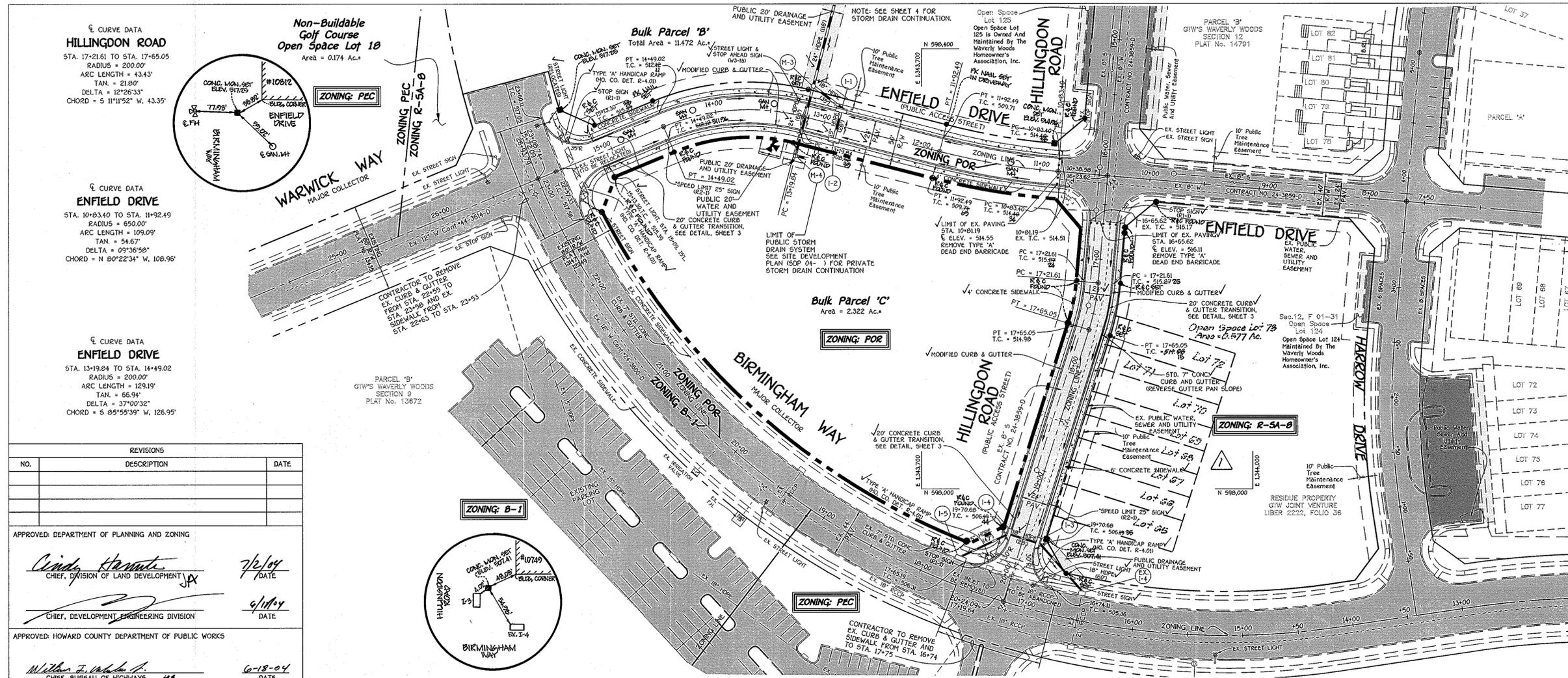




No.	Revision	Date
1	Eliminated 17 parking spaces adjacent to Hillington Road; also relocated proposed lots 65 thru 72 & 2-2 Lot 72.	1-11-05



**REVISIONS**

NO.	DESCRIPTION	DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*Cindy Hamrick* 7/2/04  
 CHIEF, DIVISION OF LAND DEVELOPMENT

*[Signature]* 9/1/04  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*William F. [Signature]* 6-18-04  
 CHIEF, BUREAU OF HIGHWAYS

**G.T.W.'S WAVERLY WOODS**  
 SECTION 13  
 Open Space Lots 1 Thru 18  
 And Bulk Parcels 'A' Thru 'D'

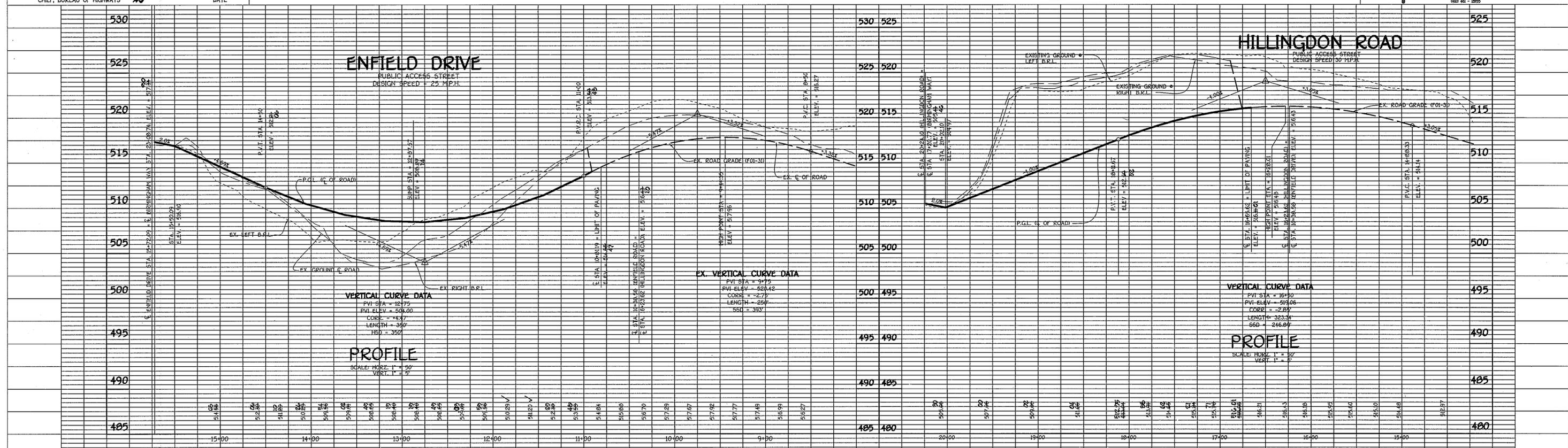
**ENFIELD DRIVE** HILLINGTON ROAD  
 PLAN AND PROFILE

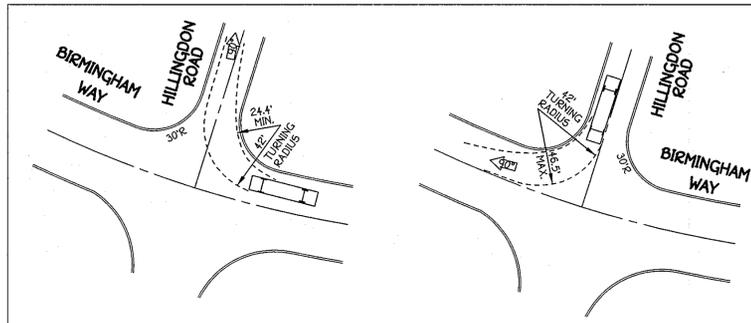
**Owner:** GTW Joint Venture  
 c/o Land Design And Development, Inc.  
 2800 Main Street  
 Ellicott City, Maryland 21043

**Developer:** Waverly Woods Development Corporation  
 c/o Land Design And Development, Inc.  
 8000 Main Street  
 Ellicott City, Maryland 21043

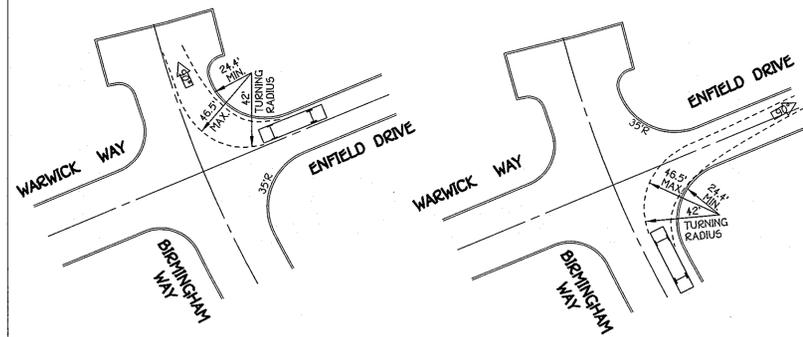
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 DES. R.A.I. DRN. J.C.L. CHK. C.J.C.

**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTRAL SQUARE OFFICE PARK - 10772 BALTIMORE NATIONAL PKWY.  
 ELICOTT CITY, MARYLAND 21042  
 410-481-2995

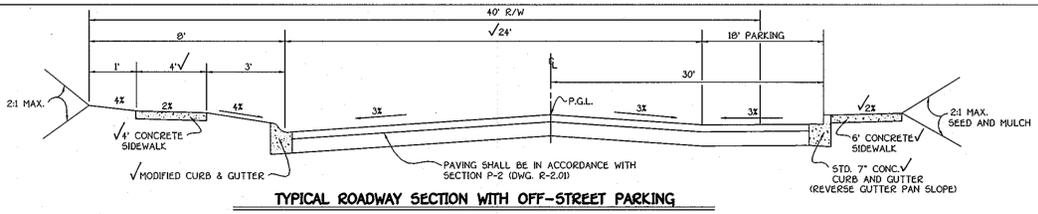




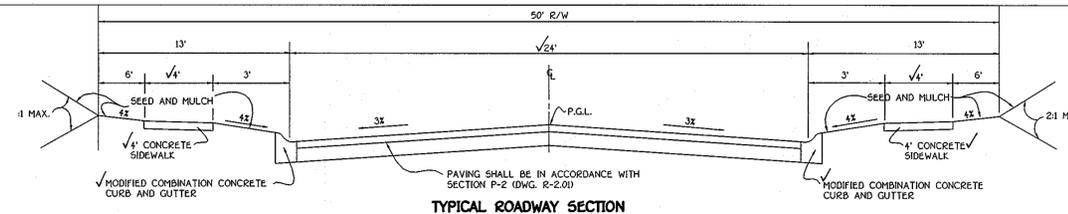
TURNING MOVEMENT ANALYSIS FOR BUS VEHICLE  
SCALE: 1" = 50'



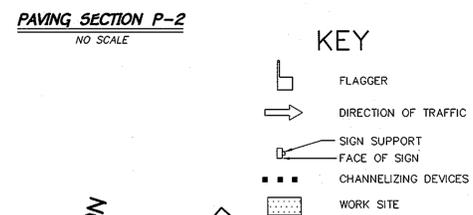
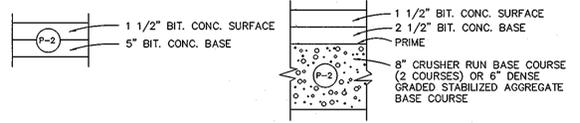
TURNING MOVEMENT ANALYSIS FOR BUS VEHICLE  
SCALE: 1" = 50'



ROADWAY INFORMATION CHART					
ROAD NAME	CLASSIFICATION	DESIGN SPEED	ZONING	STATION LIMITS	PAVING SECTION
HILLINGDON ROAD	PUBLIC ACCESS STREET	30 M.P.H.	R-5A-B	STA. 16+65.62 TO STA. 20+24.09	P-2

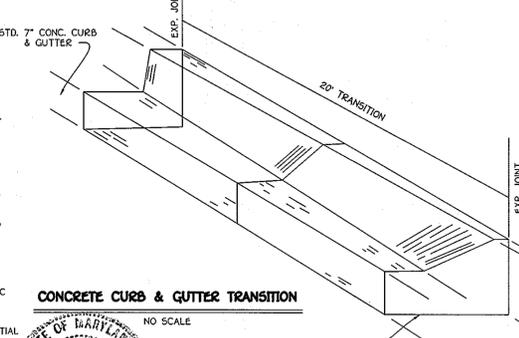


ROADWAY INFORMATION CHART					
ROAD NAME	CLASSIFICATION	DESIGN SPEED	ZONING	STATION LIMITS	PAVING SECTION
ENFIELD DRIVE	PUBLIC ACCESS STREET	25 M.P.H.	R-5A-B	STA. 10+81.19 TO STA. 15+72.09	P-2



**MAINTENANCE OF TRAFFIC SPECIAL PROVISIONS**

- GENERAL NOTES:**
- 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.
  - PROPERTY 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 PROPERTY 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 914 OF THE MARYLAND DOT STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS (JANUARY, 1992), INCLUDING ALL REVISIONS AND SUPPLEMENTS TO EACH.
  - 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 TCP OR THE SPECIAL PROVISIONS WITH REGARD TO THE TRAFFIC CONTROL ITEMS SHALL BE MADE IN WRITING TO THE ENGINEER A MINIMUM OF THREE 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 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.
  - 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 MOVE WHEN NECESSARY, OR AS DIRECTED BY THE ENGINEER, ALL TRAFFIC CONTROL DEVICES USED FOR THE GUIDANCE AND PROTECTION OF MOTORISTS, PEDESTRIANS, AND WORKERS.
  - 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 914 OF THE SPECIFICATIONS, FOR REFLECTIVE DEVICES, A PARTICULAR DEVICE IS ASSUMED 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 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. TCP'S MAY BE IMPLEMENTED WITH A SINGLE PROJECT OR JOINTLY BETWEEN TWO OR MORE PROJECTS. IN SITUATIONS WHERE TCP'S JOINTLY IMPLEMENTED, CARE SHALL BE EXERCISED TO PRESENT COORDINATE 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 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.



**G.T.W.'S WAVERLY WOODS**  
SECTION 13  
Open Space Lots 1 Thru 18  
And Bulk Parcels 'A' Thru 'D'  
Zoning: PEC, POR, PSC, R-5A-B And R5C  
Tax Map: 18 Part Of Parcels: 20 & 406 Grids: 4, 5 & 10  
Third Election District Howard County, Maryland

**ROADWAY DETAILS**      **FILLET PROFILES**

**Owner:** GTW Joint Venture  
c/o Land Design And Development, Inc.  
8000 Main Street  
Ellicott City, Maryland 21043

**Developer:** Waverly Woods Development Corporation  
c/o Land Design And Development, Inc.  
8000 Main Street  
Ellicott City, Maryland 21043

SCALE: AS SHOWN      DATE: APR. 25, 2004      DWG. NO. 3 OF 12  
DES. R.A.I.      DRN. J.C.L.      CHK. C.J.C.

**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTENAL SQUARE OFFICE PARK - 10722 BALTIMORE NATIONAL FREE  
ELICOTT CITY, MARYLAND 21043  
(410) 461-2995

APPROVED: DEPARTMENT OF PLANNING AND ZONING

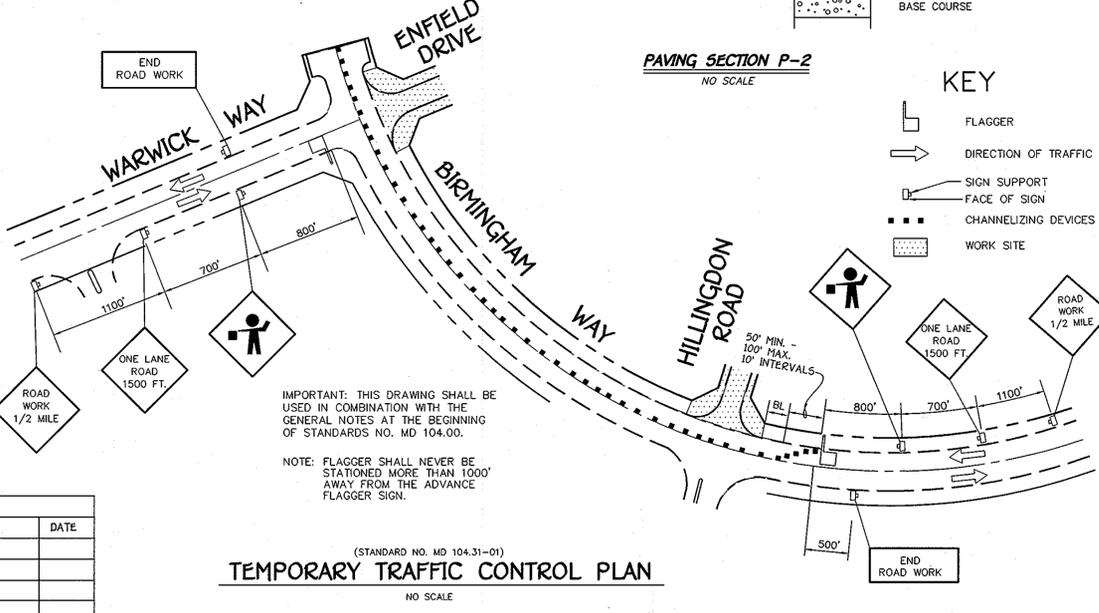
*Cindy Harnden*  
CHIEF, DIVISION OF LAND DEVELOPMENT  
7/2/04  
DATE

*[Signature]*  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
4/10/04  
DATE

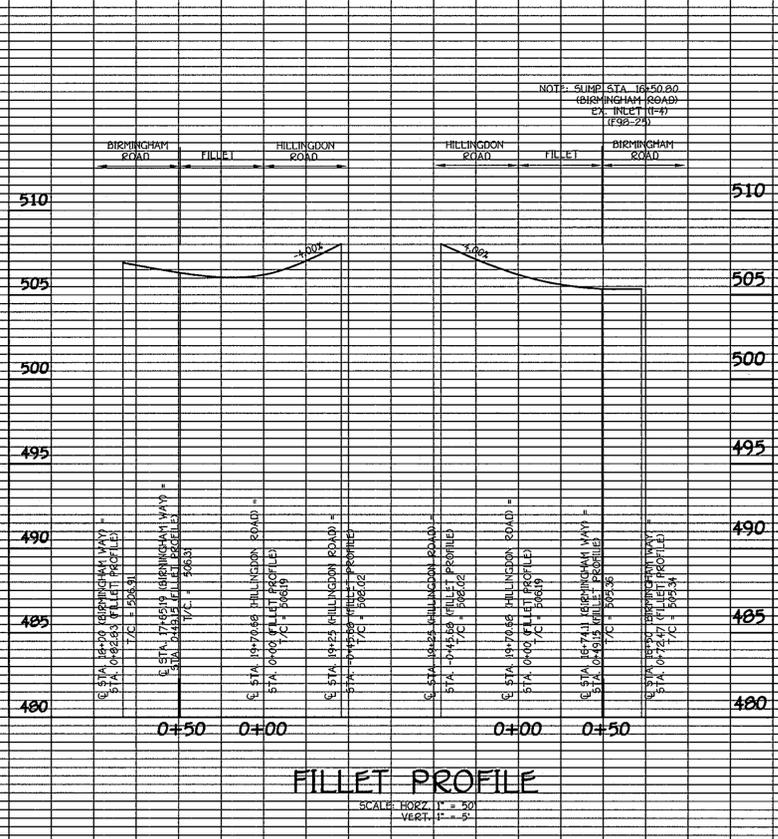
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*William F. [Signature]*  
CHIEF, BUREAU OF HIGHWAYS  
6-18-04  
DATE

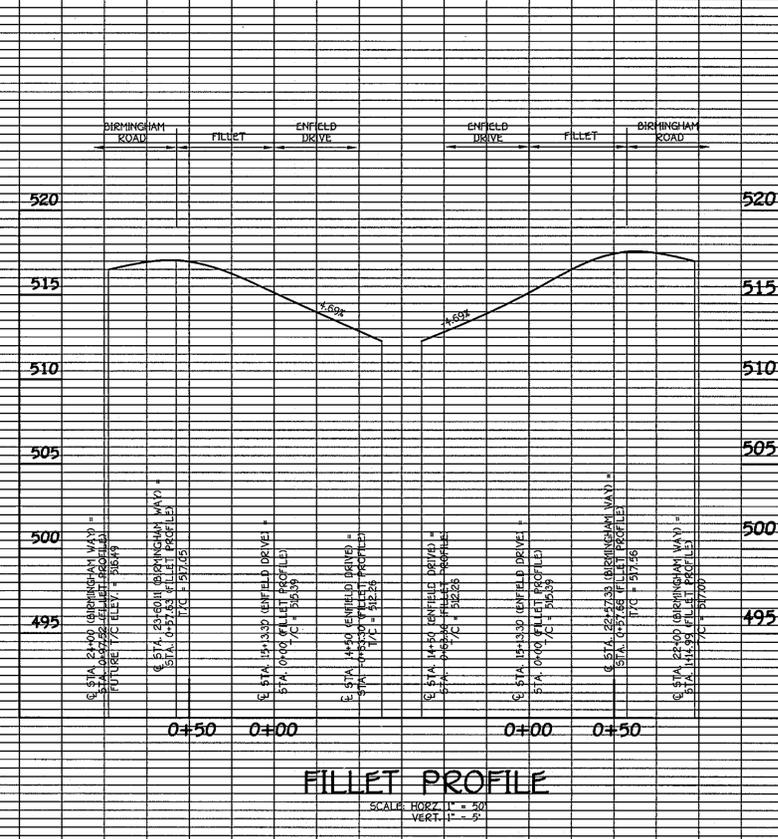
NO.	REVISIONS DESCRIPTION	DATE



**TEMPORARY TRAFFIC CONTROL PLAN**  
NO SCALE



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

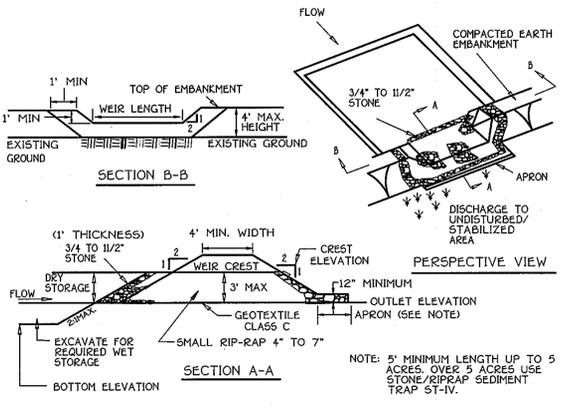
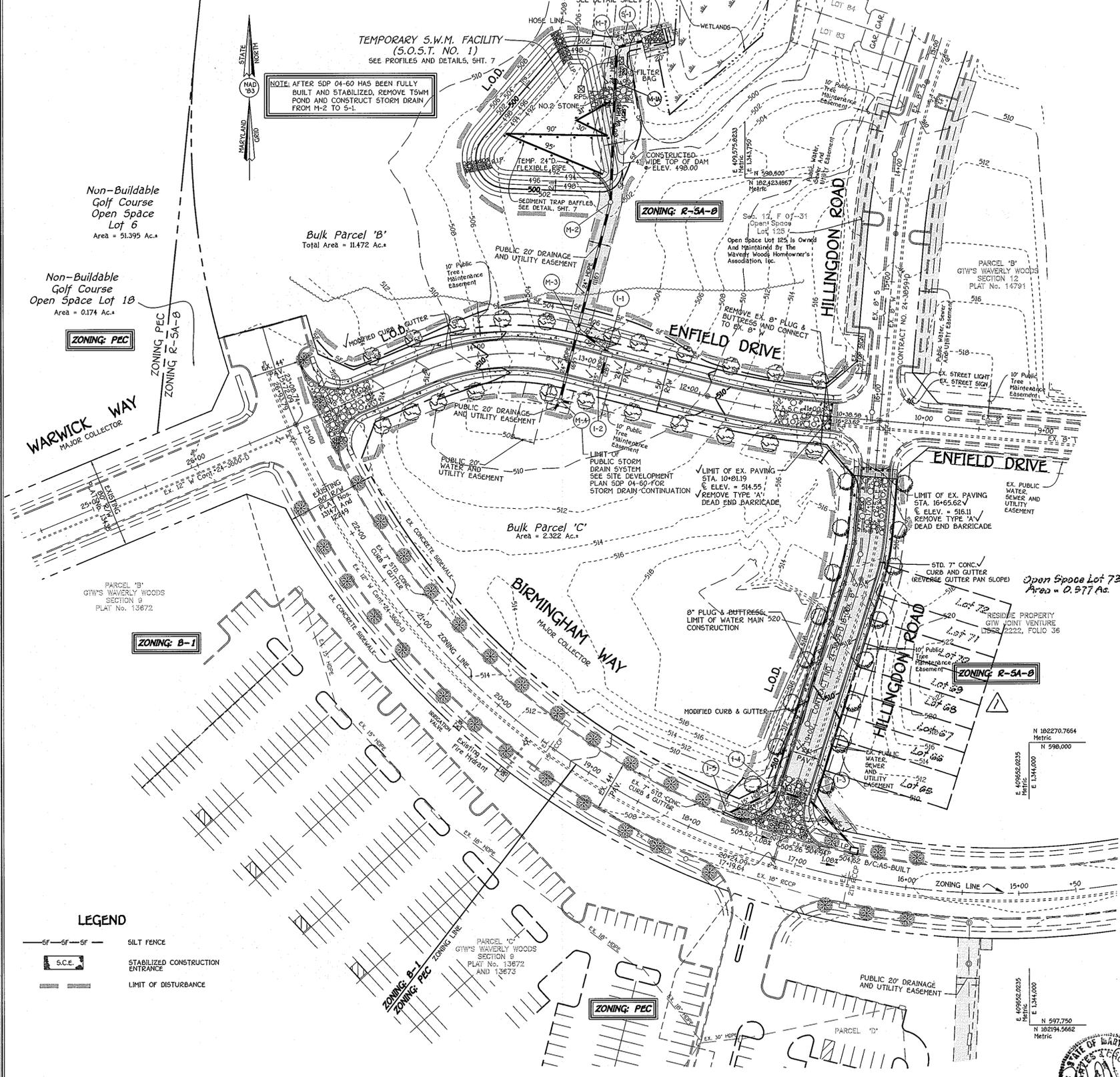


**FILLET PROFILE**  
SCALE: HORIZ. 1" = 50'  
VERT. 1" = 5'

STREET TREE SCHEDULE				
SYMBOL	QUANTITY	BOTANICAL AND COMMON NAME	SIZE	COMMENTS
	22	ACER RUBRUM "OCTOBER GLORY" RED MAPLE	2 1/2"-3" CAL.	40' APART ON PUBLIC R/W
	16	FRAXINUS AMERICANA "ROSEHILL" ROSEHILL WHITE ASH	2 1/2"-3" CAL.	40' APART ON PUBLIC R/W

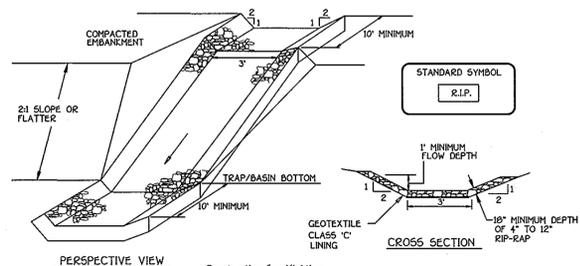
No.	Revisions	Date
1	Eliminated 17 parking spaces adjacent to Hillington Road; also indicated proposed Lots 05 thru 72 & 09 Lot 72.	1.11.05

NOTE: STREET TREES FOR NORTHSIDE OF ENFIELD DRIVE AND EASTSIDE OF HILLINGTON ROAD TO BE PLANTING WHEN BULK PARCELS 'B' AND 'D' ARE SUBDIVIDED. SURETY AMOUNTS FOR THE REQUIRED NUMBER OF STREET TREES: SHADE TREES: 30 REQUIRED, 38 PROVIDED. SURETY AMOUNT: 30 TREES X \$300.00 EA. = \$14,000.00.



- 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 concentration inflow shall be protected in accordance with Grade Stabilization 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 the placement of stone. Sections of filter cloth must overlap at least 1' with the section nearest the entrance placed on top. The filter cloth shall be embedded at least 6" into existing ground at the entrance of the outlet channel.
  - Outlet - An outlet shall be provided, including a means of conveying the discharge in an erosion free manner to an existing stable channel.

**STONE OUTLET SEDIMENT TRAP - ST II**  
NOT TO SCALE



- Construction Specifications**
- 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. The channel shall be lined with 4" to 12" rip-rap to a depth of 18".
  - Filter cloth shall be installed under all rip-rap. Filter cloth shall be Geotextile Class C.
  - Entrance and exit sections shall be installed as shown on the detail section.
  - Rip-rap used for the lining may be recycled for permanent outlet protection if the basin is to be converted to a stormwater management facility.
  - Gabion Inflow Protection may be used in lieu of Rip-rap Inflow Protection.
  - Rip-rap should blend into existing ground.
  - Rip-rap Inflow Protection shall be used where the slope is between 4:1 and 10:1, for slopes flatter than 10:1 use Earth Dike or Temporary Swale lining criteria.

**RIP-RAP INFLOW PROTECTION**  
NOT TO SCALE

**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. REMOVE EXISTING DEAD END BARRICADES. INSTALL STABILIZED CONSTRUCTION ENTRANCES. (2 DAYS)
- INSTALL THE TEMPORARY STONE OUTLET SEDIMENT TRAP NO. 1 (1 WEEK)
- OBTAIN PERMISSION OF THE SEDIMENT CONTROL INSPECTOR PRIOR TO PROCEEDING.
- CLEAR AND GRUB FOR THE REMAINDER OF THE SITE. (2 DAYS)
- GRADE SITE TO THE PROPOSED SUBGRADE. INSTALL THE STORM DRAIN SYSTEM FROM M-2 TO I-2 AND THE TEMPORARY FLEXIBLE PIPE AS SHOWN ON THE PLAN SHEETS TO OUTFALL FROM M-2 INTO THE S.O.S.T. (1 WEEK)
- INSTALL THE WATER AND SEWER MAINS. (1 WEEK)
- 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.
- INSTALL CURB AND GUTTER, SIDEWALK 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 REMAINING STORM DRAIN SYSTEM I-3 TO I-5 HAS BEEN CONSTRUCTED AND FLUSHED TO REMOVE TRAPPED SEDIMENT WITH THE EXCEPTION OF S.O.S.T.-1. (SEE S.O.C. #5, 15 AND 16. (2 WEEKS))
- NOTIFY HOWARD COUNTY OFFICE OF INSPECTIONS AND PERMITS FOR A FINAL INSPECTION OF THE COMPLETED PROJECT. (2 DAYS)
- THE S.O.S.T. WILL REMAIN IN PLACE UNTIL BULK PARCEL 'C' HAS BEEN FULLY DEVELOPED AND STABILIZED BY PERMANENT SEEDING.
- FOLLOWING THE COMPLETION OF THE PROPOSED BUILDING AND DEVELOPMENT OF BULK PARCEL 'C', REMOVE THE S.O.S.T. AND CONSTRUCT THE REMAINING STORM DRAIN SYSTEM FROM M-2 TO I-1. (6 MONTHS)
- STABILIZE ALL DISTURBED AREAS AND REMOVE ALL SEDIMENT CONTROLS UPON APPROVAL OF SEDIMENT CONTROL INSPECTOR. (1 DAY)

**STREET TREE, GRADING & SEDIMENT CONTROL PLAN**  
**GTW'S WAVERLY WOODS**  
**SECTION 13**  
Open Space Lots 1 Thru 18  
And Bulk Parcels 'A' Thru 'D'  
Zoning: PEC, POR, PSC, R-5A-B And R5C  
Tax Map: 16 Part Of Parcels: 20 & 405 Grids: 4, 5 & 10  
Third Election District Howard County, Maryland  
Date: April 26, 2004  
Sheet 4 Of 12

**ENGINEER'S CERTIFICATE**  
I hereby certify that this Plan for Erosion and Sediment Control Represents a Practical and Workable Plan Based On My Personal Knowledge Of The Site Condition And That It Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District.  
Signature of Engineer: *[Signature]* Date: 5/10/04

**DEVELOPER'S CERTIFICATE**  
I hereby 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 Process will Have A Certificate Of Attendance At The Department of Natural Resources Approved Training Program For The Control of Erosion And Sediment Before Beginning The Project. I also authorize the Inspection by The Howard Soil Conservation District Or Its Authorized Agents, As Are Deemed Necessary.  
Signature of Developer: *[Signature]* Date: 5/10/04

Reviewed For Howard County Soil Conservation District And Meets Technical Requirements:  
U.S.D.A. Natural Resources Conservation Service  
*[Signature]* Date: 6/7/04  
Approved: This Development Is Approved For Erosion And Sediment Control By The Howard Soil Conservation District.  
*[Signature]* Date: 6/17/04  
Approved: Department Of Planning And Zoning  
*[Signature]* Date: 7/6/04  
Chief, Division Of Land Development  
*[Signature]* Date: 6/17/04  
Chief, Development Engineering Division  
Approved: Howard County Department Of Public Works  
*[Signature]* Date: 6-17-04  
Chief, Bureau Of Highways

**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
CENTRAL SQUARE OFFICE PARK - 10722 BALDOR NATIONAL PIKE  
BELLICO CITY, MARYLAND 21042  
4100 481 - 2055  
E:\2004\PROJ\30003\FINAL\30003\_SHEET\_4\_S&C\_PLAN.DWG

**PLAN**  
SCALE: 1"=50'



**Owner**  
GTW Joint Venture  
c/o Land Design And Development, Inc.  
8000 Main Street  
Ellicott City, Maryland 21043

**Developer**  
Waverly Woods Development Corporation  
c/o Land Design And Development, Inc.  
8000 Main Street  
Ellicott City, Maryland 21043



**AS BUILT**

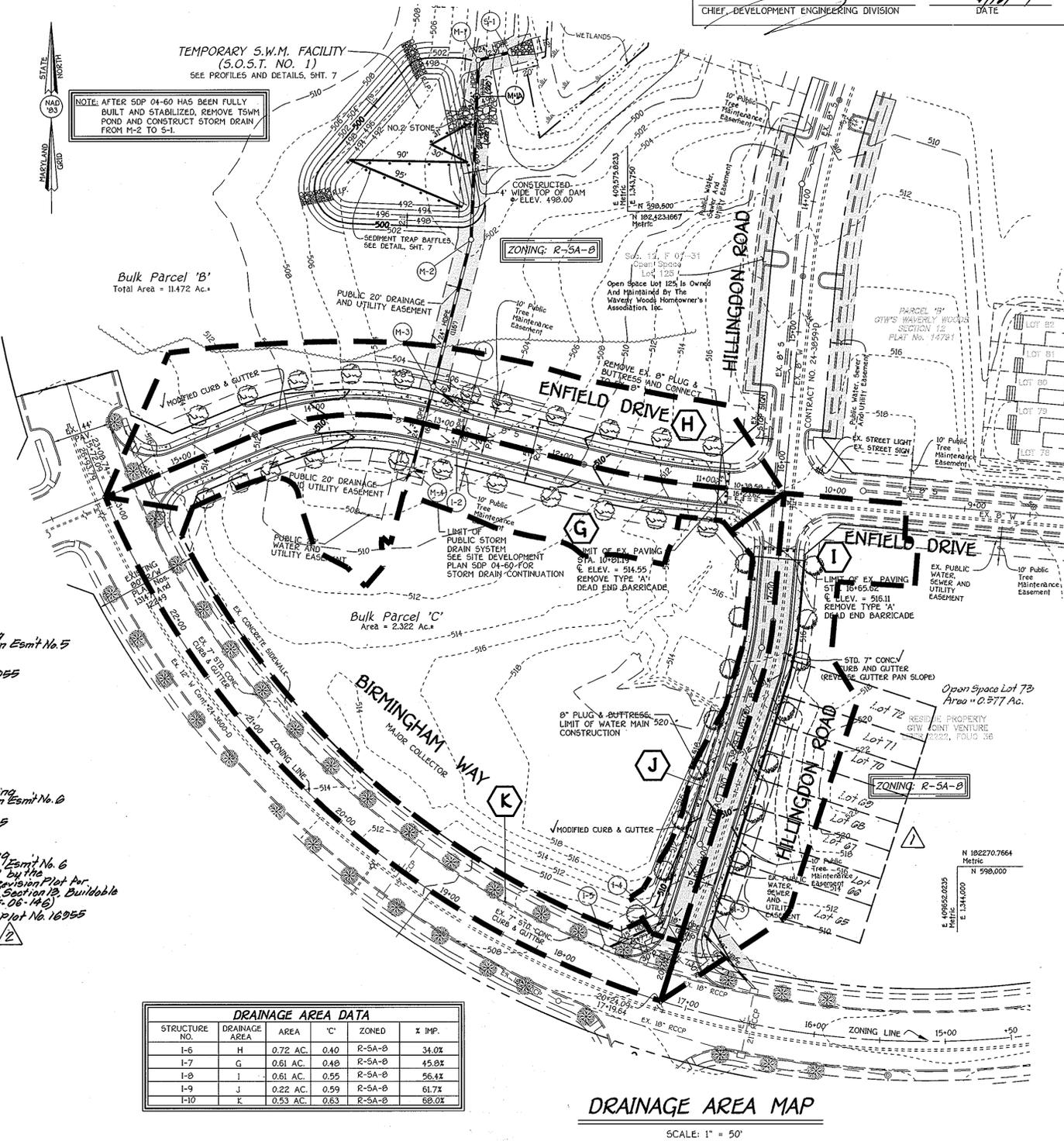
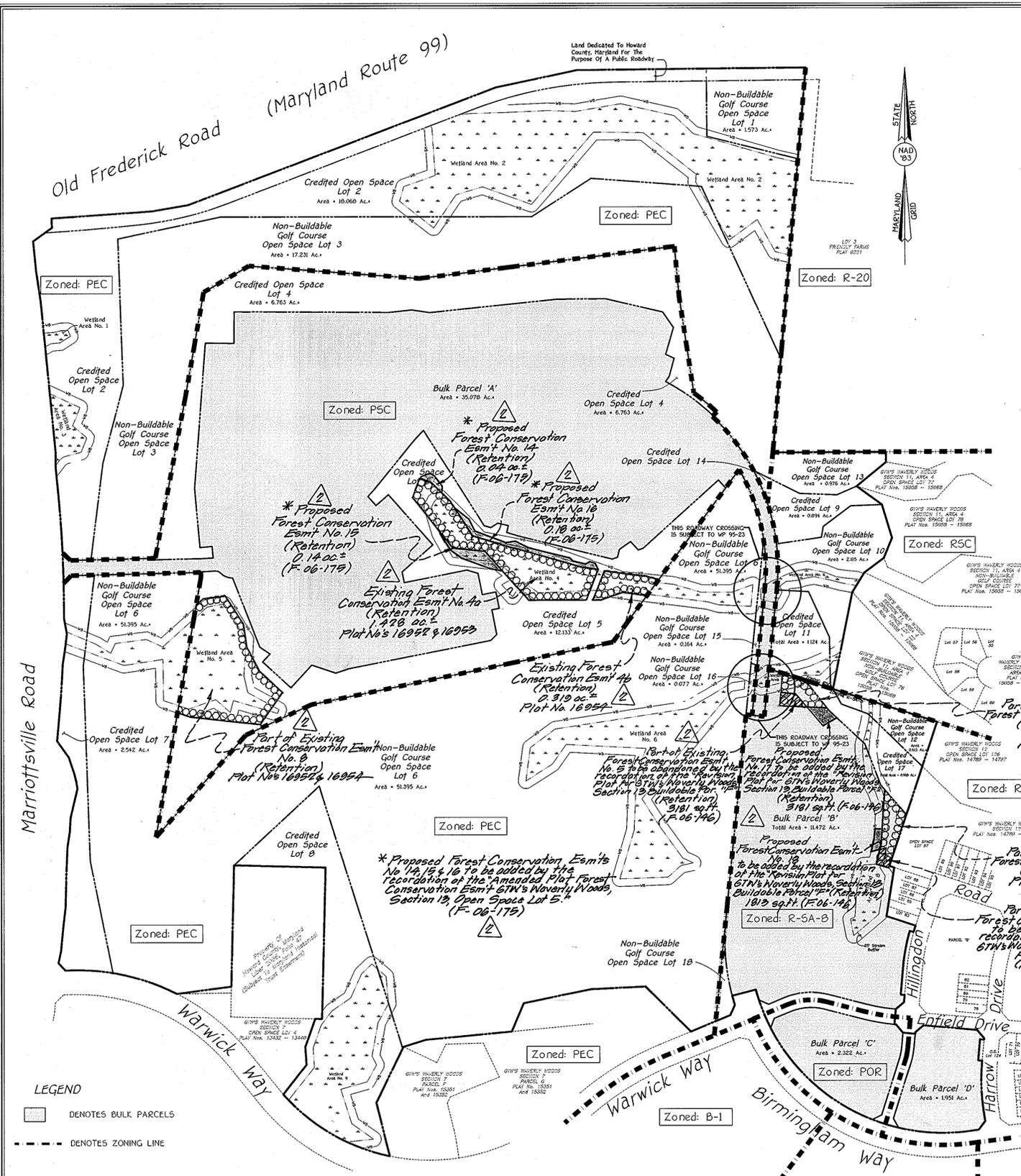


No.	Revision	Date
1	Eliminated 17 parking spaces adjacent to Hillingdon Road, also indicated proposed Lots 65 thru 72 & D5, Lot 79	1-11-05

APPROVED: DEPARTMENT OF PUBLIC WORKS  
 WILLIAM J. WILSON, CHIEF, BUREAU OF HIGHWAYS, 6-18-04 DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 CINDY CANADIAN, CHIEF, DIVISION OF LAND DEVELOPMENT, 7/2/04 DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 CINDY CANADIAN, CHIEF, DEVELOPMENT ENGINEERING DIVISION, 6/10/04 DATE



No.	Revision	Date
2	Depict proposed Forest Conservation Easements No's 14, 15 & 16 to be added upon the recordation of the Amended Plat for GTW's Waverly Woods, Section 13, D.C. Lot 5. (F-06-179). Also depict F.C.E. No's 17 & 18 that will be added, along with portions of Existing F.C.E. No's 5 & 6 that will be abandoned upon the recordation of the Revision Plat for GTW's Waverly Woods, Section 13, Buildable Parcel "F" (F-06-140)	10-20-08

FISHER, COLLINS & CARTER, INC.  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 1000 NATIONAL SQUARE, OFFICE PARK - 10772 BALTIMORE NATIONAL FREEWAY  
 GAITHERSBURG, MARYLAND 20878  
 TEL: 410-481-2000 FAX: 410-481-2005

Owner: GTW Joint Venture  
 c/o Land Design And Development, Inc.  
 8000 Main Street  
 Ellicott City, Maryland 21043

Developer: Waverly Woods Development Corporation  
 c/o Land Design And Development, Inc.  
 8000 Main Street  
 Ellicott City, Maryland 21043



**STORM DRAIN DRAINAGE AREA MAP & ZONING PLAN**  
**GTW'S WAVERLY WOODS**  
 SECTION 13  
 Open Space Lots 1 Thru 18  
 And Bulk Parcels 'A' Thru 'D'  
 Zoning: PEC, POR, P5C, R-SA-B And R5C  
 Tax Map: 16 Part Of Parcels: 20 & 406 Grids: 4, 5 & 10  
 Third Election District Howard County, Maryland  
 Date: April 26, 2004  
 Sheet 6 Of 12

AS BUILT





Approved: Department Of Public Works  
 Chief Bureau Of Highways *AS* Date *6-18-04*

Approved: Department Of Planning And Zoning  
 Chief, Division Of Land Development *JK* Date *7/2/04*

Chief, Development Engineering Division Date *6/18/04*



**Forest Conservation Easement No. 14 (F-06-175)**

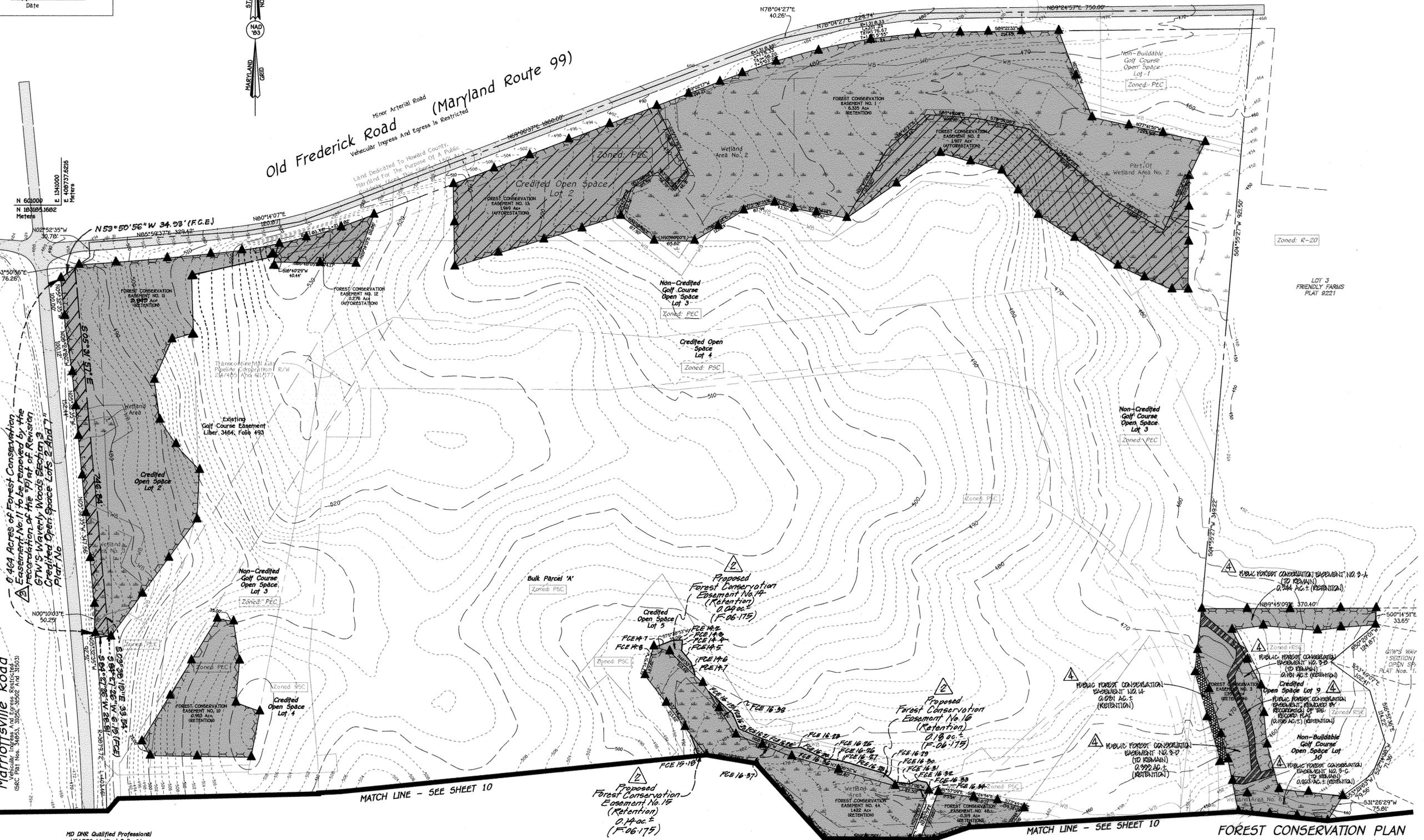
Line	Bearing & Distance
FCE 14-1	N69°08'19"E 34.29'
FCE 14-2	N62°58'35"E 21.09'
FCE 14-3	S88°08'22"E 0.55'
FCE 14-4	S04°28'21"W 19.74'
FCE 14-5	S88°08'06"E 21.18'
FCE 14-6	S12°10'15"E 28.85'
FCE 14-7	N46°28'41"W 70.00'
FCE 14-8	N72°44'30"W 35.00'

**Forest Conservation Easement No. 15 (F-06-175)**

Line	Bearing & Distance
FCE 15-9	S37°44'59"E 08.47'
FCE 15-10	S00°21'20"E 128.57'
FCE 15-11	S42°30'39"E 21.74'
FCE 15-12	N74°28'48"W 37.80'
FCE 15-13	N63°28'58"W 31.64'
FCE 15-14	N68°12'34"N 40.61'
FCE 15-15	N79°20'25"N 27.02'
FCE 15-16	N52°29'25"W 45.08'
FCE 15-17	N37°02'24"W 29.67'
FCE 15-18	N22°22'34"W 48.11'

**Forest Conservation Easement No. 16 (F-06-175)**

Line	Bearing & Distance
FCE 16-19	S48°12'38"E 07.00'
FCE 16-20	S08°45'21"E 36.72'
FCE 16-21	S66°48'19"E 55.59'
FCE 16-22	S71°40'38"E 60.00'
FCE 16-23	N04°14'47"E 22.00'
FCE 16-24	S60°46'30"E 55.00'
FCE 16-25	S85°21'05"E 30.00'
FCE 16-26	S64°57'07"E 17.00'
FCE 16-27	S86°29'54"E 17.00'
FCE 16-28	S72°27'44"E 08.00'
FCE 16-29	S51°40'18"E 25.00'
FCE 16-30	S81°57'08"E 33.00'
FCE 16-31	N69°50'32"E 12.00'
FCE 16-32	S00°01'19"E 15.00'
FCE 16-33	S43°19'30"E 18.00'
FCE 16-34	S01°12'14"W 8.00'
FCE 16-35	N01°57'06"W 72.90'
FCE 16-36	N74°08'52"W 227.90'
FCE 16-37	N68°48'41"W 127.04'
FCE 16-38	N38°40'29"W 110.00'



0.464 Acres of Forest Conservation Easement No. 11 to be removed by the reparation of the Plat of Revision GTW's Waverly Woods Section 13, Credited Open Space Lots 2 and 7, Plat No. 9.

Mariottville Road  
 Intermediate Arterial  
 Vehicular, Pedestrian, and Equestrian Access  
 GRC Plat Nos. 34853, 31051, 31502 and 31503

MD DNR Qualified Professional  
 USACCO, Wetland Delimitator  
 Certification # WDCFB3406100418  
 JOHN P. CANOLES 5/4/04

Eco-Science Professionals, Inc.  
 CONSULTING ECOLOGISTS

No.	Revision	Date
2	Depict proposed Forest Conservation Easement (FCE) No's 14, 15 & 16 that will be added upon the reparation of the Amended Plat for GTW's Waverly Woods, Section 13, Plat No. 9 (F-06-175). Also depict FCE No's 17 & 18 that will be added, along with portions of existing FCE No's 5 & 6 that will be abandoned upon the reparation of the Revision Plat for GTW's Waverly Woods, Section 13, Buildable Parcel 'A' (F-06-146). Also add Line, Bearing & Distance Charts for all affected Easements.	12/20/03
4	Removed portion of retention in FCE No. 9 and replaced area with new FCE No's 14 & 15	3/28/13
3	Removed 0.464 Ac. of Forest Conservation Easement No. 11	1/31/08

**FOREST CONSERVATION PLAN**  
 GTW's Waverly Woods  
 Section 13  
 Open Space Lots 1 Thru 18  
 And Bulk Parcels 'A' Thru 'D'  
 Zoning: PEC, POR, PSC, R-SA-B And RSC

Tax Map: 16 Part Of Parcels: 20 & 406 Grid: 4, 5 & 10  
 Third Election District Howard County, Maryland  
 Scale: 1" = 100'  
 Date: April 26, 2004  
 Sheet 9 of 12

FISHER, COLLINS & CARTER, INC.  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
 ELLICOTT CITY, MARYLAND 21042  
 410.861.2222

AS BUILT

0.042 Ac. of Forest Conservation Easement No. 2A to be removed by the recordation of the "Plat of Revision GTW's Waverly Woods, Section 13 Credited Open Space Lots 2 And 7. Plat No.

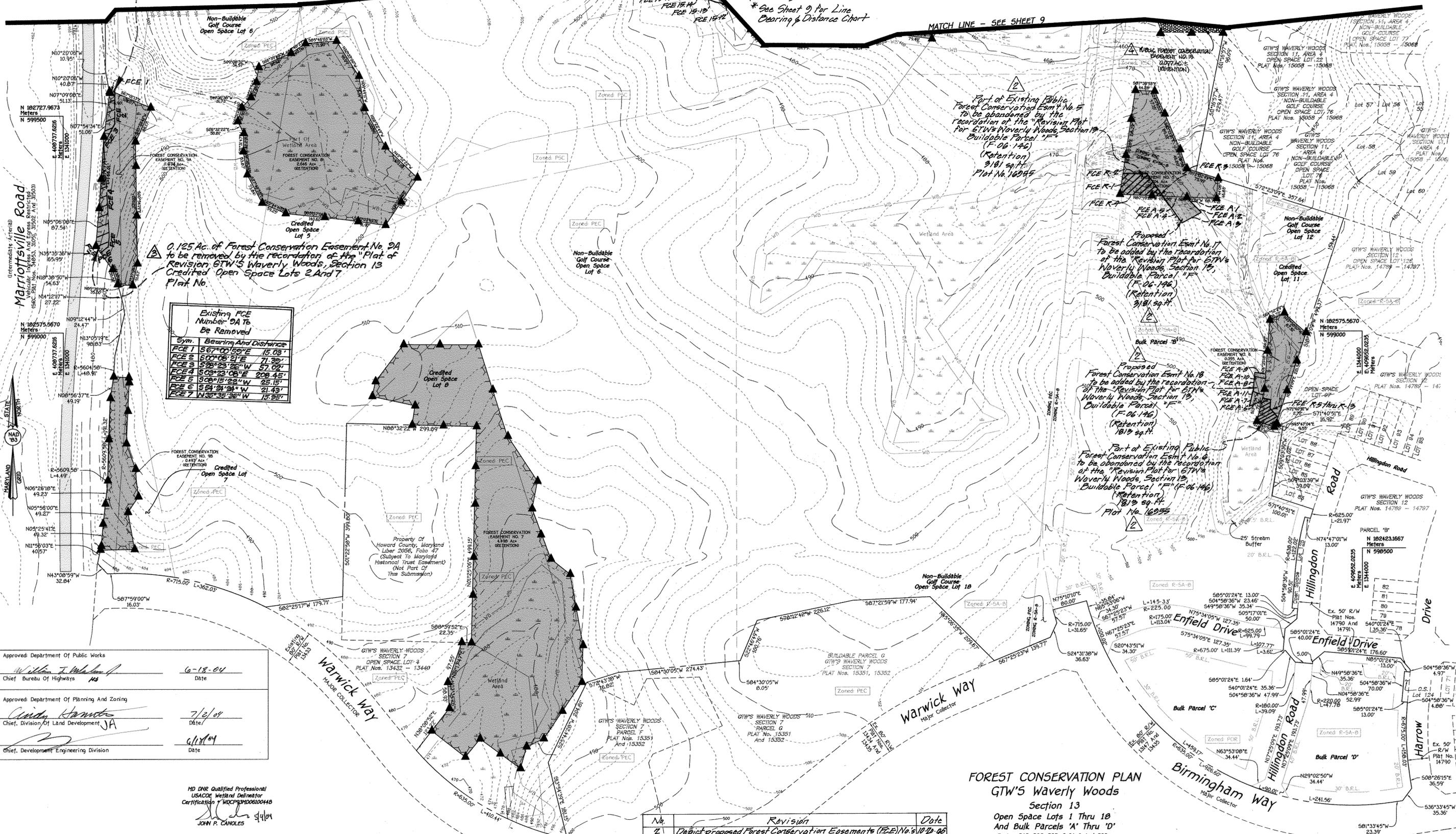
MATCH LINE - SEE SHEET 9

Proposed Forest Conservation Easement No. 15\* (Retention) 0.14ac. ± (F-06-175) \* See Sheet 9 for Line Clearing & Distance Chart

MATCH LINE - SEE SHEET 9

0.125 Ac. of Forest Conservation Easement No. 2A to be removed by the recordation of the "Plat of Revision GTW's Waverly Woods, Section 13 Credited Open Space Lots 2 And 7. Plat No.

Sym.	Bearing And Distance	Area
FCE 1	S67°00'50"E 15.08'	
FCE 2	S00°08'21"E 71.30'	
FCE 3	S08°23'22"W 57.02'	
FCE 4	S08°23'06"E 208.45'	
FCE 5	S08°15'22"W 25.15'	
FCE 6	S64°21'24"W 21.43'	
FCE 7	N35°32'32"W 15.95'	



Approved: Department of Public Works  
 Chief, Bureau of Highways  
 Date: 6-18-04

Approved: Department of Planning And Zoning  
 Chief, Division of Land Development  
 Date: 7/2/04

Chief, Development Engineering Division  
 Date: 6/18/04

MD DNR Qualified Professional  
 USACE Wetland Delineator  
 Certification # WDCP3MD060044B  
 JOHN P. CANOLAS 5/4/04

FISHER, COLLINS & CARTER, INC.  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 CONTINENTAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE  
 ELICOTT CITY, MARYLAND 21042  
 MD REG. NO. 2055

Eco-Science Professionals, Inc.  
 CONSULTING ECOLOGISTS

No.	Revision	Date
2	Deleted proposed Forest Conservation Easements (FCE) No. 10-20-06, 17-18-16 that will be added upon the recordation of the "Amended" Plat for GTW's Waverly Woods, Section 13, Credited Open Space Lots 2 And 7 (F-06-175). Also deleted prop. FCE No. 17 & 18 that will be added along with portions of existing FCE No. 2 & 3 that will be abandoned upon the recordation of the Revision Plat for GTW's Waverly Woods, Section 13, Credited Open Space Lots 2 And 7 (F-06-146).	1/31/08
3	Removed a Total of 0.167 Ac. of Forest Cons. Easement #	1/31/08

FOREST CONSERVATION PLAN  
 GTW's Waverly Woods  
 Section 13  
 Open Space Lots 1 Thru 10  
 And Bulk Parcels 'A' Thru 'D'

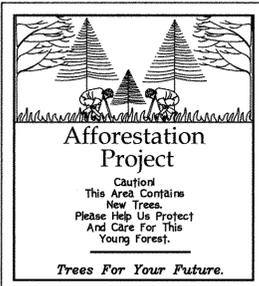
Zoning: PEC, POR, PSC, R-5A-0 And RSC  
 Tax Map: 16 Part of Parcels: 20 & 406 Grids: 4, 5 & 10  
 Third Election District Howard County, Maryland  
 Scale: 1" = 100'  
 Date: April 25, 2004  
 Sheet 10 of 12

AS BUILT

Approved: Department Of Public Works  
 Chief, Bureau of Highways  
 Date: 6-18-04

Approved: Department of Planning And Zoning  
 Chief, Division of Land Development  
 Date: 7/2/04

Chief, Development Engineering Division  
 Date: 6/16/04



DESIGNATION	ACREAGE	PLANTING CREDIT
FCE AREA #12	0.3 Ac.	1" CALIPER = 0.25 ACRES/WHIPS = 0.05 ACRES = 0.3 ACRES
FCE AREA #13	1.9 Ac.	2" CALIPER = 0.36 ACRES/WHIPS = 1.59 ACRES = 1.95 ACRES
FCE AREA #2	1.9 Ac.	2" CALIPER = 0.56 ACRES/WHIPS = 1.32 ACRES = 1.90 ACRES

**PLANTING SCHEDULE**

FCE Area #12 (0.3+/- acres)

Qty.	Species	Size	Spacing
10	Cornus florida - Flowering dogwood	1" cal.	15' oc
10	Juniperus virginiana - Red cedar	1" cal.	15' oc
20	Liriodendron tulipifera - Poplar	1" cal.	15' oc
10	Quercus alba - White oak	1" cal.	15' oc
17	Viburnum prunifolium - Blackhaw	3-4" whip	15' oc

TOTAL: 67

FCE Area #13 (1.9 +/- acres)

Qty.	Species	Size	Spacing
10	Acer rubrum - Red maple	2" cal.	*
16	Liriodendron tulipifera - Poplar	2" cal.	*
10	Quercus alba - White oak	2" cal.	*
90	Acer rubrum - Red maple	2-3" whip	11' oc
50	Cornus florida - Flowering dogwood	2-3" whip	11' oc
50	Juniperus virginiana - Red cedar	2-3" whip	11' oc
200	Liriodendron tulipifera - Poplar	2-3" whip	11' oc
135	Quercus alba - White oak	2-3" whip	11' oc
30	Viburnum prunifolium - Blackhaw	2-3" whip	11' oc

TOTAL: 591

FCE Area #2 (1.9 +/- acres)

Qty.	Species	Size	Spacing
12	Acer rubrum - Red maple	2" cal.	*
24	Liriodendron tulipifera - Poplar	2" cal.	*
22	Quercus alba - White oak	2" cal.	*
90	Acer rubrum - Red maple	2-3" whip	11' oc
50	Cornus florida - Flowering dogwood	2-3" whip	11' oc
50	Juniperus virginiana - Red cedar	2-3" whip	11' oc
135	Liriodendron tulipifera - Poplar	2-3" whip	11' oc
135	Quercus alba - White oak	2-3" whip	11' oc
25	Viburnum prunifolium - Blackhaw	2-3" whip	11' oc

TOTAL: 519

**Planting Notes:**

- Multiflora rose control may be required as part of this planting plan.
- Bareroot plant material may be used to offset the cost of multiflora rose removal and maintenance. If bareroot material is used it must be planted in March-April and an anti-desiccant gel should be utilized to protect root systems.
- Container grown stock is recommended.
- Plants should be flagged to aid on location during maintenance. Plantings should also be planted in grid pattern to facilitate maintenance and removal of invasive and exotic species.

**Multiflora Rose Control Note**

Multiflora rose is present in certain areas to be reforested. Prior to planting all multiflora rose shall be removed. Removal of the rose may be performed with mowing and herbicide treatments. Physical removal of all rose growth following by a periodic herbicide treatment of stump sprouts is recommended. Native tree and shrub species occurring within the rose thickets should be retained wherever possible. Herbicide treatments shall occur on 2 month intervals during the first growing season and once each in the spring and fall for subsequent years. Herbicide used shall be made specifically to address woody plant material and shall be applied as per manufacturer's specifications. Care should be taken not to spray planted trees or naturally occurring native tree/shrub seedlings. It is recommended that initiation of rose removal begin at least six months prior to planting.

**Planting/Soil Specifications**

- Planting of nursery stock shall take place between March 15th and April 30th. Container stock may be planted September 1-October 30.
- A twelve (12) inch layer of topsoil shall be spread over all afforestation areas impacted by site grading to assure a suitable planting area. Disturbed areas shall be seeded and stabilized as per general construction plan for project. Planting areas not impacted by site grading shall have no additional topsoil installed.
- All bareroot planting stock shall have their root systems dipped into an anti-desiccant gel prior to planting.
- Plants shall be installed so that the top of root mass is level with the top of existing grade. Backfill in the planting pits shall consist of 3 parts existing soil to 1 part pine fines or equivalent.
- Fertilizer shall consist of Agriform 22-0-2, or equivalent, applied as per manufacturer's specifications.
- A two (2) inch layer of hardwood mulch shall be placed over the root area of all plantings.
- Plant material shall be transported to the site in a tarp or covered truck. Plants shall be kept moist prior to planting.
- All non-organic debris associated with the planting operation shall be removed from the site by the contractor.

**Sequence of Construction**

- Plants shall be installed as per Plant Schedule and the Planting/Soil Specifications for the project.
- Upon completion of the planting, signage shall be installed as per the Forest Retention Area Protection Device and Signage Plan.
- Plantings shall be maintained and guaranteed in accordance with the Maintenance and Guarantee requirements for project.

**Maintenance of Plantings**

- Maintenance of plantings shall last for a period of 24 months.
- All plant material shall be watered twice a month during the first growing season. Watering may be more or less frequent depending on weather conditions. During second growing season, watering once a month during the first growing season, if needed.
- Invasive exotics and noxious weeds will be removed from reforestation areas. Old field successional species will be retained.
- Plants will be examined a minimum two times during the growing season for serious plant pests and diseases. Serious problems will be treated with the appropriate agent.
- Dead branches will be pruned from plantings.

**Guarantee Requirements**

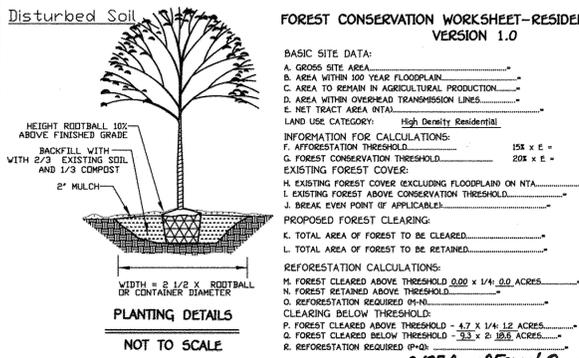
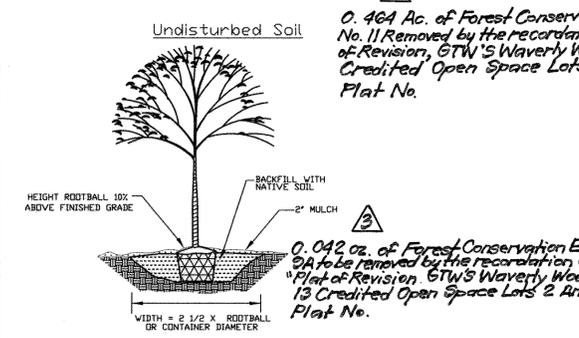
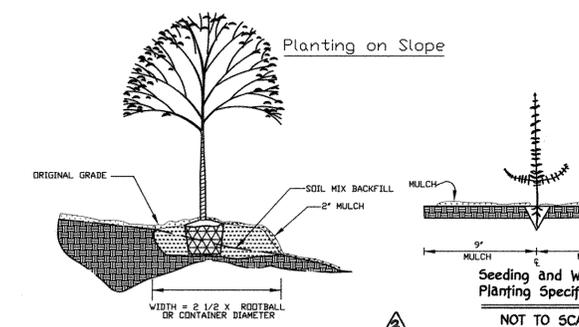
- After one growing season, plant material shall be maintained at 90% survival threshold. A 75 percent survival rate of forestation plantings will be required at the end of the 24 month maintenance period. All plant material below the 75 percent threshold will be replaced at the beginning of the next growing season.
- The contractor will not be liable for plant loss due to theft or vandalism.

**Surety for Forestation**

- The developer shall post a surety bond, letter of credit to ensure that reforestation plantings are completed. Upon acceptance of the plantings by the County, the bond shall be released.
- The forest conservation provided by this subdivision plan for Section 13 provides a total surety in the amount of \$1,932,932.20 based on the following:
  - Forest Retention: 23.99 acres on-site with a surety in the amount of \$299,000.00
  - Forest planting (reforestation) = 4.13 acres on-site with a surety in the amount of \$49,950.40 (4.13 ac. x \$4500/Sq. Ft. Ac. x \$4050/Sq. Ft. Ac.) and 41.00 Acres off-site located on the Howard Hunt Properties. Tax Map 6, Parcels 51 and 159, Grids 5 and 6 with surety in the amount of \$92,980.00 (41.00 Ac. x \$4560 Sq. Ft. x \$4050/Sq. Ft.) is posted with the developer's agreement.

**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.
- Forested areas occurring outside of the FCE shall not be considered part of the FCE and shall not be subject to protective and covenants.
- 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. Fencing shall be installed along limits of disturbance occurring within 50 feet of the proposed FCE limits.
- The Forest Conservation Act requirements for this Section 13 of the Waverly Woods development will be met through the retention of 23.99 acres of net tract area forest within the limits of a Forest Conservation Easement and through the on-site reforestation of 4.13 acres and the off-site reforestation of 28.8 acres at the Howard Hunt Club Property.



0.464 Ac. of Forest Conservation Easement No. 11 Removed by the recordation of the "Plat of Revision, GTW'S Waverly Woods, Section 13 Credited Open Space Lots 2 And 7." Plat No.

0.042 ac. of Forest Conservation Easement 9A to be removed by the recordation of the "Plat of Revision, GTW'S Waverly Woods, Section 13 Credited Open Space Lots 2 And 7." Plat No.

**FOREST CONSERVATION WORKSHEET-RESIDENTIAL ZONING VERSION 1.0**

BASIC SITE DATA:	ACRES
A. GROSS SITE AREA	77.6
B. AREA WITHIN 100 YEAR FLOODPLAIN	0.0
C. AREA TO REMAIN IN AGRICULTURAL PRODUCTION	0.0
D. AREA WITHIN OVERHEAD TRANSMISSION LINES	0.4
E. NET TRACT AREA (NTA)	77.2
LAND USE CATEGORY:	High Density Residential
INFORMATION FOR CALCULATIONS:	
F. AFFORESTATION THRESHOLD	15% x E = 11.5
G. FOREST CONSERVATION THRESHOLD	20% x E = 15.5
EXISTING FOREST COVER:	
H. EXISTING FOREST COVER EXCLUDING FLOODPLAIN ON NTA	20.2
I. EXISTING FOREST ABOVE CONSERVATION THRESHOLD	4.7
J. BREAK EVEN POINT OF APPLICATION	16.8
PROPOSED FOREST CLEARING:	
K. TOTAL AREA OF FOREST TO BE CLEARED	14.0
L. TOTAL AREA OF FOREST TO BE RETAINED	6.2
REFORESTATION CALCULATIONS:	
M. FOREST CLEARED ABOVE THRESHOLD 0.00 x 1/4 = 0.0 ACRES	0.0
N. FOREST RETAINED ABOVE THRESHOLD	0.0
O. REFORESTATION REQUIRED 91-N	0.0
CLEARING BELOW THRESHOLD:	
P. FOREST CLEARED ABOVE THRESHOLD - 4.7 x 1/4 = 1.2 ACRES	1.2
Q. FOREST CLEARED BELOW THRESHOLD - 33.2 x 0.188 ACRES	18.8
R. REFORESTATION REQUIRED 91-D	19.0

0.125 Ac. of Forest Conservation Easement 9A to be removed by the recordation of the "Plat of Revision, GTW'S Waverly Woods, Section 13, Open Space Lots 2 And 7 Plat No."

Part of Existing Forest Conservation Easement No. 5 to be Abandoned (F-06-146)

Line	Bearing & Distance
FCE R-1	N08°35'08"E 46.12'
FCE R-2	S04°15'43"E 21.28'
FCE R-3	S37°51'15"E 56.75'
FCE R-4	N87°19'25"W 92.70'

Forest Conservation Easement No. 14 to be Added (F-06-175)

Line	Bearing & Distance
FCE A-1	S37°51'15"E 17.13'
FCE A-2	S46°55'37"E 22.22'
FCE A-3	S60°23'23"W 52.82'
FCE A-4	N87°19'25"W 92.50'
FCE A-5	S87°19'25"E 61.84'

No.	Revision	Date
2	Depict proposed Forest Conservation Easements (FCE) No. 14, 15 & 16 that will be added upon the recordation of the "Amended Plat for GTW'S Waverly Woods, Section 13, Open Space Lot 5" (F-06-175). Also depict prop. FCE No. 17 & 18 that will be added, along with portions of existing FCE No. 5 & 6 that will be abandoned upon the recordation of the "Revision Plat for GTW'S Waverly Woods, Section 13, Bulldozer Parcel 1" (F-06-146). Also add Line Bearing & Distance Charts for all affected Easements.	10/20/02
3	Removed 0.464 Ac. of Forest Conservation Easement No. 11, 0.042 and 0.125 Ac. of Forest Conservation Easement No. 9A	1/31/04
4	REMOVED PORTION OF RESTRICTION IN FCE NO. 9 AND REPLACED AREA WITH NEW FCE NO. 14 & 15	3/20/03

**Owner:** GTW Joint Venture  
 c/o Land Design and Development, Inc.  
 8000 Main Street  
 Ellicott City, Maryland 21043

**Developer:** Waverly Woods Development Corporation  
 c/o Land Design and Development, Inc.  
 8000 Main Street  
 Ellicott City, Maryland 21043

Part of Existing Forest Conservation Easement No. 6 to be abandoned (F-06-146)

Line	Bearing & Distance
FCE R-5	S18°13'00"E 11.20'
FCE R-6	S71°40'51"E 47.70'
FCE R-7	S45°47'04"W 2.55'
FCE R-8	N71°45'50"W 42.12'
FCE R-9	N13°51'54"E 28.02'
FCE R-10	S00°16'56"E 19.88'
FCE R-11	S20°40'04"W 11.80'
FCE R-12	S41°22'15"E 51.9'
FCE R-13	S84°23'05"E 30.82'

Forest Conservation Easement No. 14 to be Added (F-06-175)

Line	Bearing & Distance
FCE A-6	S60°23'23"W 52.82'
FCE A-7	N18°51'54"E 22.95'
FCE A-8	N04°12'54"E 25.80'
FCE A-9	S45°31'23"E 25.25'
FCE A-10	S04°26'18"W 31.83'
FCE A-11	S73°21'44"W 20.10'

**FOREST CONSERVATION PLAN**  
 GTW'S Waverly Woods  
 Section 13  
 Open Space Lots 1 Thru 18  
 And Bulk Parcels 'A' Thru 'D'  
 Zoning: PEC, POR, PSC, R-5A-B And RSC

Tax Map 16 Part Of Parcels: 20 & 406 Grids: 4, 5 & 10  
 Third Election District Howard County, Maryland

Scale: 1" = 200'

Date: January 14, 2004  
 Revised: April 26, 2004  
 Sheet 11 Of 12

**FISHER, COLLINS & CARTER, INC.**  
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
 2100 NATIONAL PIKE  
 BELLINGHAM, WA 98226  
 408 461-2855

**Eco-Science Professionals, Inc.**  
 CONSULTING ECOLOGISTS  
 11111 WOODHURST DRIVE  
 SUITE 100  
 ELICOTT CITY, MD 21043  
 410-326-5104

AS BUILT 0468

# Planting Schedule

## FCE Area #1A (23,000 ac.)

Total planting units required: 16,797  
Total planting units provided: 16,790

Qty.	Species	Size	Spacing
1450	Acer rubrum - Red maple	2-3' whip	**
500	Cornus florida - Flowering dogwood	2-3' whip	**
500	Robinia pseudo-acacia - Black locust	2-3' whip	**
500	Juniperus virginiana - Red cedar	2-3' whip	**
1225	Liriodendron tulipifera - Poplar	2-3' whip	**
800	Nyssa sylvatica - Black gum	2-3' whip	**
1000	Prunus serotina - Black cherry	2-3' whip	**
700	Quercus alba - White oak	2-3' whip	**
500	Quercus rubra - Red oak	2-3' whip	**
500	Sassafras albidum - Sassafras	2-3' whip	**
500	Viburnum prunifolium - Blackhaw	2-3' whip	**

## FCE Area #2A (17,091 ac.)

Total planting units required: 11,965  
Total planting units provided: 11,970

Qty.	Species	Size	Spacing
1000	Acer rubrum - Red maple	2-3' whip	**
400	Cornus florida - Flowering dogwood	2-3' whip	**
200	Robinia pseudo-acacia - Black locust	2-3' whip	**
300	Juniperus virginiana - Red cedar	2-3' whip	**
1000	Liriodendron tulipifera - Poplar	2-3' whip	**
385	Nyssa sylvatica - Black gum	2-3' whip	**
800	Prunus serotina - Black cherry	2-3' whip	**
600	Quercus alba - White oak	2-3' whip	**
600	Quercus rubra - Red oak	2-3' whip	**
900	Sassafras albidum - Sassafras	2-3' whip	**
400	Viburnum prunifolium - Blackhaw	2-3' whip	**

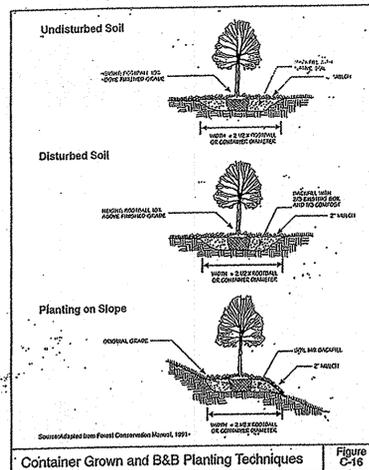
**Key:**  
Whips *wh/wh/wh* to be spaced on 11 foot centers - plantings should be installed in rows to facilitate future maintenance. Where possible rows should be made along contour. Per Howard County requirements, tree shelters should be used.  
FCA  
b.t. - branched transplant

### Planting Notes:

- Multiflora rose control may be required as part of this planting plan.
- Bareroot plant material may be used to offset the cost of multiflora rose removal and maintenance. If bareroot material is used it must be planted in March-April and an anti-desiccant gel should be utilized to protect root systems. Container grown stock is recommended.
- Plants should be flagged to aid on location during maintenance. Plantings should also be planted in rows along contour to facilitate maintenance and removal of invasive and exotic species.

### Multiflora Rose Control Note

Multiflora rose is prevalent in certain areas to be afforested. Prior to planting all multiflora rose shall be removed. Removal of the rose may be performed with mowing and herbicide treatments. Physical removal of all top growth following by a periodic herbicide treatment of stump sprouts is recommended. Native tree and shrub species occurring within the rose thickets should be retained wherever possible. Herbicide treatments shall occur on 2 month intervals during the first growing season and once each in the spring and fall for subsequent years. Herbicide used shall be made specifically to address woody plant material and shall be applied as per manufacturer specifications. Care should be taken not to spray planted trees or naturally occurring native tree/shrub seedlings. It is recommended that initiation of rose removal begin at least six months prior to planting.



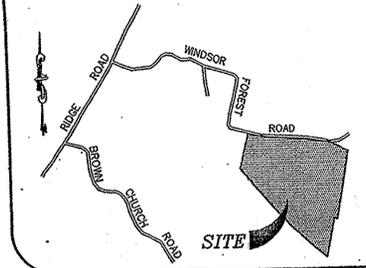
Container Grown and B&B Planting Techniques Figure C-16

### Forest Conservation Easement

Unauthorized disturbances of vegetation is prohibited. Violators are subject to fines as imposed by the Howard County Forest Conservation Act of 1992

Trees for Your Future

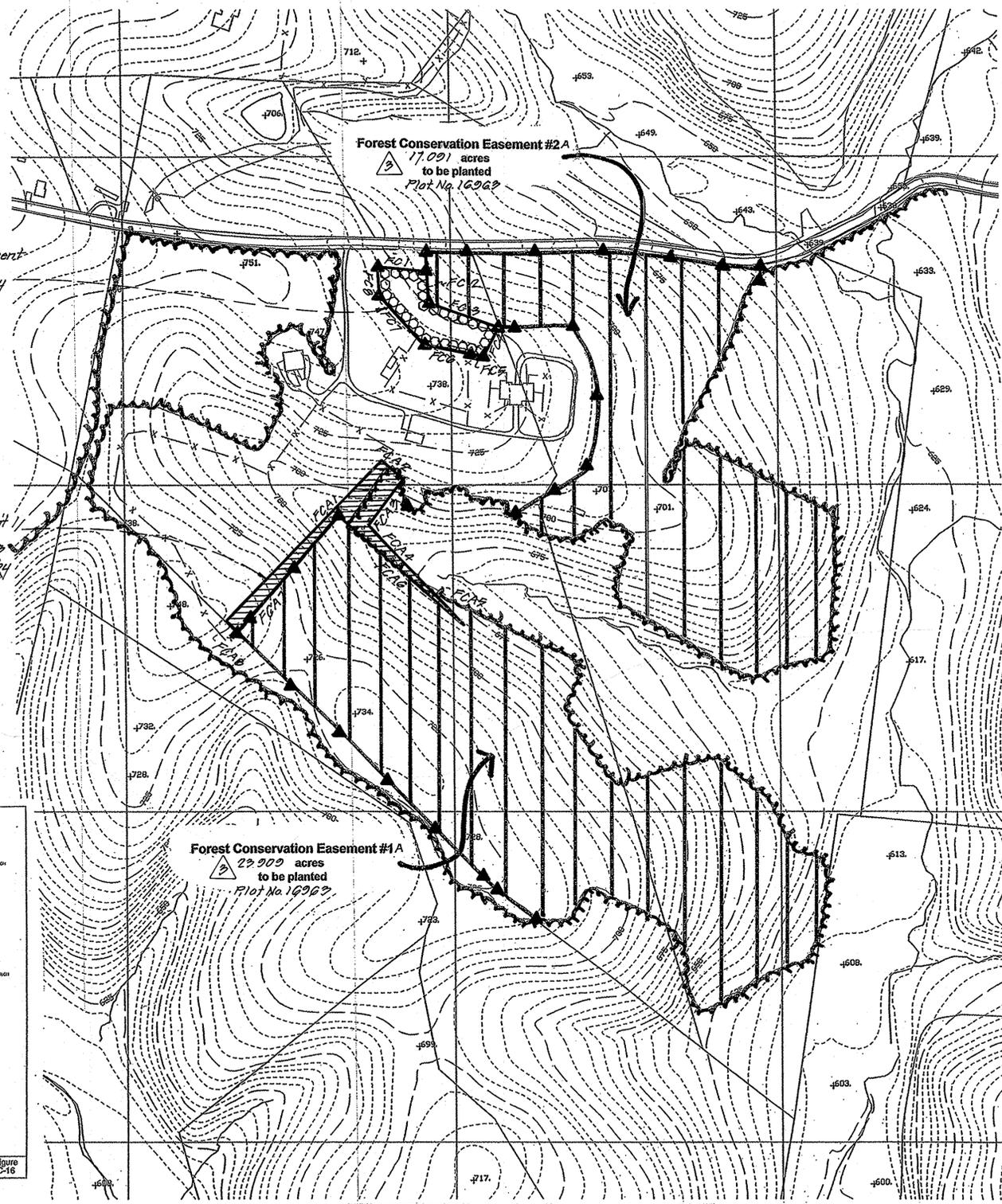
NOTE: THIS OFF-SITE PLANTING OF 41.00 ACRES PROVIDES 30.9 ACRES OF PLANTING OBLIGATION FOR WAVERLY WOODS, SECTION 13 AND PROVIDES 10.1 ACRES (41.00 AC. - 30.9 AC.) TO BE CREDITED TOWARDS THE TOTAL FOREST OBLIGATION OF WAVERLY WOODS RESIDENTIAL, COMMERCIAL, RETAIL DEVELOPMENT AND THE WAVERLY WOODS GOLF COURSE FACILITY IMPROVEMENTS.



VICINITY MAP SCALE: 1"=2000'

Public Forest Conservation Easement (0.965 ac.) to be created by the recordation of Plot No. 21590 (Reforestation)

Part of Public Forest Conservation Easement (0.965 ac.) to be removed by the recordation of Plot No. 21590



### Public Forest Conservation Easement to be Created (0.965 ac.)

Line	Bearing	Distance
FCA1	67° 15' 43" E	146.02'
FCA2	500° 12' 25" W	78.85'
FCA3	564° 31' 30" E	219.69'
FCA4	534° 11' 40" W	94.07'
FCA5	N89° 09' 33" E	17.61'
FCA6	S12° 06' 05" E	163.01'
FCA7	S86° 18' 50" E	201.01'
FCA8	S01° 56' 09" W	66.76'

### Public Forest Conservation Easement to be Removed (0.965 ac.)

Line	Bearing	Distance
FCA1	N49° 14' 55" E	667.16'
FCA2	S32° 21' 17" E	8641'
FCA3	S48° 17' 31" W	164.35'
FCA4	S41° 51' 31" E	133.87'
FCA5	S42° 09' 54" E	188.00'
FCA6	N46° 48' 08" W	507.60'
FCA7	S45° 51' 32" W	443.61'
FCA8	N38° 49' 56" W	46.22'

### 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 for use of offsite development projects as approved by Howard County. 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 FCE boundary.
- 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.
- Permanent signage shall be placed 50-100' apart along the boundaries of all areas included in Forest Conservation Easements.
- The Forest Conservation Easements shown hereon will be created to address specific offsite planting/retention obligations as allowed by Howard County Department of Planning and Zoning for the Waverly Woods Development.

### FCP LEGEND

- Existing Contours
- Existing Forest Limits
- Limits of Reforestation Area/Forest Conservation Easement

Total FCA Reforestation Credit Available = 41 acres

No.	Revision	Date
1	The purpose of this revision is to remove a portion (0.965 ac.) of Ex. Public Forest Conservation Easement (FCE) No. 1 (Plot No. 16963) & create Public FCE No. 1A & add (0.965 ac.) of FCE to Ex. Public FCE No. 2 (Plot No. 16963) & create Public FCE No. 2A. Also added Line Bearing & Distance Charts for both Easements, Revised Planting Schedule.	3.1.11

GTW'S WAVERLY WOODS OFF-SITE FOREST CONSERVATION PLAN, FOREST CONSERVATION NOTES AND DETAILS

PROPERTY OF HOWARD HUNT PROPERTIES, INC.  
ZONING: RC-DEO  
TAX MAP No: 6 PARCELS: 51 AND 159 GRID Nos: 14 AND 15  
FIFTH ELECTION DISTRICT, HOWARD COUNTY, MARYLAND  
SCALE: 1" = 100' DATE: NOVEMBER 13, 2003  
SHEET 12 OF 12

Eco-Science Professionals, Inc. CONSULTING BIOLOGISTS

300 Days Qualified Professional UNACCREDITED

OWNER HOWARD HUNT PROPERTIES, INC. c/o MR. J. THOMAS SCRIVENER SUITE 209 2808 CENTRE PARK DRIVE COLUMBIA, MARYLAND 21044

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
Chief, Division of Land Development  
DATE: 7/2/04  
Chief, Development Engineering Division  
DATE: 6/18/04

DEVELOPER NEW MANOR, L.L.C. c/o MR. DONALD REINER 2800 MAIN STREET ELLICOTT CITY, MARYLAND 21045

AS BUILT 0458