





**SEDIMENT AND EROSION 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 (410-318-1025).
- All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the most current MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL and revisions thereto.
- Following initial soil disturbance or re-disturbance, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1, b) 14 days for 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 12, of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
- All disturbed areas must be stabilized within the time period specified above in accordance with the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seeding (Sec.51) and (Sec.54), temporary seeding (Sec.52) and mulching (Sec.53). Temporary stabilization with mesh 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 conditions until permission for their removal has been obtained from the Howard County Sediment Control Inspector.

**1. SITE ANALYSIS:**

TOTAL AREA OF SITE:	60.6 AC. +/- 2,144,280 SF +/-
DEVELOPED AREA:	2.48 AC. +/- 107,126 SF +/-
IMPERVIOUS AREA:	0.25 AC. +/- 10,936 SF +/-
VEG. STABILIZED AREA:	2.23 AC. +/- 96,816 SF +/-
TOTAL CUT:	500 CY +/-
TOTAL FILL:	500 CY +/-
SILT FENCE:	800 LF.
SUPER SILT FENCE:	500 LF.
STAB. CONSTR. ENTR.	15 each

**2. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.**

**3. Additional sediment control must be provided, if deemed necessary by the Howard County Sediment Control Inspector, to stabilize areas of the site.**

**4. On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.**

**5. Trenches for the construction of utilities is limited to three pipe lengths or that which shall be back-filled and stabilized by the end of each work day, whichever is shorter.**

**SEQUENCE OF CONSTRUCTION**

No. of DAYS	DESCRIPTION
1	Obtain grading permit.
2	Install tree protection fence where shown.
3	Install erosion and sediment control measures.
4	Excavate for building and rough grade site.
5	Construct storm drainage and install IPD.
6	Construct building addition, maintenance building, playground, volleyball court and driveway.
7	Construct dry swales.
8	Final grade and stabilize all disturbed areas on site, in accordance with standards and specifications.
9	When graded areas are stabilized and with the approval of the sediment control inspector, remove erosion and sediment control measures and stabilize areas disturbed by the process.

**CONSTRUCTION SPECIFICATIONS**

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

**ROCK OUTLET PROTECTION III**

NOT TO SCALE

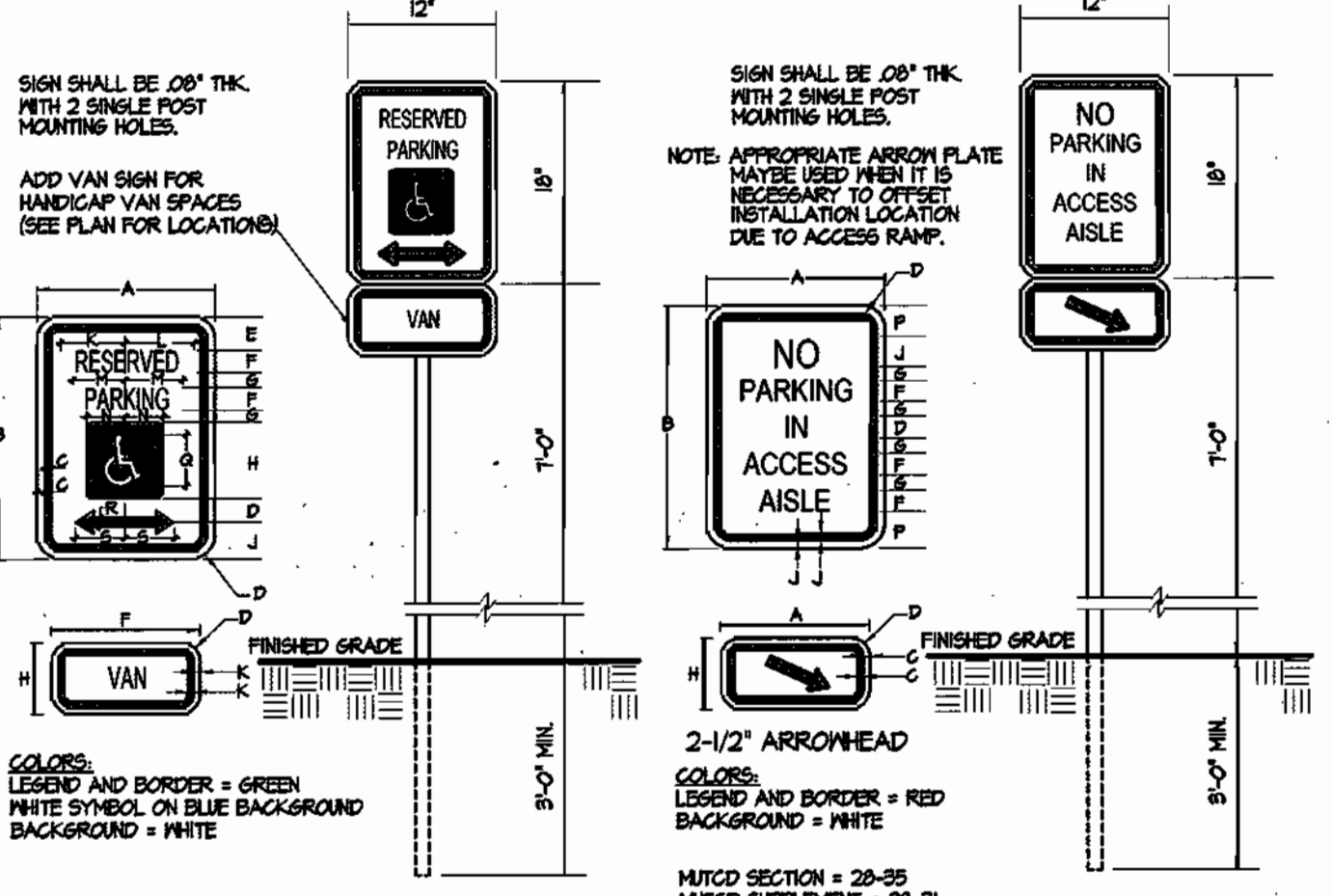


**PERMANENT SEEDING NOTES**

- Apply to graded or cleared areas not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.
- Seedbed Preparation:** Loosen upper three inches of soil by raking, disking or other acceptable means before seeding if not previously loosened.
- Soil Amendments:** In lieu of soil test recommendations, use one of the following schedules:
- Preferred:** Apply 2 tons/acre dolomitic limestone (12 lbs/1000 sq. ft.) and 600 lbs/acre 10-10-10 fertilizer (4 lbs/1000 sq. ft.) before seeding. Harrow or disk into upper three inches of soil. At time of seeding, apply 400 lbs/acre 30-0-0 urea-formaldehyde fertilizer (4 lbs/1000 sq. ft.)
  - Acceptable:** Apply 2 tons/acre dolomitic limestone (12 lbs/1000 sq. ft.) and 1000 lbs/acre 10-10-10 fertilizer (23 lbs/1000 sq. ft.) before seeding. Harrow or disk into upper three inches of soil.
- Seeding:** For the periods March 1 - April 30, and August 1 - October 15, seed with 60 lbs/acre (1.4 lbs/1000 sq. ft.) of Kentucky 31 Tall Fescue. For the period May 1 - July 31, seed with 60 lbs Kentucky 31 Tall Fescue per acre and 2 lbs/acre (0.5 lbs/1000 sq. ft.) of creeping lovegrass. During the period of October 15 - February 28, protect site by: Option 1 - Two tons per acre of well anchored straw mulch and seed as soon as possible in the spring. Option 2 - Use sod. Option 3 - Seed with 60 lbs/acre Kentucky 31 Tall Fescue and mulch with 2 tons/acre well anchored straw.
- Mulching:** Apply 1/2 to 2 tons per acre (10 to 40 lbs/1000 sq. ft.) of untreated small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 200 gallons per acre (5 gal/1000 sq. ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 340 gallons per acre (8.5 gal/1000 sq. ft.) for anchoring.
- Maintenance:** Inspect all seeding areas and make needed repairs, replacements and reseedings.

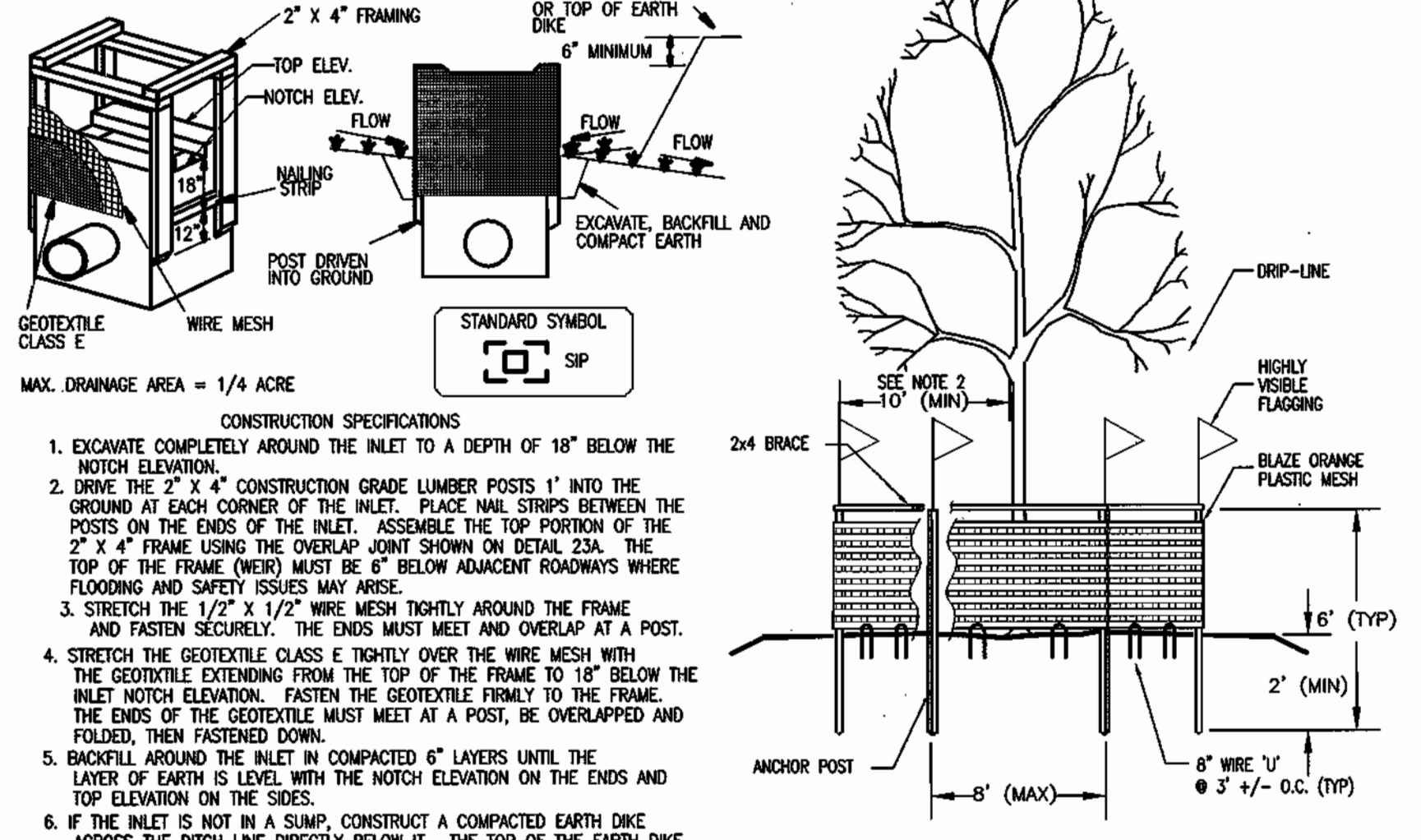
**TEMPORARY SEEDING NOTES**

- Apply to graded or cleared areas likely to be re-disturbed where a short-term vegetative cover is needed.
- Seedbed Preparation:** Loosen upper three inches of soil by raking, disking or other acceptable means before seeding if not previously loosened.
- Soil Amendments:** Apply 600 lbs/acre 10-10-10 fertilizer (1.4 lbs/1000 sq. ft.)
- Seeding:** For the periods March 1 - April 30, and August 1 - October 15, seed with 2-1/2 bushel per acre of annual ryegrass (2.5 lbs/1000 sq. ft.). For the period May 1 - August 14, seed with 3 lbs/acre of creeping lovegrass (0.75 lbs/1000 sq. ft.). For the period November 16 - February 28, protect site by apply 2 tons/acre of well anchored straw mulch and seed as soon as possible in the spring or use sod.
- Mulching:** Apply 1/2 to 2 tons per acre (10 to 40 lbs/1000 sq. ft.) of untreated small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 200 gallons per acre (5 gal/1000 sq. ft.) of emulsified asphalt on flat areas. On slopes 8 feet or higher, use 340 gallons per acre (8.5 gal/1000 sq. ft.) for anchoring.
- Refer to the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for additional rates and methods not covered.



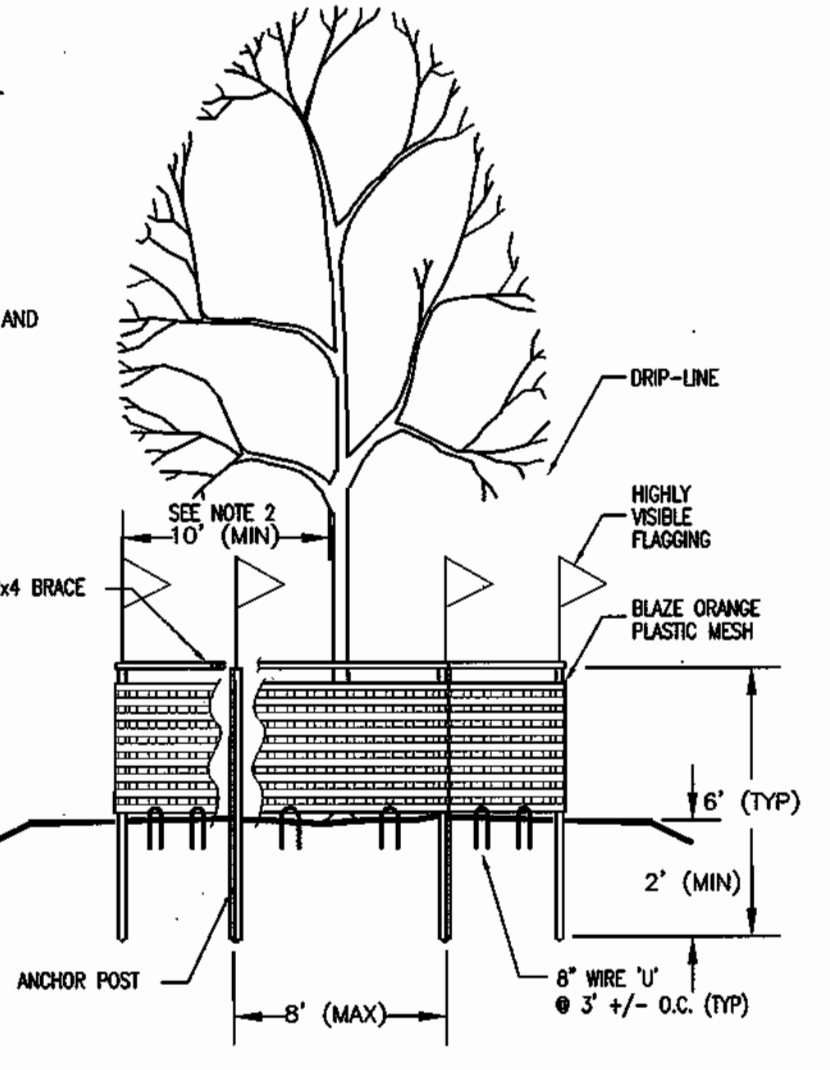
**HANDICAPPED SIGN DETAIL**

MD STD. NO. (RT-8) NOT TO SCALE



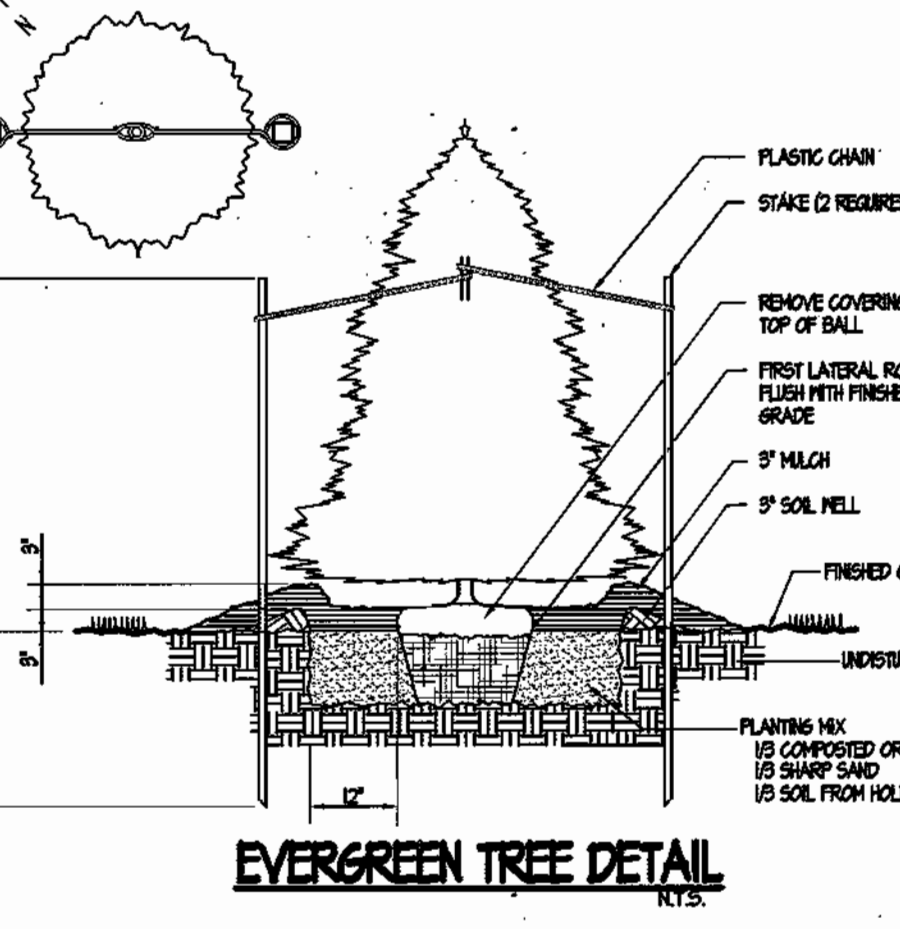
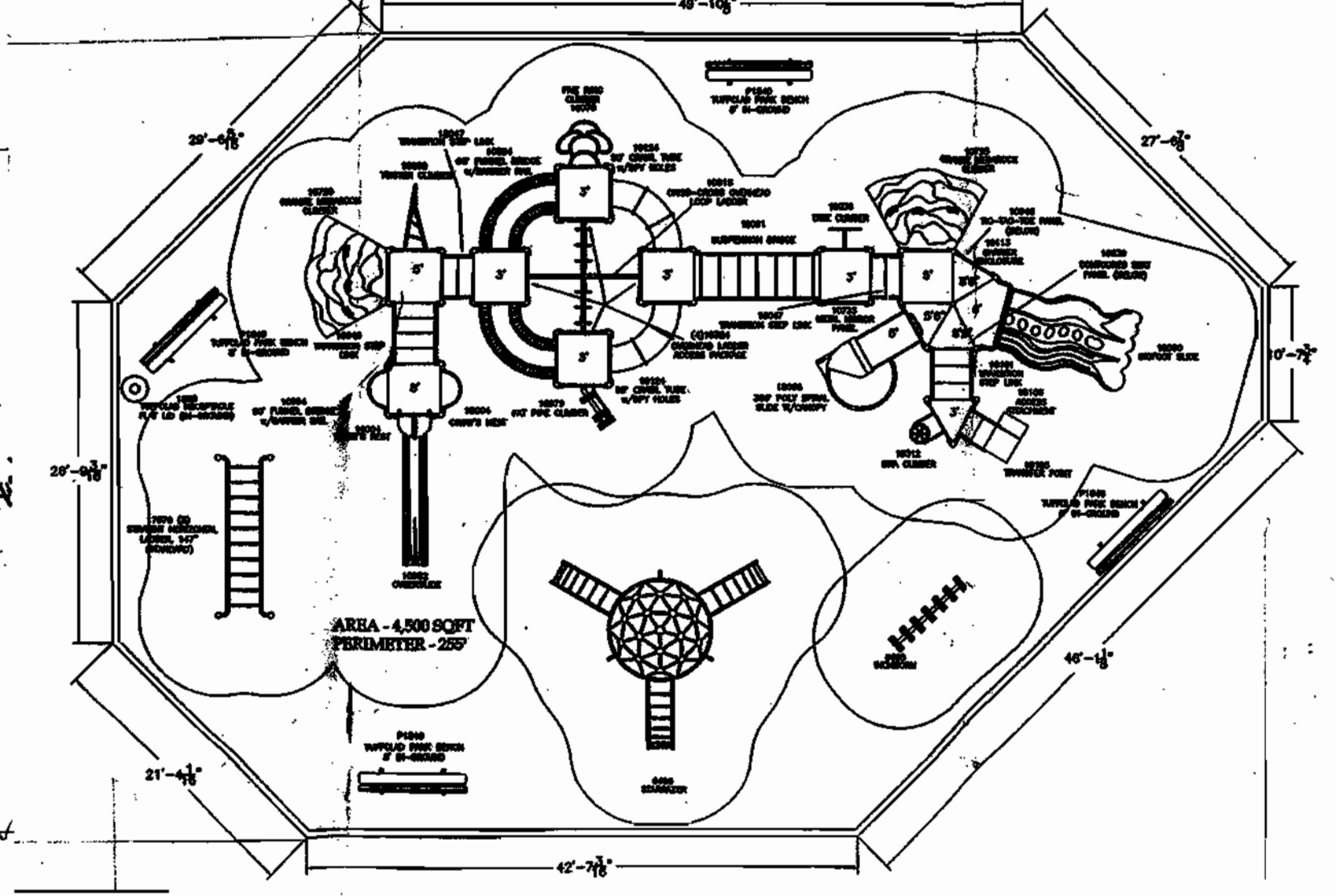
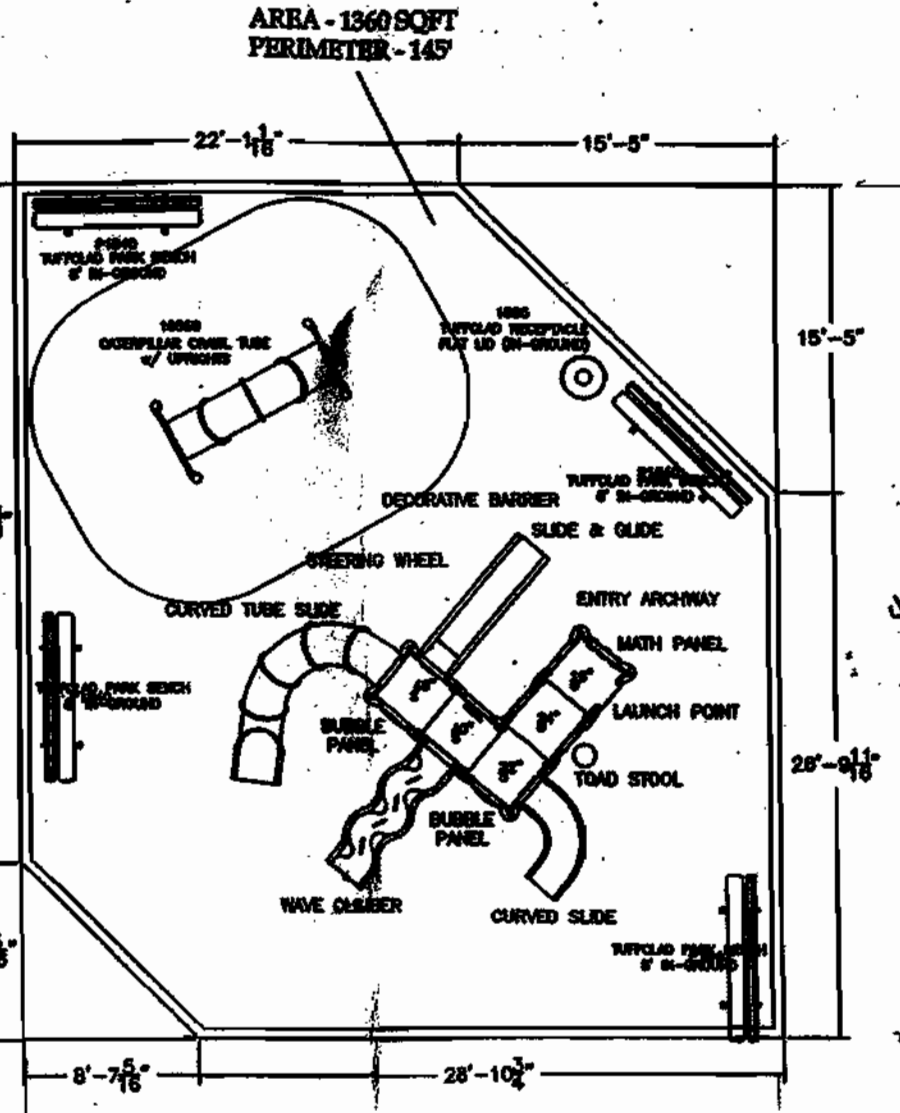
**STANDARD INLET PROTECTION**

NOT TO SCALE

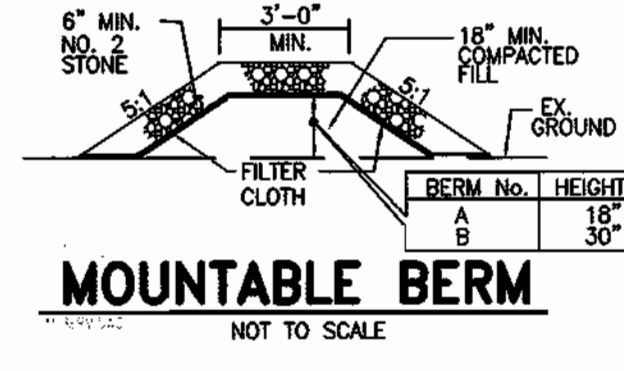


**TREE PROTECTION FENCE**

NOT TO SCALE

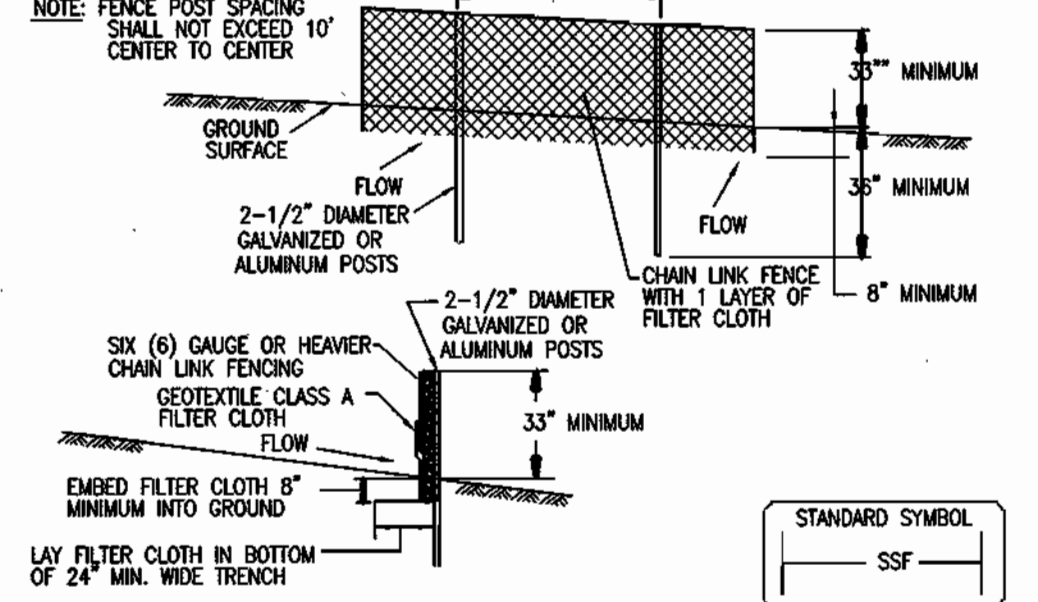


**EVERGREEN TREE DETAIL**



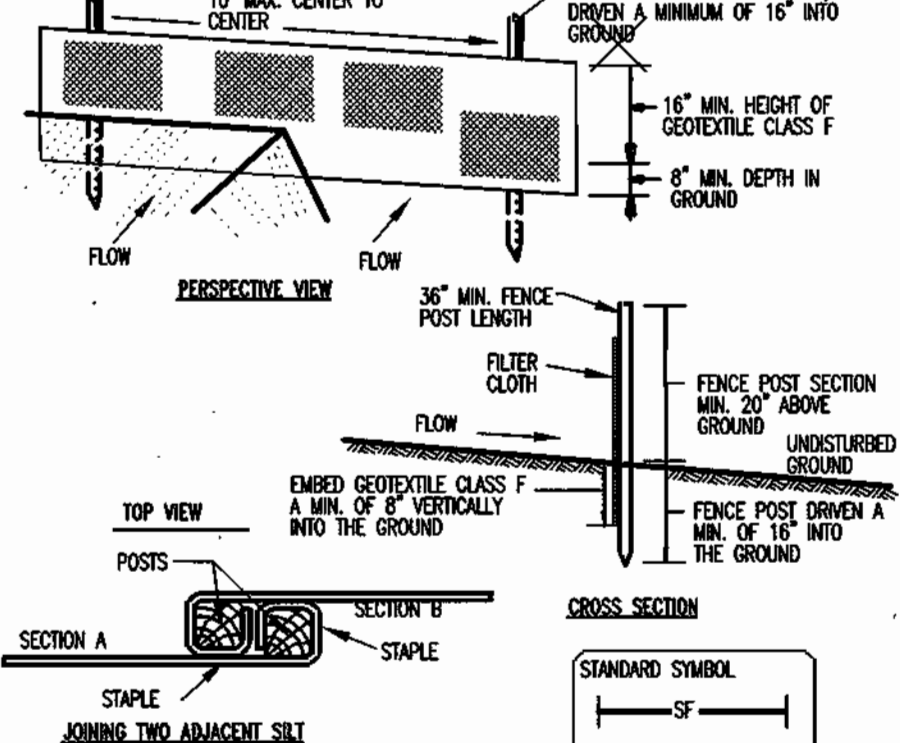
**MOUNTABLE BERM**

NOT TO SCALE



**SUPER SILT FENCE**

NOT TO SCALE



**STABILIZED CONSTRUCTION ENTRANCE**

NOT TO SCALE

**SILT FENCE**

NOT TO SCALE

CLASS	APPROXIMATE OPENING SIZE	GRAV. TENSILE STRENGTH	BURST STRENGTH
A	0.20"	250	500
B	0.60	200	320
C	0.80	200	320
D	0.60	90	145
E	0.30	90	145
F (SILT FENCE)	0.40-0.80"	90	140

\* US Std. Sieve #20-225

CONSTRUCTION SPECIFICATION

- LENGTH - MINIMUM OF 50' (\*30' FOR SINGLE RESIDENCE LOT).
- WIDTH - 10' MINIMUM, SHOULD BE FLARED AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
- GEOTEXTILE FABRIC (FILTER CLOTH) SHALL BE PLACED OVER THE EXISTING GROUND PRIOR TO PLACING STONE. \*\*THE PLAN APPROVAL AUTHORITY MAY NOT REQUIRE SINGLE FAMILY RESIDENCES TO USE GEOTEXTILE TO STABILIZE CONSTRUCTION ENTRANCES.
- STONE - CRUSHED AGGREGATE (2" TO 3") OR RECLAIMED OR RECYCLED CONCRETE EQUIPMENT SHALL BE PLACED AT LEAST 6" DEEP OVER THE LENGTH AND WIDTH OF THE ENTRANCE.
- SURFACE WATER - ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED THROUGH THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PIPE INSTALLED THROUGH THE STABILIZED CONSTRUCTION ENTRANCE SHALL BE PROTECTED WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 6" OF STONE OVER THE PIPE. PIPE HAS TO BE SIZED ACCORDING TO THE DRAINAGE. WHEN THE SOE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE WILL NOT BE NECESSARY. PIPE SHOULD BE BEZEL ACCORDING TO THE AMOUNT OF RUNOFF TO BE CONVEYED. A 6" MINIMUM WIRE IS REQUIRED.
- LOCATION - A STABILIZED CONSTRUCTION ENTRANCE SHALL BE LOCATED AT EVERY POINT WHERE CONSTRUCTION TRAFFIC ENTERS OR LEAVES A CONSTRUCTION SITE. VEHICLES LEAVING THE SITE MUST TRAVEL OVER THE ENTIRE LENGTH OF THE STABILIZED CONSTRUCTION ENTRANCE.

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS.  
 Jim Murray 5/9/03  
 USDA - NATURAL RESOURCES CONSERVATION SERVICE DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.  
 John Robertson 5/9/03  
 HOWARD SOIL CONSERVATION DISTRICT DATE

**ENGINEER'S CERTIFICATE**  
 I certify that this plan for sediment and erosion control represents a practical and workable plan based on my personal knowledge of the site and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.  
 Jeffrey L. Schwab 4/26/03  
 ENGINEER DATE

**DEVELOPER'S CERTIFICATE**  
 I/we certify that all development and construction will be done according to this plan for sediment and erosion control, and that all 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.  
 R. Kelly Treasurer 4/24/03  
 DEVELOPER DATE

**OWNER:** Chapelgate Presbyterian Church  
 26200 Harriottsville Road  
 Harriottsville, MD 21104 Phone: 410-442-5800

**Chapelgate Presbyterian Church**  
**Maintenance Building Addition**  
 2600 Harriottsville Road Harriottsville, Maryland 21104  
 3rd Election District Howard County, Maryland  
 Tax Map 16 Parcel 110 Zoning: R-20 Deed Ref: 11584/1394

**Erosion & Sediment Control**  
**Notes & Details**

REVISIONS



**SITE RESOURCES**  
 Comprehensive Land Planning & Site Design Services  
 14807 Arretville Pike • Pikesville, Maryland 21111  
 (410) 683-3388 • fax: (410) 683-3389

DRAWN BY: TPD CONTRACT NO.:

DESIGNED BY: JLS SCALE: 1" = 50'

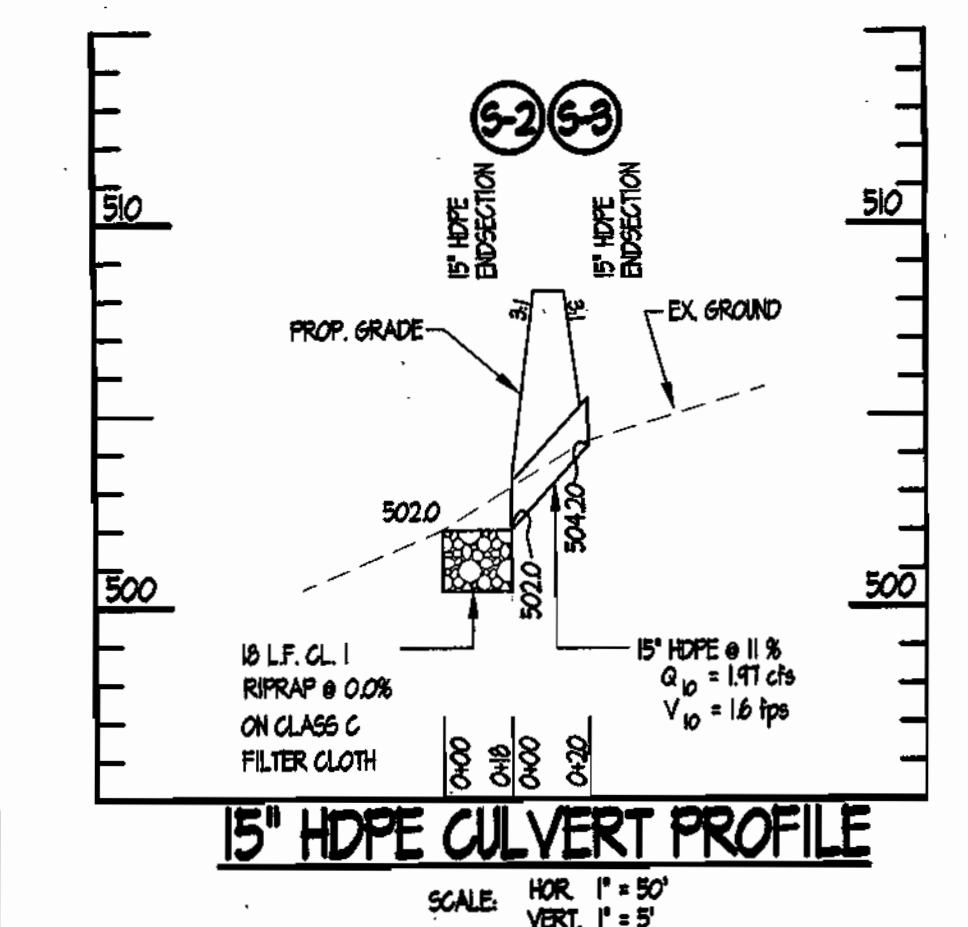
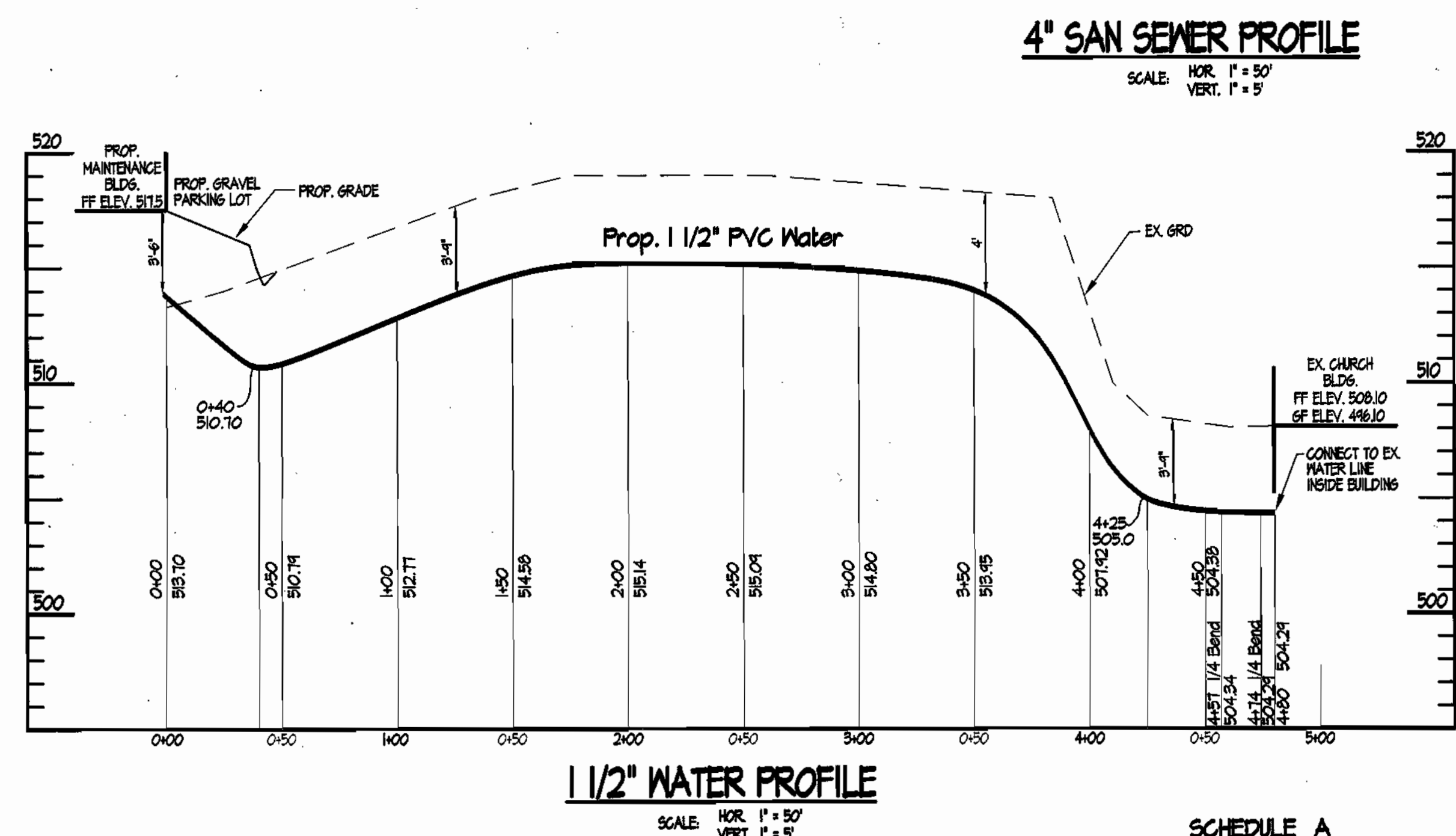
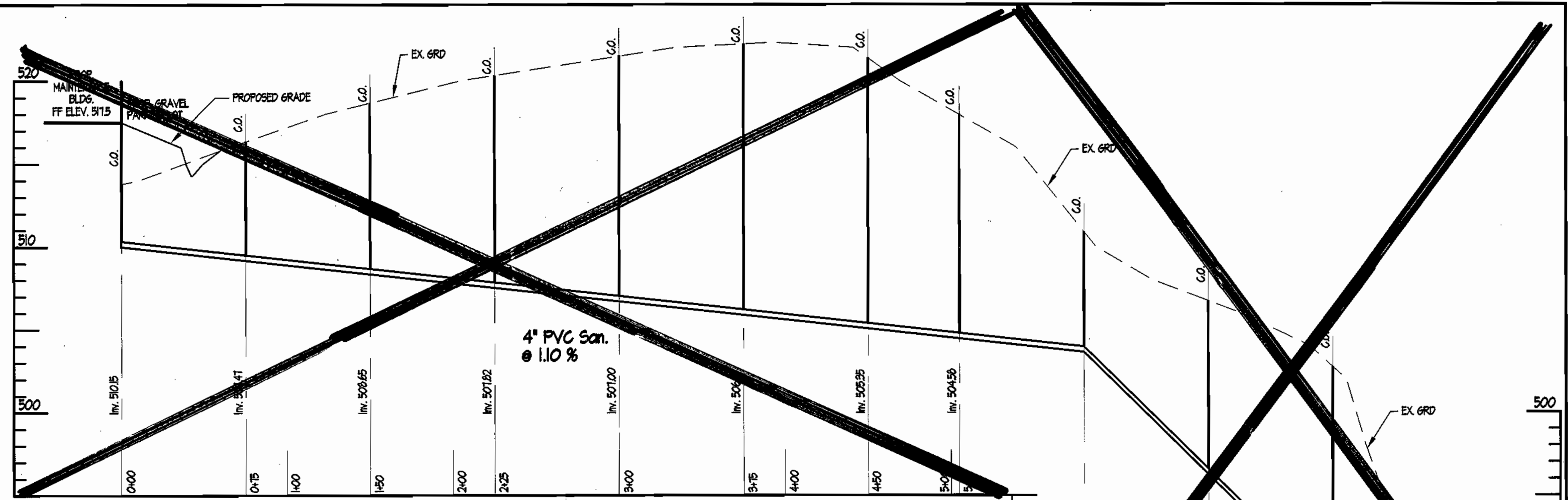
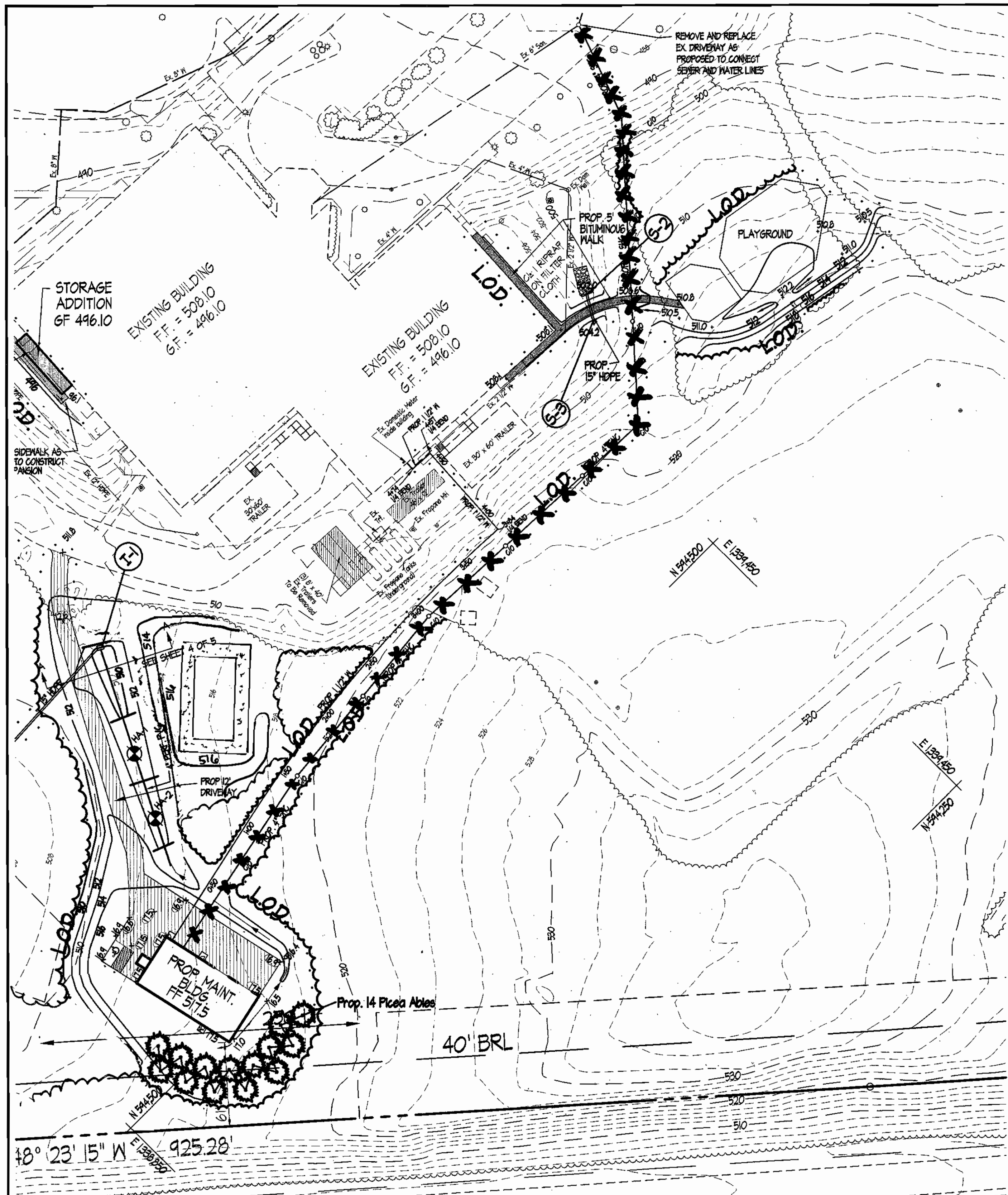
CHECKED BY: JLS SRI PROJECT NO: 99120-C

DATE: April 21, 2003 SHEET 2 OF 5

APPROVED DEPARTMENT OF PLANNING & ZONING  
 DATE 5/14/03  
 CHIEF DEVELOPMENT ENGINEERING DIVISION  
 DATE 5/27/03  
 CHIEF DIVISION OF LAND DEVELOPMENT  
 DATE 5/28/03  
 DIRECTOR JA

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS  
 COUNTY HEALTH OFFICER NA DATE





- Landscape Notes:**
- Quantities shown on the plan are estimates only; the contractor is required to install the quantities labeled in plan view. Contractor shall notify Site Resources of any discrepancy between the quantities listed in the chart and quantities shown in plan view.
  - Plant material substitutions are subject to approval by the owner's representative.
  - Locations of all plant material shall be staked for approval by the owner's representative. Owner reserves the right to shift staked locations.
  - All shrub and groundcover areas shall be planted in continuous prepared beds, mulched with composted hardwood mulch as detailed and specified.
  - Planting beds shall have positive drainage with a minimum 2 percent slope.
  - Contractor shall verify accuracy of base information and existing conditions in the field to his own satisfaction. Bid shall be based on actual site conditions. No extra shall be made for work arising from site conditions differing from those indicated on drawings and specifications.
  - The contractor shall notify Miss Utility at 1-800-251-TITTI a minimum of two working days prior to beginning planting and construction.
  - Damage to existing conditions and utilities shall be repaired and restored at the expense of the contractor.
  - All plant material shall be nursery grown and shall conform to American Association of Nurserymen, Inc. standards.
  - All planting procedures shall conform to the latest edition of Landscape Contractor Association Guidelines for the Baltimore/Washington metropolitan area, latest edition.
  - No plants are required, and no landscape surety is required for this site development plan.

**PLANT SCHEDULE**

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	QUANTITIES	COMMENTS
PA	Platanus	NORWAY SPRUCE	6"	14	E.B.R.

**SCHEDULE A PERIMETER LANDSCAPE EDGE**

CATEGORY	ADJACENT TO ROADWAYS	ADJACENT TO PERIMETER PROPERTIES
LANDSCAPE TYPE	B	NA
LINEAR FEET OF ROADWAY FRONTAGE / PERIMETER	250	
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	YES, 250 LF	
CREDIT FOR WALL, FENCE, OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	
NUMBER OF PLANTS REQUIRED	250 + 250 = 0	
SHADE TREES	0	
EVERGREEN TREES	0	
SHRUBS	0	
NUMBER OF PLANTS PROVIDED		
SHADE TREES		
EVERGREEN TREES	14 EVERGREEN	
OTHER TREES (2) (SUBSTITUTION)		
SHRUBS (10) (SUBSTITUTION)		
(DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)		

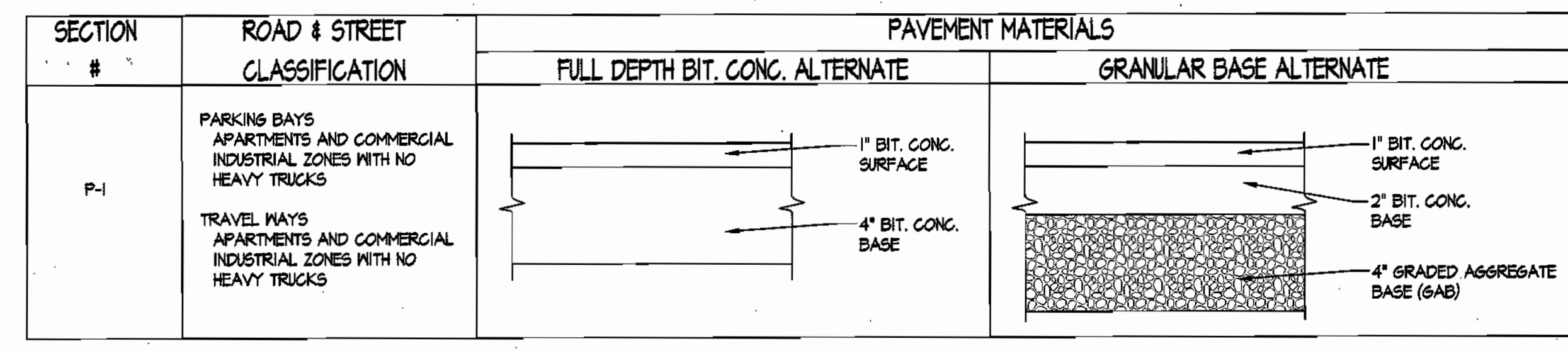
**INSET**  
1" = 50'

**APPROVED:** DEPARTMENT OF PLANNING & ZONING  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 DATE: 5/22/03  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 DATE: 5/28/03  
 DIRECTOR J.K.

**APPROVED:** FOR PUBLIC WATER AND PRIVATE SEWERAGE SYSTEMS

COUNTY HEALTH OFFICER  
 HOWARD COUNTY HEALTH DEPARTMENT

**U.S. RTE 40** **BALTIMORE NAT**



**ADDRESS CHART**

PARCEL #	STREET ADDRESS
10	2600 Harriettsville Road

**PERMIT INFORMATION CHART**

SUBDIVISION NAME	SECTION / AREA	LOTS / PARCELS
Chapelgate Presbyterian Church	N/A	10
PLAT No. or L.P.	BLOCK No.	ZONE
1204 / 334	910/15/16	R20
	TAX MAP No.	ELECT. DIST.
	16	3 rd
		CENSUS TRACT
		6020
WATER CODE	K21	SEWER CODE
		542200

**OWNER:** Chapelgate Presbyterian Church  
 2600 Harriettsville Road  
 Harriettsville, MD 21044 Phone: 410-442-5800

**Chapelgate Presbyterian Church Maintenance Building Addition**  
 2600 Harriettsville Road Harriettsville, Maryland 21044  
 3rd Election District Howard County, Maryland  
 Tax Map 16 Parcel 10 Zoning: R-20 Deed Ref: 11584 / 334

**UTILITY PROFILES & PLAN VIEW LANDSCAPE FOR MAINTENANCE BUILDING**

REVISIONS

6/19/03 REDLINE RELOCATION OF VOLLEYBALL COURT AND SEPTIC RESERVE AREA OUT OF MAINTENANCE BUILDING.

**STATE OF MARYLAND**  
 DEPARTMENT OF PLANNING & ZONING

**SITE RESOURCES**  
 Comprehensive Land Planning & Site Design Services  
 14307 Arrettsville Pike • Pikesville, Maryland 21111  
 (410) 663-3388 • Fax (410) 663-3389

**DRAWN BY:** TPD **CONTRACT NO.:**  
**DESIGNED BY:** JLS **SCALE:** 1" = 50'  
**CHECKED BY:** JLS **SRI PROJECT NO.:** 99120-C  
**DATE:** April 21, 2003 **SHEET** 3 OF 5

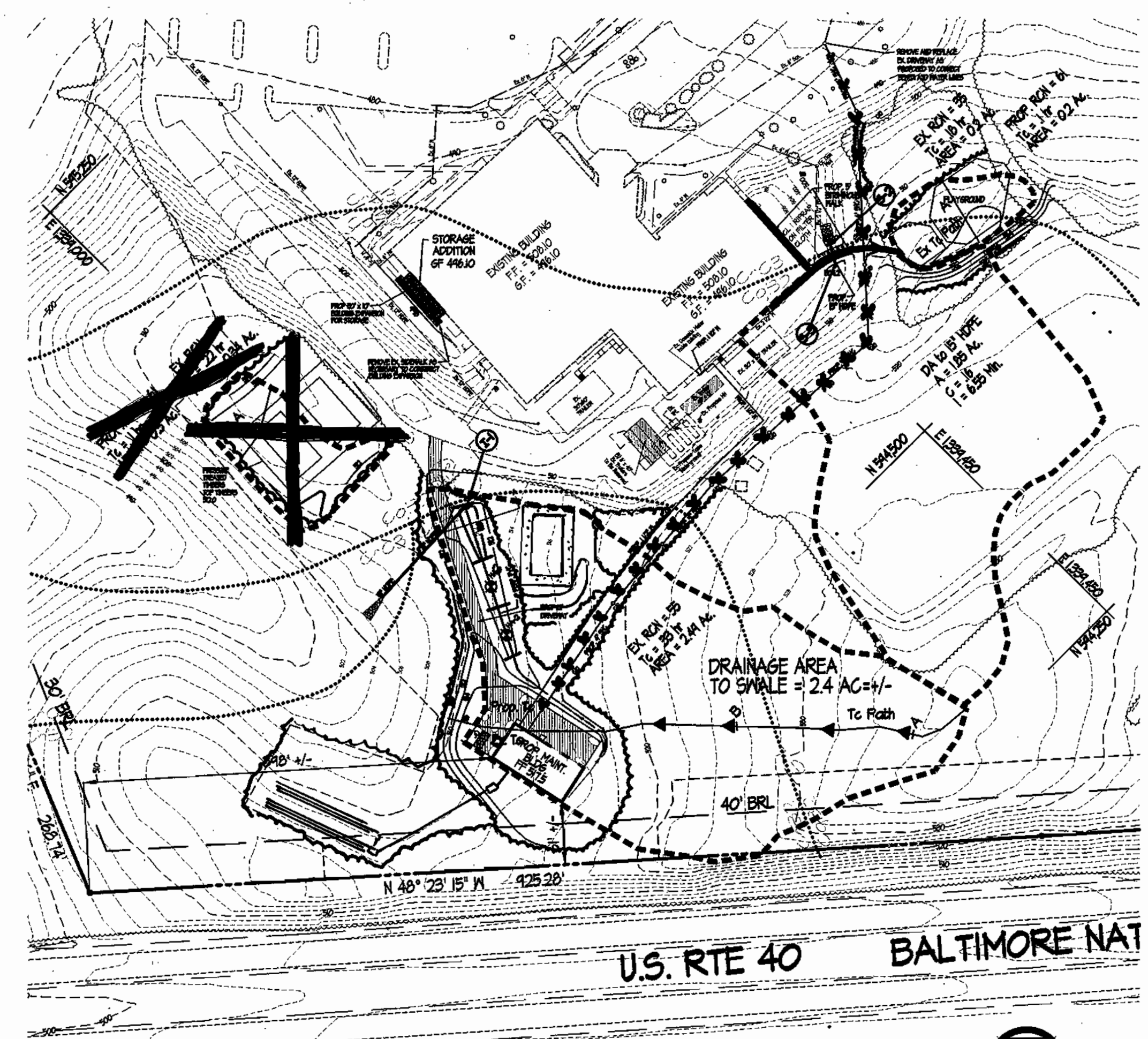


**Hand Auger Log**  
Contract No.: HA-3  
Head Auger No.: HA-3  
Project: Chapellgate Maintenance Building  
Location: SWM Structure  
Date Started: 7/4/02  
Date Ended: 7/4/02  
Surface Elev.: est. @ 312.7  
SMA Rep: Kim Drenthmacher  
Groundwater Elev.: Dry  
Excavation Equip.: Hand Auger

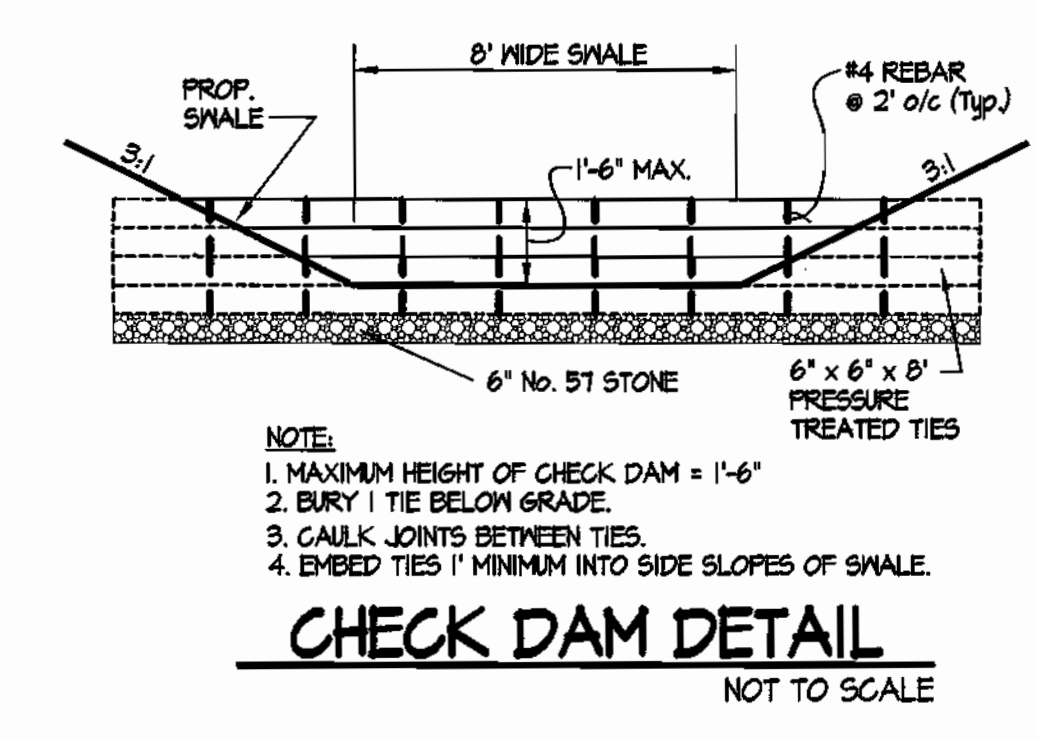
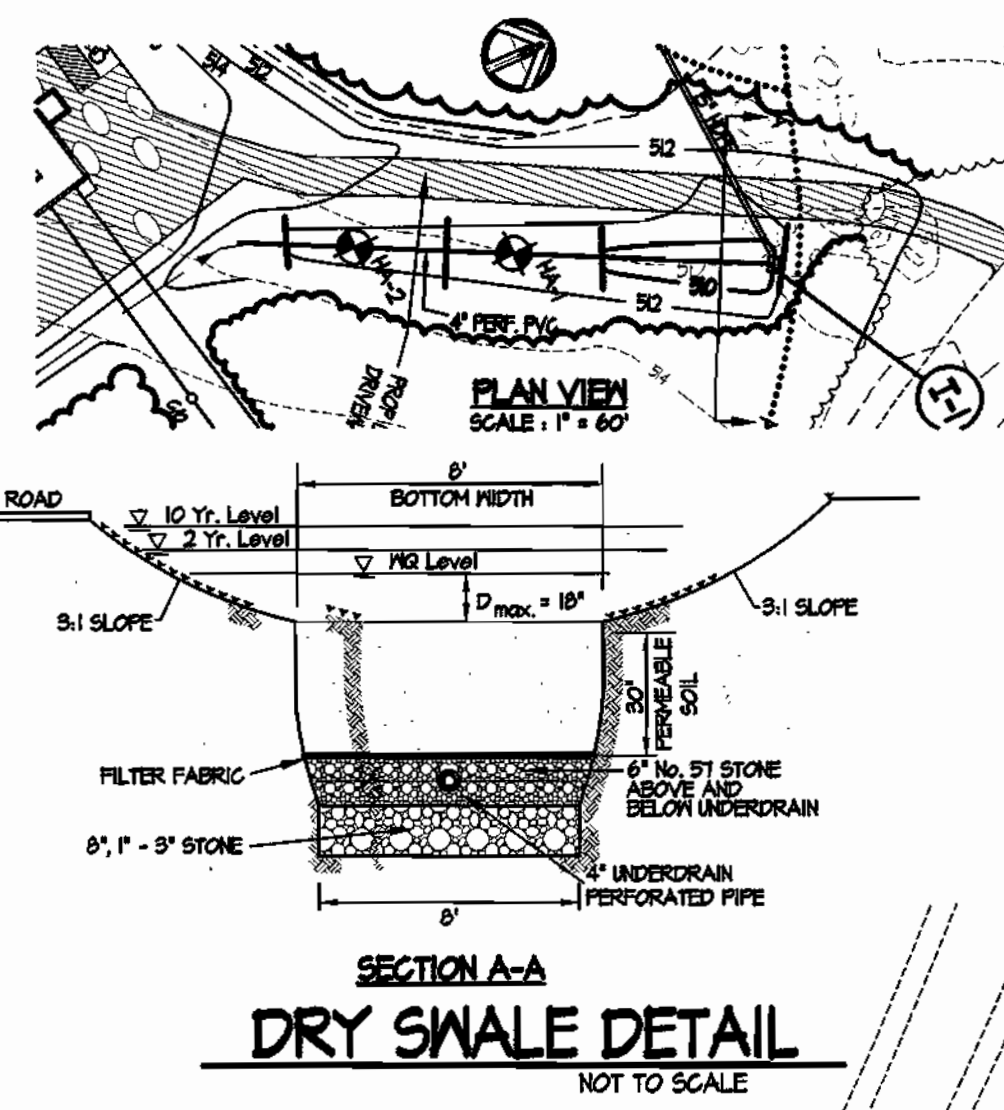
Topsoil 2 inches	Residual soils
LOAM, fine rock fragments, moist, red-brown	
Sandy LOAM, fine rock fragments, moist, red-brown	
Auger refusal at 4.1 feet	
8.7	
SANDY CLAY LOAM, moist red-brown and tan	
7.7	
Bottom of auger at 7.7 feet	

**Hand Auger Log**  
Contract No.: HA-1  
Head Auger No.: HA-1  
Project: Chapellgate Maintenance Building  
Location: SWM Structure  
Date Started: 4/15/2002  
Date Ended: 4/15/2002  
Surface Elev.: est. @ 311.9  
SMA Rep: Kim Drenthmacher  
Groundwater Elev.: Dry  
Excavation Equip.: Hand Auger

Topsoil 2 inches	Residual soils
SANDY CLAY, fine rock fragments, moist, red-brown	
6.7	
SANDY CLAY LOAM, moist red-brown and tan	
7.7	
Bottom of auger at 7.7 feet	

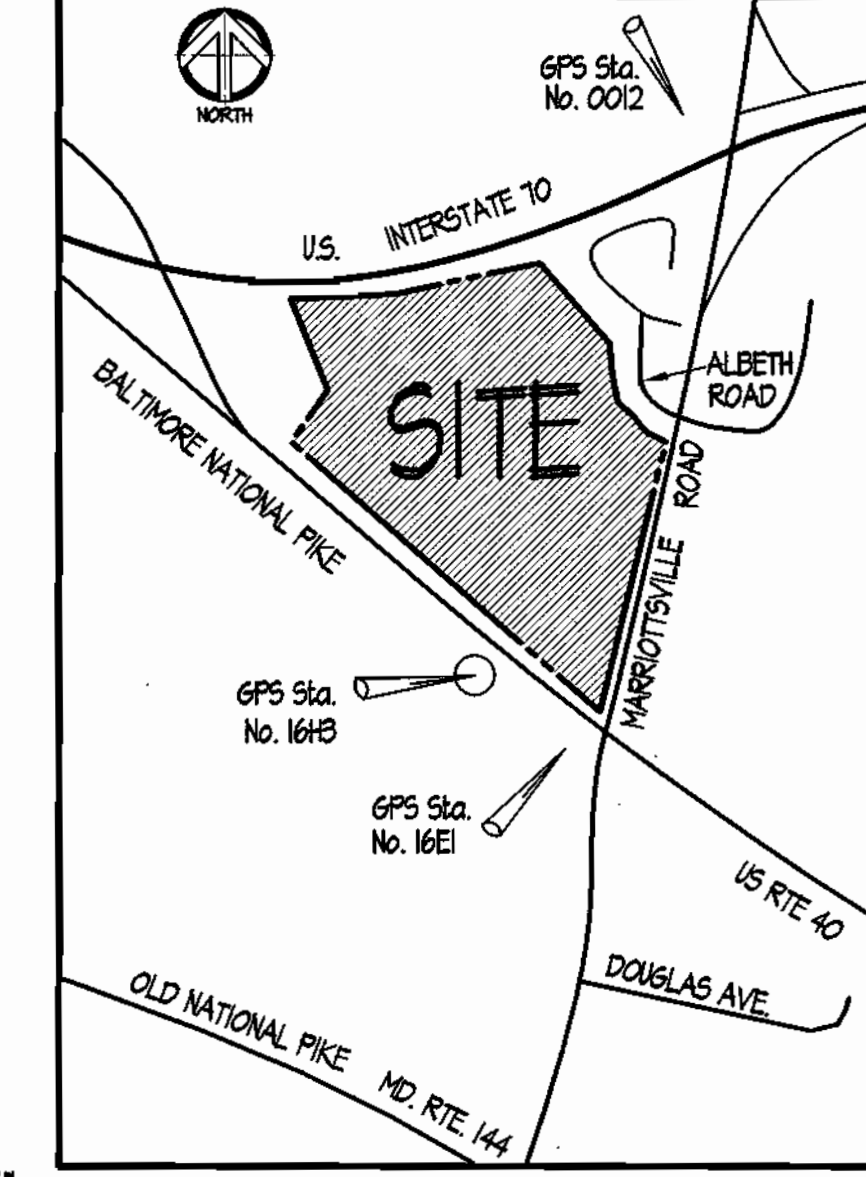


**DRAINAGE AREA TO SWM POND INSET**  
SCALE: 1" = 100'

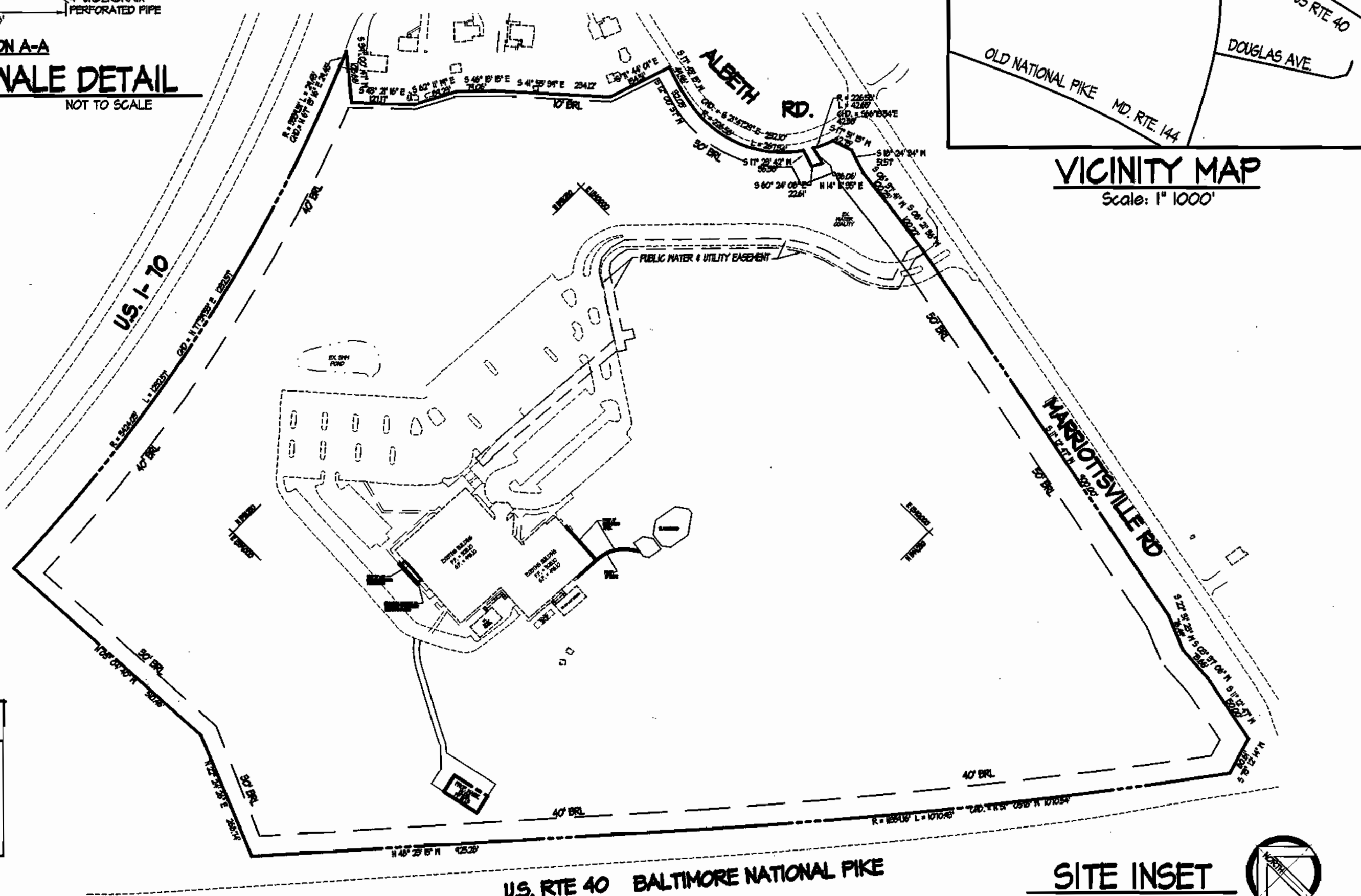


**CHECK DAM DETAIL**  
NOT TO SCALE

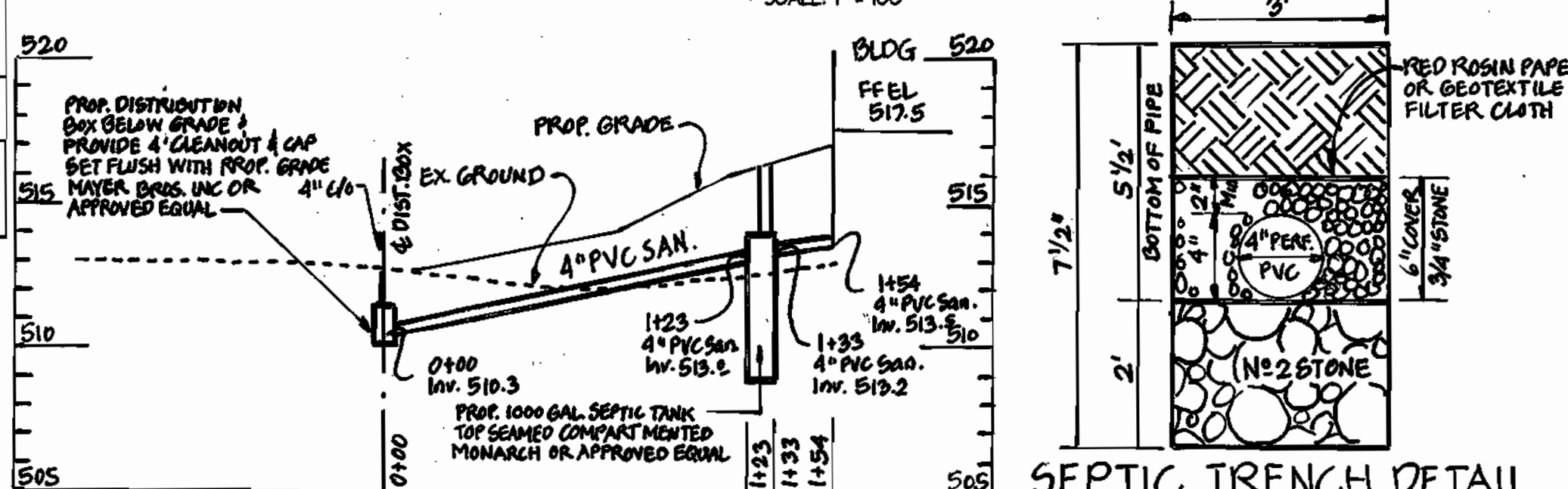
NOTE:  
1. MAXIMUM HEIGHT OF CHECK DAM = 1'-6"  
2. BURY 1 TIE BELOW GRADE.  
3. CAULK JOINTS BETWEEN TIES.  
4. EMBED TIES 1" MINIMUM INTO SIDE SLOPES OF SWALE.



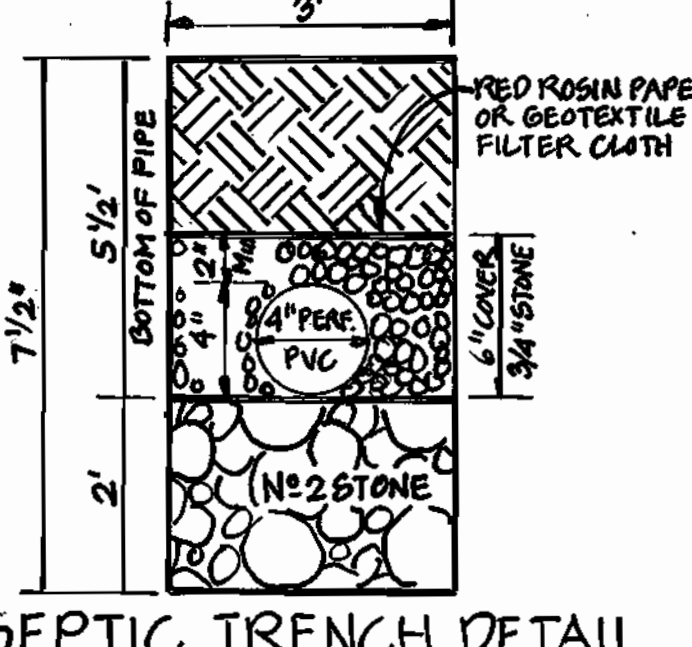
**VICINITY MAP**  
Scale: 1" = 1000'



**SITE INSET**  
SCALE: 1" = 200'



**SANITARY SEWER PROFILE**  
SCALE: HOR. 1" = 50'  
VERT. 1" = 5'



**SEPTIC TRENCH DETAIL**  
N.T.S.

**INVERT CHART**

STATION	TOP GRADE	INV. OF 4" PVC	LOCATION OF INVERT
1154	517.0	519.5	INLET COMING OUT OF BLDG.
1129	516.5	519.2	INLET END OF 1000 GAL. SEPTIC TANK
1129	516.5	519.2	INLET BEGIN OF 1000 GAL. SEPTIC TANK
0100	515.5	510.3	INLET DISTRIBUTION BOX 4" x 4"
	515.0	510.3	BOTTOM OF PIPE IN 3' WIDE x 100' LONG TRENCH #1
	515.0	505.5	BOTTOM OF PIPE IN 3' WIDE x 100' LONG TRENCH #2

**WATER QUALITY SUMMARY**

	Required (Cu. Ft.)	Provided (Cu. Ft.)	Notes
Pre-Treatment Volume	102	116	Storage Provided in Forebay
Water Quality Volume (WQV)	1026	1844	
Recharge Volume (Rev)	266	332	Stone Storage Under Swale
Channel Protection (Cpv)	Not Required	N/A	Oil Yr Storm (2 cfs.)
Overbank Protection (Op)	Not Required	N/A	
Extreme Flood Volume (Qf)	Not Required	N/A	

**DRY SWALE SUMMARY TABLE**

Dry Swale #	Side Slopes	Bottom Width	Q1	V1	Q2	V2
1	4:1	8'	0.9	0.8	3.1	1.3

**STRUCTURE SCHEDULE**

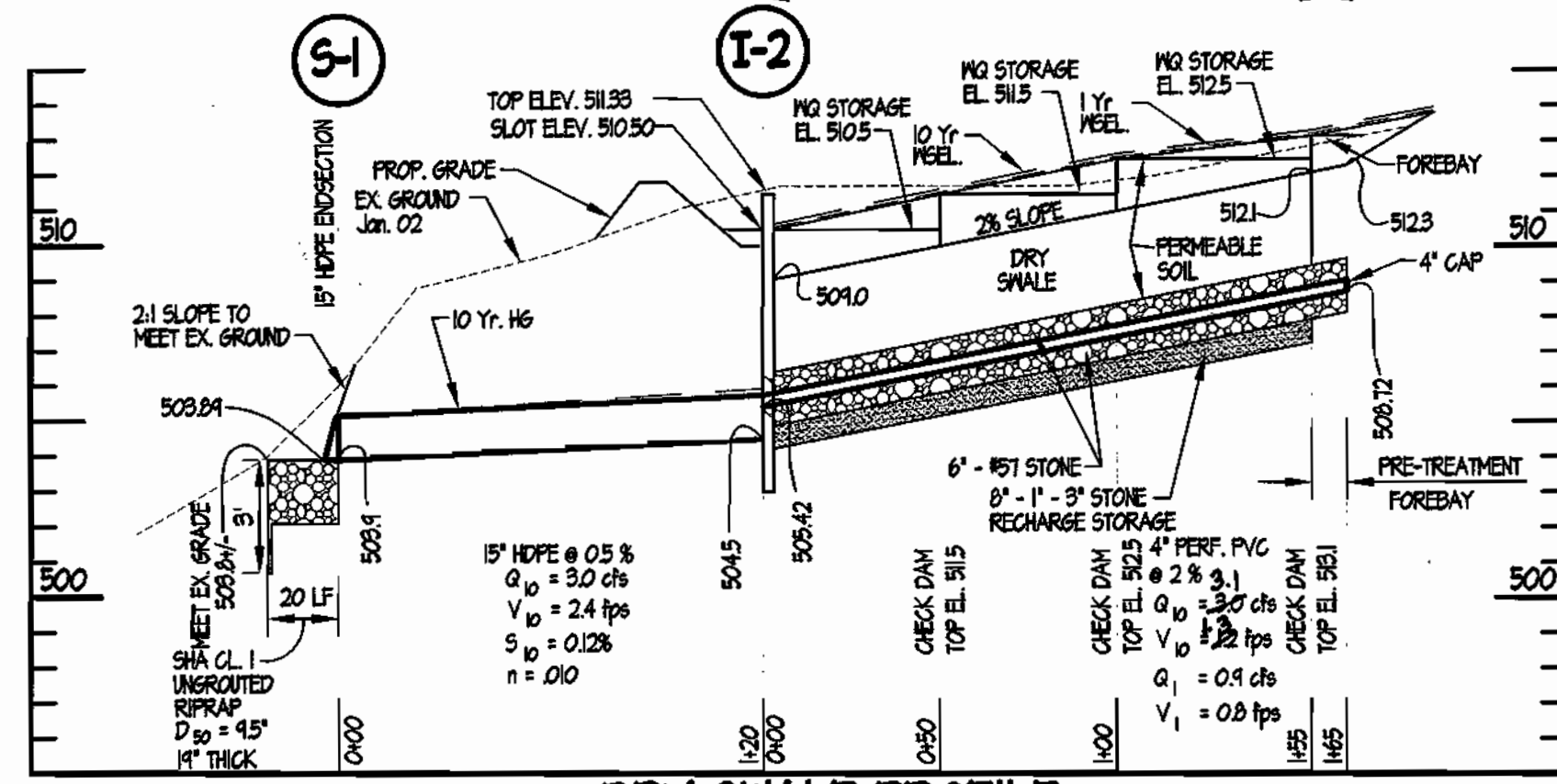
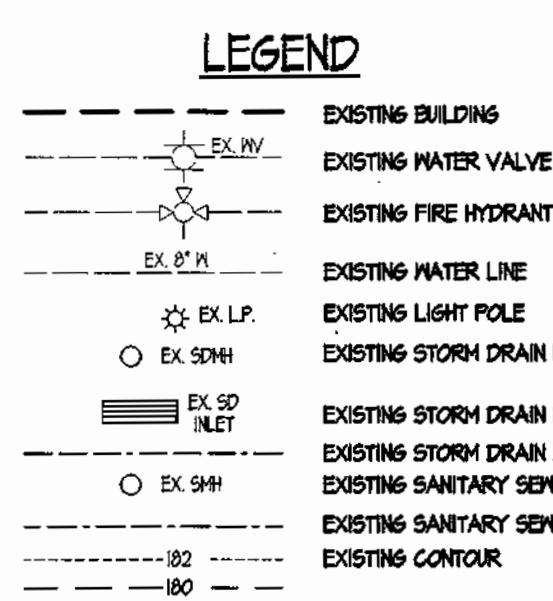
No.	TYPE	INV. IN	INV. OUT	TOP ELEV.	REMARKS	LOCATION
T-2	PRECAST D-INLET	505.42	504.5	511.33	HO. CO. STD. SD4.34 - 2'-7" SQ	SEE PLAN
S-1	HDPE END SECT.	503.40	503.84	-	PER MANUFACTURER	SEE PLAN
S-2	HDPE END SECT.	504.20	-	-	PER MANUFACTURER	SEE PLAN
S-3	HDPE END SECT.	-	502.00	-	PER MANUFACTURER	SEE PLAN

**PIPE SCHEDULE**

SIZE	TYPE	L.F.
15"	HDPE	140
4"	PERF. PVC	165

**OPERATION & MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED OPEN CHANNEL SYSTEMS (O-1 & O-2)**

- THE OPEN CHANNEL SYSTEM SHALL BE INSPECTED ANNUALLY AND AFTER MAJOR STORMS. INSPECTION SHALL BE PERFORMED DURING FINE WEATHER TO DETERMINE IF THE FACILITY IS FUNCTIONING PROPERLY.
- THE OPEN CHANNEL SHALL BE MOVED A MINIMUM OF 4" AS NEEDED DURING THE GROWING SEASON TO MAINTAIN A MAXIMUM GRASS HEIGHT OF 6" INCHES.
- DEBRIS AND LITTER SHALL BE REMOVED DURING REGULAR MAINTENANCE OPERATIONS AS NEEDED.
- VISIBLE SIGNS OF EROSION IN THE OPEN CHANNEL SYSTEM SHALL BE REPAIRED AS SOON AS NEEDED.
- REMOVE SILT IN THE OPEN CHANNEL WHEN IT EXCEEDS 25% OF THE ORIGINAL MAX.



**DRY SWALE PROFILE**  
SCALE: HOR. 1" = 50'  
VERT. 1" = 5'

**Dry Swale Specifications**

Material	Specifications	Size	Notes
dry swale soil	USCS, ML, SM, SC	n/a	Soil with a higher percent organic content is preferred
check dam (pressure treated)	AWPA Standard C6	6" by 6" or 8" by 8"	do not coat with creosote, embed at least 3" into side slopes
check dam (natural wood)	Black Locust, Red Mulberry, Cedars, Catalpa, White Oak, Chestnut Oak, Black Walnut	6" to 12" diameter, radius as necessary	do not use the following, as these species have a predilection toward rot: Ash, Baldpate, Birch, Elm, Hackberry, Hemlock, Hickories, Maples, Red and Black Oak, Pine, Poplar, Spruce, Sweetgum, Willow
underdrain gravel	AASHTO M-43	0.25" to 0.75"	
underdrain	F 150 Type PS 20 or AASHTO M-210	4" to 6" rigid schedule 40 PVC or SDR35	5/8" part. @ 6" on center, 4 holes per row minimum of 3" diameter over pipes, not necessarily underneath pipes
geotextile	Class 10 - apparent opening size (ASTM D-4753), grab tensile strength (ASTM D-4682), puncture resistance (ASTM D-4653)	n/a	
Rip rap	For county criteria if none given use NEMA Standards and Specs Section 909	Size per county DOT requirements based on 10-year design flows	

DATE NO. REVISION

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

*Mark A. Leagle* 5/20/03  
DIRECTOR DATE

*Craig Hamilton* 5/27/03  
CHIEF DIVISION OF LAND DEVELOPMENT DATE

*Paul Drenthmacher* 5/14/03  
CHIEF DEVELOPMENT ENGINEERING TECHNICAL DATE

APPROVED: FOR PUBLIC WATER AND PRIVATE SEWERAGE

COUNTY HEALTH OFFICER  
HOWARD COUNTY HEALTH DEPARTMENT

**CHAPELLGATE PRESBYTERIAN CHURCH**  
3rd ELECTION DISTRICT HOWARD COUNTY, MARYLAND

**Stormwater Management Plan**  
For Maintenance Building, Storage Addition  
And Playgrounds

REVISIONS

6/14/03 REDLINE RELOCATION OF VOLLEYBALL COURT AND SEPTIC RESERVE AREA OUT OF THE MAINTENANCE BUILDING

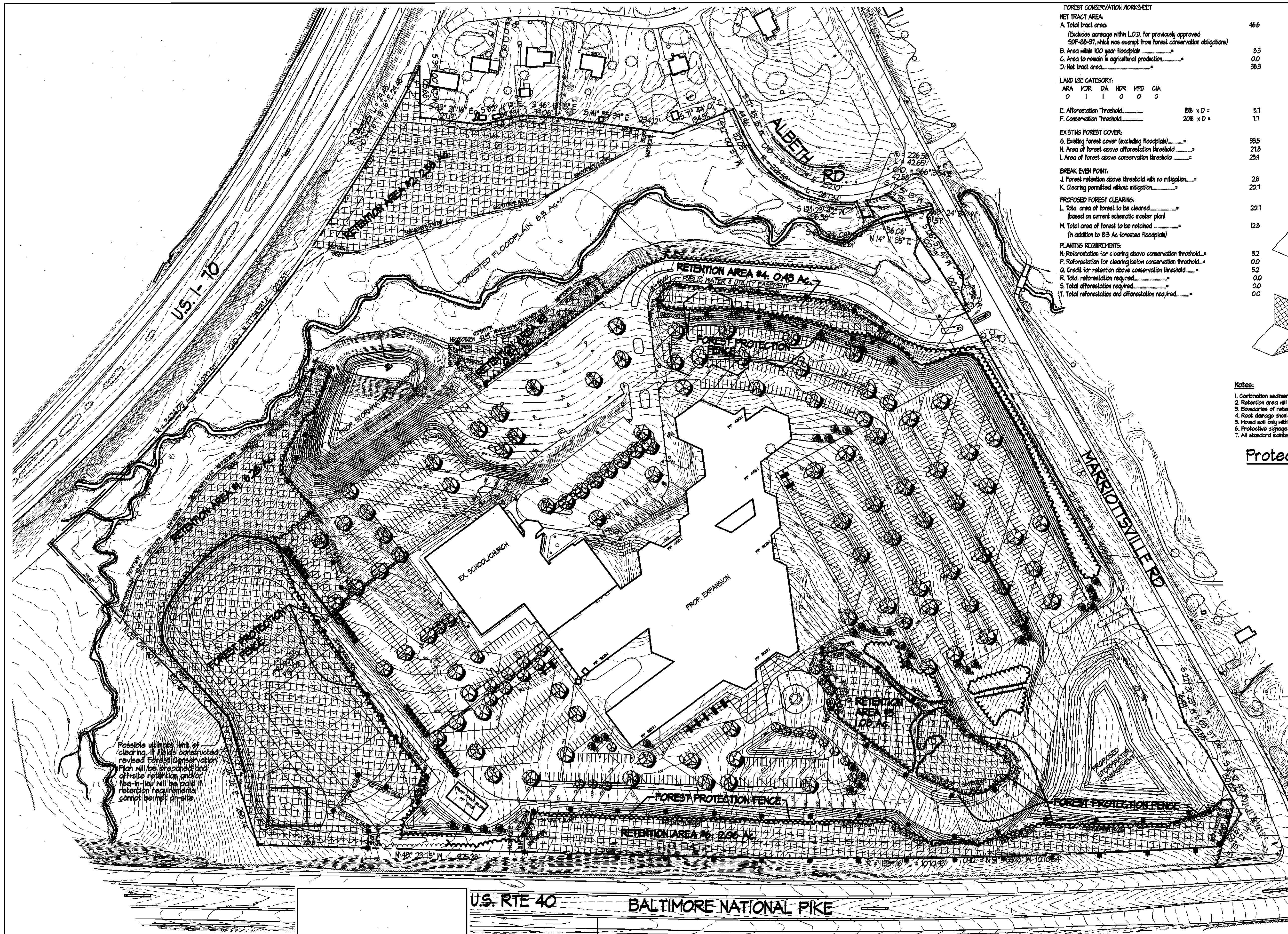
**SITE RESOURCES**  
Incorporated  
Comprehensive Land Planning & Site Design Services

14307 Arrettsville Pike • Pikesville, Maryland 21113  
(410) 653-3300 • Fax (410) 653-3389

DRAWN BY: CGS  
DESIGNED BY: JST/JLS  
CHECKED BY: JLS  
DATE: 7/10/03

CONTRACT NO.:  
SCALE: 1" = 50'  
SRI PROJECT NO: 99120.C  
SHEET 4 OF 5





FOREST CONSERVATION WORKSHEET

NET TRACT AREA:  
 A. Total tract area: 46.6  
 (Excludes acreage within L.O.D. for previously approved SDP-02-37, which was exempt from forest conservation obligations)  
 B. Area within 100 year floodplain: 8.3  
 C. Area to remain in agricultural production: 0.0  
 D. Net tract area: 38.3

LAND USE CATEGORY:  
 ARA MDR IDA HDR MPD CIA  
 0 1 1 0 0 0

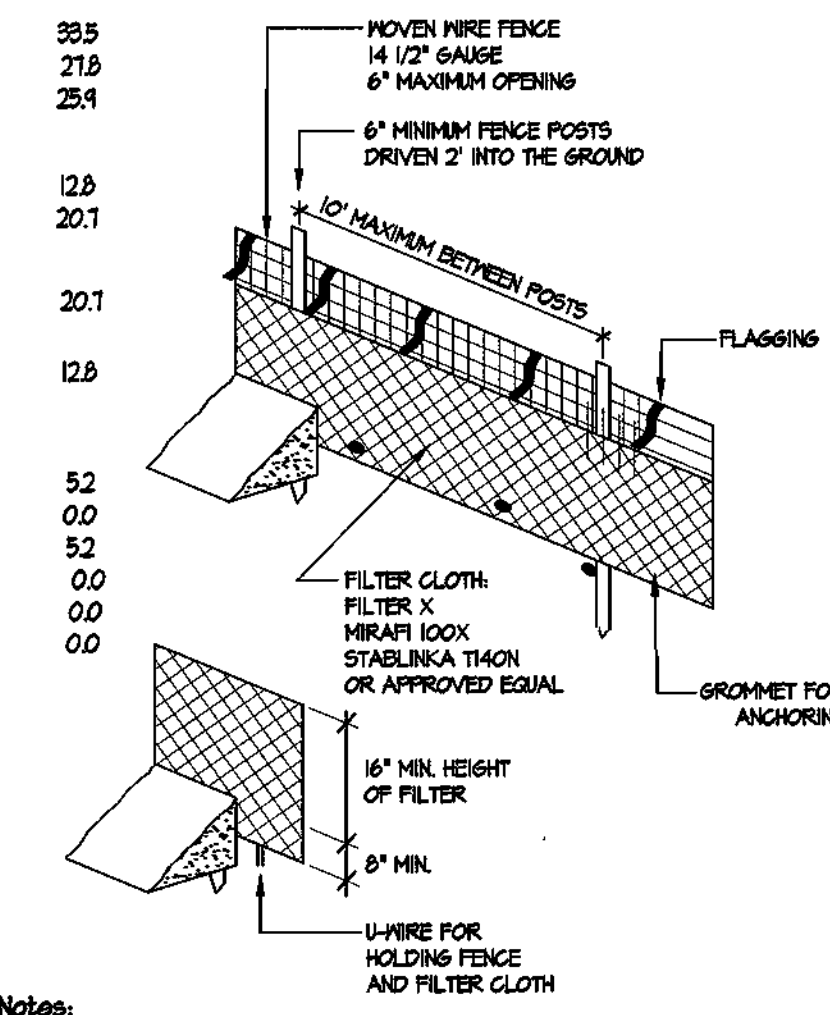
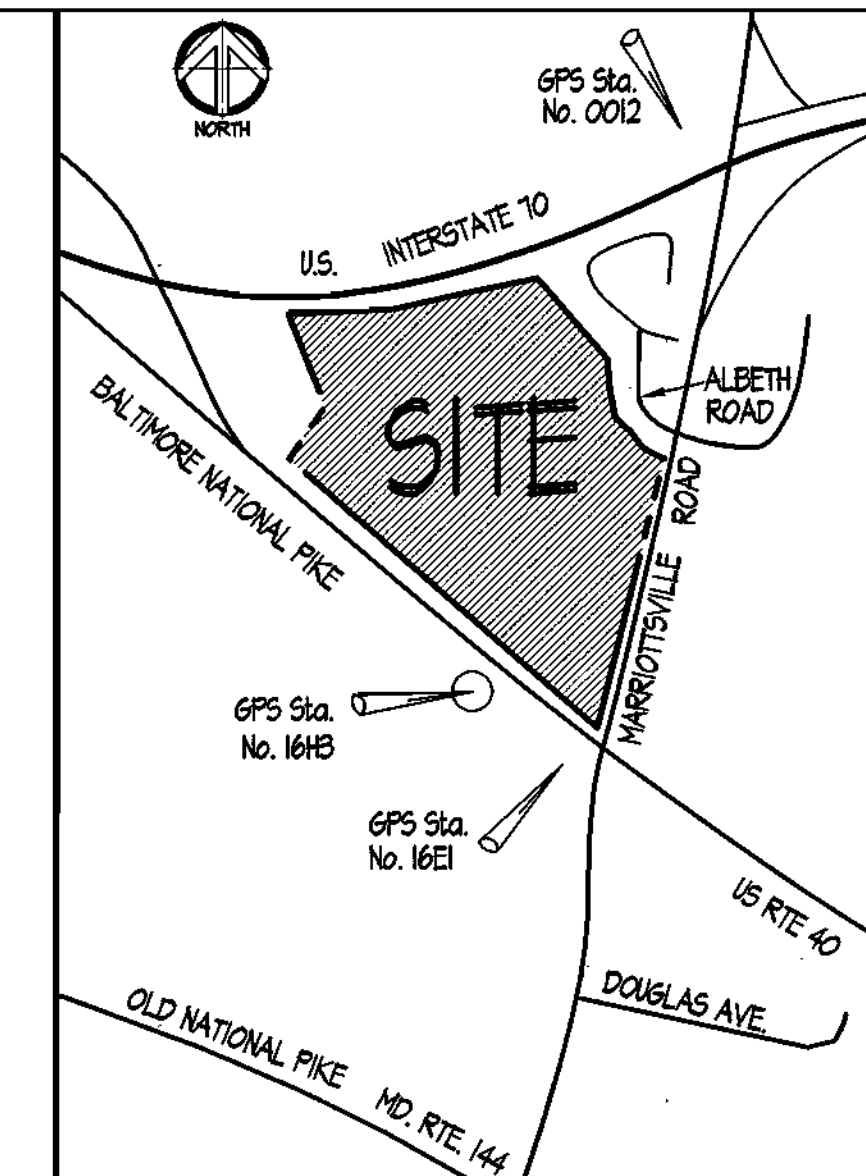
E. Afforestation Threshold: 51% x D = 51  
 F. Conservation Threshold: 20% x D = 17

EXISTING FOREST COVER:  
 G. Existing forest cover (excluding floodplain): 38.5  
 H. Area of forest above afforestation threshold: 21.9  
 I. Area of forest above conservation threshold: 25.4

BREAK EVEN POINT:  
 J. Forest retention above threshold with no mitigation: 12.8  
 K. Clearing permitted without mitigation: 20.1

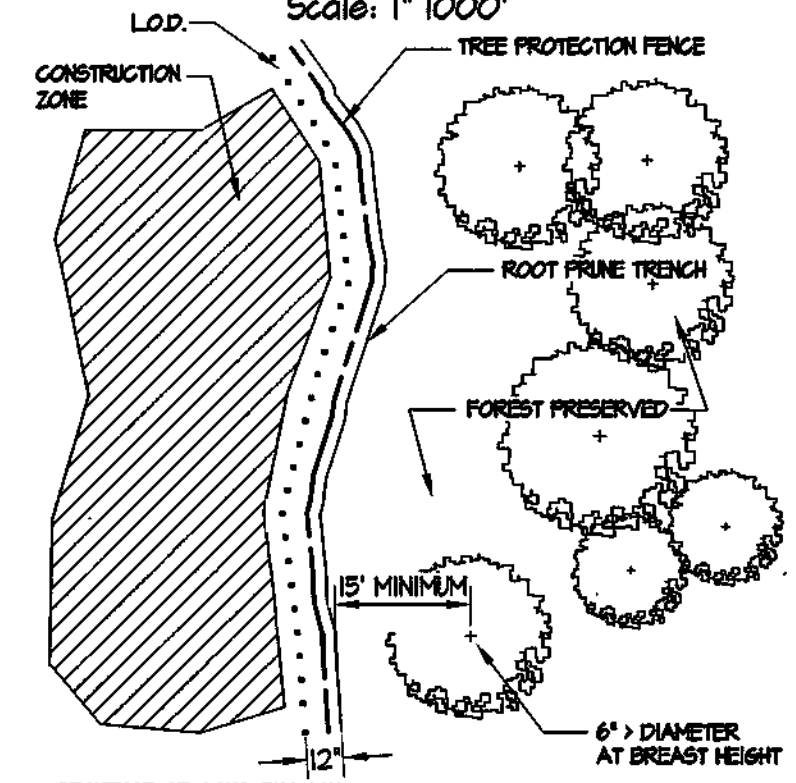
PROPOSED FOREST CLEARING:  
 L. Total area of forest to be cleared: 20.1  
 (based on current schematic master plan)  
 M. Total area of forest to be retained: 12.8  
 (In addition to 8.3 Ac. forested floodplain)

PLANTING REQUIREMENTS:  
 N. Reforestation for clearing above conservation threshold: 5.2  
 O. Reforestation for clearing below conservation threshold: 0.0  
 P. Credit for retention above conservation threshold: 5.2  
 R. Total reforestation required: 0.0  
 S. Total afforestation required: 0.0  
 T. Total reforestation and afforestation required: 0.0



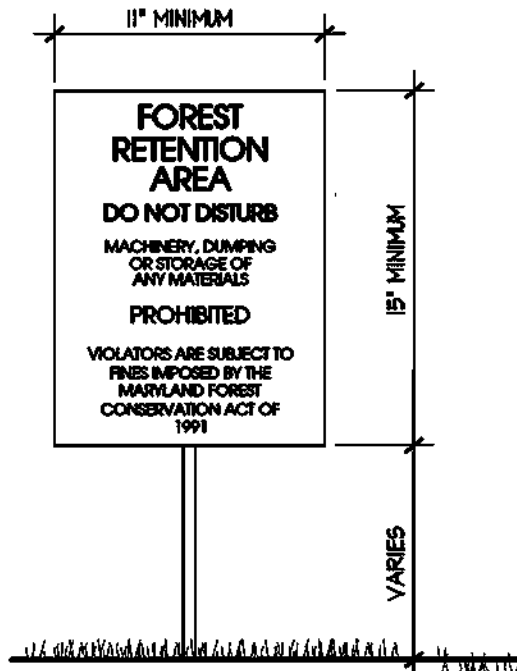
- Notes:
1. Combination sediment control and protective device
  2. Retention area will be set as part of the review process
  3. Boundary lines of retention area should be staked prior to installing protective device.
  4. Root damage should be avoided, as described in detail.
  5. Mound soil only within limits of disturbance.
  6. Protective signage is also required, as shown in detail.
  7. All standard maintenance for sediment control devices applies to these details.

Protective Fence Detail  
Not to Scale



- SEQUENCE OF CONSTRUCTION:
1. Field locate limit of disturbance (L.O.D.)
  2. Root prune entire perimeter when trees have a 6 inch or greater diameter breast height within 15 feet of L.O.D.
  3. Place wire fence or sediment fence within the root prune trench along the perimeter of the easement. Do not excavate or move heavy equipment outside the L.O.D.
  4. Place tree protection signs on fencing at 100 foot intervals.
  5. Apply root stabilizing hormone at prescribed rate.
  6. Proceed with sediment control.

Root Pruning Detail  
Not to Scale



- Notes:
1. Bottom of signs to be higher than top of tree protection fence.
  2. Signs to be placed approximately 100' apart along the Forest Conservation Easement perimeter. Conditions on site affecting visibility may warrant placing signs closer or farther apart.
  3. Attachment of signs to trees is prohibited.

Sign Detail  
Not to Scale

ADDRESS CHART	
PARCEL #	STREET ADDRESS
110	2600 MARIOTTVILLE ROAD
SECTION / AREA LOT# / PARCELS	
CHAPEL GATE PRESBYTERIAN CHURCH	N/A 110
FLAT No. or L.P. BLOCK No.	ZONE TAX MAP No. ELEC. DIST. CROSS TRACT
1304 / 254	11/0 R20 16 3 6030
WATER CODE	SEWER CODE
K01	542000
OWNER / PETITIONER: CHAPEL GATE PRESBYTERIAN CHURCH, INC. 2600 Marriottville Road Marriottville, MD 21104	

**CHAPEL GATE PRESBYTERIAN CHURCH**  
 3 rd ELECTION DISTRICT HOWARD COUNTY, MARYLAND

**Forest Conservation Plan**

REVISIONS

APPROVED: DEPARTMENT OF PLANNING & ZONING

*[Signature]*  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
*[Signature]*  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 DIRECTOR

DATE: 5/22/03  
 DATE: 5/22/03

APPROVED: FOR PUBLIC WATER AND PRIVATE SEWERAGE

COUNTY HEALTH OFFICER  
 HOWARD COUNTY HEALTH DEPARTMENT

U.S. RTE 40 BALTIMORE NATIONAL PIKE

LEGEND

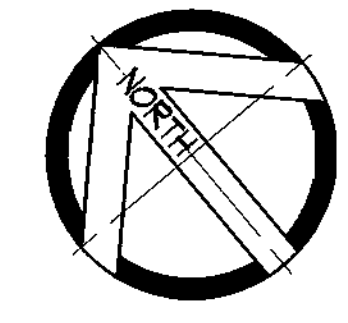
	LIMIT OF PROPOSED CLEARING
	PROPOSED FOREST RETENTION EASEMENT AREAS
	FOREST RETENTION SIGNS (100' INTERVALS)
	FOREST PROTECTION FENCE

NOTE:  
 The proposed Forest Retention Areas, as shown hereon, are based on the proposed ultimate development as currently anticipated. The owner reserves the right to adjust the limits of the Forest Retention Areas on-site, and to provide off-site retention and/or to pay fee-in-lieu. If retention requirements cannot ultimately be met on-site, the owner shall record an amended plat if Forest Conservation Areas change during the future phases of development, with no financial penalty for changes or reduction in the limits of retention. Standard fees will be charged as surety for retention or for fee-in-lieu.

RETENTION AREA #1	6.28 Ac.
RETENTION AREA #2	2.58 Ac.
RETENTION AREA #3	0.37 Ac.
RETENTION AREA #4	0.43 Ac.
RETENTION AREA #5	1.08 Ac.
RETENTION AREA #6	2.06 Ac.
<b>TOTAL RETENTION</b>	<b>12.80 Ac.</b>

NOTE:  
 Prior to ultimate construction, owner to provide fencing on the site along the perimeters of the easements to protect the retention areas from construction activity.

NOTE:  
 Total surety amount:  
 12.80 ac. (Area of Retention) x 43560 x 0.20 = \$11,519.60  
 SDP-02-122 Plat of Forest Conservation Easement #15983-15925, recorded 5-16-03.



**SITE RESOURCES**  
 Incorporated  
 Comprehensive Land Planning & Site Design Services

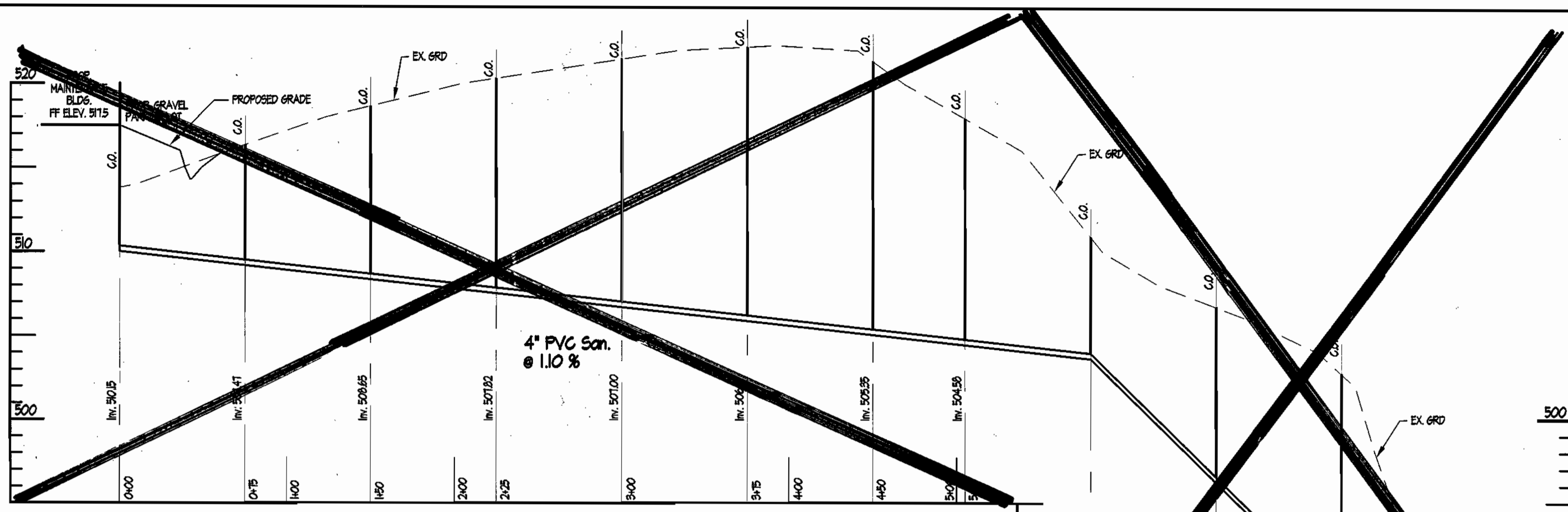
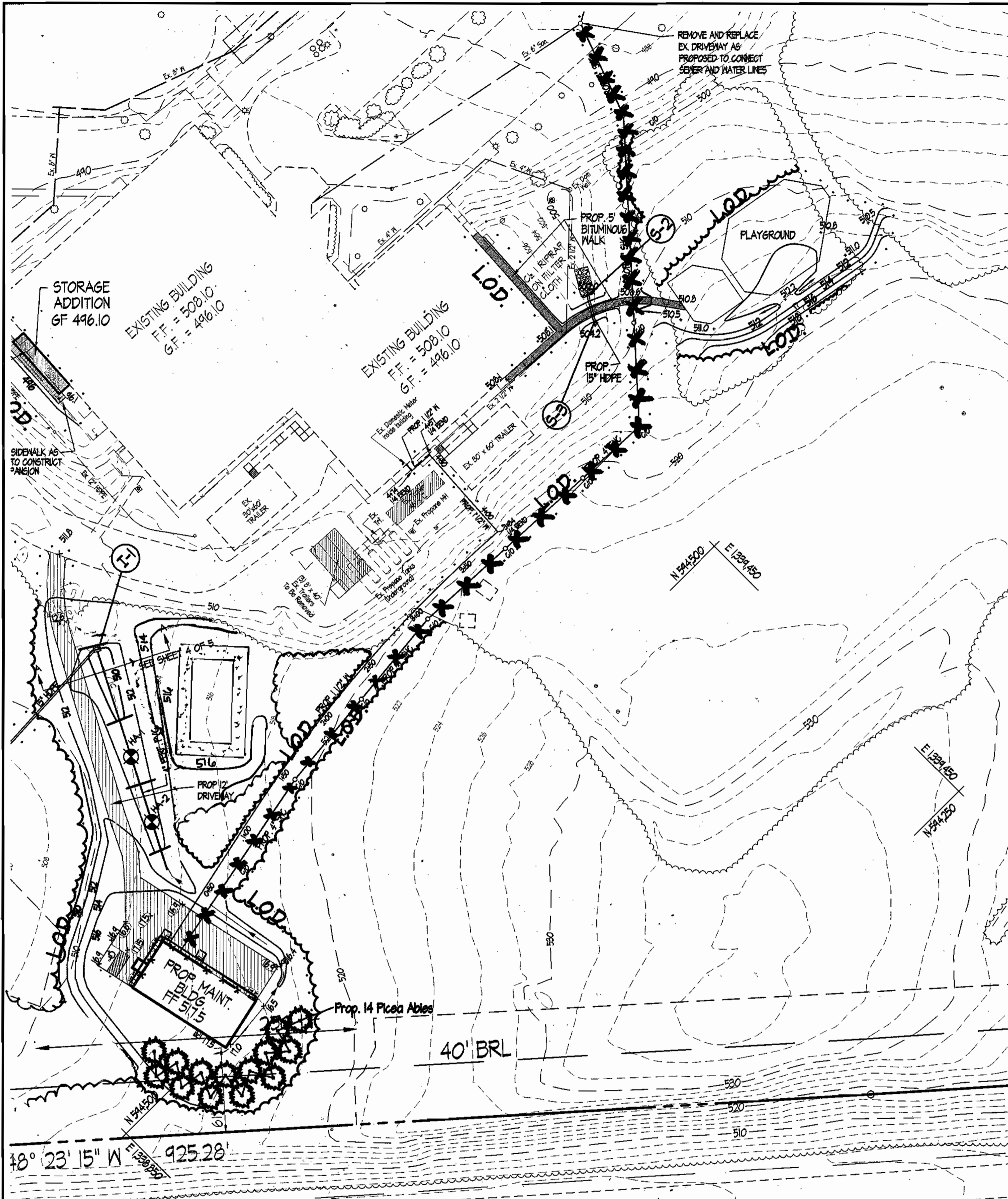
14807 Jarrattville Pike • Phoenix, Maryland 21131  
 (410) 683-3388 • fax (410) 683-3389

DRAWN BY: TPD	CONTRACT NO.:
DESIGNED BY: SHF	SCALE: 1" = 100'
CHECKED BY: SHF	SRI PROJECT NO: 49120.C
DATE: April 21, 2003	SHEET 5 of 5

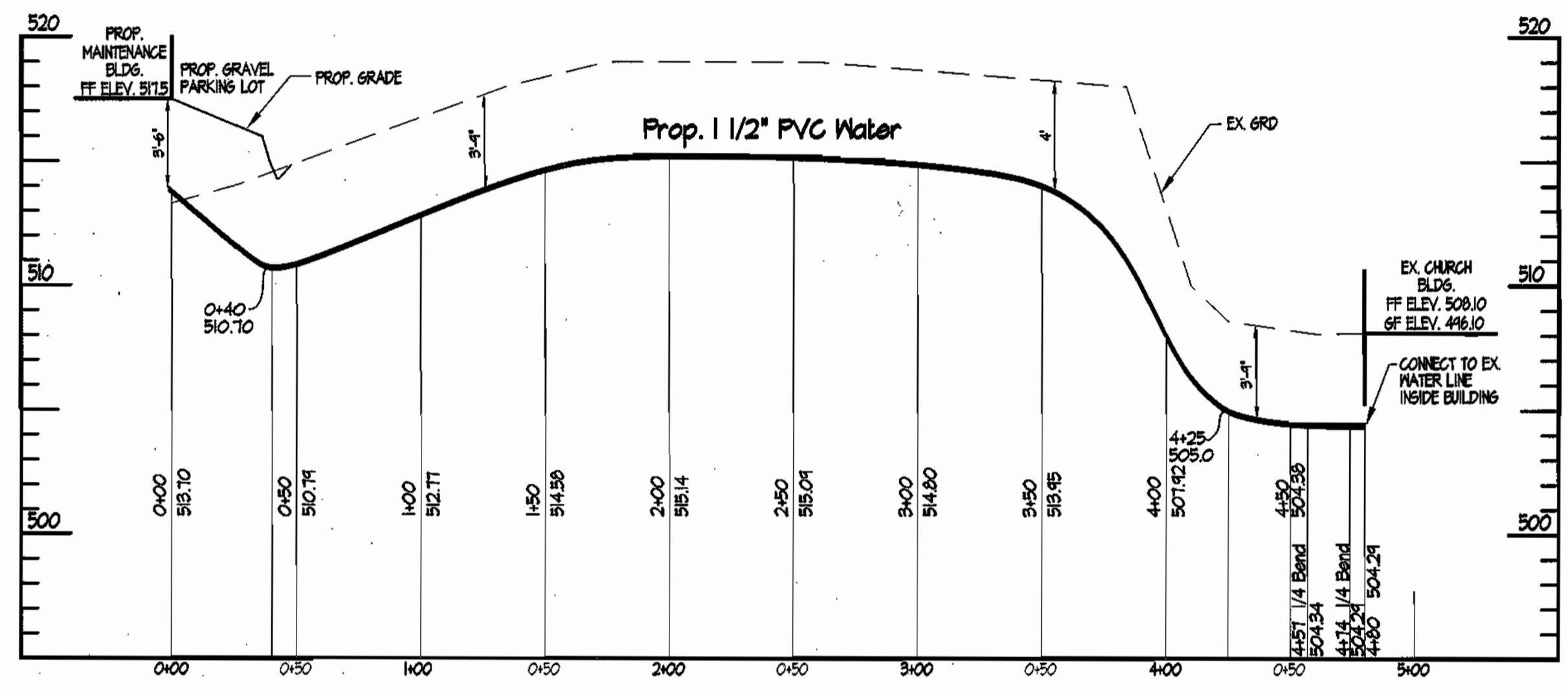




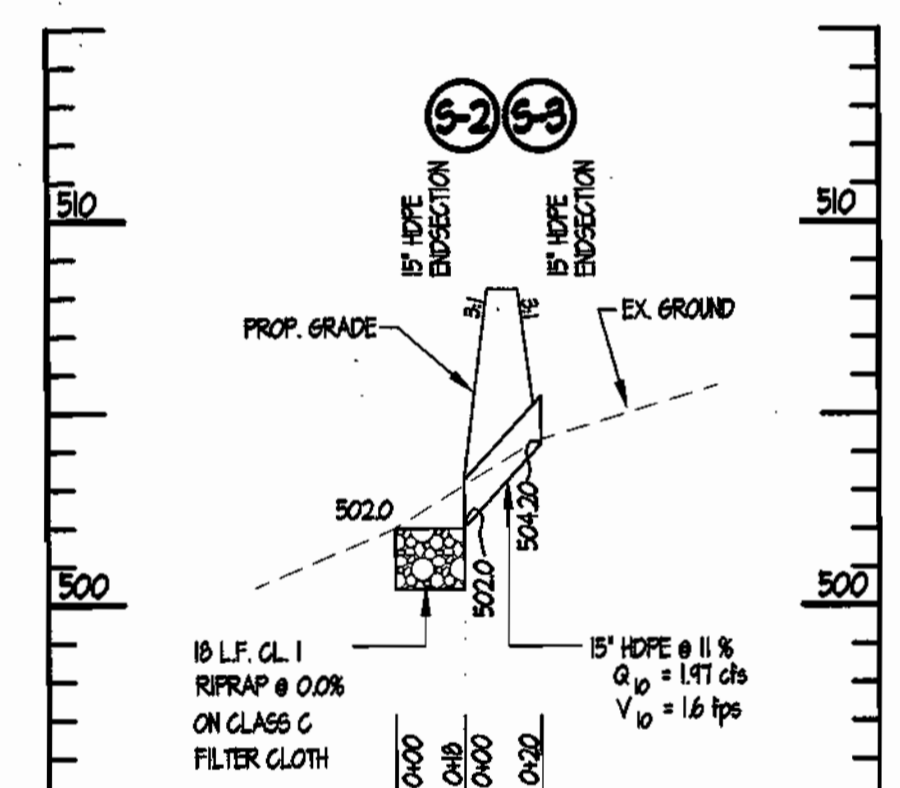




**4\"/>**



**1 1/2\"/>**



**15\"/>**

**Landscape Notes:**

- Quantities shown on the plant list are estimates only; the contractor is required to install the quantities labeled in plan view. Contractor shall notify Site Resources of any discrepancy between the quantities listed in the chart and quantities shown in plan view.
- Plant material substitutions are subject to approval by the owner's representative.
- Locations of all plant material shall be staked for approval by the owner's representative. Owner reserves the right to shift stakeloc locations.
- All shrub and grandcover areas shall be planted in continuous prepared beds, mulched with composted hardwood mulch as detailed and specified.
- Planting beds shall have positive drainage with a minimum 2 percent slope.
- Contractor shall verify accuracy of base information and existing conditions in the field to his own satisfaction. Bid shall be based on actual site conditions. No extra shall be made for work arising from site conditions differing from those indicated on drawings and specifications.
- The contractor shall notify H&S Utility at 1-800-251-TITI a minimum of two working days prior to beginning planting and construction.
- Damage to existing conditions and utilities shall be repaired and restored at the expense of the contractor.
- All plant material shall be nursery grown and shall conform to American Association of Nurserymen, Inc. standards.
- All planting procedures shall conform to the latest edition of Landscape Contractor Association guidelines for the Baltimore/Washington metropolitan area, latest edition.
- No plants are required, and no landscape survey is required for this site development plan.

**PLANT SCHEDULE**

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	QUANTITIES	COMMENTS
PA	Picea Abies	NORWAY SPRUCE	8"	14	R.I.P.

**PAVING SECTIONS**

SECTION #	ROAD & STREET CLASSIFICATION	PAVEMENT MATERIALS	
		FULL DEPTH BIT. CONC. ALTERNATE	GRANULAR BASE ALTERNATE
P-1	PARKING BAYS APARTMENTS AND COMMERCIAL INDUSTRIAL ZONES WITH NO HEAVY TRUCKS  TRAVELWAYS APARTMENTS AND COMMERCIAL INDUSTRIAL ZONES WITH NO HEAVY TRUCKS		

**SCHEDULE A PERIMETER LANDSCAPE EDGE**

CATEGORY	ADJACENT TO ROADWAYS	ADJACENT TO PERIMETER PROPERTIES
LANDSCAPE TYPE	B	NA
LINEAR FEET OF ROADWAY FRONTAGE / PERIMETER	250	
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)		
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	
NUMBER OF PLANTS REQUIRED SHADE TREES EVERGREEN TREES SHRUBS	250 - 250 = 0 3 0 0	
NUMBER OF PLANTS PROVIDED SHADE TREES EVERGREEN TREES OTHER TREES (2:1 SUBSTITUTION) SHRUBS (10:1 SUBSTITUTION)		14 EVERGREEN
(DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)		

**ADDRESS CHART**

PARCEL #	STREET ADDRESS
110	2600 Marriottsville Road

**PERMIT INFORMATION CHART**

SUBDIVISION NAME	SECTION / AREA	LOTS / PARCELS
Chapelgate Presbyterian Church	NA	10
PLAT No. or L.P. BLOCK No. ZONE TAX MAP No. ELEC. DIST. CONSERV. TRACT	1504 / 334	4102/15/16 R20 16 3 rd 6030
DATE	SEWER CODE	
4/12/15/16	5492000	
WATER CODE		
K01		

OWNER: Chapelgate Presbyterian Church  
2600 Marriottsville Road  
Marriottsville, MD, 21104 Phone: 410-442-5800

**Chapelgate Presbyterian Church Maintenance Building Addition**  
2600 Marriottsville Road Marriottsville, Maryland 21104  
3 rd Election District Howard County, Maryland  
Tax Map 16 Parcel 110 Zoning: R-20 Deed Ref. 11504 / 334

**UTILITY PROFILES & PLAN VIEW LANDSCAPE FOR MAINTENANCE BUILDING**

REVISIONS

4/29/13 REVISED BUILDING FOOTPRINT & ELEVATIONS  
6/19/13 REDLINE RELOCATION OF VOLLEYBALL COURT AND SEPTIC RESERVE AREA OUT OF MAINTENANCE BUILDING.

**SITE RESOURCES**  
Incorporated  
Comprehensive Land Planning & Site Design Services

14307 Lurdeford Pike • Pikesville, Maryland 21113  
(410) 683-3388 • fax (410) 683-3380

DRAWN BY: TPD CONTRACT NO.:  
DESIGNED BY: JLS SCALE: 1" = 50'  
CHECKED BY: JLS SRI PROJECT NO: 99120-C  
DATE: SEPT 29, 2008 SHEET 3 OF 5

APPROVED: DEPARTMENT OF PLANNING & ZONING  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
CHIEF, DIVISION OF LAND DEVELOPMENT  
DIRECTOR

5/14/13 DATE  
5/23/13 DATE  
5/28/13 DATE

APPROVED FOR PUBLIC WATER AND PRIVATE SEWERAGE SYSTEMS

COUNTY HEALTH OFFICER  
HOWARD COUNTY HEALTH DEPARTMENT