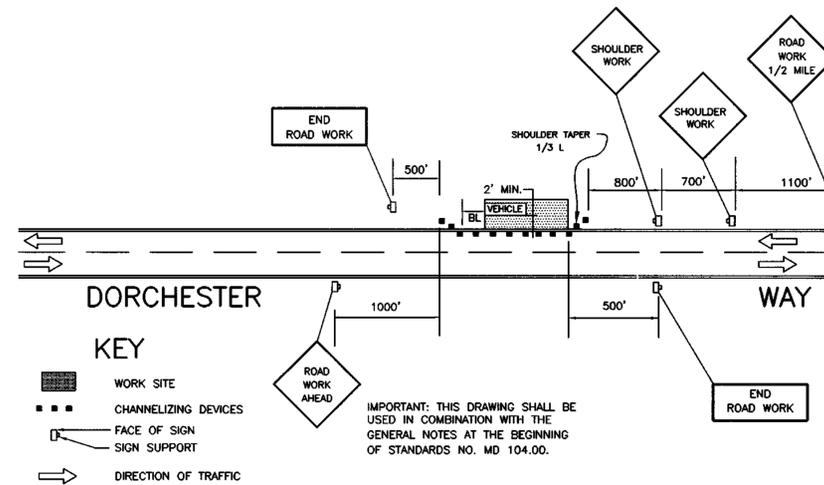


MAINTENANCE OF TRAFFIC SPECIAL PROVISIONS

GENERAL

1. THE PURPOSE OF THIS PORTION OF THE SPECIAL PROVISION IS TO SET FOR THE TRAFFIC CONTROL REQUIREMENTS NECESSARY FOR THE SAFE AND EFFICIENT MAINTENANCE TO TRAFFIC WITHIN WORK AREAS AND TO MINIMIZE ANY INCONVENIENCES TO THE TRAVELING PUBLIC AND THE CONTRACTOR AND/OR PERMITTEE.
2. PROPER TRAFFIC CONTROL THROUGH WORK AREAS IS ESSENTIAL FOR INSURING THE SAFETY AND THAT OF HIGHWAY WORKERS HAS THE HIGHEST PRIORITY OF ALL TASKS WITHIN THIS PROJECT. THE PROPER APPLICATION OF THE APPROVED TRAFFIC CONTROL PLAN (TCP) WILL PROVIDE THE DESIRED LEVEL OF SAFETY.
3. THROUGHOUT THESE SPECIAL PROVISIONS, ANY MENTION OF THE TCP SHALL BE IMPLIED TO INCLUDE COMBINATIONS OF TYPICAL TRAFFIC CONTROL STANDARDS WHICH FORM THE OVERALL TCP FOR THIS PROJECT WHICH HAS BEEN APPROVED BY THE APPROPRIATE SHA TRAFFIC ENGINEER.
4. THE CONTRACTOR AND/OR PERMITTEE SHALL BE REQUIRED TO ADHERE TO THE PROVISIONS OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), 1988 EDITION, ESPECIALLY PART VI, AND TO SECTION 804 OF THE MARYLAND DOT STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS (UNIFORM), 1988, INCLUDING ALL REVISIONS AND SUPPLEMENTS TO EACH.
5. THE CONTRACTOR AND/OR PERMITTEE SHALL BE REQUIRED TO ADHERE TO THE REQUIREMENTS SET FOR IN THE TCP AND THESE SPECIAL PROVISIONS, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. ANY REQUESTS TO MAKE MINOR CHANGES TO THE TOP OR THE SPECIAL PROVISIONS WITH REGARD TO THE TRAFFIC CONTROL ITEMS SHALL BE MADE IN WRITING TO THE ENGINEER A MINIMUM OF THIRTY (30) WORKING DAYS PRIOR TO THE PROPOSED SCHEDULING CHANGE. THE CONTRACTOR AND/OR PERMITTEE SHALL HAVE WRITTEN APPROVAL OF THE ENGINEER PRIOR TO THE IMPLEMENTATION OF ANY CHANGE.
6. NO WORK SHALL BEGIN ON ANY WORK ACTIVITY OR WORK PHASE UNTIL ALL REQUIRED TRAFFIC CONTROL PATTERNS AND DEVICES INDICATED ON THE TCP FOR THAT ACTIVITY OR PHASE ARE COMPLETELY AND CORRECTLY IN PLACE TO HAVE BEEN CHECKED FOR APPROVED USAGE.
7. GENERAL AND SPECIFIC WARNING SIGNS SHALL ONLY BE IN PLACE WHEN SPECIFIC WORK TASKS AND ACTIVITIES ARE ACTUALLY UNDERWAY OR CONDITIONS EXIST THAT POSE A POTENTIAL HAZARD TO THE PUBLIC, AND ANY ADDITIONAL SIGNING HAS BEEN APPROVED BY THE APPROPRIATE SHA TRAFFIC ENGINEER. NOTE: THE PRACTICE OF PLACING SIGNING AND OTHER TRAFFIC CONTROL DEVICES IN ADDITION TO THOSE INDICATED ON THE APPROVED TCP IS NOT PERMITTED.
8. THE CONTRACTOR AND/OR PERMITTEE SHALL PROVIDE, MAINTAIN IN NEW CONDITION, AND REMOVE WHEN NECESSARY, OR AS DIRECTED BY THE ENGINEER, ALL TRAFFIC CONTROL DEVICES USED FOR THE GUIDANCE AND PROTECTION OF MOTORISTS, PEDESTRIANS, AND WORKERS.
9. ALL TRAFFIC CONTROL DEVICES REQUIRED BY THE TCP SHALL BE KEPT IN GOOD CONDITION, FULLY PERFORMING AS SET FORTH IN THE TCP, THE MUTCD, AND/OR SECTION 804 OF THE SPECIFICATIONS. FOR REFLECTIVE DEVICES, A PARTICULAR DEVICE IS ASSIGNED TO HAVE FAILED TO MEET MINIMUM OPERATIONAL STANDARDS WHEN THE DEVICE NO LONGER HAS RETRO-REFLECTANCE CAPABILITY OF AT LEAST 60% OF THE SPECIFIED MINIMUM VALUE OVER AT LEAST 50% OF THE VISIBLE REFLECTIVE SURFACE.
10. ALL TRAFFIC CONTROL DEVICES NOT REQUIRED FOR THE SAFE CONDUCT OF TRAFFIC SHALL BE PROMPTLY REMOVED, COMPLETELY COVERED, TURNED AWAY FROM TRAFFIC, OR OTHERWISE TAKEN OUT OF SERVICE. IT IS INTENDED THAT NO TRAFFIC CONTROL DEVICE IS TO BE IN SERVICE WHEN THERE IS NO CLEAR CUT REASON FOR THE DEVICE.
11. THROUGHOUT THE PERIODS OF WORK ACTIVITIES, TRAFFIC SHALL BE MAINTAINED BY IMPLEMENTING THE APPROVED TCP. IN LIEU OF THE TCP PREPARED FOR THIS PROJECT, AND/OR INDIVIDUAL TYPICAL TRAFFIC CONTROL STANDARDS, THE CONTRACTOR AND/OR PERMITTEE HAS THE OPTION OF PREPARING AND SUBMITTING A TCP, WHOLLY OR IN PART, OF HIS OWN DESIGN, FOLLOWING GUIDELINES SET FORTH IN THE MUTCD AND PRESCRIBED BY THE ADMINISTRATION. A TCP DEVELOPED BY THE CONTRACTOR AND/OR PERMITTEE SHALL NOT BE IMPLEMENTED UNTIL ADVANCE WRITTEN APPROVAL IS OBTAINED FROM THE ENGINEER. TCPs MAY BE IMPLEMENTED WITHIN A SINGLE PROJECT OR JOINTLY BETWEEN TWO OR MORE PROJECTS. IN SITUATIONS WHERE TOPs JOINTLY IMPLEMENTED, CARE SHALL BE EXERCISED TO PRESENT CORRECT AND NON-CONFLICTING GUIDANCE TO THE TRAVELING PUBLIC.
12. THROUGHOUT THESE SPECIAL PROVISIONS, WHERE SPEED OF TRAFFIC IS NOTED, THIS MEANS THE POSTED SPEED OR PREVAILING TRAVEL SPEED, WHICHEVER IS HIGHER, UNLESS OTHERWISE NOTED.
13. TRAFFIC SHALL BE MAINTAINED AT ALL TIMES THROUGHOUT THE ENTIRE LENGTH OF THE PROJECT, UNLESS OTHERWISE NOTED. NO TRAVEL LANES OTHER THAN THOSE DESIGNATED FOR POSSIBLE CLOSURE IN THE TCP SHALL BE CLOSED WITHOUT OBTAINING PRIOR APPROVAL FROM THE ENGINEER. ALL INGRESS AND EGRESS TO THE WORK AREA BY THE CONTRACTOR AND/OR PERMITTEE SHALL BE PERFORMED WITH THE FLOW OF TRAFFIC.



(STANDARD NO. MD 104.00-01)
TEMPORARY TRAFFIC CONTROL PLAN
NO SCALE

APPROVED
DEPARTMENT OF PLANNING AND ZONING
Cindy Harwitz 7/19/01
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

APPROVED
DEPARTMENT OF PLANNING AND ZONING
Michael J. ... 7/18/01
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

APPROVED
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Andrew M. ... 7-16-01
CHIEF, BUREAU OF HIGHWAYS DATE



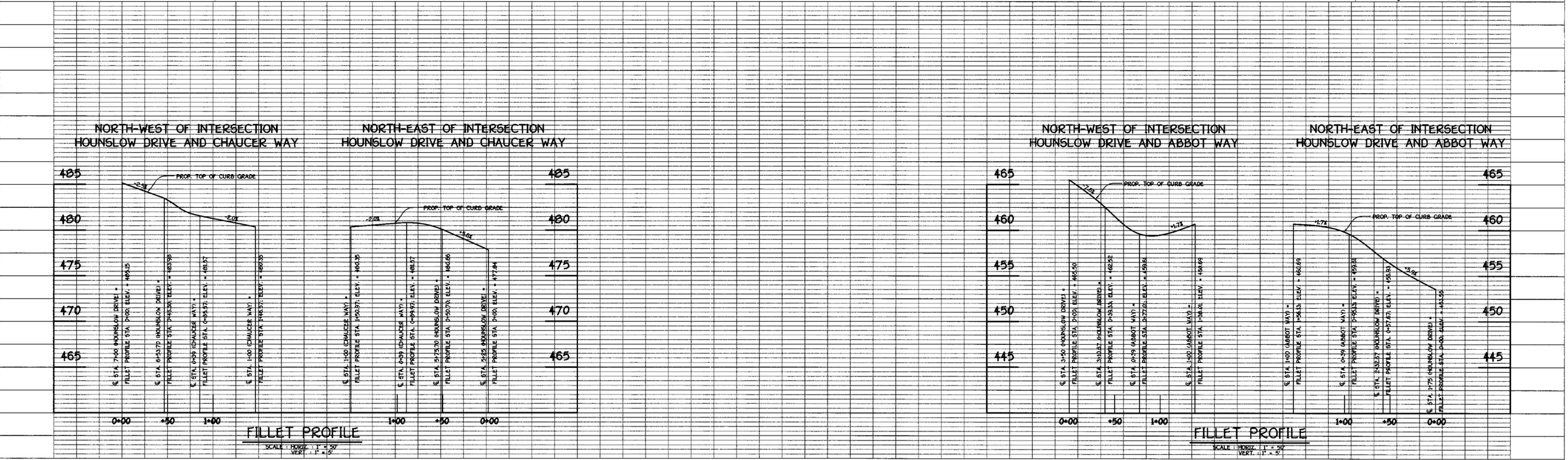
GTW'S WAVERLY WOODS SECTION 11 AREA 4 LOTS 22 THRU 30
1/4 SUBDIVISION OF PROPERTY OF WAVERLY WOODS DEVELOPMENT CORPORATION, LIBER 2222, FOLIO 30
TAX MAP NO. 16 PART OF PARCEL NO. 20
ZONING: R5C
THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND

FILLET PROFILES ROADWAY DETAILS

OWNER / DEVELOPER
WAVERLY WOODS DEVELOPMENT CORPORATION
c/o LAND DESIGN AND DEVELOPMENT, LLC
8000 MAIN STREET
ELLCOTT CITY, MARYLAND 21042

SCALE: AS SHOWN DATE: JUNE 4, 2001 DWG NO. 4 OF 13
DES. J.M.Z. DRN. J.C.L. CHK. A.M.V.

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLCOTT CITY, MARYLAND 21042
4100 461 - 0955

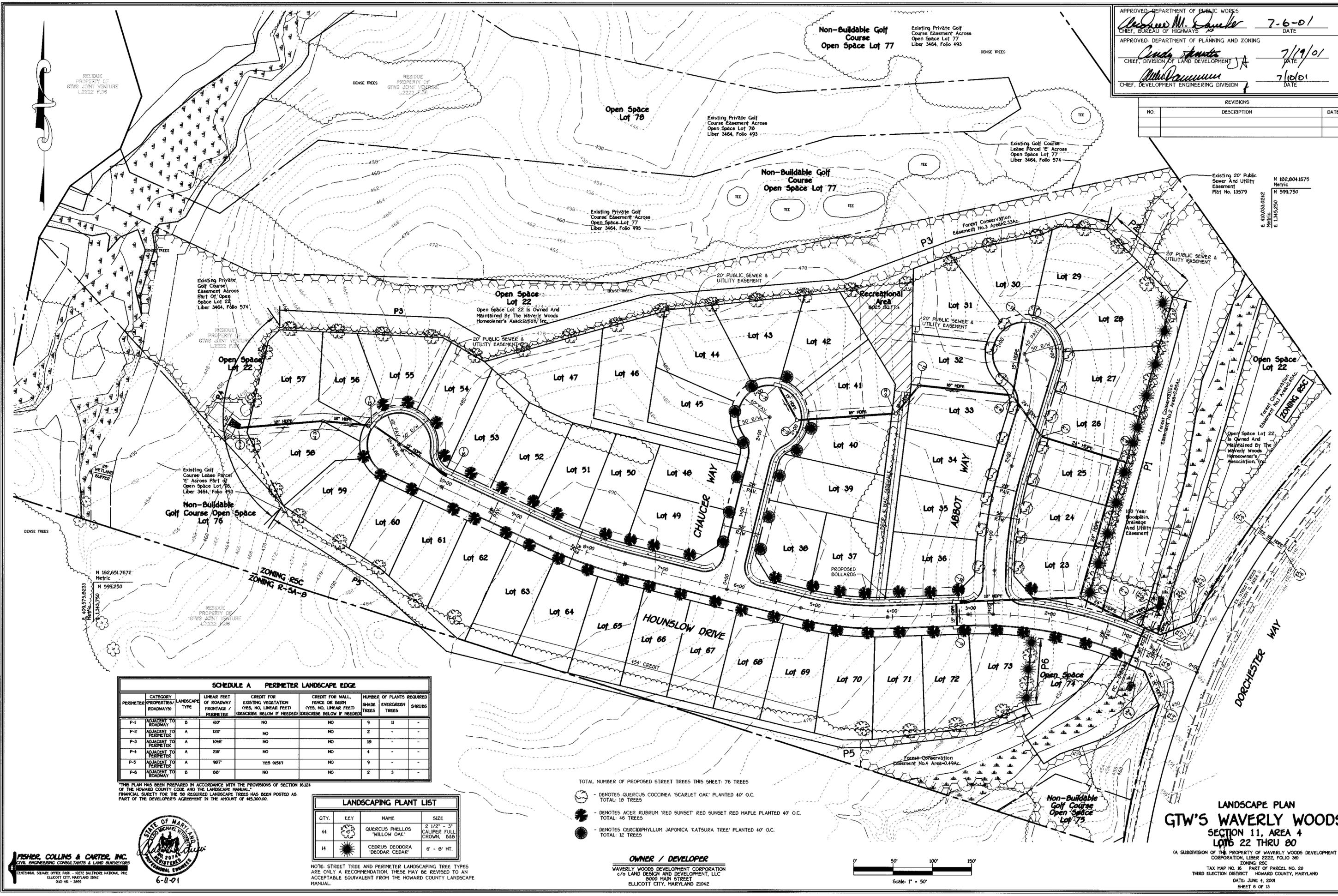


APPROVED: DEPARTMENT OF PUBLIC WORKS
 CHIEF, BUREAU OF HIGHWAYS *7-6-01*
 DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 CHIEF, DIVISION OF LAND DEVELOPMENT *7/19/01*
 DATE

7/18/01
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE

REVISIONS		
NO.	DESCRIPTION	DATE



PERIMETER	CATEGORY (PROPERTIES/ROADWAYS)	LANDSCAPE TYPE	LINEAR FEET OF ROADWAY FRONTAGE / PERIMETER	CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NUMBER OF PLANTS REQUIRED		
						SHADE TREES	EVERGREEN TREES	SHRUBS
P-1	ADJACENT TO ROADWAY	B	410'	NO	NO	9	11	-
P-2	ADJACENT TO PERIMETER	A	120'	NO	NO	2	-	-
P-3	ADJACENT TO PERIMETER	A	1046'	NO	NO	18	-	-
P-4	ADJACENT TO PERIMETER	A	216'	NO	NO	4	-	-
P-5	ADJACENT TO PERIMETER	A	987'	YES (454')	NO	9	-	-
P-6	ADJACENT TO ROADWAY	B	86'	NO	NO	2	3	-

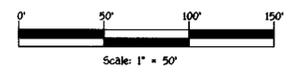
THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE 50 REQUIRED LANDSCAPE TREES HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$15,300.00.

QTY.	KEY	NAME	SIZE
44		QUERCUS PHELLOS 'WILLOW OAK'	2 1/2" - 3" CALIPER FULL CROWN, 8&8
14		CEDRUS DECOLOGA 'DEODAR CEDAR'	6' - 8' HT.

NOTE: STREET TREE AND PERIMETER LANDSCAPING TREE TYPES ARE ONLY A RECOMMENDATION. THESE MAY BE REVISED TO AN ACCEPTABLE EQUIVALENT FROM THE HOWARD COUNTY LANDSCAPE MANUAL.

- TOTAL NUMBER OF PROPOSED STREET TREES THIS SHEET: 76 TREES
- DENOTES QUERCUS COCCINEA 'SCARLET OAK' PLANTED 40' O.C. TOTAL: 18 TREES
 - DENOTES ACER RUBRUM 'RED SUNSET' RED SUNSET RED MAPLE PLANTED 40' O.C. TOTAL: 46 TREES
 - DENOTES CERCIIDIPHYLLUM JAPONICA 'KATSURA TREE' PLANTED 40' O.C. TOTAL: 12 TREES

OWNER / DEVELOPER
 WAVERLY WOODS DEVELOPMENT CORPORATION
 c/o LAND DESIGN AND DEVELOPMENT, LLC
 8000 MAIN STREET
 ELLICOTT CITY, MARYLAND 21042



LANDSCAPE PLAN
GTW'S WAVERLY WOODS
 SECTION 11, AREA 4
 LOTS 22 THRU 80
 (A SUBDIVISION OF THE PROPERTY OF WAVERLY WOODS DEVELOPMENT CORPORATION, LIBER 2222, FOLIO 36)
 ZONING R5C
 TAX MAP NO. 15 - PART OF PARCEL NO. 29
 THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 DATE: JUNE 4, 2001
 SHEET 6 OF 13

K:\Drawings\3\30686 GTW Section 11\FINALS\AREA 4\30686 LANDSCAPE PLAN.dwg

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK - 10722 BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21042
 410.461.2999



6-11-01

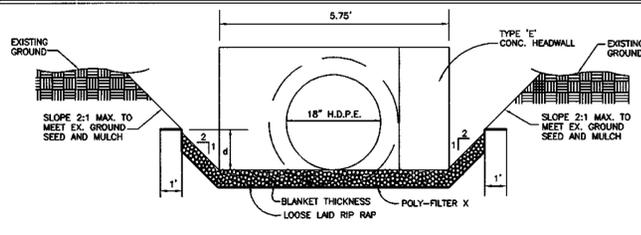
STRUCTURE SCHEDULE

STRUCTURE NO.	TOP ELEVATION	INV. IN	INV. OUT	ROAD NAME	ROAD STA.	OFFSET	TYPE	W	REMARKS
I-10	463.09	454.77	453.27	HOUNSLOW DRIVE	C.L. STA. 3+10.23	*14.43'R	A-10	2.5'	S.D. - 4.41
I-11	463.09	-----	455.10	HOUNSLOW DRIVE	C.L. STA. 3+10.23	*14.43'L	A-10	2.5'	S.D. - 4.41
I-12	456.35	-----	452.54	ABBOT WAY	L.P. STA. 1+45.74	-----	A-10	2.5'	S.D. - 4.41
I-13	461.50	459.02	458.52	-----	N 599,500.00 E 1,344,201.33	-----	5' INLET	---	S.D. - 4.22
I-14	477.25	-----	473.44	CHAUCER WAY	L.P. STA. 1+27.25	-----	A-10	2.5'	S.D. - 4.41
I-15	470.50	464.68	464.18	HOUNSLOW DRIVE	L.P. STA. 1+42.73	-----	A-10	2.5'	S.D. - 4.41
I-16	477.07	-----	472.00	HOUNSLOW DRIVE	C.L. STA. 9+97	*14.43'R	A-10	2.5'	S.D. - 4.41
M-4	450.70	436.72	436.22	HOUNSLOW DRIVE	C.L. STA. 1+08	25'R	STD MH	---	G. - 5.11
M-5	452.00	446.18, 441.80	441.30	HOUNSLOW DRIVE	C.L. STA. 1+68	35.7'R	STD MH	---	G. - 5.11
M-6	447.58	443.21	442.71	-----	N 599,405.21 E 1,343,655.35	-----	STD MH	---	G. - 5.11
M-7	460.50	449.90	449.40	ABBOT WAY	C.L. STA. 2+37.08	25'R	STD MH	---	G. - 5.11
M-8	459.33	453.74, 452.06	451.80	ABBOT WAY	C.L. STA. 2+81	23.5'L	STD MH	---	G. - 5.11
M-9	467.50	461.63	461.33	-----	N 599,454.45 E 1,344,771.70	-----	STD MH	---	G. - 5.11
M-10	477.50	472.43	471.93	CHAUCER WAY	L.P. STA. 1+84.62	5'R	STD MH	---	G. - 5.11
M-11	468.00	457.78	457.28	-----	N 599,445.84 E 1,343,534.66	-----	STD MH	---	G. - 5.11
EX. HW-1 (F01-91)	440.00	435.50, 435.50, 435.50	435.50	HOUNSLOW DRIVE	C.L. STA. 0+77	54'R	EXISTING TYPE 'A' HEADWALL	---	S.D. - 5.31
5-2	456.55	454.30	454.30	-----	-----	-----	TYPE 'E' HEADWALL	---	S.D. - 5.31

* - DENOTES DISTANCE FROM CENTERLINE TO FACE OF INLET

PIPE SCHEDULE

SIZE	TYPE	LENGTH
15"	HDPE	299'
18"	HDPE	623'
24"	HDPE	456'



RIP RAP CHANNEL DETAIL
NO SCALE

RIP-RAP CHANNEL DESIGN DATA

STRUCTURE	AREA	WETTED PERIMETER	R	R 2/3	S	S 1/2	W	d	N	V (F.P.S.)	Q (C.F.S.)	IP-RAP SIZE	BLANKET THICKNESS	DIA.
S-2	2.58	6.97'	0.3716	0.5169	0.005	0.0707	5.0'	0.44'	0.04	1.36	3.51	9.5"	15"	18"

CONSTRUCTION SPECIFICATIONS FOR RIP-RAP OUTFALLS

- The subgrade for the filter, riprap or gabion shall be prepared to the required lines and grades. Any fill required in the subgrade shall be compacted to a density of approximately that of the surrounding undisturbed material.
- The rock or gravel shall conform to the specified grading limits when installed respectively in the riprap or filter.
- Filter cloth shall be protected from punching, cutting or tearing. Any damage other than an occasional small hole shall be repaired by placing another piece of cloth over the damaged part or by completely replacing the cloth. All overlaps whether for repairs or for joining two pieces of cloth shall be a minimum of one foot.
- Stone for the riprap or gabion outlets may be placed by equipment. Both shall each be constructed to the full course thickness in one operation and in such a manner as to avoid displacement of underlying materials. The stone for riprap or gabion outlets shall be delivered and placed in a manner that will insure that it is reasonably homogeneous with the smaller stones and spalls filling the voids between the larger stones. Riprap shall be placed in a manner to prevent damage to the filter blanket or filter cloth. Hand placement will be required to the extent necessary to prevent damage to the permanent works.

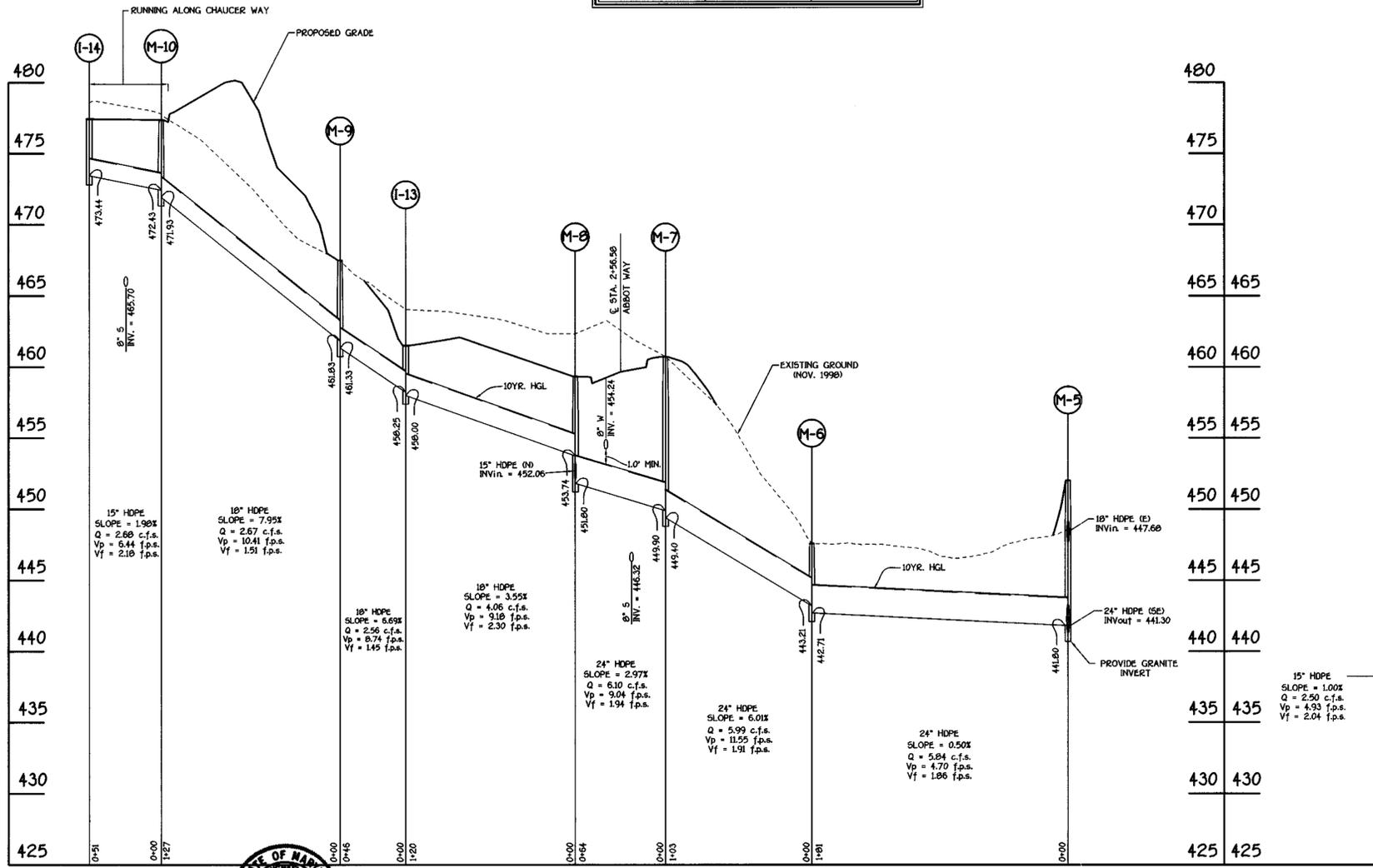
REVISIONS

NO.	DESCRIPTION	DATE

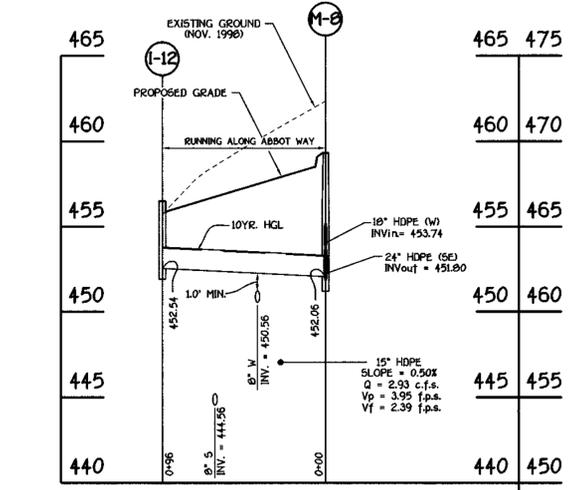
APPROVED: DEPARTMENT OF PUBLIC WORKS
Andrew M. Daniels 7-6-01
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Clayton Hunter 7/19/01
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

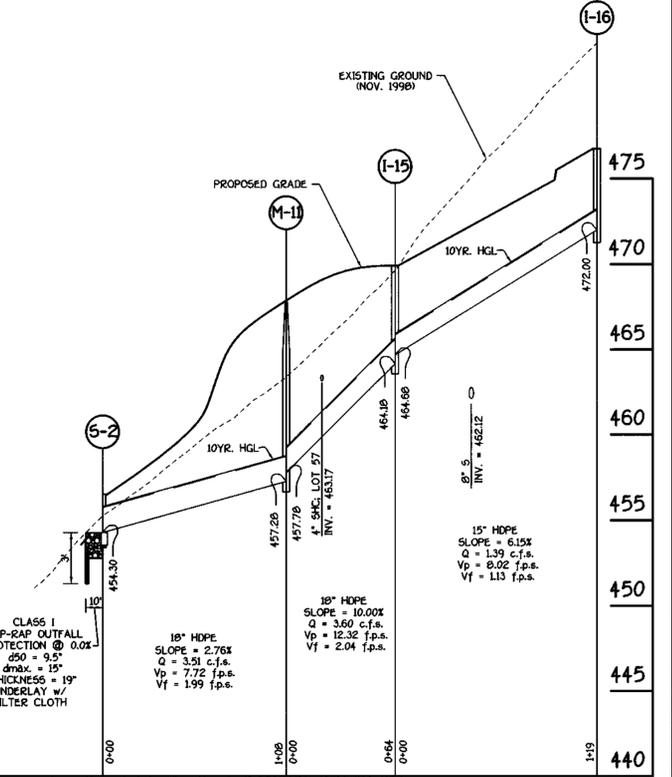
Mike Dammann 7/10/01
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE



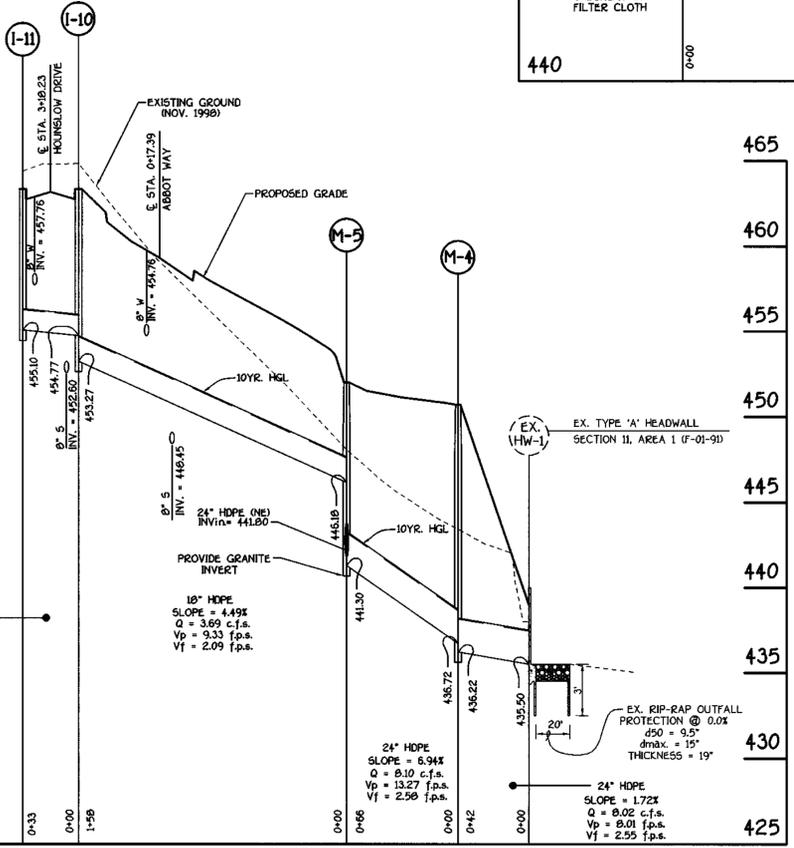
PROFILE
SCALE: HORIZ. : 1" = 50'
VERT. : 1" = 5'



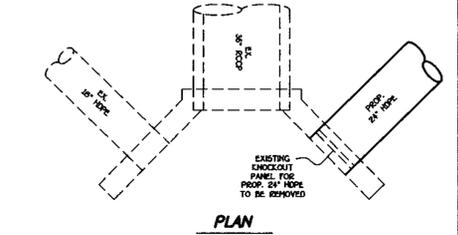
PROFILE
SCALE: HORIZ. : 1" = 50'
VERT. : 1" = 5'



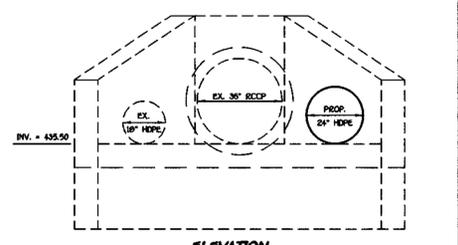
PROFILE
SCALE: HORIZ. : 1" = 50'
VERT. : 1" = 5'



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



PLAN



ELEVATION

(SECTION 11, AREA 1) (F-01-91)
MODIFIED TYPE "A" HEADWALL (EX. HW-1)
 NOT TO SCALE

STORM DRAIN PROFILES
GTW'S WAVERLY WOODS
 SECTION 11, AREA 4
 LOTS 22 THRU 80
 (A SUBDIVISION OF THE PROPERTY OF WAVERLY WOODS DEVELOPMENT CORPORATION, LIBER 2222, FOLIO 36)
 ZONING: R5C
 TAX MAP NO. 16 PART OF PARCEL NO. 20
 THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 DATE: JUNE 4, 2001
 SHEET 7 OF 13

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK - 1872 BALTIMORE NATIONAL PIKE
 ELICOTT CITY, MARYLAND 21042
 410-481-2955



OWNER / DEVELOPER
 WAVERLY WOODS DEVELOPMENT CORPORATION
 c/o LAND DESIGN AND DEVELOPMENT, LLC
 3000 MAIN STREET
 ELICOTT CITY, MARYLAND 21042

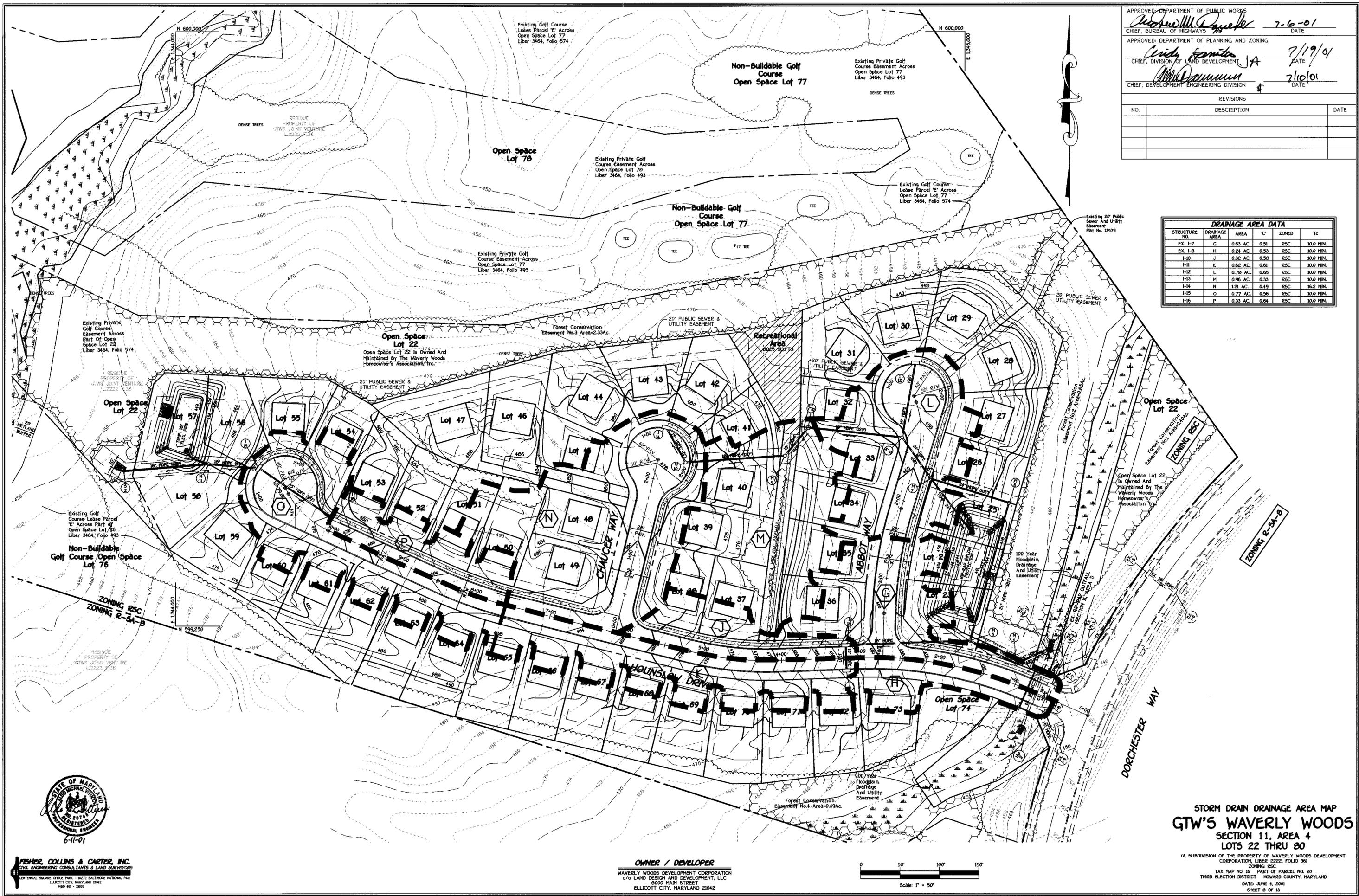
APPROVED: DEPARTMENT OF PUBLIC WORKS
Richard M. Pappeler 7-6-01
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Chris Gantner 7/19/01
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

William J. ... 7/10/01
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

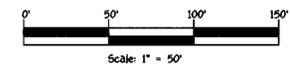
REVISIONS		
NO.	DESCRIPTION	DATE

DRAINAGE AREA DATA					
STRUCTURE NO.	DRAINAGE AREA	AREA	C'	ZONED	Tc
EX-1-7	G	0.63 AC.	0.51	RSC	10.0 MIN.
EX-1-8	H	0.24 AC.	0.53	RSC	10.0 MIN.
I-10	J	0.32 AC.	0.59	RSC	10.0 MIN.
I-11	K	0.82 AC.	0.61	RSC	10.0 MIN.
I-12	L	0.79 AC.	0.65	RSC	10.0 MIN.
I-13	M	0.96 AC.	0.33	RSC	10.0 MIN.
I-14	N	1.21 AC.	0.49	RSC	15.2 MIN.
I-15	O	0.77 AC.	0.56	RSC	10.0 MIN.
I-16	P	0.33 AC.	0.64	RSC	10.0 MIN.

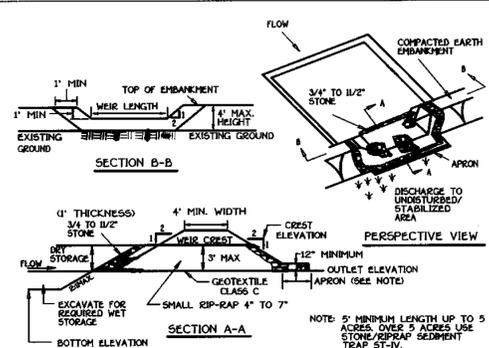
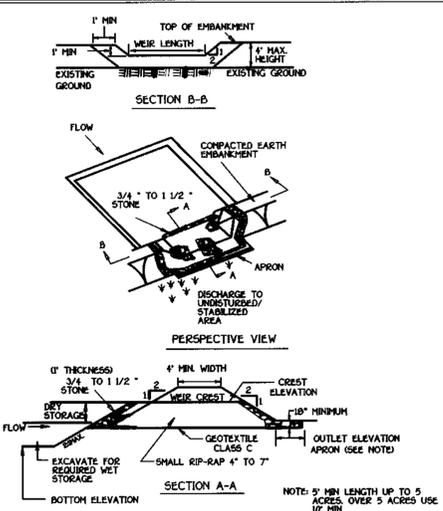


FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PkE
 ELLICOTT CITY, MARYLAND 21042
 (410) 461-2929

OWNER / DEVELOPER
 WAVERLY WOODS DEVELOPMENT CORPORATION
 c/o LAND DESIGN AND DEVELOPMENT, LLC
 8000 MAIN STREET
 ELLICOTT CITY, MARYLAND 21042



STORM DRAIN DRAINAGE AREA MAP
GTW'S WAVERLY WOODS
 SECTION 11, AREA 4
 LOTS 22 THRU 80
 (A SUBDIVISION OF THE PROPERTY OF WAVERLY WOODS DEVELOPMENT CORPORATION, LIBER 2222, FOLIO 36)
 ZONING: RSC
 TAX MAP NO. 16 - PART OF PARCEL NO. 20
 THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 DATE: JUNE 4, 2001
 SHEET 8 OF 13

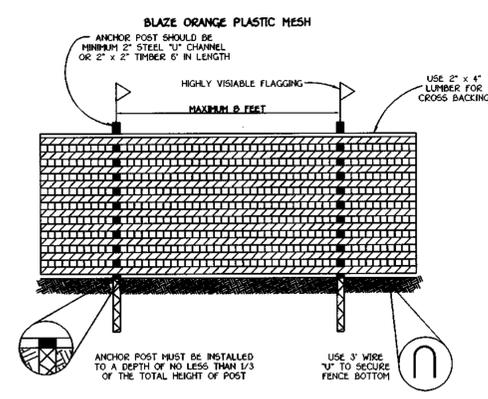
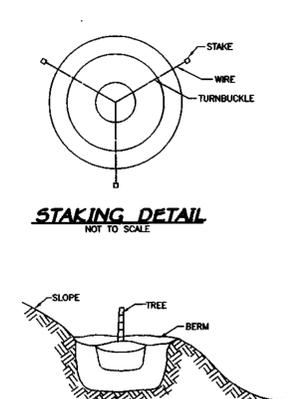
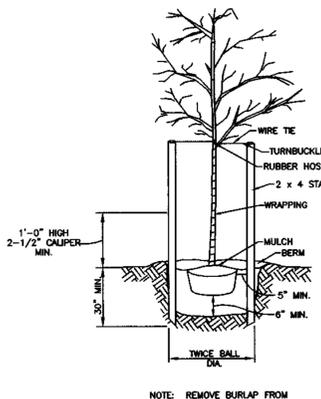


- Construction Specifications**
1. The area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
 2. The fill material for the embankment shall be free of roots or other woody vegetation as well as over-sized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed. Maximum height of embankment shall be 4', measured at centerline of embankment.
 3. All cut and fill slopes shall be 2:1 or flatter.
 4. Elevation of the top of any dike directing water into trap must equal or exceed the height of trap embankment.
 5. Storage area provided shall be figured by computing the volume measured from top of excavation. (For storage requirements see Table 9).
 6. Geotextile Class C shall be placed over the bottom and sides of the outlet channel prior to placement of stone. Section of fabric must overlap at least 1' with section nearest the entrance placed on top. Fabric shall be embedded at least 6\"/>

- Construction Specifications**
1. Area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
 2. The fill material for the embankment shall be free of roots and other woody vegetation as well as over-sized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed.
 3. All cut and fill slopes shall be 2:1 or flatter.
 4. The stone used in the outlet shall be small rip-rap 4\"/>

STONE RIP-RAP OUTLET SEDIMENT TRAP - ST IV
NOT TO SCALE

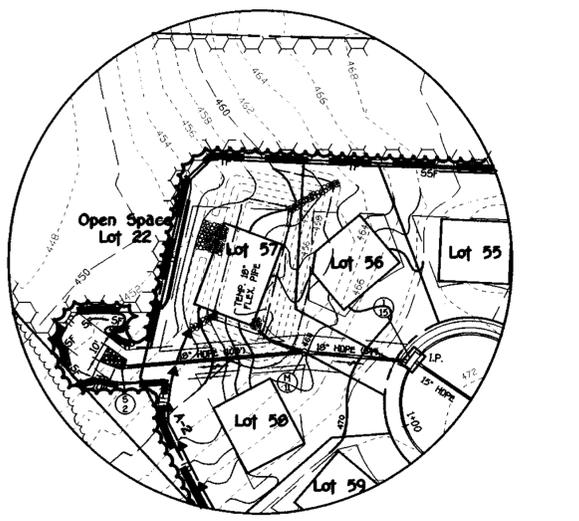
STONE RIP-RAP OUTLET SEDIMENT TRAP - ST IV
NOT TO SCALE



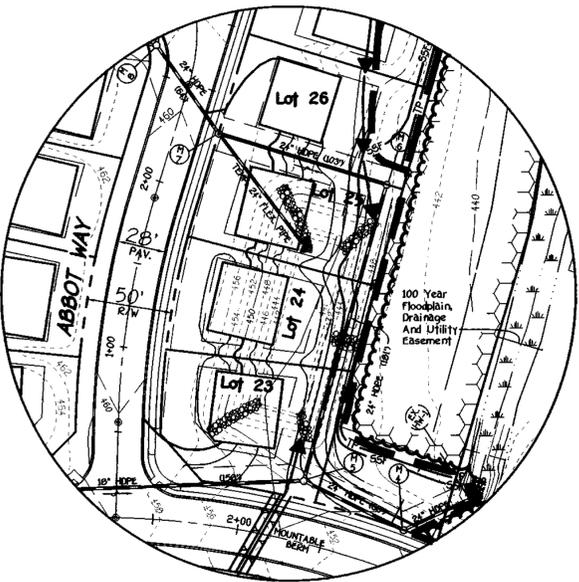
TREE PLANTING
NOT TO SCALE

GRADING FOR PLANTING ON SLOPES
NOT TO SCALE

TREE PROTECTION DETAIL
NOT TO SCALE



FINAL GRADING AT STONE OUTLET SEDIMENT TRAP (ST-III)
SCALE: 1" = 50'



FINAL GRADING AT STONE/RIP-RAP OUTLET SEDIMENT TRAP (ST-IV)
SCALE: 1" = 50'

DEVELOPER'S CERTIFICATE
I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND THAT ANY RESPONSIBLE PERSONNEL IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I/WE AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY.

Signature of Developer: *[Signature]* DATE: 6-11-01

ENGINEER'S CERTIFICATE
I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PROPERLY PREPARED PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE PROJECT AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Signature of Engineer: *[Signature]* DATE: 6-11-01

REVIEW FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.
U.S.D.A. NATURAL RESOURCES CONSTRUCTION SERVICE: *[Signature]* DATE: 7/6/01

THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
APPROVED: *[Signature]* DATE: 7/2/01

APPROVED: DEPARTMENT OF PLANNING AND ZONING
CHIEF, DIVISION OF LAND DEVELOPMENT: *[Signature]* DATE: 7/19/01

APPROVED: DEPARTMENT OF PLANNING AND ZONING
CHIEF, DEVELOPMENT ENGINEERING DIVISION: *[Signature]* DATE: 7/10/01

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
CHIEF, BUREAU OF HIGHWAYS: *[Signature]* DATE: 7-6-01

REVISIONS		
NO.	DESCRIPTION	DATE

- SEQUENCE OF CONSTRUCTION**
1. OBTAIN THE REQUIRED GRADING PERMIT. (1 DAY)
 2. NOTIFY MISS UTILITY AT LEAST 48 HOURS BEFORE BEGINNING ANY WORK (1-800-257-7777). NOTIFY THE HOWARD COUNTY OFFICE OF CONSTRUCTION/INSPECTION 24 HOURS BEFORE STARTING ANY WORK (410-313-1870). (1 DAY)
 3. CLEAR AND GRUB FOR SEDIMENT CONTROL MEASURES ONLY. INSTALL STABILIZED CONSTRUCTION ENTRANCE. (1 WEEK)
 4. INSTALL THE REQUIRED SEDIMENT AND EROSION CONTROL DEVICES AS INDICATED ON THE PLAN SHEETS. NO BLASTING WILL BE PERMITTED FOR THE EXCAVATION OF THE PROPOSED TRAPS OR BASINS. WHERE NECESSARY, RIPPINGS AND JACK HAMMERS SHOULD BE UTILIZED IN THE EXCAVATION OF EACH FACILITY. (2 WEEKS)
 5. OBTAIN PERMISSION OF THE SEDIMENT CONTROL INSPECTOR PRIOR TO PROCEEDING.
 6. CLEAR AND GRUB FOR THE REMAINDER OF THE SITE. (2 WEEKS)
 7. GRADE SITE TO THE PROPOSED SUBGRADE. INSTALL THE WATER AND SEWER MAINS AND THE STORM DRAIN SYSTEM. BRICK SHUT THE STORM DRAIN PIPE RUNS FROM M-7 TO M-6 AND M-11 TO S-2 AT STRUCTURES M-7 AND M-11. INSTALL INLET PROTECTION AND TEMPORARY FLEX PIPES AS INDICATED ON THE PLAN SHEETS. (4 WEEKS)
 8. THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE ON ALL SEDIMENT AND EROSION CONTROL STRUCTURES SHOWN HEREON AFTER EACH RAINFALL AND ON A DAILY BASIS. REMOVE SEDIMENTS FROM ALL TRAPS WHEN CLEANOUT ELEVATIONS ARE REACHED. ALL SEDIMENTS MUST BE PLACED UPSTREAM OF AN APPROVED TRAP DEVICE.
 9. INSTALL CURB AND GUTTER PLUS ROAD BASE COURSE. (1 WEEK)
 10. STABILIZE ALL DISTURBED AREAS AND OBTAIN PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR TO PROCEED. (2 DAYS)
 11. APPLY TACK COAT TO SUB-BASE AND LAY SURFACE COURSE. (1 WEEK)
 12. FOLLOWING SUCCESSFUL STABILIZATION OF ALL DISTURBED AREAS IN ACCORDANCE WITH THE PERMANENT SEEDING NOTES, AND AFTER PERMISSION HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, ALL EROSION AND SEDIMENT CONTROL DEVICES MAY BE REMOVED AND/OR BACKFILLED AND THE REMAINING AREAS BROUGHT TO FINAL GRADE AFTER THE STORM DRAIN SYSTEM HAS BEEN FLUSHED TO REMOVE TRAPPED SEDIMENT. THIS WOULD ALSO INCLUDE THE REMOVAL OF TEMPORARY STORM DRAIN FLEX PIPES AT THE STORM DRAIN RUN CONNECTIONS. (2 WEEKS)
 13. NOTIFY HOWARD COUNTY OFFICE OF INSPECTIONS AND PERMITS FOR A FINAL INSPECTION OF THE COMPLETED PROJECT.
 14. CONTRACTOR SHALL DELAY CONSTRUCTION ON LOTS 23 THRU 31 UNTIL SUCH TIME AS THE SEDIMENT TRAP ST-III AND RELATED "A" EARTH DIKE IS REMOVED.

SEDIMENT CONTROL NOTES AND DETAILS
GTW'S WAVERLY WOODS
SECTION 11, AREA 4
Lots 22 Thru 80
(A SUBDIVISION OF THE PROPERTY OF WAVERLY WOODS DEVELOPMENT CORPORATION, LIBER 2222, FOLIO 36)
ZONING: R5C
TAX MAP NO. 16 PART OF PARCEL NO. 20
THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND
DATE: JUNE 4, 2001
SHEET 9 OF 13

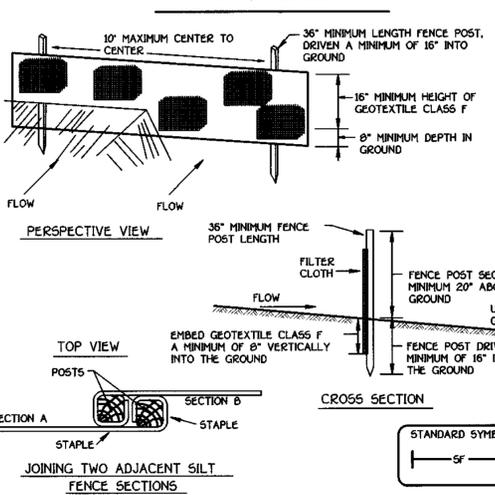
FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTRAL OFFICE: 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
410-461-2995

OWNER / DEVELOPER
WAVERLY WOODS DEVELOPMENT CORPORATION
c/o LAND DESIGN AND DEVELOPMENT, LLC
6000 MAIN STREET
ELLICOTT CITY, MARYLAND 21042

SEDIMENT CONTROL NOTES

- 1) 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 (413-4855).

SILT FENCE



Construction Specifications

- 1. Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 1 1/2" x 1 1/2" square (minimum 10' long) and shall be of sound quality hardwood.

Silt Fence Design Criteria

Table with columns: Slope Steepness, Slope Length, Silt Fence Length. Rows include 5:1 and steeper slopes with corresponding length requirements.

Note: In areas of less than 2% slope and sandy soils (USDA general classification system, soil Class A) maximum slope length and silt fence length will be unlimited.

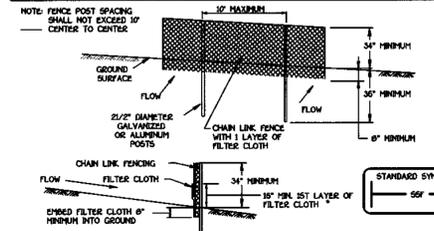
SOIL STANDARDS AND SPECIFICATIONS

VEGETATIVE STABILIZATION

Using vegetation as cover for barren soil to protect it from forces that cause erosion. Vegetative stabilization specifications are used to promote the establishment of vegetation on exposed soil.

SECTION I - VEGETATIVE STABILIZATION METHODS AND MATERIALS
A. Site Preparation
1. Install erosion and sediment control structures (either temporary or permanent) such as diversions, grade stabilization structures, berms, waterways, or sediment control basins.

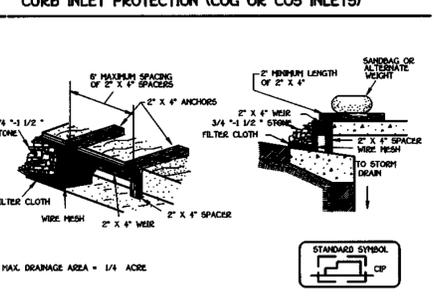
SUPER SILT FENCE



Construction Specifications
1. Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing.

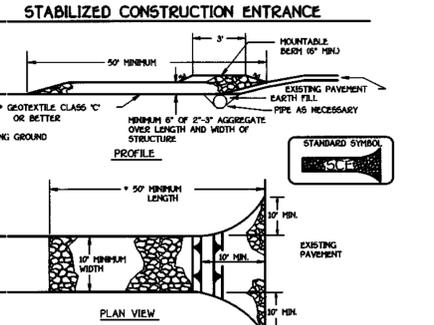
Design Criteria table with columns: Slope Steepness, Slope Length (Minimum), 50' Fence Length (Minimum). Rows include 5:1 to 20:1 slopes.

CURB INLET PROTECTION (COG OR COS INLETS)



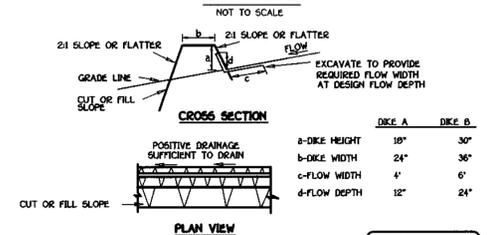
Construction Specifications
1. Attach a continuous piece of wire mesh (30" minimum width by 36" length plus 4" to the 2' x 4' wire (minimum 36" length plus 2" as shown on the standard drawing).

STABILIZED CONSTRUCTION ENTRANCE



Construction Specifications
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.

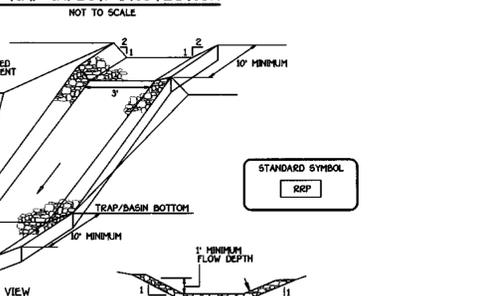
EARTH DIKE



Construction Specifications
1. Seed and cover with straw mat.
2. Seed and cover with Erosion Control Matting or live with seed.
3. 4" - 7" stone or recycled concrete equivalent placed into the soil 7" minimum.

Construction Specifications
1. All temporary earth dikes shall have uninterrupted positive grade to an outlet. Spot elevations may be necessary for grades less than 1%.

RIP-RAP INFLOW PROTECTION



Construction Specifications
1. Rip-rap lined inflow channels shall be 1' in depth, have a trapezoidal cross section with 2:1 or flatter side slopes and 3" (min) bottom width.

EROSION CONTROL MATTING



Construction Specifications
1. Lay-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.

DEVELOPER'S CERTIFICATE

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND THAT ANY RESPONSIBLE PERSONNEL IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT.

SIGNATURE OF DEVELOPER: [Signature] DATE: 6-11-01

ENGINEER'S CERTIFICATE

I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS MY BEST PROFESSIONAL JUDGMENT AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

SIGNATURE OF ENGINEER: [Signature] DATE: 6-11-01

REVIEW FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS. U.S.D.A. NATURAL RESOURCES SERVICE. DATE: 7/2/01

APPROVED: DEPARTMENT OF PLANNING AND ZONING. CHIEF, DIVISION OF LAND DEVELOPMENT. DATE: 7/19/01

APPROVED: DEPARTMENT OF PLANNING AND ZONING. CHIEF, DEVELOPMENT ENGINEERING DIVISION. DATE: 7/10/01

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS. CHIEF, BUREAU OF HIGHWAYS. DATE: 7-6-01

SEDIMENT CONTROL NOTES AND DETAILS

GTW'S WAVERLY WOODS SECTION 11, AREA 4 Lots 22 Thru 80 (A SUBDIVISION OF THE PROPERTY OF WAVERLY WOODS DEVELOPMENT CORPORATION, LIBER 2222, FOLIO 36)

OWNER / DEVELOPER: WAVERLY WOODS DEVELOPMENT CORPORATION. TAX MAP NO. 16. PART OF PARCEL NO. 20. THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND. DATE: JUNE 4, 2001. SHEET 10 OF 13.

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.

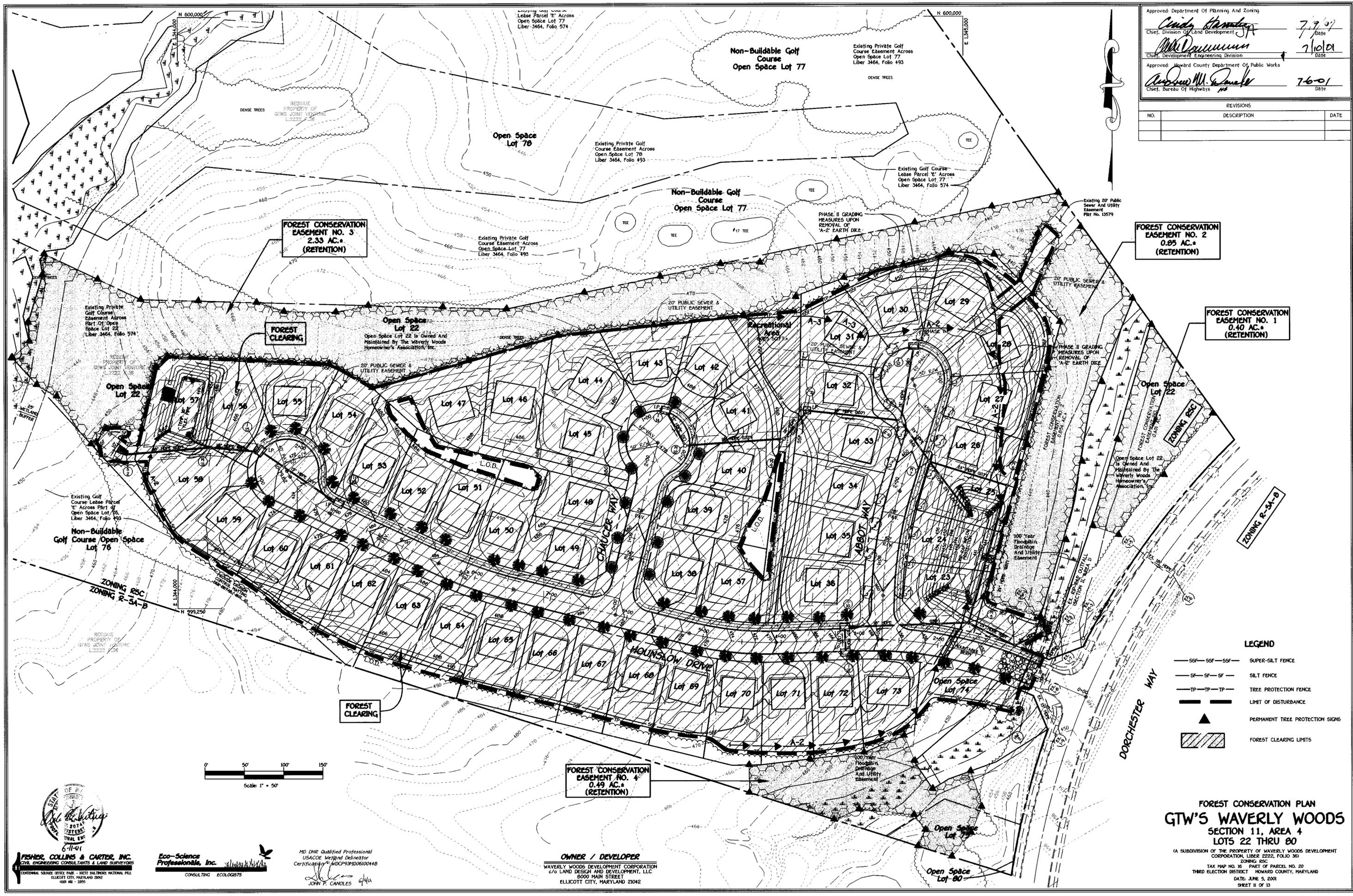
Note: If flow will enter from the edge of the matting then the area affected by the flow must be keyed-in.

OWNER / DEVELOPER: WAVERLY WOODS DEVELOPMENT CORPORATION. TAX MAP NO. 16. PART OF PARCEL NO. 20. THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND. DATE: JUNE 4, 2001. SHEET 10 OF 13.

Approved: Department of Planning And Zoning
 Chief, Division of Land Development
 Chief, Development Engineering Division
 Approved: Howard County Department of Public Works
 Chief, Bureau of Highways

Cindy Hamilton 7/9/07
Mike Dammann 7/10/07
Andrew M. Pank 7-6-07

REVISIONS		
NO.	DESCRIPTION	DATE



FOREST CONSERVATION EASEMENT NO. 2
 0.05 AC.±
 (RETENTION)

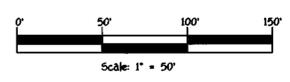
FOREST CONSERVATION EASEMENT NO. 1
 0.40 AC.±
 (RETENTION)

FOREST CONSERVATION EASEMENT NO. 3
 2.33 AC.±
 (RETENTION)

FOREST CONSERVATION EASEMENT NO. 4
 0.49 AC.±
 (RETENTION)

LEGEND

—SSF—SSF—SSF—	SUPER-SILT FENCE
—SF—SF—SF—	SILT FENCE
—TP—TP—TP—	TREE PROTECTION FENCE
— — —	LIMIT OF DISTURBANCE
▲	PERMANENT TREE PROTECTION SIGNS
▨	FOREST CLEARING LIMITS



FOREST CONSERVATION PLAN
GTW'S WAVERLY WOODS
 SECTION 11, AREA 4
 LOTS 22 THRU 80
 (A SUBDIVISION OF THE PROPERTY OF WAVERLY WOODS DEVELOPMENT CORPORATION, LIBER 2222, FOLIO 36)
 ZONING: R-5C
 TAX MAP NO. 16 PART OF PARCEL NO. 20
 THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 DATE: JUNE 5, 2003
 SHEET 11 OF 13

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CONFIDENTIAL SOURCE OFFICE PARK - 10722 SALTBRIDGE NATIONAL PARK
 ELLICOTT CITY, MARYLAND 21042
 410.461.2000

Eco-Science Professionals, Inc.
 CONSULTING ECOLOGISTS

MD DNR Qualified Professional
 USACOE Wetland Delineator
 Certification # MD0P931006100448
JOHN P. CANOLES

OWNER / DEVELOPER
 WAVERLY WOODS DEVELOPMENT CORPORATION
 c/o LAND DESIGN AND DEVELOPMENT, LLC
 3000 MAIN STREET
 ELLICOTT CITY, MARYLAND 21042

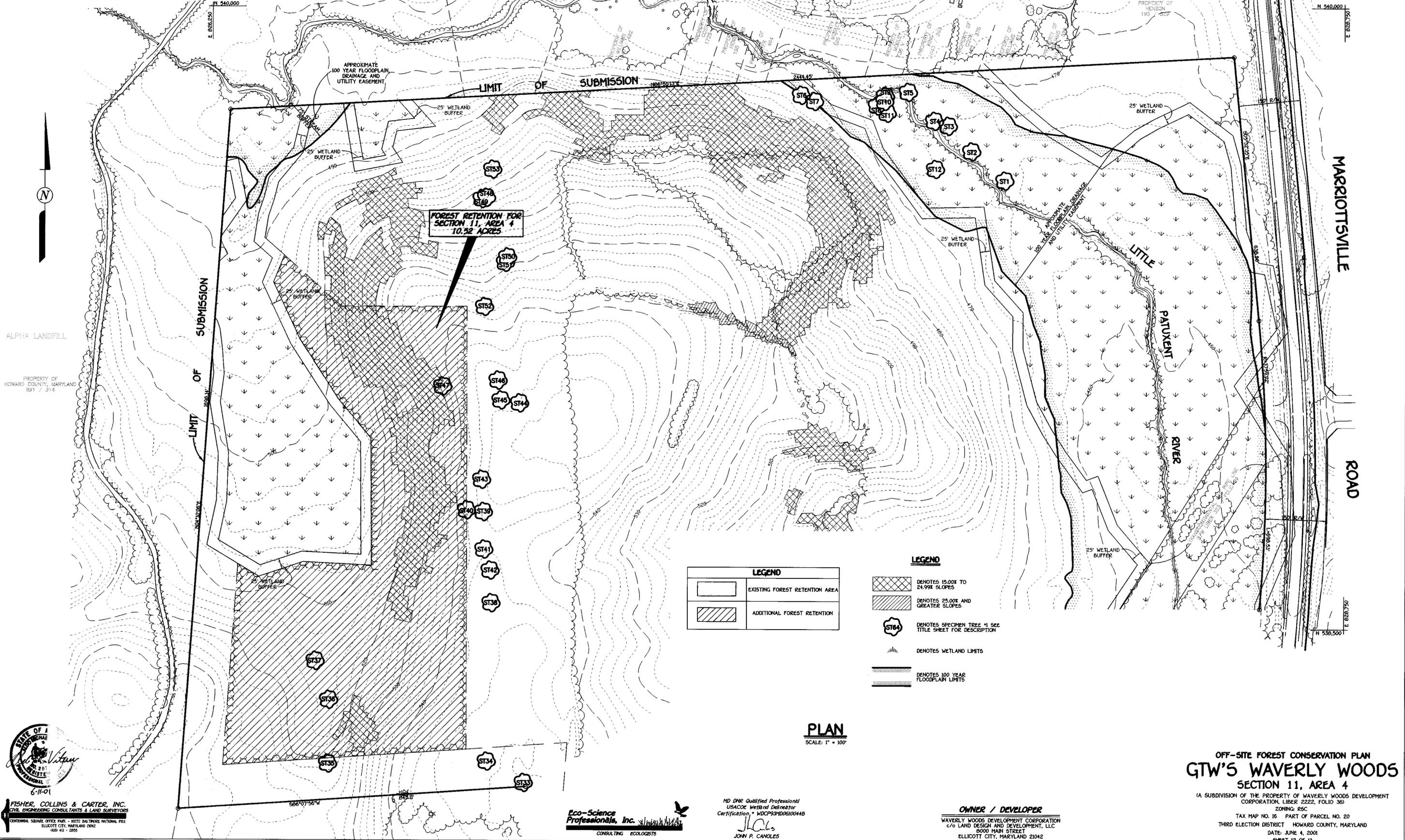
F.01.93

APPROVED: DEPARTMENT OF PUBLIC WORKS
Andrew W. Panghe 7-6-01
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
JR 7/19/01
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Michael 7/16/01
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

OLD FREDERICK ROAD



LEGEND	
	EXISTING FOREST RETENTION AREA
	ADDITIONAL FOREST RETENTION

- LEGEND**
- DENOTES 15.00% TO 24.99% SLOPES
 - DENOTES 25.00% AND GREATER SLOPES
 - DENOTES SPECIMEN TREE #1 SEE TITLE SHEET FOR DESCRIPTION
 - DENOTES WETLAND LIMITS
 - DENOTES 100 YEAR FLOODPLAIN LIMITS

PLAN
 SCALE: 1" = 100'



FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK • 10272 BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21114
 (410) 451-2200

Eco-Science Professionals, Inc.
 CONSULTING ECOLOGISTS

MD DNR Qualified Professional
 USACE Wetland Designer
 Certification # WDCP93MD00100448
John P. Canoles
 JOHN P. CANOLES

OWNER / DEVELOPER
 WAVERLY WOODS DEVELOPMENT CORPORATION
 C/O LAND DESIGN AND DEVELOPMENT, LLC
 8000 HAIN STREET
 ELLICOTT CITY, MARYLAND 21142

OFF-SITE FOREST CONSERVATION PLAN
GTW'S WAVERLY WOODS
 SECTION 11, AREA 4
 (A SUBDIVISION OF THE PROPERTY OF WAVERLY WOODS DEVELOPMENT CORPORATION, LIBER 2222, FOLIO 36)
 ZONING: R5C
 TAX MAP NO. 16 PART OF PARCEL NO. 20
 THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 DATE: JUNE 4, 2001
 SHEET 12 OF 13

Forest Conservation Calculations for
Waverly Woods Section 11 Area 4

	Acres
Forest Preservation in Section 11, Area 4 Development	4.1
Forest Clearing in Section 11, Area 4 Development	12.2
Total Forest Clearing within Residentially Zoned Areas of Waverly Woods	69.9
Percentage of Forest Clearing Within Section 11 Area 4 Development	17.5
Total Reforestation Required for Waverly Woods Residential Development	60.16
Reforestation for Section 11, Area 4 Development	10.52

FCA Calculation Notes:

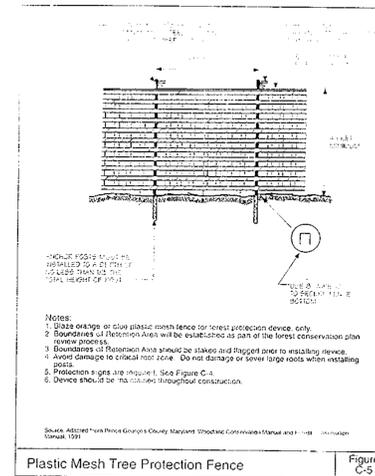
- All information relative to the FCP calculations has been developed from the Forest Conservation Plan prepared by Environmental Systems Analysis (ESA), Inc. The Forest Conservation requirements have been established by guidelines outlined in the February 1996 Forest Conservation Plan as prepared by ESA, Inc.
- The Forest Conservation Worksheet above includes the Preliminary Forest Conservation calculation (from the PFCP revised on February 26, 1996) and the latest forest conservation calculations (thru Section 11, Area 4) for residentially zoned development at Waverly Woods. Forest Retention and clearing differences in the two worksheets reflect minor changes from preliminary to final plan. With the exception of the Golf Course, Section 11 will be the final residentially zoned portion of Waverly Woods.
- Like the previous sections of Waverly Woods, reforestation for Section 11, Area 4 has been calculated on a percentage basis. Section 11, Area 4 accounts for 17.5% of the Waverly Woods residentially zoned forest clearing at Waverly Woods. Therefore, 17.5% of the Waverly Woods residential reforestation obligation (as revised by the updated FCA worksheet) will be provided for Section 11 Area 4. This requirement will be met by dedicating 10.52 acres of forest retention surplus on Waverly Woods commercially zoned property to Section 11, Area 4.
- Including Section 11, Area 4 a total of 9.05 acres of onsite reforestation, 11.8 acres of additional onsite retention and 8.13 acres of offsite reforestation (see January 1996 Final FCP for Waverly Woods Section 4, Areas 1 and 2) has been planned for the Waverly Woods residentially zoned property to date. This leaves a balance of 31.18 acres of reforestation to be performed for the remaining areas of Section 11 and the Golf Course. *THE 8.13 ACRES OF OFF-SITE IS LOCATED ON WEST FRIENDSHIP ESTATES, SECTION ONE, KNOWN AS PLAT Nos. 11493 AND 11494 (F-95-173).*

FCP NOTES

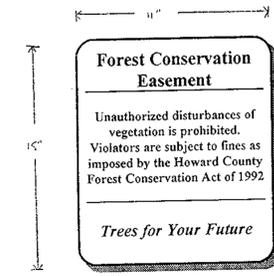
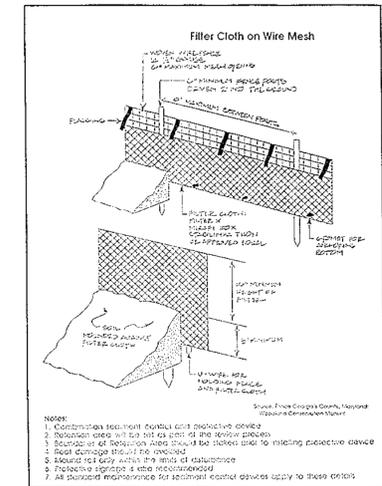
- Any Forest Conservation Easement (FCE) area shown hereon is subject to protective covenants which may be found in the Land Records of Howard County which restrict the disturbance and use of these areas.
- The forest Conservation Easements have been established to fulfill the requirements of Section 16.1200 of the Howard County Code, Forest Conservation Act. No clearing, grading, or construction is permitted within the Forest Conservation Easements; however, forest management practices as defines in the Deed of Forest Conservation Easement are allowed.
- Limits of disturbance shall be restricted to areas outside the limit of temporary fencing or the FCE boundary, whichever is greater.
- There shall be no clearing, grading, construction or disturbance of vegetation in the Forest Conservation Easement, except as permitted by Howard County DPZ.
- No stockpiles, parking areas, equipment cleaning areas, etc. shall occur within areas designated as Forest Conservation Easements.
- Temporary fencing shall be used to protect forest resources during construction. The fencing shall be placed along all FCE boundaries which occur within 15 feet of the proposed limits of disturbance.
- Permanent signage shall be placed 50-100' apart along the boundaries of all areas included in Forest Conservation Easements.
- The reforestation obligation shown hereon shall be met through the retention of existing forest on a commercially zoned section of Waverly Woods.

Waverly Woods Residential -
Forest Conservation Worksheet

Input Parameter:	Preliminary FCP	Thru Section 11/ Area 4
Tract Area	291.90	291.91
100 Year Floodplain	4.10	4.81
Other ROW/Easements to be excluded from NTA	2.04	2.09
Disturbance within Floodplain to be added to NTA	0.00	2.47
Existing Forest Area (NTA)	103.00	103.00
Afforestation Threshold	15%	15%
Conservation Threshold	20%	20%
Total Area forest Cleared	65.55	69.90
Total Area Forest Retained	37.45	33.10
Calculated Parameters:		
Net Tract Area	285.76	287.47
Afforestation Threshold	42.86	43.12
Conservation Threshold	57.15	57.49
Forest Above Conservation Threshold	45.85	45.51
Reforestation for Clearing above Conservation Threshold	11.46	11.38
Reforestation for Clearing Below Conservation Threshold	39.40	48.78
Expected Total Project Reforestation Obligation	50.87	60.16



APPROVED: DEPARTMENT OF PUBLIC WORKS
7-6-01
DATE
APPROVED: DEPARTMENT OF PLANNING AND ZONING
7/19/01
DATE
APPROVED: COMMISSION OF LAND DEVELOPMENT
7/19/01
DATE
CHIEF DEVELOPMENT ENGINEERING DEPARTMENT



SHEET INDEX	
SHEET No.	SHEET
1	TITLE SHEET
2	HOUNSLOW DRIVE PLAN AND PROFILE, ABBOT WAY PLAN & CHAUCER WAY PLAN
3	ABBOT WAY & CHAUCER WAY PROFILES AND ROADWAY DETAILS
4	FILLET PROFILES & ROADWAY DETAILS
5	STREET TREE, GRADING AND SEDIMENT CONTROL PLAN
6	LANDSCAPE PLAN
7	STORM DRAIN PROFILES
8	STORM DRAIN DRAINAGE AREA MAP
9	SEDIMENT CONTROL NOTES AND DETAILS
10	SEDIMENT CONTROL NOTES AND DETAILS
11	FOREST CONSERVATION PLAN
12	OFF-SITE FOREST CONSERVATION PLAN
13	FOREST CONSERVATION NOTES AND DETAILS

APPROVED: DEPARTMENT OF PUBLIC WORKS
Andrew M. Doucette 7-6-01
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cindy Hamstra 7/19/01
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

William J. ... 7/10/01
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

FINAL ROAD CONSTRUCTION, GRADING AND SEDIMENT CONTROL PLANS

GTW'S WAVERLY WOODS

SECTION 11, AREA 4

LOTS 22 THRU 80

(A SUBDIVISION OF THE PROPERTY OF WAVERLY WOODS DEVELOPMENT CORPORATION,
 LIBER 2222, FOLIO 36)

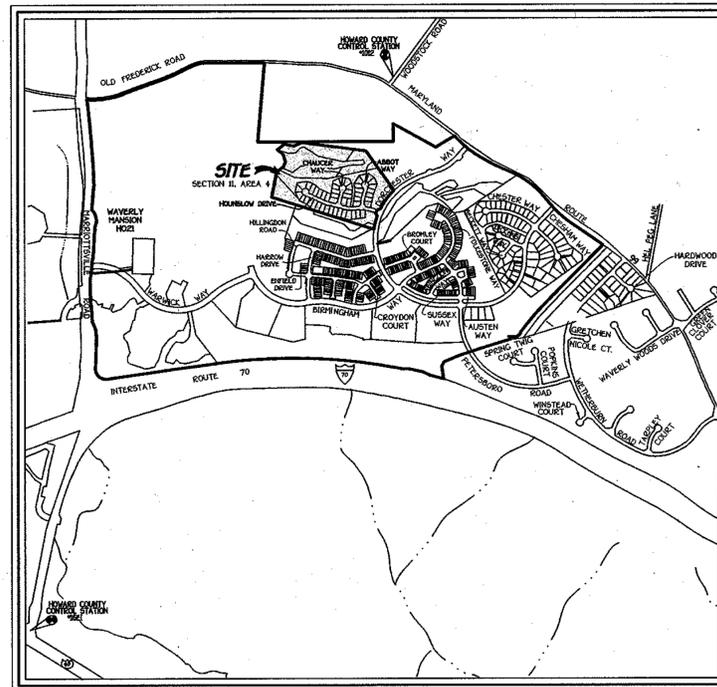
ZONED: RSC

TAX MAP No. 16, PART OF PARCEL No. 20

ROAD CLASSIFICATION CHART		
ROAD	CLASSIFICATION	R/W WIDTH
HOUNSLOW DRIVE	PUBLIC ACCESS STREET	50'
ABBOT WAY	PUBLIC ACCESS PLACE	50'
CHAUCER WAY	PUBLIC ACCESS PLACE	50'

TRAFFIC CONTROL SIGNS				
STREET NAME	CL. STATION	OFFSET	POSTED SIGN	SIGN CODE
HOUNSLOW DRIVE	0+42	16'L	STOP	R1-1
HOUNSLOW DRIVE	1+00	16'R	SPEED LIMIT 25	R2-1
HOUNSLOW DRIVE	2+50	16'L	STOP AHEAD	W3-1
ABBOT WAY	0+34	16'L	STOP	R1-1
CHAUCER WAY	0+34	16'L	STOP	R1-1

STREET LIGHT CHART				
DWG. NO.	STREET NAME	STATION	OFF-SET	FIXTURE/POLE TYPE
2	HOUNSLOW DRIVE	CL. STA. 2+95	20' R	100-WATT HPS VAPOR "COLONIAL" POST TOP FIXTURE MOUNTED ON A 14-FOOT BLACK FIBERGLASS POLE
2	HOUNSLOW DRIVE	CL. STA. 5+85	19' R	100-WATT HPS VAPOR "COLONIAL" POST TOP FIXTURE MOUNTED ON A 14-FOOT BLACK FIBERGLASS POLE
2	ABBOT WAY	LP. STA. 1+43	3' SIDING CURB	100-WATT HPS VAPOR "COLONIAL" POST TOP FIXTURE MOUNTED ON A 14-FOOT BLACK FIBERGLASS POLE
2	CHAUCER WAY	LP. STA. 1+29	3' SIDING CURB	100-WATT HPS VAPOR "COLONIAL" POST TOP FIXTURE MOUNTED ON A 14-FOOT BLACK FIBERGLASS POLE
2	HOUNSLOW DRIVE	LP. STA. 1+00	3' SIDING CURB	100-WATT HPS VAPOR "COLONIAL" POST TOP FIXTURE MOUNTED ON A 14-FOOT BLACK FIBERGLASS POLE



VICINITY MAP
 SCALE: 1" = 1200'

THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND

GENERAL NOTES

- ALL ASPECTS OF THE PROJECT ARE IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVERS ARE APPROVED.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS, DIVISION OF CONSTRUCTION INSPECTION AT 410-313-1880 AT LEAST 15 WORKING DAYS PRIOR TO THE START OF CONSTRUCTION.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION.
- LOCATION: SOUTHWEST SIDE OF OLD FREDERICK ROAD (MARYLAND ROUTE 99) AND EASTSIDE OF DORCHESTER WAY. TAX MAP #16, PART OF PARCEL 20.
- THIS PLAN IS SUBJECT TO ZONING BOARD CASE No. ZB9929-M WHICH APPROVED ON MARCH 22, 1993, A REQUEST TO REZONE 682.18 ACRES OF RURAL LAND INTO THE MIXED USE AREAS.
- TOPOGRAPHY SHOWN HEREON IS FROM AERIAL MAPS FLOWN WITH 2 FOOT CONTOUR INTERVALS PREPARED BY HARFORD AERIAL SURVEYS DATED NOVEMBER 1998.
- PROPERTY IS LOCATED WITHIN METROPOLITAN DISTRICT.
- PUBLIC WATER AND SEWER ARE TO BE UTILIZED FOR THIS SITE AND WILL BE EXTENDED FROM THE LIMITS OF CONTRACT Nos. 24-3469-D AND 24-3566-D.
- STORMWATER MANAGEMENT FOR THIS DEVELOPMENT WILL BE DONE BY THE RETENTION METHOD PROVIDED UNDER EX. POND 1 (F 95-174). THE S.W.M. REPORT IS PROVIDED BY HILDENBURG ASSOCIATES, INC. (APPROVED 3/26/99).
- THIS HORIZONTAL AND VERTICAL DATUM SHOWN ARE BASED ON THE FOLLOWING NAD '83 HOWARD COUNTY CONTROL STATIONS:
 HOWARD COUNTY MONUMENT 1012 N 601060.177 ELEV. = 445.577
 E 1345336.7580
 HOWARD COUNTY MONUMENT 16E1 N 593250.9322 ELEV. = 509.924
 E 1340192.7110
- AREA TABULATION:
SECTION 11, AREA 4
 a. TOTAL NUMBER OF BUILDABLE LOTS TO BE RECORDED 51
 b. TOTAL NUMBER OF HOA OPEN SPACE LOTS TO BE RECORDED 5
 c. TOTAL NUMBER OF GOLF COURSE OPEN SPACE LOTS TO BE RECORDED 3
 d. TOTAL AREA OF BUILDABLE LOTS TO BE RECORDED 3,282 AC.
 e. TOTAL AREA OF HOA OPEN SPACE LOTS TO BE RECORDED 12,067 AC.
 f. TOTAL AREA OF GOLF COURSE OPEN SPACE LOTS TO BE RECORDED 1012 AC.
 g. TOTAL AREA OF LOTS/PARCELS TO BE RECORDED 34,461 AC.
 h. TOTAL AREA OF ROADWAY TO BE RECORDED 2,150 AC.
 i. TOTAL AREA TO BE RECORDED 33,611 AC.
- THE NOISE STUDY FOR GTW'S WAVERLY WOODS WAS PROVIDED BY WILDMAN ENVIRONMENTAL SERVICES, INC. ON NOVEMBER 1, 1994.
- THE FOREST CONSERVATION OBLIGATION FOR THIS SECTION HAS BEEN MET WITH 4.07 ACRES OF ONSITE FOREST RETENTION AND 10.52 ACRES OF OFFSITE FOREST RETENTION, LOCATED ON A PORTION OF THE G.T.W. WAVERLY WOODS PROPERTY, WEST OF MARRIOTTVILLE ROAD. THE SURETY OBLIGATION FOR THIS AREA = \$63,654.00.
SEE CONVEYANCE AGREEMENT IN THE AMOUNT OF \$45,000.00 IS HELD AS PART OF THE DEVELOPERS AGREEMENT.
- THERE IS A PUBLIC 100 YEAR FLOODPLAIN WITHIN SECTION 11.
- THE WETLANDS STUDY FOR GTW'S WAVERLY WOODS WAS PREPARED BY EXPLORATION RESEARCH, INC. AND WAS COMPILED ON 9/5/91.
- THE TRAFFIC STUDY FOR GTW'S WAVERLY WOODS WAS PREPARED BY THE TRAFFIC GROUP AND APPROVED ON JULY 14, 1994.
- THE SOILS INVESTIGATION REPORT WAS PREPARED BY I.T.E., INC. ON JUNE 28, 1994.
- THE SKETCH PLAN No. S 94-07 WAS APPROVED ON 11/30/93. THE PRELIMINARY PLAN P 00-10 WAS APPROVED ON 9/6/00. THE PRELIMINARY PLAN CONCOIDES WITH THE PHASING PLAN FOR THE YEAR OF 2002 AS SHOWN UNDER THE SKETCH PLAN AND MODIFIED PHASING PLAN FOR PHASING 2002 THRU 2010 APPROVED BY THE PLANNING DIRECTOR ON JUNE 21, 1999.
- STREET LIGHTS WILL BE REQUIRED IN THIS DEVELOPMENT IN ACCORDANCE WITH THE DESIGN MANUAL. STREET LIGHT PLACEMENT AND TYPE OF FIXTURE AND POLE SELECTED SHALL BE IN ACCORDANCE WITH THE LATEST HOWARD COUNTY DESIGN MANUAL, VOLUME III (1993) AND AS MODIFIED BY "GUIDELINES FOR STREET LIGHTS IN RESIDENTIAL DEVELOPMENTS (JUNE 1999)". THE JUNE 1999 POLICY INCLUDES GUIDELINES FOR LATERAL AND LONGITUDINAL PLACEMENT. A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN AND STREET LIGHT AND ANY TREE.
- ALL HANDICAP RAMPS SHALL MEET CURRENT ADA REQUIREMENTS.

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK - 10772 BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21042
 (410) 481-2995

OWNER / DEVELOPER
 WAVERLY WOODS DEVELOPMENT CORPORATION
 c/o LAND DESIGN AND DEVELOPMENT, LLC
 8000 MAIN STREET
 ELLICOTT CITY, MARYLAND 21042

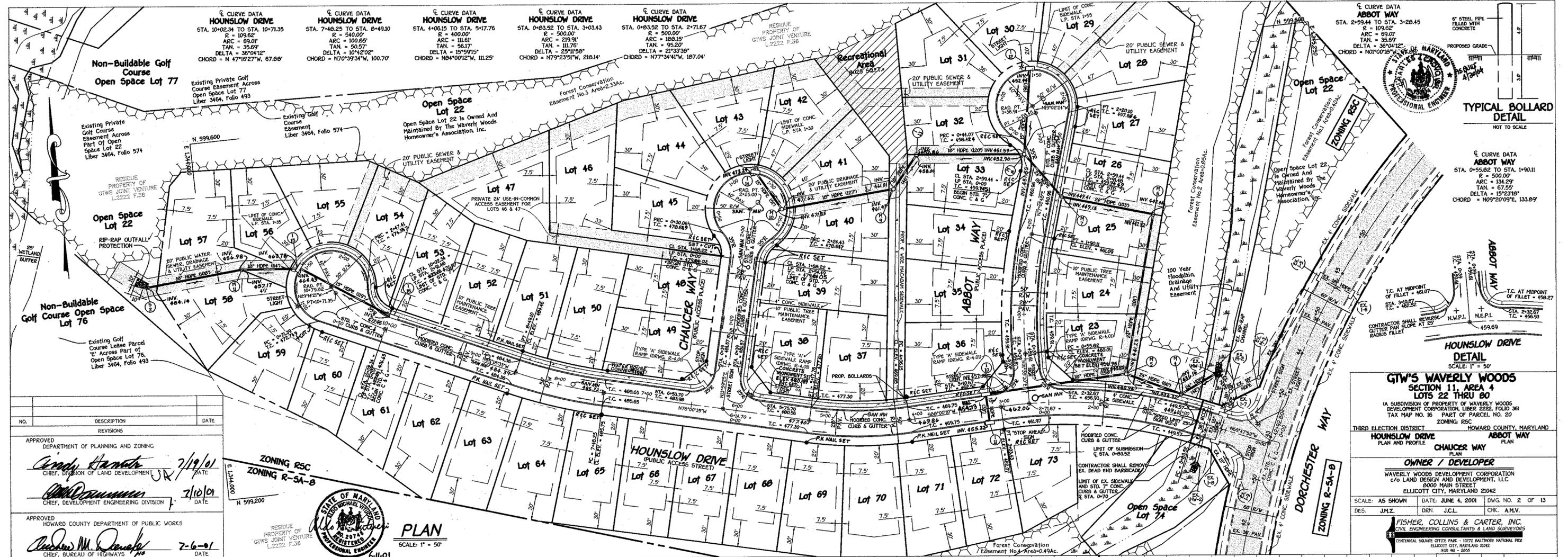


6-11-01
 DATE

GTW'S WAVERLY WOODS
 SECTION 11, AREA 4
 LOTS 22 THRU 80
 (A SUBDIVISION OF THE PROPERTY OF WAVERLY WOODS DEVELOPMENT CORPORATION, LIBER 2222, FOLIO 36)
 ZONING: RSC
 TAX MAP No. 16 PART OF PARCEL No. 20
 THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 DATE: JUNE 4, 2001
 SHEET 1 OF 13



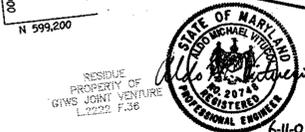
F01-93 AS BUILT



NO.	DESCRIPTION	DATE
1	APPROVED DEPARTMENT OF PLANNING AND ZONING	
2	APPROVED HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS	

APPROVED DEPARTMENT OF PLANNING AND ZONING
Cindy Harvath 7/19/01
 CHIEF, DIVISION OF LAND DEVELOPMENT

APPROVED HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Richard M. Dancy 7-6-01
 CHIEF, BUREAU OF HIGHWAYS



PLAN
 SCALE: 1" = 50'

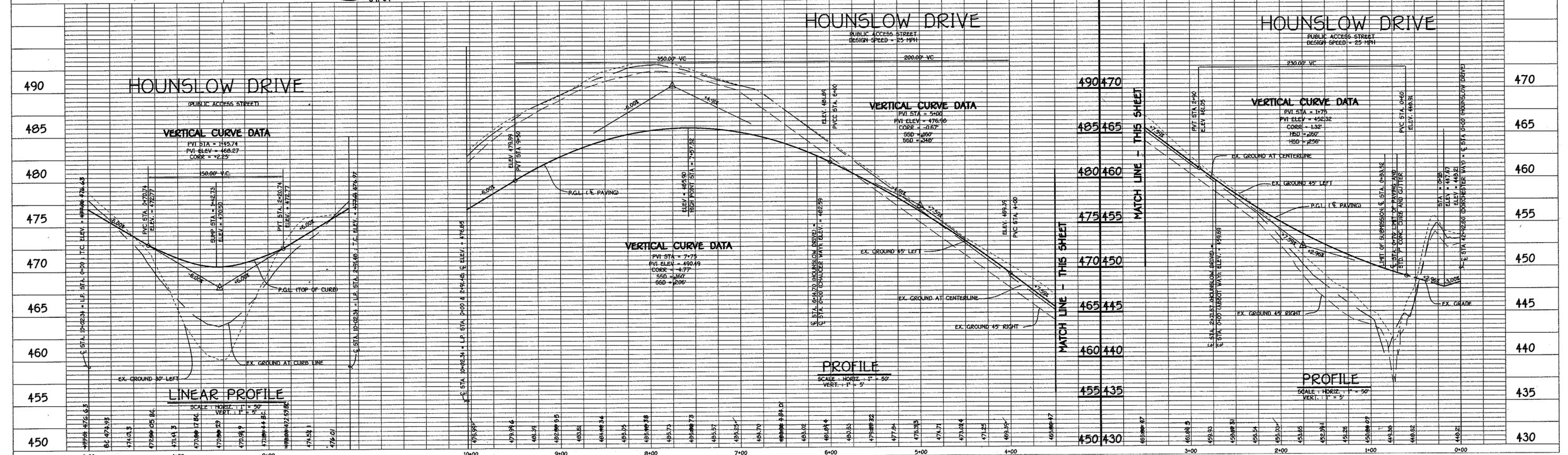
GTW'S WAVERLY WOODS SECTION 11, AREA 4 LOTS 22 THRU 80
 (A SUBDIVISION OF PROPERTY OF WAVERLY WOODS DEVELOPMENT CORPORATION, LIBER 2222, FOLIO 36)
 TAX MAP NO. 16 PART OF PARCEL NO. 20
 ZONING RSC HOWARD COUNTY, MARYLAND

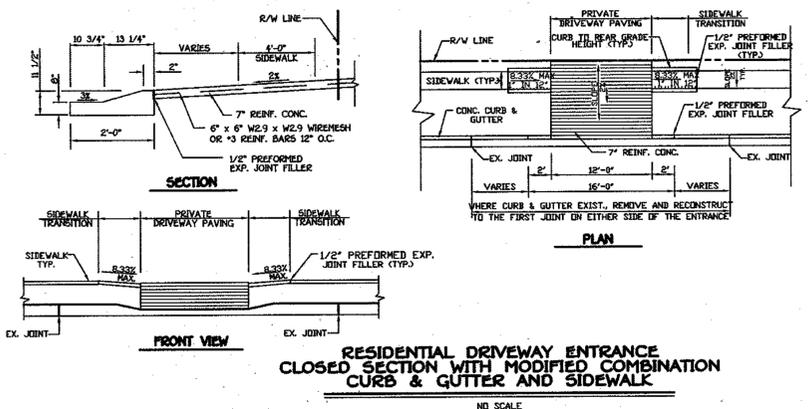
HOUNSLOW DRIVE PLAN AND PROFILE
CHAUCER WAY PLAN
ABBOT WAY PLAN

OWNER / DEVELOPER
 WAVERLY WOODS DEVELOPMENT CORPORATION
 C/O LAND DESIGN AND DEVELOPMENT, LLC
 ELLICOTT CITY, MARYLAND 21042

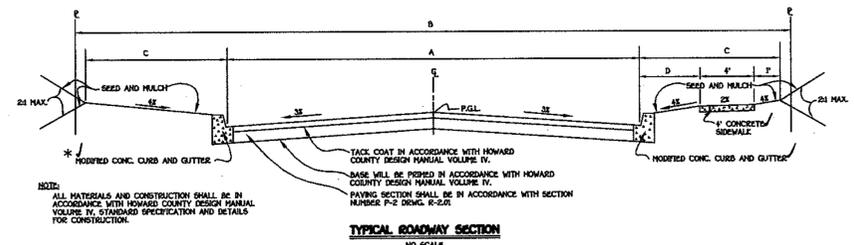
SCALE: AS SHOWN DATE: JUNE 4, 2001 DWG. NO. 2 OF 13
 DES. J.M.Z. DRN. J.C.L. CHK. AM.V.

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTURIAL SQUARE OFFICE PARK - 1872 BALTIMORE NATIONAL FREE
 ELLICOTT CITY, MARYLAND 21042
 (410) 461-2055





RESIDENTIAL DRIVEWAY ENTRANCE CLOSED SECTION WITH MODIFIED COMBINATION CURB & GUTTER AND SIDEWALK
 NO SCALE



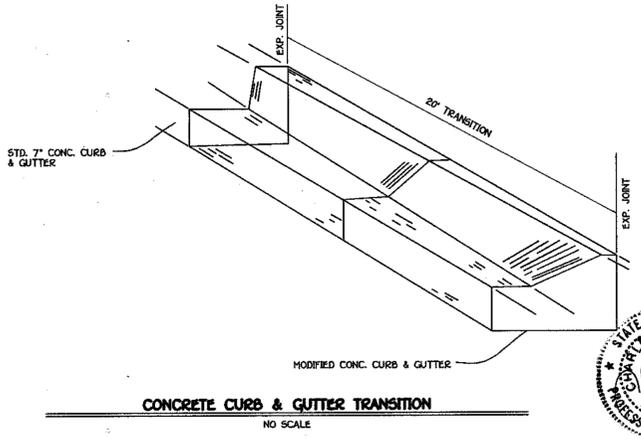
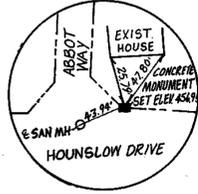
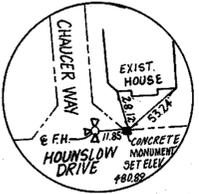
ROAD NAME	CLASSIFICATION	C.L. STA. TO C.L. STA.	A	B	C	D	PAVING SECTION	DESIGN SPEED
HOUNSLOW DRIVE	PUBLIC ACCESS STREET	0+70 TO 10+79.82	28"	50"	9"	4"	P-2	25 MPH
ABBOT WAY	PUBLIC ACCESS PLACE	0+00 TO 3+36.51	28"	50"	9"	4"	P-2	25 MPH
CHAUCER WAY	PUBLIC ACCESS PLACE	0+00 TO 2+25.00	28"	50"	9"	4"	P-2	25 MPH

* STD. 7" CONC. CURB AND GUTTER TO BE USED IN ALL LINEAR PROFILES IN ROADWAY CUL-DE-SACS.

APPROVED
 DEPARTMENT OF PLANNING AND ZONING
Sandy Handley 7/19/01
 CHIEF, DIVISION OF LAND DEVELOPMENT

APPROVED
 DEPARTMENT OF PLANNING AND ZONING
John D. Damm 7/10/01
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

APPROVED
 HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Richard M. Pender 7-6-01
 CHIEF, BUREAU OF HIGHWAYS



GTW'S WAVERLY WOODS SECTION 11, AREA 4 LOTS 22 THRU 80
 (A SUBDIVISION OF PROPERTY OF WAVERLY WOODS DEVELOPMENT CORPORATION, LIBER. 2222, FOLIO 36)
 TAX MAP NO. 16 PART OF PARCEL NO. 20
 ZONING: RSC

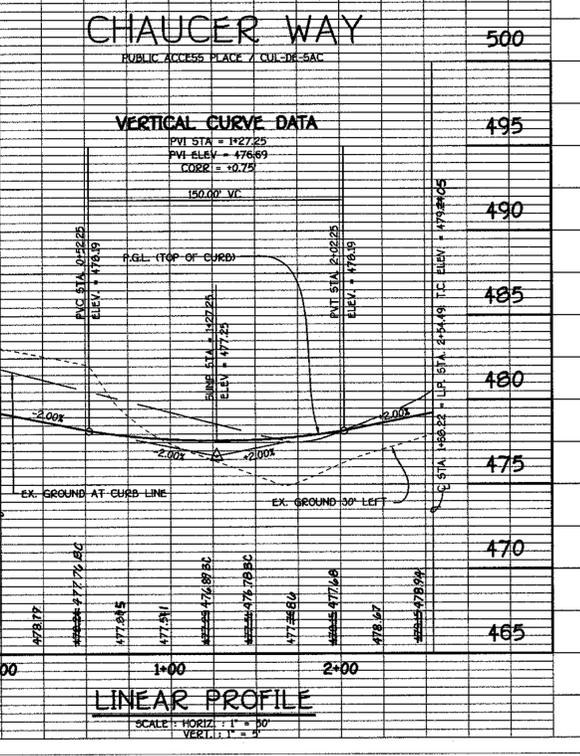
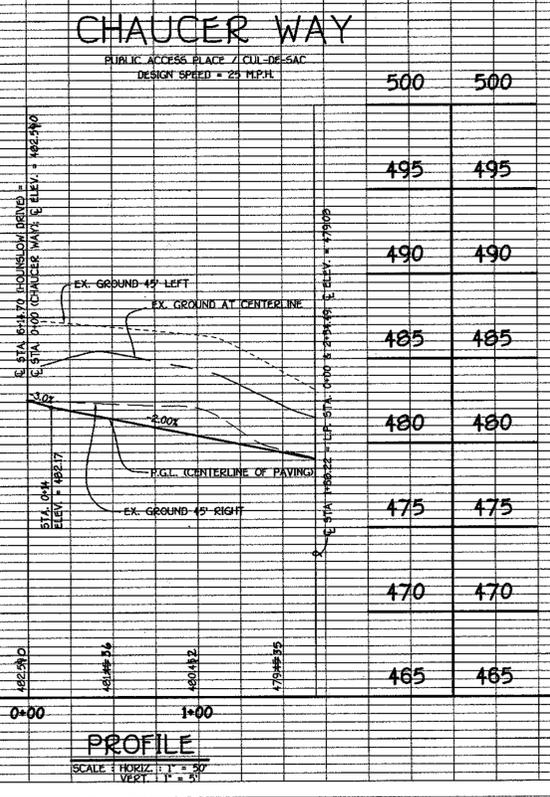
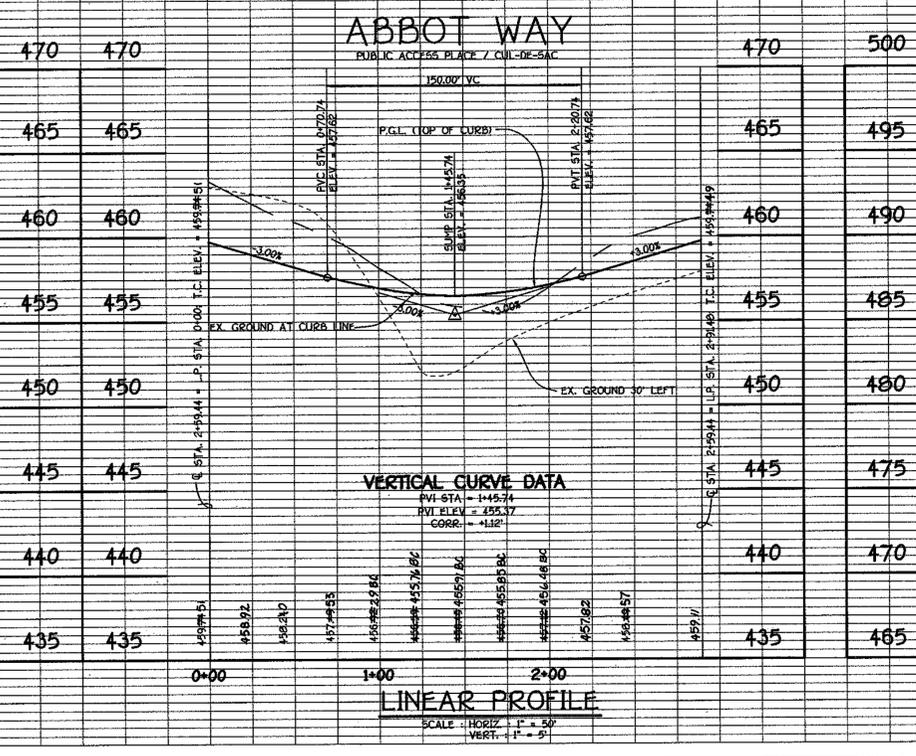
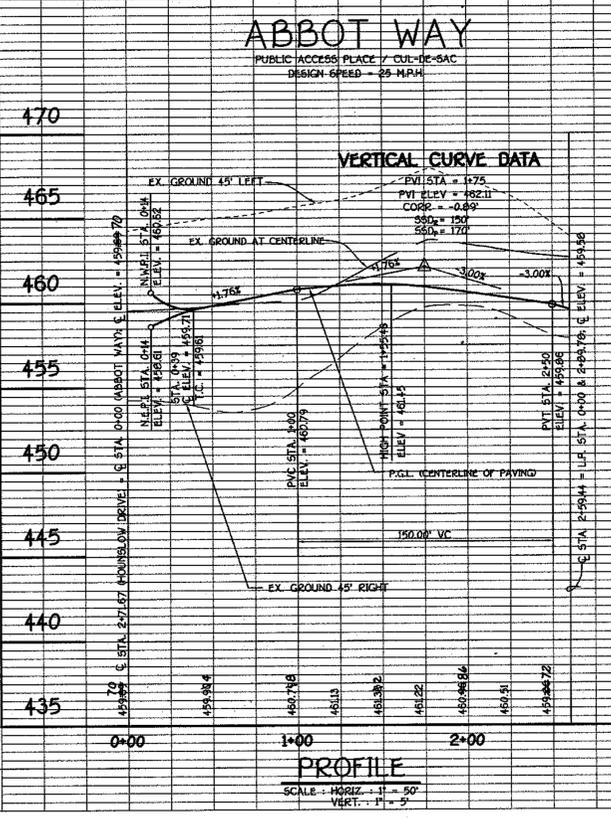
THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND

CHAUCER WAY PROFILE ABBOT WAY PROFILE

ROADWAY DETAILS
 OWNER / DEVELOPER
 WAVERLY WOODS DEVELOPMENT CORPORATION
 C/O LAND DESIGN AND DEVELOPMENT, LLC
 ELLICOTT CITY, MARYLAND 21042

SCALE: AS SHOWN DATE: JUNE 4, 2001 DWG. NO. 3 OF 13
 DES. J.M.Z. DRN. J.C.L. CHK. A.M.V.

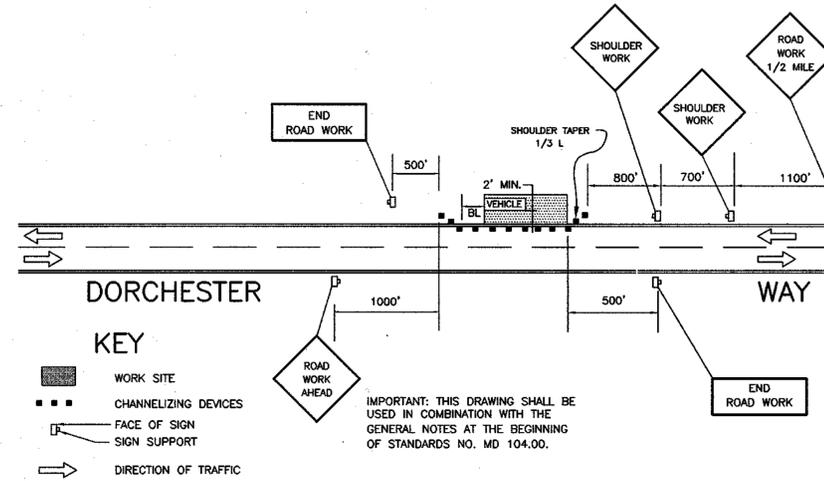
FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK - 1872 BALTIMORE NATIONAL Pkwy.
 ELLICOTT CITY, MARYLAND 21042
 (410) 461-3955



MAINTENANCE OF TRAFFIC SPECIAL PROVISIONS

GENERAL

- THE PURPOSE OF THIS PORTION OF THE SPECIAL PROVISION IS TO SET FOR THE TRAFFIC CONTROL REQUIREMENTS NECESSARY FOR THE SAFE AND EFFICIENT MAINTENANCE TO TRAFFIC WITHIN WORK AREAS, AND TO MINIMIZE ANY INCONVENIENCES TO THE TRAVELING PUBLIC AND THE CONTRACTOR AND/OR PERMITTEE.
- PROPER TRAFFIC CONTROL THROUGH WORK AREAS IS ESSENTIAL FOR INSURING THE SAFETY AND THAT OF NEARBY WORKERS HAS THE HIGHEST PRIORITY OF ALL TRAFFIC WITHIN THIS PROJECT. THE PROPER APPLICATION OF THE APPROVED TRAFFIC CONTROL PLAN (TCP) WILL PROVIDE THE DESIRED LEVEL OF SAFETY.
- THROUGHOUT THESE SPECIAL PROVISIONS, ANY MENTION OF THE TCP SHALL BE IMPLIED TO INCLUDE ANY COMBINATION OF TYPICAL TRAFFIC CONTROL STANDARDS WHICH FORM THE OVERALL TCP FOR THIS PROJECT WHICH HAS BEEN APPROVED BY THE APPROPRIATE SHA TRAFFIC ENGINEER.
- THE CONTRACTOR AND/OR PERMITTEE SHALL BE REQUIRED TO ADHERE TO THE PROVISIONS OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), 1998 EDITION, ESPECIALLY PART VI, AND TO SECTION 614 OF THE MARYLAND DOT STANDARD SPECIFICATIONS FOR CONSTRUCTION MATERIALS (LANSBURY, 1982), INCLUDING ALL REVISIONS AND SUPPLEMENTS TO EACH.
- THE CONTRACTOR AND/OR PERMITTEE SHALL BE REQUIRED TO ADHERE TO THE REQUIREMENTS SET FORTH IN THE TCP AND THESE SPECIAL PROVISIONS, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. ANY REQUESTS TO MAKE MINOR CHANGES TO THE TCP OR THE SPECIAL PROVISIONS WITH REGARD TO THE TRAFFIC CONTROL ITEMS SHALL BE MADE IN WRITING TO THE ENGINEER A MINIMUM OF THREE (3) WORKING DAYS PRIOR TO THE PROPOSED SCHEDULING CHANGE. THE CONTRACTOR AND/OR PERMITTEE SHALL HAVE WRITTEN APPROVAL OF THE ENGINEER PRIOR TO THE IMPLEMENTATION OF ANY CHANGE.
- NO WORK SHALL BEGAIN ON ANY WORK ACTIVITY OR WORK PHASE UNTIL ALL REQUIRED TRAFFIC CONTROL PATTERNS AND DEVICES INDICATED ON THE TCP FOR THAT ACTIVITY OR PHASE ARE COMPLETELY AND CORRECTLY IN PLACE TO HAVE BEEN CHECKED FOR APPROVED USAGE.
- GENERAL AND SPECIFIC WARNING SIGNS SHALL ONLY BE IN PLACE WHEN SPECIFIC WORK TASKS AND ACTIVITIES ARE ACTUALLY UNDERWAY OR CONDITIONS EXIST THAT POSE A POTENTIAL HAZARD TO THE PUBLIC, AND ANY ADDITIONAL SIGNING HAS BEEN APPROVED BY THE APPROPRIATE SHA TRAFFIC ENGINEER. NOTE: THE PRACTICE OF PLACING SIGNING AND OTHER TRAFFIC CONTROL DEVICES IN ADDITION TO THOSE INDICATED ON THE APPROVED TCP IS NOT PERMITTED.
- THE CONTRACTOR AND/OR PERMITTEE SHALL PROVIDE, MAINTAIN IN NEW CONDITION, AND WHEN NECESSARY, OR AS DIRECTED BY THE ENGINEER, ALL TRAFFIC CONTROL DEVICES USED FOR THE GUIDANCE AND PROTECTION OF MOTORISTS, PEDESTRIANS, AND WORKERS, FULLY PERFORMING AS SET FORTH IN THE MUTCD AND/OR SECTION 614 OF THE SPECIFICATIONS. FOR REFLECTIVE DEVICES, A PARTICULAR DEVICE IS ASSUMED TO HAVE MET THE MINIMUM OPERATIONAL STANDARDS WHEN THE DEVICE NO LONGER HAS RETRO-REFLECTANCE CAPABILITY OF AT LEAST 60% OF THE SPECIFIED MINIMUM VALUE OVER AT LEAST 90% OF THE VISIBLE REFLECTIVE SURFACE.
- ALL TRAFFIC CONTROL DEVICES NOT REQUIRED FOR THE SAFE CONDUCT OF TRAFFIC SHALL BE PROMPTLY REMOVED, COMPLETELY COVERED, TURNED AWAY FROM TRAFFIC, OR OTHERWISE TAKEN OUT OF SERVICE. IT IS INTENDED THAT NO TRAFFIC CONTROL DEVICE IS TO BE IN SERVICE WHEN THERE IS NO CLEAR CUT REASON FOR THE DEVICE.
- THROUGHOUT THE PERIODS OF WORK ACTIVITIES, TRAFFIC SHALL BE MAINTAINED BY IMPLEMENTING THE APPROVED TCP. IN LIEU OF THE TCP PREPARED FOR THIS PROJECT, AND/OR INDIVIDUAL TYPICAL TRAFFIC CONTROL STANDARDS, THE CONTRACTOR AND/OR PERMITTEE HAS THE OPTION OF PREPARING AND SUBMITTING A TCP, WHOLLY OR IN PART, OF HIS OWN DESIGN, FOLLOWING GUIDELINES SET FORTH IN THE MUTCD AND PRESCRIBED BY THE ADMINISTRATION. A TCP DEVELOPED BY THE CONTRACTOR AND/OR PERMITTEE SHALL NOT BE IMPLEMENTED UNTIL ADVANCE WRITTEN APPROVAL IS OBTAINED FROM THE ENGINEER. TCPs MAY BE IMPLEMENTED WITHIN A SINGLE PROJECT OR JOINTLY BETWEEN TWO OR MORE PROJECTS. IN SITUATIONS WHERE TCPs JOINTLY IMPLEMENTED CASES SHALL BE EXERCISED TO PRESENT CORRECT AND NON-CONFLICTING GUIDANCE TO THE TRAVELING PUBLIC.
- THROUGHOUT THESE SPECIAL PROVISIONS, WHERE SPEED OF TRAFFIC IS NOTED, THIS MEANS THE POSTED SPEED OR PREVAILING TRAVEL SPEED, WHICHEVER IS HIGHER, UNLESS OTHERWISE NOTED.
- TRAFFIC SHALL BE MAINTAINED AT ALL TIMES THROUGHOUT THE ENTIRE LENGTH OF THE PROJECT, UNLESS OTHERWISE NOTED. NO TRAVEL LANES OTHER THAN THOSE DESIGNATED FOR POSSIBLE CLOSURE IN THE TCP SHALL BE CLOSED WITHOUT OBTAINING APPROVAL FROM THE ENGINEER. ALL INGRESS AND EGRESS TO THE WORK AREA BY THE CONTRACTOR AND/OR PERMITTEE SHALL BE PERFORMED WITH THE FLOW OF TRAFFIC.



(STANDARD NO. MD 104.04-01)
TEMPORARY TRAFFIC CONTROL PLAN
NO SCALE

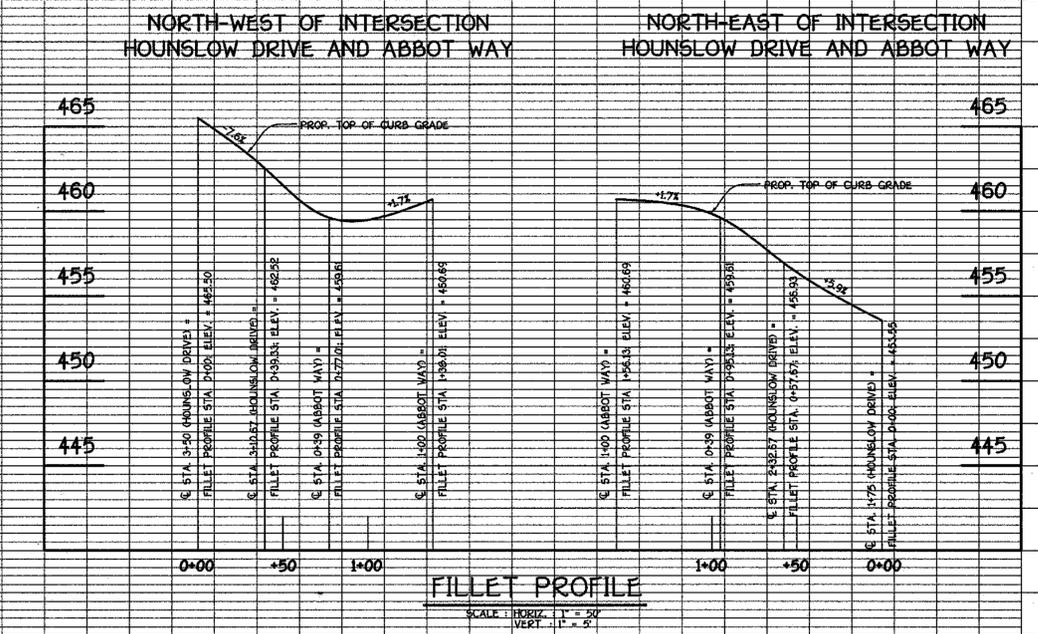
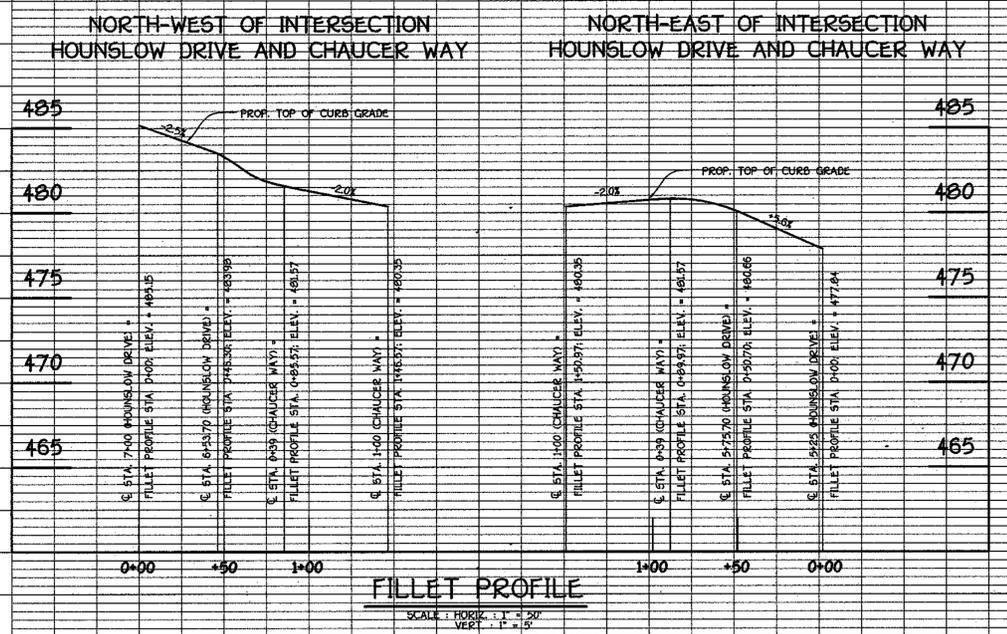
APPROVED
DEPARTMENT OF PLANNING AND ZONING
Cindy Hamrick 7/19/01
CHIEF, DIVISION OF LAND DEVELOPMENT
DATE

APPROVED
DEPARTMENT OF PLANNING AND ZONING
Michael V. Jones 7/16/01
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE

APPROVED
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Andrew M. Paulk 7-6-01
CHIEF, BUREAU OF HIGHWAYS
DATE



GTW'S WAVERLY WOODS	
SECTION 1: AREA 4	
LOTS 22 THRU 80	
A SUBDIVISION OF PROPERTY OF WAVERLY WOODS DEVELOPMENT CORPORATION, LIBER 2222, FOLIO 30	
TAX MAP NO. 16 PART OF PARCEL NO. 20	
ZONING: RES. HOWARD COUNTY, MARYLAND	
FILLET PROFILES	ROADWAY DETAILS
OWNER / DEVELOPER	
WAVERLY WOODS DEVELOPMENT CORPORATION c/o LAND DESIGN AND DEVELOPMENT, LLC 8000 MAIN STREET ELLCOTT CITY, MARYLAND 21042	
SCALE: AS SHOWN	DATE: JUNE 4, 2001
DES. J.M.Z.	CHK. A.M.V.
FISHER, COLLINS & CARTER, INC. CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS CENTRAL SQUARE OFFICE PARK - 10722 BALTIMORE NATIONAL PIKE ELLCOTT CITY, MARYLAND 21042 (301) 881-2995	



AS BUILT 01-93

ENGINEER'S CERTIFICATE
 I Herby Certify That This Plan For Erosion And Sediment Control Represents A Practical Plan Based On My Personal Knowledge Of The Site Conditions And That It Was Prepared In Accordance With The Requirements Of The Maryland Conservation District.
 Signature Of Engineer: *[Signature]* Date: 6-11-01

DEVELOPER'S CERTIFICATE
 I/We Certify That All Development And Construction Will Be Done According To This Plan Of Development And Plan For Erosion And Sediment Control And That All Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Attendance At A Department Of Natural Resources Approved Training Program For The Control Of Sedimentation And Erosion Before Beginning The Project. I Also Authorize Periodic On-Site Inspection By The Howard Soil Conservation District/Or Their Authorized Agents, As Are Deemed Necessary.
 Signature Of Developer: *[Signature]* Date: 6-11-01

Reviewed For Howard County Soil Conservation District And Meets Technical Requirements: *[Signature]* Date: 7/2/01
 U.S.D.A. - Natural Resources Conservation Service

Approved: This Development Is Approved For Erosion And Sediment Control By The Howard Soil Conservation District: *[Signature]* Date: 7/2/01
 District Howard Soil Conservation Dist.

Approved Department Planning And Zoning: *[Signature]* Date: 7/19/01
 Chief, Division Of Land Development

Approved: Howard County Department Of Public Works: *[Signature]* Date: 7-6-01
 Chief, Bureau Of Highways

STONE OUTLET SEDIMENT TRAP (ST-III)
 INITIAL D.A. = 2.20 AC.
 FINAL D.A. = 2.77 AC.
 STORAGE REQUIRED: WEIR: 1800 x 2.77 = 4,986 CUFT.
 STORAGE PROVIDED: WEIR: 7,482 CUFT. @ ELEV. 452.00
 DRY: 7,340 CUFT. @ ELEV. 454.00
 STORAGE DEPTH = 5.0'
 BOT. ELEV. = 449.00
 TOP OF EMBANKMENT = 456.00
 CLEAR-OUT ELEV. = 450.50
 12" WEIR CREST ELEV. = 452.00
 Q2ex = 2.1 C.F.S.
 Q2prop = 1.5 C.F.S.

STONE/RIP-RAP OUTLET SEDIMENT TRAP (ST-IV)
 INITIAL D.A. = 1.50 AC.
 FINAL D.A. = 5.60 AC.
 STORAGE REQUIRED: WEIR: 1800 x 5.60 = 10,080 CUFT.
 STORAGE PROVIDED: WEIR: 10,323 CUFT. @ ELEV. 444.00
 DRY: 10,092 CUFT. @ ELEV. 448.00
 BOT. ELEV. = 441.00
 STORAGE DEPTH = 5.0'
 SIDE SLOPES = 2:1
 TOP OF EMBANKMENT = 448.00
 CLEAR-OUT ELEV. = 442.50
 24" WEIR CREST ELEV. = 446.00
 Q2ex = 1.8 C.F.S.
 Q2prop = 1.7 C.F.S.

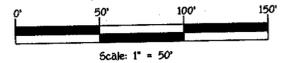
STREET TREE SCHEDULE				
SYMBOL	QUANTITY	BOTANICAL AND COMMON NAME	SIZE	COMMENTS
	16	QUERCUS COCCINEA "SCARLET OAK"	2 1/2"-3" CAL.	40' APART ON PUBLIC R/W
	46	ACER RUBRUM "RED SUNSET" RED SUNSET RED MAPLE	2 1/2"-3" CAL.	40' APART ON PUBLIC R/W
	12	CERCIDIPHYLLUM JAPONICA "KATSURA TREE"	2 1/2"-3" CAL.	40' APART ON PUBLIC R/W

NOTE: STREET TREE TYPES ARE ONLY A RECOMMENDATION AND MAY BE REVISED TO AN ACCEPTABLE COUNTY EQUIVALENT FROM THE HOWARD COUNTY LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED 76 STREET TREES HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$22,600.00.

NOTE: SEE SHEET 9 FOR FINAL GRADING IN SEDIMENT TRAP AREAS.

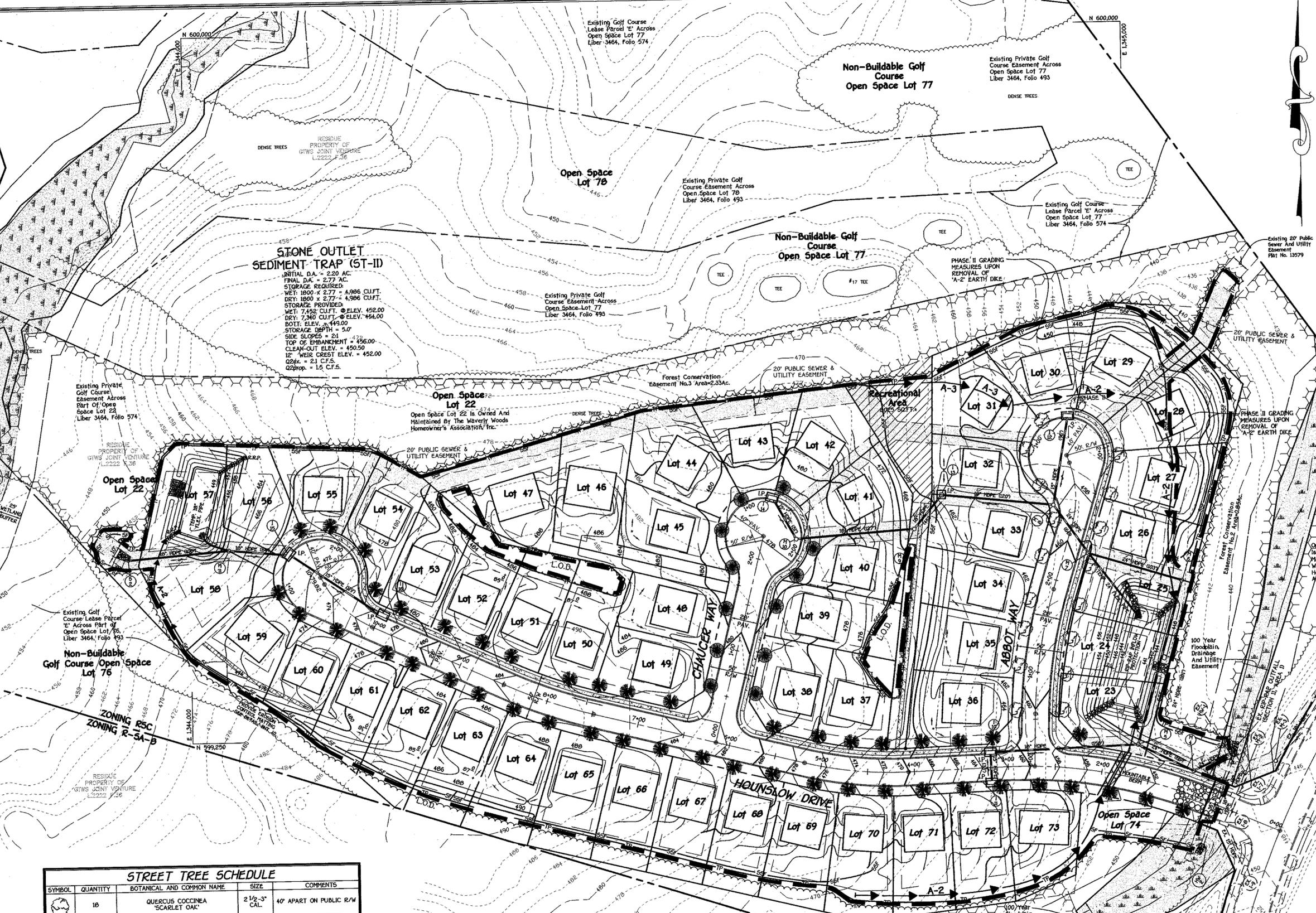


OWNER / DEVELOPER
 WAVERLY WOODS DEVELOPMENT CORPORATION
 c/o LAND DESIGN AND DEVELOPMENT, LLC
 8000 MAIN STREET
 ELLICOTT CITY, MARYLAND 21042



STREET TREE, GRADING AND SEDIMENT CONTROL PLAN
GTW'S WAVERLY WOODS
 SECTION 11, AREA 4
 LOTS 22 THRU 80
 (A SUBDIVISION OF THE PROPERTY OF WAVERLY WOODS DEVELOPMENT CORPORATION, LIBER 2222, FOLIO 36)
 ZONING: RSC
 TAX MAP NO. 16 PART OF PARCEL NO. 20
 THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 DATE: JUNE 4, 2001
 SHEET 5 OF 13

- LEGEND**
- SSF—SSF—SSF— SUPER-SILT FENCE
 - SF—SF—SF— SILT FENCE
 - TP—TP—TP— TREE PROTECTION FENCE
 - I.P. INLET PROTECTION
 - S.C.E. STABILIZED CONSTRUCTION ENTRANCE
 - A-2— EARTH DIKE
 - — — — — LIMIT OF DISTURBANCE
 - R.R.P. RIP-RAP INFLOW PROTECTION
 - EROSION CONTROL MATTING



FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK - 18072 BALTIMORE NATIONAL FREE
 ELLICOTT CITY, MARYLAND 21114
 (410) 461-2855

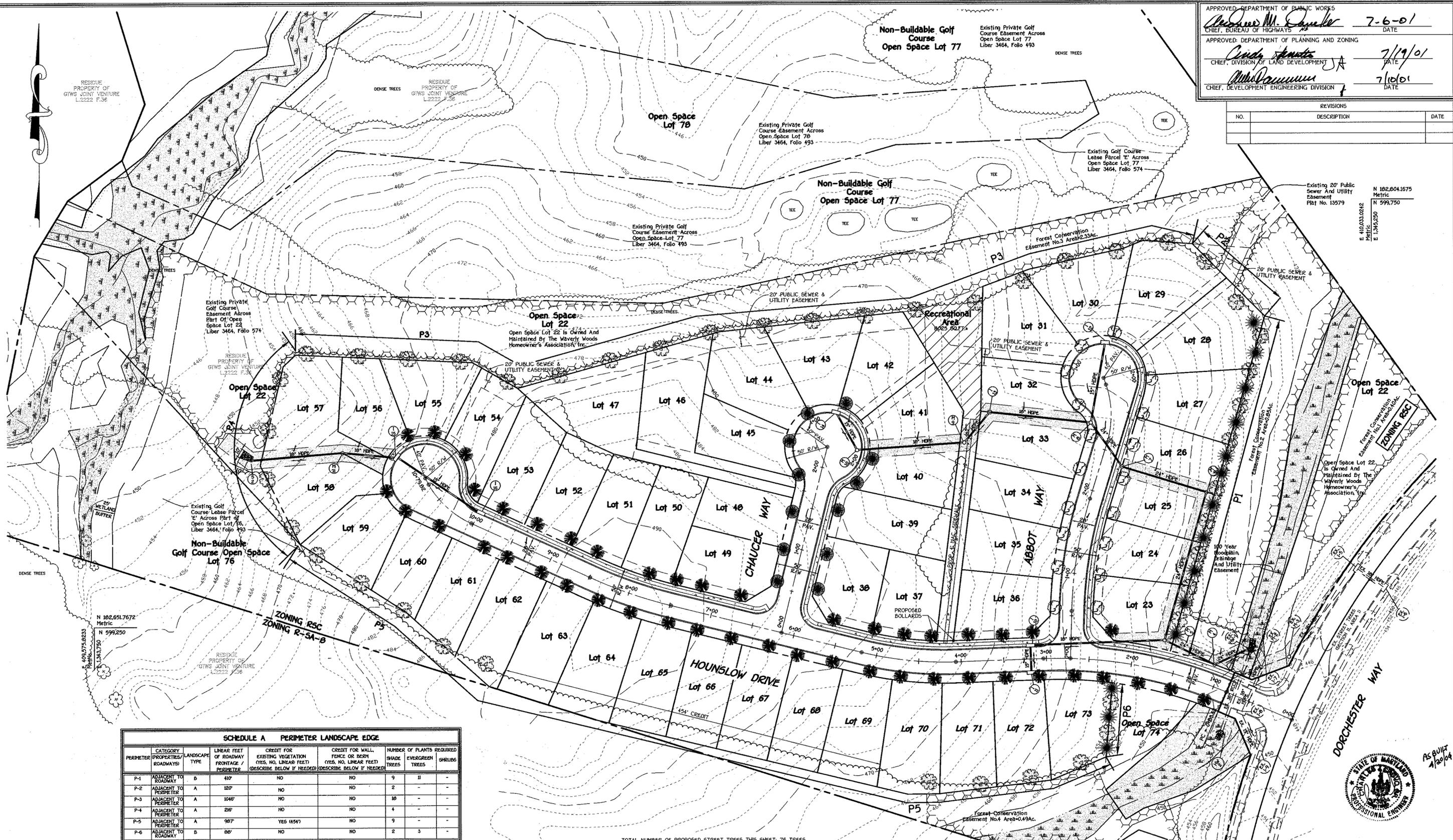
NO.	DESCRIPTION	DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS
Richard M. Dwyer 7-6-01
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cindy Smith 7/19/01
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Michael J. ... 7/10/01
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

REVISIONS		
NO.	DESCRIPTION	DATE



SCHEDULE A PERIMETER LANDSCAPE EDGE							
PERIMETER	CATEGORY	LANDSCAPE TYPE	LINEAR FEET OF ROADWAY FRONTAGE / PERIMETER	CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	CREDIT FOR WALL, FENCE OR BORN (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NUMBER OF PLANTS REQUIRED	
						SHADE TREES	EVERGREEN TREES
P-1	ADJACENT TO ROADWAY	B	480'	NO	NO	9	11
P-2	ADJACENT TO PERIMETER	A	120'	NO	NO	2	-
P-3	ADJACENT TO PERIMETER	A	1046'	NO	NO	18	-
P-4	ADJACENT TO PERIMETER	A	216'	NO	NO	4	-
P-5	ADJACENT TO PERIMETER	A	987'	YES (454')	NO	9	-
P-6	ADJACENT TO ROADWAY	B	86'	NO	NO	2	3

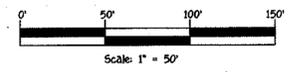
THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16324 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE 50 REQUIRED LANDSCAPE TREES HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$15,300.00.

LANDSCAPING PLANT LIST			
QTY.	KEY	NAME	SIZE
44		QUERCUS PHellos 'WILLOW OAK'	2 1/2" - 3" CALIPER FULL CROWN, B&B
14		CEDRUS DEODORA 'DEODAR CEDAR'	6' - 8' HT.

NOTE: STREET TREE AND PERIMETER LANDSCAPING TREE TYPES ARE ONLY A RECOMMENDATION. THESE MAY BE REVISED TO AN ACCEPTABLE EQUIVALENT FROM THE HOWARD COUNTY LANDSCAPE MANUAL.

- TOTAL NUMBER OF PROPOSED STREET TREES THIS SHEET: 76 TREES
- DENOTES QUERCUS COCCINEA 'SCARLET OAK' PLANTED 40' O.C. TOTAL: 18 TREES
 - DENOTES ACER RUBRUM 'RED SUNSET' RED SUNSET RED MAPLE PLANTED 40' O.C. TOTAL: 45 TREES
 - DENOTES CERCIIDIPHYLLUM JAPONICA 'KATSURA TREE' PLANTED 40' O.C. TOTAL: 12 TREES

OWNER / DEVELOPER
 WAVERLY WOODS DEVELOPMENT CORPORATION
 c/o LAND DESIGN AND DEVELOPMENT, LLC
 8000 MAIN STREET
 ELLICOTT CITY, MARYLAND 21042



LANDSCAPE PLAN
GTW'S WAVERLY WOODS
 SECTION 11, AREA 4
 LOTS 22 THRU 80
 (A SUBDIVISION OF THE PROPERTY OF WAVERLY WOODS DEVELOPMENT CORPORATION, LIBER 2222, FOLIO 36)
 ZONING RSC
 TAX MAP NO. 16 PART OF PARCEL NO. 20
 3RD ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 DATE: JUNE 4, 2001
 SHEET 6 OF 13



FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK - 10772 BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21042
 410-431-2995

F 01-93 AS BUILT

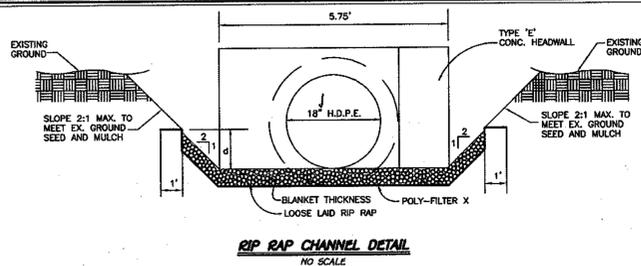
STRUCTURE SCHEDULE

STRUCTURE NO.	TOP ELEVATION	INV. IN	INV. OUT	ROAD NAME	ROAD STA.	OFFSET	TYPE	W	REMARKS
I-10	463.00 33	454.7X3	453.80 04	HOUNSLOW DRIVE	C.L. STA. 3+10.00	*14.43R	A-10	2.5'	S.D. - 4.41
I-11	463.00 41	---	455.00 32	HOUNSLOW DRIVE	C.L. STA. 3+10.00	*14.43L	A-10	2.5'	S.D. - 4.41
I-12	466.35 4532	---	452.00 44	ABBOT WAY	L.P. STA. 1+45.00	---	A-10	2.5'	S.D. - 4.41
I-13	461.50	459.00 458.04	459.00 457.00	---	N 793.00 33 E 1341.80 33 L	---	5" INLET	---	S.D. - 4.22
I-14	476.91 477.20	---	473.44 24	CHAUCER WAY	L.P. STA. 1+27.00	---	A-10	2.5'	S.D. - 4.41
I-15	470.00 36	464.00 43	464.00 417.0	HOUNSLOW DRIVE	L.P. STA. 1+40.00	---	A-10	2.5'	S.D. - 4.41
I-16	477.00 36	---	472.00 45	HOUNSLOW DRIVE	C.L. STA. 9+9X.8	*14.43R	A-10	2.5'	S.D. - 4.41
M-4	450.00 41	435.00 32	435.00 14	HOUNSLOW DRIVE	C.L. STA. 1+085.47	25'R	STD MH	---	G. - 5.11
M-5	453.27 452.00	445.25 441.00 23	445.00 440.94	HOUNSLOW DRIVE	C.L. STA. 1+084.74	35.72R	STD MH	---	G. - 5.11
M-6	447.50 5	440.00 442.44	442.00 32	---	N 599.405 21 L E 1345.05 33 L	---	STD MH	---	G. - 5.11
M-7	460.50 1	449.00 41	449.00 13	ABBOT WAY	C.L. STA. 2+37.00	25'R	STD MH	---	G. - 5.11
M-8	459.00 29	457.00 23	451.00 55	ABBOT WAY	C.L. STA. 2+047.20	23.5'L	STD MH	---	G. - 5.11
M-9	469.00 40	461.00 43	461.00 01	---	N 599.75 45 33 S E 1344.99 33 L	---	STD MH	---	G. - 5.11
M-10	477.50 6	471.00 471.83	471.00 42	CHAUCER WAY	L.P. STA. 1+04.00	5'R	STD MH	---	G. - 5.11
M-11	467.99 460.00	457.00 17	457.00 456.92	---	N 599.75 45 33 S E 1344.99 33 L	---	STD MH	---	G. - 5.11
EX. HW-1 (F01-91)	439.89 440.00	435.00 435.00 435.00	435.00 73	HOUNSLOW DRIVE	C.L. STA. 0+77	54'R	EXISTING TYPE 'A' HEADWALL	---	---
S-2	456.00 73	454.00 14	454.00 14	---	N 599.405 21 S E 1345.05 33 L	---	TYPE 'E' HEADWALL	---	S.D. - 5.31

* - DENOTES DISTANCE FROM CENTERLINE TO FACE OF INLET

PIPE SCHEDULE

SIZE	TYPE	LENGTH
15"	HDPE	299'
18"	HDPE	623'
24"	HDPE	450'



RIP-RAP CHANNEL DESIGN DATA

STRUCTURE	AREA	WETTED PERIMETER	R	R 2/3	S	S 1/2	W	d	H	V (F.P.S.)	Q (C.F.S.)	BLANKET THICKNESS	DIA.
S-2	2.98	6.97	0.3716	0.5169	0.005	0.0707	5.0'	0.44'	0.04	1.36	3.51	9.5'	15"

CONSTRUCTION SPECIFICATIONS FOR RIP-RAP OUTFALLS

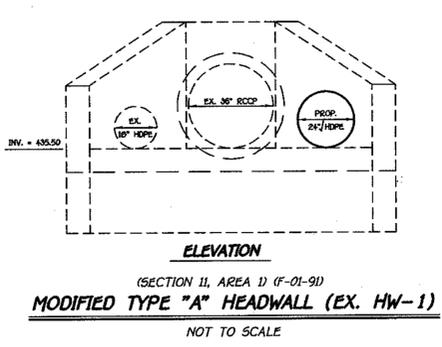
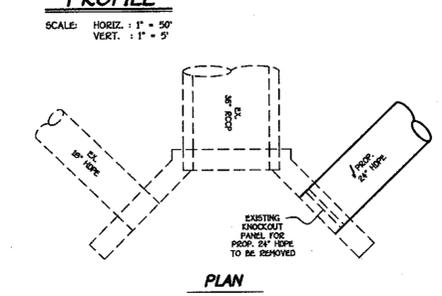
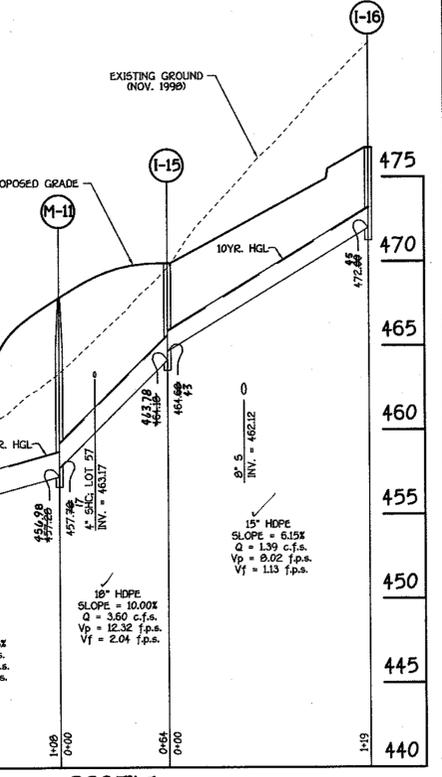
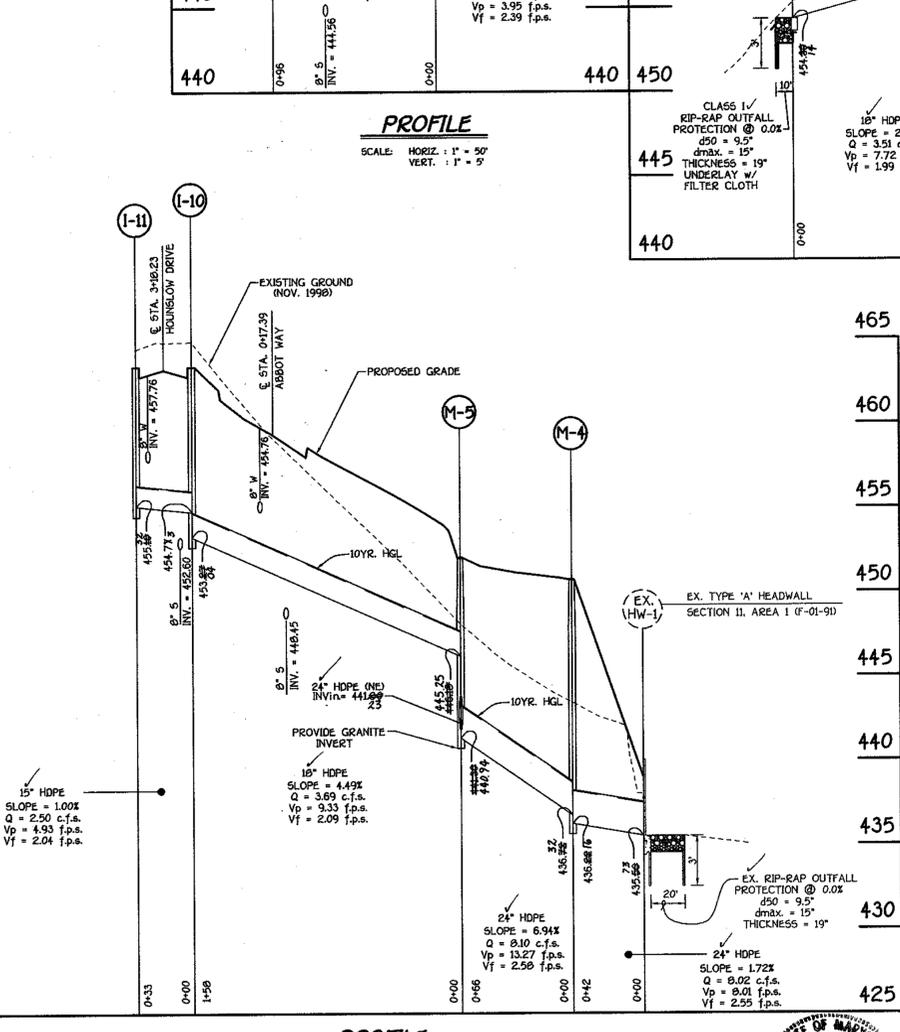
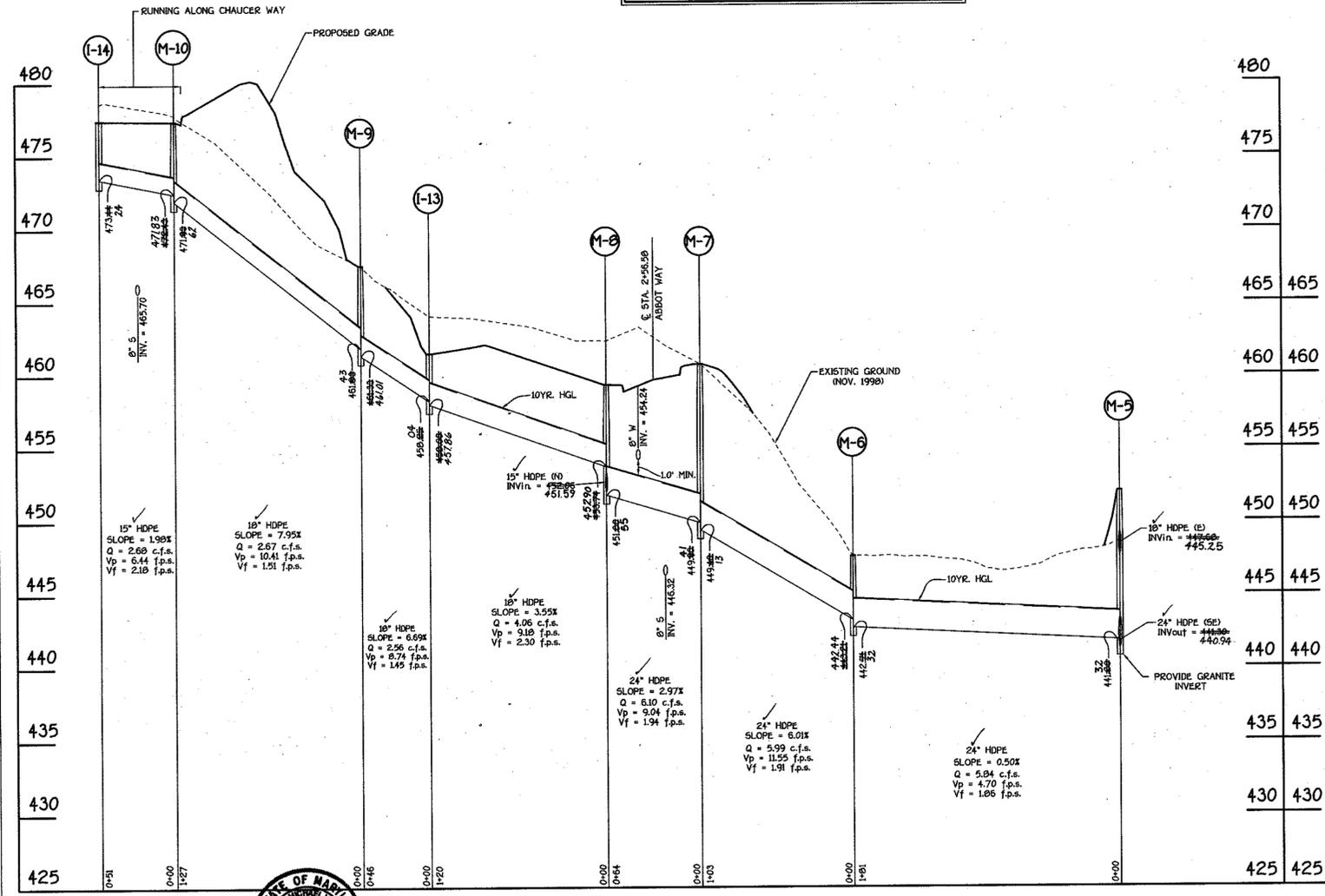
- The subgrade for the filter, riprap or gabion shall be prepared to the required lines and grades. Any fill required in the subgrade shall be compacted to a density of approximately that of the surrounding undisturbed material.
- The rock or gravel shall conform to the specified grading limits when installed respectively in the riprap or filter.
- Filter cloth shall be protected from puncturing, cutting or tearing. Any damage other than an occasional small hole shall be repaired by placing another piece of cloth over the damaged part or by completely replacing the cloth. All overlaps whether for repairs or for joining two pieces of cloth shall be a minimum of one foot.
- Stone for the riprap or gabion outlets may be placed by equipment. Both shall each be constructed to the full course thickness in one operation and in such a manner as to avoid displacement of underlying materials. The stone for riprap or gabion outlets shall be delivered and placed in a manner that will insure that it is reasonably homogeneous with the smaller stones and spalls filling the voids between the larger stones. Riprap shall be placed in a manner to prevent damage to the filter blanket or filter cloth. Hand placement will be required to the extent necessary to prevent damage to the permanent works.

NO.	REVISIONS DESCRIPTION	DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS
Richard M. Daniels 7-6-01
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cindy Hunter 7/19/01
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Mike Dammann 7/10/01
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE



FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 11111 WINDMILL LANE, SUITE 200
 ELICOTT CITY, MARYLAND 21042
 410-418-2000



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

OWNER / DEVELOPER
 WAVERLY WOODS DEVELOPMENT CORPORATION
 c/o LAND DESIGN AND DEVELOPMENT, LLC
 2000 MAIN STREET
 ELICOTT CITY, MARYLAND 21042

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



STORM DRAIN PROFILES
GTW'S WAVERLY WOODS
 SECTION 11, AREA 4
 LOTS 22 THRU 80
 (A SUBDIVISION OF THE PROPERTY OF WAVERLY WOODS DEVELOPMENT CORPORATION, LIDER 2222, FOLIO 30)
 ZONING: RES
 TAX MAP NO. 15 PART OF PARCEL NO. 20
 THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 DATE: JUNE 4, 2001
 SHEET 7 OF 13

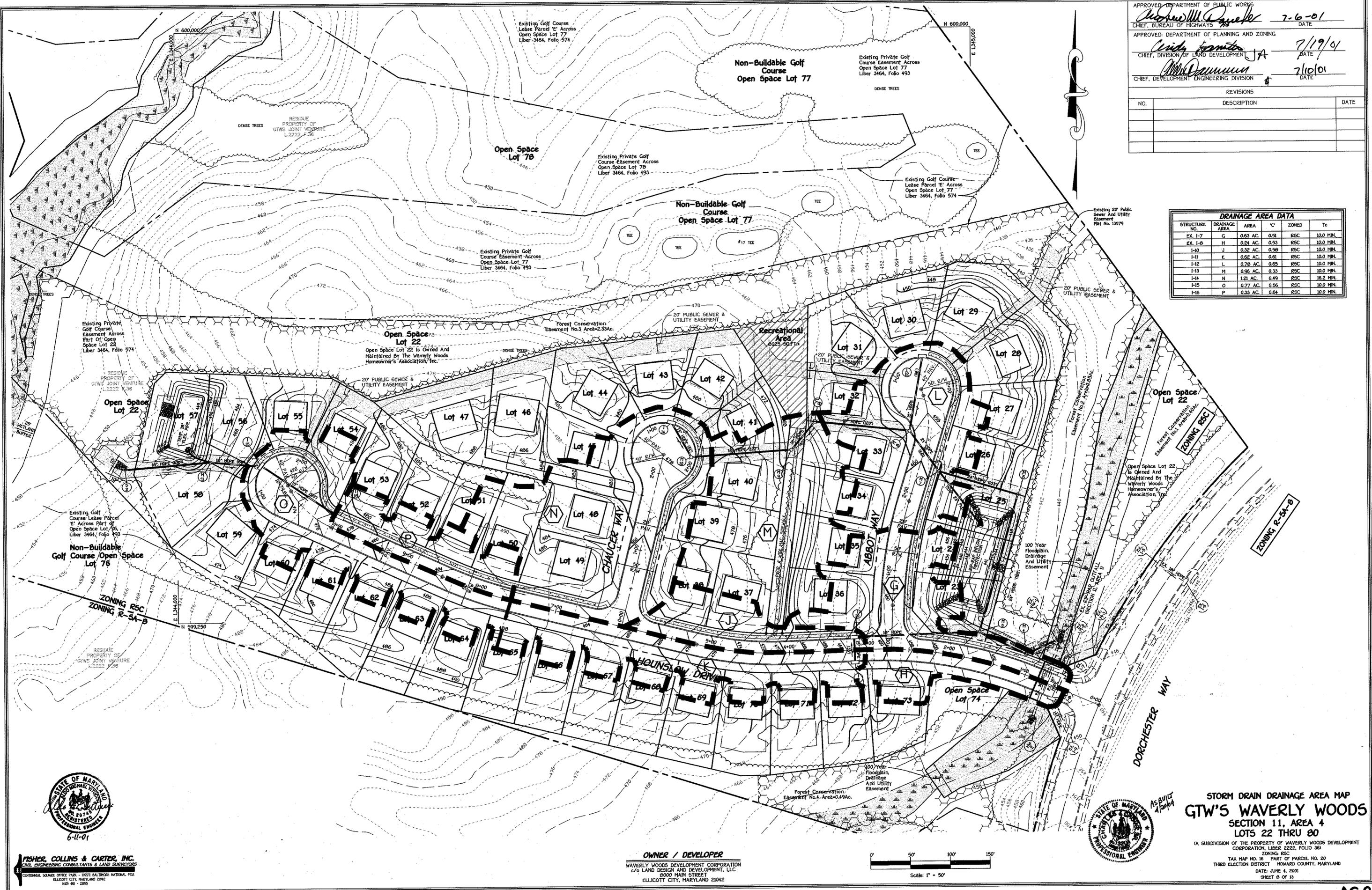
APPROVED: DEPARTMENT OF PUBLIC WORKS
 CHIEF, BUREAU OF HIGHWAYS *[Signature]* 7-6-01 DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 CHIEF, DIVISION OF LAND DEVELOPMENT *[Signature]* 7/19/01 DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION *[Signature]* 7/10/01 DATE

REVISIONS		
NO.	DESCRIPTION	DATE

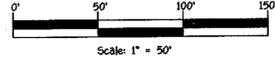
DRAINAGE AREA DATA					
STRUCTURE NO.	DRAINAGE AREA	AREA	C	ZONED	Tc
EX. I-7	G	0.63 AC.	0.51	RSC	10.0 MIN.
EX. I-8	H	0.24 AC.	0.53	RSC	10.0 MIN.
I-9	J	0.32 AC.	0.50	RSC	10.0 MIN.
I-11	K	0.62 AC.	0.61	RSC	10.0 MIN.
I-12	L	0.78 AC.	0.65	RSC	10.0 MIN.
I-13	M	0.95 AC.	0.33	RSC	10.0 MIN.
I-14	N	1.21 AC.	0.49	RSC	16.2 MIN.
I-15	O	0.77 AC.	0.56	RSC	10.0 MIN.
I-16	P	0.33 AC.	0.64	RSC	10.0 MIN.



STORM DRAIN DRAINAGE AREA MAP
GTW'S WAVERLY WOODS
 SECTION 11, AREA 4
 LOTS 22 THRU 80

(A SUBDIVISION OF THE PROPERTY OF WAVERLY WOODS DEVELOPMENT CORPORATION, LIBER 2222, FOLIO 30)
 ZONING RSC
 TAX MAP NO. 16 PART OF PARCEL NO. 20
 THIRD ELECTION DISTRICT - HOWARD COUNTY, MARYLAND
 DATE: JUNE 4, 2001
 SHEET 6 OF 13

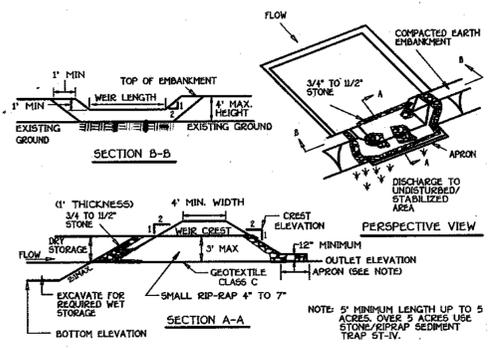
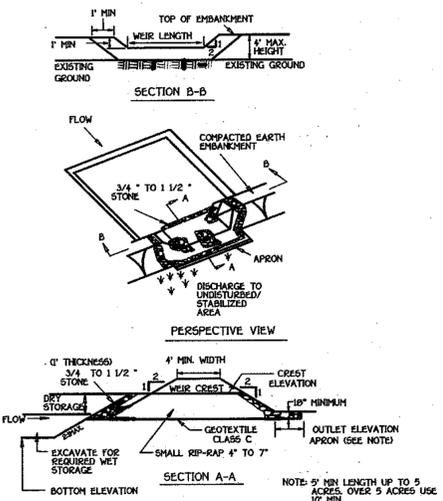
OWNER / DEVELOPER
 WAVERLY WOODS DEVELOPMENT CORPORATION
 c/o LAND DESIGN AND DEVELOPMENT, LLC
 8000 MAIN STREET
 ELLICOTT CITY, MARYLAND 21042



FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK - 10772 BALTIMORE NATIONAL PIKE
 ELICOTT CITY, MARYLAND 21042
 4100 48 - 2995

K:\Drawings\330686 GTW Section 11\FINALS\AREA 4\30686 STORMDRAIN DA MAP.dwg

FOI-93 AS BUILT

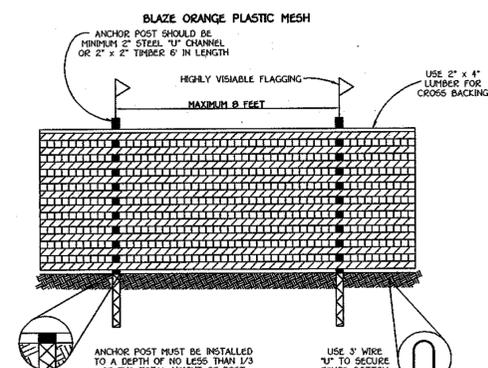
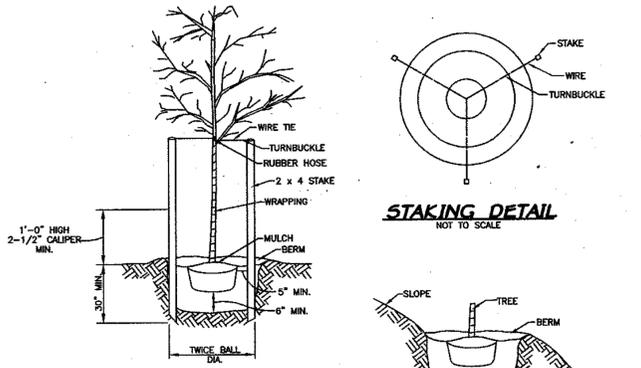


- Construction Specifications**
- Area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
 - The fill material for the embankment shall be free of roots and other woody vegetation as well as over-sized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed.
 - All cut and fill slopes shall be 2:1 or flatter.
 - The stone used in the outlet shall be small rip-rap 4" to 7" in size with a 1" thick layer of 3/4" to 1 1/2" washed aggregate placed on the upstream face of the outlet. Stone facing shall be as necessary to prevent clogging. Geotextile Class C may be substituted for the stone facing by placing it on the inside face of the stone outlet.
 - Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to one half of the wet storage depth of the trap. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.
 - The structure shall be inspected periodically and after each rain and repairs made as needed.
 - Construction of traps shall be carried out in such a manner that sediment pollution is abated. Once constructed, the top and outside face of the embankment shall be stabilized with seed and mulch. Points of concentrated inflow shall be protected in accordance with Grade Stabilization Structure criteria. The remainder of the interior slopes should be stabilized (one time) with seed and mulch upon trap completion and monitored and maintained erosion free during the life of the trap.
 - The structure shall be dewatered by approved methods, removed and the area stabilized when the drainage area has been properly stabilized.
 - Refer to Section D for specifications concerning trap dewatering.
 - Minimum trap depth shall be measured from the weir elevation.
 - The elevation of the top of any dike directing water into the trap must equal or exceed the elevation of the trap embankment.
 - Geotextile Class C shall be placed over the bottom and sides of the outlet channel prior to placement of stone. Section of fabric must overlap at least 1' with section nearest the entrance placed on top. Fabric shall be embedded at least 6" into existing ground at entrance of outlet channel.
 - Outlet - An outlet shall include a means of conveying the discharge in an erosion free manner to an existing stable channel. Protection against scour at the discharge point shall be provided as necessary.
 - Outlet channel must have positive drainage from the trap.
 - Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to 1/2 of the wet storage depth of the trap (900 c.f./ac). Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.
 - The structure shall be inspected periodically after each rain and repaired as needed.
 - Construction of traps shall be carried out in such a manner that sediment pollution is abated. Once constructed, the top and outside face of the embankment shall be stabilized with seed and mulch. Points of concentrated inflow shall be protected in accordance with Grade Stabilization Structure criteria. The remainder of the interior slopes should be stabilized (one time) with seed and mulch upon trap completion and monitored and maintained erosion free during the life of the trap.
 - The structure shall be dewatered by approved methods, removed and the area stabilized when the drainage area has been properly stabilized.

STONE RIP-RAP OUTLET SEDIMENT TRAP - ST IV
NOT TO SCALE

STONE OUTLET SEDIMENT TRAP - ST II
NOT TO SCALE

STONE RIP-RAP OUTLET SEDIMENT TRAP - ST IV
NOT TO SCALE

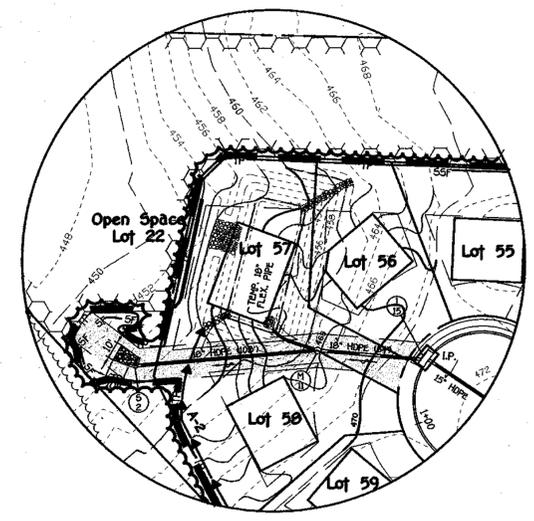


TREE PLANTING
NOT TO SCALE

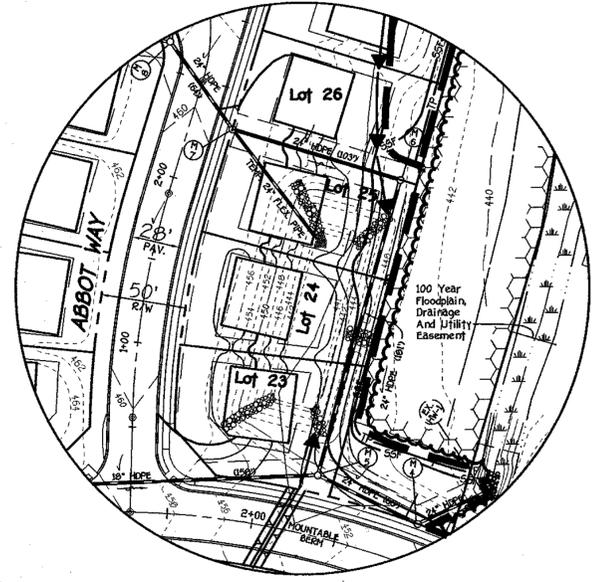
GRADING FOR PLANTING ON SLOPES
NOT TO SCALE

- 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.

TREE PROTECTION DETAIL
NOT TO SCALE



FINAL GRADING AT STONE OUTLET SEDIMENT TRAP (ST-II)
SCALE: 1" = 50'



FINAL GRADING AT STONE/RIP-RAP OUTLET SEDIMENT TRAP (ST-IV)
SCALE: 1" = 50'

- SEQUENCE OF CONSTRUCTION**
- OBTAIN THE REQUIRED GRADING PERMIT. (1 DAY)
 - NOTIFY MISS UTILITY AT LEAST 48 HOURS BEFORE BEGINNING ANY WORK (1-800-257-7777). NOTIFY THE HOWARD COUNTY OFFICE OF CONSTRUCTION/INSPECTION 24 HOURS BEFORE STARTING ANY WORK (410-313-1870). (1 DAY)
 - CLEAR AND GRUB FOR SEDIMENT CONTROL MEASURES ONLY. INSTALL STABILIZED CONSTRUCTION ENTRANCE. (1 WEEK)
 - INSTALL THE REQUIRED SEDIMENT AND EROSION CONTROL DEVICES AS INDICATED ON THE PLAN SHEETS. NO BLASTING WILL BE PERMITTED FOR THE EXCAVATION OF THE PROPOSED TRAPS OR BASINS. WHERE NECESSARY, RIPPING AND JACK HAMMING SHOULD BE UTILIZED IN THE EXCAVATION OF EACH FACILITY. (2 WEEKS)
 - OBTAIN PERMISSION OF THE SEDIMENT CONTROL INSPECTOR PRIOR TO PROCEEDING.
 - CLEAR AND GRUB FOR THE REMAINDER OF THE SITE. (2 WEEKS)
 - GRADE SITE TO THE PROPOSED SUBGRADE. INSTALL THE WATER AND SEWER MAINS AND THE STORM DRAIN SYSTEM. BRICK SHUT THE STORM DRAIN PIPE RUNS FROM M-7 TO M-8 AND M-11 TO M-2 AT STRUCTURES M-7 AND M-11. INSTALL INLET PROTECTION AND TEMPORARY FLEX PIPES AS INDICATED ON THE PLAN SHEETS. (4 WEEKS)
 - THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE ON ALL SEDIMENT AND EROSION CONTROL STRUCTURES SHOWN HEREON AFTER EACH RAINFALL AND ON A DAILY BASIS. REMOVE SEDIMENTS FROM ALL TRAPS WHEN CLEAVOUT ELEVATIONS ARE REACHED. ALL SEDIMENTS MUST BE PLACED UPSTREAM OF AN APPROVED TRAP DEVICE.
 - INSTALL CURB AND GUTTER PLUS ROAD BASE COURSE. (1 WEEK)
 - STABILIZE ALL DISTURBED AREAS AND OBTAIN PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR TO PROCEED. (2 DAYS)
 - APPLY TACK COAT TO SUB-BASE AND LAY SURFACE COURSE. (1 WEEK)
 - FOLLOWING SUCCESSFUL STABILIZATION OF ALL DISTURBED AREAS IN ACCORDANCE WITH THE PERMANENT SEEDING NOTES, AND AFTER PERMISSION HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, ALL EROSION AND SEDIMENT CONTROL DEVICES MAY BE REMOVED AND/OR BACKFILLED AND THE REMAINING AREAS BROUGHT TO FINAL GRADE. AFTER THE STORM DRAIN SYSTEM HAS BEEN FLUSHED TO REMOVE TRAPPED SEDIMENT, THIS WOULD ALSO INCLUDE THE REMOVAL OF TEMPORARY STORM DRAIN FLEX PIPES AT THE STORM DRAIN RUN CONNECTIONS. (2 WEEKS)
 - NOTIFY HOWARD COUNTY OFFICE OF INSPECTIONS AND PERMITS FOR A FINAL INSPECTION OF THE COMPLETED PROJECT.
 - CONTRACTOR SHALL DELAY CONSTRUCTION ON LOTS 23THRU 31 UNTIL SUCH TIME AS THE SEDIMENT TRAP ST-II AND RELATED "A-2" EARTH DIKE IS REMOVED.

DEVELOPER'S CERTIFICATE

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT AND THAT ANY RESPONSIBLE PERSONNEL IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I/WE ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NECESSARY.

Signature of Developer: *[Signature]* Date: 6-11-01

ENGINEER'S CERTIFICATE

I HEREBY CERTIFY THAT THE PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND FEASIBLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.

Signature of Engineer: *[Signature]* Date: 6-11-01

REVIEW FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICE: *[Signature]* Date: 7/6/01

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

APPROVED: *[Signature]* Date: 7/12/01

HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Division of Land Development: *[Signature]* Date: 7/19/01

APPROVED, DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division: *[Signature]* Date: 7/10/01

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Chief, Bureau of Highways: *[Signature]* Date: 7-6-01

REVISIONS		
NO.	DESCRIPTION	DATE



AS BUILT 7/24/04

SEDIMENT CONTROL NOTES AND DETAILS

GTW'S WAVERLY WOODS

SECTION 11, AREA 4
Lots 22 Thru 80

(A SUBDIVISION OF THE PROPERTY OF WAVERLY WOODS DEVELOPMENT CORPORATION, LIBER 2222, FOLIO 36)

ZONING: R5C
TAX MAP NO. 16 PART OF PARCEL NO. 20
THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND
DATE: JUNE 4, 2001
SHEET 9 OF 13

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CONTINENTAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLSWORTH CITY, MARYLAND 21042
410 481 - 2202



OWNER / DEVELOPER

WAVERLY WOODS DEVELOPMENT CORPORATION
c/o LAND DESIGN AND DEVELOPMENT, LLC
8000 MAIN STREET
ELLSWORTH CITY, MARYLAND 21042

Approved: Department Of Planning And Zoning

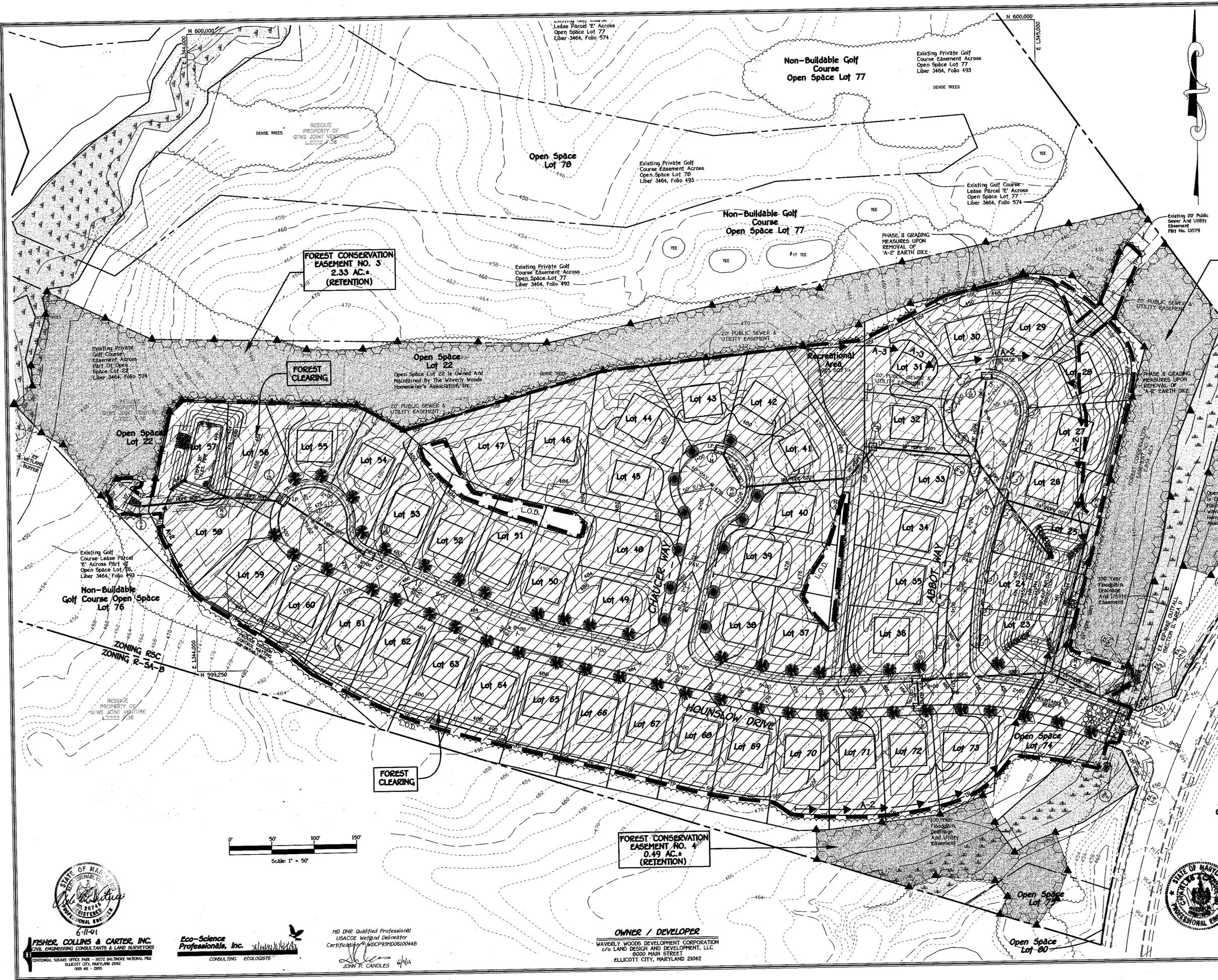
Cindy Hamilton 7/19/07
Chief, Division of Land Development Date

Mike Dammann 7/10/07
Chief, Development Engineering Division Date

Approved: Howard County Department Of Public Works

Richard M. Pank 7-6-07
Chief, Bureau Of Highways Date

REVISIONS		
NO.	DESCRIPTION	DATE



FOREST CONSERVATION EASEMENT NO. 2
0.05 AC.±
(RETENTION)

FOREST CONSERVATION EASEMENT NO. 1
0.40 AC.±
(RETENTION)

FOREST CONSERVATION EASEMENT NO. 3
2.33 AC.±
(RETENTION)

FOREST CONSERVATION EASEMENT NO. 4
0.49 AC.±
(RETENTION)

LEGEND

—SFF—SFF—SFF—	SUPER-SILT FENCE
—SF—SF—SF—	SILT FENCE
—TP—TP—TP—	TREE PROTECTION FENCE
—	LIMIT OF DISTURBANCE
▲	PERMANENT TREE PROTECTION SIGNS
▨	FOREST CLEARING LIMITS

FOREST CONSERVATION PLAN
GTW'S WAVERLY WOODS
SECTION 11, AREA 4
LOTS 22 THRU 80
(A SUBDIVISION OF THE PROPERTY OF WAVERLY WOODS DEVELOPMENT CORPORATION, LIBER 2222, FOLIO 36)
ZONING: RSC
TAX MAP NO. 16 - PART OF PARCEL NO. 20
THIRD ELECTION DISTRICT - HOWARD COUNTY, MARYLAND
DATE: JUNE 5, 2007
SHEET 11 OF 13



FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTRAL SQUARE OFFICE PARK - 10272 BAL THORNE NATIONAL PIKE
ELLCOTT CITY, MARYLAND 21042
410.661.2225

Eco-Science Professionals, Inc.
CONSULTING ECOLOGISTS

MD DNR Qualified Professional
USACOE Wetland Designer
Certification # MDCP931006100418
John P. Canoles

OWNER / DEVELOPER
WAVERLY WOODS DEVELOPMENT CORPORATION
c/o LAND DESIGN AND DEVELOPMENT, LLC
2400 MAIN STREET
ELLCOTT CITY, MARYLAND 21042



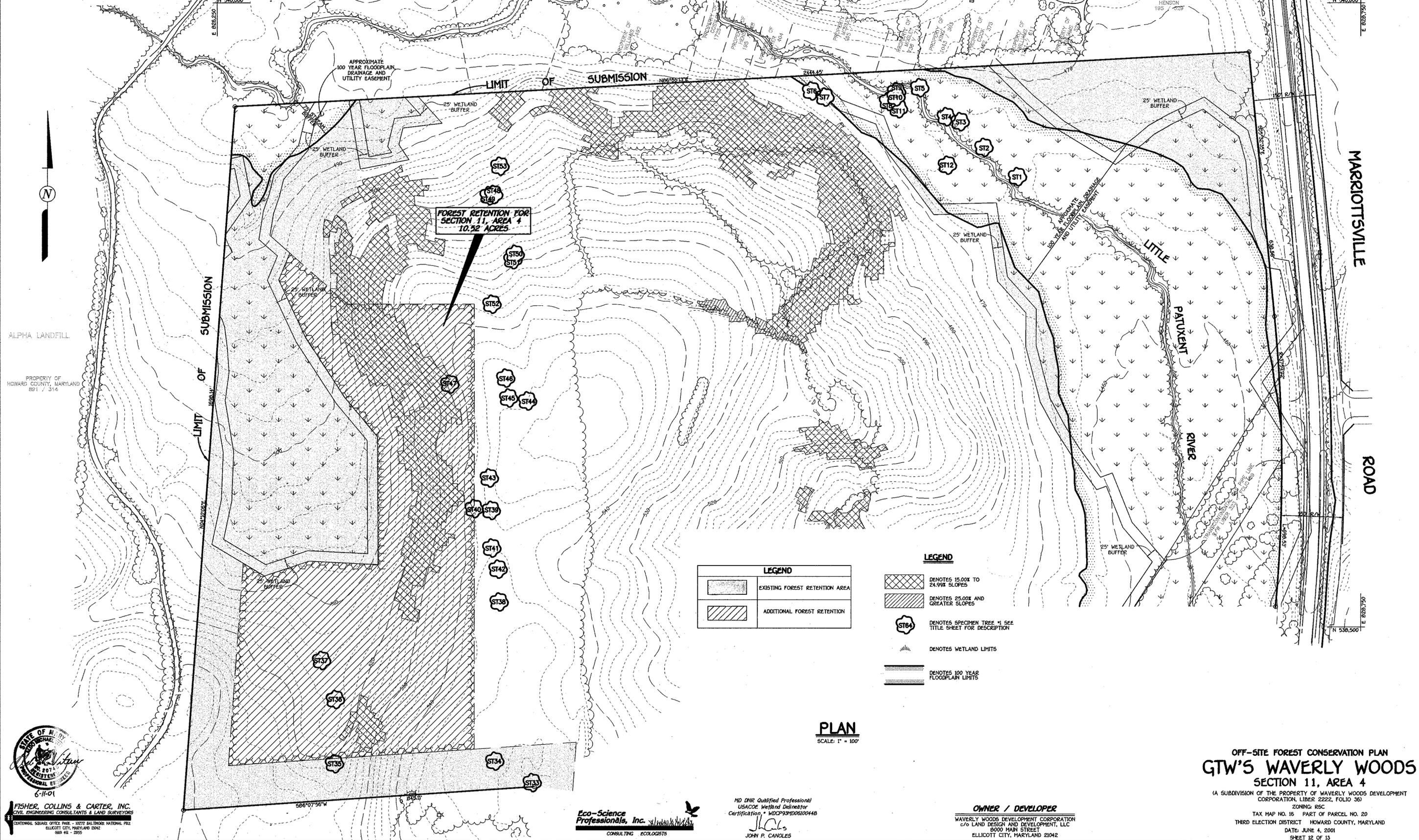
F.01-93 AS BUILT

APPROVED: DEPARTMENT OF PUBLIC WORKS
Richard W. Danaher 7-6-01
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Andy Hamilton 7/19/01
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

William J. ... 7/10/01
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

OLD FREDERICK ROAD



FOREST RETENTION FOR SECTION 11, AREA 4 10.32 ACRES

LEGEND	
	EXISTING FOREST RETENTION AREA
	ADDITIONAL FOREST RETENTION

- LEGEND**
- DENOTES 15.00% TO 24.99% SLOPES
 - DENOTES 25.00% AND GREATER SLOPES
 - DENOTES SPECIMEN TREE *1 SEE TITLE SHEET FOR DESCRIPTION
 - DENOTES WETLAND LIMITS
 - DENOTES 100 YEAR FLOODPLAIN LIMITS

PLAN
 SCALE: 1" = 100'

STATE OF MARYLAND
 PROFESSIONAL ENGINEER
 No. 2074
 EXPIRES 12/31/01
 6-11-01

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL FREE
 ELICOTT CITY, MARYLAND 21042
 (410) 481-2955

Eco-Science Professionals, Inc.
 CONSULTING ECOLOGISTS

MD DNR Qualified Professional
 USACOE Wetland Delineator
 Certification # WDQP93MD06100448
J.P. Canoles
 JOHN P. CANOLES

OWNER / DEVELOPER
 WAVERLY WOODS DEVELOPMENT CORPORATION
 c/o LAND DESIGN AND DEVELOPMENT, LLC
 8000 MAIN STREET
 ELICOTT CITY, MARYLAND 21042

OFF-SITE FOREST CONSERVATION PLAN
GTW'S WAVERLY WOODS
 SECTION 11, AREA 4
 (A SUBDIVISION OF THE PROPERTY OF WAVERLY WOODS DEVELOPMENT CORPORATION, LIBER 2222, FOLIO 36)
 ZONING: R5C
 TAX MAP NO. 16 PART OF PARCEL NO. 20
 THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 DATE: JUNE 4, 2001
 SHEET 12 OF 13

Forest Conservation Calculations for
Waverly Woods Section 11 Area 4

	Acre
Forest Preservation in Section 11, Area 4 Development	4.1
Forest Clearing in Section 11, Area 4 Development	12.2
Total Forest Clearing within Residentially Zoned Areas of Waverly Woods	69.9
Percentage of Forest Clearing Within Section 11 Area 4 Development	17.5
Total Reforestation Required for Waverly Woods Residential Development	60.16
Reforestation for Section 11, Area 4 Development	19.52

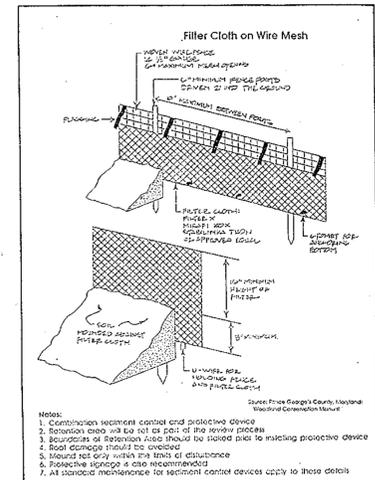
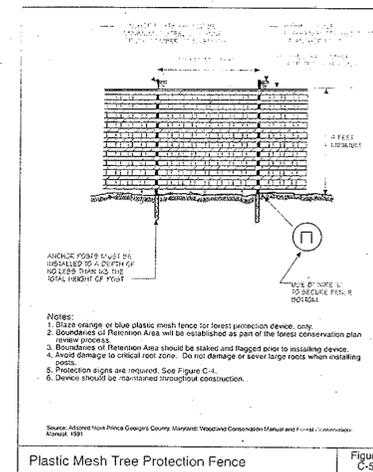
FCA Calculation Notes:

- All information relative to the FCP calculations has been developed from the Forest Conservation Plan prepared by Environmental Systems Analysis (ESA), Inc. The Forest Conservation requirements have been established by guidelines outlined in the February 1996 Forest Conservation Plan as prepared by ESA, Inc.
- The Forest Conservation Worksheet above includes the Preliminary Forest Conservation calculation (from the PFCP revised on February 26, 1996) and the latest forest conservation calculations (thru section 11, Area 4) for residentially zoned development at Waverly Woods. Forest Retention and clearing differences in the two worksheets reflect minor changes from preliminary to final plan. With the exception of the Golf Course, Section 11 will be the final residentially zoned portion of Waverly Woods.
- Like the previous sections of Waverly Woods, reforestation for Section 11, Area 4 has been calculated on a percentage basis. Section 11, Area 4 accounts for 17.5% of the Waverly Woods residentially zoned forest clearing at Waverly Woods. Therefore, 17.5% of the Waverly Woods residential reforestation obligation (as revised by the updated FCA worksheet) will be provided for Section 11 Area 4. This requirement will be met by dedicating 10.52 acres of forest retention surplus on Waverly Woods commercially zoned property to Section 11, Area 4.
- Including Section 11, Area 4 a total of 9.05 acres of onsite reforestation, 11.8 acres of additional onsite retention and 8.13 acres of offsite reforestation (see January 1996 Final FCP for Waverly Woods Section 4, Areas 1 and 2) has been planned for the Waverly Woods residentially zoned property to date. This leaves a balance of 31.18 acres of reforestation to be performed for the remaining areas of Section 11 and the Golf Course. *THE 8.13 ACRES OF OFF-SITE IS LOCATED ON WEST FRIENDSHIP ESTATES, SECTION ONE, KNOWN AS PLAT No. 11438 AND 11439 (F-25-173).*

Waverly Woods Residential -
Forest Conservation Worksheet

Input Parameter:	Preliminary FCP	Thru Section 11/ Area 4
Tract Area	291.90	291.91
100 Year Floodplain	4.10	4.81
Other ROW/Easements to be excluded from NTA	2.04	2.09
Disturbance within Floodplain to be added to NTA	0.00	2.47
Existing Forest Area (NTA)	103.00	103.00
Afforestation Threshold	15%	15%
Conservation Threshold	20%	20%
Total Area forest Cleared	65.55	69.90
Total Area Forest Retained	37.45	33.10
Calculated Parameters:		
Net Tract Area	285.76	287.47
Afforestation Threshold	42.86	43.12
Conservation Threshold	57.15	57.49
Forest Above Conservation Threshold	45.85	45.51
Reforestation for Clearing above Conservation Threshold	11.46	11.38
Reforestation for Clearing Below Conservation Threshold	39.40	48.78
Expected Total Project Reforestation Obligation	50.87	60.16

APPROVED: DEPARTMENT OF PUBLIC WORKS
7-6-01
DATE
CHIEF ENGINEER OF HIGHWAYS AND BRIDGES
7/19/01
DATE
CHIEF ENGINEER OF LAND DEVELOPMENT
7/19/01
DATE
CHIEF DEVELOPMENT ENGINEERING DEPARTMENT



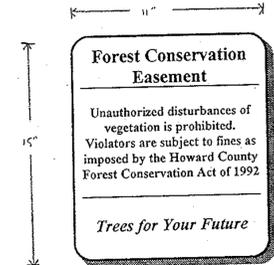
FCP NOTES

- Any Forest Conservation Easement (FCE) area shown hereon is subject to protective covenants which may be found in the Land Records of Howard County which restrict the disturbance and use of these areas.
- The forest Conservation Easements have been established to fulfill the requirements of Section 16.1200 of the Howard County Code, Forest Conservation Act. No clearing, grading, or construction is permitted within the Forest Conservation Easements; however, forest management practices as defined in the Deed of Forest Conservation Easement are allowed.
- Limits of disturbance shall be restricted to areas outside the limit of temporary fencing or the FCE boundary, whichever is greater.
- There shall be no clearing, grading, construction or disturbance of vegetation in the Forest Conservation Easement, except as permitted by Howard County DPZ.
- No stockpiles, parking areas, equipment cleaning areas, etc. shall occur within areas designated as Forest Conservation Easements.
- Temporary fencing shall be used to protect forest resources during construction. The fencing shall be placed along all FCE boundaries which occur within 15 feet of the proposed limits of disturbance.
- Permanent signage shall be placed 50-100' apart along the boundaries of all areas included in Forest Conservation Easements.
- The reforestation obligation shown hereon shall be met through the retention of existing forest on a commercially zoned section of Waverly Woods.

Eco-Science
Professionals, Inc.
CONSULTING ECOLOGISTS

MD DNR Qualified Professional
USACOE Wetland Delistee
Certification # WD0203106048442

P.O. Box 5006 Glen Arm, MD 21057 (410) 592-6752



DETAIL SHEET
GTW'S WAVERLY WOODS
SECTION 11, AREA 4
(A SUBDIVISION OF THE PROPERTY OF WAVERLY WOODS DEVELOPMENT CORPORATION, LIBER 2222, FOLIO 361)
ZONING: R-3
TAX MAP NO. 18 PART OF PARCEL NO. 20
THIRD ELECTION DISTRICT HOWARD COUNTY, MARYLAND
DATE: APRIL 23, 2001
SHEET 13 OF 13

ASBUILT F-01-93