

# PRELIMINARY EQUIVALENT SKETCH PLAN

## OWINGS PROPERTY, LOT 5

### 5th ELECTION DISTRICT

### HOWARD COUNTY, MARYLAND

#### NOTES

1. THE CONTOURS AND ELEVATIONS SHOWN HEREON ARE BASED ON AERIAL PHOTOGRAPHY BY AIR SURVEY PHOTOGRAMMETRIC MAPPING SERVICES, MARCH 18, 2001.
2. THE BOUNDARY LINES SHOWN HEREON ARE BASED ON A BOUNDARY SURVEY BY DEWBERRY & DAVIS, LLC, JANUARY 2002.
3. ALL EXISTING WELLS AND SEPTIC AREAS WITHIN 100' OF THE SITE HAVE BEEN SHOWN TO THE BEST OF OUR KNOWLEDGE.
4. ALL WELLS TO BE DRILLED PRIOR TO RECORD PLAT APPROVAL.
5. APPLICATION NO. 615214 PERC LOCATIONS ARE BASED ON PERC TESTING DATED APRIL 23, 2001.
6. A GROUND WATER APPROPRIATION PERMIT MUST BE SUBMITTED PRIOR TO RECORD PLAT SUBMISSION.
7. THE LOTS SHOWN HEREON COMPLY WITH THE MINIMUM OWNERSHIP WIDTH AND LOT AREA AS REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT.

THIS AREA DESIGNATES A MINIMUM 10,000 SQ FT PRIVATE SEWAGE EASEMENT REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWAGE DISPOSAL. IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED UNTIL PUBLIC SEWAGE IS AVAILABLE. THESE EASEMENTS SHALL BE NULL AND VOID UPON CONNECTION TO A PUBLIC SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO GRANT VARIANCES FOR ENCROACHMENT INTO THE PRIVATE SEWAGE EASEMENT. RECORDATION OF A MODIFIED SEWAGE EASEMENT SHALL NOT BE NECESSARY.

THIS AREA DESIGNATES A MINIMUM 60,000 SQ FT PRIVATE SEWAGE EASEMENT REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT FOR SHARED SEWAGE DISPOSAL. IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED UNTIL PUBLIC SEWAGE IS AVAILABLE. THESE EASEMENTS SHALL BE NULL AND VOID UPON CONNECTION TO A PUBLIC SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO GRANT VARIANCES FOR ENCROACHMENT INTO THE PRIVATE SEWAGE EASEMENT. RECORDATION OF A MODIFIED SEWAGE EASEMENT SHALL NOT BE NECESSARY. APPROVAL OF THE NUMBER OF LOTS/BEDROOMS IS SUBJECT TO PRELIMINARY PLAN APPROVAL.

PERCOLATION TESTS HOLES SHOWN HEREON HAVE BEEN FIELD LOCATED AND SHOWN AS: PASSED FAILED

#### LEGEND

- EXISTING 2 FOOT CONTOURS
- EXISTING 10 FOOT CONTOURS
- PERC TEST HOLE: PASSED
- PERC TEST HOLE: FAILED
- PROPOSED WELL LOCATION
- PROPOSED INDIVIDUAL SEPTIC AREA
- PROPOSED SHARED SEPTIC AREA
- EXISTING 25% AND GREATER SLOPES
- WELL REPLACEMENT AREA

## SHEET INDEX

1. COVERSHEET
2. PRELIMINARY GRADING PLAN
- 3-5. PRELIMINARY FOREST CONSERVATION AND LANDSCAPE PLAN

#### SITE DATA

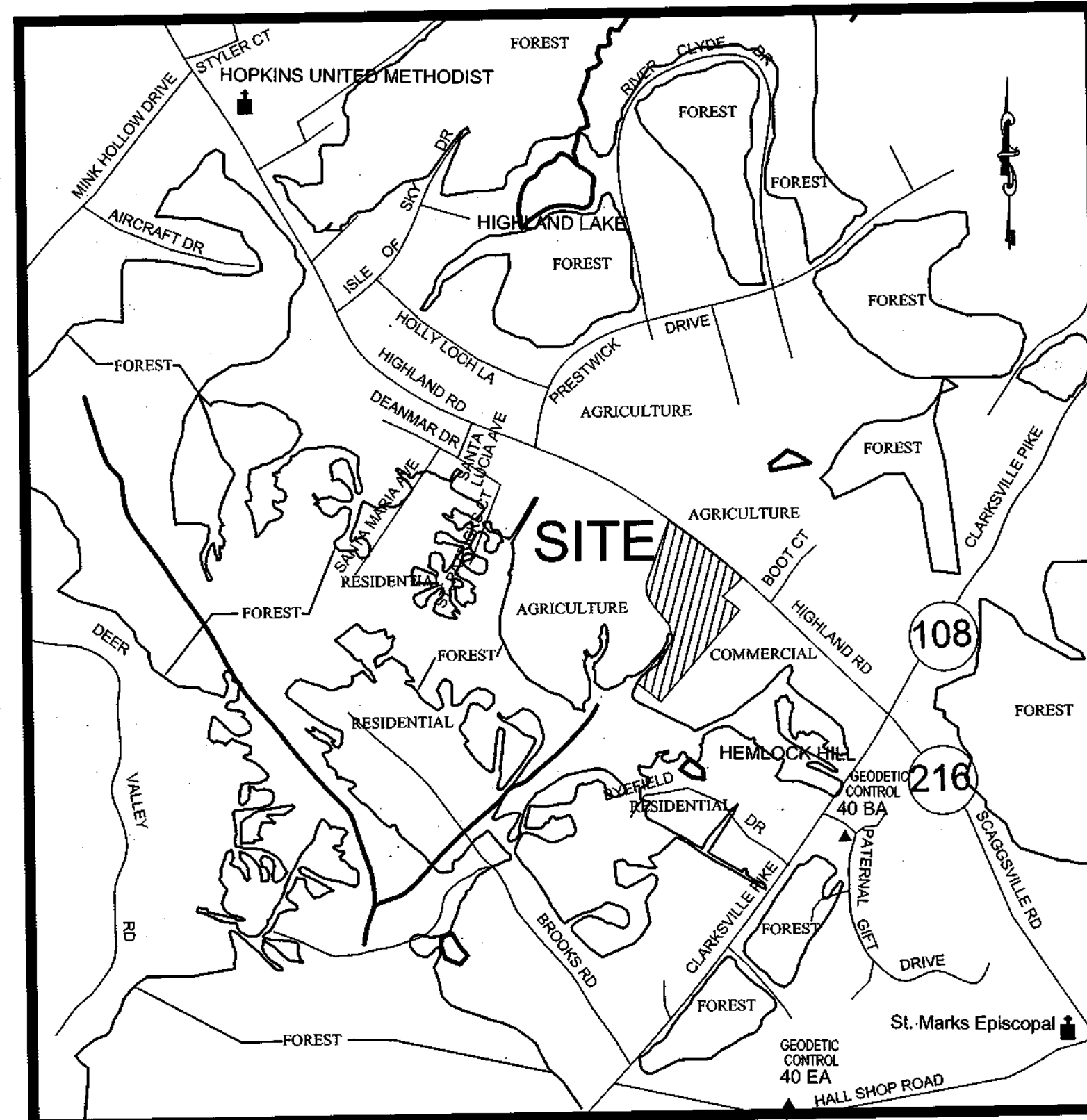
1. LOCATION: TAX MAP 40, PARCEL 44
2. 5TH ELECTION DISTRICT
3. ZONING: RR-DEO
4. GROSS AREA OF PROJECT: 25.6294 Ac
5. NO. OF RESIDENTIAL DWELLING UNITS: 7
6. AREA OF PROPOSED RESIDENTIAL LOTS 17-22 & 24: 7.65 Ac
7. AREA OF INSTITUTIONAL LOT 23: 6.01 Ac
8. OPEN SPACE REQUIRED: NONE
9. NON-BUILDABLE PRESERVATION SPACE TO BE OWNED BY HOA: 11.75 Ac
10. RECREATION OPEN SPACE REQUIRED: NONE
11. AREA OF PROPOSED ROADS: 0.23 Ac
12. AREA OF 100 YEAR FLOOD PLAIN: 0.27 Ac. + 0.21 Ac. = 0.48 Ac.
13. AREA OF 25% SLOPES AND STEEPER: 0.23 Ac.
14. NO. OF LOTS/PARCELS:
  - 8 BUILDABLE LOTS
  - 2 NON-BUILDABLE PRESERVATION PARCELS

#### GENERAL NOTES

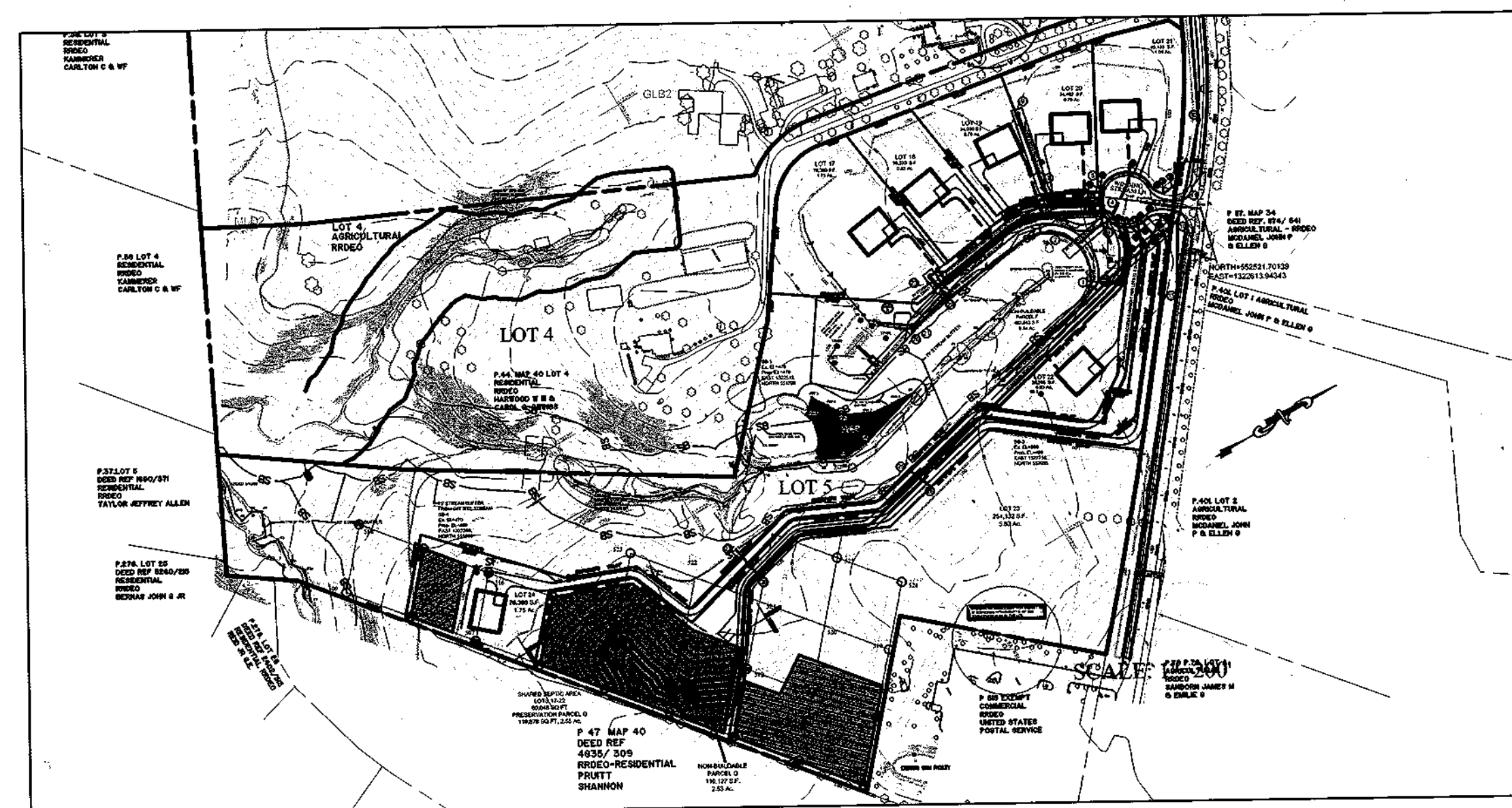
1. THE PROJECT IS IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVERS HAVE BEEN APPROVED.
2. THIS PLAN SHALL BE SUBJECT TO THE FIFTH EDITION OF THE HOWARD COUNTY SUBDIVISION REGULATIONS AND AMENDED ZONING REGULATIONS PER COUNCIL BILL 50-2001.
3. THE EXISTING TOPOGRAPHY IS TAKEN FROM AERIAL SURVEY WITH TWO FOOT CONTOUR INTERVALS PREPARED BY AIR SURVEY PHOTOGRAMMETRIC MAPPING SERVICES DATED MARCH 18, 2001.
4. PROJECT BOUNDARY IS BASED ON BOUNDARY SURVEY BY D&D, FEBRUARY 2002. THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 40BA AND 40EA ARE THE CLOSEST TO THIS PROJECT AND WERE USED FOR THIS PROJECT. TRAVERSE RAN BY MARKS AND ASSOCIATES, BOUNDARY SURVEY BY D&D.
5. WATER WILL BE PRIVATE FOR ALL LOTS.
6. SEWER FOR LOTS 23 & 24 IS PRIVATE. LOTS 17-22 WILL HAVE A PUBLIC SHARED SYSTEM TO BE MAINTAINED BY HOWARD COUNTY AND APPROVED ON JUNE 8, 2002.
7. STORMWATER MANAGEMENT QUALITY CONTROL PROVIDED BY TWO SAND FILTERS AREAS TO BE OWNED AND MAINTAINED BY HOA. RECHARGE VOLUME ACHIEVED THROUGH GRASS SWALES ON PUBLIC STREET AND PRIVATE DRIVEWAY. SIZES SHOWN HEREON ARE APPROXIMATE IN SIZE SHAPE AND LOCATION. THEY ARE BASED ON CONCEPT PREPARED BY D&D LLC, MAY 2003 AND ARE SUBJECT TO CHANGE BASED ON FINAL DESIGN.
8. THE WETLANDS DELINEATION STUDY FOR THIS PROJECT WAS PREPARED BY DEWBERRY & DAVIS LLC AND APPROVED BY THE U.S. CORPS OF ENGINEERS ON MAY 13, 2002.
9. THE TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY LEE CUNNINGHAM & ASSOCIATES, DATED AUGUST 2002.
10. NO NOISE STUDY IS REQUIRED FOR THIS PROJECT.
11. THE GEOTECHNICAL REPORT FOR THIS PROJECT WAS PREPARED BY GTA, DATED AUGUST 27, 2002.
12. FOREST STAND DELINEATION BY DEWBERRY & DAVIS LLC, FEB 2002
13. LANDSCAPING WILL BE PROVIDED IN ACCORDANCE WITH SECTION 16.124 OF THE H.C. SUBDIVISION AND LAND DEVELOPMENT REGULATIONS & THE LANDSCAPE MANUAL.
14. STREET LIGHTING IS NOT REQUIRED FOR THIS SITE.
15. SEDIMENT & EROSION CONTROL PER SEPARATE PLAN.
16. THIS PROPERTY IS NOT WITHIN THE METROPOLITAN DISTRICT.
17. THERE ARE NO BURIAL OR CEMETERY LOCATIONS ON THIS SITE.
18. A FOREST CONSERVATION PLAN IN ACCORDANCE WITH SECTION 16.1200 OF THE HOWARD CO. CODE & THE FOREST CONSERVATION MANUAL, PROVIDED AS PART OF THIS PRELIMINARY EQUIVALENT SKETCH PLAN FOR THIS SITE. D&D LLC, MAY 2003. FOREST CONSERVATION WILL BE PROVIDED BY ON SITE REFORESTATION AND AFORESTATION OF 3.27 AC. MIN. UNLESS OTHERWISE DETERMINED AT FINAL PLAN STAGE.
19. THERE ARE NO HISTORIC SITES ON THIS PROPERTY.
20. PROJECT BACKGROUND INFORMATION  
DEED REFERENCE: LIBER 1100 FOLIO 242  
WATERSHED: PATUXENT, STREAM USE DESIGNATION: NATURAL  
GROSS AREA: 25.6294 Ac  
GROSS AREA EXCLUDING CHURCH LOT: 19.6194 Ac  
NET AREA: 19.6194 - (0.48 Ac.) = 19.1394 Ac. - (0.23 Ac.) = 18.9094  
NO. OF ENTITIES PERMITTED BY RIGHT (19.6194/4.25) = 4  
MAXIMUM NO. OF UNITS BASED ON DEO/CEO (18.9094/2) = 9  
NO. OF DEO'S REQUIRED: (7-4) = 3  
PROPOSED LOTS 8 (7 RESIDENTIAL AND 1 INSTITUTIONAL)  
21. THE PROPOSED USE OF LOT 23 WILL BE INSTITUTIONAL.  
22. WAIVER REQUEST NO. WP-03-56 IS FOR TWO ACCESS POINTS ONTO HIGHLAND ROAD.  
A.) ONE ACCESS POINT IS FOR LOT 23, WITH AN INSTITUTIONAL USE. THIS SIGHT DISTANCE STUDY HAS BEEN PREPARED BY CLARK, FINEFROCK & SACKETT, INC.  
B.) THE SECOND ACCESS POINT IS FOR WINDING STREAM LANE FOR LOTS 17-22 AND 24 AND PRESERVATION PARCELS F AND G. THIS SIGHT DISTANCE STUDY HAS BEEN REVISED BY DEWBERRY & DAVIS, LLC ON MAY 15, 2003.  
23. AS PER LETTER DATED ON MARCH 21, 2003, THE PLANNING DIRECTOR APPROVED THE REQUEST TO WAIVE SECTION 16.119f.(3), TO ALLOW TWO POINTS OF ACCESS FROM THE PROPOSED SUBDIVISION (SP-03-03) ONTO HIGHLAND ROAD.

APPROVAL IS SUBJECT TO THE FOLLOWING CONDITIONS:

- 1.) THE GRANTING OF THIS WAIVER WILL ONLY BE APPLICABLE FOR THE IDENTIFIED USE (CHURCH/INSTITUTIONAL) AS REFERENCED IN OUR LETTER OF OCTOBER 11, 2002. IN THE EVENT THAT THE SUBJECT PROPERTY LOT 23, AS SHOWN ON THE REVISED PLANS FOR SP-03-03, IS NOT ACQUIRED BY OUR SHEPHERD LUTHERAN CHURCH SPECIFICALLY FOR THE DEVELOPMENT OF A CHURCH AND ITS ANCILLARY USES, THIS WAIVER WILL BECOME NULL AND VOID.
- 2.) VEHICULAR INGRESS AND EGRESS RESTRICTION NOTATIONS SHALL BE SHOWN ALONG THE ENTIRE SUBDIVISION FRONTAGE FOR SP-03-03 EXCEPT AT THE INTERSECTION OF THE PROPOSED PUBLIC ROAD AND AT THE PROPOSED CHURCH ENTRANCE. THE WIDTH OF THE OPENING IN THE ACCESS RESTRICTION RELATIVE TO THE CHURCH ENTRANCE SHALL BE THE MINIMUM NEEDED, BASED ON VOLUME IV OF THE DESIGN MANUAL, TO ACCOMMODATE THE CHURCH'S ACCESS ONTO HIGHLAND ROAD.



VICINITY MAP  
SCALE: 1"=1000'



TENTATIVELY APPROVED  
DEPT. OF PLANNING AND ZONING  
HOWARD COUNTY  
March 2, 2004  
PLANNING DIRECTOR

OWNER:  
MR. & MRS. HARWOOD W. OWINGS  
13009 HIGHLAND ROAD  
HIGHLAND, MARYLAND 20777



1/20/04

NOTE  
INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF THE MAINS BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS WELL IN ADVANCE OF THE START OF EXCAVATION CONTACT "MISS UTILITY" AT 1-800-327-7777 AT LEAST 48 HOURS PRIOR TO THE START OF EXCAVATION. IF CLEARANCES ARE LESS THAN SHOWN ON THIS PLAN OF TWELVE (12) INCHES, WHICH EVER IS LESS, CONTACT THE ENGINEER AND THE UTILITY BEFORE PROCEEDING WITH CONSTRUCTION.

PRELIMINARY EQUIVALENT SKETCH PLAN					
OWINGS PROPERTY					
RESUBDIVISION OF LOT 5					
CONSISTING OF LOTS 17-24, PARCELS F, G					
5TH ELECTION DISTRICT			HOWARD COUNTY, MARYLAND		
Section:	Area:	Phase:	Scale:	Sheet:	
NA	NA	AS SHOWN	1 of 16		
Tax Map Grid & Parcel:	Date:	Price Submitted:	Resubmitted:	File Number:	
MAP 40, PARCEL 44	OCT. 2003	83092	112582	SP-03-03	
		RESUBMITTED: 10/18/03	RESUBMITTED: 10/18/03		

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS, LOTS 23 AND 24; AND FOR PRIVATE WATER AND A SHARED SEWERAGE SYSTEM FOR LOTS 17-22.

HOWARD COUNTY HEALTH DEPARTMENT

*Henry Bonstein, M.D., D.S.*  
HOWARD COUNTY HEALTH OFFICER

1-22-04  
DATE

Engineers  
Planners  
Landscape Architects  
**Dewberry & Davis LLC**  
A Dewberry Company  
804 West Diamond Avenue, Suite 200  
Gaithersburg, MD 20878-1414  
(301) 948-8300 Fax: (301) 258-7607  
www.dewberry.com

Drawn by: KDM

Designed by: IEV

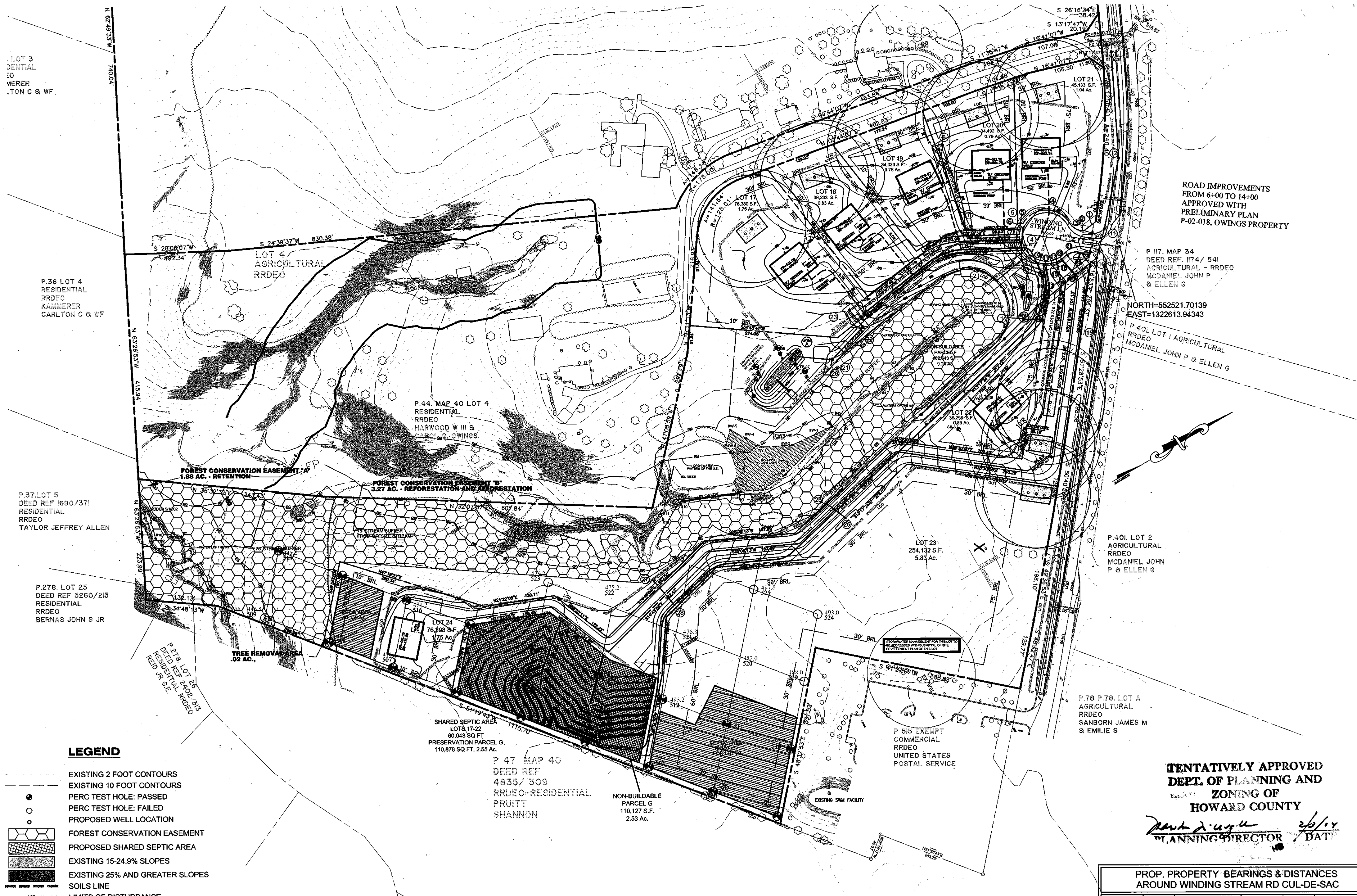
Checked by: IEV

Zoned: RR-DEO

DEVELOPER:  
DALE THOMPSON BUILDERS  
6300 WOODSIDE COURT  
COLUMBIA, MARYLAND 21046  
PHONE: (410) 995-6736  
FAX: (410) 381-8747

SP-03-03





LOT 3 DENTON TO WERER, TON C & WF

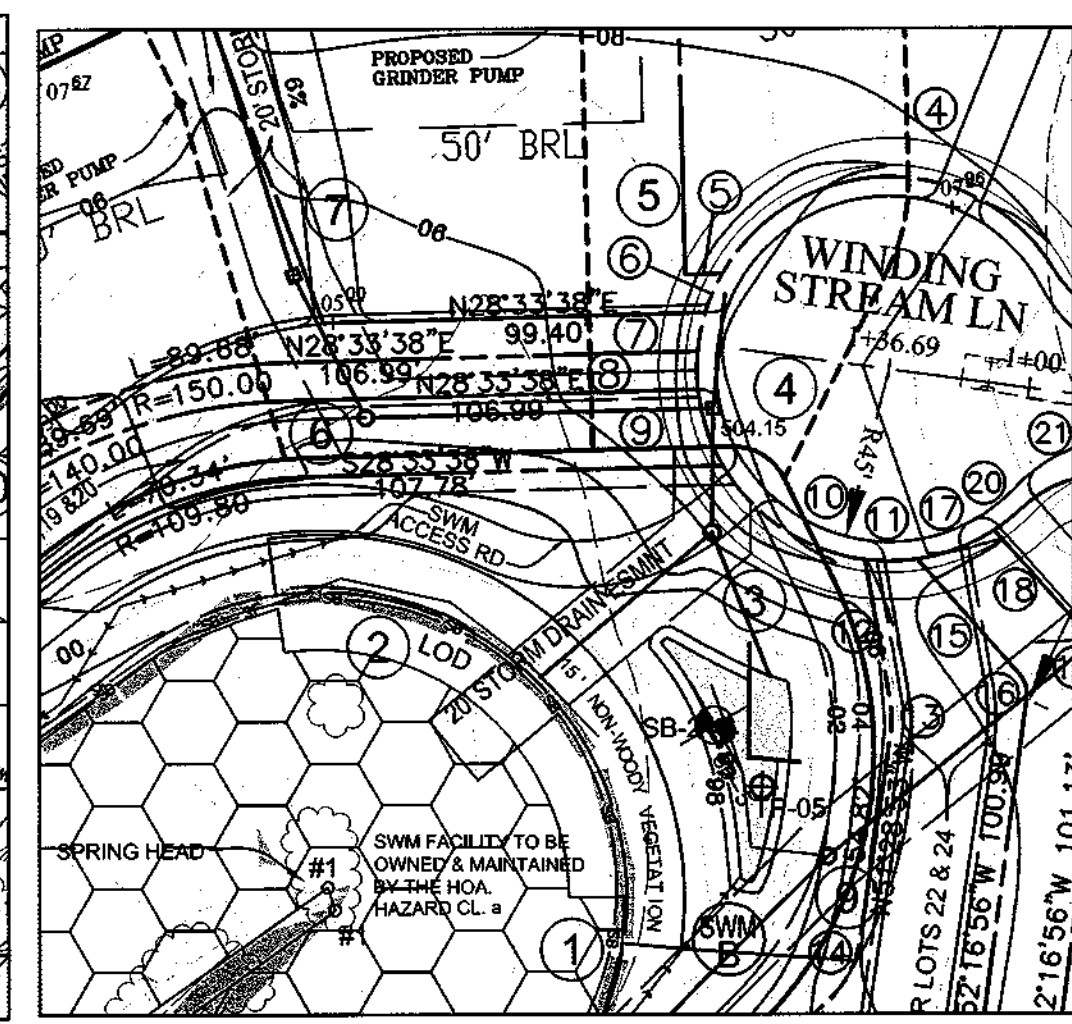
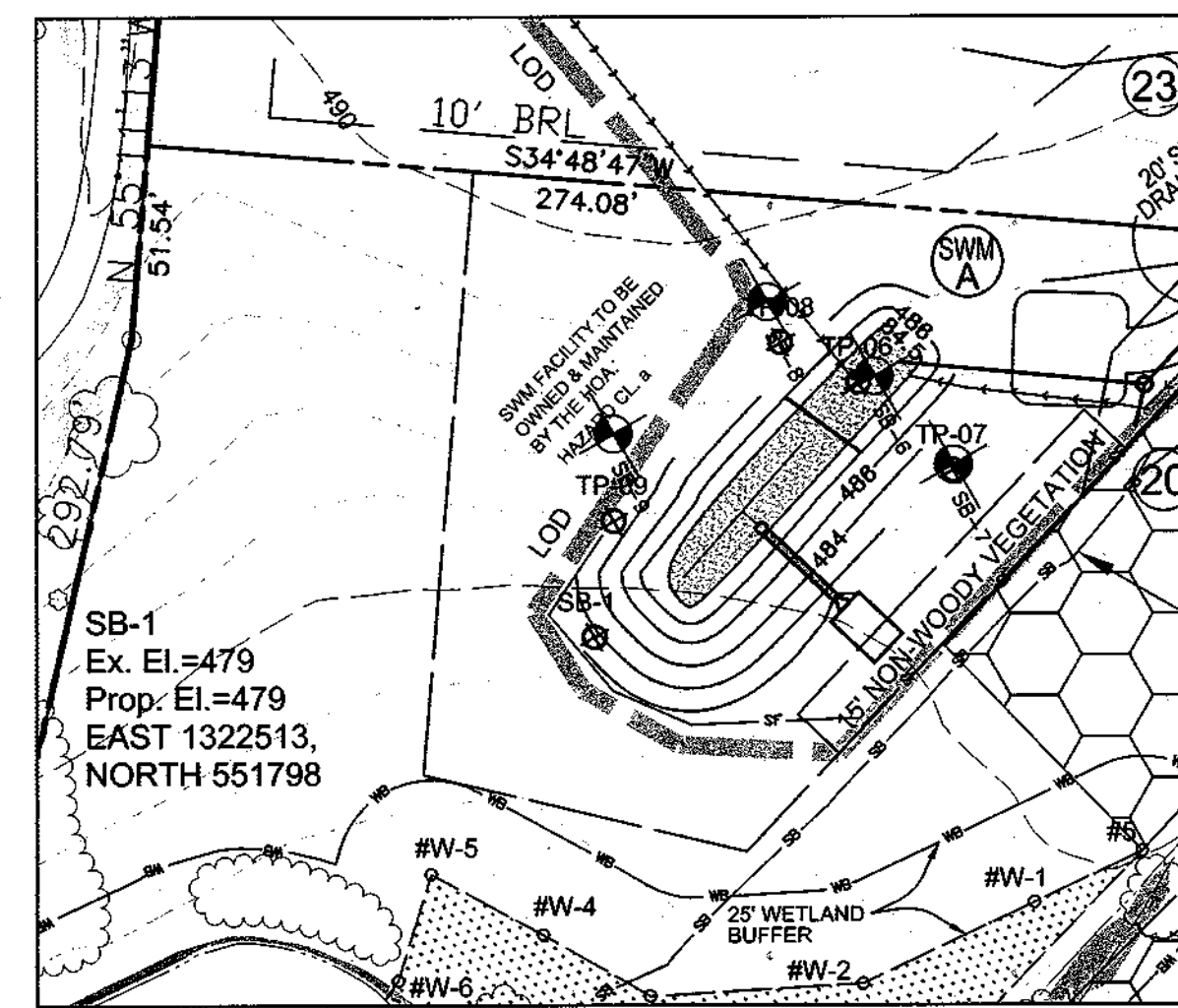
P. 38 LOT 4 RESIDENTIAL RRDEO KAMMERER CARLTON C & WF

P. 37 LOT 5 DEED REF 1690/371 RESIDENTIAL RRDEO TAYLOR JEFFREY ALLEN

P. 278 LOT 25 DEED REF 5260/215 RESIDENTIAL RRDEO BERNAS JOHN S JR

**LEGEND**

- EXISTING 2 FOOT CONTOURS
- EXISTING 10 FOOT CONTOURS
- PERC TEST HOLE: PASSED
- PERC TEST HOLE: FAILED
- PROPOSED WELL LOCATION
- ▨ FOREST CONSERVATION EASEMENT
- ▨ PROPOSED SHARED SEPTIC AREA
- ▨ EXISTING 15-24.9% SLOPES
- ▨ EXISTING 25% AND GREATER SLOPES
- SOILS LINE
- LIMITS OF DISTURBANCE



**SWM SCALE 1"=50'**

EASEMENTS	FOR LOTS
1. 20' USE IN COMMON ACCESS EASEMENT FOR LOTS	17, 18, 19, 20 & PARCEL F
2. 20' USE IN COMMON ACCESS EASEMENT FOR LOTS	22, 24 & PARCEL G
3. 20' SANITARY SEWER EASEMENT FOR LOTS	17, 18, 19, 20, 22, PARCEL F & G
4. STORMWATER MANAGEMENT FACILITY NO. A EASEMENT FOR LOTS	17, 18 & 19
5. STORMWATER MANAGEMENT FACILITY NO. B EASEMENT FOR LOTS	21, 22 & PARCEL F
6. 20' STORM DRAIN EASEMENT	17, 18, 19 & 20
7. 20' STORM DRAIN EASEMENT	17

**PROP. PROPERTY BEARINGS & DISTANCES AROUND WINDING STREAM RD CUL-DE-SAC**

LOT	BEARING	DISTANCE	LOT	BEARING	DISTANCE
LOT 21	①	N 07° 16' 53" W 28.28'	LOT 22	①	L = 13.58' R = 50.00'
	②	N 37° 43' 07" E 4.24'		②	N 70° 03' 46" W 37.55'
	③	L = 26.87' R = 30.00'		③	L = 8.11' R = 25.00'
	④	L = 103.97' R = 50.00'		④	L = 18.66' R = 25.00'
LOT 20	⑤	N 28° 33' 38" E 9.64'	LOT 24	⑤	S 78° 27' 54" W 39.67'
	⑥	L = 11.06' R = 50.00'		⑥	L = 7.31' R = 5.50'
LOT 19	⑦	L = 10.27' R = 50.00'	LOT 18	⑦	L = 21.59' R = 50.00'
	⑧	L = 10.03' R = 50.00'		⑧	N 78° 27' 54" E 31.99'
LOT 17	⑨	L = 21.01' R = 50.00'	LOT 17	⑨	L = 24.50' R = 28.00'
	⑩	L = 45.80' R = 50.00'		⑩	L = 9.33' R = 50.00'
PARCEL F	⑪	L = 26.87' R = 30.00'	PARCEL G	⑪	L = 26.87' R = 30.00'
	⑫	L = 26.87' R = 30.00'		⑫	L = 26.87' R = 30.00'
	⑬	S 37° 43' 07" W 4.24'		⑬	S 37° 43' 07" W 4.24'
				⑭	S 82° 43' 07" W 28.28'

**TENTATIVELY APPROVED DEPT. OF PLANNING AND ZONING OF HOWARD COUNTY**

*[Signature]* PLANNING DIRECTOR

**BMP SELECTION AND LOCATION OF FACILITIES**

**Drainage Area "A"**  
 Rev Requirement met site wide in the common driveway swales for lots 17 thru 19.  
 WQv Required and a BMP must be selected. There are no known Watershed or Terrain factors which prohibit any filtering BMP's at this site. Since Rev is being handled in the grass channels, we can select from Table 4.3 Six possible BMP facilities. Since the total drainage area to the facility is 3.80 acres, only three of the BMP's qualify under Table 4.4. The F-1 Surface Sand Filter was selected and appears to satisfy all the community and environmental factors in Table 4.5.

**Drainage Area "B"**  
 Rev Requirement met site wide in the open section roadway swales for Street "C".  
 WQv Required and a BMP must be selected. There are no known Watershed or Terrain factors which prohibit any filtering BMP's at this site. Since Rev is being handled in the grass channels, we can select from Table 4.3 Six possible BMP facilities. Since the total drainage area to the facility is 3.11 acres, only three of the BMP's qualify under Table 4.4. The F-1 Surface Sand Filter was selected and appears to satisfy all the community and environmental factors in Table 4.5.

**Drainage Area "C"**  
 Rev Requirement met due to good site design.  
 WQv Requirement met due to good site design.

**SUMMARY**

The overall low imperviousness of this site contributes to the low impact of any development on this property. The water recharge volume (Rev) for all areas is managed in the open section roadways for areas "A" & "B". Areas "A" & "B" will meet the water quality requirement (WQv) by utilizing Sand Filters.

**Summary Tables**

Category	Volume Required		Comments
	Drainage Area "A"	Drainage Area "B"	
Water Quality Volume (WQv)	0.070 Ac-Ft	0.062 Ac-Ft	Areas A & B will use Sand Filters to meet the requirement.
Recharge Volume (Rev)	0.018 Ac-Ft	0.016 Ac-Ft	Areas A & B will use the open roadway swales in areas A & B.
Channel Protection Volume (Cpv)	N/A	N/A	
Overbank Flood Protection Storage Volume (Qp)	N/A	N/A	
Extreme Flood Volume (Qf)	N/A	N/A	

Runoff	Acres		1-year storm		10-year storm		100-year storm	
	Total	On-Site	Q Pre	Q Dev	Q Pre	Q Dev	Q Pre	Q Dev
Total Drainage Area	38.7	15.87	5.24	6.01	44.67	47.71	69.89	94.73
Drainage Area "A"	3.8	3.80	n/a	0.57	n/a	6.14	n/a	12.50
Drainage Area "B"	3.11	2.68	n/a	1.01	n/a	6.40	n/a	12.16
Drainage Area "C"	31.79	9.39	n/a	5.19	n/a	40.22	n/a	79.55

**MINIMUM LOT SIZE CHART (AREAS IN S.F.)**

LOT NO	GROSS AREA	PIPESTEM AREA	MINIMUM LOT SIZE
17	76,380	6,927	69,453
18	36,333	1,934	34,399
19	34,030	981	33,049
20	34,493	71	34,422
22	36,298	3,198	33,100
24	76,398	33,241	43,157

NOTE: WINDING STREAM LANE IS A PUBLIC ACCESS PLACE

OWNER:  
 MR. & MRS. HARWOOD W. OWINGS  
 13009 HIGHLAND ROAD  
 HIGHLAND, MARYLAND 20777

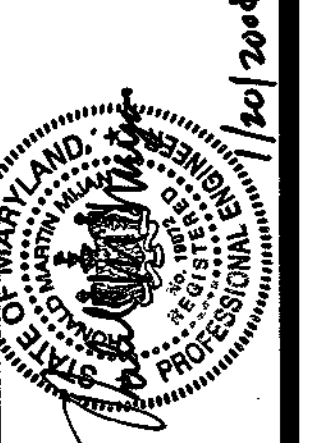
**PRELIMINARY EQUIVALENT SKETCH PLAN OWINGS PROPERTY**  
 RESUBDIVISION OF LOT 5  
 CONSISTING OF LOTS 17-24, PARCELS F, G  
 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

Section: NA	Area: NA	Phase: NA	Scale: 1" = 100'	Sheet: 2 of 16
Tax Map Grid & Parcel: MAP 40, PARCEL 44	Date: OCT. 2003	From Submittal: FIRST SUBMITTAL: 8/20/02 RESUBMITTED: 11/25/02	RESUBMITTED: 4/24/03	File number: SP-03-03

**NOTE**

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**Dewberry & Davis LLC**  
 A Dewberry Company  
 Engineers  
 Planners  
 Surveyors  
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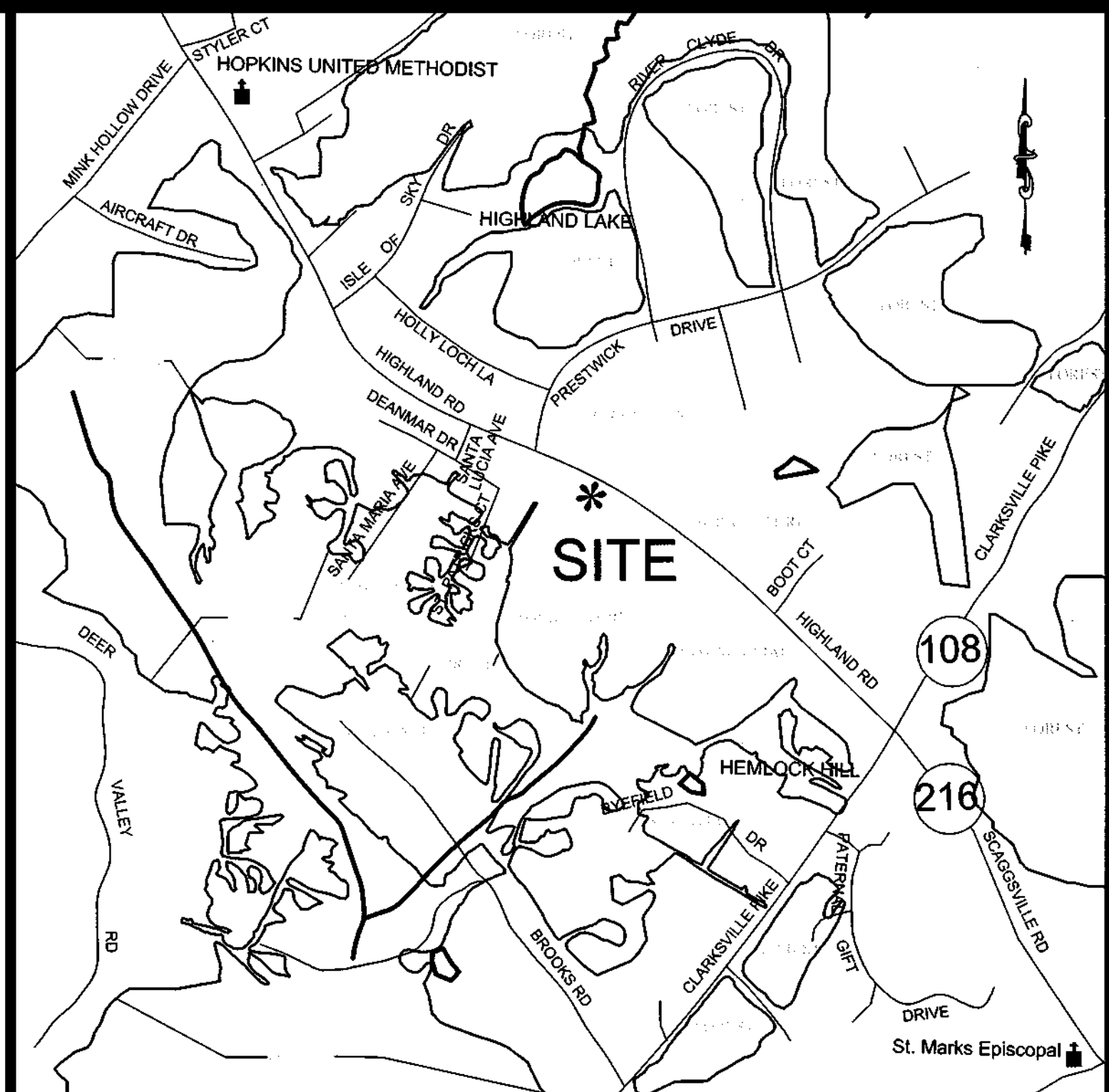
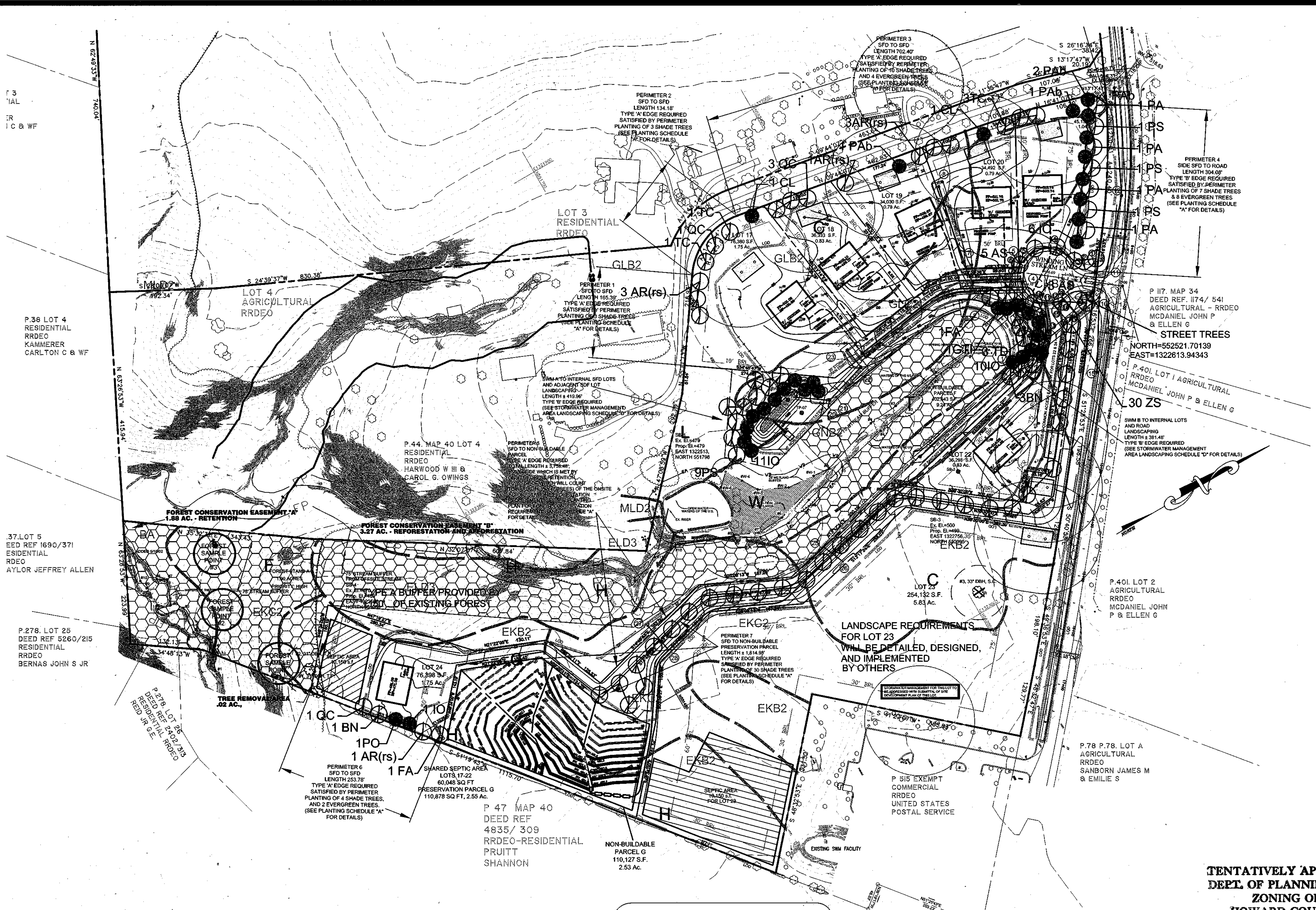


Drawn by: KDM  
 Designed by: IEV  
 Checked by: IEV  
 Zoned: RR-DEO

DEVELOPER:  
 DALE THOMPSON BUILDERS  
 6300 WOODSIDE COURT  
 COLUMBIA, MARYLAND 21046  
 PHONE: (410) 995-6736  
 FAX: (410) 381-8747

**PRELIMINARY GRADING PLAN**





**GENERAL NOTES**

- TOTAL AREA OF TRACT: 25.64 AC; 1,116,879 SQ. FT.
- EXISTING ZONING: RRDEO
- BOUNDARY FROM TAX MAP (40), AND FROM SURVEY
- TOPOGRAPHY FROM SURVEY CONTOUR INTERVAL 2 FEET.
- THERE ARE NO 100-YEAR FLOODPLAINS KNOWN TO EXIST ON THIS SITE ACCORDING TO AVAILABLE INFORMATION (MDMRLINNET).
- WETLANDS, WETLAND BUFFERS, STREAMS, AND STREAM BUFFERS ON THE SUBJECT PROPERTY WERE IDENTIFIED BY A SURVEY CONDUCTED BY DEWBERRY & DAVIS LLC, WHILE THOSE COMING FROM OFFSITE WERE ESTIMATED FROM AERIAL PHOTOGRAPHY.
- THE WILDLIFE AND HERITAGE SERVICE HAS NO RECORDS FOR FEDERAL OR STATE RARE, THREATENED OR ENDANGERED PLANTS OR ANIMALS WITHIN THIS PROJECT SITE. HOWEVER, THE FORESTED AREA ON THE SUBJECT PROPERTY MAY CONTAIN FOREST INTERIOR DWELLING BIRD HABITAT. THIS INFORMATION COMES FROM DNR.
- THE SUBJECT PROPERTY FALLS WITHIN THE ROCKY GORGE DAM SUB-WATERSHED (USE CLASS 1), OF THE PATUXENT WATERSHED.
- THERE IS ONE FOREST STAND ON THIS SITE TOTALING 1.90 ACRES. SITE INVESTIGATIONS PERFORMED ON 2/10/02, BY DEWBERRY & DAVIS LLC.
- ONE HYDRIC SOIL EXISTS WITHIN THE SUBJECT PROPERTY ACCORDING TO THE HOWARD COUNTY SOIL SURVEY OF MARYLAND.
- THERE ARE NO HISTORICAL SITES KNOWN TO EXIST ON THE SUBJECT PROPERTY ACCORDING TO AVAILABLE INFORMATION (MDMRLINNET).

**SPECIMEN TREE IDENTIFICATION LIST**

BOTANICAL NAME/ COMMON NAME	TRUNK Ø (d.b.h.)	TREE HEIGHT	TREE CANOPY	TREE CONDITION	TREE PROTECTION MEASURES/NOTES
1. <i>Liriodendron tulipifera</i> TULIP POPLAR	31"	65'	40'	FAIR	REMOVE
2. <i>Liriodendron tulipifera</i> TULIP POPLAR	31"	60'	30'	FAIR	SAVE, ROOT PRUNE
3. <i>Catalpa bignonioides</i> SOUTHERN CATALPA	32"	15'	20'	POOR	REMOVE

**TENTATIVELY APPROVED  
DEPT. OF PLANNING AND  
ZONING OF  
HOWARD COUNTY.**

*Paul A. Culp* 2/3/14  
PLANNING DIRECTOR DATE

**LEGEND**

- LIMIT OF DISTURBANCE
- TREE PROTECTION FENCE (TO BE INSTALLED PRIOR TO CONSTRUCTION)
- REFORESTATION FENCE (TO BE INSTALLED AFTER PLANTING)
- ⊗ EXIST. TREE >24" D.B.H.
- ⊗ TREE >24" D.B.H. TO BE REMOVED
- CONSERVATION AREAS (RETENTION, REFORESTATION & AFFORESTATION)
- FOREST AREA TO BE CLEARED

**SOILS LEGEND  
HOWARD COUNTY**

**NON-HYDRIC SOILS LIST**

- CHB2 CHESTER SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
- GLB2 GLENELOG LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
- GLC2 GLENELOG LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED
- EKC2 ELIOAK SILT LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED
- EKB2 ELIOAK SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
- GNB2 GLENEVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
- ELD3 ELIOAK SILTY CLAY LOAM, 15 TO 25 PERCENT SLOPES, SEVERELY ERODED

**HYDRIC SOILS LIST**

- BA BAILE SILT LOAM

DESCRIPTION PER HOWARD COUNTY SOIL SURVEY

**LEGEND**

- CRITICAL ROOT ZONE (CRZ) (ESTIMATED RADIUS = 1.5' X DBH)
- ROOT PRUNE LINE
- WETLAND BOUNDARY
- WETLAND BUFFER
- STREAM
- STREAM BUFFER
- ⊗ EXIST. TREE >24" D.B.H.
- AREAS WITH 15-24.9% SLOPES
- AREAS WITH 25% & GREATER SLOPES
- FOREST SAMPLE POINT #1
- FSD SAMPLE POINT
- TREE LINE
- GLB2 SOILS SYMBOL
- CROPS
- HEDGEROWS
- OPEN FIELD
- GROUP OF TREES
- FOREST

**NOTE**

INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS WITH THE UNDERSTANDING THAT THE LOCATION AND ELEVATION OF THE MAINS BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS WILL IN ADVANCE OF THE START OF EXCAVATION CONTACT "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO THE START OF EXCAVATION. IF CLEARANCES ARE LESS THAN SHOWN ON THIS PLAN OR TWELVE (12) INCHES, WHICHEVER IS LESS, CONTACT THE ENGINEER AND THE UTILITY BEFORE PROCEEDING WITH CONSTRUCTION.

**OWNER:**  
MR. & MRS. HARWOOD W. OWINGS  
13009 HIGHLAND ROAD  
HIGHLAND, MARYLAND 20777

**PRELIMINARY EQUIVALENT SKETCH PLAN  
OWINGS PROPERTY  
RESUBDIVISION OF LOT 5  
CONSISTING OF LOTS 17-24, PARCELS F, G  
5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND**

Section: NA	Area:	Phase: NA	Scale: 1" = 100'	Sheet: 3 of 16
Tax Map Grid & Parcel: MAP 40, PARCEL 44	Date: OCT. 2003	Prior Submittals: FIRST SUBMITTED: 8/20/02 RESUBMITTED: 1/23/03 RESUBMITTED: 2/21/03 RESUBMITTED: 5/15/03	RESUBMITTED: 10/18/03	File number: SP-03-03

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A Dewberry Company  
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Drawn by: MNJ  
Designed by: MNJ  
Checked by: GW  
Zone: RR-DEO  
DEVELOPER:  
DALE THOMPSON BUILDERS  
630 WOODSIDE COURT  
COLUMBIA, MARYLAND 21046  
PHONE: (410) 995-6756  
FAX: (410) 381-8747

LANDSCAPE PLAN / FOREST CONSERVATION PLAN







SCHEDULE 'A' PERIMETER LANDSCAPE EDGE (TOTAL)		
CATEGORY	ADJACENT TO ROADWAYS	ADJACENT TO PERIMETER PROPERTIES
LANDSCAPE TYPE	B	A
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	± 904.08'	± 8,803.10'
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	YES, ± 983.44'
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	NO
NUMBER OF PLANTS REQUIRED SHADE TREES EVERGREEN TREES SHRUBS	6.08 SHADE TREES 7.60 EVERGREEN TREES 0 SHRUBS	96.83 SHADE TREES 0 EVERGREEN TREES 0 SHRUBS
NUMBER OF PLANTS PROVIDED SHADE TREES EVERGREEN TREES OTHER TREES (±1 SUBSTITUTION) SHRUBS (10±1 SUBSTITUTION) (DESCRIBE PLANT SUBSTITUTION)	7 SHADE TREES 8 EVERGREEN TREES	97 SHADE TREES 8 EVERGREEN TREES

PLANTING SCHEDULE (A) FOR PERIMETER 4--SFD(SIDE) TO ROAD (TYPE B EDGE) (PERIMETER LENGTH=304.08')						
QTY	KEY	BOTANICAL NAME	COMMON NAME	SIZE/TYPE	ROOT CONDITION	REMARKS
<b>SHADE TREES</b>						
3	PS	PRUNUS SARGENTI	SARGENT CHERRY	2 1/2"-3" CAL	B & B	
4	PA	PLANTINUS X ACERIFOLIA	BLOODGOOD LONDON PLANE	2 1/2"-3" CAL	B & B	
<b>EVERGREEN TREES</b>						
6	IO	ILEX OPACA	AMERICAN HOLLY	5'-6" HEIGHT	B & B	
2	PAB	PICEA ABIES	NORWAY SPRUCE	5'-6" HEIGHT	B & B	

SCHEDULE 'A' PERIMETER LANDSCAPE EDGE (FOR EACH PERIMETER)											
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			NUMBER OF PLANTS PROVIDED		
						SHADE TREES	EVERGREEN TREES	SHRUBS	SHADE TREES	EVERGREEN TREES	SHRUBS
1	SFD TO SFD	A	165.39'	NO	NO	2.78	--	--	3	--	--
2	SFD TO SFD	A	134.18'	NO	NO	2.24	--	--	3	--	--
3	SFD TO SFD	A	702.40'	NO	NO	11.71	--	--	10	4	--
4	SFD (SIDE) TO ROAD	B	304.08'	NO	NO	6.08	7.60	--	7	8	--
5	SFD TO PRESERVATION PARCEL	A	3,798.48'	YES, 983.44' OF FOREST TO BE RETAINED IN EASEMENT	NO, BUT PLANTING REQUIREMENT WILL COUNT TOWARDS 14.2% OF THE ONSITE AFFORESTATION/REFORESTATION PLANTING REQUIREMENT, AND HAS BEEN INCLUDED IN THE 'PLANTING PLAN FOR FOREST CONSERVATION REQUIREMENTS' PLANTING SCHEDULE.	44.08	--	--	47	--	--
6	SFD TO SFD	A	253.78'	NO	NO	4.23	--	--	4	2	--
7	SFD TO PRESERVATION PARCEL	A	1,768.93'	NO	NO	29.82	--	--	30	--	--
<b>TOTAL TABULATION FOR LOT 5:</b>						102.91	7.60	--	104	14	--

**PLANTING SCHEDULE (A) FOR PERIMETER 1--SFD TO SFD (TYPE A BUFFER)  
(PERIMETER LENGTH=165.39')**

QTY	KEY	BOTANICAL NAME	COMMON NAME	SIZE/TYPE	ROOT CONDITION	REMARKS
<b>SHADE TREES</b>						
3	AR(s)	ACER RUBRUM "RED SUNSET"	RED MAPLE (RED SUNSET)	2 1/2"-3" CAL	B & B	

PLANTING SCHEDULE (A) FOR PERIMETER 6--SFD TO SFD (TYPE A EDGE) (PERIMETER LENGTH=253.78')						
QTY	KEY	BOTANICAL NAME	COMMON NAME	SIZE/TYPE	ROOT CONDITION	REMARKS
<b>SHADE TREES</b>						
1	FA	FRAXINUS AMERICANA "AUTUMN PURPLE"	AUTUMN PURPLE WHITE ASH	2 1/2"-3" CAL	B & B	
1	QC	QUERCUS COCCINEA	SCARLET OAK	2 1/2"-3" CAL	B & B	
1	AR(s)	ACER RUBRUM "RED SUNSET"	RED MAPLE (RED SUNSET)	2 1/2"-3" CAL	B & B	
1	BN	BETULA NIGRA "HERITAGE"	HERITAGE CLUMP BIRCH	10'-12" HEIGHT	B & B	
<b>EVERGREEN TREES</b>						
1	IO	ILEX OPACA	AMERICAN HOLLY	5'-6" HEIGHT	B & B	
1	PO	PICEA OMORIKA	SERBIAN SPRUCE	6'-8" HEIGHT	B & B	

**PLANTING SCHEDULE (A) FOR PERIMETER 2--SFD TO SFD (TYPE A BUFFER)  
(PERIMETER LENGTH=134.18')**

QTY	KEY	BOTANICAL NAME	COMMON NAME	SIZE/TYPE	ROOT CONDITION	REMARKS
<b>SHADE TREES</b>						
1	QC	QUERCUS COCCINEA	SCARLET OAK	2 1/2"-3" CAL	B & B	
2	TC	TILIA CORDATA	LITTLELEAF LINDEN	2 1/2"-3" CAL	B & B	

PLANTING SCHEDULE (A) FOR PERIMETER 7--NON-BUILDABLE PRESERVATION PARCEL TO SFD (TYPE A EDGE) (PERIMETER LENGTH=1,788.93')						
QTY	KEY	BOTANICAL NAME	COMMON NAME	SIZE/TYPE	ROOT CONDITION	REMARKS
<b>SHADE TREES</b>						
30	ZS	ZELKOVA SERRATA "VILLAGE GREEN"	VILLAGE GREEN JAPANESE ZELKOVA	2 1/2"-3" CAL	B & B	40' O.C. WITHIN 10' TREE EASEMENT EXCEPT WHERE NOTED ON PLAN

**PLANTING SCHEDULE (A) FOR PERIMETER 3--SFD TO SFD (TYPE A BUFFER)  
(PERIMETER LENGTH=702.40')**

QTY	KEY	BOTANICAL NAME	COMMON NAME	SIZE/TYPE	ROOT CONDITION	REMARKS
<b>SHADE TREES</b>						
3	QC	QUERCUS COCCINEA	SCARLET OAK	2 1/2"-3" CAL	B & B	
4	AR(s)	ACER RUBRUM "RED SUNSET"	RED MAPLE (RED SUNSET)	2 1/2"-3" CAL	B & B	
3	TC	TILIA CORDATA	LITTLELEAF LINDEN	2 1/2"-3" CAL	B & B	
<b>EVERGREEN TREES (2 EVERGREEN TREES SUBSTITUTED FOR 1 SHADE TREE)</b>						
2	CL	CUPRESSOCYPARIS LEYLAND	LEYLAND CYPRESS	5'-6" HEIGHT	B & B	
2	PAB	PICEA ABIES	NORWAY SPRUCE	5'-6" HEIGHT	B & B	

**PLANTING SCHEDULE 'D' FOR-SWM 'B' TO INTERNAL LOT PERIMETERS (TYPE B BUFFER) (PERIMETER LENGTH=± 381.48')**

QTY	KEY	BOTANICAL NAME	COMMON NAME	SIZE/TYPE	ROOT CONDITION	REMARKS
<b>SHADE TREES</b>						
3	TD	TAXODIUM DISTICHUM	COMMON BALD CYPRESS	2 1/2"-3" CAL	B & B	
3	BN	BETULA NIGRA "HERITAGE"	HERITAGE CLUMP BIRCH	10'-12" HEIGHT	B & B	
1	FA	FRAXINUS AMERICANA "AUTUMN PURPLE"	AUTUMN PURPLE WHITE ASH	2 1/2"-3" CAL	B & B	
1	GTI	GLEDITSIA TRIACANTHOS "IMPERIAL"	IMPERIAL THORNLESS HONEYLOCUST	2 1/2"-3" CAL	B & B	
<b>EVERGREEN TREES</b>						
10	IO	ILEX OPACA	AMERICAN HOLLY	5'-6"	B & B	15' O.C.

**LANDSCAPING PLANT LIST (STREET TREES)**

QTY	KEY	BOTANICAL NAME	COMMON NAME	SIZE/TYPE	ROOT CONDITION	REMARKS
<b>SHADE TREES</b>						
8	AS	ACER SACCHARUM "GREEN MOUNTAIN"	"GREEN MOUNTAIN" SUGAR MAPLE	2" - 2 1/2" CAL	B & B	40' O.C. WITHIN 10' TREE EASEMENT EXCEPT WHERE NOTED ON PLAN

**SUMMARY PLANTING SCHEDULE FOR OWINGS LOT 5**

QTY	KEY	BOTANICAL NAME	COMMON NAME	SIZE/TYPE	ROOT CONDITION	REMARKS
<b>SHADE TREES</b>						
2	FA	FRAXINUS AMERICANA "AUTUMN PURPLE"	AUTUMN PURPLE WHITE ASH	2 1/2"-3" CAL	B & B	
8	AR(s)	ACER RUBRUM "RED SUNSET"	RED MAPLE (RED SUNSET)	2 1/2"-3" CAL	B & B	
5	QC	QUERCUS COCCINEA	SCARLET OAK	2 1/2"-3" CAL	B & B	
5	TC	TILIA CORDATA	LITTLELEAF LINDEN	2 1/2"-3" CAL	B & B	
12	PS	PRUNUS SARGENTI	SARGENT CHERRY	2 1/2"-3" CAL	B & B	
4	PA	PLANTINUS X ACERIFOLIA	BLOODGOOD LONDON PLANE	2 1/2"-3" CAL	B & B	
4	BN	BETULA NIGRA "HERITAGE"	HERITAGE CLUMP BIRCH	10'-12" HEIGHT	B & B	
2	AR(sg)	ACER RUBRUM "OCTOBER GLORY"	RED MAPLE (OCTOBER GLORY)	2 1/2"-3" CAL	B & B	
3	TD	TAXODIUM DISTICHUM	COMMON BALD CYPRESS	2 1/2"-3" CAL	B & B	
8	AS	ACER SACCHARUM "GREEN MOUNTAIN"	"GREEN MOUNTAIN" SUGAR MAPLE	2" - 2 1/2" CAL	B & B	
1	GTI	GLEDITSIA TRIACANTHOS "IMPERIAL"	IMPERIAL THORNLESS HONEYLOCUST	2 1/2"-3" CAL	B & B	
30	ZS	ZELKOVA SERRATA "VILLAGE GREEN"	VILLAGE GREEN JAPANESE ZELKOVA	2 1/2"-3" CAL	B & B	
<b>EVERGREEN TREES</b>						
4	CL	CUPRESSOCYPARIS LEYLAND	LEYLAND CYPRESS	5'-6" HEIGHT	B & B	
4	PAB	PICEA ABIES	NORWAY SPRUCE	5'-6" HEIGHT	B & B	
28	IO	ILEX OPACA	AMERICAN HOLLY	5'-6" HEIGHT	B & B	
1	PO	PICEA OMORIKA	SERBIAN SPRUCE	6'-8" HEIGHT	B & B	

TENTATIVELY APPROVED  
DEPT. OF PLANNING AND ZONING  
OF HOWARD COUNTY  
*David A. Taylor* 2/3/14  
PLANNING DIRECTOR DATE

SCHEDULE 'D' STORMWATER MANAGEMENT AREA LANDSCAPING		
PERIMETER TYPE	ADJACENT TO INTERNAL DEVELOPMENT AND SFD (SWM A)	ADJACENT TO INTERNAL DEVELOPMENT AND ROAD (SWM B)
LANDSCAPE TYPE	B	B
LINEAR FEET OF PERIMETER	± 416.96'	± 381.48'
NUMBER OF TREES REQUIRED		
SHADE TREES	5.40	7.63
EVERGREEN TREES	10.50	9.54
CREDIT FOR EXISTING VEGETATION (NO, YES, AND %)	NO	NO
CREDIT FOR OTHER LANDSCAPING (NO, YES, AND %)	NO	NO
NUMBER OF TREES PROVIDED		
SHADE TREES	9	8
EVERGREEN TREES	11	10
OTHER TREES (±1 SUBSTITUTION)		

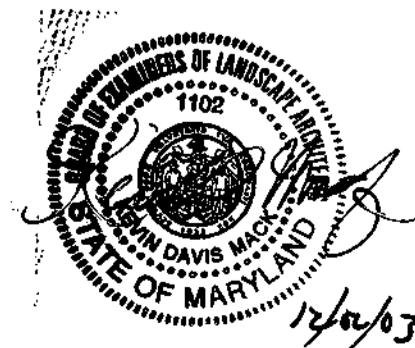
OWNER:  
MR. & MRS. HARWOOD W. OWINGS  
13009 HIGHLAND ROAD  
HIGHLAND, MARYLAND 20777

**PRELIMINARY EQUIVALENT SKETCH PLAN  
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**NOTE TO REVIEWER**  
1. NO PLANTING SCHEDULE TYPES "B", OR "C" ARE REQUIRED FOR THIS PROJECT.

**NOTE**  
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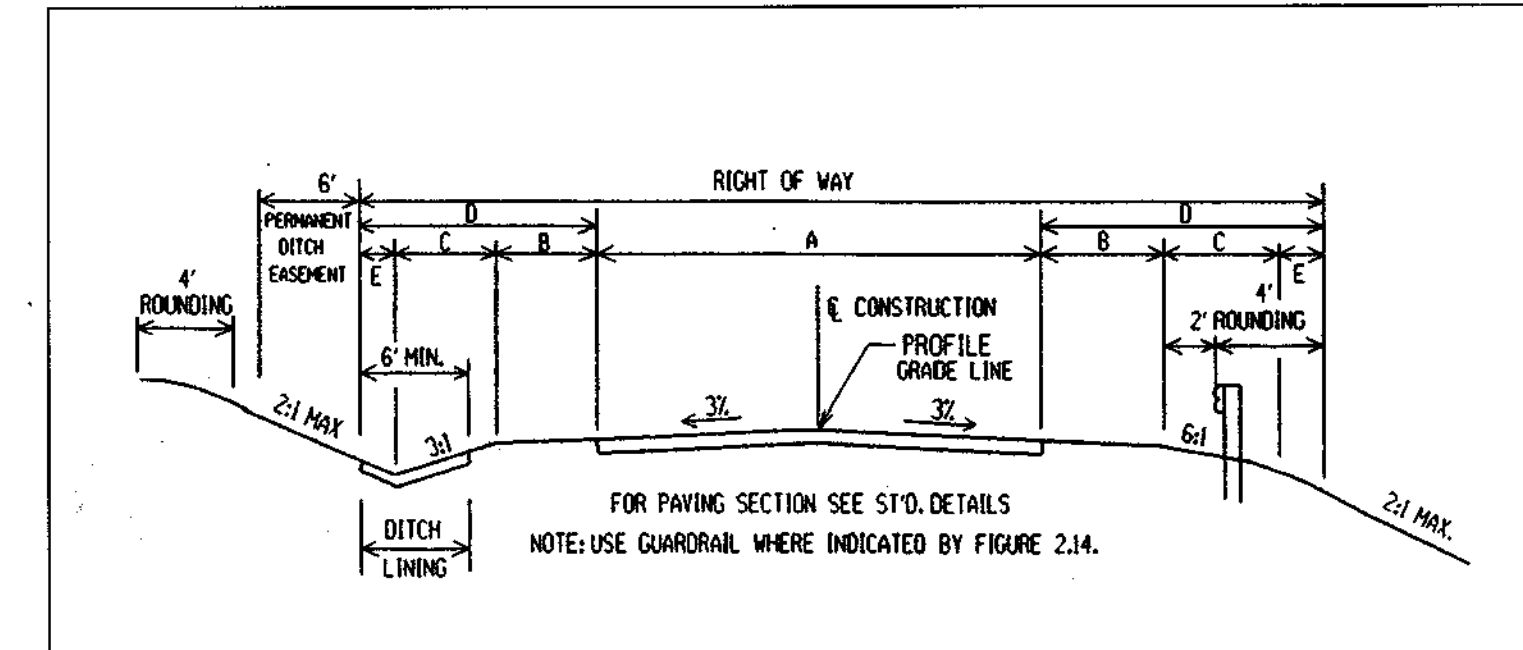
Drawn by: MNJ  
Designed by: MNJ  
Checked by: GW  
Zoned: RR-DEO

DEVELOPER:  
DALE THOMSON BUILDERS  
6300 WOODSIDE COURT  
COLUMBIA, MARYLAND 21046  
PHONE: (410) 995-6736  
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LANDSCAPE PLAN / FOREST CONSERVATION PLAN

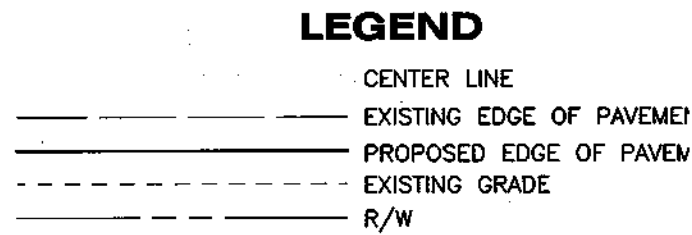
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**TYPICAL PAVEMENT SECTION WINDING STREAM LANE\***

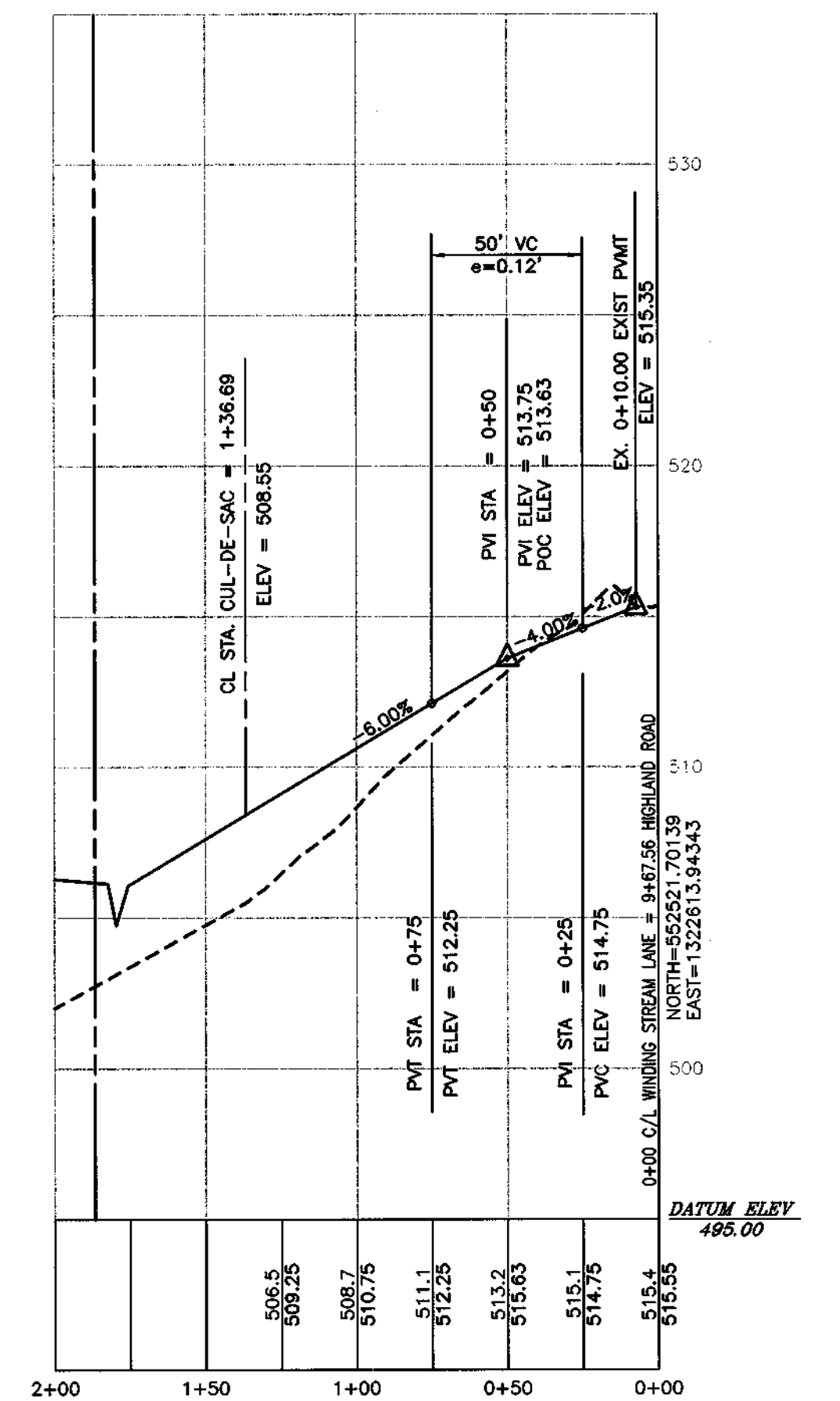
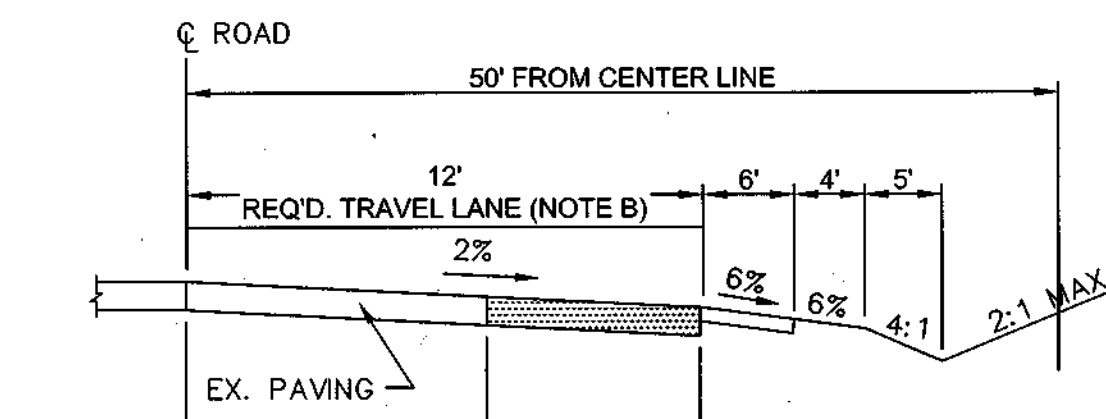
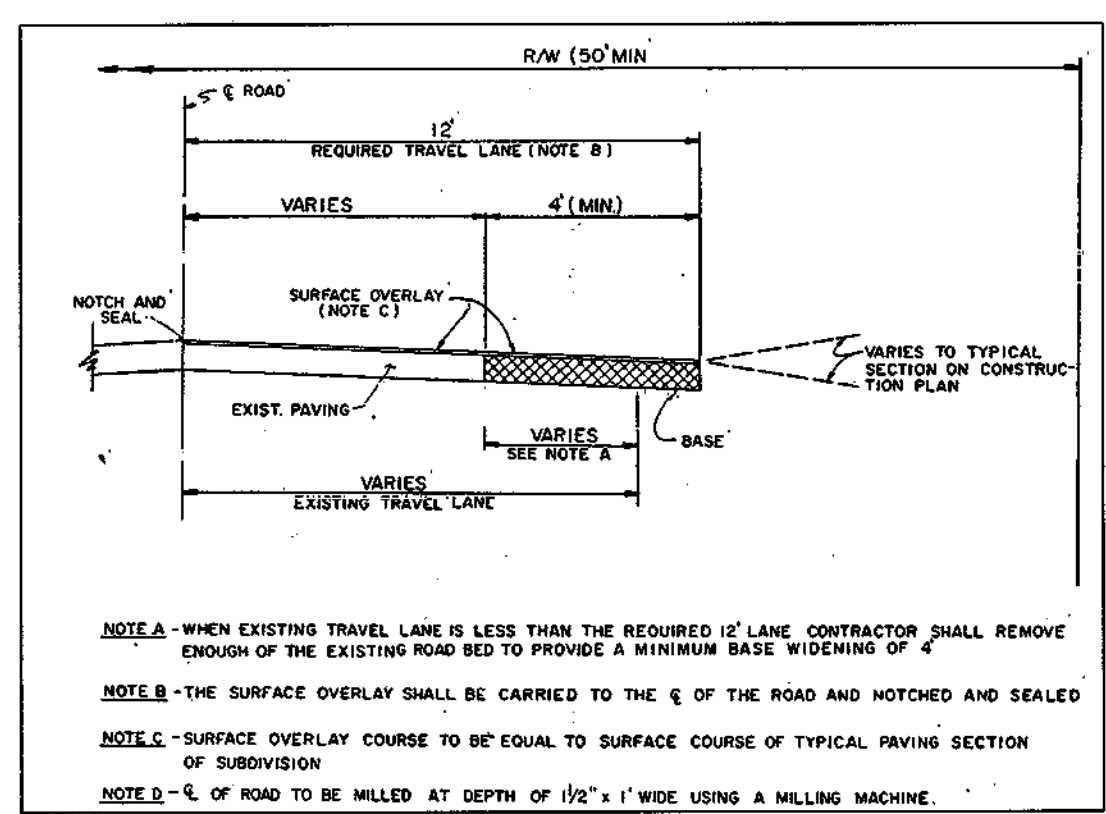


CLASSIFICATION	A	B	C	D	E	R/W	DESIGN SPEED
PUBLIC-200 ADT ACCESS PLACE*	18'	4'	4'	11'	3'	40'	25 MPH

**SCALE:**  
**HORIZ: 1"=50'**  
**VERT: 1"=5'**



TENTATIVELY APPROVED  
 DEPT. OF PLANNING AND ZONING OF  
 HOWARD COUNTY  
*Mark J. Boyle* 10/3/03  
 PLANNING DIRECTOR DATE



**WINDING STREAM LANE**  
 SCALE: HOR. 1" = 50'  
 VERT. 1" = 5'

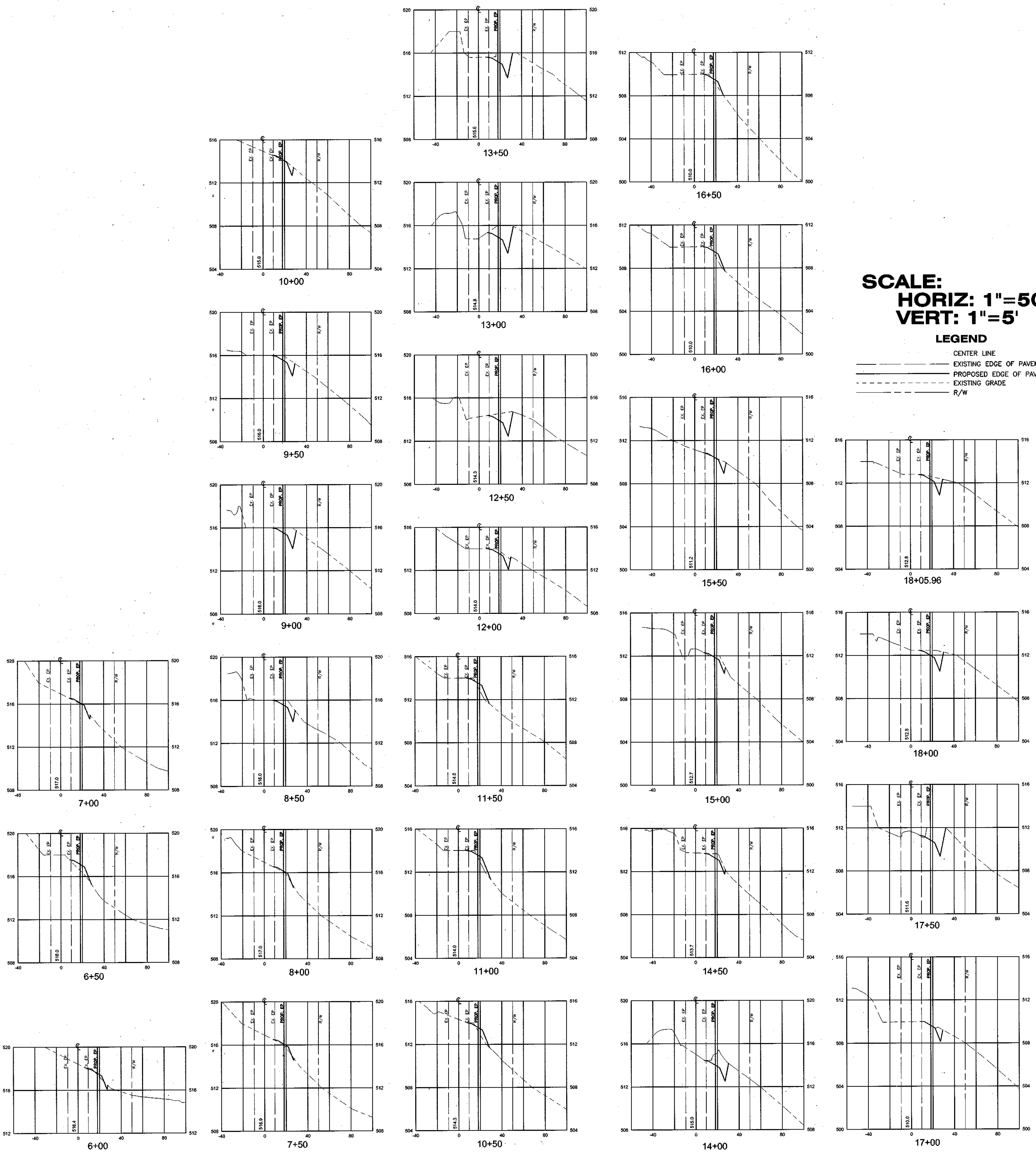
DESIGN SPEED = 25 MPH  
 SSD = 160 FT  
 HSD = N/A  
 A = -6 - (-4) = 2  
 $S < L, L = \frac{2(160)^2}{1329}$   
 $\therefore L = 38'$   
 USE L = 50'



OWNER:  
 MR. & MRS. HARWOOD W. OWINGS  
 13009 HIGHLAND ROAD  
 HIGHLAND, MARYLAND 20777

**PRELIMINARY EQUIVALENT SKETCH PLAN OWINGS PROPERTY**  
 RESUBDIVISION OF LOT 5  
 CONSISTING OF LOTS 17-24, PARCELS F, G  
 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

Section: NA	Area: NA	Phase: NA	Scale: 1" = 100'	Sheet: 6 of 16
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**PRELIMINARY STREET PROFILES**

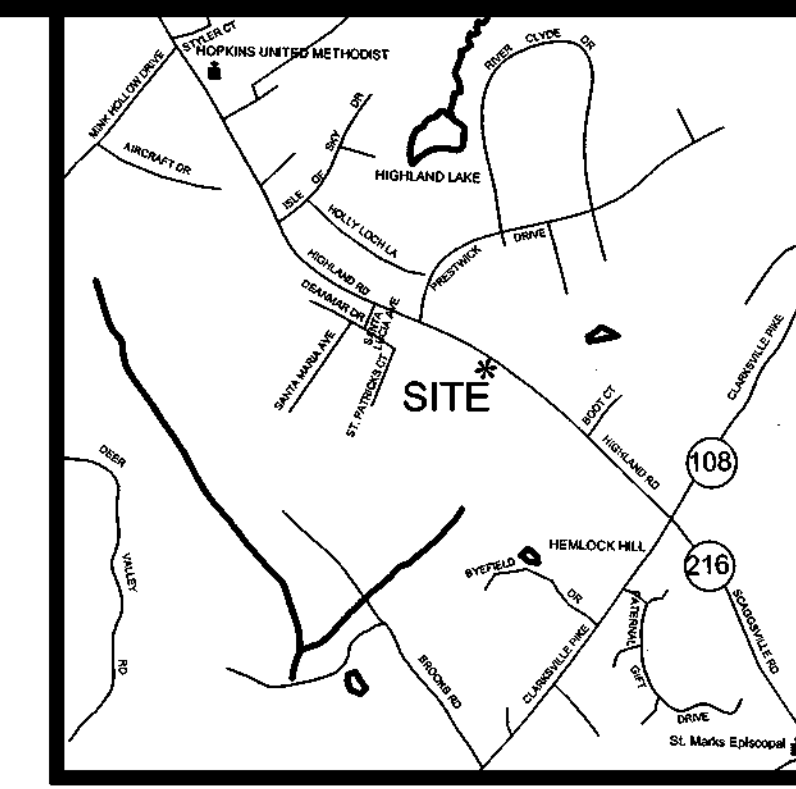


**OWINGS PROPERTY - LOT 5**

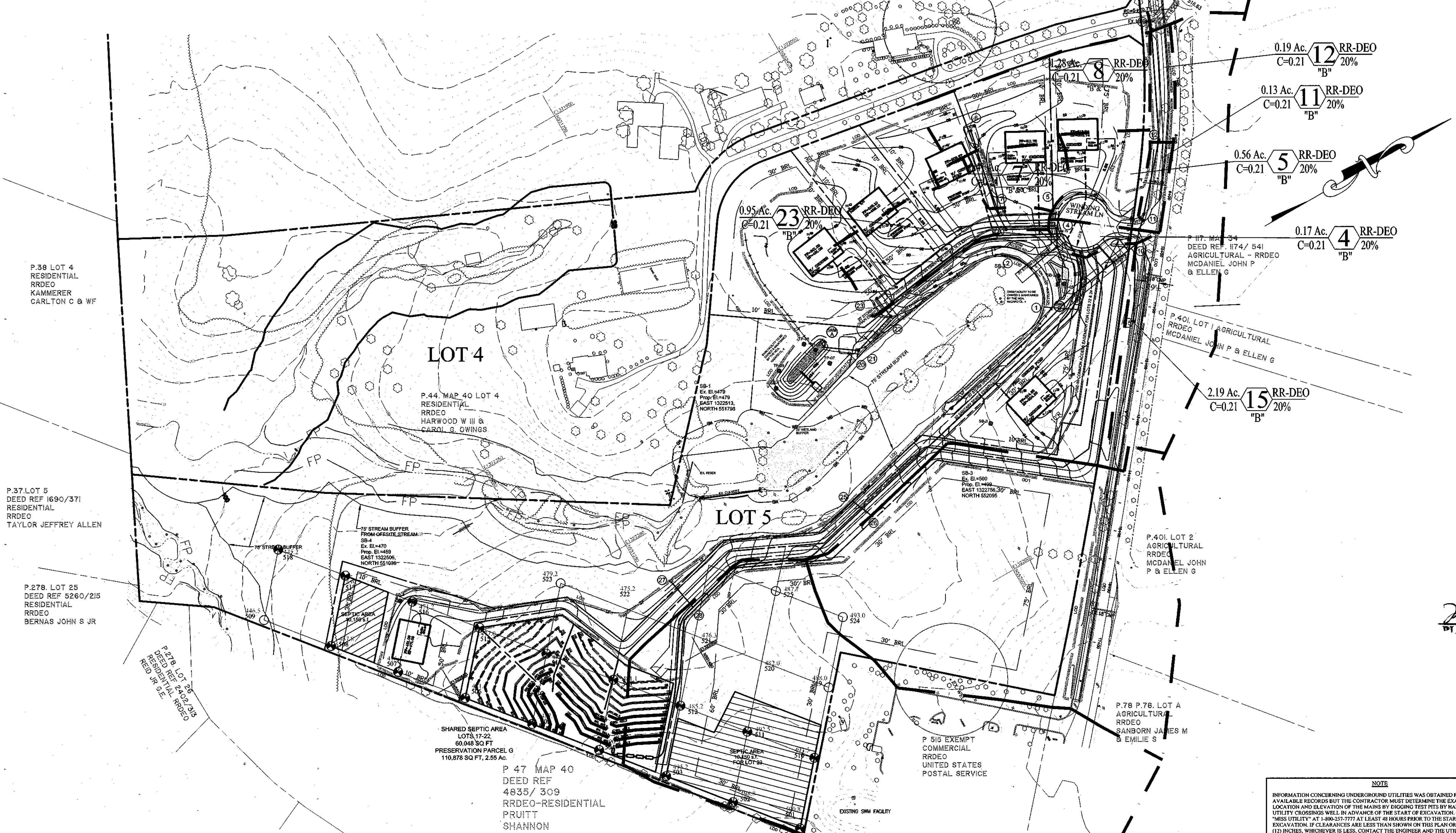
STORM DRAIN COMPUTATIONS  
SHT 1 of 1

DATE: January 20, 2004  
10 YR STORM

FROM	TO	AREA INCREM.	AREA TOTAL	R=C	AR	JAR	Tc min	I in/hr	Q INCREM. cfs	Q TOTAL cfs	SLOPE MIN %	SLOPE ACT %	PIPE SIZE inches	Q/A fps	LENGTH ft
13	12	8.87	8.87	0.21	1.86	1.86	10.00	6.60	12.29	12.29	0.60%	1.00%	21	5.11	200
12	11	0.19	9.06	0.21	0.04	1.90	10.65	6.41	0.26	12.20	0.16%	1.00%	27	3.07	135
11	10	0.13	9.20	0.21	0.03	1.93	11.39	6.20	0.18	11.97	0.15%	1.00%	27	3.01	55
15	10	2.19	2.19	0.21	0.46	0.46	10.00	6.60	3.04	3.04	0.22%	1.00%	15	2.48	135
10	9	0.00	11.39	0.21	0.00	2.39	11.69	6.13	0.00	14.66	0.22%	1.00%	27	3.69	165
9	1	0.00	11.39	0.21	0.00	2.39	12.44	5.94	0.00	14.21	0.80%	1.00%	21	5.91	45
8	7	1.28	1.28	0.21	0.27	0.27	10.00	6.60	1.77	1.77	0.01%	1.00%	21	0.74	184
7	6	0.41	1.69	0.21	0.09	0.35	14.16	5.58	0.48	1.98	0.02%	1.00%	21	0.82	45
6	4	0.00	1.69	0.21	0.00	0.35	15.07	5.44	0.00	1.93	0.01%	1.00%	21	0.80	100
5	4	0.56	0.56	0.21	0.12	0.12	12.44	5.94	0.70	0.70	0.02%	1.00%	18	0.40	30
4	3	0.17	2.42	0.21	0.04	0.51	17.15	5.13	0.18	2.61	0.16%	1.00%	15	2.12	45
3	2	0.00	2.42	0.21	0.00	0.51	17.50	5.08	0.00	2.58	0.06%	2.00%	18	1.46	55
23	22	0.95	0.95	0.21	0.20	0.20	10.00	6.60	1.32	1.32	0.04%	1.00%	15	1.07	45
22	21	0.00	0.95	0.21	0.00	0.20	10.70	6.39	0.00	1.27	0.04%	1.00%	15	1.04	155
21	20	0.00	0.95	0.21	0.00	0.20	13.19	5.76	0.00	1.15	0.03%	1.00%	15	0.94	85



VICINITY MAP  
SCALE: 1"=2000'



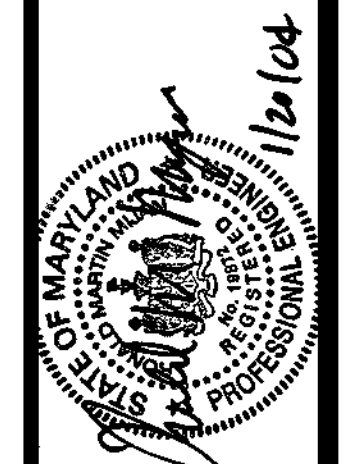
TENTATIVELY APPROVED  
DEPT. OF PLANNING AND  
ZONING OF  
HOWARD COUNTY  
*Mark M. Coyle* 2/10/04  
PLANNING DIRECTOR DATE

OWNER:  
MR. & MRS. HARWOOD W. OWINGS  
13009 HIGHLAND ROAD  
HIGHLAND, MARYLAND 20777

PRELIMINARY EQUIVALENT SKETCH PLAN OWINGS PROPERTY RESUBDIVISION OF LOT 5 CONSISTING OF LOTS 17-24, PARCELS F, G 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND				
Section:	Area:	Phase:	Scale:	Sheet:
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MAP 40, PARCEL 44	OCT. 2003	FIRST SUBMITTAL: 8/30/02 RESUBMITTED: 1/25/03 RESUBMITTED: 12/10/03 RESUBMITTED: 12/10/03	RESUBMITTED: 4/24/03 RESUBMITTED: 10/18/03	SP-03-03

NOTE  
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**Dewberry & Davis LLC**  
A Dewberry Company  
Engineers  
Planners  
Surveyors  
Landscape Architects  
www.dewberry.com  
804 West Diamond Avenue, Suite 200  
Gaithersburg, MD 20878-1414  
(301) 948-8300 Fax: (301) 258-7607

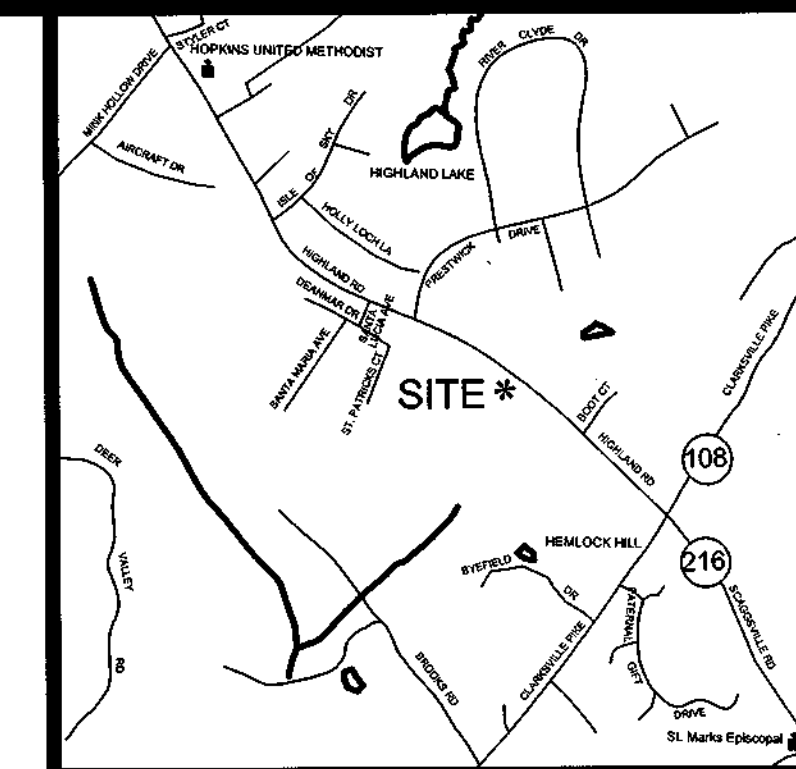


Drawn by: MNJ  
Designed by: MNJ  
Checked by: GW  
Zoned: RR-DEO

DEVELOPER:  
DALE THOMPSON BUILDERS  
6300 WOODSIDE COURT  
COLUMBIA, MARYLAND 21046  
PHONE: (410) 995-6736  
FAX: (410) 981-8747

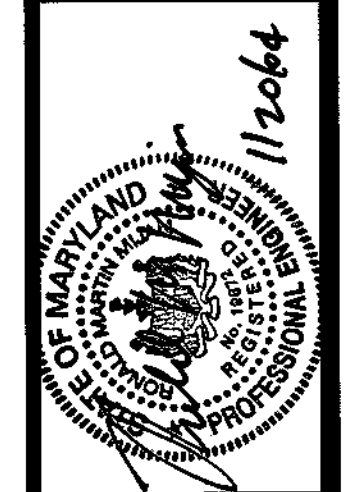
PRELIMINARY STORM DRAIN STUDY





VICINITY MAP  
SCALE: 1"=2000'

**Dewberry & Davis LLC**  
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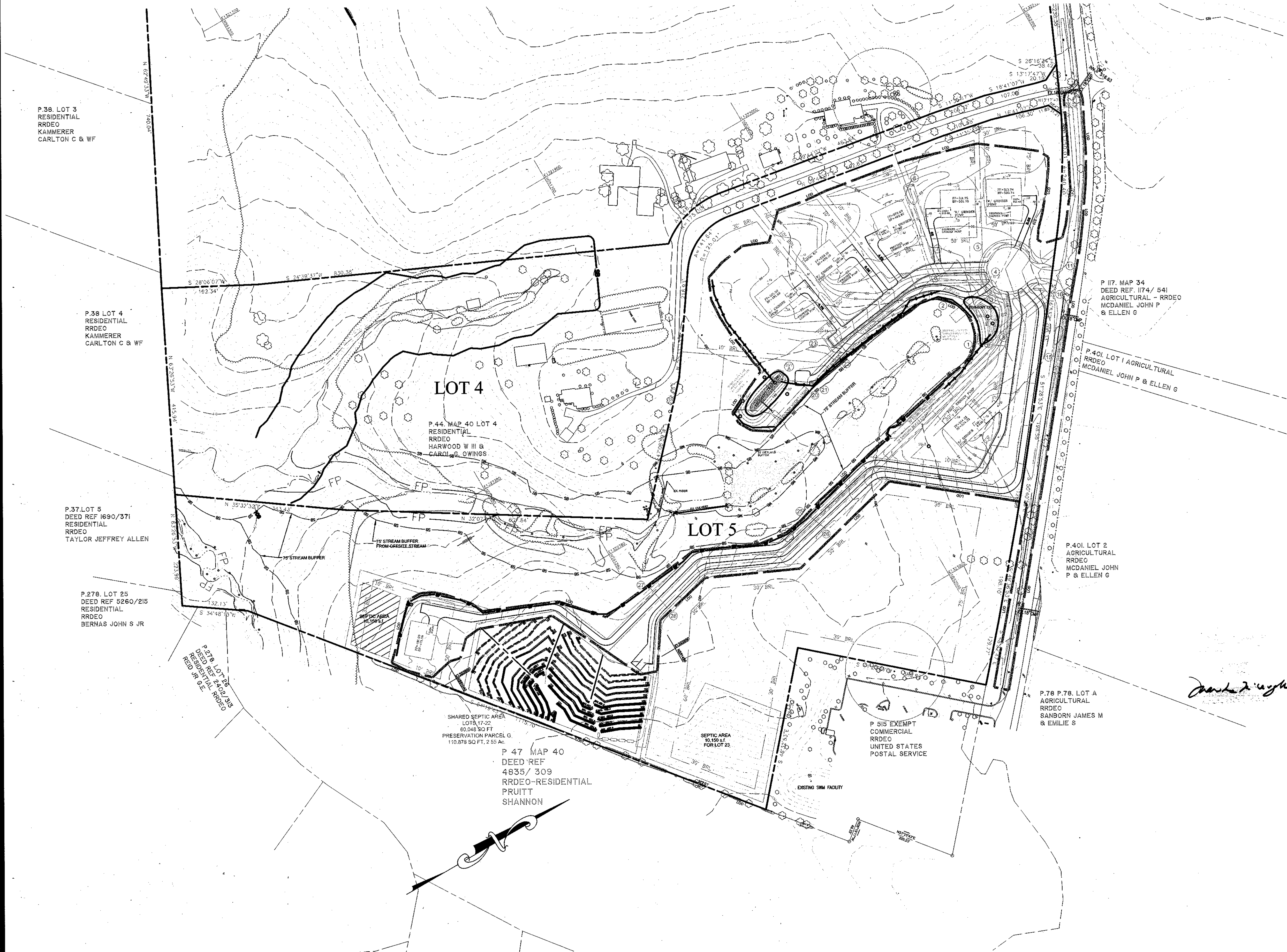


Drawn by: IEV  
Scale:

Zoned: RR-DEO

DEVELOPER:  
DALE THOMPSON BUILDERS  
6300 WOODSIDE COURT  
COLUMBIA, MARYLAND 21046  
PHONE: (410) 995-6736  
FAX: (410) 381-8747

PRELIMINARY SEDIMENT CONTROL PLAN



**TENTATIVELY APPROVED  
DEPT. OF PLANNING AND  
ZONING OF  
HOWARD COUNTY**

PLANNING DIRECTOR DATE

**LEGEND**

- EXISTING 2 FOOT CONTOURS
- EXISTING 10 FOOT CONTOURS
- PERC TEST HOLE: PASSED
- PERC TEST HOLE: FAILED
- PROPOSED LOD
- PROPOSED SILT FENCE
- PROPOSED EARTH DIKE

**NOTE**

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OWNER:  
MR. & MRS. HARWOOD W. OWINGS  
13009 HIGHLAND ROAD  
HIGHLAND, MARYLAND 20777

**PRELIMINARY EQUIVALENT SKETCH PLAN  
OWINGS PROPERTY  
RESUBDIVISION OF LOT 5  
CONSISTING OF LOTS 17-24, PARCELS F, G**

5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

Section: NA	Area:	Phase: NA	Scale: 1" = 100'	Sheet: 8 of 16
Tax Map Grid & Parcel: MAP 40, PARCEL 44	Date: OCT. 2003	Prior Submittals: FIRST SUBMITTED: 8/10/02 RESUBMITTED: 11/25/02 RESUBMITTED: 2/21/03 RESUBMITTED: 2/25/03	Resubmitted: RESUBMITTED: 4/24/03 RESUBMITTED: 10/18/03	File number: SP-03-03

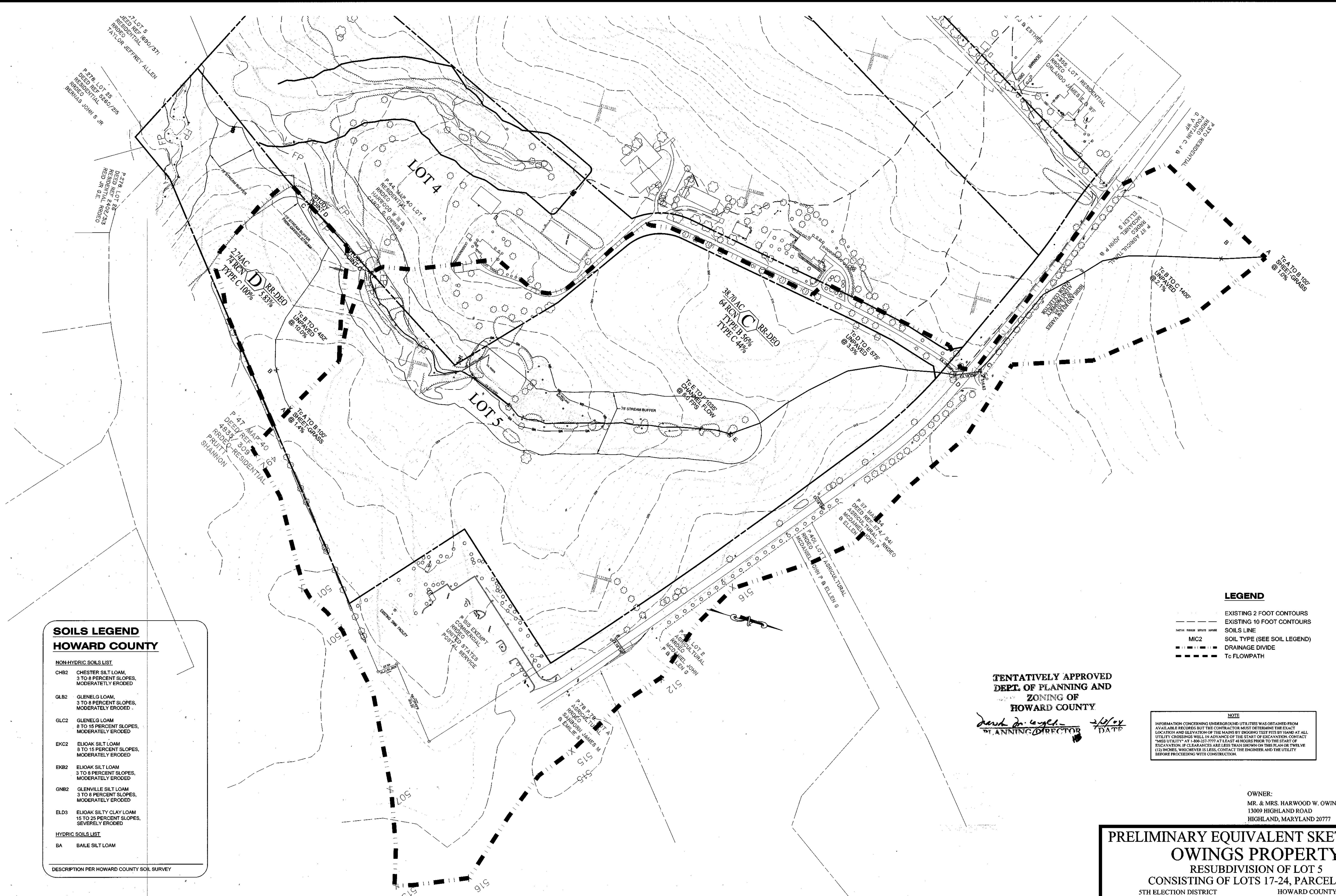




Drawn by: IEV  
 Designed by: MAM  
 Checked by: MAM  
 Zoned: RR-DEO

DEVELOPER:  
 DALE THOMPSON BUILDERS  
 6800 WOODSIDE COURT  
 COLUMBIA, MARYLAND 21046  
 PHONE: (410) 995-6756  
 FAX: (410) 381-8747

EXISTING SWM DRAINAGE AREA MAP



**SOILS LEGEND**  
**HOWARD COUNTY**

**NON-HYDRIC SOILS LIST**

CHB2	CHESTER SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
GLB2	GLENELG LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
GLC2	GLENELG LOAM 8 TO 15 PERCENT SLOPES, MODERATELY ERODED
EKC2	ELIOAK SILT LOAM 8 TO 15 PERCENT SLOPES, MODERATELY ERODED
EKB2	ELIOAK SILT LOAM 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
GNB2	GLENVILLE SILT LOAM 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
ELD3	ELIOAK SILTY CLAY LOAM 15 TO 25 PERCENT SLOPES, SEVERELY ERODED

**HYDRIC SOILS LIST**

BA	BAILE SILT LOAM
----	-----------------

DESCRIPTION PER HOWARD COUNTY SOIL SURVEY

**LEGEND**

---	EXISTING 2 FOOT CONTOURS
---	EXISTING 10 FOOT CONTOURS
---	SOILS LINE
---	SOIL TYPE (SEE SOIL LEGEND)
---	DRAINAGE DIVIDE
---	Tc FLOWPATH

TENTATIVELY APPROVED  
 DEPT. OF PLANNING AND  
 ZONING OF  
 HOWARD COUNTY

*Derek D. Ugel*  
 PLANNING DIRECTOR

NOTE  
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OWNER:  
 MR. & MRS. HARWOOD W. OWINGS  
 13009 HIGHLAND ROAD  
 HIGHLAND, MARYLAND 20777

**PRELIMINARY EQUIVALENT SKETCH PLAN**  
**OWINGS PROPERTY**  
 RESUBDIVISION OF LOT 5  
 CONSISTING OF LOTS 17-24, PARCELS F, G  
 5TH ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

Section:	Area:	Phase:	Scale:	Sheet:
NA		NA	1" = 100'	9 of 16
Tax Map Grid & Parcel:	Date:	Prior Submittals:	File number:	
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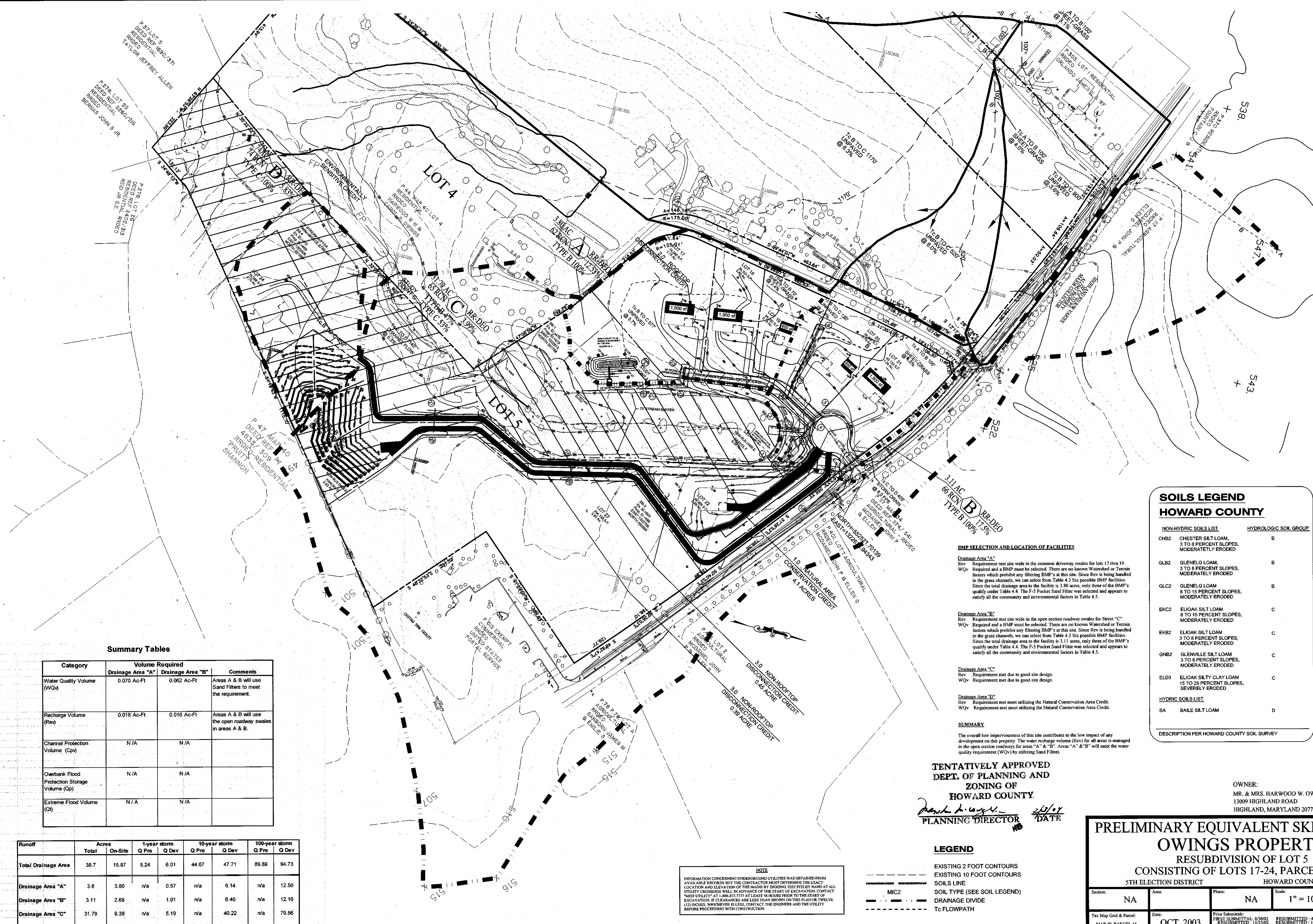




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 Designed by: MAM  
 Checked by: MAM  
 Zoned: RR-DEO

DEVELOPER:  
 DALE THOMPSON BUILDERS  
 6300 WOODSIDE COURT  
 COLUMBIA, MARYLAND 21046  
 PHONE: (410) 995-6736  
 FAX: (410) 381-8747

**PROPOSED SWM DRAINAGE AREA MAP**



**Summary Tables**

Category	Volume Required		Comments
	Drainage Area "A"	Drainage Area "B"	
Water Quality Volume (WQv)	0.070 Ac-Ft	0.062 Ac-Ft	Areas A & B will use Sand Filters to meet the requirement.
Recharge Volume (Rev)	0.018 Ac-Ft	0.016 Ac-Ft	Areas A & B will use the open roadway swales in areas A & B.
Channel Protection Volume (Cpv)	N/A	N/A	
Overbank Flood Protection Storage Volume (Qp)	N/A	N/A	
Extreme Flood Volume (Qf)	N/A	N/A	

Runoff	Acres		1-year storm		10-year storm		100-year storm	
	Total	On-Site	Q Pre	Q Dev	Q Pre	Q Dev	Q Pre	Q Dev
Total Drainage Area	38.7	15.87	5.24	6.01	44.67	47.71	89.89	94.73
Drainage Area "A"	3.8	3.80	n/a	0.57	n/a	6.14	n/a	12.50
Drainage Area "B"	3.11	2.68	n/a	1.01	n/a	6.40	n/a	12.16
Drainage Area "C"	31.79	9.39	n/a	5.19	n/a	40.22	n/a	79.56
Drainage Area "D"	2.74	2.74	1.18	1.82	5.45	7.15	9.72	12.26

**BMP SELECTION AND LOCATION OF FACILITIES**

**Drainage Area "A"**  
 Rev. Requirement met site wide in the common driveway swales for lots 17 thru 19.  
 WQv. Required and a BMP must be selected. There are no known Watershed or Terrain factors which prohibit any filtering BMP's at this site. Since Rev is being handled in the grass channels, we can select from Table 4.3 Six possible BMP facilities. Since the total drainage area to the facility is 3.80 acres, only three of the BMP's qualify under Table 4.4. The F-5 Pocket Sand Filter was selected and appears to satisfy all the community and environmental factors in Table 4.5.

**Drainage Area "B"**  
 Rev. Requirement met site wide in the open section roadway swales for Street "C".  
 WQv. Required and a BMP must be selected. There are no known Watershed or Terrain factors which prohibit any filtering BMP's at this site. Since Rev is being handled in the grass channels, we can select from Table 4.3 Six possible BMP facilities. Since the total drainage area to the facility is 3.11 acres, only three of the BMP's qualify under Table 4.4. The F-5 Pocket Sand Filter was selected and appears to satisfy all the community and environmental factors in Table 4.5.

**Drainage Area "C"**  
 Rev. Requirement met due to good site design.  
 WQv. Requirement met due to good site design.

**Drainage Area "D"**  
 Rev. Requirement met utilizing the Natural Conservation Area Credit.  
 WQv. Requirement met utilizing the Natural Conservation Area Credit.

**TENTATIVELY APPROVED**  
**DEPT. OF PLANNING AND ZONING OF HOWARD COUNTY.**  
*Mark H. ...*  
**PLANNING DIRECTOR**      10/07  
 DATE

**SOILS LEGEND**  
**HOWARD COUNTY**

NON-HYDRIC SOILS LIST	HYDROLOGIC SOIL GROUP
CHB2 CHESTER SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
GLB2 GLENELG LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
GLC2 GLENELG LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	B
EKC2 ELIOAK SILT LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	C
EKB2 ELIOAK SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	C
GNB2 GLENVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	C
ELD3 ELIOAK SILTY CLAY LOAM, 15 TO 25 PERCENT SLOPES, SEVERELY ERODED	C
<b>HYDRIC SOILS LIST</b>	
BA BAILE SILT LOAM	D

DESCRIPTION PER HOWARD COUNTY SOIL SURVEY

**LEGEND**

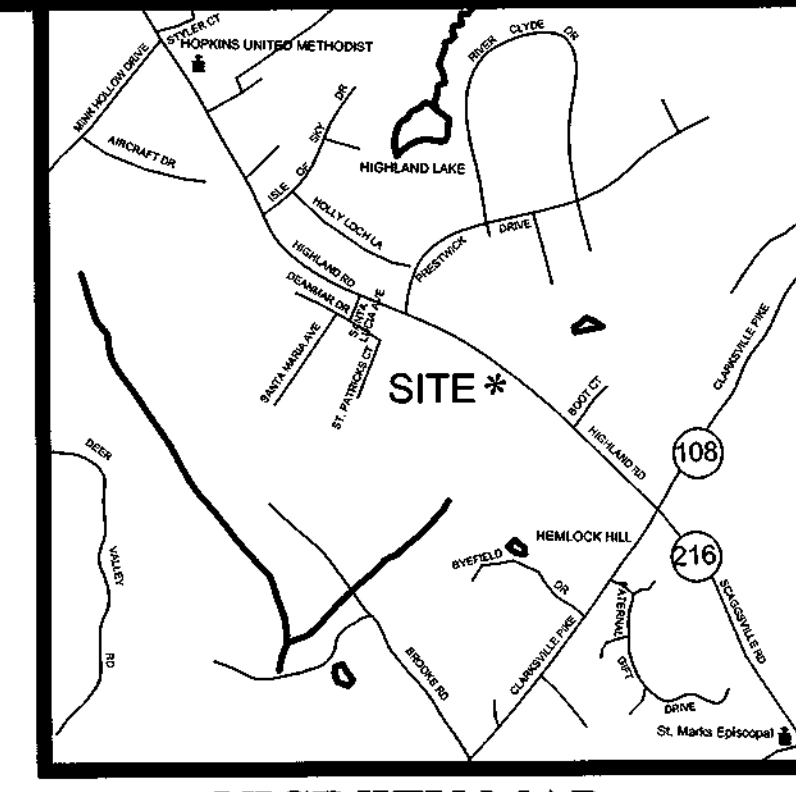
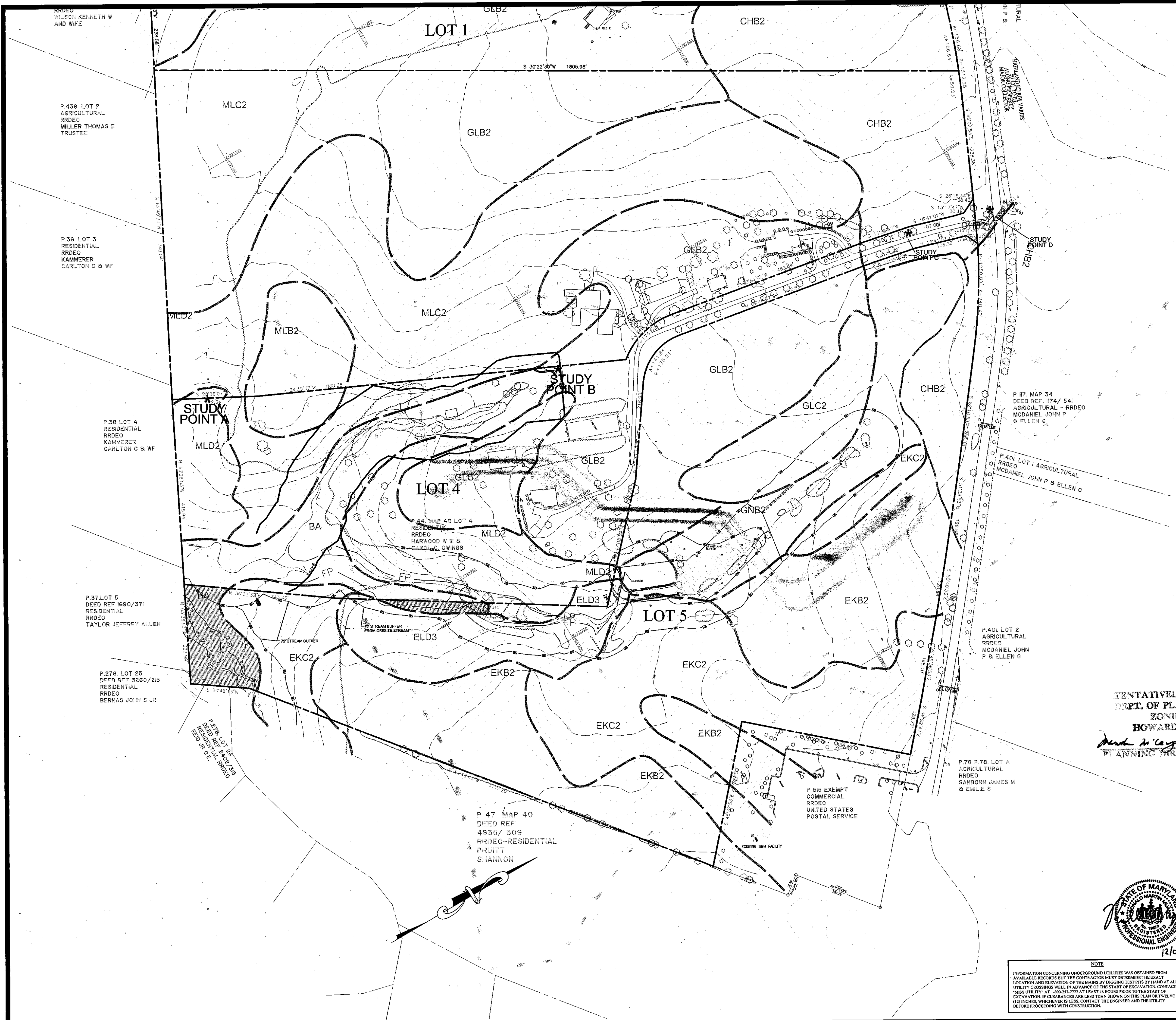
- EXISTING 2 FOOT CONTOURS
- EXISTING 10 FOOT CONTOURS
- SOILS LINE
- SOIL TYPE (SEE SOIL LEGEND)
- DRAINAGE DIVIDE
- To FLOWPATH

**PRELIMINARY EQUIVALENT SKETCH PLAN**  
**OWINGS PROPERTY**  
 RESUBDIVISION OF LOT 5  
 CONSISTING OF LOTS 17-24, PARCELS F, G  
 5TH ELECTION DISTRICT      HOWARD COUNTY, MARYLAND

Section: NA	Area: NA	Phase: NA	Scale: 1" = 100'	Sheet: 10 of 16
Tax Map Grid & Parcel: MAF 40, PARCEL 44	Date: OCT. 2003	Price Submitted: 8/20/02 FIRST SUBMITTED: 1/23/02 RESUBMITTED: 5/15/03	RESUBMITTED: 4/24/03 RESUBMITTED: 10/18/03	File number: SP-03-03

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VICINITY MAP  
SCALE: 1"=2000'

**SOILS LEGEND  
HOWARD COUNTY**

**NON-HYDRIC SOILS LIST**

CHB2 CHESTER SILT LOAM,  
3 TO 8 PERCENT SLOPES,  
MODERATELY ERODED

GLB2 GLENELG LOAM,  
3 TO 8 PERCENT SLOPES,  
MODERATELY ERODED

GLC2 GLENELG LOAM,  
8 TO 15 PERCENT SLOPES,  
MODERATELY ERODED

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MODERATELY ERODED

EKB2 ELIOAK SILT LOAM  
3 TO 8 PERCENT SLOPES,  
MODERATELY ERODED

GNB2 GLENVILLE SILT LOAM  
3 TO 8 PERCENT SLOPES,  
MODERATELY ERODED

ELD3 ELIOAK SILTY CLAY LOAM  
15 TO 25 PERCENT SLOPES,  
SEVERELY ERODED

**HYDRIC SOILS LIST**

BA BAILE SILT LOAM (SEE HATCHING)

DESCRIPTION PER HOWARD COUNTY SOIL SURVEY

TENTATIVELY APPROVED  
DEPT. OF PLANNING AND  
ZONING OF  
HOWARD COUNTY  
*David W. Taylor* 12/6/03  
PLANNING DIRECTOR DATE

OWNER:  
MR. & MRS. HARWOOD W. OWINGS  
13009 HIGHLAND ROAD  
HIGHLAND, MARYLAND 20777



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**PRELIMINARY EQUIVALENT SKETCH PLAN  
OWINGS PROPERTY**  
RESUBDIVISION OF LOT 5  
CONSISTING OF LOTS 17-24, PARCELS F, G  
5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

Section: NA	Area:	Phase: NA	Scale: 1" = 100'	Sheet: 11 of 16
Tax Map Grid & Parcel: MAP 40, PARCEL 44	Date: OCT. 2003	File Number: SP-03-03	First Submittal: 8/20/02 RESUBMITTED: 11/25/02 RESUBMITTED: 2/21/03 RESUBMITTED: 5/15/03	Resubmitted: 4/24/03 RESUBMITTED: 10/18/03

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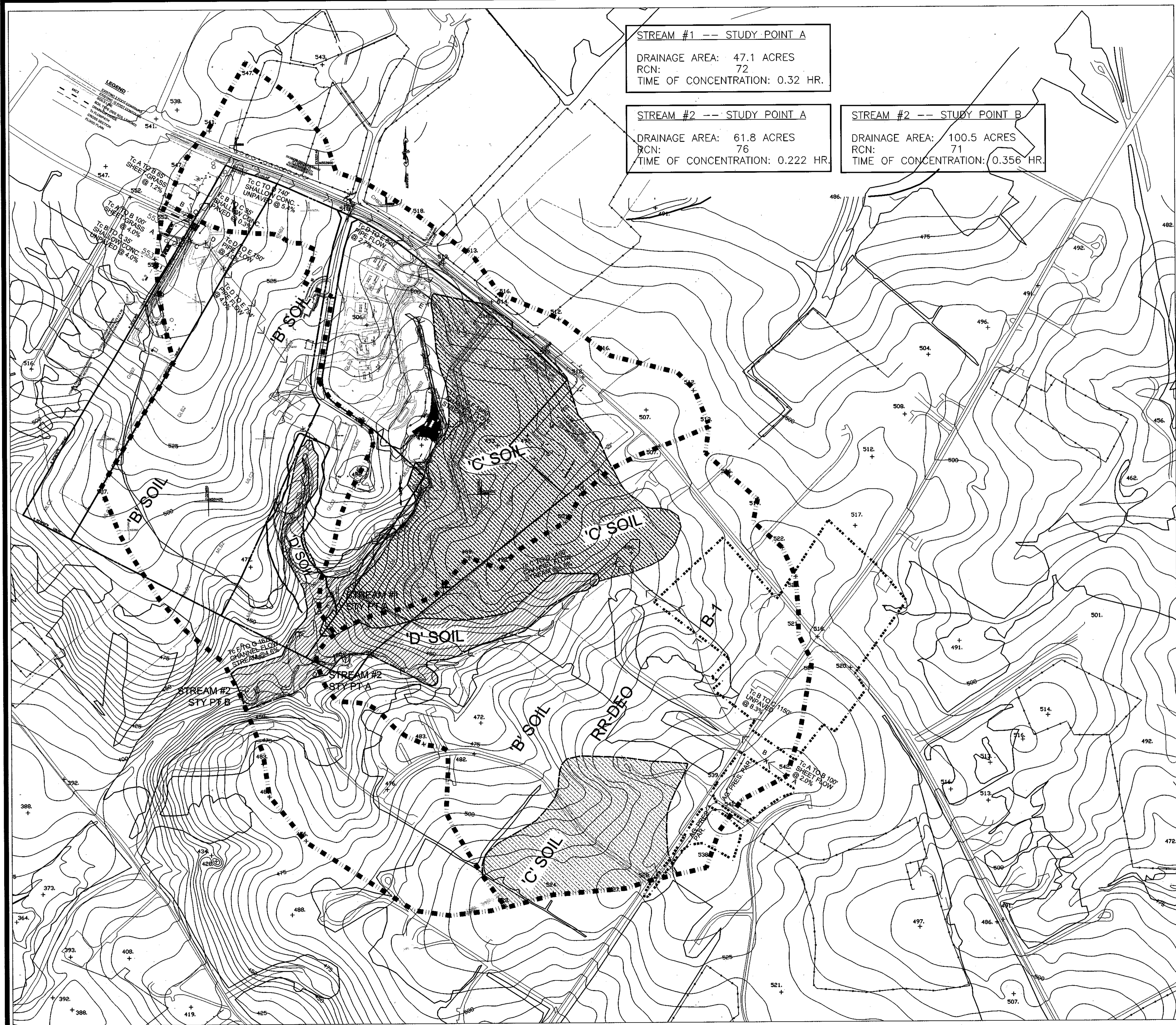
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Drawn by: IEV  
Scale:  
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DEVELOPER:  
DALE THOMPSON BUILDERS  
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PHONE: (410) 995-6736  
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SOILS MAP





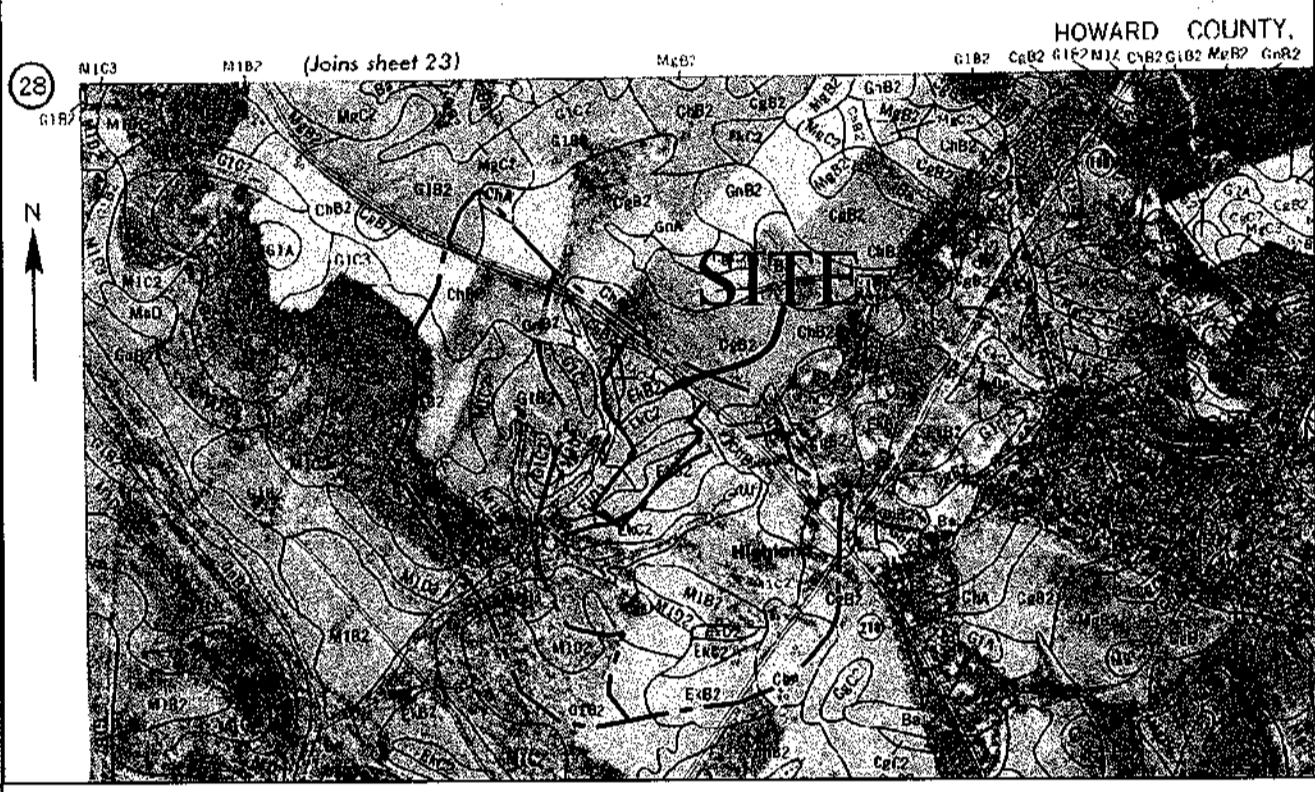
STREAM #1 -- STUDY POINT A  
 DRAINAGE AREA: 47.1 ACRES  
 RCN: 72  
 TIME OF CONCENTRATION: 0.32 HR.

STREAM #2 -- STUDY POINT A  
 DRAINAGE AREA: 61.8 ACRES  
 RCN: 76  
 TIME OF CONCENTRATION: 0.222 HR.

STREAM #2 -- STUDY POINT B  
 DRAINAGE AREA: 100.5 ACRES  
 RCN: 71  
 TIME OF CONCENTRATION: 0.356 HR.

**SOILS LEGEND  
 HOWARD COUNTY**

- NON-HYDRIC SOILS LIST**
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  - GLB2 GLENELG LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
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  - EKB2 ELIOAK SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
  - GNB2 GLENVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
  - ELD3 ELIOAK SILTY CLAY LOAM, 15 TO 25 PERCENT SLOPES, SEVERELY ERODED
- HYDRIC SOILS LIST**
- BA BAILE SILT LOAM
- DESCRIPTION PER HOWARD COUNTY SOIL SURVEY

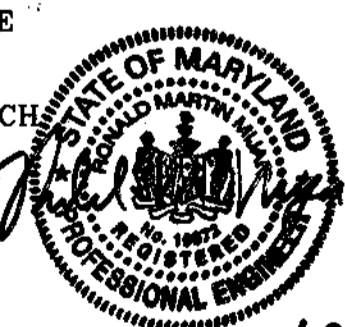


SCALE 1" = 1320'

TENTATIVELY APPROVED  
 DEPT. OF PLANNING AND  
 ZONING OF  
 HOWARD COUNTY  
*Merv Dingle* 2/10/03  
 PLANNING DIRECTOR DATE

**LEGEND**

- 'C' EXIST. SOILS SYMBOL
- - - - - EXIST. SOILS BOUNDARIES
- - - - - ZONING BOUNDARY
- - - - - DRAINAGE DIVIDE
- A → HYDRAULIC REACH



OWNER:  
 MR. & MRS. HARWOOD W. OWINGS  
 13009 HIGHLAND ROAD  
 HIGHLAND, MARYLAND 20777

SCALE 1" = 200'

**PRELIMINARY EQUIVALENT SKETCH PLAN  
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 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

Section: NA	Area:	Phase: NA	Scale: XXXXX	Sheet: 12 of 16
Tax Map Grid & Parcel: MAP 40, PARCEL 44	Date: OCT. 2003	First Submittal: 8/30/02 Resubmitted: 1/12/03 Resubmitted: 2/27/03 Resubmitted: 5/15/03	Resubmitted: 4/24/03 Resubmitted: 10/18/03	File number: SP-03-03

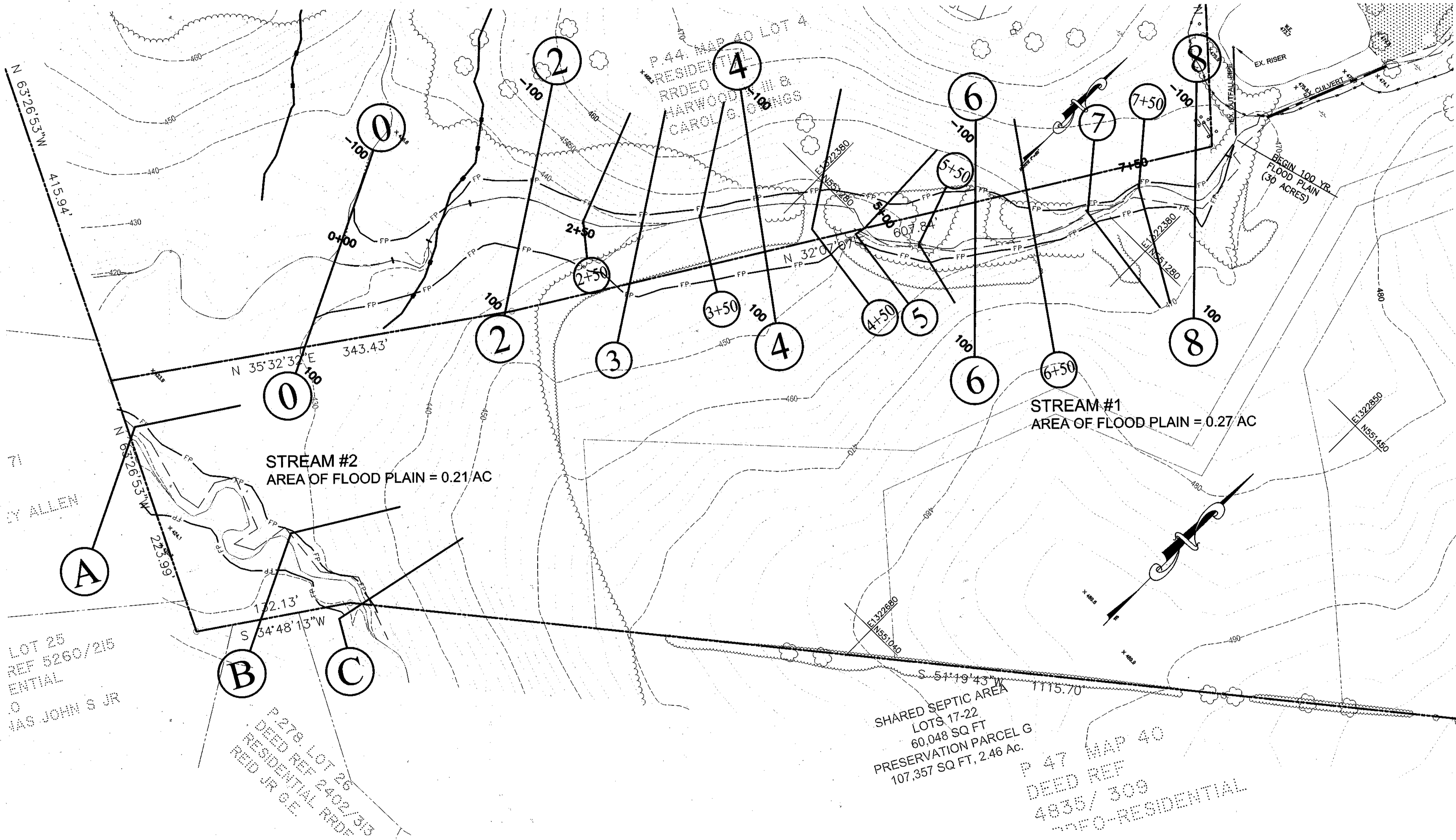
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Drawn by:  
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 Zoned: RR-DEO

DEVELOPER:  
 DALE THOMPSON BUILDERS  
 6300 WOODSIDE COURT  
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ULTIMATE 100 YEAR FLOOD PLAIN STUDY  
 DRAINAGE AREA MAP





Owings Lot 5 Stream #1				
Cross Section	100-yr Q (cfs)	Ex. Channel Elev.	100-year WSE	E.G. WSE
0+00	197	426.5	428.5	429.49
2+00	197	433.3	435.46	437.00
2+50	197	435.2	437.02	440.57
3+00	197	439.0	441.65	443.02
3+50	197	441.9	443.46	445.69
4+00	197	443.3	446.62	447.42
4+50	197	444.9	447.03	448.87
5+00	197	447.1	449.43	451.18
5+50	197	449.7	451.82	453.83
6+00	197	453.5	454.90	457.70
6+50	197	455.7	458.82	459.61
7+00	197	457.4	459.53	461.03
7+50	197	460.0	462.09	463.91
8+00	197	462.0	464.62	465.66

Owings Lot 5 Stream #2			
Cross Section	100-yr Q (cfs)	Ex. Channel Elev.	100-year WSE
A	322	419.0	422.73
B	322	425.1	428.22
C	322	428.6	431.27

LOT 25  
REF 5260/215  
RESIDENTIAL  
MR. & MRS. JOHN S. JR.

P 278, MAP 40  
DEED REF 2402/315  
RESIDENTIAL TRD  
MR. & MRS. JOHN S. JR.

SHARED SEPTIC AREA  
LOTS 17-22  
60,048 SQ FT  
PRESERVATION PARCEL G  
107,357 SQ FT, 2.46 AC.

P 47, MAP 40  
DEED REF  
4835/309  
INFO-RESIDENTIAL

TENTATIVELY APPROVED  
DEPT. OF PLANNING AND  
ZONING OF  
HOWARD COUNTY

*Jessie A. Wright*  
PLANNING DIRECTOR DATE 10/01



OWNER:  
MR. & MRS. HARWOOD W. OWINGS  
13009 HIGHLAND ROAD  
HIGHLAND, MARYLAND 20777

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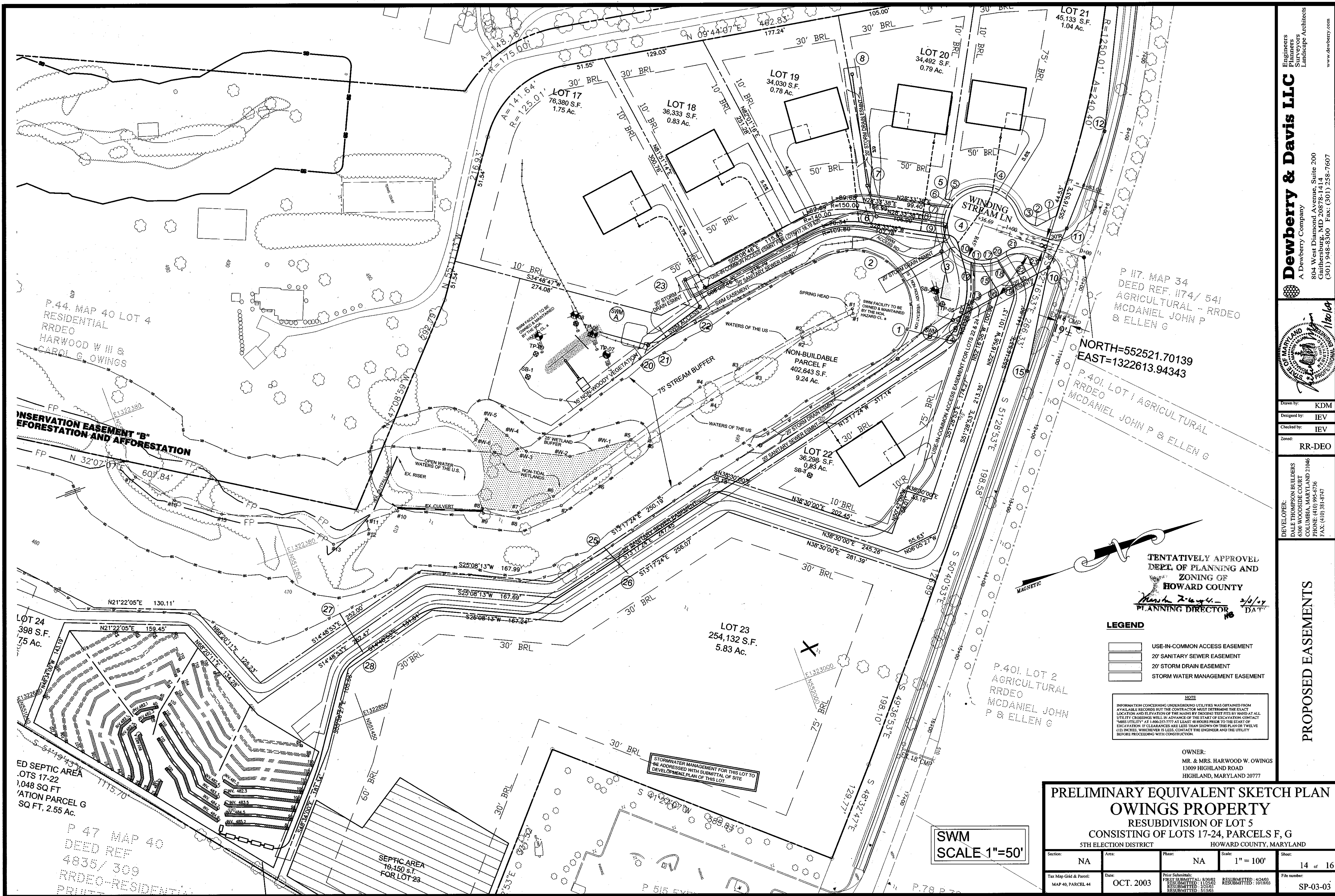
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Drawn by: SGB  
Designed by: SGB  
Checked by: RMM  
Zoned: RR-DEO

DEVELOPER:  
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6900 WOODSIDE COURT  
COLUMBIA, MARYLAND 21046  
PHONE: (410) 995-6736  
FAX: (410) 381-8747

ULTIMATE 100 YEAR FLOOD PLAIN STUDY  
CROSS SECTION LOCATIONS





P.44. MAP 40 LOT 4  
RESIDENTIAL  
RRDEO  
HARWOOD W III &  
CAROL G. OWINGS

INSERVATION EASEMENT "B"  
AFFORESTATION AND AFFORESTATION

LOT 24  
398 S.F.  
75 Ac.

ED SEPTIC AREA  
OTS 17-22  
1,048 SQ FT  
ATION PARCEL G  
SQ FT, 2.55 Ac.

P 47 MAP 40  
DEED REF  
4835/ 309  
RRDEO-RESIDENTIAL

LOT 17  
78,380 S.F.  
1.75 Ac.

LOT 18  
36,333 S.F.  
0.83 Ac.

LOT 19  
34,030 S.F.  
0.78 Ac.

LOT 20  
34,492 S.F.  
0.79 Ac.

LOT 21  
45,133 S.F.  
1.04 Ac.

LOT 22  
36,298 S.F.  
0.83 Ac.

LOT 23  
254,132 S.F.  
5.83 Ac.

SEPTIC AREA  
10,150 S.F.  
FOR LOT 23

P 117. MAP 34  
DEED REF. 1174/ 541  
AGRICULTURAL - RRDEO  
MCDANIEL JOHN P  
& ELLEN G

NORTH=552521.70139  
EAST=1322613.94343

P.401 LOT 1 AGRICULTURAL  
RRDEO  
MCDANIEL JOHN P & ELLEN G

P.401 LOT 2  
AGRICULTURAL  
RRDEO  
MCDANIEL JOHN  
& ELLEN G

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ZONING OF  
HOWARD COUNTY  
*Mark Ziegler* 2/10/04  
PLANNING DIRECTOR DAT

- LEGEND**
- USE-IN-COMMON ACCESS EASEMENT
  - 20' SANITARY SEWER EASEMENT
  - 20' STORM DRAIN EASEMENT
  - STORM WATER MANAGEMENT EASEMENT

**NOTE**  
INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATION OF THE MAINS BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS WELL IN ADVANCE OF THE START OF EXCAVATION. CONTACT "MRS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO THE START OF EXCAVATION. IF CLEARANCES ARE LESS THAN SHOWN ON THIS PLAN OR TWELVE (12) INCHES, WHICHEVER IS LESS, CONTACT THE ENGINEER AND THE UTILITY BEFORE PROCEEDING WITH CONSTRUCTION.

OWNER:  
MR. & MRS. HARWOOD W. OWINGS  
13009 HIGHLAND ROAD  
HIGHLAND, MARYLAND 20777

SWM  
SCALE 1"=50'

**PRELIMINARY EQUIVALENT SKETCH PLAN  
OWINGS PROPERTY**  
RESUBDIVISION OF LOT 5  
CONSISTING OF LOTS 17-24, PARCELS F, G  
5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

Section:	Area:	Phase:	Scale:	Sheet:
NA		NA	1" = 100'	14 of 16
Tax Map Grid & Parcel:	Date:	Prior Submittals:	RESUBMITTED:	File number:
MAP 40, PARCEL 44	OCT. 2003	FIRST SUBMITTED: 6/20/02 RESUBMITTED: 2/7/03 RESUBMITTED: 2/10/04	RESUBMITTED: 4/24/03 RESUBMITTED: 10/18/03	SP-03-03

**Dewberry & Davis LLC**  
A Dewberry Company  
Engineers  
Planners  
Surveyors  
Landscape Architects  
804 West Diamond Avenue, Suite 200  
Gaithersburg, MD 20878-1414  
(301) 948-8300 Fax: (301) 258-7607  
www.dewberry.com

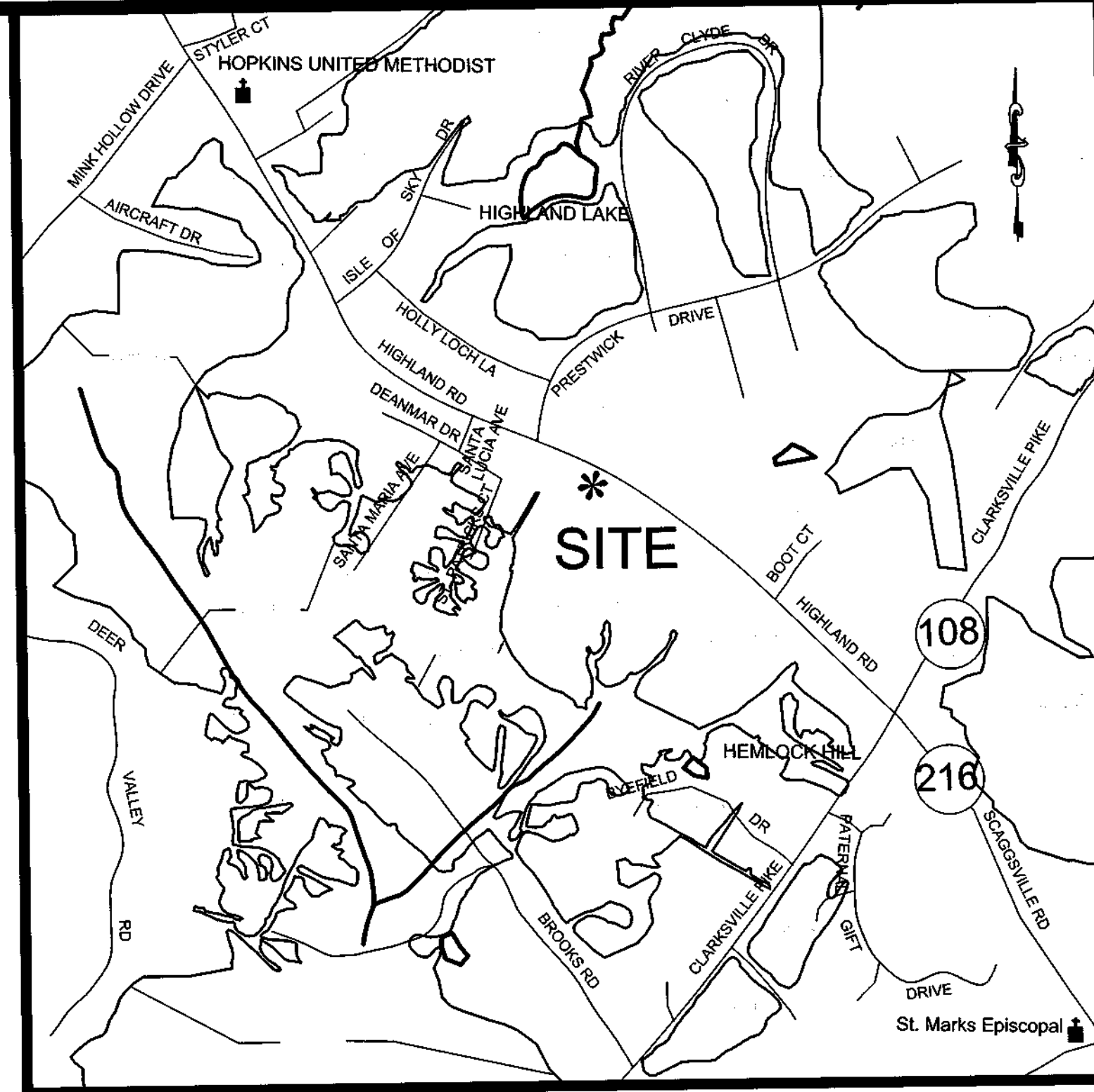
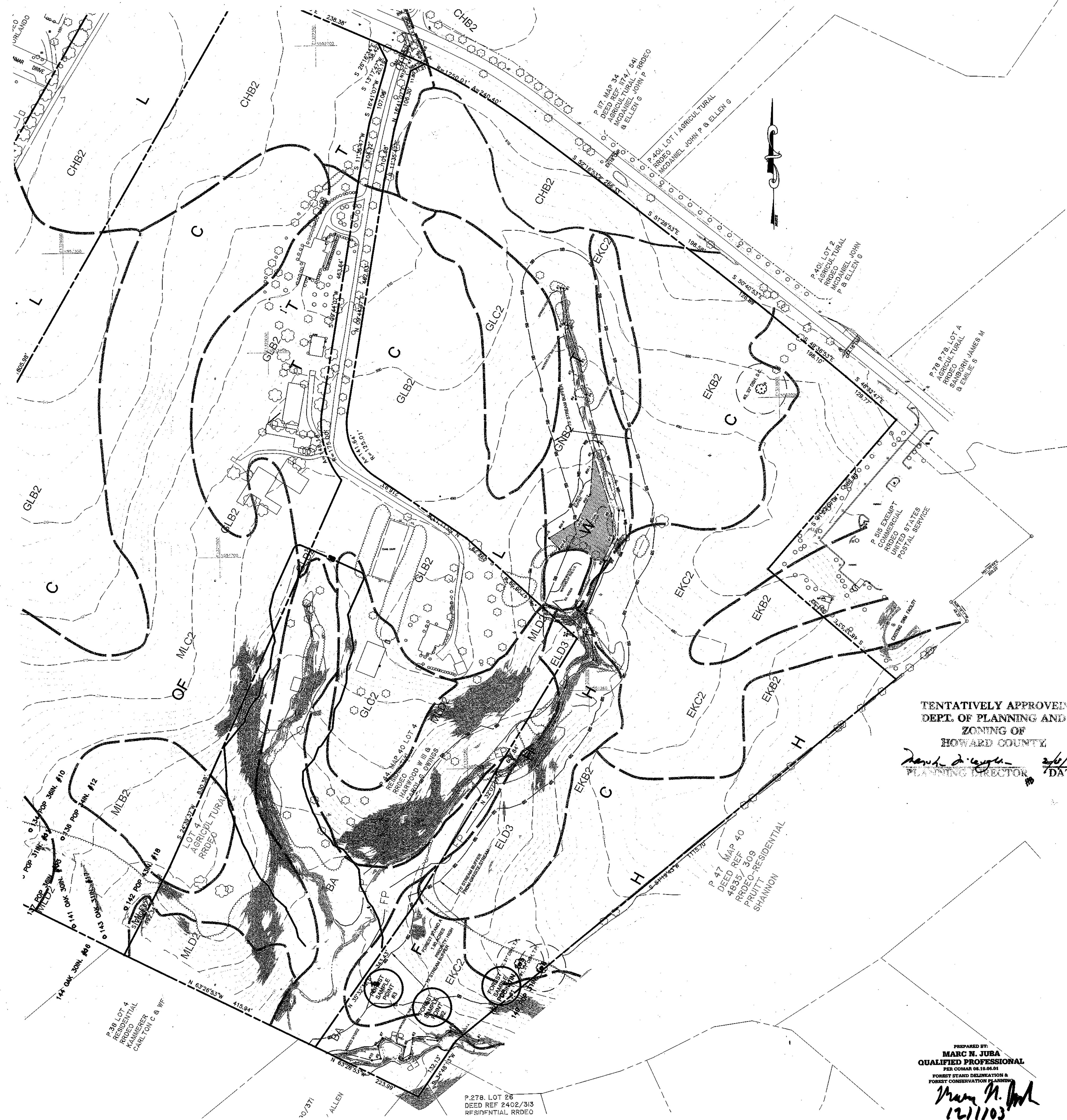


Drawn by: KDM  
Designed by: IEV  
Checked by: IEV  
Zoned: RR-DEO

DEVELOPER:  
DALE THOMPSON BUILDERS  
6800 WOODSIDE COURT  
COLUMBIA, MARYLAND 21046  
PHONE: (410) 995-0736  
FAX: (410) 381-8747

PROPOSED EASEMENTS





VICINITY MAP  
SCALE: 1"=1000'

**SOILS LEGEND  
HOWARD COUNTY**

- NON-HYDRIC SOILS LIST**
- CHB2 CHESTER SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
  - GLB2 GLENELG LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
  - GLC2 GLENELG LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED
  - EKC2 ELIOAK SILT LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED
  - EBK2 ELIOAK SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
  - GNB2 GLENVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
  - ELD3 ELIOAK SILTY CLAY LOAM, 15 TO 25 PERCENT SLOPES, SEVERELY ERODED
- HYDRIC SOILS LIST**
- BA BAILE SILT LOAM
- DESCRIPTION PER HOWARD COUNTY SOIL SURVEY

**GENERAL NOTES**

1. TOTAL AREA OF TRACT: 25.64 AC; 1,116,879± SQ. FT.
2. EXISTING ZONING: RRDEO
3. BOUNDARY FROM TAX MAP (40), AND FROM SURVEY
4. TOPOGRAPHY FROM SURVEY CONTOUR INTERVAL 2 FEET.
5. THERE ARE NO 100-YEAR FLOODPLAINS KNOWN TO EXIST ON THIS SITE ACCORDING TO AVAILABLE INFORMATION (MOMERLIN.NET).
6. WETLANDS, WETLAND BUFFERS, STREAMS, AND STREAM BUFFERS ON THE SUBJECT PROPERTY WERE IDENTIFIED BY SURVEY, WHILE THOSE COMING FROM OFFSITE WERE ESTIMATED FROM ARIAL PHOTOGRAPHY.
7. THE WILDLIFE AND HERITAGE SERVICE HAS NO RECORDS FOR FEDERAL OR STATE RARE, THREATENED OR ENDANGERED PLANTS OR ANIMALS WITHIN THIS PROJECT SITE. HOWEVER, THE FORESTED AREA ON THE SUBJECT PROPERTY CONTAINS FOREST INTERIOR WELWELLING BIRD HABITAT. THIS INFORMATION COMES FROM DNR.
8. THE SUBJECT PROPERTY FALLS WITHIN THE ROCKY GORGE DAM SUB-WATERSHED (USE CLASS 1), OF THE PATUXENT WATERSHED.
9. THERE IS ONE FOREST STAND ON THIS SITE TOTALING 3.67 ACRES. SITE INVESTIGATIONS PERFORMED ON 2/10/02, BY DEWBERRY & DAVIS LLC.
10. ONE HYDRIC SOIL EXISTS WITHIN THE SUBJECT PROPERTY ACCORDING TO THE HOWARD COUNTY SOIL SURVEY OF MARYLAND.
11. THERE ARE NO HISTORICAL SITES KNOWN TO EXIST ON THE SUBJECT PROPERTY ACCORDING TO AVAILABLE INFORMATION (MOMERLIN.NET)

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ZONING OF  
HOWARD COUNTY

*Dawn D. Leggett* 2/6/12  
PLANNING DIRECTOR DATE

**LEGEND**

- CRITICAL ROOT ZONE (CRZ) (ESTIMATED RADIUS = 1.5' X DBH)
- WETLAND BOUNDARY
- WETLAND BUFFER
- STREAM
- STREAM BUFFER
- EXIST. TREE >24" D.B.H.
- AREAS WITH 15-25% SLOPES
- AREAS WITH 25% & GREATER SLOPES
- FOREST SAMPLE POINT #1
- FSD SAMPLE POINT
- TREE LINE
- GLB2 SOILS SYMBOL
- CROPS
- HEDGEROWS
- OPEN FIELD
- GROUP OF TREES
- FOREST

**SPECIMEN TREE IDENTIFICATION LIST**

BOTANICAL NAME/ COMMON NAME	TRUNK Ø (d.b.h.)	TREE HEIGHT	TREE CANOPY	TREE CONDITION
1. <i>Liriodendron tulipifera</i> TULIP POPLAR	31"	65'	40'	FAIR
2. <i>Liriodendron tulipifera</i> TULIP POPLAR	31"	60'	30'	FAIR
3. <i>Catalpa bignonioides</i> SOUTHERN CATALPA	32"	15'	20'	POOR

**NOTE**  
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(301) 948-8300 Fax: (301) 258-7607

Drawn by: MNJ

Designed by: MNJ

Checked by: GW

Date: MAY 2003

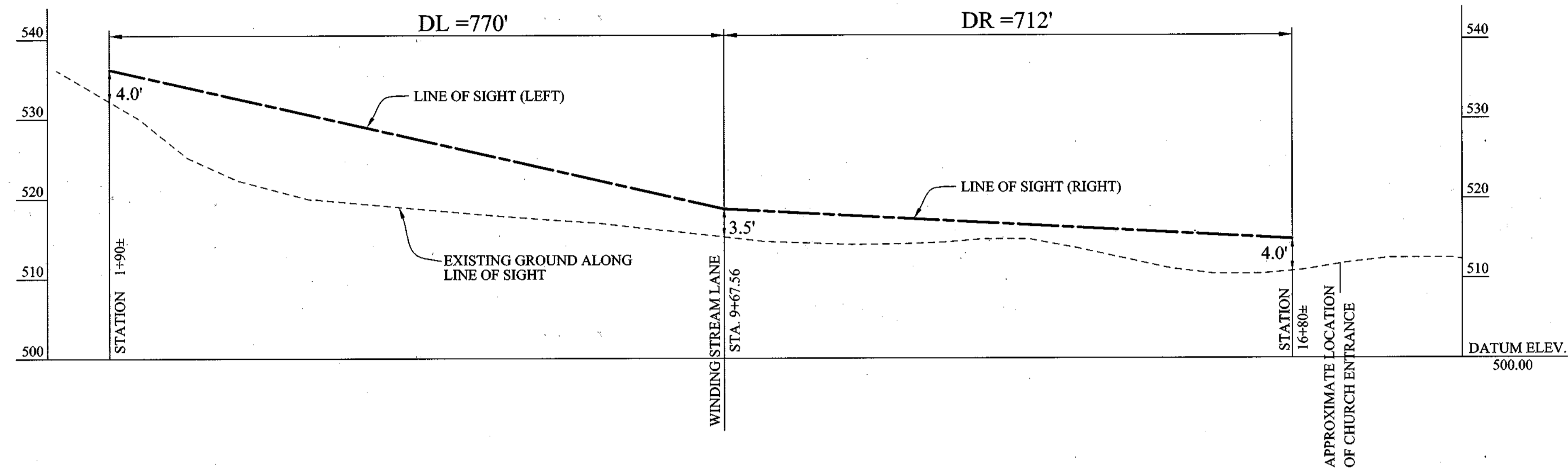
Scale: 1" = 50'

Zoned: RR-DEO

DEVELOPER:  
DALE THOMPSON BUILDERS  
6800 WOODSIDE COURT  
COLUMBIA, MARYLAND 21046  
PHONE: (410) 995-6736  
FAX: (410) 381-8747

NATURAL RESOURCE INVENTORY/FOREST STAND DELINEATION  
OWINGS PROPERTY  
LOT 5  
HOWARD COUNTY, MARYLAND  
5TH ELECTION DISTRICT



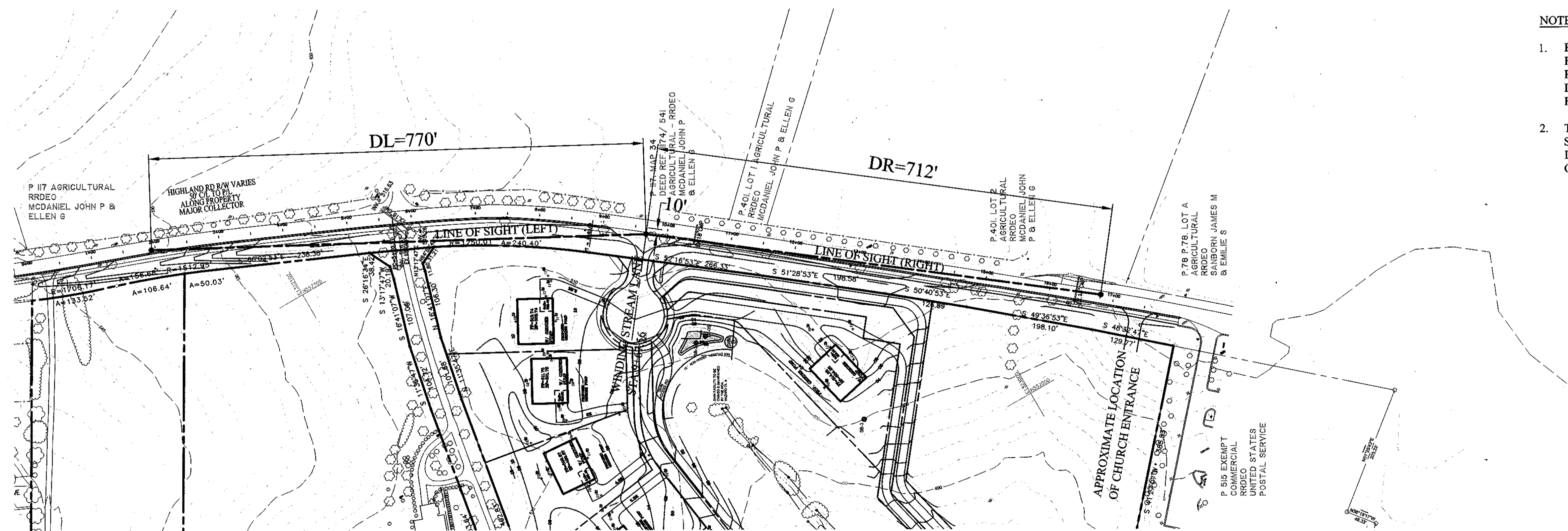


**WINDING STREAM LANE**

**SIGHT DISTANCE LEFT (DL)**  
 85TH PERCENTILE SPEED = 49.9 MPH (USE 50 MPH)  
 South Bound Vehicles  
 Based on figure 2.17 of Design Manual Volume III  
 CROSS N/A  
 LEFT TURN 540'  
 RIGHT TURN 770'  
 Since the vehicles are turning onto an existing road grades that average out to less than 2%, therefore no grade adjustments factors are required to be used.

**SIGHT DISTANCE LEFT (DR)**  
 85TH PERCENTILE SPEED = 46.6 MPH (USE 50 MPH)  
 North Bound Vehicles  
 Based on figure 2.17 of Design Manual Volume III  
 CROSS N/A  
 LEFT TURN 712'

SCALE: HOR.: 1" = 100'  
 VERT: 1" = 10'



SCALE: 1" = 100'

**NOTE:**

- FOR SIGHT DISTANCE STUDY FOR THE PROPOSED ENTRANCE FOR LOT 23, OUR SHEPARD LUTHERAN CHURCH. SEE PLANS PREPARED BY CLARK, FINEPROCK & SACKETT, INC. DATED: FEB. 3, 2003 FILE NO. 02-085-D
- THE 85TH PERCENTILE SPEEDS USED WHERE OBTAINED FROM SPOT SPEED STUDY, PREPARED BY LEE CUNNINGHAM & ASSOC. INC. DATED: FEB. 3, 2003, FOR THE PROPOSED ENTRANCE FOR LOT 23, OUR SHEPARD CHURCH.

TENTATIVELY APPROVED  
 DEPT. OF PLANNING AND  
 ZONING OF  
 HOWARD COUNTY

*David A. Taylor* 2/6/03  
 PLANNING DIRECTOR DATE

OWNER:  
 MR. & MRS. HARWOOD W. OWINGS  
 13009 HIGHLAND ROAD  
 HIGHLAND, MARYLAND 20777

**SIGHT DISTANCE STUDY  
 OWINGS PROPERTY**  
 RESUBDIVISION OF LOT 5  
 CONSISTING OF LOTS 17-25, PARCELS F, G  
 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

Section: NA	Area:	Phase: NA	Scale: 1" = 100'	Sheet: 16 of 16
Tax Map Grid & Parcel: MAP 40, PARCEL 44	Date: MAY 2003	File number: SP-03-03	First Submittal: AUG 30, 2002 Resubmitted: NOV 25, 2002 Resubmitted: FEB 21, 2003 Resubmitted: MAY 15, 2003	



Drawn by: SGB  
 Designed by: RMM  
 Checked by: RMM  
 Zoned: RR-DEO

DEVELOPER:  
 DALE THOMPSON BUILDERS  
 6300 WOODSIDE COURT  
 COLUMBIA, MARYLAND 21046  
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SIGHT DISTANCE STUDY  
 WP - 03 - 056