Sample Schedule for Section 4.3.b.

Perimeter Area

1) Linear feet of parking lot perimeter adjacent to property line:

2) Number of plants required between parking lot and property line: 295'

8 shade trees (or equivalent ornamental or evergreen trees)
42 shrubs

3) Number of plants provided between parking lot and property line:

8 shade trees
0 ornamental trees
0 evergreen trees
42 shrubs

Sample Schedule for Section 4.2.

Commercial and Industrial Landscaped Strip

1) Linear feet of street frontage, not including parking lots and driveway entrances (see Figure 4-2): 419.92'

2) Option selected (1,2, or 3): Option #1

3) Number of plants required: 12 shade trees (or equivalent ornamental or evergreen trees)
120 shrubs

4) Number of plants provided: 12 shade trees
0 ornamental trees
0 evergreen trees
120 shrubs

INTERIOR LANDSCAPING SCHEDULE

Total area of parking lot = 12,860 s.f.
Green space required : 5% of 12,860

Required = 643 s.f.
Provided = 868 s.f.
1 shade tree per 300 s.f. of landscape provided.

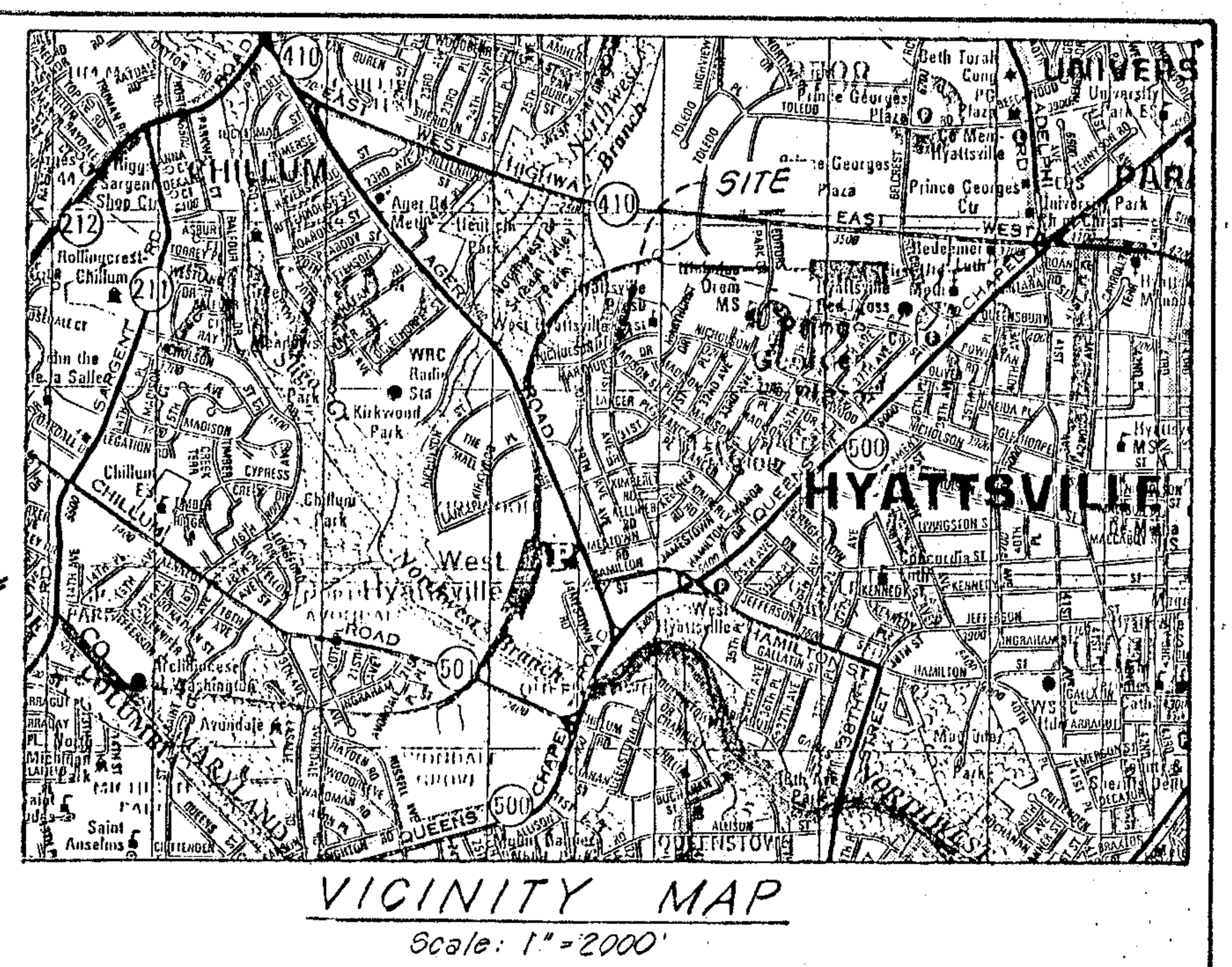
Required = 3 trees
Provided = 3 trees

PARKING SCHEDULE

Use: Place of Worship
Rate: 1 space per 4 persons

Church seating: 130 persons

Parking Requirements:
Required = 33 parking spaces
Provided = 39 parking spaces
Regular = (9.5'x 19') = 37 spaces
Handicap = (13'x 19') = 2 spaces
Total provided = 39 spaces



VICINITY MAP

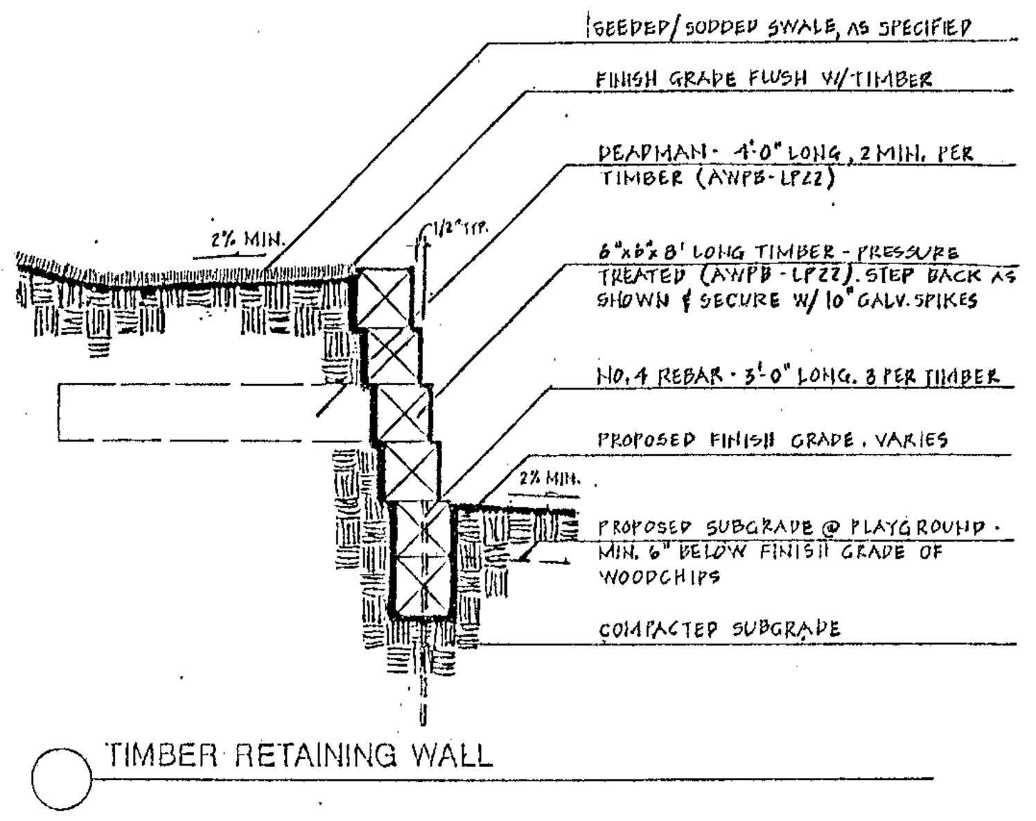
Scale: 1" = 2000'

Copyright ADC "The Map People" permitted use № 20492158.

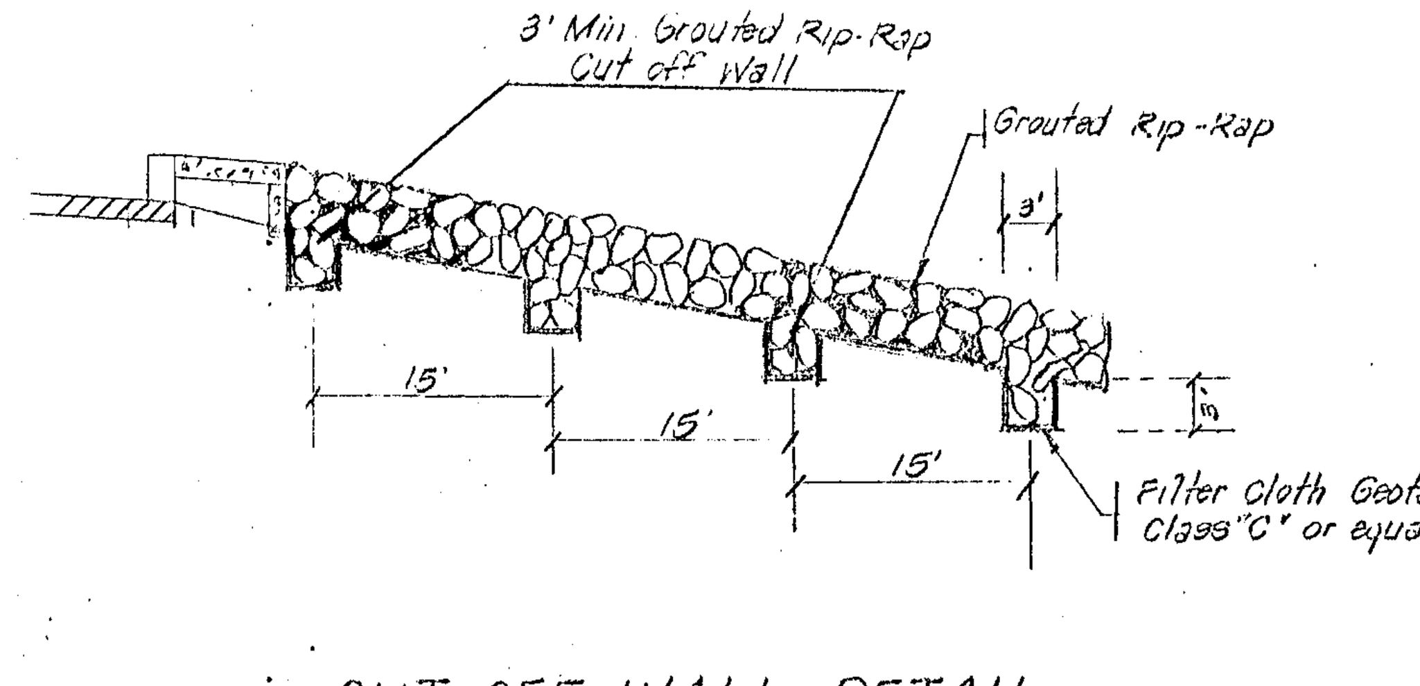
Proposed	Existing
A = 0.62 ac	A = 0.28 ac
I = 7.08	I = 7.08
C = 0.82	C = 0.5
Q = 2.72 cfs	Q = 1.0 cfs

LANDSCAPE SCHEDULE

No.	Symbol	Botanic Name	Common Name	Size	Spacing	Method	Qty.
1.		Pinus Strobus	White Pine	5'-6'	5' o.c.	B&B	0
2.	Shade	a). Acer rubrum	Red Maple	2½"-3"	24' o.c.	B&B	10 (2a)
		b) Quercus rubra	Red Oak	" "	" "	" "	10 (2b)
		c.) Ulmus parvifolia	Chinese Elm	" "	" "	" "	0
						Total	12
3.	Ornamental	a) Prunus sp.	Flowering Cherry (in var.)	6'-8'	15' o.c.	B&B	0
		b.) Pyrus calleryana bradfordi	Bradford pear	6'-8'	" "	" "	0
		c.) Lagerstromia indica	Crape Myrtle	"	"	"	0
						Total	20
			SHRUBS				
4.		Forsythia sp.	Forsythia (in var.)	3'-4'	7' oc.	Cont.	41
5.		Azaleas sp	Azaleas (in. var.)	18"-24"	3' oc.	Cont.	77
6.		Taxus baccata repandens T. Wardi, T. Nana	Dwarf yew (in var.)	" "	4' oc.	" "	29
7.		Ilex. sp.	Holly (in var.)	2'-2½	4. oc.	" "	15
					Total =		162

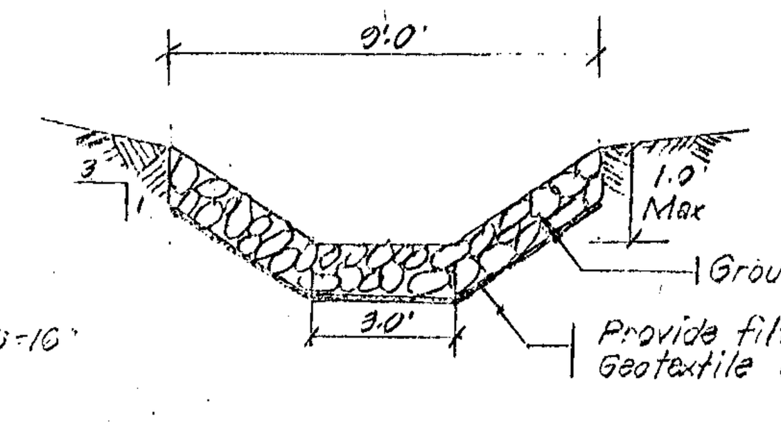


TIMBER RETAINING WALL



CUT OFF WALL DETAIL

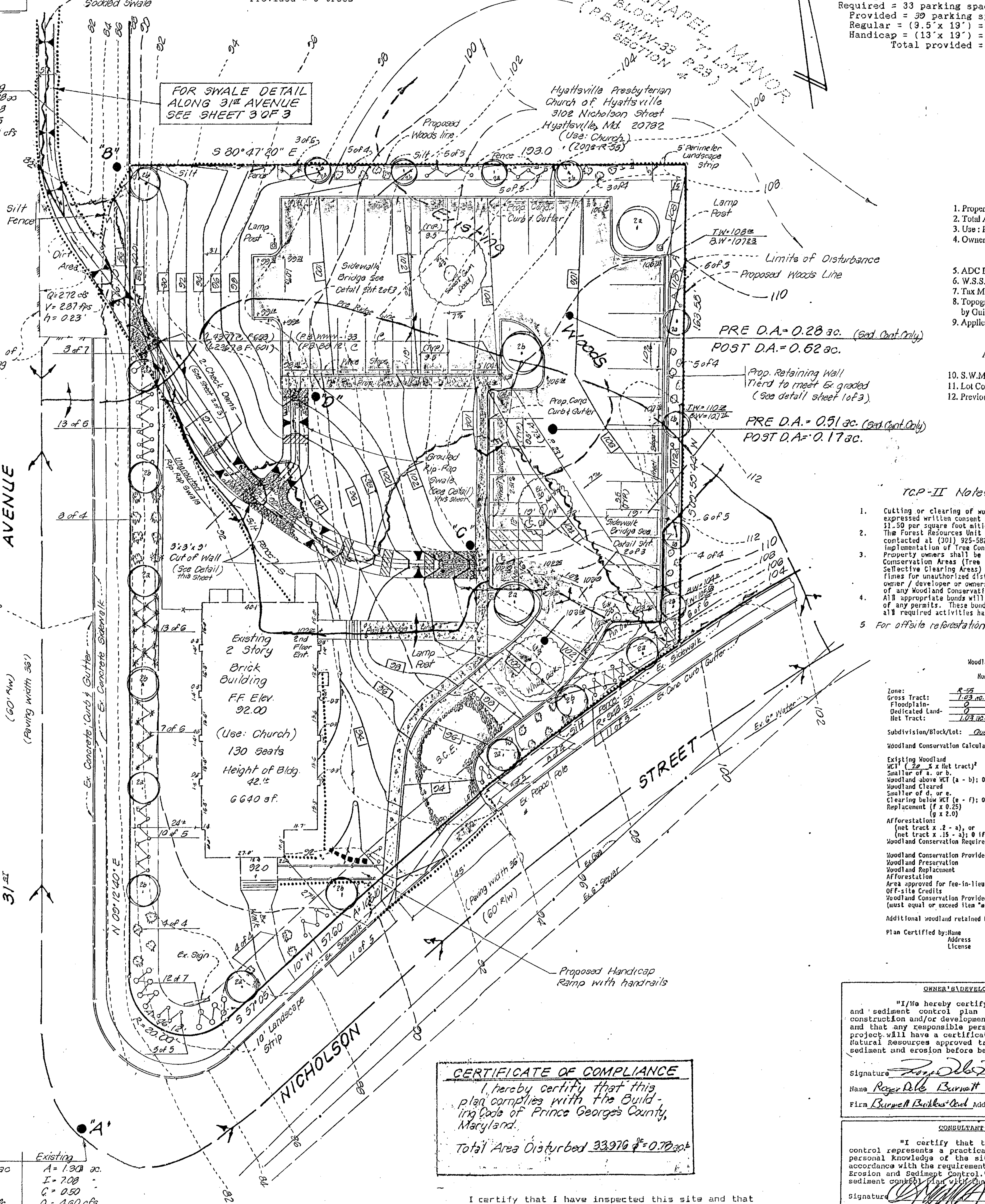
N.T.S.



d50 = 6"
dmax = 9"
Blanket Thickness = 16"

RIP-RAP SWALE

N.T.S.



Proposed	Existing
A = 1.1 ac	A = 1.30 ac.
I = 7.08	I = 7.08
C = 0.61	C = 0.50
Q = 4.75 cfs	Q = 4.60 cfs

CERTIFICATE OF COMPLIANCE

I hereby certify that this plan complies with the Building Code of Prince George's County, Maryland.

Total Area Disturbed 33,976 sf = 0.78 ac±

I certify that I have inspected this site and that drainage onto this site from upgrade properties, and from this site onto other downgrade properties has been addressed in substantial accordance with applicable codes.

GENERAL NOTES

1. Property Zoned = R-55.
2. Total Area of site = 1.03 acres.
3. Use : Place of Worship.
4. Owners : West Hyattsville Baptist Church
   3102 Nicholson Street
   Hyattsville, Md. 20781
5. ADC Locator Map page 11, grid k-2.
6. W.S.S.C. 200' sheet 207NE-3.
7. Tax Map No. 41, grid E-3.
8. Topography obtained from a drawing performed by Guilford and Chase, P.C. dated June 1995.
9. Applicant : Chinese Baptist Church of Maryland
   3100 Nicholson Street
   Hyattsville, Md. 20781
   Attn : Rev. Andrew Shen
   301-559-8461
10. S.W.M. # 978003430.
11. Lot Coverage = 41%.
12. Previous Special Exception = SE 3099.

GENERAL NOTES FOR STORM DRAIN CONSTRUCTION

1. All storm drains shall be constructed in accordance with the latest edition of the Stormwater Standards and Specifications of Prince George's County, Department of Environmental Resources, unless otherwise noted.
2. For Types of structures refer to the latest Stormwater Management Standard Details, DER (SWMSD) unless otherwise noted.
3. Information concerning underground utilities was obtained from available records. The contractor must determine the exact locations and elevations of the utilities by digging test pits at all utility crossings well in advance of trenching. If clearances are less than specified, contact the engineer and the owner of other involved utility.

APPROVAL STAMPS

	INSPECTION BY DER	PW & TRANS
STORM DRAIN SYSTEM		
S.D. PIPES		
S.D. FLOOD CONTROL		
WATER QUALITY SYSTEM		
INFILTRATION		
RETENTION POND		
DETENTION POND		
OIL GRIT SEP.		
EXT. DET POND		
UNDERGROUND STORAGE		
CHECK DAM —	②	
OTHERS		

CSD# 978003430

PROJECT NAME QUEENS CHAPEL MANOR

PRINCE GEORGE'S COUNTY MD DEPARTMENT OF ENVIRONMENTAL RESOURCES Permits and Review Division.

APPROVED for Stormwater Management and Storm Drain Only

* T. Singh 3/20/97 Date

* SUBJECT TO APPROVAL OF DPW&T OF CITY OF HYATTSVILLE.

( ) Public storm drain/SWM system permits required prior to construction.

✓ Private storm drain/SWM system. A recorded maintenance agreement is required.

( ) Preconstruction meeting is required for all DER inspected storm drain/SWM systems. Call (301)952-4914 to arrange.

Revision

( ) Approval

Date

Description

TCP-II Notes:

1. Cutting or clearing of woodland not in conformance with this Plan or without the expressed written consent of the Planning Director or designee shall be subject to a $1.50 per square foot mitigation fee.
2. The Forest Resources Unit of the Department of Environmental Resources (DER) must be contacted at (301) 925-5820 prior to the start of any work on the site to address implementation of Tree Conservation measures shown on this Plan.
3. Property owners shall be notified by the Developer or Contractor of any Woodland Conservation Areas (Tree Save Areas, Reforestation Areas, Afforestation Areas, or Sellective Clearing Areas) located on their lot or parcel of land and the associated fimes for unauthorized disturbances to these areas. Upon the sale of the property the owner / developer or owners representative shall notify the purchaser of the property of any Woodland Conservation Areas.
4. All appropriate bonds will be posted with the Building Official prior to the issuance of any permits. These bonds will be retained as surety by the Building Official until all required activities have been satisfied.
5. For offsite reforestation see TCP II/106/96.

Woodland Conservation Worksheet for Non-Governmental Projects

Zone: R-55
Gross Tract: 1.03 ac.
Floodplain- 0
Dedicated Land- 0
Net Tract: 1.03 ac.

Owner: Chinese Baptist Church of Md. c/o Rev. Andrew Shen
Address: 3100 Nicholson St. Hyattsville, Md. 20781
Phone: 301-559-8461
Tax map: 41-F-3 & 50-C-4
Permit #:

Subdivision/Block/Lot: Queens Chapel Manor Plo Lot 1 & Plo Blk. "7"

Woodland Conservation Calculations:	Net Tract (acres)	Floodplain (acres)
Existing Woodland	a. 0.49	k. 0
WCT (20 % x Net tract)[2]	b. 0.21	
Smaller of a. or b.	c. 0.21	
Woodland above WCT (a - b); 0 if ⊘	d. 0.28	
Woodland Cleared	e. 0.49	l. 0
Smaller of d. or e.	f. 0.28	
Clearing below WCT (e - f); 0 if ⊘	g. 0.21	
Replacement (f x 0.25)	h. 0.07	
(g x 2.0)	i. 0.42	
Afforestation: (net tract x .2 - a), or (net tract x .15 - a); 0 if < 0	j. 0	
Woodland Conservation Required: (c+h+i+j+l-g)	m. 0.49	

Woodland Conservation Provided:	(acres)
Woodland Preservation	0
Woodland Replacement	0.49
Afforestation	0
Area approved for fee-in-lieu	0 \$0.30 * 43560 \$ 0
Off-site Credits	0.49
Woodland Conservation Provided (must equal or exceed item "m" above)	0 and \$ 0

Additional woodland retained but not part of any requirements: 0 acres

Plan Certified by: Name Gregory C. Benefiel
Address 16031 Jerald Road Laurel, Md. 20707
License Md #10994

STATE OF MARYLAND GREGORY C. BENEFIEL No 10994 REGISTERED PROFESSIONAL LAND SURVEYOR

M-NCPPC
Prince George's County Planning Department
Natural Resources Division
APPROVAL
TREE CONSERVATION PLAN
TCP- II/101/96
John P. Markovich 11/6/96
BY DATE

APPROVED PLAN
DSP-97001-02

PRINCE GEORGE'S SOIL CONSERVATION DISTRICT
APPROVAL
SEDIMENT CONTROL, GRADING, SOILS & DRAINAGE
SC# 153-97
POND P# ✗
Lance Gardner 4/23/97
DISTRICT SIGNATURE DATE

OWNER'S\DEVELOPER'S CERTIFICATION

"I/We hereby certify that I have reviewed this erosion and sediment control plan and that all clearing, grading, construction and/or development will be done pursuant to this plan and that any responsible personnel involved in the construction project will have a certificate of attendance at a Department of Natural Resources approved training program for the control of sediment and erosion before beginning the project."

Signature Roger Dale Burnett Date 11/19/96
Name Roger Dale Burnett Title Pres. Phone 604-3662
Firm Burnett Builders Devel Address 12610 Old Carpender Belts Md.

CONSULTANT'S CERTIFICATION

"I certify that this plan of erosion and sediment control represents a practicable and workable plan based on my personal knowledge of the site, and this plan was prepared in accordance with the requirements of the Prince George's County Soil Erosion and Sediment Control." I have reviewed this erosion and sediment control plan with the owner/developer.

Signature [signature] Md. License # 10994
Name Gregory C. Benefiel Date 11/20/00

Rev 1/21/97 SCP.
Rev 4/8/97 SCD Plr.
Rev. 12/16/96 Comments
Rev. 1/4/97 SWM.
Rev 1/21/97 MNCPPC.

"For the construction of the Parking area"

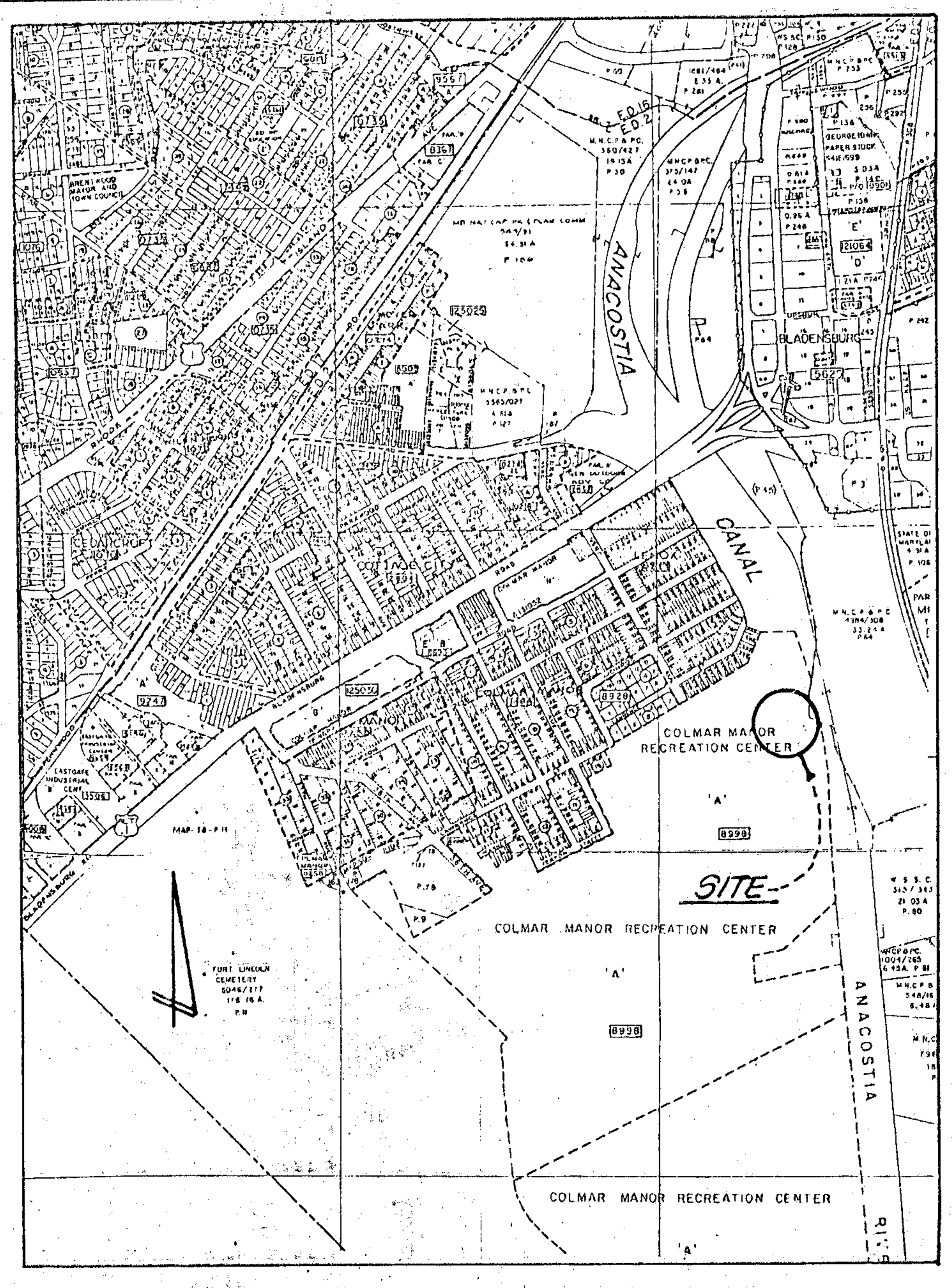
SITE DEVELOPMENT, GRADING, SEDIMENT CONTROL
TCP TYPE II & LANDSCAPE PLAN
Nicholson Street & 31st Avenue
Part of Block "7" & Lot 1
"CHINESE BAPTIST CHURCH OF MARYLAND"

QUEENS CHAPEL MANOR

Hyattsville (16th) Election District
Prince George's County, Maryland

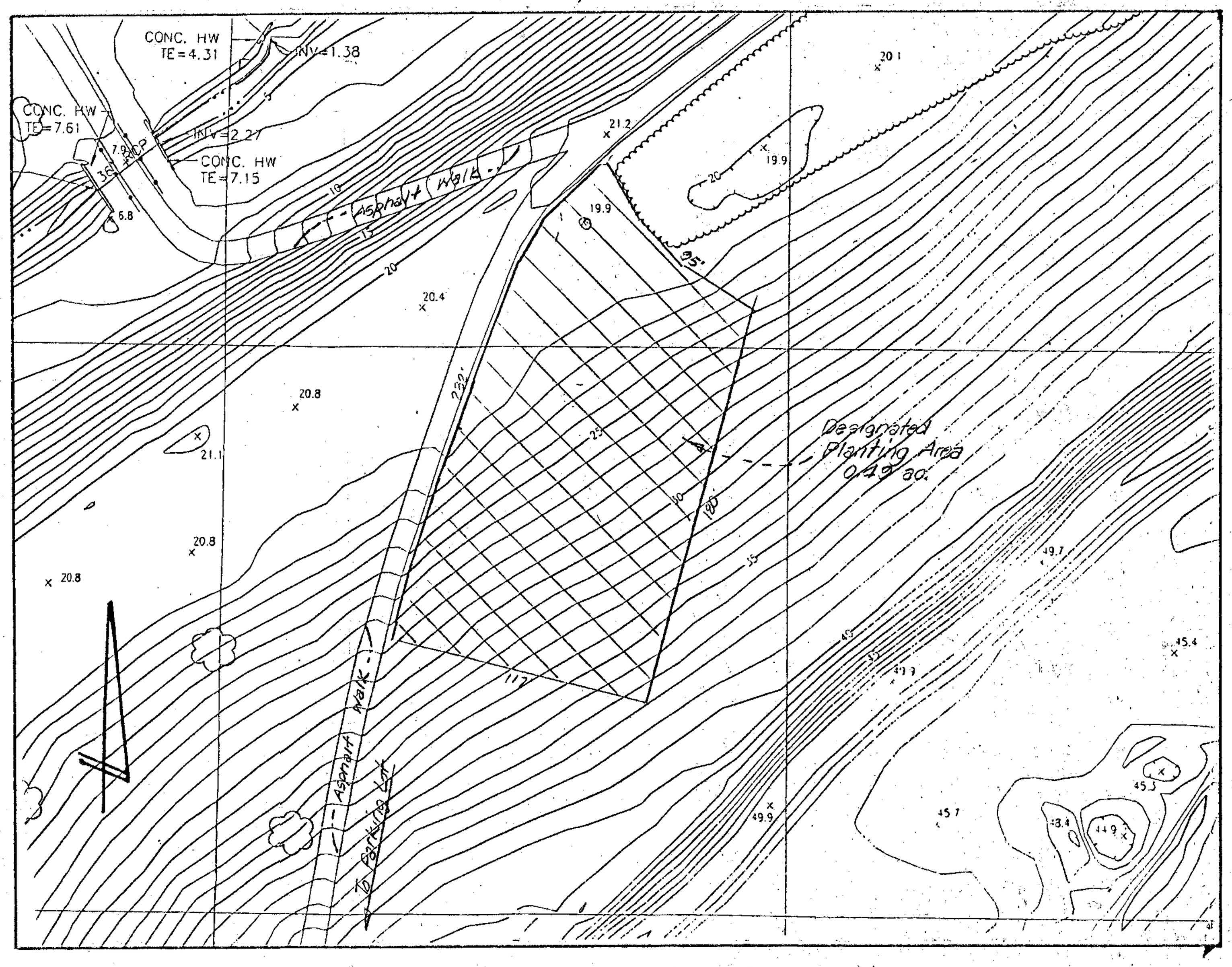
SURVEYS INC.
SURVEYING • ENGINEERING • LAND PLANNING
PERMIT SERVICES
16031 Jerald Road
Laurel, Maryland 20707 301-776-0561

Scale 1" = 20'		Date Sept. 1996	
Sheet 1 of 3		Drawn By [signature]	
Plat Book WWW 33-88-12		Plat No. 23 - 73	
Liber 2367 4377		Folio 601 658	
Job No 96-53		Drawing No. L-029	



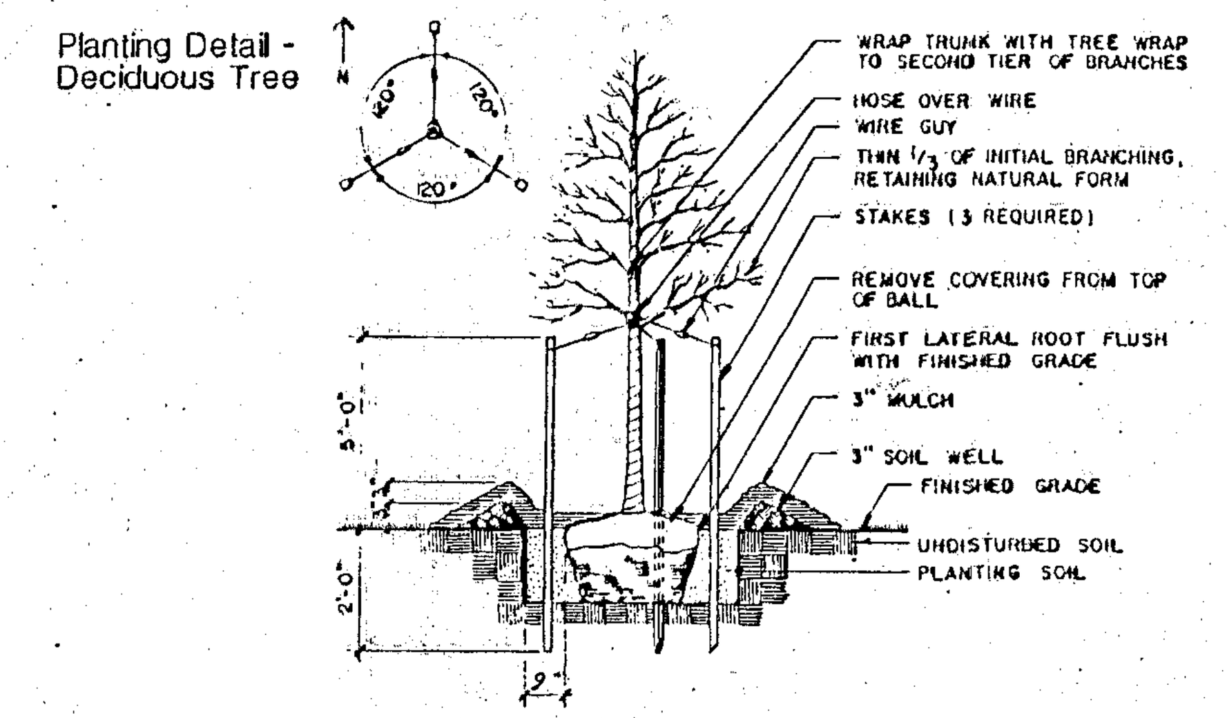
REFORESTATION VICINITY MAP

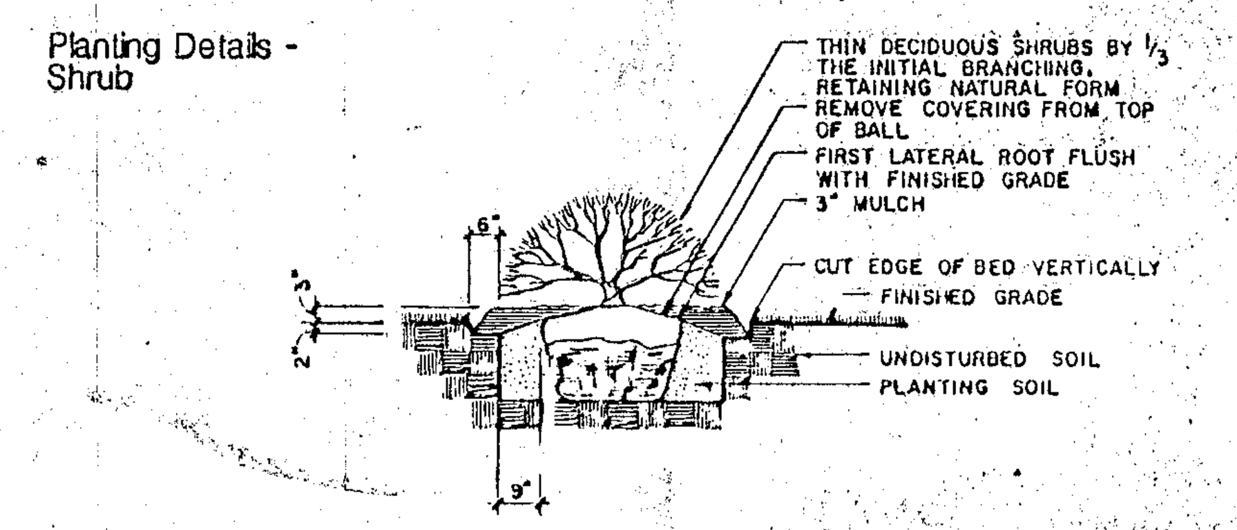
Scale: 1" = 400'



REFORESTATION AREA MAP

Scale: 1" = 50'





City of Hyattsville, Maryland

Department of Public Works

DRIVEWAY AND/OR CURB CUT PERMIT   Nº 182

I/We Hyattsville Baptist (Property Owner) Date: 11/21/96 hereby make application for a permit to construct a driveway, apron and/or necessary curb cuts for same at: 3100 Nicholson St. (Location of property where construction is to take place.)

All construction SHALL meet the requirements and specifications of the City Code and the Prince George's County General Specifications and Standards for Highway and Street Construction.

Name of Contractor: Roger Dale Burnett

Phone: 301-464-3662

Address: 12610 Old Gunpowder Rd.

Permit Fee: 50.00   Peformance Deposit: N/A

~~Performance Deposit to be refunded when construction is completed, Inspected and approved by the Department of Public Works.~~

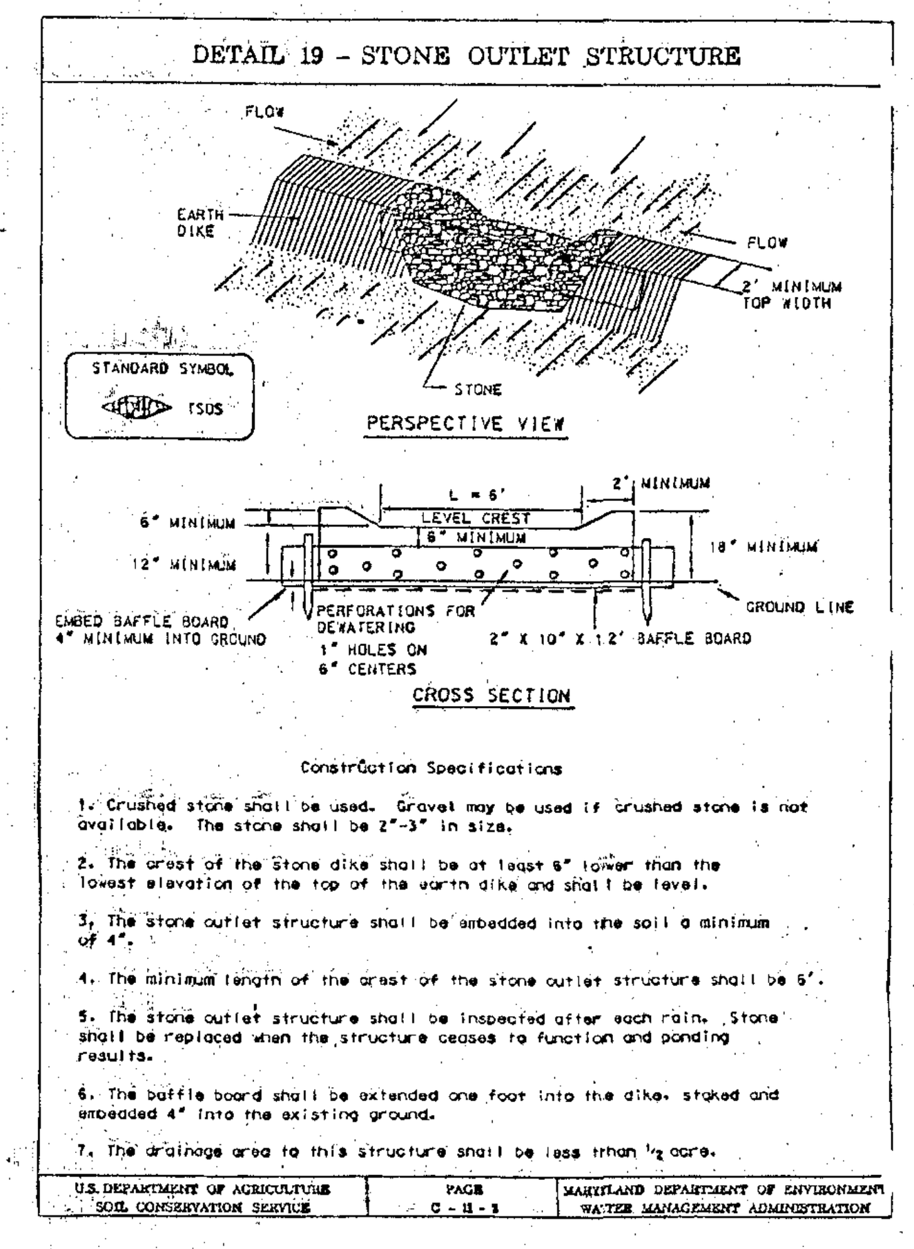
Permit Issued by: .... Director

Date Issued: ....

Construction completed, Inspected and approved for refund of Performance Deposit by: .... Director-Superintendent DPW

Date: ....

4307 Jefferson St., Hyattsville, Md. 20781 · 301 927-0194 · 927-1676



SEQUENCE OF CONSTRUCTION

1. Preconstruction Meeting....................1 Day
2. Obtain necessary permits....................2 Days
3. Notify "Miss Utility" atleast 48 hours prior to any construction....................1 Day
4. Install sedimant control devices as shown:....................2 Days
   - Stabilize construction enterance
   - Silt fence
   - Straw bale dike
5. Rough grade site for the construction of the parking lot....................3 weeks
6. Construct rip-rap swales....................1 week
7. Construct curb/gutter, sidewalks and paving....................1 month
8. Final grade and stabilize all areas disturbed by construction....................2 Days
9. Remove sediment control devices when written permission....................2 Days
   Has been granted by the prince George's County Sediment Control Inspector

Total estimated time of construction....................2-3 Months

TCP-II Notes:

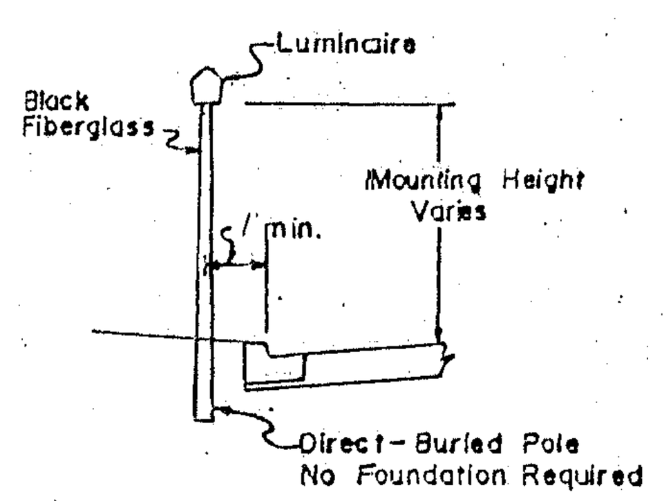
1. Cutting or clearing of woodland not in conformance with this Plan or without the expressed written consent of the Planning Director or designee shall be subject to a $1.50 per square foot mitigation fee.
2. The Forest Resources Unit of the Department of Environmental Resources (DER) must be contacted at (301) 925-5820 prior to the start of any work on the site to address implementation of Tree Conservation measures shown on this Plan.
3. Property owners shall be notified by the Developer or Contractor of any Woodland Conservation Areas (Tree Save Areas, Reforestation Areas, Afforestation Areas, or Selective Clearing Areas) located on their lot or parcel of land and the associated fines for unauthorized disturbances to these areas. Upon the sale of the property the owner / developer or owners representative shall notify the purchaser of the property of any Woodland Conservation Areas.
4. All appropriate bonds will be posted with the Building Official prior to the issuance of any permits. These bonds will be retained as surety by the Building Official until all required activities have been satisfied.
5. For reforestation calculations see TCP II/101/96.

Note:

1. Trees/shrubs for reforestation are provided by the church/owners.
2. Planting for reforestation is to be done by M.N.C.P.& P.C. and/or their assigns.
3. Trees / shrubs scheduled for planting are as follows:

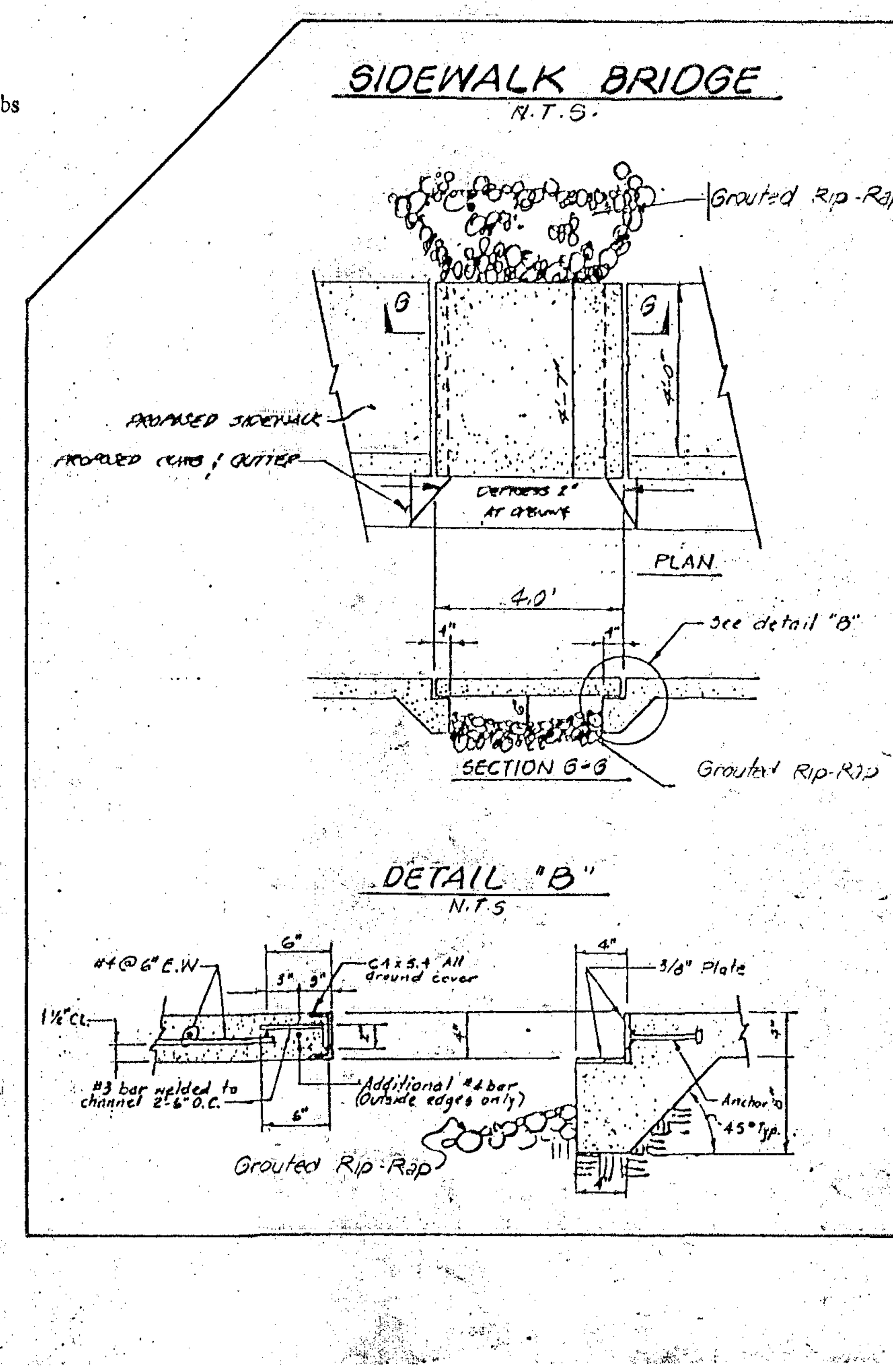
TYPE	SIZE	QUANTITY	
TREES			
Yellow Poplar	1" cal.	55	
Red Bud	1" cal.	56	
Willow Oak	1" cal.	56	TOTAL = 223 Trees
Red Maple	1" cal.	56	
SHRUBS			
Winterberry	3'	15	
American Holly	18"-24"	15	TOTAL = 45 Shrubs
Witch Hazel	2'-3'	15	

4. Trees are to be planted 10 feet on center in miscellaneous order, with shrubs planted spontaneously between.



LAMP POST DETAIL

N.T.S



M-NCPPC

Prince George's County Planning Department

Natural Resources Division

APPROVAL

TREE CONSERVATION PLAN

TCP- II/106/96

BY   DATE

APPROVED PLAN DSP-97001-02

CSD# 978003430

PROJECT NAME QUEENS CHAPEL MANOR

PRINCE GEORGE'S COUNTY MD DEPARTMENT OF ENVIRONMENTAL RESOURCES Permits and Review Division

APPROVED for Stormwater Management and Storm Drain Only

T. Singh 3/21/97 Date

REFORESTATION CALCULATIONS

Area to be reforested = 0.49 ac.

Rate: 1000 seedlings per acre.

Substitutions = 1" caliper tree per 2 seedlings.

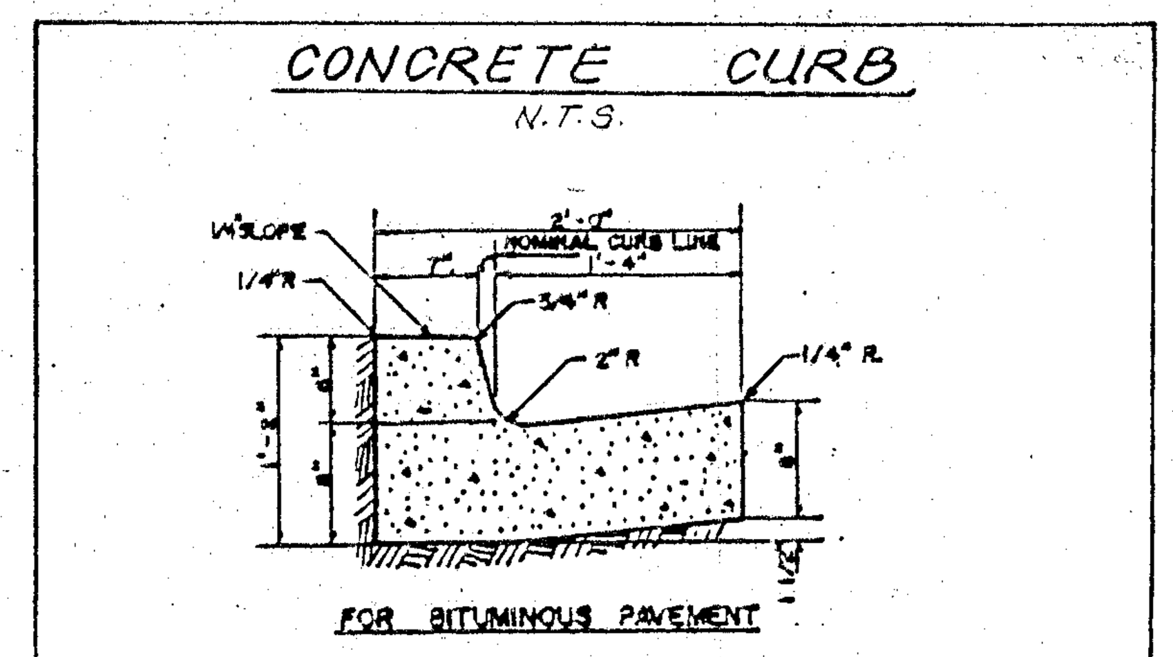
1 shrub per seedling.

Required = 1000 x 0.49 = 490 seedlings = 245 - 1" caliper trees

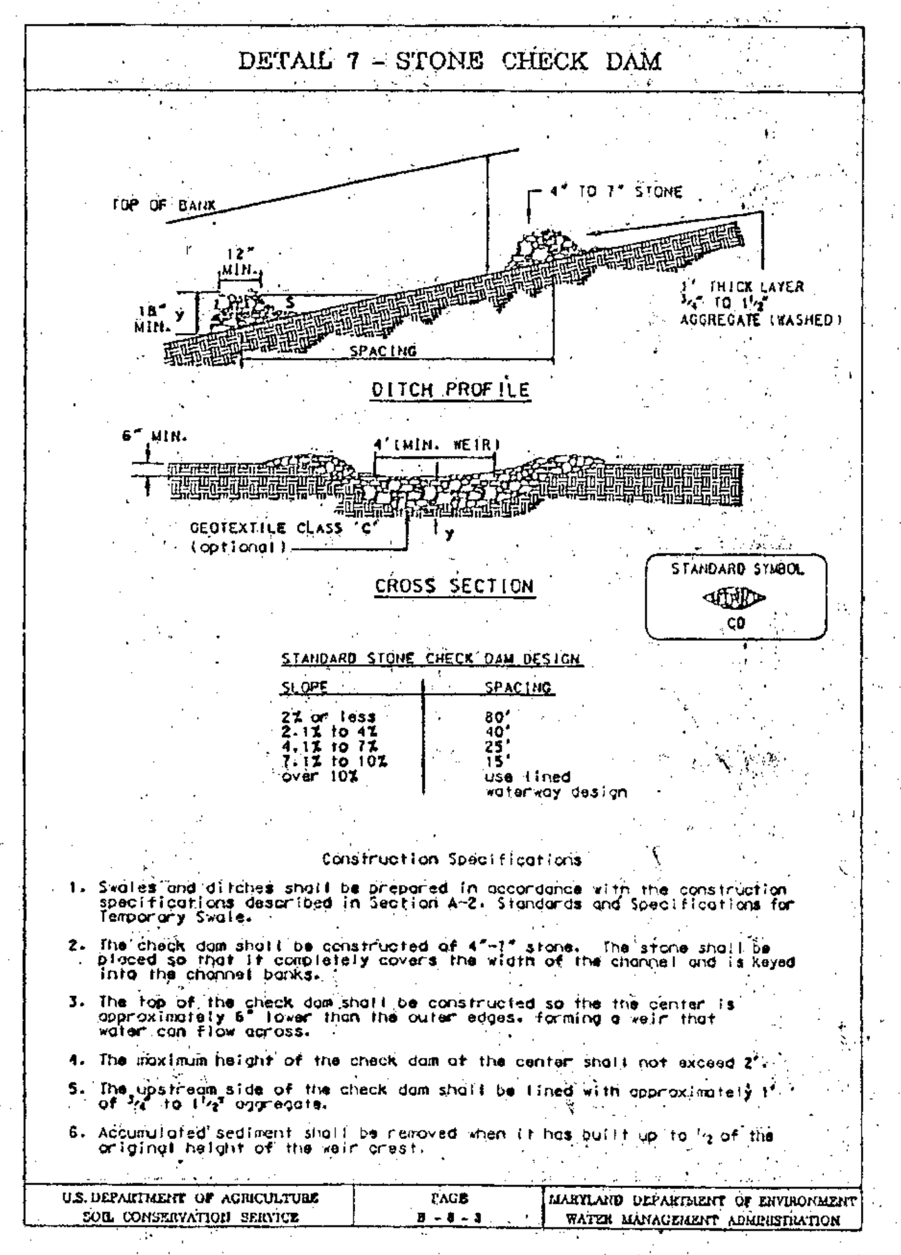
Provided = 223 - 1" caliper trees = 446 seedlings

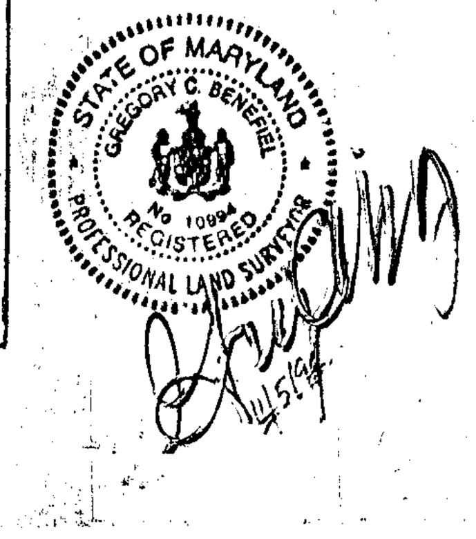
45 - Shrubs = 45 Seedlings

Equivalent = 491 seedlings



NOTE: CONSTRUCT EXPANSION JOINTS AT 100' INTERVALS, AT BEGINNING AND END OF SHORT RADIUS (LESS THAN 100') CURVES, AT STRUCTURES, AND AT MID POINT OF CURB RETURN, USING 1/2" PREFORMED EXPANSION JOINT FILLER, NON EXTRUDING.





SITE DEVELOPMENT, GRADING, SEDIMENT CONTROL TCP TYPE II & LANDSCAPE PLAN

QUEENS CHAPEL MANOR

Hyattsville (16th) Election District
Prince George's County, Maryland

SURVEYS INC.

16011 Jerald Road

As-Shown	10/96
Sheet 2 of 3	
96-53	L-029a

20.0 STANDARDS AND SPECIFICATIONS

FOR

VEGETATIVE STABILIZATION

Definition

Using vegetation as cover for barren soil to protect it from forces that cause erosion.

Purpose

Vegetative Stabilization specifications are used to promote the establishment of vegetation on exposed soil. When soil is stabilized with vegetation, the soil is less likely to erode and more likely to allow infiltration of rainfall, thereby reducing sediment loads and runoff to downstream areas, and improving wildlife habitat and visual resources.

Conditions Where Practice Applies

This practice shall be used on denuded areas as specified on the plans and may be used on highly erodible or critically eroding areas. This specification is divided into Temporary Seeding, to quickly establish vegetative cover for short duration (up to one year), and Permanent Seeding, for long term vegetative cover. Examples of applicable areas for Temporary Seeding are temporary soil stockpiles, cleared areas being left idle between construction phases, earth dikes, etc. and for Permanent Seeding are lawns, dams, cut and fill slopes and other areas at final grade, former stockpile and staging areas, etc.

Effects on Water Quality and Quantity

Planting vegetation in disturbed areas will have an effect on the water budget, especially on volumes and rates of runoff, infiltration, evaporation, transpiration, percolation, and groundwater recharge. Vegetation, over time, will increase organic matter content and improve the water holding capacity of the soil and subsequent plant growth.

Vegetation will help reduce the movement of sediment, nutrients, and other chemicals carried by runoff to receiving waters. Plants will also help protect groundwater supplies by assimilating those substances present within the root zone.

Sediment control devices must remain in place during grading, seedbed preparation, seeding, mulching and vegetative establishment to prevent large quantities of sediment and associated chemicals and nutrients from washing into surface waters.

Section I - Vegetative Stabilization Methods and Materials

A. Site Preparation

i. Install erosion and sediment control structures (either temporary or permanent) such as diversions, grade stabilization structures, berms, waterways, or sediment control basins.

ii. Perform all grading operations at right angles to the slope. Final grading and shaping is not usually necessary for temporary seeding.

iii. Schedule required soil tests to determine soil amendment composition and application rates for sites having disturbed area over 5 acres.

B. Soil Amendments (Fertilizer and Lime Specifications)

i. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas over 5 acres. Soil analysis may be performed by the University of Maryland or a recognized commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses.

ii. Fertilizers shall be uniform in composition, free flowing and suitable for accurate application by approved equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers shall all be delivered to the site fully labeled according to the applicable state fertilizer laws and shall bear the name, trade name or trademark and warrantee of the producer.

iii. Lime materials shall be ground limestone (hydrated or burnt lime may be substituted) which contains at least 50% total oxides (calcium oxide plus magnesium oxide). Limestone shall be ground to such fineness that at least 50% will pass through a #100 mesh sieve and 98 - 100% will pass through a #20 mesh sieve.

iv. Incorporate lime and fertilizer into the top 3 - 5" of soil by disking or other suitable means.

C. Seedbed Preparation

i. Temporary Seeding

a. Seedbed preparation shall consist of loosening soil to a depth of 3" to 5" by means of suitable agricultural or construction equipment, such as disc harrows or chisel plows or rippers mounted on construction equipment. After the soil is loosened it should not be rolled or dragged smooth but left in the roughened condition. Sloped areas (greater than 3:1) should be tracked leaving the surface in an irregular condition with ridges running parallel to the contour of the slope.

b. Apply fertilizer and lime as prescribed on the plans.

c. Incorporate lime and fertilizer into the top 3 - 5" of soil by disking or other suitable means.

ii. Permanent Seeding

a. Minimum soil conditions required for permanent vegetative establishment:

1. Soil pH shall be between 6.0 and 7.0
2. Soluble salts shall be less than 500 parts per million (ppm).
3. The soil shall contain less than 40% clay but enough fine grained material (> 30% silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception is if lovegrass or serecia lespedeza is to be planted, then a sandy soil (< 30% silt plus clay) would be [illegible].
4. Soil shall contain 1.5% minimum organic matter by weight.
5. Soil must contain sufficient pore space to permit adequate root penetration.
6. If these conditions cannot be met by soils on site, adding topsoil is required in accordance with Section 21 Standard and Specification for Topsoil.

b. Areas previously graded in conformance with the drawings shall be maintained in a true and even grade, then scarified or otherwise loostened to a depth of 3 - 5" to permit bonding of the topsoil to the surface area and to create horizontal erosion check slots to prevent topsoil from sliding down a slope.

c. Apply soil amendments as per [illegible] included on the plans.

d. Mix soil amendments into the top 3 - 5" of topsoil by disking or other suitable means. Lawn areas should be raked to smooth the surface, remove large objects like stones and branches, and ready the area for seed application. Where site conditions will not permit normal [illegible] loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface. Steep slopes (steeper than 3:1) should be tracked by a dozer leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. The top 1 - 3" of soil should be loose and friable. Seedbed loosening may not be necessary on newly disturbed areas.

D. Seed Specifications

i. All seed must meet the requirements of the Maryland State Seed Law. All seed shall be subject to re-testing by a recognized seed laboratory. All seed used shall have been tested within the 6 months immediately preceding the date of sowing such material on this job.

Note: Seed tags shall be made available to the inspector to verify type and rate of seed used.

ii. Inoculant - The inoculant for treating legume seed in the seed mixtures shall be a pure culture of nitrogen-fixing bacteria prepared specifically for the species. Inoculants shall not be used later than the date indicated on the container. Add fresh inoculant as directed on package. Use four times the recommended rate when hydroseeding. Note: It is very important to keep inoculant as cool as possible until used. Temperatures above 75-80° F. can weaken bacteria and make the inoculant less effective.

E. Methods of Seeding

i. Hydroseeding. Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer), broadcast or drop seeder, or a cultipacker seeder.

a. If fertilizer is being applied at the time of seeding, the application rates amounts will not exceed the following: nitrogen; maximum of 100 lbs. per acre total of soluble nitrogen; P205 (phosphorous): 200 lbs/ac; K20 (potassium): 200 lbs/ac.

b. Lime - use only ground agricultural limestone, (Up to 3 tons per acre may be applied by hydroseeding). Normally, not more than 2 tons are applied by hydroseeding at any one time. Do not use burnt or hydrated lime when hydroseeding.

c. Seed and fertilizer shall be mixed on site and seeding shall be done immediately and without interruption.

ii. Dry Seeding: This includes use of conventional drop or broadcast spreaders.

a. Seed spread dry shall be incorporated into the subsoil at the rates prescribed on the Temporary or Permanent Seeding Summaries or Tables 25 or 26. The seeded area shall then be rolled with a weighted roller to provide good seed to soil contact.

b. Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.

iii. Drill or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil.

a. Cultipacking seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seedbed must be firm after planting.

b. Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.

F. Mulch Specifications (In order of preference)

i. Straw shall consist of thoroughly threshed wheat, rye or oat straw, reasonably bright in color, and shall not be musty, moldy, caked, decayed, or excessively dusty and shall be free of noxious weed seeds as specified in the Maryland Seed Law.

ii. Wood Cellulose Fiber Mulch (WCFM)

a. WCFM shall consist of specially prepared wood cellulose processed into a uniform fibrous physical state.

b. WCFM shall be dyed green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniformly spread slurry.

c. WCFM, including dye, shall contain no germination or growth inhibiting factors.

d. WCFM materials shall be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The mulch material shall form a blotter-like ground cover, on application, having moisture absorption and percolation properties and shall cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.

e. WCFM material shall contain no elements or compounds at concentration levels that will be phyto-toxic.

f. WCFM must conform to the following physical requirements: fiber length to approximately 10 mm., diameter approximately 1 mm., pH range of 4.0 to 8.5, ash content of 1.6% maximum and water holding capacity of 90% minimum.

Note: Only sterile straw mulch should be used in areas where one species of grass is desired.

G. Mulching Seeded Areas - Mulch shall be applied to all seeded areas immediately after seeding.

i. If grading is completed outside of the seeding season, mulch alone shall be applied as prescribed in this section and maintained until the seeding season returns and seeding can be performed in accordance with these specifications.

ii. When straw mulch is used, it shall be spread over all seeded areas at the rate of 2 tons/acre. Mulch shall be applied to a uniform loose depth of between 1" and 2". Mulch applied shall achieve a uniform distribution and depth so that the soil surface is not exposed. If a mulch anchoring tool is to be used, the rate should be increased to 2.5 tons/acre.

iii. Wood cellulose fiber used as a mulch shall be applied at a net dry weight of 1,500 lbs. per acre. The wood cellulose fiber shall be mixed with water, and the mixture shall contain a maximum of 50 lbs. of wood cellulose fiber per 100 gallons of water.

H. Securing Straw Mulch (Mulch Anchoring): Mulch anchoring shall be performed immediately following mulch application to minimize loss by wind or water. This may be done by one of the following methods (listed by preference), depending upon size of area and erosion hazard:

i. A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into the soil surface a minimum of two (2) inches. This practice is most effective on large areas, but is limited to flatter slopes where equipment can operate safely. If used on sloping land, this practice should be used on the contour if possible.

ii. Wood cellulose fiber may be used for anchoring straw. The fiber binder shall be applied at a net dry weight of 750 pounds/acre. The wood cellulose fiber shall be mixed with water and the mixture shall contain a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.

iii. Application of liquid binders should be heavier at the edges where wind catches mulch, such as in valleys and on crests of banks. The remainder of area should be appear uniform after binder application. Synthetic binders - such as Acrylic DLR (Agro-Tack), DCA-70, Petroset, Terra Tax II, Terra Tack AR or other approved equal may be used at rates recommended by the manufacturer to anchor mulch.

iv. Lightweight plastic netting may be stapled over the mulch according to manufacturer's recommendations. Netting is usually available in rolls 4' to 15' feet wide and 300 to 3,000 feet long.

I. Incremental Stabilization - Cut Slopes

i. All cut slopes shall be dressed, prepared, seeded and mulched as the work progresses. Slopes shall be excavated and stabilized in equal increments not to exceed 15'.

ii. Construction sequence (Refer to Figure 3 below):

a. Excavate and stabilize all temporary swales, side ditches, or berms that will be used to convey runoff from the excavation.

b. Perform phase 1 excavation, dress, and stabilize.

c. Perform phase 2 excavation, dress, and stabilize. Overseed phase 1 areas as necessary.

d. Perform final phase excavation, dress, and stabilize. Overseed previously seeded areas as necessary.

Note: Once excavation has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions in the operation or completing the operation out of the seeding season will necessitate the application of temporary stabilization.

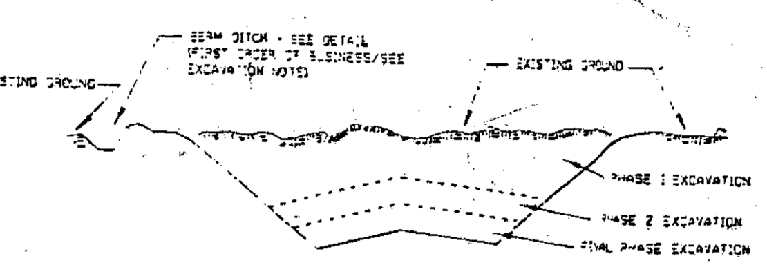


Figure 4 Incremental Stabilization - Cut

J. Incremental Stabilization of Embankments - Fill Slopes

i. Embankments shall be constructed in lifts as prescribed on the plans.

ii. Slopes shall be stabilized immediately when the vertical height of the multiple lifts reaches 15', or when the grading operation ceases as prescribed in the plans.

iii. At the end of each day, temporary berms and pipe slope drains should be constructed along the top edge of the embankment to intercept surface runoff and convey it down the slope in a non-erosive manner to a sediment trapping device.

iv. Construction sequence: Refer to Figure 4 (below).

a. Excavate and stabilize all temporary swales, side ditches, or berms that will be used to divert runoff around the fill. Construct Slope Silt Fence on low side of fill as shown in Figure 5, unless other methods shown on the plans address this area.

b. Place phase 1 embankment, dress and stabilize.

c. Place phase 2 embankment, dress and stabilize.

d. Place final phase embankment, dress and stabilize. Overseed previously seeded areas as necessary.

Note: Once the placement of fill has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions in the operation or completing the operation out of the seeding season will necessitate the application of temporary stabilization.

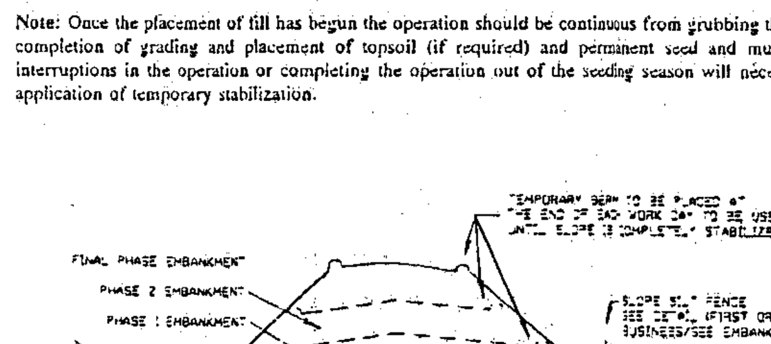


Figure 5 Incremental Stabilization - Fill

Section II - Temporary Seeding

Vegetation - annual grass or grain used to provide cover on disturbed areas for up to 12 months. For longer duration of vegetative cover, Permanent Seeding is required.

A. Seed Mixtures - Temporary Seeding

i. Select one or more of the species or mixtures listed in Table 26 for the appropriate Plant Hardiness Zone (from Figure 5) and enter them in the Temporary Seeding Summary below, along with application rates, seeding dates and seeding depths. If this Summary is not put on the plans and completed, then Table 26 must be put on the plans.

ii. For sites having soil tests performed, the rates shown on this table shall be deleted and the rates recommended by the testing agency shall be written in. Soil tests are not required for Temporary Seeding.

Temporary Seeding Summary

Seed Mixture (Hardiness Zone 6b) From Table 26					Fertilizer Rate (10-10-10)	Lime Rate
No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths		
1	Annual Ryegrass	50lbs/ac	2/1 - 4/30	1/4"-1/2"	600 lb/ac (15 lb/1000 sf)	2 tons/ac (100 lb/1000 sf)

Section III: Permanent Seeding

Seeding grass and legumes to establish ground cover for a minimum period of one year on disturbed areas generally receiving low maintenance.

A. Seed Mixtures - Permanent Seeding

i. Select one or more of the species or mixtures listed in Table 25 for the appropriate Plant Hardiness Zone (from Figure 5) and enter them in the Permanent Seeding Summary below, along with application rates and seeding dates. Seeding depths can be estimated using Table 26. If this Summary is not put on the construction plans and completed, then Table 25 must be put on the plans. Additional planting specifications for exceptional sites such as shorelines, streambanks, or dunes or for special purposes such as wildlife or aesthetic treatment may be found in USDA-SCS Technical Field Office Guide, Section 342 - Critical Area Planting. For special lawn maintenance areas, see Sections IV Sod and V Turfgrass.

ii. For sites having disturbed area over 5 acres, the rates shown on this table shall be deleted and the rates recommended by the soil testing agency shall be written in.

iii. For areas receiving low maintenance, apply ureaform fertilizer (46-0-0) at 3 1/2 lbs/1000 sq.ft. (150 lbs/ac), in addition to the above soil amendments shown in the table below, to be performed at the time of seeding.

Permanent Seeding Summary

Seed Mixture (For Hardiness Zone 6b) (From Table 25)					Fertilizer Rate (10-20-20)			Lime Rate
No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths	N	P205	K20	
10	Tall Fescue (80%) Hard fescue (20%)	- 120lbs/ac - 30lbs/ac.	3/1 - 5/15	1/4" - 1/2"	90 lb/ac (2.0 lb/1000 sf)	175 lb/ac (4 lb/1000 sf)	175 lb/ac (4 lb/1000 sf)	2 tons/ac (100 lb/1000 sf)

Section IV - Sod: To provide quick cover on disturbed areas (2:1 grade or flatter).

A. General specifications

i. Class of turfgrass sod shall be Maryland or Virginia State Certified or Approved. Sod labels shall be made available to the job foreman and inspector.

ii. Sod shall be machine cut at a uniform soil thickness of 3/4", plus or minus 1/4", at the time of cutting. Measurement for thickness shall exclude top growth and thatch. Individual pieces of sod shall be cut to the suppliers width and length. Maximum allowable deviation from standard widths and lengths shall be 5 percent. Broken pads and torn or uneven ends will not be acceptable.

iii. Standard size sections of sod shall be strong enough to support their own weight and retain their size and shape when suspended vertically with a firm grasp on the upper 10 percent of the section.

iv. Sod shall not be harvested or transplanted when moisture content (excessively dry or wet) may adversely affect its survival.

v. Sod shall be harvested, delivered, and installed within a period of 36 hours. Sod not transplanted within this period shall be approved by an agronomist or soil scientist prior to its installation.

B. Sod Installation

i. During periods of excessively high temperature or in areas having dry subsoil, the subsoil shall be lightly irrigated immediately prior to laying the sod.

ii. The first row of sod shall be laid in a straight line with subsequent rows placed parallel to and tightly wedged against each other. Lateral joints shall be staggered to promote more uniform growth and strength. Ensure that sod is not stretched or overlapped and that all joints are butted tight in order to prevent voids which would cause air drying of the roots.

iii. Wherever possible, sod shall be laid with the long edges parallel to the contour and with staggering joints. Sod shall be rolled and tamped, pegged or otherwise secured to prevent slippage on slopes and to ensure solid contact between sod roots and the underlying soil surface.

iv. Sod shall be watered immediately following rolling or tamping until the underside of the new sod pad and soil surface below the sod are thoroughly wet. The operations of laying, tamping and irrigating for any piece of sod shall be completed within eight hours.

C. Sod Maintenance

i. In the absence of adequate rainfall, watering shall be performed daily or as often as necessary during the first week and in sufficient quantities to maintain moist soil to a depth of 4". Watering should be done during the heat of the day to prevent wilting.

ii. After the first week, sod watering is required as necessary to maintain adequate moisture content.

iii. The first mowing of sod should not be attempted until the sod is firmly rooted. No more than 1/3 of the grass leaf shall be removed by the initial cutting or subsequent cuttings. Grass height shall be maintained between 2" and 3" unless otherwise specified.

Section IV - Turfgrass Establishment

Areas where turfgrass may be desired include lawns, parks, playgrounds, and commercial sites which will receive a medium to high level of maintenance. Areas to receive seed shall be tilled by disking or other approved methods to a depth of 2 to 4 inches, leveled and raked to prepare a proper seedbed. Stones and debris over 1 1/2 inches in diameter shall be removed. The resulting seedbed shall be in such condition that future mowing of grasses will pose no difficulty.

Note: Choose certified material. Certified material is the best guarantee of cultivar purity. The certification program of the Maryland Department of Agriculture, Turf and Seed Section, provides a reliable means of consumer protection and assures a pure genetic line.

A. Turfgrass Mixtures

i. Kentucky Bluegrass - Full sun mixture - For use in areas that receive intensive management. Irrigation required in the areas of central Maryland and eastern shore. Recommended Certified Kentucky Bluegrass Cultivars Seeding Rate: 1.5 to 2.0 pounds/1000 square feet. A minimum of three bluegrass cultivars should be chosen ranging from a minimum of 10% to a maximum of 35% of the mixture by weight.

ii. Kentucky Bluegrass/Perennial Rye - Full sun mixture - For use in full sun areas where rapid establishment is necessary and when turf will receive medium to intensive management. Certified Perennial Ryegrass Cultivars/Certified Kentucky Bluegrass Seeding rate: 2 pounds mixture/1000 square feet. A minimum of 3 Kentucky Bluegrass Cultivars must be chosen, with each cultivar ranging from 10% to 35% of the mixture by weight.

iii. Tall Fescue/Kentucky Bluegrass - Full sun mixture - For use in drought prone areas and/or for areas receiving low to medium management in full sun to medium shade. Recommended mixture includes; certified Tall Fescue Cultivars 95 - 100%, certified Kentucky Bluegrass Cultivars 0 - 5%. Seeding rate: 5 to 8 lb/1000 sf. One or more cultivars may be blended.

iv. Kentucky Bluegrass/Fine Fescue - Shade Mixture - For use in areas with shade in Bluegrass lawns. For establishment in high quality, intensively managed turf area. Mixture includes; certified Kentucky Bluegrass Cultivars 30-40% and certified Fine Fescue and 60-70%. Seeding rate: 1 1/2 - 3 lbs/1000 square feet. A minimum of 3 Kentucky bluegrass cultivars must be chosen, with each cultivar ranging from a minimum of 10% to a maximum of 35% of the mixture by weight.

Note: Turfgrass varieties should be selected from those listed in the most current University of Maryland Publication, Agronomy Mimeo #77, "Turfgrass Cultivar Recommendations for Maryland".

B. Ideal times of seeding

Western MD: March 15 - June 1, August 1 - October 1 (Hardiness Zones - 5b, 6a)

Central MD: March 1 - May 15, August 15 - October 15 (Hardiness Zone - 6b)

Southern MD, Eastern Shore: March 1 - May 15, August 15 - October 15 (Hardiness Zones - 7a, 7b)

C. Irrigation

If soil moisture is deficient, supply new seedings with adequate water for plant growth (1/2" - 1" every 3 to 4 days depending on soil texture) until they are firmly established. This is especially true when seedings are made late in the planting season, in abnormally dry or hot seasons, or on adverse sites.

D. Repairs and Maintenance

Inspect all seeded areas for failures and make necessary repairs, replacements, and reseedings within the planting season.

i. Once the vegetation is established, the site shall have 95% groundcover to be considered adequately stabilized.

ii. If the stand provides less than 40% ground coverage, reestablish following original lime, fertilizer, seedbed preparation and seeding recommendations.

iii. If the stand provides between 40% and 94% ground coverage, overseeding and fertilizing using half of the rates originally applied may be necessary.

iv. Maintenance fertilizer rates for permanent seedings are shown in Table 24. For lawns and other medium to high maintenance turfgrass areas, refer to the University of Maryland publication "Lawn Care in Maryland" Bulletin No. 171.

21.0 STANDARD AND SPECIFICATIONS

FOR

TOPSOIL

Definition

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

Purpose

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

Conditions Where Practice Applies

I. This practice is limited to areas having 2:1 or flatter slopes where:

a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.

b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.

c. The original soil to be vegetated contains material toxic to plant growth.

d. The soil is so acidic that treatment with limestone is not feasible.

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

Construction and Material Specifications

I. Topsoil salvaged from the existing site may be used provided that it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-SCS in cooperation with Maryland Agricultural Experimental Station.

II. Topsoil Specifications - Soil to be used as topsoil must meet the following:

i. Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting textured subsoils and shall contain less than 5% by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1½" in diameter.

ii. Topsoil must be free of plants or plant parts such as bermuda grass, quackgrass, Johnsongrass, nutsedge, poison ivy, thistle, or others as specified.

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

II. For sites having disturbed areas under 5 acres:

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

III. For sites having disturbed areas over 5 acres:

i. On soil meeting Topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following:

a. pH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be perscribed to raise the pH to 6.5 or higher.

b. Organic content of topsoil shall be not less than 1.5 percent by weight.

c. Topsoil having soluble salt content greater than 500 parts per million shall not be used.

d. No sod or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phyto-toxic materials.

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

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

V. Topsoil Application

i. When topsoiling, maintain needed erosion and sediment control practices such as diversions, Grade Stabilization Structures, Earth Dikes, Slope Silt Fence and Sediment Traps and Basins.

ii. Grades on the areas to be topsoiled, which have been previously established, shall be maintained, albeit 4" - 8" higher in elevation.

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

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

VI. Alternative for Permanent Seeding - Instead of applying the full amounts of lime and commercial fertilizer, composted sludge and amendments may be applied as specified below:

i. Composted Sludge Material for use as a soil conditioner for sites having disturbed areas over 5 acres shall be tested to prescribe amendments and for sites having disturbed areas under 5 acres shall conform to the following requirements:

a. Composted sludge shall be supplied by, or originate from, a person or persons that are permitted (at the time of acquisition of the compost) by the Maryland Department of the Environment under COMAR 26.04.06.

b. Composted sludge shall contain at least 1 percent nitrogen, 1.5 percent phosphorus, and 0.2 percent potassium and have a Ph of 7.0 to 8.0. If compost does not meet these requirements, the appropriate constituents must be added to meet the requirements prior to use.

c. Composted sludge shall be applied at a rate of 1 ton/1,000 square feet.

iv. Composted sludge shall be amended with a potassium fertilizer applied at the rate of 4 lb/1,000 square feet, and 1/3 the normal lime application rate.

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

19.0 STANDARDS AND SPECIFICATIONS

FOR

LAND GRADING

Definition

Reshaping of the existing land surface in accordance with a plan as determined by engineering survey and layout.

Purpose

The purpose of a land grading specification is to provide for erosion control and vegetative establishment on those areas where the existing land surface is to be reshaped by grading according to plan.

Design Criteria

The grading plan should be based upon the incorporation of building designs and street layouts that fit and utilize existing topography and desirable natural surroundings to avoid extreme grade modifications. Information submitted must provide sufficient topographic surveys and soil investigations to determine limitations that must be imposed on the grading operation related to slope stability, effect on adjacent properties and drainage patterns, measures for drainage and water removal and vegetative treatment, etc.

Many counties have regulations and design procedures already established for land grading and cut and fill slopes. Where these requirements exist, they shall be followed. The plan must show existing and proposed contours of the area(s) to be graded. The plan shall also include practices for erosion control, slope stabilization, safe disposal of runoff water and drainage, such as waterways, lined ditches, reverse slope benches (include grade and cross section), grade stabilization structures, retaining walls, and surface and subsurface drains. The plan shall also include phasing of these practices. The following shall be incorporated into the plan:

1. Provisions shall be made to safely conduct surface runoff to storm drains, protected outlets or to stable water courses to insure that surface runoff will not damage slopes or other graded areas.

2. Cut and fill slopes that are to be stabilized with grasses shall not be steeper than 2:1. (Where the slope is to be mowed the slope should be no steeper than 3:1; 4:1 is preferred because of safety factors related to mowing steep slopes.) Slopes exceeding 2:1 shall require special design and stabilization considerations that shall be adequately shown on the plans.

3. Reverse benches shall be provided whenever the vertical interval (height) of any 2:1 slope exceeds 20 feet; for 3:1 slope it shall be increased to 30 feet and for 4:1 to 40 feet. Benches shall be located to divide the slope face as equally as possible and shall convey the water to a stable outlet. Soils, seeps, rock outcrops, etc., shall also be taken into consideration when designing benches.

a. Benches shall be a minimum of six-feet wide to provide for ease of maintenance.

b. Benches shall be designed with a reverse slope of 6:1 or flatter to the toe of the upper slope and with a minimum of one foot in depth. Bench gradient to the outlet shall be between 2 percent and 3 percent, unless accompanied by appropriate design and computations.

c. The flow length within a bench shall not exceed 800' unless accompanied by appropriate design and computations. For flow channel stabilization see temporary swale.

4. Surface water shall be diverted from the face of all cut and/or fill slopes by the use of earth dikes, ditches and swales or conveyed downslope by the use of a designed structure, except where:

a. The face of the slope is or shall be stabilized and the face of all graded slopes shall be protected from surface runoff until they are stabilized.

b. The face of the slope shall not be subject to any concentrated flows of surface water such as from natural drainageways, graded swales, downspouts, etc.

c. The face of the slope will be protected by special erosion control materials, to include, but not limited to: approved vegetative stabilization practices (see section G), rip-rap or other approved stabilization methods.

5. Cut slopes occurring in ripable rock shall be serrated as shown on the following diagram. These serrations shall be made with conventional equipment as the excavation is made. Each step or serration shall be constructed on the contour and will have steps cut at nominal two-foot intervals with nominal three-foot horizontal shelves. These steps will vary depending on the slope ratio or the cut slope. The nominal slope line is 1:1. These steps will weather and act to hold moisture, lime, fertilizer and seed thus producing a much quicker and longer lived vegetative cover and better slope stabilization. Overland flow shall be diverted from the top of all serrated cut slopes and carried to a suitable outlet.

6. Subsurface drainage shall be provided where necessary to intercept seepage that would otherwise adversely affect slope stability or create excessively wet site conditions.

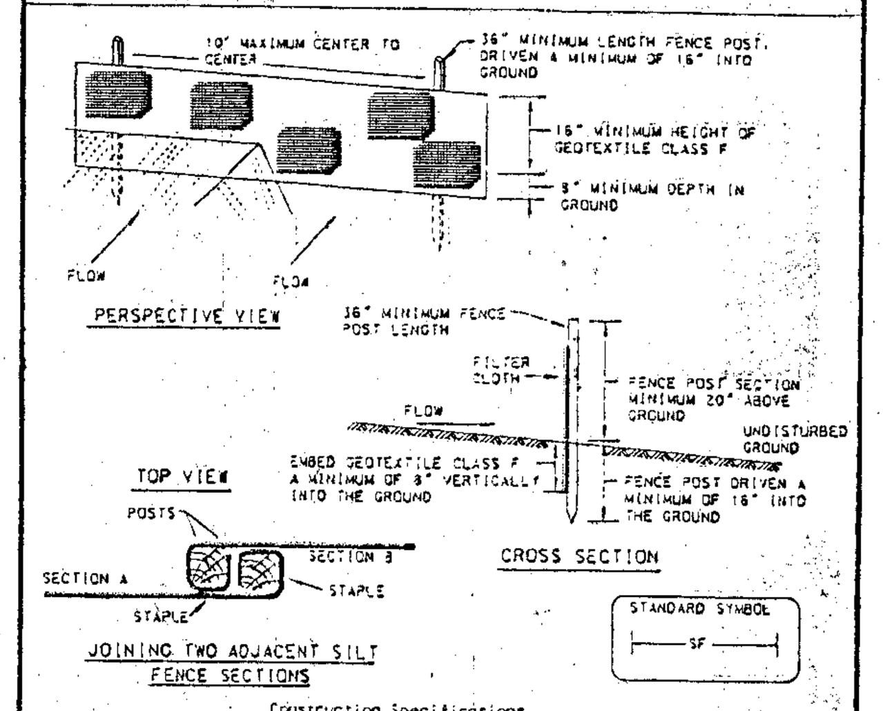
7. Slopes shall not be created so close to property lines as to endanger adjoining properties without adequately protecting such properties against sedimentation, erosion, slippage, settlement, subsidence or other related damages.

8. Fill material shall be free of brush, rubbish, rocks, logs, stumps, building debris, and other objectionable material. It should be free of stones over two (2) inches in diameter where compacted by hand or mechanical tampers or over eight (8) inches in diameter where compacted by rollers or other equipment. Frozen material shall not be placed in the fill nor shall the fill material be placed on a frozen foundation.

9. Stockpiles, borrow areas and spoil shall be shown on the plans andl shall be subject to the provisions of this Standard and Specifications.

10. All disturbed areas shall be stabilized structurally or vegetatively in compliance with 20.0 Standards and Specifications for Vegetative Stabilization.

DETAIL 22 - SILT FENCE



Construction Specifications

1. Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 1½" x 1½" square (minimum) cut, or 1¾" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard T or U section weighting not less than 1.00 pond per linear foot.

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

Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal ft²/ minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322

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

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

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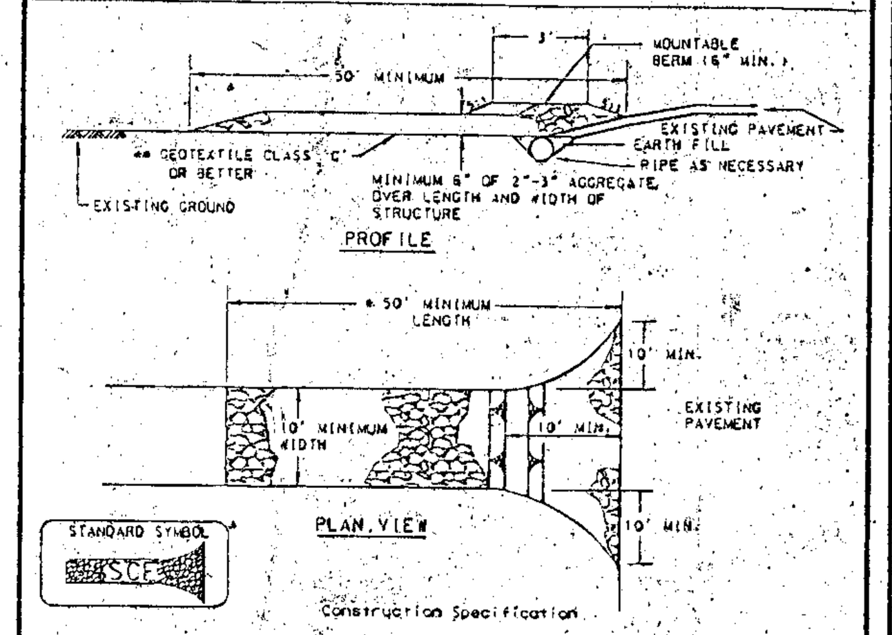
DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE



Construction Specification

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

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

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

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

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

6. Location - A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE F - 17 - 3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

GENERAL NOTES

a. The developer is responsible for the acquisition of all required easement, right and/or rights-of-way pursuant to the discharge from the sediment and erosion control practices, stormwater management practices and the discharge of stormwater onto or across and grading or other work to be performed on adjacent or downstream properties affected by this plan.

b. Following initial soil disturbance or redisturbance, permanent or temporary stabilization shall be completed within: a) seven calendar days as to the surface of all perimeter controls, dikes, swales, ditches, perimeter slopes, and all slopes greater than three horizontal to one vertical (3:1) and b) fourteen days for all other disturbed or graded areas on the project site. The in-place sediment control measures will be maintained on a continuing basis until the site is permanently stabilized and all permit requirements are met.

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

d. Approval shall be requested upon final stabilization of all sites with disturbed areas in excess of two acres before removal of controls.

e. Disturbed surface area 0.75±ac.
Volume of spoil material 2,318cy.
Volume of borrow material 0.

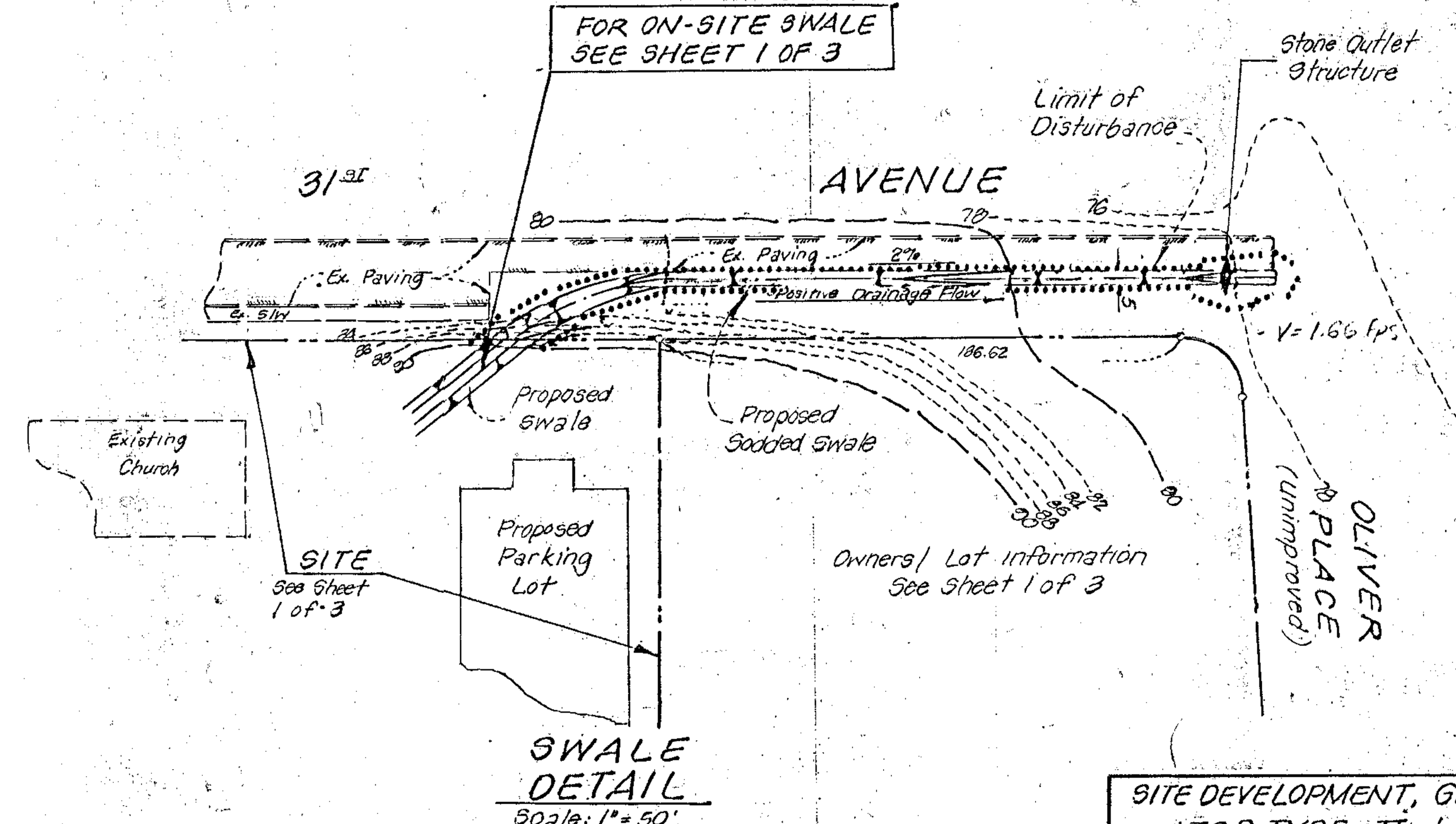
f. List predominant soil types and general description per PGSCD soil survey: SwC - Sunnyside - urban land complex 5 to 15% Slopes

G. Offsite borrow or spoil areas must have an approved and active sediment control plan.

STANDARD SYMBOLS

Symbol name	Symbol
EARTH DIKE	A-2 / B-3
SWALE	A-2 / B-3
PERIMETER DIKE/SWALE	PD/S-1
PIPE SLOPE DRAIN	PSD-12
ROCK OUTLET PROTECTION	
STONE CHECK DAM	CD
STONE OUTLET STRUCTURE	TSOS
SILT FENCE	SF — SF
SUPER SILT FENCE	SSF — SSF
STRAW BALE DIKE	SBD
STANDARD INLET PROTECTION	SIP
AT GRADE INLET PROTECTION	AGIP
CURB INLET PROTECTION	CIP
STANDARD INLET PROTECTION	MIP
GABION INFLOW PROTECTION	GM
RIP-RAP INFLOW PROTECTION	RRP
SUMP PIT	SP
STABILIZED CONSTRUCTION ENTRANCE	SCE
REMOVABLE PUMPING STATION	RPS

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



SWALE DETAIL
Scale: 1" = 50'

CSD# 978003430
PROJECT NAME QUEENS CHAPEL MANOR
PRINCE GEORGE'S COUNTY MD
DEPARTMENT OF ENVIRONMENTAL RESOURCES
Permits and Review Division
APPROVED for Stormwater Management and Storm Drain Only
T. Singh 3/20/97
Date

APPROVED PLAN
DSP-97001-02

SITE DEVELOPMENT, GRADING, SEDIMENT CONTROL
TCP TYPE - II & LANDSCAPE PLAN

QUEENS CHAPEL MANOR

Hyattsville (16th) Election District
Prince George's County, Maryland

SURVEYS INC.
SURVEYING & ENGINEERING & LAND PLANNING
PERMIT SERVICES
16031 Jerald Road
Laurel, Maryland 20707 301-776-0561

As Shown	Date 10/96
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