

GLENELG COUNTRY SCHOOL

NEW MIDDLE SCHOOL AND PERFORMING ARTS CENTER

12793 FOLLY QUARTER ROAD

GLENELG, MARYLAND 21737

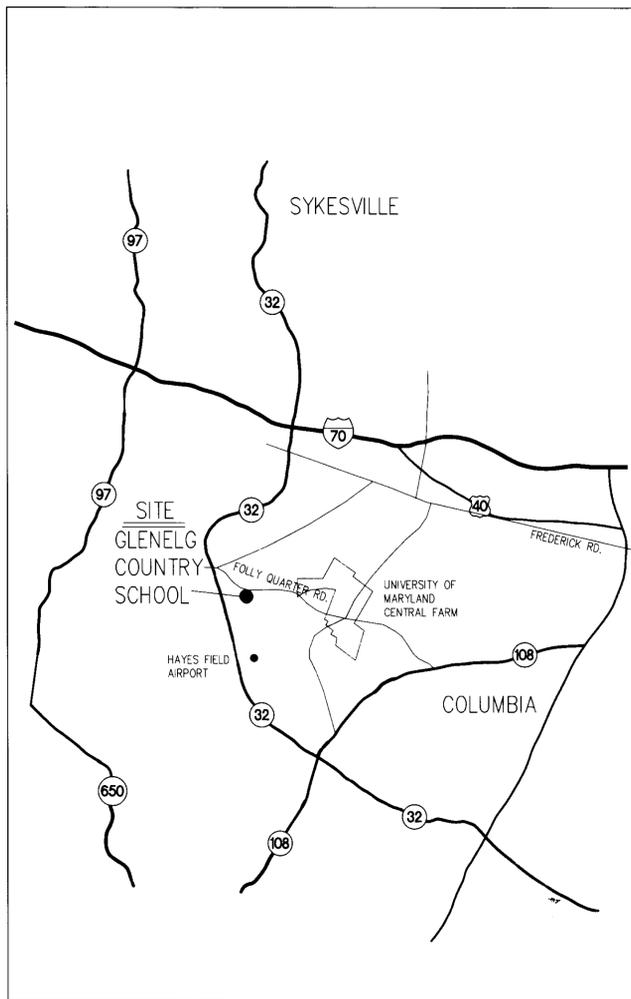
SITE/CIVIL AND LANDSCAPE PACKAGE



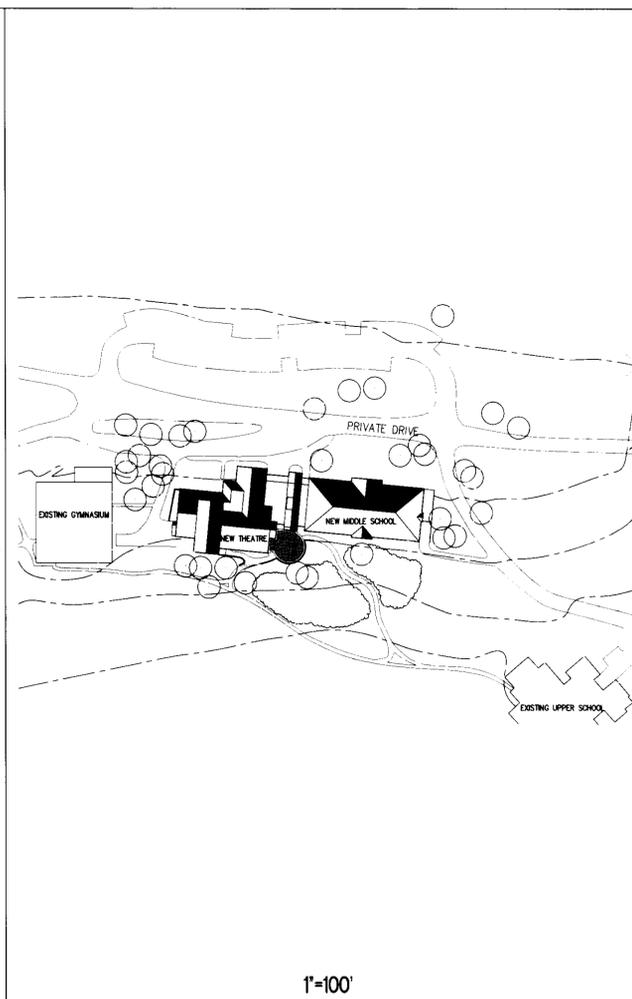
GRIEVES WORRALL WRIGHT + O'HATNICK
ARCHITECTS
5 EAST READ STREET
BALTIMORE, MD 21202
410-332-1009 410-332-0038 FAX

A. MORTON THOMAS AND ASSOCIATES, INC.
SITE/CIVIL ENGINEERS
12750 TWINBROOK PARKWAY, SUITE 200
ROCKVILLE, MD 20852
301-881-2545 301-881-0814 FAX

LDR INTERNATIONAL
LANDSCAPE ARCHITECTS
9175 GUILFORD ROAD
COLUMBIA, MD 21046
410-792-4360 301-498-5070 FAX



AREA PLAN 1 0 1 2



LOCATION PLAN 1"=100'

SHT # DWG #

SITE/CIVIL

- 1 CS - COVER SHEET
- 2 C-1 - SITE GRADING AND IMPROVEMENTS PLAN
- 3 C-2 - WELL AND SEPTIC PLAN
- 4 C-3 - WELL AND SEPTIC PLAN
- 5 C-4 - MISCELLANEOUS DETAILS
- 6 C-4A - STORMWATER MANAGEMENT PLANS AND DETAILS
- 7 C-4B - STORMWATER MANAGEMENT DETAILS
- 8 C-5 - EROSION AND SEDIMENT CONTROL
- 9 C-6 - EROSION AND SEDIMENT CONTROL DETAILS
- 10 C-7 - EROSION AND SEDIMENT CONTROL NOTES AND DETAILS
- 11 C-8 - LANDSCAPE PLAN
- 12 C-9 - FOREST CONSERVATION PLAN
- 13 C-10 - FOREST CONSERVATION - MASTER PLAN FOREST STAND DELINEATION (ISSUED FOR PERMIT, NOT ISSUED FOR BIDDING)

NOTE 1: ARCHITECTURAL, STRUCTURAL, + ELECTRICAL DRAWINGS, BOUND + NUMBERED, SEPARATELY, FORM A PART OF THE CONTRACT DOCUMENTS.

NOTE 2: MECHANICAL/PLUMBING WORK IS BEING PROVIDED UNDER A SEPARATE CONTRACT TO THE OWNER.



| | |
|--|------------------------|
| APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS. HOWARD COUNTY HEALTH DEPARTMENT | |
| <i>Joyce M. Boyd MD</i> COUNTY HEALTH OFFICER | <i>3/21/97</i> DATE |
| APPROVED: DEPARTMENT OF PLANNING & ZONING | |
| <i>John Dammann</i> CHIEF, DEVELOPMENT ENGINEERING DIVISION | <i>3/25/97</i> DATE |
| <i>Richard Stone</i> CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH | <i>3/27/97</i> DATE |
| <i>David Smith</i> DIRECTOR | <i>3/27/97</i> DATE |

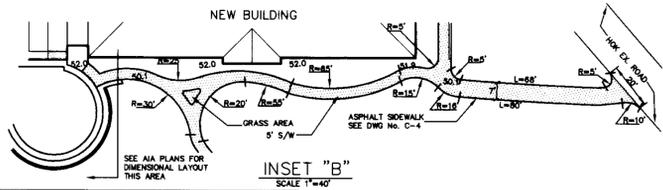
DRAWING INDEX

Sheet 1 of 13

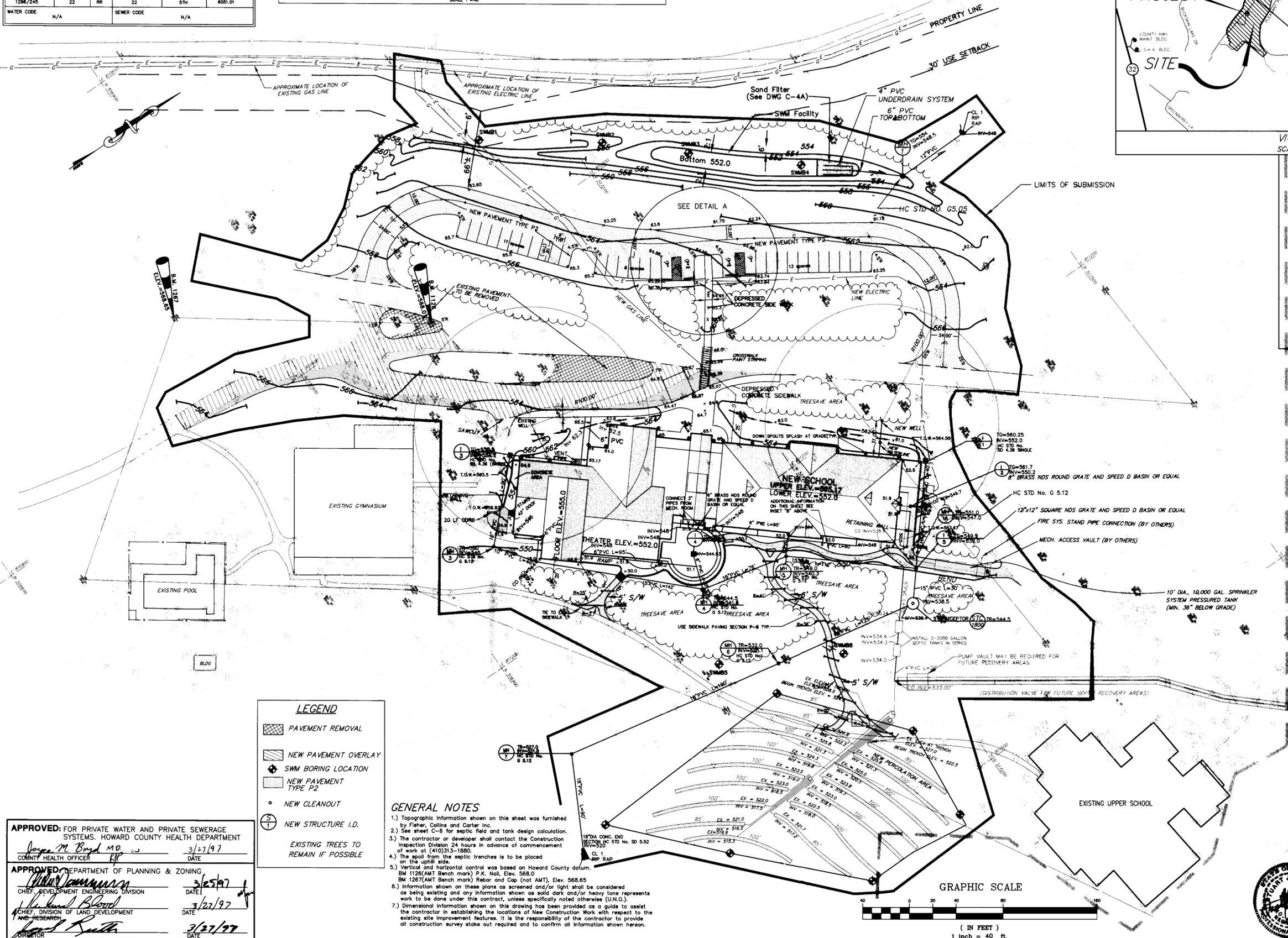
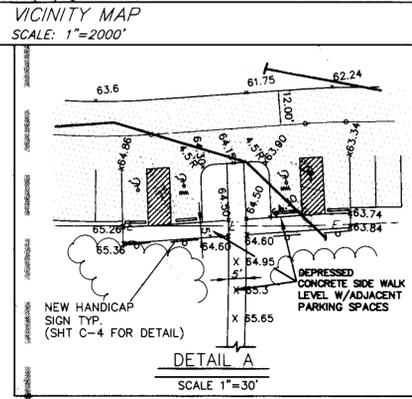
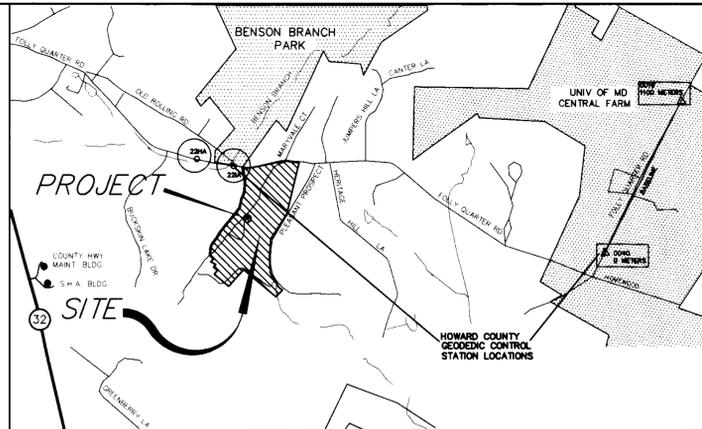
CS-SITE/CIVIL PLUP SCALE: 1"=100'

| ADDRESS CHART | |
|---------------|--------------------------|
| LOT NUMBER | STREET ADDRESS |
| PARCEL 146 | 12793 FOLLY QUARTER ROAD |

| PERMIT INFORMATION CHART | | | | |
|--------------------------|--------------|------------|--------------|--------------|
| SUBDIVISION NAME | SECTION/AREA | N/A | LOT/PARCEL # | 146 |
| GLENELG COUNTRY SCHOOL | | | | |
| PLAT # OR L/F | BLOCK # | ZONE | TAX/ZONE MAP | ELECT. DIST. |
| 1296/245 | 22 | RR | 22 | 5TH |
| WATER CODE | N/A | SEWER CODE | N/A | |



MISS UTILITY
 Call "Miss Utility" at 1-800-257-7777 at least 48 hours prior to the start of work. The excavator must notify all public utility companies with underground facilities in the area of proposed excavation and have those facilities located by the utility companies prior to commencing excavation.



NOTE: LIMITS OF SUBMISSION ARE TO INCLUDE: THE CONSTRUCTION OF THE NEW MIDDLE SCHOOL, WELL AND SEPTIC, STORM WATER MANAGEMENT FACILITIES, VEHICLE PARKING, PEDESTRIAN WALKWAYS AND SERVICE UTILITIES AS SHOWN WITHIN LIMITS.

- GENERAL SEQUENCE OF CONSTRUCTION**
- INSTALL EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN ON THE EROSION AND SEDIMENT CONTROL PLAN.
 - INSTALL UTILITIES, AND BEGIN EXCAVATION FOR THE NEW BUILDING AND GRADING FOR THE PARKING LOT. CONSTRUCT SEPTIC SYSTEM AND INSTALL FIRE SYSTEM STORAGE TANK.
 - WIDEN/OVERLAY ROADWAYS AS SHOWN ON SITE IMPROVEMENT AND GRADING PLAN.
 - PLANT TREES AND SHRUBS AS SHOWN ON THE PLANTING PLAN.
 - CLEAN UP ALL REMAINING CONSTRUCTION DEBRIS, REMOVE ALL EROSION AND SEDIMENT CONTROL DEVICES AND STABILIZE ALL REMAINING DISTURBED AREAS.
 - CONTRACTOR TO GRADE FUTURE PARKING AREAS TO SUBGRADE ELEVATIONS, PROVIDE POSITIVE DRAINAGE.

- SITE ANALYSIS**
- TOTAL AREA OF PARCEL: 83.76 AC.±
 A. LIMIT OF SUBMISSION: 3.6 AC.±
 - PRESENT ZONING: RR
 (SEE CASE'S SDR78-15; SDR82-144; BA80-17; SDR82-101; BA82-DAN; SDR85-76; BA95-46E; SDR97-07)
 - PROPERTY SHOWN ON TAX MAP 22 - PARCEL 146
 - PARKING DATA:
 A. INTENDED USE OF STRUCTURE: MIDDLE SCHOOL
 B. TOTAL AREA OF BUILDING: 24,500 S.F. OR 0.56 AC.± ON LOWER FLOOR (LESS THAN 1% OF COVERAGE) AND 12,600 S.F. UPPER FLOOR.
 C. SCHOOL POPULATION:
 1. STUDENTS - 162
 D. TOTAL NUMBER OF SPACES REQUIRED:
 1. 1 PARKING PER 6 STUDENTS=27
 5. LOADING SPACES ARE PROVIDED AT LOADING DOCK=2
 6. HANDICAPPED SPACES REQUIRED=2
 E. TOTAL NUMBER OF SPACES PROVIDED: 32
 1. REGULAR SPACES (18' X 8')=28
 2. HANDICAPPED SPACES (20' X 18')=4

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS. HOWARD COUNTY HEALTH DEPARTMENT
 COUNTY HEALTH OFFICER: *Joseph M. Boyd* M.D. DATE: 3/27/97

APPROVED: DEPARTMENT OF PLANNING & ZONING
 CHIEF, DEVELOPMENT ENGINEERING DIVISION: *William J. ...* DATE: 3/25/97
 CHIEF, DIVISION OF LAND DEVELOPMENT: *...* DATE: 3/27/97
 DIRECTOR: *...* DATE: 3/27/97

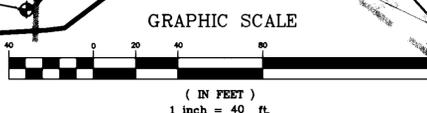
LEGEND

| | |
|--|----------------------|
| | PAVEMENT REMOVAL |
| | NEW PAVEMENT OVERLAY |
| | SWM BORING LOCATION |
| | NEW PAVEMENT TYPE P2 |
| | NEW CLEANOUT |
| | NEW STRUCTURE I.D. |

EXISTING TREES TO REMAIN IF POSSIBLE

GENERAL NOTES

- Topographic information shown on this sheet was furnished by Fisher, Collins and Carter Inc.
- See sheet C-8 for septic field and tank design calculation.
- The contractor or developer shall contact the Construction Inspection Division 24 hours in advance of commencement of work at (410)313-1880.
- The spoil from the septic trenches is to be placed on the uphill side.
- Vertical and horizontal control was based on Howard County datum.
 BM 1126(AMT Bench mark) P.K. Nail, Elev. 568.0
 BM 1267(AMT Bench mark) Rebar and Cap (not AMT), Elev. 568.65
- Information shown on these plans as screened and/or light shall be considered as being existing and any information shown as solid dark and/or heavy tone represents work to be done under this contract, unless specifically noted otherwise (U.A.O.).
- Dimensional information shown on this drawing has been provided as a guide to assist the contractor in establishing the locations of New Construction Work with respect to the existing site improvement features. It is the responsibility of the contractor to provide all construction survey stake out required and to confirm all information shown hereon.



GLENELG COUNTRY SCHOOL
 NEW MIDDLE SCHOOL AND PERFORMING ARTS CENTER
 12793 FOLLY QUARTER ROAD GLENELG, MD 21737

A MORTON THOMAS AND ASSOCIATES, INC.
 ENGINEERS - PLANNERS - SURVEYORS
 LANDSCAPE ARCHITECTS
 1510 BROADWAY SUITE 800
 ANNAPOLIS, MARYLAND 21403
 TEL: (410) 891-8848 - FAX: (410) 891-0814
 DATE: OCTOBER 1996 - AUT. PROJECT NO. 96-088
 BY: JAA - CHK: SJA - SCALE: 1"=40'



REVISIONS

| Rev. | Date | By |
|------|------|----|
| | | |
| | | |
| | | |

Project Title: **GLENELG COUNTRY SCHOOL**

Job No: 96-088.01
 Designer: SJA/JAA
 Scale: 1"=40'
 Date: MAR 16, 1997
 Last Rev: OCT 15, 1996
 Checked: JAA
 Drawn: SJA
 Approved: SJA

SITE GRADING AND IMPROVEMENTS PLAN

Sheet 2 of 13
 SDR 97-07



Work Sheets

I. BASIC SITE DATA
 GROSS SITE AREA: 80.8 ACRES
 AREA WITHIN 100 YEAR FLOODPLAIN: 0
 AREA WITHIN AGRICULTURAL USE OR PRESERVATION PARCEL (IF APPLICABLE): 0
 NET TRACT AREA: 80.8
 LAND USE CATEGORY (R-RLD, R-RMD, R-S, CAVO, I): I

II. INFORMATION FOR CALCULATIONS
 A. NET TRACT AREA: 80.8
 B. REFORESTATION THRESHOLD (20% x A): 16.16
 C. AFFORESTATION MINIMUM (15% x A): 12.12
 D. EXISTING FOREST ON NET TRACT AREA: 28.7
 E. FOREST AREAS TO BE CLEARED: 52.1
 F. FOREST AREAS TO BE RETAINED: 28.7

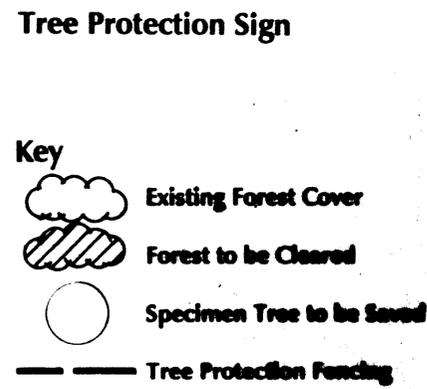
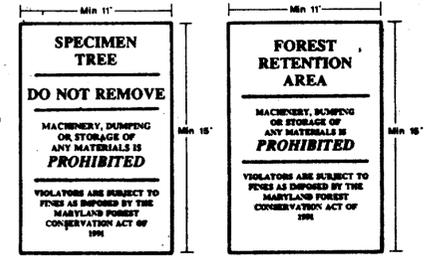
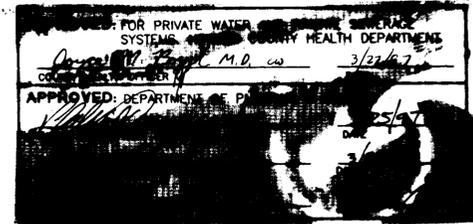
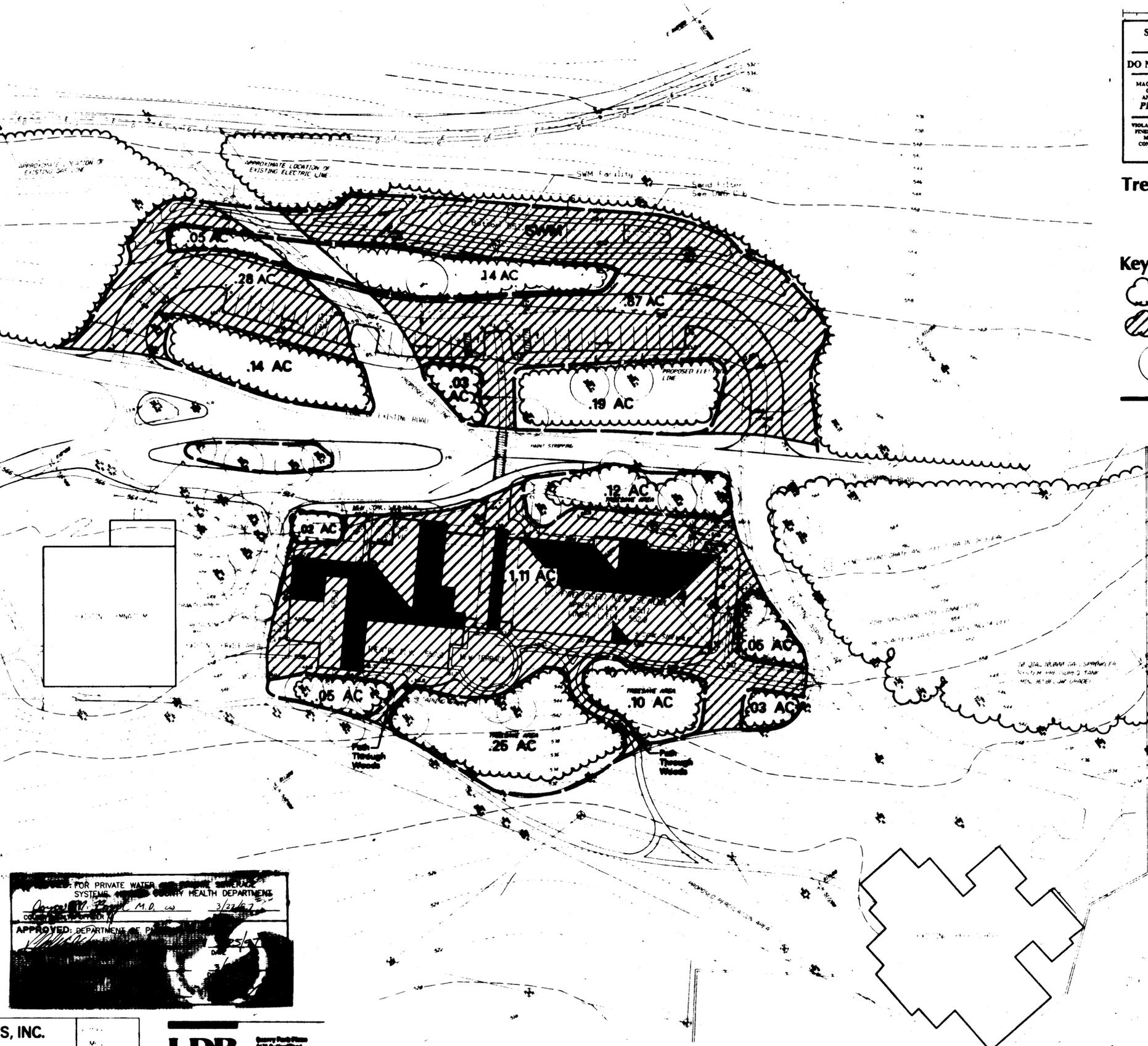
III. DETERMINING REQUIREMENTS: AFFORESTATION OR REFORESTATION
 1. Reforestation
 If existing forest areas equal or exceed the afforestation minimum (if D equals or is more than C), and clearing of forest areas is proposed, reforestation requirements may apply.
 GO TO SECTION IV
 If existing forests exceed the afforestation minimum (if D equals or is more than C) and no clearing of existing forest resources is proposed, no reforestation is required. No further calculations are needed.
 2. Afforestation
 If existing forest area are less than the afforestation minimum (if D is less than C), afforestation requirements apply.

IV. REFORESTATION CALCULATIONS
 A. NET TRACT AREA: 80.8
 B. REFORESTATION THRESHOLD (20% x A): 16.16
 C. EXISTING FOREST ON NET TRACT AREA: 28.7
 D. FOREST AREAS TO BE CLEARED: 52.1
 E. FOREST AREAS TO BE RETAINED: 28.7
 F. FOREST AREAS CLEARED ABOVE REFORESTATION THRESHOLD (D - B, if F is less than B, Alternate 2): 23.4
 G. FOREST AREAS CLEARED BELOW REFORESTATION THRESHOLD (D - F, if applicable): 28.7
 H. FOREST AREAS CLEARED BELOW REFORESTATION THRESHOLD (B - F, if applicable): 0
 I. FOREST AREAS RETAINED ABOVE REFORESTATION THRESHOLD (F - B, Retention Credit, if applicable): 9.3

Select the alternative that applies:
 1. Clearing above the threshold only
 If forest areas to be retained equal or are greater than the reforestation threshold (if F equals or is greater than B), the following calculations apply:
 REFORESTATION FOR CLEARING ABOVE THRESHOLD: 8
 CREDIT FOR FOREST AREAS RETAINED ABOVE THRESHOLD: 9.3
 TOTAL REFORESTATION REQUIRED: 0
 If the total reforestation requirement is equal to or less than 0, no reforestation is required.
 2. Clearing below the threshold
 If forest areas to be retained are less than the reforestation threshold (if F is less than B), the following calculations apply:
 REFORESTATION FOR CLEARING ABOVE THRESHOLD: 8
 REFORESTATION FOR CLEARING BELOW THRESHOLD: 14 x 2
 TOTAL REFORESTATION REQUIRED: (8 x 1/4) + (14 x 2)
 Since clearing occurs below the threshold, no forest retention credit is possible.

V. AFFORESTATION CALCULATIONS
 A. NET TRACT AREA: 80.8
 B. REFORESTATION THRESHOLD (20% x A): 16.16
 C. AFFORESTATION MINIMUM (15% x A): 12.12
 D. EXISTING FOREST ON NET TRACT AREA: 28.7
 E. FOREST AREAS TO BE CLEARED: 52.1
 F. FOREST AREAS TO BE RETAINED: 28.7
 Select the alternative that applies:
 1. No clearing below the Minimum
 If existing forests are less than the afforestation minimum (if D is less than C) and no clearing is proposed, the following calculations apply:
 TOTAL AFFORESTATION REQUIRED: C - D
 Afforestation must make total forest area equal the minimum required.
 2. Clearing below the Minimum
 If existing forests are less than the afforestation minimum (if D is less than C) and clearing is proposed, the following calculations apply:
 AFFORESTATION FOR UNFORESTED AREAS BELOW MINIMUM: C - D
 AFFORESTATION FOR CLEARING BELOW MINIMUM: E x 2
 TOTAL AFFORESTATION REQUIRED: (C - D) + (E x 2)
 Afforestation requires the total forest area be equal to the minimum and it requires compensation for clearing.

* Includes .76 AC of Forest Being Retained, But Under 10,000 SF



Refer to Forest Stand Delineations Prepared by A. Morton Thomas and Associates, Inc., Dated 6-20-96 For Location of All Existing Forest Stands

GLENELG COUNTRY SCHOOL
 12793 FOLLY QUARTER ROAD
 GLENELG, MD. 21737
 (410) 531-2229
SITE DEVELOPMENT PLAN
 GLENELG COUNTRY SCHOOL
 NEW MIDDLE SCHOOL FACILITY
 TAX MAP 22, BLOCK 22, PARCEL 146
 5TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 JULY, 1996 SCALE: 1" = 40'
 SHEET 1 OF 5

GLENELG COUNTRY SCHOOL
NEW MIDDLE SCHOOL AND PERFORMING ARTS CENTER
12793 FOLLY QUARTER ROAD GLENELG, MD 21737



REVISIONS

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|---------|---------|
| 9/17/96 | REVISED |
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Project Title: GLENELG COUNTRY SCHOOL

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| | | |

FOREST CONSERVATION PLAN
 C-9
 12 13

A. MORTON THOMAS AND ASSOCIATES, INC.



Calculations

Perimeter planting between adjacent land uses

Required: None. Development parcel is internal to overall parcel.

Provided: Existing Wooded Buffer (Min. 50')

Perimeter planting along public roads:

N/A

Internal and perimeter parking lots

Required: 1 shade tree/island/20 spaces
32 spaces - 20 = 2 trees required

Provided: 2 Shade Trees

Perimeter planting of loading areas

Required: None. Loading area not adjacent to roadway, residential properties, or Perimeter boundaries

Internal Planting for residential developments

N/A

Perimeter planting of SWM facilities

Perimeter Length: 680 LF
(Includes 20' Setback Area)

Existing Woods: 340 LF
(Between SWM and Residential Zoned Property)

Remaining Perimeter: 340 LF
(Remaining Perimeter is not adjacent to any Residential Structure or Residential Lot.)

No Landscaping Required

Additional planting

Buffer Planting - 980 LF

1 Shade Tree / 40 LF to supplement existing street trees = 25 required.

No evergreen trees required. Views to fields to be maintained.

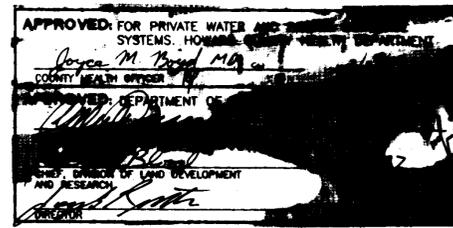
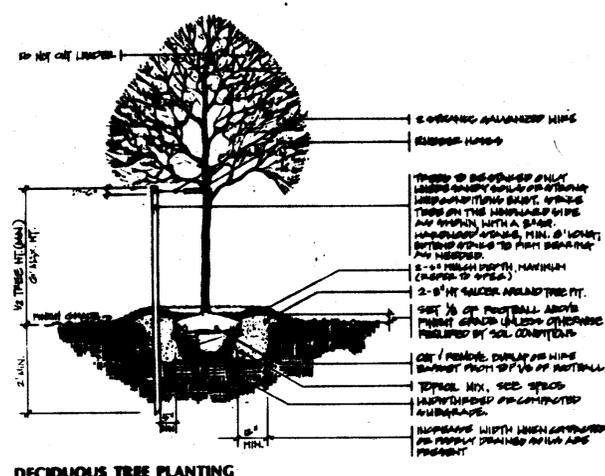
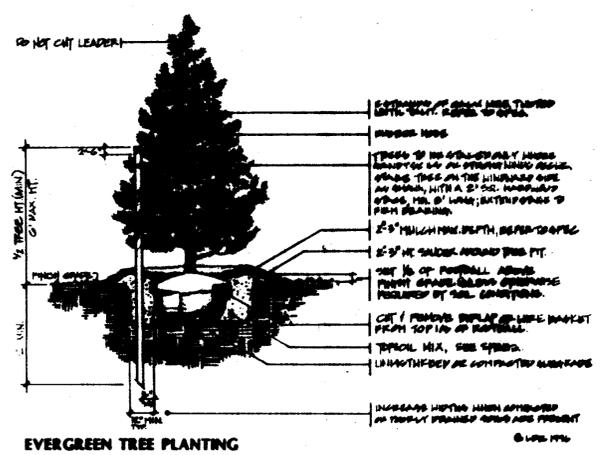
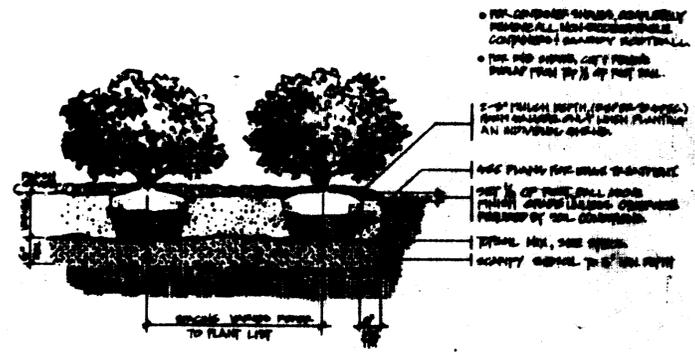
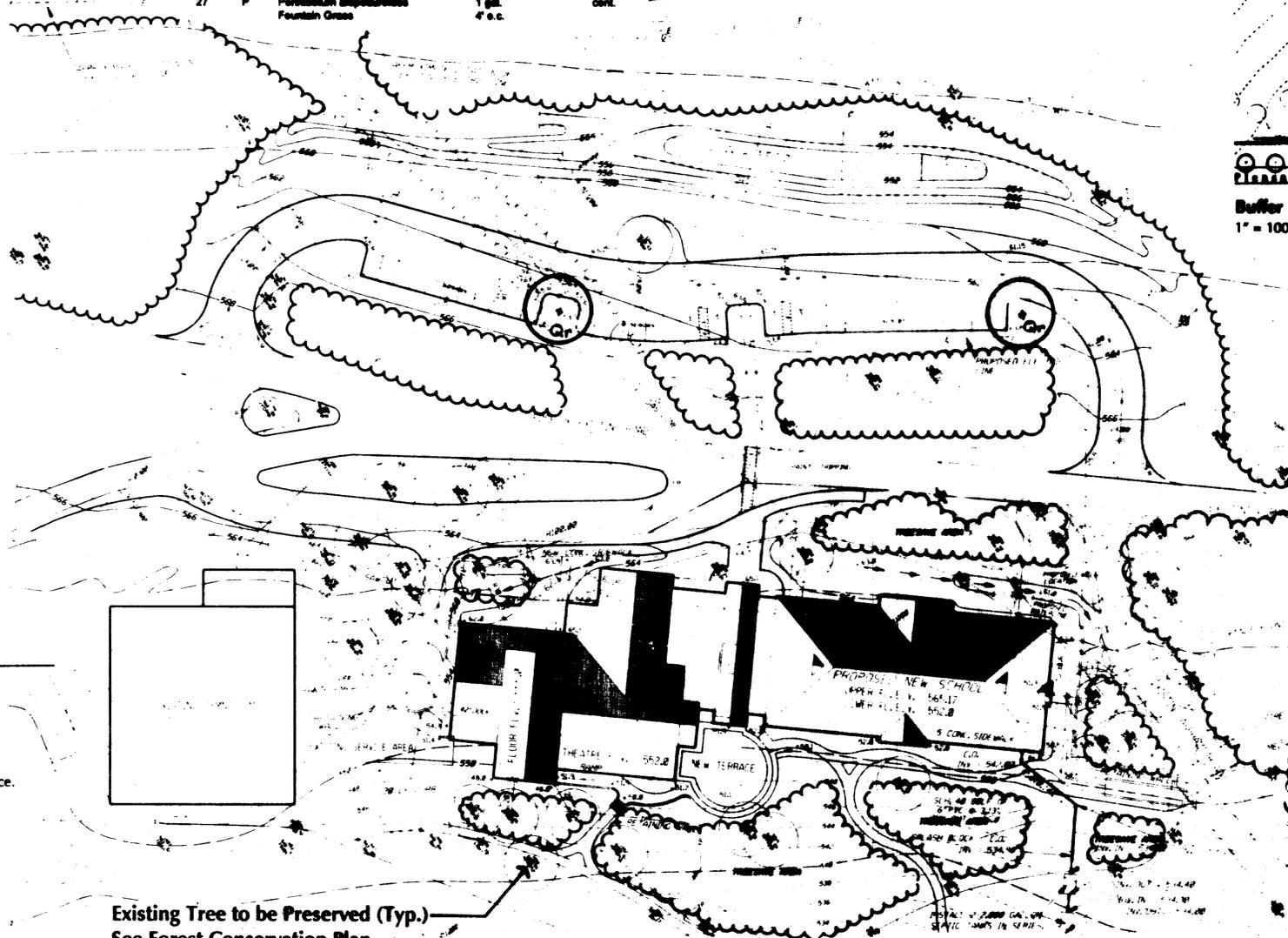
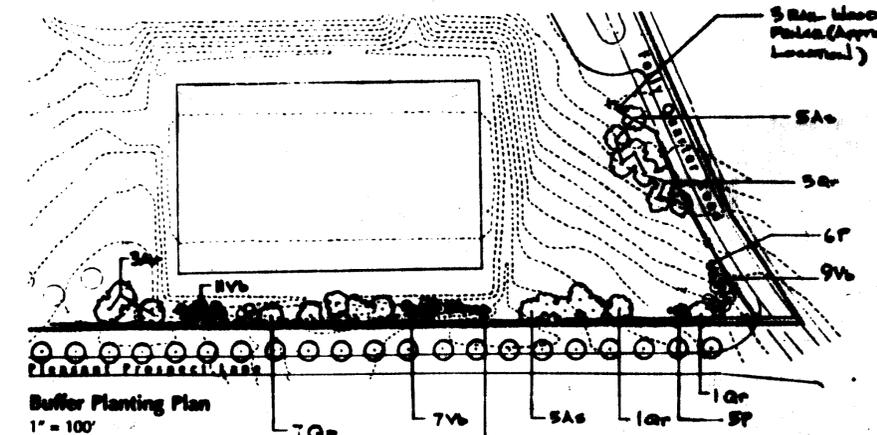
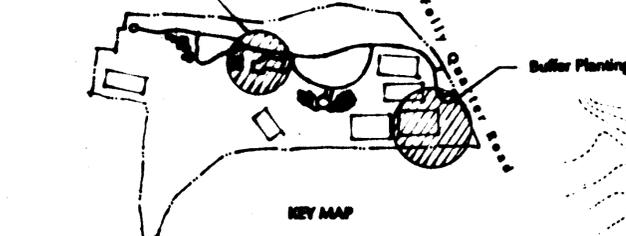
Shrub and ornamental grasses to supplement wood fence. Wood fence: 1100 LF provided.

GENERAL PLANTING NOTES:

- All plant material shall conform to the sizes given in the plant list and shall be nursery grown in accordance with the "American Standard for Nursery Stock", latest edition.
- All planting shall be in accordance with standard American Association of Nurserymen procedures and specifications. Contractor shall verify the correct location of all underground utilities in the field prior to installation of any plant materials.
- Plant material location to be staked in the field and approved by the Landscape Architect or Owner's Representative prior to planting.
- All plant beds and planting areas to be mulched to a depth of 3", unless otherwise noted on drawings or specifications.
- All disturbed areas shall be fine graded and seeded or sodded as noted on sheet L3.
- All plant beds shall be contained with a spaced edge unless otherwise noted on drawings.
- Obtain approval from Landscape Architect or Owner's Representative before making any substitutions or changes.
- Quantities shown on plant list are for the Contractor's convenience only and are not guaranteed to be accurate. In the event of a discrepancy between quantities shown on the plan and quantities shown on the plant list, the quantities on the plan shall apply.

| QTY | KEY | BOTANICAL/COMMON NAME | SIZE | B&B | Full |
|-----|-----|---|----------------------------|-------|------|
| 7 | Qr | Quercus rubra Red Oak | 13-18" H. 2 1/2-3" est. | B&B | Full |
| 7 | Qp | Quercus prinus 'Sovereign' Sovereign Pin Oak | 13-18" H. 2 1/2-3" est. | B&B | Full |
| 3 | Ar | Acer rubrum 'October Glory' October Glory Maple | 13-18" H. 2 1/2-3" est. | B&B | Full |
| 10 | As | Acer saccharum 'Green Mountain' Green Mountain Sugar Maple | 13-18" H. 2 1/2-3" est. | B&B | Full |
| 27 | Vd | Viburnum dentatum Arrowwood Viburnum | 2-3" H. 8" o.c. | B&B | Full |
| 27 | P | Pennisetum setosum Fountain Grass | 1 gal. 4" o.c. | cont. | |

Middle School Planting



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REVISIONS

| NO. | DATE | DESCRIPTION |
|-----|----------|---------------|
| 1 | 07/16/13 | PERMIT |
| 2 | 07/16/13 | PERM. CORRECT |

Project Title: **GLENELG COUNTRY SCHOOL**

GLENELG COUNTRY SCHOOL
12793 FOLLY QUARTER ROAD
GLENELG, MD, 21737
(410) 531-2229

SITE DEVELOPMENT PLAN
GLENELG COUNTRY SCHOOL
NEW MIDDLE SCHOOL FACILITY
TAX MAP 22, BLOCK 22, PARCEL 146
5TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
JULY, 1996 SCALE: 1" = 40'
SHEET 1 OF 5

LANDSCAPE PLAN
C-8
11/13
SDA 97-02

STANDARD AND SPECIFICATION FOR TOP SOIL

21.0 STANDARD AND SPECIFICATIONS

FOR TOPSOIL

Definition

Placement of topsoil over a prepared subsoil prior to establishment of permanent vegetation.

Purpose

To provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.

Conditions Where Practice Applies

- This practice is limited to areas having 2:1 or flatter slopes where:
 - The texture of the exposed subsoil parent material is not adequate to produce vegetative growth.
 - The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish containing supplies of moisture and plant nutrients.
 - The original soil to be vegetated contains material toxic to plant growth.
 - The soil is so acidic that treatment with limestone is not feasible.

For the purpose of these Standards and Specifications, areas having slopes steeper than 2:1 require special consideration and design for adequate stabilization. Areas having slopes steeper than 2:1 shall have the appropriate stabilization shown on the plans.

Construction and Material Specifications

- Topsoil salvaged from the existing site may be used provided that it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-SCS in cooperation with Maryland Agricultural Experimental Station.
- Topsoil Specifications - Soil to be used as topsoil must meet the following:
 - Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand, or loam soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting textured subsoils and shall contain less than 5% by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1 1/2" in diameter.
 - Topsoil must be free of plants or plant parts such as bermuda grass, quackgrass, Johnsongrass, nutsedge, poison ivy, thistle, or others as specified.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE 6 - E - 1 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

STANDARD AND SPECIFICATION FOR TOP SOIL CONT'D

- Where the subsoil is either highly acidic or composed of heavy clays, ground limestone shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures.

- For sites having disturbed areas under 5 acres:
 - Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials.

- For sites having disturbed areas over 5 acres:
 - On soil meeting Topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following:
 - pH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise the pH to 6.5 or higher.
 - Organic content of topsoil shall be not less than 1.5 percent by weight.
 - Topsoil having soluble salt content greater than 500 parts per million shall not be used.
 - No seed or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phytotoxic materials.

Note: Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.

- Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials.

Note: Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.

- Topsoil Application
 - When topsoiling, maintain needed erosion and sediment control practices such as diversions, Grade Stabilization Structures, Earth Dikes, Slope Silt Fence and Sediment Traps and Basins.
 - Grades on the areas to be topsoiled, which have been previously established, shall be maintained, albeit 4" - 8" higher in elevation.

Topsoil shall be uniformly distributed to a 4" - 8" layer and lightly compacted to a minimum thickness of 4". Spreading shall be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water pockets.

Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE 6 - E - 2 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

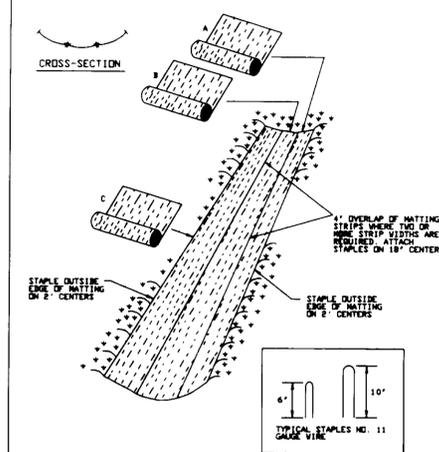
STANDARD AND SPECIFICATION FOR TOP SOIL CONT'D

- Alternative for Permanent Seeding - Instead of applying the full amounts of lime and commercial fertilizer, composted sludge and amendments may be applied as specified below:
 - Composted Sludge Material for use as a soil conditioner for sites having disturbed areas over 5 acres shall be tested to prescribe amendments and for sites having disturbed areas under 5 acres shall conform to the following requirements:
 - Composted sludge shall be supplied by, or originate from, a person or persons that are permitted (at the time of acquisition of the compost) by the Maryland Department of the Environment under COMAR 26.04.06.
 - Composted sludge shall contain at least 1 percent nitrogen, 1.5 percent phosphorus, and 0.2 percent potassium and have a Ph of 7.0 to 8.0. If compost does not meet these requirements, the appropriate constituents must be added to meet the requirements prior to use.
 - Composted sludge shall be applied at a rate of 1 ton/1,000 square feet.
 - Composted sludge shall be amended with a potassium fertilizer applied at the rate of 4 lb/1,000 square feet, and 1/3 the normal lime application rate.

References: Guideline Specifications, Soil Preparation and Sodding, MD-VA, Pub. #1, Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institute, Revised 1973.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE 6 - E - 3 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 30 - EROSION CONTROL MATTING



U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE 6 - E - 4 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

EROSION CONTROL MATTING

- Construction Specifications
- 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's cross-section. Secure with a row of staples about 4" from slope from the trench. Spacing between staples is 6".
 - Staple the 4" overlap in the channel center using an 18" spacing between staples.
 - Before stapling the outer edges of the matting, make sure the matting is smooth and in firm contact with the soil.
 - Staples shall be placed 2' apart with 4 rows for each strip, 2 outer rows, and 2 alternating rows down the center.
 - 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". Staple fashion: Reinforce the overlap with a double row of staples spaced 6" apart in a staggered pattern on either side.
 - 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 affected by the flow must be key-in.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE 6 - E - 5 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

CERTIFICATION BY THE DEVELOPER

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

Signature: Bernard Sanker, Agent
Date: 3/19/97

CERTIFICATION BY THE ENGINEER

"I/WE CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT 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."

Signature: Stuart J. Robinson, P.E.
Date: 1/20/98

SECTION II - TEMPORARY SEEDING

VEGETATION - ANNUAL GRASS OR DRAIN USED TO PROVIDE COVER ON DISTURBED AREAS FOR UP TO 12 MONTHS. FOR LONGER DURATION OF VEGETATIVE COVER, PERMANENT SEEDING IS REQUIRED.

- SEED MIXTURES - TEMPORARY SEEDING
 - SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TABLE 26 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE 5) AND ENTER THEM IN THE TEMPORARY SEEDING SUMMARY BELOW ALONG WITH APPLICATION RATES, SEEDING DATES AND SEEDING DEPTHS. IF THIS SUMMARY IS NOT PUT ON THE PLANS AND COMPLETED, THEN TABLE 26 MUST BE PUT ON THE PLANS.
 - FOR SITES HAVING SOIL TESTS PERFORMED, THE RATES SHOWN ON THIS TABLE SHALL BE DELETED AND THE RATES RECOMMENDED BY THE TESTING AGENCY SHALL BE WRITTEN IN. SOIL TESTS ARE NOT REQUIRED FOR TEMPORARY SEEDING.

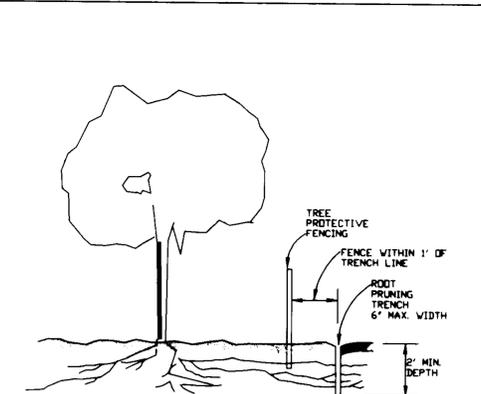
| NO. | SPECIES | SEED MIXTURE (HARDINESS ZONE 6B) FROM TABLE 25 | | SEEDING DATE | SEEDING DEPTHS | FERTILIZER RATE (10-10-10) | | LIME RATE |
|-----|------------|--|-------------------------|--------------|----------------|------------------------------|-------------------------------|-----------|
| | | APPLICATION RATE (LB/AC) | SEEDING DATE | | | N | P205 | |
| | ANNUAL RYE | 50 | 3/15-5/31 8/15-10/31 | | 1/4"-1/2" | 800 LB/AC (15 LB/1000 SF) | 2 TONS/AS (100 LB/1000 SF) | |

SECTION III - PERMANENT SEEDING

SEEDING GRASS AND LEGUMES TO ESTABLISH GRASS COVER FOR A MINIMUM PERIOD OF ONE YEAR ON DISTURBED AREAS GENERALLY RECEIVING LOW MAINTENANCE.

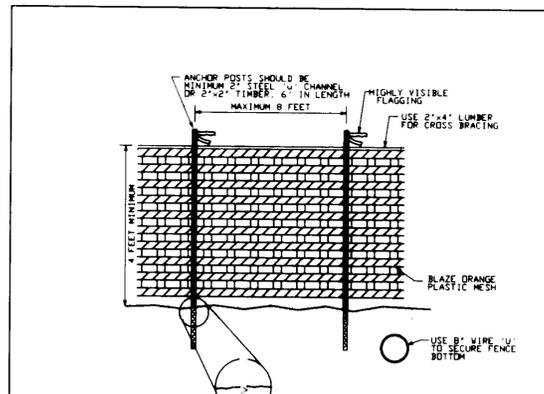
- SEED MIXTURES - PERMANENT SEEDING
 - SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TABLE 25 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE 5) AND ENTER THEM IN THE PERMANENT SEEDING SUMMARY BELOW ALONG WITH APPLICATION RATES AND SEEDING DATES. SEEDING DEPTHS CAN BE ESTIMATED USING TABLE 26. IF THIS SUMMARY PLANTING SPECIFICATIONS FOR EXCEPTIONAL SITES SUCH AS SHORELINES, STREAMBANKS, OR DUNES OR FOR SPECIAL PURPOSES SUCH AS WILDLIFE OR AESTHETIC TREATMENT MAY BE FOUND IN USDA-SCS TECHNICAL FIELD OFFICE GUIDE, SECTION 342 - CRITICAL AREA PLANTING, FOR SPECIAL LAWN MAINTENANCE AREAS, SEE SECTION IV SOO AND V TURFGRASS.
 - FOR SITES HAVING DISTURBED AREA OVER 5 ACRES, THE RATES SHOWN ON THIS TABLE SHALL BE DELETED AND THE RATES RECOMMENDED BY THE SOIL TESTING AGENCY SHALL BE WRITTEN IN.
 - FOR AREAS RECEIVING LOW MAINTENANCE, APPLY UREAFORM FERTILIZER (46-0-0) AT 3 1/2 LBS/1000 SQ. FT. (150 LBS/AC), IN ADDITION TO THE ABOVE SOIL AMENDMENTS SHOWN IN THE TABLE BELOW, TO BE PERFORMED AT THE TIME OF SEEDING.

| NO. | SPECIES | SEED MIXTURE (HARDINESS ZONE 6B) FROM TABLE 25 | | SEEDING DATE | SEEDING DEPTHS | FERTILIZER RATE (10-20-20) | | | LIME RATE |
|-----|--|--|-------------------------|--------------|----------------|------------------------------|-----------------------------|-----------------------------|-------------------------------|
| | | APPLICATION RATE (LB/AC) | SEEDING DATE | | | N | P205 | K2O | |
| 2 | KENTUCKY BLUEGRASS (SOO) CREEPING RED FESCUE OR A HARD FESCUE (40S) | 150 | 3/15-5/31 8/15-10/31 | | | 90 LB/AC (2.0 LB/1000 SF) | 175 LB/AC (4 LB/1000 SF) | 175 LB/AC (4 LB/1000 SF) | 2 TONS/AC (100 LB/1000 SF) |
| | RESTOP (10S) | | | | | | | | |



NOTE: ROOTS SHOULD BE CLEANLY CUT USING VIBRATORY KNIFE OR OTHER SIMILAR EQUIPMENT.

TREE ROOT PRUNING DETAIL 14
NOT TO SCALE



NOTE: ANCHOR POSTS MUST BE INSTALLED TO A DEPTH OF NO LESS THAN 1/3 OF THE TOTAL HEIGHT OF POST.

TREE PROTECTION DEVICE
N.T.S.

SEDIMENT CONTROL NOTES

- A MINIMUM OF 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY OFFICE OF INSPECTION AND PERMITS PRIOR TO THE START OF ANY CONSTRUCTION (992-2437).
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1984 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A) 5 CALENDAR DAYS FOR ALL PERMETER SEDIMENT CONTROL STRUCTURES, ONE'S PERMETER SLOPES AND ALL SLOPES GREATER THAN 3:1; B) 7 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1984 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, FOR PERMANENT SEEDINGS, SOO, TEMPORARY SEEDING AND MULCHING TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMITS FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY DWP INSPECTOR.
- SITE ANALYSIS:

| | |
|---|-------------|
| TOTAL AREA OF SITE | 804 ACRES |
| AREA DISTURBED | 4.52 ACRES |
| AREA TO BE ROOPEL OR PAVED | 1.7 ACRES |
| AREA TO BE VEGETATIVELY STABILIZED | 1.9 ACRES |
| TOTAL CUT | 4361 CU YDS |
| TOTAL FILL | 383 CU YDS |
| OFFSITE WASTE/BORROW AREA (LOCATION NOT YET DETERMINED) | |
- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- THE OFFSITE WASTE/BORROW AREA LOCATIONS IS TO BE APPROVED BY THE HOWARD COUNTY DIVISION OF CONSTRUCTION INSPECTION.

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

APPROVED: [Signature] DATE 3/21/97
HOWARD S.C.D.

REVIEWED FOR: [Signature] DATE 3/21/97
HOWARD S.C.D.

APPROVED: [Signature] DATE 3/27/97
U.S. SOIL CONSERVATION SERVICE

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT

APPROVED: [Signature] DATE 3/21/97
COUNTY HEALTH OFFICER

APPROVED: DEPARTMENT OF PLANNING & ZONING
[Signature] DATE 3/25/97
CHIEF, DEVELOPMENT ENGINEERING DIVISION

[Signature] DATE 3/27/97
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH

[Signature] DATE 3/27/97
DIRECTOR

OWNER AND DEVELOPER

GLENELG COUNTRY SCHOOL
12793 FOLLY QUARTER ROAD
GLENELG, MD. 21737
(410) 531-2229

SITE DEVELOPMENT PLAN

GLENELG COUNTRY SCHOOL
NEW MIDDLE SCHOOL FACILITY
TAX MAP 22, BLOCK 22, PARCEL 146
5TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
JULY, 1996 SCALE: 1" = 40'



A MORTON THOMAS AND ASSOCIATES, INC.
ENGINEERS - PLANNERS - SURVEYORS
LANDSCAPE ARCHITECTS
1200 WASHINGTON BLVD. #200
BETHESDA, MD 20814
TEL: (301) 981-4800 FAX: (301) 981-4814
DATE: OCTOBER 1988 A/E PROJECT NO. 88-008
BY: J.A. DICK, S.A. SCALE: 1/4"



REVISIONS

| No. | Date | By | Desc. |
|-----|------|----|-------|
| | | | |

GLENELG COUNTRY SCHOOL

APPROVED: [Signature] DATE 3/21/97
COUNTY HEALTH OFFICER

APPROVED: [Signature] DATE 3/25/97
CHIEF, DEVELOPMENT ENGINEERING DIVISION

[Signature] DATE 3/27/97
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH

[Signature] DATE 3/27/97
DIRECTOR

EROSION AND SEDIMENT CONTROL NOTES AND DETAILS

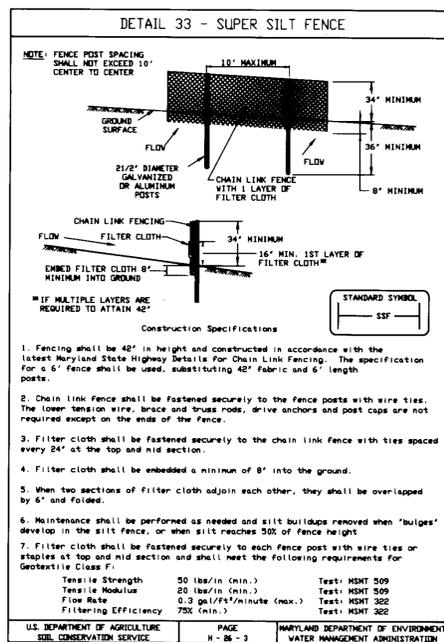
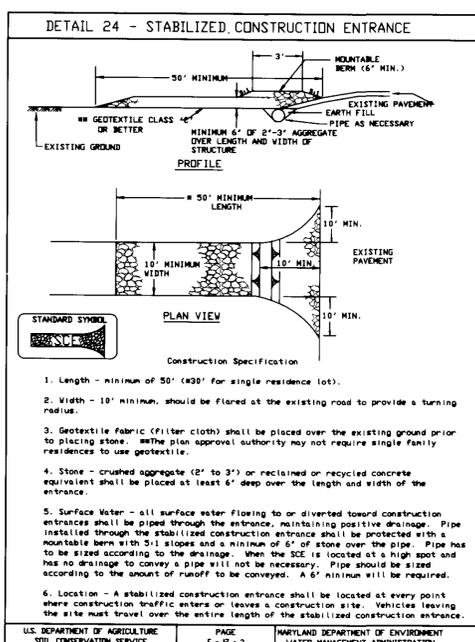
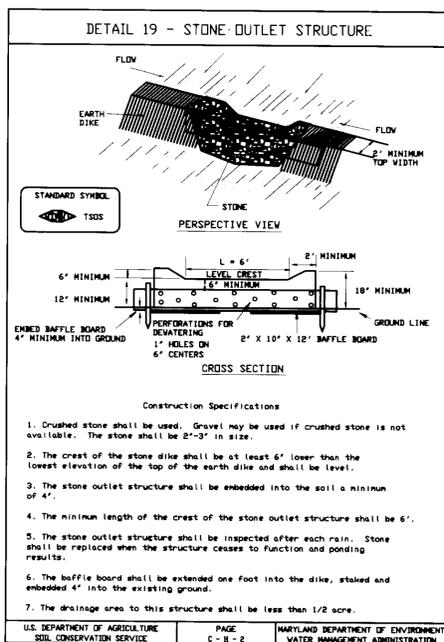
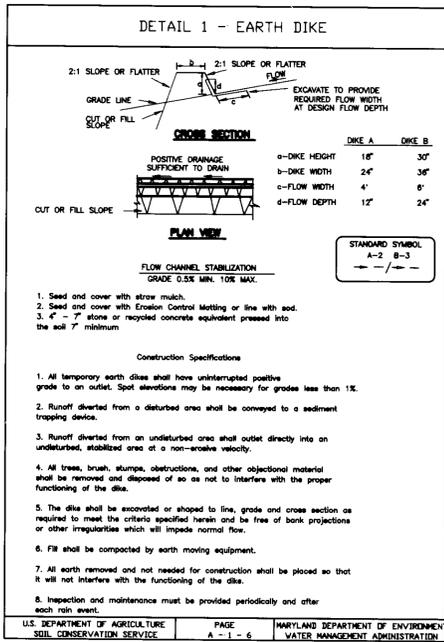
C-7

FOR EROSION AND SEDIMENT CONTROL ONLY

10 13

SDP-97-07

PLOT SCALE 1"=40'

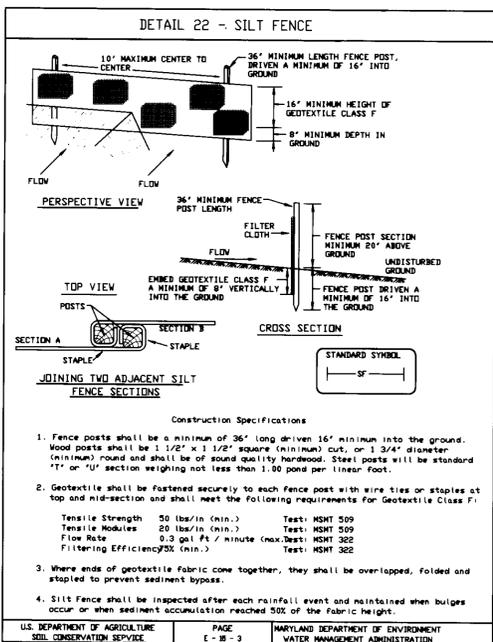


SUPER SILT FENCE

Design Criteria

| Slope | Slope Steepness | Slope Length (Maximum) | Silt Fence Length (Maximum) |
|----------|-----------------|------------------------|-----------------------------|
| 0 - 10% | 0 - 10:1 | Unlimited | Unlimited |
| 10 - 20% | 10:1 - 5:1 | 200 Feet | 1,500 Feet |
| 20 - 33% | 5:1 - 3:1 | 100 Feet | 1,000 Feet |
| 33 - 50% | 3:1 - 2:1 | 100 Feet | 500 Feet |
| 50% + | 2:1 + | 50 Feet | 250 Feet |

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE H-36-3a MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION



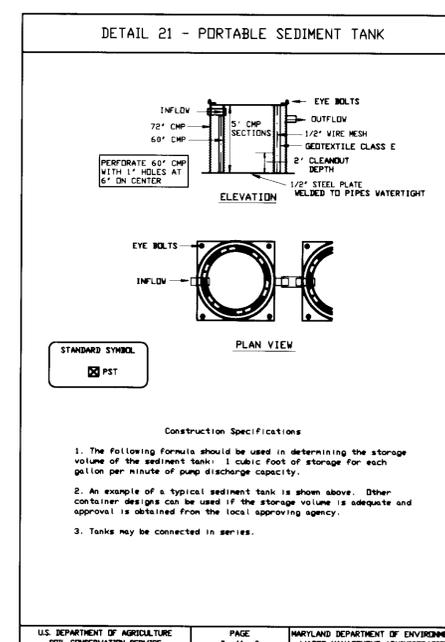
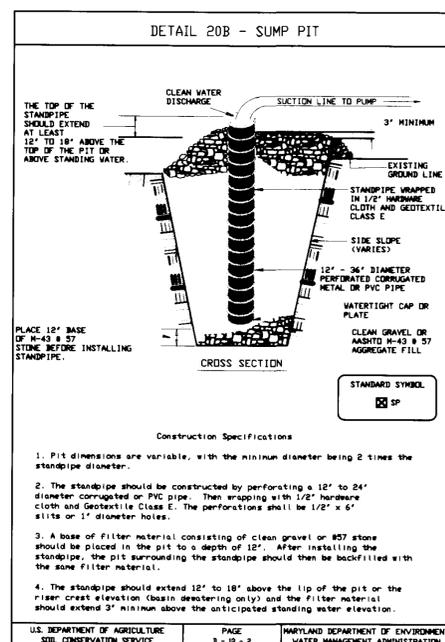
SILT FENCE

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 required.

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



OWNER AND DEVELOPER
 GLENELG COUNTRY SCHOOL
 12793 FOLLY QUARTER ROAD
 GLENELG, MD 21737
 (410) 531-2229

SITE DEVELOPMENT PLAN
 GLENELG COUNTRY SCHOOL
 NEW MIDDLE SCHOOL FACILITY
 TAX MAP 22, BLOCK 22, PARCEL 146
 5TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 JULY, 1996 SCALE: 1" = 40'
 SHEET 1 OF 5

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

APPROVED: *[Signature]* DATE 3/21/97
 COUNTY HEALTH OFFICER

REVIEWED FOR: *[Signature]* S.C.D.
 AND MEETS TECHNICAL REQUIREMENTS
 SIGNATURE: *[Signature]* DATE 3/21/97
 U.S. SOIL CONSERVATION SERVICE

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS. HOWARD COUNTY HEALTH DEPARTMENT

Joyce M. Boyd, M.D. DATE 3/17/97
 COUNTY HEALTH OFFICER

APPROVED: DEPARTMENT OF PLANNING & ZONING

[Signature] DATE 3/25/97
 CHIEF DEVELOPMENT ENGINEERING DIVISION

[Signature] DATE 3/22/97
 CHIEF DIVISION OF LAND DEVELOPMENT AND RESEARCH

[Signature] DATE 3/27/97
 DIRECTOR

A MORTON THOMAS AND ASSOCIATES, INC.
 ENGINEERS - PLANNERS - SURVEYORS
 LANDSCAPE ARCHITECTS
 1500 MARSH ROAD SUITE 200
 ANNAPOLIS, MARYLAND 21403
 TEL: (410) 891-2848 FAX: (410) 891-2844
 DATE: OCTOBER 1988 AUT. PROJECT NO. 88-088
 BY: JAA CHK: SJA SCALE: N/A



REVISIONS

| Rev. | Date | By | Notes |
|------|------|----|-------|
| | | | |

Project Title
GLENELG COUNTRY SCHOOL

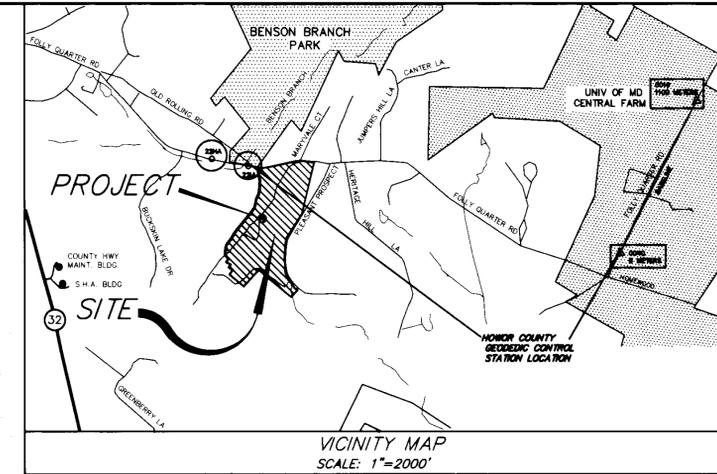
| Job No. | Design |
|-----------|--------------|
| 96-066.01 | SJR/JAA |
| Drawn | JAA |
| Checked | JAA |
| Date | MAR 18, 1997 |
| Approved | SJR |
| Date | OCT 15, 1996 |

Drawing Title
EROSION AND SEDIMENT CONTROL DETAILS

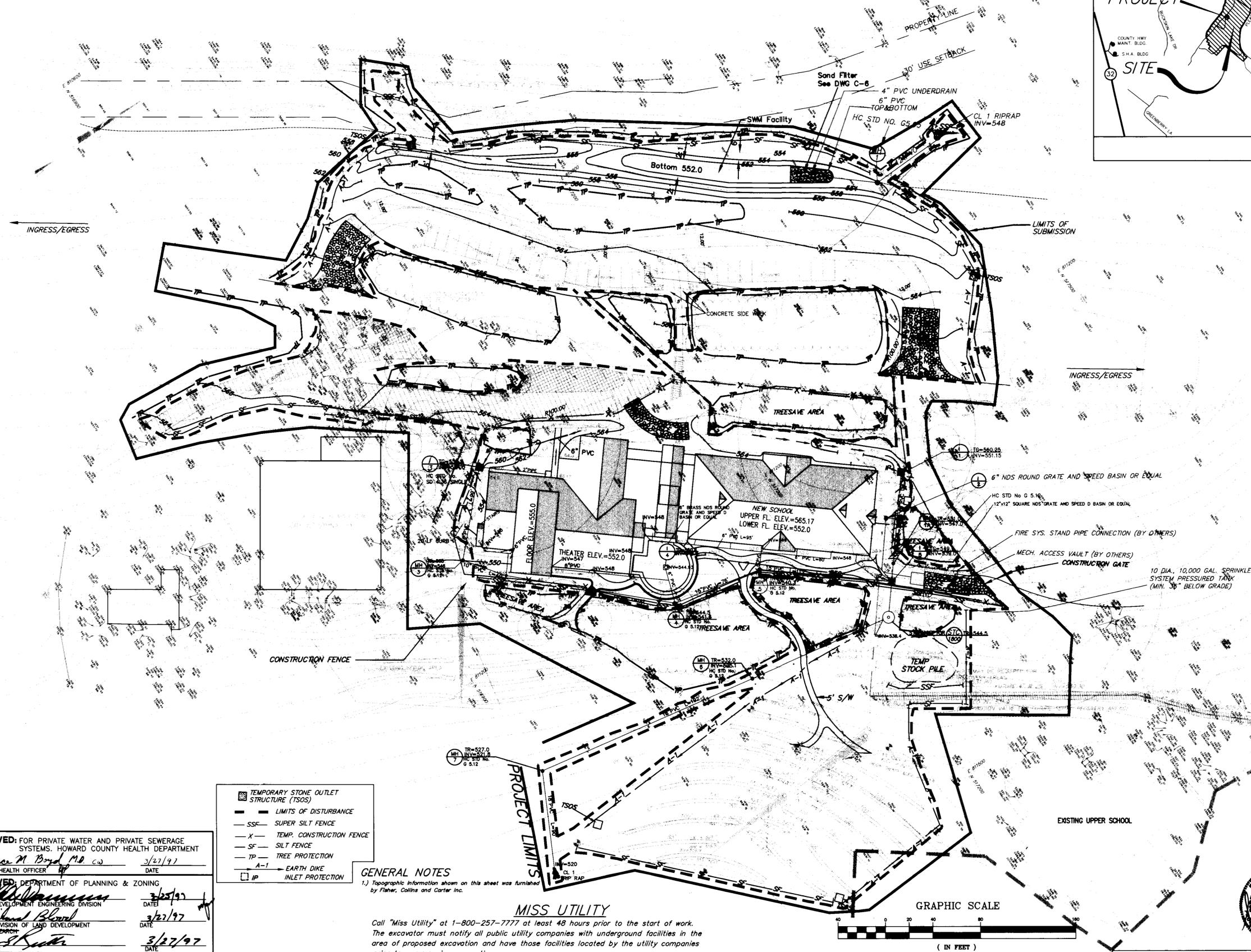
Drawing Number
 C-6

FOR EROSION AND SEDIMENT CONTROL ONLY

- NOTE:
1. CONTRACTOR TO PLACE CONSTRUCTION SIGN AT ENTRANCE TO SCHOOL (SEE VICINITY MAP)
 2. CONTRACTOR TO STABILIZE DITCH AND POND AREA IMMEDIATELY AFTER CONSTRUCTION AND AT THE END OF EACH WORKING BAY.
 3. THE SPOIL FROM THE SEPTIC AND PIPE TRENCHES IS TO BE PLACED ON THE UPHILL SIDE.



GLENELG COUNTRY SCHOOL
NEW MIDDLE SCHOOL AND PERFORMING ARTS CENTER
 12793 FOLLY QUARTER ROAD GLENELG, MD 21737



- EROSION AND SEDIMENT CONTROL SEQUENCE OF CONSTRUCTION**
1. AN APPROVED GRADING PERMIT SHALL BE OBTAINED PRIOR TO ANY START OF WORK.
 2. THE CONTRACTOR SHALL NOTIFY HOWARD COUNTY OFFICE OF INSPECTION AND PERMITS 24 HOURS BEFORE STARTING CONSTRUCTION.
 3. CLEAR AND GRUB THE AREAS NECESSARY, ONLY WITHIN THE LIMITS OF DISTURBANCE, FOR THE INSTALLATION OF PERIMETER SEDIMENT CONTROL DEVICES. PROVIDE BRIGHT COLORED PLASTIC FENCING AROUND PERIMETER OF TREE LINES, WHERE SHOWN, TO AVOID DISTURBANCE OF EXISTING TREES DURING CONSTRUCTION. THIS FENCING IS TO REMAIN IN PLACE UNTIL COMPLETION OF THE JOB.
 4. INSTALL THE PERIMETER CONTROL MEASURES (STABILIZED CONSTRUCTION ENTRANCES, SILT FENCE, TEMPORARY STONE OUTLET STRUCTURES, EXISTING DIKES AND SUPER SILT FENCE AS SHOWN IN THE EROSION AND SEDIMENT CONTROL PLAN.
 5. DEWATER THE EXCAVATED AREA, IF REQUIRED. PORTABLE SEDIMENT TANKS OR FILTERS BAGS, UNDER NO CIRCUMSTANCES SHALL SEDIMENT LADEN WATER BE ALLOWED TO BE PUMPED OR DISCHARGED DIRECTLY ONTO UNDISTURBED AREAS.
 6. INSTALL GAS AND ELECTRIC UTILITIES UP TO BUILDING AREA.
 7. BEGIN GRADING OF REAR PARKING AREA AND EXCAVATION/CONSTRUCTION OF NEW BUILDING. SEPTIC AREAS AND INSTALL FIRE WATER HOLDING TANK. ANY EXCAVATED MATERIAL NOT STOCKPILED IS TO BE IMMEDIATELY REMOVED FROM THE SITE TO AN APPROVED STOCKPILE AREA. IMMEDIATELY STABILIZE ALL DISTURBED AREAS AT THE END OF EACH WORKING DAY. SPOIL FROM SEPTIC TRENCHES TO BE PLACED ON UP HILL SIDE.
 8. NO CONTROLS MAY BE REMOVED WITHOUT PRIOR APPROVAL OF THE SEDIMENT CONTROL INSPECTOR.
 9. INSTALL PLANTINGS.
 10. STABILIZE ALL REMAINING DISTURBED AREAS.
 11. AFTER CONSTRUCTION IS COMPLETE AND ALL AREAS ARE STABILIZED, AND WITH APPROVAL OF THE HOWARD COUNTY DILP SEDIMENT CONTROL INSPECTOR, REMOVE ALL SEDIMENT CONTROL MEASURES AND BRIGHT COLORED PLASTIC FENCING.

- NOTES**
1. THE CONTRACTOR HAS THE OPTION TO USE A DIFFERENT EROSION AND SEDIMENT CONTROL PLAN ONLY IF AN ALTERNATIVE IS FORMALLY APPROVED BY ALL THREE OF THE FOLLOWINGS: THE LOCAL SCD, THE DILP INSPECTOR, AND THE DIVISION OF CONSTRUCTION INSPECTION REPRESENTATIVES.
 2. STOCKPILE LOCATION AREAS ARE TO BE DETERMINED BY THE CONTRACTOR, WITH APPROVAL FROM THE HOWARD COUNTY DILP SEDIMENT CONTROL INSPECTOR.

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

APPROVED: *John Polito* 3/21/97
 HOWARD S.C.D. DATE

REVIEWED FOR: *Howard* S.C.D.
 AND MEETS TECHNICAL REQUIREMENTS
Caryl Summers 3/21/97
 U.S. SOIL CONSERVATION SERVICE DATE

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS. HOWARD COUNTY HEALTH DEPARTMENT

Joyce M. Boyd MD CW 3/27/97
 COUNTY HEALTH OFFICER DATE

APPROVED: DEPARTMENT OF PLANNING & ZONING

Richard Beard 3/25/97
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Richard Beard 3/27/97
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Richard Beard 3/27/97
 DIRECTOR DATE

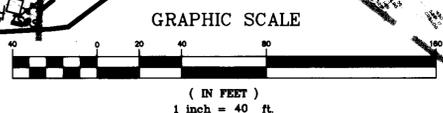
- TEMPORARY STONE OUTLET STRUCTURE (TSOS)
- LIMITS OF DISTURBANCE
- SSF SUPER SILT FENCE
- X TEMP. CONSTRUCTION FENCE
- SF SILT FENCE
- TP TREE PROTECTION
- A-1 EARTH DIKE
- IP INLET PROTECTION

GENERAL NOTES

1.) Topographic information shown on this sheet was furnished by Fisher, Collins and Carter Inc.

MISS UTILITY

Call "Miss Utility" at 1-800-257-7777 at least 48 hours prior to the start of work. The excavator must notify all public utility companies with underground facilities in the area of proposed excavation and have those facilities located by the utility companies prior to commencing excavation.



OWNER AND DEVELOPER
 GLENELG COUNTRY SCHOOL
 12793 FOLLY QUARTER ROAD
 GLENELG, MD. 21737
 (410) 531-2229

SITE DEVELOPMENT PLAN
 GLENELG COUNTRY SCHOOL
 NEW MIDDLE SCHOOL FACILITY
 TAX MAP 22, BLOCK 22, PARCEL 146
 5TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

A MORTON THOMAS AND ASSOCIATES, INC.

DESIGNERS • PLANNERS • SURVEYORS
 LANDSCAPE ARCHITECTS
 1200 WOODBINE AVENUE SUITE 200
 ANNAPOLIS, MARYLAND 21403
 TEL: (410) 861-8848 FAX: (410) 861-8844
 DATE: OCTOBER 1996 PROJECT NO.: 96-006
 BY: JAA DATE: 3/27/97 SCALE: 1"=40'



REVISIONS

| Rev. | Date | By | Notes |
|------|------|----|-------|
| | | | |
| | | | |
| | | | |
| | | | |
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Project Title: **GLENELG COUNTRY SCHOOL**

Job No.: 96-006.01
 Design: SJR/JAA
 Scale: 1"=40'
 Drawn: JAA
 Date: MAR 16, 1997
 Checked: SJR
 Approved: OCT 15, 1996

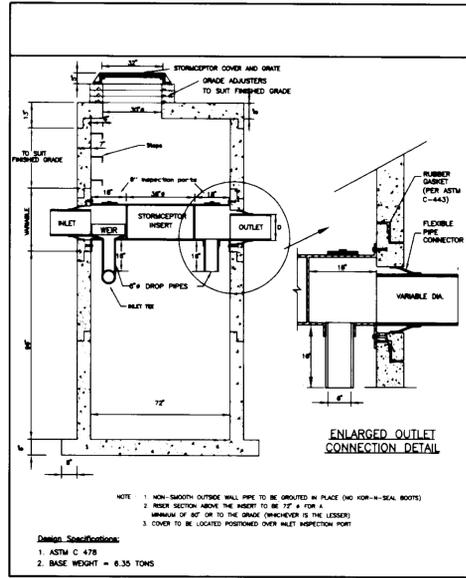
EROSION AND SEDIMENT CONTROL PLAN

Drawing Number: **C-5**

Sheet: 9 of 13

SDP 97-07

FOR EROSION AND SEDIMENT CONTROL ONLY



Concrete Stormceptor® Order Request Form

Contractor Information

NAME _____
ADDRESS _____
CITY _____
STATE _____
ZIP CODE _____
CONTACT _____
PHONE _____
FAX _____
(TO BE DETERMINED)

Owner Information

NAME: GLENELG COUNTY SCHOOL
PHONE: 301-281-1811

Please draw orientation of inlet and outlet pipe on diagram along with pipe inside diameter (in.) and invert elevation (ft.). Clearly mark inlet pipe with an I and outlet pipe with an O and provide the inlet/outlet pipe angle in degrees.

Stormceptor® Model

900 3600
1200 4800
1800 6000
2400 7200

Insert Size

22"
32"
44"
Custom

Manhole Number

Top Elevation (ft.) _____
Inlet Pipe Invert (ft.) _____
Outlet Pipe Invert (ft.) _____
Pipe Type _____
Pipe Inside Diameter (in.) [O] _____
Pipe Outside Diameter (in.) [I] _____

Project Name GLENELG COUNTY SCHOOL
Approximate time frame until required delivery (weeks) TO BE DETERMINED

Delivery Address: Street SAME AS ABOVE
City GLENELG State MD Zip Code 21737

Designer: Company A. MORTON THOMAS AND ASSOC., INC.
Designer Contact STU ROBINSON Phone (301)281-2545 Fax (301)281-0814

Please fax this sheet back to Hydro Conduit/Virgin Precast at 800-790-8278
After Hours Answer / Or Call Valley Phone 1-800-999-8278

For credit information/applications contact Corrie Brooker at (804) 798-0088
For Technical Assistance Please Call Stormceptor Corporation at (801) 782-8801 or toll free at 1 (800) 782-8708

TO BE INCLUDED ON BIDDING PLAN BY DESIGNER 11/24/96

| STORMCEPTOR DATA | | | | | |
|------------------|-----------------------|----------------------|---------------|---------------------------|-----------|
| STRUCTURE NUMBER | DRAINAGE AREA (ACRES) | PERCENT % IMPERVIOUS | TOP ELEVATION | INCOMING PIPE SIZE/INVERT | MODEL No. |
| STC 1800 | 1.25 | 76 | 544.5 | 15IN/538.5 | STC 1800 |

| FLOW AND CAPACITIES** | | | | |
|-----------------------|--------------------------------|--------------------------|---------------------|-------------------------|
| MODEL | MAX. TREATED FLOW RATE (gpm)** | SEDIMENT CAPACITY (ft.3) | OIL CAPACITY (ft.3) | TOTAL CAPACITY (US gal) |
| STC 1800 | 285 | 195 | 280 | 1830 |

* APPROXIMATE
** WITHOUT BY-PASS

| DIMENSIONS* | | | | | |
|-------------|-----------|--------------------------|---------|-----------------------|-----------------------|
| MODEL | DIAM (ft) | DROP PIPE DIAM (DP) (in) | HL (in) | T _{max} (in) | W _{max} (in) |
| STC 1800 | 6 | 6 | 105 | 8 | 8 |

* APPROXIMATE
** MAXIMUM VALUES

| PIPING AND INSERT DIMENSIONS | | |
|------------------------------|----------------|---------|
| PIPE DIAMETER D (in) | PIPE MATERIAL | HN (in) |
| 10 | PVC | 22 |
| 12 | CONC. / PE RIB | 22 |
| 12 | PVC / PE RIB | 22 |
| 12 | CONCRETE | 22 |
| 18 | PVC / PE RIB | 22 |
| 18 | CONCRETE | 32 |

INSPECTION NOTES: PRECAST CONCRETE STORMCEPTOR

- PRIOR TO THE START OF INSTALLING THE STORMCEPTOR THE CONTRACTOR SHALL NOTIFY HOWARD COUNTY OFFICE OF INSPECTION AND PERMITS 48 HOURS PRIOR TO INSTALLATION (PRE CONSTRUCTION MEETING).
 - THE HOWARD COUNTY DWP SEDIMENT CONTROL INSPECTOR MUST BE NOTIFIED AT EACH OF THE FOLLOWING STAGES:
 - APPROVAL OF SUBGRADE. PREPARE A GRAVEL BED AT THE BOTTOM OF THE EXCAVATION (6" DEEP).
 - PLACE STORMCEPTOR IN EXCAVATION AT CORRECT ELEVATION AND AT CORRECT ALIGNMENT AND GRADE FOR INLET AND OUTLET STORM DRAINS. LEVEL UNIT, INSTALL BASE AND LOWER TANK MIDDLE SECTION WITH STORMCEPTOR INSERT RISER SECTION, TOP SLAB WITH PERSON WAY, LEVELING RUNGS AND MANHOLE FRAME AND COVER.
 - BACKFILL STORMCEPTOR WITH SUITABLE NATIVE SOIL (NO ORGANIC OR TOPSOIL IS TO BE USED FOR BACKFILL). BACKFILL AND COMPACT IN 8" LIFTS. BACKFILL SHOULD BE AT 95% OF DENSITY.
 - WHEN SITE IS PERMANENTLY STABILIZED AND SEDIMENT CONTROL MEASURES HAVE BEEN REMOVED, THEN THE STORMCEPTOR WILL BE PUMPED OUT AND CLEANED AND PLACED INTO STORMWATER MANAGEMENT FACILITY.
 - FINAL INSPECTION.
- NOTE: PRECASTER IS TO CERTIFY THE STRUCTURAL INTEGRITY OF THE STORMCEPTOR STRUCTURES.

AS MANUFACTURED BY CSR-HYDRO CONDUIT AND STORMCEPTOR CORPORATION, MODEL STC-1800, PRECAST CONCRETE. FOR TECHNICAL INFORMATION CALL STORMCEPTOR AT 301-782-8361. TO ORDER CONTACT CSR-HYDRO CONDUIT, VIRGINIA PRECAST AT 1-800-999-2278 AT LEAST 3 WEEKS PRIOR TO NEEDED DELIVERY.

CONSTRUCTION NOTES:

- SILT AND DEBRIS SHALL NOT BE ALLOWED TO ENTER THE STORMCEPTOR UNTIL THE CONTRIBUTING DRAINAGE AREAS HAVE BEEN PERMANENTLY STABILIZED. SILT MAY BE ALLOWED TO ENTER STORMCEPTOR IF IT IS BEING USED AS A FINAL SEDIMENT CONTROL FILTERING DEVICE.
- ALL OPENINGS TO STRUCTURES SHALL BE PROTECTED WITH THE APPROPRIATE SEDIMENT CONTROL MEASURES.
- THE STORMCEPTOR MUST BE PUMPED OUT AND CLEANED AT THE END OF THE CONSTRUCTION OF THE PROJECT.

MAINTENANCE NOTES WATER QUALITY STRUCTURE-WASTE

- WATER QUALITY STRUCTURES WILL REQUIRE PERIODIC CLEANING. OWNERS OF THESE FACILITIES WILL HAVE TO CLEAN THEM A MINIMUM OF ONCE A YEAR OR AS NEEDED.
- MAINTENANCE OF THESE FACILITIES WILL CONSIST OF CLEANING OUT THE STORMCEPTOR AND DISPOSAL OF THE WASTE AND REPAIR OF THE FACILITY AS NEEDED. PERIODIC INSPECTIONS OF THESE FACILITIES WILL BE MADE BY THE OWNER.
- THE DISPOSAL OF THE LIQUID AND SOLID MATTER SHALL BE AS FOLLOWS:
 - ALL LIQUID MATERIAL IN THE STORMCEPTOR SHALL BE PUMPED INTO A SUITABLE TANK TRUCK AND DISPOSED OF AT AN APPROVED SEWAGE TREATMENT PLANT FOR DISCHARGE.
 - THE SOLID MATERIAL SHALL BE LANDFILLED IN AN APPROVED SANITARY LANDFILL.
- THE INLET PIPES AND STRUCTURAL PARTS SHALL BE REPAIRED AS NEEDED.
- STORMCEPTOR INLET AND OUTLET ASSEMBLY SHALL BE PERIODICALLY INSPECTED. BLOCKAGES SHALL BE REMOVED AND DISPOSED OF AS REQUIRED IN 3B ABOVE.

MAINTENANCE AND SCHEDULE OF SAND FILTER STRUCTURE:

- THE MAINTENANCE OF THE SYSTEM INCLUDES:
- THE WATER LEVEL IN THE SAND FILTER SURFACE AREA SHOULD BE MONITORED BY THE OWNER ON A QUARTERLY BASIS AND AFTER EVERY LARGE STORM FOR THE FIRST YEAR AFTER COMPLETION OF CONSTRUCTION.
 - THE FOLLOWING SHALL BE OBSERVED AND PERFORMED BY THE OWNER AND/OR HIS MAINTENANCE REPRESENTATIVE:
 - REMOVAL OF SILT FROM THE SURFACE WHEN ACCUMULATION EXCEEDS FOUR (4) INCHES.
 - REMOVAL OF ACCUMULATED PAPER, TRASH AND DEBRIS AS NECESSARY.
 - VEGETATION GROWING WITHIN THE TRENCH AREA IS NOT ALLOWED TO EXCEED 18 INCHES IN HEIGHT AT ANY TIME.
 - CORRECTIVE MAINTENANCE IS REQUIRED ANY TIME THE TRENCH DOES NOT DRAIN DOWN COMPLETELY WITHIN 40 HOURS. (IE. NO STANDING WATER WITHIN THE SAND FILTER SYSTEM AND DOWN STREAM AREA SHALL BE VISIBLE.)
 - INSPECTION OF THE SAND FILTER SYSTEM AND DOWN STREAM STRUCTURE(S) AFTER EVERY MAJOR EVENT.
 - ANNUAL INSPECTION AND REPAIR OF THE SYSTEM.

AFTER APPROXIMATELY THREE TO FIVE YEARS, THE UPPER LAYER OF THE FILTER CAN BE EXPECTED TO BECOME CLOGGED WITH FINE SILT WHEN THE DRAIN DOWN TIME FOR THE FILTER EXCEEDS 40 HOURS. THE UPPER LAYER OF GRAVEL GEOTEXTILE FABRIC MUST BE REMOVED AND REPLACED WITH NEW, CLEAN MATERIALS CONFORMING TO THE ORIGINAL SPECIFICATIONS.

Installation Procedures

Concrete Stormceptor® Installation

The installation of the concrete Stormceptor® should conform in general to state highway or local specifications for the construction of manholes. Selected sections of a general specification that are applicable are summarized in the following sections.

Excavation

Excavation for the installation of the Stormceptor® should conform to state highway or local specifications. Topsoil that is removed during the excavation for the Stormceptor® should be stockpiled in designated areas and should not be mixed with subsoil or other materials. Topsoil stockpiles, and the general site preparation for the installation of the Stormceptor® should conform to state highway or local specifications.

The Stormceptor® should not be installed on frozen ground. Excavation should extend a minimum of 12 inches from the precast concrete surfaces plus an allowance for shoring and bracing where required. If the bottom of the excavation provides an unsuitable foundation additional excavation may be required.

In areas with a high water table, continuous dewatering should be provided to ensure that the excavation is stable and free of water.

Leveling

A 6 to 12 inch layer of granular material (conforming to local or state highway backfill specifications) should be installed, compacted, and leveled at the bottom of the excavation to the proper elevation for the installation of the interceptor base.

Backfilling

Backfill material should conform to state highway or local specifications. Generally, backfill material should be placed in uniform layers not exceeding 12 inches in depth. Each layer should be compacted to the density required by local/state guidelines. Backfill is not to contain topsoil.

Stormceptor® Construction Sequence

The concrete Stormceptor® is installed in sections in the following sequence:

- aggregate base
- base slab
- treatment chamber section(s)
- transition slab (if required)
- by-pass section
- connect inlet and outlet pipes
- transition slab (if required)
- maintenance access way
- frame and access cover

The precast base should be placed level at the specified grade. The entire base should be in contact with the underlying compacted granular material. Subsequent sections, complete with joint seals, should be installed in accordance with the precast concrete manufacturer's recommendations.

Adjustment of the Stormceptor® can be performed by lifting the upper sections of the excavated area, re-leveling the base, and re-installing the sections. Damaged sections and gaskets should be repaired or replaced as necessary. Once the Stormceptor® has been constructed, the lift holes should be plugged with mortar.

Down Pipe and Riser Pipe

Once the by-pass section has been attached to the treatment chamber the down pipe and riser pipe can be attached. To install these pipes a worker enters the treatment chamber through the central access way in the by-pass section.

STC 900, STC 1200, STC 1800

The inlet pipe (pipe with the tee at the end) is installed by coating the outside of the end of the pipe with quick dry PVC cement and pushing the pipe into the coupling provided on the underside of the by-pass section. The tee must be oriented such that water which enters the treatment chamber is directed tangentially around the inside walls of the chamber.

The outlet riser pipe (straight pipe without the tee) is installed in a similar fashion using the quick dry PVC cement and coupling provided underneath the by-pass section near the downstream pipe.

Inlet and outlet pipes should be securely set into the by-pass chamber using gasket or approved pipe seals so that the structure is watertight. Flexible rubber boots are normally used and installed at the precast concrete plant prior to shipping. The flexible boots are applicable for pipes with an outside diameter up to 46 inches. Stormceptor Corporation should be notified if the pipe is to be grouted in the field at the time of ordering since the boots are generally included in the price quotations.

Installation of the flexible boots should follow the manufacturer's recommendations. As previously mentioned, the boots will already be attached to the Stormceptor® at the concrete plant.

Frame and Cover Installation

Precast concrete adjustment units should be installed to set the frame and cover at the required elevation. The adjustment units should be laid in a full bed of mortar with successive units being joined using sealant recommended by the manufacturer. Frames for the cover should be set in a full bed of mortar at the elevation specified.

OWNER AND DEVELOPER
GLENELG COUNTRY SCHOOL
12793 FOLLY QUARTER ROAD
GLENELG, MD. 21737
(410) 531-2229

SITE DEVELOPMENT PLAN
GLENELG COUNTRY SCHOOL
NEW MIDDLE SCHOOL FACILITY
TAX MAP 22, BLOCK 22, PARCEL 146
5TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
JULY, 1996 SCALE: 1" = 40'
SHEET 1 OF 5

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT

Joyce M. Boyd M.D. 3/27/97
COUNTY HEALTH OFFICER DATE

APPROVED: DEPARTMENT OF PLANNING & ZONING

Richard Blood 3/25/97
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Richard Blood 3/27/97
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Richard Blood 3/27/97
DIRECTOR DATE



| SEQUENCE OF CONSTRUCTION AND INSPECTOR'S CHECKOFF LIST FOR STORMWATER MANAGEMENT STORMCEPTOR | | |
|---|---------------------------------|-------------------------|
| STAGE | DEVELOPER'S/ENGINEER'S APPROVAL | DEP. INSPECTOR APPROVAL |
| 1. PRE-CONSTRUCTION MEETING | INITIALS/DATE | INITIALS/DATE |
| 2. INSTALLATION OF STORMCEPTOR® AND ASSOCIATED STORM DRAINAGE | | |
| a. OBTAIN APPROVAL OF SUBGRADE | | |
| b. INSTALLATION OF PRECAST BASE & LOWER TANK | | |
| c. INSTALLATION OF PRECAST MIDDLE SECTION WITH STORMCEPTOR INSERT | | |
| d. INSTALLATION OF PRECAST TOP SLAB | | |
| e. INSTALLATION OF ADJUSTMENT RINGS AND FRAME AND COVER | | |
| 3. BACKFILLING OPERATION AND COMPACTION | | |
| 4. SITE IS PERMANENTLY STABILIZED, SEDIMENT CONTROL MEASURES REMOVED AND ALL SEDIMENT AND DEBRIS REMOVED FROM STORMCEPTOR | | |
| 5. FINAL INSPECTION | | |

* MANDATORY NOTIFICATION/APPROVAL OF DEP INSPECTOR PRIOR TO PROCEEDING WITH NEXT STAGE. CALL 217-8301 PRIOR TO 12:00 NOON ON THE PRECEDING DAY TO ARRANGE FOR NOTIFICATION/INSPECTION.

CONTRACTOR INSTALLATION INSTRUCTIONS: PRECAST CONCRETE STORMCEPTOR

- STAKE-OUT THE LOCATION OF THE STORMCEPTOR AND EXCAVATE 10" E. EXCAVATE AROUND SPACE TO CONNECT INLET AND OUTLET PIPES TO UNIT. INSTALL A 12" DEEP (OR AS REQUIRED) LAYER OF COMPACTED AGGREGATE SUBBASE AT THE BOTTOM OF THE EXCAVATION. INSTALL THE INLET BOX OR SINKING AS NEEDED.
- CHECK ELEVATION OF UNIT BY MEASURING ITS SECTIONS FROM BASE OF THE STORAGE CHAMBER (BOTTOM OF UNIT'S SLAB) TO THE INVERT OF STORMCEPTOR BYPASS CHAMBER INLET ELEVATION (FIBERGLASS INSERT). SUBTRACT THIS DISTANCE FROM DESIGN INVERT ELEVATION TO DETERMINE TOP OF SUBBASE ELEVATION. CHECK ELEVATION OF INSTALLED SUBBASE AND ADJUST AS NEEDED.
- SECURE INSPECTOR APPROVAL OF SUBGRADE AND SUBBASE. ALL LIFTING APPARATUS IS TO BE PROVIDED BY THE INSTALLATION CONTRACTOR.
- INSTALL STORAGE CHAMBER. (INSTALL SCREW LIFTING PINS INTO BASE OF STORAGE CHAMBER.) ATTACH CABLES OR CHAINS TO ALL 4 LIFT LUGS ON THE BASE SLAB. USING LARGE EQUIPMENT OR CRANE, LIFT AND PLACE THE BASE SECTION OF THE STORAGE CHAMBER IN THE EXCAVATED HOLE ON THE SUBBASE. MAKE SURE THAT THE BASE IS LEVEL. SPECIFIC ALIGNMENT OF THIS PART IS NOT REQUIRED. INSTALL RUBBER GASKET ON BASE UNIT AND COAT WITH LUBRICATING GREASE (PROVIDED IN SHIPMENT), IF NOT PRELUBRICATED. INSTALL ADDITIONAL STORAGE CHAMBER SECTIONS, AS REQUIRED (PROCEDURES ARE SAME AS STEP 4).
- (FOR STORMCEPTOR MODELS STC-900, STC-1200 AND STC-1800 SKIP STEP 5 AND GO TO STEP 6)
- INSTALL REDUCING SLAB. (STORMCEPTOR MODELS STC-2400, STC-3600, STC-4800, STC-6000 AND STC-7200) CHECK THAT SECTION IS SET FLUSH, LEVEL AND IS AT THE PROPER ELEVATION. INSTALL RUBBER GASKET ON THE TRANSITION SLAB SPOT AND COAT WITH LUBRICATING GREASE (PROVIDED IN SHIPMENT).
- INSTALL BYPASS SECTION OF STORMCEPTOR WITH FACTORY INSTALLED STORMCEPTOR INSERT. LIFT BYPASS SECTION AND INSTALL, WHILE CHECKING ALIGNMENT AND GRADE OF INLET AND OUTLET DRAINAGE PIPES. CHECK TO MAKE SURE THE BYPASS CHAMBER IS SET FLUSH, LEVEL AND IS AT THE PROPER ELEVATION. THE BYPASS SECTION MUST BE ORIENTED SUCH THAT INLET PIPE DISCHARGES INTO THE V-SHAPED FIBERGLASS WEIRS (INSIDE INSERT). INSTALL RUBBER GASKET ON TOP OF BYPASS SECTION AND COAT WITH LUBRICATING GREASE, IF NOT PRELUBRICATED.
- INSTALL STORMCEPTOR DROP PIPES ACCORDING TO STC PIPE INSTALLATION PROCEDURE ON REVERSE SIDE OF THESE INSTRUCTIONS.
- INSTALL RISER SECTION. LIFT RISER SECTION AND INSTALL, WHILE CHECKING THAT SECTION IS SET FLUSH AND IS AT PROPER ELEVATION AND THAT UNIT IS LEVEL. SPECIFIC ALIGNMENT OF THIS PART IS REQUIRED, IF STEPS ARE INCLUDED. ALIGN STEPS ABOVE INLET INSPECTION PORT. NOTE, FOR SLOTTED INSTALLATIONS THIS SECTION MAY NOT BE REQUIRED.
- INSTALL TOP SLAB WITH OPENING FOR STORMCEPTOR FRAME AND COVER. IF OPENING IS OFFSET (NOT CENTERED) THE TOP SLAB OPENING SHOULD BE ORIENTED ABOVE THE STORMCEPTOR INLET INSPECTION PORT (PLUG).
- BACKFILL STORMCEPTOR WITH APPROVED BACKFILL MATERIAL (NO ORGANIC OR TOPSOIL IS TO BE USED FOR BACKFILL). BACKFILL AND COMPACT IN 8 INCH LIFTS. BACKFILL SHOULD BE GROUDED INSIDE AND OUTSIDE WITH GROUT.
- INSTALL AND SET GRADE ADJUSTING RINGS, AS NEEDED. PLUG ALL LIFT HOLES WITH TAPERED FLEXIBLE PLUG AND KNOCK IN TO PLACE. PLUGS IN STORAGE CHAMBER MUST BE GROUDED INSIDE AND OUTSIDE WITH GROUT.
- INSTALL AND SET STORMCEPTOR FRAME AND COVER.
- INSTALL INLET AND OUTLET STORM DRAIN PIPES. CONNECT INLET AND OUTLET STORM DRAIN PIPES WITH FLEXIBLE BOOTS (WHEN PROVIDED) AND WITH NON-SINKING GROUT WHEN NO FLEXIBLE BOOTS ARE PROVIDED. THE INVERT OF THE INLET AND OUTLET PIPE IS TO MATCH UP WITH THE INVERT OF THE STORMCEPTOR INSERT. FLEXIBLE BOOT INSTALLATION PROCEDURES: CENTER THE PIPE IN BOOT OPENING. LUBRICATE THE OUTSIDE OF THE PIPE AND/OR THE INSIDE OF THE BOOT, IF THE PIPE OUTSIDE DIAMETER IS THE SAME AS THE INSIDE DIAMETER OF THE BOOT. POSITION THE PIPE CLAMP IN THE GROOVE OF THE BOOT WITH THE SCREW AT THE TOP. TIGHTEN THE PIPE CLAMP SCREW TO 60 INCH POUNDS. IF THE PIPE IS MUCH SMALLER THAN THE BOOT, LIFT THE BOOT SUCH THAT IT CONTACTS THE BOTTOM OF THE PIPE WHILE TIGHTENING THE CLAMP TO ENSURE EVEN CONTACT OF THE RUBBER. MOVE PIPE HORIZONTALLY AND/OR VERTICALLY TO BRING TO GRADE.
- THE STORMCEPTOR SHOULD BE PUMPED OUT WHEN THE SEDIMENT CONTROL MEASURES ARE REMOVED (SITE PERMANENTLY STABILIZED).
- FINAL INSPECTION.

FOR TECHNICAL INFORMATION CALL STORMCEPTOR CORPORATION AT 1-800-782-2703

GLENELG COUNTRY SCHOOL
NEW MIDDLE SCHOOL AND PERFORMING ARTS CENTER
12793 FOLLY QUARTER ROAD GLENELG, MD 21737

A. MORTON THOMAS AND ASSOCIATES, INC.
ENGINEERS - PLANNERS - SURVEYORS
LANDSCAPE ARCHITECTS
1200 HANCOCK SQUARE SUITE 300
BETHESDA, MARYLAND 20814
TEL: (301) 881-0400 FAX: (301) 881-0514
DATE: OCTOBER 1996 ASH PROJECT NO. 96-006
BY: JAA OLS EA SCALE: 1/4"

GW
W/O

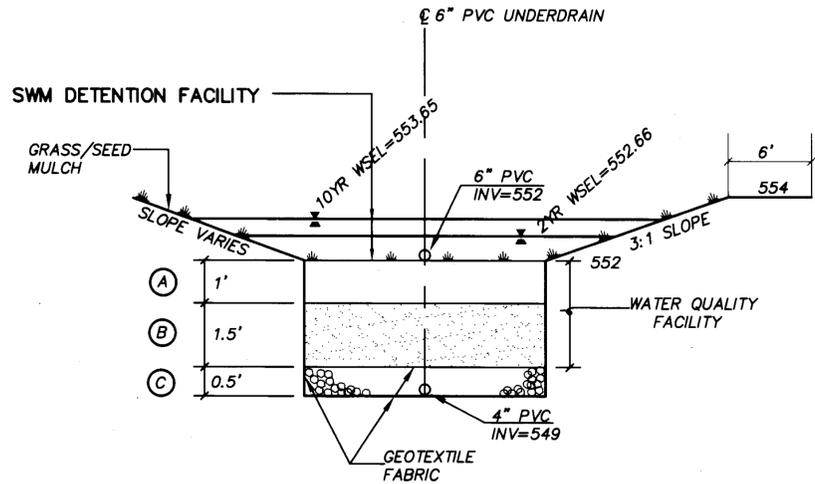
ARCHITECTS
5 EAST PEAC STREET BALTIMORE, MD 21202
410-532-1009

| REVISIONS | |
|-----------|------|
| Rev. | Date |
| | |
| | |

Project Title
GLENELG COUNTRY SCHOOL

| Job No. | Drawn |
|-----------|---------|
| 96-006.01 | JAA/JAA |
| | |
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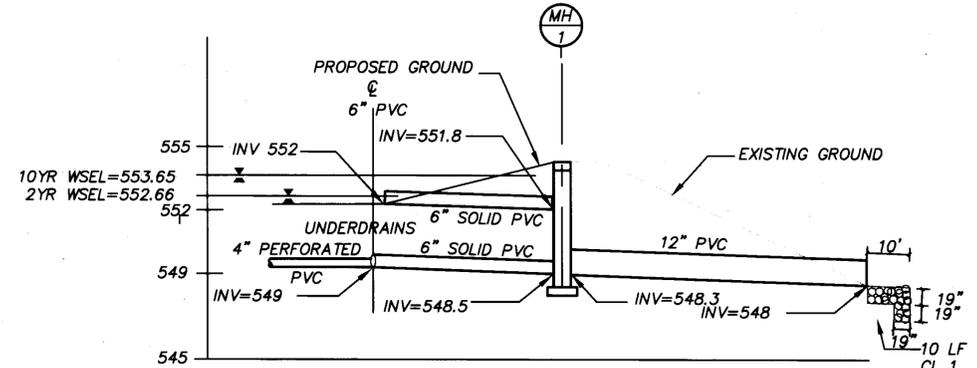
MISCELLANEOUS DETAILS
Drawing Number
C-4B



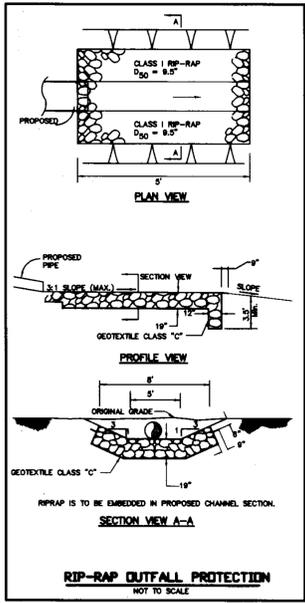
- (A) SAND-SOIL MIX TO BE 50% SANDY LOAM TOP SOIL AND 50% MORTAR SAND (AASHTO M-45)
- (B) C33 SAND LAYER
- (C) PEA GRAVEL NO. 7

NOTE: REFER TO CIVIL DRAWING C-4B FOR SAND FILTER'S MAINTENANCE SCHEDULE.

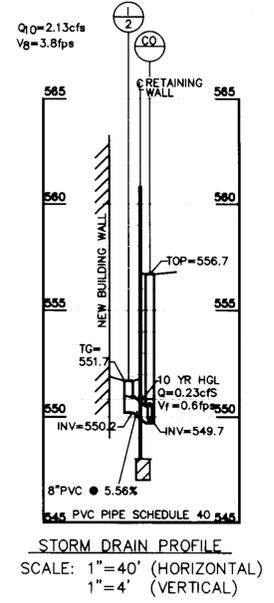
SAND FILTER
N.T.S.



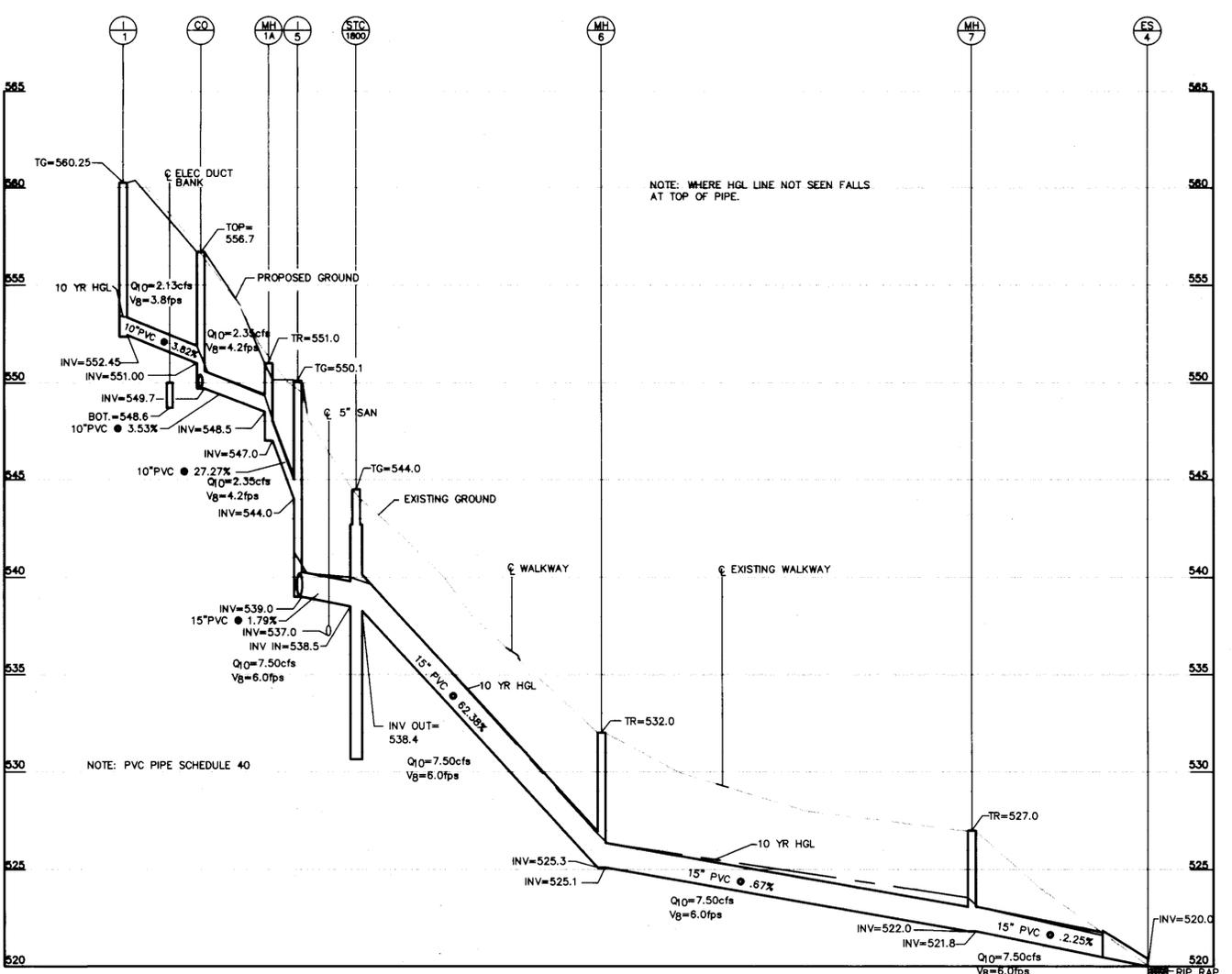
OUTFALL SWM POND
SCALE: 1" = 4' VERT.
1" = 20' HORIZ.



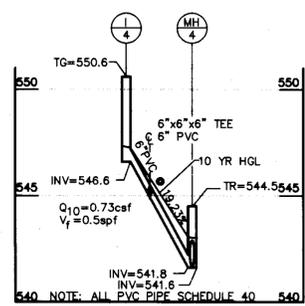
RIP-RAP OUTFALL PROTECTION
NOT TO SCALE



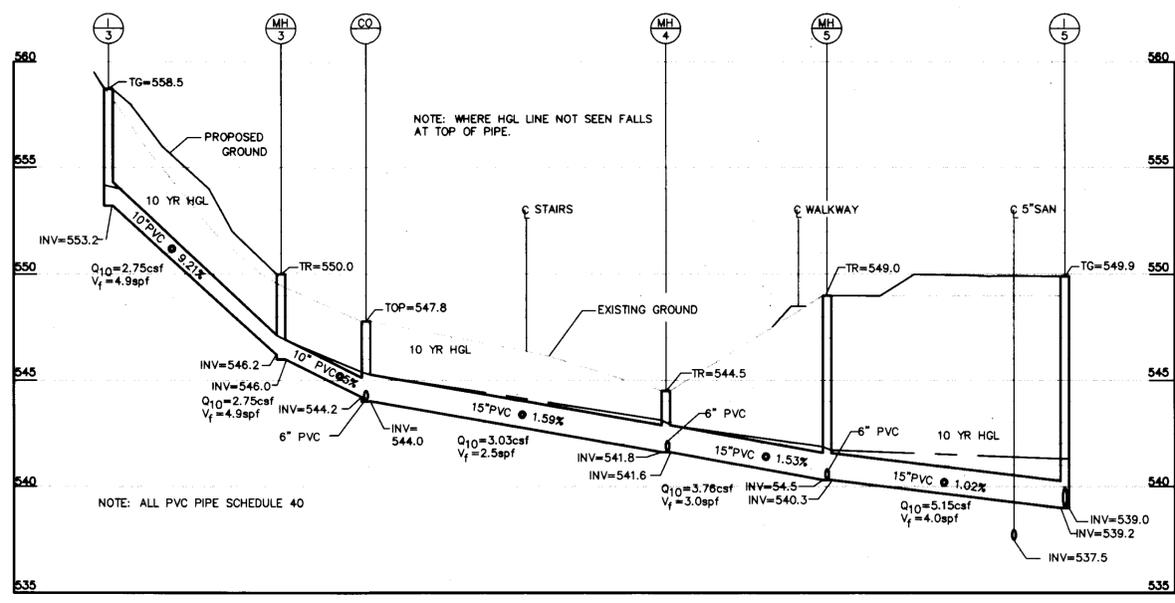
STORM DRAIN PROFILE
SCALE: 1"=40' (HORIZONTAL)
1"=4' (VERTICAL)



STORM DRAIN PROFILE
SCALE: 1"=40' (HORIZONTAL)
1"=4' (VERTICAL)



STORM DRAIN PROFILE
SCALE: 1"=40' (HORIZONTAL)
1"=4' (VERTICAL)



STORM DRAIN PROFILE
SCALE: 1"=40' (HORIZONTAL)
1"=4' (VERTICAL)

OWNER AND DEVELOPER
GLENELG COUNTRY SCHOOL
12793 FOLLY QUARTER ROAD
GLENELG, MD. 21737
(410) 531-2229

SITE DEVELOPMENT PLAN
GLENELG COUNTRY SCHOOL
NEW MIDDLE SCHOOL FACILITY
TAX MAP 22, BLOCK 22, PARCEL 146
5TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS. HOWARD COUNTY HEALTH DEPARTMENT
COUNTY HEALTH OFFICER: *Joyce M. Boyd, M.D.* DATE: 3/27/97

APPROVED: DEPARTMENT OF PLANNING & ZONING
CHIEF, DEVELOPMENT ENGINEERING DIVISION: *William J. ...* DATE: 3/25/97
CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH: *Richard ...* DATE: 3/22/97
DIRECTOR: *...* DATE: 3/27/97

GLENELG COUNTRY SCHOOL
NEW MIDDLE SCHOOL AND PERFORMING ARTS CENTER
12793 FOLLY QUARTER ROAD GLENELG, MD 21737

A MORTON THOMAS AND ASSOCIATE, INC.
ENGINEERS - PLANNERS - SURVEYORS
LANDSCAPE ARCHITECTS
1700 WOODBURN ROAD SUITE 200
BETHESDA, MARYLAND 20814
Tel: (301) 491-8844 Fax: (301) 491-0814
LISC. CORP. NO. 1181 Lic. No. 1181-0001
BY: J.M. DATE: 08/28/96
GREENSBORO, NORTH CAROLINA

ARCHITECTS
5 EAST FRED STREET BALTIMORE, MD 21202
410-528-7000

| REVISIONS | | |
|-----------|------|----|
| Rev. | Date | By |
| | | |
| | | |
| | | |

Project Title: **GLENELG COUNTRY SCHOOL**

| | | |
|----------------------|--------|--|
| Job No. 96-066 | Design | |
| Drawn | | |
| AS SHOWN | REA | |
| DATE: MAR 18, 1997 | | |
| Scale: OCT. 15, 1996 | | |

Drawing Title: **STORMWATER MANAGEMENT PLANS AND DETAILS**

Drawing Number: **C-4A**

Sheet: **G 13**

SEPTIC FIELD AND TANK DESIGN CALCULATION

Proposed use, Middle School.
 Proposed student population, 182 students.
 Estimated daily flows, student use without showers or kitchen facilities:
 182 students @ 15 gallons per day per student = 2,430 gallons daily design flow.

Initial and reserve septic field area:
 Shallow field proposed per percolation testing conducted March 1985.
 Depth and size of initial septic field:
 Inlet depth 4.5', bottom of trench 6.0', trench width 3', average percolation rate 10 minutes.
 Initial system design = 2,430 GPD ÷ 0.8 GPD/3' = 3,038 3' absorption area.
 3,038 3' absorption area = 3' trench with = 1,013 linear feet of 3' wide initial system required.
 Recovery area required = 2 x 1,013 = 2,026 linear feet of 3' wide recovery area required.

Initial system proposed in area tested for Middle School, (septic area 1). The recovery areas use the Middle School testing area and the area tested for the Artura Secondary School Athletic Complex, (septic reserve area 2).

Septic tank sizing:
 Volume of tank required = 1,125 + (0.75 x daily flow) 0.
 Vt = 1,125 + 1,823
 Vt = 2,948 gal septic tank.
 Two 2,000 gallon septic tanks, in line, proposed.

- SEPTIC SYSTEM NOTES**
1. Septic field design based upon the percolation testing conducted on the site March 13, 1985.
 2. The proposed septic fields are not within 100 feet of any walls, streams, swales, wetlands or 100 year flood plain.
 3. The initial septic field, (in area 1) and proposed recovery area, (in area 2) being utilized for the proposed middle school septic system are plotted from the plan entitled "Percolation Test Results" prepared by CS&D Architects and certified by Charles Cross, PE.
 4. The proposed future secondary school athletic complex building septic field is being used for this middle school proposal. A suitable septic disposal area shall have to be located, tested and approved prior to the construction of the athletic complex.
 5. Prior to starting work the contractor is to verify the elevation and location of the sewer connection of the building and notify the engineer of any problems or discrepancies.
 6. All work is to be performed in accordance with the Howard County Health Department regulations and in accordance with applicable permits.
 7. The contractor is to notify MISS UTILITY at 1-800-257-7777, 48 hours in advance of any construction for the location of all utilities.

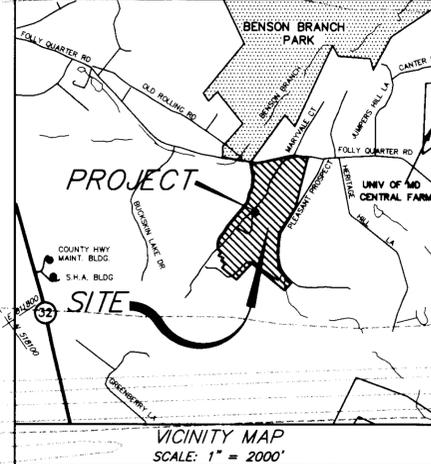
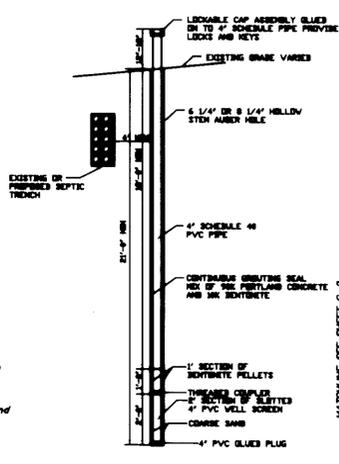
CERTIFICATION

I hereby certify that the information shown on this plan was compiled from the sources as referenced and that it was prepared by me or under my direct supervision.

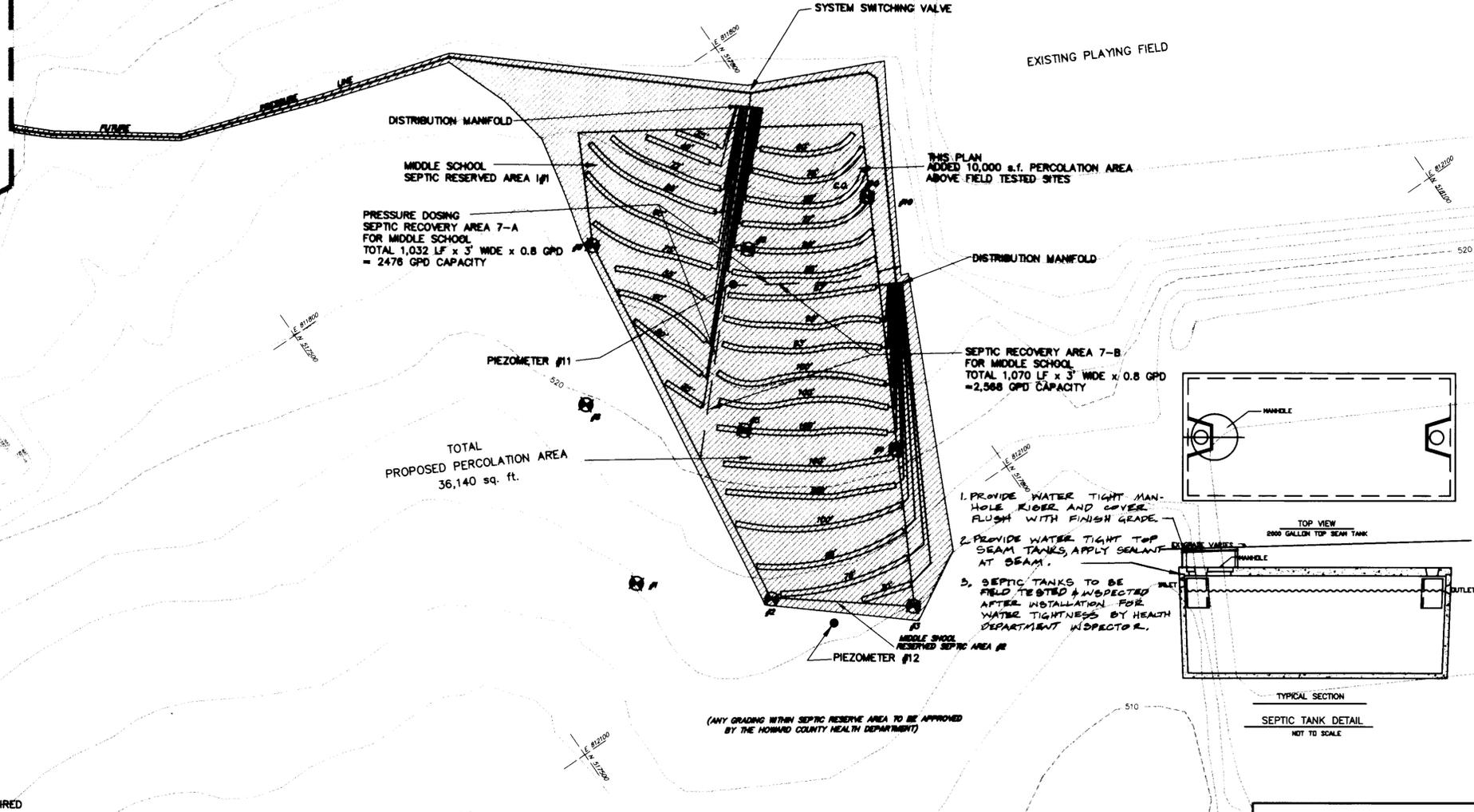
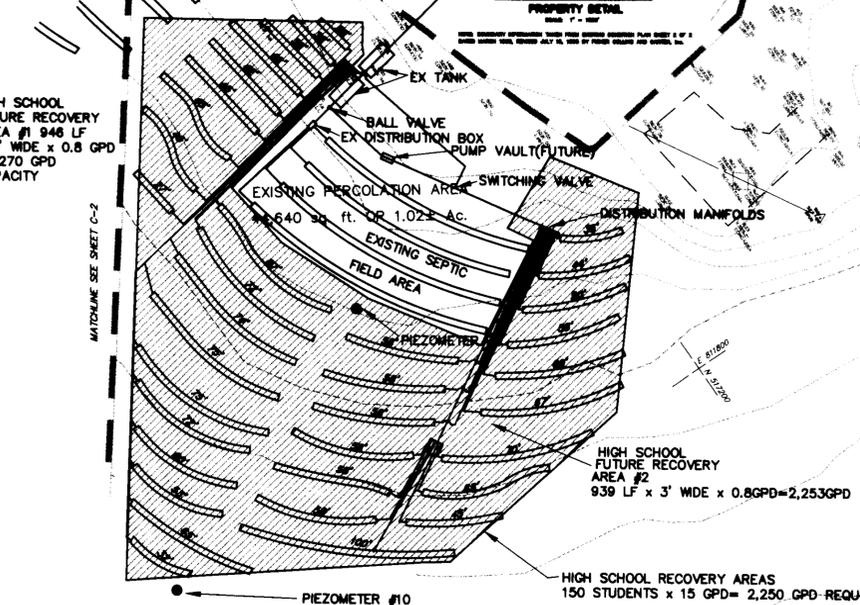
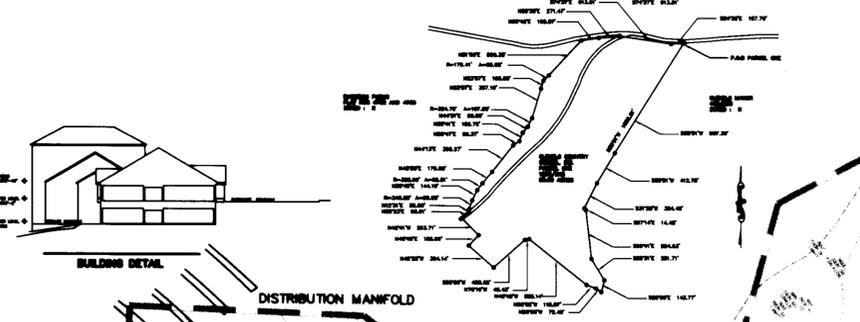
3/28/97
 Date
 Stuart Robinson, MD PE #17836
 Signature

PIEZOMETER DETAIL
 NOT TO SCALE

NOTE: 1. SEE SITE PLAN AND CAMPUS WELL AND SEPTIC TANK PLAN FOR LOCATION
 2. WELL POINTS ARE REQUIRED



GLENELG COUNTRY SCHOOL
 NEW MIDDLE SCHOOL AND PERFORMING ARTS CENTER
 12793 FOLLY QUARTER ROAD GLENELG, MD 21737

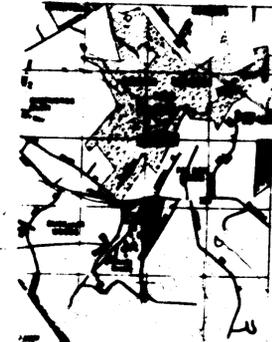


Characterization of Forest Areas

- Forest F-1 is a composition of oaks 12"-18" diameter with white oak, red oak and white pine with a "Forest Oak Forest Assessor"
- Forest F-2 is a composition of oaks 12"-18" diameter oak, white oak and white pine with a "Forest Oak Forest Assessor"
- Forest F-3 is a composition of oaks 12"-18" diameter oak and white pine with a "Forest Oak Forest Assessor"
- Forest F-4 is a composition of oaks 12"-18" diameter oak with white oak and white pine with a "Forest Oak Forest Assessor"
- Forest F-5 is a composition of oaks 12"-18" diameter oak with white oak and white pine with a "Forest Oak Forest Assessor"

- Forest F-6 is a composition of oaks 12"-18" diameter oak with white oak and white pine with a "Forest Oak Forest Assessor"
- Forest F-7 is a composition of oaks 12"-18" diameter oak with white oak and white pine with a "Forest Oak Forest Assessor"
- Forest F-8 is a composition of oaks 12"-18" diameter oak with white oak and white pine with a "Forest Oak Forest Assessor"
- Forest F-9 is a composition of oaks 12"-18" diameter oak with white oak and white pine with a "Forest Oak Forest Assessor"
- Forest F-10 is a composition of oaks 12"-18" diameter oak with white oak and white pine with a "Forest Oak Forest Assessor"

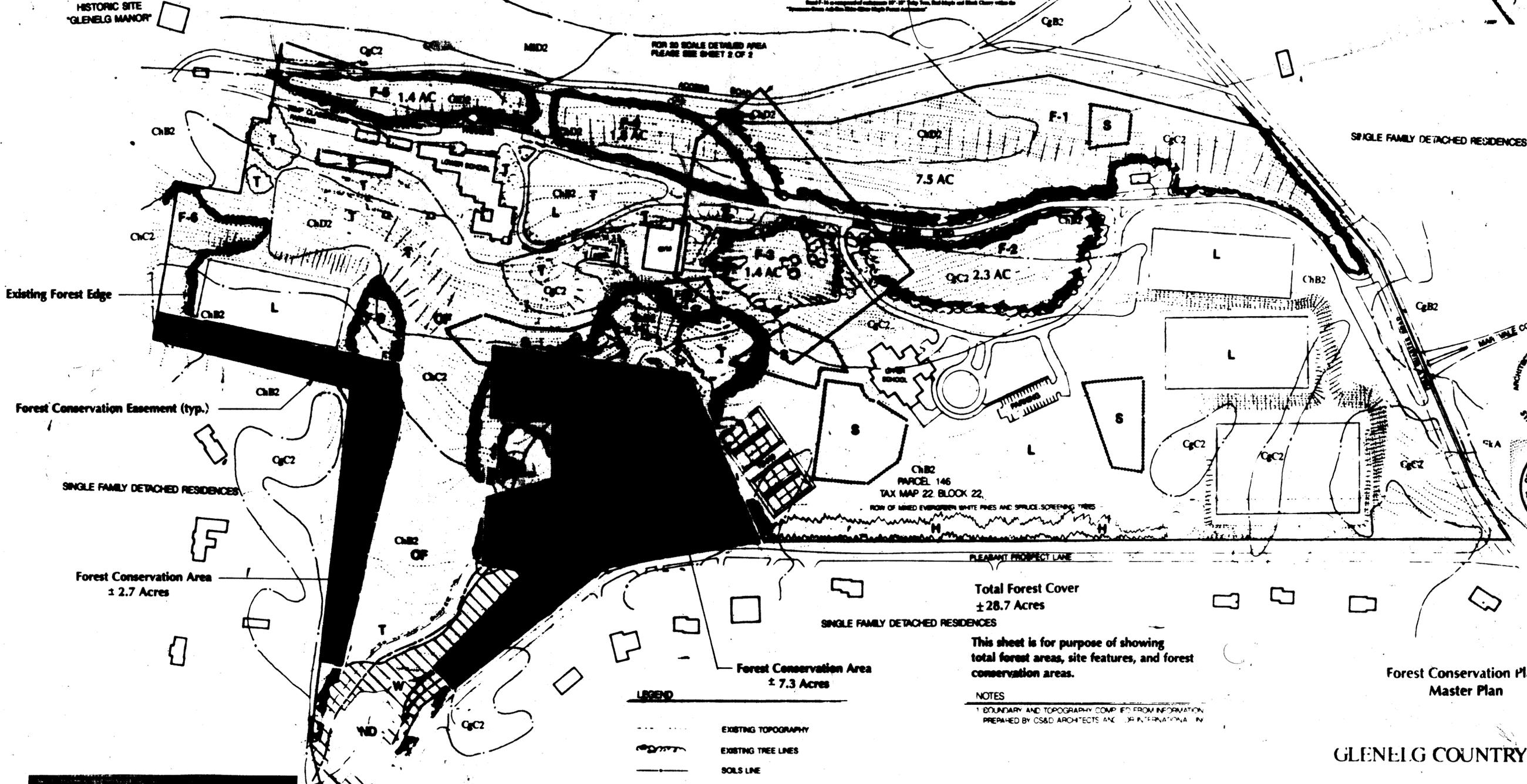
- Forest F-11 is a composition of oaks 12"-18" diameter oak with white oak and white pine with a "Forest Oak Forest Assessor"
- Forest F-12 is a composition of oaks 12"-18" diameter oak with white oak and white pine with a "Forest Oak Forest Assessor"
- Forest F-13 is a composition of oaks 12"-18" diameter oak with white oak and white pine with a "Forest Oak Forest Assessor"
- Forest F-14 is a composition of oaks 12"-18" diameter oak with white oak and white pine with a "Forest Oak Forest Assessor"
- Forest F-15 is a composition of oaks 12"-18" diameter oak with white oak and white pine with a "Forest Oak Forest Assessor"



VICINITY MAP
SCALE 1" = 2.000'

HISTORIC SITE
"GLENELG MANOR"

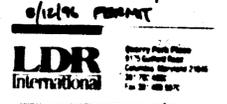
FOR 80 SCALE DETAILED AREA
PLEASE SEE SHEET 2 OF 2



**Forest Conservation Plan
Master Plan**

GLENELG COUNTRY SCHOOL

TAX MAP 22, BLOCK 22, PARCEL 146
5th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND



A. MORTON THOMAS AND ASSOCIATES, INC.
ENGINEERS • SURVEYORS • PLANNERS • LANDSCAPE ARCHITECTS
12750 TWINBROOK PARKWAY - SUITE 200 - ROCKVILLE, MARYLAND 20851
TELEPHONE: (301) 981-2545 FAX: (301) 981-6844

SHEET **C-10**
OF 13

LEGEND

| | |
|--|--------------------------------|
| | EXISTING TOPOGRAPHY |
| | EXISTING TREE LINES |
| | SOILS LINE |
| | SOILS TYPE |
| | EXISTING IMPROVEMENTS |
| | STEEP SLOPES |
| | LIMITS OF WETLANDS |
| | STREAMS |
| | STREAM BUFFER |
| | FORESTED AREAS AND NUMBER |
| | OPEN FIELD OR MEADOW |
| | HEDGEROWS |
| | LAWNS & PLAYFIELDS |
| | SEPTIC PIELDS OR RESERVE AREAS |

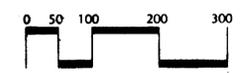
**Total Forest Cover
± 28.7 Acres**

This sheet is for purpose of showing
total forest areas, site features, and forest
conservation areas.

NOTES
1. BOUNDARY AND TOPOGRAPHY COMPILED FROM INFORMATION
PREPARED BY CS&D ARCHITECTS AND CS&D INTERNATIONAL, INC.

CERTIFICATION
I HEREBY CERTIFY THAT I PREPARED THIS PLAN AND THAT
I AM A DAILY REGISTERED LANDSCAPE ARCHITECT IN THE
STATE OF MARYLAND.

DATE: 10/15/97 NORMAN E. HANES, R.L.A. # 567



NORTH



Total Forest Conservation Area Shown: ±10.0 Acres

SR 97-07