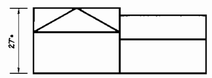
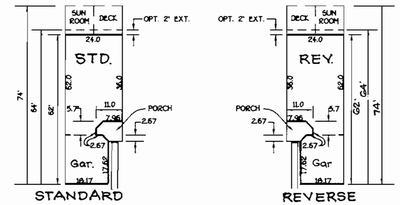
SHEET INDEX	
Sheet No.	Description
1 & 2	Site Development Plan
3 & 4	Sediment Erosion and Landscape Plan
5	Detail Sheet

LEGEND	
Symbol	Description
	Existing Contour 2' Interval
	Existing Contour 10' Interval
	Proposed Contour 2' Interval
	Proposed Contour 10' Interval
+ 624.00	Spot Elevation
-SF— SF-	Silt Fence
	Proposed Walkout
	Earth Dike
-X — X -	Tree Protection
	Existing Tree Line
L.O.D.	Limit Of Disturbance
	Existing Street Tree



TYPICAL BUILDING ELEVATION DETAIL



STANDARD REVERSE

TYPICAL BUILDING

SCALE: 1" = 30'

House sq. Footage with all opt. 1624.42 §

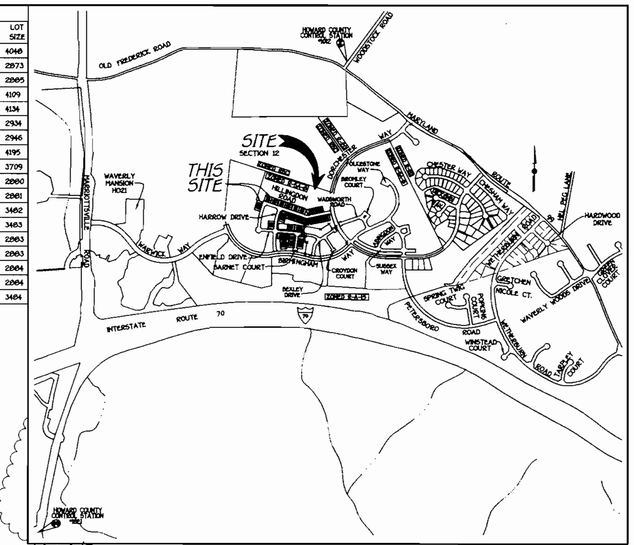
$ without Options 1336.42 §

with 2' opt O.H 1504.42 § (no G.R)

TYPICAL 4 UNIT BUILDING

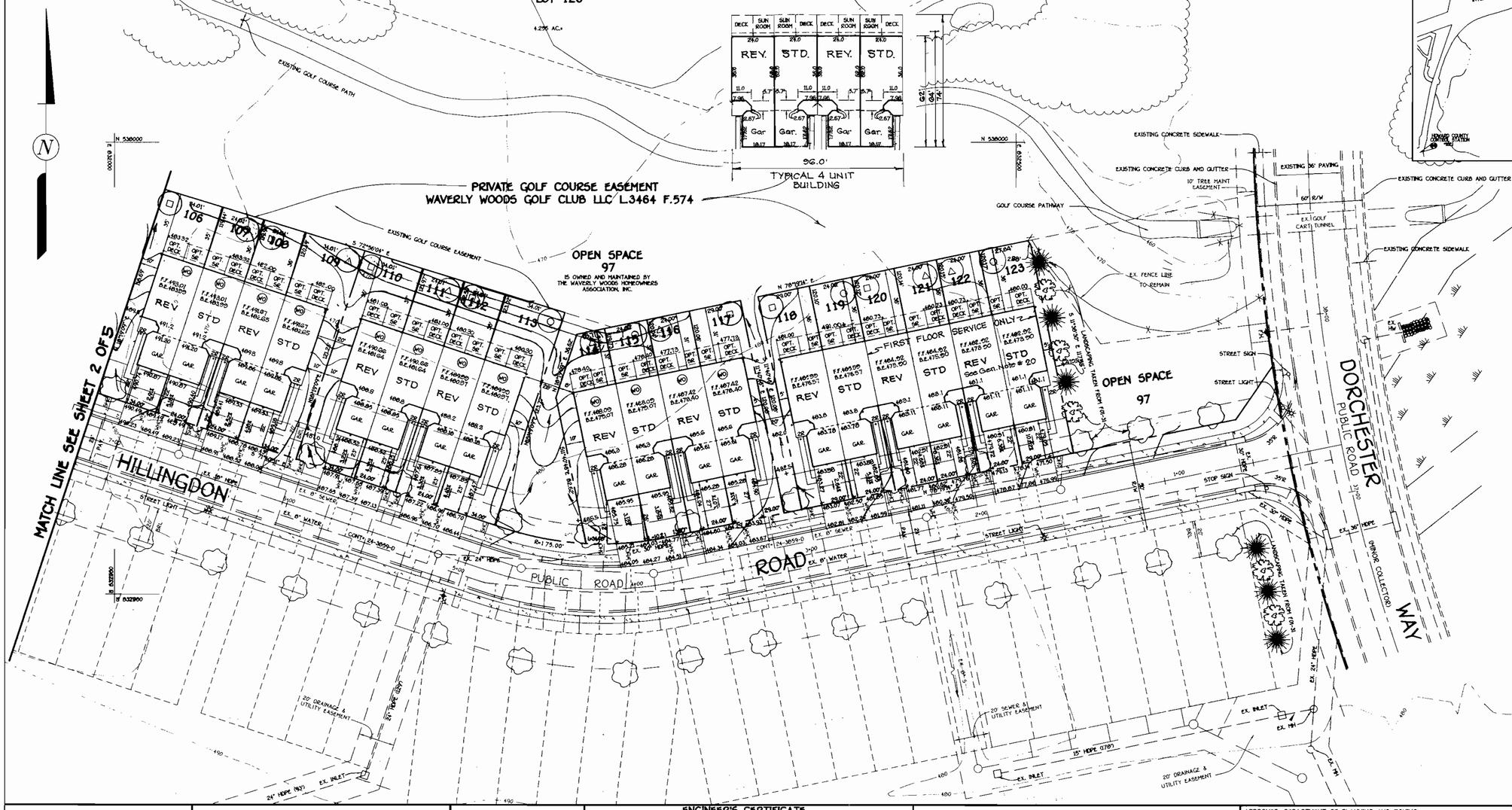
LOT INFORMATION

LOT NUMBER	STREET ADDRESS	MIN. CELLAR ELEV.	INV. ELEV @ PROPERTY LINE (S.H.C.)	LOT COVERAGE	DWELLING SIZE	LOT SIZE
106	10654 HILLINGDON ROAD	482.98	478.28	40%	1624.42	4048
107	10652 HILLINGDON ROAD	481.95	477.25	57%	1624.42	2873
108	10650 HILLINGDON ROAD	481.65	476.95	56%	1624.42	2885
109	10648 HILLINGDON ROAD	480.75	476.05	40%	1624.42	4109
110	10646 HILLINGDON ROAD	480.57	475.87	39%	1624.42	4134
111	10644 HILLINGDON ROAD	479.68	474.98	55%	1624.42	2934
112	10642 HILLINGDON ROAD	479.57	474.87	55%	1624.42	2946
113	10640 HILLINGDON ROAD	478.86	473.96	39%	1624.42	4195
114	10630 HILLINGDON ROAD	477.06	472.37	44%	1624.42	3709
115	10628 HILLINGDON ROAD	476.66	471.66	56%	1624.42	2880
116	10626 HILLINGDON ROAD	476.31	471.61	56%	1624.42	2881
117	10624 HILLINGDON ROAD	476.11	471.41	47%	1624.42	3462
118	10620 HILLINGDON ROAD	474.72	471.12	47%	1624.42	3463
119	10618 HILLINGDON ROAD	474.50	470.90	56%	1624.42	2883
120	10616 HILLINGDON ROAD	475.73	471.03	56%	1624.42	2883
121	10614 HILLINGDON ROAD	475.89	471.19	56%	1624.42	2884
122	10612 HILLINGDON ROAD	475.96	471.26	56%	1624.42	2884
123	10610 HILLINGDON ROAD	476.39	471.69	47%	1624.42	3484



VICINITY MAP

SCALE: 1" = 1200'



GENERAL NOTES

1. THE SUBJECT PROPERTY IS ZONED R-SA-8 PER THE 10-18-93 COMPREHENSIVE ZONING PLAN.
2. IN ACCORDANCE WITH SECTION 128 OF HOWARD COUNTY ZONING REGULATIONS, BAY WINDOWS, CHIMNEYS OR EXTERIOR STAIRWAYS NOT MORE THAN 18 FEET IN WIDTH MAY PROJECT NOT MORE THAN 4 FEET INTO ANY SETBACKS, PORCHES OR DECKS, OPEN OR ENCLOSED MAY PROJECT NOT MORE THAN 10 FEET INTO THE FRONT OR REAR YARD SETBACK (APPLIES FOR RESIDENTIAL SDP'S)
3. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST (5) FIVE WORKING DAYS PRIOR TO THE START OF WORK.
4. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
5. THIS PROJECT IS SUBJECT TO HOWARD COUNTY FILES: S 94-07 P 00-17, F 01-31, ZB 929-M
6. BOUNDARY AND TOPOGRAPHIC SURVEY PERFORMED BY: FISHER COLLINS AND CARTER INC. ON OR ABOUT APRIL, 1996
7. HORIZONTAL AND VERTICAL CONTROL DATUM IS BASED ON HOWARD COUNTY GEODETIC CONTROL STATIONS:
   HOWARD COUNTY MONUMENT 1012 — N 601060.177 ELEV. = 445.577, E 1345336.7980
   HOWARD COUNTY MONUMENT 1561 — N 593250.9322 ELEV. = 509.924, E 1340912.7110
8. ANY DAMAGE TO THE COUNTY'S RIGHT-OF-WAY SHALL BE CORRECTED AT THE DEVELOPER'S EXPENSE.
9. THIS PLAN IS FOR HOUSE SITING AND LOT GRADING ONLY. IMPROVEMENTS SHOWN WITHIN THE RIGHTS-OF-WAYS OF THIS S.D.P. ARE NOT USED FOR CONSTRUCTION. FOR CONSTRUCTION SEE APPROVED ROAD CONSTRUCTION PLANS F 01-31 AND/OR APPROVED WATER AND SEWER PLANS CONTRACT NO. 24-3659-D
10. CONTRACTOR WILL CHECK SEWER HOUSE CONNECTION ELEVATION AT EASEMENT LINE PRIOR TO CONSTRUCTION.
11. STORMWATER MANAGEMENT OBLIGATIONS ARE FULFILLED UNDER F 01-31
12. THIS PLAN IS SUBJECT TO WAIVER PETITION NO. WP 95-94 FROM SEC. 16.116A THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, WHICH RESTRICTS GRADING AND REMOVAL OF VEGETATIVE COVER FROM WETLANDS AND STREAM BUFFER.
13. SITE ANALYSIS DATA:
    A. TOTAL PROJECT AREA: 2.95 AC.±
    B. AREA OF PLAN SUBMISSION 2.95 AC.±
    C. LIMIT OF DISTURBED AREA: 3.11 AC.±
    D. PRESENT ZONING: R-SA-8
    E. PROPOSED USE FOR SITE AND STRUCTURES: TOWNHOUSES ZONE R-SA-8
    F. MIN. LOT COVERAGE: 60%
    G. TOTAL NUMBER OF UNITS PROPOSED: 40
    H. NUMBER OF PARKING SPACES REQUIRED: 80 (2 SPACES PER DWELLING UNIT)
    I. NUMBER OF PARKING SPACES PROVIDED: 80
    J. OPEN SPACE REQUIREMENTS ARE PROVIDED 120 LOTS X 200 = 24000 Sq.ft.
    K. RECREATIONAL OPEN SPACE REQUIREMENTS ARE PROVIDED FOR SECTION 12 (LOTS 8 & 97) 26,280 Sq.ft
14. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISION OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE GRADING PERMIT IN THE AMOUNT OF TWELVE THOUSAND DOLLARS ($12,000).
15. GARAGES SHALL BE USED FOR PARKING PURPOSE ONLY IN ACCORDANCE WITH SECTION 133.D.2.A. OF THE HOWARD COUNTY ZONING REGULATIONS.
16. TYPICAL DRIVEWAY APRON DETAIL FOR ALL GARAGE UNITS TO BE HOWARD COUNTY CLOSED SECTION DETAIL. SEE SHEET 5 OF 5 FOR SPECIFICATIONS. HO. CO. STANDARD R6.01
17. THE FOREST CONSERVATION OBLIGATION WAS SATISFIED UNDER F-01-31. THE CREATION OF A 1.66 ACRE REFORESTATION EASEMENT.
18. OPEN DECKS ARE NOT CONSIDERED STRUCTURES FOR CALCULATING LOT COVERAGE ON SINGLE FAMILY ATTACHED DWELLINGS PER HOWARD COUNTY ZONING REGULATIONS SECTION 128 A.(2).
19. ALL DWELLINGS ARE SUBJECT TO SECTION 128.A.1. b & c OF THE HOWARD COUNTY ZONING REGULATIONS.
20. Lots 120 THRU 123 have first floor gravity sewer service only. Basement will not sewer by gravity
21. No clearing, grading or construction is permitted within the 25' wetland buffer and the forest conservation easement, except as shown on the approved road constr. dwg. F-01-31.

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

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 Howard Soil Conservation District."

Signature of Engineer EARL D COLLINS — Date 4-9-01

DEVELOPER'S CERTIFICATE

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

Signature of Developer/BUILDER HUGH G GAY — Date 4-9-01

Reviewed for HOWARD SCD and meets Technical Requirements.

H.C.D.A.-Natural Resources Conservation Service — Date 4/6/01

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.

Howard SCD — Date 4/6/01

OWNER/DEVELOPER	BUILDER
WAVERLY WOODS DEVELOPMENT CORP. C/O LAND DESIGN AND DEVELOPMENT CORP. 8000 MAIN STREET ELLICOTT CITY, MD 21043	SHC- HILLINGDON, LLC 1626 CROFTON BOULEVARD SUITE 7 CROFTON, MARYLAND 21114

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — Date 5/24/01

Chief, Development Engineering Division — Date 4/12/01

Director - Department of Planning and Zoning — Date 5/25/01

PROJECT		SECTION	LOT NO.
GTW'S WAVERLY WOODS		12	83-96 & 98-123

PLAT	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
14789-14797	5	R-SA-8	16	THIRD	6030

WATER CODE	SEWER CODE
H03	5993000

SITE DEVELOPMENT PLAN

GTW'S WAVERLY WOODS

SECTION 12

LOTS 83 THRU 96 AND LOTS 98 THRU 123

SINGLE FAMILY ATTACHED DWELLINGS

(A SUBDIVISION OF PART OF THE PROPERTY OF GTW JOINT VENTURE)

LIBER 2222, FOLIO 361

ZONED R-SA-8

TAX MAP No: 16 PART OF PARCEL: 20

THIRD ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

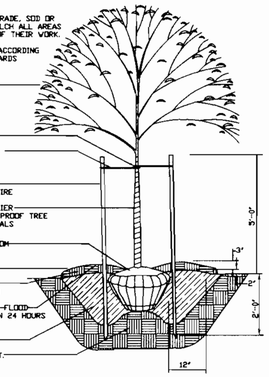
SCALE: 1" = 30' DATE: JULY, 2000

SHEET 1 OF 5

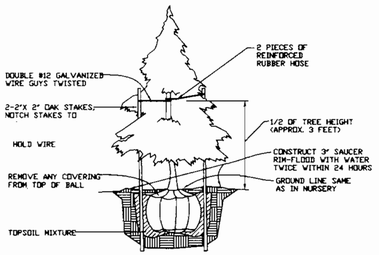
SDP 01-101

NOTE: CONTRACTOR TO REGRADE, SOD OR HYDROSEED AND STRAW MULCH ALL AREAS DISTURBED AS A RESULT OF THEIR WORK.

SPRAY WITH WILT-PROOF ACCORDING TO MANUFACTURERS STANDARDS



TREE PLANTING DETAIL



EVERGREEN PLANTING DETAIL

PLANTING SPECIFICATIONS

Plants, related material, and operations shall meet the detailed description as given on the plans and as described herein.

All plant material, unless otherwise specified, shall be nursery grown, uniformly branched, have a vigorous root system, and shall conform to the species, size, root and shape shown on the plant list and the American Association of Nurserymen (AAN) Standards. Plant material shall be healthy, vigorous, free from defects, decay, disfiguring roots, sun scald injuries, abrasions of the bark, plant disease, insect pest eggs, borers and all forms of insect infestations or objectionable disfigurements. Plant material that is weak or which has been cut back from larger grades to meet specified requirements will be rejected. Trees with forked leaders will not be accepted. All plants shall be freshly dug; no heeled-in plants from cold storage will be accepted.

Unless otherwise specified, all general conditions, planting operations, details and planting specification shall conform to "Landscape Specification Guidelines For Baltimore-Washington Metropolitan Areas", (hereinafter "Landscape Guidelines") approved by the Landscape Contractors Association of Metropolitan Washington and the Potomac Chapter of the American Society of Landscape Architect, latest edition, including all agenda.

Contractor shall be required to guarantee all plant material for a period of one year after date of acceptance in accordance with the appropriate section of the Landscape Guidelines. Contractor's attention is directed to the maintenance requirements found within the one year specifications including watering and replacement of specified plant material.

Contractor shall be responsible for notifying utility companies, utility contractors and "Miss Utility" a minimum of 48 hours prior to beginning any work. Contractor may make minor adjustments in spacing and location of plant material to avoid conflicts with utilities. Damage to existing structure and utilities shall be repaired at the expense of the Contractor.

Protection of existing vegetation to remain shall be accomplished by the temporary installation of 4 foot high snow fence or blaze orange safety fence at the drip line.

Contractor is responsible for installing all material in the proper planting season for each plant type. All planting is to be completed within the growing season of completion of site construction.

Bid shall be base on actual site conditions. No extra payment shall be made for work arising from site conditions differing from those indicated on drawings and specifications

Plant quantities are provided for the convenience of the contractor only. If discrepancies exist between quantities shown on plan and those shown on the plant list, the quantities on the plan take precedence

All shrubs shall be planted in continuous trenches or prepared planting beds and mulched with composted hardwood mulch as details and specified except where noted on plans.

Positive drainage shall be maintained in planting beds (2 percent slope).

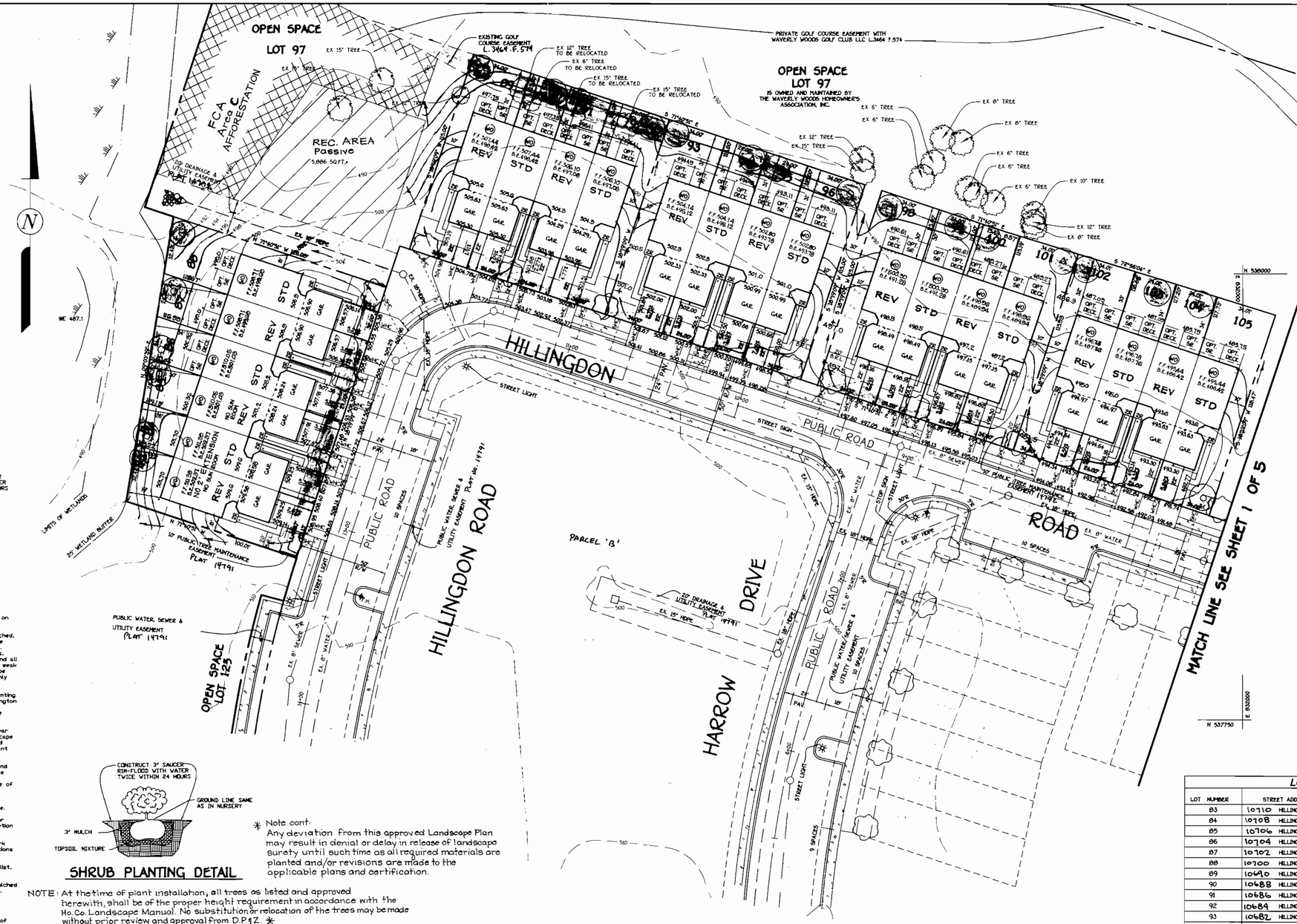
Planting mix shall be as follows: Deciduous Plants - Two parts topsoil, one part well-rotted cow or horse manure. Add 3 lbs. of standard fertilizer per cubic yard of planting mix. Evergreen Plants - two parts topsoil, one part humus or owner approved organic material. Add 3 lbs. of evergreen (acidic) fertilizer per cubic yard of planting mix. Topsoil shall conform to the Landscape Guidelines.

Weed Control: Incorporate a pre-emergent herbicide into the planting bed following recommended rates on the label. Caution: Be sure to carefully check the chemical used to assure its adaptability to the specific ground cover to be treated.

All areas within contract limits disturbed during or prior to construction not designated to receive plants and mulch shall be fine graded and seeded.

This plan is intended for landscape use only. see other plan sheets for more information on grading, sediment control, layout, etc.

TREE PLANTING DETAIL



SHRUB PLANTING DETAIL

✳ Note cont:
Any deviation from this approved Landscape Plan may result in denial or delay in release of landscape surety until such time as all required materials are planted and/or revisions are made to the applicable plans and certification.

NOTE: At the time of plant installation, all trees as listed and approved herewith, shall be of the proper height requirement in accordance with the Ho. Co. Landscape Manual. No substitution or relocation of the trees may be made without prior review and approval from D.P.&Z. ✳

LANDSCAPE SCHEDULE

QUANTITY	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE
12	△	FRAXINUS AMERICANA' AUTUMN PURPLE	WHITE ASH	2 1/2"-3" CAL.
14	◻	LIQUIDAMBER STRACIFLUA'	AMERICAN SWEETGUM	2 1/2"-3" CAL.
14	○	ACER RUBRUM' OCTOBER GLORY	OCTOBER GLORY MAPLE	2 1/2"-3" CAL.

FINICAL SURETY FOR THE INTERNAL LANDSCAPING IN THE AMOUNT OF $2,000 FOR THE REQUIRED 40 TREES WILL BE PAID FOR AT TIME OF GRADING PERMIT APPLICATION BY THE BUILDER.

DEVELOPER/BUILDER CERTIFICATE

"I/We certify that landscaping shown on this plan will be done according to this plan, Sect.16.124 of the Ho. Co. Code and the Ho. Co. Landscape Manual. I/We further certify that upon completion, a certification of landscape installation, accompanied by an executed one year guarantee of plant materials will be submitted to the Dept. of Planning and Zoning

Hugh G Goy — Signature of Developer/Builder — 4-9-01 Date

LOT INFORMATION

LOT NUMBER	STREET ADDRESS	MIN. CELLAR ELEV.	INV. ELEV + PROPERTY LINE (S.H.C.)	LOT COVERAGE	DWELLING SIZE	LOT SIZE
83	10710 HILLINGDON ROAD	500.51	495.91	41%	1336.42	3283
84	10708 HILLINGDON ROAD	499.22	494.62	52%	1336.42	2572
85	10706 HILLINGDON ROAD	499.01	494.41	56%	1504.42	2666
86	10704 HILLINGDON ROAD	497.80	493.20	59%	1624.42	2760
87	10702 HILLINGDON ROAD	497.59	492.99	57%	1624.42	2854
88	10700 HILLINGDON ROAD	497.33	492.63	41%	1624.42	3951
89	10690 HILLINGDON ROAD	496.74	492.04	42%	1624.42	3910
90	10688 HILLINGDON ROAD	495.56	490.86	59%	1624.42	2760
91	10686 HILLINGDON ROAD	495.24	490.54	59%	1624.42	2760
92	10684 HILLINGDON ROAD	493.92	489.22	42%	1624.42	3910
93	10682 HILLINGDON ROAD	493.32	488.62	42%	1624.42	3910
94	10680 HILLINGDON ROAD	491.97	487.27	59%	1624.42	2760
95	10678 HILLINGDON ROAD	491.73	487.03	59%	1624.42	2760
96	10676 HILLINGDON ROAD	490.26	485.56	42%	1624.42	3910
98	10672 HILLINGDON ROAD	489.66	484.96	42%	1624.42	3910
99	10670 HILLINGDON ROAD	488.32	483.62	59%	1624.42	2760
100	10668 HILLINGDON ROAD	488.02	483.32	59%	1624.42	2761
101	10666 HILLINGDON ROAD	486.67	481.97	41%	1624.42	8929
102	10664 HILLINGDON ROAD	486.40	481.70	41%	1624.42	3954
103	10662 HILLINGDON ROAD	485.13	480.43	58%	1624.42	2807
104	10660 HILLINGDON ROAD	484.89	480.19	58%	1624.42	2819
105	10658 HILLINGDON ROAD	483.65	478.95	40%	1624.42	4015

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(410) 461 - 2855

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 Howard Soil Conservation District."

Signature of Engineer EARL D. COLLINS — 4-9-01 Date

DEVELOPER'S CERTIFICATE

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

Signature of Developer / Builder Huge G.Goy — 4-9-01 Date

Reviewed for HOWARD SCD and meets Technical Requirements.

U.S.D.A.-Natural Resources Conservation Service — 4/16/01 Date

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.

Howard SCD — 4/16/01 Date

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — 5/24/01 Date

Chief, Development Engineering Division — 4/23/01 Date

Director, Department of Planning and Zoning — 5/25/01 Date

OWNER/DEVELOPER

WAVERLY WOODS DEVELOPMENT CORP.
C/O LAND DESIGN AND DEVELOPMENT CORP.
8000 MAIN STREET
ELLICOTT CITY, MD 21043

BUILDER

SHC-HILLINGDON, LLC
1551 CROFTON BOULEVARD SUITE 7
CROFTON, MARYLAND 21114

PROJECT		SECTION	LOT NO.
GTW'S WAVERLY WOODS		12	89-96 & 98-123
PLAT	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
14789-14797	5	R-SA-8	16	THIRD	6030
WATER CODE		SEWER CODE	
H03		5993000	

SITE DEVELOPMENT PLAN

GTW'S WAVERLY WOODS

SECTION 12

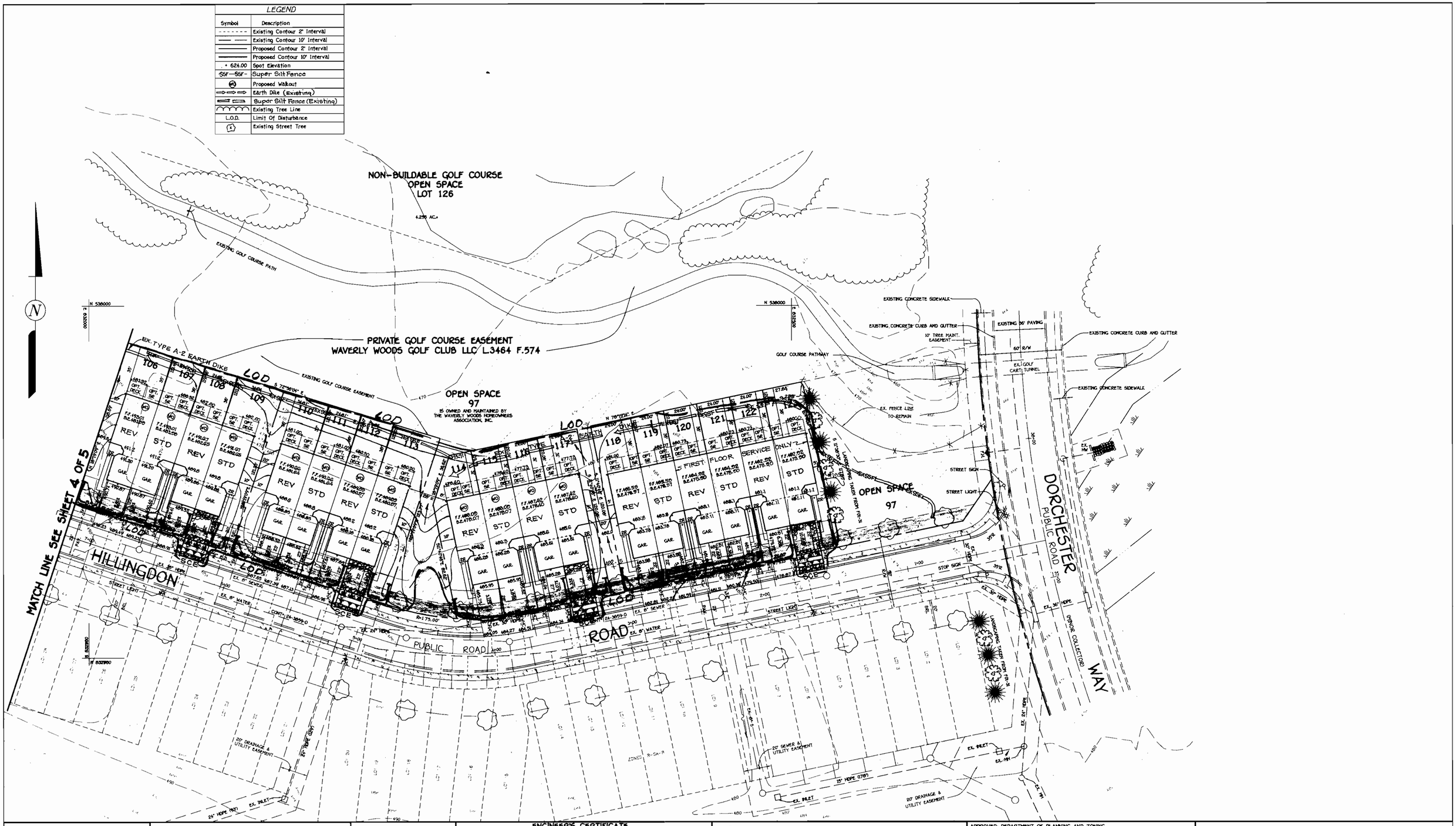
LOTS 83 THRU 96 AND LOTS 98 THRU 123

SINGLE FAMILY ATTACHED DWELLINGS
(A SUBDIVISION OF PART OF THE PROPERTY OF GTW JOINT VENTURE,

LIBER 2222, FOLIO 361
ZONED R-SA-8
TAX MAP No: 16 PART OF PARCEL: 20
THIRD ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
SCALE: 1" = 30' DATE: JULY, 2000
SHEET 2 OF 5

SDP 01-101

LEGEND	
Symbol	Description
- - - - - - -	Existing Contour 2' Interval
— — — —	Existing Contour 10' Interval
———	Proposed Contour 2' Interval
———	Proposed Contour 10' Interval
. + 624.00	Spot Elevation
SSF—SSF-	Super Silt Fence
WO	Proposed Walkout
⇒ ⇒ ⇒	Earth Dike (Existing)
⟹ ⟹	Super Silt Fence (Existing)
⌒⌒⌒	Existing Tree Line
L.O.D.	Limit Of Disturbance
(S)	Existing Street Tree



FISHER, COLLINS & CARTER, INC.
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CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

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

Signature of Engineer EARL D COLLINS — Date 4-9-01

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Signature of Developer/Builder Hugh G Gay — Date 4-9-01

Reviewed for HOWARD SCD and meets Technical Requirements.

U.S.D.A.-Natural Resources Conservation Service — Date 4/16/01

This development plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.

Howard SCD — Date 4/16/01

OWNER/DEVELOPER	BUILDER
WAVERLY WOODS DEVELOPMENT CORP. C/O LAND DESIGN AND DEVELOPMENT CORP. 8000 MAIN STREET ELLICOTT CITY, MD 21043	SHC- HILLINGDON, L.L.C. 1651 CROFTON BOULEVARD SUITE 7 CROFTON, MARYLAND 21114

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — Date 5/29/01

Chief, Development Engineering Division — Date 4/30/01

Director, Department of Planning and Zoning — Date 5/25/01

PROJECT	SECTION	LOT NO.
GTW'S WAVERLY WOODS	12	83-96 & 98-123

PLAT	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
14789-14797	5	R-SA-8	15	THIRD	6030

WATER CODE	SEWER CODE
H03	5993000

SEDIMENT AND EROSION CONTROL PLAN

GTW'S WAVERLY WOODS

SECTION 12

LOTS 83 THRU 96 AND LOTS 98 THRU 123

SINGLE FAMILY ATTACHED DWELLINGS

(A SUBDIVISION OF PART OF THE PROPERTY OF GTW JOINT VENTURE,

LIBER 2222, FOLIO 361

ZONED R-SA-8

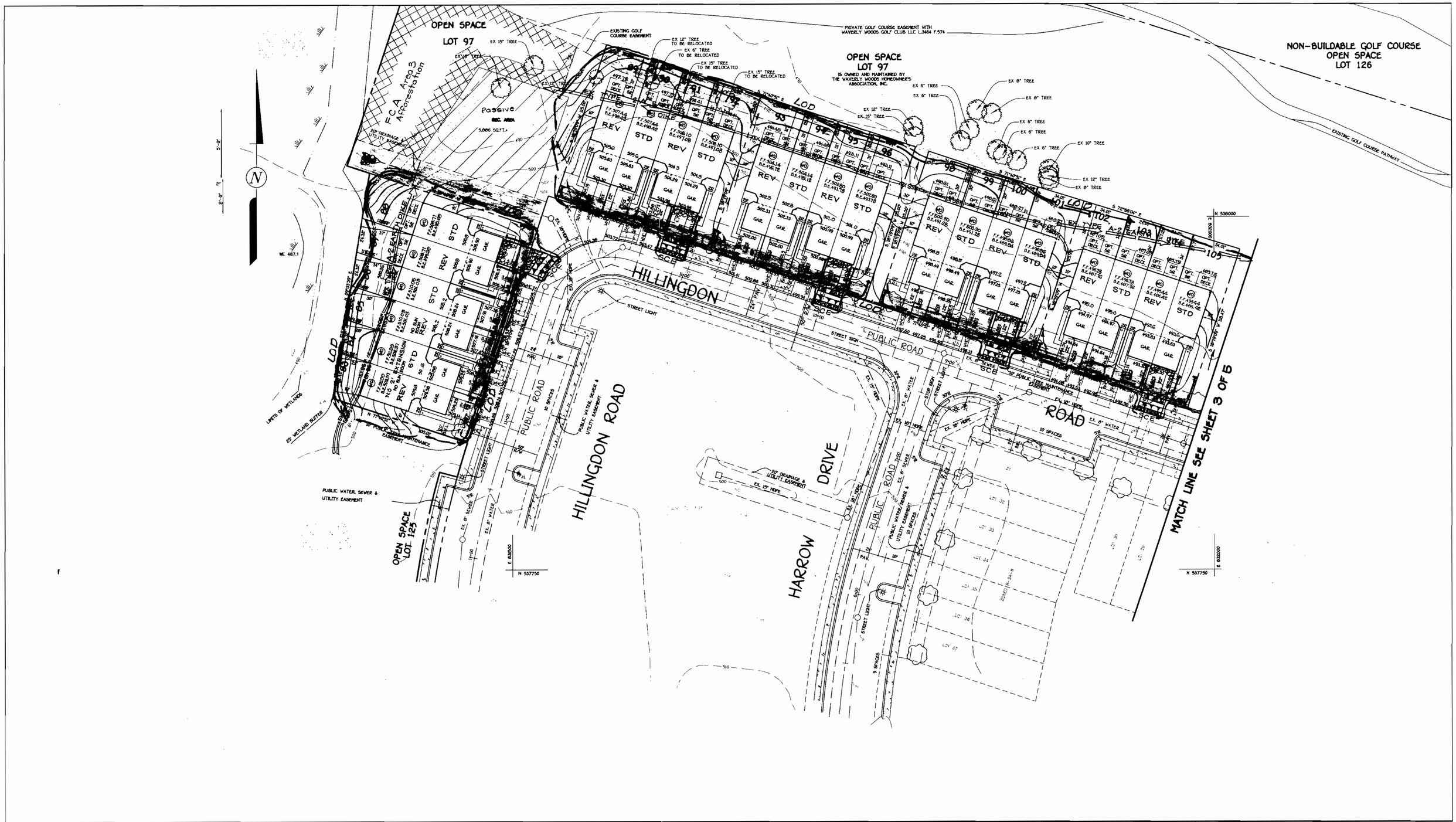
TAX MAP No. 16 PART OF PARCEL: 20

THIRD ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

SCALE: 1" = 30' DATE: JULY, 2000

SHEET 3 OF 5

SDP 01-101



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ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

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 Howard Soil Conservation District."

Signature of Engineer EARL D. COLLINS — Date 4-9-01

DEVELOPER'S CERTIFICATE

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

Signature of Developer/Builder Hugh G. Gay — Date 4-9-01

Reviewed for HOWARD SCD and meets Technical Requirements.

U.S.D.A.-Natural Resources Conservation Service — Date 4/16/01

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.

Howard SCD — Date 4/16/01

OWNER/DEVELOPER	BUILDER
WAVERLY WOODS DEVELOPMENT CORP. C/O LAND DESIGN AND DEVELOPMENT CORP. 8000 MAIN STREET ELLICOTT CITY, MD 21043	SHC- HILLINGDON, LLC 1051 CROFTON BOULEVARD SUITE 7 CROFTON, MARYLAND 21114

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — Date 5/24/01

Chief, Development Engineering Division — Date 4/20/01

Director - Department of Planning and Zoning — Date 5/25/01

PROJECT	SECTION	LOT NO.
GTW'S WAVERLY WOODS	12	89-96 & 98-123

PLAT	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
14789-14797	15	R-SA-8	16	THIRD	6030

WATER CODE	SEWER CODE
H03	5993000

SEDIMENT AND EROSION CONTROL PLAN

GTW'S WAVERLY WOODS

SECTION 12

LOTS 83 THRU 96 AND LOTS 98 THRU 123

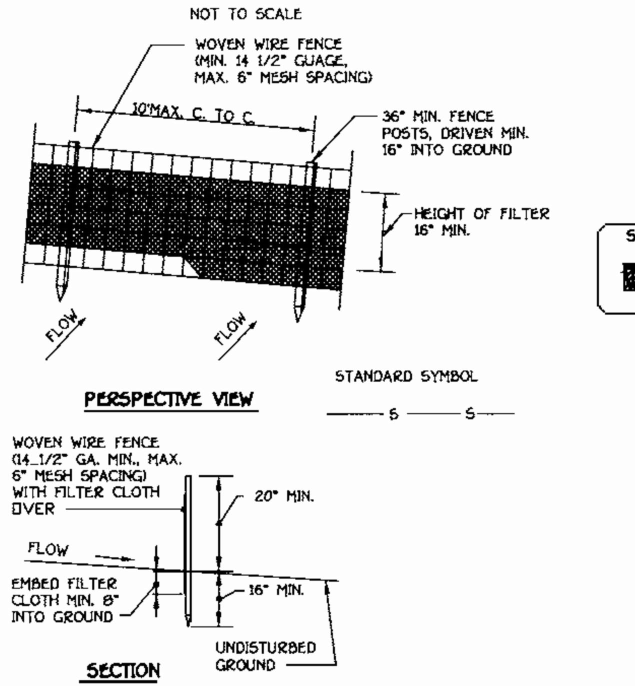
SINGLE FAMILY ATTACHED DWELLINGS
(A SUBDIVISION OF PART OF THE PROPERTY OF GTW JOINT VENTURE)

LIBER 2222, FOLIO 361
ZONED R-SA-8
TAX MAP No. 16 PART OF PARCEL: 20
THIRD ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
SCALE: 1" = 30' DATE: FEBRUARY, 2001
SHEET 4 OF 5

SDP 01-101

SILT FENCE

NOT TO SCALE

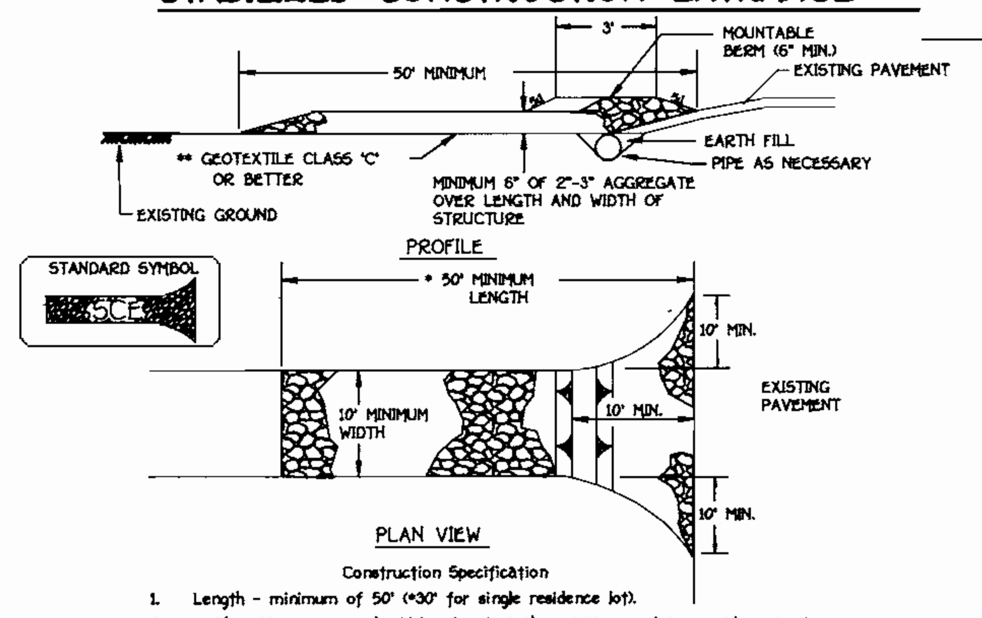


CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OF STAPLES.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

POSTS: STEEL EITHER T OR U TYPE OR 2" HARDWOOD
FENCE: WOVEN WIRE, 14. GA. 6" MAX. MESH OPENING
FILTER CLOTH: FILTER X, MIRAFI 100X, STABILINKA T14 ON OR APPROVED EQUAL
PREFABRICATED UNIT: GEOFAB, ENVIROFENCE, OR APPROVED EQUAL.

STABILIZED CONSTRUCTION ENTRANCE

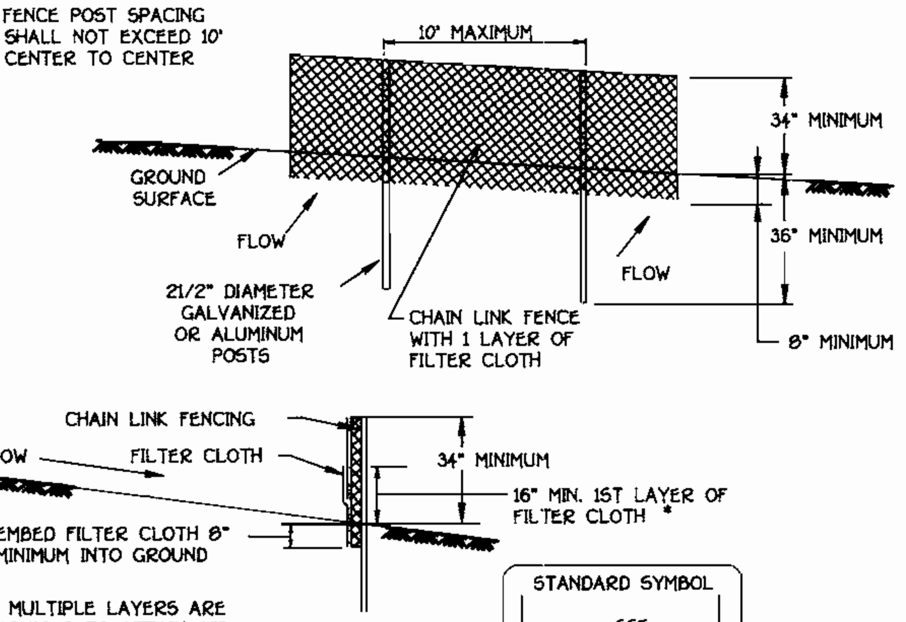


Construction Specification

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.

SUPER SILT FENCE

NOTE: FENCE POST SPACING SHALL NOT EXCEED 10' CENTER TO CENTER



Construction Specifications

1. Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6' fence shall be used, substituting 42" fabric and 6' length posts.

2. Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence.

3. Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.

4. Filter cloth shall be embedded a minimum of 8" into the ground.

5. When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded.

6. Maintenance shall be performed as needed and silt buildups removed when "bulges" develop in the silt fence, or when silt reaches 50% of fence height

7. Filter cloth 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/ft /minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322

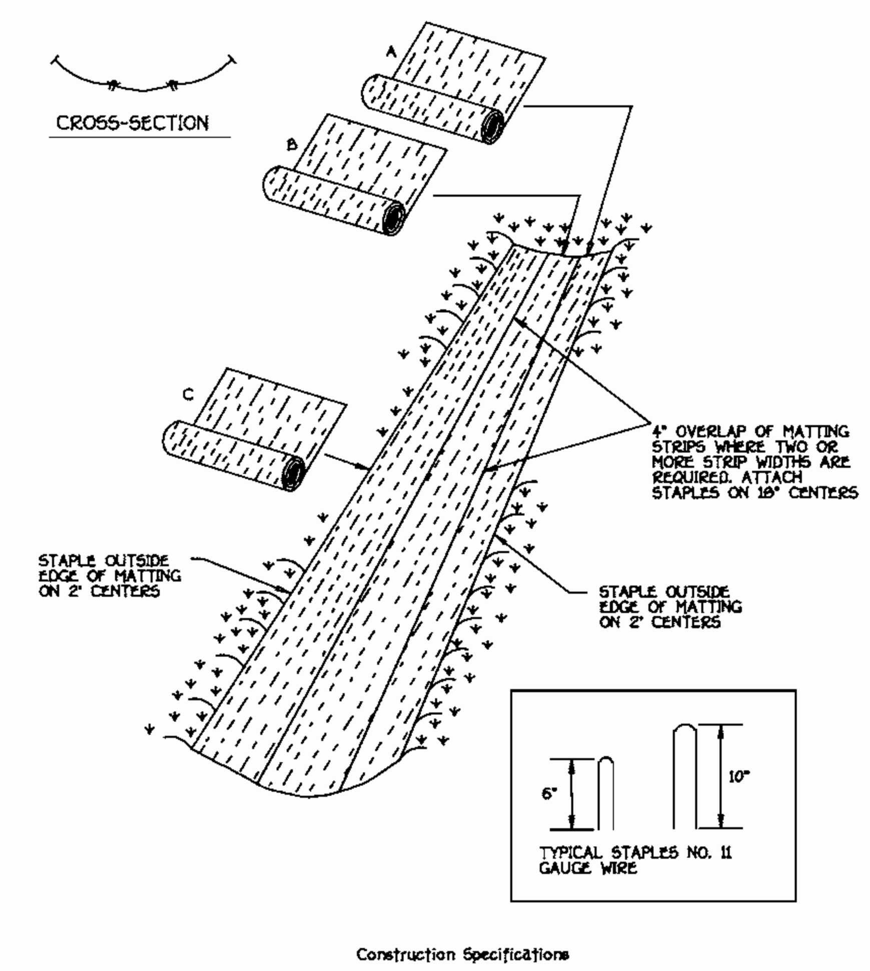
SEDIMENT CONTROL NOTES

1) A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LISCENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (313-1855).
2) 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.
3) FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: a) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3:1, b) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
4) 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.
5) ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING (SEC. 51), 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	2.95 ACRES
AREA DISTURBED	3.11 ACRES
AREA TO BE ROOFED OR PAVED	1.70 ACRES
AREA TO BE VEGETATIVELY STABILIZED	1.41 ACRES
TOTAL CUT	1000 CU.YDS.
TOTAL FILL	1000 CU.YDS.
OFFSITE WASTE/BORROW AREA LOCATION	CU.YDS.

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 CONTROLS 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 LENGHTS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

EROSION CONTROL MATTING



Construction Specifications

1. Key-in the matting by placing the top ends of the matting in a narrow trench, 6" in depth. Backfill the trench and tamp firmly to conform to the channel cross-section. Secure with a row of staples about 4" down slope from the trench. Spacing between staples is 6".
2. Staple the 4" overlap in the channel center using an 18" spacing between staples.
3. Before stapling the outer edges of the matting, make sure the matting is smooth and in firm contact with the soil.
4. Staples shall be placed 2' apart with 4 rows for each strip, 2 outer rows, and 2 alternating rows down the center.
5. Where one roll of matting ends and another begins, the end of the top strip shall overlap the upper end of the lower strip by 4", shiplap fashion. Reinforce the overlap with a double row of staples spaced 6" apart in a staggered pattern on either side.
6. The discharge end of the matting liner should be similarly secured with 2 double rows of staples.

Note: If flow will enter from the edge of the matting then the area effected by the flow must be keyed-in.

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 run-off to downstream areas, and improving wildlife habitat and visual resources.

CONDITIONS WHERE PRACTICE APPLIES

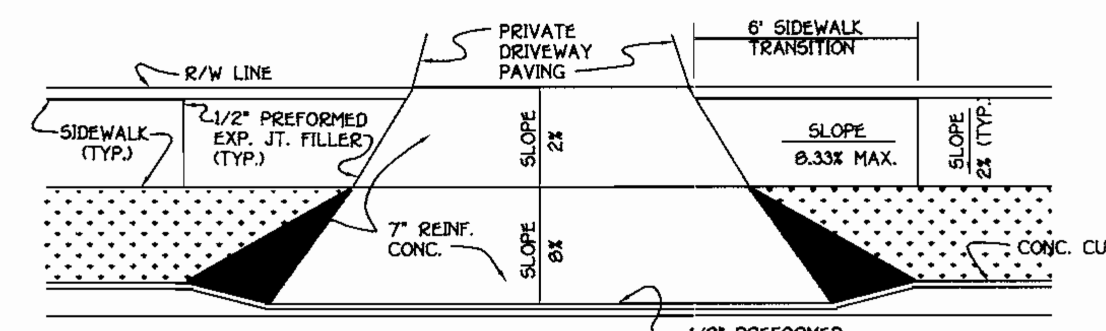
This practice shall be used on denuded areas as specified on the plans and may be used on highly erodible or critically eroding areas. This specification is divided into Temporary Seeding, to quickly establish vegetative cover for short duration (Up to one year), and Permanent Seeding, for long term 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 1 - VEGETATIVE STABILIZATION METHODS AND MATERIALS

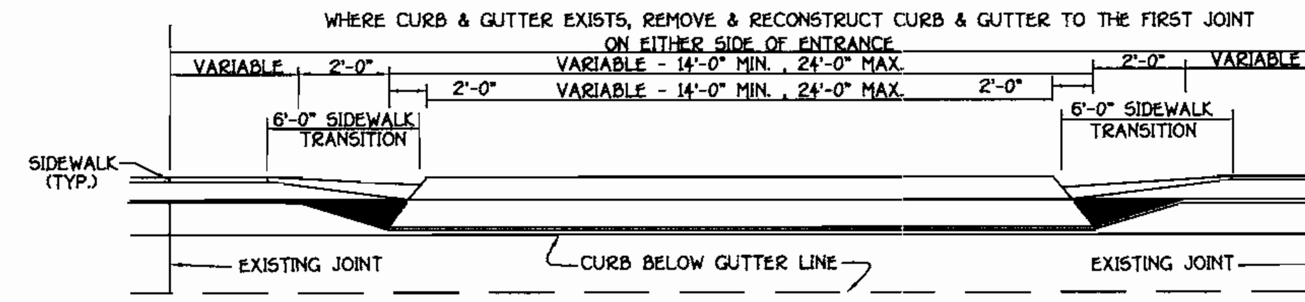
A. Site Preparation
   i. Install erosion and sediment control structures (either temporary or permanent) such as diversions, grade stabilization structures, berms, waterways, or sediment control basins.
   ii. Perform all grading operations at right angles to the slope. Final grading and shaping is 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. In corporate 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 lespedezas is to be planted, then a sandy soil (<30% silt plus clay) would be acceptable.
         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 loosened 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 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 soil test or as 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 and application. Where site conditions will not permit normal seedbed preparation, 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 seeded, 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 265 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, reasonable 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 along 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 crest 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.



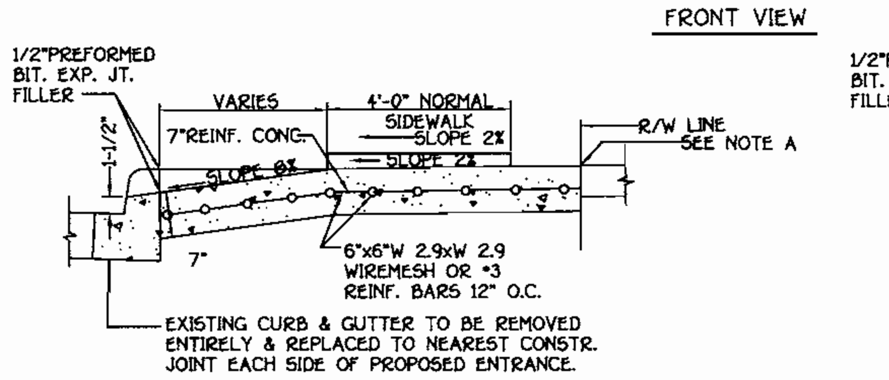
NOTE B: TIE-IN GRADE OF PRIVATE DRIVEWAY SHALL NOT EXCEED 14%.

DRIVEWAY ENTRANCE

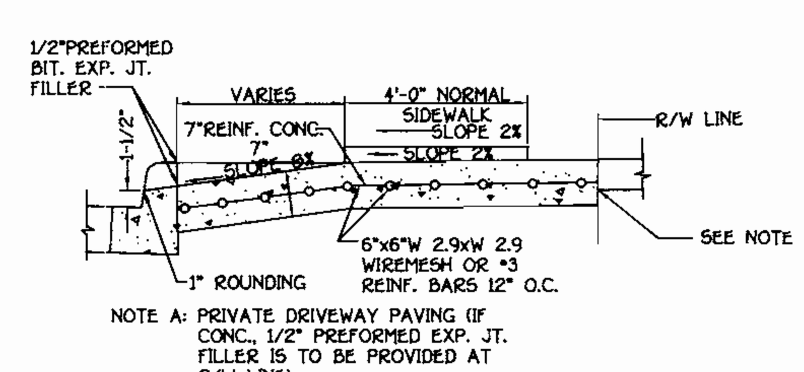
WHERE CURB & GUTTER EXISTS, REMOVE & RECONSTRUCT CURB & GUTTER TO THE FIRST JOINT ON EITHER SIDE OF ENTRANCE



FRONT VIEW



SECTION:DRIVEWAY IN EXISTING CURB



NOTE A: PRIVATE DRIVEWAY PAVING (IF CONC., 1/2" PREFORMED EXP. JT. FILLER IS TO BE PROVIDED AT R/W LINE)

SECTION:DRIVEWAY IN NEW CURB

RESIDENTIAL DRIVEWAY ENTRANCE
CLOSED SECTION W/STD. 7" COMB. CURB
AND GUTTER AND SIDEWALK SET BACK FROM CURB

NO SCALE

PERMANENT SEEDING NOTES

ALL DISTURBED AREAS SHALL BE STABILIZED AS FOLLOWS:

SEEDBED PREPARATION:
LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING.

SOIL AMENDMENTS:
APPLY TWO TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1,000 SQ.FT.) AND 600 LBS. PER ACRE 0-20-20 FERTILIZER (14 LBS./1,000 SQ.FT.) BEFORE SEEDING HARROW OR DISC INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS. PER ACRE 38-0-0 UREAFORM FERTILIZER (9 LBS./1,000 SQ.FT.) AND 500 LBS. PER ACRE (11.5 LBS./1,000 SQ.FT.) OF 10-20-20 FERTILIZER.

SEEDING:
FOR THE PERIODS MARCH 1 THROUGH APRIL 30, AND AUGUST 1 THROUGH OCTOBER 15, SEED WITH 100 LBS. PER ACRE (2.3 LBS./1,000 SQ.FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THROUGH JULY 31, SEED WITH 60 LBS/ACRE (1.4 LBS./1,000 SQ.FT.) KENTUCKY 31 TALL FESCUE AND 2 LBS. PER ACRE (0.05 LBS./1,000 SQ.FT.) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THROUGH FEBRUARY 28, PROJECT SITE BY: OPTION (1) - TWO TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING; OPTION (2) - USE SOD; OPTION (3) - SEED WITH 100 LBS./ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH TWO TONS/ACRE WELL ANCHORED STRAW. ALL SLOPES SHOULD BE HYDROSEEDED.

MULCHING:
APPLY 1 TO 2 TONS PER ACRE (10 TO 90 LBS./1,000 SQ.FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING 200 GALLONS PER ACRE (5 GAL./1,000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT ACRES. ON SLOPES 8 FEET OR HIGHER USE 348 GALLONS PER ACRE (8 GAL./1,000 SQ.FT.) FOR ANCHORING.

MAINTENANCE:
INSPECT ALL SEEDED AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

* FOR PUBLIC PONDS SUBSTITUTE CHEMUNG CROWNVETCH AT 15 LBS./ACRE AND KENTUCKY 31 TALL FESCUE AT 40 LBS/ACRE AS THE SEEDING REQUIRMENT. OPTIMUM SEEDING DATE FOR THIS MIXTURE IS MARCH 1 TO APRIL 30.

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, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS:
APPLY 600 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS./1,000 SQ.FT.)

SEEDING:
FOR THE PERIODS MARCH 1 THROUGH APRIL 30, AND AUGUST 15 THROUGH NOVEMBER 15, SEED WITH 1 BUSHEL PER ACRE OF ANNUAL RYE (3.2 LBS./ACRE OF WEEPING LOVEGRASS (.07 LBS./1,000 SQ.FT. FOR THE PERIOD NOVEMBER 16 THRU FEBRUARY 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 TO 2 TONS PER ACRE (70 TO 90 LBS./1,000 SQ.FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL.1,000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT ACRES ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL./1,000 SQ.FT.) FOR ANCHORING.

REFER TO THE 1988 MARYLAND STANDARDS AND SPECIFICATION FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

SEQUENCE OF CONSTRUCTION

1. OBTAIN GRADING PERMIT (10 DAYS)
2. REGRADE EXISTING SEDIMENT AND EROSION CONTROL DEVICES AS INDICATED ON PLAN. AND INSTALL NEW E/S CONTROL DEVICES. INSTALL TEMPORARY SEEDING. (3 DAYS)
3. MASS GRADE TO LIMITS OF DISTURBANCE. (10 DAYS).
4. CONSTRUCT BUILDINGS (1 YEAR).
5. FINE GRADE SITE AND INSTALL PERMANENT SEEDING AND LANDSCAPING. (10 DAYS)
6. REMOVE E & S CONTROL DEVICES AS UPLAND AREAS ARE STABILIZED AND PERMISSION IS GRANTED BY E & S CONTROL INSPECTOR. (4 DAYS)

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

STATE OF MARYLAND — EARL D. COLLINS — NO. 9754 — REGISTERED PROFESSIONAL ENGINEER

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 Howard Soil Conservation District."

Signature of Engineer EARL D COLLINS — 4-9-01 Date

DEVELOPER'S CERTIFICATE

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

Signature of Developer/Builder Hugh G. Gay — 4-9-01 Date

Reviewed for HOWARD SCD and meets Technical Requirements.
U.S.D.A.-Natural Resource Conservation Service — 4/16/01 Date

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.
Howard SCD — 4/16/01 Date

OWNER/DEVELOPER	BUILDER
WAVERLY WOODS DEVELOPMENT CORP. C/O LAND DESIGN AND DEVELOPMENT CORP. 8000 MAIN STREET ELLICOTT CITY, MD 21043	SHC-HILLINGDON, L.L.C. 1651 CROFTON BOULEVARD SUITE 7 CROFTON, MARYLAND 21114

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development — 5/24/01 Date
Chief, Development Engineering Division — 4/12/01 Date
Director - Department of Planning and Zoning — 5/25/01 Date

PROJECT				SECTION	LOT NO.
GTW'S WAVERLY WOODS				12	89-96 & 98-123
PLAT	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
14789-14797	5	R-SA-8	16	THIRD	6030
WATER CODE			SEWER CODE		
H03			5993000		

SEDIMENT AND EROSION CONTROL PLAN

GTW'S WAVERLY WOODS

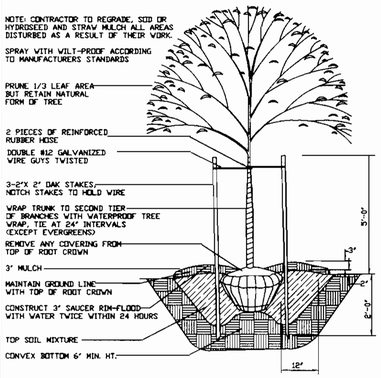
SECTION 12

LOTS 83 THRU 96 AND LOTS 98 THRU 123

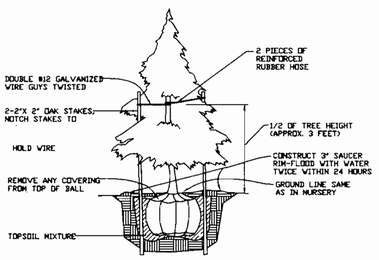
SINGLE FAMILY ATTACHED DWELLINGS
(A SUBDIVISION OF PART OF THE PROPERTY OF GTW JOINT VENTURE,
LIBER 2222, FOLIO 36)
ZONED R-SA-8
TAX MAP No: 16 PART OF PARCEL: 20
THIRD ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
SCALE: 1" = 30' DATE: JULY, 2000
SHEET 5 OF 5

SDP 01-101

K:\Drawings 6\



TREE PLANTING DETAIL



EVERGREEN PLANTING DETAIL

PLANTING SPECIFICATIONS

Plants, related material, and operations shall meet the detailed description as given on the plans and as described herein.

All plant material, unless otherwise specified, shall be nursery grown, uniformly branched, have a vigorous root system, and shall conform to the species, size, root and shape shown on the plant list and the American Association of Nurserymen (AAN) Standards. Plant material shall be healthy, vigorous, free from defects, decay, disfiguring roots, sun scald injuries, abrasions of the bark, plant disease, insect pest eggs, borers and all forms of insect infestations or objectionable disfigurements. Plant material that is weak or which has been cut back from larger grades to meet specified requirements will be rejected. Trees with forked leaders will not be accepted. All plants shall be freshly dug; no healed-in plants from cold storage will be accepted.

Unless otherwise specified, all general conditions, planting operations, details and planting specification shall conform to "Landscape Specification Guidelines for Baltimore-Washington Metropolitan Areas", (hereinafter "Landscape Guidelines") approved by the Landscape Contractors Association of Metropolitan Washington and the Potomac Chapter of the American Society of Landscape Architect, latest edition, including all agenda.

Contractor shall be required to guarantee all plant material for a period of one year after date of acceptance in accordance with the appropriate section of the Landscape Guidelines. Contractor's attention is directed to the maintenance requirements found within the one year specifications including watering and replacement of specified plant material.

Contractor shall be responsible for notifying utility companies, utility contractors and "Miss Utility" a minimum of 48 hours prior to beginning any work. Contractor may make minor adjustments in spacing and location of plant material to avoid conflicts with utilities. Damage to existing structure and utilities shall be repaired at the expense of the Contractor.

Protection of existing vegetation to remain shall be accomplished by the temporary installation of 4 foot high snow fence or blaze orange safety fence at the drip line.

Contractor is responsible for installing all material in the proper planting season for each plant type. All planting is to be completed within the growing season of completion of site construction.

Bid shall be base on actual site conditions. No extra payment shall be made for work arising from site conditions differing from those indicated on drawings and specifications

Plant quantities are provided for the convenience of the contractor only. If discrepancies exist between quantities shown on plan and those shown on the plant list, the quantities on the plan take precedence

All shrubs shall be planted in continuous trenches or prepared planting beds and mulched with composted hardwood mulch as details and specified except where noted on plans.

Positive drainage shall be maintained in planting beds (2 percent slope).

Planting mix shall be as follows: Deciduous Plants - Two parts topsoil, one part well-rotted cow or horse manure. Add 3 lbs. of standard fertilizer per cubic yard of planting mix. Evergreen Plants - two parts topsoil, one part humus* or other approved organic material. Add 3 lbs. of evergreen (acidic) fertilizer per cubic yard of planting mix. Topsoil shall conform to the Landscape Guidelines.

Weed Control: Incorporate a pre-emergent herbicide into the planting bed following recommended rates on the label. Caution: Be sure to carefully check the chemical used to assure its adaptability to the specific ground cover to be treated.

All areas within contract limits disturbed during or prior to construction not designated to receive plants and mulch shall be fine graded and seeded.

This plan is intended for landscape use only. see other plan sheets for more information on grading, sediment control, layout, etc.

TREE PLANTING DETAIL

SHRUB PLANTING DETAIL

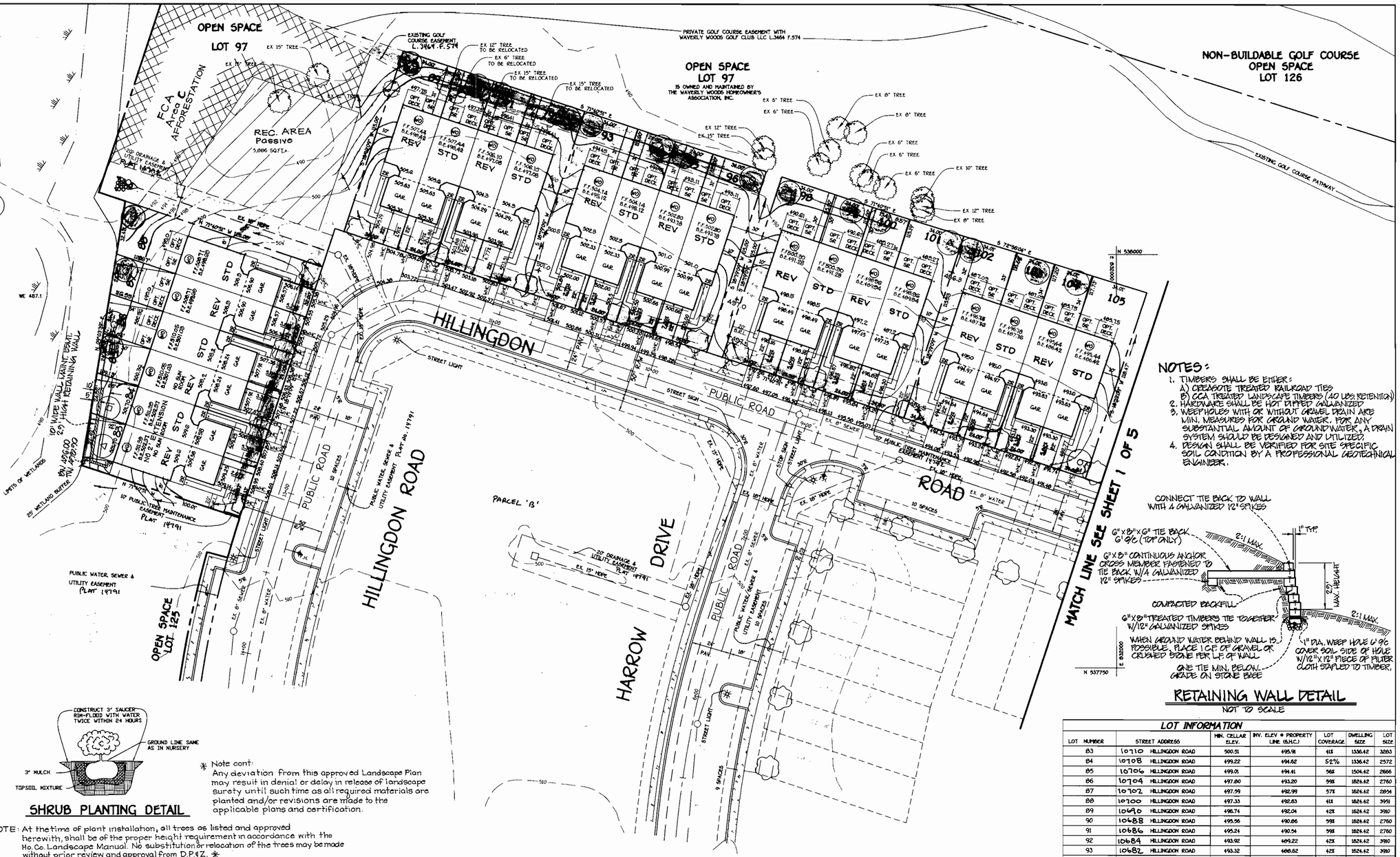
* Note cont:
Any deviation from this approved Landscape Plan may result in denial or delay in release of landscape surety until such time as all required materials are planted and/or revisions are made to the applicable plans and certification.

NOTE: At the time of plant installation, all trees as listed and approved herewith, shall be of the proper height requirement in accordance with the Ho. Co. Landscape Manual. No substitution or relocation of the trees may be made without prior review and approval from D.P.&Z. *

LANDSCAPE SCHEDULE

QUANTITY	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE
12	△	FRAXINUS AMERICANA' AUTUMN PURPLE	AUTUMN PURPLE WHITE ASH	2 1/2"-3" CAL.
14	□	LIQUIDAMBER STRACIFLUA'	AMERICAN SWEETGUM	2 1/2"-3" CAL.
14	○	ACER RUBRUM' OCTOBER GLORY	OCTOBER GLORY MAPLE	2 1/2"-3" CAL.

PRICIAL SURETY FOR THE INTERNAL LANDSCAPING IN THE AMOUNT OF $2,000 FOR THE REQUIRED 20 TREES WILL BE PAID FOR AT TIME OF GRADING PERMIT APPLICATION BY THE BUILDER.



NOTES:

1. TIMBERS SHALL BE EITHER:
   A) CREASOTE TREATED RAILROAD TIES
   B) CCA TREATED LANDSCAPE TIMBERS (40 LBS RETENTION)
2. HARDWARE SHALL BE HOT DIPPED GALVANIZED
3. WEEPHOLES WITH OR WITHOUT GRAVEL DRAIN ARE MIN. MEASURES FOR GROUND WATER. FOR ANY SUBSTANTIAL AMOUNT OF GROUND WATER, A DRAIN SYSTEM SHOULD BE DESIGNED AND UTILIZED.
4. DESIGN SHALL BE VERIFIED FOR SITE SPECIFIC SOIL CONDITION BY A PROFESSIONAL GEOTECHNICAL ENGINEER.

RETAINING WALL DETAIL

NOT TO SCALE

LOT INFORMATION

LOT NUMBER	STREET ADDRESS	MIN. CELLAR ELEV.	INV. ELEV @ PROPERTY LINE (S.H.C.)	LOT COVERAGE	DWELLING SIZE	LOT SIZE
83	10710 HILLINGDON ROAD	500.51	495.91	41%	1336.42	3263
84	10708 HILLINGDON ROAD	499.22	494.62	52%	1336.42	2572
85	10706 HILLINGDON ROAD	499.01	494.41	56%	1524.42	2666
86	10704 HILLINGDON ROAD	497.80	493.20	59%	1524.42	2760
87	10702 HILLINGDON ROAD	497.59	492.99	57%	1524.42	2854
88	10700 HILLINGDON ROAD	497.33	492.63	41%	1524.42	3951
89	10690 HILLINGDON ROAD	498.74	492.04	42%	1524.42	3910
90	10688 HILLINGDON ROAD	495.56	490.86	59%	1524.42	2760
91	10686 HILLINGDON ROAD	495.24	490.54	59%	1524.42	2760
92	10684 HILLINGDON ROAD	493.92	489.22	42%	1524.42	3910
93	10682 HILLINGDON ROAD	493.32	488.62	42%	1524.42	3910
94	10680 HILLINGDON ROAD	491.97	487.27	59%	1524.42	2760
95	10678 HILLINGDON ROAD	491.73	487.03	59%	1524.42	2760
96	10676 HILLINGDON ROAD	490.26	485.56	42%	1524.42	3910
98	10672 HILLINGDON ROAD	489.66	484.96	42%	1524.42	3910
99	10670 HILLINGDON ROAD	488.32	483.62	59%	1524.42	2760
100	10668 HILLINGDON ROAD	488.02	483.32	59%	1524.42	2761
101	10666 HILLINGDON ROAD	486.57	481.97	41%	1524.42	3829
102	10664 HILLINGDON ROAD	486.40	481.70	41%	1524.42	3954
103	10662 HILLINGDON ROAD	485.13	480.43	58%	1524.42	2807
104	10660 HILLINGDON ROAD	484.89	480.19	58%	1524.42	2819
105	10658 HILLINGDON ROAD	483.85	478.95	40%	1524.42	4015

DEVELOPER/BUILDER CERTIFICATE

"I/We certify that landscaping shown on this plan will be done according to this plan, Sect.16.124 of the Ho. Co. Code and the Ho. Co. Landscape Manual. I/We further certify that upon completion, a certification of landscape installation, accompanied by an executed one year guarantee of plant materials will be submitted to the Dept. of Planning and Zoning

Hugh G. Gay — 4-9-01
Signature of Developer/Builder — Date

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

NO.	REVISION	DATE
1	ADD RETAINING WALL & REV. GRD. TO LOTS 83 & 84	2/17/02

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 Howard Soil Conservation District."

Earl D. Collins — 4-9-01
Signature of Engineer EARL D. COLLINS — Date

DEVELOPER'S CERTIFICATE

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

Hugh G. Gay — 4-9-01
Signature of Developer / Builder Hugh G.Gay — Date

Reviewed for HOWARD SCD and meets Technical Requirements.

Jim Myers — 4/16/01
U.S.D.A.-Natural Resources Conservation Service — Date

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.

John Robertshaw — 4/16/01
Howard SCD — Date

OWNER/DEVELOPER	BUILDER
WAVERLY WOODS DEVELOPMENT CORP. C/O LAND DESIGN AND DEVELOPMENT CORP. 8000 MAIN STREET ELLICOTT CITY, MD 21043	SHC-HILLINGDON, LLC 1851 CROFTON BOULEVARD SUITE 7 CROFTON, MARYLAND 21114

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Lindy Dameron — 5/24/01
Chief, Division of Land Development — Date

4/27/01
Chief, Development Engineering Division — Date

5/25/01
Director, Department of Planning and Zoning — Date

PROJECT	SECTION	LOT NO.
GTW'S WAVERLY WOODS	12	89-96 & 98-123

PLAT	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
14789-14797	5	R-SA-8	16	THIRD	6030

WATER CODE	SEWER CODE
H03	5993000

SITE DEVELOPMENT PLAN

GTW'S WAVERLY WOODS

SECTION 12

LOTS 83 THRU 96 AND LOTS 98 THRU 123
SINGLE FAMILY ATTACHED DWELLINGS
(A SUBDIVISION OF PART OF THE PROPERTY OF GTW JOINT VENTURE.

LIBER 2222, FOLIO 361
ZONED R-SA-8
TAX MAP No 16 PART OF PARCEL: 20
THIRD ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
SCALE: 1" = 30' DATE: JULY, 2000
SHEET 2 OF 5

SDP 01-101