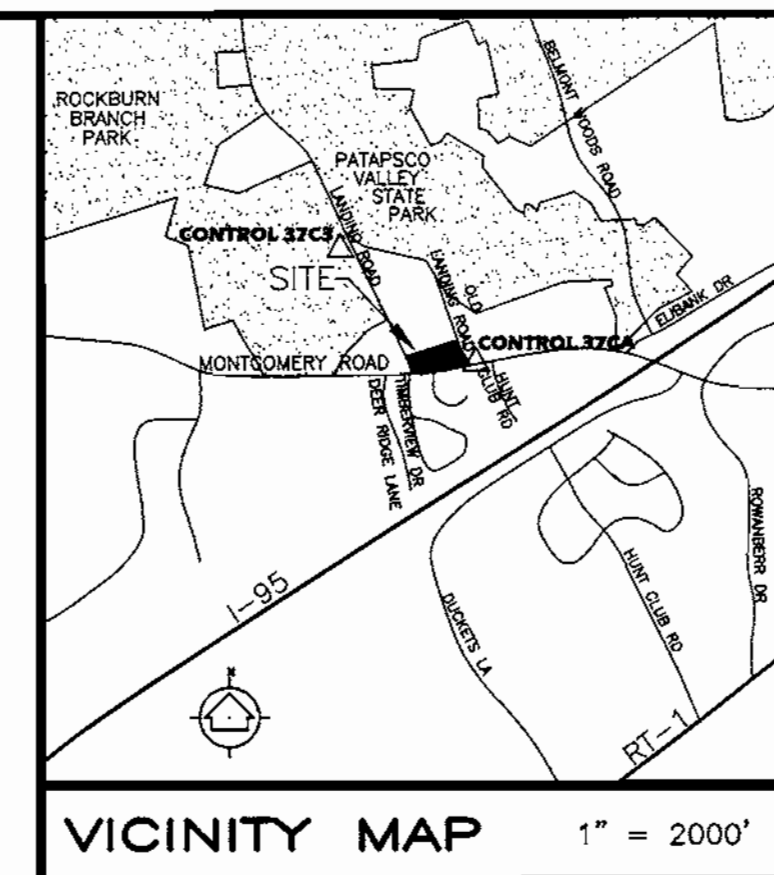


NOTES

- COORDINATES AND BEARINGS SHOWN ON THIS PLAT ARE REFERRED TO THE SYSTEM OF COORDINATES ESTABLISHED BY THE HOWARD COUNTY GEODETIC CONTROL SYSTEM (NAD'83), AND ARE BASED ON THE FOLLOWING TRAVERSE STATIONS (TRANSLATED METERS TO FEET)

DESIGNATION	NORTH (SFT)	EAST (SFT)
37CA	564321.657	1382742.880
37C3	562916.023	1384856.682
- ELEVATIONS SHOWN HEREON REFER TO THE NORTH AMERICAN VERTICAL DATUM 1988 (NAVD'88) WITH LOCAL REFERENCE TO THE FOLLOWING HOWARD COUNTY GEODETIC CONTROL SYSTEM STATION:

DESIGNATION	ELEVATION (SFT)
37CA	256.965
37C3	257.772



SDP 00-40

SITE DEVELOPMENT PLAN

for

GRACE EPISCOPAL CHURCH

BUILDING ADDITION

HOWARD COUNTY, MARYLAND

CONSTRUCTION NOTES:

- THE CONTRACTOR SHALL NOTIFY THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS CONSTRUCTION INSPECTION DIVISION AT 410-313-1880 AT LEAST 24 HOURS PRIOR TO STARTING ANY OF THE WORK SHOWN HEREON.
- THE CONTRACTOR SHALL NOTE THAT IN CASE OF DISCREPANCY BETWEEN ANY SCALED DIMENSIONS AND THE FIGURED DIMENSIONS SHOWN ON THESE PLANS, THE FIGURED DIMENSIONS SHALL GOVERN.
- CONTRACTOR SHALL MEET ALL EXISTING IMPROVEMENTS SMOOTHLY FOR LINE, GRADE, AND FINISH.
- ALL WORK SHOWN ON THESE PLANS SHALL BE COMPLETED IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS AND OF THE MARYLAND STATE HIGHWAY ADMINISTRATION AND THE HOWARD COUNTY PLUMBING CODE, UNLESS OTHERWISE NOTED.
- IT SHALL BE DISTINCTLY UNDERSTOOD THAT FAILURE TO MENTION SPECIFICALLY ANY WORK WHICH WOULD NORMALLY BE REQUIRED TO COMPLETE THIS PROJECT SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO PERFORM SUCH WORK. THE COST OF SUCH WORK SHALL BE INCLUDED IN THE BASE BID.
- THE CONTRACTOR SHALL INSPECT THE SITE TO DETERMINE IF ANY TREES, PAVING, ETC. ARE TO BE REMOVED PRIOR TO PLACING A BID ON SUCH ITEMS.
- THE LOCATIONS OF EXISTING UTILITIES SHOWN HEREON ARE APPROXIMATE ONLY AND ARE PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. THE LOCATIONS ARE TAKEN FROM EXISTING RECORDS AND DO NOT REPRESENT FIELD-VERIFIED LOCATIONS. THE CONTRACTOR SHALL NOTIFY MISS UTILITY AT 1-800-257-7777 A MINIMUM OF 5 WORKING DAYS PRIOR TO DIGGING. THE CONTRACTOR SHALL CONFIRM TO HIS OWN SATISFACTION THE LOCATION OF ALL UTILITIES PRIOR TO ANY EXCAVATION OR PLACEMENT OF MATERIALS. IF ANY CONFLICT IS FOUND BETWEEN UNDERGROUND UTILITIES AND THE PROPOSED LOCATION OF ANY CONSTRUCTION, THE CONTRACTOR SHALL CONTACT MARYLAND LAND DESIGN, INC. AND THE OWNER OF THE UTILITY IMMEDIATELY. ANY DAMAGE OR DISRUPTION OF SERVICE SHALL BE AT THE EXPENSE OF THE CONTRACTOR. RELOCATION OF ANY EXISTING UTILITIES, SHALL BE AT THE EXPENSE OF THE OWNER. THE CONTRACTOR SHALL COORDINATE RELOCATION OF THESE FACILITIES, IF NECESSARY.
- CONTRACTOR SHALL PROTECT ALL EXISTING TREES OUTSIDE THE LIMIT OF DISTURBANCE AT ALL TIMES DURING CONSTRUCTION.
- CONTRACTOR SHALL PROTECT ALL EXISTING IMPROVEMENTS NOT SCHEDULED FOR REMOVAL OR DEMOLITION COST OF REPAIR TO EXISTING IMPROVEMENTS SHALL BE INCLUDED IN THE BASE BID. ALL EXISTING SITE FEATURES NOT BEING RETAINED SHALL BE REMOVED AND DISPOSED OF AT AN APPROVED LOCATION. ANY DAMAGE TO OFF SITE ROADS, RIGHTS OF WAY, OR ADJACENT PROPERTY SHALL BE REPAIRED IMMEDIATELY AT THE EXPENSE OF THE CONTRACTOR.
- THE CONTRACTOR SHALL CLEAR THE PROJECT SITE OF ALL TREES, PAVING, STRUCTURES, ETC. WITHIN THE CONSTRUCTION AREA UNLESS OTHERWISE NOTED ON THE PLANS.
- ONLY SUITABLE MATERIAL SHALL BE USED AS FILL AND ALL FILL SHALL BE PLACED AND COMPACTED AS SPECIFIED IN THE SOILS REPORT PREPARED FOR THIS SITE OR AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER. ALL 2:1 SLOPES SHOWN HEREON, EXCEPTING THOSE ASSOCIATED WITH LANDSCAPE BERMING, ALL GRADING UNDER PROPOSED PAVING, AND ALL FILL AND COMPACTION SHALL BE APPROVED BY A GEOTECHNICAL ENGINEER.
- CONTRACTOR SHALL PROVIDE MINIMUM 4 FOOT BENCH AT EDGE OF PAVING IN FILL AREAS. MAXIMUM SLOPE OF BENCH SHALL BE 4% (1/4 IN. PER FOOT).
- MAXIMUM SLOPE SHALL BE 2 HORIZONTALLY TO 1 VERTICALLY.
- CONTRACTOR SHALL PLACE 4" MINIMUM TOPSOIL IN LANDSCAPE AREAS. TOPSOIL SHALL BE APPROVED BY LANDSCAPE ARCHITECT.
- CONTRACTOR SHALL PLACE A WITNESS POST AT THE TERMINUS OF ALL UTILITY STUBS.
- ALL UTILITIES INSTALLED SHALL RECEIVE FULL TRENCH COMPACTION.
- CONTRACTOR SHALL PROVIDE A MINIMUM OF 1 FOOT OF PROTECTIVE FILL OVER STORM DRAIN PIPES DURING CONSTRUCTION.
- ALL AREAS NOT BEING PAVED OR RECEIVING BUILDING COVERAGE SHALL BE STABILIZED IN ACCORDANCE WITH THE PLANS APPROVED BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.
- BOARD OF APPEAL CASE NUMBER BOA 00-29E, DATED 8/29/00, GRANTED A 2 YEAR EXTENSION TO OBTAIN A BUILDING PERMIT (SEPT. 28, 2002) AND SEPT. 28, 2003 FOR COMPLETION OF SUBSTANTIAL CONSTRUCTION OF THE SITE.

SITE ANALYSIS DATA:

- TOTAL PROJECT AREA: 4.040 AC OR 1975,917.72 S.F.
- AREA OF PLAN SUBMISSION: 4.040 ACRES
- LIMITS OF DISTURBED AREA: 167,270 S.F. OR 3.84 ACRES
- PRESENT ZONING: R-ED
- PROPOSED USES FOR SITE AND STRUCTURES: EXISTING BUILDING= SANCTUARY
PROPOSED BUILDING= DAYCARE
- FLOOR SPACE ON EACH LEVEL OF BUILDINGS PER USE:
SANCTUARY/SUNDAY SCHOOL/OFFICES = 7677 S.F.
DAYCARE = 8834 S.F.
- NUMBER OF PARKING SPACES REQUIRED:
 - EXISTING PARKING SPACES: 50
 - PARKING REQUIREMENTS: 158 CHILDREN MAXIMUM PER BA 98-18E&V.
 - SECTION 133.D.7, A, DAYCARE CENTER; M-F
7:00 A.M.-6:00 P.M. OPERATION
3.0 SPACES / 1000 S.F.
8834 S.F. / 3 = 27 SPACES
 - SECTION 133.D.7, H, EXISTING RELIGIOUS/SUNDAY SCHOOL ACTIVITIES - NO FIXED SEATS
WEEKENDS ONLY
10 SPACES / 1000 S.F.
2400 S.F. / 100 x 10 = 24 SPACES
 - HANDICAP REQUIREMENTS:
4 SPACES / 100 PARKING SPACES
(3 HANDICAP + 1 VAN ACCESSIBLE)
 - CHURCH OFFICES:
7:00 AM - 9:00 PM 7 DAYS / WEEK
3.3 SPACES / 1000 OFFICE AREA
2700 SF OFFICE / 1000 x 3.3 = 9 SPACES
 TOTAL SPACES REQUIRED = 60 SPACES
 - NUMBER OF PARKING SPACES PROVIDED ON SITE:
60 SPACES (INCLUDES 5 HANDICAP SPACES)
 - BUILDING COVERAGE OF SITE: 0.38 ACRES AND 8.42% OF GROSS AREA.
 - APPLICABLE DPZ FILE REFERENCES: BA CASE NO. 98-18 E&V
SPECIAL EXCEPTION FOR A STRUCTURE USED PRIMARILY FOR RELIGIOUS ACTIVITIES AND TO ENLARGE THE EXISTING DAY CARE CENTER.
VARIANCES AS FOLLOWS:
 - REDUCE THE 75 FOOT USE SETBACK FROM THE PUBLIC RIGHT-OF-WAY FOR LANDING ROAD TO 1 FOOT FOR 30 PARKING SPACES AND TO 17 FEET FOR DRIVE AISLES.
 - REDUCE THE 20 FOOT REAR LOT LINE USE SETBACK TO 10 FEET FOR 11 PARKING SPACES.
 - REDUCE THE 75 FOOT USE SETBACK FROM THE PUBLIC RIGHT-OF-WAY FOR OLD LANDING ROAD TO 20 FEET FOR 62 PARKING SPACES AND TO 22 FEET FOR DRIVE AISLES.
 - REDUCE THE 75 FOOT STRUCTURE SETBACK FROM THE PUBLIC RIGHT-OF-WAY FOR MONTGOMERY ROAD TO 59 FEET FOR THE ADDITION TO THE EX. BUILDING. REDUCE THE 75 FOOT USE SETBACK FROM THE PUBLIC RIGHT-OF-WAY FOR MONTGOMERY ROAD TO 9 FEET FOR 24 PARKING SPACES, AND REDUCE TO 10 FEET FOR DRIVE AISLES.
 - LANDING ROAD IS A DESIGNATED SCENIC ROAD. DEVELOPMENT ABUTTING THIS ROAD WILL BE DESIGNED SO AS TO MINIMIZE ANY IMPACT ON SCENIC VIEWS FROM THE ROAD AND COMPLY WITH ALL REGULATIONS
 - ALL PROPOSED OUTDOOR LIGHTING WILL BE IN ACCORDANCE WITH SECTION 134 OF THE ZONING REGULATIONS FOR HOWARD COUNTY AND SHALL BE DIRECTED AWAY FROM ADJOINING RESIDENTIAL PROPERTY.
 - LANDSCAPING FOR THIS SITE WILL BE PROVIDED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL. REQUIRED SURETY IN THE AMOUNT OF \$24,180.00 WILL BE PROVIDED WITH THE DEVELOPER AGREEMENT.
 - IN ACCORDANCE WITH SECTION 16.1202 OF THE HOWARD COUNTY CODE AND FOREST CONSERVATION MANUAL, FOREST CONSERVATION OBLIGATIONS FOR THIS SITE HAVE BEEN MET BY THE FILING OF A DECLARATION OF INTENT FOR THE CLEARING OF LESS THAN 40,000 SQ. FT. OF FOREST ON A SINGLE PARCEL.
 - THIS SITE PLAN DOES NOT INCLUDE THE FOLLOWING FEATURES APPROVED UNDER BA CASE NO. 98-18E&V.
 - 5744 S.F. COMMUNITY MINISTRY ADDITION
 - 3499 S.F. GYMNASIUM
 - GARDEN COURT WITH FOUNTAIN
 - TWO TRASH DUMPSTERS
 - 129 PARKING SPACES
 THE ABOVE ITEMS ARE ALL POSSIBLE SECOND PHASE IMPROVEMENTS. THE SECOND PHASE CONSTRUCTION IS NOT ANTICIPATED IN THE NEAR FUTURE. AN AMENDED SITE PLAN SHALL BE PREPARED SHOULD THIS PHASE OCCUR. A FUTURE BOARD OF APPEALS HEARING SHALL BE HELD TO ALLOW FOR THE PHASING OF THESE FEATURES.
 - THE CONTRACTOR OR DEVELOPER SHALL CONTACT THE CONSTRUCTION INSPECTION DIVISION 24 HOURS IN ADVANCE OF COMMENCEMENT OF WORK AT 410-313-1880.

SHEET INDEX

- SHEET 1: TITLE SHEET
- SHEET 2: EXISTING CONDITIONS & DEMOLITION PLAN
- SHEET 3: SITE PLAN
- SHEET 4: GRADING, SWM & SEDIMENT CONTROL PLAN
- SHEET 5: MISCELLANEOUS NOTES AND DETAILS
- SHEET 6: STORMWATER MANAGEMENT NOTES AND DETAILS
- SHEET 7: STORM DRAIN PROFILE AND DETAILS
- SHEET 8: LANDSCAPE PLAN
- SHEET 9: BUILDING ELEVATIONS
- SHEET 10: HANDICAP PARKING AND BUILDING ACCESS PLAN
- SHEET 11: STORM DRAIN DRAINAGE AREA MAP
- SHEET 12: STORMWATER MANAGEMENT DRAINAGE AREA MAP

PROJECT OWNER/DEVELOPER:

THE VESTRY OF GRACE CHURCH
6725 MONTGOMERY ROAD
ELKRIDGE, MD 21075
TELEPHONE: 410-796-3270

These plans for ~~owner's~~ construction, soil erosion and sediment control meet the requirements of Howard Soil Conservation District.

J. K. Blanton
APPROVED: HOWARD SOIL CONSERVATION DISTRICT
PLAN NUMBER _____ DATE 10/26/00

Reviewed for the Howard Conservation District and meets technical requirements.

J. A. Wafford
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
NATURAL RESOURCES CONSERVATION SERVICE
DATE 11/21/00

APPROVED: Howard County Department of Planning and Zoning

[Signature]
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE 11/10/00

[Signature]
CHIEF, DIVISION OF LAND DEVELOPMENT
DATE 11/21/00

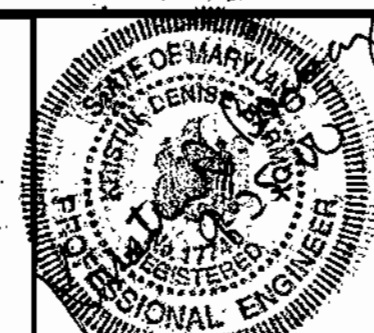
[Signature]
DIRECTOR
DATE 11/21/00

ADDRESS CHART					
PARCEL NO.	STREET ADDRESS				
431	6725 MONTGOMERY ROAD, ELKRIDGE, MD 21075				
SUBDIVISION NAME	SECTION NAME	PARCEL #			
N/A	N/A	431			
PLAT #	BLOCK #	ZONE	TAX/ZONE MAP	ELECT. DIST.	CENSUS TRACT
N/A	6	RED	37	01	8011.01
WATER CODE: 001		SEWER CODE: 2150562			

MARYLAND LAND DESIGN, INC.
CONSULTING ENGINEERS AND LAND PLANNERS

2001 MEADOW DRIVE
WESTMINSTER, MARYLAND 21158
TELEPHONE: (410) 857-0210 FAX: (410) 840-0143

© Copyright 1998



REVISIONS		
NO.	DATE	DESCRIPTION

PLAN PREPARATION	
DRAWN BY: DAB	DATE: 29 JULY 1999
DESIGNED BY: DAB	FILE NO. 99020
CHECKED BY: KDB	DRAWING NO.

TITLE SHEET -

GRACE EPISCOPAL CHURCH
BUILDING ADDITION
LIBER 336 FOLIO 275
1st ELECTION DISTRICT, TAX MAP: 37, BLOCK 6, PARCEL 431
HOWARD COUNTY, MARYLAND

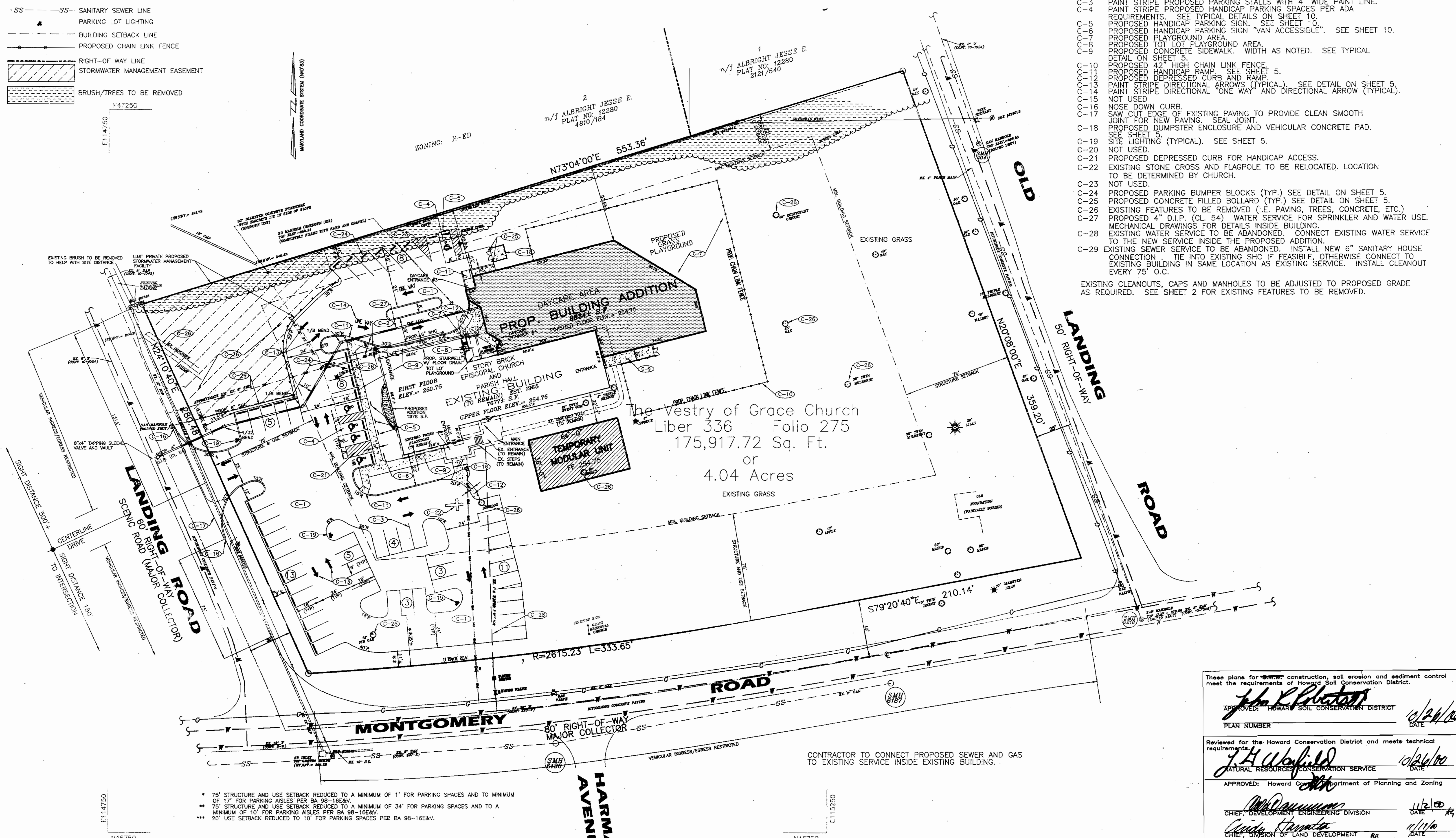
SCALE
NO SCALE
SHEET NO.
1 OF 12

LEGEND

- GAS LINE TO BUILDING
- WATER LINE
- SS — SANITARY SEWER LINE
- PARKING LOT LIGHTING
- BUILDING SETBACK LINE
- PROPOSED CHAIN LINK FENCE
- RIGHT-OF-WAY LINE
- STORMWATER MANAGEMENT EASEMENT
- BRUSH/TREES TO BE REMOVED

CONSTRUCTION NOTES:

- C-1 PROPOSED BITUMINOUS PAVING. SEE PAVING SECTION ON SHEET 5.
 - C-2 PROPOSED HOWARD COUNTY STANDARD CURB AND GUTTER. ALL RADII TO BE 5' UNLESS OTHERWISE NOTED.
 - C-3 PAINT STRIPE PROPOSED PARKING STALLS WITH 4" WIDE PAINT LINE.
 - C-4 PAINT STRIPE PROPOSED HANDICAP PARKING SPACES PER ADA REQUIREMENTS. SEE TYPICAL DETAILS ON SHEET 10.
 - C-5 PROPOSED HANDICAP PARKING SIGN. SEE SHEET 10.
 - C-6 PROPOSED HANDICAP PARKING SIGN "VAN ACCESSIBLE". SEE SHEET 10.
 - C-7 PROPOSED PLAYGROUND AREA.
 - C-8 PROPOSED TOT LOT PLAYGROUND AREA.
 - C-9 PROPOSED CONCRETE SIDEWALK. WIDTH AS NOTED. SEE TYPICAL DETAIL ON SHEET 5.
 - C-10 PROPOSED 42" HIGH CHAIN LINK FENCE.
 - C-11 PROPOSED HANDICAP RAMP. SEE SHEET 5.
 - C-12 PROPOSED DEPRESSED CURB AND RAMP.
 - C-13 PAINT STRIPE DIRECTIONAL ARROWS (TYPICAL). SEE DETAIL ON SHEET 5.
 - C-14 PAINT STRIPE DIRECTIONAL "ONE WAY" AND DIRECTIONAL ARROW (TYPICAL).
 - C-15 NOT USED.
 - C-16 NOSE DOWN CURB.
 - C-17 SAW CUT EDGE OF EXISTING PAVING TO PROVIDE CLEAN SMOOTH JOINT FOR NEW PAVING. SEAL JOINT.
 - C-18 PROPOSED DUMPSTER ENCLOSURE AND VEHICULAR CONCRETE PAD. SEE SHEET 5.
 - C-19 SITE LIGHTING (TYPICAL). SEE SHEET 5.
 - C-20 NOT USED.
 - C-21 PROPOSED DEPRESSED CURB FOR HANDICAP ACCESS.
 - C-22 EXISTING STONE CROSS AND FLAGPOLE TO BE RELOCATED. LOCATION TO BE DETERMINED BY CHURCH.
 - C-23 NOT USED.
 - C-24 PROPOSED PARKING BUMPER BLOCKS (TYP.) SEE DETAIL ON SHEET 5.
 - C-25 PROPOSED CONCRETE FILLED BOLLARD (TYP.) SEE DETAIL ON SHEET 5.
 - C-26 EXISTING FEATURES TO BE REMOVED (I.E. PAVING, TREES, CONCRETE, ETC.)
 - C-27 PROPOSED 4" D.I.P. (CL. 54) WATER SERVICE FOR SPRINKLER AND WATER USE. MECHANICAL DRAWINGS FOR DETAILS INSIDE BUILDING.
 - C-28 EXISTING WATER SERVICE TO BE ABANDONED. CONNECT EXISTING WATER SERVICE TO THE NEW SERVICE INSIDE THE PROPOSED ADDITION.
 - C-29 EXISTING SEWER SERVICE TO BE ABANDONED. INSTALL NEW 6" SANITARY HOUSE CONNECTION. TIE INTO EXISTING SHC IF FEASIBLE, OTHERWISE CONNECT TO EXISTING BUILDING IN SAME LOCATION AS EXISTING SERVICE. INSTALL CLEANOUT EVERY 75' O.C.
- EXISTING CLEANOUTS, CAPS AND MANHOLES TO BE ADJUSTED TO PROPOSED GRADE AS REQUIRED. SEE SHEET 2 FOR EXISTING FEATURES TO BE REMOVED.



The Vestry of Grace Church
 Liber 336 Folio 275
 175,917.72 Sq. Ft.
 or
 4.04 Acres

These plans for **SMH** construction, soil erosion and sediment control meet the requirements of Howard Soil Conservation District.

APPROVED: *John P. Rhoads*
 HOWARD SOIL CONSERVATION DISTRICT
 PLAN NUMBER: _____ DATE: 11/24/00

Reviewed for the Howard Conservation District and meets technical requirements:

APPROVED: *J. H. Welford*
 NATURAL RESOURCES CONSERVATION SERVICE
 DATE: 11/24/00

APPROVED: *[Signature]*
 HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION: *[Signature]* DATE: 11/21/00
 CHIEF, DIVISION OF LAND DEVELOPMENT: *[Signature]* DATE: 11/16/00

DIRECTOR: *[Signature]* DATE: 11/21/00

- * 75' STRUCTURE AND USE SETBACK REDUCED TO A MINIMUM OF 1' FOR PARKING SPACES AND TO MINIMUM OF 17' FOR PARKING AISLES PER BA 98-18E&V.
- ** 75' STRUCTURE AND USE SETBACK REDUCED TO A MINIMUM OF 34' FOR PARKING SPACES AND TO A MINIMUM OF 10' FOR PARKING AISLES PER BA 98-16E&V.
- *** 20' USE SETBACK REDUCED TO 10' FOR PARKING SPACES PER BA 98-16E&V.

MARYLAND LAND DESIGN, INC.
 CONSULTING ENGINEERS AND LAND PLANNERS

2001 MEADOW DRIVE
 WESTMINSTER, MARYLAND 21158
 TELEPHONE: (410) 857-0210 FAX: (410) 840-0143

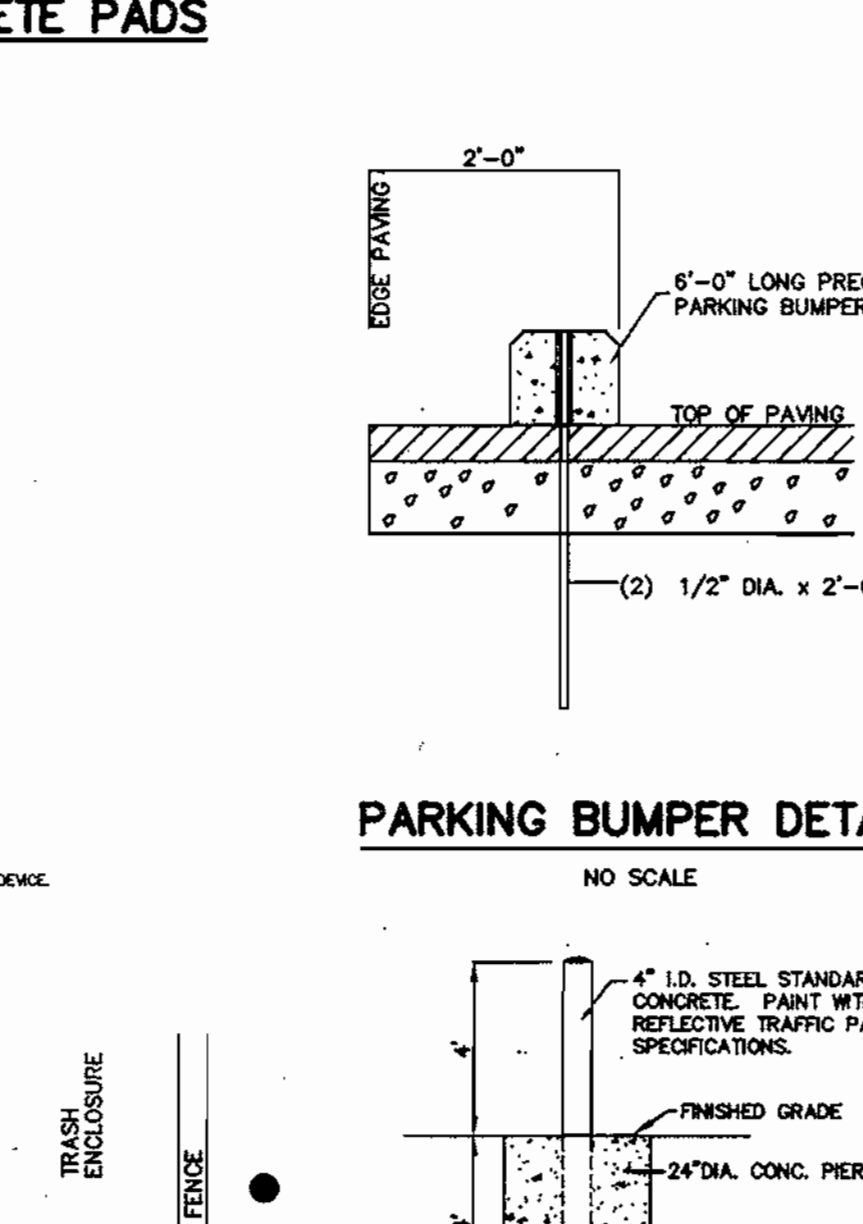
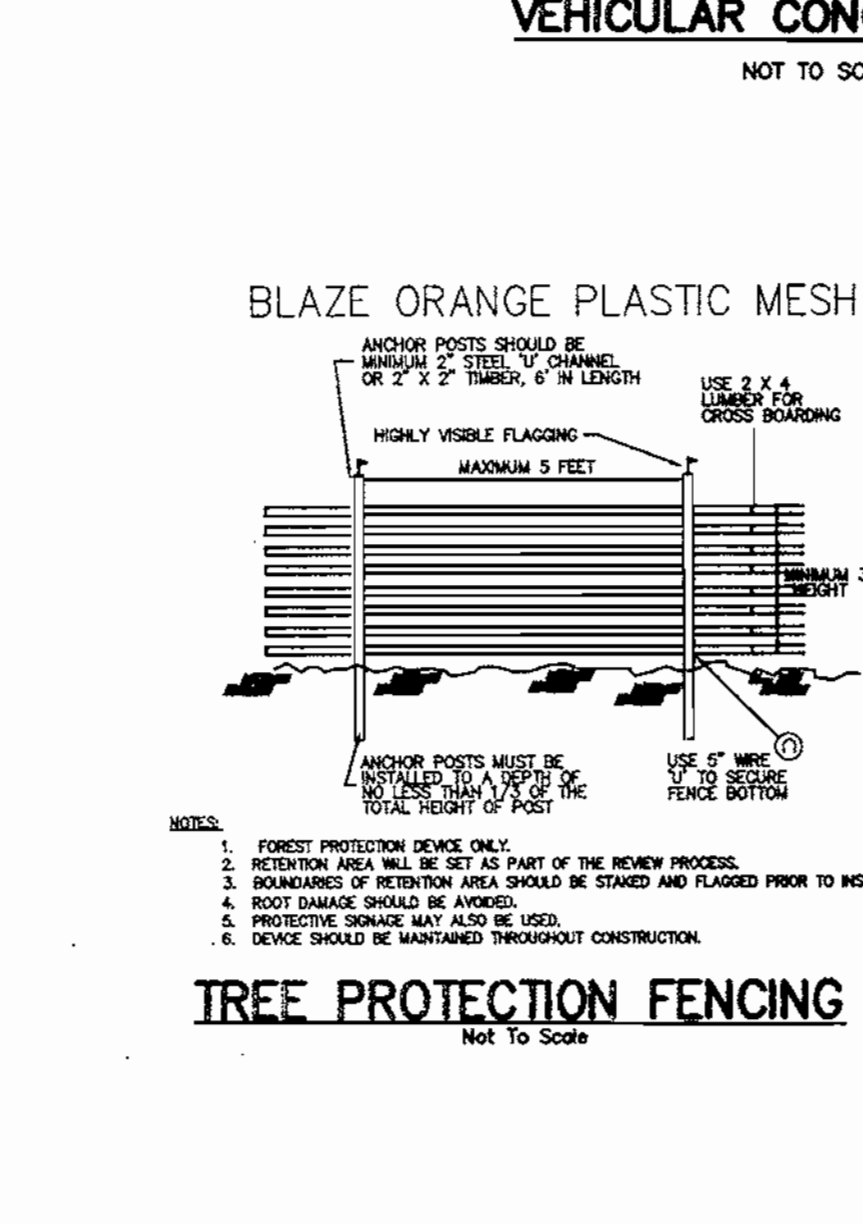
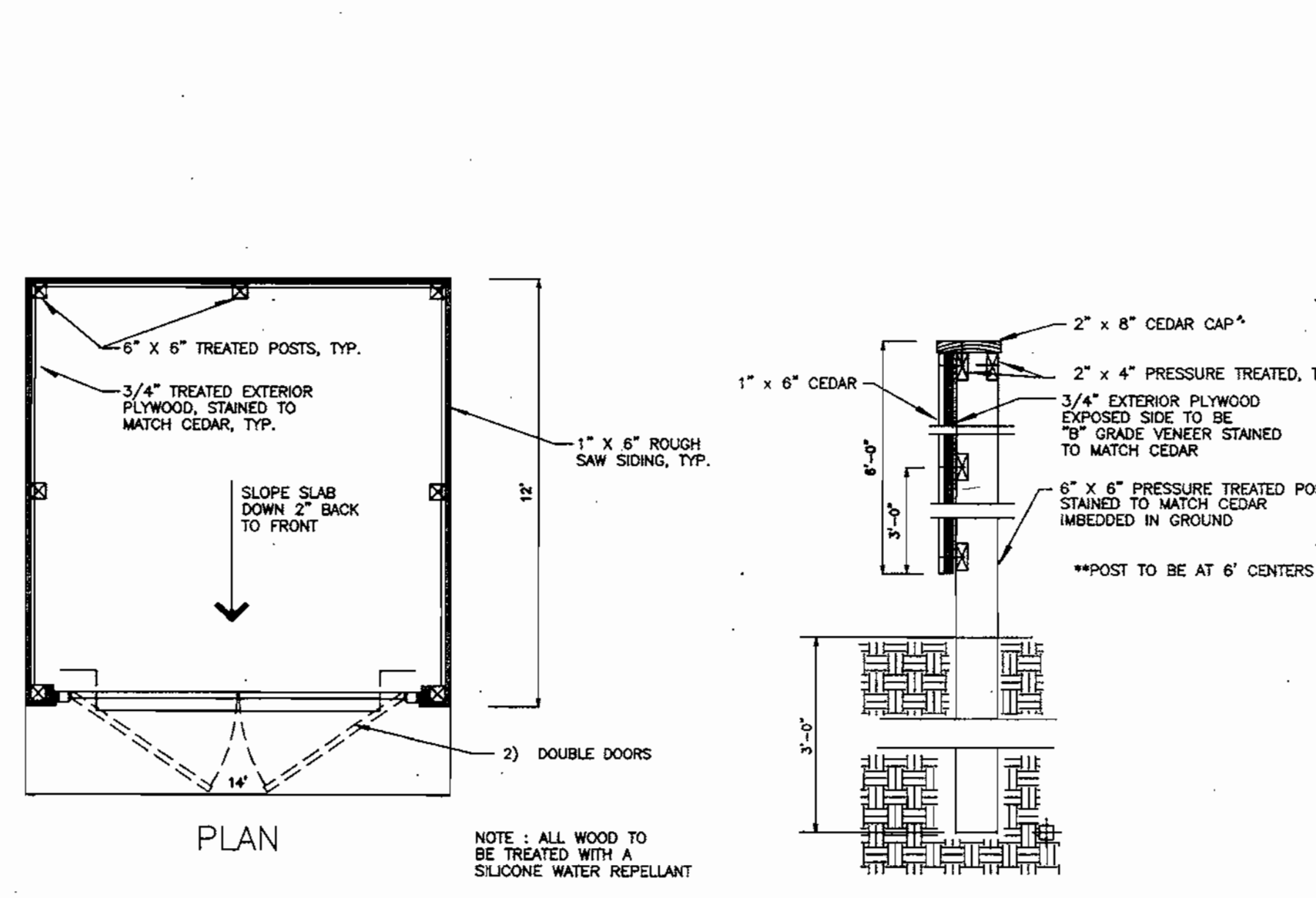
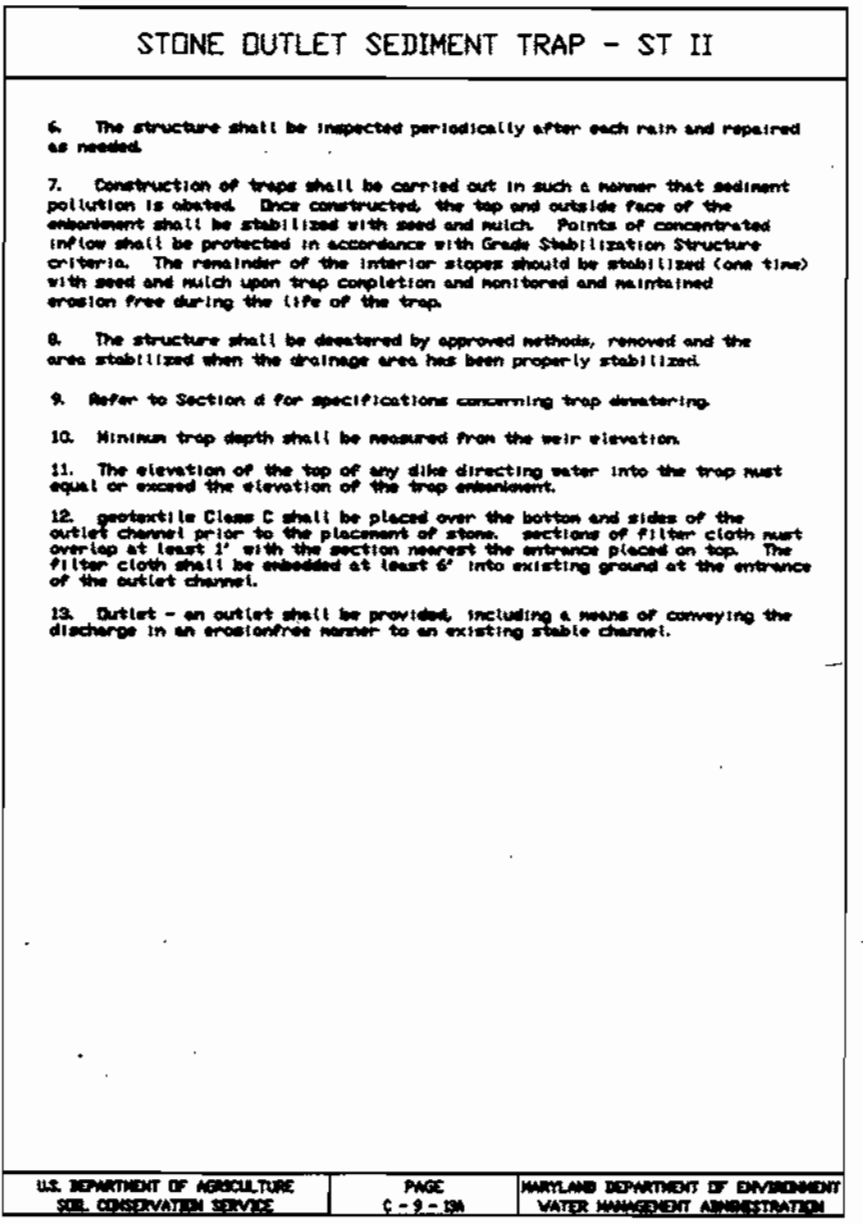
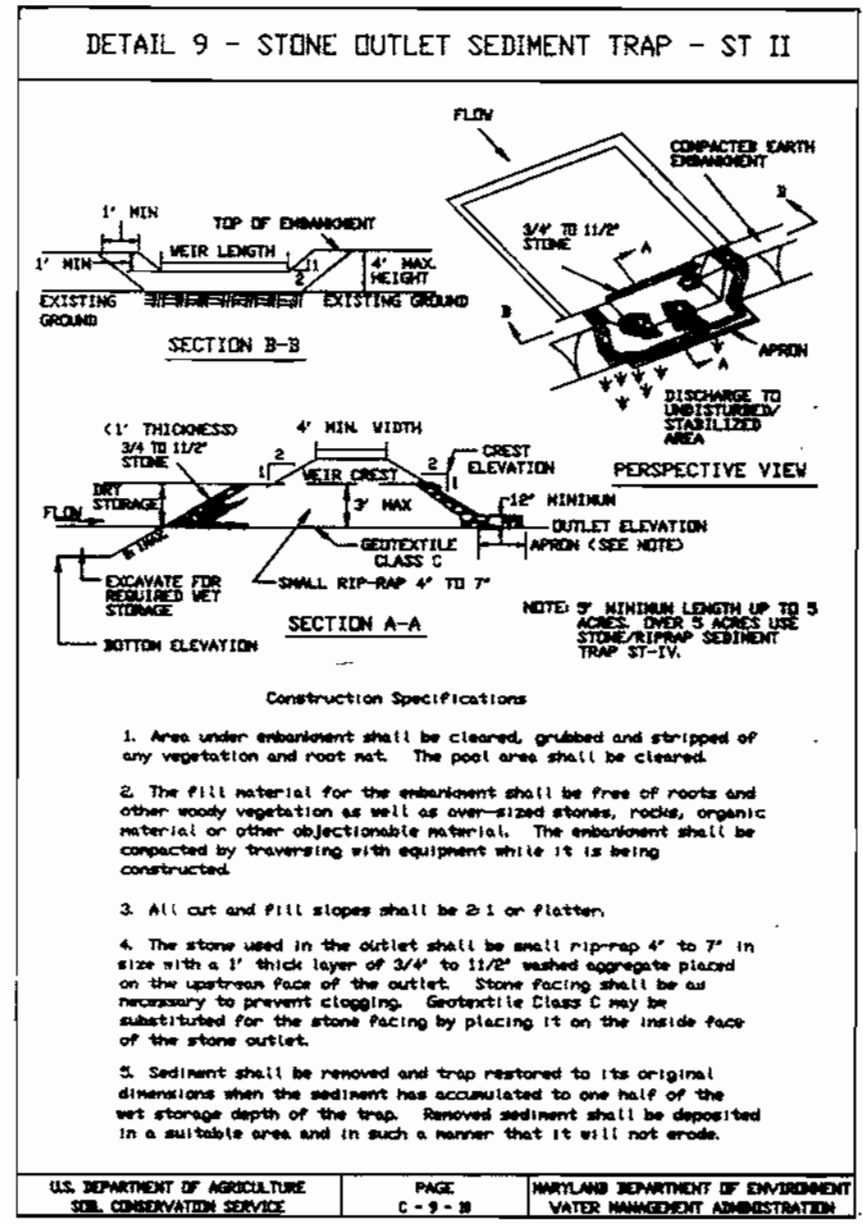
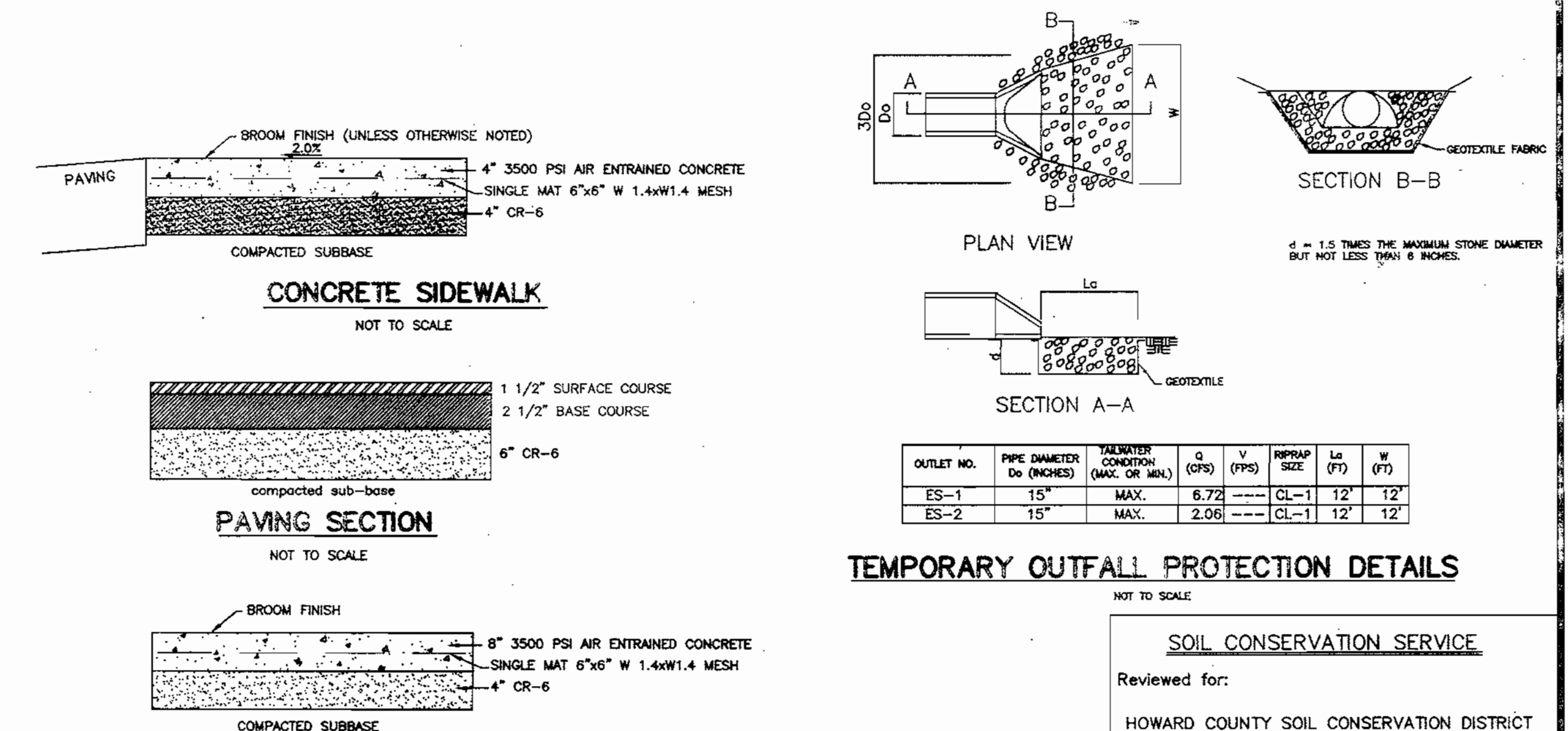
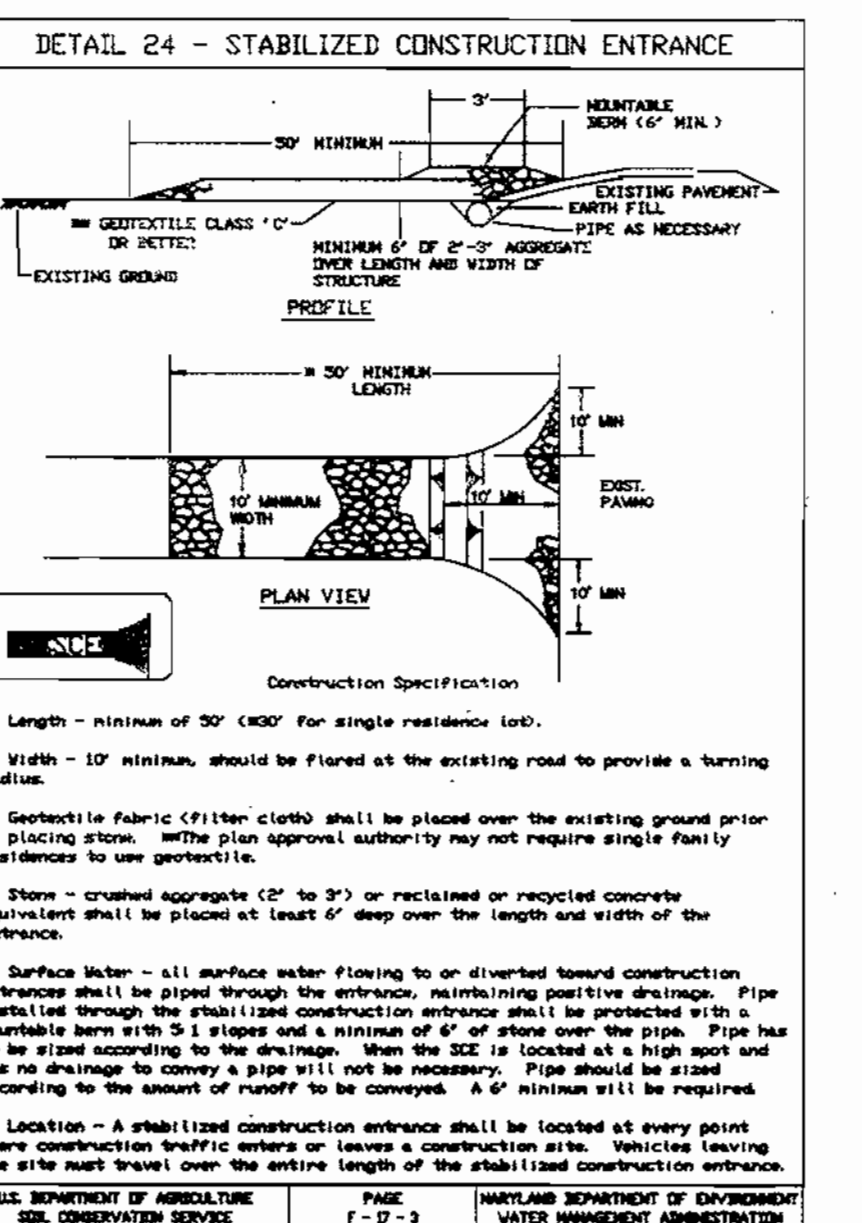
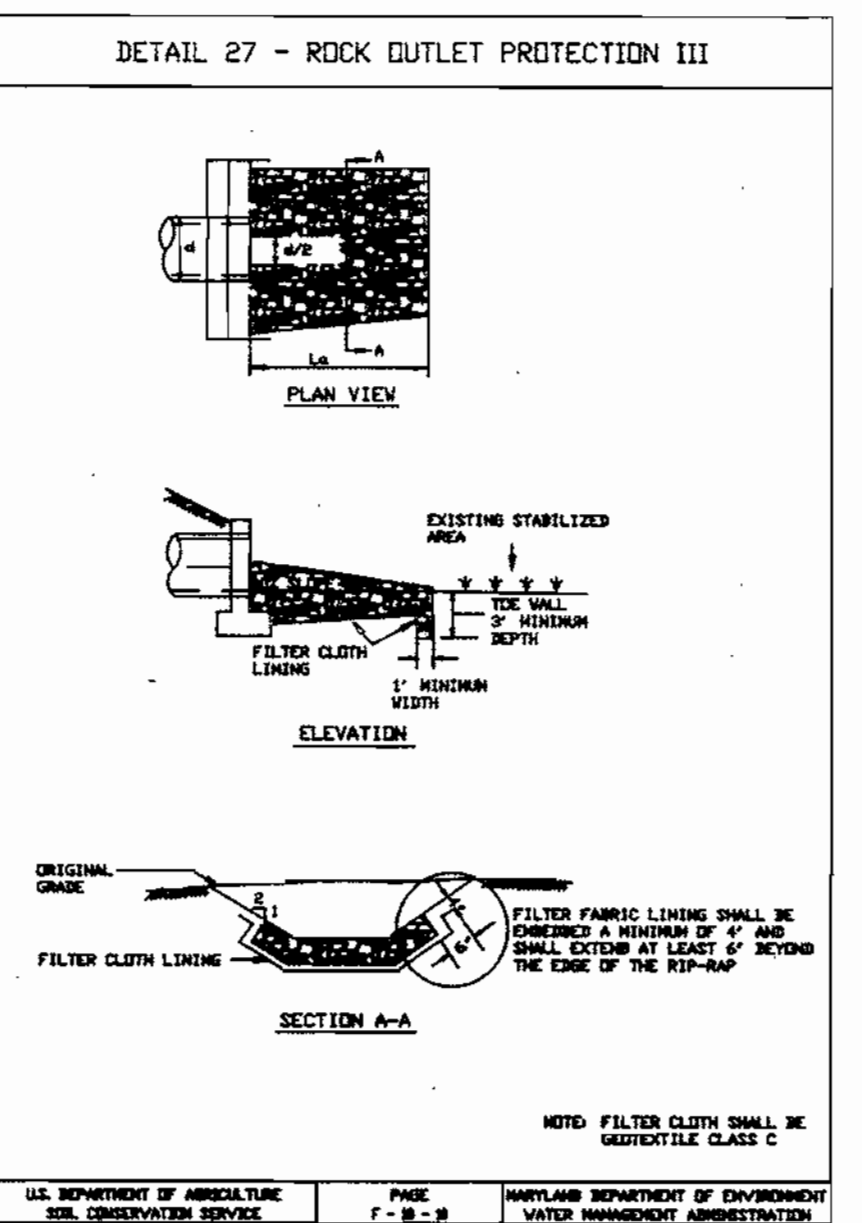
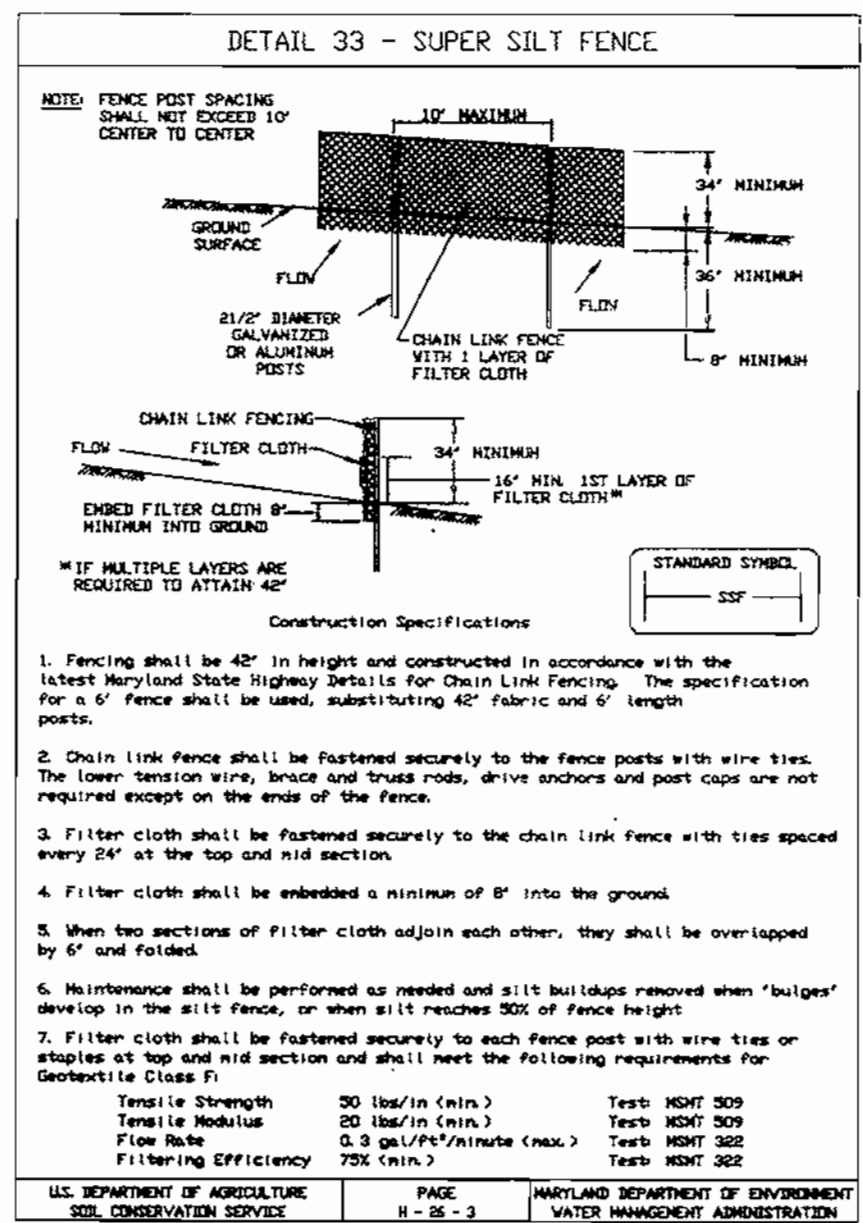
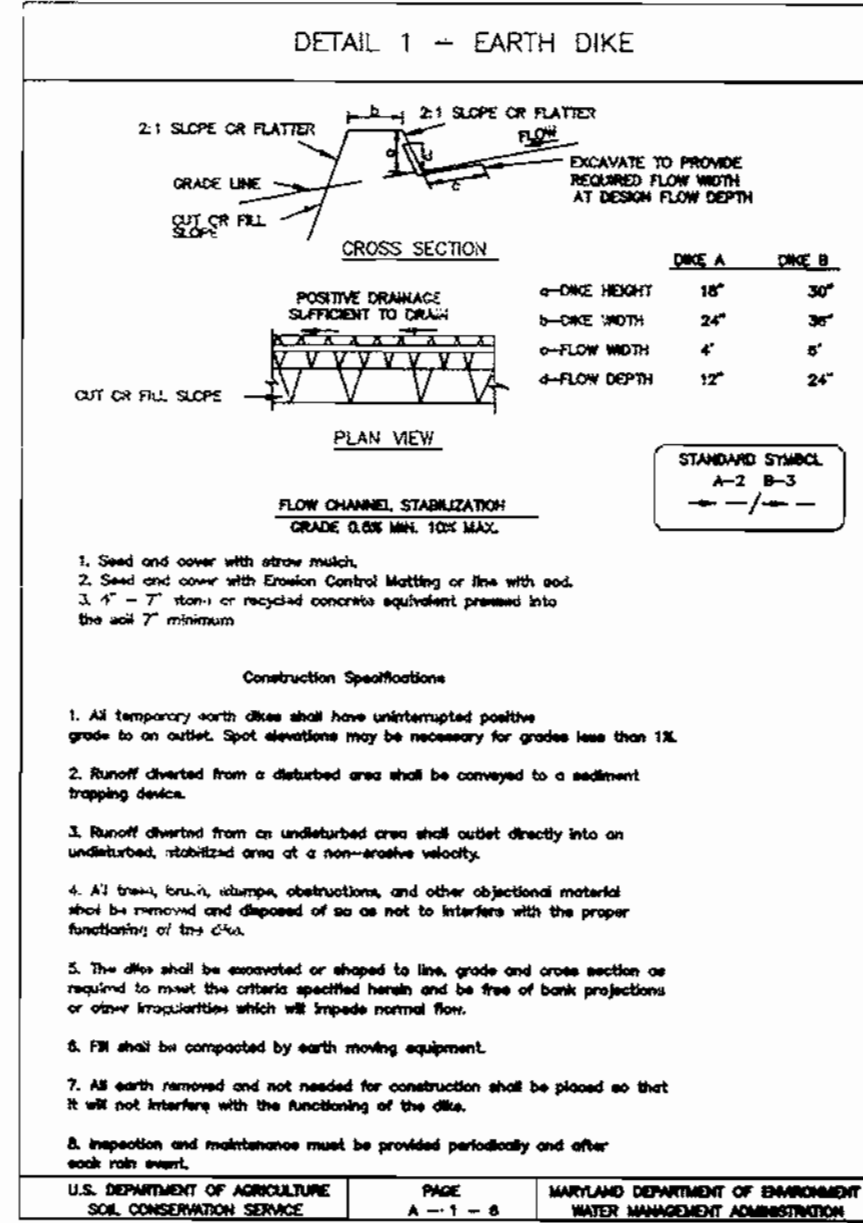
© COPYRIGHT 1998



REVISIONS		
NO.	DATE	DESCRIPTION

PLAN PREPARATION	
DRAWN BY: DAB	DATE: 29 JULY 1999
DESIGNED BY: DAB	FILE NO. 99020
CHECKED BY: KDB	DRAWING NO.

SITE PLAN		SCALE
GRACE EPISCOPAL CHURCH		1" = 30'
BUILDING ADDITION		SHEET NO.
LIBER 336 FOLIO 275		3 OF 12
1st ELECTION DISTRICT, TAX MAP: 37, BLOCK 6, PARCEL 431		
HOWARD COUNTY, MARYLAND		



SOIL CONSERVATION SERVICE

Reviewed for:

HOWARD COUNTY SOIL CONSERVATION DISTRICT

and meets Technical Requirements

J. M. Warfield 10/26/00 DATE

NDA NATURAL RESOURCES CONSERVATION SERVICE

SOIL CONSERVATION DISTRICT

This Development Plan is approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.

Approved: J. M. Warfield 10/27/00 DATE

HOWARD S.C.D. DATE

DEVELOPER

"I" We certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District.

Kristin D. Parmey 10/18/00 DATE

Print name below signature
Kristin D. Parmey

ENGINEER

"I" certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

Kristin D. Parmey 10-18-00 DATE

Print name below signature
Kristin D. Parmey

PERMANENT SEEDING NOTES

SCOPE: Planting permanent, long lived vegetative cover on graded and/or cleared areas and areas that have been in temporary vegetation for more than 1 year.

STANDARDS: The following notes shall conform to the 1984 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL published jointly by the Maryland Department of Environment - Water Management Administration, the Natural Resources Conservation Service, and the State Soil Conservation Committee.

The seed bed shall be prepared by loosening the soil to a depth of 3 to 5 inches and incorporating the lime and fertilizer into the loosened layer of soil. See G-20, Sec. 1-C.

For sites over 5 ac, soil tests will be performed to determine the exact nutrient and application rates for both lime and fertilizer. Soil tests will be prepared by the University of Maryland or a recognized commercial laboratory. If the existing soil does not meet the minimum conditions as stated in G-20, sec. 1-C, then topsoil will need to be obtained that meets these conditions and applied so as to meet the requirements in G-21.

For sites of 5 ac. or less of disturbance, the following fertilizer and lime rates shall apply:

Fertilizer shall consist of a mixture of 10-20-20 and be applied at the following rates: 400 lb per acre (2 lb per 1000 sq. ft.), P205 = 175 lb per acre (4 lb per 1000 sq. ft.), K2O = 175 lb per acre (4 lb per 1000 sq. ft.). Fertilizer shall meet the requirements in G-20, sec. 1-C.

Lime shall be applied at a rate of 2 tons per acre (100 lb per 1000 sq. ft.) and shall meet the requirements in G-20, sec. 1-C.

Seed tags shall be made available to the inspector to verify the type and rate of seed used. The seed must meet the requirements in G-20, sec. 1-C.

Mulching will be applied immediately after seeding and will need to meet the requirements in G-20, sec. 1-F, G, & H.

Refer to G-20, sec. 1-E for methods of seeding specifications.

Refer to G-20, sec. 4 for soil specifications.

Refer to G-20, sec. 5 for turfgrass establishment specifications.

Seeding mixtures shall be selected from or will be equal to those on Table 25.

TEMPORARY SEEDING NOTES

SCOPE: Planting short term (no more than 1 year) vegetation to temporarily stabilize any areas where soil disturbance has occurred, until the area can be permanently stabilized with vegetative or non-vegetative practices.

STANDARDS: The following notes shall conform to the 1984 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL published jointly by the Maryland Department of Environment - Water Management Administration, the Natural Resources Conservation Service, and the State Soil Conservation Committee.

The seed bed shall be prepared by loosening the soil to a depth of 3 to 5 inches and incorporating the lime and fertilizer into the loosened layer of soil. See G-20, Sec. 1-C.

Fertilizer shall consist of a mixture of 10-10-10 and be applied at a rate of 600 lb per acre (15 lb per 1000 sq. ft.) and will meet the requirements in G-20, sec. 1-C.

Lime shall be applied at a rate of 2 tons per acre (100 lb per 1000 sq. ft.) and shall meet the requirements in G-20, sec. 1-C.

Seed tags shall be made available to the inspector to verify the type and rate of seed used. The seed must meet the requirements in G-20, sec. 1-F, G, & H.

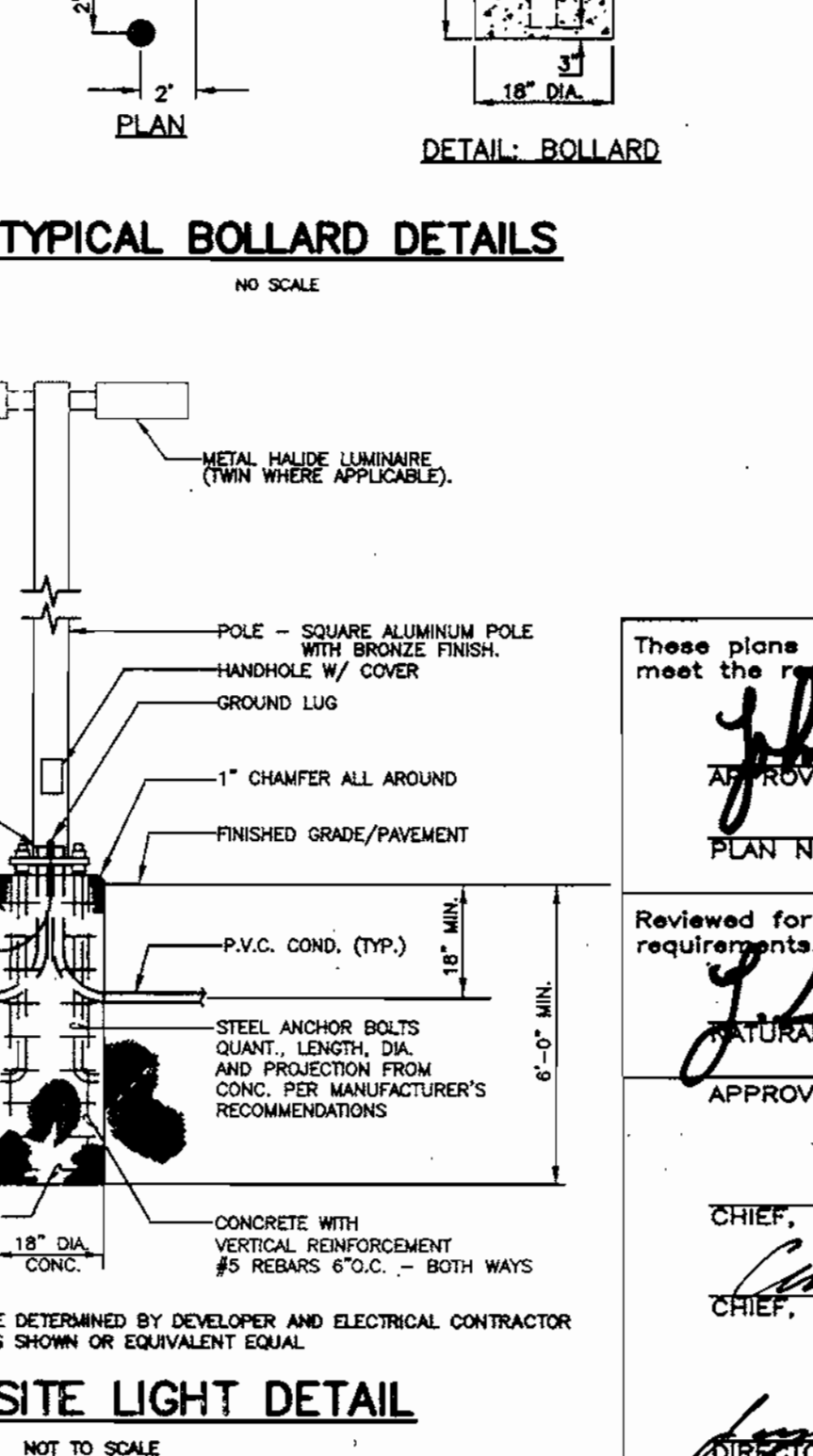
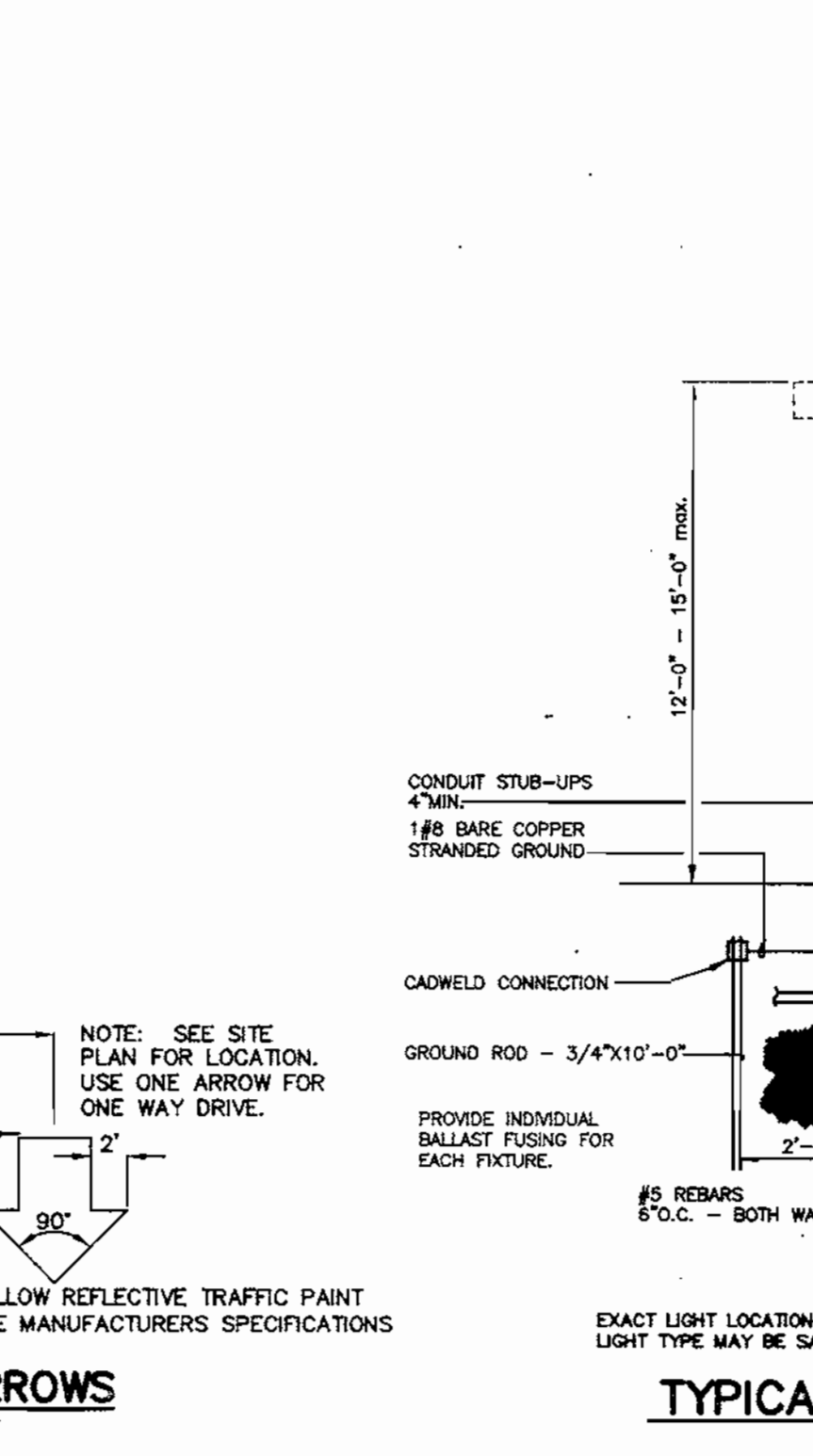
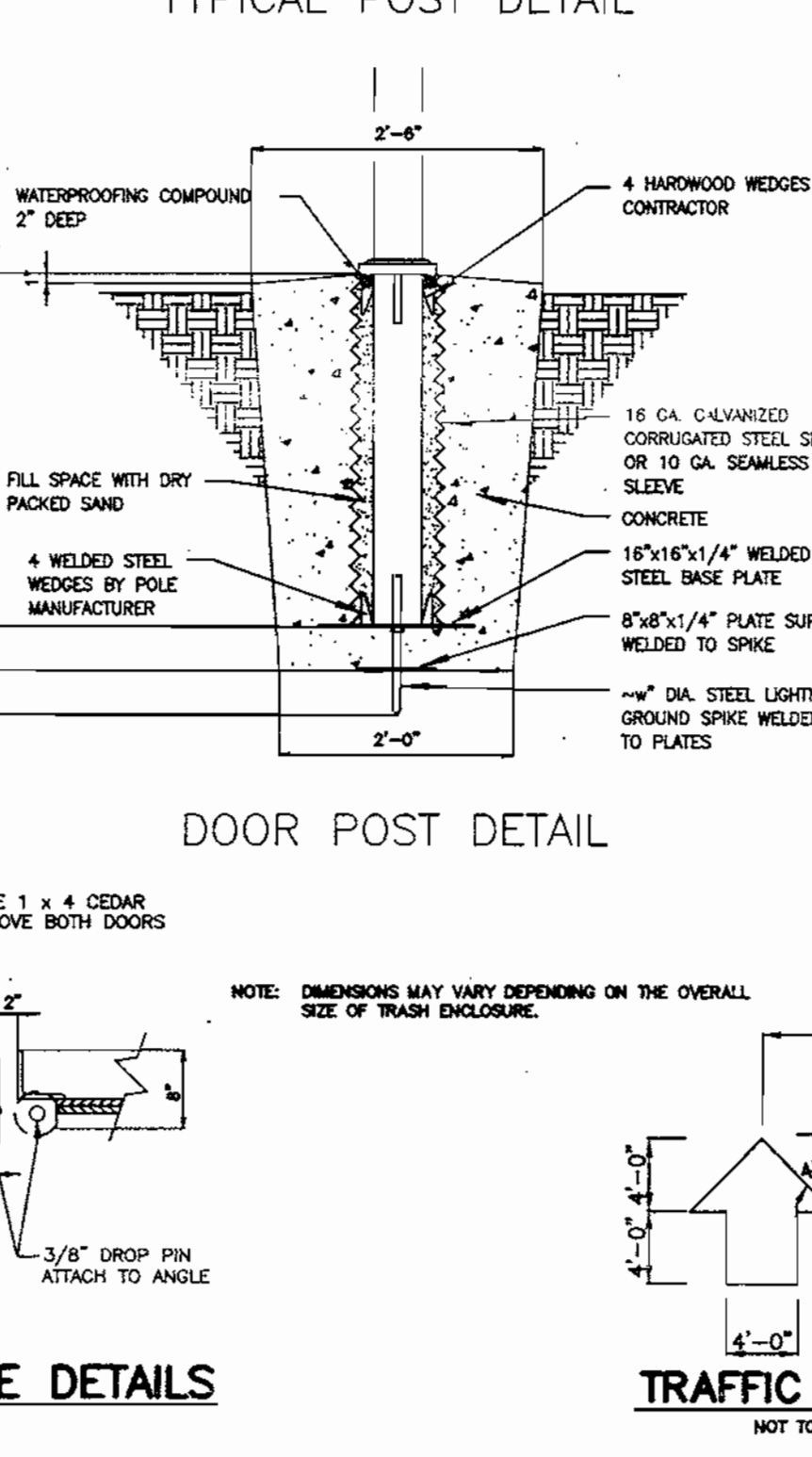
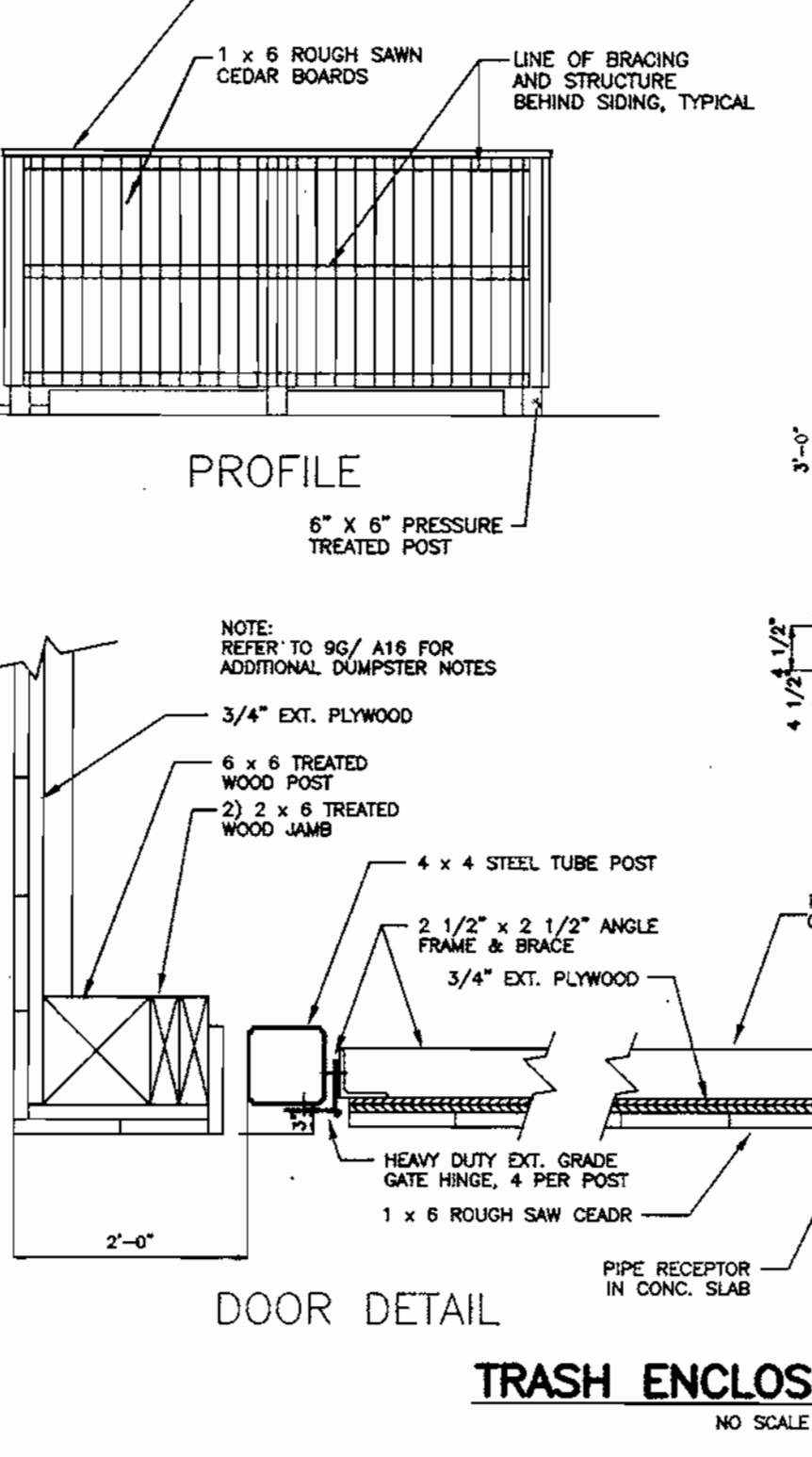
Mulching will be applied immediately after seeding and will need to meet the requirements in G-20, sec. 1-F, G, & H.

Seeding mixtures shall be selected from or will be equal to those on Table 26.

STANDARD SEDIMENT CONTROL NOTES

- A minimum of 48 hours notice must be given to the Howard County Department of Inspections, Licenses and permits, sediment control division prior to the start of any construction (315-1855).
- All vegetative and structural practices are to be installed according to the provisions of the plan and one to be in accordance with the 1984 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL and revisions thereto.
- Following initial soil disturbance or re-disturbance, permanent or temporary stabilization shall be completed within: (a) 72 hours after start of any permanent sediment control structure, (b) permanent slope and all slopes steeper than 3:1, (c) 1 day on all other disturbed or graded areas on the project site.
- All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol. 1 Chapter 7 of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
- All disturbed areas must be stabilized within the time period specified above in accordance with the 1984 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seeding, and mulching (Sec. G). Temporary stabilization with mulch shall only be done when recommended seeding does 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 permission for their removal has been obtained from the Howard County Sediment Control Inspector.
- SITE ANALYSIS:**

Total Area of Site	= 4.50 Acres
Area Disturbed	= 3.84 Acres
Area to be seeded or paved	= 1.37 Acres
Area to be vegetatively stabilized	= 2.47 Acres
Total Dist.	= 4.84 Acres
Total Fill	= 0.66 Acres
- Any sediment control practice that is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
- Additional sediment control must be provided, if deemed necessary by the Howard County Sediment Control Inspector.
- On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be required upon completion of installation of permanent erosion and sediment control. No further processing with any other earth disturbance or grading. Other building or grading inspection agencies may not be notified until the final approval by the inspection agency is made.
- Trenches for the construction of utilities are limited to three pipe lengths and that which shall be back-filled and stabilized within one working day, whichever is shorter.



These plans for construction, soil erosion and sediment control meet the requirements of Howard Soil Conservation District.

J. M. Warfield 10/26/00 DATE

APPROVED: HOWARD SOIL CONSERVATION DISTRICT

PLAN NUMBER

Reviewed for the Howard Conservation District and meets technical requirements

J. M. Warfield 10/26/00 DATE

NATURAL RESOURCES CONSERVATION SERVICE

APPROVED: Howard County Department of Planning and Zoning

CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE 11/2/00

CHIEF, DIVISION OF LAND DEVELOPMENT DATE 11/7/00

11/2/00 DATE

MARYLAND LAND DESIGN, INC.

CONSULTING ENGINEERS AND LAND PLANNERS

2001 MEADOW DRIVE
WESTMINSTER, MARYLAND 21158
TELEPHONE: (410) 857-0210 FAX: (410) 840-0143

© COPYRIGHT 1998

REVISIONS		
NO.	DATE	DESCRIPTION

PLAN PREPARATION	
DRAWN BY: DAB	DATE: 29 JULY 1999
DESIGNED BY: DAB	FILE NO. 98030
CHECKED BY: KOB	DRAWING NO.

MISCELLANEOUS DETAILS

GRACE EPISCOPAL CHURCH

BUILDING ADDITION

LIBER 336 FOLIO 275

1st ELECTION DISTRICT, TAX MAP: 37, BLOCK 6, PARCEL 431

HOWARD COUNTY, MARYLAND

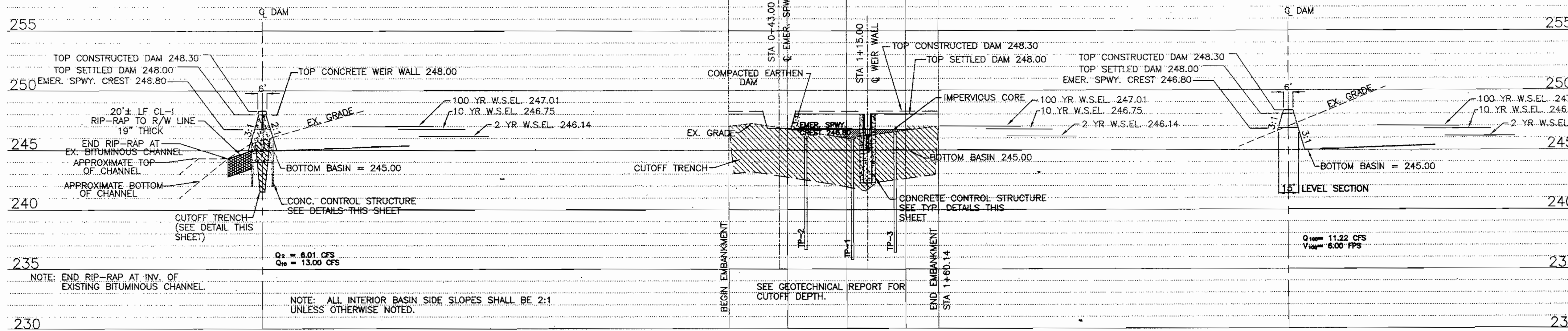
SCALE

NO SCALE

SHEET NO.

5 OF 12

SDP00-40



SECTION THRU EMBANKMENT

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

PROFILE ALONG CENTERLINE OF EMBANKMENT

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

PROFILE THRU EMERGENCY SPILLWAY

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

PER THE SOILS REPORT PREPARED BY HERBST/BENSON AND ASSOCIATES (JUNE 23, 1999) THE FOLLOWING RECOMMENDATIONS FOR CONSTRUCTION OF THE BASIN SHALL BE FOLLOWED:

- WITHIN THE EMBANKMENT AREA, STRIP THE TOPSOIL AND REMOVE IN-PLACE FILL AND ANY SOFT OR OTHERWISE UNSUITABLE MATERIALS TO EXPOSE STABLE, UNDISTURBED NATIVE SOILS.
- PROF ROLL THE EXPOSED SURFACE TO A UNIFORM CONDITION FURTHER CUTTING OUT ANY SOFT OR OTHERWISE UNSUITABLE SPOTS.
- EXCAVATE THE CUTOFF TRENCH, BACKFILL THE RESULTING EXCAVATION WITH ACCEPTABLE FINE-GRAINED MATERIALS AND CONSTRUCT THE PRINCIPAL SPILLWAY. THE CUTOFF TRENCH SHOULD EXTEND A MINIMUM DEPTH OF 4 FEET BELOW THE STRIPPED/UNDERCUT SURFACE.
- FILL THE DESIGNATED EMBANKMENT AREA WITH CONTROLLED FILL TO ACHIEVE PLAN GRADE. THE FILL EMBANKMENT SHALL BE PROVIDED WITH AN IMPERVIOUS CORE EXTENDING FROM THE TOP OF THE CUT-OFF TRENCH TO AT LEAST THE DESIGN 10-YEAR WATER SURFACE ELEVATION. ALL FILL PLACEMENT AND COMPACTION SHALL BE IN ACCORDANCE WITH APPENDIX I, COMPACTED FILL. THE FILL MATERIALS USED IN THE GENERAL FILL EMBANKMENT AND DESIGNATED IMPERVIOUS ZONES SHALL CONFORM TO APPROVED MATERIAL TYPES.
- WITHIN THE POND BASIN AREA, CONTINUE TO EXCAVATE THE POND TO ACHIEVE PLAN GRADE.

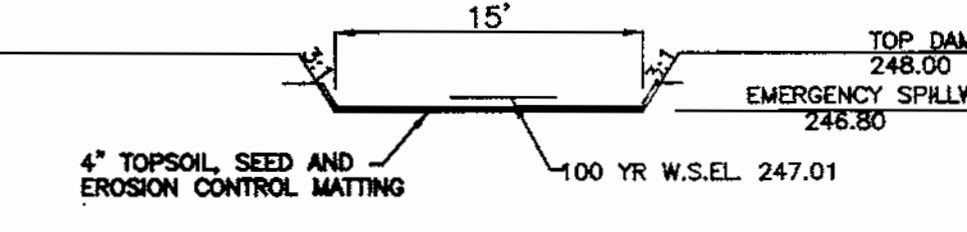
CONVERSION OF SEDIMENT TRAP TO SWM BASIN SEQUENCE OF CONSTRUCTION

- NOTIFY HOWARD COUNTY DEPARTMENT OF PERMITS AND LICENSES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION OF BASIN.
- REMOVE SEDIMENT TRAP ROCK OUTLET STRUCTURE.
- RE-GRADE TO DESIGN ELEVATIONS. INSTALL CONCRETE CONTROL STRUCTURE.
- INSTALL NEW STORM DRAIN RIP-RAP PROTECTION AND PILOT CHANNEL WHERE SHOWN.
- PERMANENTLY STABILIZE BASIN.

*CONTACT THE ENGINEER FOR INSPECTION OF BASIN DURING EACH PHASE OF CONSTRUCTION NOTED ABOVE FOR AS-BUILT INSPECTION.

DESIGN STORM	FACILITY INFLOW	FACILITY DISCHARGE	WATER SURFACE ELEVATION	STORAGE VOLUME (AC-FT)	"Q" ALLOWABLE
2 YEAR	7.12 CFS	6.01 CFS	246.14	0.06	6.18 CFS
10 YEAR	14.30 CFS	13.00 CFS	246.75	0.1165	13.14 CFS
100 YEAR	22.44 CFS	22.43 CFS	247.01	0.136	N/A

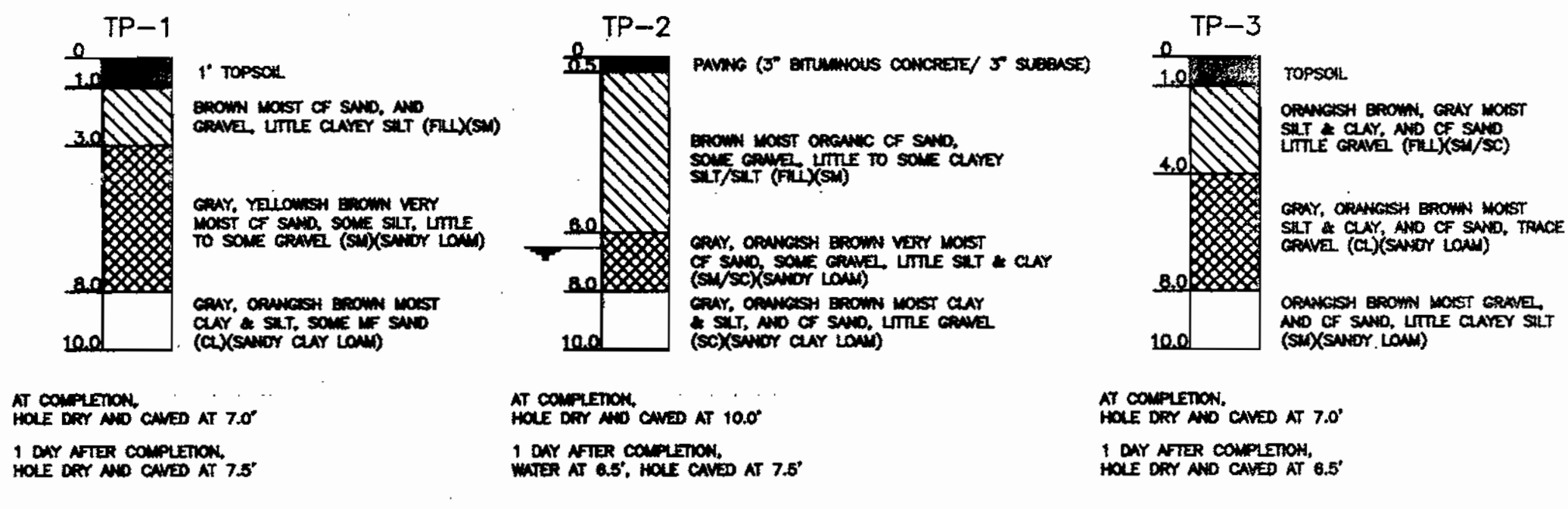
CLASSIFICATION: MD POND CODE 378 NOT APPLICABLE
 STORAGE-HEIGHT PRODUCT: (10 YEAR) = 0.20 AC-FT
 WATERSHED AREA TO FACILITY: 4.03± ACRES
 LEVEL OF MANAGEMENT PROVIDED BY FACILITY: 2 AND 10 YEAR QUANTITY, STORMCEPTOR PROVIDED FOR FOR WATER QUALITY MANAGEMENT FROM FIRST 1/2" OF RUNOFF FROM NEW IMPERVIOUS AREAS.



EMERGENCY SPILLWAY SECTION

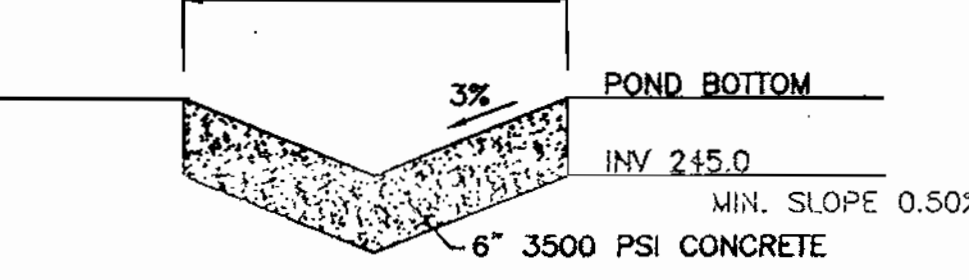
NOT TO SCALE

4" TOPSOIL, SEED AND EROSION CONTROL MATTING



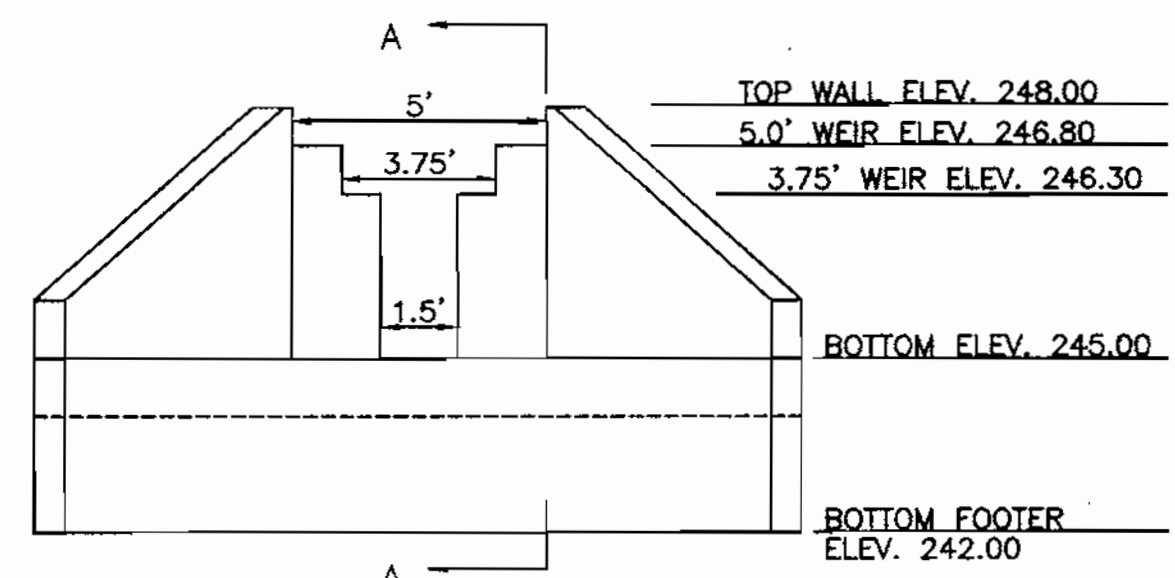
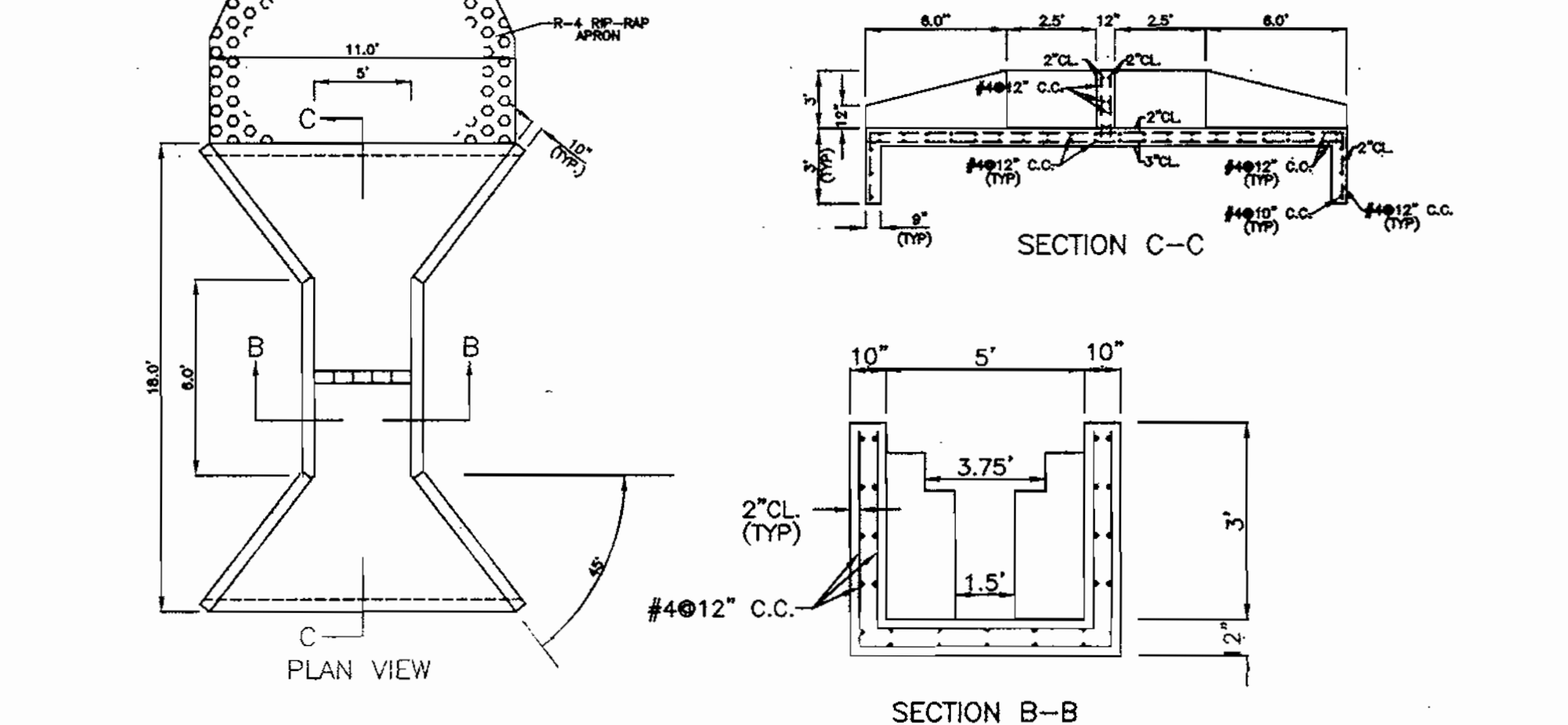
SOIL BORING LOG

NOT TO SCALE



PILOT CHANNEL DETAIL

NOT TO SCALE

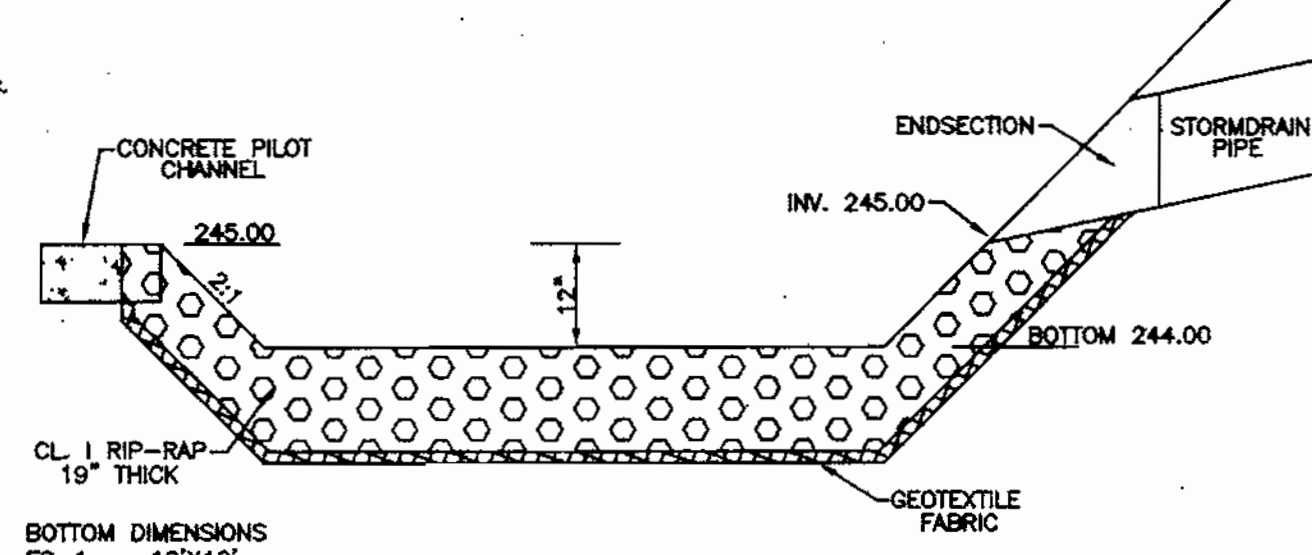


- NOTES:
- ALL EXPOSED EDGES TO HAVE 3/4" X 3/4" CHAMFER OR AS DIRECTED.
 - CONCRETE SHALL BE SHA MIX NO. 3 (f_c = 3500 PSI @ 28 DAYS)
 - REINFORCING STEEL SHALL BE ASTM A-615 GRADE 60.
 - QUANTITIES IN TABLE FOR ESTIMATING ONLY.

VOL CONC. (cy)	STEEL (lbs)
14.5	1100

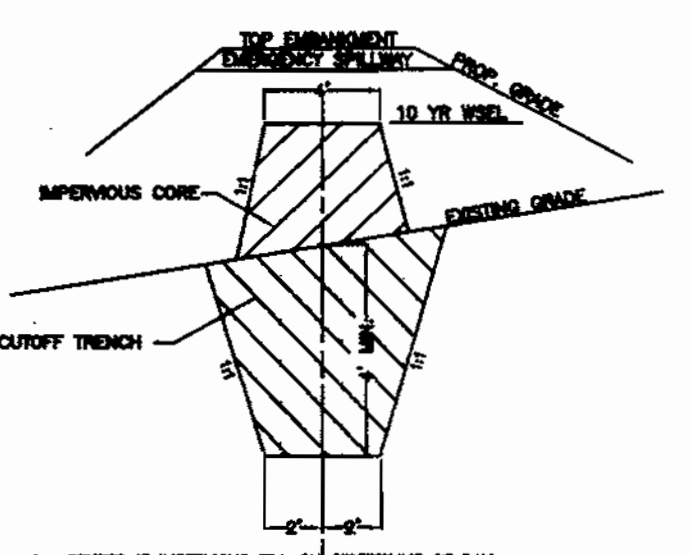
LOW RISE STORMWATER MANAGEMENT CONTROL STRUCTURE

NOT TO SCALE



SECTION - FOREBAY

NOT TO SCALE



CUTOFF TRENCH DETAIL

NOT TO SCALE

- CENTER OF IMPERVIOUS FILL ON CENTERLINE OF DAM.
- IMPERVIOUS FILL SHALL MEET U.S. CLASSIFICATION CLAY, SC, OR CH.
- CURVE TO 10% OF DAM'S 1:1 SLOPE.
- SEED STRIP SHALL BE 1" OF PLANT.
- TRENCH SHALL EXTEND ALONG CENTERLINE OF FILL TO A MINIMUM DEPTH OF 4 FEET BELOW EXISTING GRACE.
- CUTOFF TRENCH TO EXTEND 4 FEET BELOW ALL PILES, STRUCTURES, ETC.
- CORE SHALL EXCEED VERTICALLY FROM EXISTING SURFACE TO THE FOREBAY POOL WATER SURFACE ELEVATION AND HORIZONTALLY 10' AT EACH END.

I CERTIFY THAT THIS POND MEETS ALL REQUIREMENTS FOR HAZARD CLASS A, B OR C (REQUIREMENTS AS STATED IN THE SOIL CONSERVATION SERVICE MARYLAND STANDARDS AND SPECIFICATIONS FOR POND CODE 378, NOVEMBER 1992). ALL NECESSARY INVESTIGATIONS AND COMPUTATIONS HAVE BEEN PERFORMED TO VERIFY THIS FINDING. A COPY OF SAID INFORMATION HAS BEEN SUPPLIED TO HOWARD COUNTY SOIL CONSERVATION DISTRICT.

SIGNATURE: Kristin D. Barry PE # 17740
 NAME: Kristin D. Barry DATE: 10-18-2000

DEVELOPER'S/LANDOWNER'S CERTIFICATION:
 I/WE HEREBY 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 ATTENDING AT A DEPT. OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD COUNTY 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 COUNTY SOIL CONSERVATION DISTRICT.

DEVELOPER: *Albert C. Arington* DATE: 9/22/00
 NAME: ALBERT C. ARINGTON & SONS

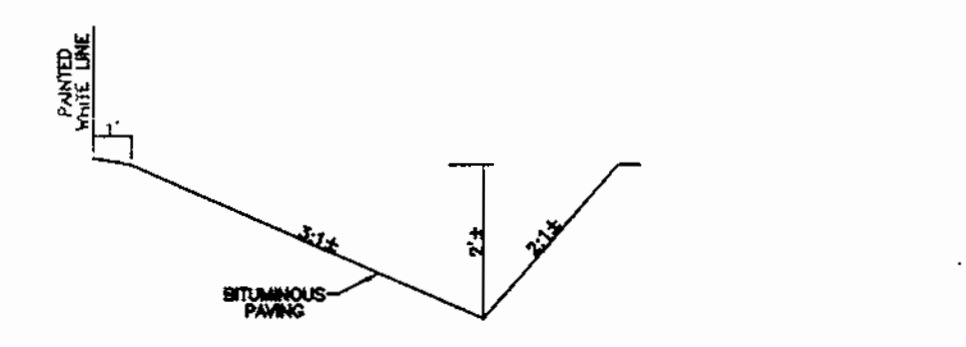
ENGINEER CERTIFICATION:
 I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.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

ENGINEER: Kristin D. Barry PE # 17740
 NAME: Kristin D. Barry DATE: 10-18-2000

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

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

MAINTENANCE RESPONSIBILITY:
 1. THE STORMWATER MANAGEMENT FACILITY SHOWN ON THESE PLANS SHALL BE CONSTRUCTED AND MAINTAINED BY THE OWNER.
 2. OWNER, HIS HEIRS OR ASSIGNS SHALL BE RESPONSIBLE FOR CONTINUING MAINTENANCE OF THE FACILITY WHICH SHALL INCLUDE SUCH ITEMS AS MOWING, CLEANING AND REMOVING OF SEDIMENT AND/OR DEBRIS. THE TIME PERIOD FOR ITS CONTINUING MAINTENANCE SHALL BE ON AN "AS-NEEDED" BASIS BUT SHALL NOT BE DELAYED LONGER THAN 30 DAYS.
 3. OWNER, HIS HEIRS OR ASSIGNS SHALL BE RESPONSIBLE FOR REPAIRING ANY STRUCTURAL DAMAGES OR FAILURE WHICH MAY OCCUR AS A RESULT OF NEGLIGENCE, ACCIDENT OR MISUSE. IN THE EVENT OF STRUCTURAL DAMAGE, OWNER SHALL BE RESPONSIBLE TO MAKE NECESSARY REPAIRS AS QUICKLY AS POSSIBLE BUT IN ANY CASE WITHIN 90 DAYS.
 4. OWNER SHALL GRANT RIGHT OF ENTRY TO AUTHORIZED COUNTY PERSONNEL FOR PURPOSE OF INSPECTION AND/OR MONITORING WHICH SHALL BE CONDUCTED ONLY DURING NORMAL COUNTY WORKING HOURS (8:00 A.M. TO 5:00 P.M. MONDAY - FRIDAY).



TYPICAL SECTION EX. BITUMINOUS ROADSIDE SWALE

LANDING ROAD

APPROVED: *John D. Johnson* DATE: 10/26/00
 PLAN NUMBER: _____ DATE: _____

REVIEWED: *John D. Johnson* DATE: 10/26/00
 NATURAL RESOURCES CONSERVATION SERVICE DATE: _____

APPROVED: *John D. Johnson* DATE: 10/26/00
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE: _____

APPROVED: *John D. Johnson* DATE: 10/26/00
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE: _____

MARYLAND LAND DESIGN, INC.
 CONSULTING ENGINEERS AND LAND PLANNERS
 2001 MEADOW DRIVE
 WESTMINSTER, MARYLAND 21158
 TELEPHONE: (410) 857-0210 FAX: (410) 840-0143
 © COPYRIGHT 1998



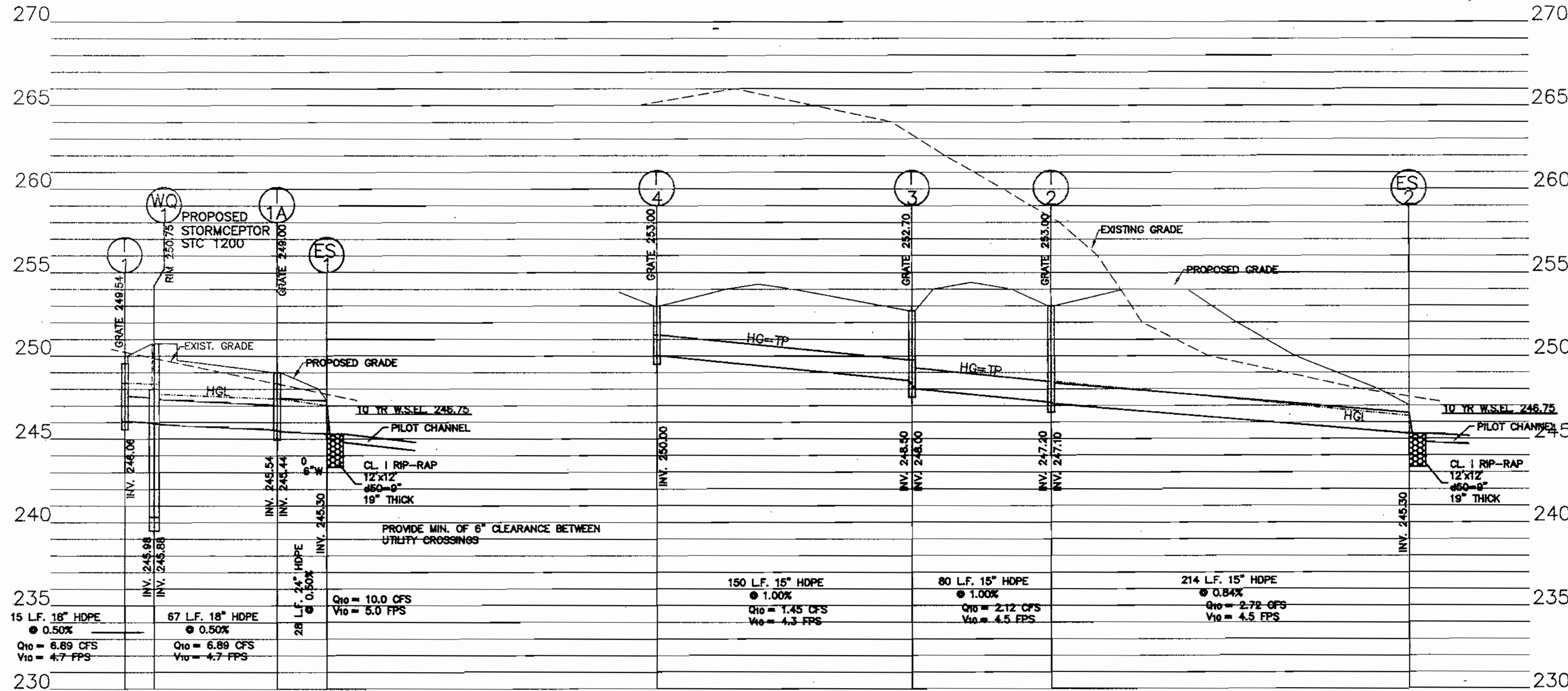
REVISIONS		
NO.	DATE	DESCRIPTION

PLAN PREPARATION	
DRAWN BY: DAB	29 JULY 1999
DESIGNED BY: KDB	FILE NO. 99020
CHECKED BY: KDB	DRAWING NO.

SWM NOTES AND DETAILS	
GRACE EPISCOPAL CHURCH	
BUILDING ADDITION	
LIBER 336 FOLIO 275	
1st ELECTION DISTRICT, TAX MAP: 37, BLOCK 6, PARCEL 431	
HOWARD COUNTY, MARYLAND	

SCALE	
1" = 50'	
SHEET NO. 6 OF 12	

SDP 00-40



- CONTRACTOR INSTALLATION INSTRUCTIONS**
PRECAST CONCRETE STORMCEPTOR
DISC DESIGN
- STAKE-OUT THE LOCATION OF THE STORMCEPTOR AND EXCAVATE HOLE. EXCAVATE ADEQUATE SPACE TO CONNECT INLET AND OUTLET PIPES TO UNIT. INSTALL A 1/2" DEEP (OR AS REQUIRED) LAYER OF COMPACTED AGGREGATE SUBGRADE AT THE BOTTOM OF THE EXCAVATION. INSTALL TRENCH BOX OR SHORING AS NEEDED.
 - CHECK ELEVATION OF UNIT BY MEASURING ITS SECTIONS FROM BASE OF THE STORAGE CHAMBER (OUTSIDE 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 SUBGRADE ELEVATION. CHECK ELEVATION OF INSTALLED SUBGRADE 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 OR HOOKS INTO BASE OF STORAGE CHAMBER.) ATTACH CABLES OR CHAINS TO LIFT LINES ON THE BASE SLAB. USING LARGE EQUIPMENT OR CRANE, LIFT AND PLACE THE STORAGE CHAMBER IN THE EXCAVATED HOLE ON THE SUBGRADE. 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 SUPPLYMENT, IF NOT PRELUBRICATED). INSTALL ADDITIONAL STORAGE CHAMBER SECTIONS, AS REQUIRED (PROCEDURE IS SAME AS STEP 4).
 - INSTALL REDUCING SLAB. (STORMCEPTOR MODELS STD-2400, STD-3600, STD-4800, STD-6000 AND STD-7200) CHECK THAT SECTION IS SET FLUSH, LEVEL AND IS AT THE PROPER ELEVATION. INSTALL RUBBER GASKET ON THE TRANSITION SLAB SPOUT AND COAT WITH LUBRICATING GREASE (PROVIDED IN SUPPLYMENT).
 - 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 INSERT. INSTALL RUBBER GASKET ON TOP OF BYPASS SECTION AND COAT WITH LUBRICATING GREASE, IF NOT PRELUBRICATED.
 - INSTALL INLET AND OUTLET STORM DRAIN PIPES. CONNECT INLET AND OUTLET STORM DRAIN PIPES WITH FLEXIBLE BOOTS (WHEN PROVIDED) AND WITH NON-SHINK GROUT WHEN NO FLEXIBLE BOOTS ARE PROVIDED. THE INVERT OF THE INLET AND OUTLET PIPE IS TO MATCH WITH THE INVERT OF THE STORMCEPTOR INSERT. FLEXIBLE BOOT INSTALLATION PROCEDURES: CENTER THE PIPE IN THE 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 80 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 CONTRACTION OF THE RUBBER. MOVE THE PIPE HORIZONTALLY AND/OR VERTICALLY TO BRING IT TO GRADE.
 - INSTALL STORMCEPTOR DROP PIPES ACCORDING TO STC PIPE INSTALLATION PROCEDURE ON PAGE 2 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 PROPERLY FOR ACCESS FROM MANHOLE OPENING AND ADJUST TO VENT PIPE. NOTE: FOR SHALLOW INSTALLATIONS THIS SECTION MAY NOT BE REQUIRED.
 - INSTALL TOP SLAB (CAP) WITH MANHOLE OPENING FOR STORMCEPTOR FRAME AND COVER. MANHOLE OPENING OFFSET (NOT CENTERED) SHOULD BE ORIENTED SO CHIMNEY IS ABOVE STEPS AND ADJACENT TO VENT PIPE SUCH THAT VENT PIPE CAN BE CUT 1" BELOW TOP OF SLAB AND SECURELY ATTACHED TO INSIDE EDGE OF MANHOLE ACCESS OPENING. TOP SLAB OPENING SHOULD BE ORIENTED ABOVE THE STORMCEPTOR OUTLET (24" HOPE) DROP PIPE AND ABOVE THE 8" HOPE VENT PIPE.
 - BACKFILL STORMCEPTOR WITH APPROVED BACKFILL MATERIAL (NO ORGANIC OR TOPSOIL IS TO BE USED FOR BACKFILL). BACKFILL AND COMPACT IN 6" LIFTS. BACKFILL SHOULD BE COMPACTED TO LOCAL/STATE REQUIREMENTS.
 - INSTALL AND SET GRADE ADJUSTING RINGS OR USE APPROVED GRADE ADJUSTING METHOD AND LEVELING MATERIALS, AS NEEDED. PLUG ALL LIFT HOLES WITH TAPERED FLEXIBLE PLUG (PROVIDED) AND GROUT IN TO PLACE. PLUGS IN STORAGE CHAMBER MUST ALSO BE GROUTED INSIDE AND OUTSIDE WITH GROUT. GROUT ALL OTHER LIFT HOLES.
 - INSTALL AND SET STORMCEPTOR FRAME AND COVER.
 - THE STORMCEPTOR SHOULD BE PUMPED OUT WHEN THE SEDIMENT CONTROL MEASURES ARE REMOVED (SITE PERMANENTLY STABILIZED).
 - FILL UNIT WITH CLEAN WATER AFTER UNIT IS CLEANED OUT, IF REQUIRED BY LOCAL INSPECTION PERSONNEL.
 - FINAL INSPECTION.

Stormceptor Corporation
1 (800) 762-4703

1.0 Installation Procedures

1.1 Concrete Stormceptor Installation

The installation of the concrete Stormceptor shall 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. Trench box or shoring should be used during the excavation for the Stormceptor. The excavation should be at least 12 inches from the present concrete surface on all sides 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 bench specifications) should be installed, compacted, and leveled at the bottom of the excavation to the proper elevation for the installation of the Stormceptor base.

Backfills

Backfill material should conform to state highway or local specifications. Generally, backfill material should be placed in 6 inch layers not exceeding 12 inches in depth. Each layer should be compacted to 90% of the maximum dry density. 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
- riser section
- manhole access way
- frame and cover

The present 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 present concrete manufacturer's recommendations.

Adjustment of the Stormceptor can be performed by lifting the upper sections. This of the associated area, re-leveling the base, and re-bolting the sections. Damaged sections and joints should be replaced. 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 concrete access way in the by-pass section.

STC 800, STC 1200, STC 1800

The inlet pipe (the one 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 gasket 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 (provided pipe without the tee) is installed in a similar fashion using the quick dry PVC cement and coupling provided underneath the by-pass section of the Stormceptor.

Inlet and Outlet Pipes

Inlet and outlet pipes should be securely set into the by-pass chamber using grout or approved pipe seals so that the structure is watertight. Kor-N-Seal boots are normally used and installed at the present concrete joint prior to setting. The Kor-N-Seal boots are supplied in two sizes with an outside diameter up to 14 inches. Stormceptor Corporation should be notified if the pipe to be installed is larger than the size of the boot (i.e. Kor-N-Seal boots will not be used) since the boots are generally included in the price quotation.

Installation of the Kor-N-Seal boots should follow the manufacturer's recommendations. As previously mentioned, the boots will already be attached to the concrete joint. Accordingly, the following procedure should be followed to attach the inlet and outlet pipes to the Stormceptor in the field:

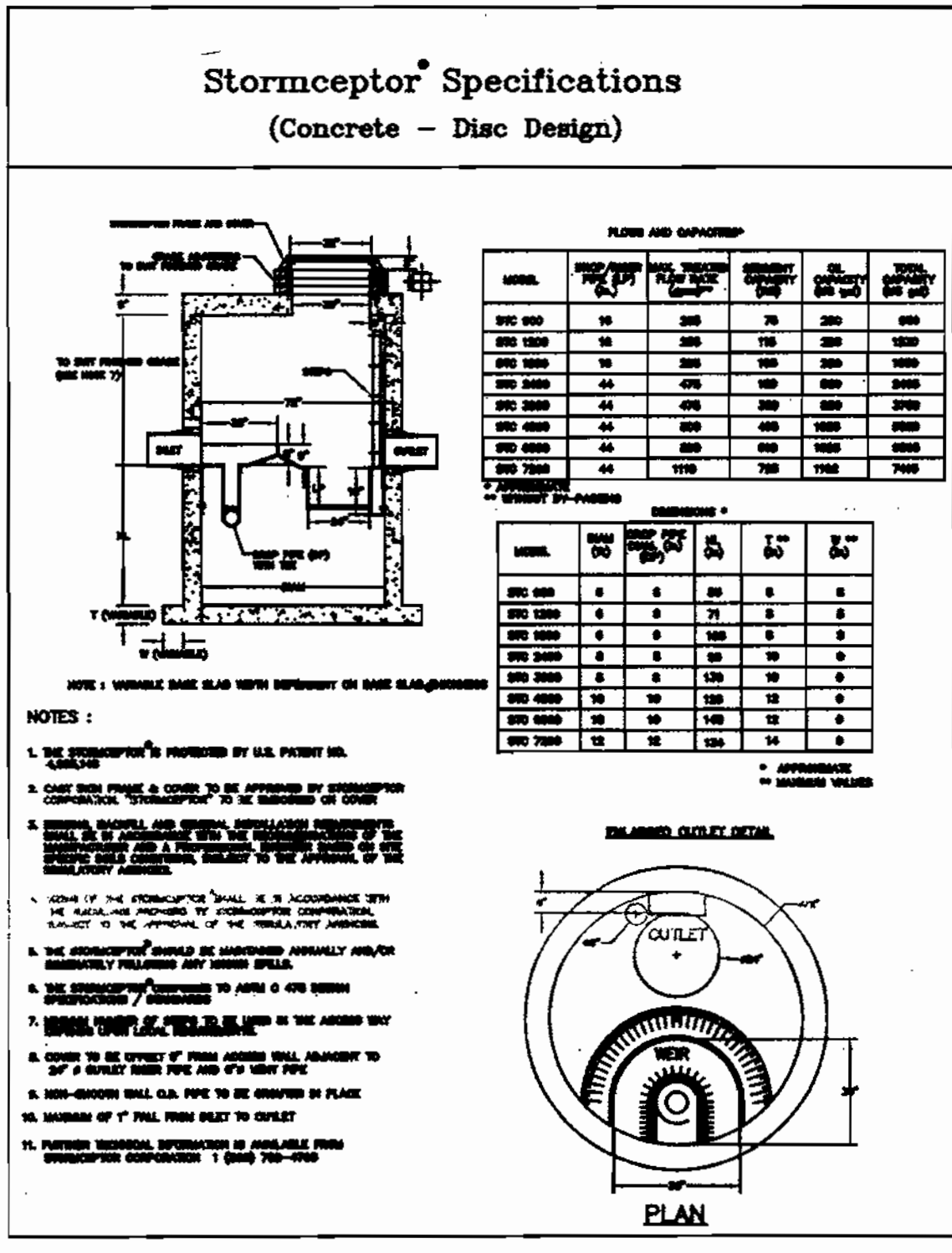
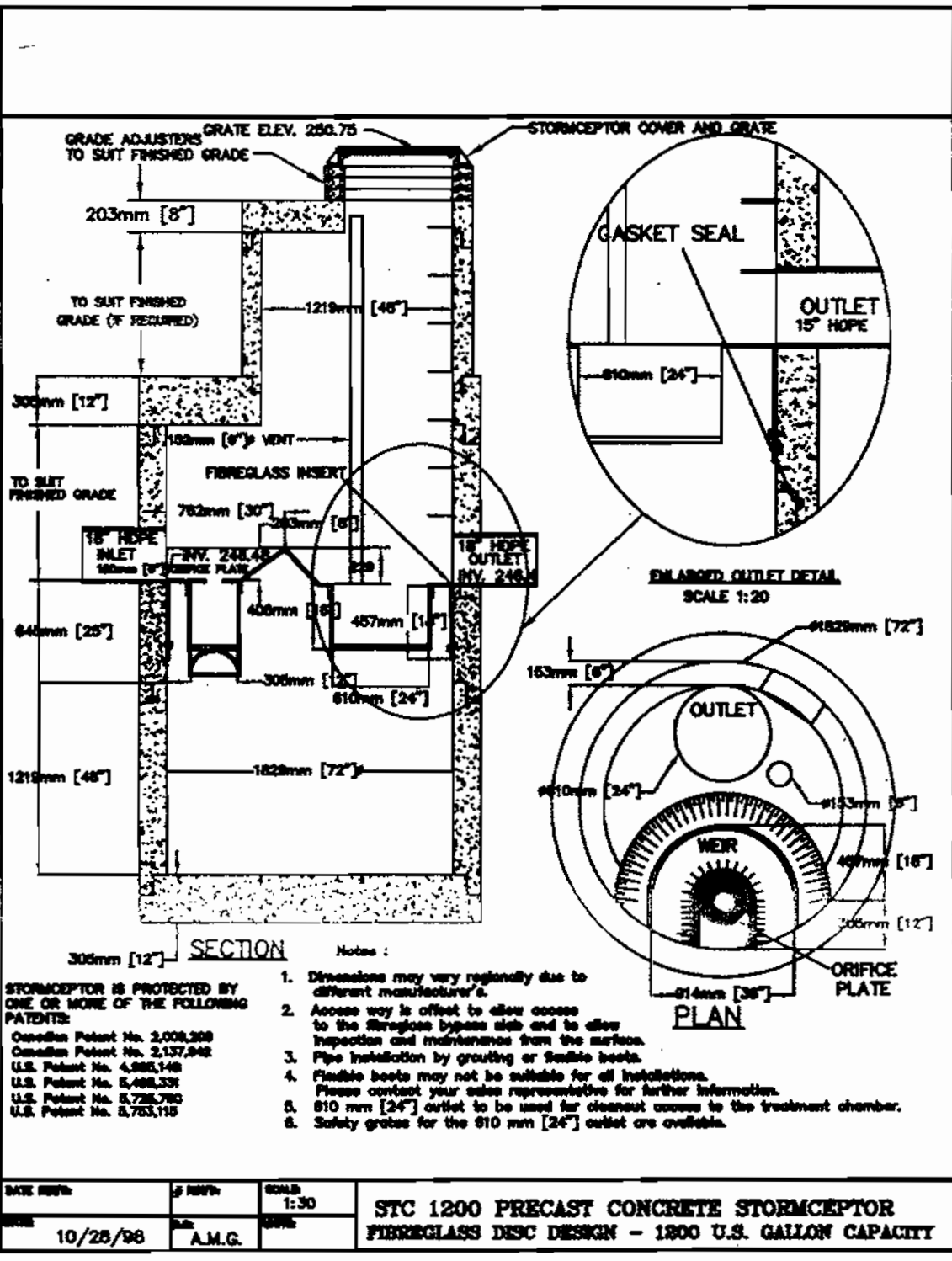
- Center the pipe in the boot opening
- Lubricate the outside of the pipe end/or inside of the boot if the pipe outside diameter is the same as the inside diameter of the boot
- Position the pipe clamp in the groove of the boot with the screw at the top
- Tighten the pipe clamp to the correct torque
- On minimum outside diameter installations lift the boot such that it contacts the bottom of the pipe while tightening the pipe clamp to ensure even contraction of the rubber
- Move the pipe horizontally and/or vertically to bring it to grade

Frame and Cover Installation

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

STORM DRAIN PROFILES
SCALE: 1" = 5' VERT. 1" = 50' HORIZ.

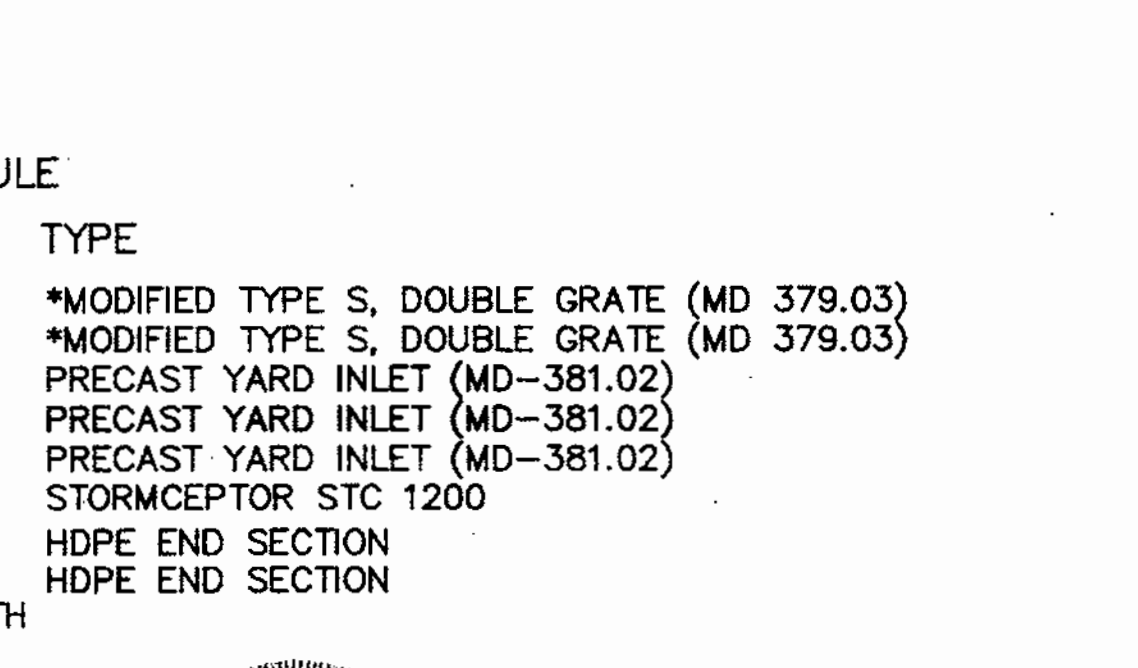
- OPERATION AND MAINTENANCE SCHEDULE FOR STORMCEPTOR WATER QUALITY DEVICE**
- Stormceptor water quality structures will require periodic inspection and cleaning to maintain operation and function. Owners will have the Stormceptor unit inspected yearly or as required by Howard County, utilizing the Stormceptor Inspection/Monitoring Form. Inspections can be done by using a clear Plexiglas tube (Cylinder Jolly) to estimate water column depths. When sediment depths exceed the specified level (Table 1 of Technical Manual) then cleaning of the unit is required.
 - Stormceptor water quality structures must be checked and cleaned immediately after petroleum spills, control appropriate regulatory agencies.
 - Maintenance of Stormceptor units should be done by a person trained which will remove the water, sediment, debris, floating hydrocarbons and other materials in use. The proper cleaning and disposal of the removed materials and liquid must be followed.
 - Inlet and outlet pipes must be checked for any obstructions and if any obstructions are found they must be removed. Structural parts of the Stormceptor are replaced as needed.
 - Owner shall retain and make Stormceptor Inspection/Monitoring Forms available to Howard County officials upon their request.



STORM DRAIN STRUCTURE SCHEDULE

STRUCTURE	GRATE INV. IN	INV. OUT	TYPE
I-1	249.00	246.56	*MODIFIED TYPE S, DOUBLE GRATE (MD 379.03)
I-1A	249.00	245.58	*MODIFIED TYPE S, DOUBLE GRATE (MD 379.03)
I-2	253.00	247.10	PRECAST YARD INLET (MD-381.02)
I-3	252.70	248.00	PRECAST YARD INLET (MD-381.02)
I-4	253.00	250.00	PRECAST YARD INLET (MD-381.02)
WQ-1	250.75	246.48	STORMCEPTOR STC 1200
ES-1	---	245.30	HDPE END SECTION
ES-2	---	245.30	HDPE END SECTION

*MODIFIED TO MAKE LESS THAN STANDARD DEPTH I-1 TO BE DEPRESSED 3" WITHIN A 5' RADIUS.



MARYLAND LAND DESIGN, INC.
CONSULTING ENGINEERS AND LAND PLANNERS

2001 MEADOW DRIVE
WESTMINSTER, MARYLAND 21158
TELEPHONE: (410) 857-0210 FAX: (410) 840-0143

© COPYRIGHT 1998



REVISIONS

NO.	DATE	DESCRIPTION



PLAN PREPARATION

DRAWN BY: DAB	DATE: 29 JULY 1999
DESIGNED BY: DAB	FILE NO. 98030
CHECKED BY: KOB	DRAWING NO.

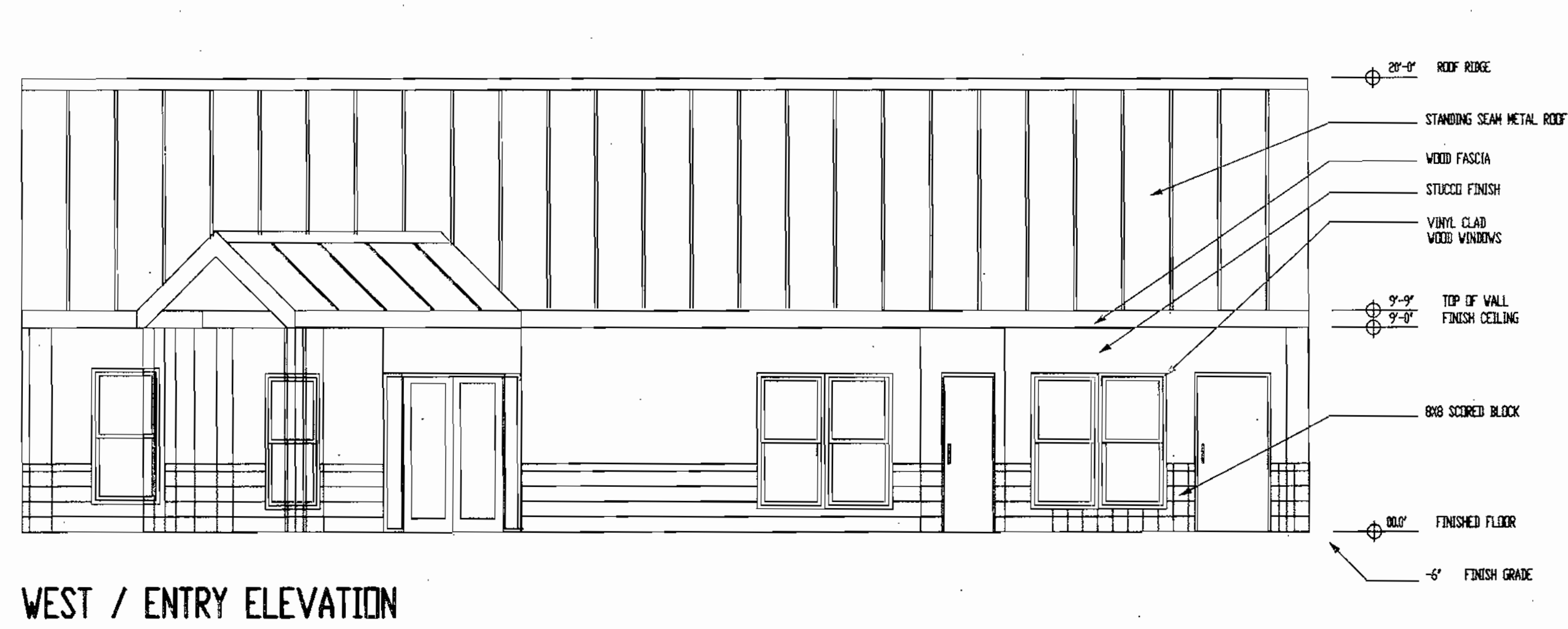
STORM DRAIN PROFILES AND DETAILS

GRACE EPISCOPAL CHURCH
LIBER 336 FOLIO 275
1st ELECTION DISTRICT TA MAP 57, BLOCK 6, PARCEL 431
HOWARD COUNTY, MARYLAND

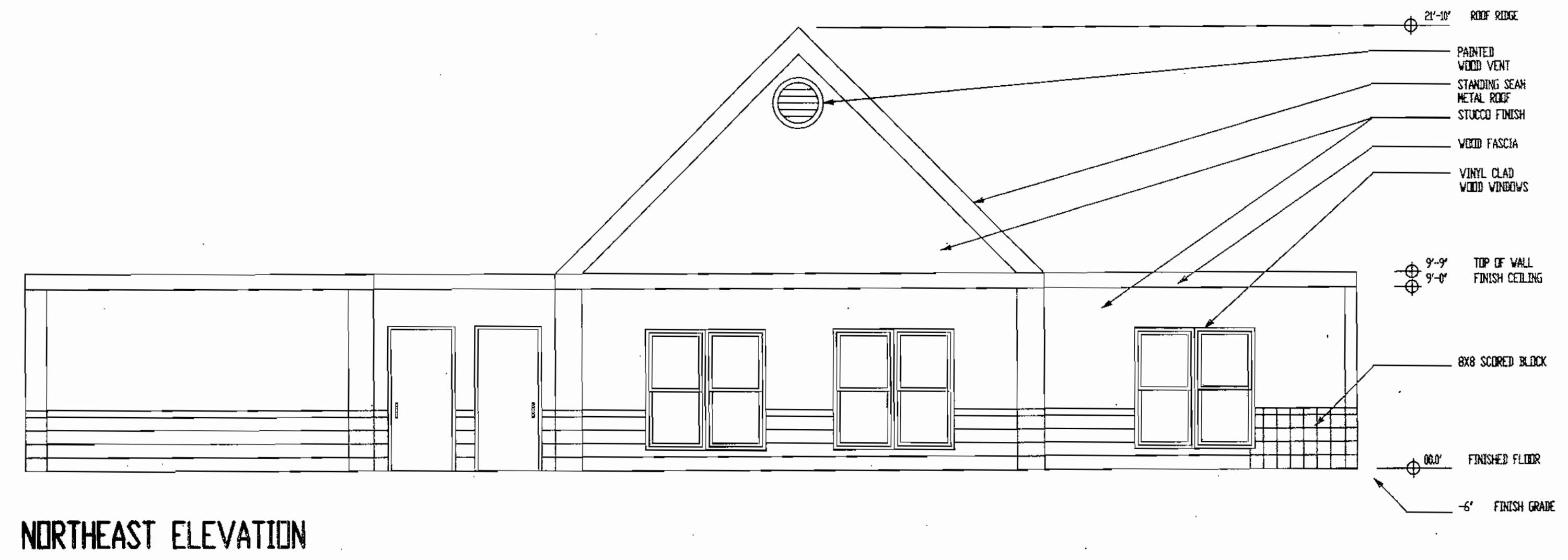
SCALE
NO SCALE

SHEET NO.
7 OF 12

SDP00-40



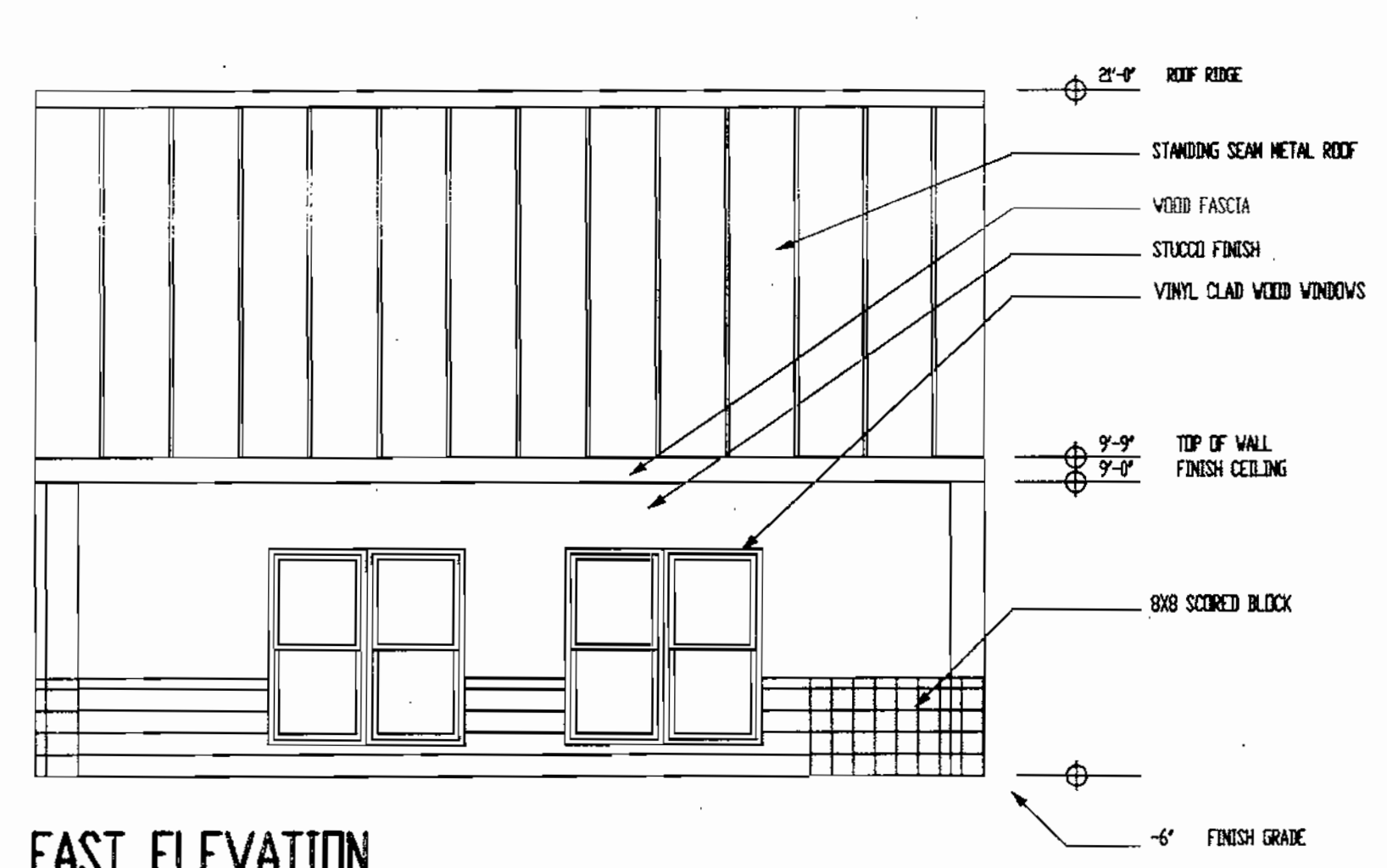
WEST / ENTRY ELEVATION



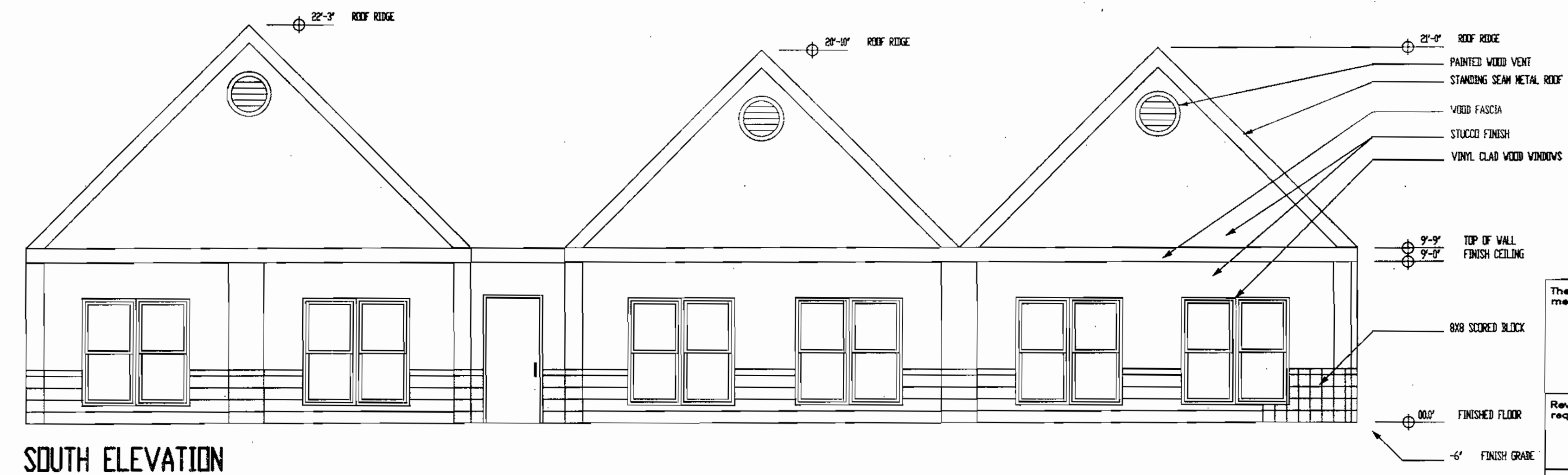
NORTHEAST ELEVATION



NORTH ELEVATION



EAST ELEVATION



SOUTH ELEVATION

These plans for SWD construction, soil erosion and sediment control meet the requirements of Howard Soil Conservation District.

APPROVED: *John K. [Signature]* 10/26/00
 HOWARD SOIL CONSERVATION DISTRICT
 PLAN NUMBER _____ DATE _____

Reviewed for the Howard Conservation District and meets technical requirements.

APPROVED: *J. A. [Signature]* 10/26/00
 NATURAL RESOURCES CONSERVATION SERVICE
 DATE _____

APPROVED: *[Signature]* 11/2/00
 HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE _____

ONLY *[Signature]* 11/2/00
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE _____

[Signature] 11/2/00
 DIRECTOR
 DATE _____

THIS PLAN REPRESENTS THE PROPOSED ADDITION

ELEVATIONS SHOWN HEREON PREPARED BY ELEVEN THIRTEEN ARCHITECTS, INC.
 401 W. 6TH STREET, GEORGETOWN, TEXAS 78626
 TELEPHONE: 512-869-1104 FAX: 512-869-1362

MARYLAND LAND DESIGN, INC.
 CONSULTING ENGINEERS AND LAND PLANNERS

2001 MEADOW DRIVE
 WESTMINSTER, MARYLAND 21158
 TELEPHONE: (410) 857-0210 FAX: (410) 840-0143

© COPYRIGHT 1999



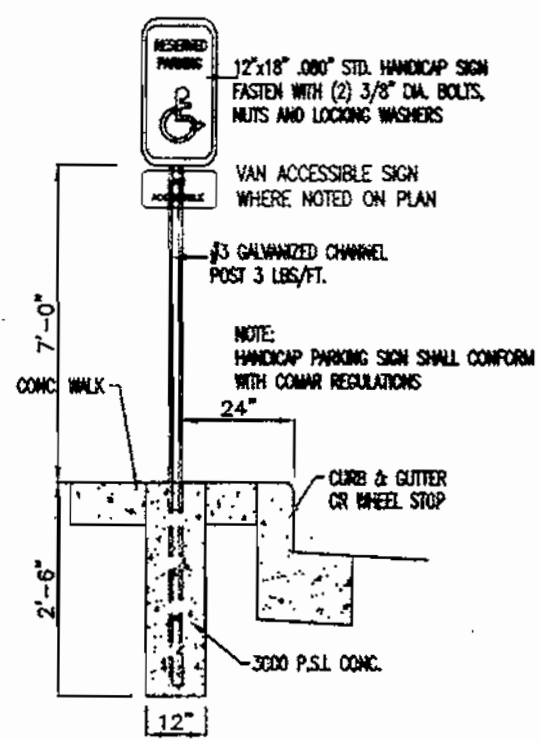
REVISIONS		
NO.	DATE	DESCRIPTION

PLAN PREPARATION	
DRAWN BY: DAB	DATE: 29 JULY 1999
DESIGNED BY: DAB	FILE NO. 99020
CHECKED BY: KDB	DRAWING NO.

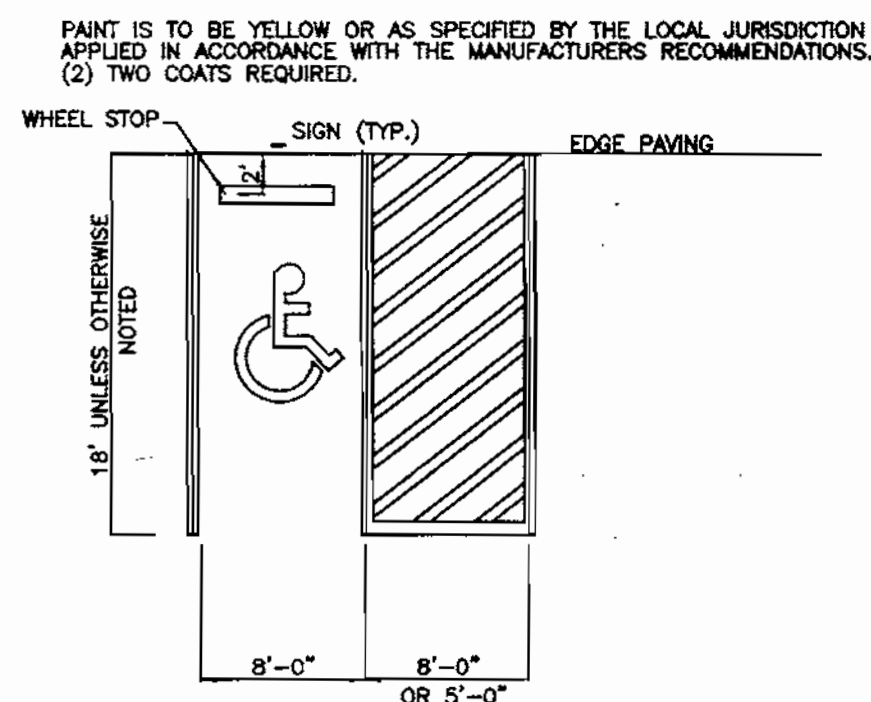
BUILDING ELEVATIONS	
GRACE EPISCOPAL CHURCH	
BUILDING ADDITION	
LIBER 336 FOLIO 275	
1st ELECTION DISTRICT, TAX MAP: 37, BLOCK 6, PARCEL 431	
HOWARD COUNTY, MARYLAND	

SCALE	
NO SCALE	
SHEET NO. 9 OF 12	

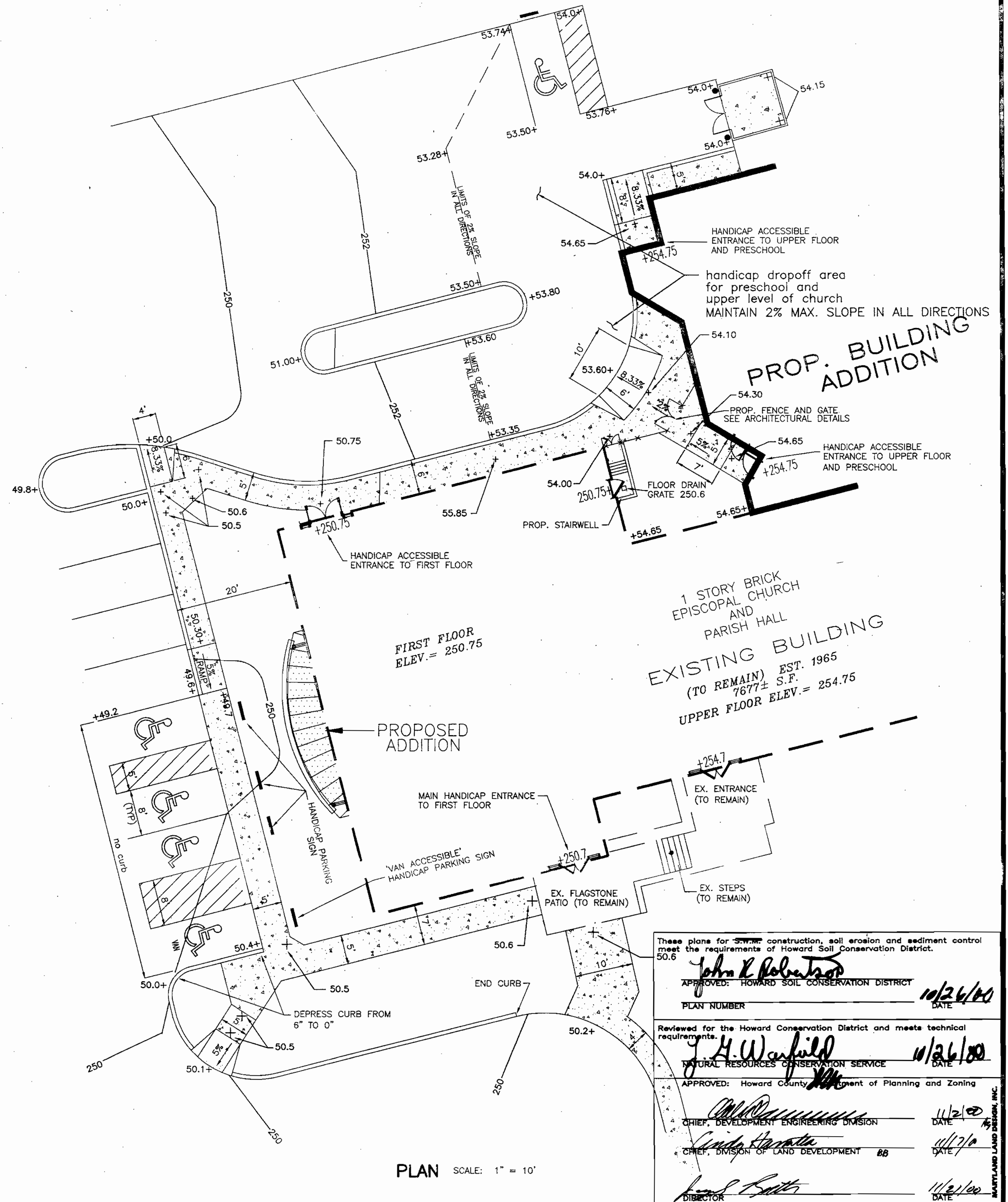
SDP 00-40



HANDICAP PARKING SIGN DETAIL
NOT TO SCALE



TYPICAL HANDICAP PARKING DETAIL
NOT TO SCALE



These plans for S.W.M. construction, soil erosion and sediment control meet the requirements of Howard Soil Conservation District.

APPROVED: *John K. Robertson* 10/26/00
HOWARD SOIL CONSERVATION DISTRICT
PLAN NUMBER _____ DATE

Reviewed for the Howard Conservation District and meets technical requirements.

APPROVED: *J. H. Warfield* 11/26/00
NATURAL RESOURCES CONSERVATION SERVICE
DATE

APPROVED: *[Signature]* 11/21/00
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE

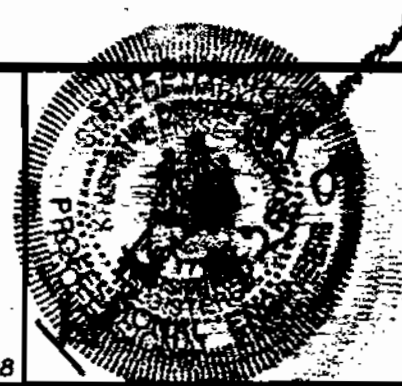
APPROVED: *[Signature]* 11/17/00
CHIEF, DIVISION OF LAND DEVELOPMENT
DATE

APPROVED: *[Signature]* 11/21/00
DIRECTOR
DATE

PLAN SCALE: 1" = 10'

MARYLAND LAND DESIGN, INC.
CONSULTING ENGINEERS AND LAND PLANNERS

2001 MEADOW DRIVE
WESTMINSTER, MARYLAND 21158
TELEPHONE: (410) 857-0210 FAX: (410) 840-0143



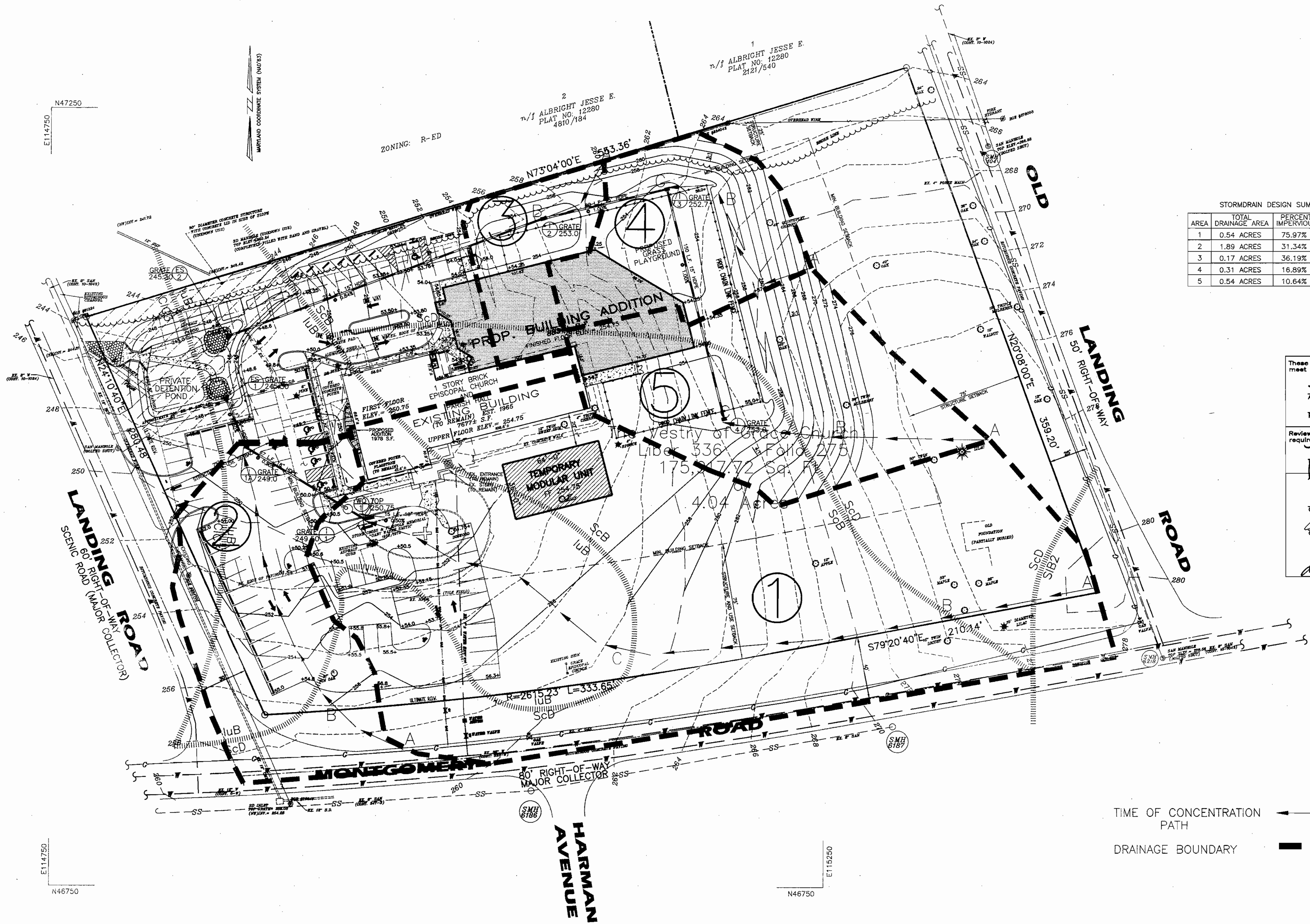
REVISIONS		
NO.	DATE	DESCRIPTION

PLAN PREPARATION	
DRAWN BY: DAB	DATE: 24 DECEMBER 1998
DESIGNED BY: DAB	FILE NO. 99020
CHECKED BY: KDB	DRAWING NO.

HANDICAP PARKING AND BUILDING ACCESS PLAN	
GRACE EPISCOPAL CHURCH BUILDING ADDITION	
LIBER 336 FOLIO 275	
1st ELECTION DISTRICT, TAX MAP: 37, BLOCK 6, PARCEL 431	
HOWARD COUNTY, MARYLAND	

SCALE
1" = 10'
SHEET NO.
10 OF 12

SDP00-20



STORMDRAIN DESIGN SUMMARY

AREA	TOTAL DRAINAGE AREA	PERCENT IMPERVIOUS	"C" FACTOR
1	0.54 ACRES	75.97%	0.69
2	1.89 ACRES	31.34%	0.43
3	0.17 ACRES	36.19%	0.46
4	0.31 ACRES	16.89%	0.30
5	0.54 ACRES	10.64%	0.30

These plans for storm construction, soil erosion and sediment control meet the requirements of Howard Soil Conservation District.

John R. Robertson
 APPROVED: HOWARD SOIL CONSERVATION DISTRICT
 PLAN NUMBER _____ DATE 10/26/00

Reviewed for the Howard Conservation District and meets technical requirements.

J. M. Workfield
 NATURAL RESOURCES CONSERVATION SERVICE
 APPROVED: Howard County Department of Planning and Zoning
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE 11/21/00

Cindy Kharota
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE 11/17/00

James L. Smith
 DIRECTOR DATE 11/21/00

TIME OF CONCENTRATION PATH ← →

DRAINAGE BOUNDARY ————

MARYLAND LAND DESIGN, INC.
 CONSULTING ENGINEERS AND LAND PLANNERS

2001 MEADOW DRIVE
 WESTMINSTER, MARYLAND 21158
 TELEPHONE: (410) 857-0210 FAX: (410) 840-0143

© COPYRIGHT 1998



REVISIONS		
NO.	DATE	DESCRIPTION

PLAN PREPARATION	
DRAWN BY: DAB	DATE: 29 JULY 1999
DESIGNED BY: DAB	FILE NO. 99020
CHECKED BY: KDB	DRAWING NO.

STORM DRAIN DRAINAGE AREA MAP

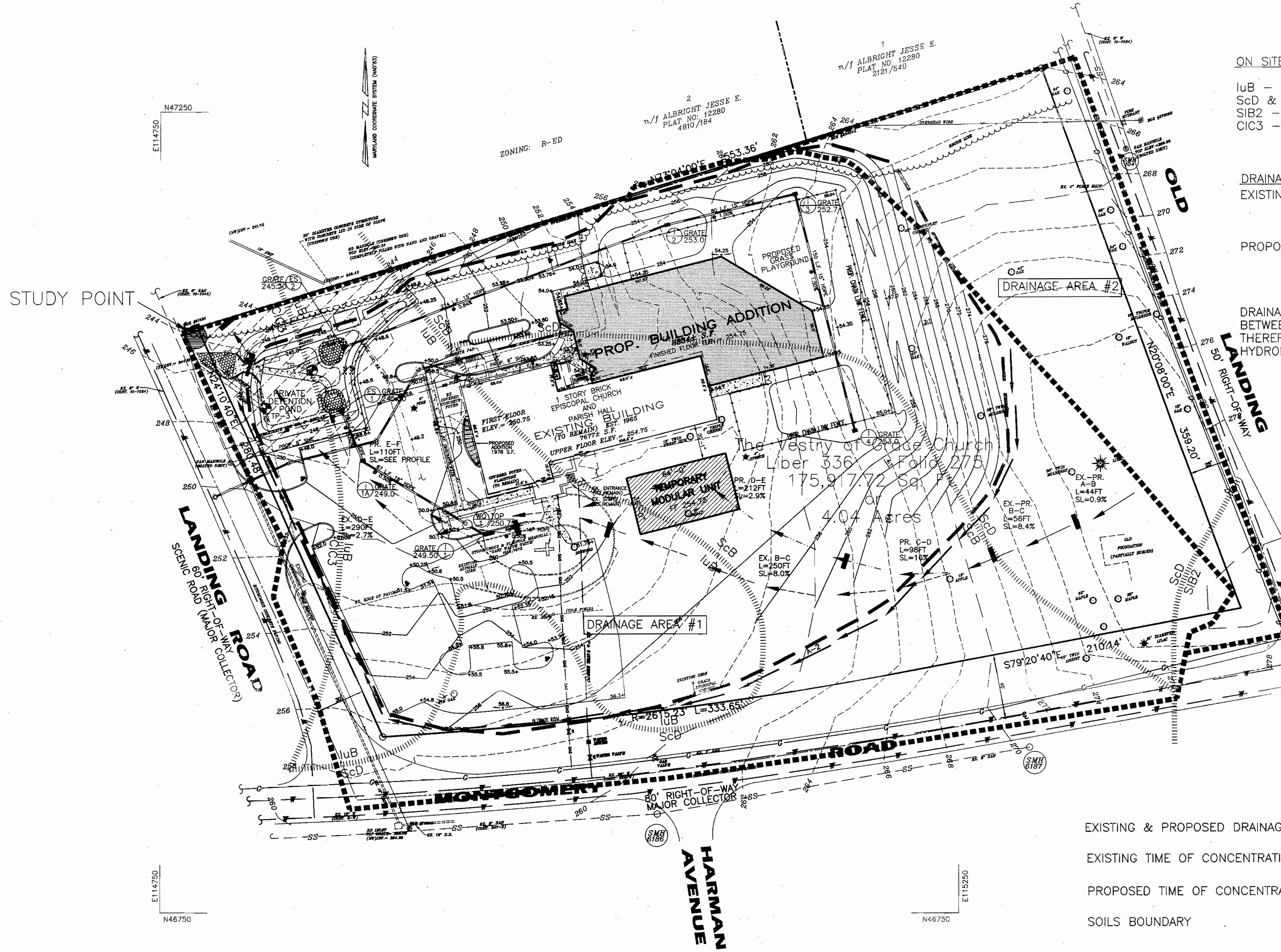
GRACE EPISCOPAL CHURCH
 BUILDING ADDITION
 LIBER 336 FOLIO 275
 1st ELECTION DISTRICT, TAX MAP: 37, BLOCK 6, PARCEL 431
 HOWARD COUNTY, MARYLAND

SCALE
 1" = 30'

SHEET NO.
 11 OF 12

SDP00-40

ALL SOILS SHOWN HEREON ARE CLASSIFIED IN THE HYDROLOGIC SOIL GROUP 'C' WITH THE EXCEPTION OF SIB2 WHICH IS 'B'.



ON SITE SOILS

luB - luka Loam; HSG C
 ScD & ScB - Sandy & Clayey Soils; HSG C
 SIB2 - Sassafras Loam; HSG B
 CIC3 - Chillum Gravelly Loam; HSG C

DRAINAGE AREA #1 INFORMATION

EXISTING: DRAINAGE AREA #1 = 4.03 ACRES
 Tc = 0.29 HOURS
 RCN = 80

PROPOSED: DRAINAGE AREA #1 = 4.03 ACRES
 Tc = 0.29 HOURS
 RCN = 83

DRAINAGE AREA #2 (0.77 AC.) WILL BE UNCHANGED BETWEEN EXISTING AND PROPOSED CONDITIONS, THEREFORE THIS AREA WAS NOT ANALYZED AND HYDROLOGIC PARAMETERS WERE NOT CALCULATED.

These plans for SWMM construction, soil erosion and sediment control meet the requirements of Howard Soil Conservation District.

John Robertson
 APPROVED: HOWARD SOIL CONSERVATION DISTRICT
 PLAN NUMBER _____ DATE 11/26/00

Reviewed for the Howard Conservation District and meets technical requirements.

J. L. Wenzel
 NATURAL RESOURCES CONSERVATION SERVICE
 APPROVED: Howard County Department of Planning and Zoning
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE 11/26/00

Andy Hamble
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE 11/17/00

Paul R. Smith
 SUPERVISOR DATE 11/21/00

- EXISTING & PROPOSED DRAINAGE LIMITS
- EXISTING TIME OF CONCENTRATION PATH
- PROPOSED TIME OF CONCENTRATION PATH
- SOILS BOUNDARY

MARYLAND LAND DESIGN, INC.
 CONSULTING ENGINEERS AND LAND PLANNERS
 2001 MEADOW DRIVE
 WESTMINSTER, MARYLAND 21158
 TELEPHONE: (410) 857-0210 FAX: (410) 840-0143
 © COPYRIGHT 1998



REVISIONS		
NO.	DATE	DESCRIPTION

PLAN PREPARATION	
DRAWN BY: DAB	DATE: 29 JULY 1999
DESIGNED BY: KDB	FILE NO. 99020
CHECKED BY: KDB	DRAWING NO.

STORMWATER MANAGEMENT D.A. MAP
GRACE EPISCOPAL CHURCH
BUILDING ADDITION
 1st ELECTION DISTRICT, TAX MAP: 37, BLOCK 6, PARCEL 431
 HOWARD COUNTY, MARYLAND

SCALE
 1" = 30'
SHEET NO.
 12 OF 12

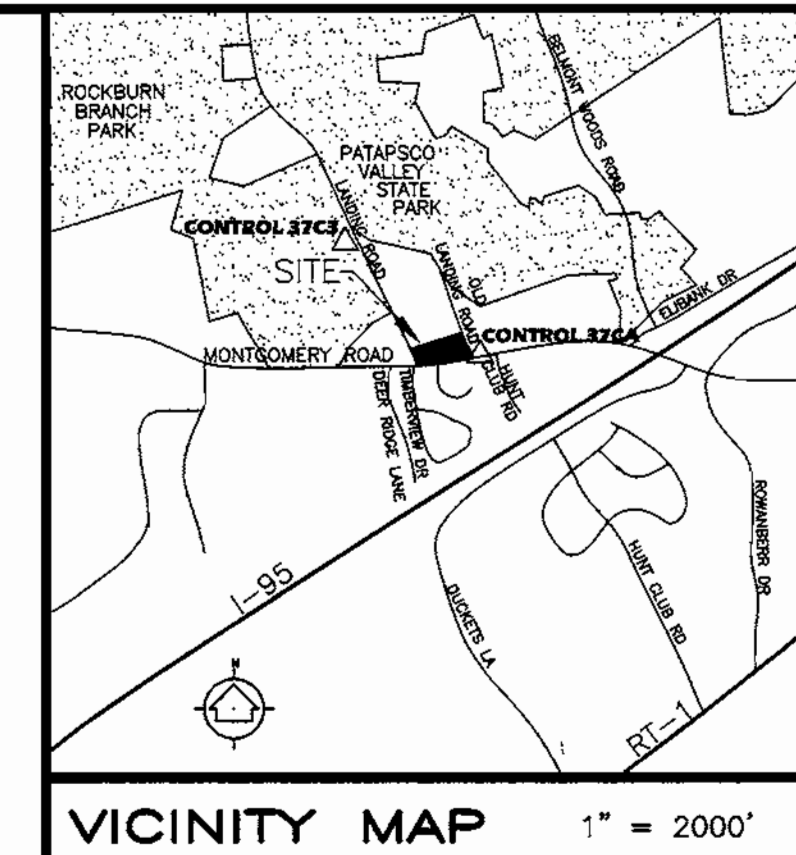
SDP00-40

NOTES

- COORDINATES AND BEARINGS SHOWN ON THIS PLAT ARE REFERRED TO THE SYSTEM OF COORDINATES ESTABLISHED BY THE HOWARD COUNTY GEODETIC CONTROL SYSTEM (NAD'83), AND ARE BASED ON THE FOLLOWING TRAVERSE STATIONS (TRANSLATED METERS TO FEET)

DESIGNATION	NORTH (SFT)	EAST (SFT)
37CA	564321.657	1382742.880
37CS	562918.023	1384856.662
- ELEVATIONS SHOWN HEREON REFER TO THE NORTH AMERICAN VERTICAL DATUM 1988 (NAVD'88) WITH LOCAL REFERENCE TO THE FOLLOWING HOWARD COUNTY GEODETIC CONTROL SYSTEM STATION:

DESIGNATION	ELEVATION (SFT)
37CA	256.965
37CS	257.772



SDP 00-40

SITE DEVELOPMENT PLAN

for

GRACE EPISCOPAL CHURCH

BUILDING ADDITION

HOWARD COUNTY, MARYLAND

SITE ANALYSIS DATA:

- TOTAL PROJECT AREA: 4.040 AC OR 1975,917.72 S.F.
- AREA OF PLAN SUBMISSION: 4.040 ACRES
- LIMITS OF DISTURBED AREA: 167,270 S.F. OR 3.84 ACRES
- PRESENT ZONING: R-ED
- PROPOSED USES FOR SITE AND STRUCTURES: EXISTING BUILDING= SANCTUARY
PROPOSED BUILDING= DAYCARE
- FLOOR SPACE ON EACH LEVEL OF BUILDINGS PER USE:
SANCTUARY/SUNDAY SCHOOL/OFFICES = 7677 S.F.
DAYCARE = 8634 S.F. / 3 = 27 SPACES
- NUMBER OF PARKING SPACES REQUIRED:
 - EXISTING PARKING SPACES: 50
 - PARKING REQUIREMENTS: 158 CHILDREN MAXIMUM PER BA 98-16E&V.
 - SECTION 133.D.7, A, DAYCARE CENTER; M-F
7:00 A.M.-8:00 P.M. OPERATION
3.0 SPACES / 1000 S.F.
8634 S.F. / 3 = 27 SPACES
 - SECTION 133.D.7, H, EXISTING RELIGIOUS/SUNDAY SCHOOL ACTIVITIES - NO FIXED SEATS
WEEKENDS ONLY
10 SPACES / 1000 S.F.
2400 S.F. / 100 x 10 = 24 SPACES
 - HANDICAP REQUIREMENTS:
4 SPACES / 100 PARKING SPACES
(3 HANDICAP + 1 VAN ACCESSIBLE)
 - CHURCH OFFICES:
7:00 AM - 9:00 PM 7 DAYS / WEEK
3.3 SPACES / 1000 OFFICE AREA
2700 SF OFFICE / 1000 x 3.3 = 9 SPACES
- APPLICABLE DPZ FILE REFERENCES: BA CASE NO. 98-18 E&V
SPECIAL EXCEPTION FOR A STRUCTURE USED PRIMARILY FOR RELIGIOUS ACTIVITIES AND TO ENLARGE THE EXISTING DAY CARE CENTER.
VARIANCES AS FOLLOWS:
 - REDUCE THE 75 FOOT USE SETBACK FROM THE PUBLIC RIGHT-OF-WAY FOR LANDING ROAD TO 1 FOOT FOR 30 PARKING SPACES AND TO 17 FEET FOR DRIVE AISLES.
 - REDUCE THE 20 FOOT REAR LOT LINE USE SETBACK TO 10 FEET FOR 11 PARKING SPACES.
 - REDUCE THE 75 FOOT USE SETBACK FROM THE PUBLIC RIGHT-OF-WAY FOR OLD LANDING ROAD TO 20 FEET FOR 62 PARKING SPACES AND TO 22 FEET FOR DRIVE AISLES.
 - REDUCE THE 75 FOOT STRUCTURE SETBACK FROM THE PUBLIC RIGHT-OF-WAY FOR MONTGOMERY ROAD TO 59 FEET FOR THE ADDITION TO THE EX. BUILDING, REDUCE THE 75 FOOT USE SETBACK FROM THE PUBLIC RIGHT-OF-WAY FOR MONTGOMERY ROAD TO 8 FEET FOR 24 PARKING SPACES, AND REDUCE TO 10 FEET FOR DRIVE AISLES.
- LANDING ROAD IS A DESIGNATED SCENIC ROAD. DEVELOPMENT ABUTTING THIS ROAD WILL BE DESIGNED SO AS TO MINIMIZE ANY IMPACT ON SCENIC VIEWS FROM THE ROAD AND COMPLY WITH ALL REGULATIONS
- ALL PROPOSED OUTDOOR LIGHTING WILL BE IN ACCORDANCE WITH SECTION 134 OF THE ZONING REGULATIONS FOR HOWARD COUNTY AND SHALL BE DIRECTED AWAY FROM ADJOINING RESIDENTIAL PROPERTY.
- LANDSCAPING FOR THIS SITE WILL BE PROVIDED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL. REQUIRED SURETY IN THE AMOUNT OF \$24,180.00 WILL BE PROVIDED WITH THE DEVELOPER'S AGREEMENT.
- IN ACCORDANCE WITH SECTION 18.1202 OF THE HOWARD COUNTY CODE AND FOREST CONSERVATION MANUAL, FOREST CONSERVATION OBLIGATIONS FOR THIS SITE HAVE BEEN MET BY THE FILING OF A DECLARATION OF INTENT FOR THE CLEARING OF LESS THAN 40,000 SQ. FT. OF FOREST ON A SINGLE PARCEL.
- THIS SITE PLAN DOES NOT INCLUDE THE FOLLOWING FEATURES APPROVED UNDER BA CASE NO. 98-18E&V.
 - 5744 S.F. COMMUNITY MINISTRY ADDITION
 - 3489 S.F. GYMNASIUM
 - GARDEN COURT WITH FOUNTAIN
 - TWO TRASH DUMPSTERS
 - 129 PARKING SPACES
- THE ABOVE ITEMS ARE ALL POSSIBLE SECOND PHASE IMPROVEMENTS. THE SECOND PHASE CONSTRUCTION IS NOT ANTICIPATED IN THE NEAR FUTURE. AN AMENDED SITE PLAN SHALL BE PREPARED SHOULD THIS PHASE OCCUR. FUTURE BOARD OF APPEALS HEARING SHALL BE HELD TO ALLOW FOR THE PHASING OF THESE FEATURES.
- THE CONTRACTOR OR DEVELOPER SHALL CONTACT THE CONSTRUCTION INSPECTION DIVISION 24 HOURS IN ADVANCE OF COMMENCEMENT OF WORK AT 410-313-1880.

CONSTRUCTION NOTES:

- THE CONTRACTOR SHALL NOTIFY THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS CONSTRUCTION INSPECTION DIVISION AT 410-313-1880 AT LEAST 24 HOURS PRIOR TO STARTING ANY OF THE WORK SHOWN HEREON.
- THE CONTRACTOR SHALL NOTE THAT IN CASE OF DISCREPANCY BETWEEN ANY SCALED DIMENSIONS AND THE FIGURED DIMENSIONS SHOWN ON THESE PLANS, THE FIGURED DIMENSIONS SHALL GOVERN.
- CONTRACTOR SHALL MEET ALL EXISTING IMPROVEMENTS SMOOTHLY FOR LINE, GRADE, AND FINISH.
- ALL WORK SHOWN ON THESE PLANS SHALL BE COMPLETED IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS AND OF THE MARYLAND STATE HIGHWAY ADMINISTRATION AND THE HOWARD COUNTY PLUMBING CODE, UNLESS OTHERWISE NOTED.
- IT SHALL BE DISTINCTLY UNDERSTOOD THAT FAILURE TO MENTION SPECIFICALLY ANY WORK WHICH WOULD NORMALLY BE REQUIRED TO COMPLETE THIS PROJECT SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO PERFORM SUCH WORK. THE COST OF SUCH WORK SHALL BE INCLUDED IN THE BASE BID.
- THE CONTRACTOR SHALL INSPECT THE SITE TO DETERMINE IF ANY TREES, PAVING, ETC. ARE TO BE REMOVED PRIOR TO PLACING A BID ON SUCH ITEMS.
- THE LOCATIONS OF EXISTING UTILITIES SHOWN HEREON ARE APPROXIMATE ONLY AND ARE PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. THE LOCATIONS ARE TAKEN FROM EXISTING RECORDS AND DO NOT REPRESENT FIELD-VERIFIED LOCATIONS. THE CONTRACTOR SHALL NOTIFY MISS UTILITY AT 1-800-257-7777 A MINIMUM OF 5 WORKING DAYS PRIOR TO DIGGING. THE CONTRACTOR SHALL CONFIRM TO HIS OWN SATISFACTION THE LOCATION OF ALL UTILITIES PRIOR TO ANY EXCAVATION OR PLACEMENT OF MATERIALS. IF ANY CONFLICT IS FOUND BETWEEN UNDERGROUND UTILITIES AND THE PROPOSED LOCATION OF ANY CONSTRUCTION, THE CONTRACTOR SHALL CONTACT MARYLAND LAND DESIGN, INC. AND THE OWNER OF THE UTILITY IMMEDIATELY. ANY DAMAGE OR DISRUPTION OF SERVICE SHALL BE AT THE EXPENSE OF THE CONTRACTOR. RELOCATION OF ANY EXISTING UTILITIES SHALL BE AT THE EXPENSE OF THE OWNER. THE CONTRACTOR SHALL COORDINATE RELOCATION OF THESE FACILITIES, IF NECESSARY.
- CONTRACTOR SHALL PROTECT ALL EXISTING TREES OUTSIDE THE LIMIT OF DISTURBANCE AT ALL TIMES DURING CONSTRUCTION.
- CONTRACTOR SHALL PROTECT ALL EXISTING IMPROVEMENTS NOT SCHEDULED FOR REMOVAL OR DEMOLITION COST OF REPAIR TO EXISTING IMPROVEMENTS SHALL BE INCLUDED IN THE BASE BID. ALL EXISTING SITE FEATURES NOT BEING RETAINED SHALL BE REMOVED AND DISPOSED OF AT AN APPROVED LOCATION. ANY DAMAGE TO OFF SITE ROADS, RIGHTS OF WAY, OR ADJACENT PROPERTY SHALL BE REPAIRED IMMEDIATELY AT THE EXPENSE OF THE CONTRACTOR.
- THE CONTRACTOR SHALL CLEAR THE PROJECT SITE OF ALL TREES, PAVING, STRUCTURES, ETC. WITHIN THE CONSTRUCTION AREA UNLESS OTHERWISE NOTED ON THE PLAN.
- ONLY SUITABLE MATERIAL SHALL BE USED AS FILL AND ALL FILL SHALL BE PLACED AND COMPACTED AS SPECIFIED IN THE SOILS REPORT PREPARED FOR THIS SITE OR AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER. ALL 2:1 SLOPES SHOWN HEREON, EXCEPTING THOSE ASSOCIATED WITH LANDSCAPE BERMING, ALL GRADING UNDER PROPOSED PAVING, AND ALL FILL AND COMPACTION SHALL BE APPROVED BY A GEOTECHNICAL ENGINEER.
- CONTRACTOR SHALL PROVIDE MINIMUM 4 FOOT BENCH AT EDGE OF PAVING IN FILL AREAS. MAXIMUM SLOPE OF BENCH SHALL BE 4% (1/4 IN. PER FOOT).
- MAXIMUM SLOPE SHALL BE 2 HORIZONTALLY TO 1 VERTICALLY.
- CONTRACTOR SHALL PLACE 4" MINIMUM TOPSOIL IN LANDSCAPE AREAS. TOPSOIL SHALL BE APPROVED BY LANDSCAPE ARCHITECT.
- CONTRACTOR SHALL PLACE A WITNESS POST AT THE TERMINUS OF ALL UTILITY STUBS.
- ALL UTILITIES INSTALLED SHALL RECEIVE FULL TRENCH COMPACTION.
- CONTRACTOR SHALL PROVIDE A MINIMUM OF 1 FOOT OF PROTECTIVE FILL OVER STORM DRAIN PIPES DURING CONSTRUCTION.
- ALL AREAS NOT BEING PAVED OR RECEIVING BUILDING COVERAGE SHALL BE STABILIZED IN ACCORDANCE WITH THE PLANS APPROVED BY THE HOWARD SOIL CONSERVATION DISTRICT.
- BOARD OF APPEAL CASE NUMBER BOA 00-20E, DATED 8/29/00, GRANTED A 2 YEAR EXTENSION TO OBTAIN A BUILDING PERMIT (SEPT. 28, 2002) AND SEPT. 28, 2003 FOR COMPLETION OF SUBSTANTIAL CONSTRUCTION OF THE SITE. Per a memo dated 1/29/03 from the Zoning Administration the increase in size and change of footprint of the daycare addition is departmentally approved.

SHEET INDEX

- SHEET 1: TITLE SHEET
- SHEET 2: EXISTING CONDITIONS & DEMOLITION PLAN
- SHEET 3: SITE PLAN
- SHEET 4: GRADING, SWM & SEDIMENT CONTROL PLAN
- SHEET 5: MISCELLANEOUS NOTES AND DETAILS
- SHEET 6: STORMWATER MANAGEMENT NOTES AND DETAILS
- SHEET 7: STORM DRAIN PROFILE AND DETAILS
- SHEET 8: LANDSCAPE PLAN
- SHEET 9: BUILDING ELEVATIONS
- SHEET 10: HANDICAP PARKING AND BUILDING ACCESS PLAN
- SHEET 11: STORM DRAIN DRAINAGE AREA MAP
- SHEET 12: STORMWATER MANAGEMENT DRAINAGE AREA MAP

PROJECT OWNER/DEVELOPER:

THE VESTRY OF GRACE CHURCH
6725 MONTGOMERY ROAD
ELK RIDGE, MD 21075
TELEPHONE: 410-796-3270

These plans for ~~the~~ construction, soil erosion and sediment control meet the requirements of Howard Soil Conservation District.
John R. Roberts
APPROVED: HOWARD SOIL CONSERVATION DISTRICT 11/26/00
PLAN NUMBER _____ DATE

Reviewed for the Howard Conservation District and meets technical requirements.
J.A. Wayfield
NATURAL RESOURCES CONSERVATION SERVICE 11/24/00
APPROVED: Howard Department of Planning and Zoning

[Signature] 11/21/00
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE
[Signature] 11/17/00
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 11/21/00
DIRECTOR DATE

ADDRESS CHART	
PARCEL NO. 431	STREET ADDRESS 6725 MONTGOMERY ROAD, ELK RIDGE, MD 21075
SUBDIVISION NAME N/A	
SECTION NAME N/A	PARCEL # 431
PLAT # N/A	BLOCK # 6
ZONE RED	TAX/ZONE MAP 01
ELECT. DIST. 37	CENSUS TRACT 6011.01
WATER CODE: 001	SEWER CODE: 2150562

MARYLAND LAND DESIGN, INC.
CONSULTING ENGINEERS AND LAND PLANNERS
2001 MEADOW DRIVE
WESTMINSTER, MARYLAND 21158
TELEPHONE: (410) 857-0210 FAX: (410) 840-0143
© Copyright 1998



REVISIONS		
NO.	DATE	DESCRIPTION
1	2-6-03	NOTE ADDED PER COMMENTS

PLAN PREPARATION	
DRAWN BY: DAB	DATE: 29 JULY 1999
DESIGNED BY: DAB	FILE NO. 99020
CHECKED BY: KDB	DRAWING NO.

TITLE SHEET -	
GRACE EPISCOPAL CHURCH	
BUILDING ADDITION	
LIBER 336 FOLIO 275	
1st ELECTION DISTRICT, TAX MAP: 37, BLOCK 6, PARCEL 431	
HOWARD COUNTY, MARYLAND	

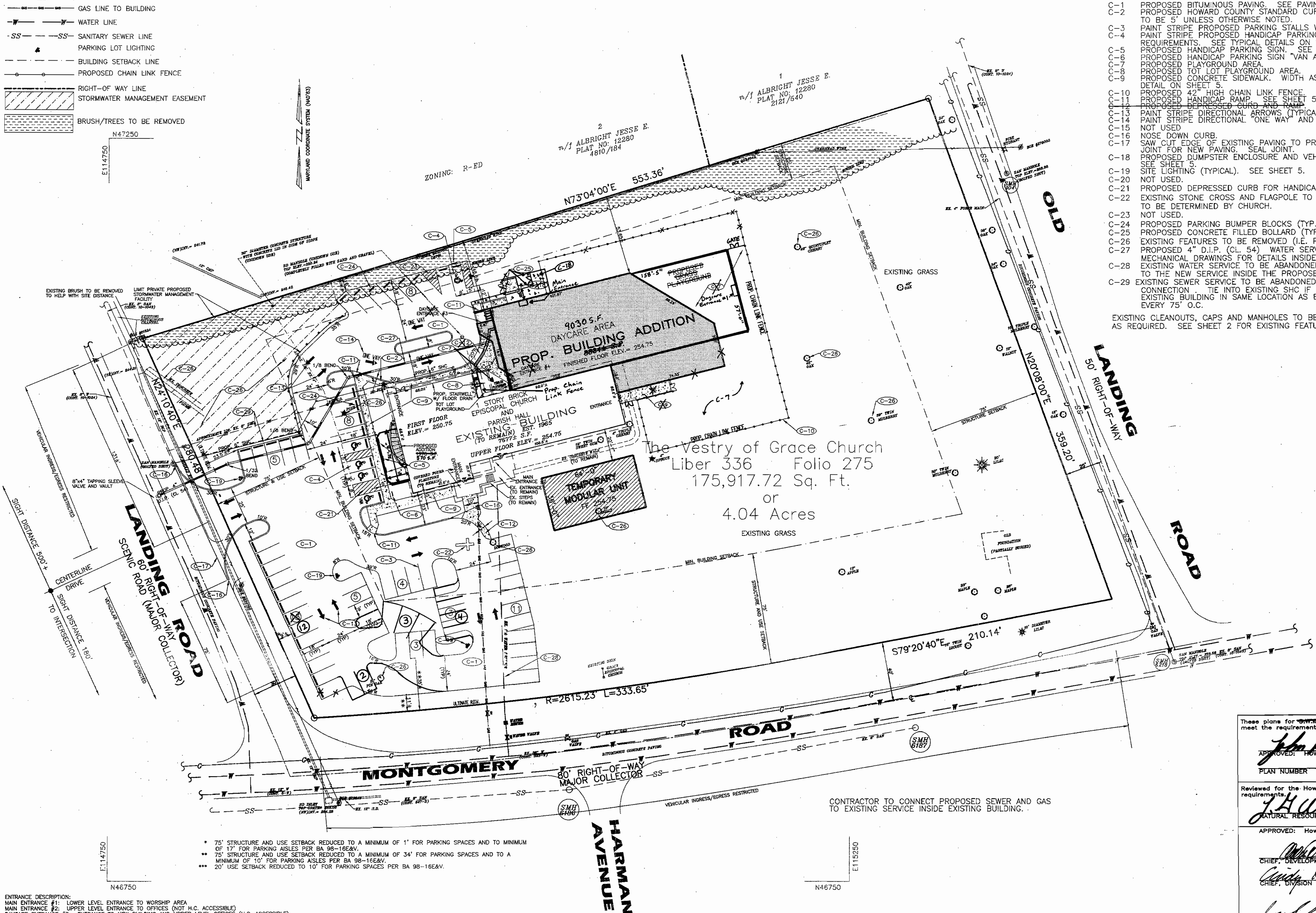
SCALE	
NO SCALE	
SHEET NO.	
1 OF 12	

LEGEND

- GAS LINE TO BUILDING
- W—W— WATER LINE
- SS—SS— SANITARY SEWER LINE
- PARKING LOT LIGHTING
- BUILDING SETBACK LINE
- PROPOSED CHAIN LINK FENCE
- RIGHT-OF-WAY LINE
- STORMWATER MANAGEMENT EASEMENT
- BRUSH/TREES TO BE REMOVED

CONSTRUCTION NOTES:

- C-1 PROPOSED BITUMINOUS PAVING. SEE PAVING SECTION ON SHEET 5.
 - C-2 PROPOSED HOWARD COUNTY STANDARD CURB AND GUTTER. ALL RADII TO BE 5' UNLESS OTHERWISE NOTED.
 - C-3 PAINT STRIPE PROPOSED PARKING STALLS WITH 4" WIDE PAINT LINE.
 - C-4 PAINT STRIPE PROPOSED HANDICAP PARKING SPACES PER ADA REQUIREMENTS. SEE TYPICAL DETAILS ON SHEET 10.
 - C-5 PROPOSED HANDICAP PARKING SIGN. SEE SHEET 10.
 - C-6 PROPOSED HANDICAP PARKING SIGN "VAN ACCESSIBLE". SEE SHEET 10.
 - C-7 PROPOSED PLAYGROUND AREA.
 - C-8 PROPOSED TOT LOT PLAYGROUND AREA.
 - C-9 PROPOSED CONCRETE SIDEWALK. WIDTH AS NOTED. SEE TYPICAL DETAIL ON SHEET 5.
 - C-10 PROPOSED 42" HIGH CHAIN LINK FENCE.
 - C-11 PROPOSED HANDICAP RAMP. SEE SHEET 5.
 - C-12 PROPOSED DEPRESSED CURB AND RAMP.
 - C-13 PAINT STRIPE DIRECTIONAL ARROWS (TYPICAL). SEE DETAIL ON SHEET 5.
 - C-14 PAINT STRIPE DIRECTIONAL "ONE WAY" AND DIRECTIONAL ARROW (TYPICAL).
 - C-15 NOT USED.
 - C-16 NOSE DOWN CURB.
 - C-17 SAW CUT EDGE OF EXISTING PAVING TO PROVIDE CLEAN SMOOTH JOINT FOR NEW PAVING. SEAL JOINT.
 - C-18 PROPOSED DUMPSTER ENCLOSURE AND VEHICULAR CONCRETE PAD. SEE SHEET 5.
 - C-19 SITE LIGHTING (TYPICAL). SEE SHEET 5.
 - C-20 NOT USED.
 - C-21 PROPOSED DEPRESSED CURB FOR HANDICAP ACCESS.
 - C-22 EXISTING STONE CROSS AND FLAGPOLE TO BE RELOCATED. LOCATION TO BE DETERMINED BY CHURCH.
 - C-23 NOT USED.
 - C-24 PROPOSED PARKING BUMPER BLOCKS (TYP.) SEE DETAIL ON SHEET 5.
 - C-25 PROPOSED CONCRETE FILLED BOLLARD (TYP.) SEE DETAIL ON SHEET 5.
 - C-26 EXISTING FEATURES TO BE REMOVED (I.E. PAVING, TREES, CONCRETE, ETC.).
 - C-27 PROPOSED 4" D.I.P. (CL. 54) WATER SERVICE FOR SPRINKLER AND WATER USE. MECHANICAL DRAWINGS FOR DETAILS INSIDE BUILDING.
 - C-28 EXISTING WATER SERVICE TO BE ABANDONED. CONNECT EXISTING WATER SERVICE TO THE NEW SERVICE INSIDE THE PROPOSED ADDITION.
 - C-29 EXISTING SEWER SERVICE TO BE ABANDONED. INSTALL NEW 6" SANITARY HOUSE CONNECTION. TIE INTO EXISTING SHC IF FEASIBLE, OTHERWISE CONNECT TO EXISTING BUILDING IN SAME LOCATION AS EXISTING SERVICE. INSTALL CLEANOUT EVERY 75' O.C.
- EXISTING CLEANOUTS, CAPS AND MANHOLES TO BE ADJUSTED TO PROPOSED GRADE AS REQUIRED. SEE SHEET 2 FOR EXISTING FEATURES TO BE REMOVED.



MARYLAND LAND DESIGN, INC.
CONSULTING ENGINEERS AND LAND PLANNERS

2001 MEADOW DRIVE
WESTMINSTER, MARYLAND 21158
TELEPHONE: (410) 857-0210 FAX: (410) 840-0143

© COPYRIGHT 1998



REVISIONS		
NO.	DATE	DESCRIPTION
1	2-6-99	SITE REVISIONS

PLAN PREPARATION	
DRAWN BY: DAB	DATE: 29 JULY 1999
DESIGNED BY: DAB	FILE NO. 99020
CHECKED BY: KDB	DRAWING NO.

SITE PLAN	
GRACE EPISCOPAL CHURCH	
BUILDING ADDITION	
LIBER 336 FOLIO 275	
1st ELECTION DISTRICT, TAX MAP: 37, BLOCK 6, PARCEL 431	
HOWARD COUNTY, MARYLAND	

SCALE	
1" = 30'	
SHEET NO.	
3 OF 12	

These plans for soil construction, soil erosion and sediment control meet the requirements of Howard Soil Conservation District.

APPROVED: *John K. Blanton*
HOWARD SOIL CONSERVATION DISTRICT
PLAN NUMBER: _____ DATE: 11/24/00

Reviewed for the Howard Conservation District and meets technical requirements.

APPROVED: *J.H. Wolf*
NATURAL RESOURCES CONSERVATION SERVICE
DATE: 10/26/00

APPROVED: *[Signature]*
HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

APPROVED: *[Signature]*
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 11/2/00

APPROVED: *[Signature]*
CHIEF, DIVISION OF LAND DEVELOPMENT
DATE: 11/19/00

APPROVED: *[Signature]*
DIRECTOR
DATE: 11/21/00

CONTRACTOR TO CONNECT PROPOSED SEWER AND GAS TO EXISTING SERVICE INSIDE EXISTING BUILDING.

REQUIRED SEQUENCE OF CONSTRUCTION

- OBTAIN GRADING PERMIT.
- THE CONTRACTOR SHALL NOTIFY THE HOWARD COUNTY DEPARTMENT OF PERMITS AND LICENSES 48 HOURS PRIOR TO BEGINNING WORK. (1 DAY)
- CLEAR AND GRUB FOR THE INSTALLATION OF SUPER SILT FENCE, EARTH DIKE AND CONSTRUCTION ENTRANCE. REMOVE ONLY ENOUGH EXISTING PAVING TO INSTALL STABILIZED CONSTRUCTION ENTRANCE AS SHOWN. (5 DAYS)
- REMOVE ENOUGH PAVING TO CONSTRUCT SWM BASIN/SEDIMENT TRAP. CONSTRUCT TRAP. DO NOT INSTALL SWM CONC. CONTROL STRUCTURE AT THIS TIME. INSTALL STONE OUTLET IN ITS PLACE. SEE SEDIMENT TRAP PLAN VIEW THIS SHEET FOR GRADES. (10 DAYS)
- CONSTRUCT NEW PARKING AREA ALONG THE SOUTHERN PORTION OF THE SITE. (20 DAYS)
- ONCE PARKING AREA IN #5 HAS BEEN COMPLETED, REMOVE ENOUGH PAVING, FENCING, ETC. TO CONSTRUCT BUILDING ADDITION AND PLAYGROUND. (5 DAYS)
- ROUGH GRADE FOR BUILDING AND PLAYGROUND. (5 DAYS)
- CONSTRUCT BUILDING. (6 MONTHS)
- REMOVE REMAINING PAVING AND ROUGH GRADE REMAINDER OF SITE. (10 DAYS)
- INSTALL STORM DRAINAGE SYSTEM. INSTALL INLET PROTECTION. (20 DAYS)
- INSTALL CURBING. (2 DAYS)

- (CONTINUED)
- INSTALL STONE BASE AND PAVING. (5 DAYS)
 - FINE GRADE SITE. (5 DAYS)
 - STABILIZE SITE WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR. REMOVE REMAINING SEDIMENT CONTROL FACILITIES. REMOVE STONE OUTLET FROM TRAP/SWM BASIN AND CONVERT TO SWM BASIN (INSTALL CONC. CONTROL STRUCTURE AND RE-GRADE TO FINAL BASIN GRADE. SEE CONVERSION SEQUENCE AND SWM DETAILS SHEET 6). PERMANENTLY STABILIZE. (20 DAYS)
- NOTE: NO SEDIMENT CONTROL DEVICE SHALL BE REMOVED WITHOUT PRIOR APPROVAL OF THE SEDIMENT CONTROL INSPECTOR. ANY VARIATIONS FROM THE SEQUENCE OF CONSTRUCTION MUST BE APPROVED BY THE SEDIMENT CONTROL INSPECTOR.

THE SEDIMENT CONTROL INSPECTOR MAY REQUIRE ADDITIONAL SEDIMENT CONTROLS DURING CONSTRUCTION IF DEEMED NECESSARY.

SITE ANALYSIS:
 TOTAL SITE AREA: 4.51+ACRES
 DISTURBED AREA: 3.34 AC. OR 167,270± SQ.FT.
 IMPERVIOUS AREA: 59,677± SQ.FT. (TOTAL EXISTING AND PROPOSED)
 VEGETATED AREA: 107,593 SQ.FT.

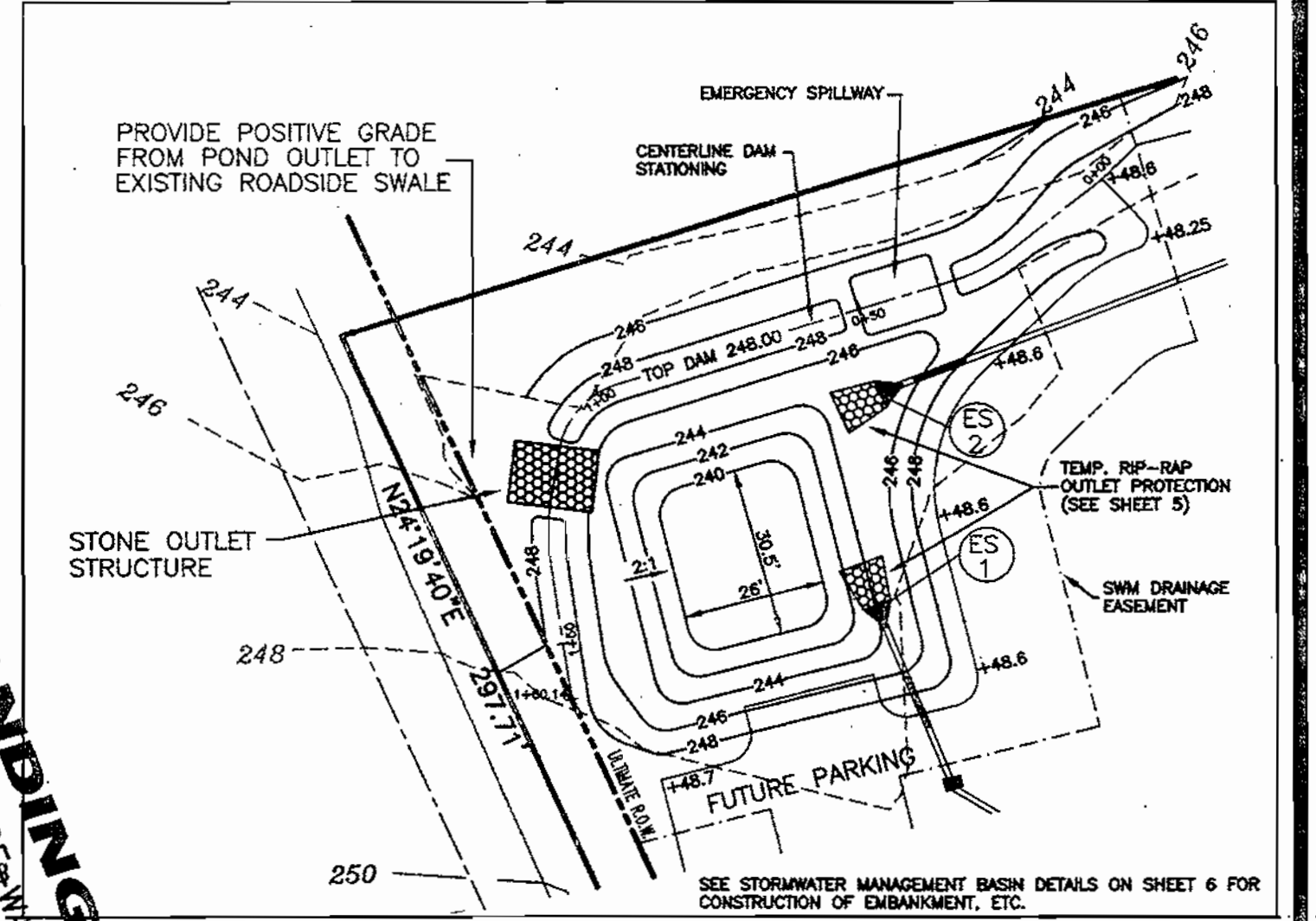
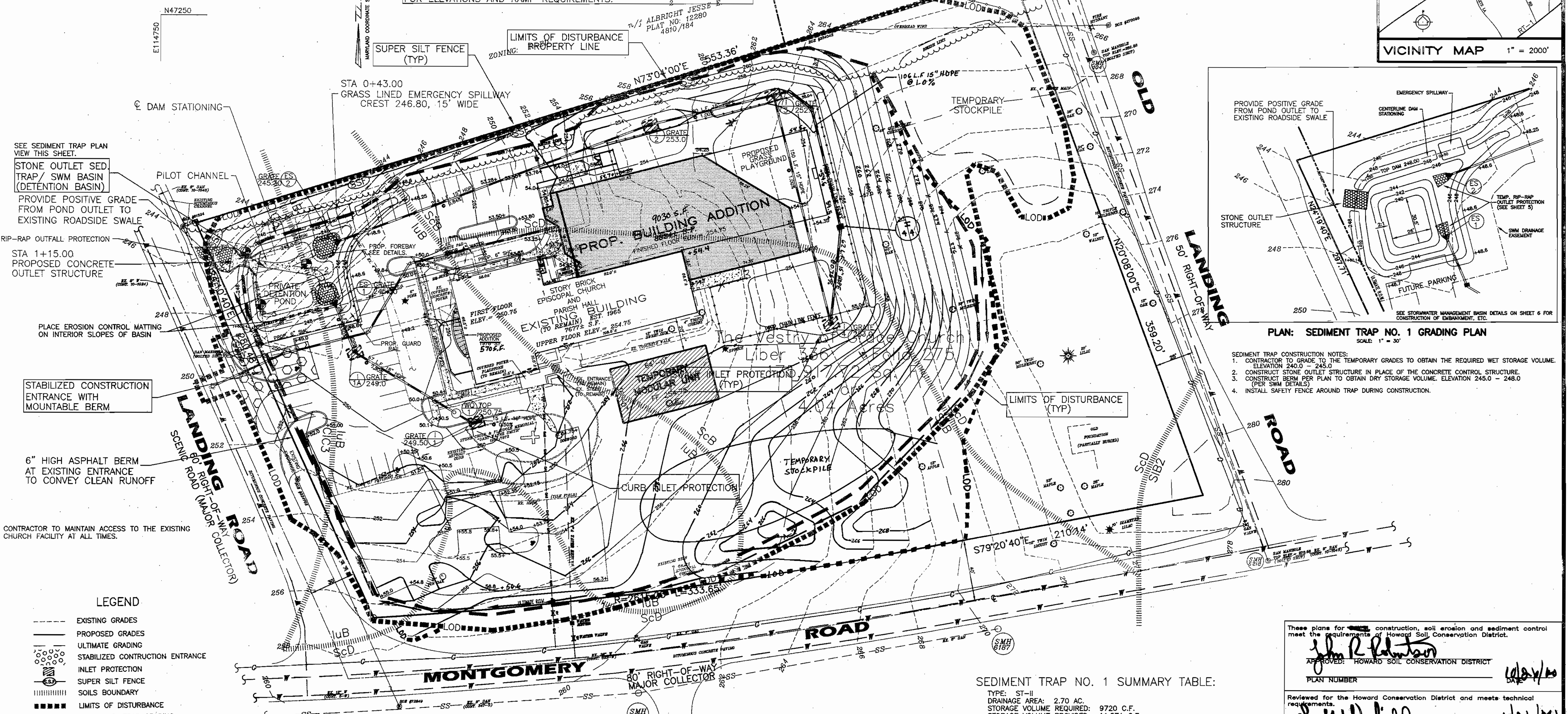
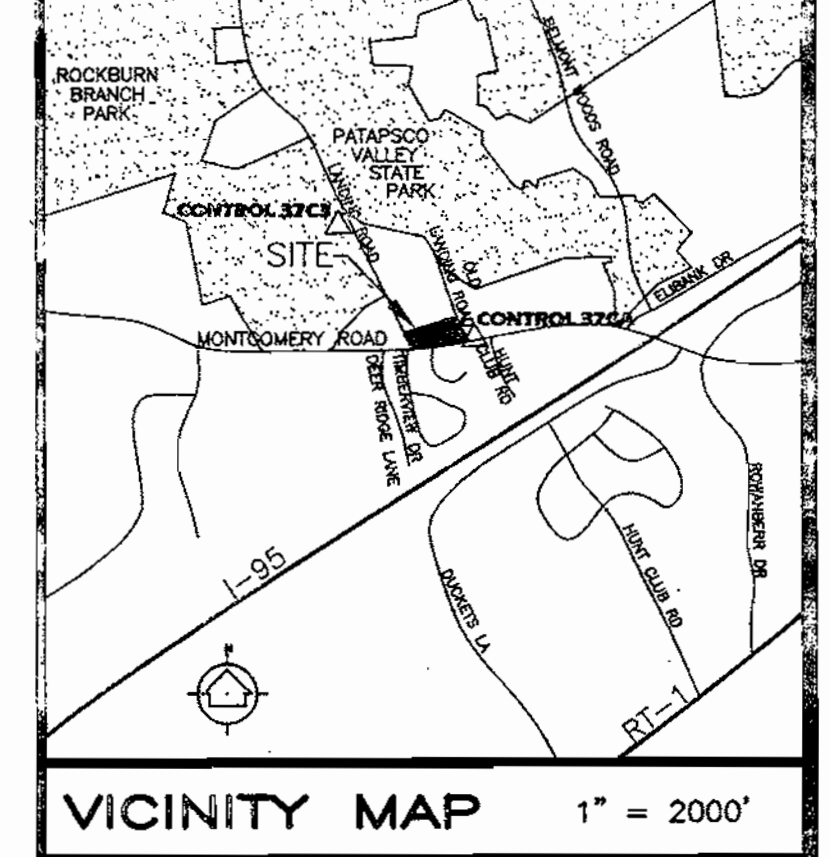
PROVIDE TREE PROTECTION AROUND EXISTING TREES THAT ARE NEAR CONSTRUCTION AREA.

UTILITY NOTES:

- CONTRACTOR SHOULD OPEN ONLY THAT SECTION OF TRENCH THAT CAN BE BACKFILLED AND STABILIZED EACH DAY. IF TRENCH MUST REMAIN OPEN LONGER THAN ONE DAY, SILT FENCE SHALL BE PLACED BELOW (DOWNSLOPE) THE TRENCH.
- PLACE ALL EXCAVATED MATERIAL ON THE UPHILL SIDE OF THE TRENCH. ANY SEDIMENT CONTROL STRUCTURES DISTURBED BY UTILITY CONSTRUCTION SHALL BE REPAIRED IMMEDIATELY.

STACKPILE/TOPSOIL NOTES

- Stockpiling will not be allowed on any impervious area.
- All stockpiles left at the end of the day must be temporarily stabilized, unless they are within existing perimeter sediment controls.



PLAN: SEDIMENT TRAP NO. 1 GRADING PLAN
 SCALE: 1" = 30'

- SEDIMENT TRAP CONSTRUCTION NOTES:
- CONTRACTOR TO GRADE TO THE TEMPORARY GRADES TO OBTAIN THE REQUIRED WET STORAGE VOLUME. ELEVATION 240.0 - 245.0
 - CONSTRUCT STONE OUTLET STRUCTURE IN PLACE OF THE CONCRETE CONTROL STRUCTURE.
 - CONSTRUCT BERM PER PLAN TO OBTAIN DRY STORAGE VOLUME. ELEVATION 245.0 - 248.0 (PER SWM DETAILS)
 - INSTALL SAFETY FENCE AROUND TRAP DURING CONSTRUCTION.

- LEGEND**
- EXISTING GRADES
 - PROPOSED GRADES
 - ULTIMATE GRADING
 - STABILIZED CONSTRUCTION ENTRANCE
 - INLET PROTECTION
 - SUPER SILT FENCE
 - SOILS BOUNDARY
 - LIMITS OF DISTURBANCE
 - TEMP. SED. TRAP GRADING
 - EARTH DIKE
 - ASPHALT CURB

- NOTES**
- COORDINATES AND BEARINGS SHOWN ON THIS PLAT ARE REFERRED TO THE SYSTEM OF COORDINATES ESTABLISHED BY THE HOWARD COUNTY GEODETIC CONTROL SYSTEM (NAD 83), AND ARE BASED ON THE FOLLOWING TRAVERSE STATIONS (TRANSLATED METERS TO FEET)
 - ELEVATIONS SHOWN HEREON REFER TO THE NORTH AMERICAN VERTICAL DATUM 1988 (NAVD 88) WITH LOCAL REFERENCE TO THE FOLLOWING HOWARD COUNTY GEODETIC CONTROL SYSTEM STATION:
- | DESIGNATION | NORTH (FT) | EAST (FT) |
|-------------|------------|-------------|
| 37CA | 564321.857 | 1382742.580 |
| 37CB | 562916.023 | 1384856.662 |
-
- | DESIGNATION | ELEVATION (FT) |
|-------------|----------------|
| 37CA | 256.985 |
| 37CB | 257.772 |

SEDIMENT TRAP NO. 1 SUMMARY TABLE:

TYPE: ST-II
 DRAINAGE AREA: 2.70 AC.
 STORAGE VOLUME REQUIRED: 9720 C.F.
 STORAGE VOLUME PROVIDED: 11,571 C.F.
 WET STORAGE VOLUME REQUIRED: 4860 C.F.
 WET STORAGE VOLUME PROVIDED: 5168 C.F.
 WET STORAGE BOTTOM ELEVATION: 240.00
 WEIR LENGTH: 11'
 DRY STORAGE DEPTH BELOW OUTLET: 2'
 CLEANOUT ELEVATION: 242.00
 EMBANKMENT ELEVATION: 248.00
 EMBANKMENT HEIGHT: 3'

INSTALL ST-II IN PLACE OF PROPOSED CONCRETE CONTROL STRUCTURE DURING SEDIMENT CONTROL. SEE SEQUENCE OF CONSTRUCTION.

These plans for construction, soil erosion and sediment control meet the requirements of Howard Soil Conservation District.

APPROVED: *John R. Robertson*
 HOWARD SOIL CONSERVATION DISTRICT
 PLAN NUMBER: 11/24/00

Reviewed for the Howard Conservation District and meets technical requirements.

APPROVED: *John R. Robertson*
 NATURAL RESOURCES CONSERVATION SERVICE
 DATE: 11/24/00

APPROVED: *John R. Robertson*
 HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 11/24/00

APPROVED: *John R. Robertson*
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 11/24/00

APPROVED: *John R. Robertson*
 DIRECTOR
 DATE: 11/24/00

MARYLAND LAND DESIGN, INC.
 CONSULTING ENGINEERS AND LAND PLANNERS

2001 MEADOW DRIVE
 WESTMINSTER, MARYLAND 21158
 TELEPHONE: (410) 857-0210 FAX: (410) 840-0143

© COPYRIGHT 1998



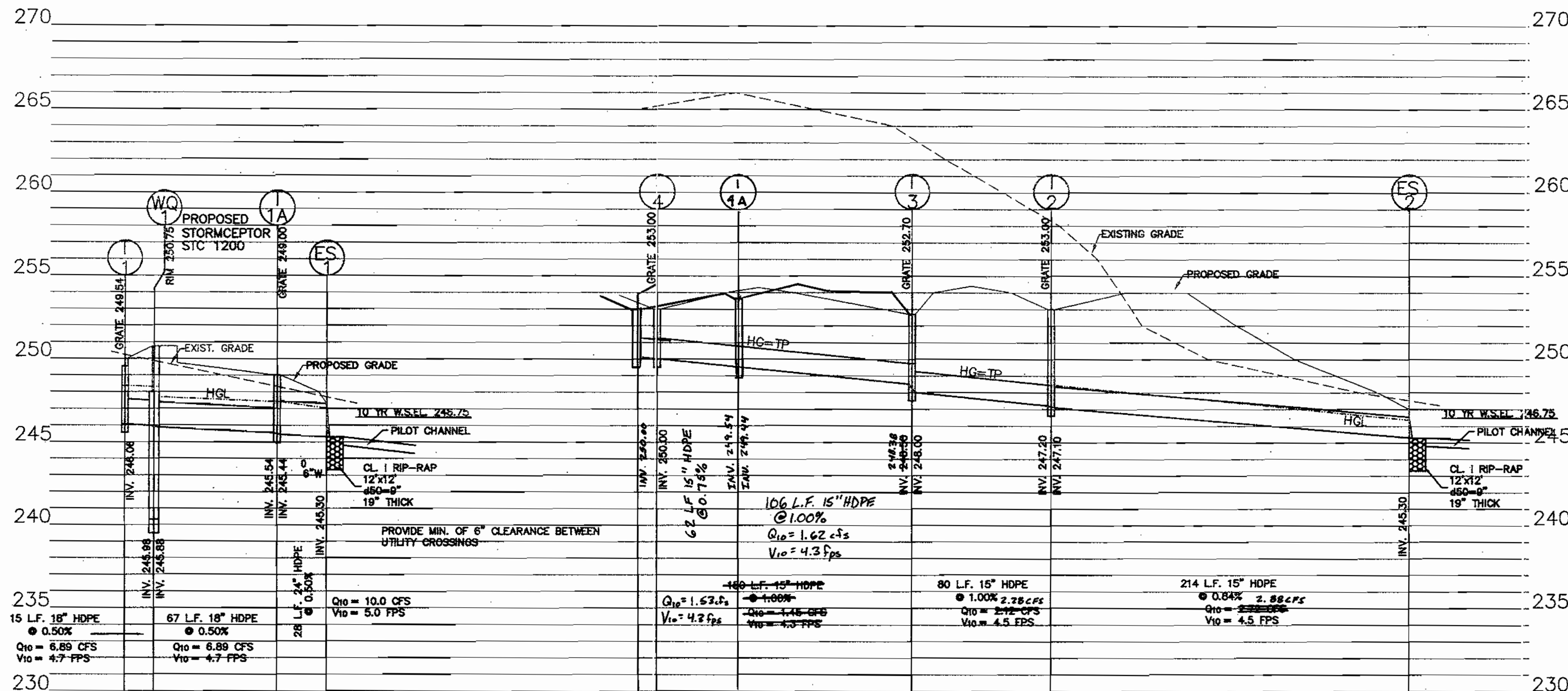
REVISIONS		
NO.	DATE	DESCRIPTION
1	2-6-03	SITE AND GRADING REVISIONS

PLAN PREPARATION	
DRAWN BY: DAB	DATE: 29 JULY 1999
DESIGNED BY: DAB	FILE NO. 99020
CHECKED BY: KDB	DRAWING NO.

GRADING, SWM & SEDIMENT CONTROL PLAN	
GRACE EPISCOPAL CHURCH LIBER 336 FOLIO 275 1st ELECTION DISTRICT, TAX MAP: 37, BLOCK 6, PARCEL 431 HOWARD COUNTY, MARYLAND	

SCALE
1" = 30'
SHEET NO.
4 OF 12

SDP 00-40



STORM DRAIN PROFILES

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

OPERATION AND MAINTENANCE SCHEDULE FOR STORMCEPTOR WATER QUALITY DEVICE

- Stormceptor water quality structures will require periodic inspection and cleaning to maintain operation and function. Owners will have the Stormceptor unit inspected yearly or as required by Howard County, utilizing the Stormceptor Inspection/Monitoring Form. Inspections can be done by using a diver floatable tube ("sludge judge") to extract a water column sample. When sediment depths exceed the specified level (Table 8 of Technical Manual) then cleaning of the unit is required.
- Stormceptor water quality structures must be checked and cleaned immediately after petroleum spills, contact appropriate regulatory agencies.
- Maintenance of Stormceptor units should be done by a person which will remove the water, sediment, debris, floating hydrocarbons and other materials in it. The proper cleaning and disposal of the removed materials and liquid must be followed.
- Inlet and outlet pipes must be checked for any obstructions and if any obstructions are found they must be removed. Structural parts of the Stormceptor will be replaced as needed.
- Owner shall retain and make Stormceptor Inspection/Monitoring Forms available to Howard County officials upon their request.

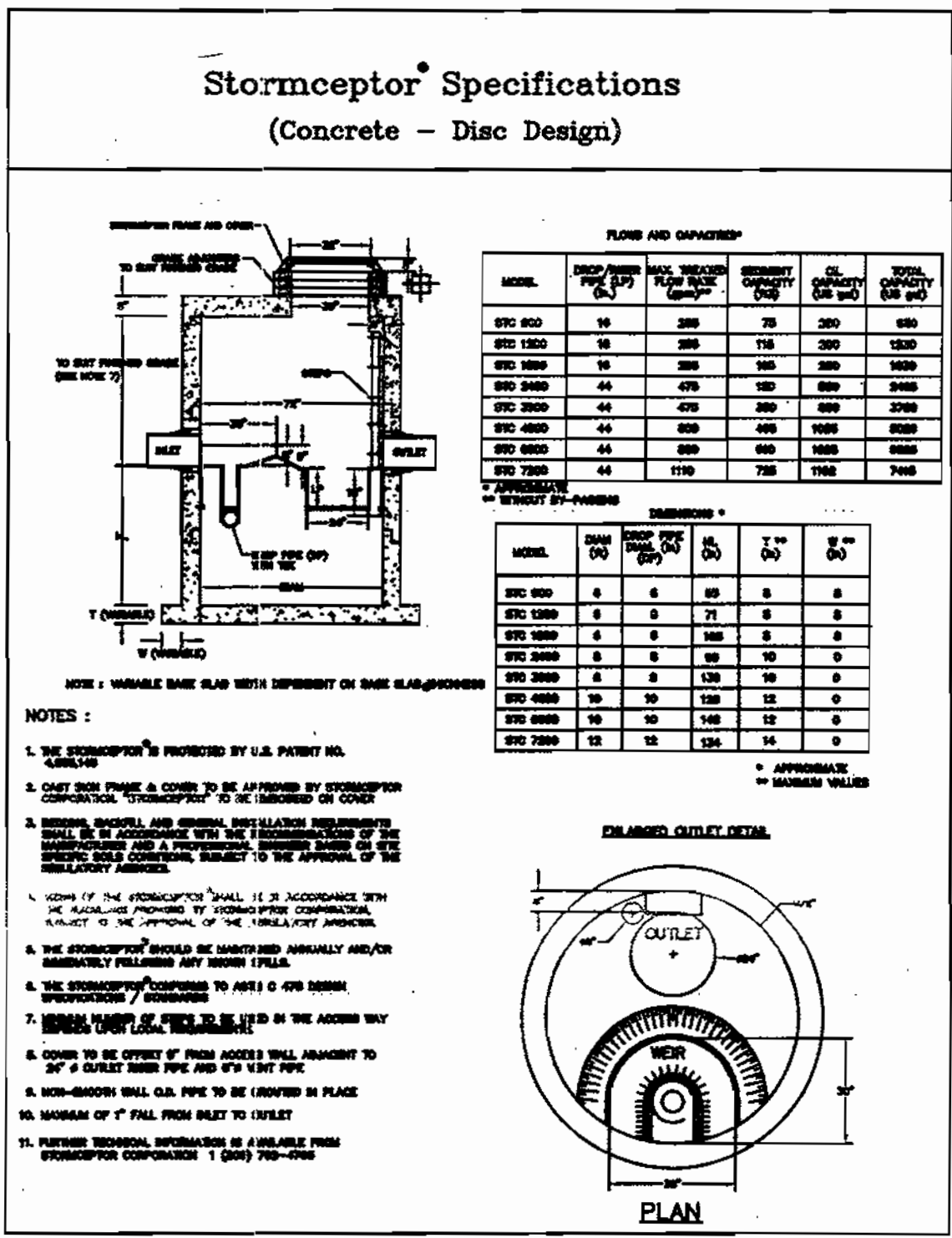
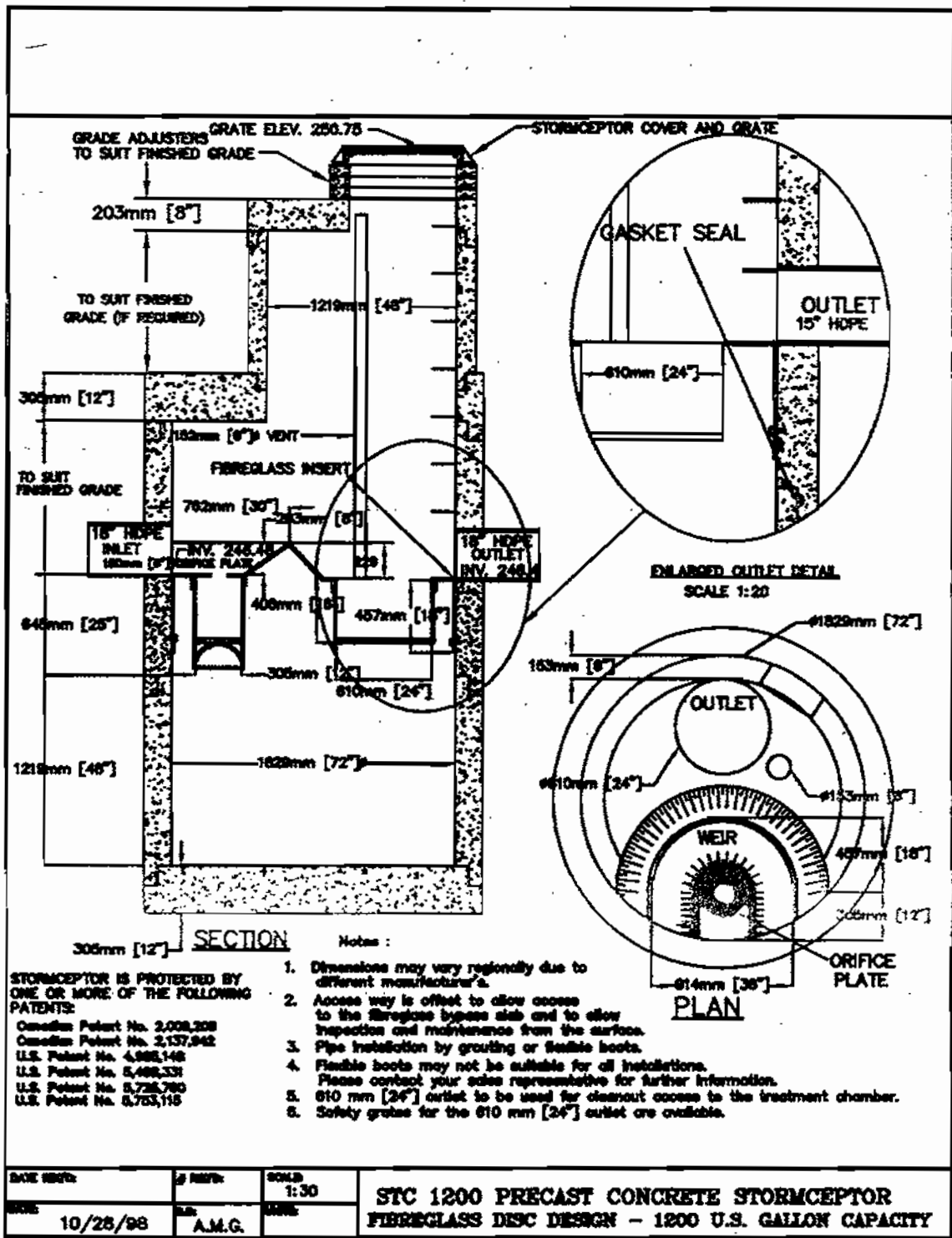
15. FILL UNIT WITH CLEAN WATER AFTER UNIT IS CLEANED OUT, IF REQUIRED BY LOCAL INSPECTION

16. FINAL INSPECTION

FOR TECHNICAL INFORMATION CALL STORMCEPTOR CORPORATION AT 1-800-782-4703

DATE: 3/3/97

PAGE 1



DATE: 10/28/98	BY: A.M.G.	PROJECT: STC 1200 PRECAST CONCRETE STORMCEPTOR
		PRECAST CONCRETE DESIGN - 1200 U.S. GALLON CAPACITY

STRUCTURE	GRATE	INV. IN	INV. OUT	TYPE
I-1	249.00	---	246.56	*MODIFIED TYPE S, DOUBLE GRADE (MD 379.03)
I-1A	249.00	245.68	245.58	*MODIFIED TYPE S, DOUBLE GRADE (MD 379.03)
1-2	253.00	247.20	247.10	PRECAST YARD INLET (MD-381.02)
1-3	252.70	248.59	248.00	PRECAST YARD INLET (MD-381.02)
1-4	253.00	---	250.00	PRECAST YARD INLET (MD-381.02)
WQ-1	250.75	246.48	246.40	STORMCEPTOR STC 1200
ES-1	---	---	245.30	HDPE END SECTION
ES-2	---	---	245.30	HDPE END SECTION

*MODIFIED TO MAKE LESS THAN STANDARD DEPTH I-1 TO BE DEPRESSED 3" WITHIN A 5' RADIUS.

I-1A	253.75	249.54	247.44	PRECAST YARD INLET (MD-381.02)
------	--------	--------	--------	--------------------------------

MODEL	STEP	INLET	OUTLET	Q (GPM)	V (FPS)	Q (MGD)	V (FPS)
STC 1200	1	18	24	100	1.62	0.007	4.3
STC 1200	2	18	24	200	3.24	0.014	8.6
STC 1200	3	18	24	300	4.86	0.021	12.9
STC 1200	4	18	24	400	6.48	0.028	17.2
STC 1200	5	18	24	500	8.10	0.035	21.5
STC 1200	6	18	24	600	9.72	0.042	25.8
STC 1200	7	18	24	700	11.34	0.049	30.1
STC 1200	8	18	24	800	12.96	0.056	34.4
STC 1200	9	18	24	900	14.58	0.063	38.7
STC 1200	10	18	24	1000	16.20	0.070	43.0

MARYLAND LAND DESIGN, INC.
CONSULTING ENGINEERS AND LAND PLANNERS

2001 MEADOW DRIVE
WESTMINSTER, MARYLAND 21158
TELEPHONE: (410) 857-0210 FAX: (410) 840-0143

© COPYRIGHT 1998

NO.	DATE	DESCRIPTION
1	2-6-99	STORM DRAIN REVISIONS

REVISIONS

NO. DATE DESCRIPTION

1 2-6-99 STORM DRAIN REVISIONS

PLAN PREPARATION

DRAWN BY: DAB DATE: 29 JULY 1999

DESIGNED BY: DAB FILE NO. 98030

CHECKED BY: KDB DRAWING NO.

STORM DRAIN PROFILES AND DETAILS

GRACE EPISCOPAL CHURCH
BUILDING ADDITION
LIBER 336, FOLIO 275
1st ELECTION DISTRICT, TAX MAP: 37, BLOCK 6, PARCEL 431
HOWARD COUNTY, MARYLAND

SCALE
NO SCALE

SHEET NO.
7 OF 12

These plans for construction, soil erosion and sediment control meet the requirements of Howard Soil Conservation District.

APPROVED: Howard Soil Conservation District
DATE: 10/24/00

Reviewed for the Howard Conservation District and meets technical requirements:
J. S. Wofford
RURAL RESOURCE CONSERVATION SERVICE
DATE: 10/24/00

APPROVED: Howard County Department of Planning and Zoning
DATE: 11/2/00

DATE: 11/7/00

DATE: 11/21/00

CONTRACTOR INSTALLATION INSTRUCTIONS: PRECAST CONCRETE STORMCEPTOR

1. STAKE-OUT THE LOCATION OF THE STORMCEPTOR AND EXCAVATE HOLE. EXCAVATE ADEQUATE SPACE TO CONNECT INLET AND OUTLET PIPES TO UNIT. INSTALL A 12" DEEP (OR AS REQUIRED) LAYER OF COMPACTED AGGREGATE SUBGRADE AT THE BOTTOM OF THE EXCAVATION. INSTALL TRENCH BOX OR SHORING AS NEEDED.

2. 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 SUBGRADE ELEVATION. CHECK ELEVATION OF INSTALLED SUBGRADE AND ADJUST AS NEEDED.

3. SECURE INSPECTOR APPROVAL OF SUBGRADE AND SUBBASE. ALL LIFTING APPARATUS IS TO BE PROVIDED BY THE INSTALLATION CONTRACTOR.

4. INSTALL STORAGE CHAMBER. (INSTALL SCREW LIFTING PINS INTO BASE OF STORAGE CHAMBER). ATTACH CABLES OR CHAINS TO LIFT LINES 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 SUBGRADE. 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 (PROCEDURE IS SAME AS STEP 4).

(FOR STORMCEPTOR MODELS STC-900, STC-1200 AND STC-1800 SKIP STEP 5 AND GO TO STEP 6)

5. 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 SPROUT AND COAT WITH LUBRICATING GREASE (PROVIDED IN SHIPMENT).

6. 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 MERE (SIDE INSERT). INSTALL RUBBER GASKET ON TOP OF BYPASS SECTION AND COAT WITH LUBRICATING GREASE, IF NOT PRELUBRICATED.

7. INSTALL INLET AND OUTLET STORM DRAIN PIPES. CONNECT INLET AND OUTLET STORM DRAIN PIPES WITH FLEXIBLE BOOTS (WHEN PROVIDED) AND WITH NON-SHEDDING GROUT WHEN NO FLEXIBLE BOOTS ARE PROVIDED. THE INVERT OF THE INLET AND OUTLET PIPE IS TO MATCH WITH THE INVERT OF THE STORMCEPTOR INSERT. FLEXIBLE BOOT INSTALLATION PROCEDURES: CENTER THE PIPE IN THE 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 80 INCH POUNDS. IF THE PIPE IS MUCH SMALLER THAN THE BOOT, LEFT THE BOOT SUCH THAT IT CONTACTS THE BOTTOM OF THE PIPE WHILE TIGHTENING THE CLAMP TO ENSURE EVEN CONTRACTION OF THE RUBBER. MOVE PIPE HORIZONTALLY AND/OR VERTICALLY TO BRING TO GRADE.

8. INSTALL STORMCEPTOR DROP PIPES ACCORDING TO STC PIPE INSTALLATION PROCEDURE ON PAGE 2 OF THESE INSTRUCTIONS.

9. 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 NOT REQUIRED. INSTALL RUBBER GASKET ON BACK UNIT AND COAT WITH LUBRICATING GREASE (PROVIDED IN SHIPMENT), IF NOT PRELUBRICATED. ALIGN STEPS PROPERLY FOR ACCESS FROM MANHOLE OPENING AND ADJACENT TO VENT PIPE. NOTE: FOR SHALLOW INSTALLATIONS THIS SECTION MAY NOT BE REQUIRED.

10. INSTALL TOP SLAB (CAP) WITH MANHOLE OPENING FOR STORMCEPTOR FRAME AND COVER. MANHOLE OPENING OFFSET (NOT CENTERED) SHOULD BE ORIENTED SO OPENING IS ABOVE STEPS AND ADJACENT TO VENT PIPE. SIGN THAT OF VENT PIPE CAN BE CUT 1" BELOW TOP OF SLAB AND SECURELY ATTACHED TO INSIDE EDGE OF MANHOLE ACCESS OPENING. TOP SLAB OPENING SHOULD BE ORIENTED ABOVE THE STORMCEPTOR OUTLET (24" HIGH) DROP PIPE AND ABOVE THE 6" HIGH VENT PIPE.

11. BACKFILL STORMCEPTOR WITH APPROVED BACKFILL MATERIAL (NO ORGANIC OR TOPSOIL). IS TO BE USED FOR BACKFILL. BACKFILL AND COMPACT IN 8" CH LIFTS. BACKFILL SHOULD BE COMPACTED TO LOCAL/STATE REQUIREMENTS.

12. INSTALL AND SET GRADE ADJUSTING RINGS OR USE APPROVED GRADE ADJUSTING METHOD AND MATERIAL AS NEEDED. PLUG ALL LIFT HOLES WITH TAPERED FLEXIBLE PLUG AND KNOCK IN TO PLACE. PLUGS IN STORAGE CHAMBER MUST BE ORIENTED INSIDE AND OUTSIDE WITH GROUT. GROUT ALL OTHER LIFT HOLES.

13. INSTALL AND SET STORMCEPTOR FRAME AND COVER.

14. THE STORMCEPTOR SHOULD BE PUMPED OUT WHEN THE SEDIMENT CONTROL MEASURES ARE REMOVED (SITE PERMANENTLY STABILIZED).

15. FILL UNIT WITH CLEAN WATER AFTER UNIT IS CLEANED OUT, IF REQUIRED BY LOCAL INSPECTION

16. FINAL INSPECTION

7/3/96

FOR TECHNICAL INFORMATION CALL STORMCEPTOR CORPORATION AT 1-800-782-4703

SDP00-40

