

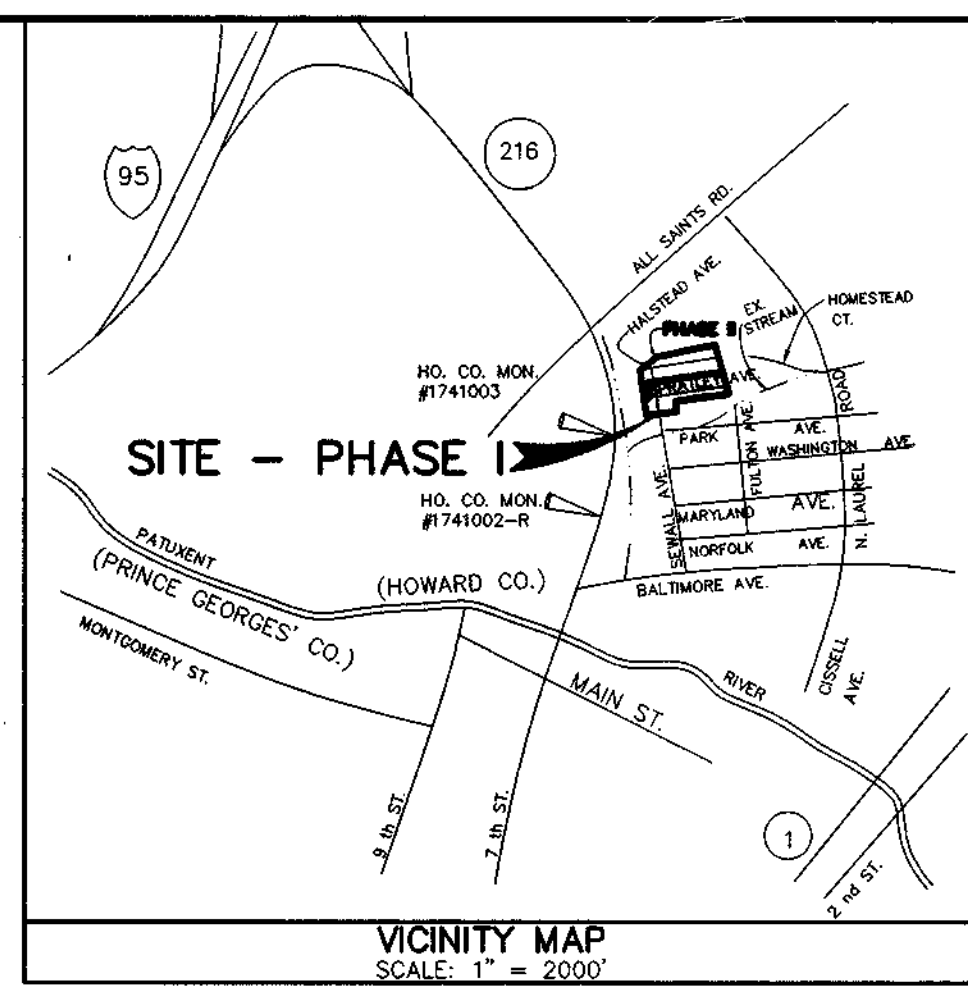
**GENERAL NOTES:**

- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION.
- PROJECTS BACKGROUND:  
LOCATION: TAX MAP 50 - P/O PARCEL 426  
ZONING: R-5C  
TOTAL AREA OF PHASE I: 8.674 AC.  
NUMBER OF PROPOSED DWELLINGS: 36  
NUMBER OF EXISTING LOTS: 37  
RECORD PLAT SIGNED: APPROXIMATELY 1898
- THE TOPOGRAPHY SHOWN WAS GENERATED FROM AERIAL TOPOGRAPHY SURVEY PROVIDED BY WINGS, INC., DATED MARCH 1995, AND CONSISTS OF 2 FOOT CONTOUR INTERVALS.
- THE COORDINATES SHOWN HEREON ARE BASED ON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON MARYLAND GRID SYSTEM NAD 27 - HOWARD COUNTY MONUMENTS NO. 1741003 AND 1741002-R.
- THE BOUNDARY SURVEY OF SUBJECT PROPERTY WAS PERFORMED BY FISHER, COLLINS & CARTER, INC., DATED DEC. 1995.
- ANY DAMAGE TO THE COUNTY OWNED RIGHT-OF-WAY SHALL BE CORRECTED AT THE DEVELOPER'S EXPENSE.
- THE CONTRACTOR SHALL VERIFY LOCATION OF UTILITIES AND EASEMENTS PRIOR TO CONSTRUCTION.
- PLAT REFERENCE FOR THE SUBJECT PROPERTY IS PLAT NO. 61/470, DATED APPROXIMATELY 1898.
- WATER AND SEWER CONNECTIONS ARE PER WATER/SEWER CONTRACT NO. 24-3603-D.
- DRAINAGE AREA IS THE PATUXENT BASIN.
- ALL ROADS ARE PUBLIC EXCEPT THE PRIVATE DRIVE (STREAM VIEW LANE) FOR BLOCK "B"; LOTS 1-6.
- ALL EASEMENTS ARE PUBLIC UNLESS NOTED AS "PRIVATE".
- STORM WATER MANAGEMENT, QUANTITY AND QUALITY CONTROL, SHALL BE PROVIDED BY THE PROPOSED REGIONAL STORM WATER MANAGEMENT SYSTEM. THIS SYSTEM WILL BE PUBLIC AND MAINTAINED BY HOWARD COUNTY. ADDITIONAL WATER QUALITY SHALL BE PROVIDED BY THREE (3) WATER QUALITY FACILITIES LOCATED IN THE UPLANDS OF THE SUBDIVISION AT THE STORM DRAIN OUTFALLS. THESE FACILITIES WILL BE PUBLICLY OWNED AND MAINTAINED.
- STORM DRAIN SYSTEM WILL BE PUBLICLY OWNED AND MAINTAINED BY THE HOWARD COUNTY.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
- FOREST CONSERVATION IS NOT REQUIRED FOR THIS SUBDIVISION SINCE THE PROPERTY WAS RECORDED PRIOR TO THE FOREST CONSERVATION BILL AND NO ADDITIONAL LOTS ARE BEING CREATED.
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- ALL PLAN DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
- EXISTING UTILITIES ARE ON HOWARD COUNTY APPROVED DRAWINGS. CONTRACTOR SHALL VERIFY ALL LOCATIONS PRIOR TO CONSTRUCTION.
- A FLOODPLAIN STUDY HAS BEEN PREPARED & APPROVED BY FISHER, COLLINS, AND CARTER DATED NOV. 1994. A REVISED STUDY HAS BEEN PREPARED BY TSA GROUP, INC. DATED OCT. 1996 TO ACCOUNT FOR THE PROPOSED REGIONAL SWMF.
- THE WETLANDS DELINEATION FOR THIS PROJECT WAS PREPARED BY ECO SCIENCE PROFESSIONALS, DATED SEPT. 1996.
- NO TRAFFIC STUDY IS REQUIRED FOR THIS PROJECT.
- LANDSCAPING IS NOT REQUIRED FOR THIS PROJECT SINCE THIS SITE WAS SUBDIVIDED PRIOR TO ANY LANDSCAPING REQUIREMENTS. **ALTHOUGH, STREET TREES WILL BE PROVIDED.**
- GEOTECHNICAL REPORT COMPILED BY HILLIS CARNES ENGINEERING ASSOCIATES DATED OCT. 3, 1996.
- GRADING CONSTRUCTION AND THE REMOVAL OF VEGETATION ARE PROHIBITED WITHIN THE WETLANDS AND THEIR 25 FOOT BUFFER UNLESS PREVIOUSLY APPROVED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT.
- MAINTENANCE AGREEMENT FOR THE USE-IN-COMMON DRIVEWAY ACCESS FOR BLOCK "B" LOTS 1 TO 6, AND BLOCK "H" LOTS 12 TO 14 **WILL BE RECORDED BY THE OWNER/DEVELOPER.**
- STREET LIGHTS WILL BE REQUIRED IN THIS DEVELOPMENT IN ACCORDANCE WITH THE DESIGN MANUAL. STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURE AND POLE SELECTED SHALL BE IN ACCORDANCE WITH THE LATEST HOWARD COUNTY DESIGN MANUAL, VOLUME II (1993) AND AS MODIFIED BY "GUIDELINES FOR STREET LIGHTS IN RESIDENTIAL DEVELOPMENTS (JUNE 1993)." THE JUNE 1993 POLICY INCLUDES GUIDELINES FOR LATERAL AND LONGITUDINAL PLACEMENT.  
A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.  
STREET LIGHTS FOR THIS SUBDIVISION SHALL BE 100-WATT "TRADITIONAIRE" HPS POST TOP FIXTURE ON BLACK FIBERGLASS POLES LOCATED AS SHOWN ON THIS PLAN.  
TREES ARE PROHIBITED ON TOP OF DAM (CENTERLINE STATION 1+50 TO 3+30) AND ALL EXISTING TREES ARE TO BE REMOVED WITHIN 25 FEET OF THE DAM.

# NORTH LAUREL PARK PHASE I

6th ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

## ROADS, STORM DRAIN AND STORMWATER MANAGEMENT CONSTRUCTION PLANS



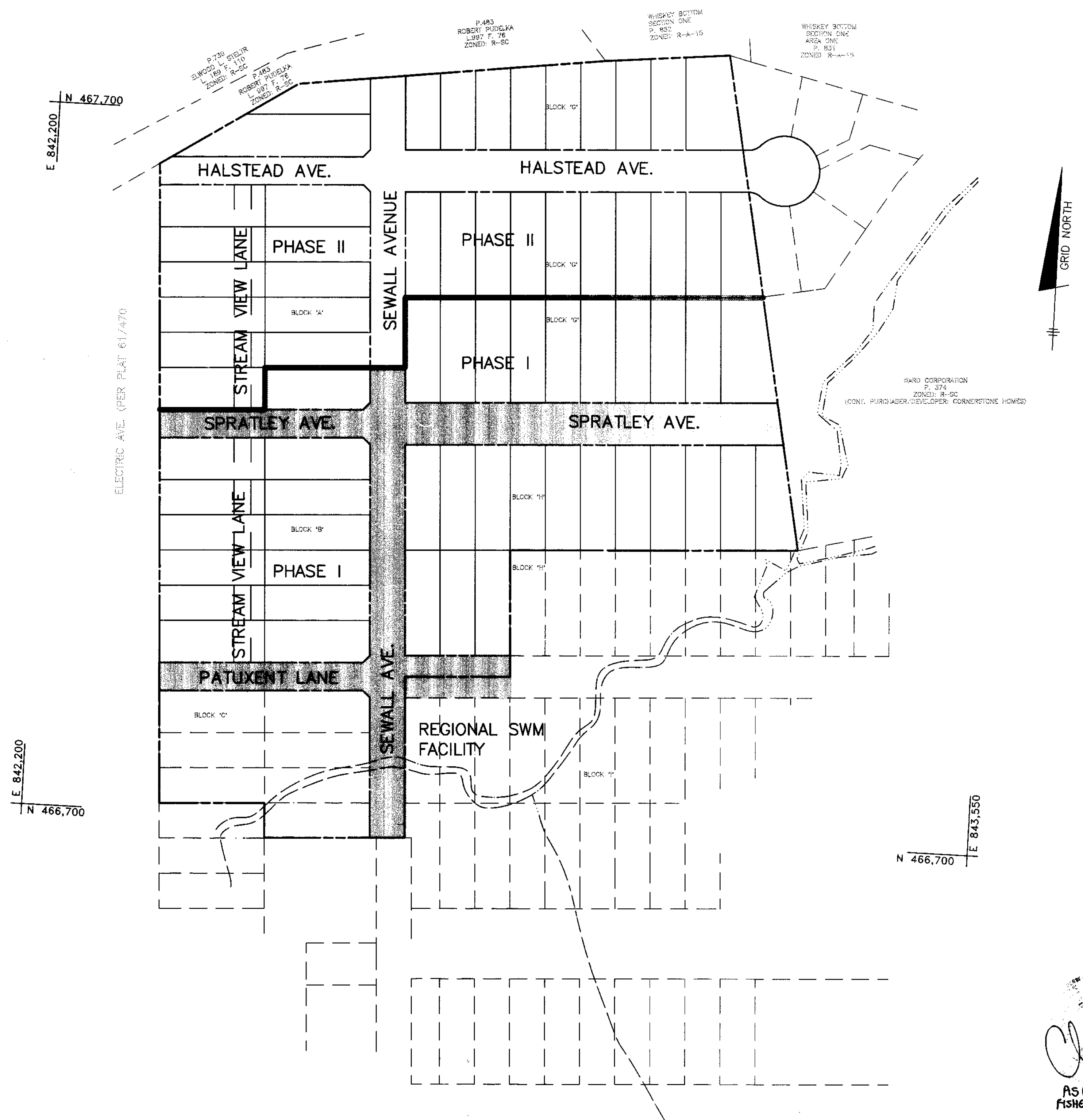
**BENCH MARK DATA**

HOWARD COUNTY MON. # 1741003 CONC. MON. ON WEST SIDE OF RTE. 216 AND 0.2' BELOW SURFACE. ELEV. = 198.395	HOWARD COUNTY MON. # 1741002-R CONC. MON. ON TOP OF BANK EAST OF EAST EDGE MAC OF RTE. 216 FLUSH WITH SURFACE. ELEV. = 197.368
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**SHEET INDEX**

SHEET NO.	TITLE
1	COVER SHEET
2	ROAD AND STORM DRAIN PLAN
3-4	ROAD PROFILE AND SECTION DETAILS
5-6	STORM DRAIN PROFILES
7	GRADING PLAN
8	DRAINAGE AREA MAP FOR STORM DRAIN SYSTEM
9	STORM WATER MANAGEMENT PLAN, NOTES AND DETAILS
10-12	STORM WATER MANAGEMENT NOTES AND DETAILS
13	WATER QUALITY POND PLAN, DETAILS AND PROFILES
14	SEDIMENT AND EROSION CONTROL PLAN
15	TEMPORARY STORMWATER MANAGEMENT NOTES AND DETAILS
16	EROSION & SEDIMENTS CONTROL NOTES AND DETAILS

- NONTIDAL WETLANDS No. 96-NT-1197/199666059 HAS BEEN APPROVED AND SHALL BE ISSUED PRIOR TO CONSTRUCTION.  
- WATERWAY CONSTRUCTION PERMIT No. 97-08-8007



"CAPITAL PROJECT D-1110F, SWM FACILITY CONSTRUCTION"

NO	DATE	REVISION
1	8/97	REV. PER COUNTY COMMENTS DATED 8/1/97
0	6/97	SUBMISSION TO COUNTY FOR REVIEW AND APPROVAL.

**TSA GROUP, INC.**  
planning • architecture • engineering • surveying  
8800 Baltimore National Pike • Ellicott City, Maryland 21043 • (410) 480-8100

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Andrew M. Ponce* 10-29-97  
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
*Carla Hamilton* 11/25/97  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*Chad Demmons* 11/21/97  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

OWNER/DEVELOPER:  
CORNERSTONE HOLDINGS, L.L.C.  
7405 BUCKS HAVEN LANE  
HIGHLAND, MARYLAND 20777  
410-988-9146

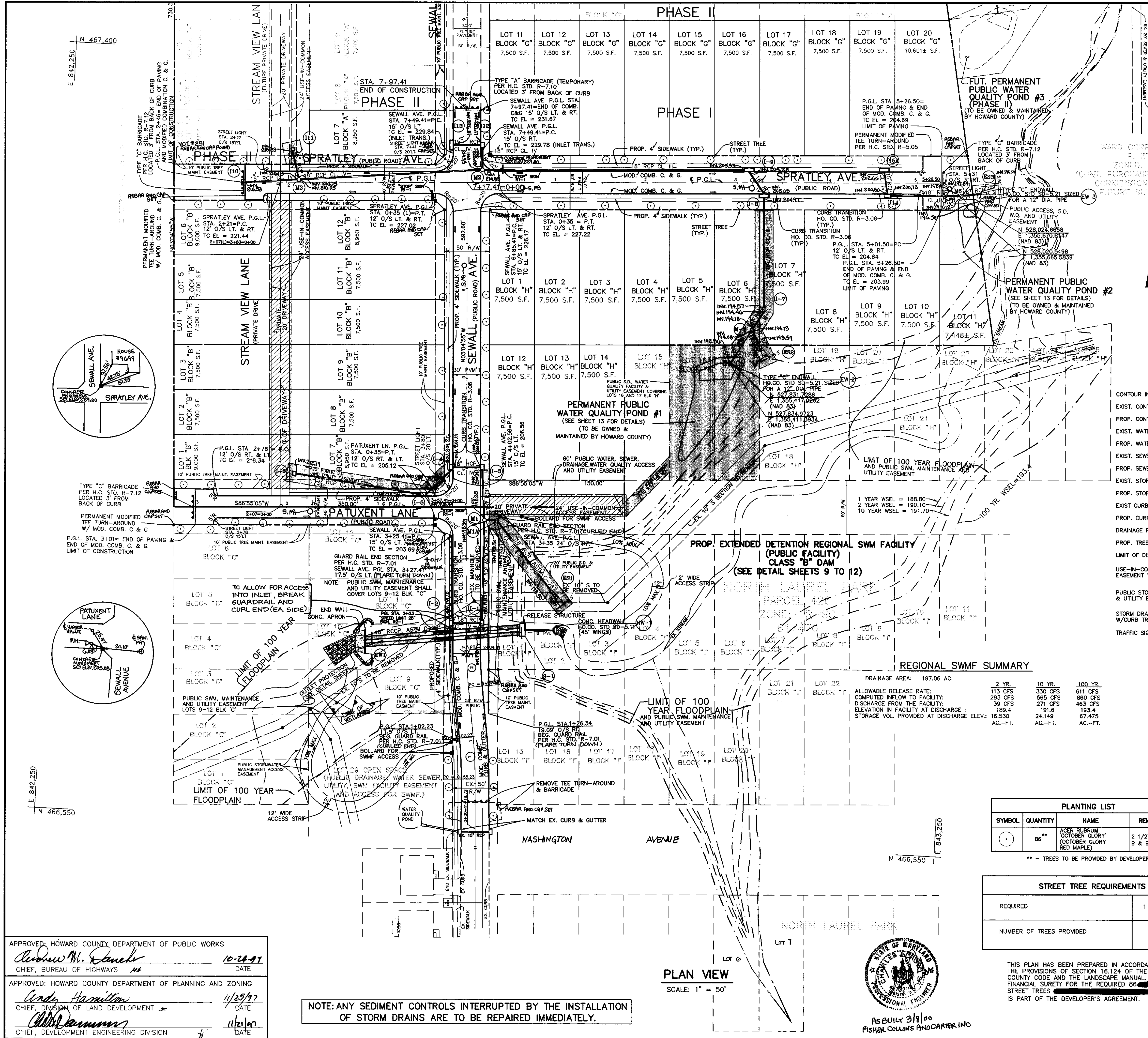
PROJECT:  
**NORTH LAUREL PARK - PHASE I**  
LOT 7; BLOCK "A"; LOTS 1-12; BLOCK "B";  
LOTS 11-20; BLOCK "C"; LOTS 1-10 & 12-14; BLOCK "H"

LOCATION: TAX MAP 50 - P/O PARCEL 426  
6th ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

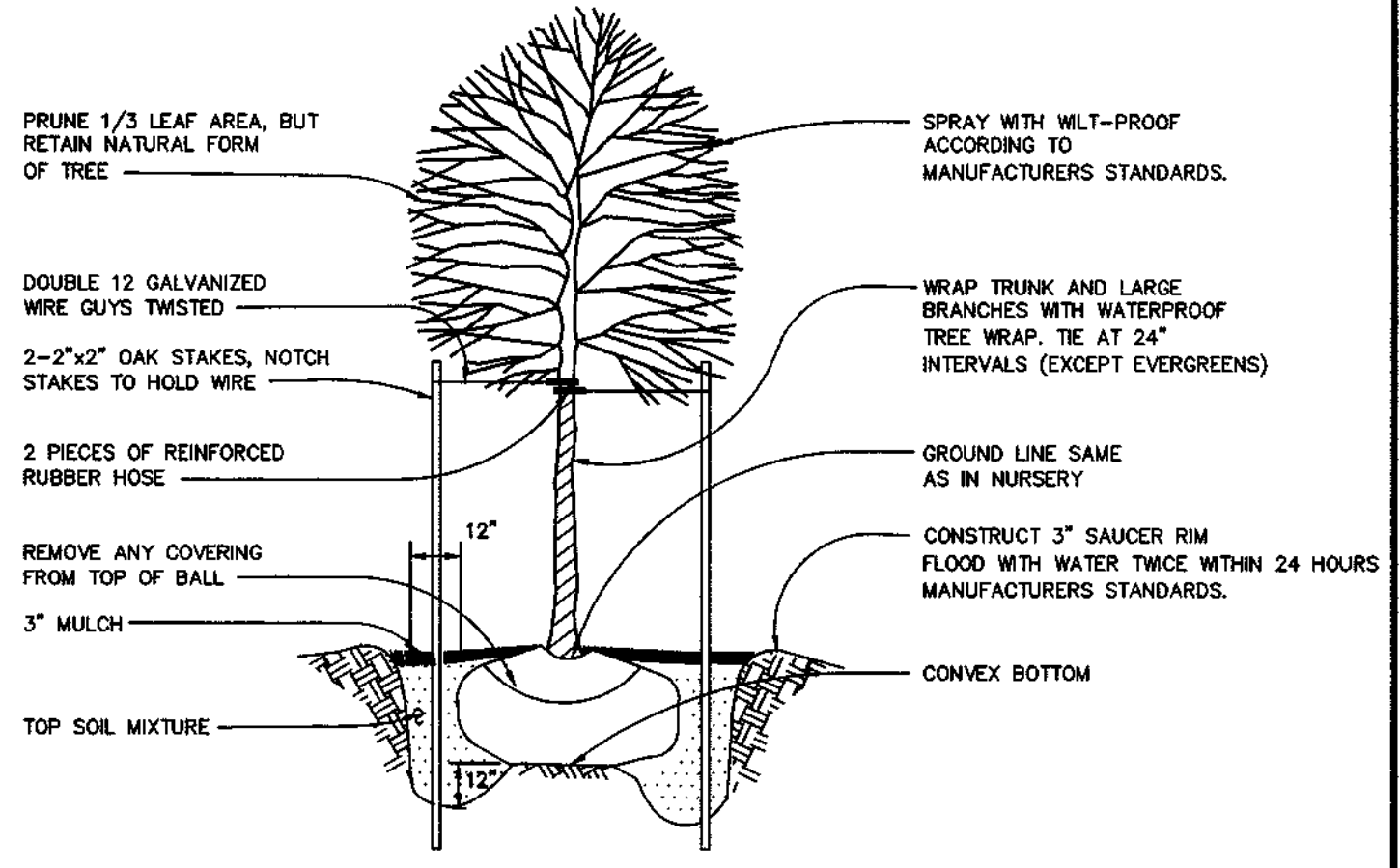
TITLE:  
**COVER SHEET**

DATE: JUNE, 1997 PROJECT NO. 0946  
DESIGN: YSL DRAFT: JMC CHECK: CAM SCALE: 1" = 100' DRAWING 1 OF 16

AS BUILT 3/8/00  
FISHER COLLINS AND CARTER INC.



- NOTES:**
- ALL CURB & GUTTER ARE MODIFIED COMBINATION CURB & GUTTER PER HOWARD CO. STD. R-3.01
  - PROVIDE SIDEWALK RAMP AT ALL INTERSECTIONS WHERE SIDEWALKS ARE SHOWN (SIDEWALK RAMP, TYPE A, PER HOWARD CO. STD. R-4.01)
  - ALL DRIVEWAYS PER HOWARD CO. STD. R-6.03.
  - SEE HOWARD CO. STD. R-3.06 FOR CURB TRANSITION DETAIL FOR ALL CURB INLETS.



**LEGEND**

- CONTOUR INTERVAL 2 FOOT
- EXIST. CONTOUR 250
- PROP. CONTOUR 260
- EXIST. WATER EX 8" W
- PROP. WATER 8" W
- EXIST. SEWER EX 8" S
- PROP. SEWER 8" S
- EXIST. STORM DRAIN EX 15" RCP
- PROP. STORM DRAIN 15" RCP
- EXIST CURB & GUTTER
- PROP. CURB & GUTTER
- DRAINAGE FLOW DIRECTION
- PROP. TREE LINE
- LIMIT OF DISTURBANCE
- USE-IN-COMMON ACCESS EASEMENT WHERE INDICATED
- PUBLIC STORM DRAIN & UTILITY EASEMENT
- STORM DRAIN INLET W/CURB TRANSITION
- TRAFFIC SIGN

**SPRATLEY AVE. CENTERLINE DATA**

Desc. Station	Tangent Data	Northing	Easting
PI -2+46	246.00	467255.0161	842745.5560
Length:	526.50	Course: N 86-55-05 E	467268.2425
PI 0+00	526.50	467268.2425	842691.2102
PI 5+28.50		467298.5501	842616.9486

**PATUXENT LANE CENTERLINE DATA**

Desc. Station	Tangent Data	Northing	Easting
PI 0+00	301.00	466906.7632	842710.5659
PI 3+01		466892.5796	842410.2012

**SEWALL AVE. CENTERLINE DATA**

Desc. Station	Tangent Data	Northing	Easting
0+00	55.23	466522.7870	842739.5216
0+55.23	55.23	466607.9324	842736.5023
Length:	55.23	Course: N 03-08-02 W	
PC 0+55.23		466607.9324	842736.5023
PT 1+02.23		466564.6748	842731.7321
Delta:	05-23-10	Type: LEFT	
Radius:	500.00	IOC:	11-27-33
Length:	47.00	Tangent:	23.52
Mid-Ord:	0.55	External:	0.55
Chord:	46.99	Course:	N 05-48-37 W
1+02.23		466564.6748	842731.7321
1+57.38		466709.1912	842723.9651
Length:	55.12	Course: N 08-31-12 W	
PC 1+57.38		466709.1912	842723.9651
PT 2+04.81		466756.3859	842718.7704
Delta:	05-28-17	Type: RIGHT	
Radius:	500.00	IOC:	11-27-33
Length:	47.46	Tangent:	23.70
Mid-Ord:	0.56	External:	0.54
Chord:	47.44	Course:	N 05-48-04 W
2+04.81		466756.3859	842718.7704
7+97.41		467348.1267	842888.9089
Length:	582.60	Course: N 03-04-55 W	

**REGIONAL SWMF SUMMARY**

DRAINAGE AREA:	2 YR.	10 YR.	100 YR.
197.06 AC.	113 CFS	330 CFS	611 CFS
ALLOWABLE RELEASE RATE:	293 CFS	565 CFS	860 CFS
COMPUTED INFLOW TO FACILITY:	39 CFS	271 CFS	463 CFS
DISCHARGE FROM THE FACILITY:	189.4	191.6	193.4
ELEVATION IN FACILITY AT DISCHARGE:	24.149	24.149	67.475
STORAGE VOL. PROVIDED AT DISCHARGE ELEV.:	16.530	24.149	67.475
	AC.-FT.	AC.-FT.	AC.-FT.

**PLANTING LIST**

SYMBOL	QUANTITY	NAME	REMARKS
(Symbol)	86 **	ACER RUBRUM OCTOBER GLORY OCTOBER GLORY RED MAPLE	2 1/2" MIN. CAL. B & B FULL HEAD

\*\* - TREES TO BE PROVIDED BY DEVELOPER

**STREET TREE REQUIREMENTS**

REQUIRED	NUMBER OF TREES PROVIDED
1 PER 40' O.C. (3,454 L.F.)	86

THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED 86 STREET TREES IS PART OF THE DEVELOPER'S AGREEMENT.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Andrew M. Daniels* 10-24-97  
 CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
*Andy Hamilton* 11/23/97  
 CHIEF, DIVISION OF LAND DEVELOPMENT

*Chris Damann* 11/21/97  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

NOTE: ANY SEDIMENT CONTROLS INTERRUPTED BY THE INSTALLATION OF STORM DRAINS ARE TO BE REPAIRED IMMEDIATELY.

PLAN VIEW  
 SCALE: 1" = 50'



AS BUILT 3/8/00  
 FISHER COLLINS AND CARTER, INC.

2 5-6-99 REVISE GUARDRAIL LOCATION - LEFT SIDE  
 1 8/97 REV. PER COUNTY COMMENTS DATED 8/1/96  
 0 6/97 SUBMISSION TO COUNTY FOR REVIEW AND APPROVAL.  
 NO DATE REVISION

**TSA GROUP, INC.**  
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 8480 Baltimore National Pike • Ellicott City, Maryland 21040 • (410) 486-8106

*Donald M. Daniels*

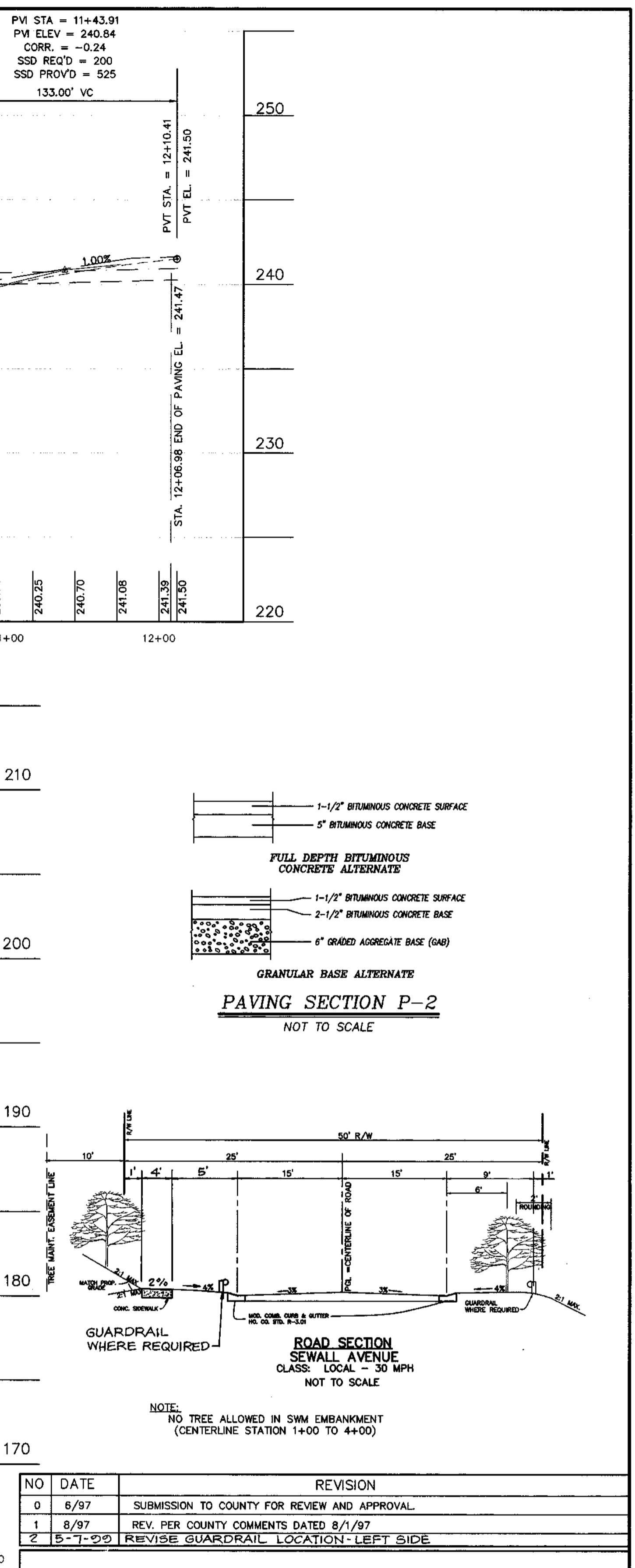
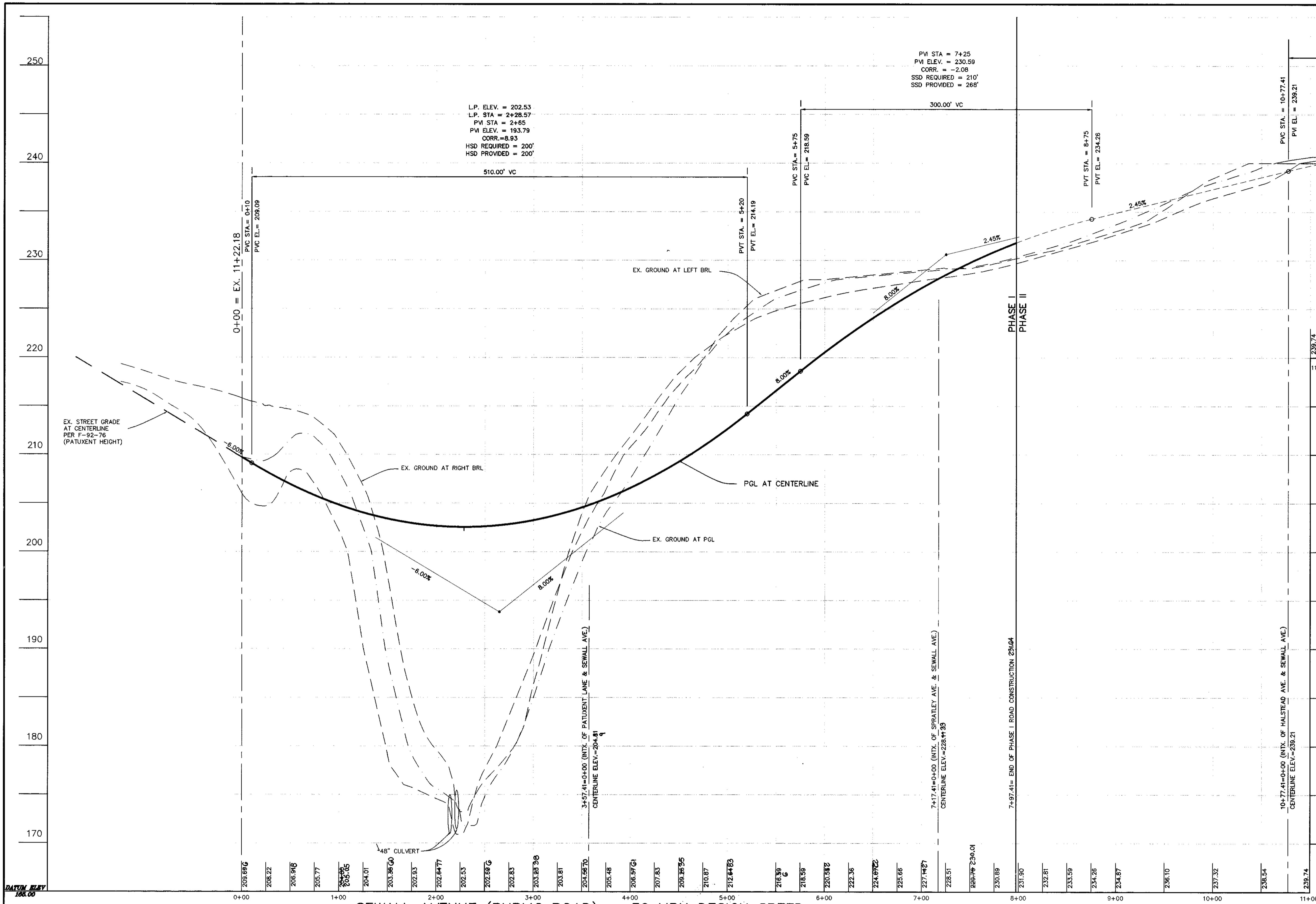
OWNER/DEVELOPER:  
 CORNERSTONE HOLDINGS, L.L.C.  
 7405 BUCKS HAVEN LANE  
 HIGHLAND, MARYLAND 20777  
 410-988-9146

PROJECT:  
**NORTH LAUREL PARK - PHASE I**  
 LOT 7; BLOCK "A"; LOTS 1-12; BLOCK "B"  
 LOTS 11-20; BLOCK "G"; LOTS 1-10 & 12-14; BLOCK "H"

LOCATION:  
 TAX MAP 80 - P/O PARCEL 426  
 6th ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

TITLE:  
**ROAD AND STORM DRAIN PLAN**

DATE: JUNE, 1997 PROJECT NO. 0946  
 DESIGN: YSL DRAFT: YSL CHECK: CAM SCALE: 1" = 50' DRAWING 2 OF 18



SEWALL AVENUE (PUBLIC ROAD) -- 30 MPH DESIGN SPEED  
 SCALE: H: 1" = 50'  
 V: 1" = 5'

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Andrew M. Danaher* 10-29-97  
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
*Candy Hamilton* 11/25/97  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*Mike Deuninger* 11/21/97  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE



AS BUILT 3/8/00  
 FISHER COLLINS AND COMPANY INC

NO	DATE	REVISION
0	6/97	SUBMISSION TO COUNTY FOR REVIEW AND APPROVAL
1	8/97	REV. PER COUNTY COMMENTS DATED 8/1/97
2	5-1-99	REVISE GUARDRAIL LOCATION - LEFT SIDE

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 6400 Baltimore National Pike • Ellicott City, Maryland 21043 • (410) 466-8106

*Donald Moss*

PROJECT: NORTH LAUREL PARK - PHASE I  
 LOT 7; BLOCK "A", LOTS 1-12; BLOCK "B", LOTS 11-20; BLOCK "G", LOTS 1-10 & 12-14; BLOCK "H"

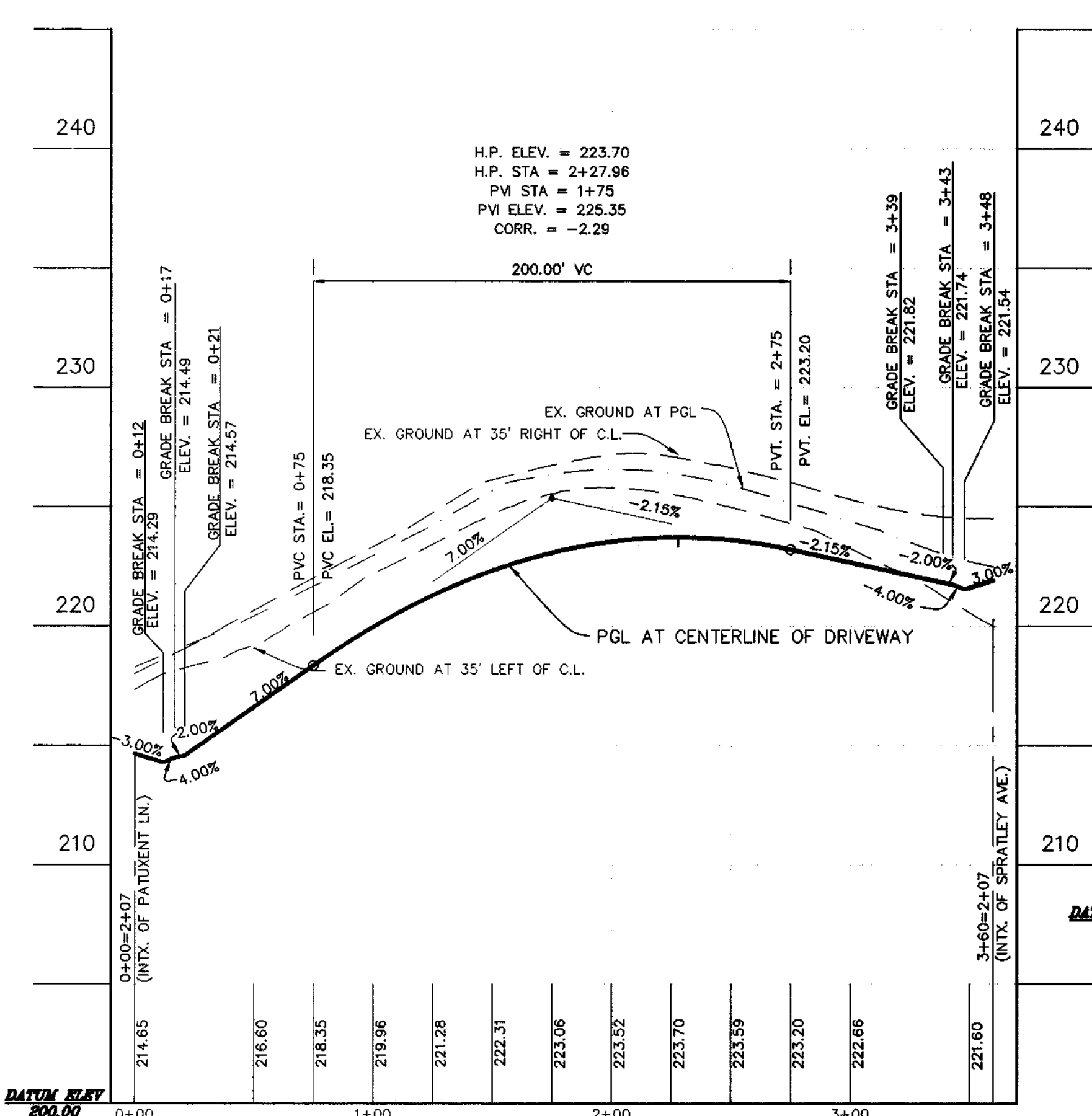
OWNER/DEVELOPER: CORNERSTONE HOLDINGS, L.L.C.  
 7405 BUCKS HAVEN LANE  
 HIGHLAND, MARYLAND 20777  
 410-988-9146

LOCATION: TAX MAP 50 - P/O PARCEL 426  
 6th ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

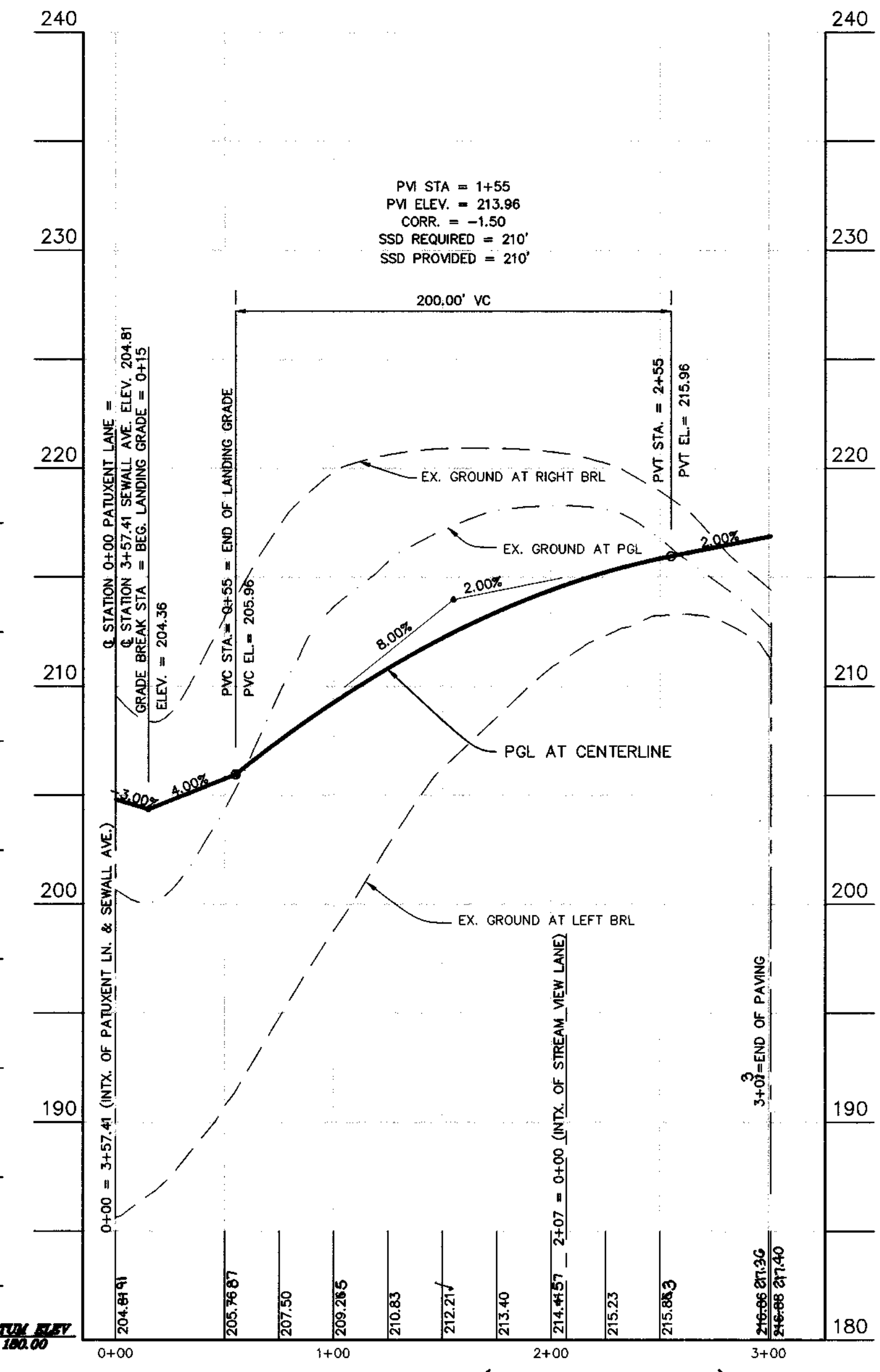
TITLE: PUBLIC ROAD PROFILE:  
 SEWALL AVENUE

DATE: JUNE 1997 PROJECT NO. 0946

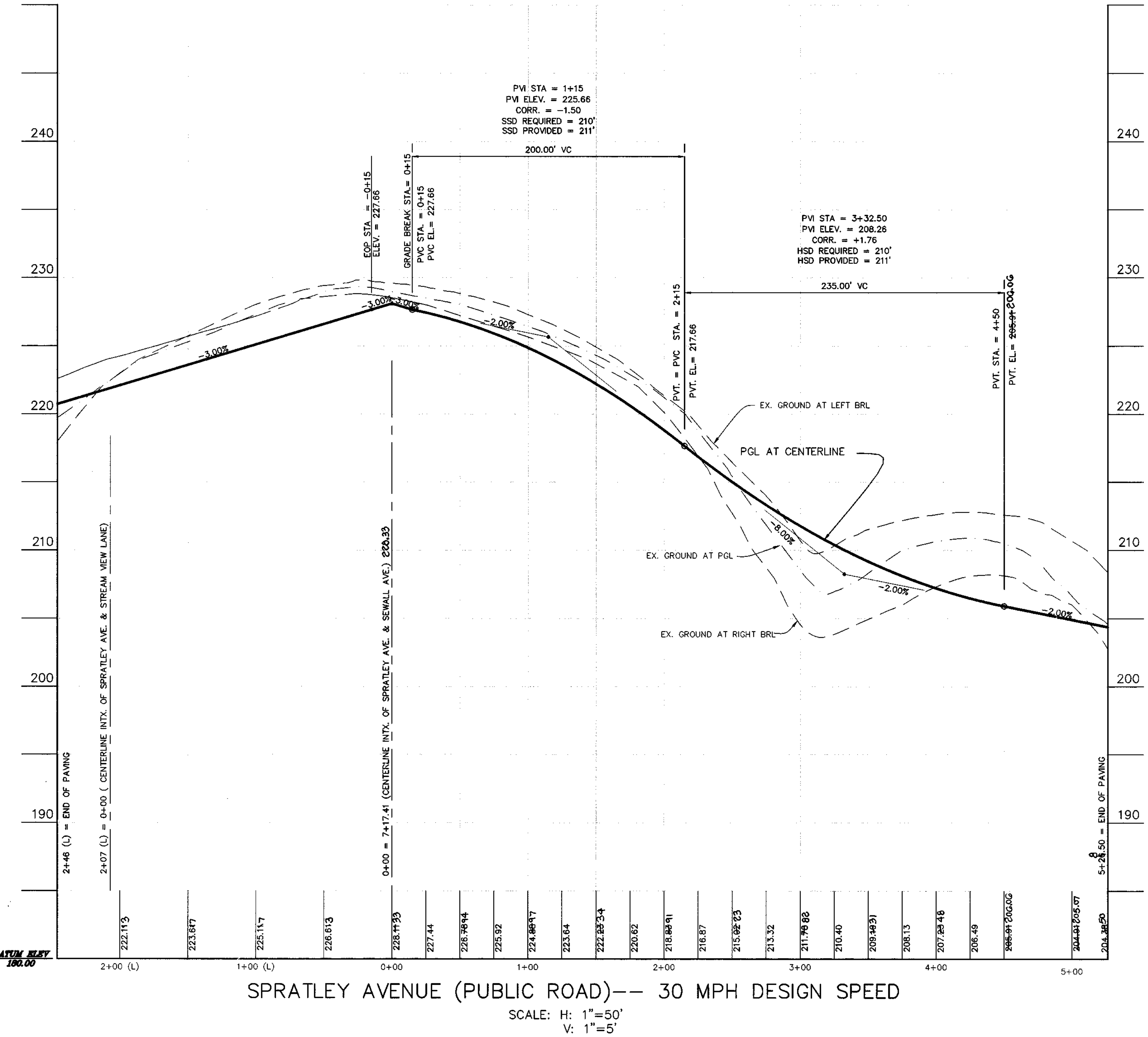
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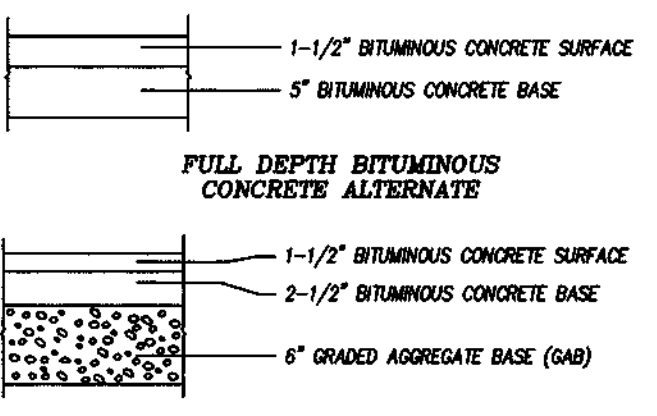
STREAM VIEW LANE  
PRIVATE 20' DRIVEWAY FOR BLOCK "B"  
SCALE: H: 1"=50'  
V: 1"=5'



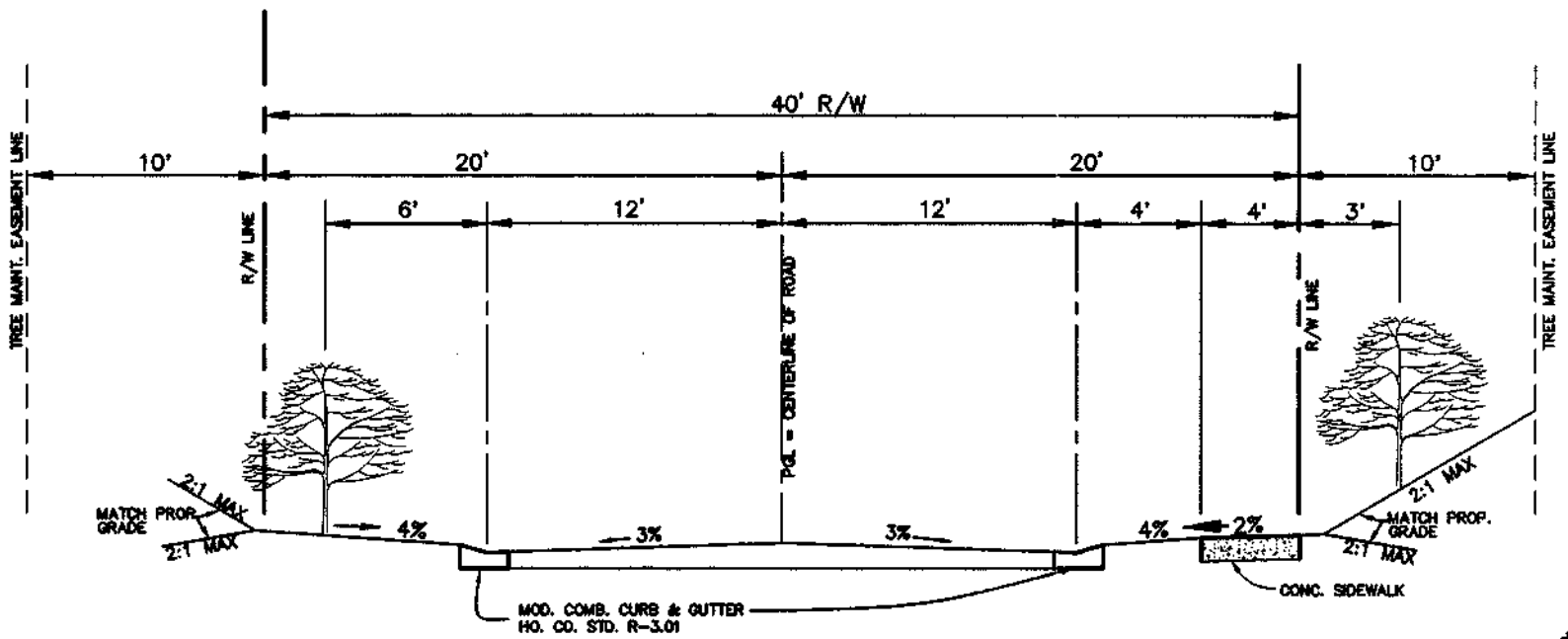
PATUXENT LANE (PUBLIC ROAD)  
30 MPH DESIGN SPEED  
SCALE: H: 1"=50'  
V: 1"=5'



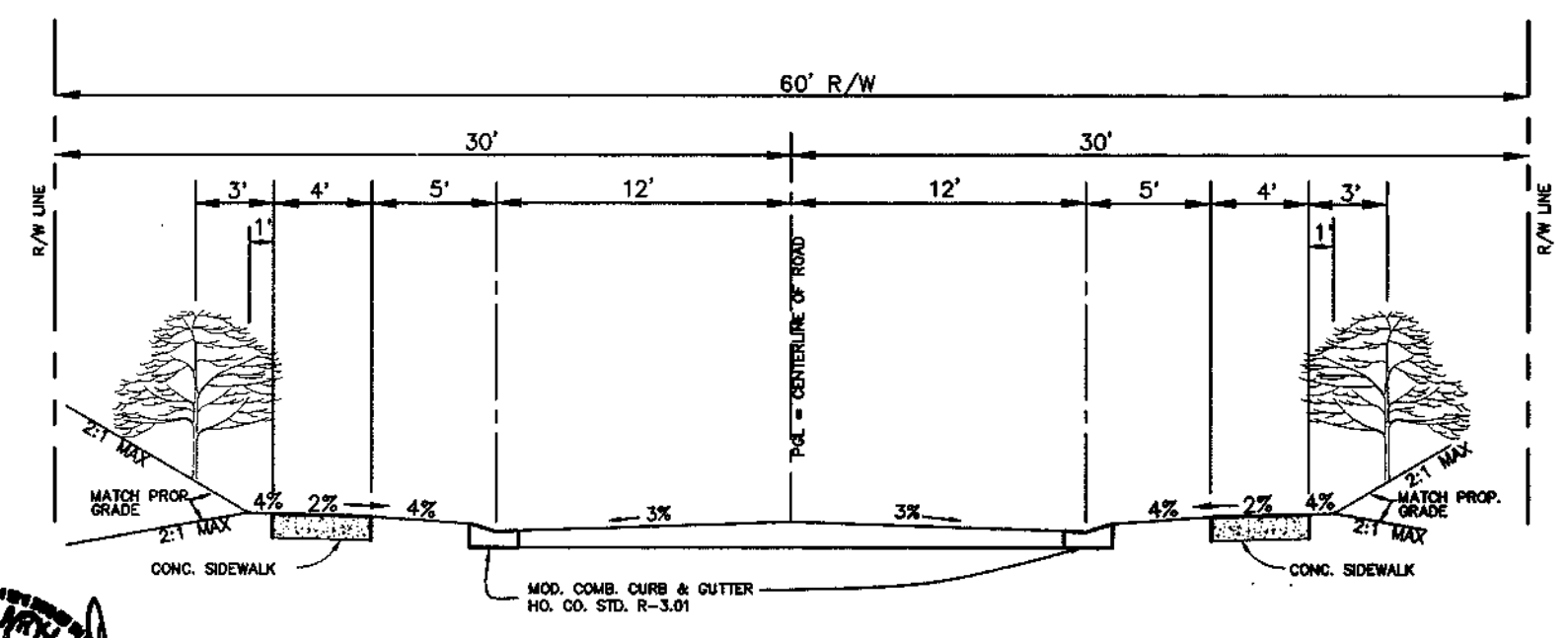
SPRATLEY AVENUE (PUBLIC ROAD) -- 30 MPH DESIGN SPEED  
SCALE: H: 1"=50'  
V: 1"=5'



PAVING SECTION P-2  
NOT TO SCALE



ROAD SECTION  
PATUXENT LANE (FROM STA. 0+35 TO 3+01)  
SPRATLEY AVENUE (FROM STA. 0+35(L) TO 2+46(L))  
CLASS: LOCAL - 30 MPH  
NOT TO SCALE



ROAD SECTION  
SPRATLEY AVENUE (FROM STA. 0+35 TO 5+26.50)  
CLASS: LOCAL - 30 MPH  
NOT TO SCALE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Charles M. Daulton* 10-24-97  
CHIEF, BUREAU OF HIGHWAYS  
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
*Andy Hamilton* 11/25/97  
CHIEF, DIVISION OF LAND DEVELOPMENT  
*Bill Dammann* 11/21/97  
CHIEF, DEVELOPMENT ENGINEERING DIVISION

NO	DATE	REVISION
0	6/97	SUBMISSION TO COUNTY FOR REVIEW AND APPROVAL.
1	8/97	REV. PER COUNTY COMMENTS DATED 8/1/97

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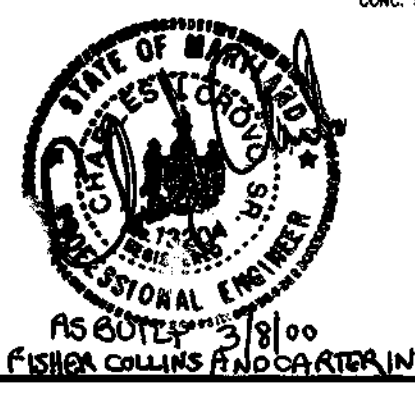
OWNER/DEVELOPER:  
CORNERSTONE HOLDINGS, L.L.C.  
7405 BUCKS HAVEN LANE  
HIGHLAND, MARYLAND 20777  
410-988-9146

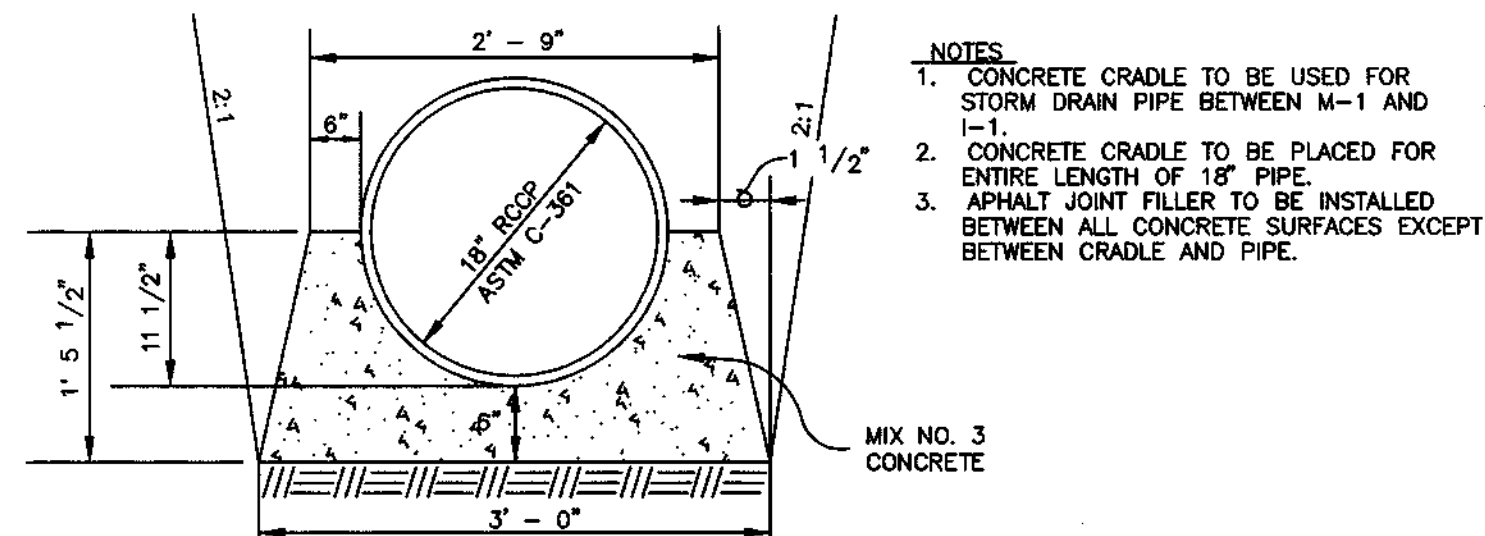
PROJECT:  
NORTH LAUREL PARK -- PHASE I  
LOT 7; BLOCK "A", LOTS 1-12; BLOCK "B",  
LOTS 11-20; BLOCK "G", LOTS 1-10 & 12-14; BLOCK "H"

LOCATION:  
TAX MAP 50 - P/O PARCEL 428  
6th ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

TITLE:  
ROAD PROFILES

DATE: JUNE 1997 PROJECT NO. 0946  
DESIGN: YSL DRAFT: YSL/JMC CHECK: CAM SCALE: AS SHOWN DRAWING 4 OF 16



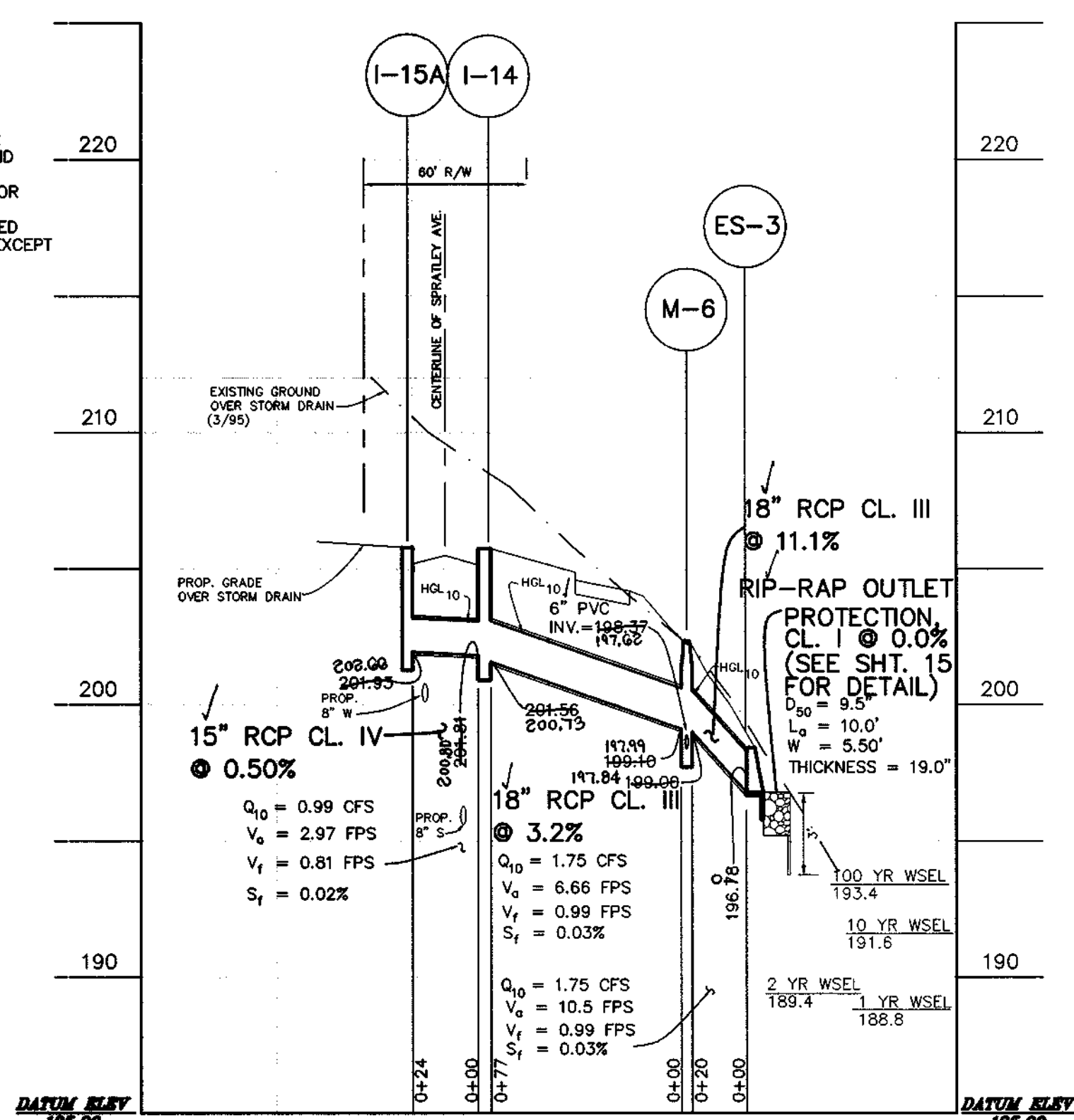


TYPE 'A-2' CONCRETE CRADLE

NOT TO SCALE

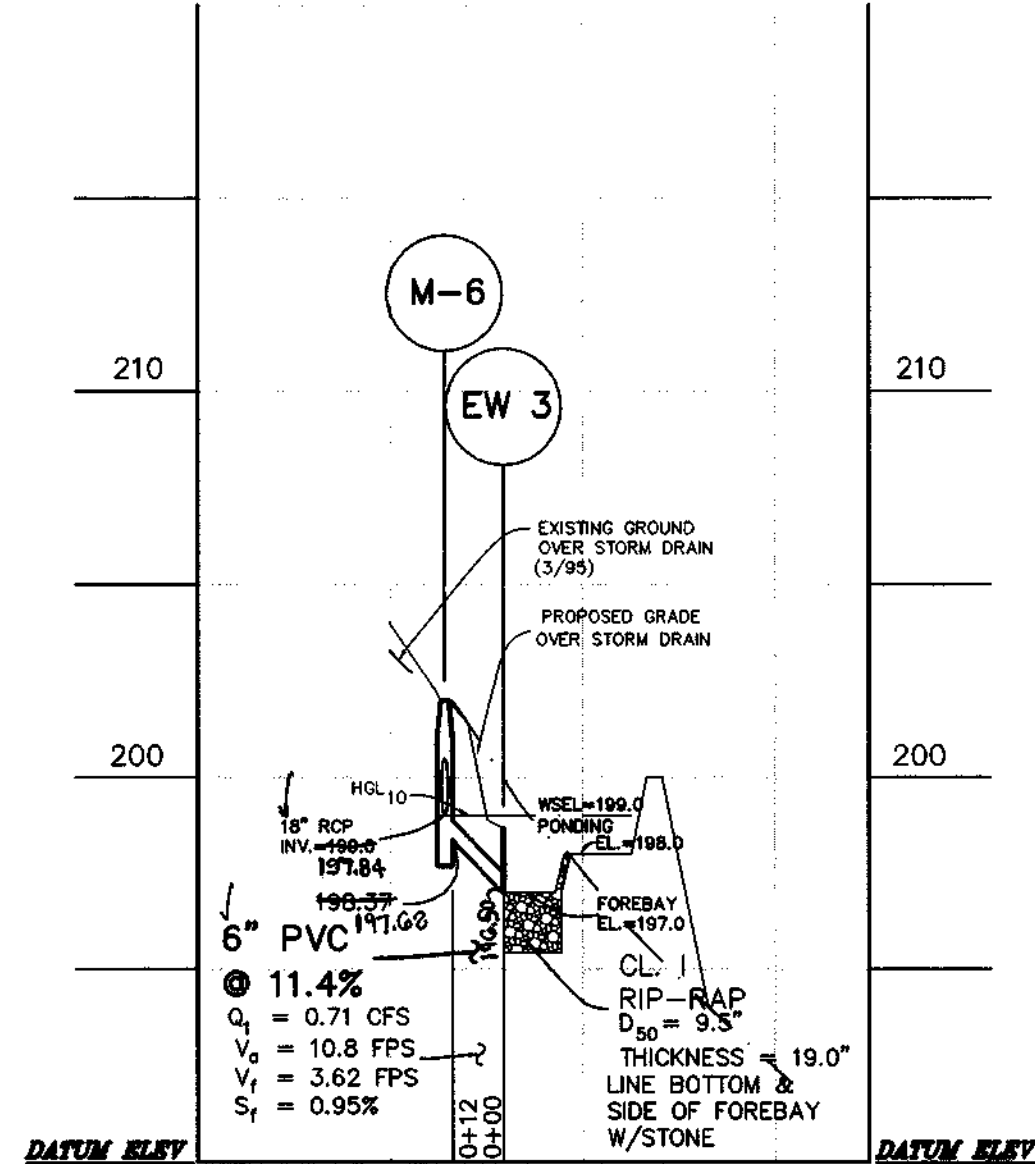
- NOTES:
1. CONCRETE CRADLE TO BE USED FOR STORM DRAIN PIPE BETWEEN M-1 AND I-1.
  2. CONCRETE CRADLE TO BE PLACED FOR ENTIRE LENGTH OF 18" PIPE.
  3. ASPHALT JOINT FILLER TO BE INSTALLED BETWEEN ALL CONCRETE SURFACES EXCEPT BETWEEN CRADLE AND PIPE.

MIX NO. 3 CONCRETE



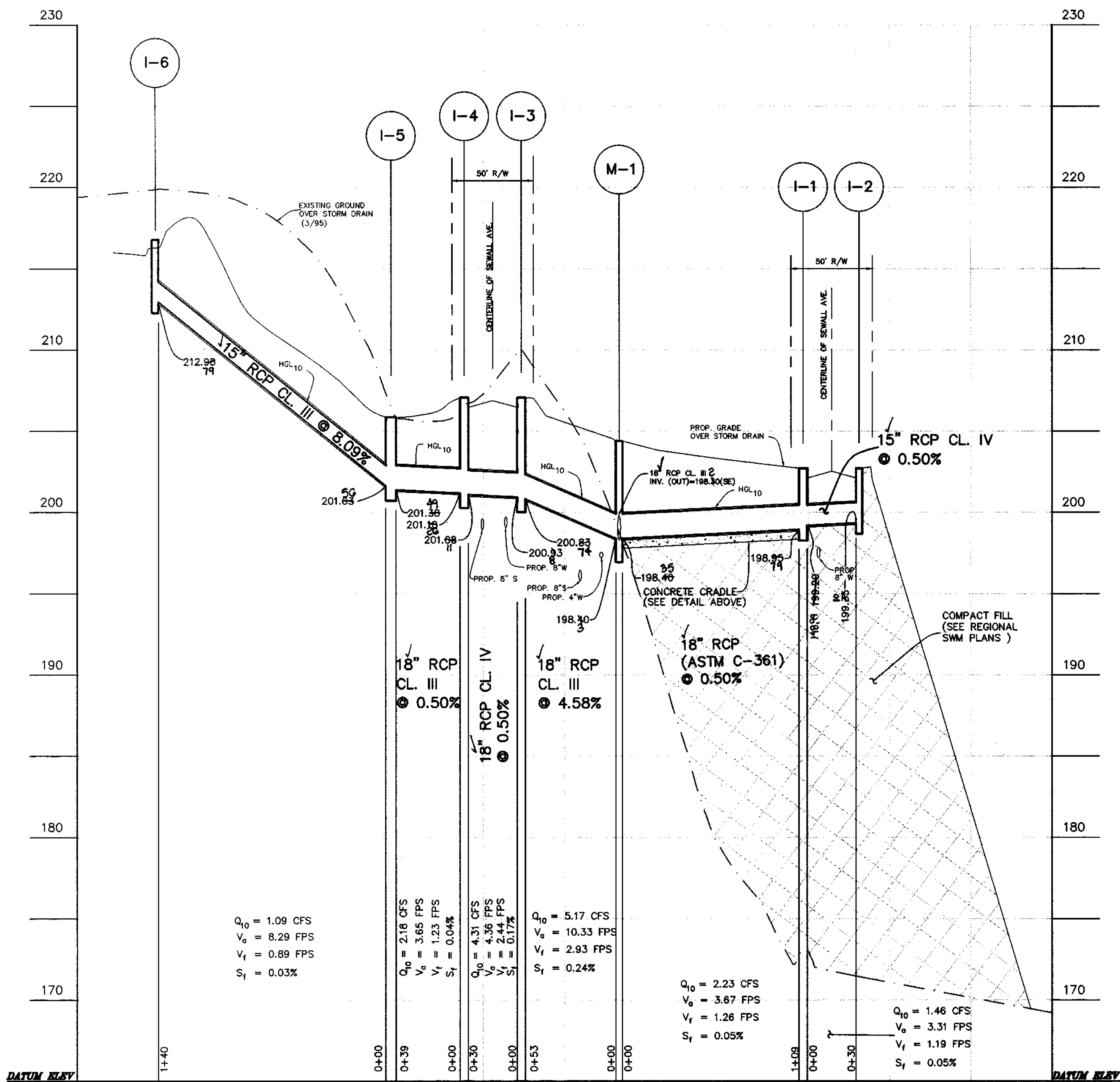
SPRATLEY AVENUE

SCALE: H: 1"=50'  
V: 1"=5'



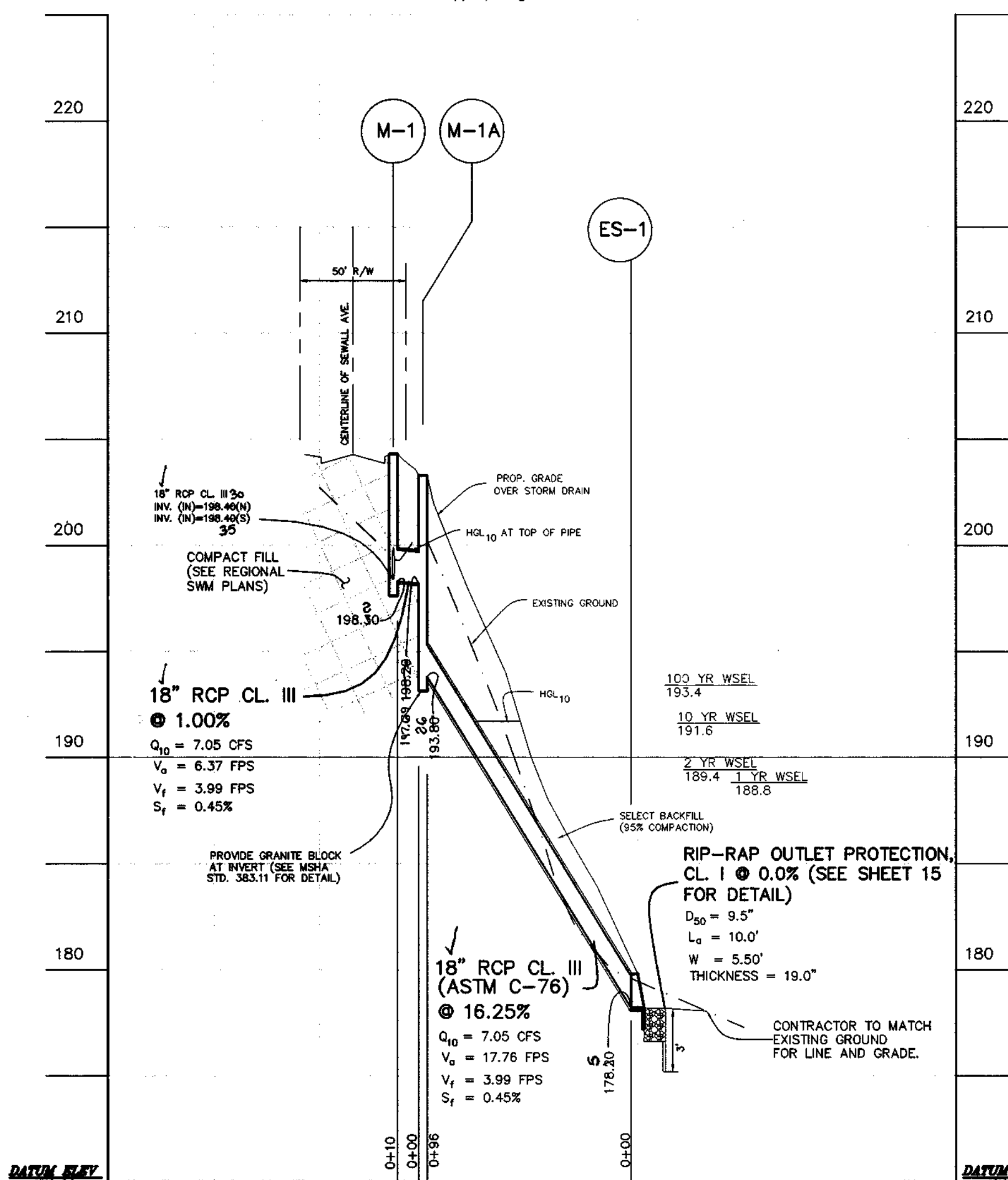
WATER QUALITY POND #2

SCALE: H: 1"=50'  
V: 1"=5'



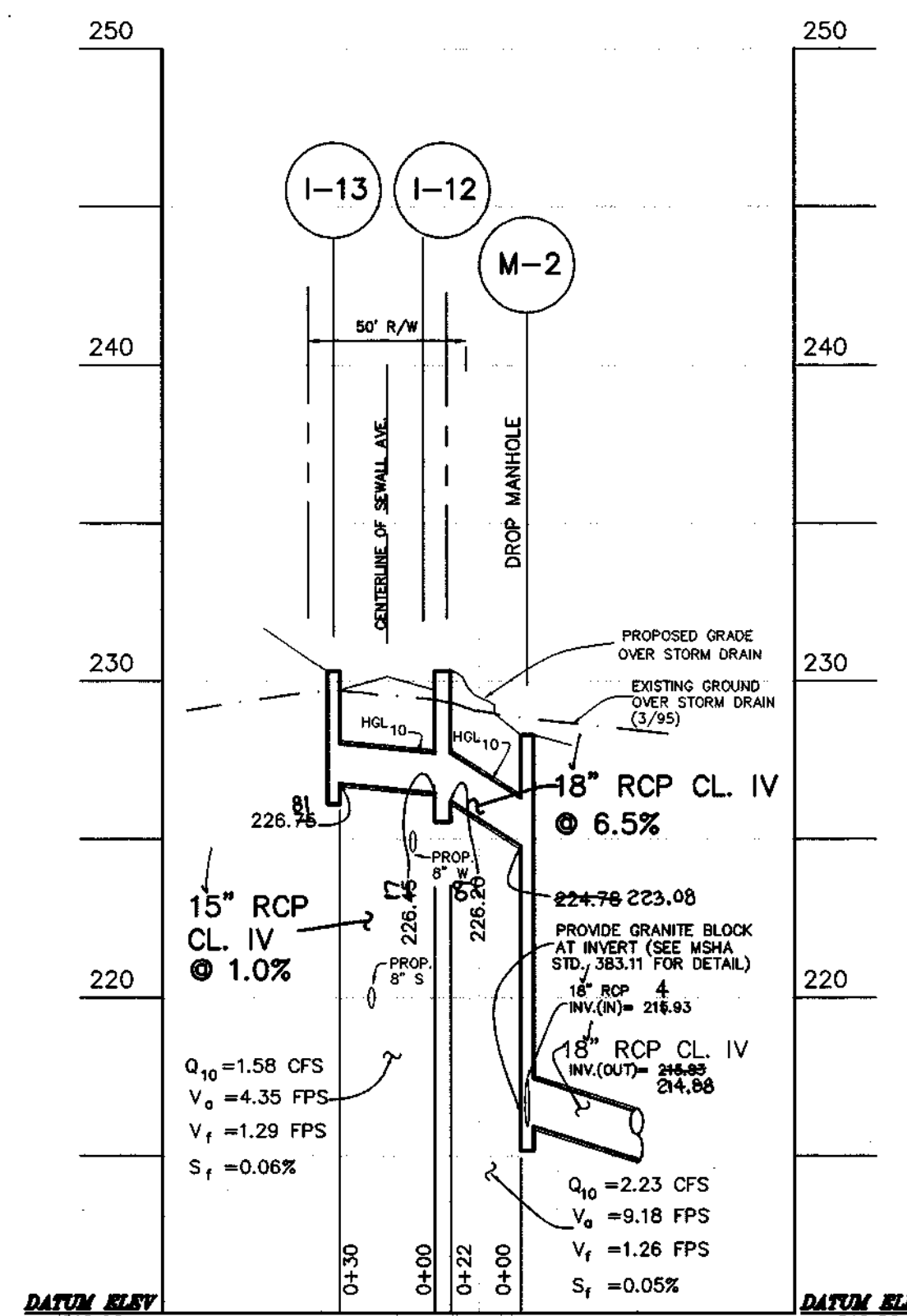
PATUXENT LANE & SEWALL AVENUE

SCALE: H: 1"=50'  
V: 1"=5'



SEWALL AVENUE

SCALE: H: 1"=50'  
V: 1"=5'



SEWALL AVENUE

SCALE: H: 1"=50'  
V: 1"=5'

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Andrew M. Davelle* 10-24-97  
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
*Andy Hamilton* 1/25/97  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*Mike Cummings* 11/21/97  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

NOTE: STATIONS ON THE PROFILE REPRESENT THE LENGTH OF THE PIPE FROM THE OUTSIDE EDGE OF THE STRUCTURE TO THE OUTSIDE EDGE OF THE STRUCTURE.

NOTE: ANY SEDIMENT CONTROLS INTERRUPTED BY THE INSTALLATION OF STORM DRAINS ARE TO BE REPAIRED IMMEDIATELY.



As Built 1/10  
FISHER COLLINS AND COMPANY

NO	DATE	REVISION
0	06/97	SUBMISSION TO COUNTY FOR REVIEW AND APPROVAL
1	08/97	REV. PER COMMENTS DATED 8/1/97

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LOTS 11-20; BLOCK "G", LOTS 1-10 & 12-14; BLOCK "H"

LOCATION:  
TAX MAP 50 - P/O PARCEL 426  
6TH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

TITLE:  
PUBLIC STORM DRAIN PROFILES

DATE: JUNE 1997 PROJECT NO. 0946

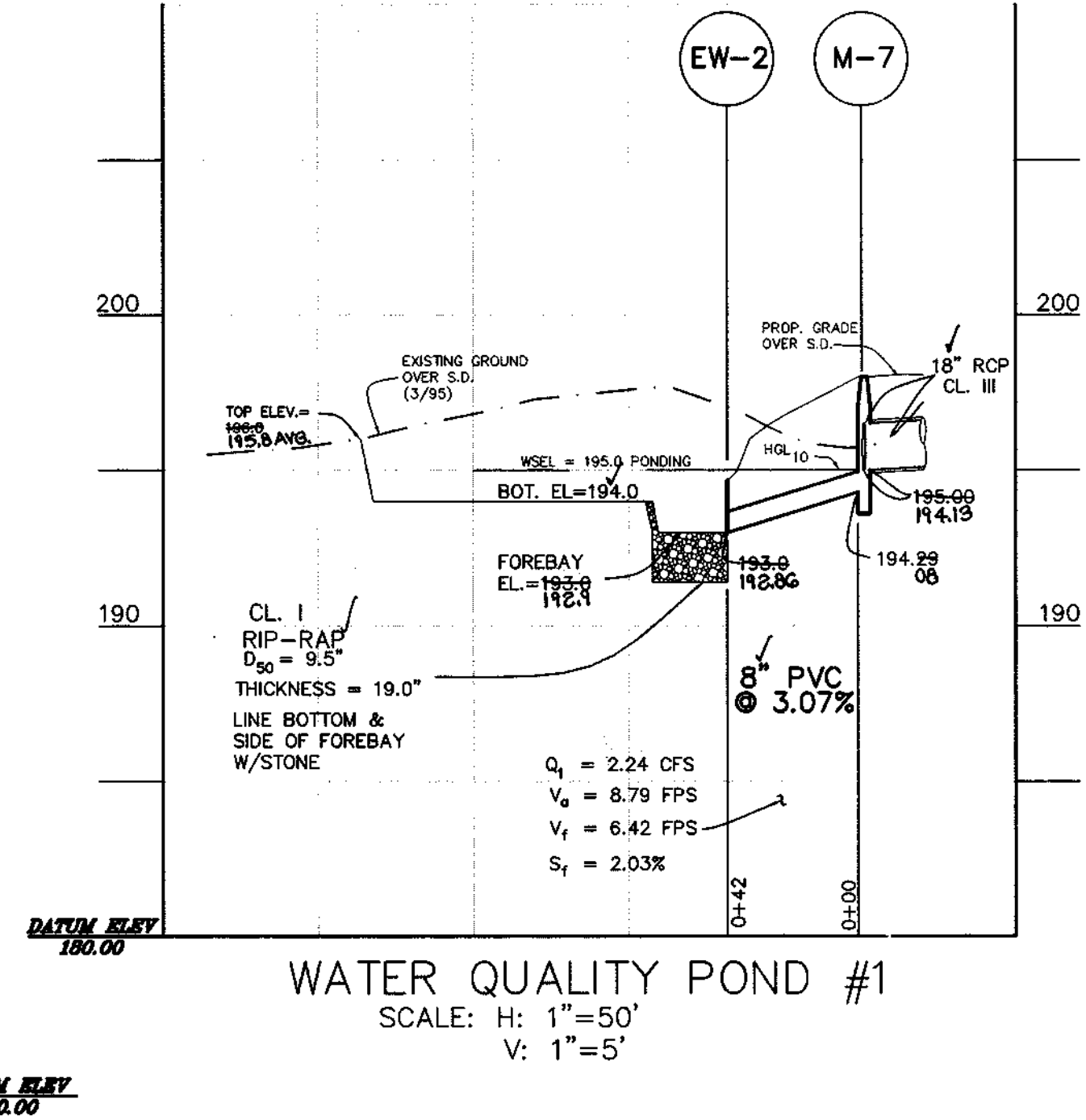
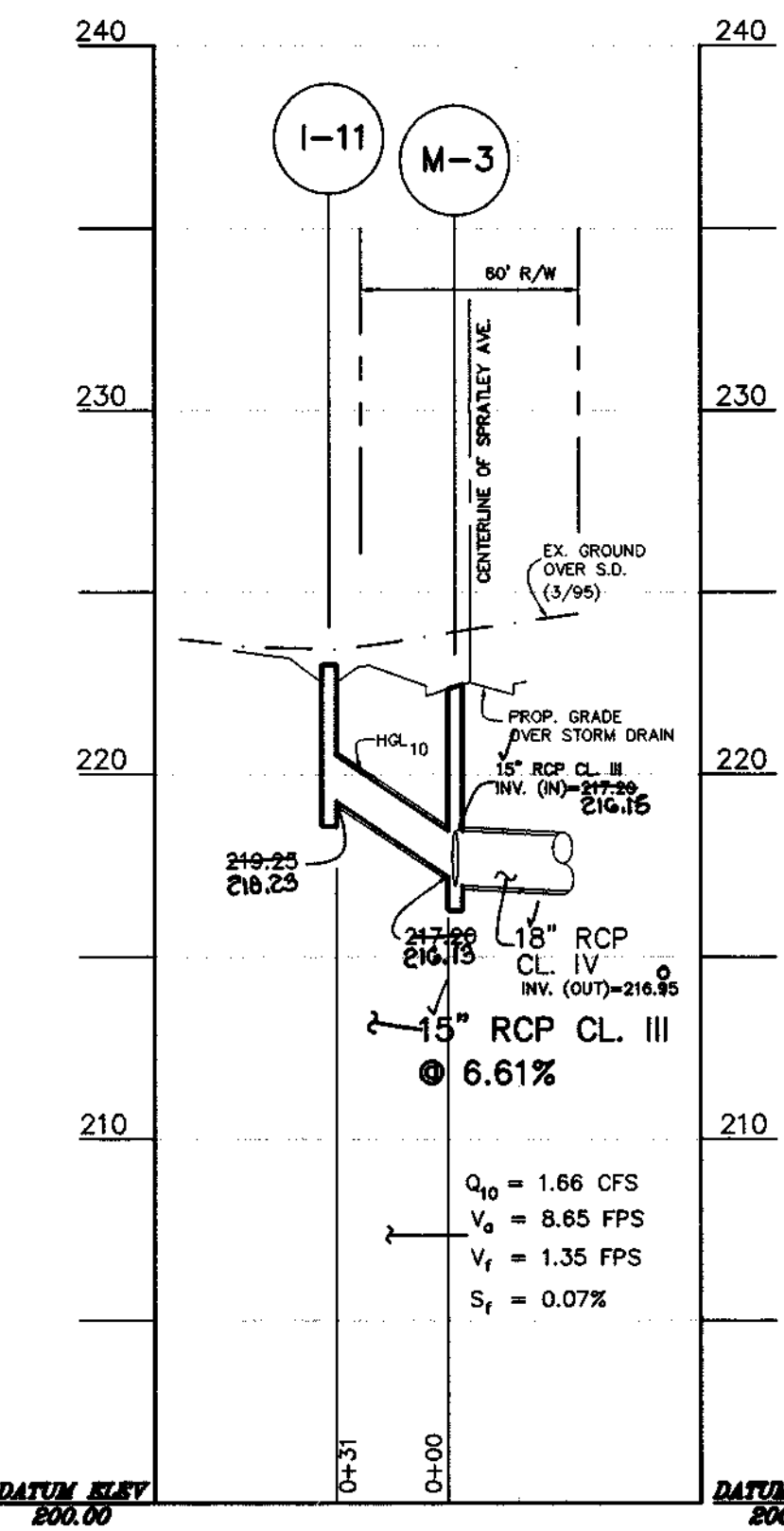
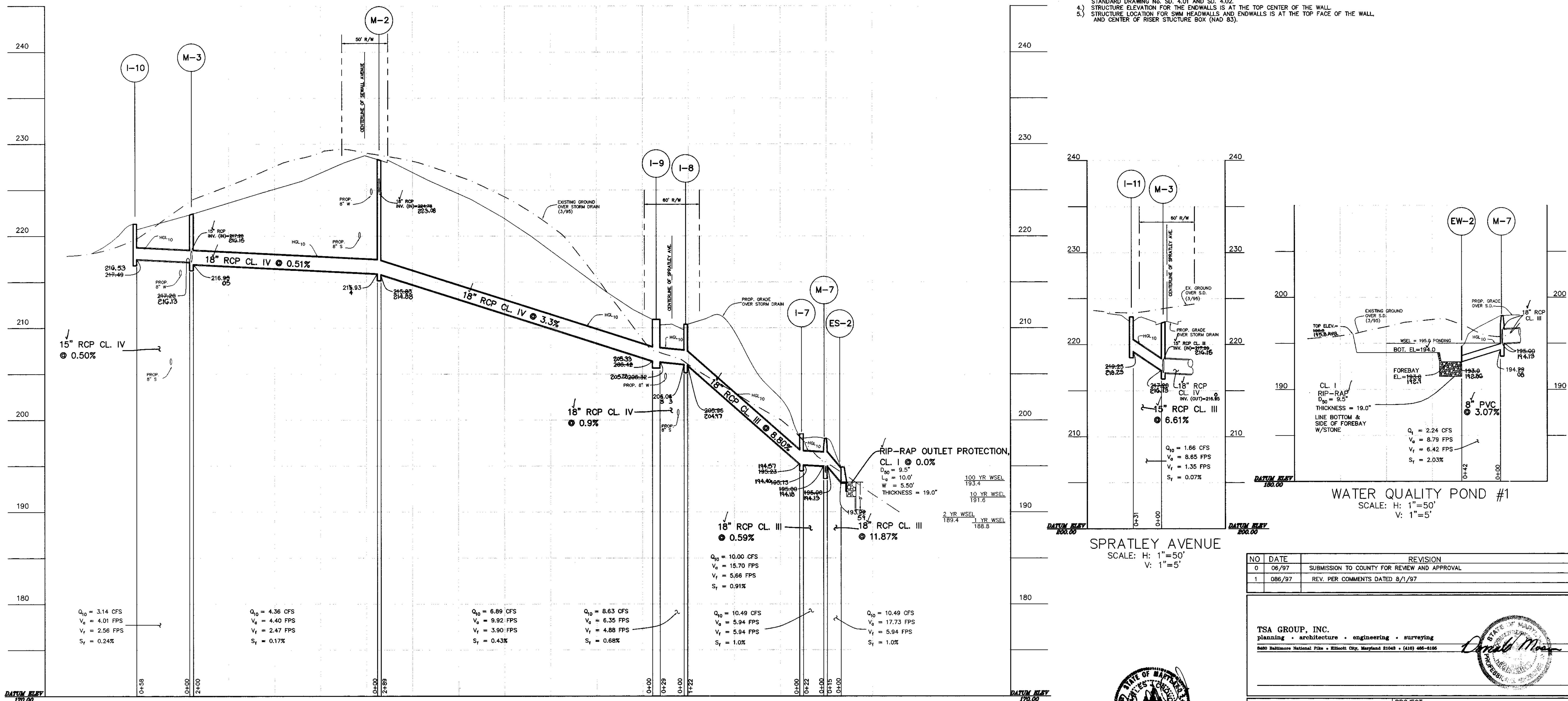
DESIGN: YSL DRAFT: YSL CHECK: CAM SCALE: AS SHOWN DRAWING 5 OF 16

STORM DRAIN STRUCTURE SCHEDULE--PHASE I

STRUCTURE NO.	STRUCTURE TYPE (3)	LOCATION	STRUCTURE ELEVATION	INVERT IN (SIZE)	INVERT IN (SIZE)	INVERT OUT (SIZE)	INVERT OUT (SIZE)	REMARKS	STRUCTURE NO.	STRUCTURE TYPE (3)	LOCATION	STRUCTURE ELEVATION	INVERT (IN) / SIZE	INVERT (IN) / SIZE	INVERT (OUT) / SIZE	REMARKS
ES-1	STD. CONC. END SECTION, H.C. STD. SD-5.52	N 468821.58 E 842808.08				178.30 (18")			I-7	STD. YARD INLET, TYPE "D" H.C. STD. SD-4.11	N 487148.02 E 843022.00	198.80 (19)	198.30 (18")	195.30 (18")		
ES-2	STD. CONC. END SECTION, H.C. STD. SD-5.52	N 487107.84 E 843024.55				193.80 (18")			I-8	STD. PRECAST A-10 INLET, H.C. STD. SD-4.41	12.0' O/S RT. AT P.G.L. STA. 3+38.00	210.30 (23)	205.00 (18")	205.00 (18")		
ES-3	STD. CONC. END SECTION, H.C. STD. SD-5.52	N 487208.00 E 843237.79				196.70 (18")			I-9	STD. PRECAST A-10 INLET, H.C. STD. SD-4.41	12.0' O/S LT. AT P.G.L. STA. 3+18.00	211.30 (18)	205.00 (18")	205.00 (18")		
M-1	STD. CONC. MANHOLE H.C. STD. G-5.12	17+42.87 O/S RT. AT P.G.L. STA. 3+43.87	204.81 (25)	198.30 (18")	198.30 (18")	198.30 (18")			I-10	STD. PRECAST A-5 INLET, H.C. STD. SD-4.40	0' O/S AT P.G.L. STA. 2+44.00	221.30 (8)		205.00 (15")		
M-1A	STD. CONC. MANHOLE H.C. STD. G-5.12	30.5' N 468895.95 E 842744.78 3+43	200.00 (204.74)	191.00 (18")	191.00 (18")	191.00 (18")		DROP MANHOLE	I-11	STD. YARD INLET, TYPE "D" H.C. STD. SD-4.11	37.0' O/S RT. AT P.G.L. STA. 1+91.00	200.40 (221.6)		210.20 (15")		
M-2	STD. CONC. MANHOLE H.C. STD. G-5.12	16.5' N 468895.95 E 842744.78 3+43	228.30 (31)	213.30 (18")	213.30 (18")	213.30 (18")		DROP MANHOLE	I-12	STD. PRECAST A-5 INLET, H.C. STD. SD-4.40	15.0' O/S RT. AT P.G.L. STA. 7+58.00	230.30 (4)	226.40 (15")	226.40 (18")		
M-3	STD. CONC. MANHOLE H.C. STD. G-5.12	1+20.00 O/S RT. AT P.G.L. STA. 1+40.00(L)	222.40 (23)	217.00 (15")	217.00 (15")	217.00 (15")			I-13	STD. PRECAST A-10 INLET, H.C. STD. SD-4.41	15.0' O/S LT. AT P.G.L. STA. 7+58.00	230.30 (26)		226.40 (15")		
M-6	STD. CONC. MANHOLE H.C. STD. G-5.12	N 467208.00 E 843240.00 41	202.00 (204.42)	197.00 (18")	197.00 (18")	197.00 (18")		DIVERSION STRUCTURE (SEE SHEET 13 FOR DETAILS)	I-14	STD. PRECAST A-5 INLET, H.C. STD. SD-4.40	12.0' O/S RT. AT P.G.L. STA. 4+07.00	205.80 (73)	200.30 (15")	200.30 (15")		
M-7	STD. CONC. MANHOLE H.C. STD. G-5.12	N 467122.32 E 843018.00	198.00 (18)	194.10 (18")	194.10 (18")	194.10 (18")		DIVERSION STRUCTURE (SEE SHEET 13 FOR DETAILS)	I-15A	STD. PRECAST A-10 INLET, H.C. STD. SD-4.41	12.0' O/S LT. AT P.G.L. STA. 4+63.50	205.80 (7)	202.40 (15")	202.40 (15")		
I-1	STD. PRECAST A 5 INLET, H.C. STD. SD-4.40	15.0' O/S RT. AT P.G.L. STA. 2+08.00 27	202.00 (24)	198.00 (15")	198.00 (15")	198.00 (15")		DEPRESSED GUTTER AT OPENING	EW 1	REGIONAL FACILITY ENDWALL	N 527,515.3663 E 1,355,025.5484 (LEFT) (5)	175.50 (4)		170.00 (TWIN 48")	SEE SHEET 10 FOR DETAILS	
I-2	STD. PRECAST A 5 INLET, H.C. STD. SD-4.40	15.0' O/S LT. AT P.G.L. STA. 2+08.00 27	202.00 (24)	198.00 (15")	198.00 (15")	198.00 (15")		DEPRESSED GUTTER AT OPENING	EW 2	STD. TYPE "C" ENDWALL, H.C. STD. SD-5.21	N 527,524.8603 E 1,355,025.5484 (RIGHT) (5)	194.50 (4)		192.00 (TWIN 48")	USE ENDWALL SIZE FOR 12" DIA. PIPE	
I-3	STD. PRECAST A 5 INLET, H.C. STD. SD-4.40	15.0' O/S RT. AT P.G.L. STA. 4+04.00 00	206.70 (5)	200.80 (18")	200.80 (18")	200.80 (18")			EW 3	STD. TYPE "C" ENDWALL, H.C. STD. SD-5.21	N 527,524.8603 E 1,355,025.5484 (5)	198.10 (4)		197.00 (8")	USE ENDWALL SIZE FOR 12" DIA. PIPE	
I-4	STD. PRECAST A 5 INLET, H.C. STD. SD-4.40	15.0' O/S LT. AT P.G.L. STA. 4+04.00 00	206.70 (6)	201.80 (18")	201.80 (18")	201.80 (18")			S-1	REGIONAL FACILITY RISER	N 527,524.8603 E 1,355,199.1162 (5)	194.70 (4)		173.00 (TWIN 48")	SEE SHEET 12 FOR DETAILS	
I-5	STD. PRECAST A 5 INLET, H.C. STD. SD-4.40	12.0' O/S RT. AT P.G.L. STA. 0+48.00 49	205.00 (4)	201.80 (15")	201.80 (15")	201.80 (15")			HW-1	REGIONAL FACILITY HEADWALL, H.C. STD SD-5.11	N 527,524.8603 E 1,355,234.6484 (LEFT) (5)	176.00		173.00 (8")	SEE SHEET 10 FOR DETAILS. USE HEADWALL SIZE FOR 18" PIPE W/45' WINGS	
I-6	STD. YARD INLET, TYPE "D" H.C. STD. SD-4.11	30.5' N 468895.95 E 842744.78 3+43	216.80 (7)			212.80 (15")										

EW2 N467085.27 E842993.82  
EW3 N467079.51 E843044.66

- NOTES:
- STRUCTURE ELEVATION FOR MANHOLE IS AT THE TOP CENTER OF THE RIM.
  - STRUCTURE ELEVATION FOR THE INLET IS THE TOP OF CURB ELEVATION
  - LOCATED AT THE MID-POINT OF THE INLET.
  - REFERENCE DRAWING FOR TYPE A-5 AND A-10 INLETS IN HOWARD COUNTY STANDARD DRAWING NO. SD. 4.01 AND SD. 4.02.
  - STRUCTURE ELEVATION FOR THE ENDWALLS IS AT THE TOP CENTER OF THE WALL.
  - STRUCTURE LOCATION FOR SWM HEADWALLS AND ENDWALLS IS AT THE TOP FACE OF THE WALL AND CENTER OF RISER STRUCTURE BOX (NAD 83).



SPRATLEY AVENUE  
SCALE: H: 1"=50'  
V: 1"=5'

WATER QUALITY POND #1  
SCALE: H: 1"=50'  
V: 1"=5'

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Andrew M. Paule* 10-28-97  
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
*Andy Hamilton* 11/25/97  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*Chris Damman* 11/21/97  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

SPRATLEY AVENUE  
SCALE: H: 1"=50'  
V: 1"=5'

NOTE: STATIONS ON THE PROFILE REPRESENT THE LENGTH OF THE PIPE FROM THE OUTSIDE EDGE OF THE STRUCTURE TO THE OUTSIDE EDGE OF THE STRUCTURE.

NOTE: ANY SEDIMENT CONTROLS INTERRUPTED BY THE INSTALLATION OF STORM DRAINS ARE TO BE REPAIRED IMMEDIATELY.

NO	DATE	REVISION
0	06/97	SUBMISSION TO COUNTY FOR REVIEW AND APPROVAL
1	08/97	REV. PER COMMENTS DATED 8/1/97

TSA GROUP, INC.  
planning • architecture • engineering • surveying  
8400 Baltimore National Pike • Ellicott City, Maryland 21043 • (410) 406-8100

OWNER/DEVELOPER:  
CORNERSTONE HOLDINGS, L.L.C.  
7405 BUCKS HAVEN LANE  
HIGHLAND, MARYLAND 20777  
410-988-9146

PROJECT:  
NORTH LAUREL PARK - PHASE I  
LOT 7; BLOCK "A", LOTS 1-12; BLOCK "B",  
LOTS 11-20; BLOCK "C", LOTS 1-10 & 12-14; BLOCK "H"

LOCATION:  
TAX MAP 50 - P/O PARCEL 426  
6TH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

TITLE:  
PUBLIC STORM DRAIN PROFILES

DATE: JUNE 1997 PROJECT NO. 0946

DESIGN: YSL DRAFT: YSL CHECK: CAM SCALE: AS SHOWN DRAWING 8 OF 18

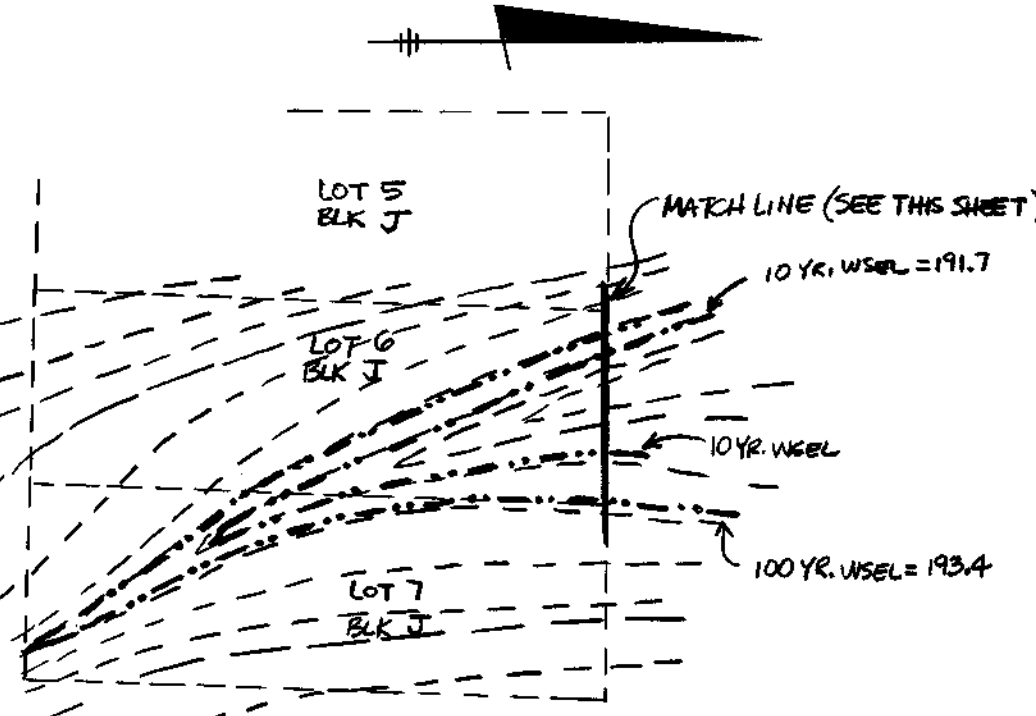


AS BUILT 3/8/00  
FISHER COLLEGE AND CAMPUS INC.



E 842,450  
N 467,950

STATION	FLOW (CFS)	WSEL
0+00	466.00	178.33
0+25	466.00	178.33
0+53	466.00	178.32
0+78	466.00	178.33
1+24	466.00	178.34
1+56	466.00	178.33
2+20	466.00	178.34
4+50	860.00	193.40
5+30	860.00	193.40
6+60	860.00	193.40
7+85	860.00	193.41
9+00	860.00	193.40
10+25	720.00	193.41



E 843,050  
N 467,950



1	8/97	REV. PER COMMENTS DATED 8/1/97
0	6/97	SUBMISSION TO COUNTY FOR REVIEW AND APPROVAL
NO	DATE	REVISION

**TSA GROUP, INC.**  
planning • architecture • engineering • surveying  
8400 Baltimore National Pike • Beltsville City, Maryland 21051 • (410) 406-8100

OWNER/DEVELOPER:  
CORNERSTONE HOLDINGS, L.L.C.  
7405 BUCKS HAVEN LANE  
HIGHLAND, MARYLAND 20777  
410-988-9146

PROJECT:  
**NORTH LAUREL PARK - PHASE I**  
LOT 7; BLOCK "A", LOTS 1-12; BLOCK "B",  
LOTS 11-20; BLOCK "G", LOTS 1-10 & 12-14; BLOCK "H"

LOCATION:  
TAX MAP 50 - P/O PARCEL 426  
6th ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

TITLE:  
**GRADING PLAN**

DATE: JUNE 1997 PROJECT NO. 0946  
SCALE: 1" = 50' DRAWING 7 OF 16

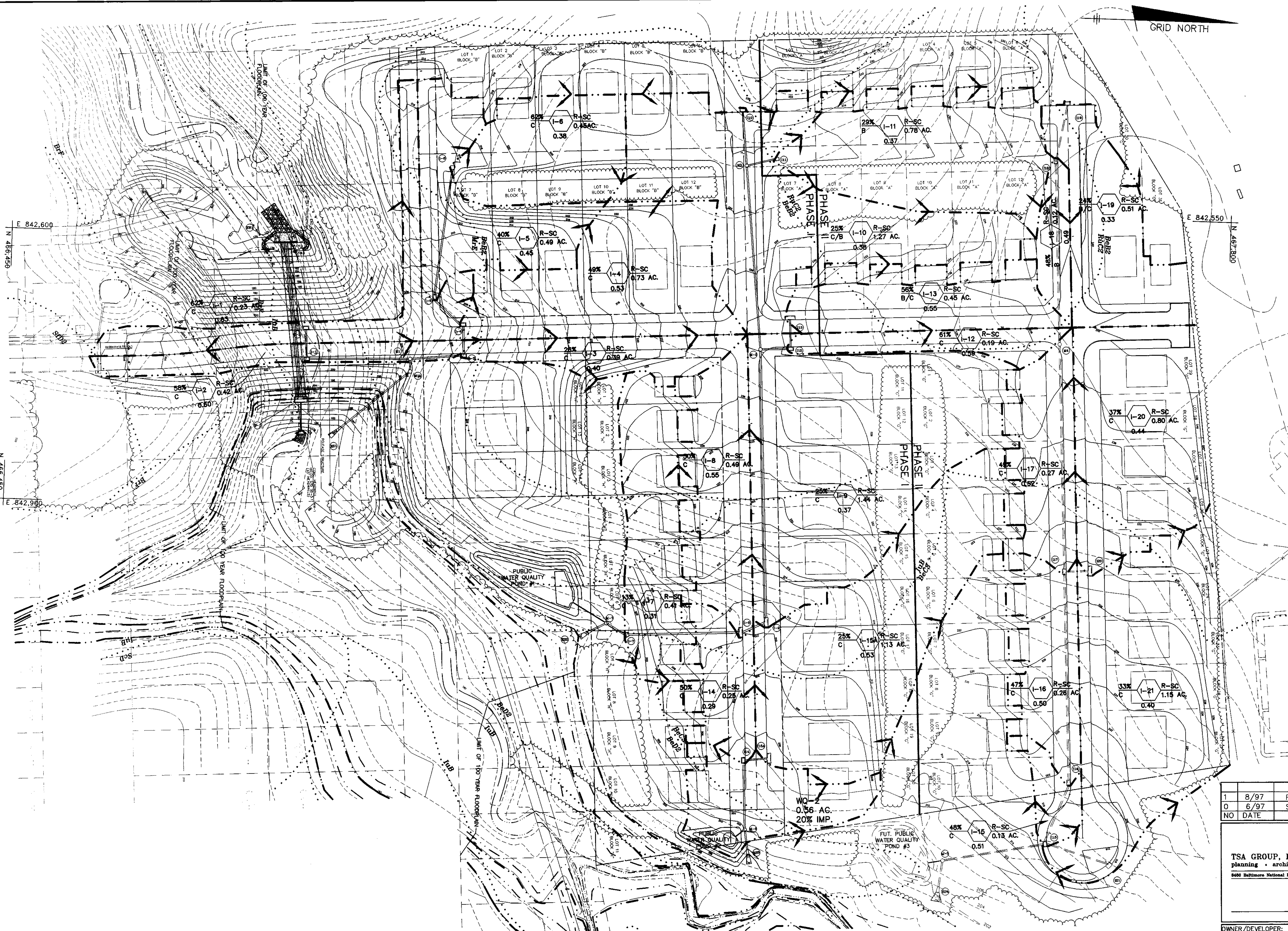
DESIGN: YSL DRAFT: YSL CHECK: CAM

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Andrew M. Daniels* 10-24-97  
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
*Cathy Hamilton* 11/25/97  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*William Dammann* 11/21/97  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

PLAN VIEW  
SCALE: 1" = 50'



SOILS LEGEND		
SYMBOL	MAPPING UNIT	HYD. SOIL GROUP
Bu2	BELTSVILLE SILT LOAM 1-8% SLOPES, MOD. ERODED	C
Bu3	BELTSVILLE SILT LOAM 5-10% SLOPES, SEVERELY ERODED	C
Bu4	BELTSVILLE SILT LOAM 10-15% SLOPES, MOD. ERODED	C
Bu5	BRANDYWINE LOAM 3-8% SLOPES, MOD. ERODED	C
Bu6	BRANDYWINE LOAM 8-10% SLOPES, MOD. ERODED	C
Bu7	BRANDYWINE LOAM 15-25% SLOPES, SEVERELY ERODED	C
Bu8	BRANDYWINE LOAM 25-40% SLOPES, MOD. ASPECT	C
Cm2	CHILLUM SILT LOAM 5-10% SLOPES, MOD. ERODED	C
Cm3	CHELUM-FARFAX LOAM 1-5% SLOPES, MOD. ERODED	C
Em	ELKTON SILT LOAM	C
En	EDERSBORO LOAM SAND 1-5% SLOPES	C
Fs	FALLSINGTON LOAM	C
Ik	IRMA LOAM LOCAL ALUMINUM 1-5% SLOPES	C
Kc3	KELLY CLAY LOAM 15-30% SLOPES, SEVERELY ERODED	C
Kc4	KELLY SILT LOAM 3-8% SLOPES, MOD. ERODED	C
Kc5	KELLY SILT LOAM 8-10% SLOPES, MOD. ERODED	C
Lr	LEONARDTOWN SILT LOAM	C
Lr2	LEONARDTOWN SILT LOAM 3-8% SLOPES, MOD. ERODED	C
Mt3	MANOR LOAM 8-15% SLOPES, SEVERELY ERODED	C
Mt4	MANOR LOAM 15-25% SLOPES, MOD. ERODED	C
Mt5	MANOR LOAM 15-25% SLOPES, SEVERELY ERODED	C
Mt6	MANOR LOAM 25-40% SLOPES	C
Md	MANOR STONY LOAM 3-5% SLOPES	C
Md2	MONTGOMERY & REARY SAND 15-45% SLOPES	C
Ru2	RUMFORD LOAMY SAND 5-10% SLOPES, MOD. ERODED	C
Ru3	RUMFORD LOAMY SAND 10-15% SLOPES, MOD. ERODED	C
Sd	SANDY & CLAYEY LAND MOD. SLOPING	C
Sd2	SANDY & CLAYEY LAND MOD. STEEP	C
Sr2	SASSAPARILLA GRAVELLY SANDY LOAM 1-5% SLOPES, MOD. ERODED	C
Sr3	SASSAPARILLA GRAVELLY SANDY LOAM 5-10% SLOPES, MOD. ERODED	C
Sr4	SASSAPARILLA GRAVELLY SANDY LOAM 5-10% SLOPES, SEVERELY ERODED	C
Sr5	SASSAPARILLA GRAVELLY SANDY LOAM 5-10% SLOPES, SEVERELY ERODED	C
Sr6	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr7	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr8	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr9	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr10	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr11	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr12	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr13	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr14	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr15	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr16	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr17	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr18	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr19	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr20	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr21	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr22	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr23	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr24	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr25	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr26	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr27	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr28	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr29	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr30	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr31	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr32	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr33	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr34	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr35	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr36	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr37	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr38	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr39	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr40	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr41	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr42	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr43	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr44	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr45	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr46	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr47	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr48	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr49	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr50	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr51	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr52	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr53	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr54	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr55	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr56	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr57	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr58	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr59	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr60	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr61	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr62	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr63	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr64	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr65	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr66	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr67	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr68	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr69	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr70	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr71	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr72	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr73	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr74	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr75	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr76	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr77	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr78	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr79	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr80	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
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Sr82	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr83	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr84	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr85	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr86	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr87	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr88	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr89	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr90	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr91	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr92	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr93	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr94	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr95	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr96	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr97	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr98	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr99	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C
Sr100	SUNNYSIDE FINE SANDY LOAM 5-15% SLOPES, MOD. ERODED	C

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Andrew M. Danek* 10-24-97  
 CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
*Andy Hamilton* 11/25/97  
 CHIEF, DIVISION OF LAND DEVELOPMENT

*John Dammann* 11/21/97  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

PLAN VIEW  
 SCALE: 1" = 50'

1	8/97	REV. PER COMMENTS DATED 8/1/97
0	6/97	SUBMISSION TO COUNTY FOR REVIEW AND APPROVAL.
NO	DATE	REVISION

TSA GROUP, INC.  
 planning • architecture • engineering • surveying  
 9600 Baltimore National Pike • Millersville, Maryland 21104 • (410) 486-6106

OWNER/DEVELOPER:  
 CORNERSTONE HOLDINGS, L.L.C.  
 7405 BUICKS HAVEN LANE  
 8th ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND  
 410-988-9146

PROJECT:  
**NORTH LAUREL PARK - PHASE I**  
 LOT 7, BLOCK "A"; LOTS 1-12, BLOCK "B";  
 LOTS 11-20, BLOCK "C"; LOTS 1-10 & 12-14, BLOCK "H"

LOCATION:  
 TAX MAP 50 - P/O PARCEL 426  
 8th ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

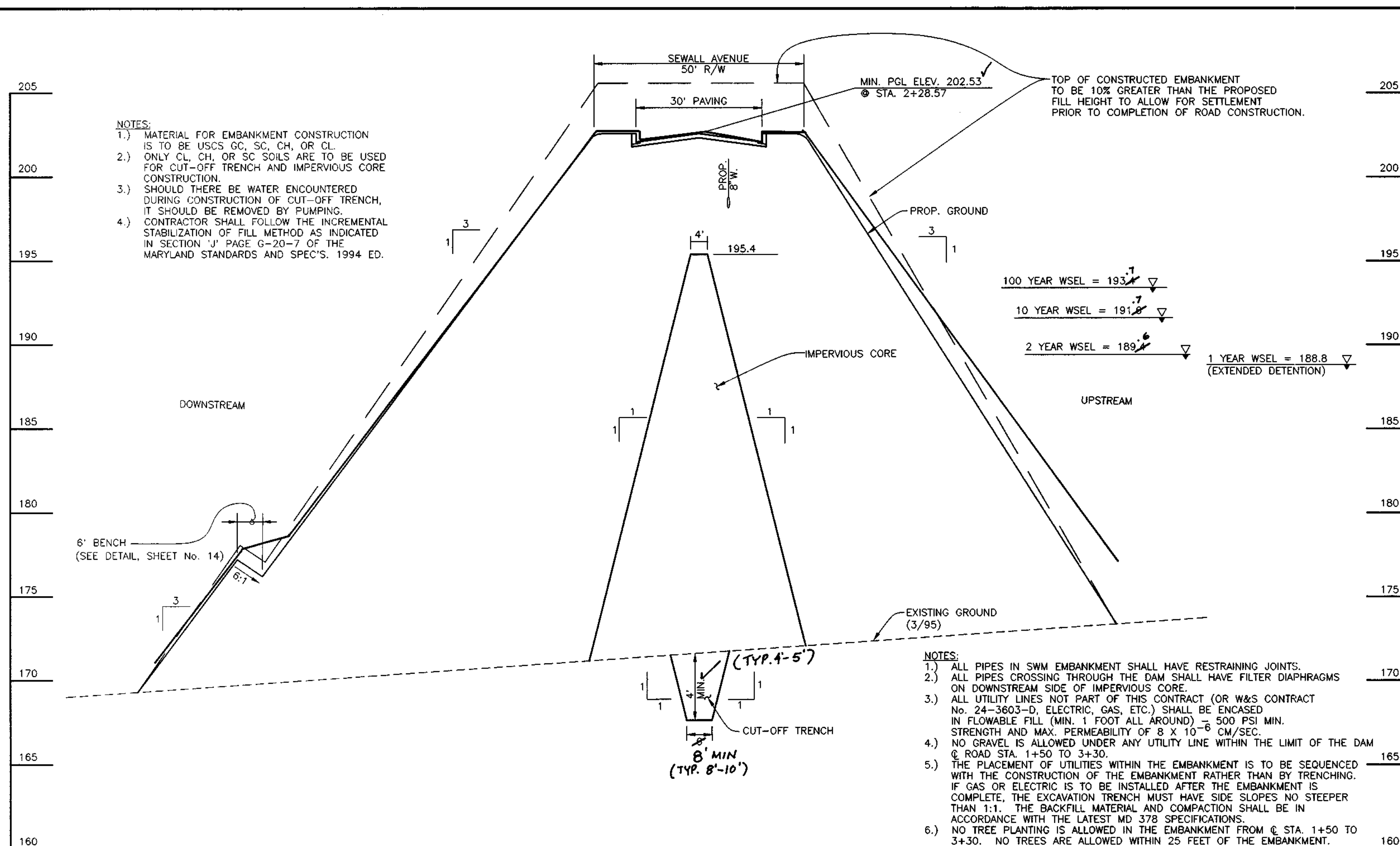
TITLE:  
**DRAINAGE AREA MAP  
 FOR PUBLIC STORM DRAIN SYSTEM**

DATE: JUNE, 1997 PROJECT NO. 0946  
 DRAWING NO. OF 16

DESIGN: YSL DRAFT: YSL CHECK: CAM SCALE: 1" = 50'



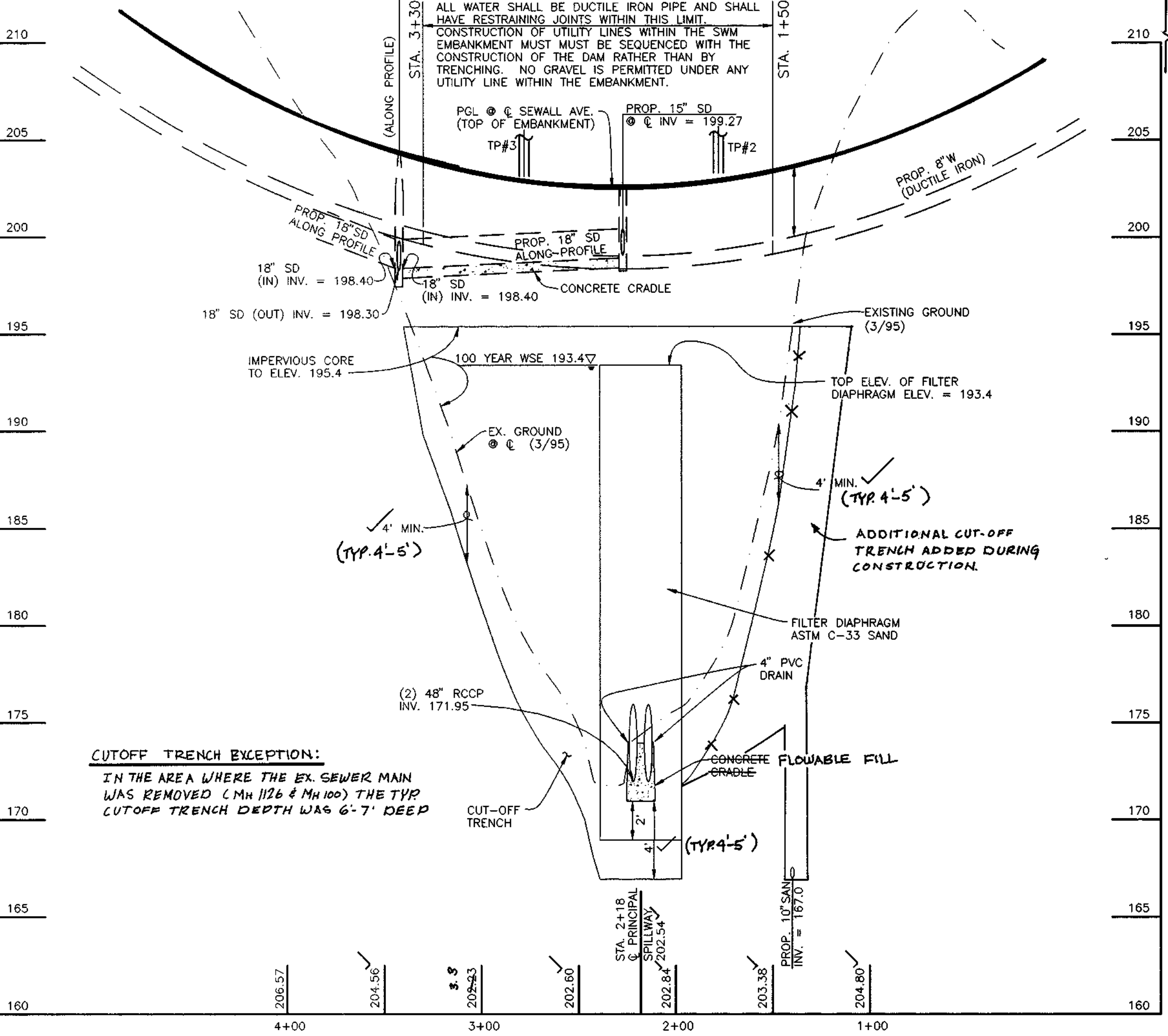
NOTES:  
 1. MATERIAL FOR EMBANKMENT CONSTRUCTION IS TO BE USGS GC, SC, CH, OR CL.  
 2. ONLY CL, CH, OR SC SOILS ARE TO BE USED FOR CUT-OFF TRENCH AND IMPERVIOUS CORE CONSTRUCTION.  
 3. SHOULD THERE BE WATER ENCOUNTERED DURING CONSTRUCTION OF CUT-OFF TRENCH, IT SHOULD BE REMOVED BY PUMPING.  
 4. CONTRACTOR SHALL FOLLOW THE INCREMENTAL STABILIZATION OF FILL METHOD AS INDICATED IN SECTION 'J' PAGE G-20-7 OF THE MARYLAND STANDARDS AND SPECS. 1994 ED.



**TYPICAL EMBANKMENT SECTION**

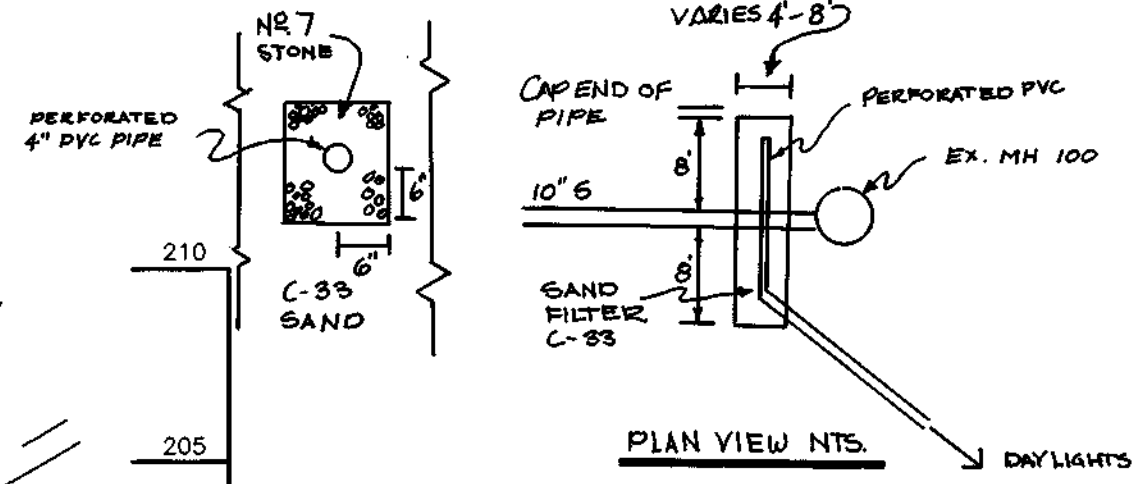
SCALE: HORIZ.: 1" = 20'  
 VERT.: 1" = 5'

NOTES:  
 1. ALL PIPES CROSSING THROUGH THE DAM SHALL HAVE FILTER DIAPHRAGMS ON DOWNSTREAM SIDE OF IMPERVIOUS CORE.  
 2. ALL UTILITY LINES NOT PART OF THIS CONTRACT (OR W&S CONTRACT NO. 24-3603-D, ELECTRIC, GAS, ETC.) SHALL BE ENCASED IN FLOWABLE FILL (MIN. 1 FOOT ALL AROUND) - 500 PSI MIN. STRENGTH AND MAX. PERMEABILITY OF  $8 \times 10^{-6}$  CM/SEC.  
 3. NO GRAVEL IS ALLOWED UNDER ANY UTILITY LINE WITHIN THE LIMIT OF THE DAM @ ROAD STA. 1+50 TO 3+30.  
 4. THE PLACEMENT OF UTILITIES WITHIN THE EMBANKMENT IS TO BE SEQUENCED WITH THE CONSTRUCTION OF THE EMBANKMENT RATHER THAN BY TRENCHING. IF GAS OR ELECTRIC IS TO BE INSTALLED AFTER THE EMBANKMENT IS COMPLETE, THE EXCAVATION TRENCH MUST HAVE SIDE SLOPES NO STEEPER THAN 1:1. THE BACKFILL MATERIAL AND COMPACTION SHALL BE IN ACCORDANCE WITH THE LATEST MD 378 SPECIFICATIONS.  
 5. NO TREE PLANTING IS ALLOWED IN THE EMBANKMENT FROM @ STA. 1+50 TO 3+30. NO TREES ARE ALLOWED WITHIN 25 FEET OF THE EMBANKMENT.



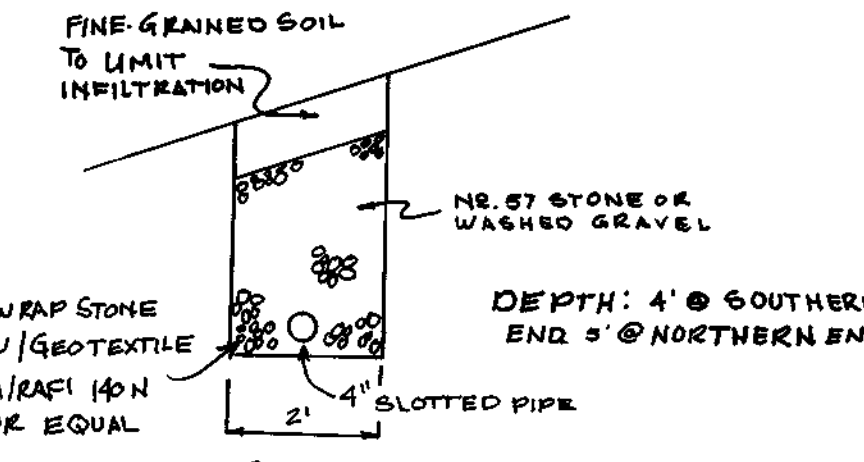
**E EMBANKMENT PROFILE**

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



**PLAN VIEW NTS.**

NOTE:  
 INSPECTION OF THE POND(S) SHOWN HEREON SHALL BE PERFORMED AT LEAST ANNUALLY, IN ACCORDANCE WITH THE CHECKLIST AND REQUIREMENTS CONTAINED WITHIN USDA, SCS "STANDARDS AND SPECIFICATIONS FOR PONDS" (MD-378). THE POND OWNER(S) AND ANY HEIRS, SUCCESSORS, OR ASSIGNS SHALL BE RESPONSIBLE FOR THE SAFETY OF THE POND AND THE CONTINUED OPERATION, SURVEILLANCE, INSPECTION, AND MAINTENANCE THEREOF. THE POND OWNER(S) SHALL PROMPTLY NOTIFY THE SOIL CONSERVATION DISTRICT OF ANY UNUSUAL OBSERVATIONS THAT MAY BE INDICATIONS OF DISTRESS SUCH AS EXCESSIVE SEEPAGE, TURBID SEEPAGE, SLIDING OR SLUMPING.



**SLOPE DRAIN DETAIL NTS.**

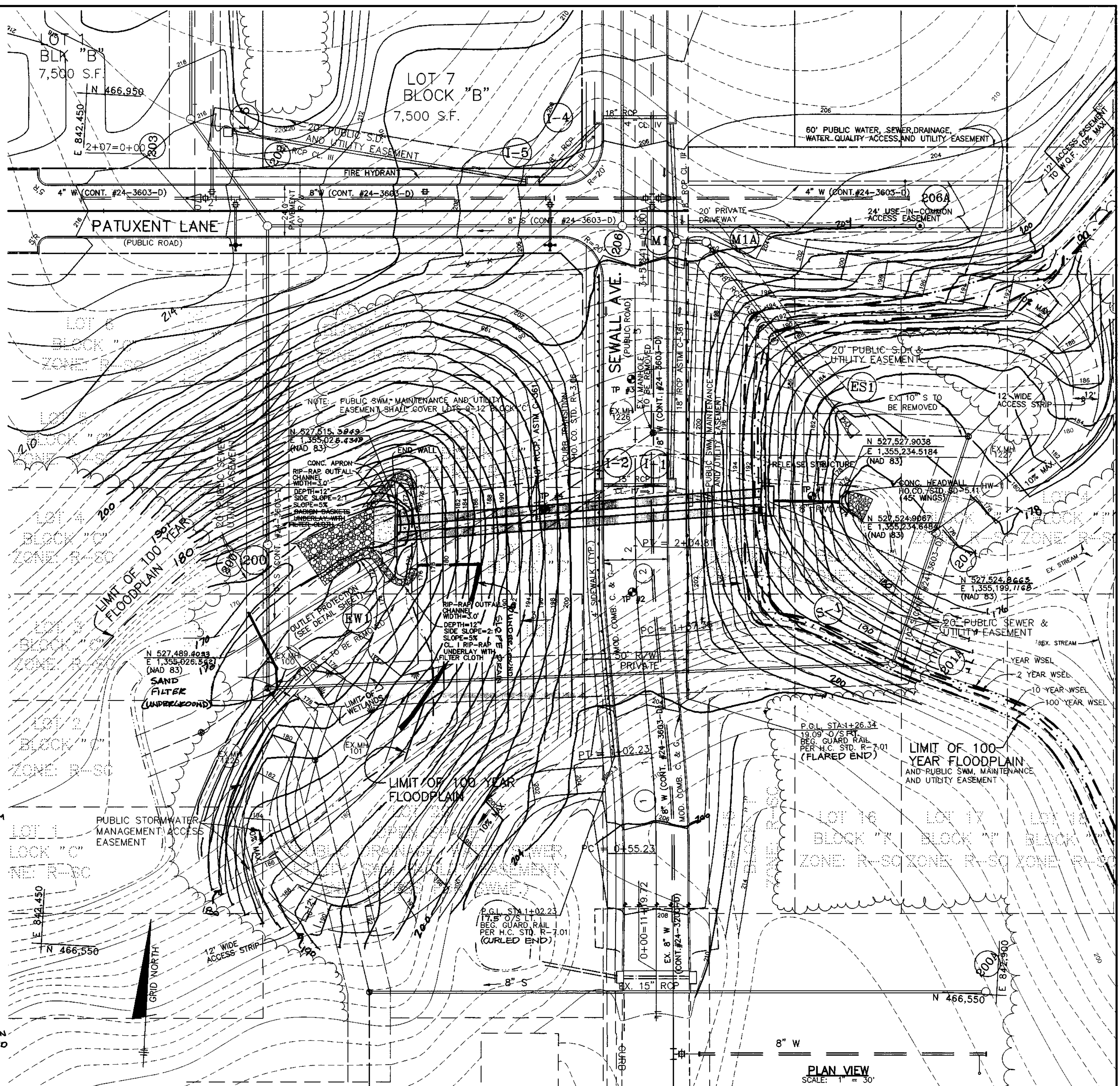
NOTES:  
 1. 8" DUCTILE IRON WATER MAIN FROM @ ROAD STA. 1+15 TO 3+90 SHALL BE LOCATED ON UPSTREAM SIDE OF IMPERVIOUS CORE. (SEE CONT. NO. 24-3603-D).  
 2. ALL UTILITY LINES LOCATED WITHIN THE EMBANKMENT (@ ROAD STA. 1+50 TO 3+30) SHALL HAVE RESTRAINING JOINTS.



By the Engineer:  
 I hereby certify that the facility shown on this plan was constructed as shown on the "AS-BUILT" plans and meets the approved plans and specifications.  
 Date: 10/24/97  
 ENGINEER: MICHAEL P. JOHNSON PE # 15852  
 Certify means to state or declare a professional opinion based upon onsite inspections and materials tests which are conducted during construction. The onsite inspections and materials tests are those inspections and tests deemed sufficient and appropriate by commonly accepted engineering standards. Certify does not mean or imply a guarantee by the Engineer nor does an Engineer's certification relieve any other party from meeting requirements imposed by contract, employment or other means, including meeting commonly accepted industry practices.

APPROVED—HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 Chief, Bureau of Highways H5 10/24/97 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 Chief, Division of Land Development #40 10/24/97 DATE  
 Chief, Development Engineering Division 10/24/97 DATE



**PLAN VIEW**  
 SCALE: 1" = 30'

NOTE: ANY SEDIMENT CONTROLS INTERRUPTED BY THE INSTALLATION OF STORM DRAINS ARE TO BE REPAIRED IMMEDIATELY.

NO.	DATE	REV. PER COMMENTS DATED	REVISION
1	8/97	REV. PER COMMENTS DATED 8/1/97	
0	6/97	SUBMISSION TO COUNTY FOR REVIEW AND APPROVAL	

**ENGINEER'S CERTIFICATE**  
 I hereby 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.  
 Donald M. Mason 10/24/97  
 Date

**DEVELOPER'S CERTIFICATE**  
 I/We certify that all development and construction will be done in accordance with this plan of development and plan for erosion and sediment control and that all responsible personnel involved in the construction of this 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 onsite inspection by the Howard Soil Conservation District or their authorized agents, as are deemed necessary.  
 B. D. Bay 10/19/97  
 Signature of Developer Date

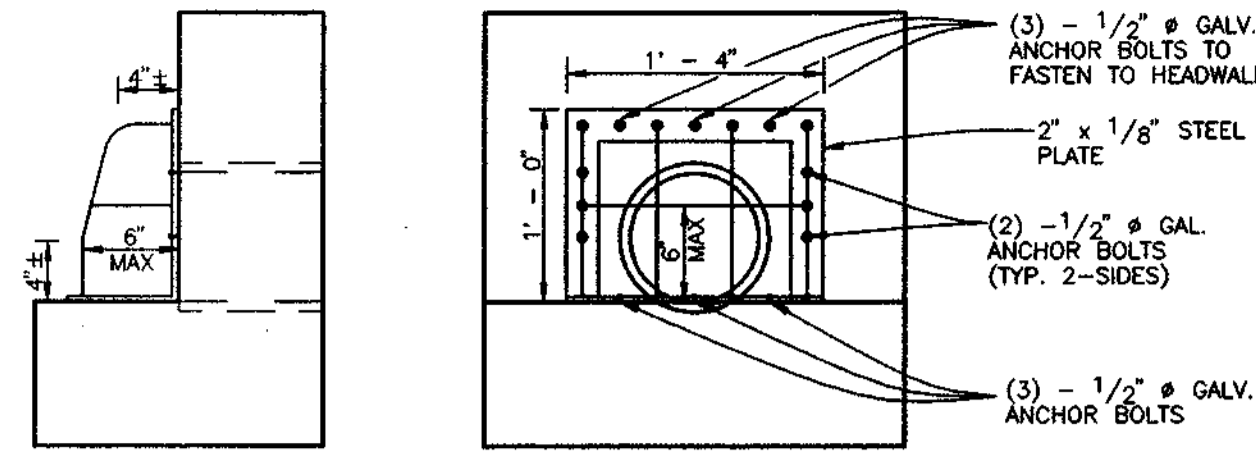
TSA GROUP, INC.  
 planning • architecture • engineering  
 8480 Baltimore National Pike • Ellicott City, Maryland 21043 • (410) 465-8105



OWNER/DEVELOPER:  
 CORNERSTONE HOLDINGS, L.L.C.  
 7405 BUCKS HAVEN LANE  
 HIGHLAND, MARYLAND 20777  
 410-988-9146

PROJECT:  
 NORTH LAUREL PARK - PHASE I  
 LOT 7; BLOCK "A", LOTS 1-12; BLOCK "B"  
 LOTS 11-20; BLOCK "G", LOTS 1-10 & 12-14, BLOCK "H"  
 LOCATION:  
 TAX MAP 50 - P/O PARCEL 426  
 SIXTH ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

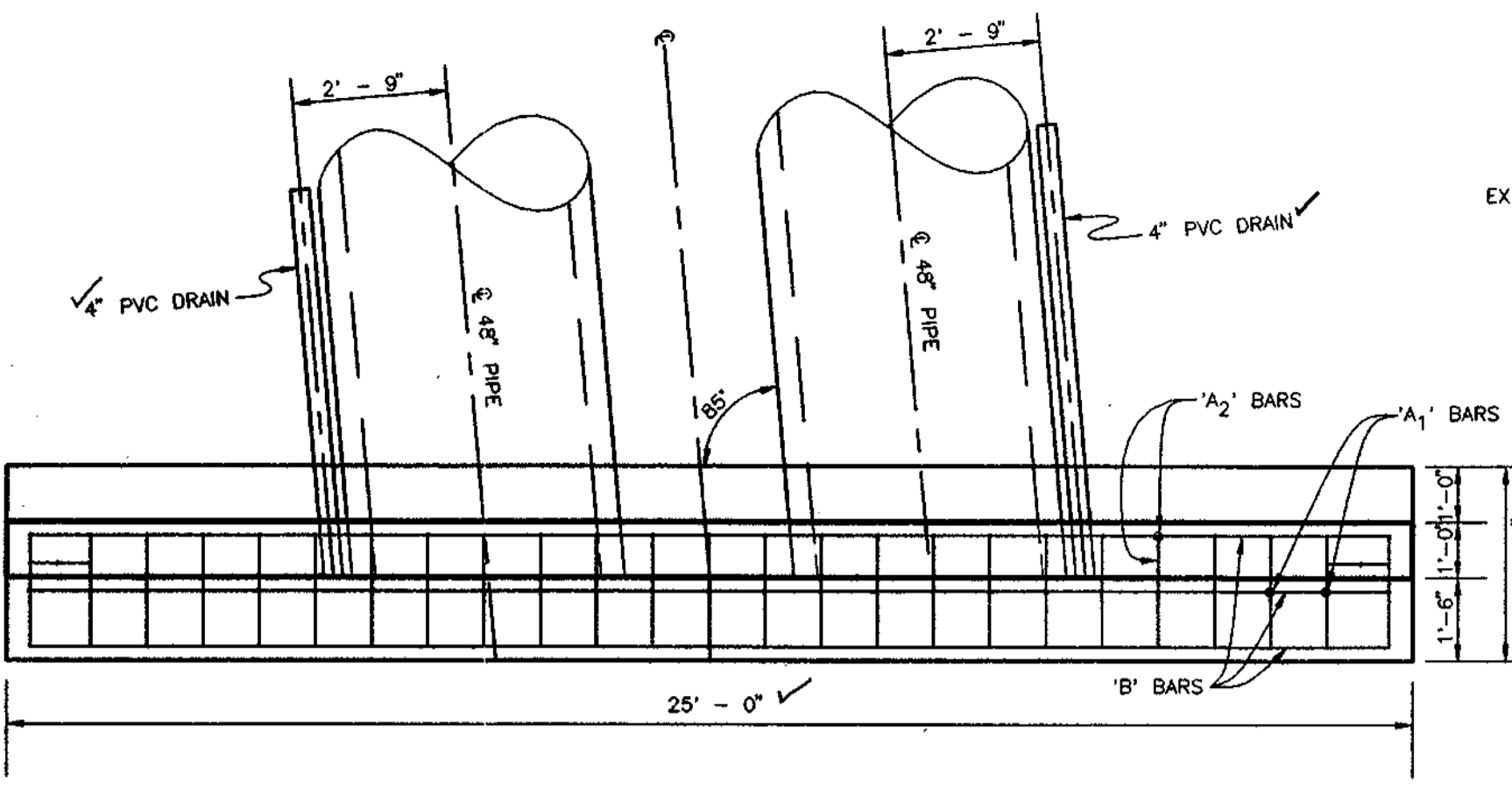
TITLE:  
 STORMWATER MANAGEMENT PLAN  
 NOTES AND DETAILS  
 DATE: JUNE, 1997 PROJECT NO. 0946  
 SCALE: AS SHOWN DRAWING 9 OF 18



**√8" PVC HEADWALL  
TRASH RACK DETAIL**  
SCALE: 1" = 1'

TRASH RACK SHALL BE GALVANIZED AFTER FABRICATION AND PAINTED BATTLESHIP GRAY.

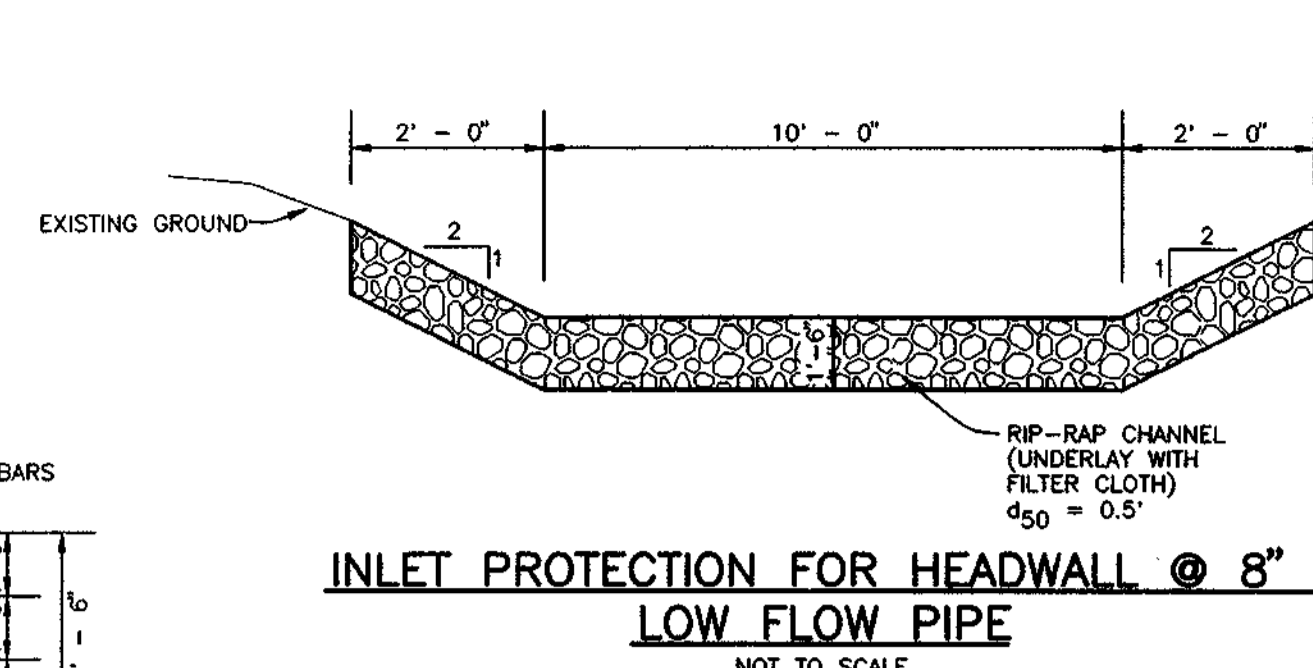
NOTE:  
USE HO. CO. STD. SD 5.11  
TYPE "A" HEADWALL  
(USE SIZE BASED ON 18" PIPE)  
(USE 45° WING WALLS)



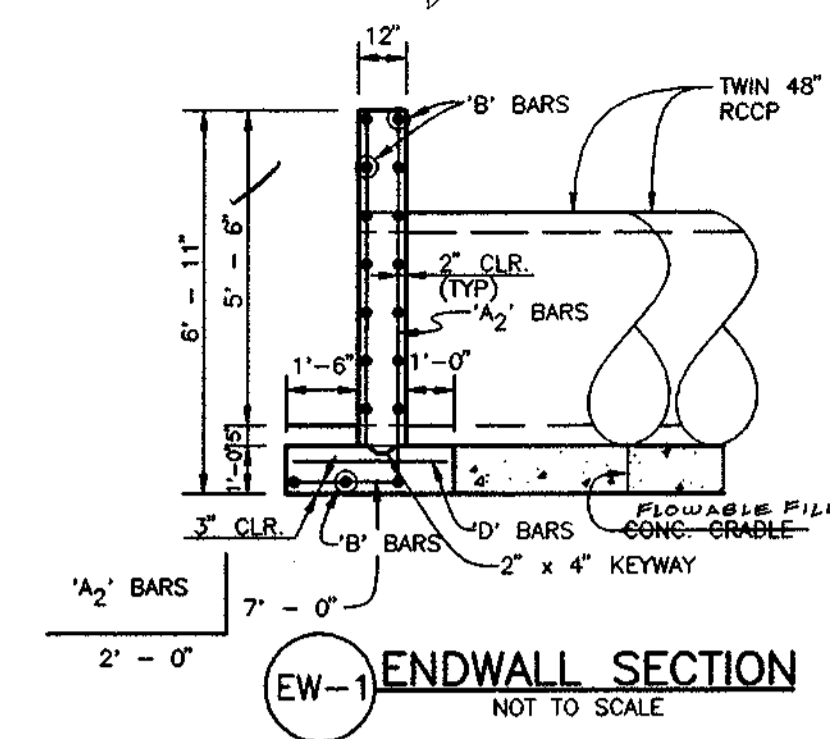
**PLAN - ENDWALL**  
NOT TO SCALE

BAR	SIZE	SPACING
A1	#5	12 OC
A2	#5	12 OC
B	#5	12 OC
C	#4	14 OC
D	#4	12 OC

NOTES:  
1. ALL CONCRETE SHALL BE MIX NO. 3.  
2. ALL REINFORCEMENT STEEL SHALL CONFORM TO THE REQUIREMENTS OF ASTM A615 GRADE 60.  
3. ALL EXPOSED CORNERS ARE TO BE CHAMFERED 3/4".

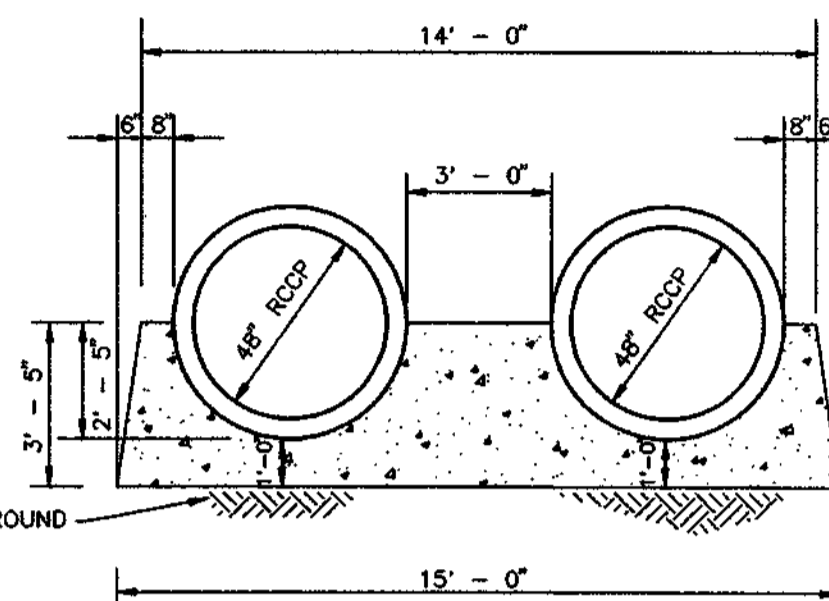


**INLET PROTECTION FOR HEADWALL @ 8" PVC  
LOW FLOW PIPE**  
NOT TO SCALE

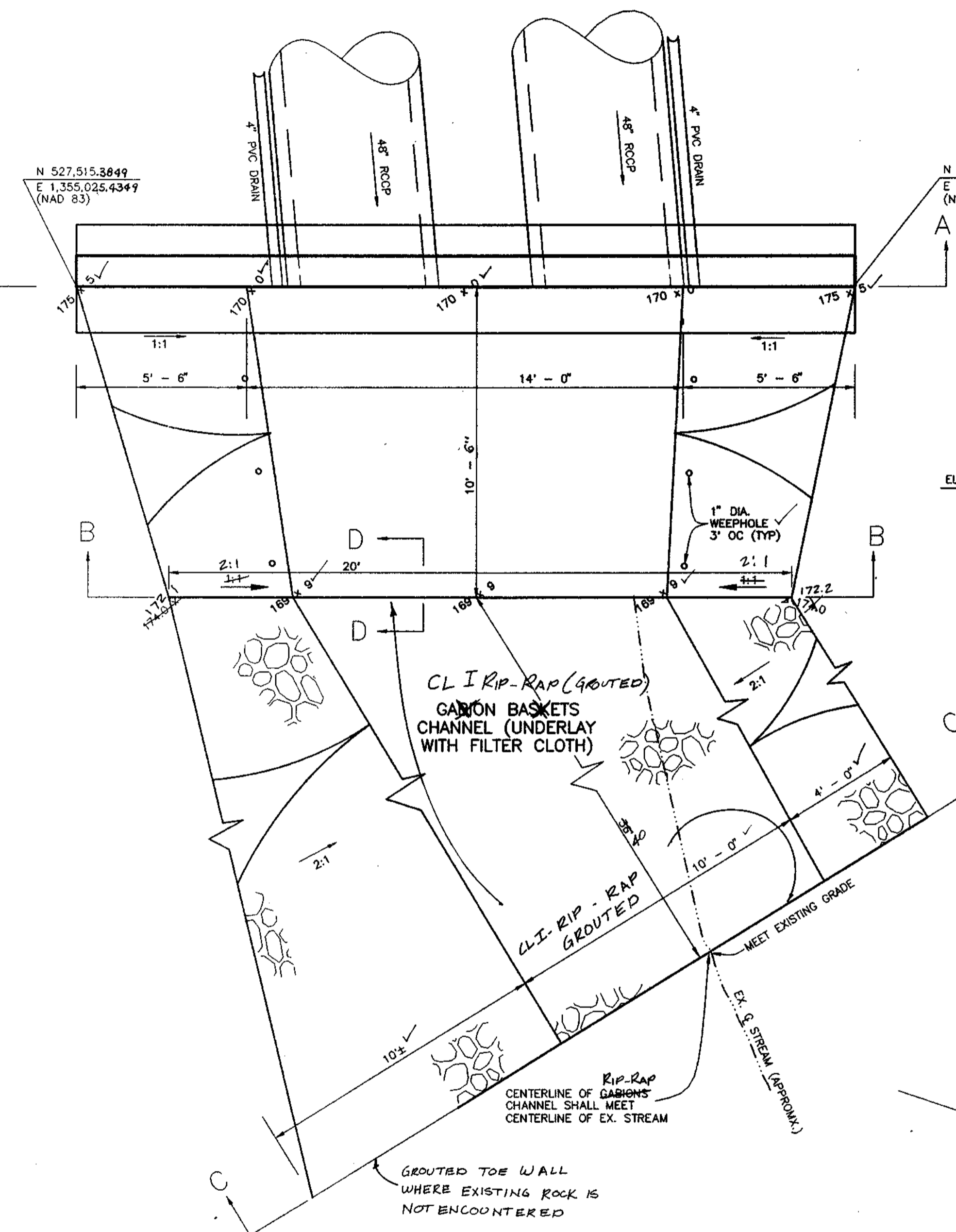


**EW-1 ENDWALL SECTION**  
NOT TO SCALE

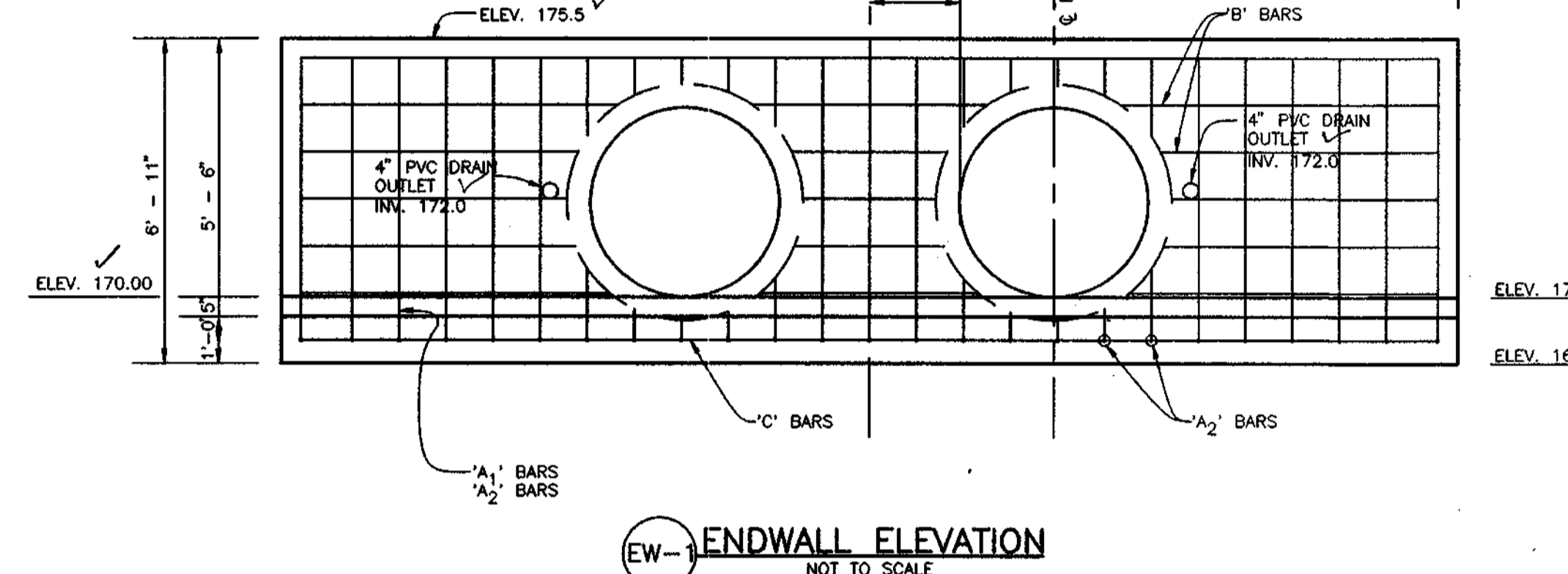
NOTES:  
1. POUR CONCRETE TO UNDISTURBED EARTH. REMOVE SHEETING BEFORE POURING CONCRETE OR LEAVE LOWER PORTION OF SHEETING IN PLACE.  
2. CONCRETE-PIPE TO BE PLACED FOR ENTIRE LENGTH OF 48" PIPES.  
3. ASPHALT JOINT FILLER TO BE INSTALLED BETWEEN ALL CONCRETE SURFACES EXCEPT BETWEEN CRADLE AND PIPE.



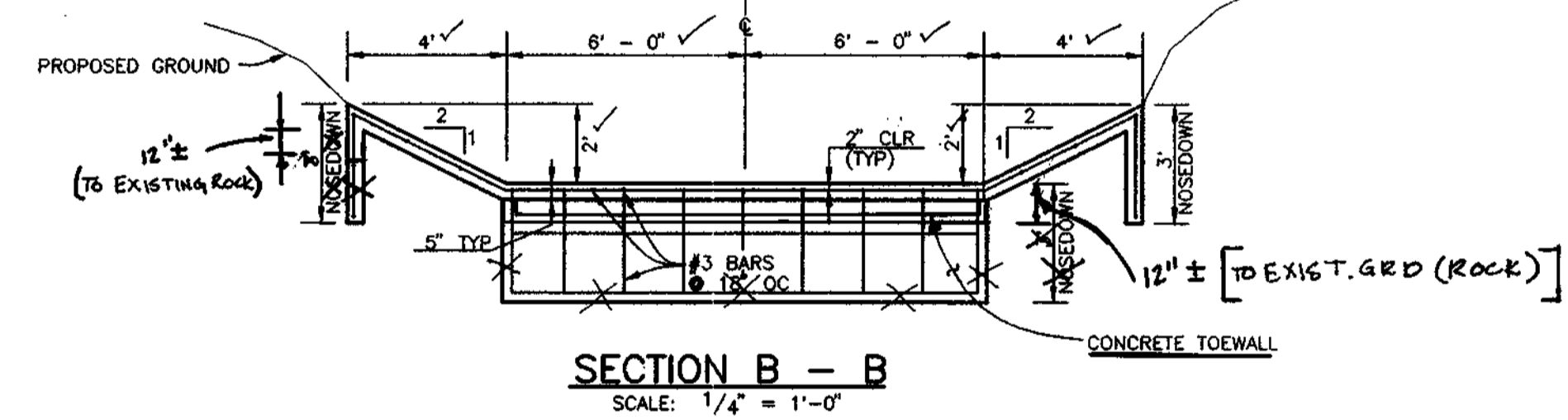
**FLOWABLE FILL  
TYPE "A-2" CONCRETE CRADLE  
FOR TWIN PIPES**  
NOT TO SCALE



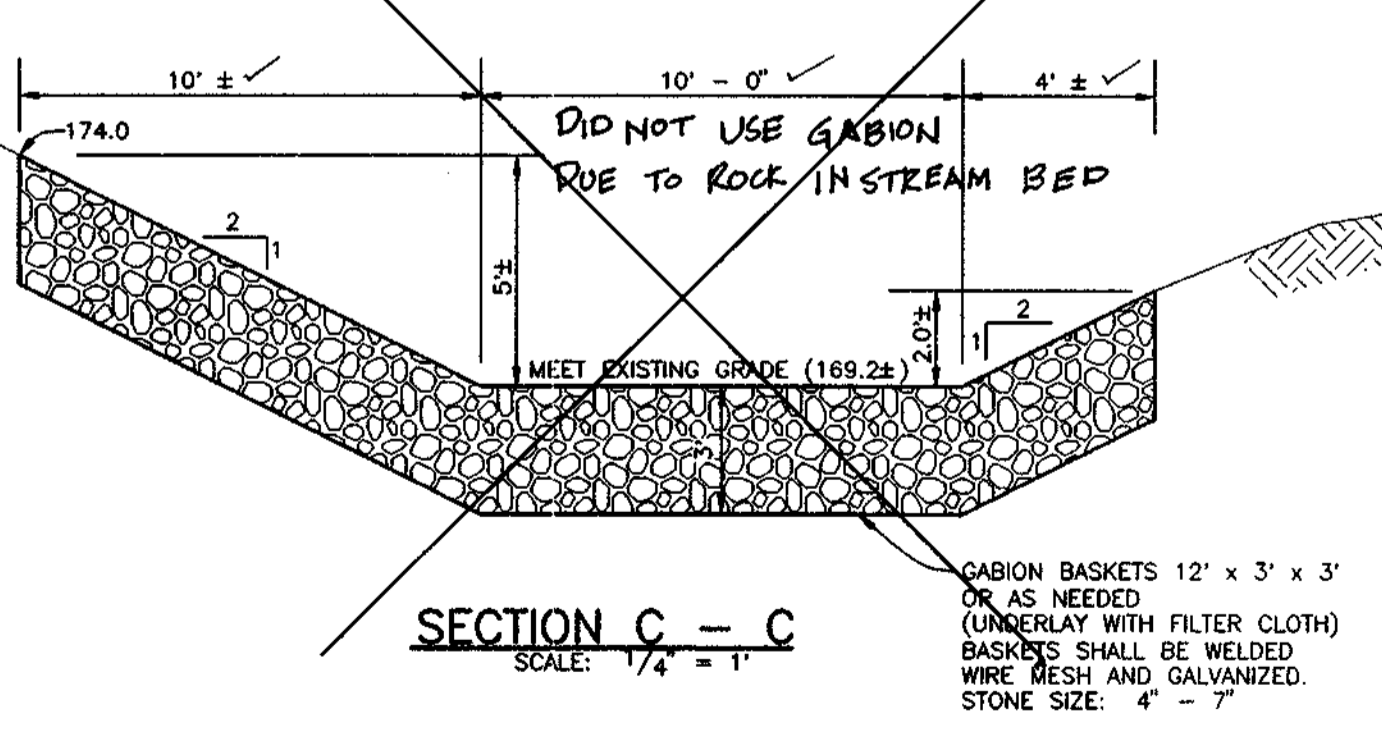
**CONCRETE APRON AT ENDWALL DETAIL**  
NOT TO SCALE



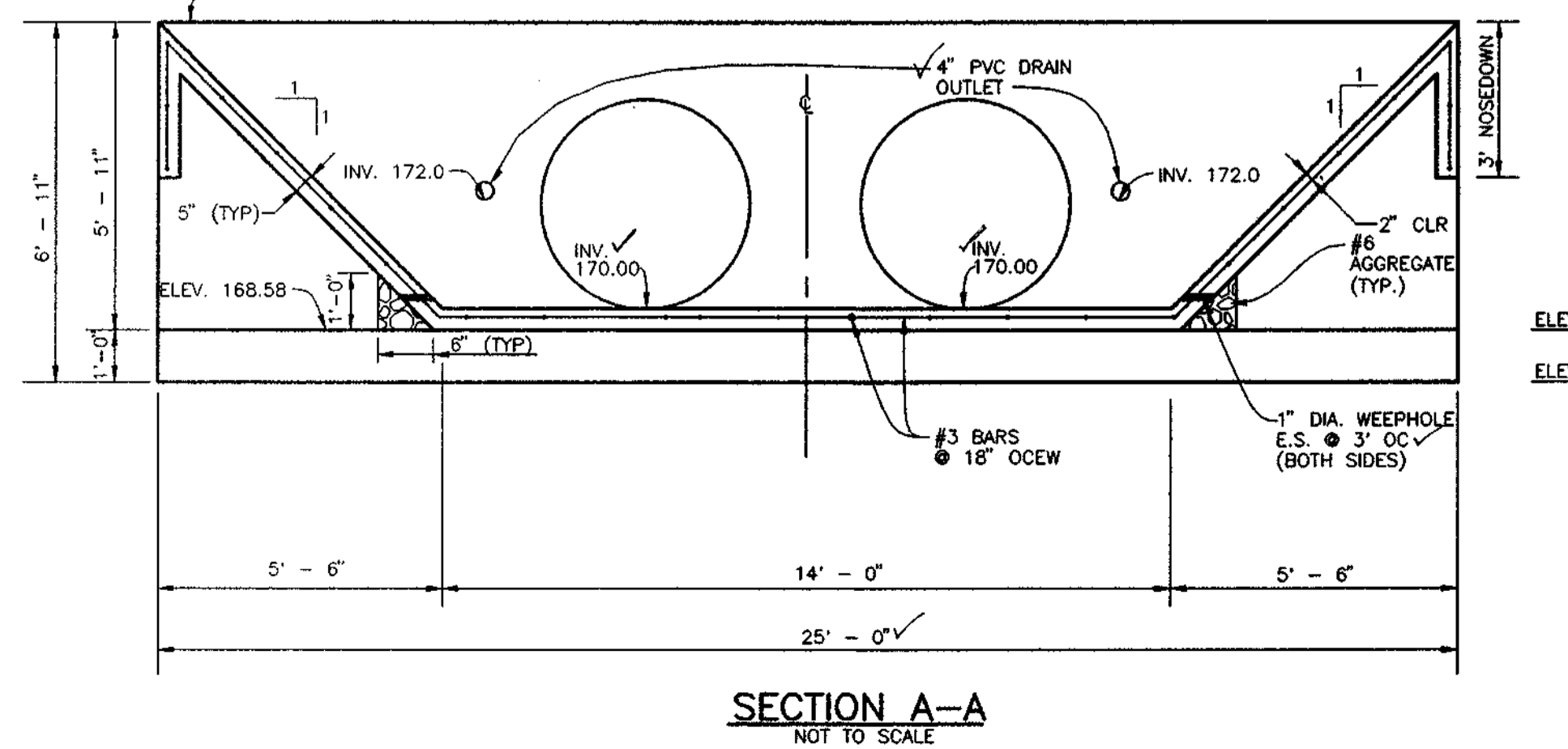
**EW - ENDWALL ELEVATION**  
NOT TO SCALE



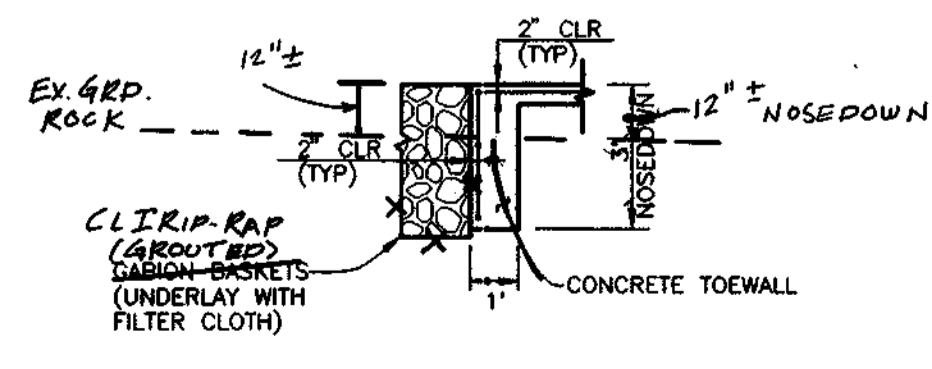
**SECTION B - B**  
SCALE: 1/4" = 1'-0"



**SECTION C - C**  
SCALE: 1/4" = 1'-0"



**SECTION A - A**  
NOT TO SCALE



**SECTION D - D**  
SCALE: 1/4" = 1'-0"

ELEV.	SOIL DESCRIPTION	DEPTH (FEET)	TEST	REMARKS
174.5	Surface	0.0		
174.5	Substrate to 18" depth	0.0		
174.5	Substrate to 36" depth	0.0		
174.5	Substrate to 54" depth	0.0		
174.5	Substrate to 72" depth	0.0		
174.5	Substrate to 90" depth	0.0		
174.5	Substrate to 108" depth	0.0		
174.5	Substrate to 126" depth	0.0		
174.5	Substrate to 144" depth	0.0		
174.5	Substrate to 162" depth	0.0		
174.5	Substrate to 180" depth	0.0		
174.5	Substrate to 198" depth	0.0		
174.5	Substrate to 216" depth	0.0		
174.5	Substrate to 234" depth	0.0		
174.5	Substrate to 252" depth	0.0		
174.5	Substrate to 270" depth	0.0		
174.5	Substrate to 288" depth	0.0		
174.5	Substrate to 306" depth	0.0		
174.5	Substrate to 324" depth	0.0		
174.5	Substrate to 342" depth	0.0		
174.5	Substrate to 360" depth	0.0		



By the Engineer:  
I hereby certify that the facility shown on this plan was constructed as shown on the "AS-BUILT" plans and meets the approved plans and specifications.  
*Michael P. Johnson*  
Date: 10/19/97  
ENGINEER MICHAEL P. JOHNSON PE # 19382  
Certify means to state or declare a professional opinion based upon onsite inspections and materials tests which are conducted during construction. The onsite inspections and materials tests are those inspections and tests deemed sufficient and appropriate by commonly accepted engineering standards. Certify does not mean or imply a guarantee by the Engineer nor does an Engineer's certification relieve any other party from meeting requirements imposed by contract, employment or other means, including meeting commonly accepted industry practices.

**ENGINEER'S CERTIFICATE**  
I hereby 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.  
*Donald Mason*  
Date: 10/19/97

**DEVELOPER'S CERTIFICATE**  
I/We certify that all development and construction will be done in accordance with this plan of development and plan for erosion and sediment control and that all responsible personnel involved in the construction of this 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 onsite inspection by the Howard Soil Conservation District or their authorized agents, as are deemed necessary.  
*B. D. Boy*  
Signature of Developer Date: 10/19/97

NO.	DATE	REVISION
0	6/97	SUBMISSION TO COUNTY FOR REVIEW AND APPROVAL.

TSA GROUP, INC.  
planning • architecture • engineering  
6480 Baltimore National Pike • Ellicott City, Maryland 21045 • (410) 485-9105



OWNER/DEVELOPER: CORNERSTONE HOLDINGS, L.L.C.  
7405 BUCKS HAVEN LANE  
HIGHLAND, MARYLAND 20777  
410-379-0157

PROJECT: NORTH LAUREL PARK - PHASE I  
LOT 7; BLOCK "A", LOTS 1-12; BLOCK "B", LOTS 11-20; BLOCK "G", LOTS 1-10 & 12-14; BLOCK "H"

LOCATION: TAX MAP 50 - P/O PARCEL 426  
SIXTH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

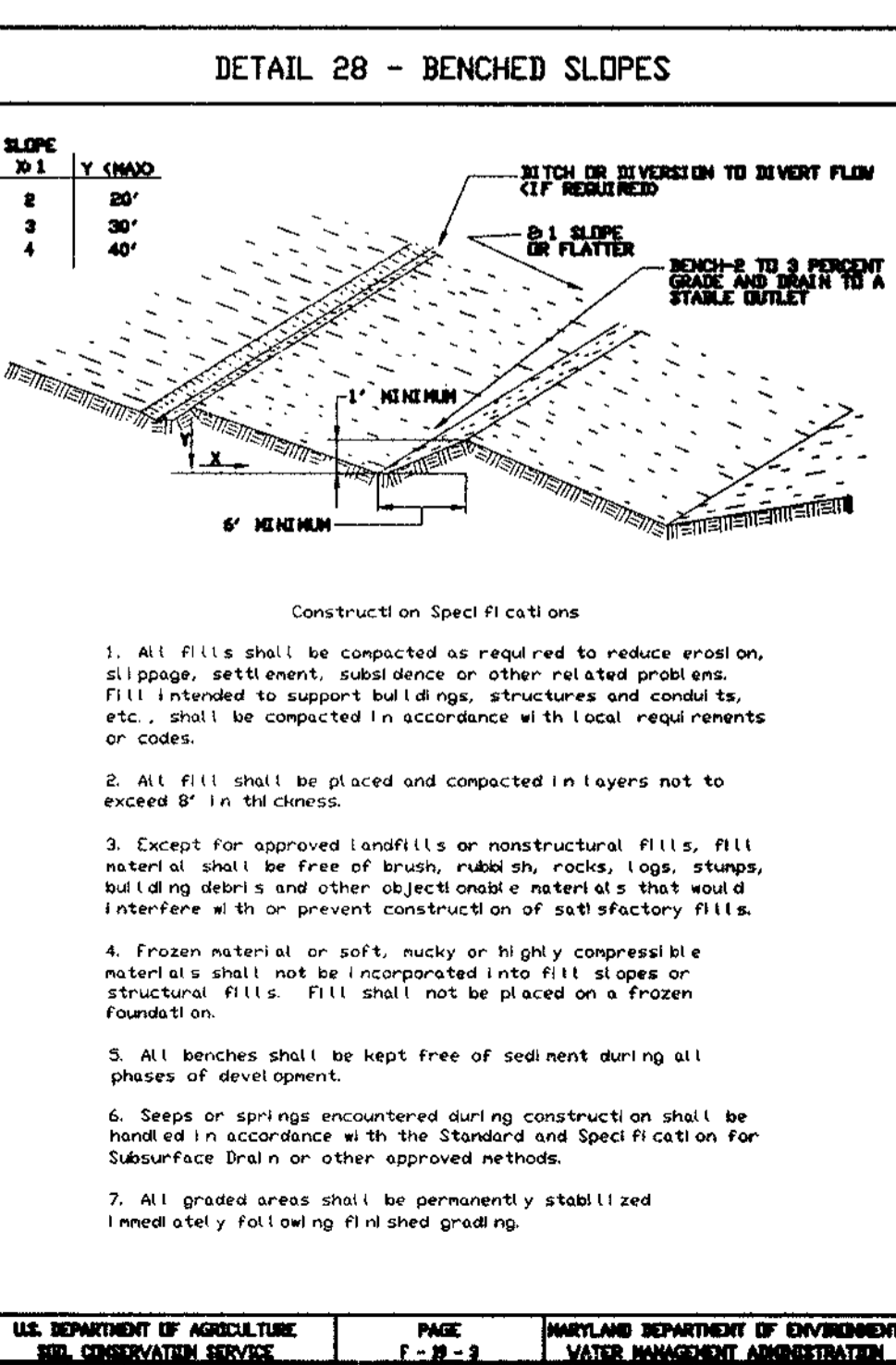
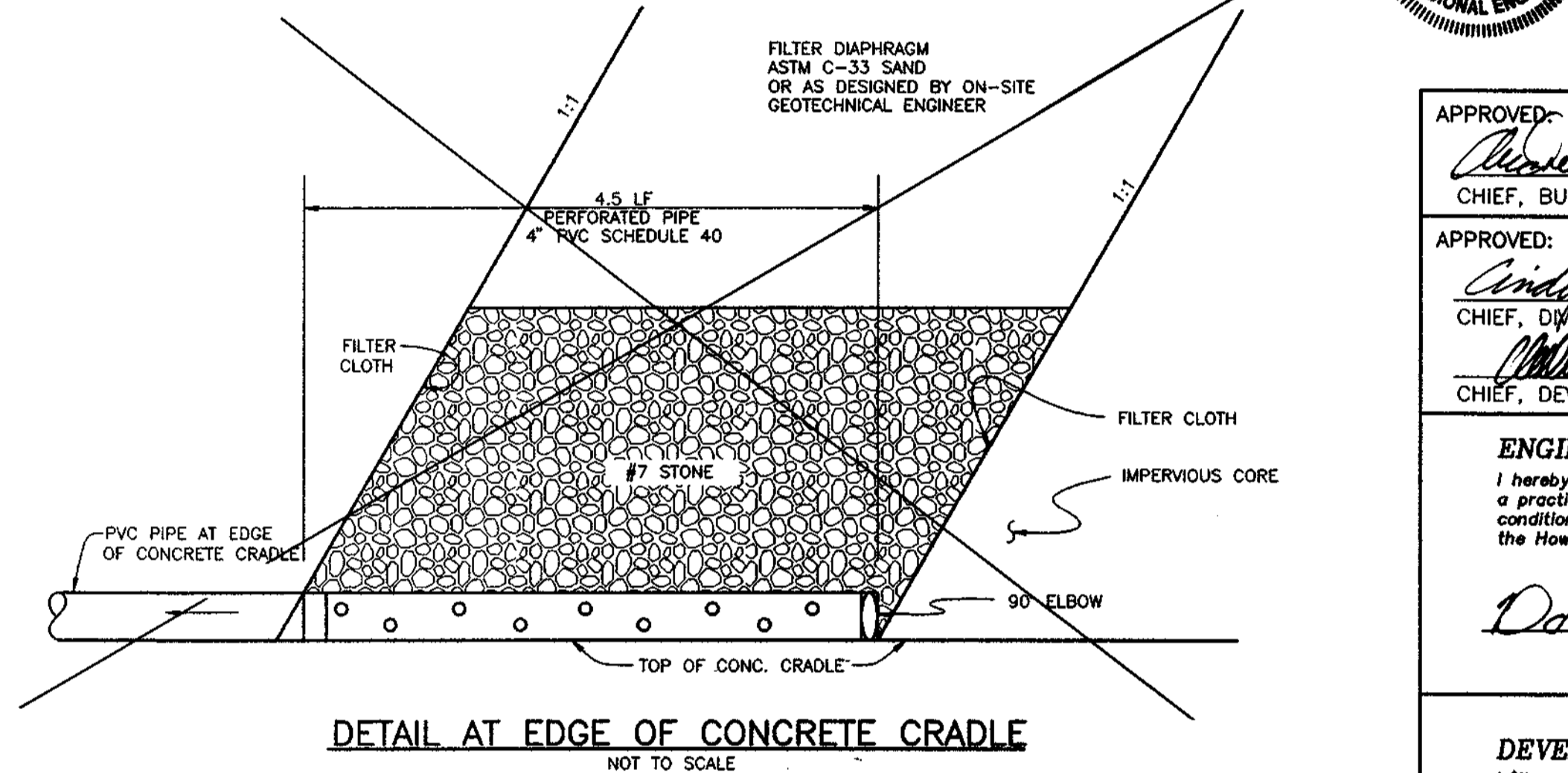
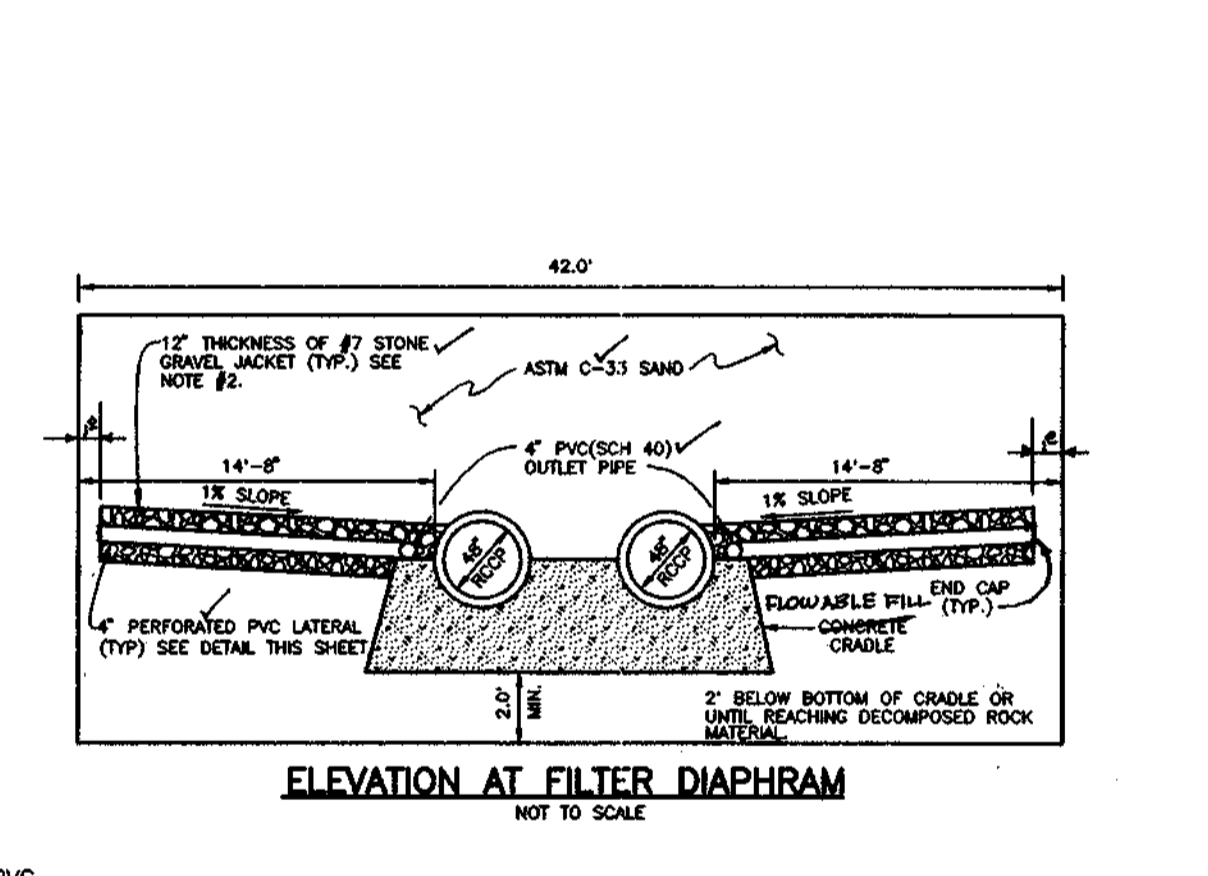
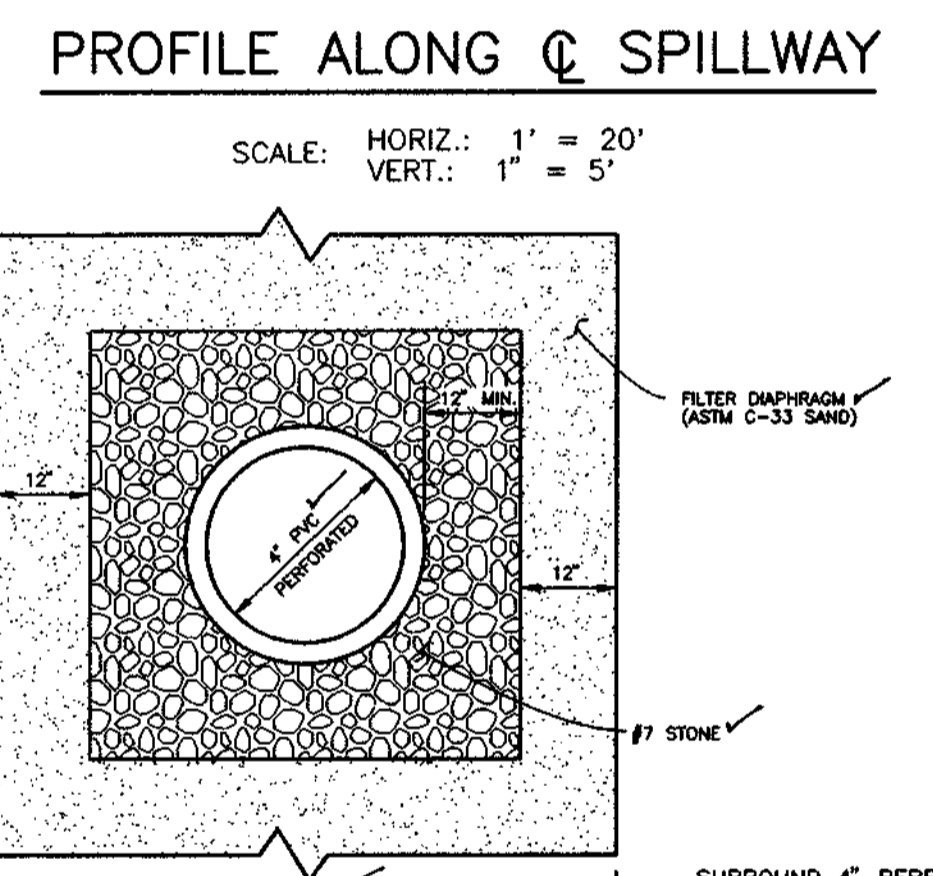
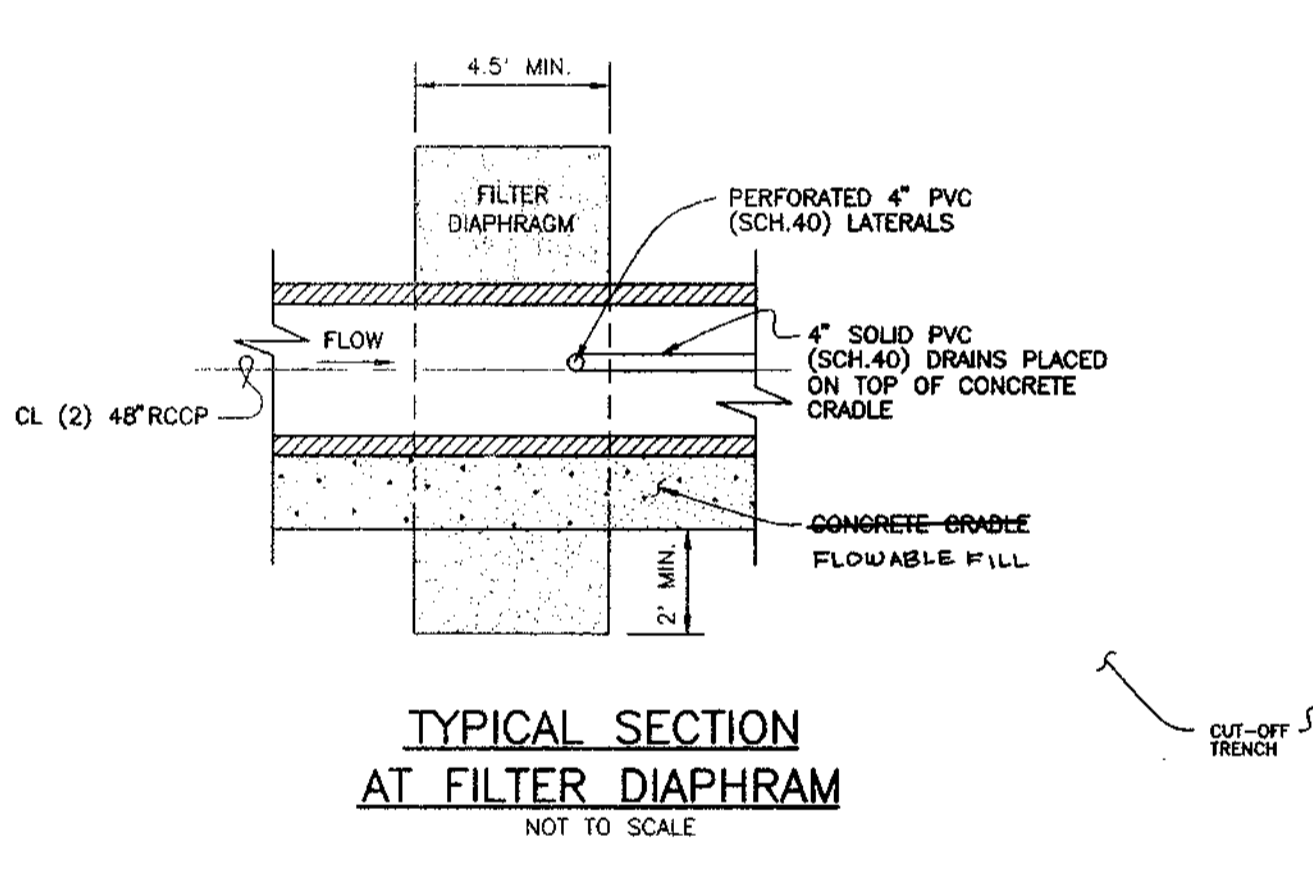
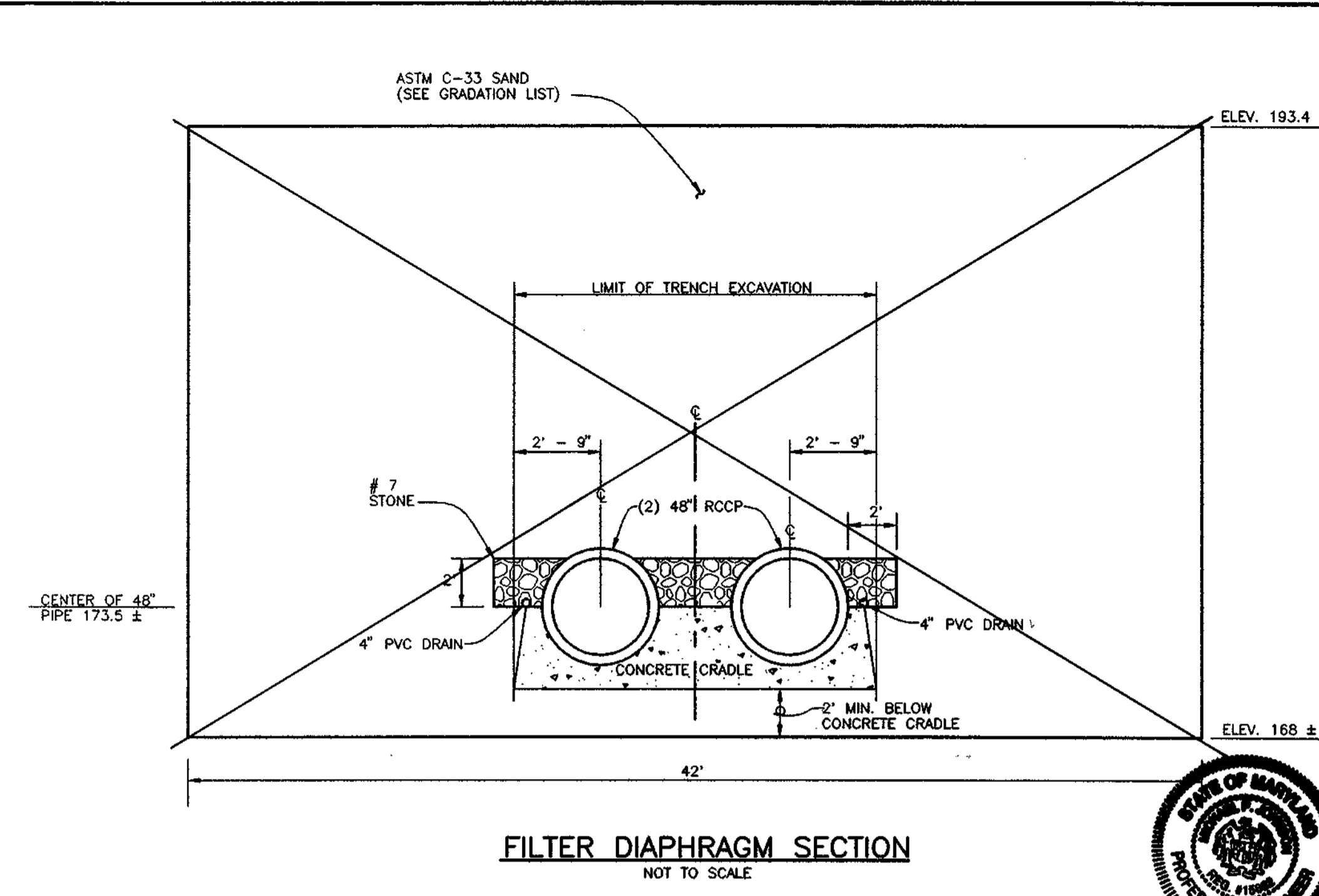
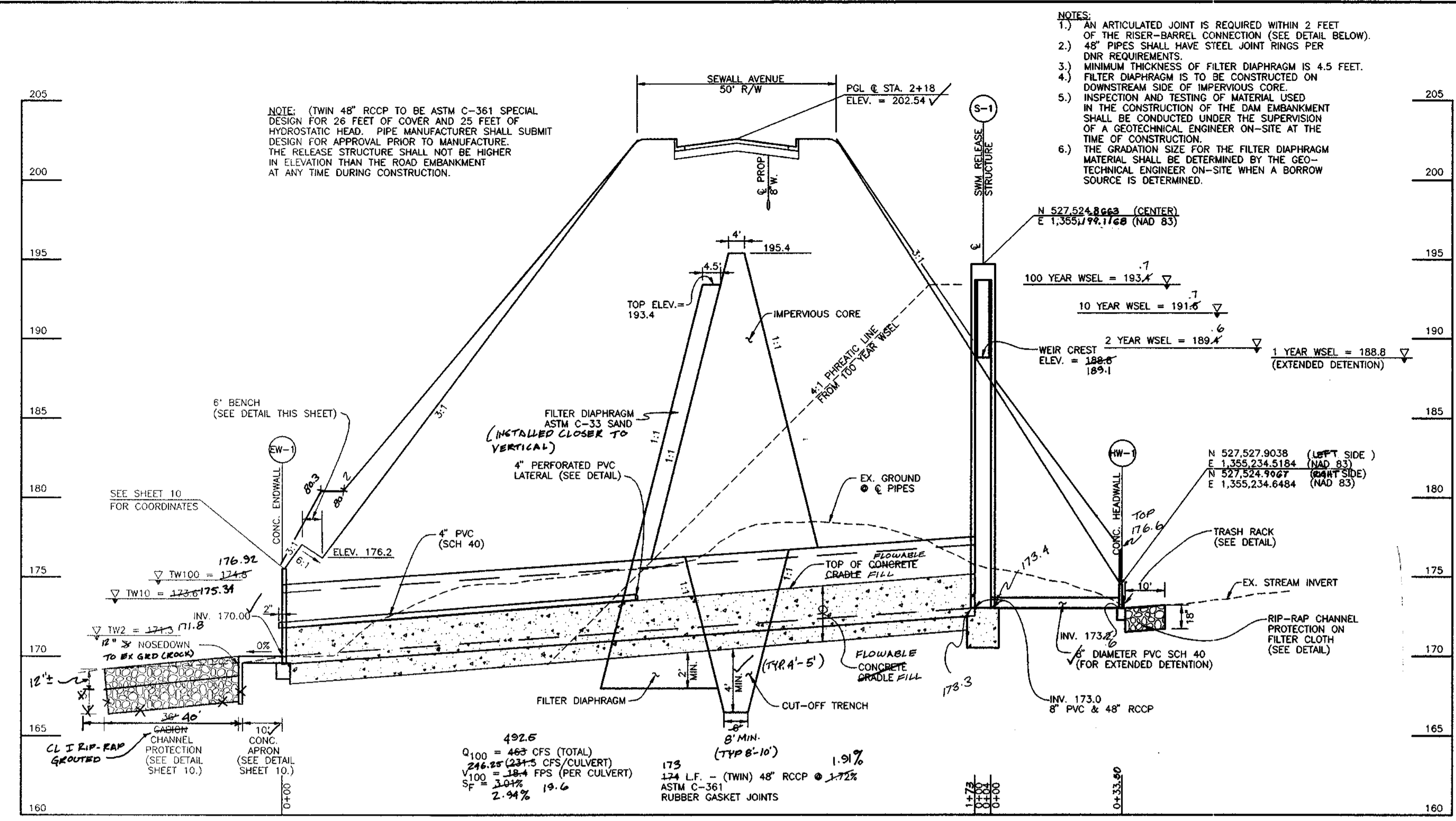
TITLE: STORMWATER MANAGEMENT NOTES AND DETAILS

DATE: JUNE, 1997 PROJECT NO. 0946  
SCALE: AS SHOWN DRAWING NO. OF 18

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Richard M. Daniels*  
CHIEF, BUREAU OF HIGHWAYS DATE: 10-24-97

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
*Cinda Hamilton*  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE: 11/25/97

*Chris Damann*  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE: 10/21/97



**HILLS - CARNES ENGINEERING ASSOCIATES, INC.**  
Page 1 of 1

**RECORD OF SOIL EXPLORATION**

Project Name	North Laurel Park	Location	Howard County, Maryland	Sheet #	1 of 2
Date	12/18/97	Hammer No.	149	Log	1
Surf. Elev.	183.7	Hammer Drop	30	Penetration	1.5
Dist. Below	2-30-35	Pen. Rate	2.0	Soil Description	3-30-35

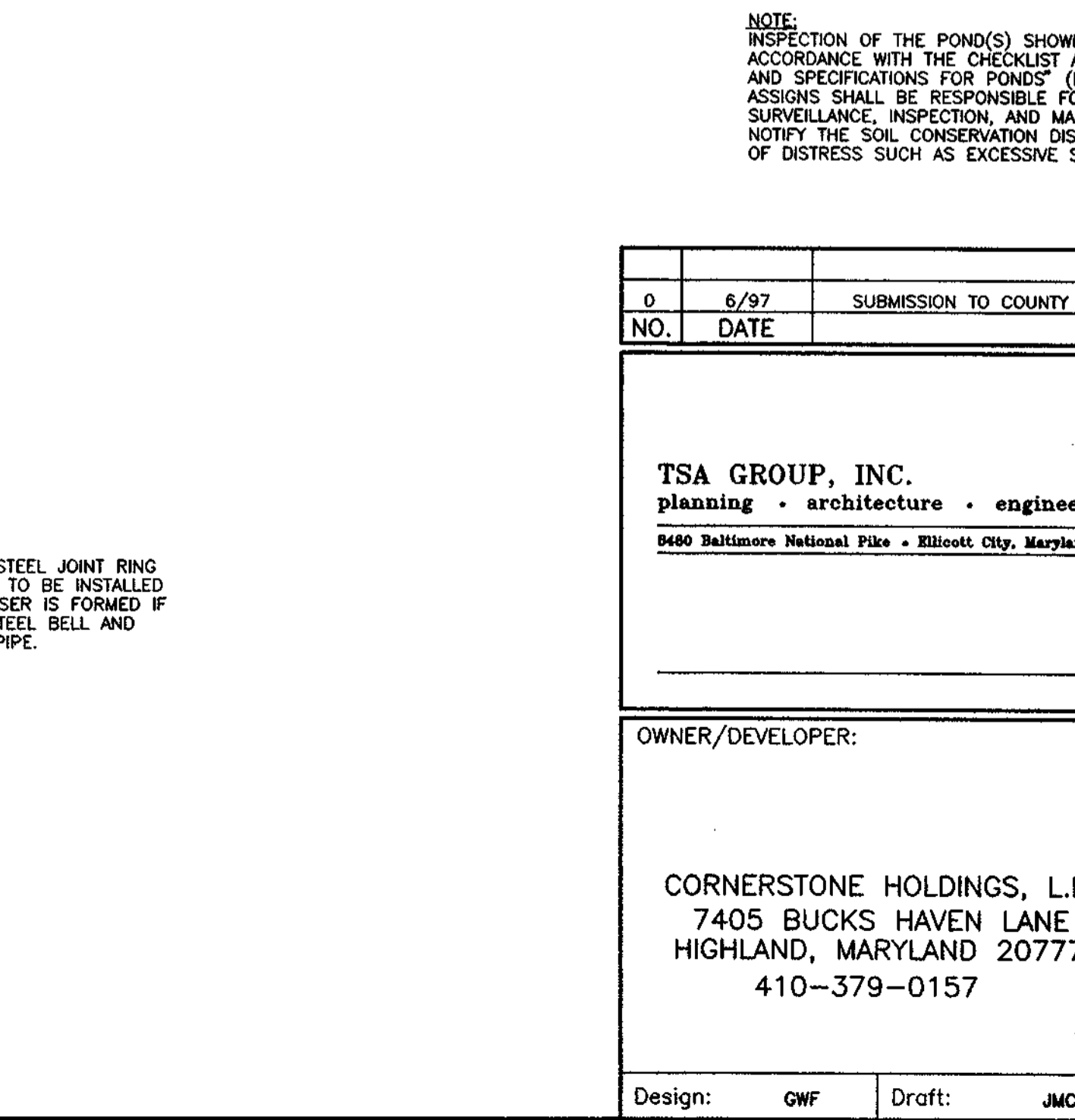
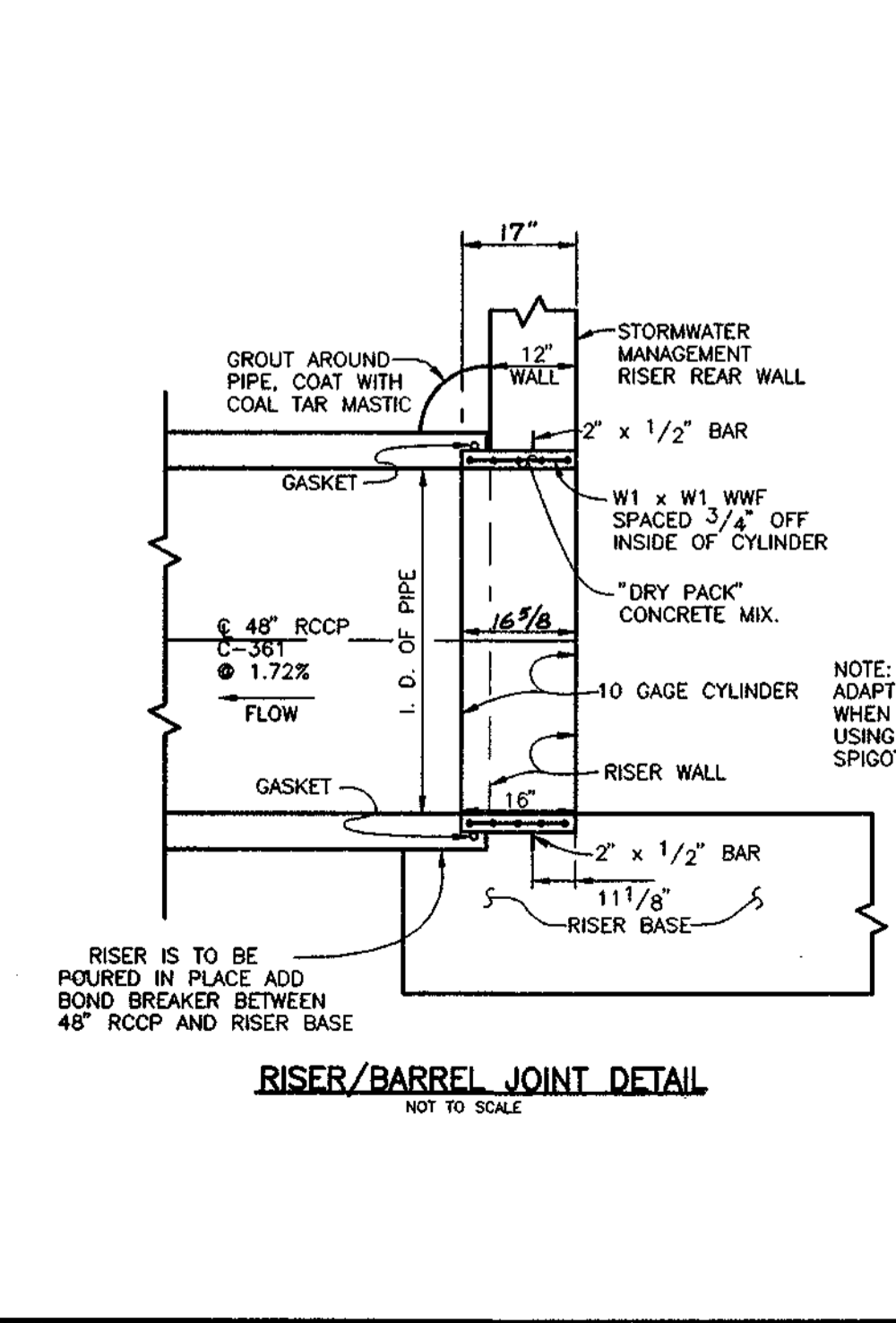
ELEV.	SOIL DESCRIPTION	DEPTH	DIAPHRAGM	SCALE	CON	BLINDS	NO.	SPACING	NOTES
183.7	Brown, very fine, silty, medium sand and rock fragments, silty clay (S-1)	0.0	1	4-7	1	10"	1	10'	Obtain 20' of North
183.5	Brown, very fine, silty, medium sand and rock fragments, silty clay (S-1)	0.0	1	3-4	2	10"	1	10'	Groundwater encountered at 3.7' feet below drilling
183.3	Overlain brown to grey, dry, very fine, silty, medium sand and decomposed rock (S-2)	4.5	0	0	3	10"	2	10'	Coned in at 4.5' at Completion
183.1	Overlain brown to grey, dry, very fine, silty, medium sand and decomposed rock (S-2)	9.0	0	0	4	10"	2	10'	Coned in at 9.0' after 24 hours
182.9	Overlain brown to grey, dry, very fine, silty, medium sand and decomposed rock (S-2)	13.5	0	0	5	10"	2	10'	Backfilled after 24 hours

**HILLS - CARNES ENGINEERING ASSOCIATES, INC.**  
Page 1 of 1

**RECORD OF SOIL EXPLORATION**

Project Name	North Laurel Park	Location	Howard County, Maryland	Sheet #	2 of 2
Date	12/18/97	Hammer No.	149	Log	2
Surf. Elev.	177.8	Hammer Drop	30	Penetration	1.5
Dist. Below	2-30-35	Pen. Rate	2.2	Soil Description	3-30-35

ELEV.	SOIL DESCRIPTION	DEPTH	DIAPHRAGM	SCALE	CON	BLINDS	NO.	SPACING	NOTES
177.8	Brown, very fine, silty, medium sand and rock fragments, silty clay (S-1)	0.0	1	1-1-3	1	14"	2	10'	2' Topsoil
177.6	Overlain brown to grey, dry, very fine, silty, medium sand and decomposed rock fragments (S-2)	5.0	0	0	1	14"	2	10'	No groundwater encountered while drilling
177.4	Overlain brown to grey, dry, very fine, silty, medium sand and decomposed rock fragments (S-2)	10.0	0	0	2	14"	2	10'	Coned in at 10.0' at Completion
177.2	Overlain brown to grey, dry, very fine, silty, medium sand and decomposed rock fragments (S-2)	15.0	0	0	3	14"	2	10'	Coned in at 15.0' after 24 hours
177.0	Overlain brown to grey, dry, very fine, silty, medium sand and decomposed rock fragments (S-2)	20.0	0	0	4	14"	2	10'	Backfilled after 24 hours



**NOTE:** INSPECTION OF THE POND(S) SHOWN HEREON SHALL BE PERFORMED AT LEAST ANNUALLY, IN ACCORDANCE WITH THE CHECKLIST AND REQUIREMENTS CONTAINED WITHIN USDA, SCS "STANDARDS AND SPECIFICATIONS FOR PONDS" (MD-378), THE POND OWNER(S) AND ANY HEIRS, SUCCESSORS, OR ASSIGNS SHALL BE RESPONSIBLE FOR THE SAFETY OF THE POND AND THE CONTINUED OPERATION, SURVEILLANCE, INSPECTION, AND MAINTENANCE THEREOF. THEREFORE, THE POND OWNER(S) SHALL PROMPTLY NOTIFY THE SOIL CONSERVATION DISTRICT OF ANY UNUSUAL OBSERVATIONS THAT MAY BE INDICATORS OF DISTRESS SUCH AS EXCESSIVE SEEPAGE, TURBID SEEPAGE, SLIDING OR SLUMPING.

NO.	DATE	REVISION
0	6/97	SUBMISSION TO COUNTY FOR REVIEW AND APPROVAL

**TSA GROUP, INC.**  
planning • architecture • engineering  
5480 Baltimore National Pike • Ellicott City, Maryland 21045 • (410) 485-0100

**OWNER/DEVELOPER:**  
CORNERSTONE HOLDINGS, L.L.C.  
7405 BUCKS HAVEN LANE  
HIGHLAND, MARYLAND 20777  
410-379-0157

**PROJECT:**  
NORTH LAUREL PARK - PHASE I  
LOT 7; BLOCK "A", LOTS 1-12; BLOCK "B"  
LOTS 11-20; BLOCK "G", LOTS 1-10 & 12-14; BLOCK "H"

**LOCATION:** TAX MAP 50 - P/O PARCEL 428  
SIXTH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

**TITLE:** STORMWATER MANAGEMENT NOTES AND DETAILS

**DATE:** JUNE, 1997  
**PROJECT NO.:** 0946

**Design:** GWF  
**Draft:** JMC  
**SCALE:** AS SHOWN  
**DRAWING:** 11 OF 18

**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 no steeper than 1:1.

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. All existing trees to be removed within 25 feet of dam. Trees, brush and stumps shall be cut approximately level with the ground surface. For dry stormwater management ponds, a minimum of a 50 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.

**Earth Fill**

**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 materials. Fill material for the center of the embankment and cut of trench shall conform to Unified Soil Classification GC, SC, CH, or CL. Consideration may be given to the use of other materials in the embankment if design and construction are supervised by a geotechnical engineer.

**Placement** - Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill material shall be placed in the maximum 8 inch thick (before compaction) layers which are to be continuous over the entire length of the fill. The most permeable borrow material shall be placed in the downstream portions of the embankment. The principal spillway must be installed concurrently with fill placement and not excavated into the embankment.

**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 by not less than one tread track of the equipment or compaction shall be achieved by a minimum of four complete passes of a sheepfoot, rubber tired or vibratory roller. Fill material shall contain sufficient moisture such that 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 yet not so wet that water can be squeezed out.

Where a minimum required density is specified, it shall not be less than 95% of maximum dry density with a moisture content within +/- 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.

**Cut Off Trench** - The cutoff trench shall be excavated into impervious material along or parallel to the centerline of the embankment as shown on the plans. The bottom width of the trench shall be governed by the equipment used for excavation, with the minimum width being four feet. The depth shall be at least four feet below existing grade or as shown on the plans. The side slopes of the trench shall be 1 to 1 or flatter. The backfill shall be compacted with construction equipment, rollers, or hand tampers to assure maximum density and minimum permeability.

**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 and adjacent to the pipe. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall equipment be driven over any part of a concrete structure or pipe, unless there is a compacted fill of 24" or greater over the structure or pipe.

**Pipe Conduits**

All pipes shall be circular in cross section.

Reinforced Concrete Pipe - All of the following criteria shall apply for reinforced concrete pipe:

1. Materials - Reinforced concrete pipe shall have bell and spigot joints with rubber gaskets and shall equal or exceed ASTM Designation C-301. An approved equivalent is AWWA Specification C-302.
2. Bedding - All reinforced concrete pipe conduits shall be laid in a concrete bedding for their entire length. This bedding shall consist of high slump concrete placed under the pipe and up the sides of the pipe at least 10% of its outside diameter with a minimum thickness of 3 inches, or as shown on the drawings. Gravel bedding is prohibited under any utility line.
3. Laying pipe - Bell and spigot pipe shall be placed with the bell end upstream. Joints shall be made in accordance with recommendations of the manufacturer of the material. After 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 2 feet from the riser.
4. Backfilling shall conform to "Structure Backfill".
5. 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 608, Mix No. 3.

**Rock Riprap**

All rock shall be dense, sound, and free from cracks, seams, and other defects conducive to accelerated weathering. The rock fragments shall be angular to subrounded in shape. The least dimension of an individual rock fragment shall be not less than one third the greatest dimension of the fragment.

The rock shall have the following properties:

1. Bulk specific gravity (saturated surface-dry basis) not less than 2.5.
2. Absorption not more than three percent.
3. Soundness: Weight loss in five cycles not more than 20 percent when sodium sulfate is used.

Bulk specific gravity and absorption shall be determined according to ASTM C 127. The test for soundness shall be performed according to ASTM C 88.

The riprap shall be placed to the required thickness in one operation. The rock shall be delivered and placed in a manner that will insure the riprap in place shall be reasonably homogeneous with the larger rocks uniformly distributed and firmly in contact one to another with the smaller rocks filling the voids between the larger rocks. Filter cloth 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 919.12.

**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 areas to be occupied 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 this purpose, all temporary protective works shall be removed or leveled and graded to the extent required to prevent obstruction in any degree whatsoever of the flow of water to the spillway or outlet works and so as not to 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 the 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 at such locations which may require draining the water to pumps 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, spoil and borrow areas, and berms shall be stabilized by seeding, liming, fertilizing and mulching in accordance with the Maryland Soil 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 pollution abatement will be followed. Construction plans shall detail erosion and sediment control measures to be employed during the construction process.

**OPERATION AND MAINTENANCE SCHEDULE OF PUBLICLY OWNED AND MAINTAINED STORMWATER MANAGEMENT FACILITY**

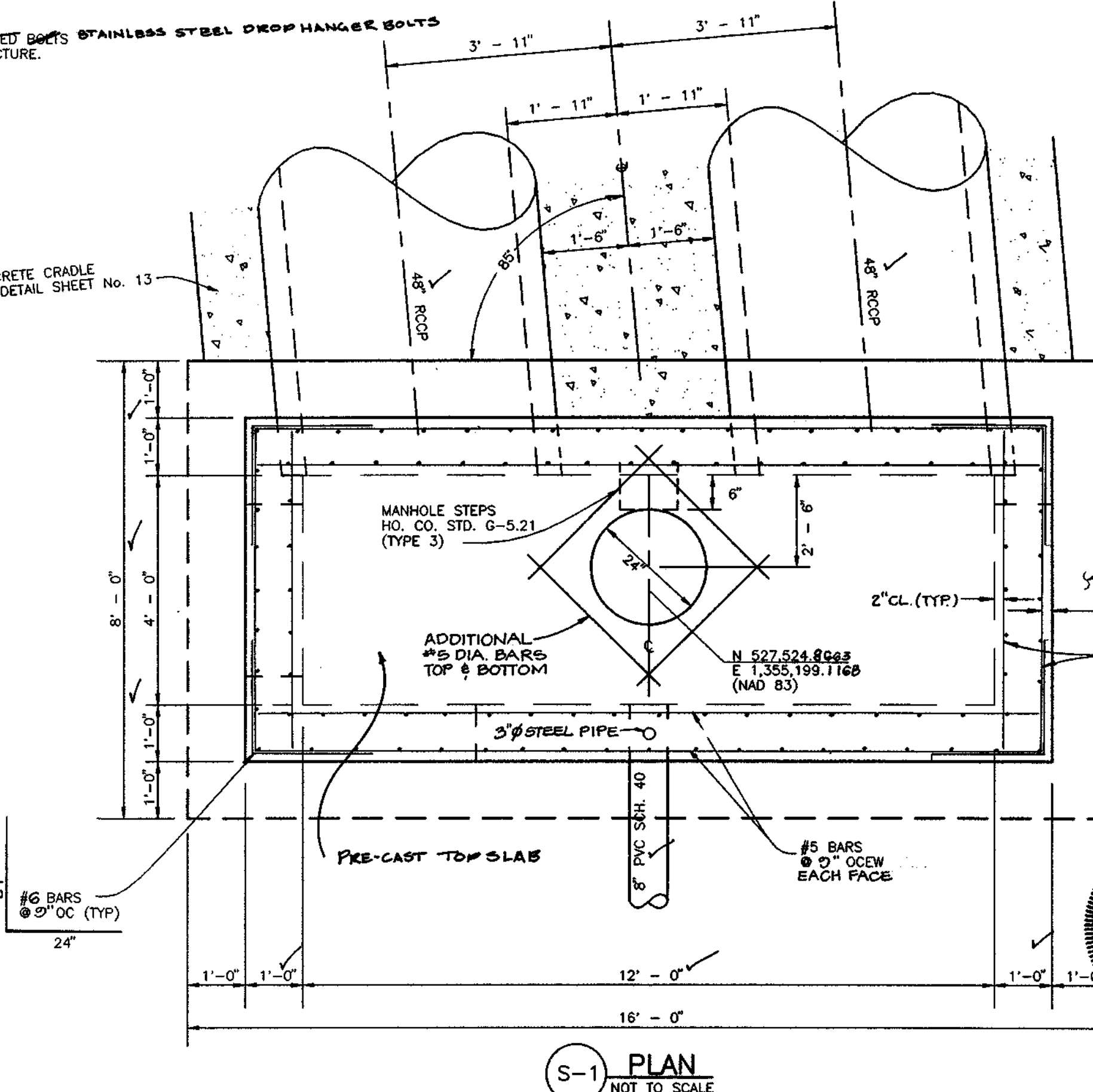
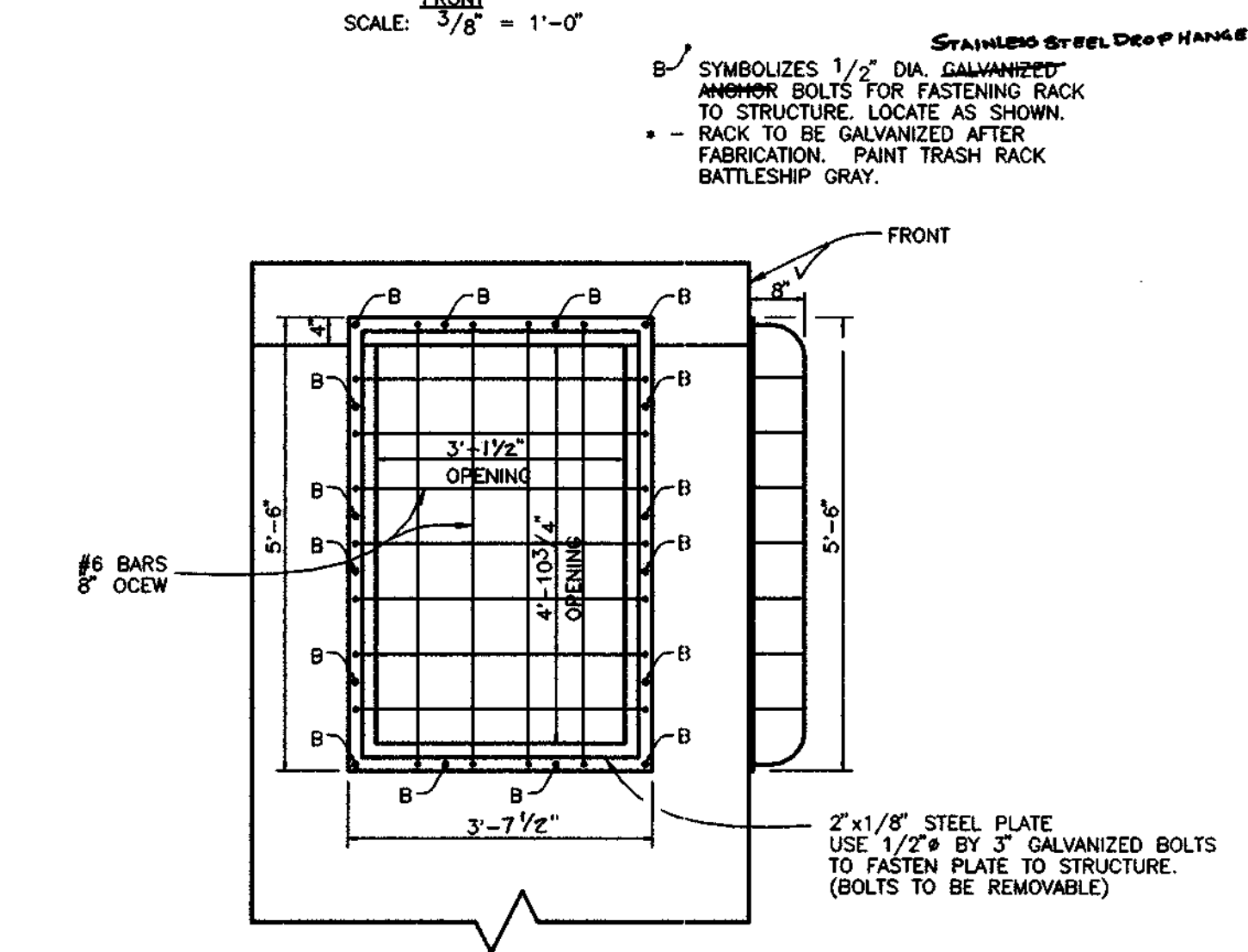
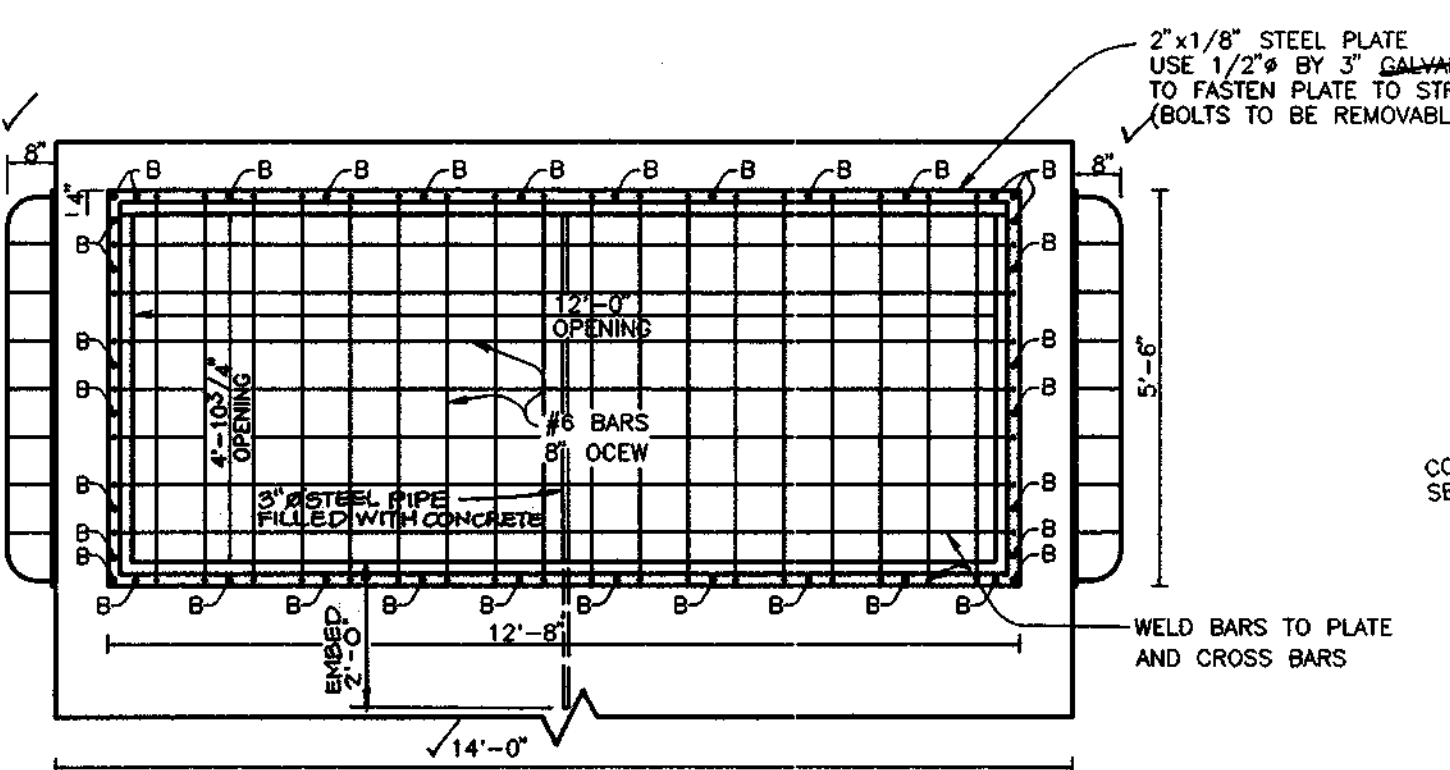
**ROUTINE MAINTENANCE**

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 mowed 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 mowed as needed.
3. Debris and litter next to the outlet structure 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.

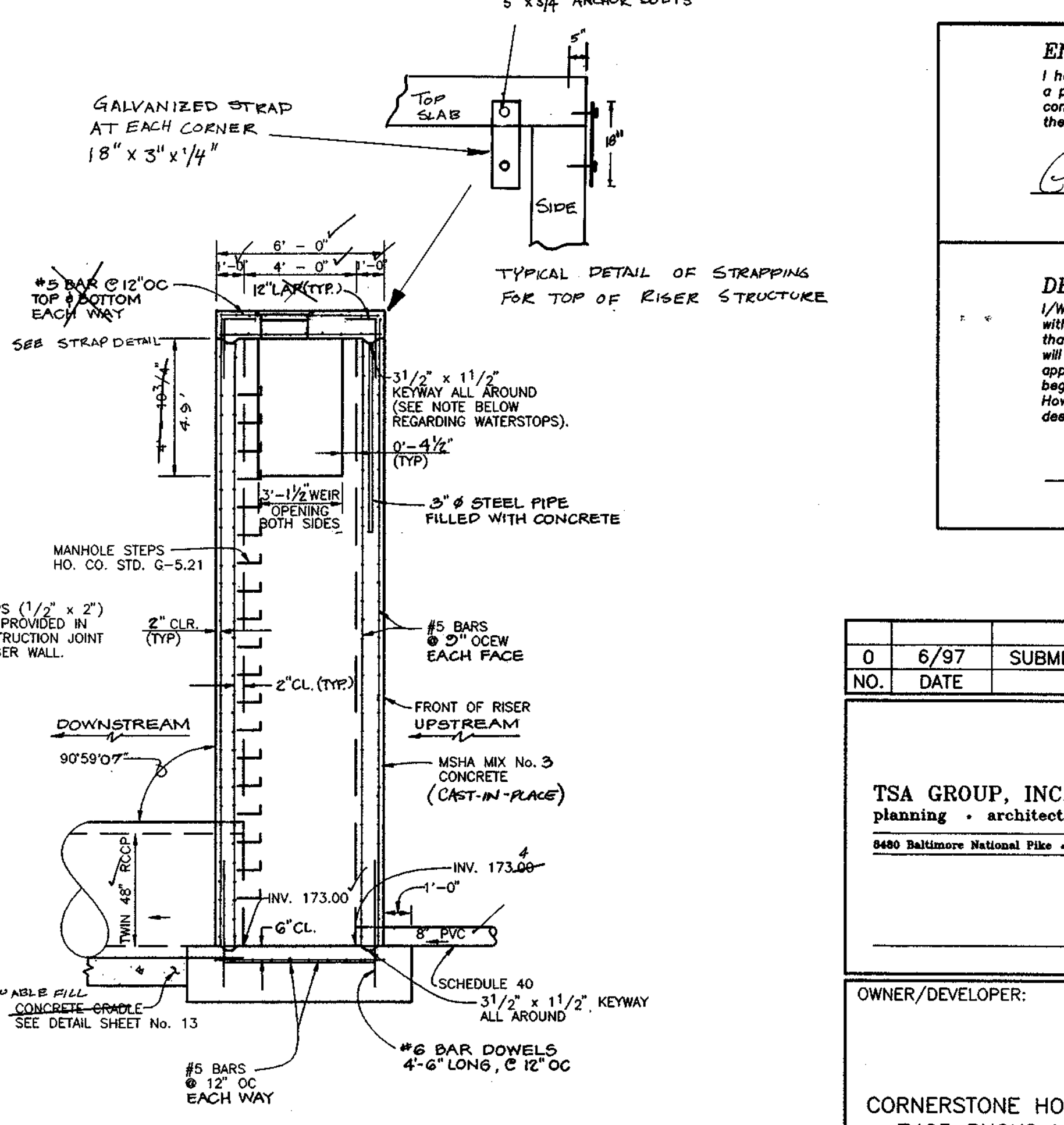
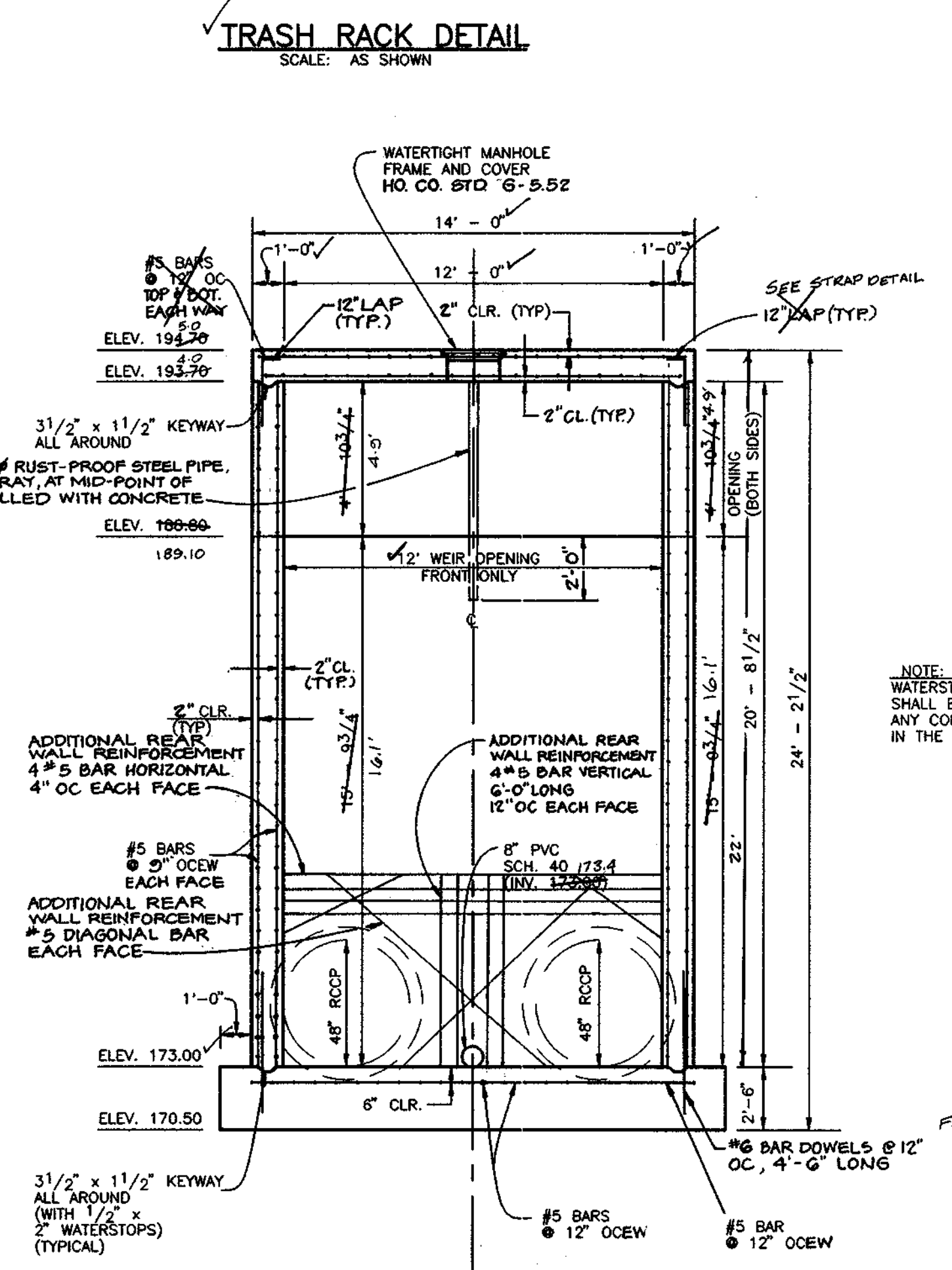
**NON-ROUTINE MAINTENANCE**

1. Structural components of the pond such as the dam, the riser, and access shall be repaired upon the detection of any damage. The components should be inspected during routine maintenance operations.
2. Sediment should be removed when its accumulation significantly reduces the design storage, interferes with the function of the riser, when deemed necessary for aesthetic reasons, or when deemed necessary by the Howard County's Department of Public Works.

INSPECTION OF THE POND(S) SHOWN HEREON SHALL BE PERFORMED AT LEAST ANNUALLY, IN ACCORDANCE WITH THE CHECKLIST AND REQUIREMENTS CONTAINED WITHIN USDA, SCS "STANDARDS AND SPECIFICATIONS FOR PONDS" (MD-378). THE POND OWNER(S) AND THE HEIRS, SUCCESSORS OR ASSIGNS SHALL BE RESPONSIBLE FOR THE SAFETY OF THE POND AND THE CONTINUED OPERATION, SUPERVILLANCE, INSPECTION AND MAINTENANCE THEREOF. THE POND OWNER(S) SHALL PROMPTLY NOTIFY THE SOIL CONSERVATION DISTRICT OF ANY UNUSUAL OBSERVATIONS THAT MAY BE INDICATIONS OF DISTRESS SUCH AS EXCESSIVE SEEPAGE, TURBID SEEPAGE, SLIDING OR SLUMPING.



- NOTE:**
1. ALL CONCRETE SHALL BE MIX #3.
  2. ALL REINFORCING STEEL SHALL GRADE 60 ASTM A615.
  3. CHAMFER EXPOSED CORNERS 3/4".
  4. BAR SPLICES SHALL BE 40 DIAMETER.



**FRONT ELEVATION**  
NOT TO SCALE

**SIDE ELEVATION**  
NOT TO SCALE

By the Engineer:  
I hereby certify that the facility shown on this plan was constructed as shown on the "AS-BUILT" plans and meets the approved plans and specifications.  
Date: 13 Apr 99  
ENGINEER: Michael P. Johnson, P.E. # 15852

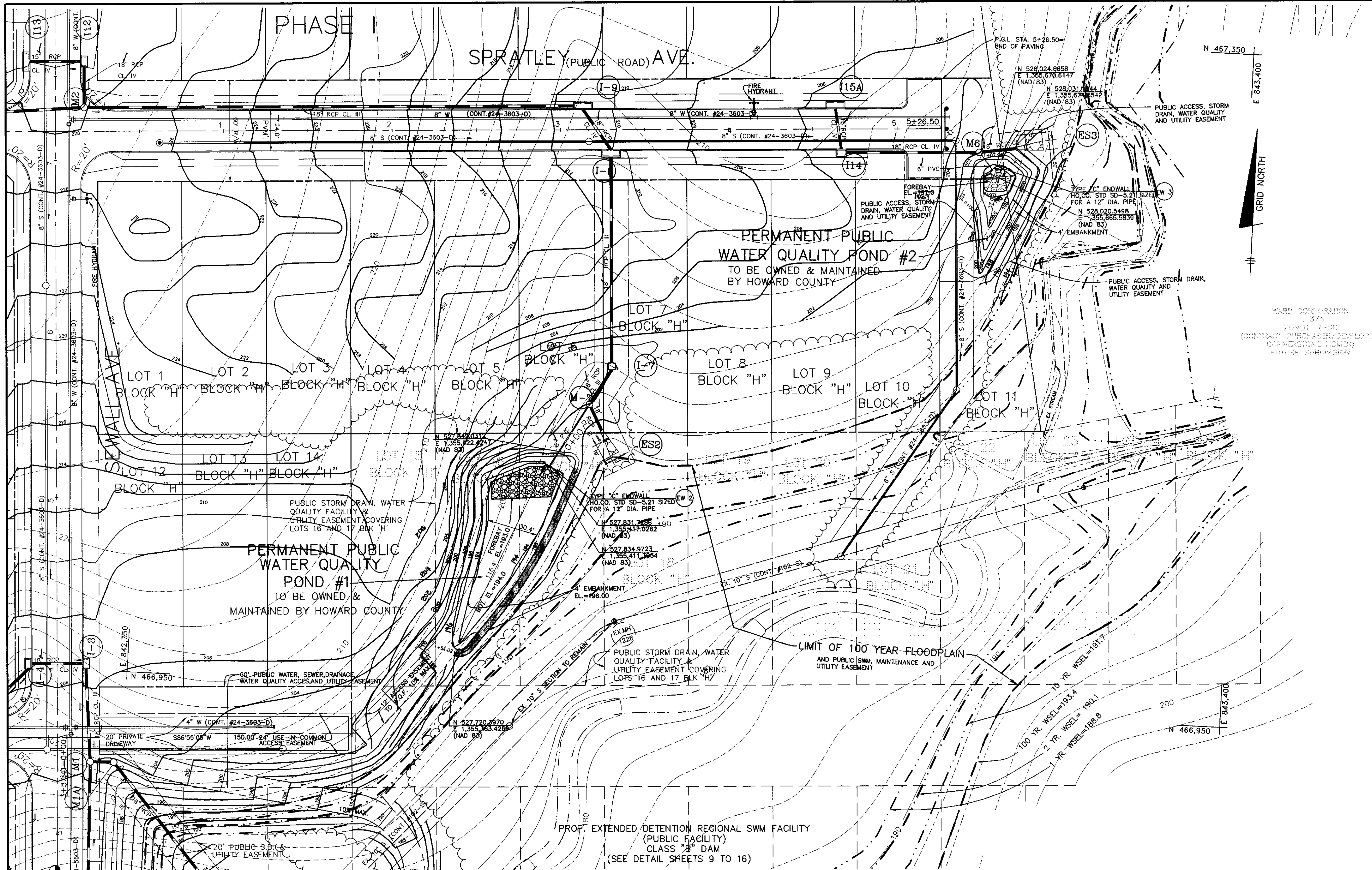
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
10-14-97 DATE  
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
11/25/97 DATE  
APPROVED: HOWARD COUNTY DEPARTMENT OF ENGINEERING  
11/21/97 DATE

**ENGINEER'S CERTIFICATE**  
I hereby 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.  
10-9-97 DATE

**DEVELOPER'S CERTIFICATE**  
I/We certify that all development and construction will be done in accordance with this plan of development and plan for erosion and sediment control and that all responsible personnel involved in the construction of this 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 onsite inspection by the Howard Soil Conservation District or their authorized agents, as are deemed necessary.  
12/3/97 DATE

HILLIS - CARNES ENGINEERING ASSOCIATES, INC. RECORD OF SOIL EXPLORATION											
Project Name: North Laurel Park											
Location: Howard County, Maryland											
Boring # B-4											
Job # 9827A											
DATE	TIME	DEPTH	SOIL DESCRIPTION	WATER	TEMPERATURE	REMARKS					
12/12/97	10:00	0.0	SURFACE								
12/12/97	10:00	1.0	Dark brown to grey, silty clay with some mica and iron oxide (SM-GM)								
12/12/97	10:00	2.0	Dark brown to grey, silty clay with some mica and iron oxide (SM-GM)								
12/12/97	10:00	3.0	Dark brown to grey, silty clay with some mica and iron oxide (SM-GM)								
12/12/97	10:00	4.0	Dark brown to grey, silty clay with some mica and iron oxide (SM-GM)								
12/12/97	10:00	5.0	Dark brown to grey, silty clay with some mica and iron oxide (SM-GM)								
12/12/97	10:00	6.0	Dark brown to grey, silty clay with some mica and iron oxide (SM-GM)								
12/12/97	10:00	7.0	Dark brown to grey, silty clay with some mica and iron oxide (SM-GM)								
12/12/97	10:00	8.0	Dark brown to grey, silty clay with some mica and iron oxide (SM-GM)								
12/12/97	10:00	9.0	Dark brown to grey, silty clay with some mica and iron oxide (SM-GM)								
12/12/97	10:00	10.0	Dark brown to grey, silty clay with some mica and iron oxide (SM-GM)								
12/12/97	10:00	11.0	Dark brown to grey, silty clay with some mica and iron oxide (SM-GM)								
12/12/97	10:00	12.0	Dark brown to grey, silty clay with some mica and iron oxide (SM-GM)								
12/12/97	10:00	13.0	Dark brown to grey, silty clay with some mica and iron oxide (SM-GM)								
12/12/97	10:00	14.0	Dark brown to grey, silty clay with some mica and iron oxide (SM-GM)								
12/12/97	10:00	15.0	Dark brown to grey, silty clay with some mica and iron oxide (SM-GM)								
12/12/97	10:00	16.0	Dark brown to grey, silty clay with some mica and iron oxide (SM-GM)								
12/12/97	10:00	17.0	Dark brown to grey, silty clay with some mica and iron oxide (SM-GM)								
12/12/97	10:00	18.0	Dark brown to grey, silty clay with some mica and iron oxide (SM-GM)								
12/12/97	10:00	19.0	Dark brown to grey, silty clay with some mica and iron oxide (SM-GM)								
12/12/97	10:00	20.0	Dark brown to grey, silty clay with some mica and iron oxide (SM-GM)								
12/12/97	10:00	21.0	Dark brown to grey, silty clay with some mica and iron oxide (SM-GM)								
12/12/97	10:00	22.0	Dark brown to grey, silty clay with some mica and iron oxide (SM-GM)								
12/12/97	10:00	23.0	Dark brown to grey, silty clay with some mica and iron oxide (SM-GM)								
12/12/97	10:00	24.0	Dark brown to grey, silty clay with some mica and iron oxide (SM-GM)								
12/12/97	10:00	25.0	Dark brown to grey, silty clay with some mica and iron oxide (SM-GM)								
12/12/97	10:00	26.0	Dark brown to grey, silty clay with some mica and iron oxide (SM-GM)								
12/12/97	10:00	27.0	Dark brown to grey, silty clay with some mica and iron oxide (SM-GM)								
12/12/97	10:00	28.0	Dark brown to grey, silty clay with some mica and iron oxide (SM-GM)								
12/12/97	10:00	29.0	Dark brown to grey, silty clay with some mica and iron oxide (SM-GM)								
12/12/97	10:00	30.0	Dark brown to grey, silty clay with some mica and iron oxide (SM-GM)								

NO.	DATE	REVISION
0	6/97	SUBMIT TO COUNTY FOR REVIEW
TSA GROUP, INC. planning • architecture • engineering 5400 Baltimore National Pike • Ellicott City, Maryland 21043 • (410) 465-8105		
OWNER/DEVELOPER:		PROJECT:
CORNERSTONE HOLDINGS, L.L.C. 7405 BUCKS HAVEN LANE HIGHLAND, MARYLAND 20777 410-379-0157		NORTH LAUREL PARK - PHASE I LOT 7; BLOCK "A"; LOTS 1-12; BLOCK "B" LOTS 11-20; BLOCK "C"; LOTS 1-10 & 12-14; BLOCK "H"
DATE: JUNE, 1997		TITLE: STORMWATER MANAGEMENT NOTES AND DETAILS
PROJECT NO. 0946		SCALE: AS SHOWN
DESIGN: GWF		DRAWING: 12 OF 18
DRAFT: JMC		

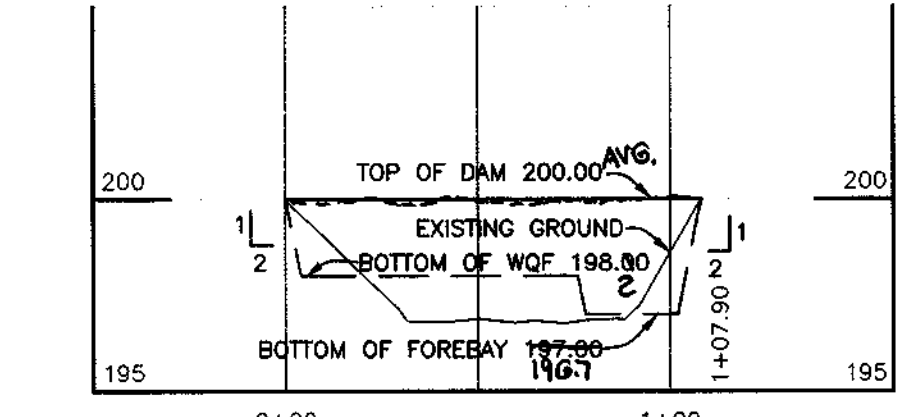


**PUBLIC WATER QUALITY FACILITY MAINTENANCE REQUIREMENTS**

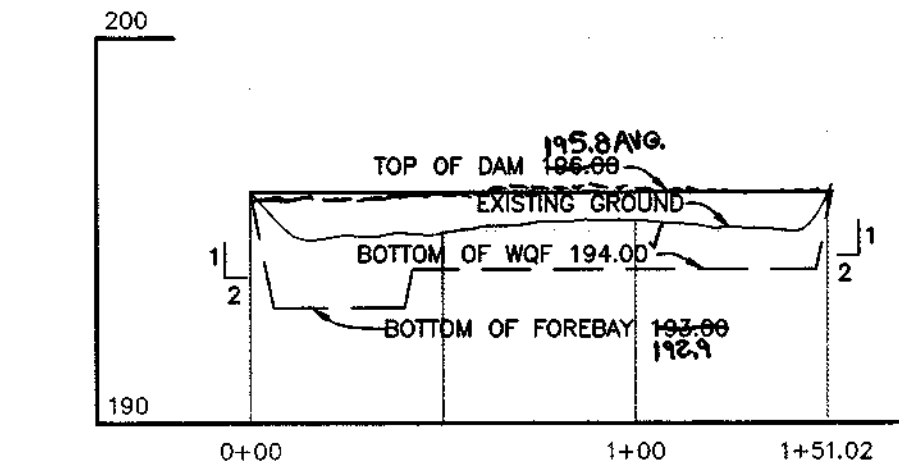
1. REMOVE SILT WHEN ACCUMULATION EXCEEDS FOUR (4) INCHES IN THE FOREBAY.
2. REMOVE PAPER AND TRASH ACCUMULATION AS NECESSARY.
3. NO VEGETATION ALLOWED TO GROW ON THE EMBANKMENT FACE OR TOP IN EXCESS OF 18 INCHES IN HEIGHT.
4. ANNUAL INSPECTION OF DIVERSION STRUCTURES IS REQUIRED. REPAIR AS NECESSARY.

**WATER QUALITY FACILITY PLANTING SCHEDULE**

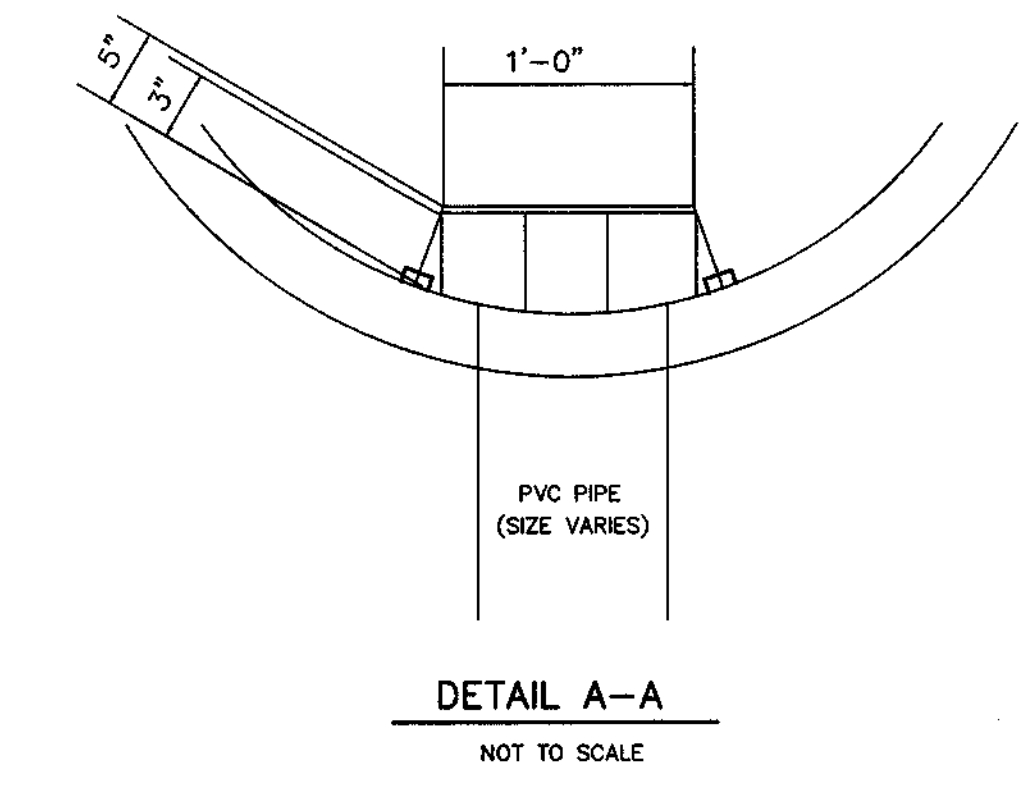
PLANT TYPE	SPACING
CATTAIL	2-3 FEET APART
SEED POND WITH BARNYARD, RYE AND REDTOP GRASS MIXTURES.	



**EMBANKMENT PROFILE WATER QUALITY POND #2**  
SCALE = VERT. 1" = 5'  
HORIZ. 1" = 50'



**EMBANKMENT PROFILE WATER QUALITY POND #1**  
SCALE = VERT. 1" = 5'  
HORIZ. 1" = 50'



**DETAIL A-A**  
NOT TO SCALE

**ENGINEER'S CERTIFICATE**

I hereby 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.

*Donald Mason* 10/26/97  
Date

**DEVELOPER'S CERTIFICATE**

I/we certify that all development and construction will be done in accordance with this plan of development and plan for erosion and sediment control and that all responsible personnel involved in the construction of this 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 onsite inspection by the Howard Soil Conservation District or their authorized agents, as are deemed necessary.

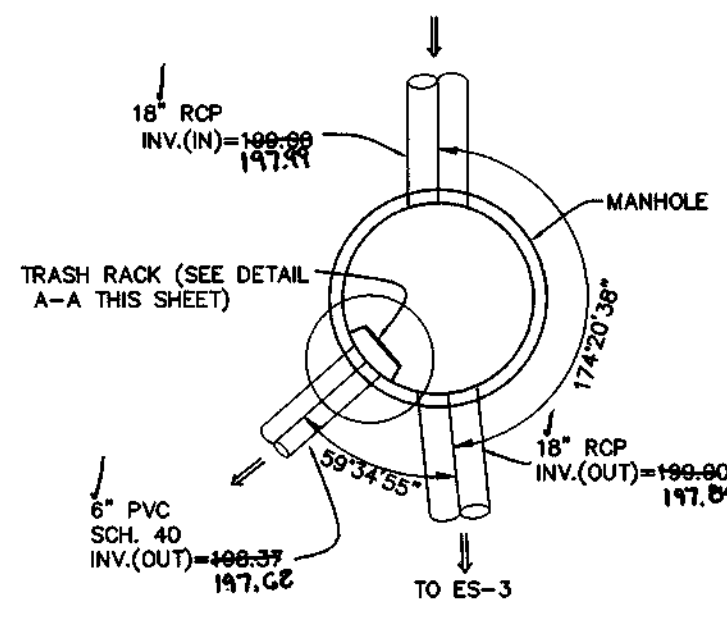
*B. D. Boy* 10/9/97  
Signature of Developer Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Andrew M. Daniels* 10-26-97  
CHIEF, BUREAU OF HIGHWAYS DATE

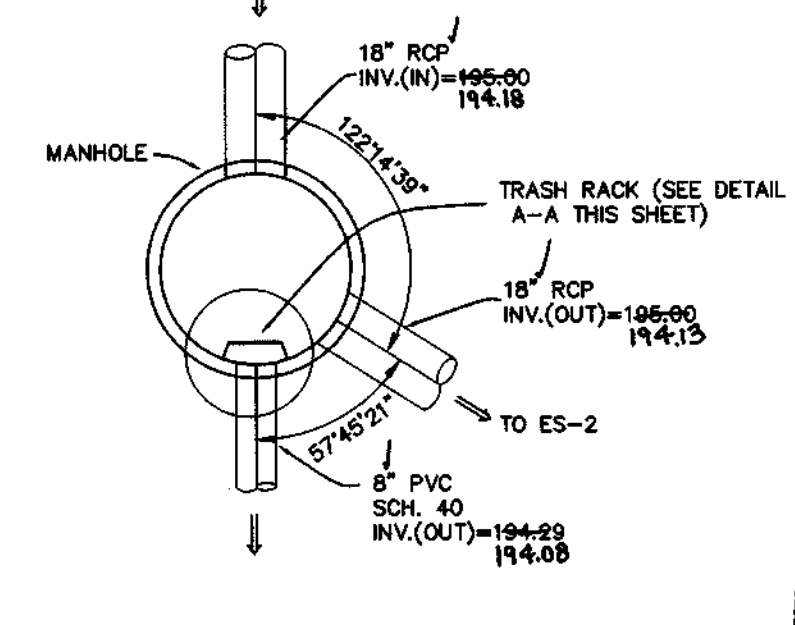
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
*Candy Hamilton* 11/26/97  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE  
*Chris Danner* 11/26/97  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

**PLAN VIEW**

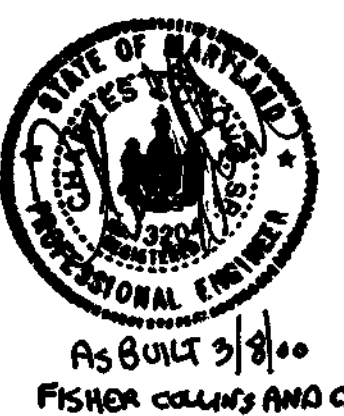
SCALE: 1" = 30'



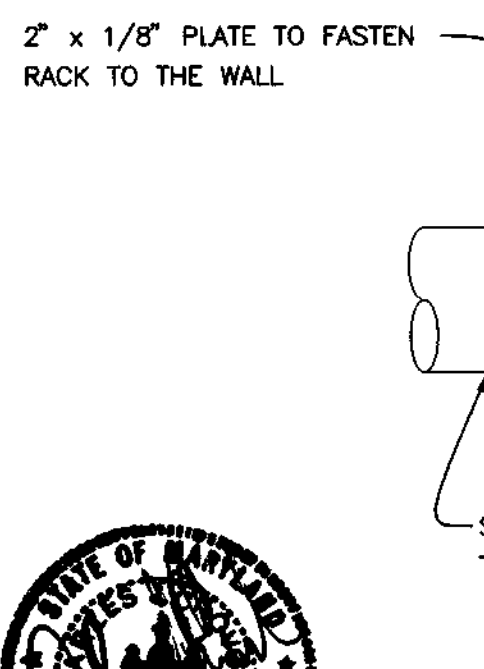
**PLAN VIEW DIVERSION MH-6**  
HOWARD CO. STD. G-5.12  
NOT TO SCALE



**PLAN VIEW DIVERSION MH-7**  
HOWARD CO. STD. G-5.12  
NOT TO SCALE



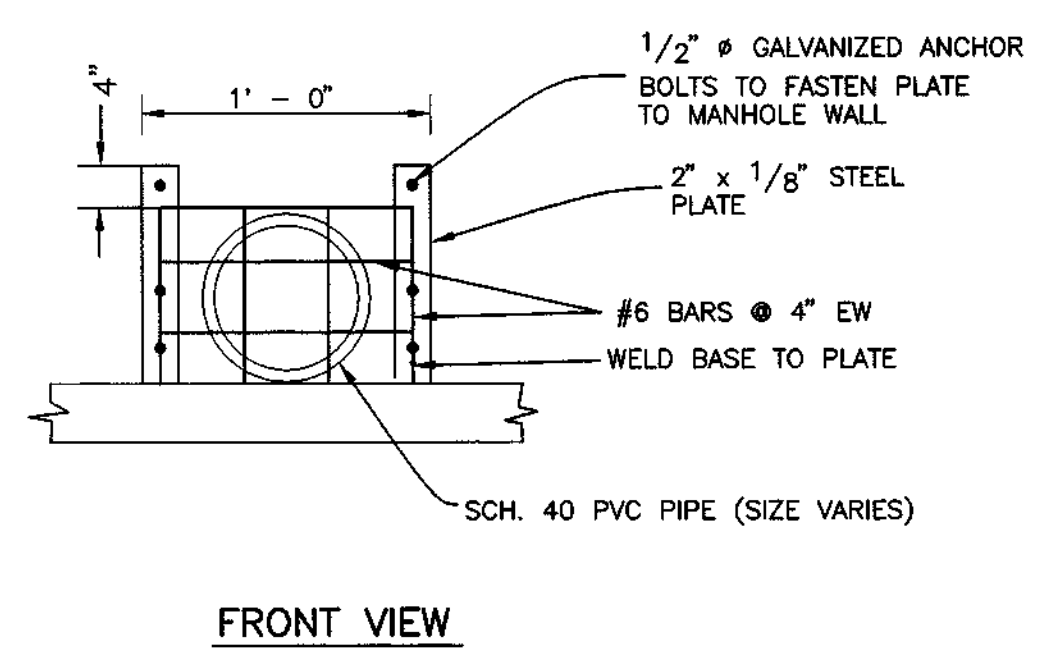
AS BUILT 3/1/00  
FISHER COLLINS AND CRATER INC.



**SIDE VIEW**

**TYPICAL TRASH RACK DETAIL FOR DIVERSION STRUCTURES**

(FOR MH 6 & MH 7)  
NOT TO SCALE



**FRONT VIEW**

NOTE: RACK SHALL BE GALVANIZED AFTER FABRICATION.

1	8/97	REV. PER COMMENTS DATED 8/1/97
0	6/97	SUBMISSION TO COUNTY FOR REVIEW AND APPROVAL.
NO	DATE	REVISION

**TSA GROUP, INC.**  
planning • architecture • engineering • surveying  
8000 Baltimore National Pike • Ellicott City, Maryland 21043 • (410) 686-8100

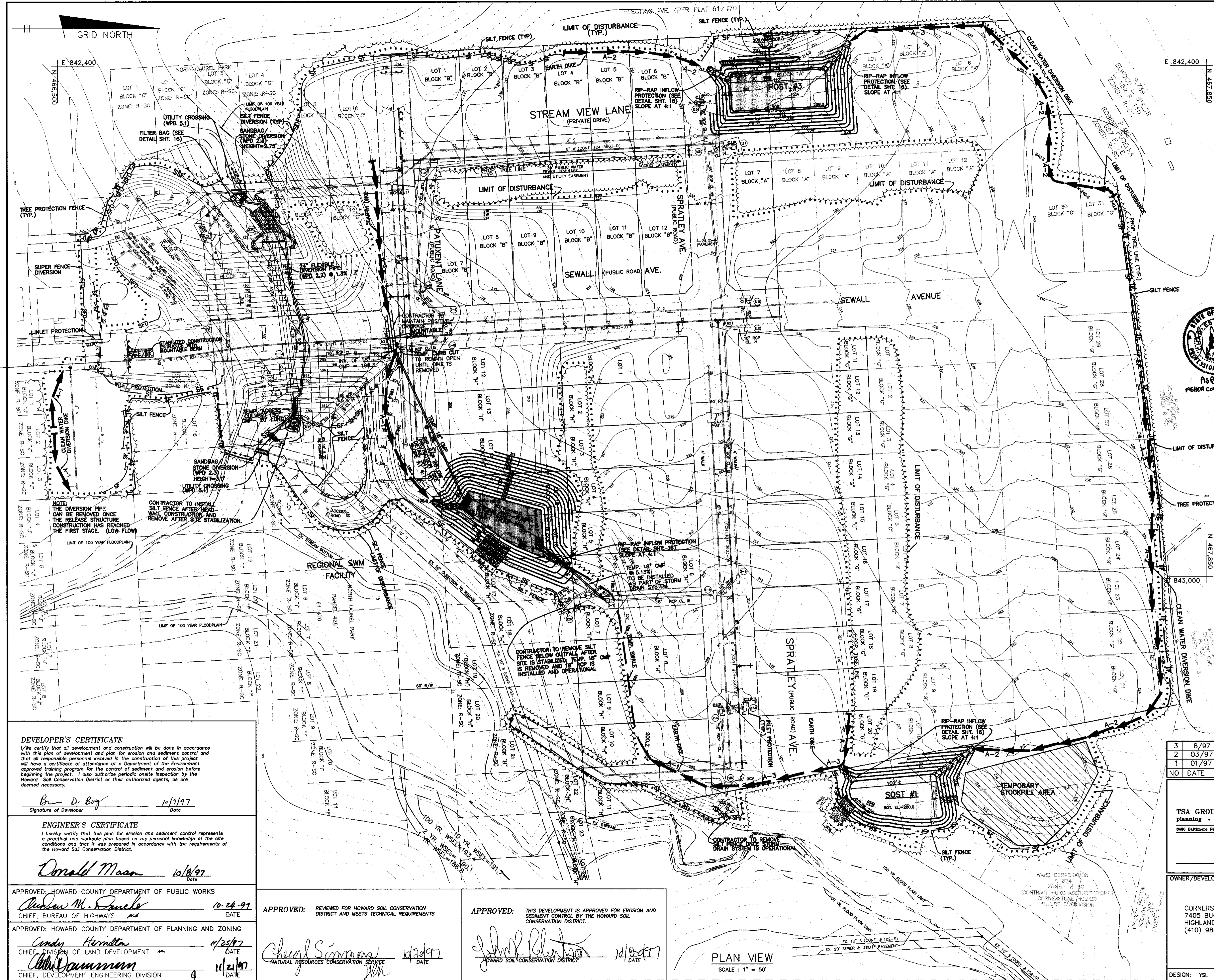
OWNER/DEVELOPER:  
CORNERSTONE HOLDINGS, L.L.C.  
7405 BUCKS HAVEN LANE  
HIGHLAND, MARYLAND 20777  
410-988-9146

PROJECT:  
**NORTH LAUREL PARK - PHASE I**  
LOT 7; BLOCK "A", LOTS 1-12; BLOCK "B", LOTS 11-20; BLOCK "G", LOTS 1-10 & 12-14; BLOCK "H"

LOCATION: TAX MAP 50 - P/O PARCEL 426  
6th ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

TITLE:  
**WATER QUALITY PONDS  
PLAN, DETAILS, AND PROFILES**

DATE: JUNE, 1997 PROJECT NO. 0946



**TEMP. SWM/PIPE OUTLET SEDIMENT TRAP NO. 3 (ST-I)**

EXISTING D.A. = 4.10 Ac.  
 DEVELOPED D.A. = 3.52 Ac.  
 STORAGE REQUIRED (TOTAL) = 14,760 C.F.  
 WET STORAGE REQUIRED = 7,380 S.F.  
 DRY STORAGE REQUIRED = 7,380 C.F.

STORAGE PROVIDED (TO RISER CREST) = 23,147 C.F.  
 WET STORAGE PROVIDED = 7380 C.F.  
 DRY STORAGE PROVIDED = 15767 C.F.

BOTTOM DIMENSION = 112' x 44'  
 BOTTOM ELEVATION = 209.0  
 WET STORAGE LIMIT ELEVATION : FROM 209.0 TO 210.35  
 DRY STORAGE LIMIT ELEVATION : FROM 210.35 TO 211.52  
 CLEANOUT ELEVATION = 209.70

RISER CREST ELEV. = 212.70 (27" CMP)  
 BARREL SIZE = 21" CMP (24 LF)  
 EMBANKMENT ELEV. = 214.50  
 EXISTING GROUND @ EMBANKMENT = 211.0±

**STONE/RIP-RAP OUTLET SEDIMENT TRAP NO. 2 (ST-IV)**

EXISTING DRAINAGE AREA = 7.79 Ac.±  
 DEVELOPED DRAINAGE AREA = 7.34 Ac.±  
 STORAGE REQUIRED = 28,044 C.F.  
 WET STORAGE REQUIRED = 14,022 C.F.  
 DRY STORAGE REQUIRED = 14,022 C.F.

STORAGE PROVIDED (TO WEIR EL. 197.0) = 43,708 C.F.  
 WET STORAGE PROVIDED = 14,022 C.F.  
 DRY STORAGE PROVIDED = 29,686 C.F.

STORAGE DEPTH BELOW OUTLET = 7.0'  
 WET STORAGE DEPTH = 2.83'  
 DRY STORAGE DEPTH = 4.17'

BOTTOM DIMENSION = 105'± x 55'±  
 BOTTOM ELEVATION = 190.00  
 WET STORAGE LIMIT ELEVATION : FROM 190.0 TO 192.83  
 DRY STORAGE LIMIT ELEVATION : FROM 192.83 TO 197.00  
 EMBANKMENT ELEVATION : 198.00  
 CLEANOUT ELEVATION : 191.53  
 WEIR ELEVATION : 197.00  
 WEIR LENGTH : 32'  
 APRON LENGTH : 10'  
 RIP-RAP ELEV. INSIDE THE TRAP = 192.83

**NOTE:**  
 DELAY CONSTRUCTION OF 18" RCP FROM INLET #7 AND MANHOLE #7. INSTALL TEMP. 18" CMP TO TRAP NO. 2 FOR SEDIMENT CONTROL CONVEYANCE.

**NOTE: ANY SEDIMENT CONTROLS INTERRUPTED BY THE INSTALLATION OF STORM DRAINS ARE TO BE REPAIRED IMMEDIATELY.**

**STONE OUTLET SEDIMENT TRAP NO. 1 (ST-II)**

EXISTING D.A. = 3.10 AC.  
 DEVELOPED D.A. = 4.13 AC.  
 STORAGE REQUIRED (TOTAL) = 14,868 C.F.  
 WET STORAGE REQUIRED = 7,434 C.F.  
 DRY STORAGE REQUIRED = 7,434 C.F.

STORAGE PROVIDED (TO WEIR EL. 203.0) = 15,474 C.F.  
 WET STORAGE PROVIDED = 7,434 C.F.  
 DRY STORAGE PROVIDED = 8,040 C.F.

STORAGE DEPTH BELOW OUTLET = 3.0'  
 WET STORAGE DEPTH = 1.56'  
 DRY STORAGE DEPTH = 1.44'

BOTTOM DIMENSION = 102'± x 51'±  
 BOTTOM ELEVATION = 200.00  
 WET STORAGE LIMIT ELEVATION : FROM 200.0 TO 201.56  
 DRY STORAGE LIMIT ELEVATION : FROM 201.56 TO 203.0  
 EMBANKMENT ELEVATION : 204.00  
 CLEANOUT ELEVATION : 200.78  
 WEIR CREST ELEVATION : 203.0  
 WEIR LENGTH : 17.0'  
 APRON LENGTH : 10'  
 EXISTING GROUND AT EMBANKMENT : 201.0 ±  
 RIP-RAP ELEV. INSIDE THE TRAP : 201.56

**NOTE: ANY SEDIMENT CONTROLS INTERRUPTED BY THE INSTALLATION OF STORM DRAINS ARE TO BE REPAIRED IMMEDIATELY.**

NO	DATE	REVISION
3	8/97	REV. PER COUNTY COMMENTS DATED 8/1/97
2	03/97	REVISED PER COMMENTS UNDER SDP SUBMITTAL
1	01/97	REVISED PER COMMENTS UNDER SDP SUBMITTAL

**TSA GROUP, INC.**  
 planning • architecture • engineering • surveying  
 6480 Baltimore National Pike • Elliott City, Maryland 21043 • (410) 466-0106

**OWNER/DEVELOPER:**  
 CORNERSTONE HOLDINGS, L.L.C.  
 7405 BUCKS HAVEN LANE  
 HIGHLAND, MARYLAND 20777  
 (410) 988-9146

**PROJECT:**  
 NORTH LAUREL PARK - PHASE I  
 LOT 7; BLOCK "A", LOTS 1-12; BLOCK "B",  
 LOTS 11-20; BLOCK "C", LOTS 1-10 & 12-14; BLOCK "H"

**LOCATION:**  
 TAX MAP 50 - P/O PARCEL 426  
 6th ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

**TITLE:**  
 SEDIMENT & EROSION CONTROL PLAN

**DATE:** JUNE, 1997  
**PROJECT NO.:** 0946

**DESIGN:** YSL **DRAFT:** YSL **CHECK:** CAM **SCALE:** 1" = 50' **DRAWING NO.:** 14 OF 16

**DEVELOPER'S CERTIFICATE**  
 I/We certify that all development and construction will be done in accordance with this plan of development and plan for erosion and sediment control and that all responsible personnel involved in the construction of this 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 onsite inspection by the Howard Soil Conservation District or their authorized agents, as are deemed necessary.

*B. D. Boy* 10/19/97  
 Signature of Developer Date

**ENGINEER'S CERTIFICATE**  
 I hereby 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.

*Donald Mason* 10/19/97  
 Signature Date

**APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS**  
*Andrew M. Pavele* 10-24-97  
 CHIEF, BUREAU OF HIGHWAYS DATE

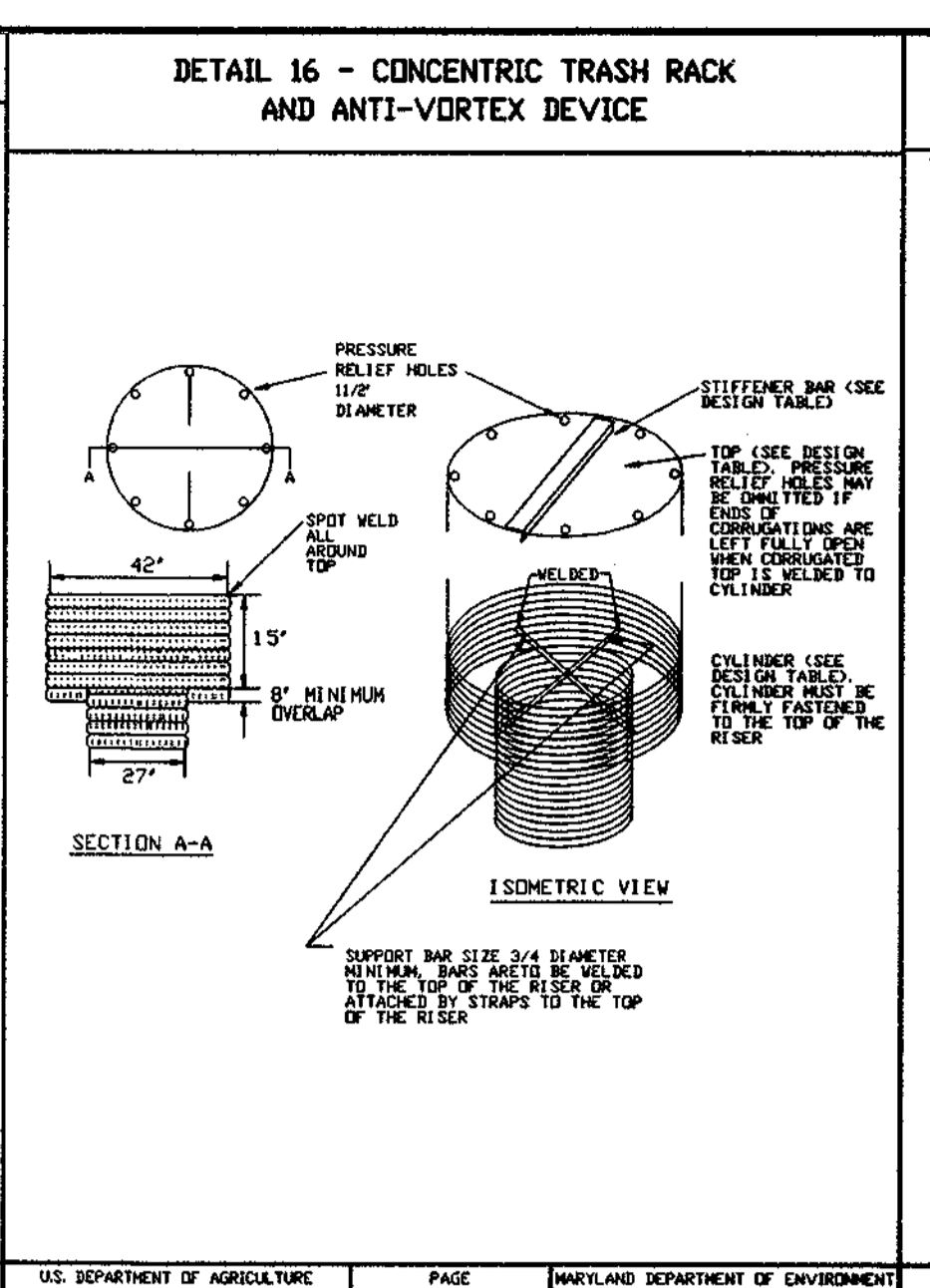
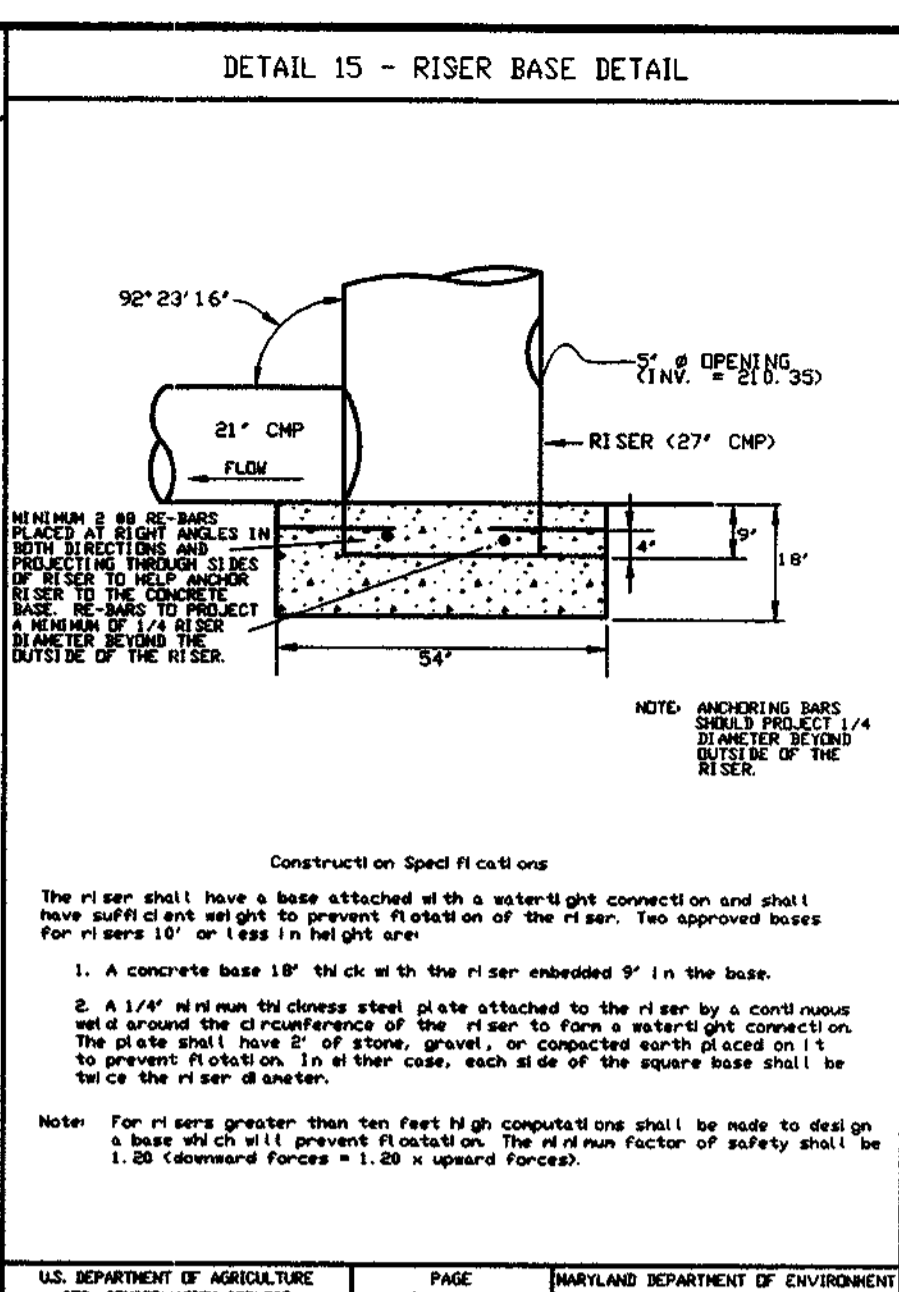
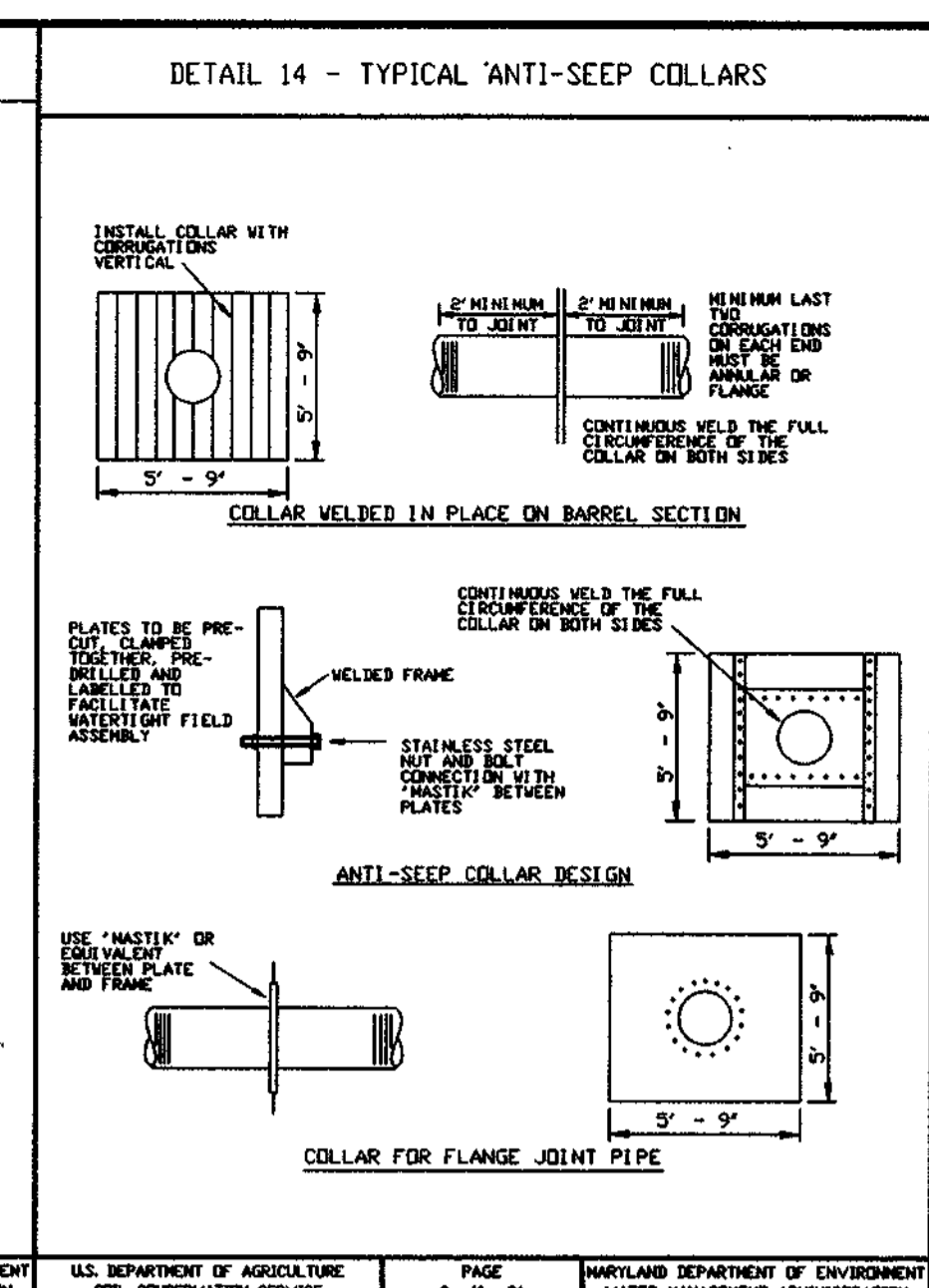
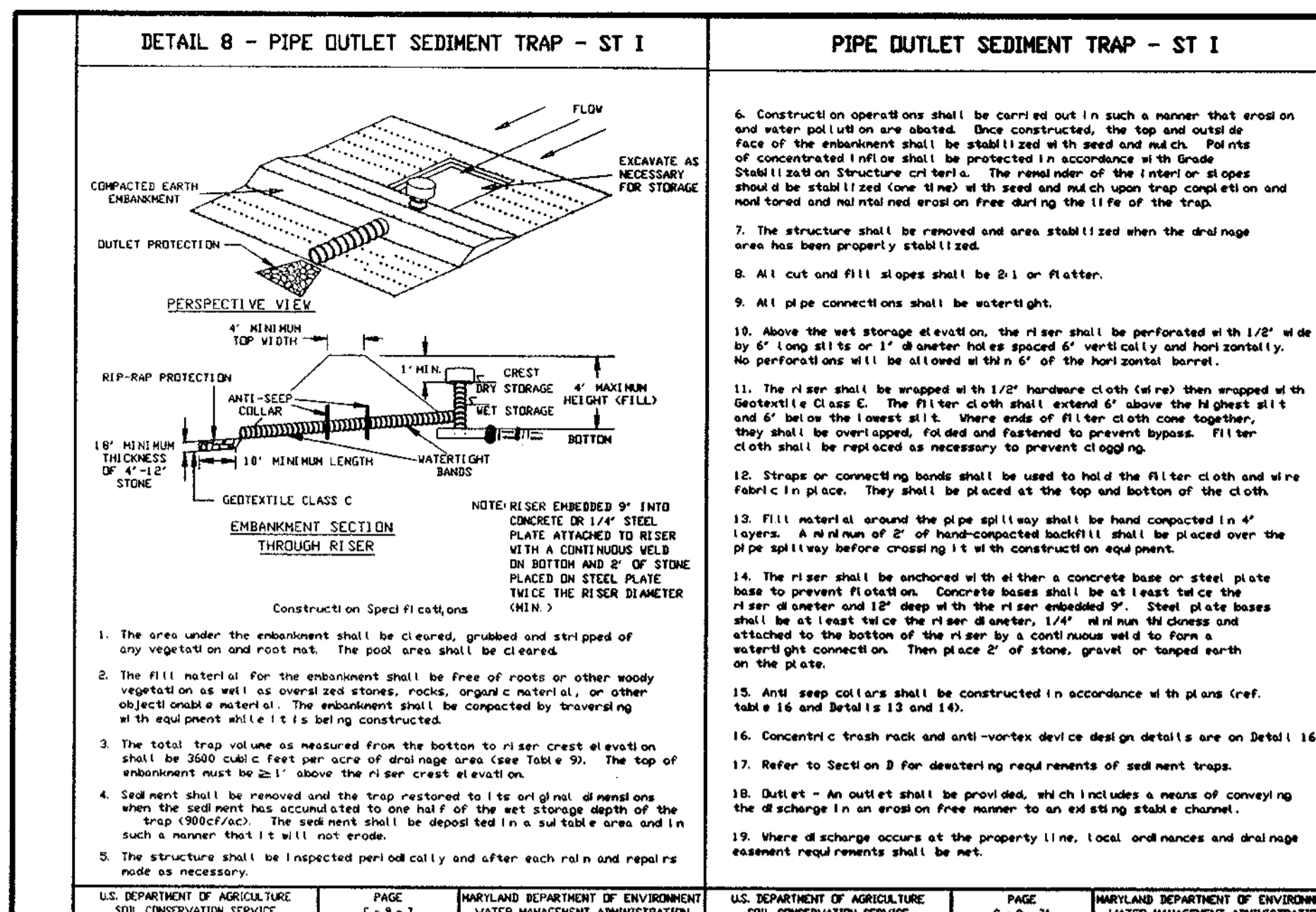
**APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING**  
*Candy Hamilton* 11/25/97  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*Chris Dammann* 11/21/97  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

**APPROVED:** REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.  
*Cheerl Simmons* 11/20/97  
 NATURAL RESOURCES CONSERVATION SERVICE DATE

**APPROVED:** THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.  
*John Blanton* 11/08/97  
 HOWARD SOIL CONSERVATION DISTRICT DATE

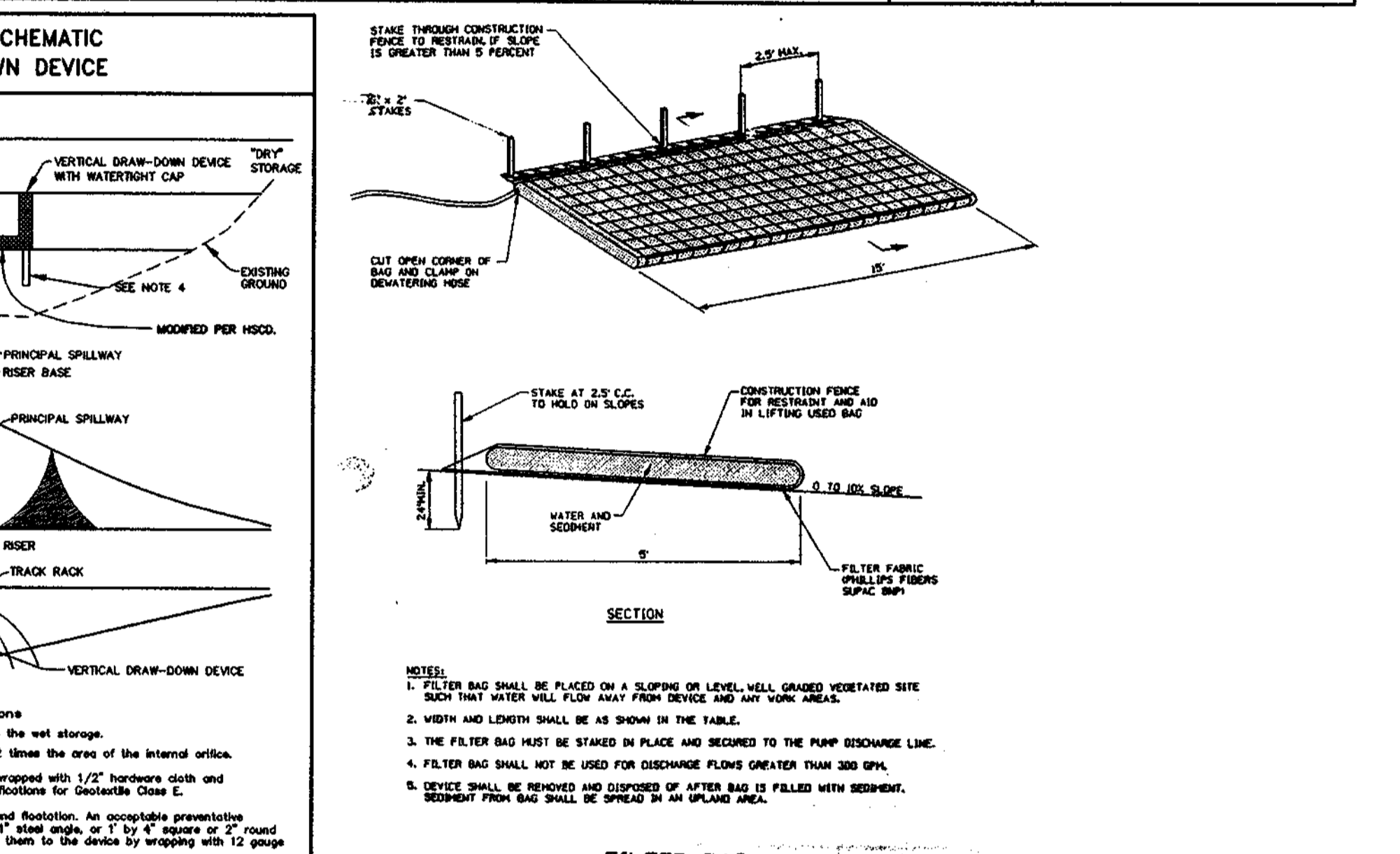
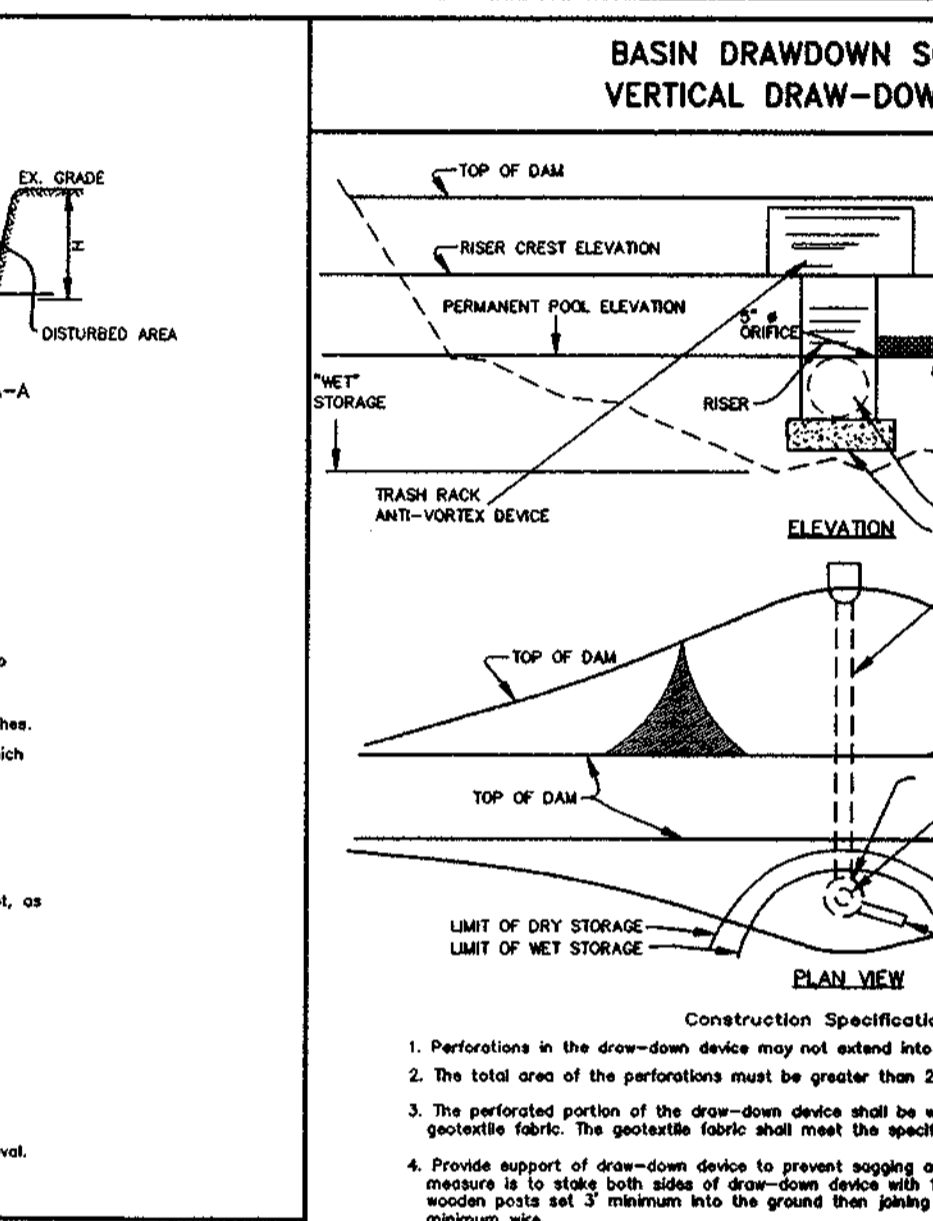
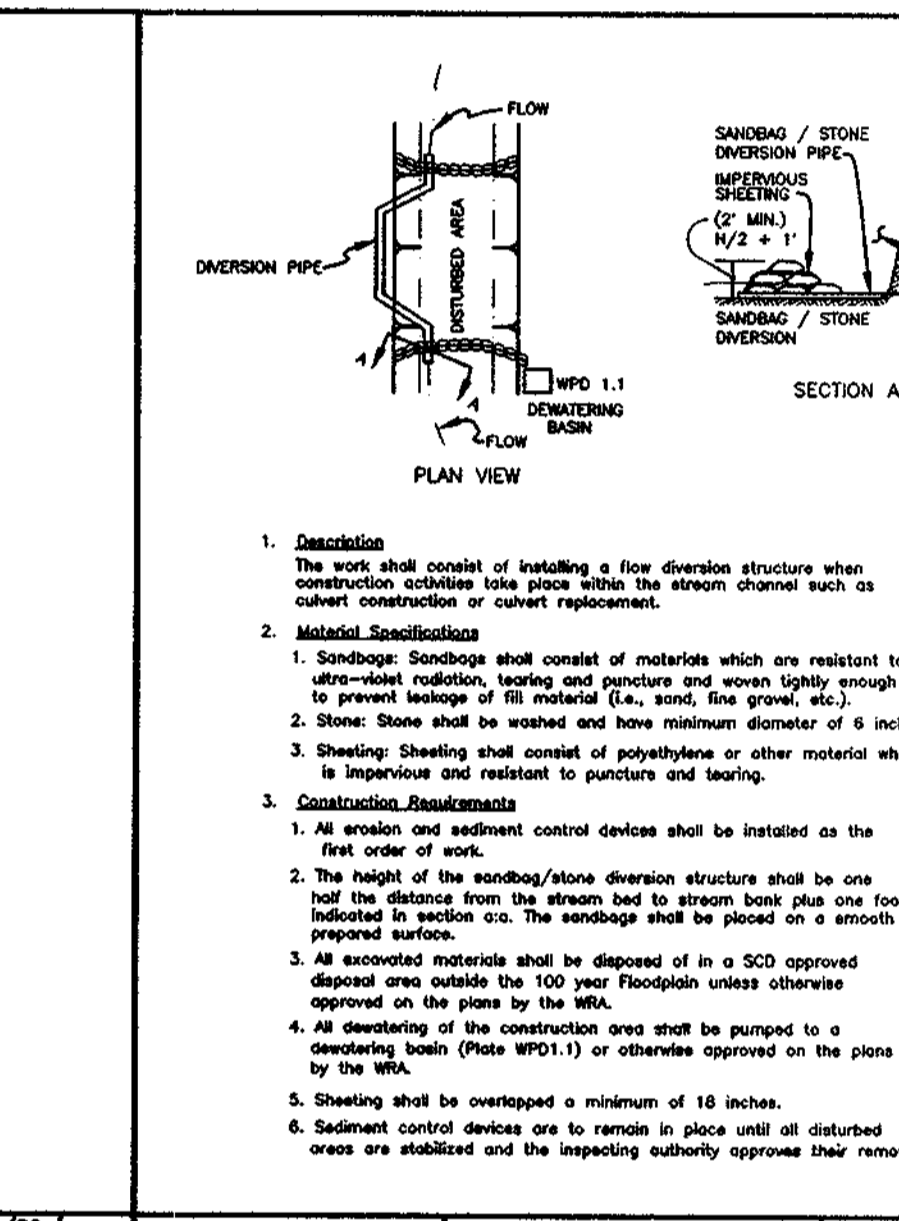
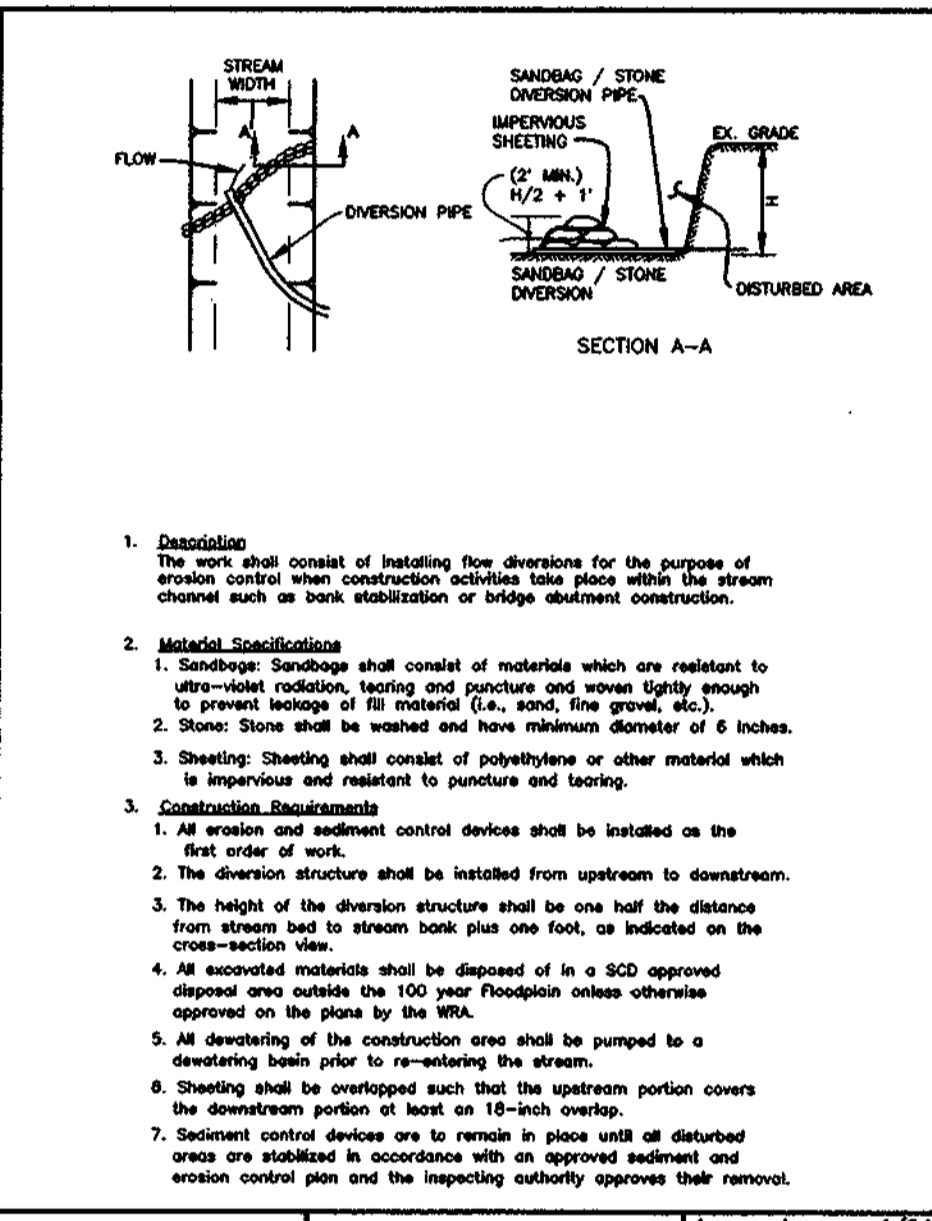
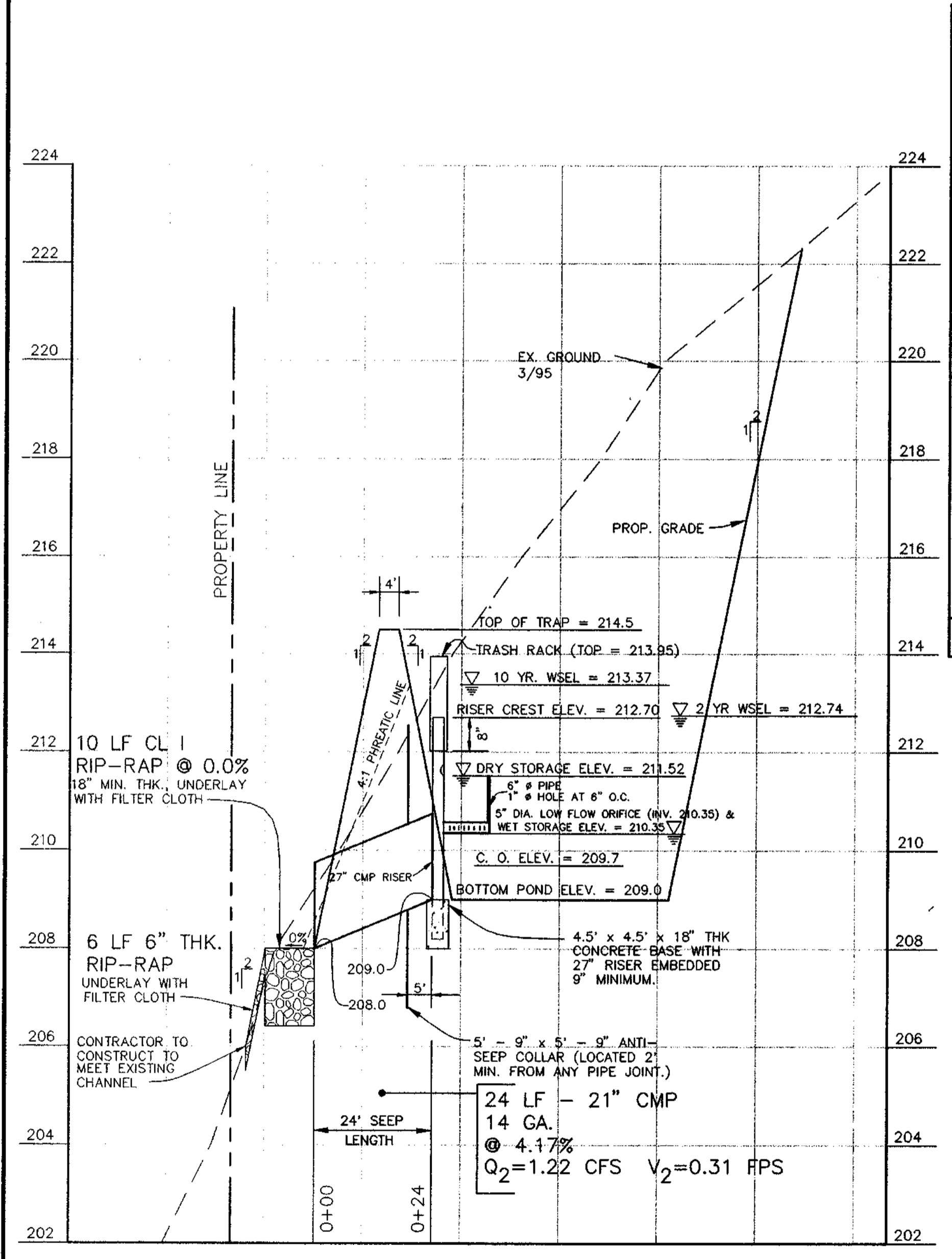
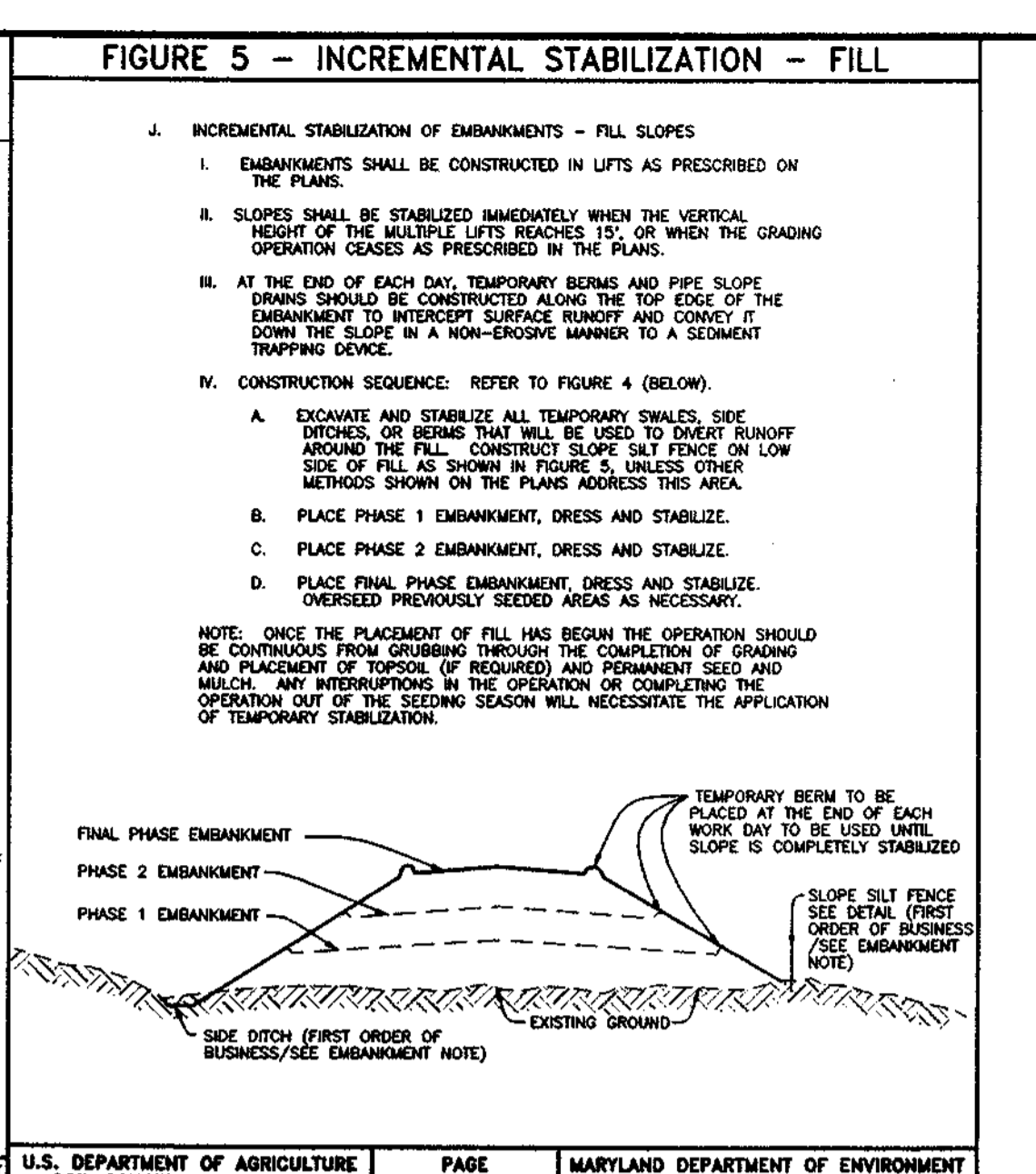
**PLAN VIEW**  
 SCALE: 1" = 50'



**DETAIL 16 - CONCENTRIC TRASH RACK AND ANTI-VORTEX DEVICE (continued)**

Riser Dia. (in.)	Trash Rack Dia. (in.)	Trash Rack Spacing (in.)	Riser Dia. (in.)	Trash Rack Dia. (in.)	Trash Rack Spacing (in.)
12	18	16	6	60	16
15	21	16	7	60	16
18	27	16	8	60	16
21	30	16	11	60	16
24	36	16	13	60	16
27	42	16	15	60	16
30	54	14	17	60	16
42	60	14	19	60	16
48	72	12	21	1-1/4" dia or 1-1/4" x 1-1/4" angle	16
54	78	12	25	8	---
60	96	12	29	1-1/2" dia or 1-1/2" x 1-1/2" angle	8
66	96	10	33	2" dia or 2x2x1/8 angle	8
72	102	10	36	2-1/2" dia or 2-1/2" x 1/4" angle	8
78	114	10	39	2-1/2" dia or 2-1/2" x 1/4" angle	8
84	120	10	42	2-1/2" dia or 2-1/2" x 1/4" angle	8

Note: The above trash rack and anti-vortex device information is only for corrugated metal pipe. Concrete risers must meet the requirements of MD 276.



**APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS**

*Andrew M. Daulton* 10/28/97 DATE

**APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING**

*Candy Hamilton* 11/25/97 DATE

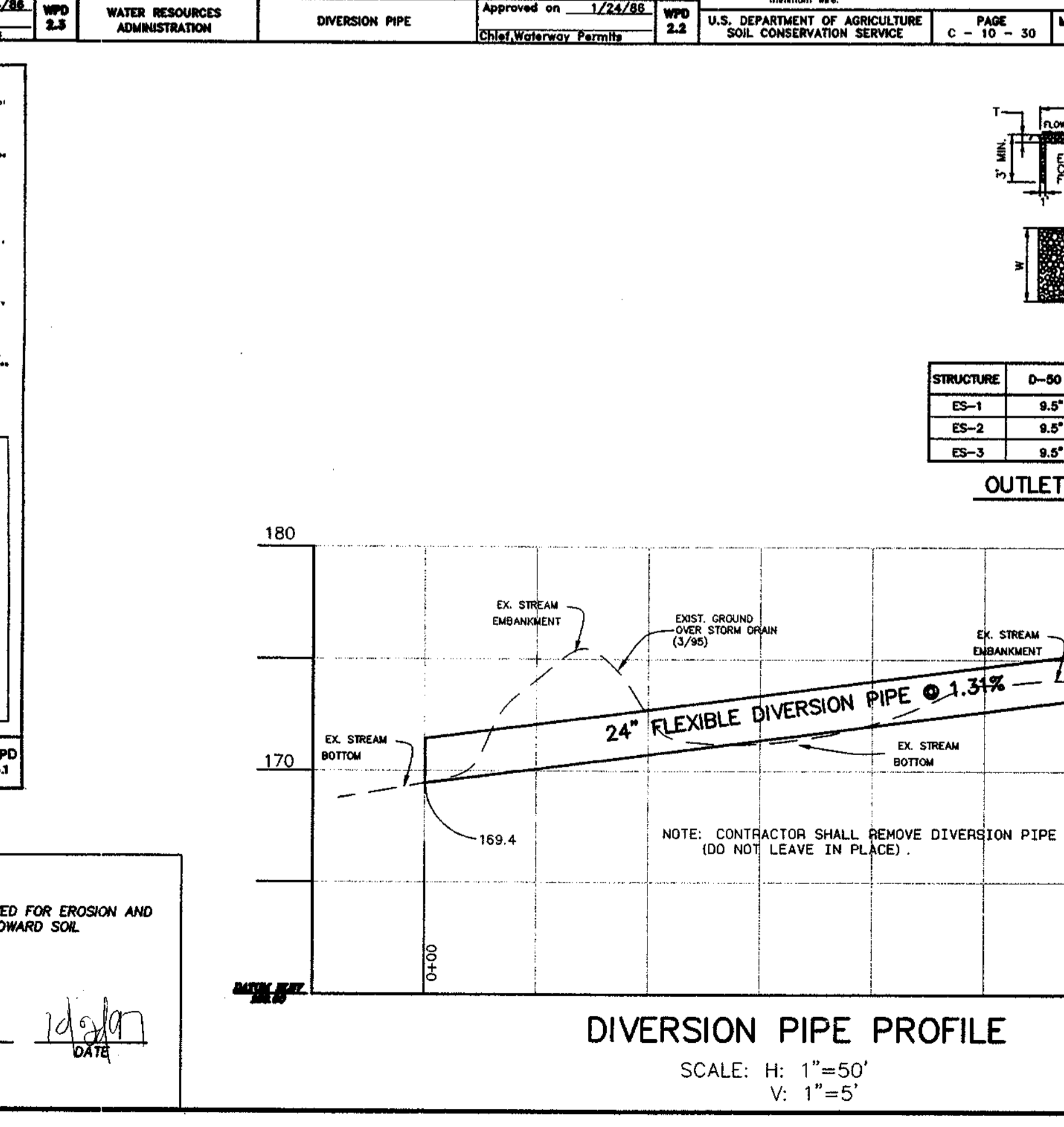
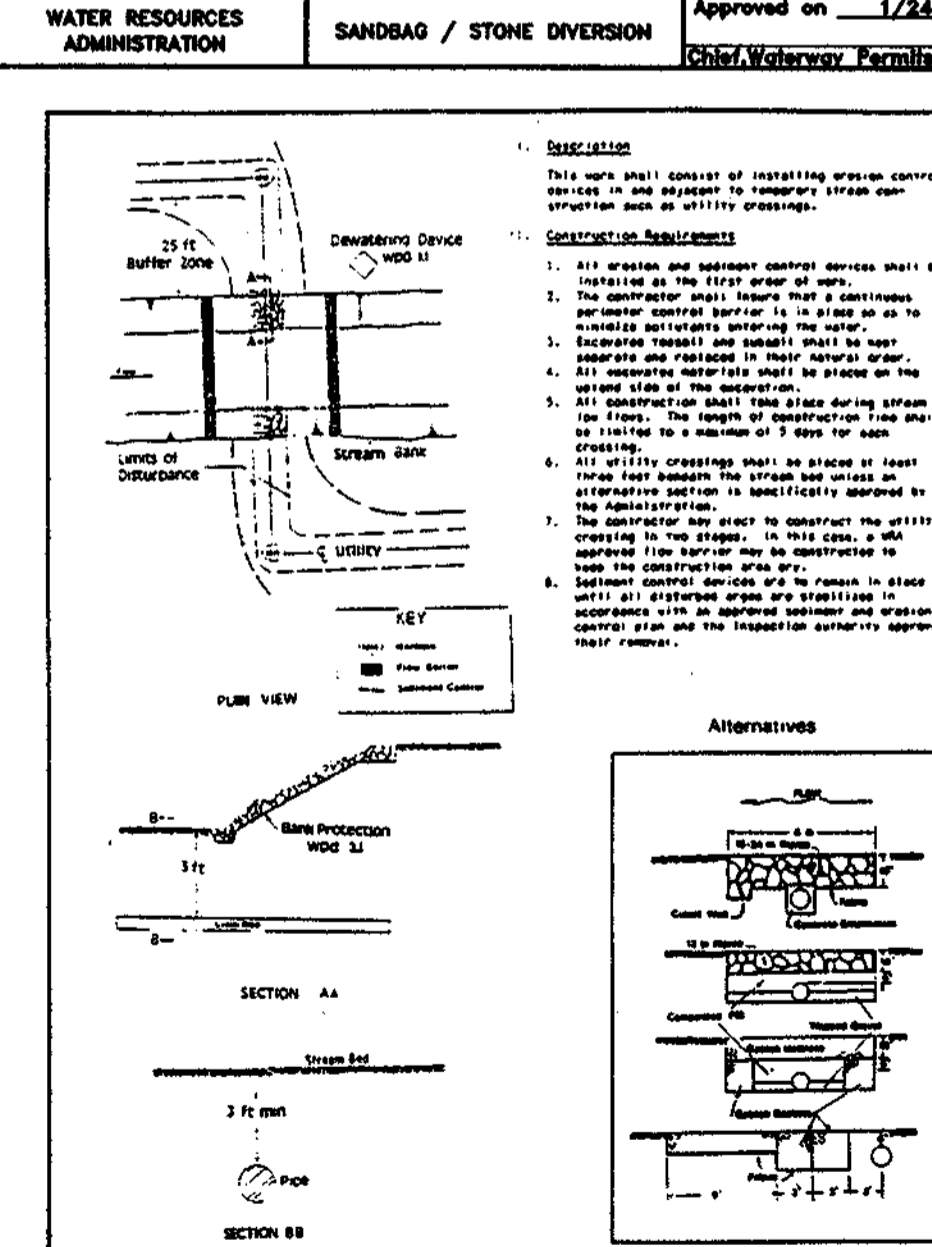
*Chris Dommers* 11/21/97 DATE

**APPROVED: REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.**

*Cheryl Scrimgeour* 10/28/97 DATE

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

*John P. ...* 10/28/97 DATE



**ENGINEER'S CERTIFICATE**

I hereby 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.

*Donald Mason* 10/8/97 Date

**DEVELOPER'S CERTIFICATE**

I/We certify that all development and construction will be done in accordance with this plan of development and plan for erosion and sediment control and that all responsible personnel involved in the construction of this 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 onsite inspection by the Howard Soil Conservation District or their authorized agents, as are deemed necessary.

*Ray D. Boy* 10/9/97 Date

**TSA GROUP, INC.**

planning • architecture • engineering • surveying

8400 Baltimore National Pike • Ellicott City, Maryland 21043 • (410) 486-9105

**OWNER/DEVELOPER:**

**CORNERSTONE HOLDINGS, L.L.C.**

7405 BUCKS HAVEN LANE  
HIGHLAND, MARYLAND 20777  
410-988-9146

**PROJECT:**

**NORTH LAUREL PARK - PHASE I**

LOT 7; BLOCK "A", LOTS 11-12; BLOCK "B", LOTS 11-20; BLOCK "C", LOTS 1-10 & 12-14; BLOCK "H"

**LOCATION:**

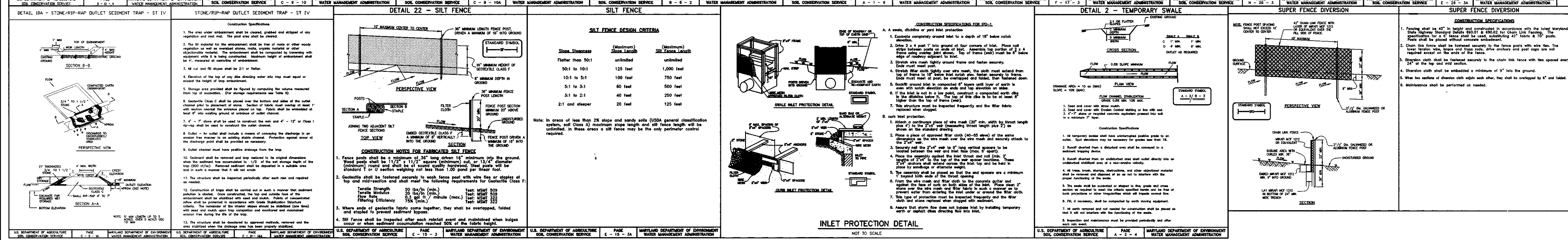
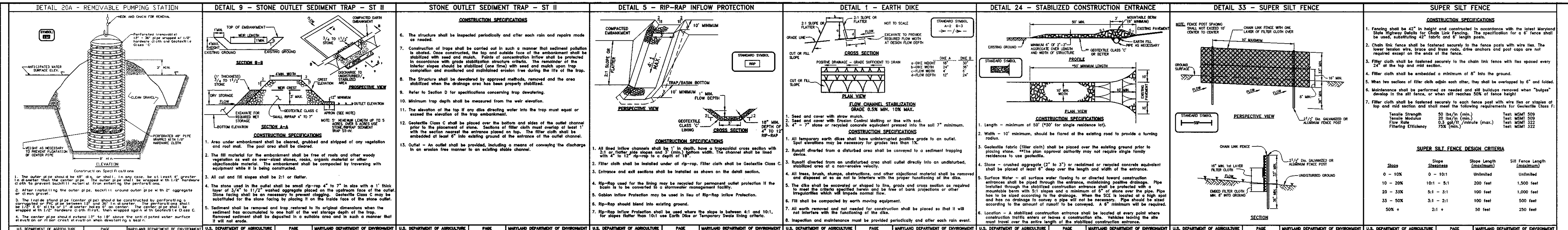
TAX MAP 50 - P/O PARCEL 426  
6TH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

**TITLE:**

**TEMPORARY STORMWATER MANAGEMENT NOTES & DETAILS**

DATE: JUNE, 1997 PROJECT NO. 0946

DESIGN: CAM DRAFTY:JMC CHECK:CAM SCALE: AS SHOWN DRAWING 15 OF 15



**PERMANENT SEEDING NOTES**

Apply to graded or cleared area 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, disking or other acceptable means before seeding. (If not previously loosened)

**Soil Amendments:** In lieu of soil test recommendations, use on the following schedules:

- 1) Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 sf) and 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sf) 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 (9 lbs/1000 sf).
- 2) Acceptable - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 sf) and 1000 lbs per acre 10-10-10 fertilizer (23 lbs/1000 sf) before seeding. Harrow or disc into upper three inches of soil.

**SEDIMENT CONTROL NOTES**

1. A minimum of 48 hours notice must be given to the Howard County Department of Inspections and Permits, Sediment Control Division prior to the start of any construction (31-1855).
2. All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the most current "Maryland Standards and Specifications for Soil Erosion and Sediment Control", and revisions thereto.
3. Following initial soil disturbances or redisturbances, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1, b) 14 calendar days for all other disturbed or graded areas on the project site.
4. All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 12, of the Howard County Design Manual, Storm Drainage.
5. All disturbed areas must be stabilized within the time period specified above in accordance with the "1994 Maryland Standards and Specifications for Soil Erosion and Sediment Control" for Permanent Seedings (Sec. 51) Soil (Sec. 54), Temporary Seeding (Sec. 50) and Mulching (Sec. 52). Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
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 Howard County Sediment Control Inspector.
7. Site Analysis:
 

Total Area of Site:	12,95± acres
Area to be roofed or paved:	14,07± acres
Area to be vegetatively stabilized:	12,71± acres
Total Out:	42,03± C.Y.
Total Fill:	34,23± C.Y.
8. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
9. Additional sediment controls must be provided, if deemed necessary by the Howard County DPW Sediment Control Inspector.
10. 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 bulging or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.
11. Trenches for the construction of utilities is limited to three pipe lengths or that which can be back filled and stabilized within one working day, whichever is shorter.
12. Quantities and estimates shown are for sediment control purposes only. Contractor shall prepare his/her own quantity estimates to his/her satisfaction.
  - \* It is the responsibility of the contractor to identify the spoil/borrow site and notify and gain approval from the sediment control inspector of the site and it's grading permit number at the time of construction.

**TEMPORARY SEEDING NOTES**

Apply to graded or cleared areas likely to be redisturbed where a short-term vegetative cover is needed.

**Seeded Preparation:** Loosen upper three inches of soil by raking, disking or other acceptable means before seeding. (If not previously loosened)

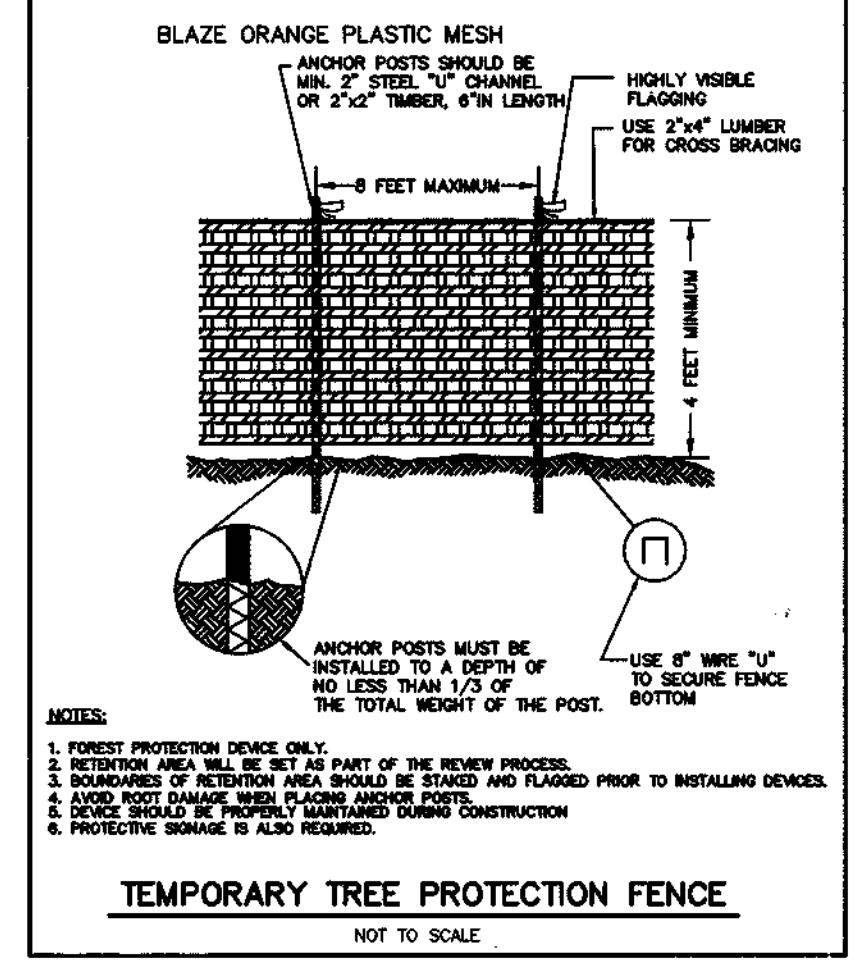
**Soil Amendments:** Apply 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sf).

**Seeding:** For periods March 1 through April 30 and from August 1 through October 15, seed with 60 lbs per acre (1.4 lbs/1000 sf) of Kentucky 31 Tall Fescue. For the period May 1 through July 31, seed with 60 lbs Kentucky 31 Tall Fescue per acre and 2 lbs per acre (0.05 lbs/1000 sf) of Weeping Lovegrass. During the period of October 16 through February 28, protect site by Option 1) 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring. Option 2) use sod. Option 3) seed with 60 lbs/acre Kentucky 31 Tall Fescue and mulch with 2 tons/acre well anchored straw.

**Mulching:** Apply 1-1/2 to 2 tons per acre (70 to 90 lbs/1000 sf) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000 sf) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 348 gallons per acre (8 gal/1000 sf) for anchoring.

**Maintenance:** Inspect all seeded areas and make needed repairs, replacements and reseedings.

**Refer to the 1983 Maryland Standards and Specifications for Soil Erosion and Sediment Control for rate and methods not covered.**



**2.0 STANDARD AND SPECIFICATIONS FOR TOPSOIL**

- CONSTRUCTION AND MATERIAL SPECIFICATIONS**
1. TOPSOIL SALVAGED FROM THE EXISTING SITE MAY BE USED PROVIDED THAT IT MEETS THE STANDARDS AS SET FORTH 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 EXPERIMENTAL STATION.
  2. TOPSOIL SPECIFICATIONS - SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING:
    - I. TOPSOIL SHALL BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, LOAM SAND, OTHER SOILS MAY BE USED IF RECOMMENDED BY THE AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE AUTHORITY. REGARDSLESS, TOPSOIL SHALL NOT BE A MIXTURE OF CONTRASTING TEXTURED SOILS AND SHALL CONTAIN LESS THAN 1% VOLUME OF CHISELS, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1/2" IN DIAMETER.
    - II. TOPSOIL MUST BE FREE OF PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACK GRASS, JOHNSON GRASS, NUTCRACK, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.
    - III. WHERE THE SUBSOIL IS EITHER ACIDIC OR COMPOSED OF HEAVY CLAYS, GROUND LIME SHALL BE SPREAD AT THE RATE OF 4-8 TONS/ACRE (COO-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.
  3. FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES:
I">
    - I. ON SOIL MEETING TOPSOIL SPECIFICATIONS, OBTAIN TEST RESULTS DICTATING FERTILIZER AND LIME AMENDMENTS 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 INDICATES 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 TROD OR SEED SHALL BE PLACED ON SOIL WHICH HAS BEEN TREATED WITH SOIL STERILANTS OR CHEMICALS USED FOR WEED CONTROL UNLESS SUFFICIENT TIME HAS ELAPSED (14 DAYS MIN) TO PERMIT DISSIPATION OF PHYTO-TOXIC MATERIALS.
    - II. PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 3.0 VEGETATION STABILIZATION SECTION 1 - VEGETATIVE STABILIZATION METHODS AND MATERIALS.
  4. TOPSOIL APPLICATION
I">
    - I. WHEN TOP SOILING, MAINTAIN NEEDED EROSION AND SEDIMENT CONTROL PRACTICES SUCH AS DIMENSIONAL GRADE STABILIZATION STRUCTURES, DIMENSIONAL PERIMETER SLOPE STABILIZATION STRUCTURES AND BASINS.
    - II. GRASSES ON THE AREAS TO BE TOP SOILED, WHICH HAVE BEEN PREVIOUSLY ESTABLISHED, SHALL BE MAINTAINED, ALBERT 4" HIGHER IN ELEVATION.
    - III. TOPSOIL SHALL BE UNIFORMLY DISTRIBUTED IN A 4"-6" LAYER AND LIGHTLY COMPACTED TO A MINIMUM OF 90% COMPACTION. SPREADING SHALL BE PERFORMED IN SUCH A MANNER THAT SODDING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL ADDITION AND TILLAGE. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOP SOILING OR OTHER OPERATIONS SHALL BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WEED PROBLEMS.
    - IV. 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 WOULD BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION.
  5. ALTERNATIVE FOR PERMANENT SEEDING - INSTEAD OF APPLYING THE FULL AMOUNTS OF LIME AND COMPOST/FERTILIZER, COMPOSTED SLUDGE AND AMENDMENTS MAY BE APPLIED AS SPECIFIED BELOW:
A">
    - A. COMPOSTED SLUDGE MATERIAL FOR USE AS A SOIL CONDITIONER FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES SHALL BE TESTED TO PRESCRIBE AMENDMENTS FOR SITES HAVING DISTURBED AREAS UNDER 5 ACRES SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:
      - A. COMPOSTED SLUDGE SHALL BE SUPPLIED, 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 26.04.08.
      - B. COMPOSTED SLUDGE SHALL CONTAIN AT LEAST 1 PERCENT NITROGEN, 1.5 PERCENT PHOSPHORUS, AND 1 PERCENT POTASSIUM. IT SHALL 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 PRESENTED ABOVE.
      - C. COMPOSTED SLUDGE SHALL BE APPLIED AT A RATE OF 1 TON/1,000 SQUARE FEET.
      - D. 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.

**SEQUENCE OF CONSTRUCTION**

1. Obtain Grading Permit.
2. Install stabilized construction entrance and inlet protection devices at the existing storm drain inlet and adjacent to SCE. Install temporary stream crossing to permit construction access to site in order to begin generating fill material for the road/pond embankment. Install tree protection fences. Rough grade area as needed for the installation of sediment and erosion control devices only. (Day 1 - 4)
3. Install temporary SWM/POST, SOST and S/ROST and all sediment control features. Stabilize in accordance with temporary seeding notes. (Day 5 - 9)
4. Install stream diversion pipe as shown on the plan. Obtain permission from Sediment Control Inspector before proceeding with any site grading or construction of SWM structures and embankment. All sediment and erosion control devices are to be properly maintained. Earth dikes and slopes adjacent to the sediment traps shall be adjusted as required during the grading operation. (Day 10)
5. Construct cutoff trench and filter diaphragm below concrete cradle for permanent regional SWM embankment. Dewater as necessary during construction. Contractor shall use the filter bag as a dewatering device. Construct SWM control structures and outfalls. (Day 11 - 17)
6. Construct concrete cradle, principal alleyway and apron. (Day 18-21)
7. Construct Regional SWM embankment. Contractor shall remove diversion pipe installed under no. 4 and restrict stream flow through the principal alleyway. (Day 22-28)
8. Proceed with core trench, filter diaphragm and embankment construction. (Day 29-35)
9. The backfill shall be in accordance with the incremental stabilization of fill embankment detail as shown on the detail sheets. Phase 1, 2 and final phase embankment height as shown on the incremental stabilization detail shall be determined by the geotechnical engineer at the time of construction. Stabilize in accordance with permanent seeding notes. (Day 30-35)
10. With the permission of the Sediment Control Inspector, complete site and road grading atop the topsoil on site. Subgrade shall be stabilized in accordance with temporary seeding notes. (Day 36 - 50)
11. Commence with utility construction except the storm drain construction of manholes M1 & M2, and end sections ES-1 & ES-2. (Day 51-75)
12. Install inlet protection where indicated. Inlet protection to remain until site is stabilized. (Day 76)
13. Install temporary CMP storm drain outfall from M-1 to trap #2 and I-7 to trap #2. Install M#2 (except wetland plants) and diversion structure. (Day 77 - 80)
14. Install concrete curb and gutter and provide temporary curb cut as shown on the plan. (Day 81 - 88) Replace curb cut once Sediment Control Inspector tests the site is stabilized and the storm drain system is functional.
15. Install paving. (Days 89 - 109)
16. Complete final grading of site (to extent possible). Redistribute topsoil over the site and stabilize in accordance with permanent seeding notes. See detail sheet for topsoil specification. (Day 110 - 120)
17. Convert Sediment Trap #2 to a water quality facility after SDP stage or as allowed by trap inspector. During house construction phase facility per construction plans and excavate to final grade. Contractor must secure permission of Sediment Control Inspector before proceeding. Sediment trap #1 and POST #3 shall remain as needed for Phase II road and SDP construction.
18. Flush the storm drain system prior to removal of the trap to remove any accumulated sediment.
19. Remove temporary CMP from I-7 and M-1. Install remaining storm drain structures, permanent concrete pipes, diversion structures and diversion pipes per the construction plans. Install wetland plantings in M#1 and M#2.
20. Establish a permanent stabilized outfall channel as noted on the plans.
21. Plug the temporary pipe stub openings and open the permanent outfall pipes as needed.
22. Restore the area to grades shown on the plan. Plant and stabilize with permanent vegetative measures.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 Chief, Bureau of Highways  
 10-28-97  
 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING  
 Chief, Division of Land Development  
 10/28/97  
 DATE

APPROVED: NATURAL RESOURCES CONSERVATION SERVICE  
 10/28/97  
 DATE

APPROVED: THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.  
 Howard Soil Conservation District  
 10/28/97  
 DATE

ENGINEER'S CERTIFICATE  
 I hereby 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.  
 Donald Mason  
 10/28/97  
 Date

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 B. D. Boy  
 10/28/97  
 Date

NO	DATE	REVISION
1	01/97	REVISED PER COMMENTS UNDER SDP SUBMITTAL.
2	03/97	REVISED PER COMMENTS UNDER SDP SUBMITTAL.
3	08/97	REVISED PER COMMENTS DATED 8/1/97

TSA GROUP, INC.  
 planning • architecture • engineering • surveying  
 8600 Baltimore National Pike • Millcreek City, Maryland 21048 • (410) 460-1000

OWNER/DEVELOPER:  
 CORNERSTONE HOLDINGS, L.L.C.  
 705 BUCKS HAVEN LANE  
 HIGHLAND, MARYLAND 20777  
 410-988-9146

PROJECT:  
 NORTH LAUREL PARK - PHASE I  
 LOT 7; BLOCK "A", LOTS 1-12; BLOCK "B", LOTS 11-20; BLOCK "C", LOTS 1-10 & 12-14; BLOCK "H"  
 LOCATION: TAX MAP 5B - P/O PARCEL 426 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE:  
 EROSION & SEDIMENT CONTROL NOTES AND DETAILS

DATE: JUNE, 1997 PROJECT NO. 0946

DESIGN: YSL/CAM DRAFT: JMC CHECK: CAM SCALE: AS SHOWN DRAWING 16 OF 16