIRE PRIOR APPROVAL OF THE SEDIMENT CONTROL INSPECTOR AND THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.
- AT THE END OF EACH WORKING DAY, ALL SEDIMENT CONTROL PRACTICES WILL BE INSPECTED AND LEFT IN OPERATIONAL CONDITION.
- FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN:
 - THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES GREATER THAN THREE HORIZONTAL TO ONE VERTICAL (3:1).
 - SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING.
- ANY CHANGE TO THE GRADING PROPOSED ON THIS PLAN REQUIRES RE-SUBMISSION TO HOWARD SOIL CONSERVATION DISTRICT FOR APPROVAL.
- DUST CONTROL WILL BE PROVIDED FOR ALL DISTURBED AREAS. REFER TO "2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL", PAGE H-22, FOR ACCEPTABLE METHODS AND SPECIFICATIONS FOR DUST CONTROL.
- ANY VARIATION FROM THE SEQUENCE OF OPERATIONS STATED ON THIS PLAN REQUIRES THE APPROVAL OF THE SEDIMENT CONTROL INSPECTOR AND THE HOWARD SOIL CONSERVATION DISTRICT PRIOR TO THE INITIATION OF THE CHANGE.
- EXCESS CUT OR BORROW MATERIAL SHALL GO TO, OR COME FROM, RESPECTIVELY, A SITE WITH AN OPEN GRADING PERMIT AND APPROVED SEDIMENT CONTROL PLAN.
- THE FOLLOWING ITEM MAY BE USED AS APPLICABLE: REFER TO "MARYLAND'S GUIDELINES TO WATERWAY CONSTRUCTION" BY THE WATER MANAGEMENT ADMINISTRATION OF THE MARYLAND DEPARTMENT OF THE ENVIRONMENT, REVISED NOVEMBER 2000, FOR STANDARD DETAILS AND DETAILED SPECIFICATIONS OF EACH PRACTICE SPECIFIED HEREIN FOR WATERWAY CONSTRUCTION.
- PUMPING SEDIMENT-LADEN WATER INTO WATERS OF THE STATE IS STRICTLY PROHIBITED. ANY PORTABLE Dewatering DEVICE MUST BE LOCATED WITHIN THE LIMIT OF DISTURBANCE.

CNA
engineers, surveyors & landscape architects

Civil Engineers • Land Surveyors • Landscape Architects
Planners • Geotechnical Engineers • Environmental Engineers
1830 Robin Circle
Forest Hill, Maryland 21050
Phone (410) 879-7200 • Fax (410) 838-1811
E-mail: cnamail@cna-engineers.com



INTERIM STOCKPILE & STREAM MITIGATION ESC PLAN
FOR

CHASE QUARRY

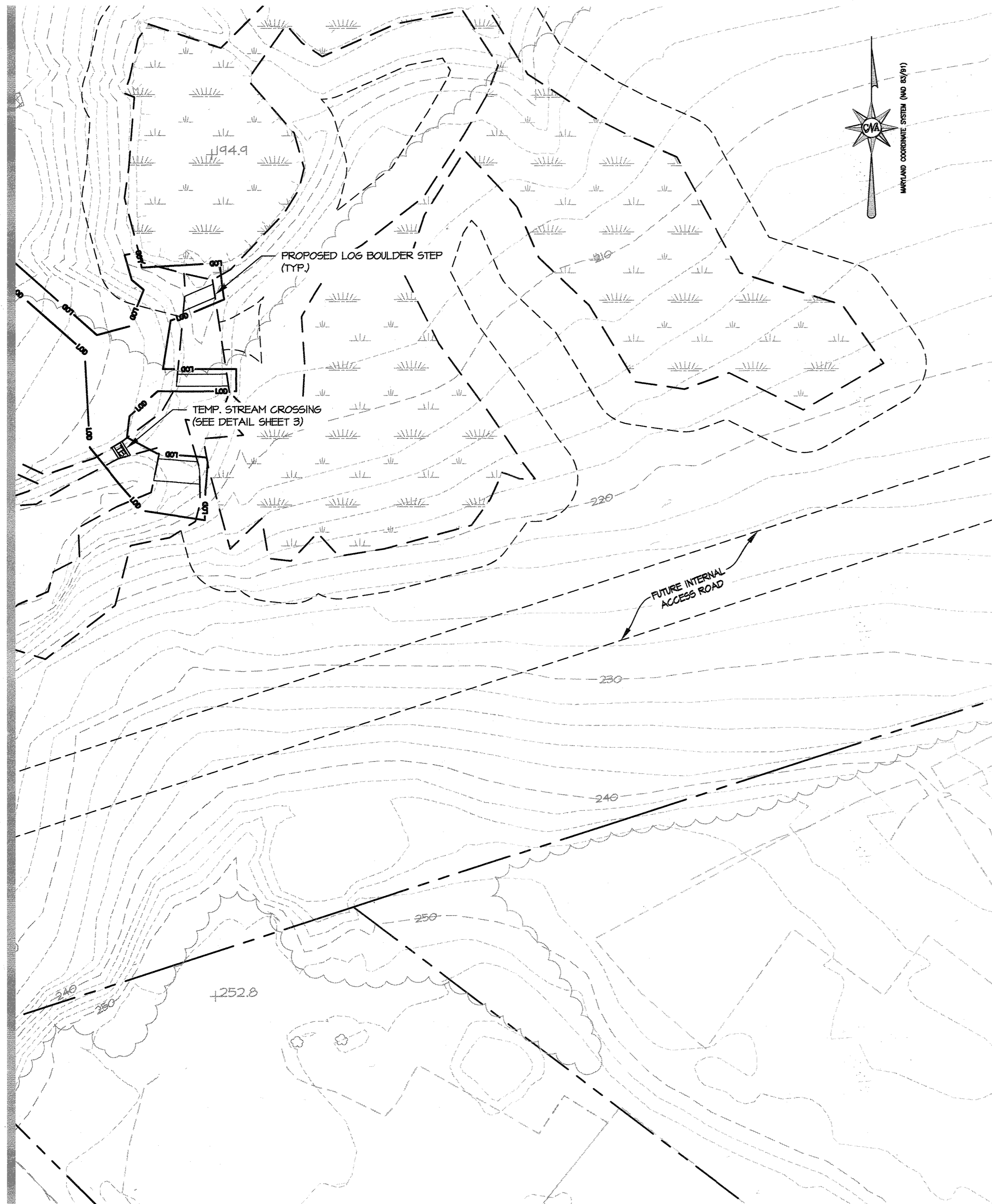
HOWARD COUNTY, MARYLAND

Date	Revisions	Date	Scale
		2/6/19	AS SHOWN
		Drawn By: SRS	Job No: 1921001.00
		Design By: SRS	Sheet: 52 of 55
		Review By: SRS	

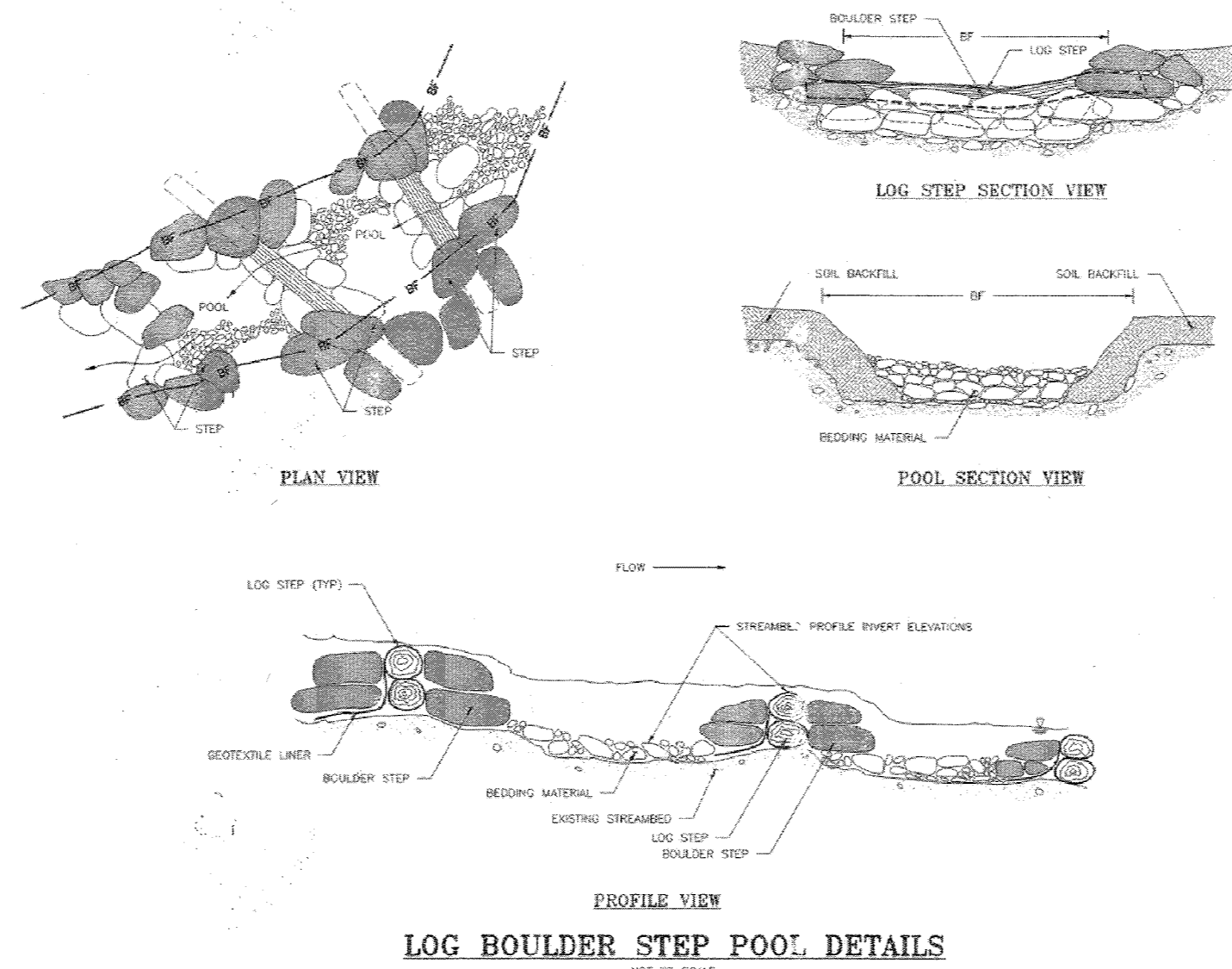
PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 28378, EXPIRATION DATE: 01/01/2021.

SDP-99-134

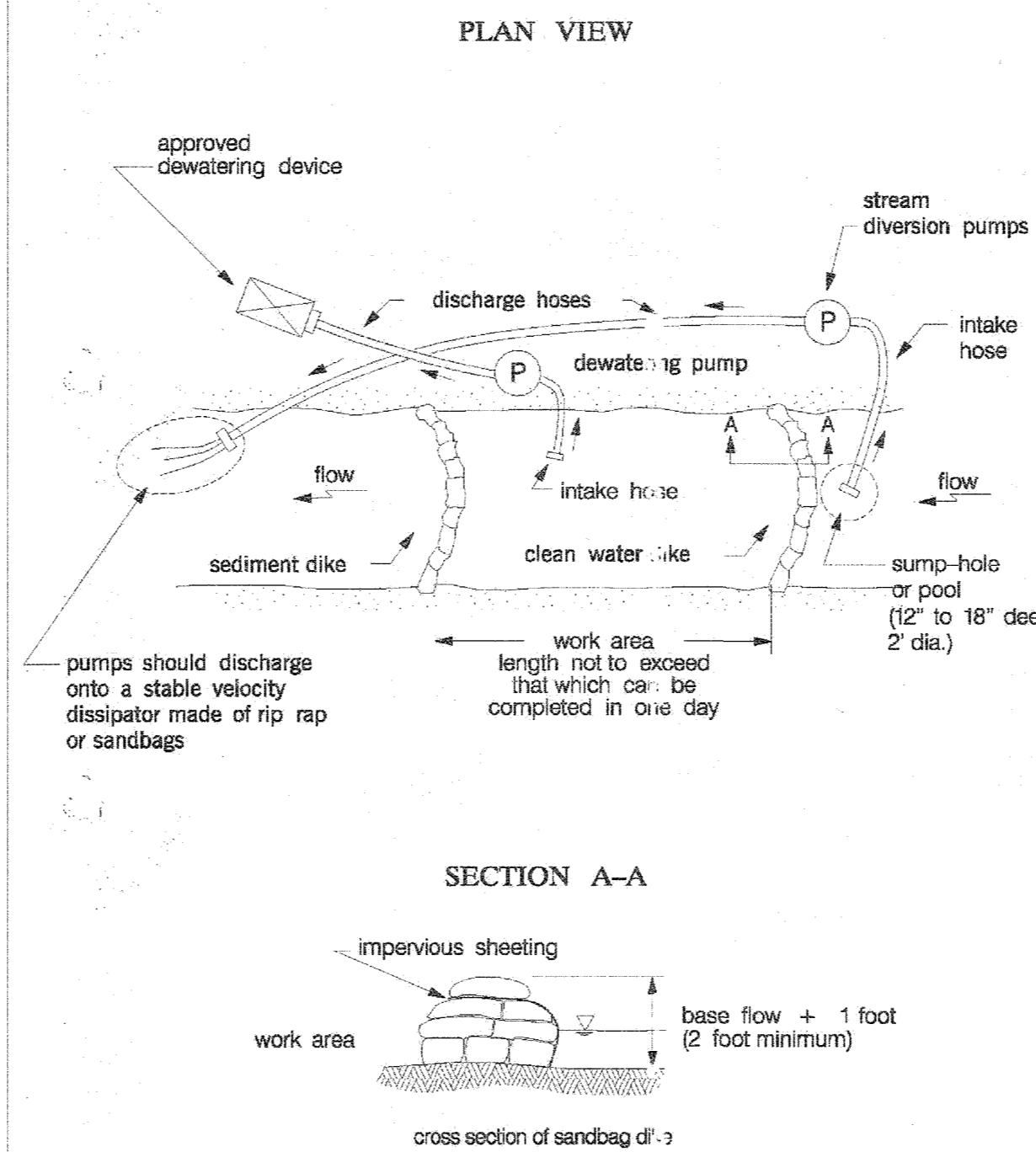
MATCHLINE A - SEE SHEET 1



INTERIM STOCKPILE ESC PLAN
SCALE: 1" = 50'



Maryland's Guidelines To Waterway Construction
DETAIL 1.2: PUMP-AROUND PRACTICE



TEMPORARY INSTREAM CONSTRUCTION MEASURES
REVISED NOVEMBER 2000
PAGE 1.2 - 3
MARYLAND DEPARTMENT OF THE ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION

MGWC 1.2: PUMP-AROUND PRACTICE

Temporary measure for dewatering in-channel construction sites

DESCRIPTION

The work should consist of installing a temporary pump around and supporting measures to divert flow around in-stream construction sites.

IMPLEMENTATION SEQUENCE

Sediment control measures, pump-around practices, and associated channel and bank construction should be completed in the following sequence (refer to Detail 1.2):

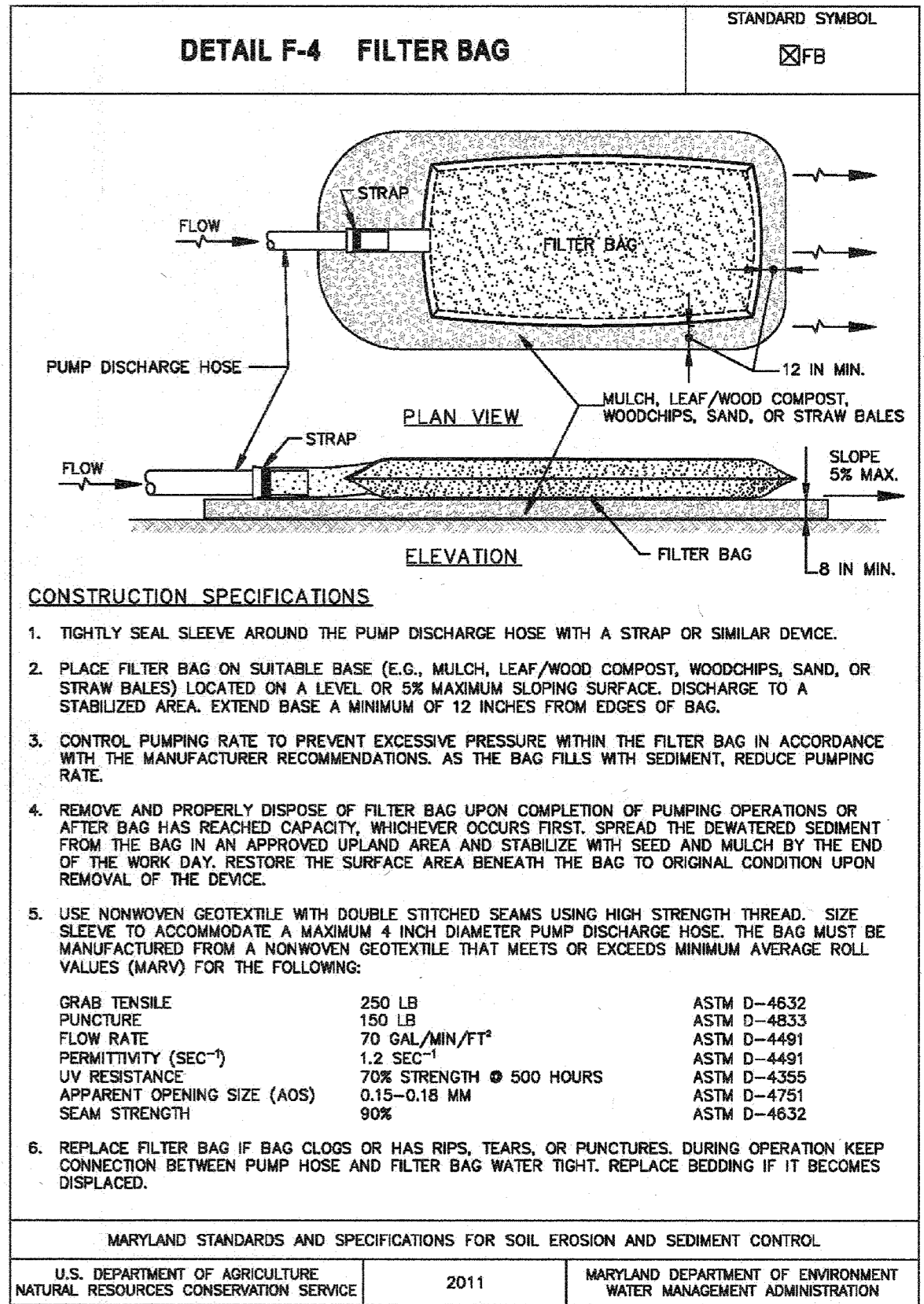
- Construction activities including the installation of erosion and sediment control measures should not begin until all necessary easements and/or right-of-ways have been acquired. All existing utilities should be marked in the field prior to construction. The contractor is responsible for any damage to existing utilities that may result from construction and should repair the damage at his/her own expense to the county's or utility company's satisfaction.
- The contractor should notify the Maryland Department of the Environment or WMA sediment control inspector at least 5 days before beginning construction. Additionally, the contractor should inform the local environmental protection and resource management inspection and enforcement division and the provider of local utilities a minimum of 48 hours before starting construction.
- The contractor should conduct a pre-construction meeting on site with the WMA sediment control inspector, the county project manager, and the engineer to review limits of disturbance, erosion and sediment control requirements, and the sequence of construction. The contractor should stake out all limits of disturbance prior to the pre-construction meeting so they may be reviewed. The participants will also designate the contractor's staging areas and flag all trees within the limit of disturbance which will be removed for construction access. Trees should not be removed within the limit of disturbance without approval from the WMA or local authority.
- Construction should not begin until all sediment and erosion control measures have been installed and approved by the engineer and the sediment control inspector. The contractor should stay within the limits of the disturbance as shown on the plans and minimize disturbance within the work area whenever possible.
- Upon installation of all sediment control measures and approval by the sediment control inspector and the local environmental protection and resource management inspection and enforcement division, the contractor should begin work at the upstream section and proceed downstream beginning with the establishment of stabilized construction entrances. In some cases, work may begin downstream if appropriate. The sequence of construction must be followed unless the contractor gets written approval for deviations from the WMA or local authority. The contractor should only begin work in an area which can be completed by the end of the day including grading adjacent to the channel. At the end of each work day, the work area must be stabilized and the pump around removed from the channel. Work should not be conducted in the channel during rain events.
- Sandbag dikes should be situated at the upstream and downstream ends of the work area as shown on the plans, and stream flow should be pumped around the work area. The pump should discharge onto a stable velocity dissipater made of riprap or sandbags.

TEMPORARY INSTREAM CONSTRUCTION MEASURES
MARYLAND DEPARTMENT OF THE ENVIRONMENT
WATERWAY CONSTRUCTION GUIDELINES
REVISED NOVEMBER 2000

MGWC 1.2: PUMP-AROUND PRACTICE

- Water from the work area should be pumped to a sediment filtering measure such as a dewatering basin, sediment bag, or other approved source. The measure should be located such that the water drains back into the channel below the downstream sandbag dike.
- Traversing a channel reach with equipment within the work area where no work is proposed should be avoided. If equipment has to traverse such a reach for access to another area, then timber mats or similar measures should be used to minimize disturbance to the channel. Temporary stream crossings should be used only when necessary and only where noted on the plans or specified. (See Section 4, Stream Crossings, Maryland Guidelines to Waterway Construction).
- All stream restoration measures should be installed as indicated by the plans and all banks graded in accordance with the grading plans and typical cross-sections. All grading must be stabilized at the end of each day with seed and mulch or seed and matting as specified on the plans.
- After an area is completed and stabilized, the clean water dike should be removed. After the final sediment flush, a new clean water dike should be established upstream from the old sediment dike. Finally, upon establishment of a new sediment dike below the old one, the old sediment dike should be removed.
- A pump around must be installed on any tributary or storm drain outfall which contributes baseflow to the work area. This should be accomplished by locating a sandbag dike at the downstream end of the tributary or storm drain outfall and pumping the stream flow around the work area. This water should discharge onto the same velocity dissipater used for the main stem pump around.
- If a tributary is to be restored, construction should take place on the tributary before work on the main stem reaches the tributary confluence. Construction in the tributary, including pump around practices, should follow the same sequence as for the main stem of the river or stream. When construction on the tributary is completed, work on the main stem should resume. Water from the tributary should continue to be pumped around the work area in the main stem.
- The contractor is responsible for providing access to and maintaining all erosion and sediment control devices until the sediment control inspector approves their removal.
- After construction, all disturbed areas should be regraded and revegetated as per the planting plan.

APPROVED PLAN REVISION
[Signature]
9/19/19
Technical Review Date



- CONSTRUCTION SPECIFICATIONS**
- TIGHTLY SEAL SLEEVE AROUND THE PUMP DISCHARGE HOSE WITH A STRAP OR SIMILAR DEVICE.
 - PLACE FILTER BAG ON SUITABLE BASE (E.G., MULCH, LEAF/WOOD COMPOST, WOODCHIPS, SAND, OR STRAW BALES) LOCATED ON A LEVEL OR 5% MAXIMUM SLOPING SURFACE. DISCHARGE TO A STABILIZED AREA. EXTEND BASE A MINIMUM OF 12 INCHES FROM EDGES OF BAG.
 - CONTROL PUMPING RATE TO PREVENT EXCESSIVE PRESSURE WITHIN THE FILTER BAG IN ACCORDANCE WITH THE MANUFACTURER RECOMMENDATIONS. AS THE BAG FILLS WITH SEDIMENT, REDUCE PUMPING RATE.
 - REMOVE AND PROPERLY DISPOSE OF FILTER BAG UPON COMPLETION OF PUMPING OPERATIONS OR AFTER BAG HAS REACHED CAPACITY, WHICHEVER OCCURS FIRST. SPREAD THE DEWATERED SEDIMENT FROM THE BAG IN AN APPROVED UPLAND AREA AND STABILIZE WITH SEED AND MULCH BY THE END OF THE WORK DAY. RESTORE THE SURFACE AREA BENEATH THE BAG TO ORIGINAL CONDITION UPON REMOVAL OF THE DEVICE.
 - USE NONWOVEN GEOTEXTILE WITH DOUBLE STITCHED SEAMS USING HIGH STRENGTH THREAD. SIZE SLEEVE TO ACCOMMODATE A MAXIMUM 4 INCH DIAMETER PUMP DISCHARGE HOSE. THE BAG MUST BE MANUFACTURED FROM A NONWOVEN GEOTEXTILE THAT MEETS OR EXCEEDS MINIMUM AVERAGE ROLL VALUES (MARY) FOR THE FOLLOWING:
- | | | |
|-----------------------------------|----------------------------|-------------|
| GRAB TENSILE | 250 LB | ASTM D-4832 |
| PUNCTURE | 150 LB | ASTM D-4833 |
| FLOW RATE | 70 GAL/MIN/FT ² | ASTM D-4491 |
| PERMITTIVITY (SEC ⁻¹) | 1.2 SEC ⁻¹ | ASTM D-4491 |
| UV RESISTANCE | 70% STRENGTH @ 500 HOURS | ASTM D-4355 |
| APPARENT OPENING SIZE (AOS) | 0.15-0.18 MM | ASTM D-4751 |
| SEAM STRENGTH | 90% | ASTM D-4832 |
- REPLACE FILTER BAG IF BAG CLOSURE HAS RIPS, TEARS, OR PUNCTURES. DURING OPERATION KEEP CONNECTION BETWEEN PUMP HOSE AND FILTER BAG WATER TIGHT. REPLACE BEDDING IF IT BECOMES DISPLACED.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL
U.S. DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE
2011
MARYLAND DEPARTMENT OF ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION

LEGEND

- 432 EXISTING 2' CONTOUR
- 430 EXISTING 10' CONTOUR
- EXISTING TRELLINE
- EXISTING SOILS BOUNDARY
- EXISTING EDGE OF PAVING
- EXISTING GRASS CHANNEL
- WETLAND
- 25' WETLAND BUFFER
- WATER OF THE U.S.
- 432 PROPOSED 2' CONTOURS
- 430 PROPOSED 10' CONTOURS
- PROPOSED SUPER SILT FENCE
- LIMIT OF DISTURBANCE
- PROPOSED EDGE OF PAVING
- PROPOSED LIMIT OF CLEARING

OWNER/DEVELOPER
SAVAGE STONE, LLC
P.O. BOX 850
LAUREL, MD 20725
ATTN: COLLIN SUMPTER

APPROVED BY HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
DIRECTOR: *[Signature]* 12/18/19
DATE: 12/18/19
CHIEF, DEVELOPMENT ENGINEERING DIVISION: *[Signature]* 12/18/19
DATE: 12/18/19
CHIEF, DIVISION OF LAND DEVELOPMENT: *[Signature]* 12/18/19
DATE: 12/18/19

CNA
Civil Engineers • Land Surveyors • Landscape Architects
Planners • Geotechnical Engineers • Environmental Engineers
1530 Robin Circle
Forest Hill, Maryland 21050
Phone (410) 879-7200 • Fax (410) 838-1811
E-mail: cnamail@cna-engineers.com

INTERIM STOCKPILE & STREAM MITIGATION ESC PLAN AND DETAILS
FOR
CHASE QUARRY
HOWARD COUNTY, MARYLAND

Date	Revisions	Date:	Scale:
		2/6/19	AS SHOWN
		Drawn By: SRS	Job No: 1921001.00
		Design By: SRS	Sheet: 53 of 55
		Review By: SRS	

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 28378, EXPIRATION DATE: 01/01/2021.

SDP 99-134

VEGETATIVE SPECIFICATIONS

B-4-2 STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

A. SOIL PREPARATION

1. TEMPORARY STABILIZATION

- a. SEEDBED PREPARATION CONSISTS OF LOOSENING SOIL TO A DEPTH OF 3 TO 5 INCHES BY MEANS OF SUITABLE AGRICULTURAL OR CONSTRUCTION EQUIPMENT...
b. APPLY FERTILIZER AND LIME AS PRESCRIBED ON THE PLANS.
c. INCORPORATE LIME AND FERTILIZER INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.
d. A SOIL TEST IS REQUIRED FOR ANY EARTH DISTURBANCE OF 5 ACRES OR MORE...
e. SOIL pH BETWEEN 6.0 AND 7.0
f. SOLUBLE SALTS LESS THAN 500 PARTS PER MILLION (PPM)
g. SOIL CONTAINS LESS THAN 40 PERCENT CLAY BUT ENOUGH FINE GRAINED MATERIAL (GREATER THAN 30 PERCENT SILT PLUS CLAY) TO PROVIDE THE CAPACITY TO HOLD A MODERATE AMOUNT OF MOISTURE...
h. SOIL CONTAINS 1.5 PERCENT MINIMUM ORGANIC MATTER BY WEIGHT.
i. SOIL CONTAINS SUFFICIENT PORE SPACE TO PERMIT ADEQUATE ROOT PENETRATION.

B. TOPSOILING

- 1. TOPSOIL IS PLACED OVER PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION...
2. TOPSOIL SALVAGED FROM AN EXISTING SITE MAY BE USED PROVIDED IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS...
3. TOPSOILING IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:
a. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.
b. THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT NUTRIENTS.
c. THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.
d. THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.
e. AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN.
4. TOPSOIL SPECIFICATIONS: SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING CRITERIA:
a. TOPSOIL MUST BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, OR LOAMY SAND...
b. TOPSOIL MUST BE FREE OF NOXIOUS PLANTS OR PLANT PARTS...
c. TOPSOIL SUBSTITUTES OR AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST...
5. TOPSOIL APPLICATION
a. EROSION AND SEDIMENT CONTROL PRACTICES MUST BE MAINTAINED WHEN APPLYING TOPSOIL.
b. UNIFORMLY DISTRIBUTE TOPSOIL IN A 5 TO 8 INCH LAYER AND LIGHTLY COMPACT TO A MINIMUM THICKNESS OF 4 INCHES.

C. SOIL AMENDMENTS (FERTILIZER AND LIME SPECIFICATIONS)

- 1. SOIL TESTS MUST BE PERFORMED TO DETERMINE THE EXACT RATIOS AND APPLICATION RATES FOR BOTH LIME AND FERTILIZER ON SITES HAVING DISTURBED AREAS OF 5 ACRES OR MORE...
2. FERTILIZERS MUST BE UNIFORM IN COMPOSITION, FREE FLOWING AND SUITABLE FOR ACCURATE APPLICATION...
3. LIME MATERIALS MUST BE GROUND LIMESTONE (HYDRATED OR BURNT LIME MAY BE SUBSTITUTED EXCEPT WITH HYDROSEEDING)...
4. LIME AND FERTILIZER ARE TO BE EVENLY DISTRIBUTED AND INCORPORATED INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.
5. WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, SPREAD GROUND LIMESTONE AT THE RATE OF 4 TO 8 TONS/ACRES (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL.

B-4-3 STANDARDS AND SPECIFICATION FOR SEEDING AND MULCHING

A. SEEDING

- 1. SPECIFICATIONS
a. ALL SEED MUST MEET THE REQUIREMENTS OF THE MARYLAND STATE SEED LAW...
b. MULCH ALONE MAY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES ONLY IF THE GROUND IS FROZEN...
c. INOCULANTS: THE INOCULANT FOR TREATING LEGUME SEED IN THE SEED MIXTURES MUST BE A PURE CULTURE OF NITROGEN FIXING BACTERIA...
d. SOD OR SEED MUST NOT BE PLACED ON SOIL WHICH HAS BEEN TREATED WITH SOIL STERILANTS OR CHEMICALS USED FOR WEED CONTROL...
2. APPLICATION
a. DRY SEEDING: THIS INCLUDES USE OF CONVENTIONAL DROP OR BROADCAST SPREADERS.
b. HYDROSEEDING: APPLY SEED UNIFORMLY WITH HYDROSEEDER (SLURRY INCLUDES SEED AND FERTILIZER).
i. IF FERTILIZER IS BEING APPLIED AT THE TIME OF SEEDING, THE APPLICATION RATES SHOULD NOT EXCEED THE FOLLOWING: NITROGEN, 100 POUNDS PER ACRE...
ii. LIME: USE ONLY GROUND AGRICULTURAL LIMESTONE (UP TO 3 TONS PER ACRE MAY BE APPLIED BY HYDROSEEDING)...
iii. MIX SEED AND FERTILIZER ON SITE AND SEED IMMEDIATELY AND WITHOUT INTERRUPTION.

B. MULCHING

- 1. MULCH MATERIALS (IN ORDER OF PREFERENCE)
a. STRAW CONSISTING OF THOROUGHLY THRESHED WHEAT, RYE, OAT, OR BARLEY AND REASONABLY BRIGHT IN COLOR...
b. WOOD CELLULOSE FIBER MULCH (WCFM) CONSISTING OF SPECIALLY PREPARED WOOD CELLULOSE PROCESSED INTO A UNIFORM FIBROUS PHYSICAL STATE.

WOOD CELLULOSE FIBER MULCH (WCFM) CONSISTING OF SPECIALLY PREPARED WOOD CELLULOSE PROCESSED INTO A UNIFORM FIBROUS PHYSICAL STATE.

- i. WCFM IS TO BE DYED GREEN OR CONTAIN A GREEN DYE IN THE PACKAGE THAT WILL PROVIDE AN APPROPRIATE COLOR TO FACILITATE VISUAL INSPECTION...
ii. WCFM, INCLUDING DYE, MUST CONTAIN NO GERMINATION OR GROWTH INHIBITING FACTORS.
iii. WCFM MATERIALS ARE TO BE MANUFACTURED AND PROCESSED IN SUCH A MANNER THAT THE WOOD CELLULOSE FIBER MULCH WILL REMAIN IN UNIFORM SUSPENSION IN WATER...
iv. WCFM MATERIAL MUST NOT CONTAIN ELEMENTS OF COMPOUNDS AT CONCENTRATION LEVELS THAT WILL BE PHYTO-TOXIC.
v. WCFM MUST CONFORM TO THE FOLLOWING PHYSICAL REQUIREMENTS: FIBER LENGTH OF APPROXIMATELY 10 MILLIMETERS...
2. APPLICATION
a. APPLY MULCH TO ALL SEEDED AREAS IMMEDIATELY AFTER SEEDING.
b. WHEN STRAW IS USED, SPREAD IT OVER ALL SEEDED AREAS AT THE RATE OF 2 TONS PER ACRE TO A UNIFORM LOOSE DEPTH OF 1 TO 2 INCHES...
c. WOOD CELLULOSE FIBER USED AS MULCH MUST BE APPLIED AT A NET DRY WEIGHT OF 1600 POUNDS PER ACRE...
3. ANCHORING
a. PERFORM MULCH ANCHORING IMMEDIATELY FOLLOWING APPLICATION OF MULCH TO MINIMIZE LOSS BY WIND OR WATER...
i. A MULCH ANCHORING TOOL IS A TRACTOR DRAWN IMPLEMENT DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE...
ii. WOOD CELLULOSE FIBER MAY BE USED FOR ANCHORING STRAW...
iii. SYNTHETIC BINDERS SUCH AS ACRYLIC DLR (AGRO-TACK), DCA-70, PETROSET, TERRA TACK II, TERRA TACK AR OR OTHER APPROVED EQUAL MAY BE USED...
iv. LIGHTWEIGHT PLASTIC NETTING MAY BE STAPLED OVER THE MULCH...
b. PERFORM MULCH ANCHORING IMMEDIATELY FOLLOWING APPLICATION OF MULCH TO MINIMIZE LOSS BY WIND OR WATER...
i. A MULCH ANCHORING TOOL IS A TRACTOR DRAWN IMPLEMENT DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE...
ii. WOOD CELLULOSE FIBER MAY BE USED FOR ANCHORING STRAW...
iii. SYNTHETIC BINDERS SUCH AS ACRYLIC DLR (AGRO-TACK), DCA-70, PETROSET, TERRA TACK II, TERRA TACK AR OR OTHER APPROVED EQUAL MAY BE USED...
iv. LIGHTWEIGHT PLASTIC NETTING MAY BE STAPLED OVER THE MULCH...

B-4-4 STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION

- CONDITIONS WHERE PRACTICE APPLIES: EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR A PERIOD OF 6 MONTHS OR LESS...
CRITERIA:
1. SELECT ONE OR MORE OF THE SPECIES OR SEED MIXTURES LISTED IN TABLE B.1 FOR THE APPROPRIATE PLANT HARDINESS ZONE...
2. FOR SITES HAVING SOIL TESTS PERFORMED, USE AND SHOW THE RECOMMENDED RATES BY THE TESTING AGENCY...
3. WHEN STABILIZATION IS REQUIRED OUTSIDE OF A SEEDING SEASON, APPLY SEED AND MULCH OR STRAW MULCH ALONE AS PRESCRIBED IN SECTION B-4-3A.1.b AND MAINTAIN UNTIL THE NEXT SEEDING SEASON.

Table with 5 columns: NO., SPECIES, APPLICATION RATE (lb/acre), SEEDING DATES, SEEDING DEPTHS, FERTILIZER RATE (10-20-20), LIME RATE. Includes rows for Annual Ryegrass and Foxtail Millet.

- NOTES:
1. SEEDING RATES FOR THE WARM-SEASON GRASSES ARE IN TONS OF PURE LIVE SEED (PLS)...
2. FOR SANDY SOILS, PLANT SEEDS AT TWICE THE DEPTH LISTED ABOVE.
3. THE PLANTING DATES LISTED ARE AVERAGES FOR EACH ZONE AND MAY REQUIRE ADJUSTMENT TO REFLECT LOCAL CONDITIONS...
SEEDING RATES LISTED ABOVE ARE FOR TEMPORARY SEEDINGS...
OATS ARE THE RECOMMENDED NURSE CROP FOR WARM-SEASON GRASSES.

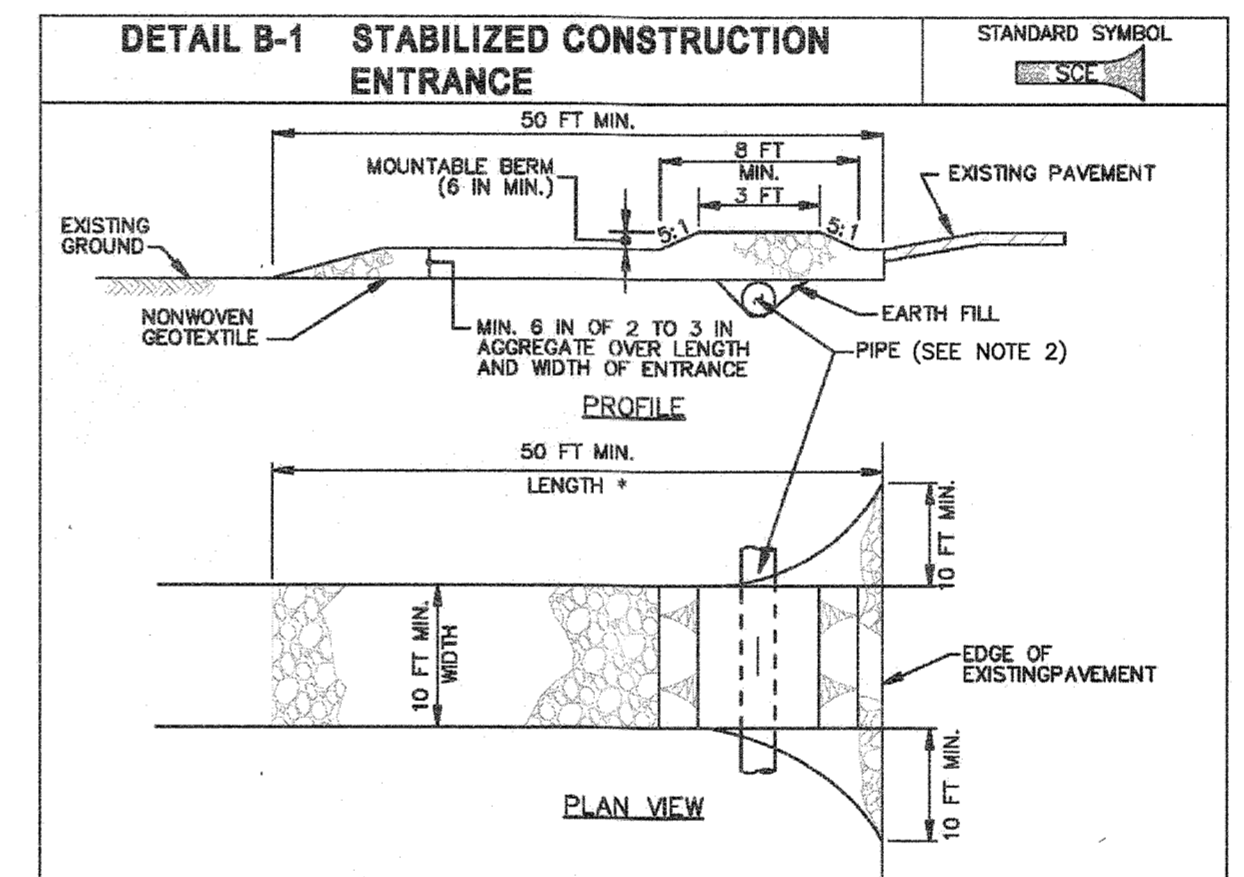
B-4-5 STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION

- CONDITIONS WHERE PRACTICE APPLIES: EXPOSED SOILS WHERE GROUND COVER IS NEEDED FOR 6 MONTHS OR MORE.
CRITERIA:
A. SEED MIXTURES
1. GENERAL USE
a. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TABLE B.3 FOR THE APPROPRIATE PLANT HARDINESS ZONE...
b. ADDITIONAL PLANTING SPECIFICATIONS FOR EXCEPTIONAL SITES SUCH AS SHOULDER, STREAM BANKS, OR DUNES...
c. FOR SITES HAVING DISTURBED AREA OVER 5 ACRES...
d. FOR AREAS RECEIVING LOW MAINTENANCE...
2. TURFGRASS MIXTURE
a. AREAS WHERE TURFGRASS MAY BE DESIRED INCLUDE LAWNS, PARKS, PLAYGROUNDS, AND COMMERCIAL SITES...
b. SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED BELOW BASED ON THE SITE CONDITIONS...
i. KENTUCKY BLUEGRASS: FULL SUN MIXTURE...
ii. KENTUCKY BLUEGRASS/PERENNIAL RYE: FULL SUN MIXTURE...
iii. TALL FESCUE/KENTUCKY BLUEGRASS: FULL SUN MIXTURE...
iv. KENTUCKY BLUEGRASS/FINE FESCUE: SHADE MIXTURE...
c. IDEAL TIMES OF SEEDING FOR TURF GRASS MIXTURES
WESTERN MD: MARCH 15 TO JUNE 1, AUGUST 1 TO OCTOBER 1...
CENTRAL MD: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15...
SOUTHERN MD, EASTERN SHORE: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15...
d. TALL AREAS TO RECEIVE SEED BY DISKING OR OTHER APPROVED METHODS...
e. IF SOIL MOISTURE IS DEFICIENT, SUPPLY NEW SEEDINGS WITH ADEQUATE WATER...

CHOOSE CERTIFIED MATERIAL, CERTIFIED MATERIAL IS THE BEST GUARANTEE OF CULTURAL PURITY, THE CERTIFICATION PROGRAM OF THE MARYLAND DEPARTMENT OF AGRICULTURE, TURF AND SEED SECTION, PROVIDES A RELIABLE MEANS OF CONSUMER PROTECTION AND ASSURES A PURE GENETIC LINE.

PERMANENT SEEDING SUMMARY table with columns for MIX, SPECIES, APPLICATION RATE, SEEDING DATES, SEEDING DEPTHS, FERTILIZER RATE, LIME RATE. Includes row for Tall Fescue.

- 1. GENERAL SPECIFICATIONS
a. CLASS OF TURFGRASS SOD MUST BE MARYLAND STATE CERTIFIED...
b. SOD MUST BE MACHINE CUT AT A UNIFORM SOIL THICKNESS...
c. STANDARD SIZE SECTIONS OF SOD MUST BE STRONG ENOUGH TO SUPPORT THEIR OWN WEIGHT...
d. SOD MUST BE HARVESTED, DELIVERED, AND INSTALLED WITHIN A PERIOD OF 36 HOURS...
e. SOD MUST BE MAINTAINED PRIOR TO LAYING THE SOD...
2. SOD INSTALLATION
a. DURING PERIODS OF EXCESSIVELY HIGH TEMPERATURE OR IN AREAS HAVING DRY SUBSOIL...
b. LAY THE FIRST ROW OF SOD IN A STRAIGHT LINE...
c. WHEREVER POSSIBLE, LAY SOD WITH THE LONG EDGES PARALLEL TO THE CONTOUR...
d. WATER THE SOD IMMEDIATELY FOLLOWING ROLLING AND TAMPING...
3. SOD MAINTENANCE
a. IN THE ABSENCE OF ADEQUATE RAINFALL, WATER DAILY DURING THE FIRST WEEK...
b. AFTER THE FIRST WEEK, SOD WATERING IS REQUIRED AS NECESSARY...
c. DO NOT MOW UNTIL THE SOD IS FIRMLY ROOTED...



- CONSTRUCTION SPECIFICATIONS
1. PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN...
2. PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE...
3. PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE...
4. PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE...
5. MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT...

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL. U.S. DEPARTMENT OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE, 2011. MARYLAND DEPARTMENT OF THE ENVIRONMENT, WATER MANAGEMENT ADMINISTRATION.

MGWC 4.8: TEMPORARY ACCESS BRIDGE

- 7. All areas disturbed during installation should be stabilized within 14 calendar days...
8. Periodic inspection should be performed by the user to ensure that the bridge, streambed, and stream banks are maintained and not damaged.
9. Maintenance should be performed as needed to ensure that the structure complies with all standards and specifications...
10. When the temporary bridge is no longer needed, all structures including abutments and other bridging materials should be removed within 14 calendar days...

MGWC 4.8: TEMPORARY ACCESS BRIDGE

Temporary stream crossing intended for minimum corridor disturbance

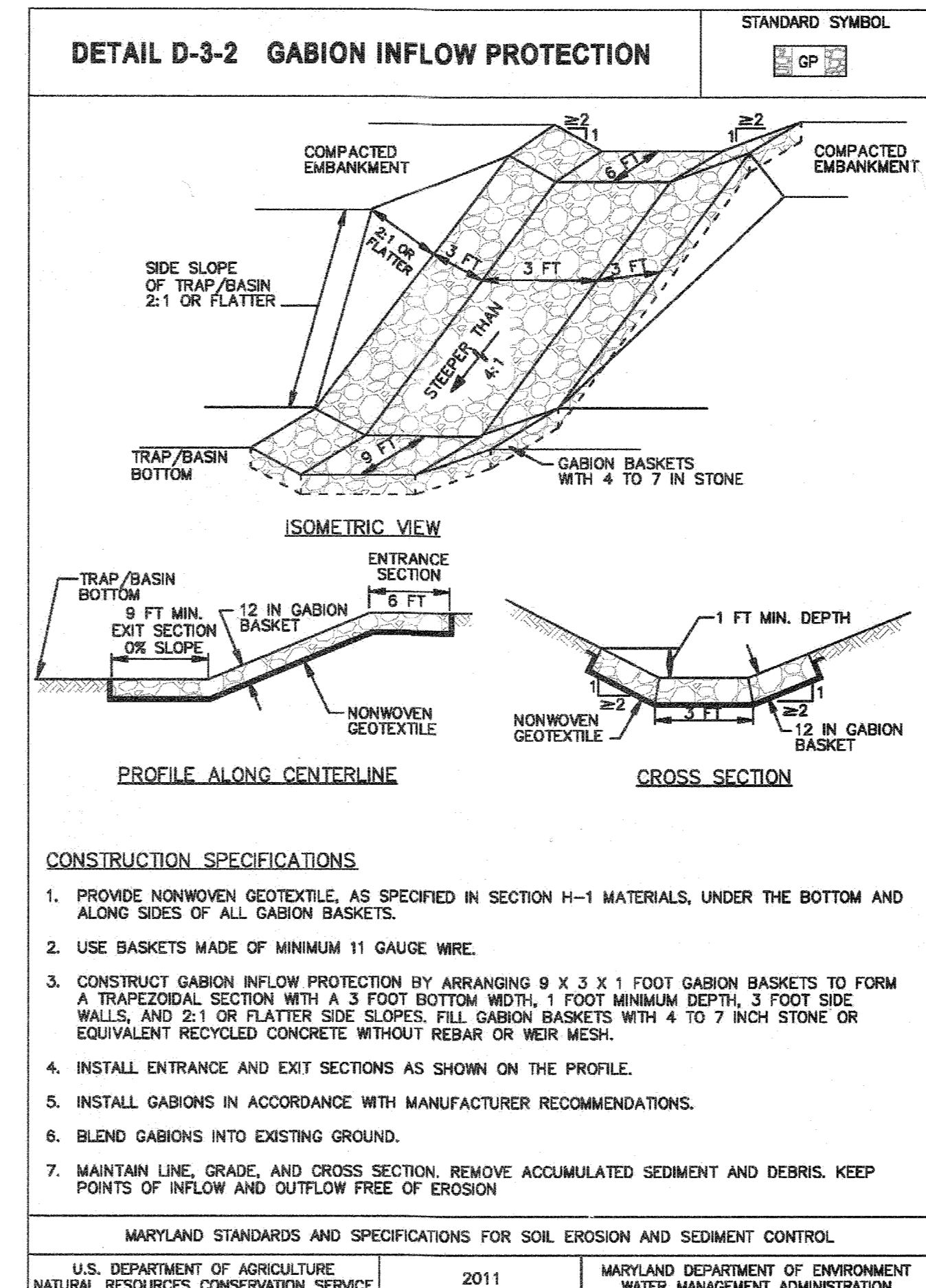
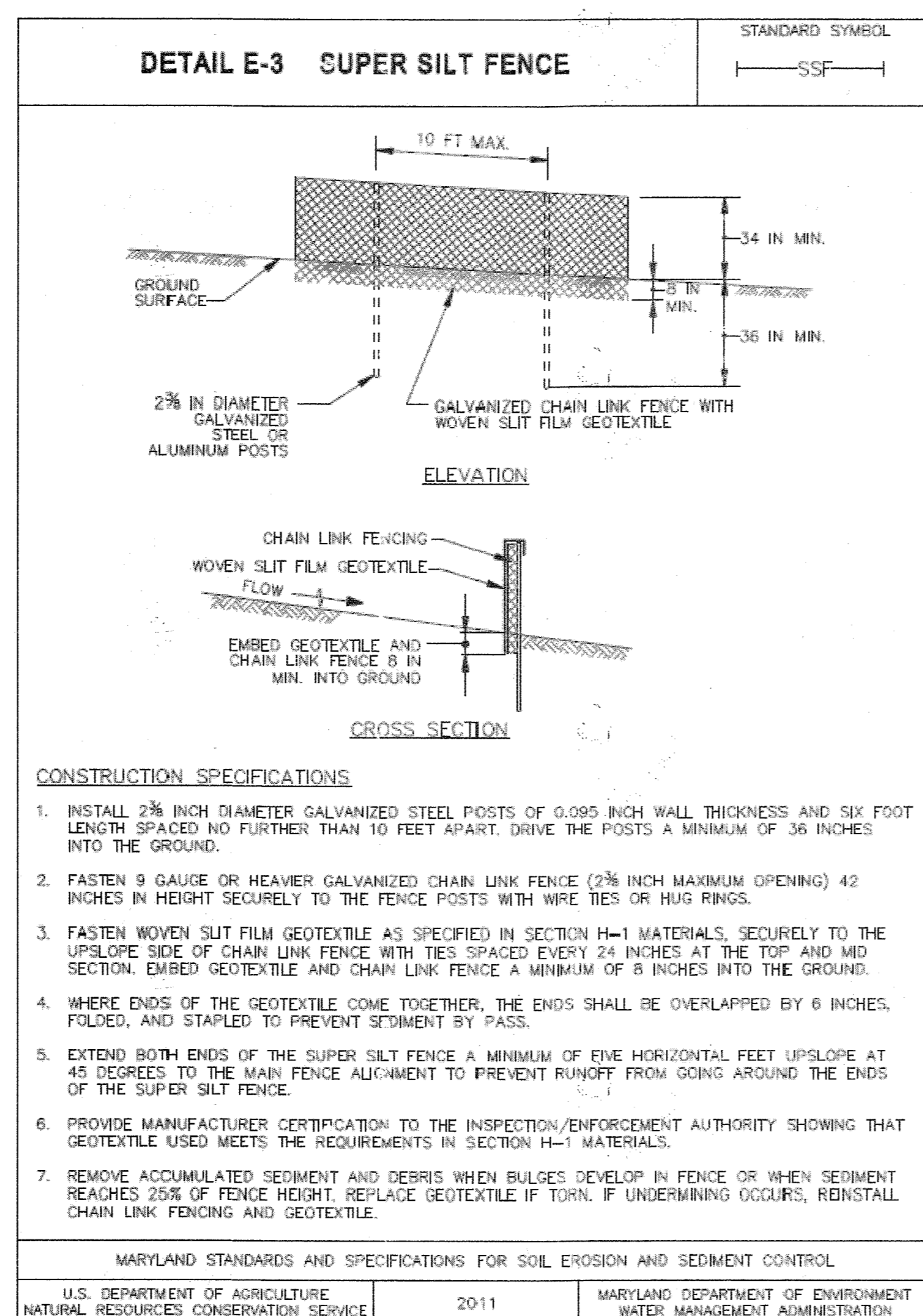
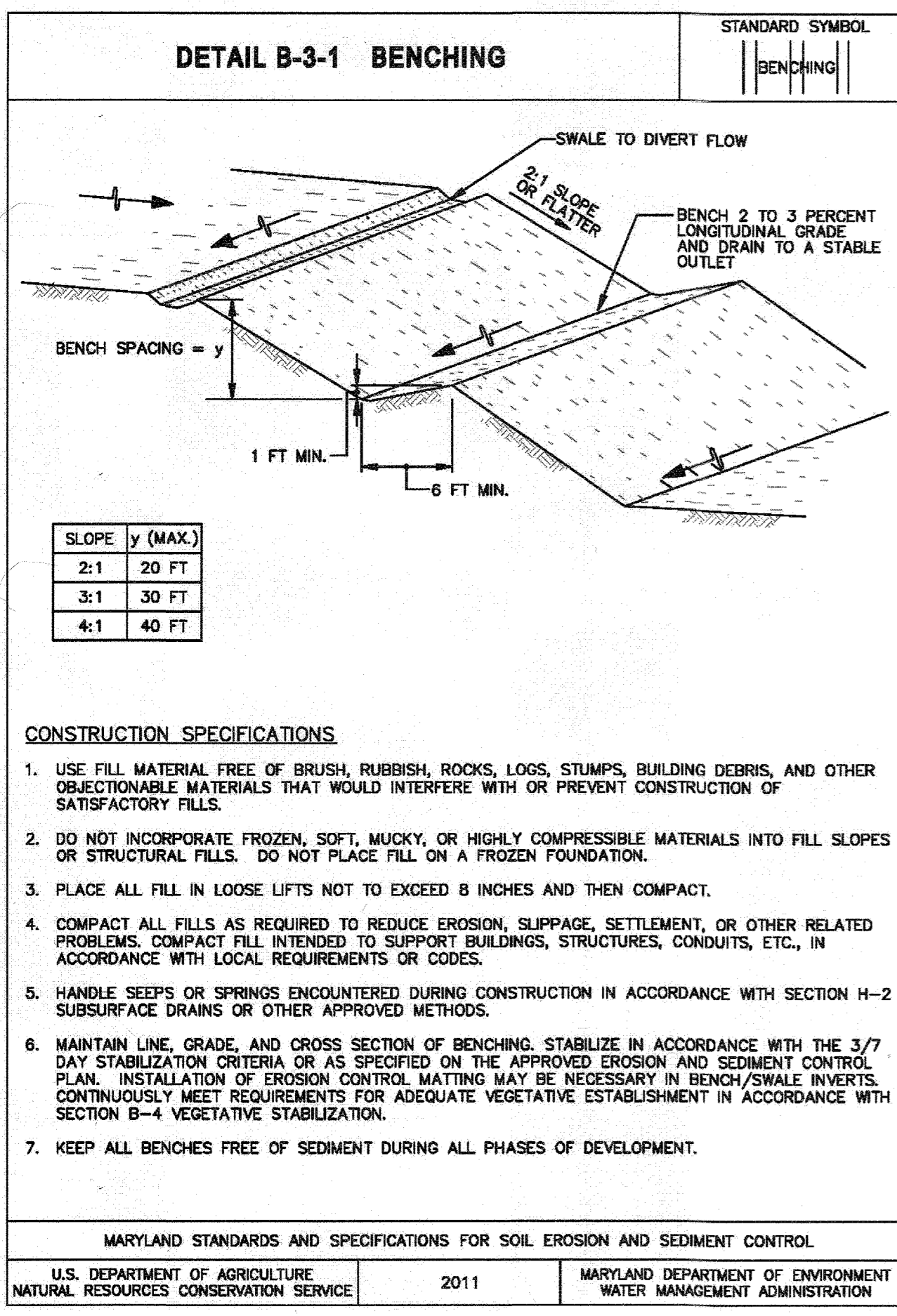
- DESCRIPTION
A temporary access bridge is a stream crossing made of wood, metal, or other materials designed to limit the amount of disturbance to the stream banks and bed.
EFFECTIVE USES & LIMITATIONS
Temporary access bridges are the preferred method of waterway crossing since they typically cause the least disturbance to the waterway bed and banks...
MATERIAL SPECIFICATIONS
• Stringers: Stringers should either be logs, sawn timber, prestressed concrete beams, metal beams, or other approved materials.
• Deck Materials: Deck materials should be of sufficient strength to support the anticipated load.
CONSTRUCTION SEQUENCE
All erosion and sediment control devices, including stream diversions, should be implemented as the first order of business...
1. Abutments should be placed parallel to, and on, stable banks such that the structure is at or above bankfull depth...
2. Temporary access bridges should be constructed to span the entire channel...
3. All decking members should be placed perpendicular to the stringers...
4. Although run-planks are optional, they may be necessary to properly distribute loads...
5. Carbs or fenders may be installed along the outer sides of the deck...
6. Bridges should be securely anchored at one end using steel cable or chain...

STREAM CROSSINGS. MARYLAND DEPARTMENT OF THE ENVIRONMENT, WATER MANAGEMENT ADMINISTRATION. REVISIONS: 11/2000, 03/2001, 03/2002, 03/2003, 03/2004, 03/2005, 03/2006, 03/2007, 03/2008, 03/2009, 03/2010, 03/2011, 03/2012, 03/2013, 03/2014, 03/2015, 03/2016, 03/2017, 03/2018, 03/2019, 03/2020, 03/2021, 03/2022.

Maryland's Guidelines To Waterway Construction. DETAIL 4.8: TEMPORARY ACCESS BRIDGE. SKETCH showing a bridge structure with steel cable attached to driven steel anchors. Includes OWNER/DEVELOPER information for Savage Stone, LLC and APPROVED PLAN REVISION stamp.

CNA engineers, surveyors & landscape architects. NOTES AND DETAILS FOR CHASE QUARRY. HOWARD COUNTY, MARYLAND. Date Revisions table with entries for 2/6/19, 12/13/19, and 12/13/20. Includes professional certification for the engineer.

Vertical text on the right edge: C:\Users\j... Design\19000\1921001\00_Specs_Corridor_Establishment..._Expansions..._Internat..._ESD..._Plan...



B-4.8 STANDARDS AND SPECIFICATIONS

FOR STOCKPILE AREA

Definition

A mound or pile of soil protected by appropriately designed erosion and sediment control measures.

Purpose

To provide a designated location for the temporary storage of soil that controls the potential for erosion, sedimentation, and changes to drainage patterns.

Conditions Where Practice Applies

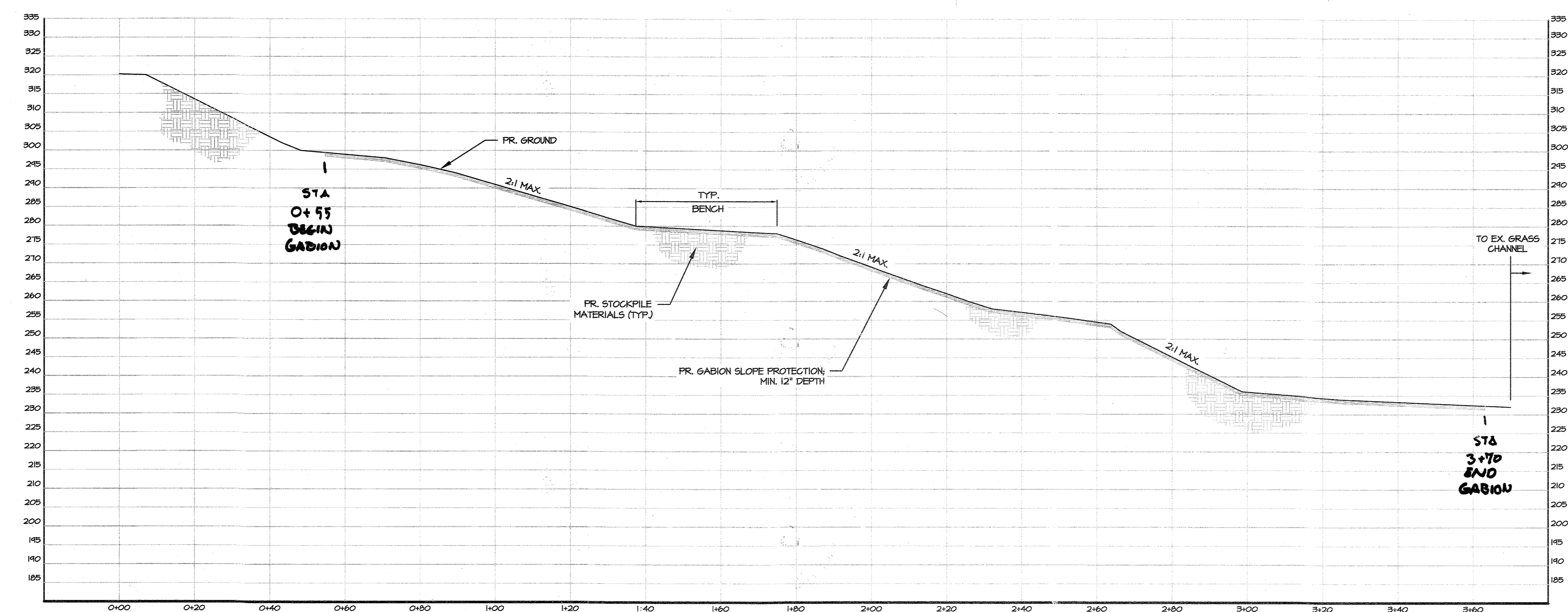
Stockpile areas are utilized when it is necessary to salvage and store soil for later use.

Criteria

- The stockpile location and all related sediment control practices must be clearly indicated on the erosion and sediment control plan.
- The footprint of the stockpile must be sized to accommodate the anticipated volume of material and based on a side slope ratio no steeper than 2:1. Benching must be provided in accordance with Section B-3 Land Grading.
- Runoff from the stockpile area must drain to a suitable sediment control practice.
- Access the stockpile area from the upgrade side.
- Clear water runoff into the stockpile area must be minimized by use of a diversion device such as an earth dike, temporary swale or diversion fence. Provisions must be made for discharging concentrated flow in a non-erosive manner.
- Where runoff concentrates along the toe of the stockpile fill, an appropriate erosion/sediment control practice must be used to intercept the discharge.
- Stockpiles must be stabilized in accordance with the 3/7 day stabilization requirement as well as Standard B-4-1 Incremental Stabilization and Standard B-4-4 Temporary Stabilization.
- If the stockpile is located on an impervious surface, a liner should be provided below the stockpile to facilitate cleanup. Stockpiles containing contaminated material must be covered with impermeable sheeting.

Maintenance

The stockpile area must continuously meet the requirements for Adequate Vegetative Establishment in accordance with Section B-4 Vegetative Stabilization. Side slopes must be maintained at no steeper than a 2:1 ratio. The stockpile area must be kept free of erosion. If the vertical height of a stockpile exceeds 20 feet for 2:1 slopes, 30 feet for 3:1 slopes, or 40 feet for 4:1 slopes, benching must be provided in accordance with Section B-3 Land Grading.



GABION OUTFLOW PROFILE
 HORIZ. & VERT. SCALE: 1" = 20'

APPROVED PLAN REVISION
[Signature]
 9/19/19
 Technical Review Date

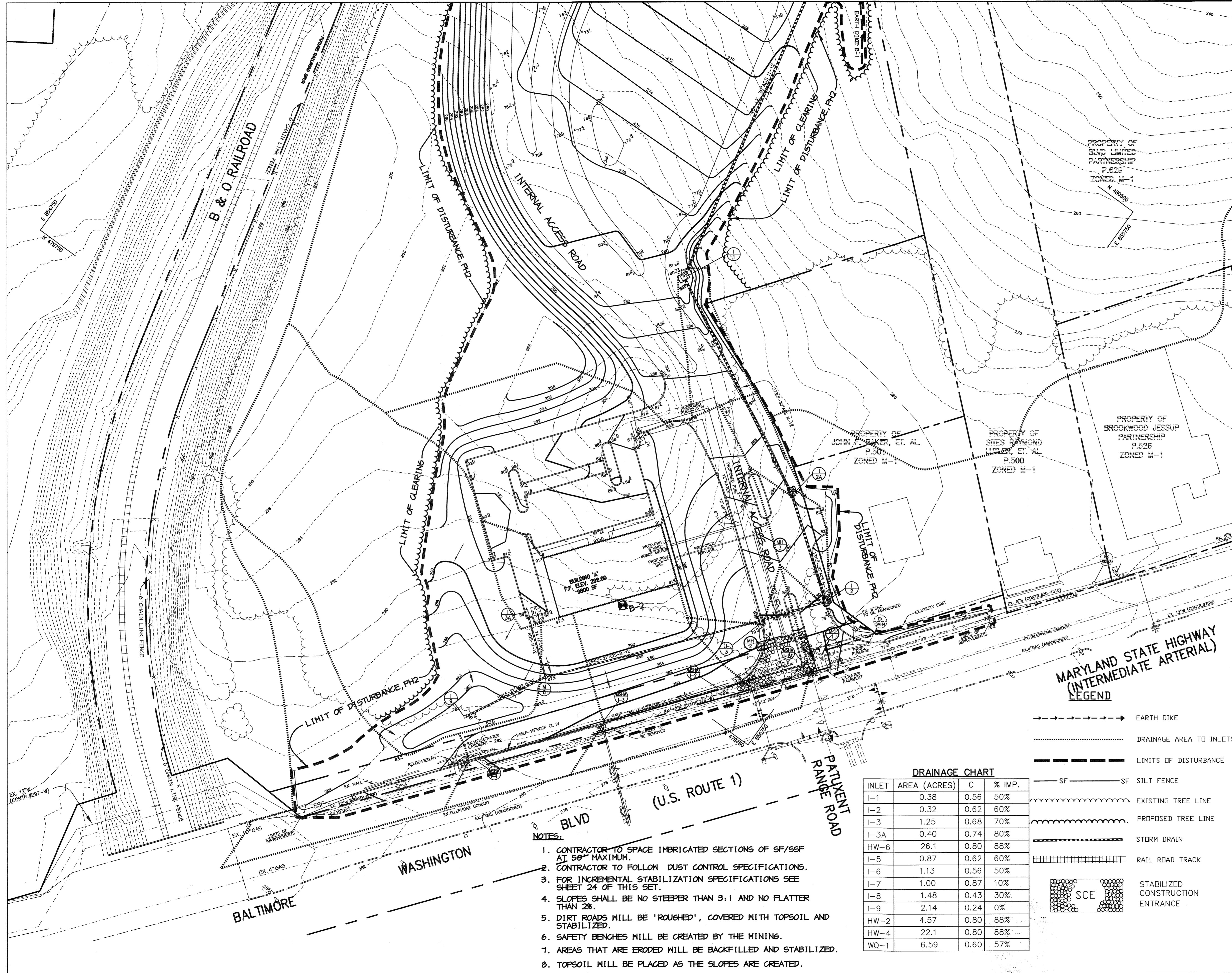
OWNER/DEVELOPER
 SAWAGE STONE, LLC
 P.O. BOX 850
 LAUREL, MD 20725
 ATTN: COLLIN SUMPTER

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 DIRECTOR: *[Signature]* 12-18-19 DATE
 CHIEF, DEVELOPMENT ENGINEERING DIVISION: *[Signature]* 12/11/19 DATE
 CHIEF, DIVISION OF LAND DEVELOPMENT: *[Signature]* 12/13/19 DATE

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Date		Revisions		Date:	Scale:
				2/6/19	N.T.S.
				Drawn By: SRS	Job No: 1921001.00
				Design By: SRS	Sheet: 55 of 55
				Review By: CRM	

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 28378, EXPIRATION DATE: 01/01/2021.



NOTE: THIS PLAN IS FOR SEDIMENT CONTROL AND DRAINAGE AREA INFORMATION ONLY. SEE SHEET 4 FOR GRADING.

BY THE DEVELOPER :
 I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.
Timothy J. Schmitt 1-30-04
 DEVELOPER DATE

BY THE ENGINEER :
 I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
Cheryl S. Row 1-30-04
 ENGINEER DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.
Jim Mays 2/10/04
 NATURAL RESOURCES CONSERVATION SERVICE DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
John S. ... 2/10/04
 HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
... 2/10/04
 DIRECTOR DATE
... 2/10/04
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE
... 2/11/04
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DATE NO.	REVISION
6-15-05	CHANGED SHEET NO.
1-9-05	ADDED NOTE

DEVELOPER/OWNER:
 CHASE LIMITED PARTNERSHIP (OWNER)
 P.O. BOX 880
 LAUREL, MD 207125
 410.142.1234
 CHASE MINING LLC (DEVELOPER)
 P.O. BOX 880
 LAUREL, MD 207125
 410.142.1234

PROJECT
CHASE QUARRY
 AREA ZONED M-1 & MXD-3, TAX MAP No. 43
 PARCEL 234 & P.O. 235, BLOCK 19
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE
GRADING, SEDIMENT CONTROL & DRAINAGE AREA MAP
 Patton Harris Rust & Associates, pc
 Engineers, Surveyors, Planners, Landscape Architects.
 8818 Centre Park Drive
 Columbia, MD 21045
 T 410.997.8900
 F 410.997.9282
 1-30-04
 DATE
 DESIGNED BY : C.J.R.
 DRAWN BY : MAD
 CHECKED BY : C.J.R.
 PROJECT NO : 99092/
 SEDIM.DWG
 DATE : JANUARY 29, 2004
 SCALE : 1" = 50'
 DRAWING NO. 12 OF 55
 CHRISTOPHER J. REID #19949

- NOTES:
1. CONTRACTOR TO SPACE IMBRICATED SECTIONS OF SF/S6F AT 50" MAXIMUM.
 2. CONTRACTOR TO FOLLOW DUST CONTROL SPECIFICATIONS.
 3. FOR INCREMENTAL STABILIZATION SPECIFICATIONS SEE SHEET 24 OF THIS SET.
 4. SLOPES SHALL BE NO STEEPER THAN 3:1 AND NO FLATTER THAN 2%.
 5. DIRT ROADS WILL BE 'ROUGHED', COVERED WITH TOPSOIL AND STABILIZED.
 6. SAFETY BENCHES WILL BE CREATED BY THE MINING.
 7. AREAS THAT ARE ERODED WILL BE BACKFILLED AND STABILIZED.
 8. TOPSOIL WILL BE PLACED AS THE SLOPES ARE CREATED.

DRAINAGE CHART

INLET	AREA (ACRES)	C	% IMP.
I-1	0.38	0.56	50%
I-2	0.32	0.62	60%
I-3	1.25	0.68	70%
I-3A	0.40	0.74	80%
HW-6	26.1	0.80	88%
I-5	0.87	0.62	60%
I-6	1.13	0.56	50%
I-7	1.00	0.87	10%
I-8	1.48	0.43	30%
I-9	2.14	0.24	0%
HW-2	4.57	0.80	88%
HW-4	22.1	0.80	88%
WQ-1	6.59	0.60	57%

- LEGEND
- EARTH DIKE
 - DRAINAGE AREA TO INLETS
 - LIMITS OF DISTURBANCE
 - SF --- SF SILT FENCE
 - EXISTING TREE LINE
 - PROPOSED TREE LINE
 - STORM DRAIN
 - RAIL ROAD TRACK
 - SCE STABILIZED CONSTRUCTION ENTRANCE