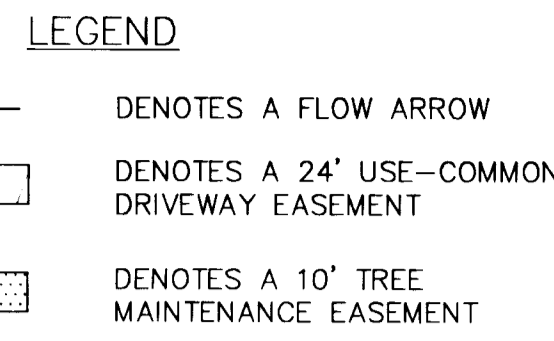
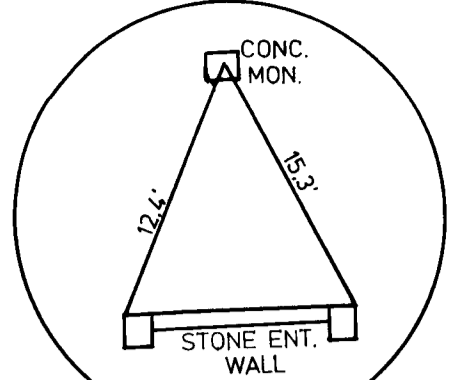
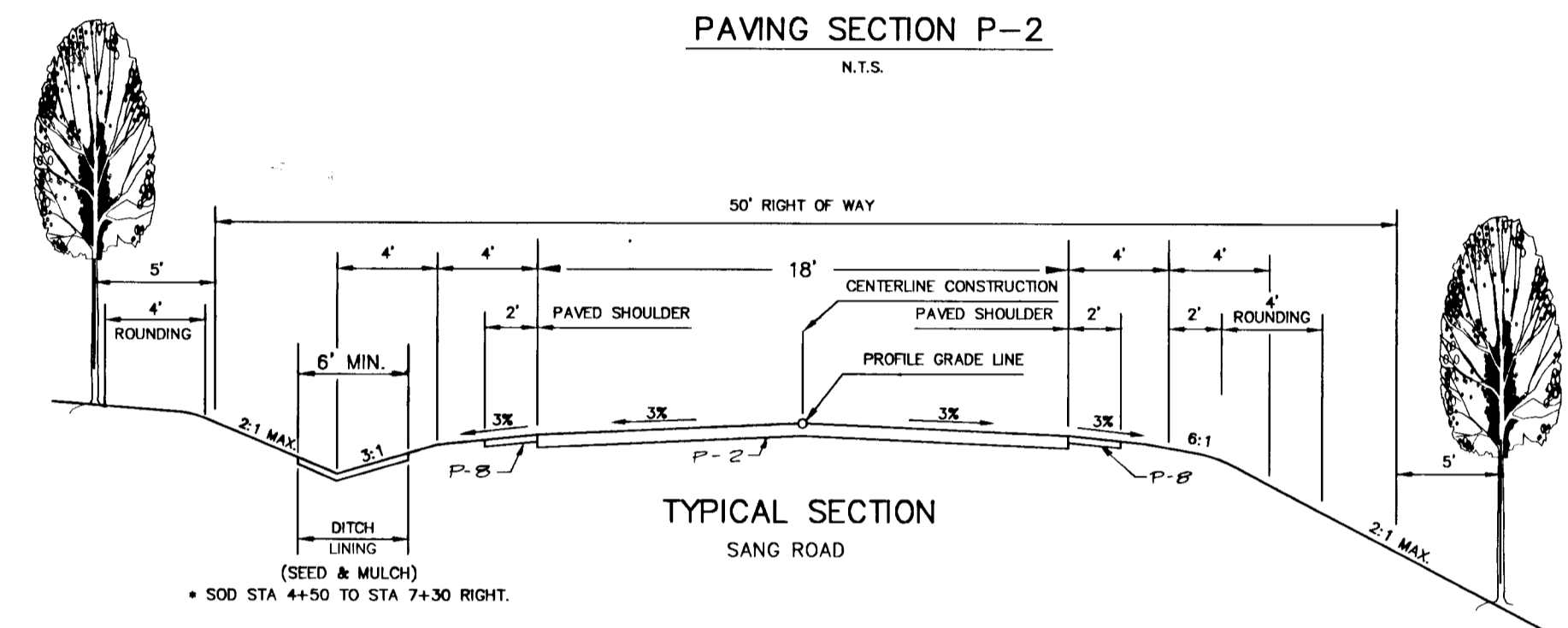
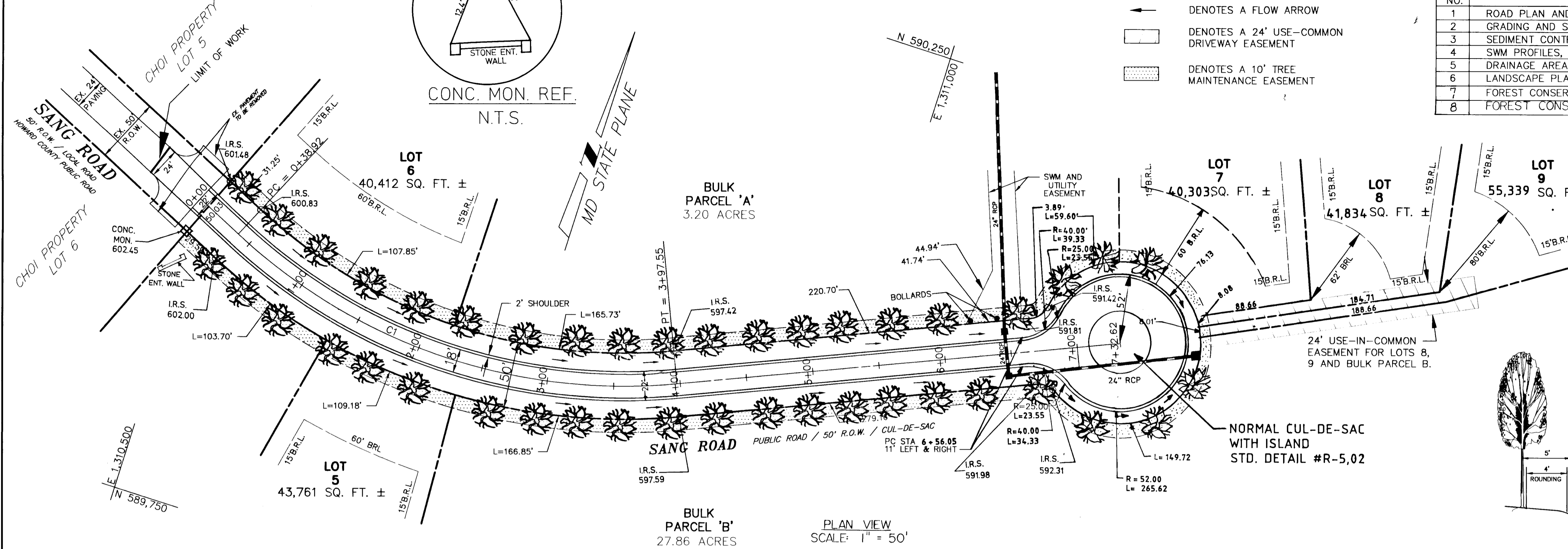
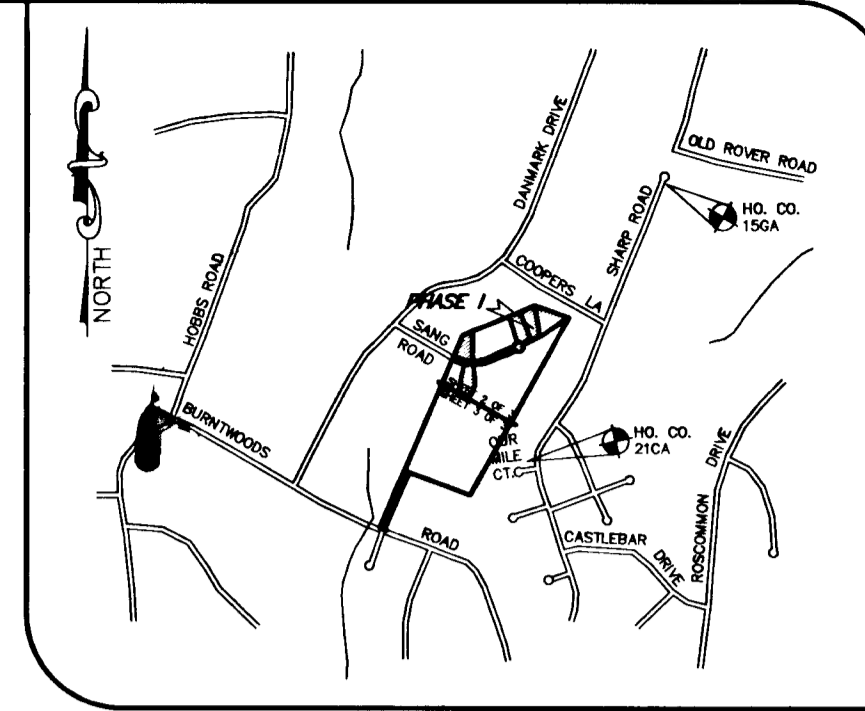


CURVE NO.	RADIUS	LENGTH	DELTA	TANGENT	CHORD	CHORD BEARING
C1	425.00'	358.64'	48°20'57"	190.77'	348.09'	S88°57'11"E



NO.	TITLE
1	ROAD PLAN AND PROFILE
2	GRADING AND SEDIMENT CONTROL PLAN
3	SEDIMENT CONTROL NOTES AND DETAILS
4	SWM PROFILES, STORM DRAIN PROFILE, AND DETAILS
5	DRAINAGE AREA MAP
6	LANDSCAPE PLAN
7	FOREST CONSERVATION PLAN
8	FOREST CONSERVATION PLAN



LOW POINT ELEV = -589.74 = 588.98
 LOW POINT STA = 1+85.71
 PVI STA = 1+91.27
 PVI ELEV = 589.18
 A.D. = 4.50
 K = 22.22

QUANTITY	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE
42	(Tree Symbol)	ACER RUBRUM 'RED SUNSET'	RED SUNSET RED MAPLE	2 1/2" - 3" CAL.
TOTAL				42 STREET TREES

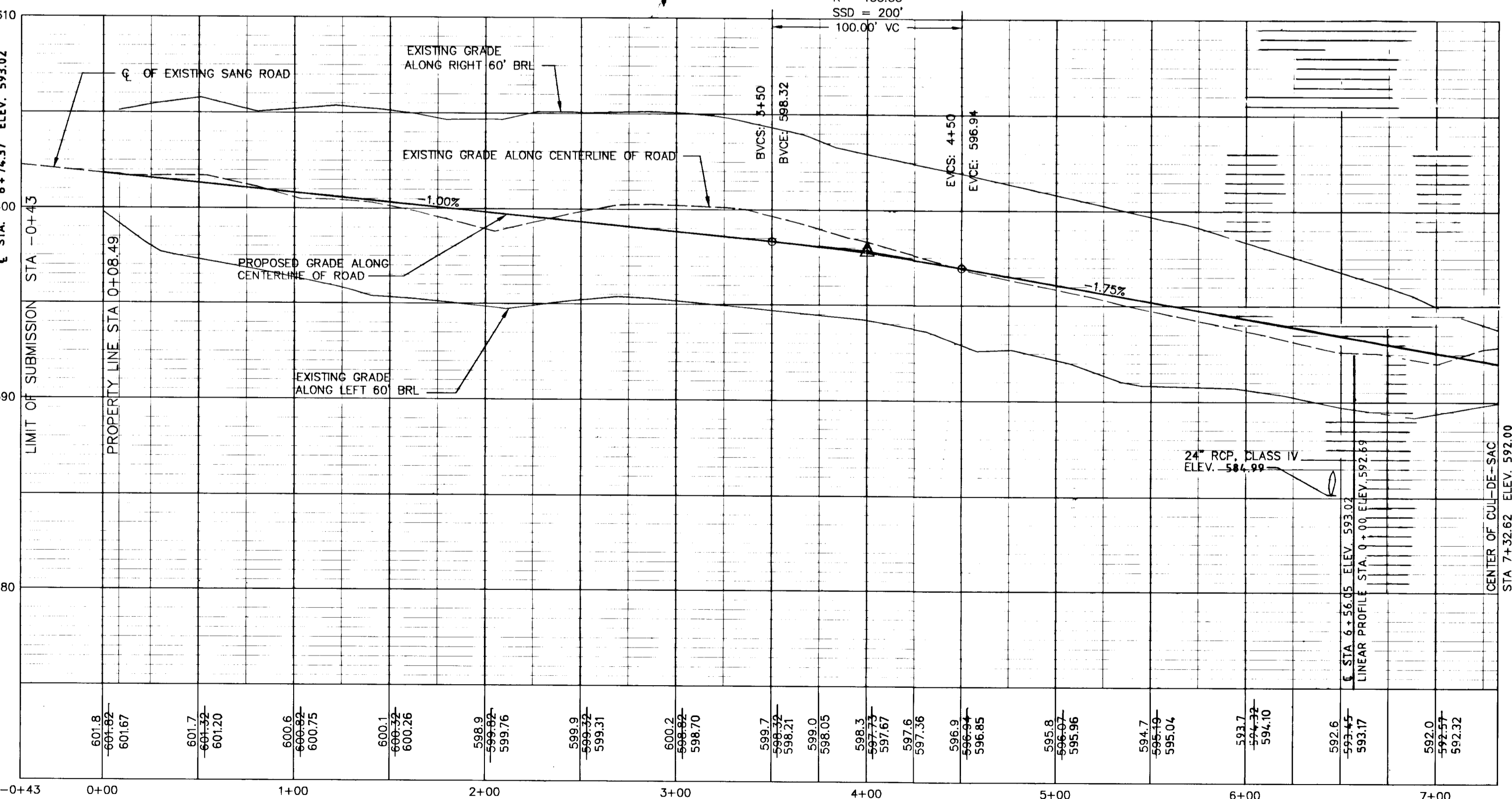
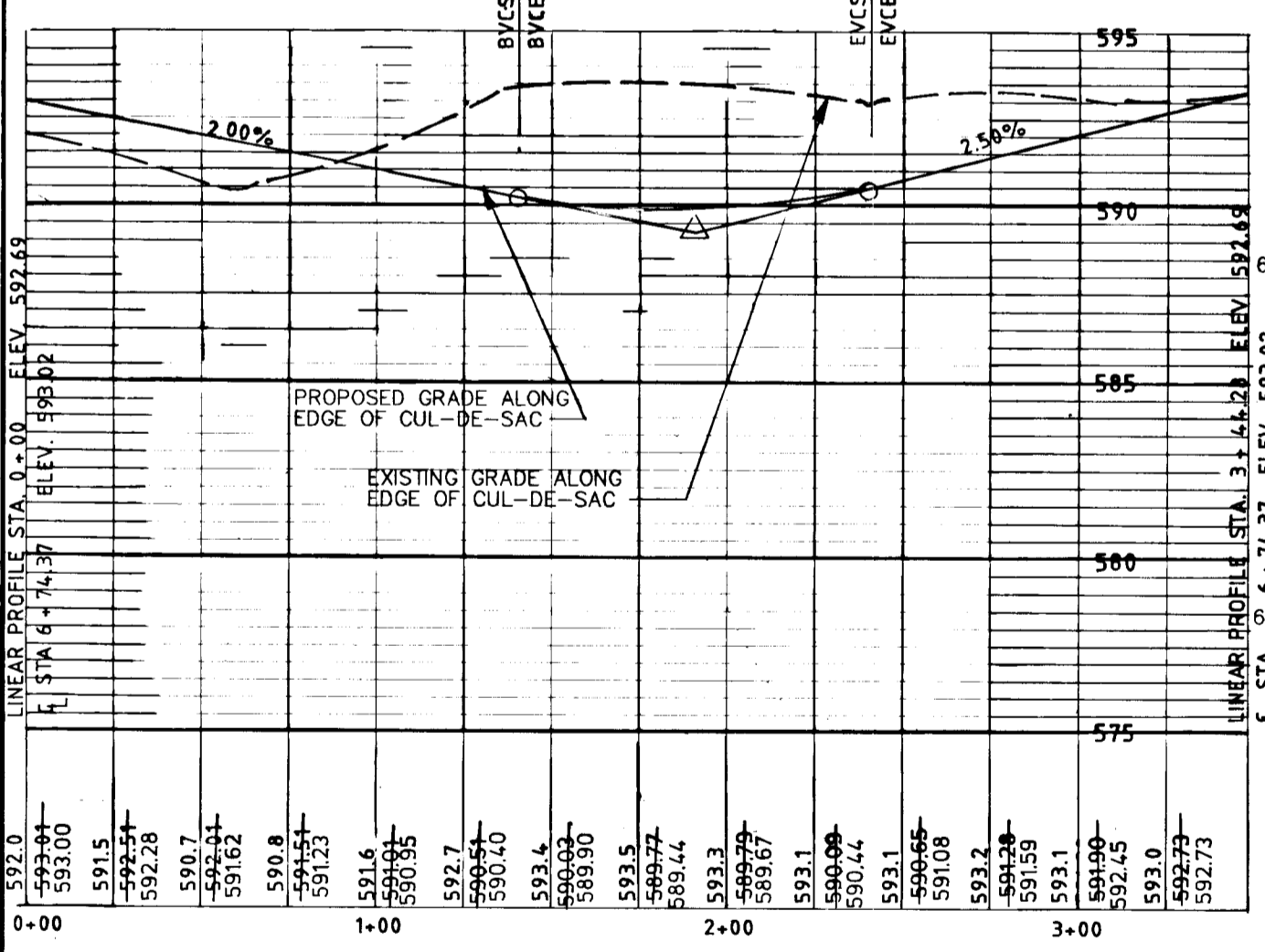
GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/CONSTRUCTION INSPECTIONS DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE (5) DAYS PRIOR TO ANY EXCAVATION WORK:

MISS UTILITY	1-800-257-7777
C&P TELEPHONE COMPANY	725-9976
HOWARD COUNTY BUREAU OF UTILITIES	313-4900
AT&T CABLE LOCATION DIVISION	393-3533
BALTIMORE GAS & ELECTRIC	685-0123
STATE HIGHWAY ADMINISTRATION	531-5533
HOWARD COUNTY DEPT. OF PUBLIC WORKS/CONSTRUCTION INSPECTION DIVISION	313-1880
- PROJECT BACKGROUND:

LOCATION: FOURTH ELECTION DISTRICT, TAX MAP 14, PARCEL 92
 ZONING: RR-DEO
 TOTAL TRACT AREA: 37.12 ACRES
 NUMBER OF PROPOSED LOTS: 5 BUILDABLE LOTS & 2 BULK PARCELS
 DATE PREVIOUS PLANS APPROVED AND DPZ REFERENCE #:
 - S-95-11, MARCH 15, 1995
 - P-96-02, AUGUST 15, 1995
- TWO FOOT CONTOUR TOPOGRAPHY AND EXISTING CONDITIONS BASED ON A FIELD SURVEY BY MILDENBERG, BOENDER & ASSOCIATES, INC. IN NOVEMBER 1995.
- HORIZONTAL AND VERTICAL DATUMS BASED ON MARYLAND STATE COORDINATE SYSTEM (NAD 83).

STA No. 15GA	N 591,743.4707
STA No. 21CA	E 1,312,790.6982
	N 588,997.3439
	E 1,311,235.7007
- WATER AND SEWER ARE PRIVATE.
- STORMWATER MANAGEMENT CONTROL WILL BE PROVIDED BY THE METHOD OF INFILTRATION. STORMWATER MANAGEMENT POND IS PUBLIC.
- GEOTECHNICAL REPORT PREPARED BY HILLIS-CARNES ENGINEERING ASSOCIATES INC. ON JUNE 13, 1995.
- NO FLOODPLAINS EXIST ON SITE.
- COMPACTION IN FILL AREAS TO BE 95% DETERMINED PER AASHTO T-180.
- THE FOREST CONSERVATION EASEMENTS HAVE BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.200 OF THE HOWARD COUNTY FOREST CONSERVATION ACT. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT, EXCEPT AS SHOWN ON AN APPROVED ROAD CONSTRUCTION DRAWING OR SITE DEVELOPMENT PLAN. HOWEVER, FOREST MANAGEMENT PRACTICES, AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT, ARE ALLOWED.
- ALL DRIVEWAYS SHALL BE IN ACCORDANCE WITH STANDARD DETAIL R6.06, UNLESS OTHERWISE NOTED.
- INFILTRATION BASIN MAINTENANCE REQUIREMENTS
 - REMOVAL OF SILT SHALL OCCUR WHEN THE ACCUMULATION EXCEEDS FOUR (4) INCHES IN THE FOREBAY.
 - REMOVAL OF ACCUMULATED PAPER, TRASH AND DEBRIS AS NECESSARY.
 - CORRECTIVE MAINTENANCE IS REQUIRED ANY TIME THE FOREBAY DOES NOT DRAIN DOWN COMPLETELY WITHIN 96 HOURS (IF NO STANDING WATER ALLOWED).
 - ANNUAL INSPECTION AND REPAIR OF THE STRUCTURE SHALL BE CONDUCTED BY THE COUNTY.



AS BUILT CERTIFICATION

ENGINEER'S SIGNATURE: *Andrew J. Boender* DATE: 3-5-96
 CHIEF BUREAU OF HIGHWAYS

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Quinn Stumm DATE: 3/8/96
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH

APPROVED: DEPARTMENT OF PUBLIC WORKS
Andrew J. Boender DATE: 3/7/96
 CHIEF, DEVELOPMENT ENGINEERING DIVISION



OWNER
 R. WAYNE NEWSOME
 P.O. BOX 39
 COLUMBIA, MD 21045
 Phone: (410) 792-2100

PROJECT: 94029
 DATE: NOV 1995
 ILLUSTRATION: SJD
 SCALE: AS SHOWN
 APPROVAL: RJH

ADD ISLAND TO CUL-DE-SAC AND CENTERLINE PROFILE & LINEAR PROFILE REVISIONS
 1
 DATE: 5/30/96

HOLLY HILLS, SECTION I
 A RESUBDIVISION OF LOT 4, HOLLY HILLS ESTATES
 TAX MAP 14 - PARCEL 92
 FOURTH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 ROAD PLAN AND PROFILE

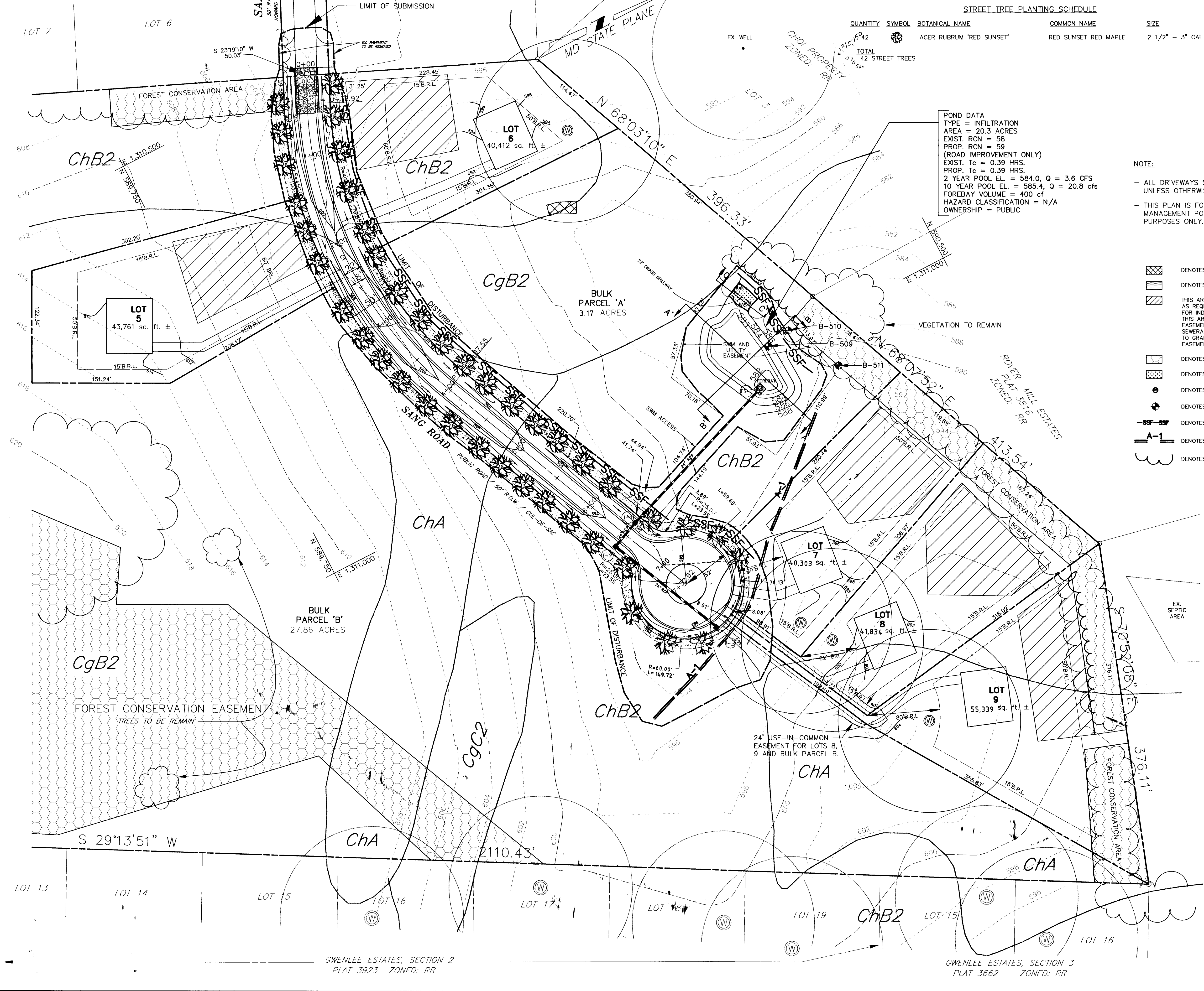
MILDENBERG, BOENDER & ASSOC., INC.
 Engineers Planners Surveyors
 5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042
 (410) 997-0286 Fax (301) 821-5321 Wash. (410) 997-0286 Fax

F-96-74

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94029-2.DWG

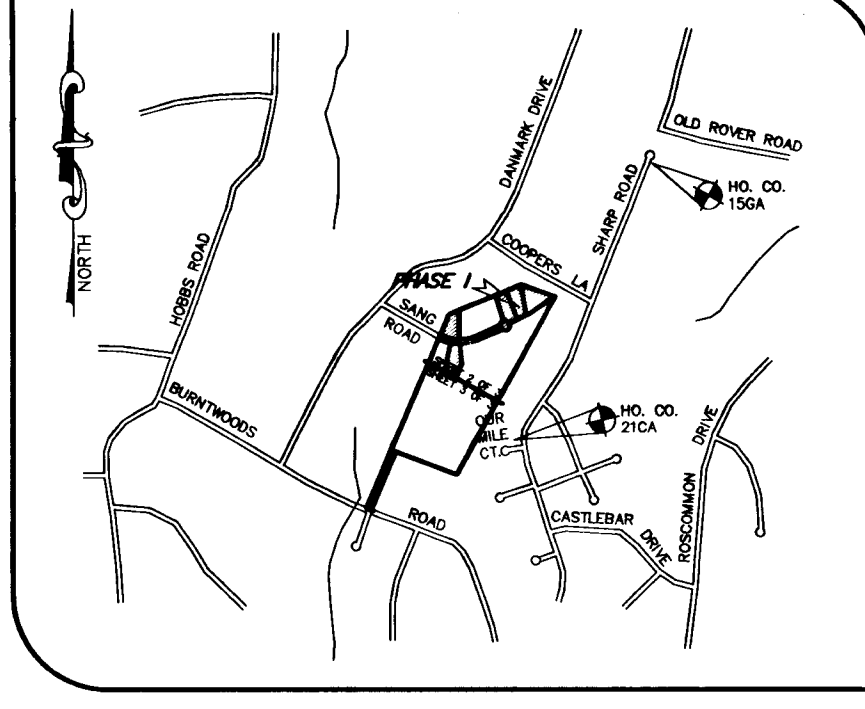
SOILS CLASSIFICATIONS
 ChA: CHESTER SILT LOAM, 0-3% SLOPES
 ChB2: CHESTER SILT LOAM, 3-8% SLOPES, MOD. ERODED
 CgB2: CHESTER GRAVELLY SILT LOAM, 3-8% SLOPES, MOD. ERODED
 CgC2: CHESTER GRAVELLY SILT LOAM, 8-15% SLOPES, MOD. ERODED
 GHA: GLENELG LOAM, 15-25% SLOPES, SEVERELY ERODED



STREET TREE PLANTING SCHEDULE

QUANTITY	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE
42	(Symbol)	ACER RUBRUM 'RED SUNSET'	RED SUNSET RED MAPLE	2 1/2" - 3" CAL.
TOTAL 42 STREET TREES				

POND DATA
 TYPE = INFILTRATION
 AREA = 20.3 ACRES
 EXIST. RCN = 58
 PROP. RCN = 59 (ROAD IMPROVEMENT ONLY)
 EXIST. Tc = 0.39 HRS.
 PROP. Tc = 0.39 HRS.
 2 YEAR POOL EL. = 584.0, Q = 3.6 CFS
 10 YEAR POOL EL. = 585.4, Q = 20.8 cfs
 FOREBAY VOLUME = 400 cf
 HAZARD CLASSIFICATION = N/A
 OWNERSHIP = PUBLIC



NOTE:
 - ALL DRIVEWAYS SHALL BE IN ACCORDANCE TO STANDARD DETAIL R6.06, UNLESS OTHERWISE NOTED.
 - THIS PLAN IS FOR THE GRADING OF THE ROAD AND STORMWATER MANAGEMENT POND. LOT GRADING IS PROVIDED FOR INFORMATIONAL PURPOSES ONLY.

- LEGEND**
- (Symbol) DENOTES 15% TO 25% SLOPES
 - (Symbol) DENOTES 10' PUBLIC TREE MAINTENANCE EASEMENT
 - (Symbol) THIS AREA DESIGNATES A PRIVATE SEWERAGE EASEMENT OF 10,000 SQUARE FEET AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWERAGE DISPOSAL. IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED UNTIL PUBLIC SEWERAGE IS AVAILABLE. THESE EASEMENTS SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SEWERAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO GRANT VARIANCES FOR ENCROACHMENTS INTO THE PRIVATE SEWERAGE EASEMENTS. RECORDATION OF A MODIFIED EASEMENT SHALL NOT BE NECESSARY.
 - (Symbol) DENOTES A FOREST CONSERVATION EASEMENT
 - (Symbol) DENOTES A SOD AREA AROUND THE STORMWATER FACILITY
 - (Symbol) DENOTES A PROPOSED WELL
 - (Symbol) DENOTES A SOIL BORING
 - (Symbol) DENOTES A SUPER SILT FENCE
 - (Symbol) DENOTES A DIVERSION SWALE
 - (Symbol) DENOTES A PROPOSED TREELINE

OWNER
 R. WAYNE NEWSOME
 P.O. BOX 39
 COLUMBIA, MD 21045
 Phone: (410) 792-2100

DEVELOPER'S CERTIFICATE
 I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE NATURAL RESOURCE CONSERVATION SERVICE.
 SIGNATURE OF DEVELOPER: *[Signature]* DATE: 2/9/96
 PRINTED NAME OF DEVELOPER: R. WAYNE NEWSOME

ENGINEER'S CERTIFICATE
 I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATURAL RESOURCE CONSERVATION SERVICE.
 SIGNATURE OF ENGINEER: *[Signature]* DATE: 1/20/96
 PRINTED NAME OF ENGINEER: R. JACOB HIKMAT

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.
 J. H. Warfield/JWR DATE: 2/23/96
 HOWARD NATURAL RESOURCE CONSERVATION SERVICE

THIS DEVELOPMENT PLAN IS APPROVED FOR THE HOWARD SOIL CONSERVATION DISTRICT.
 J. H. Robertson DATE: 2/23/96
 HOWARD SOIL CONSERVATION DISTRICT

AS BUILT CERTIFICATION
 ENGINEER'S SIGNATURE: _____ DATE: _____
 APPROVED: DEPARTMENT OF PUBLIC WORKS
 Andrew M. Daniels DATE: 2-5-96
 CHIEF BUREAU OF HIGHWAYS HS

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Jim Suriniani DATE: 3/8/96
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH JA
 Mike Damann DATE: 2/7/96
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MDC

Project:	date:	NOV 1996
94029	illustration:	SD
	scale:	1"=50'
	approval:	RJH

1	ADD ISLAND TO CUL-DE-SAC AND AB-L-3	5/20/96
	DESCRIPTION	DATE
	REVISIONS	

HOLLY HILLS, SECTION I
A RESUBDIVISION OF LOT 4, HOLLY HILLS ESTATES
 HOWARD COUNTY, MARYLAND
 TAX MAP 14 - PARCEL 92
 FOURTH ELECTION DISTRICT
GRADING AND SEDIMENT CONTROL PLAN

MILDENBERG, BOENDER & ASSOC., INC.
 Engineers Planners Surveyors
 5072 Dorsey Hall Drive Suite 202, Ellicott City, Maryland 21042
 (410) 997-0298 Balt. (301) 621-5521 Wash. (410) 997-0298 Fax

HOWARD SOIL CONSERVATION DISTRICT
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 PER ACRE DOLOMITIC LIMESTONE (92 LBS./1000 SQ.FT.) AND 600 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS./1000 SQ.FT.) BEFORE SEEDING. HARROW OR DISK INTO UPPER THREE INCHES OF SOIL AT TIME OF SEEDING. APPLY 400 LBS. PER ACRE 30-0-0 UREA-FORM FERTILIZER (9 LBS./1000 SQ.FT.)
- ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS./1000 SQ.FT.) AND 1000 LBS. PER 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 THRU APRIL 30, AND AUGUST 1 THRU OCTOBER 15, SEED WITH 60 LBS. PER ACRE 1.4 LBS./1000 SQ.FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THRU JULY 31, SEED WITH 60 LBS. KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS. PER ACRE (.05 LBS./1000 SQ.FT.) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THRU FEBRUARY 28, PROTECT SITE BY: OPTION (1) - 2 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 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS./1000 SQ.FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 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 REDISTURBED 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. PER ACRE 10-10-10 FERTILIZER (14 LBS./1000 SQ.FT.)

SEEDING: FOR PERIODS MARCH 1 THRU APRIL 30 AND FROM AUGUST 15 THRU OCTOBER 15, SEED WITH 2-1/2 BUSHEL PER ACRE OF ANNUAL RYE (3.2 LBS./1000 SQ.FT.) FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 3 LBS. PER ACRE OF WEEPING LOVEGRASS (.07 LBS./1000 SQ.FT.). FOR THE PERIOD NOVEMBER 16 THRU NOVEMBER 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOD.

MULCHING: APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS./1000 SQ.FT.) OF UNROTTED WEEED FREE SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GAL PER ACRE (5 GAL/1000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FEET OR HIGHER, USE 348 GAL PER ACRE (8 GAL/1000 SQ.FT.) FOR ANCHORING.

REFER TO THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR ADDITIONAL RATES AND METHODS NOT COVERED.

HOWARD SOIL CONSERVATION DISTRICT
STANDARD SEDIMENT CONTROL NOTES

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION, (313-1855).
- 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 REDISTURBANCE, 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 AS TO 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 1991 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING (SEC.51), SOD (SEC. 54), TEMPORARY SEEDING (SEC. 50) AND MULCHING (SEC.52). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.

6) ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

7) SITE ANALYSIS:

TOTAL AREA OF SITE:	37.12	ACRES
AREA DISTURBED:	2.6	ACRES
AREA TO BE ROOFED OR PAVED:	0.4	ACRES
AREA TO BE VEGETATIVELY STABILIZED:	2.2	ACRES
TOTAL CUT:	1,100	CU. YDS.
TOTAL FILL:	1,100	CU. YDS.
TOTAL WASTE/BORROW AREA LOCATION:	N/A	

8) ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.

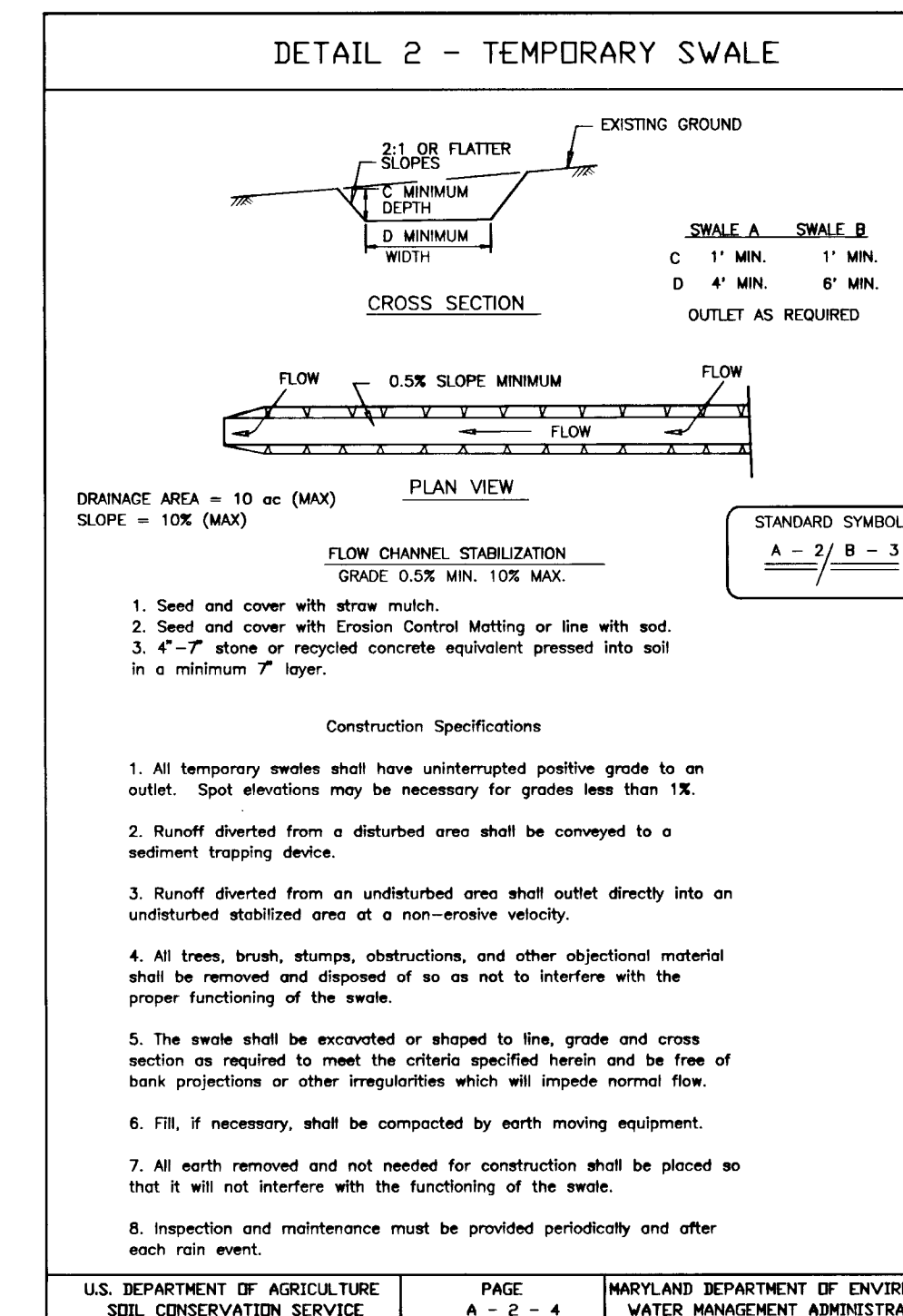
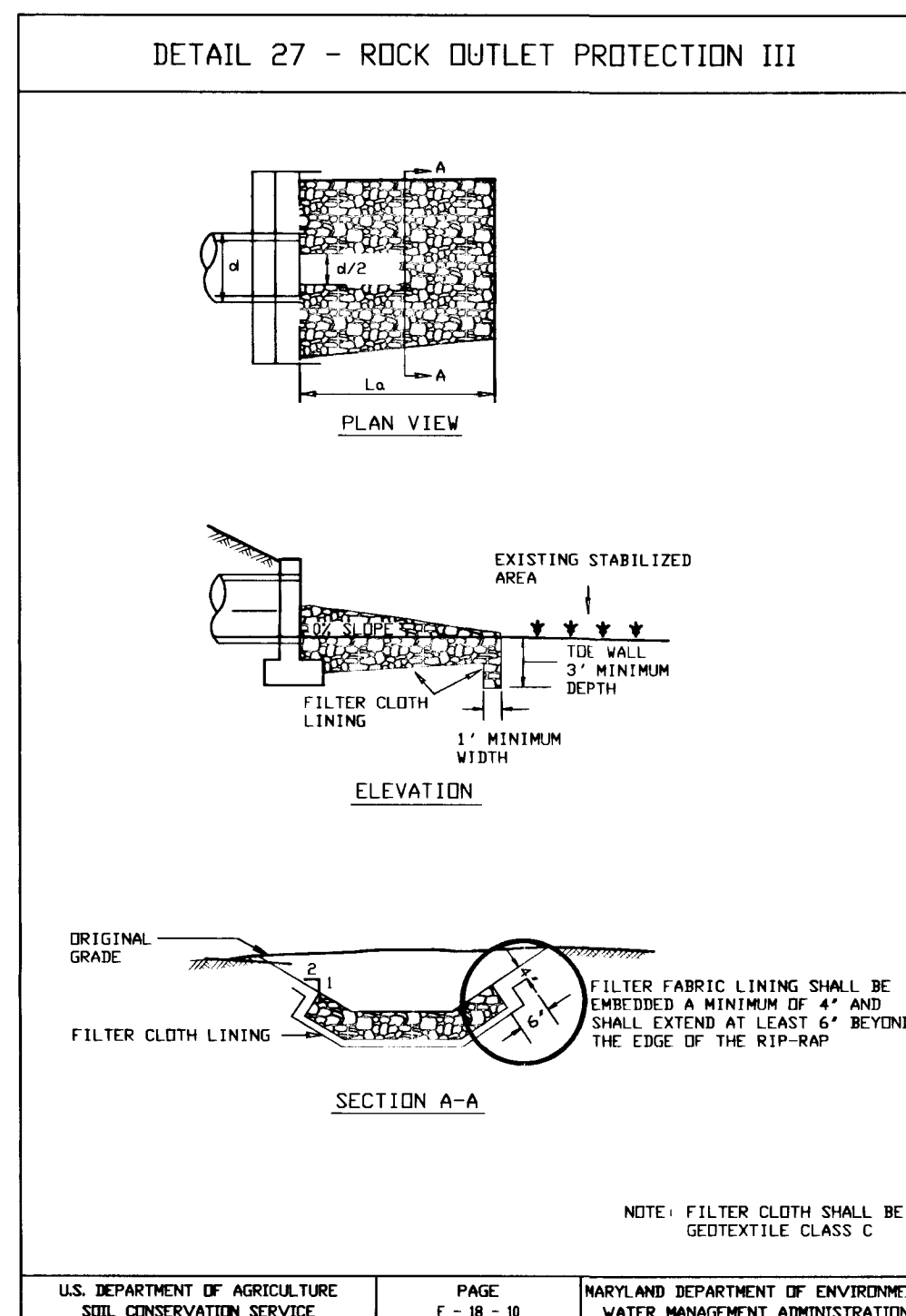
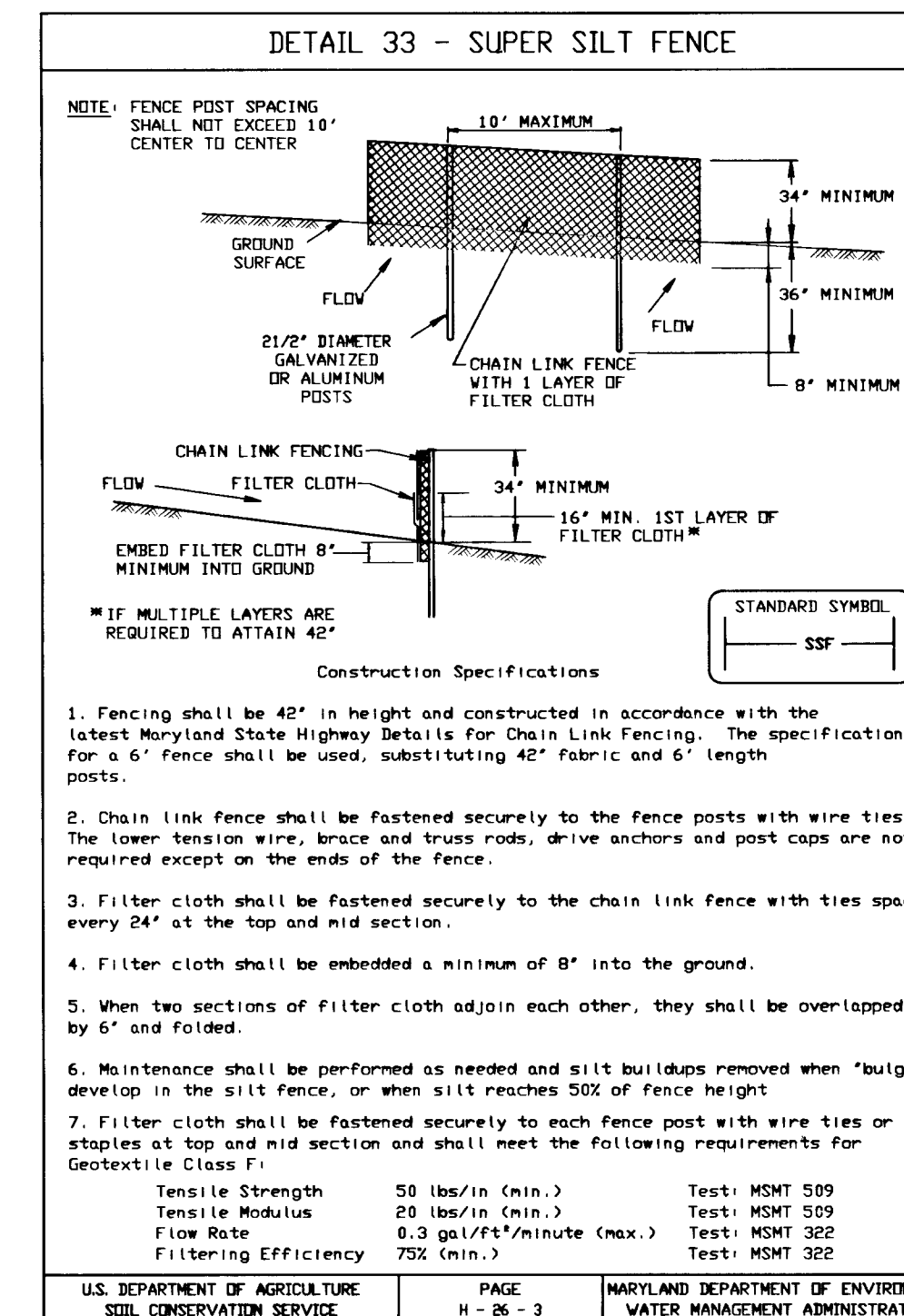
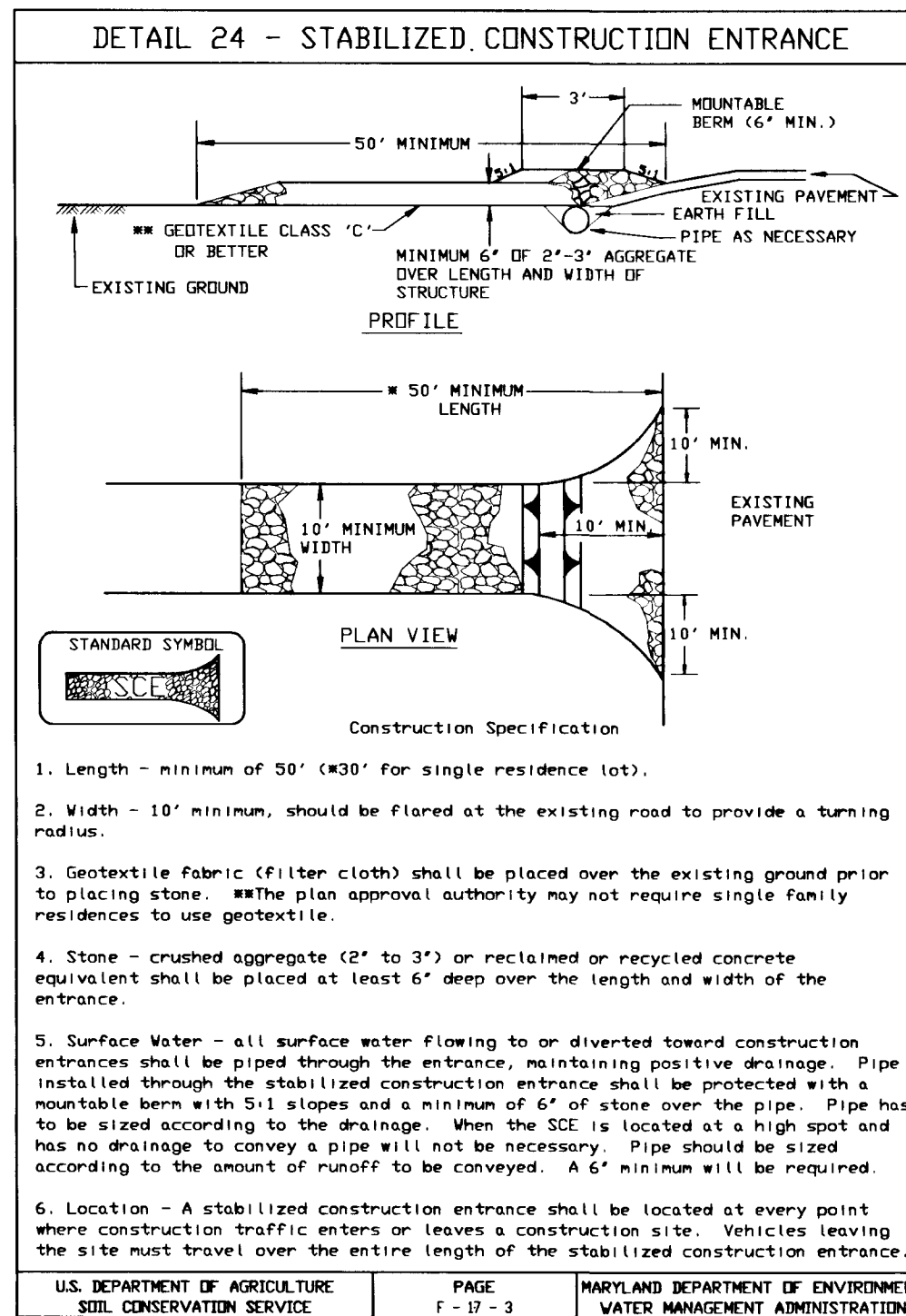
9) ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

10) 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.

11) TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN BE BACK FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

SEQUENCE OF CONSTRUCTION

- OBTAIN GRADING PERMIT.
- INSTALL STABILIZED CONSTRUCTION ENTRANCE AS SHOWN ON PLAN.
- CONSTRUCT SUPER SILT FENCE AND SEDIMENT CONTROL MEASURES AS SHOWN.
- PERFORM MASS GRADING AND CONSTRUCT THE STORM DRAIN SYSTEM. BLOCK INLETS WITH SAND BAGS.
- AFTER THE SITE IS PERMANENTLY STABILIZED. EXCAVATE THE POND AND STABILIZE. REMOVE SAND BAGS.
- WHEN ALL OF THE CONTRIBUTING AREAS TO A SEDIMENT CONTROL DEVICES HAVE BEEN PERMANENTLY STABILIZED, AND WITH THE APPROVAL OF THE SEDIMENT CONTROL INSPECTOR, REMOVE THESE DEVICES AND SEED AND MULCH THE RESULTING DISTURBED AREAS.



DEVELOPER'S CERTIFICATE

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

Signature: *R. Wayne Newsome* DATE: 2/9/96

PRINTED NAME OF DEVELOPER: R. WAYNE NEWSOME

ENGINEER'S CERTIFICATE

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATURAL RESOURCE CONSERVATION SERVICE.

Signature: *R. Jacob Hikmat* DATE: 1/20/96

PRINTED NAME OF ENGINEER: R. JACOB HIKMAT

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

Signature: *J. A. Warfield* DATE: 2/23/96

SOA - NATURAL RESOURCE CONSERVATION SERVICE

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

Signature: *John R. Robertson* DATE: 2/23/96

HOWARD SOIL CONSERVATION DISTRICT

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

Signature: _____ DATE: _____

HOWARD COUNTY HEALTH OFFICER

APPROVED: DEPARTMENT OF PUBLIC WORKS

Signature: *William M. ...* DATE: 2-5-96

CHIEF, BUREAU OF HIGHWAYS

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Signature: *Ann Stummack* DATE: 3/8/96

CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH

Signature: *John ...* DATE: 2/7/96

CHIEF, DEVELOPMENT ENGINEERING DIVISION

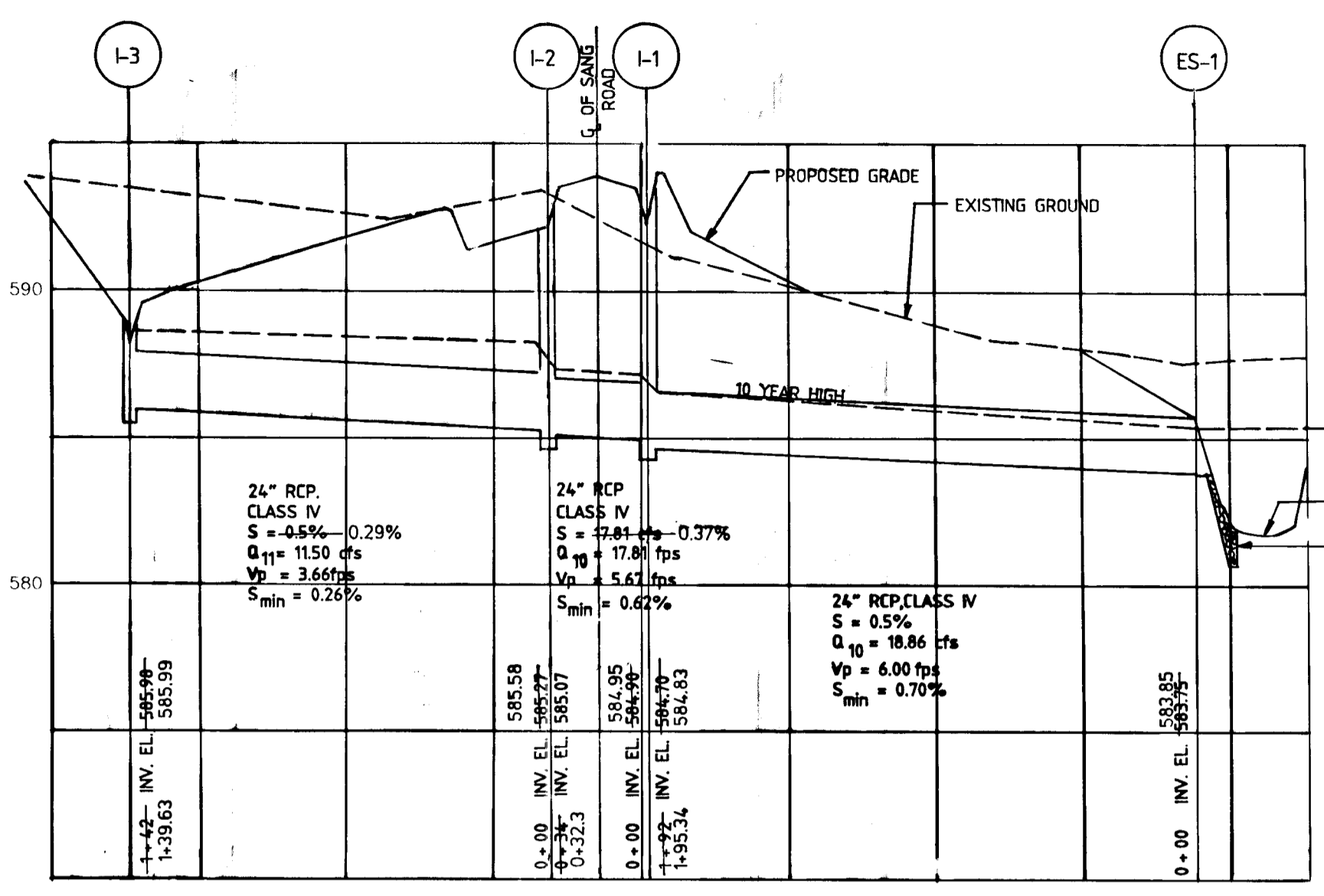
DATE	NOV 1995
PROJECT	94029
ILLUSTRATION	SED
SCORE	SED
APPROVAL	RH
DATE	
DESCRIPTION	
REVISIONS	
NO.	

HOLLY HILLS, SECTION I
A RESUBDIVISION OF LOT 4, HOLLY HILLS ESTATES
TAX MAP 14 - PARCEL 92
FOURTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
SEDIMENT CONTROL NOTES AND DETAILS

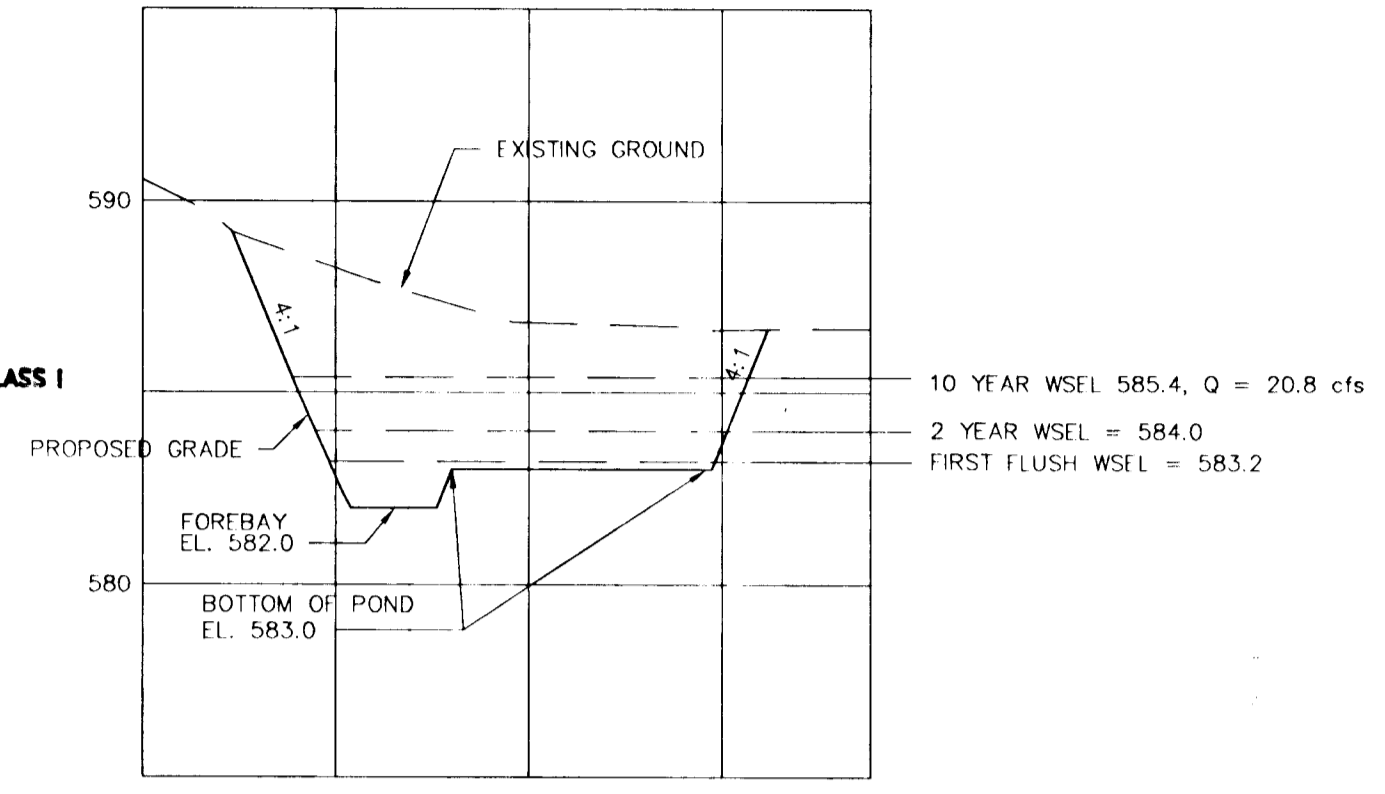
MILDENBERG, BOENDER & ASSOC., INC.
Planners, Surveyors, Engineers
5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland, 21042
(410) 987-0296 Fax: (301) 621-5521 Wash. (410) 987-0298 Fax.

OWNER/DEVELOPER
R. WAYNE NEWSOME
P.O. BOX 39
COLUMBIA, MARYLAND 21045
(410) 792-2100

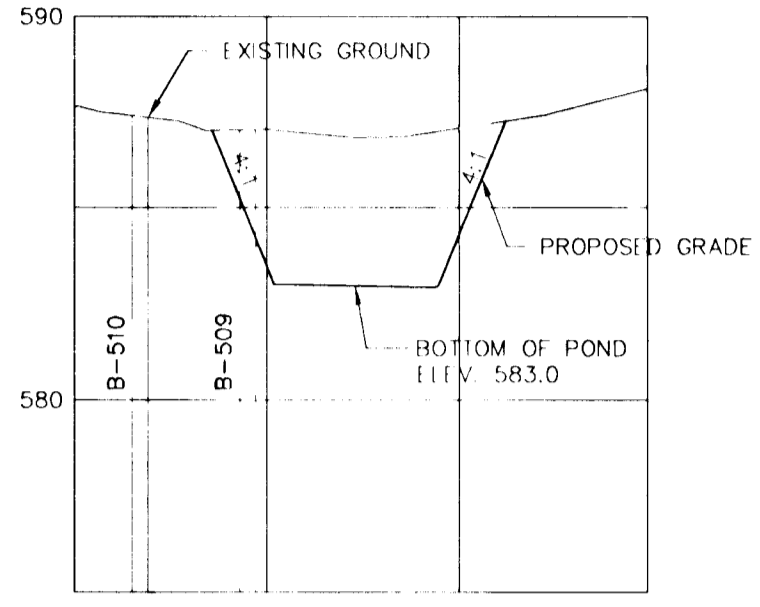
E96-74



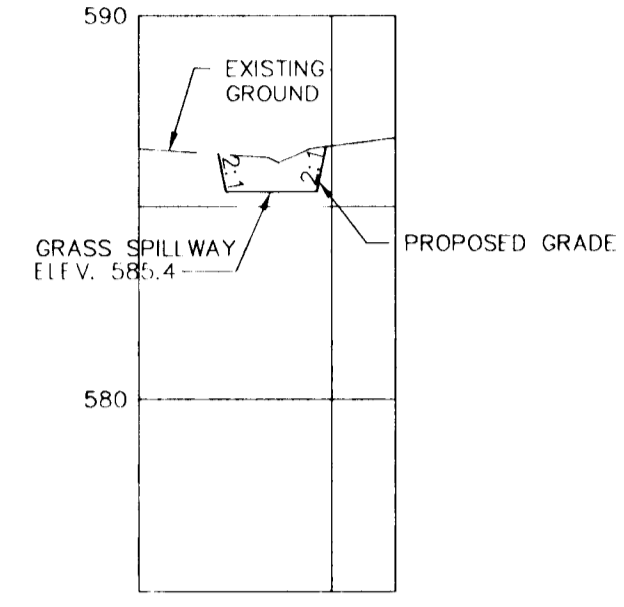
STORM DRAIN PROFILE
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'



SWM SECTION A - A'
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'

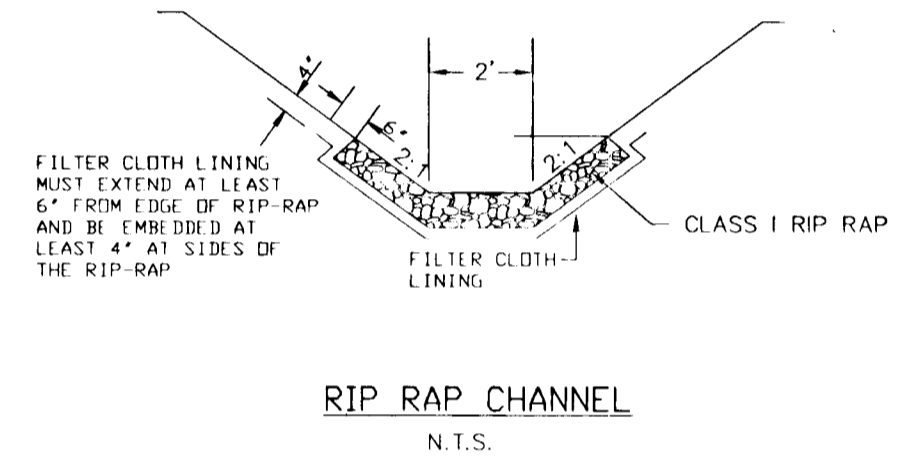


SWM SECTION B - B'
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'



SWM SECTION C - C'
 (GRASS SPILLWAY)
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'

NO.	LOCATION	STRUCTURE SCH#	RM ELEV	INV. IN	INV. OUT	COMMENTS
I-1	STA 6+46.67 - 17' LEFT		589.10	584.90	584.70	SD 4.12
I-2	STA 6+46.67 - 17' RIGHT		589.10	585.27	585.07	SD 4.12
ES-1	N 590,247,785 E 1311,036,9305		583.75 583.68	---	---	SD 5.51
I-3	LP STA 1+85.71 6' LEFT		589.23 588.98	---	585.98 585.99	SD 4.12



RIP RAP CHANNEL
 N.T.S.

HILLIS - CARNES ENGINEERING ASSOCIATES, INC.
 RECORD OF SOIL EXPLORATION
 Project Name: Holly Hills
 Location: Burntwoods Road, Howard County, Maryland
 Boring #: B-509
 Job #: 95150A
 Date Started: 6-8-95
 Date Completed: 6-8-95

ELEV.	SOIL DESCRIPTION	STRA. DEPTH	DEPTH SCALE	CON	SAMPLE BLOWS 6"	NO.	REC.	BORING & SAMPLING NOTES
SURFACE		0.0						4" Topsoil
	Brown, gray, pink, dry, loose to dense, silty fine sand with some mica			D	3-4-4	1	14"	No groundwater encountered while drilling
	Also red and black in color			D	7-8-9	2	14"	Caved at 13.0'
	Some gravel in S#2			D	14-11-16	5	14"	Caved at 14.0' after 24 Hrs.
				D	4-6-10	3	18"	Backfilled after 24 Hrs.
				D	13-10-15	4	18"	
				D	14-11-16	5	14"	
				D	13-17-21	6		
		16.5						Bottom of Test Hole at 16.5'

HILLIS - CARNES ENGINEERING ASSOCIATES, INC.
 RECORD OF SOIL EXPLORATION
 Project Name: Holly Hills
 Location: Burntwoods Road, Howard County, Maryland
 Boring #: B-510
 Job #: 95150A
 Date Started: 6-8-95
 Date Completed: 6-8-95

ELEV.	SOIL DESCRIPTION	STRA. DEPTH	DEPTH SCALE	CON	SAMPLE BLOWS 6"	NO.	REC.	BORING & SAMPLING NOTES
SURFACE		0.0						4" Topsoil
	Brown, gray, pink, dry, loose to very dense, silty fine sand with some mica			D	2-2-3	1	8"	No groundwater encountered while drilling
				D	5-5-8	2	18"	Caved at 13.5'
				D	5-6-9	3	16"	Caved at 14.0' after 24 Hrs.
				D	9-10-15	4	18"	Backfilled after 24 Hrs.
				D	12-12-14	5	15"	
				D	15-24-32	6	17"	
		16.5						Bottom of Test Hole at 16.5'

HILLIS - CARNES ENGINEERING ASSOCIATES, INC.
 RECORD OF SOIL EXPLORATION
 Project Name: Holly Hills
 Location: Burntwoods Road, Howard County, Maryland
 Boring #: B-511
 Job #: 95150A
 Date Started: 6-8-95
 Date Completed: 6-8-95

ELEV.	SOIL DESCRIPTION	STRA. DEPTH	DEPTH SCALE	CON	SAMPLE BLOWS 6"	NO.	REC.	BORING & SAMPLING NOTES
SURFACE		0.0						4" Topsoil
	Multi-color, dry, loose to dense silty fine sand with some mica			D	2-3-5	1	14"	No groundwater encountered while drilling
				D	3-5-6	2	18"	Caved at 14.0'
				D	3-4-6	3	18"	Caved at 14.0' after 24 Hrs.
				D	7-7-10	4	16"	Backfilled after 24 Hrs.
				D	3-7-6	5	16"	
				D	13-15-17	6	15"	
		16.5						Bottom of Test Hole at 16.5'

DEVELOPER'S CERTIFICATE
 I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE NATURAL RESOURCE CONSERVATION SERVICE.

2/19/96
R. WAYNE NEWSOME
 PRINTED NAME OF DEVELOPER

ENGINEER'S CERTIFICATE
 I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATURAL RESOURCE CONSERVATION SERVICE.

1/20/96
R. JACOB WIKMAT
 DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.
J. H. Wayfield / JKH 2/23/96
 SOIL CONSERVATION DISTRICT

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
John R. Robertson 2/23/96
 HOWARD SOIL CONSERVATION DISTRICT

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

HOWARD COUNTY HEALTH OFFICER _____ DATE _____

APPROVED: DEPARTMENT OF PUBLIC WORKS
Charles M. Quaker 3-5-96
 CHIEF, BUREAU OF HIGHWAYS

APPROVED: DEPARTMENT OF PLANNING AND ZONING
John Strumman 3/8/96
 CHIEF, DIVISION OF DEVELOPMENT AND RESEARCH

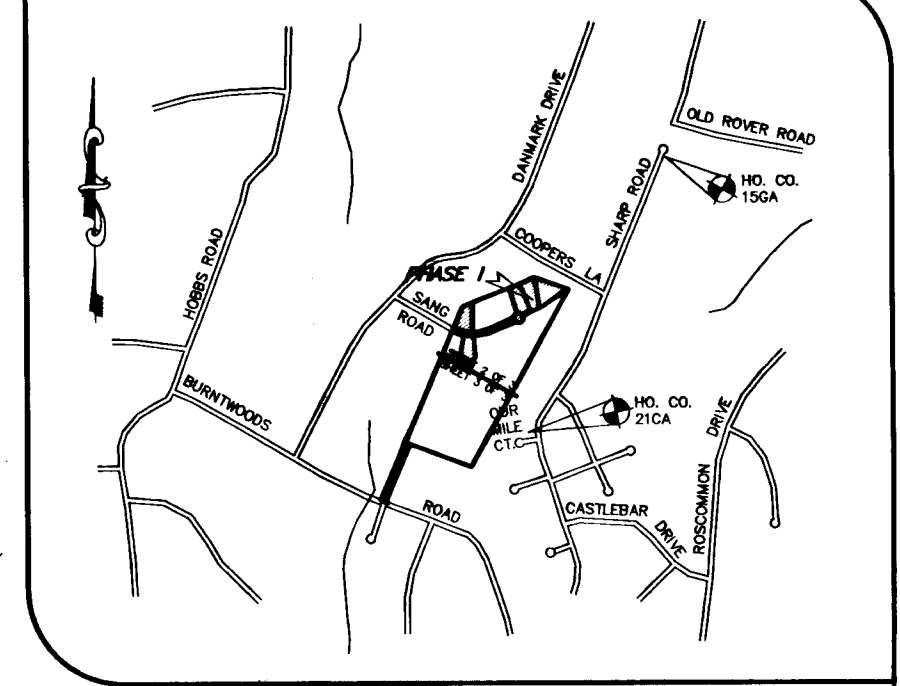
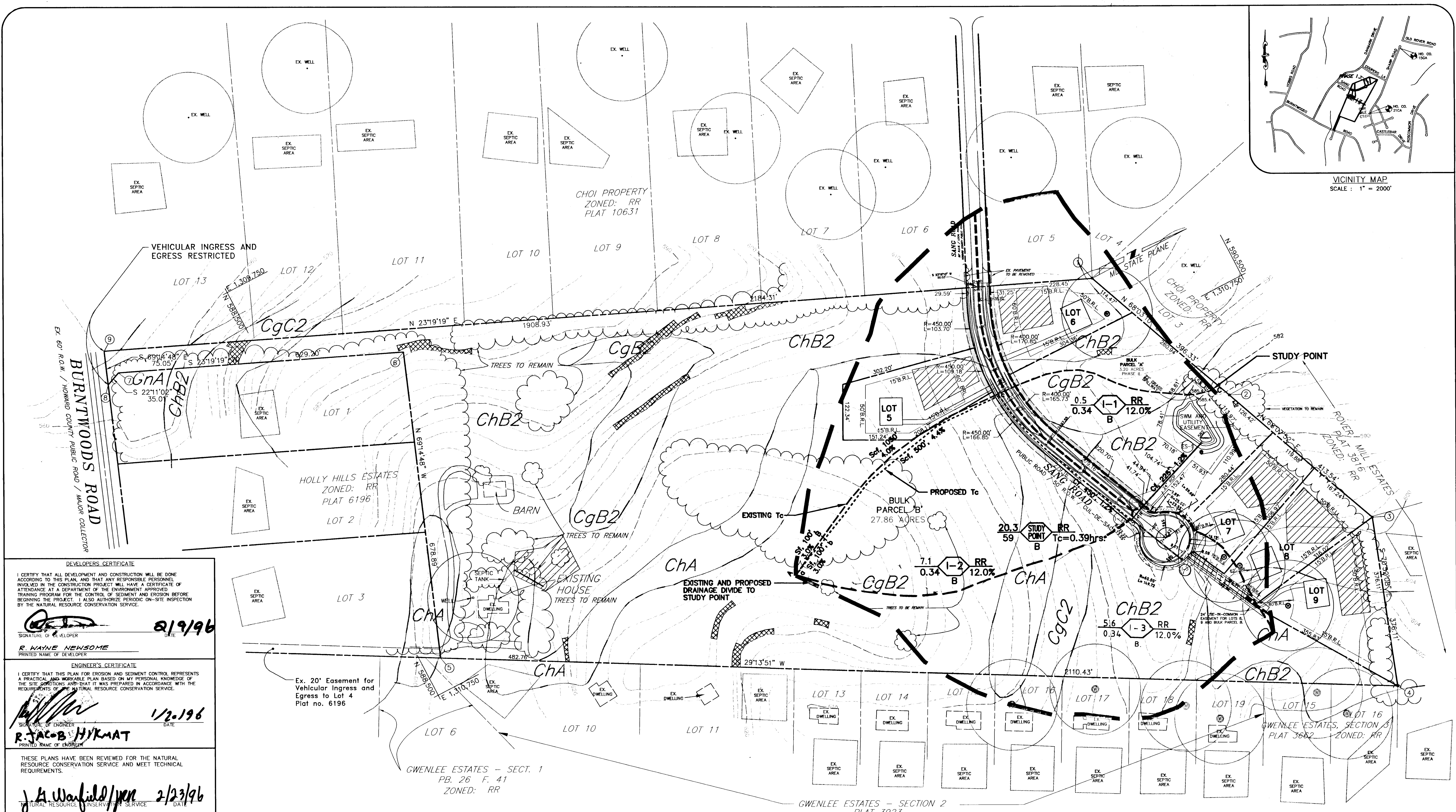
John Strumman 3/7/96
 CHIEF, DIVISION OF PLANNING AND ZONING

NOV 1995	NOV 1995	NOV 1995	NOV 1995
NOV 1995	NOV 1995	NOV 1995	NOV 1995
NOV 1995	NOV 1995	NOV 1995	NOV 1995
NOV 1995	NOV 1995	NOV 1995	NOV 1995

1. MODIFY STORM DRAIN PROFILE AND SCHEDULE
 5/30/96

HOLLY HILLS, SECTION I
 A RESUBDIVISION OF LOT 4, HOLLY HILLS ESTATES
 TAX MAP 14 - PARCEL 92
 HOWARD COUNTY, MARYLAND
 FOURTH ELECTION DISTRICT
 SWM PROFILES, STORM DRAIN PROFILE, AND DETAILS

MILDENBERG, BOENDER & ASSOC., INC.
 Engineers Planners Surveyors
 5072 Dorsey Hall Drive, Suite 202, Elkocott City, Maryland 21042
 (410) 997-0298 Fax (301) 621-5521 Wash. (410) 997-0298 Fax



project	94029	date	NOV 1995
illustration	SJD	engineering	SJD
scale	1" = 100'	approval	RIH

description	ADD ISLAND TO CUL-DE-SAC AND ADD I-3	date	5/28/94
revisions			

HOLLY HILLS, SECTION I
A RESUBDIVISION OF LOT 4, HOLLY HILLS ESTATES
 FOURTH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND
DRAINAGE AREA MAP

DEVELOPER'S CERTIFICATE
 I CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE NATURAL RESOURCE CONSERVATION SERVICE.

Signature of Developer: *R. Wayne Newsome* DATE: 02/19/96
 R. WAYNE NEWSOME
 PRINTED NAME OF DEVELOPER

ENGINEER'S CERTIFICATE
 I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATURAL RESOURCE CONSERVATION SERVICE.

Signature of Engineer: *R. Jacob Hikmat* DATE: 1/2/1996
 R. JACOB HIKMAT
 PRINTED NAME OF ENGINEER

THESE PLANS HAVE BEEN REVIEWED FOR THE NATURAL RESOURCE CONSERVATION SERVICE AND MEET TECHNICAL REQUIREMENTS.
 Signature: *J. A. Warfield* DATE: 2/23/96
 NATURAL RESOURCE CONSERVATION SERVICE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE NATURAL RESOURCE CONSERVATION SERVICE.
 Signature: *John R. Robertson* DATE: 2/23/96
 NATURAL RESOURCE CONSERVATION SERVICE

AS BUILT CERTIFICATION

ENGINEER'S SIGNATURE DATE
 APPROVED: DEPARTMENT OF PUBLIC WORKS
 Signature: *Richard M. Dander* DATE: 3-5-96
 CHIEF BUREAU OF HIGHWAYS

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Signature: *Uma Summery* DATE: 3/8/96
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH

Signature: *John D. ...* DATE: 3/7/96
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

NOTE:
 TOPOGRAPHY SHOWN HEREON IS BASED ON HOWARD COUNTY 200 SCALE TOPOGRAPHIC MAPS.

SOILS CLASSIFICATIONS
 ChA : CHESTER SILT LOAM, 0-3% SLOPES
 ChB2: CHESTER SILT LOAM, 3-8% SLOPES, MOD. ERODED
 CgB2: CHESTER GRAVELLY SILT LOAM, 3-8% SLOPES, MOD ERODED
 CgC2: CHESTER GRAVELLY SILT LOAM, 8-15% SLOPES, MOD ERODED
 GNA : GLENELG LOAM, 15-25% SLOPES, SEVERELY ERODED

- LEGEND**
- DENOTES 15% TO 25% SLOPES
 - DENOTES 10' PUBLIC TREE MAINTENANCE EASEMENT
 - THIS AREA DESIGNATES A PRIVATE SEWERAGE EASEMENT OF 10,000 SQUARE FEET AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWERAGE DISPOSAL IMPROVEMENTS OF ANY NATURE IN THIS AREA AREA RESTRICTED UNTIL PUBLIC SEWERAGE IS AVAILABLE. THESE EASEMENTS SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SEWERAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO GRANT VARIANCES FOR ENCROACHMENTS INTO THE PRIVATE SEWERAGE EASEMENTS. RECORDATION OF A MODIFIED EASEMENT SHALL NOT BE NECESSARY.
 - DENOTES A PROPOSED WELL
 - DENOTES INLET DRAINAGE DIVIDE
 - DENOTES STUDY POINT DRAINAGE DIVIDE

NOTE: THIS PLAN IS TO BE USED FOR THE PURPOSE OF A DRAINAGE AREA MAP ONLY.

LOT AREA TABLE

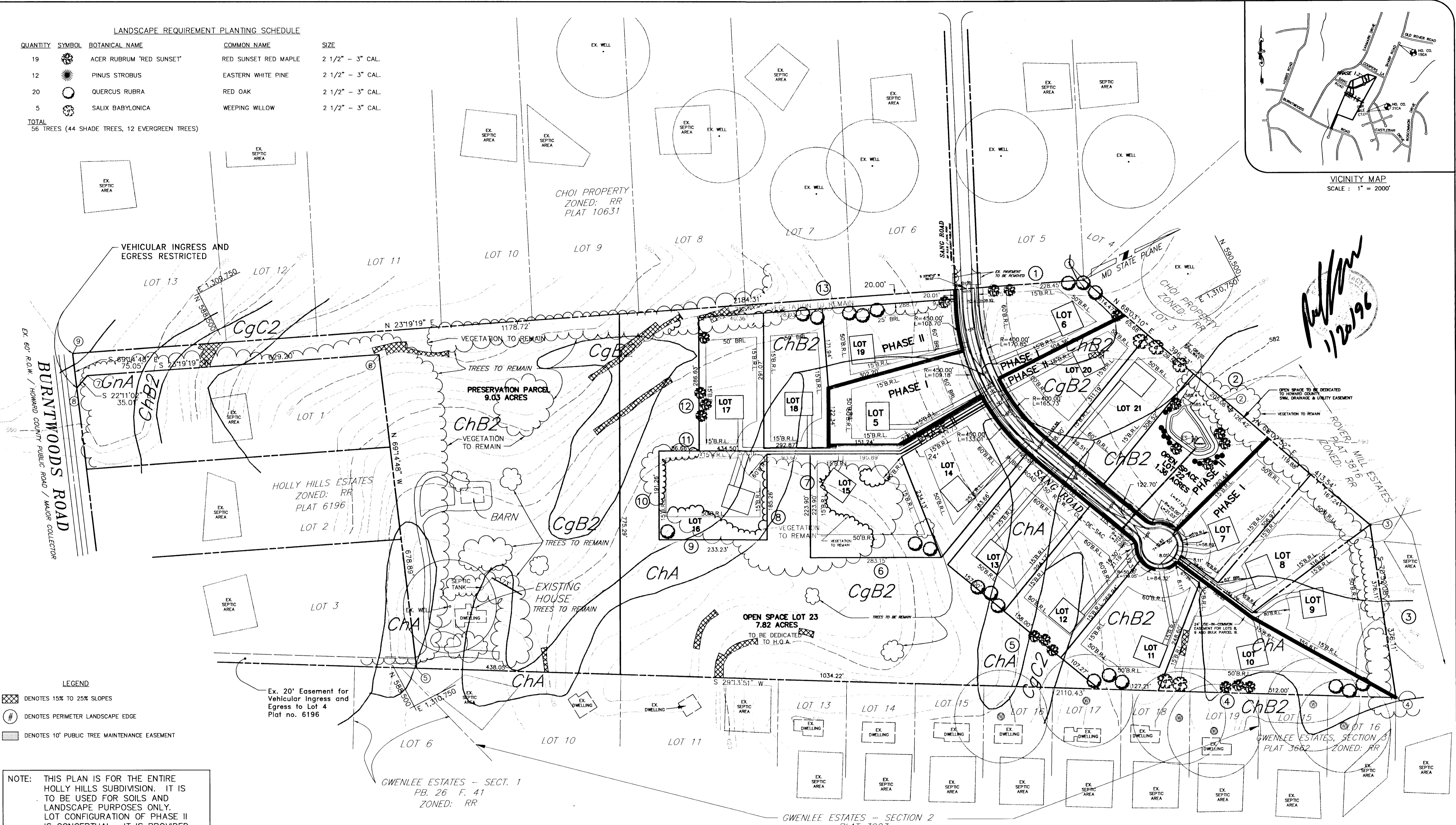
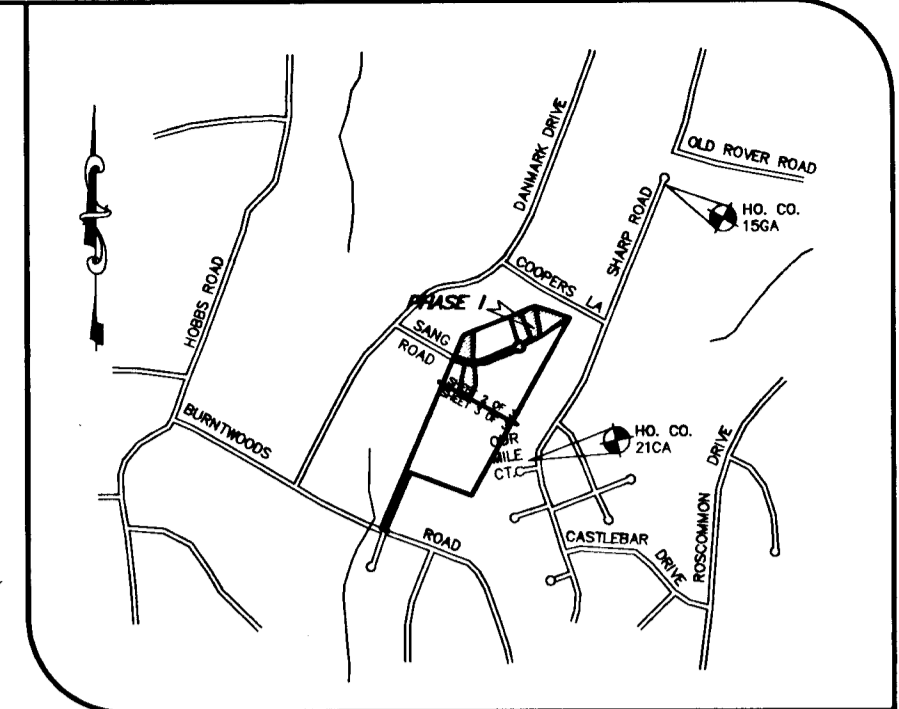
LOT NO.	LOT AREA
LOT 5	43,761 sq. ft.
LOT 6	40,412 sq. ft.
LOT 7	40,152 sq. ft.
LOT 8	41,914 sq. ft.
LOT 9	55,419 sq. ft.

OWNER
 R. WAYNE NEWSOME
 P.O. BOX 39
 COLUMBIA, MD 21045
 Phone: (410) 792-2100

MILDENBERG, BOENDER & ASSOC., INC.
 Engineers Planners Surveyors
 5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland, 21042
 (410) 987-0296 Fax. (301) 821-5321 Wash. (410) 997-0298 Fax.

LANDSCAPE REQUIREMENT PLANTING SCHEDULE

QUANTITY	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE
19		ACER RUBRUM 'RED SUNSET'	RED SUNSET RED MAPLE	2 1/2" - 3" CAL.
12		PINUS STROBUS	EASTERN WHITE PINE	2 1/2" - 3" CAL.
20		QUERCUS RUBRA	RED OAK	2 1/2" - 3" CAL.
5		SALIX BABYLONICA	WEeping WILLOW	2 1/2" - 3" CAL.
TOTAL				
56 TREES (44 SHADE TREES, 12 EVERGREEN TREES)				



Handwritten signature and date: 1/20/96

- LEGEND**
- Denotes 15% TO 25% SLOPES
 - Denotes PERIMETER LANDSCAPE EDGE
 - Denotes 10' PUBLIC TREE MAINTENANCE EASEMENT

NOTE: THIS PLAN IS FOR THE ENTIRE HOLLY HILLS SUBDIVISION. IT IS TO BE USED FOR SOILS AND LANDSCAPE PURPOSES ONLY. LOT CONFIGURATION OF PHASE II IS CONCEPTUAL. IT IS PROVIDED FOR ILLUSTRATIVE PURPOSES ONLY.

SOILS DESCRIPTION

ChA : CHESTER SILT LOAM, 0-3% SLOPES
 ChB2: CHESTER SILT LOAM, 3-8% SLOPES, MOD. ERODED
 CgC2: CHESTER GRAVELLY SILT LOAM, 3-8% SLOPES, MOD. ERODED
 GNA : GLENELG LOAM, 15-25% SLOPES, SEVERELY ERODED

PERIMETER LANDSCAPED EDGE

CATEGORY	ADJACENT TO PERIMETER PROPERTIES
LANDSCAPE TYPE	A
LINEAR FEET OF PERIMETER	4522.80'
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET)	YES, 2110.59'
CREDIT FOR WALL, FENCE, OR BERM (YES, NO, LINEAR FEET)	NO
NUMBER OF PLANTS REQUIRED	39 SHADE TREES 0 EVERGREEN TREES 0 SHRUBS
NUMBER OF PLANTS PROVIDED	39 SHADE TREES 0 EVERGREEN TREES 0 SUBSTITUTION TREES 0 SHRUBS (10:1 SUBSTITUTION)

NOTES:

- TOPOGRAPHY IS BASED ON A 200 SCALE TOPOGRAPHIC MAP OF HOWARD COUNTY, MARYLAND.
- SOILS SHOWN HEREON WERE BASED ON THE HOWARD COUNTY SOIL SURVEY MAPS.
- ALL PERIMETER LANDSCAPING AND ALL SWM LANDSCAPING IS THE RESPONSIBILITY OF THE DEVELOPER.
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED 39 PERIMETER TREES AND 15 SWM BUFFER TREES (44 LANDSCAPE TREES TOTAL) IN THE AMOUNT OF \$5,400.00 IS PART OF THE DEVELOPER'S AGREEMENT.

STORMWATER MANAGEMENT AREA LANDSCAPING

LINEAR FEET OF PERIMETER	500'
NUMBER OF TREES REQUIRED	7 SHADE TREES 8 EVERGREEN TREES
CREDIT FOR EXISTING VEGETATION (NO, YES AND LINEAR FEET)	YES, 150'
CREDIT FOR OTHER LANDSCAPING (NO, YES AND %)	N/A
NUMBER OF TREES PROVIDED	5 SHADE TREES 8 EVERGREEN TREES 2 SUBSTITUTION TREES (4 EVERGREEN TREES)

PERIMETER	EDGE TYPE	PERIMETER	EDGE TYPE	TOTAL PLANTING OBLIGATION
PERIMETER 1 SFD TO SFD - 228.45 LF 1 SHADE TREE / 60 LF	A	PERIMETER 8 SFD TO OPEN SPACE - 185.26 LF EXISTING TREES TO REMAIN	A	39 SHADE TREES 0 EVERGREEN TREES 0 SHRUBS
PERIMETER 2 SFD TO SFD - 809.87 LF 511 LF EXISTING TREES TO REMAIN 1 SHADE TREE / 60 LF	A	PERIMETER 9 SFD TO OPEN SPACE - 233.23 LF EXISTING TREES TO REMAIN	A	NOTE: * DENOTES REQUIREMENT FOR PHASE I. ** DENOTES REQUIREMENT FOR PHASE II. *** DENOTES PARTIAL REQUIREMENT FOR PHASE I AND II. 401.59 LF OF PERIMETER 2 IS A REQUIREMENT FOR PHASE I. OWNER R. WAYNE NEWSOME P.O. BOX 39 COLUMBIA, MD 21045 Phone: (410) 792-2100
PERIMETER 3 SFD TO SFD - 376.11 LF EXISTING TREES TO REMAIN	A	PERIMETER 10 SFD TO OPEN SPACE - 191.26 LF 117 LF EXISTING TREES TO REMAIN 1 SHADE TREE / 60 LF	A	
PERIMETER 4 SFD TO SFD - 639.21 LF 1 SHADE TREE / 60 LF	A	PERIMETER 11 SFD TO OPEN SPACE - 86.66 LF EXISTING TREES TO REMAIN	A	
PERIMETER 5 SFD TO OPEN SPACE - 422.27 LF 1 SHADE TREE / 60 LF	A	PERIMETER 12 SFD TO OPEN SPACE - 286.63 LF 35 LF EXISTING TREES TO REMAIN 1 SHADE TREE / 60 LF	A	
PERIMETER 6 SFD TO OPEN SPACE - 283.15 LF 181 LF EXISTING TREES TO REMAIN 1 SHADE TREE / 60 LF	A	PERIMETER 13 SFD TO OPEN SPACE - 556.80 LF 196 LF EXISTING TREES TO REMAIN 1 SHADE TREE / 60 LF	A	
PERIMETER 7 SFD TO OPEN SPACE - 223.90 LF EXISTING TREES TO REMAIN	A			

APPROVED: DEPARTMENT OF PUBLIC WORKS
Signature: Andrew D. Dwyer 3-5-96
 CHIEF BUREAU OF HIGHWAYS

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Signature: Amir J. Jumanji 3/8/96
 CHIEF, DIVISION OF LAND DEVELOPMENT AND RESEARCH

Signature: Chris P. ... 2/2/96
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

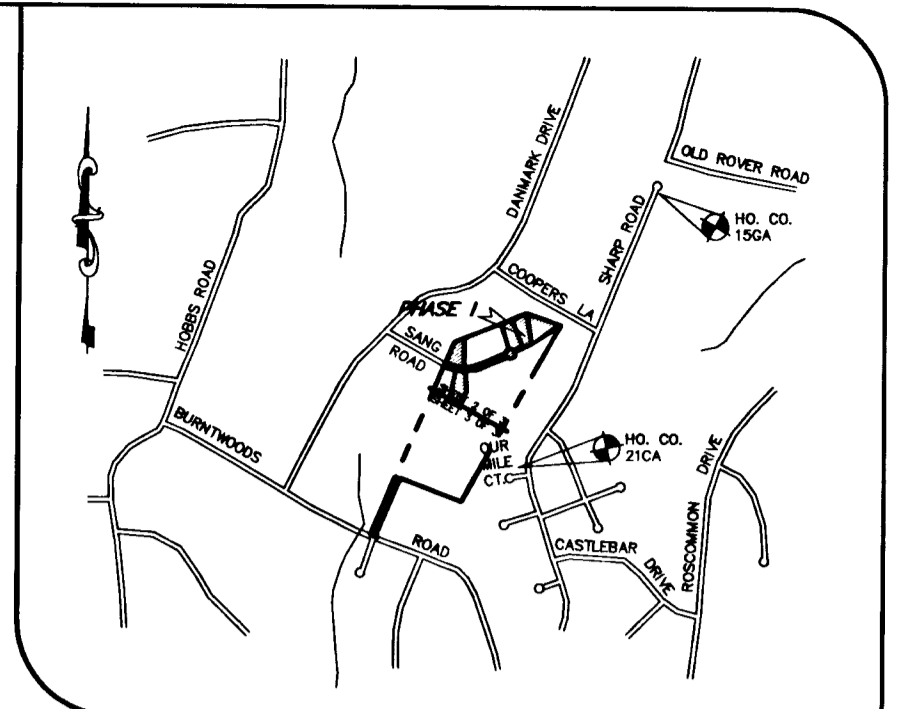
Project: 94029 NOV 1995
 Illustration: SID
 Scale: 1" = 100'
 Date: 1/20/96

MILDENBERG, BOENDER & ASSOC., INC.
 Engineers Planners Surveyors
 5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042
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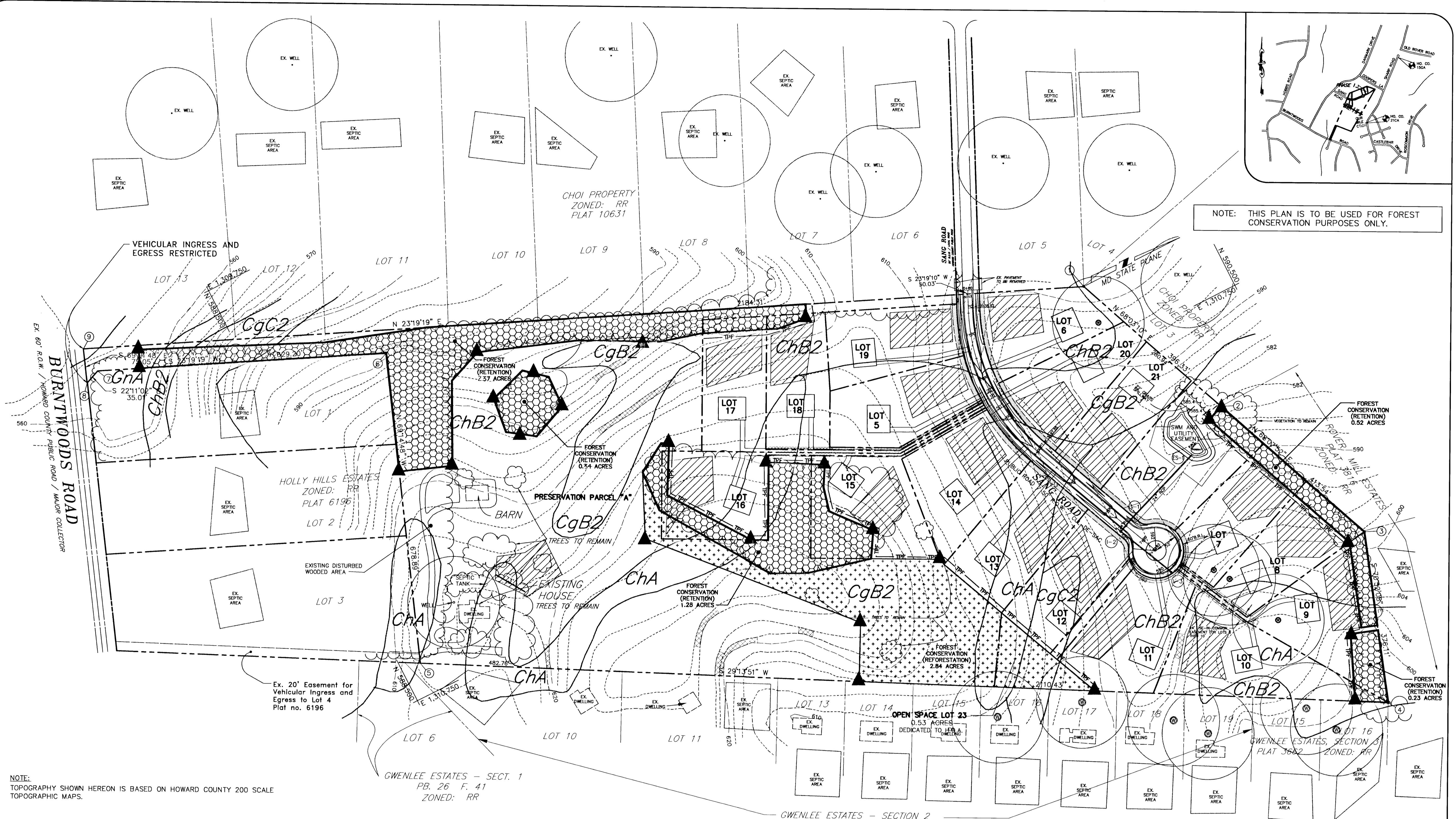
HOLLY HILLS, SECTION I
 A RESUBDIVISION OF LOT 4, HOLLY HILLS ESTATES
 FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 TAX MAP 14 - PARCEL 92
 LANDSCAPE PLAN

6 OF 8
 F-96-74

1192



NOTE: THIS PLAN IS TO BE USED FOR FOREST CONSERVATION PURPOSES ONLY.



NOTE: TOPOGRAPHY SHOWN HEREON IS BASED ON HOWARD COUNTY 200 SCALE TOPOGRAPHIC MAPS.

SOILS CLASSIFICATIONS
 ChA : CHESTER SILT LOAM, 0-3% SLOPES
 ChB2: CHESTER SILT LOAM, 3-8% SLOPES, MOD. ERODED
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LEGEND

- DENOTES 15% TO 25% SLOPES
- DENOTES 10' PUBLIC TREE MAINTENANCE EASEMENT
- THIS AREA DESIGNATES A PRIVATE SEWERAGE EASEMENT OF 10,000 SQUARE FEET AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWERAGE DISPOSAL. IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED UNTIL PUBLIC SEWERAGE IS AVAILABLE. THESE EASEMENTS SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SEWERAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO GRANT VARIANCES FOR ENCROACHMENTS INTO THE PRIVATE SEWERAGE EASEMENTS. RECORDATION OF A MODIFIED EASEMENT SHALL NOT BE NECESSARY.
- DENOTES A PROPOSED WELL
- FOREST CONSERVATION AREA (RETENTION)
- FOREST CONSERVATION AREA (REFORESTATION)
- FOREST CONSERVATION SIGNAGE
- TREE PROTECTIVE FENCING

REFORESTATION PLANT LIST

QTY.	SPECIES	SHADE TOL.	MOIST. REGIME	WET. STATUS	MIN.O.C.	MIN. SPACING	SIZE & REMARKS
100	Acer rubrum Red Maple	VT	D-W	FAC	20'	3' - 5' HT.	CONT/B & B
115	Liriodendron tulipifera Tulip Poplar	MT	M-W	FAC	20'	3' - 5' HT.	CONT/B & B
104	Nyssa sylvatica Black Gum	T	M-W	FAC	20'	3' - 5' HT.	CONT/B & B
103	Prunus serotina Black Cherry	MT	D-W	FAC	15'	3' - 5' HT.	CONT/B & B
100	Quercus alba White Oak	I	M-W	FAC+	20'	3' - 5' HT.	CONT/B & B
100	Quercus rubra Red Oak	MT	D-M	UPL	20'	3' - 5' HT.	CONT/B & B
103	Sassafras albidum Common Sassafras	MT	D-M	FACU	15'	3' - 5' HT.	CONT/B & B
TOTAL							
710 TREES							

FOREST CONSERVATION DATA

	ACRES
I. BASIC SITE DATA	
GROSS SITE AREA	37.12
AREA WITHIN 100 YEAR FLOODPLAIN	0.00
AREA WITHIN AGRICULTURAL USE OR PRESERVATION PARCEL	12.88
LESS EXISTING FORESTED AREAS	
NET TRACT AREA	24.24
LAND USE CATEGORY	RESIDENTIAL (RURAL MEDIUM DENSITY)
II. FOREST CONSERVATION WORKSHEET DATA SUMMARY	
B. REFORESTATION THRESHOLD (25%)	6.06
C. AFFORESTATION MINIMUM (20%)	4.85
D. EXISTING FOREST ON NET TRACT AREA	6.87
E. FOREST AREAS TO BE CLEARED	2.13
F. FOREST AREAS TO BE RETAINED	4.74
IV. REFORESTATION CALCULATIONS	
G. FOREST AREAS CLEARED ABOVE REFORESTATION THRESHOLD	0.81
H. FOREST AREAS CLEARED BELOW REFORESTATION THRESHOLD	1.32
I. FOREST AREAS RETAINED ABOVE REFORESTATION THRESHOLD	0.00
REFORESTATION FOR CLEARING ABOVE THRESHOLD	0.20
REFORESTATION FOR CLEARING BELOW THRESHOLD	2.84
TOTAL REFORESTATION REQUIRED	2.84

APPROVED: DEPARTMENT OF PUBLIC WORKS
Howard Shih 12/29/99
 CHIEF BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cindy Handley 1/19/99
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

John Williams 1/4/99
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

MD DNR QUALIFIED PROFESSIONAL
Stephanie Demchik
 STEPHANIE DEMCHIK
REPLACEMENT SHEET
 OWNER
 R. WAYNE NEWSOME
 P.O. BOX 39
 COLUMBIA, MD 21045
 Phone: (410) 792-2100

project 94029 date DEC 1998
 illustration SID scale 1"=100'
 approval SID
 revision RH

HOLLY HILLS, SECTION I
 A RESUBDIVISION OF LOT 4, HOLLY HILLS ESTATES
 TAX MAP 14 - PARCEL 92
 HOWARD COUNTY, MARYLAND
 FOURTH ELECTION DISTRICT
FOREST CONSERVATION PLAN

MILDENBERG, BOENDER & ASSOC., INC.
 Engineers Planners Surveyors
 5072 Dorsey Hall Drive, Suite 202, Ellicott City, Maryland 21042
 (410) 997-0296 Fax: (301) 621-5521 Wash. (410) 997-0298 Fax

7 OF 8

NOTE: THIS PLAN IS TO BE USED FOR FOREST CONSERVATION PURPOSES ONLY.

GENERAL NOTES
FOREST PROTECTION

- ALL FOREST RETENTION AREAS SHALL BE TEMPORARILY PROTECTED BY WELL ANCHORED BLAZE ORANGE PLASTIC MESH FENCING AND SIGNAGE AS INDICATED ON THE PLANS. THE DEVICES SHALL BE INSTALLED ALONG THE FOREST RETENTION BOUNDARY PRIOR TO ANY LAND CLEARING, GRUBBING, OR GRADING ACTIVITIES.
- THE FOREST PROTECTION DEVICES SHALL BE INSTALLED SUCH THAT THE CRITICAL ROOT ZONES OF ALL TREES WITHIN THE RETENTION AREA NOT OTHERWISE PROTECTED WILL BE WITHIN FOREST PROTECTION DEVICES.
- ALL PROTECTION DEVICES SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION, INCLUDING SILT FENCE BEING USED AS PROTECTIVE FENCING. ALL DEVICES SHALL REMAIN IN PLACE UNTIL ALL CONSTRUCTION HAS CEASED IN THE IMMEDIATE VICINITY.
- ATTACHMENT OF SIGNS, OR ANY OTHER OBJECTS TO TREES IS PROHIBITED. NO EQUIPMENT, MACHINERY, VEHICLES, MATERIALS OR EXCESSIVE PEDESTRIAN TRAFFIC SHALL BE ALLOWED WITHIN THESE PROTECTED AREAS.
- INSTALLATION AND MAINTENANCE OF PROTECTIVE FENCING AND SIGNAGE SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. THE GENERAL CONTRACTOR SHALL TAKE THE UTMOST CARE TO PROTECT TREE ROOT SYSTEMS DURING ALL CONSTRUCTION ACTIVITIES. TREE ROOT SYSTEMS SHALL BE PROTECTED FROM SMOTHERING, FLOODING, EXCESSIVE WETTING FROM DETERIORATING OPERATIONS, OFF-SITE RUN OFF, SPILLAGE AND DRAINING OF MATERIALS THAT MAY BE HARMFUL TO TREES.
- THE GENERAL CONTRACTOR SHALL PREVENT PARKING OF CONSTRUCTION VEHICLES AND EQUIPMENT, AND THE STORING OF BUILDING SUPPLIES OR STOCKPILING OF EARTH WITHIN FOREST CONSERVATION EASEMENTS.
- REMOVAL OF TOPSOIL OR ROOT MAT WITHIN THE TREE PRESERVATION AREA SHALL BE PROHIBITED.
- THE GENERAL CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY TREES DAMAGED OR DESTROYED WITHIN THE FOREST CONSERVATION EASEMENTS. ROOT PRUNING SHALL BE USED AT THE LIMIT OF DISTURBANCE OR LIMIT OF GRADING WITHIN AND ADJACENT TO ALL PRESERVATION AREAS, AS NECESSARY.

PRE-CONSTRUCTION MEETING

- AFTER THE BOUNDARIES OF THE FOREST RETENTION AREAS HAVE BEEN FIELD LOCATED AND MARKED, AND AFTER THE FOREST PROTECTION DEVICES HAVE BEEN INSTALLED, BUT BEFORE ANY OTHER DISTURBANCE HAS TAKEN PLACE ON SITE, A PRE-CONSTRUCTION MEETING SHALL TAKE PLACE ON SITE. THE DEVELOPER, CONTRACTOR OR PROJECT MANAGER, AND HOWARD COUNTY INSPECTORS SHALL ATTEND. THE PURPOSE OF THIS MEETING WILL BE:
 - TO IDENTIFY THE LOCATIONS OF THE FOREST RETENTION AREAS, SPECIMEN TREES WITHIN 50 FEET OF THE LIMIT OF DISTURBANCE, LIMITS OF CONSTRUCTION, EMPLOYEE PARKING AREAS AND EQUIPMENT STAGING AREAS.
 - INSPECT ALL FLAGGED BOUNDARIES AND PROTECTION DEVICES;
 - MAKE ALL NECESSARY ADJUSTMENTS;
 - ASSIGN RESPONSIBILITIES AS APPROPRIATE AND DISCUSS PENALTIES.

CONSTRUCTION MONITORING

- THE SITE SHALL BE INSPECTED PERIODICALLY DURING THE CONSTRUCTION PHASE OF THE PROJECT. A QUALIFIED PROFESSIONAL SHALL BE RESPONSIBLE FOR IDENTIFYING DAMAGE TO PROTECTED FOREST AREAS OR INDIVIDUAL TREES WHICH MAY HAVE BEEN CAUSED BY CONSTRUCTION ACTIVITIES, SUCH AS SOIL COMPACTION, ROOT INJURY, TRUNK WOUNDS, LIMB INJURY, OR STRESS CAUSED BY FLOODING OR BROUGHT CONDITIONS.
- ANY SUCH DAMAGE THAT MAY OCCUR SHALL BE REMEDIATED IMMEDIATELY USING APPROPRIATE MEASURES. SEVERE PROBLEMS MAY REQUIRE CONSULTATION WITH A PROFESSIONAL ARBORIST.
- THE CONSTRUCTION PROCEDURE SHALL NOT DAMAGE AREAS OUTSIDE OF THE LIMITS OF DISTURBANCE AS DESIGNATED ON THE PLANS. ANY DAMAGE SHALL BE RESTORED BY THE CONTRACTOR AT HIS EXPENSE AND TO THE SATISFACTION OF THE DESIGN TEAM OR ENGINEER.

NOTE :

THERE SHALL BE NO CLEARING, GRADING, CONSTRUCTION OR DISTURBANCE OF VEGETATION IN THE FOREST CONSERVATION EASEMENTS EXCEPT AS PERMITTED BY THE HOWARD COUNTY FOREST CONSERVATION PROGRAM.

THERE SHALL BE NO CLEARING, GRADING, CONSTRUCTION, SOIL COMPACTION, OR EXCAVATION, INTRODUCTION OF TOXIC CHEMICALS OR OTHER DISTURBANCES DETRIMENTAL TO THE LIVE SPECIMEN TREES OR CRITICAL ROOT ZONES FOR THESE TREES EXCEPT AS PERMITTED BY THE HOWARD COUNTY FOREST CONSERVATION PROGRAM.

PLANTING SPECIFICATIONS AND NOTES

SITE PREPARATION AND SOILS

- PROTECTIVE FENCING IS TO BE INSTALLED AS A FIRST ORDER OF BUSINESS PER PLAN LOCATIONS. PROTECTIVE FENCING WILL NOT BE NECESSARY ALONG THOSE PERIMETERS WHERE SILT FENCE HAS BEEN INSTALLED FOR SEDIMENT CONTROL.
- DISTURBANCE OF SOILS SHOULD BE LIMITED TO THE PLANTING FIELD FOR EACH PLANT.
- SOIL MIX FOR ALL PLANTS EXCEPT ERICACEOUS MATERIAL: SOIL MIX SHALL CONSIST OF EXISTING NATIVE TOPSOIL MIXTURE AT EACH PLANTING FIELD LOCATION INTO WHICH THE CONTRACTOR SHALL THOROUGHLY INCORPORATE 25% BY VOLUME OF COMPOSTED SLUDGE.
- SOIL MIX FOR ERICACEOUS MATERIAL: SOIL MIX SHALL CONSIST OF EXISTING NATIVE TOPSOIL MIXTURE AT EACH PLANTING FIELD LOCATION INTO WHICH THE CONTRACTOR SHALL THOROUGHLY INCORPORATE 25% BY VOLUME PEAT MOSS.
- ALL MIXING IN 3 AND 4 SHALL BE LIMITED TO CONTAINER GROWN OR BALL AND BURLAP STOCK ONLY AND CONFINED TO THE PLANTING FIELD AND IMMEDIATE ADJACENT SOIL SURFACE AREA AND SHALL BE DONE TO THE SATISFACTION OF THE DESIGN TEAM OR ENGINEER.

PLANT STORAGE AND INSPECTION

- FOR CONTAINER GROWN NURSERY STOCK, PLANTING SHOULD OCCUR WITHIN 2 WEEKS AFTER DELIVERY TO THE SITE.
- FOR BALL AND BURLAP NURSERY STOCK, PLANTING SHOULD OCCUR WITHIN THREE DAYS AFTER DELIVERY TO THE SITE.
- PLANTING STOCK SHOULD BE INSPECTED PRIOR TO PLANTING. PLANTS NOT CONFORMING TO STANDARD NURSERYMAN SPECIFICATIONS FOR SIZE, FORM, VIGOR, ROOTS, TRUNK WOUNDS, INSECTS AND DISEASE SHOULD BE REPLACED.
- UNTIL PLANTED, ALL PLANT STOCK SHALL BE KEPT IN A SHADED, COOL, AND MOISTENED ENVIRONMENT.

PLANT INSTALLATION

- THE PLANTING FIELD SHOULD BE PREPARED AS SPECIFIED (SEE DETAIL). NATIVE STOCKPILED SOILS SHOULD BE USED FOR SOIL MIX AND BACKFILL FOR PLANTING FIELD. AFTER PLANT INSTALLATION, RAKE SOILS EVEN OVER THE PLANTING FIELD AND COVER WITH AT LEAST 4 INCHES OF MULCH. WATER GENEROUSLY TO SETTLE SOIL BACKFILLED AROUND TREES.
 - PLANTING FIELD DIAMETERS SHOULD BE REDUCED OR PLANTING FIELD MOVED IF IT APPEARS THAT EXCESSIVE ROOT DAMAGE MAY OCCUR DURING DIGGING OPERATION NEAR EXISTING FOREST.
 - CARE SHALL BE TAKEN WHEN DIGGING PLANTING FIELDS NOT TO CHOP THROUGH LARGER EXISTING ROOTS FROM EXISTING MATURE TREES. IF ROOTS GREATER THAN 1/2 INCH ARE ENCOUNTERED DIG AROUND THEM AS MUCH AS POSSIBLE TO MINIMIZE IMPACT TO EXISTING TREES.
 - CONTAINER GROWN STOCK SHOULD BE REMOVED FROM THE CONTAINER AND ROOTS GENTLY LOOSESED FROM THE SOIL. IF THE ROOTS ENCRIRCLE THE ROOT BALL, SUBSTITUTION IS STRONGLY RECOMMENDED. J-SHAPED OR KINKED ROOT SYSTEMS SHOULD ALSO BE NOTED. ROOTS MAY NOT BE TRIMMED ON SITE, DUE TO THE INCREASED CHANCES OF SOIL BORNE DISEASES.
 - FOR BALL AND BURLAP STOCK, PLACE TREE IN PREPARED PLANTING FIELD AND REMOVE WIRE AND/OR STRINGS FROM ROOT BALL. THEN PEEL BACK BURLAP TO BASE OF ROOT BALL AND COVER ENTIRE ROOT BALL WITH TOPSOIL MIXTURE INDICATED ABOVE AND WATER GENEROUSLY.
 - THE CONTRACTOR SHALL EVENLY DISPERSE SPECIES IN GROUPS OF TWO (2) TO FIVE (5) PER SPECIES, OVER THE DESIGNATED AREA TO BE PLANTED WHILE MAINTAINING AN AVERAGE RANDOM SPACING OF INDIVIDUAL TREES AT PROPER SPACING INDICATED IN THE PLANT LIST.
 - A STRAIGHT GRID PATTERN SPACING IS TO BE AVOIDED. TREES SHALL BE PLANTED ON AN AVERAGE SPACING AS INDICATED IN THE PLANT LIST TO OBTAIN A MORE NATURAL APPEARANCE.
 - NEWLY PLANTED TREES MAY NEED WATERING AS MUCH AS ONCE A WEEK FOR THE ENTIRE GROWING SEASON, DUE TO THE VERY DEEP, WELL DRAINED NATURE OF THE NATIVE SOILS FOUND ON THIS SITE COMBINED WITH THE LOOSENESS OF THE BACKFILLED AREA WITHIN THE PLANTING FIELD. THE NEXT TWO YEARS MAY REQUIRE WATERING ONLY A FEW TIMES A YEAR DURING SUMMER AND DRY MONTHS. AFTER THAT PERIOD, TREES SHOULD ONLY NEED WATER IN SEVERE DROUGHTS. ANY WATERING PLAN SHOULD COMPENSATE FOR RECENT RAINFALL PATTERNS.
- ** IN AREAS WHERE REFORESTATION IS ADJACENT TO PROJECT BOUNDARIES, LANDSCAPE SIZE PLANT MATERIAL MUST BE INSTALLED MUST BE INSTALLED FIRST, IN ORDER TO SATISFY PERIMETER BUFFER REQUIREMENTS.

FERTILIZING

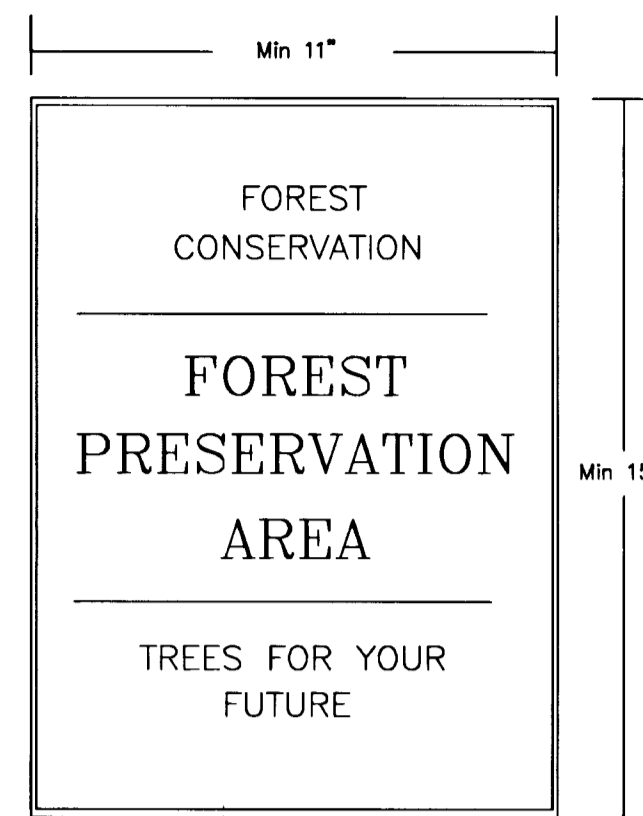
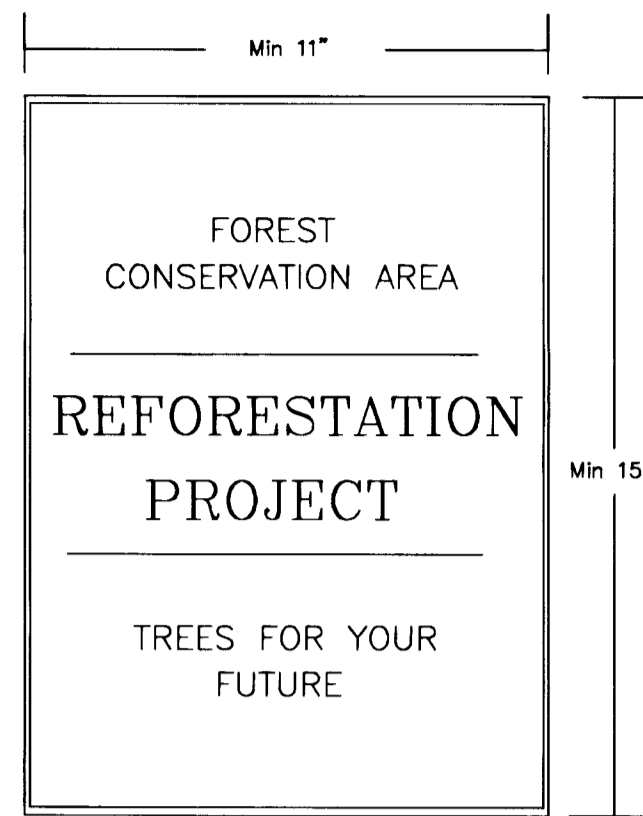
- DO NOT FERTILIZE NEWLY PLANTED TREES WITHIN THE FIRST GROWING SEASON AFTER PLANTING. DOING SO MAY CAUSE A SPURT OF CANOPY GROWTH WHICH THE ROOTS CANNOT SUPPORT AND ADD ADDITIONAL SHOCK TO THE ALREADY DISTURBED PLANT.
- NOTHING SHOULD BE ADDED TO THE SOIL WITHOUT TESTING IT FIRST TO DETERMINE WHAT IS NEEDED.
- IF AND WHEN IT IS TIME TO FERTILIZE, ORGANIC FERTILIZERS ARE PREFERRED TO SYNTHETIC FERTILIZERS. BONE MEAL OR SEAWED BASED PRODUCTS ARE AVAILABLE COMMERCIALY AND ARE RECOMMENDED. THEY HAVE THE ABILITY TO SUPPLY NUTRIENTS TO THE PLANT AS NEEDED WHILE MINIMIZING THE RISK OF EXCESS NUTRIENTS ENTERING THE FOREST SYSTEM AND WATER SUPPLY.

MAINTENANCE SCHEDULE

- ANNUAL MAINTENANCE DURING THE GROWING SEASON, FOR A MINIMUM OF TWO (2) YEAR PERIOD.
- INSPECT PLANTED STOCK FOR MORTALITY. REMOVE AND REPLACE ANY DEAD OR DISEASED PLANTINGS.
- EXPECT VOLUNTEER SEEDING OF NATIVE, LOCAL AND ENDEMIC VEGETATION TO OCCUR. DO NOT DISCOURAGE THIS GROWTH UNLESS IT NEGATIVELY EFFECTS THE PLANTED STOCK.
- MANUALLY REMOVE AGGRESSIVE, NOXIOUS, INVASIVE SPECIES AND ALL HERBACEOUS VEGETATION WITHIN A 3-FOOT RADIUS SURROUNDING THE PLANTED WOODY NURSERY STOCK.
- REMOVE AND DISPOSE OF ANY MAN-MADE TRASH, INCLUDING ITEMS CONTAINED WITHIN THE PLANTING AREA. DO NOT REMOVE DOWN AND DEAD MATERIAL NATURALLY OCCURRING OR ACCUMULATING, UNLESS IT IS SMOTHERING PLANTING STOCK OR INTERFERES WITH THE REFORESTATION PLANTING.
- A 75 PERCENT SURVIVAL OF PLANTED STOCK MUST BE ACHIEVED AT THE END OF THE 24 MONTH MANAGEMENT PERIOD. IF NOT, ADDITIONAL PLANTINGS WILL BE REQUIRED TO BRING THE PLANTED STOCK SURVIVAL RATE UP TO 75%.

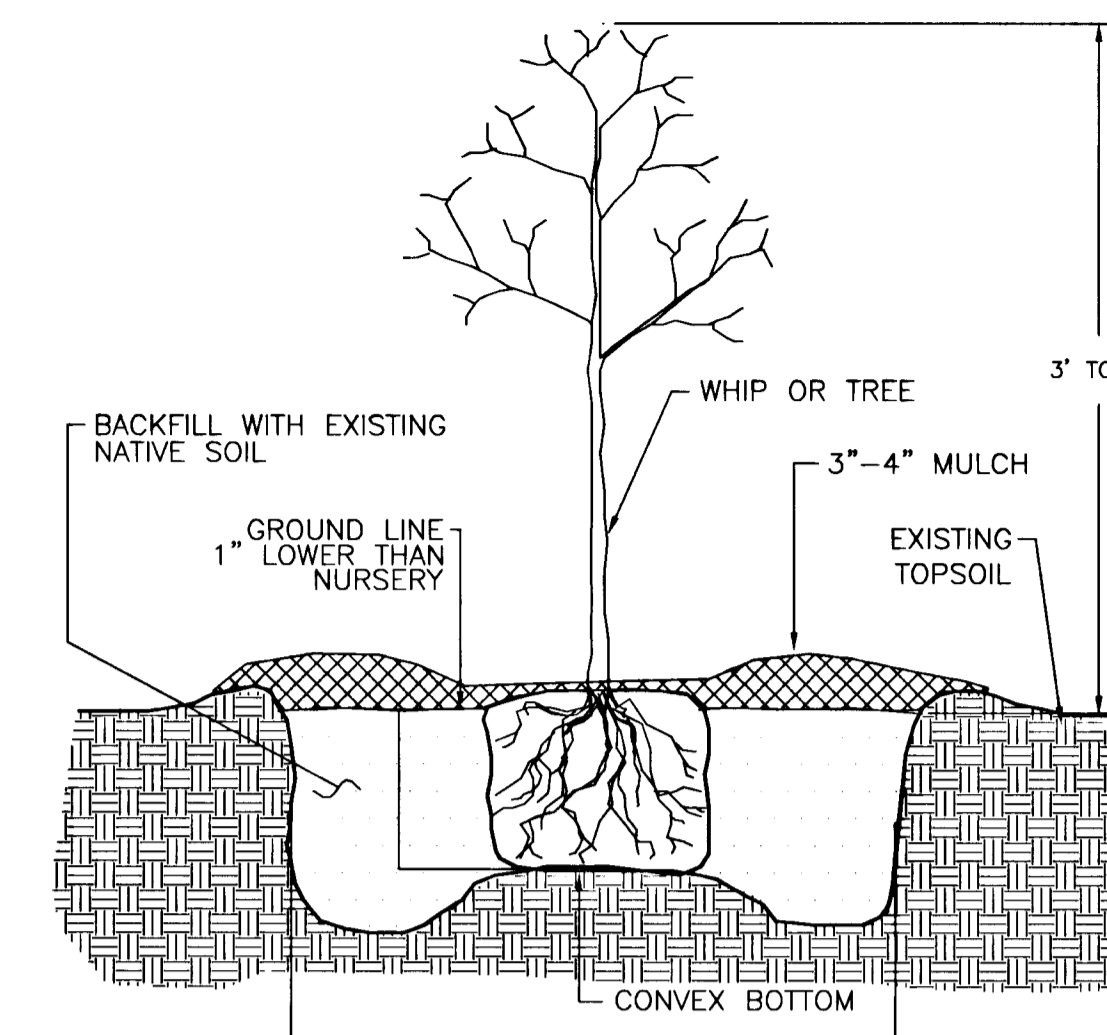
SUPERVISION

- ALL FOREST CONSERVATION ACTIVITIES SHALL BE DONE UNDER THE DIRECT SUPERVISION OF SOMEONE FROM THE DESIGN TEAM OR OTHER "QUALIFIED PROFESSIONAL" AS DETERMINED BY THE REQUIREMENTS OF COMAR 08.19.06.01 AND THE MARYLAND DEPARTMENT OF NATURAL RESOURCES, PUBLIC LANDS AND FORESTRY DIVISION.



SIGNAGE DETAILS

NOT TO SCALE

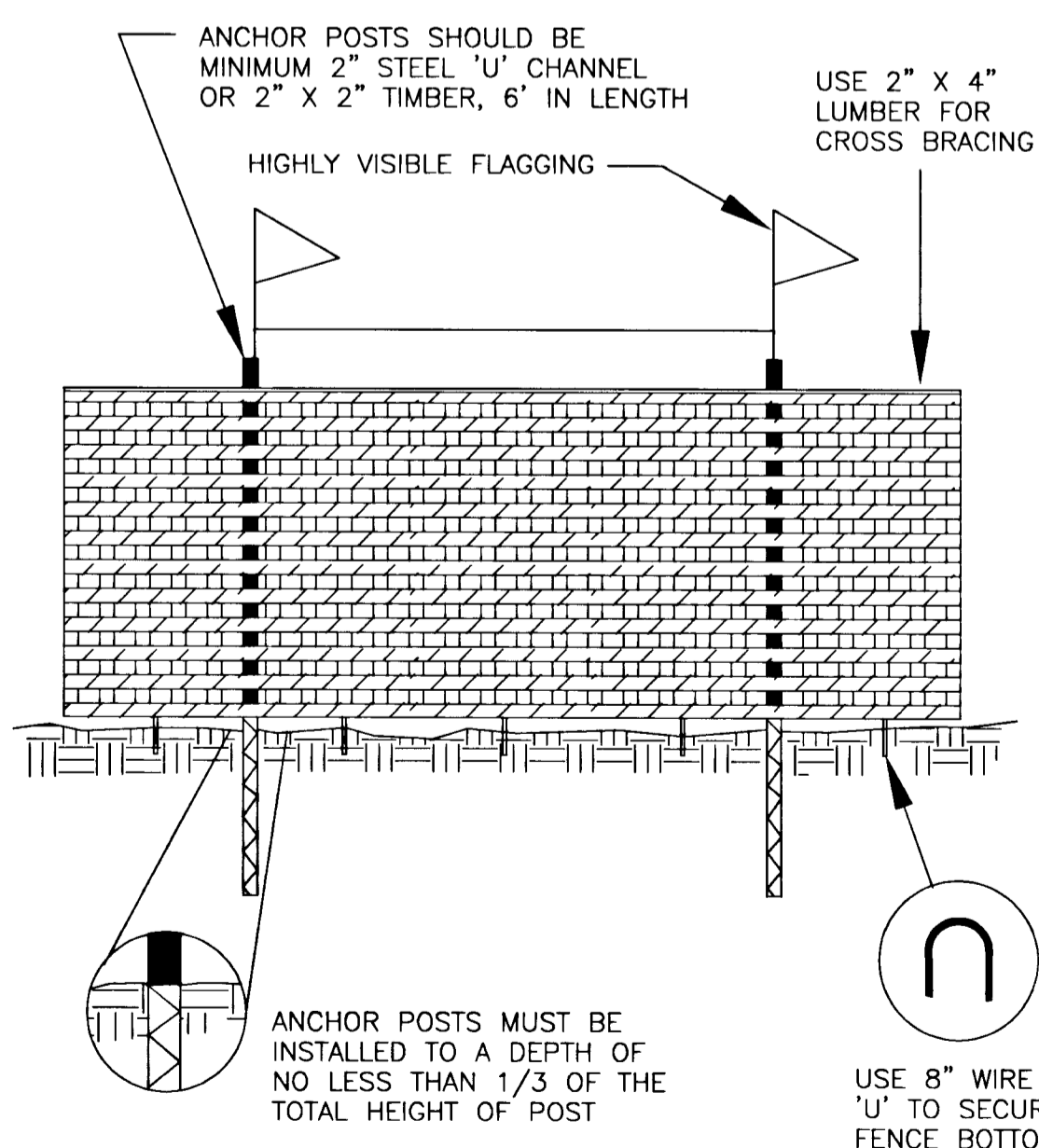


TREE PLANTING DETAIL

CONTAINER GROWN

PROTECTIVE FENCE DETAIL

BLAZE ORANGE PLASTIC MESH



- NOTES
- FOREST PROTECTION DEVICE ONLY.
 - RETENTION AREA WILL BE SET AS PART OF THE REVIEW PROCESS.
 - BOUNDARIES OF RETENTION AREA SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING DEVICE.
 - ROOT DAMAGE SHOULD BE AVOIDED.
 - PROTECTIVE SIGNAGE MAY ALSO BE USED.
 - DEVICE SHOULD BE MAINTAINED THROUGHOUT CONSTRUCTION.

APPROVED: DEPARTMENT OF PUBLIC WORKS

Hamide Shakh 12/29/98
CHIEF BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chris Hamilton 1/19/99
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

William 1/4/99
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

MD DNR QUALIFIED PROFESSIONAL

Stephanie Demchik
STEPHANIE DEMCHIK

REPLACEMENT SHEET

OWNER
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P.O. BOX 39
COLUMBIA, MD 21045
Phone: (410) 792-2100

date	1998
DEC	engineering
94029	illustration
SJD	SJD
scale	1" = 100'
approval	RJH

date	
description	revisions
no.	

HOLLY HILLS, SECTION I
A RESUBDIVISION OF LOT 4, HOLLY HILLS ESTATES
TAX MAP 14 - PARCEL 92
FOURTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
FOREST CONSERVATION NOTES, SPECIFICATIONS, & DETAILS

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