TO ANY EXCAVATION WORK BEING DONE.

WATER IS PUBLIC, CONTRACT NO. 824D-W

11. A NOISE STUDY IS NOT REQUIRED FOR THIS PROJECT.

FISHER, COLLINS AND CARTER DATED 9/26/99.

SDP-76-30, PB-229, SDP-68-12, SDP-75-32.

AND IS DATED NOVEMBER 9, 1999.

SHOWN ON THESE DRAWINGS.

OF FINISHED GRADE.

NOVEMBER 1999.

35C2 AND 35C5 WERE USED.

AVAILABLE INFORMATION.

ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS

THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/ CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR

THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR

ALL PLAN DIMENSIONS ARE TO FACE OF CURB AND FACE OF BUILDING UNLESS OTHERWISE NOTED.

INTERVALS PREPARED BY FISHER, COLLINS & CARTER, INC., DATED SEPTEMBER 26, 1999 AND SUPPLEMENTED BY FIELD RUN SURVEY BY RIEMER MUEGGE & ASSOC. OF THE SWM AREA AND HIGH BEAM COURT, DATED 11/99.

THE EXISTING TOPOGRAPHY IS TAKEN FROM FIELD SURVEY WITH MAXIMUM TWO FOOT CONTOUR

THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL

APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL

IMMEDIATELY AT THE CONTRACTOR'S EXPENSE. EXISTING UTILITIES ARE SHOWN BASED ON THE BEST

NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED

WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM.

10. A 100-YEAR FLOODPLAIN STUDY IS NOT REQUIRED FOR THIS PROJECT.

THE PROPERTY LINE SHOWN WAS TAKEN FROM A FIELD SURVEY BY

SUBJECT PROPERTY ZONED POR PER 10-18-93 COMPREHENSIVE ZONING PLAN.

SEQUENCES, PROCEDURES, AND SAFETY PRECAUTIONS AND PROGRAMS.

EACH STATION HAS BEEN APPROVED BY THE ENGINEER IN THE FIELD.

ALL PIPE ELEVATIONS SHOWN ARE INVERT \_\_\_\_\_ ELEVATIONS.

MINIMUM OF 95% COMPACTION OF AASHTO TI80.

INSPECTION BY RIEMER MUEGGE AND ASSOCIATES.

THERE WILL BE 34,500 S.F. OF FOREST CLEARED.

HCC WILL USE TRASH CANS FOR THIS FACILITY.

THE FRONT ENTRANCE SHALL BE HANDICAP ACCESSIBLE

41. ALL CURB RADII SHALL BE 5' UNLESS OTHERWISE NOTED.

BUILDING AND USE SETBACK IS 30'.

STORM DRAIN TRENCHES WITHIN PAVEMENT SHALL BE BACKFILLED AND

15. ALL ELEVATIONS SHOWN ARE BASED ON THE U.S.C. AND G.S. MEAN SEA LEVEL DATUM, 1929.

SEE DEPARTMENT OF PLANNING AND ZONING FILE NO. SDP-97-45, SDP-75-46, SDP-87-95,

CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES,

19. PIPE SHALL NOT BE INSTALLED BY THE CONTRACTOR UNTIL THE LENGTH CALLED FOR AT

NO PIPE SHALL BE LAID UNTIL LINES OF EXCAVATION HAVE BEEN BROUGHT WITHIN 6"

ALL STORM DRAIN PIPE BEDDING SHALL BE PER HOWARD CO. STANDARD SPECIFICATIONS

22. ALL STORM DRAIN INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY STANDARDS.

THERE ARE NO WETLANDS ON-SITE FOR THIS PROJECT BASED ON AN OCTOBER 13, 1999 FIELD

A TRAFFIC STUDY FOR THIS PROJECT WAS PERFORMED BY LEE CUNNINGHAM & ASSOCIATES INC. DATED

PER HOWARD COMMUNITY COLLEGE, TRASH WILL BE PICKED UP ON A TWICE PER DAY SCHEDULE.

THE ASPHALT PATH SHALL BE REPLACED / RELOCATED TO THE LIMITS SHOWN. SEE DETAIL SHEET 6.

SITE LIGHTING SHALL BE IN ACCORDANCE WITH SECTION 134 OF THE ZONING REGULATIONS.

ROOF LEADERS TO BE PVC, SCHEDULE 40 AND BE PLACED AT A 2% MINIMUM SLOPE.

PLEASE REFER TO ARCHITECTURAL PLANS FOR BUILDING DIMENSIONS, SPECIFICATIONS AND COMPACTION REQUIREMENTS

HOWARD COMMUNITY COLLEGE AGREES TO CONSTRUCT AN ASPHALT PATH FROM HICKORY RIDGE RD. TO THE CHILD CARE

WHEN CONNECTING NEW CONCRETE CURB AND GUTTER TO EXISTING CURB, USE A 5' TRANSITION TO MATCH TOP OF CURB.

CENTER (WEST SIDE SIDEWALK) IN THE FUTURE IF REQUESTED FROM THE HOWARD COUNTY BOARD OF EDUCATION.

COMPACTED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, i.e.,

STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION, LATEST AMENDMENTS.

ALL FILL AREAS WITHIN ROADWAY AND UNDER STRUCTURES TO BE COMPACTED TO A

A LANDSCAPE PLAN HAS BEEN PREPARED IN ACCORDANCE TO SECTION 16.124 OF THE

FOR BUILDING PAD AND DETAILS RELATED TO UTILITY CONNECTIONS AT BUILDING.

THE CHILD CARE CENTER WILL HAVE AN INSIDE, PRIVATE WATER METER.

HOWARD COUNTY CODE AND LANDSCAPE MANUAL FOR THIS SITE. SEE SHEET 12 FOR THE

PROFILES STATIONS SHALL BE ADJUSTED AS NECESSARY TO CONFORM TO PLAN

THE CONTRACTOR SHALL TEST PIT EXISTING UTILITIES AT LEAST (5) DAYS BEFORE STARTING WORK

# SITE DEVELOPMENT PLAN HOWARD COMMINITY COLLEGE

CHILD CARE CENTER 5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

VILLAGE HARPERS COLUMBIA VILLAGE OF **HICKORY** RIDGE

# SITE ANALYSIS

AREA OF PARCEL 47 DISTURBED AREA

PRESENT ZONING PROPOSED USE

BUILDING COVERAGE # OF PARKING SPACES REQUIRED \*\* SEE PARKING CALCULATIONS BELOW

# OF PARKING SPACES PROVIDED PAVED AREA

PARKING CALCULATIONS STUDENTS: 2 SPACES / 3 STUDENTS 1316 FULL TIME EQUIVALENT STUDENTS  $\times$  (2/3) = 877 SPACES COLLEGE EMPLOYEES: 1 SPACE / EMPLOYEE

326 EMPLOYEES  $\times$  1 = DAYCARE SPACES: 3/1000 S.F. /I\ 12,700 S.F. x 3/1000 = TOTAL REQUIRED SPACES 877 + 326 + 39 =

EXISTING PARKING PROPOSED PARKING (12 SPACES + 2 HC) MINUS 1 SPACE (DELETED FOR PATH ACCESS) TOTAL PROVIDED (1628 + 14 - 1)

VICINITY MAP

119.6 ACRES BUILDING AREA 1.8 ACRES SWM ROND AREA 0.6 ACRES

DAY CARE CENTER (USED IN CONJUNCTION WITH COLLEGE-NOT A COMMERCIAL FACILITY)

12,700 SF ± /1\

1242 SPACES (1) 1,628

7,000 SF

(PER SITE PLAN SDP-75-46)

326 SPACES

39 SPACES 1242 SPACES (1)

1628 SPACES 14 SPACES - 1 SPACES 1641 SPACES

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND CHIEF, DIVISION OF LAND DEVELOPMENT

4-12-00 / REV. SITE ANALYSIS, GEN. NOTE#29 & EAST ELEVATION DATE NO. REVISION OWNER / DEVELOPER

HOWARD COUNTY COMMUNITY COLLEGE 10901 LITTLE PATUXENT PARKWAY COLUMBIA, MARYLAND 21044-3197 ATTN: MR. JAMES O. LASH

HOWARD COMMUNITY COLLEGE

410-772-4296

CHILD CARE CENTER PARCEL 47 ZONED POR

TAX MAP NO. 35, 36 BLOCK 6 & 1 5th ELECTION DISTRICT, HOWARD COUNTY, MD. TITLE

TITLE SHEET

RIEMER MUEGGE & ASSOCIATES NC ENGINEERING ● ENVIRONMENTAL SERVICES ● PLANNING ● SURVEYING 8818 Centre Park Drive, Columbia, MD 21045 tel 410.997.8900 fax 410.997.9282

DESIGNED BY : A.A.P. DRAWN BY: J.A.P. PROJECT NO: 99250 DATE: FEBRUARY 24, 2000

SCALE : AS SHOWN DRAWING NO. 1 OF 12

SDP-00-56

SEWER IS PUBLIC, CONTRACT NO. 857D-W&S SEWER DRAINAGE AREA: PATUXENT TREATMENT PLANT: LITTLE PATUXENT WWTP THE GEOTECHNICAL STUDY FOR THIS PROJECT WAS PERFORMED BY HILLIS CARNES ENGINEERING ASSOCIATES HOWARD COMMUNITY COLLEGE HAS FILED FOR A DECLARATION OF INTENT TO MEET FOREST CONSERVATION OBLIGATIONS.

N 504,000 N 504,000 LITTLE PATUXENT PARKWAY TOWN CENTER SECTION 8, AREA 3 P.B. 27, FOLIO 49 THE HOWARD RESEARCH & DEVELOPMENT CORPORATION 463/196 THE HOWARD RESEARCH & DEVELOPMENT CORPORATION 455/219 R-40 THE HOWARD RESEARCH & DEVELOPMENT CORPORATION 516/752 R-40 PHYSICAL EDUCATION BUILDING THE HOWARD RESEARCH & DEVELOPMENT CORPORATION 455/219 PURPOSE FIELD LIMIT OF SUBMISSION THE HOWARD RESEARCH & THE HOWARD RESEARCH & DEVELOPMENT CORPORATION DEVELOPMENT CORPORATION 455/219 R-40 **NEW TOWN** N 500,250 PARCEL

<u> OCATION PLAN</u>

HOWARD COMMUNITY COLLEGE POR 523/328

107

35, 36 5th 5522500

BENCHMARKS

ELEV. 464.13

HOCO CONTROL #35-C2

HOCO CONTROL #35-C5

N 563,920.83 E 1,344,204.15

N 562,148.50 E 1,344,554.47

ADDRESS CHART

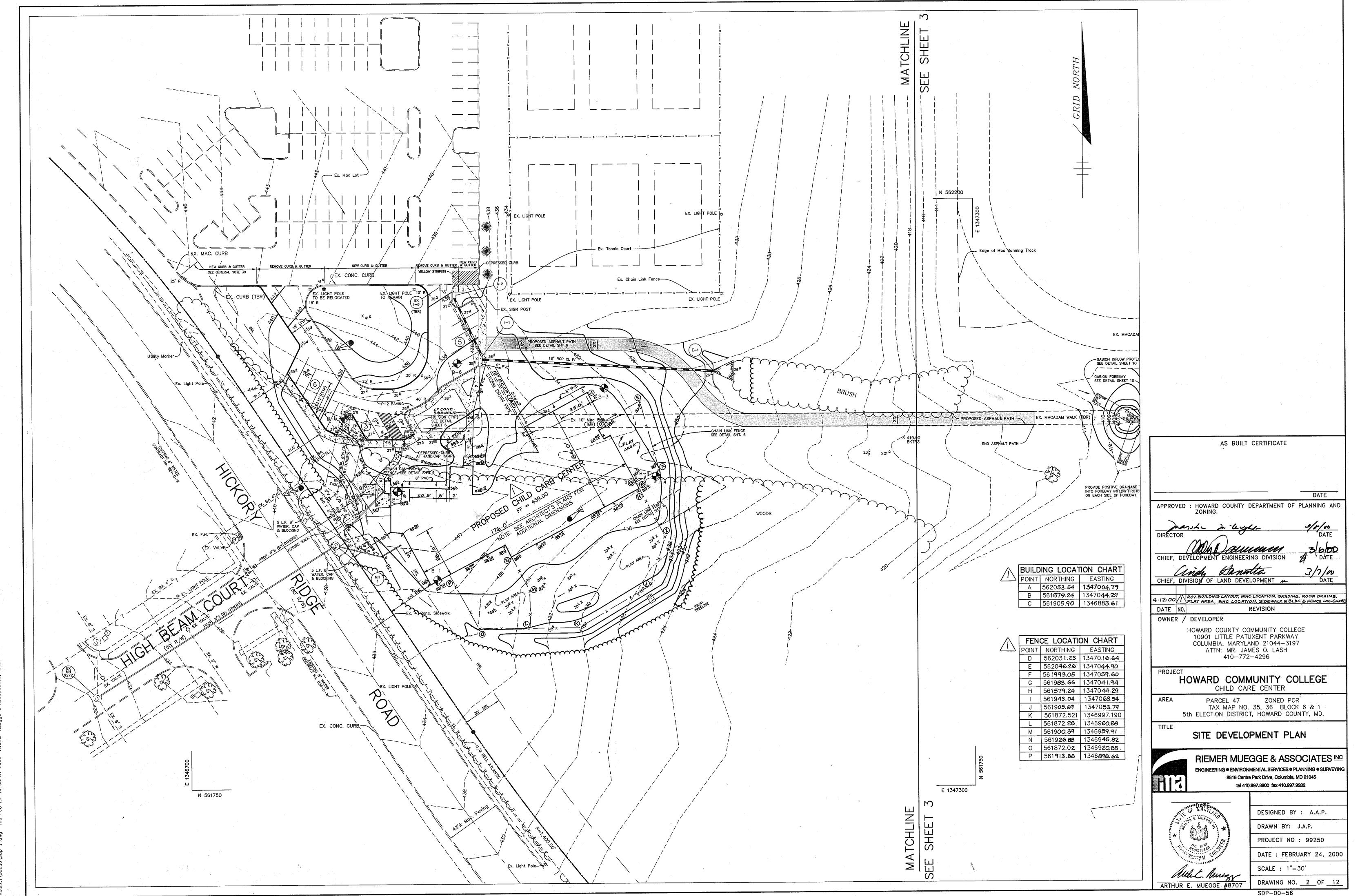
STREET ADDRESS

10901 LITTLE PATUXENT PARKWAY

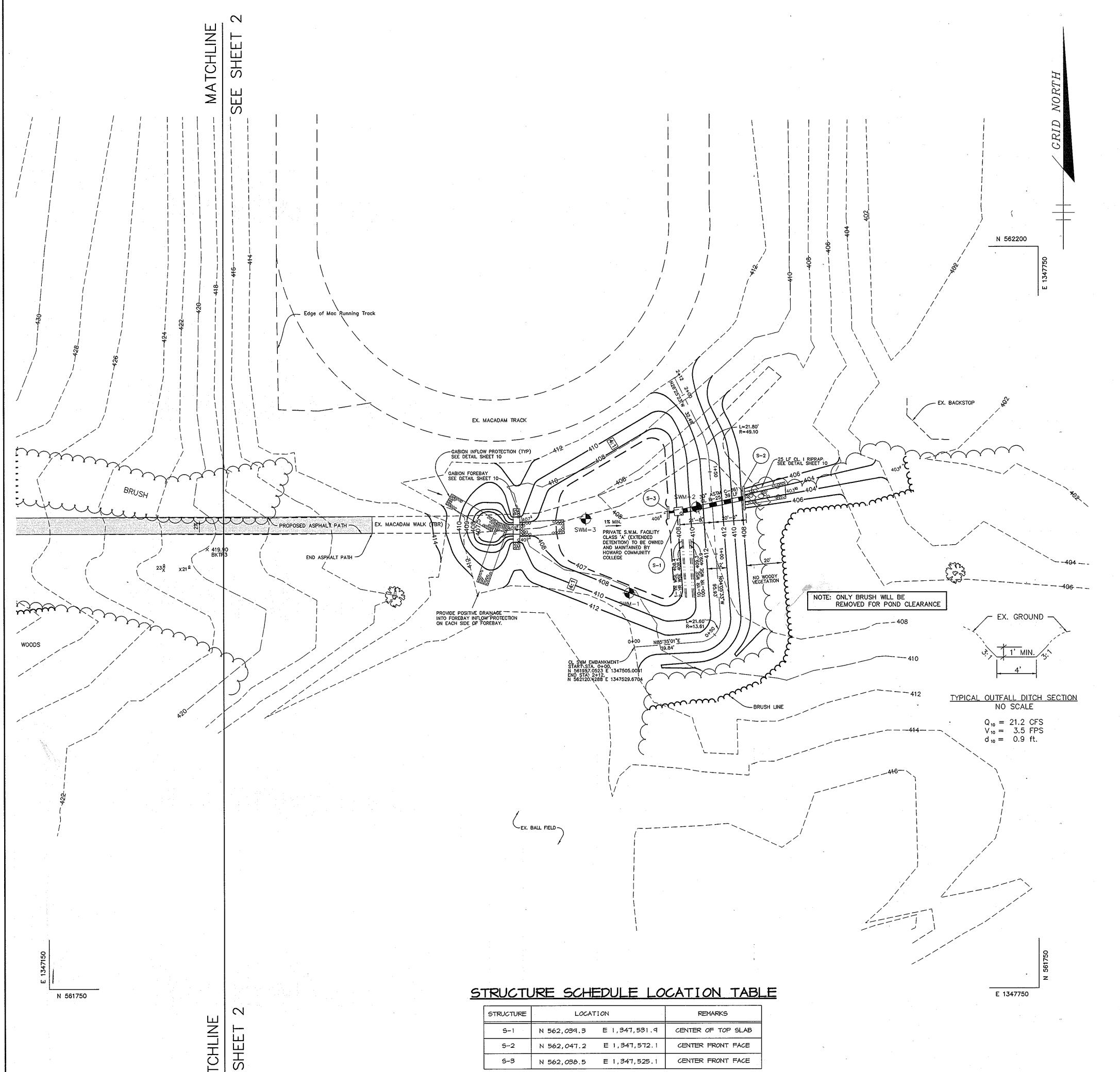
CENSUS TRACT -

6056

ARTHUR E. MUEGGE #8707



o serty og 250/edr-1 dwa Thu Eeb 24 10:38:31 2000 Riemer Miegae & Associat



STORM	EXISTING PEAK DISCHARGE AT STUDY POINT I	INFLOW	DISCHARGE	PROPOSED PEAK DISCHARGE AT STUDY POINT 1	ELEVATION	STORAGE
1 YR.	3.72 CFS	5.0 CFS	0.1 CFS	0.5 CFS	408.4	0.25 AC*FT
2 YR.	7.1 CFS	8.1 CFS	0.9 CFS	1.6 CFS	408.5	0.27 AC*FT
10 YR.	22.5 CFS	19.6 CFS	13.3 CFS	21.2 CFS	409.3	0.42 AC*FT
100 YR.	43.7 CFS	33.6 CFS	27.6 CFS	44.8 CFS	409.9	0.54 AC*FT

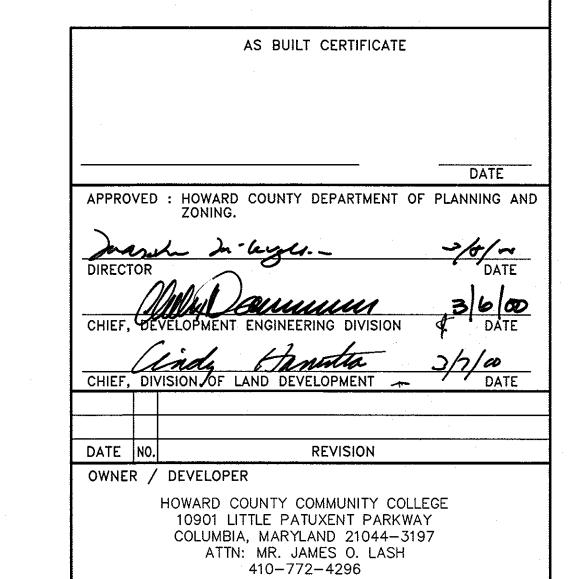
OPERATION AND MAINTENANCE SCHEDULE
OF PRIVATELY OWNED AND MAINTAINED
STORMWATER MANAGEMENT FACILITY
EXTENDED DETENTION POND

#### ROUTINE MAINTENANCE

- Facility shall be inspected anually and after major storms.
   Inspections should be performed during wet weather to determine if the pond is functioning properly.
- Top and side slopes of the embankment shall be moved a minimum of two (2) times a year, once in June and once in September. Other side slopes, the bottom of the pond, and maintenance access should be moved as needed.
- 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

- Structural components of the pond such as the dam, the riser, and the pipes shall be repaired upon the 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, interfere with the function of the riser, when deemed necessary for aesthetic reasons, or when deemed necessary by the Howard County's Department of Public



PROJECT
HOWARD COMMUNITY COLLEGE

CHILD CARE CENTER

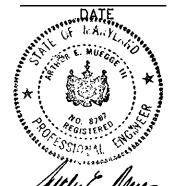
PARCEL 47 ZONED POR
TAX MAP NO. 35, 36 BLOCK 6 & 1

5th ELECTION DISTRICT, HOWARD COUNTY, MD.

STORMWATER MANAGEMENT PLAN



RIEMER MUEGGE & ASSOCIATES INC
ENGINEERING • ENVIRONMENTAL SERVICES • PLANNING • SURVEYING
8818 Centre Park Drive, Columbia, MD 21045
tel 410.997.8900 fax 410.997.9282



ARTHUR E. MUEGGE #8707

DESIGNED BY : A.A.P.

DRAWN BY: J.A.P.

PROJECT NO: 99250

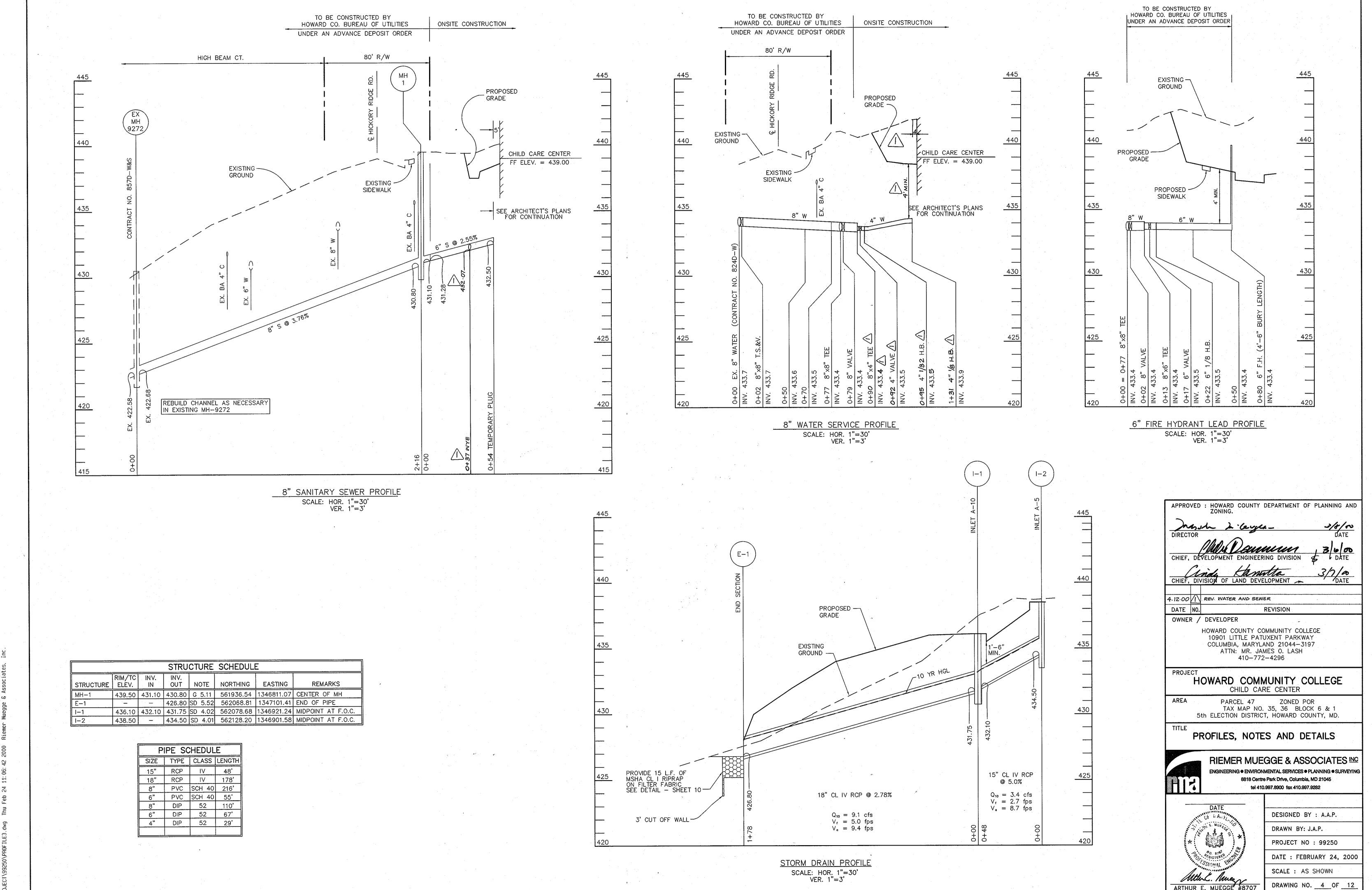
DATE: FEBRUARY 24, 2000

SCALE : 1"=30'

DRAWING NO. \_\_3\_ OF \_\_12

SDP-00-56

\DDO (ECI) 00050\cda\_2 dua Thu Eab 24 40 36 34 2000 Diamar Muanna & Associat



shall be sloped to no steeper than 1:1.

These specifications are appropriate to all ponds within the scope of the Standard for practice MD-378. All references to ASTM and AASHTO specifications apply to the most recent version.

Areas designated for borrow areas, embankment, and structural works shall be cleared, grubbed and stripped of topsoll. All trees, vegetation, roots and other objectionable material shall be removed. Channel banks and sharp breaks

Areas to be covered by the reservoir will be cleared of all trees, brush, logs fences, rubbish and other objectionable material unless otherwise designated on the plans. Trees, 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 injet 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 sultable location for use on the embankment and other designated areas.

Material - The fill material shall be taken from approved designated borrow areas. It shall be free of roots, stumps, wood, rubblish, stones greater than 6", frozen or other objectionable material. Fill material for the center of the embankment and cut off trench shall conform to Unified Soil Classification 6C, 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 materials shall be placed in 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 sheepsfoot, rubber tire 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 be 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.

Cutoff 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

The back fill shall be compacted with construction equipment, rollers, or hand tampers to assure maximum density and minimum permeability.

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

#### PIPE CONDUITS

STRUCTURE BACKFILL

All pipes shall be circular in cross section.

Corrugated Metal Pipe - All of the following criteria shall apply for corrugated

#### Reinforced Concrete Pipe - All of the following criteria shall apply for

Materials - Reinforced concrete pipe shall have bell and spigot joints with rubber gaskets and shall equal or exceed ASTM Designation C-361.

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 side of the pipe at least 10% of its outside diameter with a minimum thickness of 3 inches, or as shown on the drawinas.

Laying pipe - Bell and spigot pipe shall be placed with the bell end patream. Joints shall be made in accordance with recommendations of the manufacturer of the material. After the joints are sealed for the entire line, the bedding shall be placed so that all spaces under the pipe are filled. Care shall be exercised to prevent any deviation from the original line and grade of the pipe. The first joint must be located within 2 feet

4. Backfilling shall conform to Structure Backfill.

5. Other details (anti-seep collars, valves, etc.) shall be as shown on the

#### Polyviny: Chloride (PVC) Pipe - All of the following criteria shall apply for polývinýl chloride (PVC) pípe:

Materials - PVC pipe shall be PVC-1120 or PVC-1220 conforming to ASTM D-1785 or ASTM D-2241

2. Joints and connections to anti-seep collars shall be completely watertight. 3. Bedding - The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable

4. Backfilling shall conform to Structure "Backfill".

Materials, Section 608, Mix No. 3.

earth compacted to provide adequate support.

5. Other details (anti-seep collars, valves, etc.) shall be as shown on the draminas

# Concrete shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and

Rock riprap shall meet the requirements of Maryland Department of Transportation State Highway Administration Standard Specifications for Construction

and Materials, Section 608, Mix No. 3. 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. - 3/4"×1 1/4" SLOTTED HOLES (FRONT ONLY) EL. 408.42 --12"x3"x1/4" THICK GALVANIZED STEEL PLATE FIELD BORED INTO STRUCTURE SEAL WITH APPROVED EPOXY COMPOUND NOTE: PLACE I ON EACH SIDE OF RISER.

#### 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 mater as required or directed by the engineer for constructing each part of the mork. After having served their 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 sumps from which the water shall be pumped.

#### STABILIZATION

All borrow areas shall be graded to provide proper drainage and left in a signtly 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.

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.

Refer to the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.

## RISER STRUCTURE NOTES

EROSION AND SEDIMENT CONTROL

- 1. RISER TO BE PREFABRICATED. SHOP DRAWINGS FOR THIS PRECAST CONCRETE STRUCTURE SHALL MEET THE MINIMUM ASTM REQUIREMENTS FOR PRECAST STRUCTURES. A SHOP DRAWING SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO FABRICATION AND SHALL BE SIGNED AND SEALED BY A MARYLAND REGISTERED PROFESSIONAL ENGINEER.
- 2. CONCRETE SHALL BE MSHA MIX NO. 3 (fc=3,500 ps 1 MINIMUM)
- 3. REFER TO HOWARD COUNTY STD. 6-5.21 FOR MANHOLE STEP DETAILS.
- 4. RISER JOINT(S) TO BE FASTENED IF RISER IS FABRICATED IN SECTIONS. SEE DETAIL THIS SHEET. THE RISER JOINTS SHALL BE WATERTIGHT.
- 5. A TWO FOOT STUB OF THE 30" RCP SHALL BE PRECAST WITH THE RISER. ALL PIPE CONNECTIONS SHALL PROVIDE RUBBER GASKETS FOR WATERTIGHTNESS.
- 6. RISER SHALL BE PLACED ON A FIRMLY COMPACTED SUBGRADE APPROVED BY A GEOTECHNICAL ENGINEER.

#### REMOVABLE TRASH RACK NOTES:

- 1. STEEL TO CONFORM TO ASTM A-36. #5 BARS TO BE SMOOTH, SEE DETAIL FOR SPACING.
- 2. ALL REBAR TO BE WELDED AT ALL INTERSECTIONS.
- 3. ALL BENDS TO BE 2" RADIUS. 2" x 1/8" STEEL PLATE AND 1/2" DIAMETER ANCHOR BOLTS TO BE USED FOR TRASH RACK FRAME.
- 4. GALVANIZE TRASH RACK AFTER FABRICATION AND PAINT BATTLESHIP GRAY.

#### TOP SLAB NOTES: 1. TOP SLAB TO BE SEPARATE FROM RISER STRUCTURE.

- 2. REFER TO HOWARD COUNTY STD. G-5.52 FOR MANHOLE FRAME & COVER.
- 3. CONCRETE TO BE MIX NO. 3

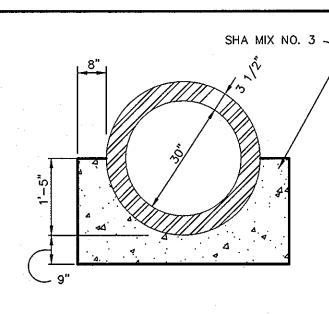
TOP VIEW

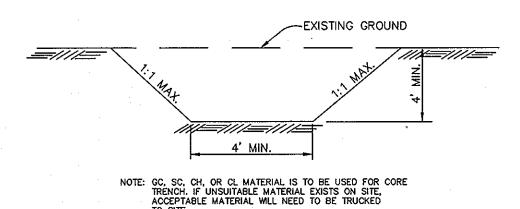
~ 4" (TYP)

MANHOLE STEP

FRONT YIEW

4. SLAB REINFORCING SHALL HAVE 2" MINIMUM COVER





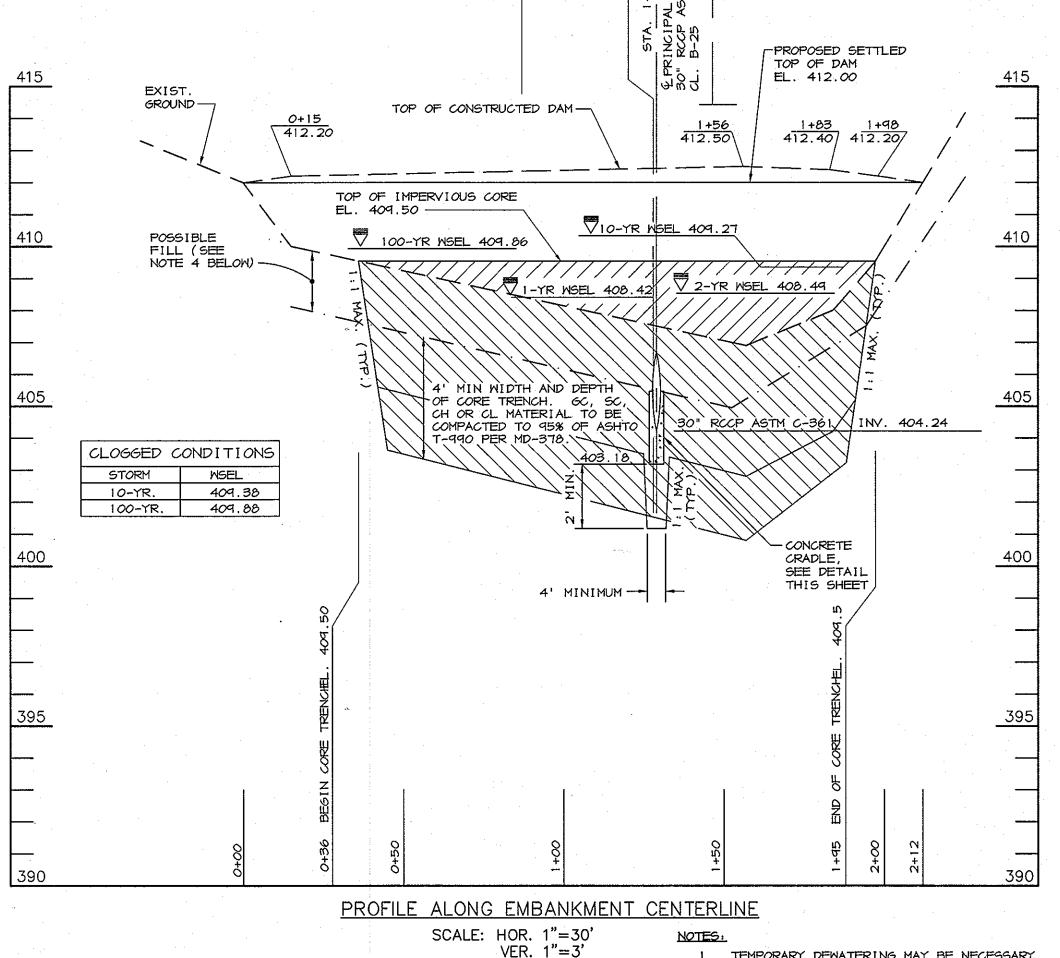
#### EMBANKMENT AND CUT-OFF TRENCH CONSTRUCTION

THE SITE SHOULD BE STRIPPED OF TOPSOIL AND ANY OTHER UNSUITABLE MATERIALS FROM THE EMBANKMENT OR STRUCTURE AREA IN ACCORDANCE WITH SOIL CONSERVATION GUIDELINES. AFTER STRIPPING OPERATIONS HAVE BEEN COMPLETED, THE EXPOSED SUBGRADE MATERIALS SHOULD BE PROOFROLLED WITH A LOADED DUMP TRUCK OR SIMILAR EQUIPMENT IN THE PRESENCE OF A GEOTECHNICAL ENGINEER OR HIS REPRESENTATIVE. FOR AREAS THAT ARE NOT ACCESSIBLE TO A DUMP TRUCK, THE ENGINEER OR HIS REPRESENTATIVE UTILIZING A DYNAMIC CONE PENETROMETER. ANY EXCESSIVELY SOFT OR LOOSE MATERIALS IDENTIFIED BY PROOFROLLING OR PENETROMETER TESTING

#### SHOULD BE EXCAVATED TO SUITABLE FIRM SOIL, AND THEN GRADES RE-ESTABLISHED BY BACKFILLING WITH SUITABLE SOIL.

A REPRESENTATIVE OF A REGISTERED GEOTECHNICAL ENGINEER MUST BE PRESENT TO MONITOR PLACEMENT AND COMPACTION OF FILL FOR THE EMBANKMENT AND CUT-OFF TRENCH. IN ACCORDANCE WITH MARYLAND SOIL CONSERVATION SPECIFICATION 378 SOILS CONSIDERED SUITABLE FOR THE CENTER OF EMBANKMENT AND CUT-OFF TRENCH SHALL CONFORM TO THE UNITED SOIL CLASSIFICATION 6C, SC, CH, OR CL. ALL FILL MATERIALS MUST BE PLACED AND COMPACTED IN ACCORDANCE WITH MDSCS 378 SPECIFICATIONS.

3" CLEAR (TYP)



TEMPORARY DEWATERING MAY BE NECESSARY DURING EXCAVATION OF THE CORE TRENCH. 2. GEOTECHNICAL ENGINEER TO BE PRESENT DURING CORE TRENCH MATERIAL INSTALLATION IF FILL MATERIAL IS ENCOUNTERED AT THE BOTTOM OF THE CORE TRENCH EXCAVATION, THE CORE TRENCH SHOULD BE EXTENDED SO

THAT IT PENETRATES I FOOT MINIMUM INTO ORIGINAL GROUND. BELOW THE LEVEL OF THE POSSIBLE FILL

4. THE CORE TRENCH SHALL EXTEND 4' MINIMUM ELEVATION AS DETERMINED BY A MARYLAND REGISTERED GEOTECHNICAL ENGINEER.

DATE HOWARD COUNTY DEPARTMENT OF PLANNING AND APPROVED ZONING.

CHIEF.

CHIEF, DIVISION OF LAND DEVELOPMENT DATE

OWNER / DEVELOPER

BY THE DEVELOPER :

BY THE ENGINEER:

I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION

WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY

RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION

PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A

DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING

BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A

PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION

REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND

CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION

CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION

WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE

SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE

WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION

DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE

MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO

THE POND WITHIN 30 DAYS OF COMPLETION.

SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD

SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL

CONSERVATION DISTRICT AND MEET THE TECHNICAL

EROSION AND SEDIMENT CONTROL.

REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL

OF THE HOWARD SOIL CONSERVATION DISTRICT.

EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS

AS BUILT CERTIFICATE

AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND

2/25/co

DATE

2.24.00

DATE

DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30

DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE

INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

HOWARD COUNTY COMMUNITY COLLEGE 10901 LITTLE PATUXENT PARKWAY COLUMBIA, MARYLAND 21044-3197 ATTN: MR. JAMES O. LASH 410-772-4296

REVISION

HOWARD COMMUNITY COLLEGE CHILD CARE CENTER

PARCEL 47 ZONED POR TAX MAP NO. 35, 36 BLOCK 6 & 1 5th ELECTION DISTRICT, HOWARD COUNTY, MD.

S.W.M. NOTES AND DETAILS



RIEMER MUEGGE & ASSOCIATES INC ENGINEERING ● ENVIRONMENTAL SERVICES ● PLANNING ● SURVEYING 8818 Centre Park Drive, Columbia, MD 21045 tel 410.997.8900 fax 410.997.9282



DESIGNED BY : A.A.P. / A.C.R DRAWN BY: J.A.P.

PROJECT NO: 99250 DATE: FEBRUARY 24, 2000 SCALE : AS SHOWN

DRAWING NO. 5 OF 12

SDP-00-56

RISER JOINT FASTENER

RISER DETAILS (STRUCTURE S-1)

EL. 404.25

EL. 403.0

EL. 410,50

且. 410.00

10-YR MSE 409.27

2-YR WSE 408.49

1-YR WSE 408,42

3'-1" (TYP) <sup>|</sup>1'-0" HOOKED BARS DOWELED 3" INTO RISER WALL

+---6" (TYP)

CONCRETE COLLAR DETAIL NO SCALE -PROVIDE WATER TIGHT SEAL 1'-6"| PROPOSED GROUND - EL. 407.4 MANHOLE STEPS -EL. 408.42 (ON OPPOSITE 📤 10" PVC EXTENDED DETENTION -DEVICE. INV. 406.00 -\_ \_ 10" & REMOVABLE

-CONCRETE CRADLE CONCRETE COLLAR

SEE DETAIL THIS SIDE YIEW

SUBGRADE TO BE APPROVED BY GEOTECH ENGINEER

410

- PROPOSED GROUND

10-YR. WSEL 409.27

27 LF CL I RIPRAP

OVER FILTER FABRIC

19" THICK, 10 FT. WIDE -

V 2-YR. WSEL 408.49

√100-YR. WSEL 409.86

<u> 10-YR. CLOGGED WSEL 409.38</u>

CUTOFF

SCHEDULE 40

CONC. ANTI-SEEP COLLAR, -

WALL

*⊚ 0.0*%

2' MIN, FROM PIPE

SHEET 6

JOINTS. SEE DETAIL

404.50

SCALE: HOR. 1"=30'

 $L_{S} = 43'$ 

I(TYP.)

PRINCIPAL SPILLWAY PROFILE VER. 1"=3"

MIN.

(TYP.)

- CONSTRUCTED TOP

EL. 412.00

0.0%

- A-2 CONCRETE CRADLE

39 LF 30" RCCP ASTM C-361

CL. B-25 **Ø** 1.3%

V10 (ACT.) = 9.1 FPS

V100 (ACT.) = 11.1 FPS

 $Q_{10} = 23.1 \text{ CFS}$ 

 $Q_{100} = 46.2 \text{ CFS}$ 

 $d_{a} = 1.2$ 

SEE DETAIL THIS SHEET.

EMBANKMENT EL 412.5

ENDWALL TYPE C

GROUND

V 2-YR WSE 404.0

WITH MODIFIED HEIGHT

TOP OF WALL EL. 408.00

- 25 LF MSHA CL. 1 RIPRAP

CLOTH. SEE DETAIL SHEET 10.

OVER FILTER FABRIC.

SEE HOCO STD. DETAIL SD-5.21,

100-YR WSE 405.0

STABILIZE OUTFALL

400

DITCH WITH ECM.

CORE TRENCH MATERIAL

PER MD-378.

TO BE 60, SC, CH OR CL AND TO BE COMPACTED

TO 95% OF ASHTO T-99

GEOTECHNICAL ENGINEER

TO BE PRESENT DURING

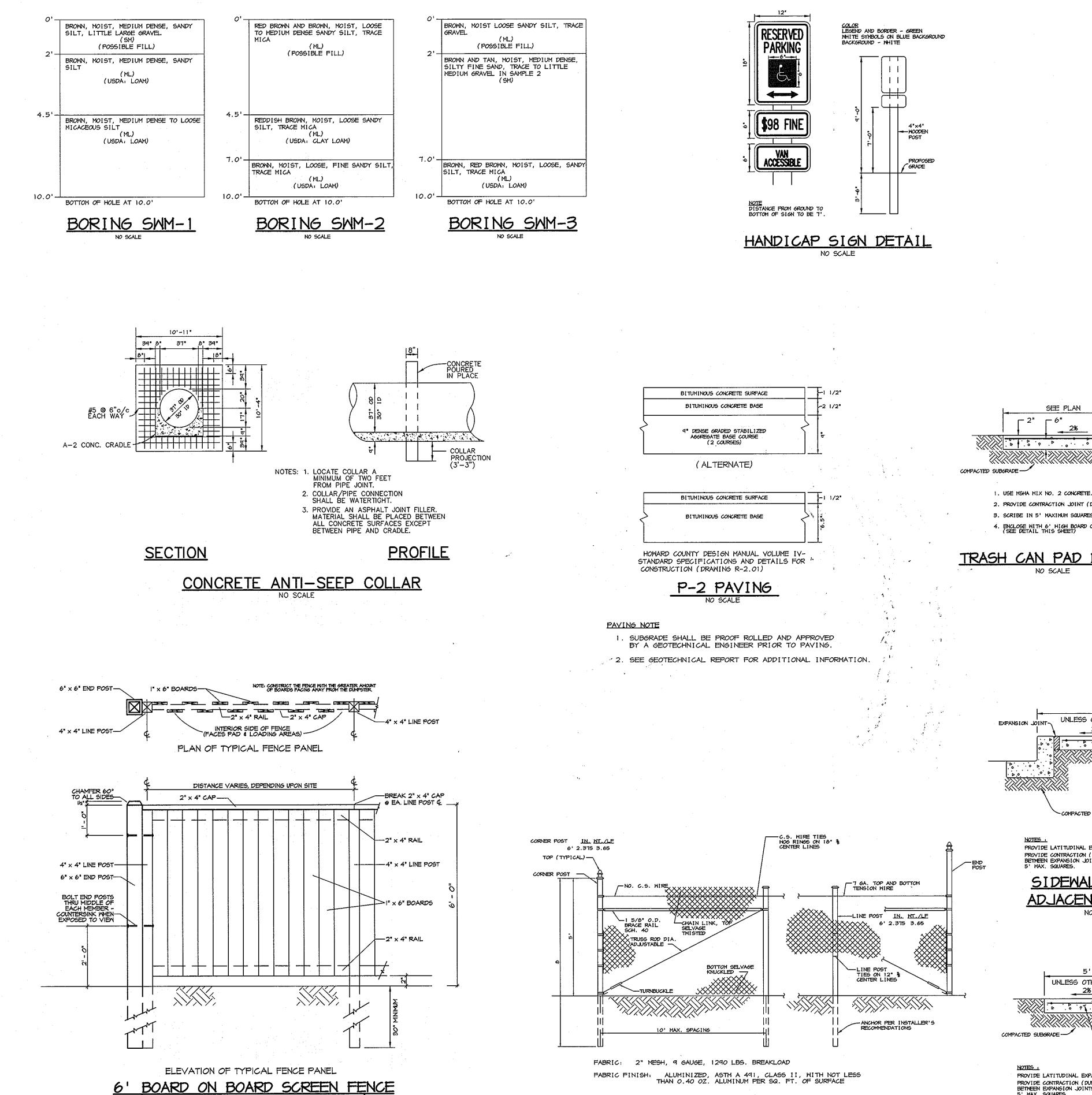
CORE TRENCH CONSTRUCTION.

USE A MASTIC JOINT SEALER FOR ALL JOINTS IN BARREL

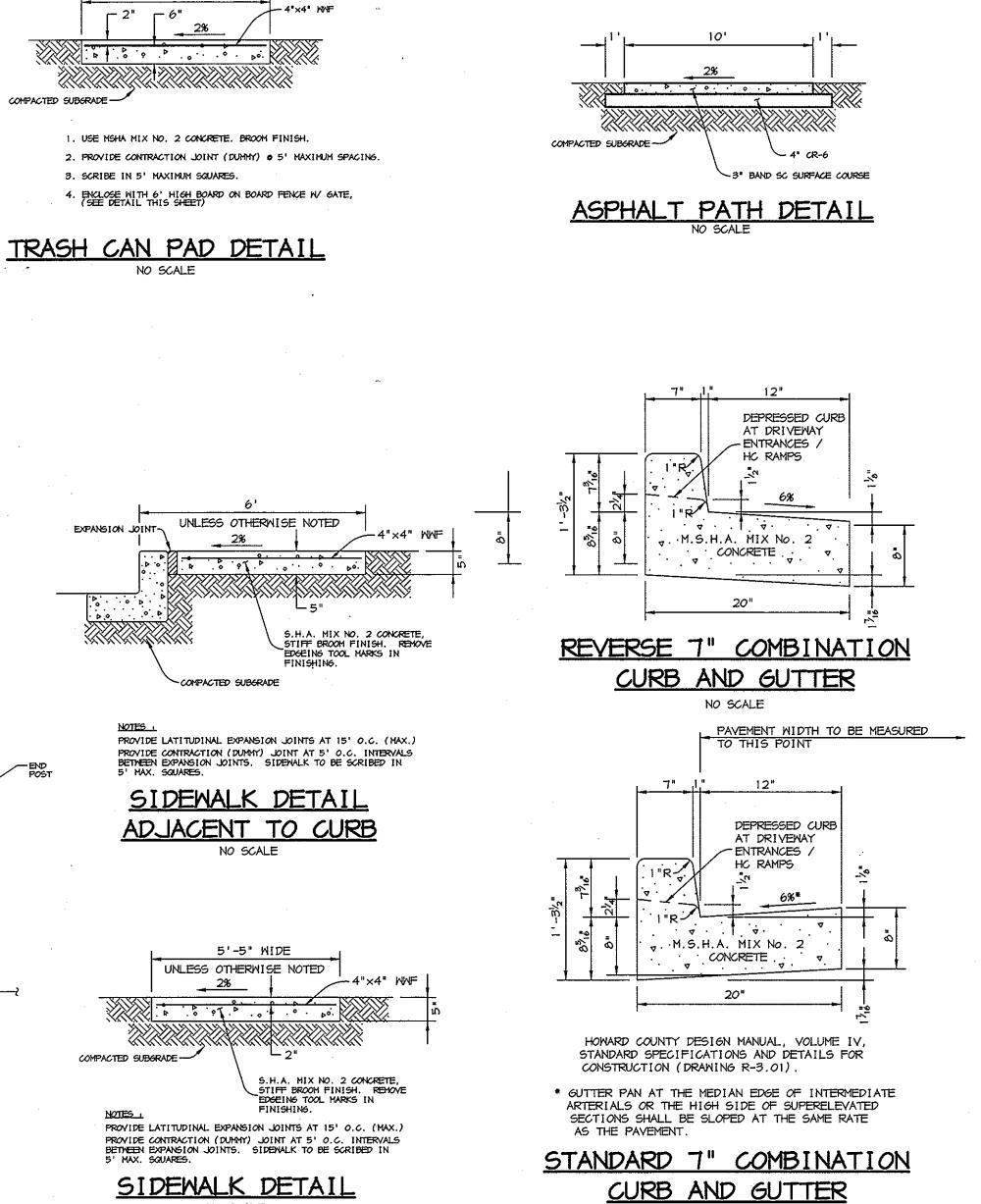
PER SCS TR-46 FIGURE E-1.

SETTLED EMBANKMENT

ARTHUR E. MUEGGE #8707

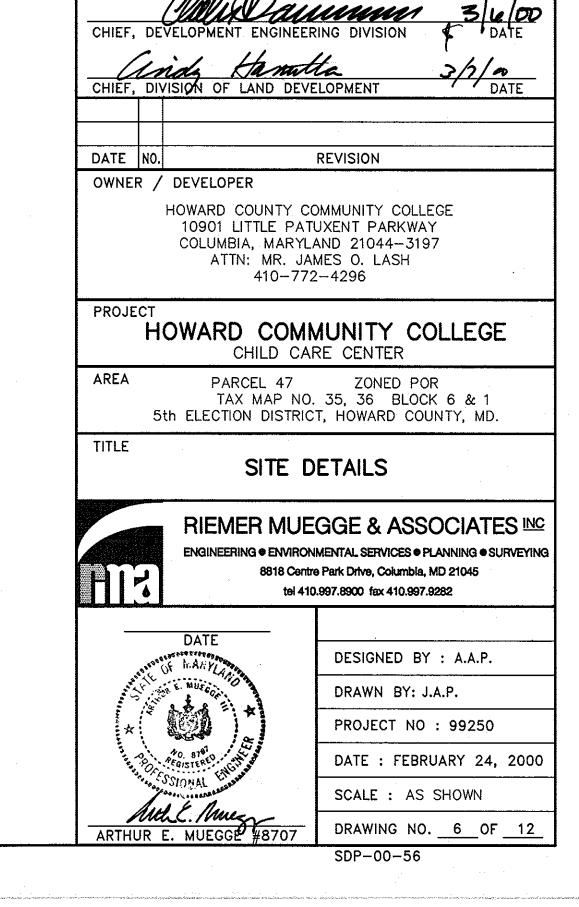


FENCE DETAIL (PLAY AREA)



NO SCALE

NO SCALE



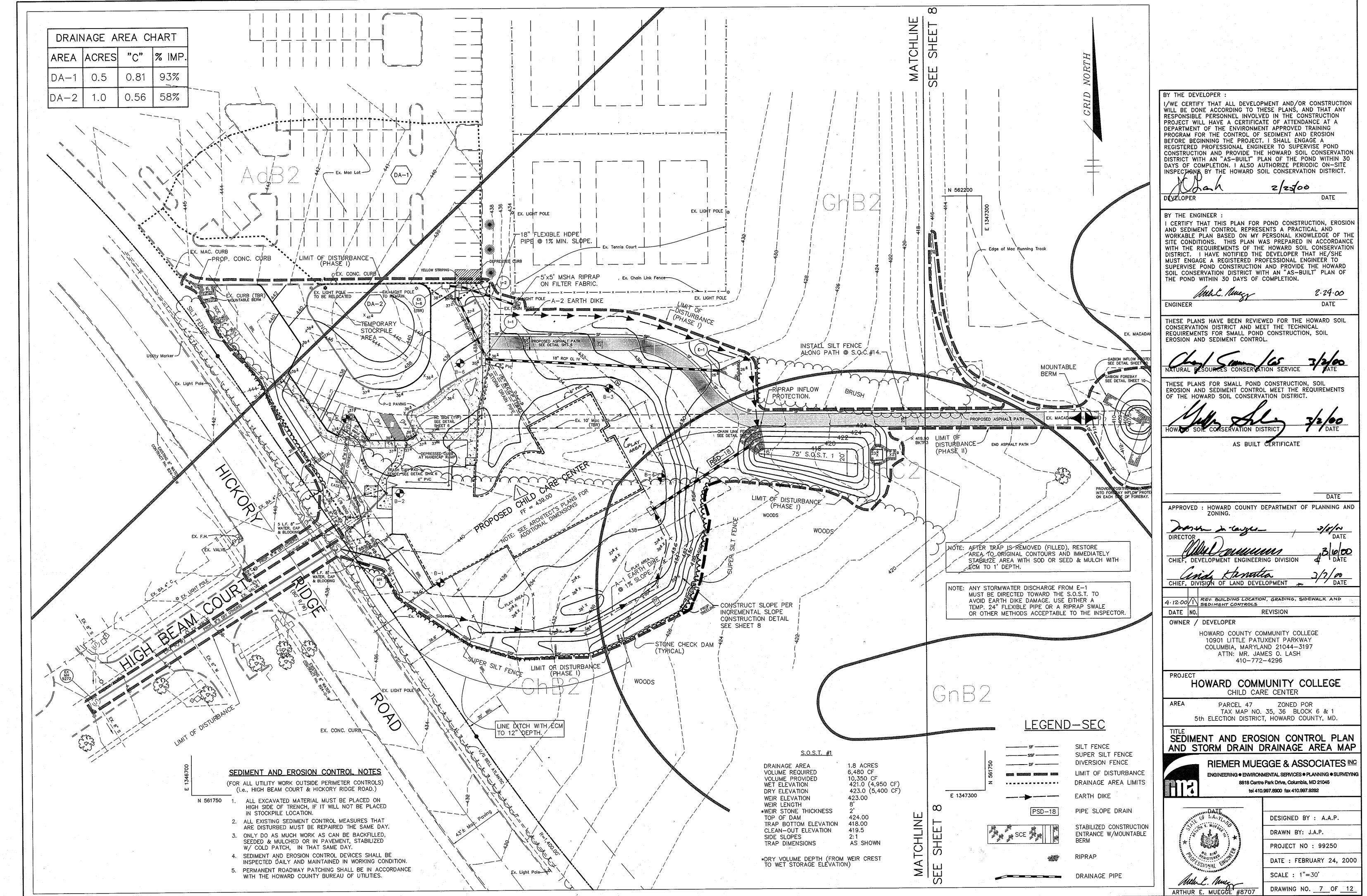
: HOWARD COUNTY DEPARTMENT OF PLANNING AND

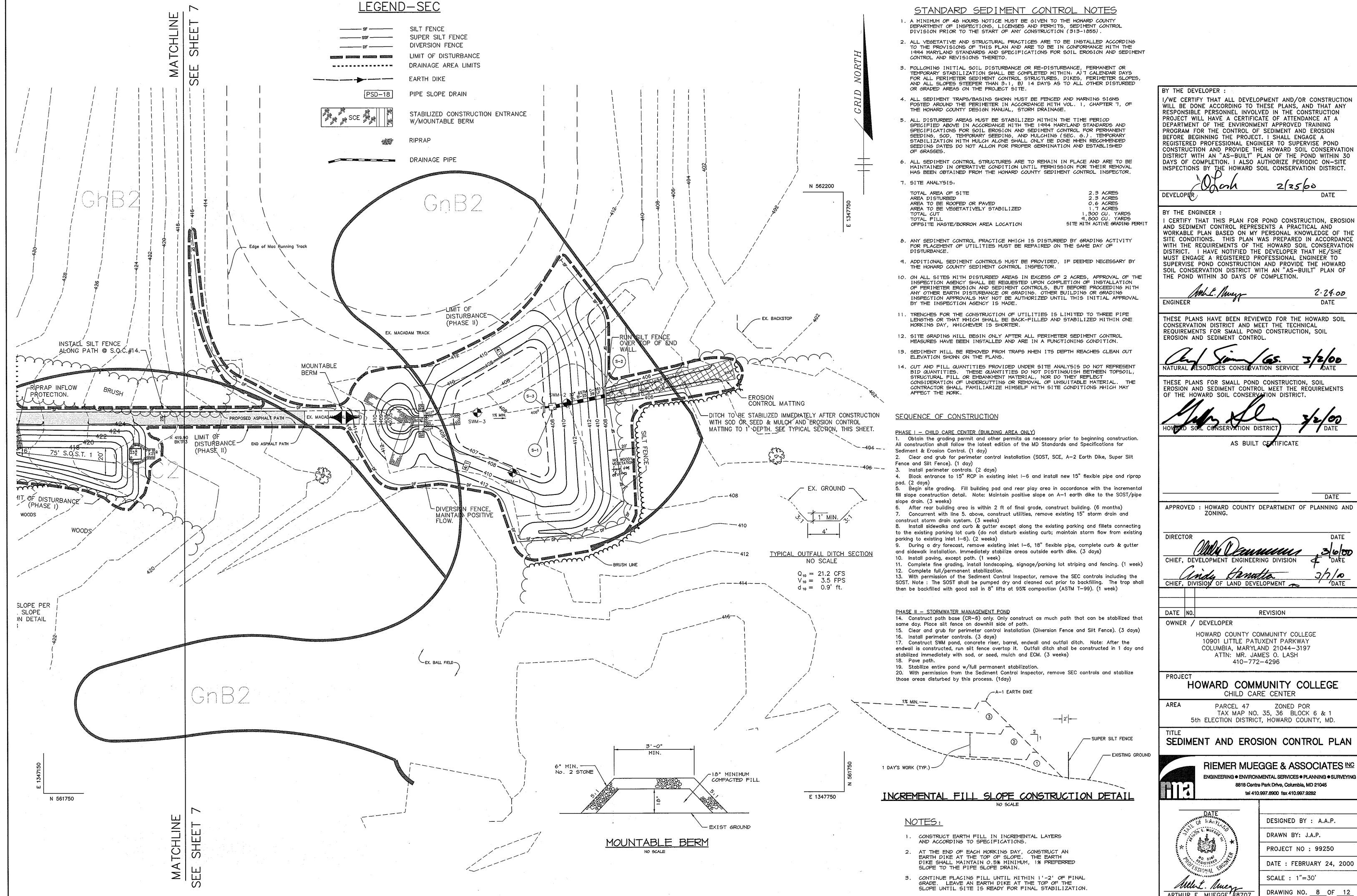
DIRECTOR

3/4/~

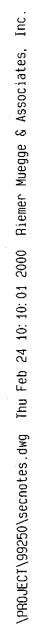
TRASH CAN PAD ENCLOSURE)

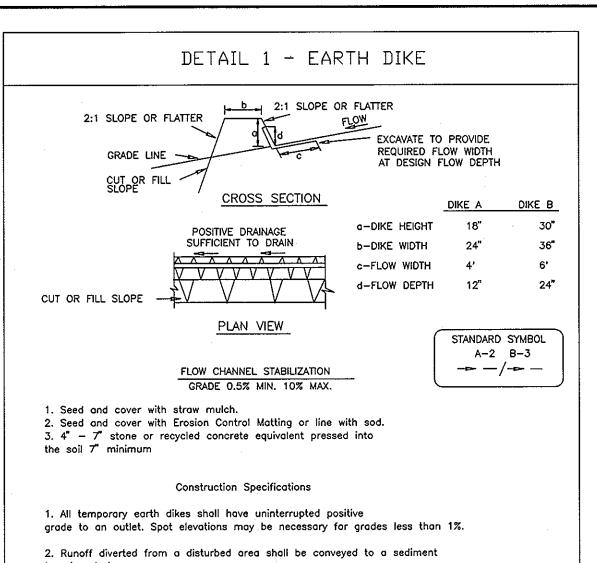
PROVIDE GATE WITH HIDTH & SHING ANGLE ACCEPTABLE TO MR. JIM LASH. ANCHOR POSTS IN 12"x12" MIX NO. 2 CONCRETE PAD, 30" DEEP (MINIMUM).





ARTHUR E. MUEGGE #8707





trapping device.

3. Runoff diverted from an undisturbed area shall outlet directly into an undisturbed, stabilized area at a non-erosive velocity.

4. All trees, brush, stumps, obstructions, and other objectional material shall be removed and disposed of so as not to interfere with the proper functioning of the dike.

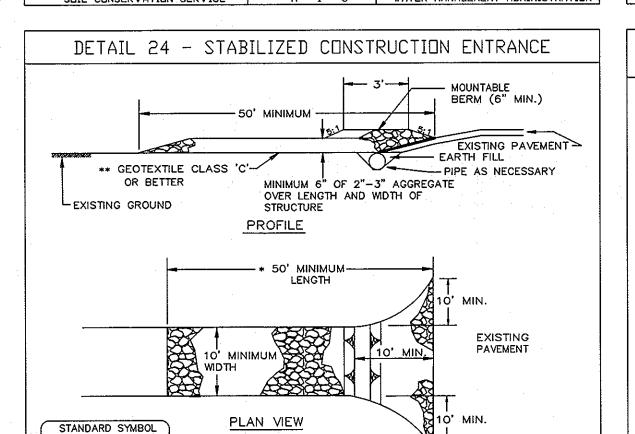
5. The dike shall be excavated or shaped to line, grade and cross section as required to meet the criteria specified herein and be free of bank projections or other irregularities which will impede normal flow.

6. Fill shall be compacted by earth moving equipment.

7. All earth removed and not needed for construction shall be placed so that it will not interfere with the functioning of the dike.

8. Inspection and maintenance must be provided periodically and after

each rain event. U.S. DEPARTMENT OF AGRICULTURE MARYLAND DEPARTMENT OF ENVIRONMENT SOIL CONSERVATION SERVICE WATER MANAGEMENT ADMINISTRATION



1. Length - minimum of 50' (\*30' for single residence lot).

**SCE** 

2. Width — 10' minimum, should be flared at the existing road to provide a turning

Construction Specification

3. Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. \*\*The plan approval authority may not require single family residences to use geotextile.

4. Stone — crushed aggregate (2" to 3") or reclaimed or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the

5. Surface Water - all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mountable berm with 5:1 slopes and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage. When the SCE is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.

6. Location - A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance. U.S. DEPARTMENT OF AGRICULTURE PAGE MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION SDIL CONSERVATION SERVICE F - 17 - 3

#### STABILIZED CONSTRUCTION ENTRANCE

Construction Specification

I. Length — minimum of  $50^{**}$  ( 30' for single residence lot). 2. Width - 10' minimum, should be flared at the existing road to provide a turning

3. Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. \*\* The plan approval authority may not require single family residences to use geotextile.

4. Stone -- crushed aggregate (2" to 3"), or reclaimed or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the

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6. Location - A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving

the site must travel over the entire length of the stabilized construction entrance. MARYLAND DEPARTMENT OF ENVIRONMENT U.S. DEPARTMENT OF AGRICULTURE WATER MANAGEMENT ADMINISTRATION SOIL CONSERVATION SERVICE

DETAIL 22 - SILT FENCE " MINIMUM LENGTH FENCE POST 10' MAXIMUM CENTER TO DRIVEN A MINIMUM OF 16" INTO - CENTER -16" MINIMUM HEIGHT OF GEOTEXTILE CLASS F - 8" MINIMUM DEPTH IN 36" MINIMUM FENCE-PERSPECTIVE VIEW POST LENGTH FILTER - FENCE POST SECTION CLOTH: MINIMUM 20" ABOVE FLOW GROUND UNDISTURBED EMBED GEOTEXTILE CLASS F - FENCE POST DRIVEN A TOP VIEW A MINIMUM OF 8" VERTICALLY INTO THE GROUND MINIMUM OF 16" INTO THE GROUND CROSS SECTION SECTION A STANDARD SYMBOL STAPLE JOINING TWO ADJACENT SILT FENCE SECTIONS Construction Specifications 1. Fence posts shall be a minimum of 36" long driven 16" minimum into the

ground. Wood posts shall be 11/2" x 11/2" square (minimum) cut, or 13/4" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard T or U section weighting not less than 1.00 pond per linear foot.

2. Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class F:

Test: MSMT 509 50 lbs/in (min.) Tensile Strength 20 lbs/in (min.) Test: MSMT 509 Tensile Modulus Flow Rate 0.3 gal ft <sup>3</sup>/ minute (max.) Test: MSMT 322 Test: MSMT 322 75% (min.) Filtering Efficiency

3. Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.

4. Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height.

MARYLAND DEPARTMENT OF ENVIRONMENT U.S. DEPARTMENT OF AGRICULTURE WATER MANAGEMENT ADMINISTRATION SOIL CONSERVATION SERVICE E - 15 - 3

#### SILT FENCE

#### Silt Fence Design Criteria

Slope Steepness	(Maximum) Slope Length	(Maximum) Silt Fence Length
Flatter than 50:1	unlimited	unlimited
50:1 to 10:1	125 feet	1,000 feet
10:1 to 5:1	100 feet	750 feet
5:1 to 3:1	60 feet	500 feet
3:1 to 2:1	40 feet	250 feet
2:1 and steeper	20 feet	125 feet

Note: In areas of less than 2% slope and sandy soils (USDA general classification system, soil Class A) maximum slope length and silt fence length will be unlimited. In these areas a silt fence may be the only perimeter control

U.S. DEPARTMENT OF AGRICULTURE MARYLAND DEPARTMENT OF ENVIRONMENT E - 15 - 3A WATER MANAGEMENT ADMINISTRATION

DETAIL 7 - STONE CHECK DAM

# 1' THICK LAYER 3/4" TO 11/2" CRUSHED AGGREGATE (WASHED) NITCH PROFILI

GEOTEXTILE CLASS 'C' (optional) -STANDARD SYMBOL

CROSS SECTION STANDARD STONE CHECK DAM DESIGN use lined waterway design

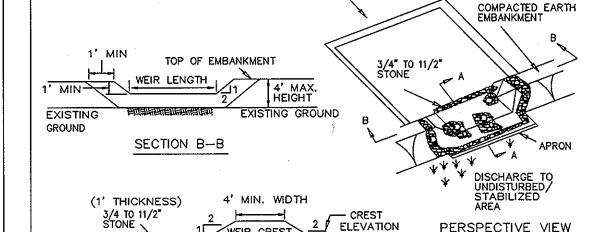
Construction Specifications

1. Swales and ditches shall be prepared in accordance with the construction specifications described in Section A—2, Standards and Specifications for Temporary Swale. 2. The check dam shall be constructed of 4"-7" stone. The stone shall be placed so that it completely covers the width of the channel and keyed into the channel banks.

3. The top of the check dam shall be constructed so the the center is approximately 6" lower than the outer edges, forming a weir that water can flow across.

4. The maximum height of the check dam at the center shall not exced 2". 5. The upstream sideof the check dam shall be lined with approximately 1" of 3/4" to 11/2" crushed aggregate.

MARYLAND DEPARTMENT OF ENVIRONMENT U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE WATER MANAGEMENT ADMINISTRATION



DETAIL 9 - STONE OUTLET SEDIMENT TRAP - ST II

— GEOTEXTILE |- 1 - APRON (SEE NOTE) —SMALL RIP−RAP 4" TO 7" NOTE: 5' MINIMUM LENGTH UP TO 5 ACRES. OVER 5 ACRES USE STONE/RIPRAP SEDIMENT TRAP ST-IV. SECTION A-A BOTTOM ELEVATION

Construction Specifications

1. Area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.

OUTLET ELEVATION

2. The fill material for the embankment shall be free of roots and other woody vegetation as well as over-sized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed.

3. All cut and fill slopes shall be 2:1 or flatter.

4. The stone used in the outlet shall be small rip-rap 4" to 7" in size with a 1' thick layer of 3/4" to 11/2" washed agaregate placed on the upstream face of the outlet. Stone facing shall be as necessary to prevent clogging. Geotextile Class C may be substituted for the stone facing by placing it on the inside face of the stone outlet.

5. Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to one half of the wet storage depth of the trap. Removed sediment shall be deposited

in a suitable area and in such a manner that it will not erode.

MARYLAND DEPARTMENT OF ENVIRONMENT U.S. DEPARTMENT OF AGRICULTURE C - 9 - 10WATER MANAGEMENT ADMINISTRATION SOIL CONSERVATION SERVICE

#### STONE DUTLET SEDIMENT TRAP - ST II

6. The structure shall be inspected periodically and after each rain and repairs made as needed.

7. Construction of traps shall be carried out in such a manner that sediment pollution is abated. Once constructed, the top and outside face of the embankment shall be stabilized with seed and mulch. Points of concentration inflow shall be protected in accordance with Grade Stabilization Structure criteria. The remainder of the interior slopes shall be stabilized (one time) with seed and mulch upon trap completion and monitored and maintained erosion free during the life of the trap.

8. The structure shall be dewatered by approved methods, removed and the area stabalized when the drainage area has been properly stabalized.

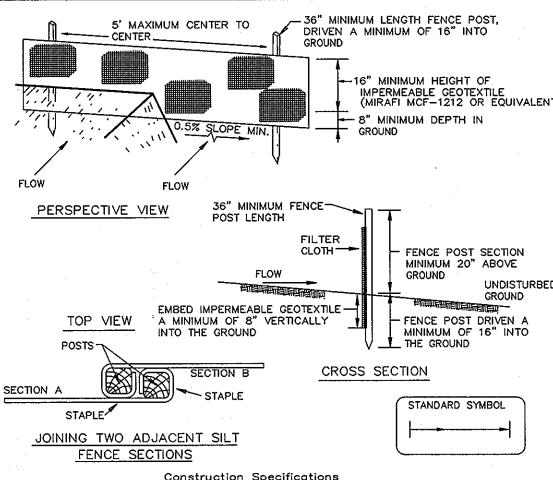
9. Refer to Section D for specifications concerning trap dewatering. 10. Minimum trap depth shall be measured from the weir elevation.

11. The elevation of the top of any dike directing water into the trap must equal or exceed the elevation of the trap embankment. 12. Geotextile class C shall be over the bottom sides of the outlet channel prior to the placement of stone. Sections of filter cloth must

overlap at lest 1' with the section nearest the entrance placed on top. The filter cloth shall be enbedded at least 6" into existing ground at the entrance of the outlet channel.

13. Outlet - An outlet shall be provided, including a means of conveying the discharge in an erosion free manor to an existing stable channel. U.S. DEPARTMENT OF AGRICULTURE MARYLAND DEPARTMENT OF ENVIRONMENT C - 9 - 10A WATER MANAGEMENT ADMINISTRATION

# DIVERSION FENCE



#### Construction Specifications

1. Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 11/2" x 11/2" square (minimum) cut, or 13/4" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard T or U section weighting not less than 1.00 pond per linear foot.

2. Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the requirements for MIRAFI MCF-1212.

.3. Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent flow bypass.

4. Diversion Fence shall be inspected after each rainfall event and maintained when bulges occur or when there is sediment accumulation.

#### DETAIL 33 - SUPER SILT FENCE NOTE: FENCE POST SPACING SHALL NOT EXCEED 10' 10' MAXIMUM CENTER TO CENTER MINIMUM AYAYAYA. GROUND SURFACE **FLOW** 21/2" DIAMETER GALVANIZED OR ALUMINUM WITH 1 LAYER OF FILTER CLOTH SIX (6) GAUGE OR HEAVIER CHAIN LINK FENCING-GEOTEXTILE CLASS A FILTER CLOTH-MINIMUM --- 2 1/2" DIA. GALVANIZED OR ALUMINUM POSTS EMBED FILTER CLOTH 8"\_\_\_\_\_ MINIMUM INTO GROUND STANDARD SYMBOL LAY FILTER IN BOTTOM OF 24" MIN. WIDE TRENCH ---— SSF —— Construction Specifications 1. Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway (SHA) Details for Chain Link Fencing. The SHA specifications

for a 6 foot fence shall be used, substituting 42" fabric and 6 foot length posts. 2. The posts do not need to be set in concrete.

3. Chain link fence shall be fastened securely to the fence posts with wire ties or staples. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence. The chain link fencing shall be six (6) gauge or heavier. 4. Filter cloth shall be fastened securely to the chain link fence with ties spaced

5. Filter cloth shall be embedded a minimum of 8" into the ground.

6. When two sections of geotextile fabric adjoin each other, they shall be overlapped

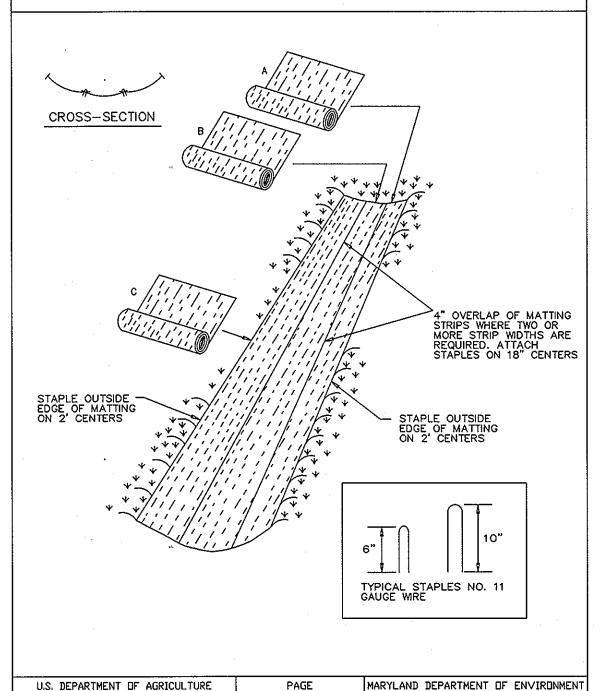
7. Maintenance shall be performed as needed and silt buildups removed when "bulges" develop in the silt fence, or when silt reaches 50% of fence height

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE

every 24" at the top and mid section.

MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

## DETAIL 30 - EROSION CONTROL MATTING



SOIL CONSERVATION SERVICE WATER MANAGEMENT ADMINISTRATION

EROSION CONTROL MATTING

#### Construction Specifications

1. Key—in the matting by placing the top ends of the matting in a narrow trench, 6" in depth. Backfill the trench and tamp firmly to conform to the channel cross-section. Secure with a row of staples about 4" down slope from the trench. Spacing between staples is 6".

2. Staple the 4" overlap in the channel center using an 18" spacing between staples.

3. Before stapling the outer edges of the matting, make sure the matting is smooth and in firm contact with the soil. 4. Staples shall be placed 2' apart with 4 rows for each strip, 2

outer rows, and 2 alternating rows down the center. 5. Where one roll of matting ends and another begins, the end of the top strip shall overlap the upper end of the lower strip by 4", shiplap fashion. Reinforce the overlap with a double row of staples spaced 6" apart in a staggered pattern on either side.

6. The discharge end of the matting liner should be similarly secured with 2 double rows of staples. Note: If flow will enter from the edge of the matting then the area

MARYLAND DEPARTMENT OF ENVIRONMENT U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE WATER MANAGEMENT ADMINISTRATION

effected by the flow must be keyed-in.

#### SUPER SILT FENCE Design Criteria Silt Fence Length Slope Steepness (maximum) (maximum) 0 - 10% 0 - 10:1Unlimited Unlimited 1,500 feet 10 - 20% 10:1 - 5:1200 feet 20 - 33% 100 feet 1,000 feet 5:1 - 3:1100 feet 500 feet 33 - 50%3:1 - 2:150% + 2:1 +250 feet U.S. DEPARTMENT OF AGRICULTURE MARYLAND DEPARTMENT OF ENVIRONMENT

SOIL CONSERVATION SERVICE

BY THE DEVELOPER: I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT, I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION, I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT. 2/25/00 DEVELOPE! DATE BY THE ENGINEER I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION

AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF TH SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

2.24.00

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

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND

CHIEF. CHIEF, DIVISION OF LAND DEVELOPMENT / / DATE

DATE NO. REVISION OWNER / DEVELOPER

> HOWARD COUNTY COMMUNITY COLLEGE 10901 LITTLE PATUXENT PARKWAY COLUMBIA, MARYLAND 21044-3197 ATTN: MR. JAMES O. LASH 410-772-4296

HOWARD COMMUNITY COLLEGE CHILD CARE CENTER

AREA PARCEL 47 ZONED POR TAX MAP NO. 35, 36 BLOCK 6 & 1 5th ELECTION DISTRICT, HOWARD COUNTY, MD.

SEDIMENT AND EROSION CONTROL NOTES AND DETAILS



RIEMER MUEGGE & ASSOCIATES INC ENGINEERING ● ENVIRONMENTAL SERVICES ● PLANNING ● SURVEYING 8818 Centre Park Drive, Columbia, MD 21045 tel 410.997.8900 fax 410.997.9282



DESIGNED BY: A.A.P. DRAWN BY: J.A.P. PROJECT NO: 99250

DATE: FEBRUARY 24, 2000 SCALE : AS SHOWN

DRAWING NO. 9 OF 12

- 1. Rip—rap lined inflow channels shall be 1' in depth, have a trapezoidal cross section with 2:1 or flatter side slopes and 3' (min.) bottom width. The channel shall be lined with 4" to 12" rip— rap to a depth of 18". 2. Filter cloth shall be installed under all rip—rap. Filter cloth shall
- be Geotextile Class C. 3. Entrance and exit sections shall be installed as shown on the detail
- 4. Rip-rap used for the lining may be recycled for permanent outlet
- protection if the basin is to be converted to a stormwater management
- 5. Gabion Inflow Protection may be used in lieu of Rip—rap Inflow Protection.
- 6. Rip-rap should blend into existing ground.
- 7. Rip-rap Inflow Protection shall be used where the slope is between 4:1 and 10:1, for slopes flatter than 10:1 use Earth Dike or Temporary Swale lining criteria.

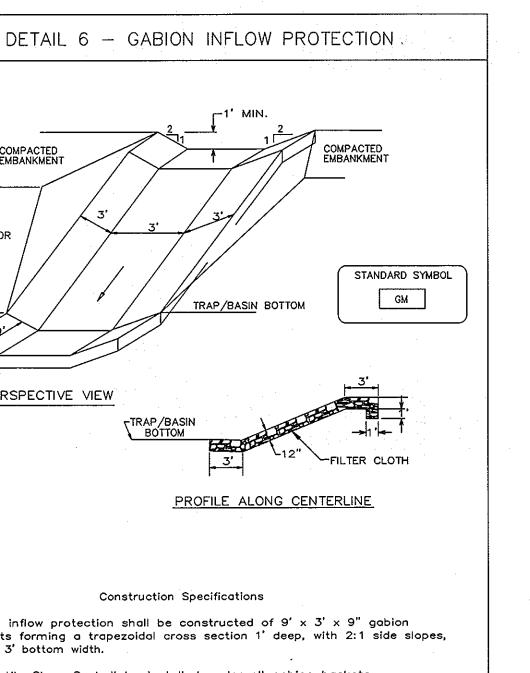
U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE

PERSPECTIVE VIEW

MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

# DETAIL 4 - PIPE SLOPE DRAIN DISCHARGE INTO A STABILIZED WATER— COURSE, SEDIMENT TRAPPING DEVICE, OR INTO A STABILIZED AREA AT A NON— EROSIVE VELOCITY. REF: 18.0 ROCK OUTLET PROTECTION (USE MANUFACTURERS SPECIFICATIONS FOR TYPE AND SPACING) STANDARD SYMBOL PSD - 12 = PIPE DIAMETER X 2 (MAX 4') Table 6 Design Criteria for Pipe Slope Drain Area (Acres) Diameter (D) in 0.5 PSD-12 1.5 PSD-18 2.5 PSD-21 3.5 PSD-24 PSD-24 (2) U.S. DEPARTMENT OF AGRICULTURE MARYLAND DEPARTMENT OF ENVIRONMENT

SOIL CONSERVATION SERVICE



#### Construction Specifications

- 1. Gabion inflow protection shall be constructed of 9' x 3' x 9" gabion baskets forming a trapezoidal cross section 1' deep, with 2:1 side slopes, and a 3' bottom width.
- 2. Geotextile Class C shall be installed under all gabion baskets.
- 3. The stone used to fill the gabion baskets shall be 4" 7".
- 4. Gabions shall be installed in accordance with manufacturers recommendations.
- 5. Gabion Inflow Protection shall be used where concentrated flow is present on slopes steeper than 4:1.

SOIL CONSERVATION SERVICE 8 - 7 - 2 WATER MANAGEMENT ADMINISTRATION

U.S. DEPARTMENT OF AGRICULTURE	PAGE	MARYLAND DEPARTMENT OF ENVIRONMENT

	۹'	6'	i 9'	PROPOSED SROUND
_	4'		41	
•	3.1	BL. 404.00	2)	EL. 410.0
ā	(B)	EL. 401.50	(B)	8 <u>H. 407.0</u>
-	©		© <u>"</u>	H. 406.0

#### GABION FOREBAY SECTION SCALE: 1"=4"

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

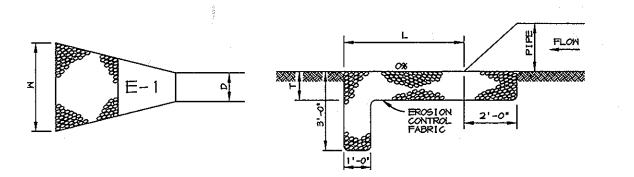
### **GABION FOREBAY NOTES**

1. Geotextile Class C shall be installed under all gabion baskets.

B - 5 - 4 WATER MANAGEMENT ADMINISTRATION

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

GABION SCHEDULE				
LETTER SIGNATION	NO. OF GABIONS	6ABION DIMENSIONS		
A	1	6'x3'x3'		
В	2	4'x3'x3'		
C	2	4'x3'x1'		



RIPRAP OUTFALL DETAIL @ E-1

PLAN

RIPRAP OUTFALL CONSTRUCTION NOTES

geotextile shall be a minimum of one foot.

1. The subgrade for the filter, rip-rap, or gabion shall be

approximately that of the surrounding undisturbed material.

2. The rock or gravel shall conform to the specified grading

3. Geotextile shall be protected from punching, cutting, or

be repaired by placing another piece of geotextile over the

damaged part or by completely replacing the geotextile. All

overlaps whether for repairs or for joining two pieces of

4. Stone for the rip-rap or gabion outlets may be placed by

thickness in one operation and in such a manner as to avoid

displacement of underlying materials. The stone for rip-rap

that will ensure that it is reasonably homogeneous with the

smaller stones and spalls filling the voids between the larger

stones. Rip-rap shall be placed in a manner to prevent damage

to the filter blanket or geotextile. Hand placement will be

required to the extent necessary to prevent damage to the

5. The stone shall be placed so that it blends in with the

existing ground. If the stone is placed too high then the

flow will be forced out of the channel and scour adjacent to

or gabion outlets shall be delivered and placed in a manner

equipment. They shall be constructed to the full course

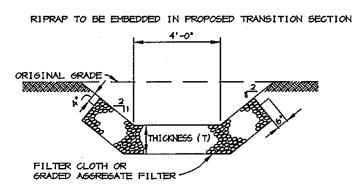
tearing. Any damage other than an occasional small hole shall

limits when installed respectively in the rip-rap or filter.

in the subgrade shall be compacted to a density of

prepared to the required lines and grades. Any fill required

PROFILE



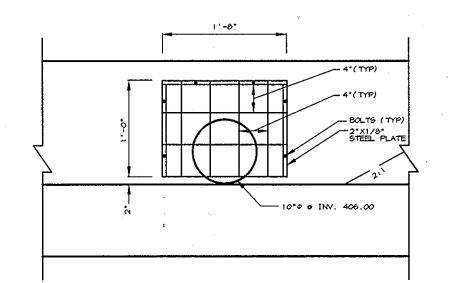
TYPICAL SECTION

PROFILE

### RIPRAP OUTFALL DETAIL @ S-2

STRUCTURE	MEDIAN STONE DIA.	LENGTH (L)	MIDTH (W)	THICKNESS (T)
E-1	٩,5"	16'	۹'	19"
5-2	4.5"	25 '	101	19"

## RIPRAP OUTLET PROTECTION DETAIL



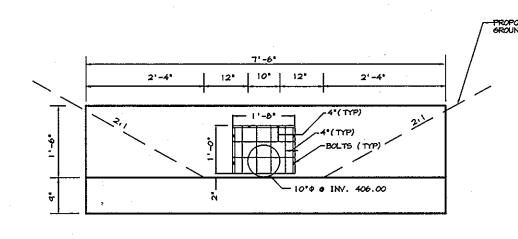
permanent works.

the stone will occur.

FRONT VIEW

PROFILE

# TRASH RACK DETAIL



ENDWALL NOTES 1) MODIFIED LENGTH & HEIGHT TYPE "C" HEADWALL (2) SEE HOWARD COUNTY STANDARD

SD5.21 FOR DETAILS NOT SHOWN.

③ GROUND BEHIND WALL EL. 407.4

S-3 HEADWALL DETAIL W/ REMOVABLE TRASH RACK

## SCALE: 1"=2"

#### REMOVABLE TRASH RACK NOTES

- 1. TRASH RACK SHALL BE ENTIRELY COVERED BY 1/2" GALVANIZED HARDWARE CLOTH, SECURELY FASTEN HARDWARE CLOTH TO ALL TRASH RACK SURFACES. (TOP AND SIDE)
- 2. STEEL TO CONFORM TO ASTM A-36. #5 BARS TO BE SMOOTH. SEE DETAILS FOR SPACING.
- 3. ALL BENDS TO BE 2" RADIUS. 2" X 1/8" STEEL PLATE AND 1/2" DIAMETER ANCHOR BOLTS TO BE USED FOR TRASH RACK FRAME.
- 4. GALVANIZE TRASH RACK AFTER FABRICATION AND AND PAINT BATTLESHIP GRAY.
- 5. TRASH RACK SHALL PROTRUDE 1'

## TEMPORARY SEEDING NOTES

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

Seedbed Preparation: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding, if not previously loosened

Soll Amendments: Apply 600 lbs. per acre 10-10-10 fertilizer (14 lbs. per 1000 sq.ft.).

Seeding, For periods March 1 thru April 30 and from August 15 thru November 15, seed with 2-1/2 bushels per acre of annual rye (3.2 lbs. per 1000 sq.ft.). For the period May 1 thru August 14, seed with 3 lbs. per acre of meeping lovegrass (0.07 lbs. per 1000 sq.ft.). For the period November 16 thru February 28, protect site by applying 2 tons per acre of mell anchored straw mulch and seed as soon as possible in the spring or use sed

Mulching: Apply 1-1/2 to 2 tons per acre (70 to 90 lbs. per 1000 sq.ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal. per acre (5 gal. per 1000 sq.ft.) of emulsified asphalt on flat areas. On slopes, 8 ft. or higher, use 347 gal. per acre (8 gal. per 1000 sq.ft.) for anchoring.

Refer to the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.

#### PERMANENT SEEDING NOTES

Apply to graded or cleared areas not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed. Seedbed Preparation . Loosen upper three inches of soil by raking, discing or other acceptable means before seeding, if not previously loosened.

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

- 1) Preferred Apply 2 tons per acre dolomitic limestone (92 lbs. per 1000 sq.ft.) and 600 lbs. per acre 10-10-10 fertilizer (14 lbs. per 1000 sq.ft.) before seeding. Harron or disc into upper three inches of soil. At time of seeding, apply 400 lbs. per acre 30-0-0 ureaform fertilizer (9 lbs. per 1000 sq.ft.).
- 2) Acceptable Apply 2 tons per acre dolomitic limestone (92 lbs. per 1000 sq.ft.) and 1000 lbs. per acre 10-10-10 fertilizer (23 lbs. per 1000 sq.ft.) before seeding. Harrow or disc into upper three inches of soil.

Seeding: For the period March 1 thru April 30 and from August 1 thru October 15, seed with 60 ibs. per acre (1.4 ibs. per 1000 sq.ft.) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 ibs. Kentucky 31 Tall Fescue per acre and 2 ibs. per acre (0.05 ibs. per 1000 sq.ft.) of weeping lovegrass. During the period October 16 thru February 28, protect site by one of the following actions:

- 2 tone per acre of well-anchored mulch etraw and seed as soon as possible in the epring.
- 3) Seed with 60 lbs. per acre Kentucky 31 Tall Fescue and mulch with 2 tons per acre well anchored straw.

Mulching 1 Apply 1-1/2 to 2 tons per acre (70 to 90 lbs. per 1000 sq.ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal. per acre (5 gal. per 1000 sq.ft.) of emulsified asphalt on flat areas. On slopes, 8 ft. or higher, use 347 gal. per acre (8 gal. per 1000 sq.ft.) for anchoring.

<u>Maintenance: inspect all seeded areas and make needed repairs.</u> replacements and reseedings.

#### BY THE DEVELOPER :

I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION, I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

2/25/00

DATE

BY THE ENGINEER :

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

ENGINEER

2.24.00

DATE

3/7/00

/ DATE

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

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT

: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

3/8/~

CHIEF, DEVELOPMENT ENGINEERING DIVISION

CHIEF, DIVISION OF LAND DEVELOPMENT ---

DATE NO. OWNER / DEVELOPER

> HOWARD COUNTY COMMUNITY COLLEGE 10901 LITTLE PATUXENT PARKWAY COLUMBIA, MARYLAND 21044-3197 ATTN: MR. JAMES O. LASH 410-772-4296

REVISION

**PROJECT** HOWARD COMMUNITY COLLEGE

CHILD CARE CENTER AREA

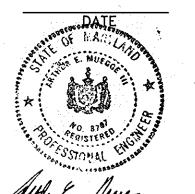
PARCEL 47 ZONED POR TAX MAP NO. 35, 36 BLOCK 6 & 1 5th ELECTION DISTRICT, HOWARD COUNTY, MD.

SEDIMENT AND EROSION CONTROL NOTES AND DETAILS



RIEMER MUEGGE & ASSOCIATES INC ENGINEERING • ENVIRONMENTAL SERVICES • PLANNING • SURVEYING 8818 Centre Park Drive, Columbia, MD 21045

tel 410.997.8900 fex 410.997.9282



DESIGNED BY : A.A.P.

DRAWN BY: J.A.P.

PROJECT NO: 99250 DATE: FEBRUARY 24, 2000

SCALE : AS SHOWN DRAWING NO. \_\_10\_0F \_\_12

ARTHUR E. MUEGGE #8707

SDP-00-56

OJECT\99250\lscp-1.dwg Thu Feb 24 11:15:46 2000 Riemer Muegge & Associates, In

EXPANSION OF PARKING LOTS BY THAN 50% SHALL BE REQUIRED TO PROVIDE LANDSCAPE FOR THE ADDITIONAL DEVELOPMENT ONLY. (PAGE 3 OF THE HO.CO. LANDSCAPE MANUAL)

SCHEDULE D - STORMWATER MANAGEMENT	AREA LANDSCAPING
S.W.M. PERIMETER	3
LANDSCAPE TYPE	В
LINEAR FEET OF TOTAL PERIMETER	± 600°
CREDIT FOR EXISTING FOREST YES / NO / LINEAR FEET	NO
CREDIT FOR EX. VEGETATION (NO OR YES & %) YES / NO / LINEAR FEET	YES ± 150'
LINEAR FEET OF REMAINING PERIMETER	± 450'
NUMBER OF TREES REQUIRED: SHADE TREES (@ 1/50') EVERGREEN TREES (@ 1/40')	9 11
NUMBER OF PLANTS PROVIDED  SHADE TREES EVERGREEN TREES (2:1 SUBSTITUTION, 50% MAX.) OTHER TREES (2:1 SUBSTITUTION, 50% MAX.) SHRUBS (10:1 SUBSTITUTION, 25% MAX.)	4 13 8 -

SCHEDULE 'D' SUBSTITUTION NOTES:

(2) EVERGREEN TREES WERE SUBSTITUTED FOR (1) SHADE TREE

(8) FLOWERING TREES WERE SUBSTITUTED FOR (4) SHADE TREES

SCHEDULE A - PER	STMETER I ANDCOM	DE EDGE	
SOUTH A - I'LL	CIMETER LANDSCAF	TE EDGE	
	ADJACENT TO ROADWAYS		
PERIMETER	1	2	
LANDSCAPE TYPE	E	В	
LINEAR FEET OF ROADWAY FRONTAGE/ PERIMETER	± 145'	± 230'	
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	YES ± 60'	
CREDIT FOR WALL, FENCE, BERM OR DRIVE AISLE (YES/NO) (LINEAR FEET)	NO	NO	
NUMBER OF PLANTS REQUIRED SHADE TREES EVERGREEN TREES SHRUBS	@1/40'= 4 - @1/4'= 36	@1/50'= 3 @1/40'= 4 -	
NUMBER OF PLANTS PROVIDED SHADE TREES EVERGREEN TREES SMALL FLOWERING TREES SHRUBS	2 4 2 26	2 3 3	

#### SCHEDULE 'A' NOTES:

REGULATIONS DO NOT REQUIRE LANDSCAPE EDGES, BUFFERING, OR SCREENING BETWEEN INTERNAL LOTS OR PARCELS WITHIN THE SAME DEVELOPMENT. (PAGE 17 OF THE Ho.Co. LANDSCAPE MANUAL)

#### SUBSTITUTION NOTES:

PERIMETER 2

PERIMETER 1

(4) EVERGREEN TREES WERE SUBSTITUTED FOR (2) SHADE TREE

(2) FLOWERING TREES WERE SUBSTITUTED FOR (10) SHRUBS

(3) FLOWERING TREES WERE SUBSTITUTED FOR (1) EVERGREEN TREE AND (1) SHADE TREE

			<u> LIST</u>		
KEY	aty	BOTANICAL + COMMON NAME	SIZE	ROOT	SPACING
		MAJOR DECIDUOUS TREES			
AR	5	Acer rubrum Red Maple	25" Cal. (12'-14' Ht.)	B&B	Space as show
LS	2	Lliquid ambar styraciflua Sweet Gum	2½" Cal. (12'-14' Ht.)	B 4 B	Space as show
Ø₽	2	Quercus phellos Willom Oak	2½" Cal. (12'-14' Ht.)	B 4 B	Space as shore
		EVERGREEN TREES			
PS	16	Pinus strobus Eastern White Pine	6'-8' Ht.	B & B	Min. spacing 15' o.c.
10	4	llex opaca American Holly	6'-8' Ht.	B&B	Min. spacing 12' o.c.
		MINOR DECIDUOUS TREES			
BN	3	Betula nigra 'Heritage' Heritage Clump Birch	8'-10' Ht.	B # B	Min. spacing 15' o.c.
cc	5	Cercis canadensis Eastern Redbud	8'-10' Ht.	B # B	Min. spacing 12' o.c.
PK	5	Prunus serrata 'Kwanzan' Kwanzan Cherry	8'-10' Ht.	B # B	Min. spacing 12' o.c.
	·	SHRUBS		<u> </u>	,
IB	26	llex cornuta 'Burfordii nana' Dwarf Burford Hollu	24"-30" Ht.	CONT	Plant 4' o.c.

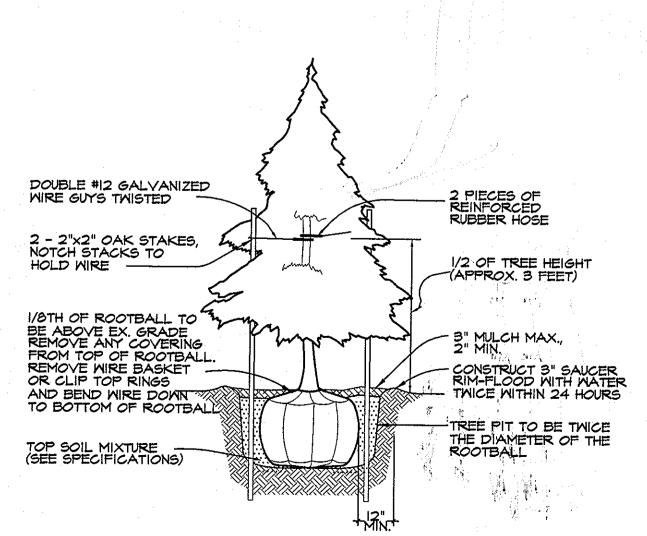
SHRUB PIT TO BE
DUG 12" WIDER THAN
ROOT BALL ON ALL SIDES

SCARIFY ROOT BALL
TO A DEPTH OF 3/4"
ON ALL SIDES OR
BUTTERFLY CUT
CONTAINER PLANTS

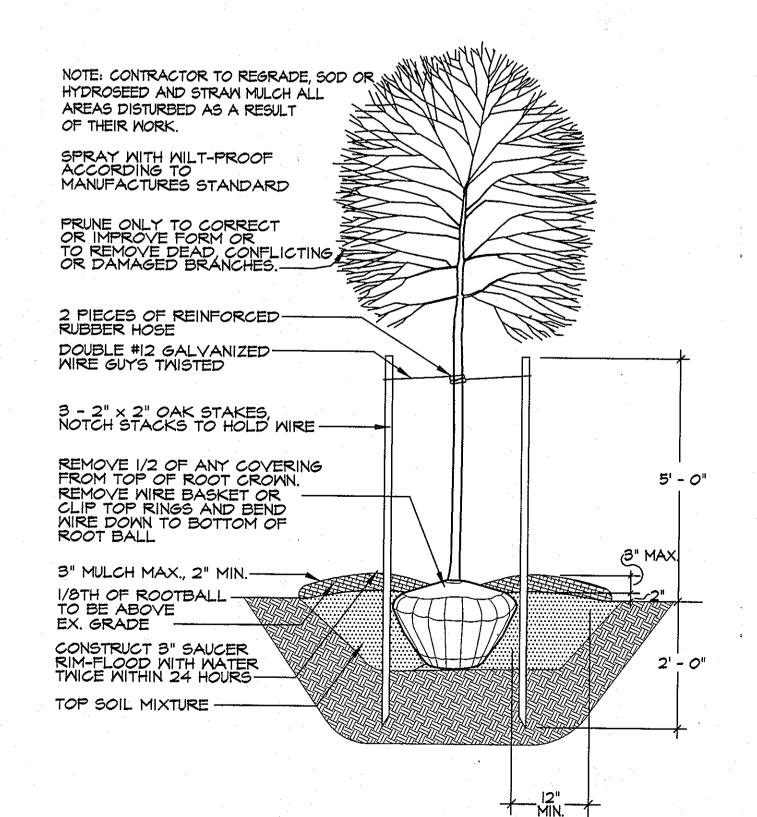
TOPSOIL MIXTURE
(SEE SPECIFICATIONS)

NOTE: ALL CONTAINERS OR BURLAP SHALL BE REMOVED BEFORE INSTALLATION.

SHRUB PLANTING DETAIL



EVERGREEN PLANTING DETAIL



B&B TREE PLANTING DETAIL NOTES:

1) 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 LANDSCAPING MANUAL PROVINCED.

- 3) THIS PLAN IS FOR LANDSCAPING PURPOSES ONLY.
- 4) CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, AND SAFETY PRECAUTIONS AND PROGRAMS.

DEVELOPER'S/BUILDER'S CERTIFICATE:

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

JORa L

2/25/cm

CHIEF, DIVISION OF LAND DEVELOPMENT -DATE DATE NO. REVISION OWNER / DEVELOPER HOWARD COUNTY COMMUNITY COLLEGE 10901 LITTLE PATUXENT PARKWAY COLUMBIA, MARYLAND 21044-3197 ATTN: MR. JAMES O. LASH 410-772-4296 HOWARD COMMUNITY COLLEGE CHILD CARE CENTER AREA PARCEL 47 ZONED POR TAX MAP NO. 35, 36 BLOCK 6 & 1 5th ELECTION DISTRICT, HOWARD COUNTY, MD. LANDSCAPE NOTES & DETAILS RIEMER MUEGGE & ASSOCIATES INC ENGINEERING ● ENVIRONMENTAL SERVICES ● PLANNING ● SURVEYING 8818 Centre Park Drive, Columbia, MD 21045 tel 410.997.8900 fax 410.997.9282 2.24.00 DESIGNED BY : D.T.D. DRAWN BY: A.J.L. PROJECT NO: 99250 DATE: FEBRUARY 24, 2000

AS BUILT CERTIFICATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND

DATE

DATE

ROJECT\99250\lscp-2.dwg Thu Feb 24 11:16:55 2000 Rie

DAVID T. DOWS R.L.A. #830 DRAWING NO. 12 OF 12

SDP-00-56

SCALE : AS SHOWN