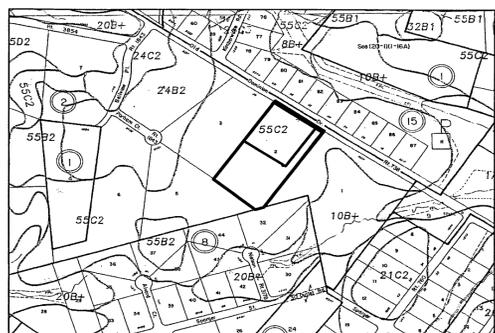


**VICINITY MAP**  
SCALE: 1" = 500'



**SOIL MAP**

**TABULATIONS**

SITE AREA = 217,861 ± OR 5.0014 ACRES  
 ZONE = R-E  
 EXISTING/PROPOSED USE = SINGLE FAMILY DETACHED  
 MAXIMUM BUILDING HEIGHT PERMITTED = 35 FEET  
 MAXIMUM BUILDING HEIGHT EXISTING/PROVIDED = 35 FEET MAXIMUM  
 MINIMUM LOT AREA REQUIRED = 75,000 SF  
 MINIMUM LOT AREA PROVIDED = ±88,000 SF  
 MINIMUM LOT WIDTH REQUIRED = 200' (INTERIOR), 225' (CORNER)  
 MINIMUM LOT WIDTH PROVIDED = ±242' (PROP. LOT 2A), ±50' (PROP. LOT 2B)  
 \*THIS SPECIAL EXCEPTION IS REQUESTED TO PERMIT A REDUCTION IN REQUIRED LOT WIDTH FOR PROPOSED LOT 2B.  
 MINIMUM YARDS:  
 REQUIRED: FRONT YARD: 50 FEET  
 SIDE YARD: 20 FEET  
 REAR YARD: 25 FEET  
 PROVIDED: FRONT YARD: 50 FEET  
 SIDE YARD: 20 FEET  
 REAR YARD: 25 FEET  
 MINIMUM YARDS:  
 PROVIDED: FRONT YARD: 50 FEET  
 SIDE YARD: 20 FEET  
 REAR YARD: 25 FEET  
 PARKING REQUIREMENTS:  
 REQUIRED/PROVIDED: 2 SPACES PER LOT  
 MAXIMUM DENSITY: 0.5 DWELLING UNITS PER ACRE  
 PROPOSED DENSITY: 0.4 DWELLING UNITS PER ACRE

**SHAPE FACTOR CALCULATION**

	LOT 2A	LOT 2B
PERIMETER (IN FEET)	1,191	1,909
TOTAL AREA OF LOT	88,692 SF	124,156 SF
SHAPE FACTOR CALCULATION	$(1,191^2) / 88,692 = 16$	$(1,909^2) / 124,156 = 29$

PER THE FAIRFAX COUNTY ZONING ORDINANCE, THE MATHEMATICAL FORMULA FOR DETERMINING THE SHAPE FACTOR IS (P<sup>2</sup>)/A, WHERE P EQUALS PERIMETER AND A EQUALS THE AREA OF THE LOT.

**STORMWATER MANAGEMENT CHECKLIST**

**MINIMUM STORMWATER INFORMATION FOR REZONING, SPECIAL EXCEPTION, SPECIAL PERMIT AND DEVELOPMENT PLAN APPLICATIONS**

Information is required to be shown or provided in all zoning applications, or a waiver request of the submission requirement with justification shall be attached. Note: Waivers will be acted upon separately, of those to adequately address the required submission information may result in a delay in processing this application.

Information is required under the following Zoning Ordinance paragraphs:  
 This local Ordinance (8-011 2J & 2L) Special Exceptions (9-011 2J & 2L)  
 Spalter Subdivision (9-615 1G & 1N) Commercial Revitalization Districts (9-622 2A (12) & (14))  
 Development Plans PRC District (16-302 3 & 4L) PRC Plan (16-303 1E & 1O)  
 Deep P Districts (except PRC) (16-502 1F & 1Q) Amendments (18-202 10F & 10I)

- 1. Plat is at a minimum scale of 1"=50' (unless it is depicted on one sheet with a minimum scale of 1"=100').
- 2. A graphic depicting the stormwater management facility(ies) and limits of clearing and grading accommodate the stormwater management facility(ies), storm drainage pipe systems and outlet protection, pond spillways, access roads, site outfalls, energy dissipation devices, and stream stabilization measures as shown on Sheet 2.
- 3. Provide:
 

Facility Name/Type & No.	On-site area served (acres)	Off-site area served (acres)	Drainage area (acres)	Footprint area (sf)	Storage Volume (cf)	If pond, dam height (ft)
IT #1	2.63 AC	5.81 AC	8.44 AC	3,900 SF	10,700 CF	
IT #2	1.54 AC	0.39 AC	1.93 AC	1,600 SF	4,500 CF	
Totals						
- 4. Onsite drainage channels, outfalls and pipe systems are shown on Sheet 2 & 4.
- 5. Pond inlet and outlet pipe systems are shown on Sheet N/A.
- 6. Maintenance access (road) to stormwater management facility(ies) are shown on Sheet 2.
- 7. Type of maintenance access road surface noted on the plat is GRAVEL (asphalt, geoblock, gravel, etc.).
- 8. Landscaping and tree preservation shown in and near the stormwater management facility is shown on Sheet 2.
- 9. A 'stormwater management narrative' which contains a description of how detention and best management practices requirements will be met is provided on Sheet 4.
- 10. A description of the existing conditions of each numbered site outfall extended downstream from the site to a point which is at least 100 times the site area or which has a drainage area of at least one square mile (640 acres) is provided on Sheet 4.
- 11. A description of how the outfall requirements, including contributing drainage areas of the Public Facilities Manual will be satisfied is provided on Sheet 4.
- 12. Existing topography with maximum contour intervals of two (2) feet and a note as to whether it is an air survey or field run is provided on Sheets 1, 2.
- 13. A submission waiver is requested for N/A.
- 14. Stormwater management is not required because N/A.

**NOTES:**

1. THE PROPERTY DELINEATED ON THIS PLAT IS LOCATED ON FAIRFAX COUNTY ASSESSMENT MAP No. 20-3 (2) PARCEL 2 AND IS CURRENTLY ZONED R-E.
2. THE PROPERTY SHOWN HEREON IS CURRENTLY IN THE NAME OF THE FOLLOWING:  
 PARCEL 2: MOSTAFA NADIMI & LILY K. SHARIFZADEH-NADIMI  
 DEED BOOK 9751 AT PAGE 599  
 OWNER/DEVELOPER:  
 MOSTAFA AND LILY NADIMI  
 8325 OLD DOMINION DRIVE  
 MCLEAN, VIRGINIA 22102  
 (703) 448-0090
3. BOUNDARY INFORMATION IS BASED UPON A FIELD RUN SURVEY BY THIS FIRM IN NOVEMBER, 2007. CONTOUR TOPOGRAPHIC INFORMATION IS BASED UPON A FIELD RUN SURVEY BY LAND DESIGN & ALLIANTS, INC. IN JUNE 2007. CONTOUR INTERVAL IS TWO FEET.
4. REGULATORY CONSTRUCTION SHALL CONFORM TO THE PROVISIONS OF ALL APPLICABLE ORDINANCES, REGULATIONS AND ADOPTED STANDARDS OF FAIRFAX COUNTY AND VDOT EXCEPT AS REQUESTED HEREIN. THE APPLICANT RESERVES THE RIGHT TO APPLY FOR ANY FUTURE PREPARED/MODIFICATIONS OF PFM DESIGN CRITERIA AT THE TIME OF SUBDIVISION PLAN / PLAT CONFORMATION / SUBMISSION PROVIDED THE WAIVERS/MODIFICATIONS ARE IN SUBSTANTIAL CONFORMANCE WITH THE SPECIAL EXCEPTION.
5. EROSION CONTROL AND SEDIMENT CONTROLS SHALL BE INSTALLED PRIOR TO ANY CLEARING, GRADING, OR CONSTRUCTION AS PER REQUIREMENTS OF THE STATE OF VIRGINIA AND THE CODE OF FAIRFAX COUNTY.
6. LAND DESIGN CONSULTANTS, INC. IS NOT AWARE OF ANY UTILITY EASEMENTS WHICH EXIST ON THE SUBJECT PROPERTY WITH A WIDTH OF 25 FEET OR MORE.
7. ALL UTILITIES INSTALLED AS PART OF THIS PROJECT SHALL BE PLACED UNDERGROUND. THE UTILITIES LOCATIONS SHOWN HEREON ARE FOR ILLUSTRATIVE PURPOSES ONLY AND ARE SUBJECT TO CHANGE BY FINAL ENGINEERING AND APPROVALS. THE APPLICANT WILL UTILIZE WELLS AS SHOWN MAKE SET 2 AND/OR INSTALL A PUBLIC WATER CONNECTION FOR EACH LOT. THE APPLICANT WILL ACCORD TO THE DETERMINATION AT TIME OF SUBDIVISION AND EITHER OPTION WILL BE CONSTRUCTED IN ACCORDANCE WITH THE PFM.
8. CLEARANCE PERMITS SHALL BE OBTAINED IF REQUIRED, AND PROVIDED PRIOR TO ANY CLEARING, GRADING OR CONSTRUCTION.
9. THE PROPOSED HOUSES WILL BE SERVED BY SEPTIC FIELDS. THE PROPOSED HOUSES MAY BE SERVED BY WELLS AND/OR A PUBLIC WATER CONNECTION FROM OLD DOMINION DRIVE. ACCORDANCE WITH THE PFM. ADDITIONAL CLEARING BEYOND THE LIMITS SHOWN HEREON MAY BE REQUIRED FOR INSTALLATION OF THE UTILITIES BASED ON FINAL APPROVED LOCATIONS; HOWEVER, THE TOTAL AMOUNT OF TREE PRESERVATION/COVER WILL NOT DECREASE. THE FINAL LOCATION DEPART WELLS, IF PROVIDED, ARE SUBJECT TO APPROVAL BY THE FAIRFAX COUNTY HEALTH DEPARTMENT. APPROVED LOCATIONS SHOWN ARE ILLUSTRATIVE. THE SEPTIC FIELD LOCATIONS HEREON WERE DETERMINED BY THE HEALTH DEPARTMENT.
10. A RESOURCE PROTECTION AREA (RPA) DOES NOT EXIST ON THE SUBJECT PROPERTY PER COUNTY RECORDS. A RESOURCE MANAGEMENT AREA (RMA), AS DEFINED BY FAIRFAX COUNTY, DOES EXIST ON THE ENTIRE SUBJECT PROPERTY.
11. THE DENSITY COMPREHENSIVE PLAN RECOMMENDS DEVELOPMENT OF THE PROPERTY AS RESIDENTIAL AT A DENSITY OF 1 DWELLING UNIT PER 2 TO 5 ACRES.
12. IN ACCORDANCE WITH THE FAIRFAX COUNTY TRAILS PLAN, A TRAIL IS NOT REQUIRED ALONG THE SUBJECT PROPERTY'S OLD DOMINION DRIVE FRONTAGE.
13. LDC IS NOT AWARE OF ANY BURIAL SITES LOCATED ON THE SUBJECT PROPERTY.
14. OLD DOMINION DRIVE IS NOT SHOWN ON THE VDOT 6 YEAR PLAN TO BE WIDENED OR IMPROVED. OLD DOMINION DRIVE IS NOT SHOWN ON THE COUNTY'S COMPREHENSIVE PLAN AND COUNTYWIDE RIGHT-OF-WAY MAP TO BE WIDENED. HOWEVER, THE APPLICANT HAS PROVIDED ADDITIONAL RIGHT-OF-WAY DEDICATION AS SHOWN ON SHEET 2 OF THE SPECIAL EXCEPTION PLAT.
15. AN ENVIRONMENTAL QUALITY CORRIDOR (EQC) AS DEFINED IN THE ADOPTED COMPREHENSIVE PLAN DOES NOT EXIST ON THE SUBJECT PROPERTY. A MINOR OR MAJOR FLOOD PLAIN, AS DEFINED BY THE FEDERAL INSURANCE ADMINISTRATION AND DEFINED BY THE ZONING ORDINANCE DOES NOT EXIST ON THE SUBJECT PROPERTY. THE COMPONENTS OF A MAXIMUM DENSITY REDUCTION PLAN DO NOT EXIST ON SITE.
16. LDC DOES NOT BELIEVE ANY HAZARDOUS OR TOXIC SUBSTANCES HAVE BEEN GENERATED, PRODUCED, STORED, TREATED, AND / OR DISPOSED OF OR HAVE BEEN OBSERVED ON THE SUBJECT PROPERTY.
17. DEVELOPMENT OF THIS PROJECT SHALL COMMENCE AT SUCH TIME AS APPROPRIATE COUNTY PERMITS HAVE BEEN OBTAINED AND SUBJECT TO THE DISCRETION OF OWNER / DEVELOPER. A GEOTECHNICAL REPORT SHALL BE SUBMITTED FOR REVIEW BY FAIRFAX COUNTY CURRENTLY WITH THE FINAL SUBDIVISION PLAN, IF REQUIRED.
18. THE SUBJECT PROPERTY WILL MEET SWM/BMP REQUIREMENTS THROUGH THE PROVISION OF A RAINWATER INFILTRATION SYSTEM TRENCH(ES) ON EACH LOT. THESE TRENCH(ES) WILL BE PRIVATELY OWNED AND A MAINTENANCE AGREEMENT RECORDED IN THE LAND RECORDS OF FAIRFAX COUNTY. THE LIMITS OF CLEARING AND GRADING AND TREE PRESERVATION AREAS MAY BE ADJUSTED BASED ON FINAL ENGINEERING; HOWEVER THE TOTAL AMOUNT OF TREE PRESERVATION/COVER WILL NOT DECREASE. A PFM MODIFICATION WILL BE REQUIRED TO PERMIT A PFM MODIFICATION ON EACH LOT AND WILL BE SUBMITTED AT TIME OF SUBDIVISION. A PFM MODIFICATION WILL BE REQUIRED TO PERMIT THE USE OF RAINWATER INFILTRATION SYSTEM TRENCH(ES).
19. ALL FOOTPRINT DIMENSIONS ARE APPROXIMATE AND FOR ILLUSTRATIVE PURPOSES, TYPICAL BUILDING FOOTPRINTS SHOWN MAY BE REDUCED PROVIDED THAT MODIFICATIONS ARE IN SUBSTANTIAL CONFORMANCE WITH THE SPECIAL EXCEPTION PLAT, THE MINIMUM YARDS ARE PROVIDED, AND THE SUBSTANTIAL AMOUNT OF PROPOSED TREE SAVE AREAS AND VEGETATION ARE NOT IMPACTED AND ARE IN SUBSTANTIAL CONFORMANCE WITH THAT PROVIDED HEREIN. MINOR ADJUSTMENTS TO THE LIMITS OF CLEARING AND GRADING MAY BE PERMITTED PROVIDED THE TOTAL PROPOSED TREE SAVE AREAS AND VEGETATION ARE NOT IMPACTED AND ARE IN SUBSTANTIAL CONFORMANCE WITH THAT PROVIDED HEREIN. HOWEVER MINOR CHANGES TO THE LIMITS OF CLEARING & GRADING WITHIN 60 FEET OF THE BOUNDARY OF TAX MAP 20-3 (2) 3B AND PROPOSED LOT 2B MAY ONLY BE MADE WITH THE WRITTEN AGREEMENT OF THE OWNER OF LOT 3B.
20. THESE AREAS TO BE PRESERVED HAVE BEEN DEPICTED ON THE SPECIAL EXCEPTION PLAT. THESE AREAS WILL BE PROTECTED DURING CONSTRUCTION THROUGH THE UTILIZATION OF TREE PROTECTION FENCING.
21. MINOR ADJUSTMENTS TO THE UTILITY LOCATIONS SHALL BE PERMITTED IN ACCORDANCE WITH THAT SHOWN ON THE PLAT AND SHALL BE IN SUBSTANTIAL CONFORMANCE WITH THAT PROVIDED HEREIN.
22. THE MINIMUM PARKING REQUIREMENTS WILL BE MET FOR EACH PROPOSED LOT VIA A GARAGE PROVIDED ON EACH LOT.
23. ALL EXISTING STRUCTURES ON PROP. LOT 2A WILL BE PRESERVED. EXISTING HOUSE AND DRIVEWAY ON PROP. LOT 2A CONSTRUCTED 1941. APPLICANT RESERVES THE RIGHT TO MODIFY THE EXISTING HOUSE PROVIDED THE LIMITS OF CLEARING AND GRADING DO NOT DECREASE AND TREE PRESERVATION IS NOT IMPACTED AND THE APPROPRIATE PERMITS ARE OBTAINED.
24. A TITLE REPORT HAS NOT BEEN PROVIDED, THEREFORE ALL ENCUMBRANCES MAY NOT BE SHOWN.
25. FIELD LOCATIONS OF ALL TREES TO BE PLANTED INSIDE THE TREE SAVE AREAS SHALL BE IDENTIFIED IN THE FIELD AT THE TIME OF LANDSCAPING OPERATIONS AND COORDINATED WITH THE FOREST MANAGEMENT DIVISION, THE PROJECT ARBORIST AND THE LANDSCAPE CONTRACTOR. REQUIREES SHOWN IN THE TREE SAVE AREA MAY BE RELOCATED ON THE SUBJECT PROPERTY, IF REQUESTED, HOWEVER THE SAME NUMBER OF TREES SHALL BE PROVIDED.
26. THE SHOWN LIMITS OF THE ACTIVE AND RESERVE SEPTIC FIELD FOR PROPOSED LOT 2B HAVE BEEN SHOWN ON SHEET 2. AT TIME OF INITIAL CONSTRUCTION, ONLY THE AREA REQUIRED FOR THE ACTIVE AND RESERVE SEPTIC FIELD SHALL BE CLEARED. THE RESERVE AREA (APPRX. 3,150 SF.) WILL REMAIN UNCLEARED AND UNDISTURBED UNTIL SUCH TIME THIS AREA IS NEEDED IN ACCORDANCE WITH COUNTY AND STATE REQUIREMENTS. ACCORDINGLY, THE RESERVE AREA FOR PROP. LOT 2A (APPRX. 450 S.F.) WILL REMAIN UNDISTURBED & UNCLEARED UNTIL SUCH TIME THIS AREA IS REQUIRED. THE TREES IN THESE AREAS WILL BE SAVED UNTIL SUCH TIME THESE AREAS ARE CLEARED FOR USE OF THE FIELD. THE TREES IN THESE AREAS WILL NOT BE UTILIZED FOR TREE PRESERVATION CREDIT.

**SHEET INDEX**

1. COVER SHEET
2. SPECIAL EXCEPTION PLAT
3. EXISTING CONDITIONS/EXISTING VEGETATION MAP
4. SWM/BMP INFO. & NARRATIVES
- 4A. TREE PRESERVATION INFO. & NOTES



9401 CENTREVILLE ROAD, SUITE 300  
 MANASSAS, VIRGINIA 20110  
 PH: 703-257-5600 FAX: 703-257-5656

**COVER SHEET**  
 RECEIVED  
 Department of Planning  
 APR 16 2007  
 Zoning Evaluation Division

**8325 OLD DOMINION DRIVE**  
 DRANESVILLE DISTRICT  
 FAIRFAX COUNTY, VIRGINIA

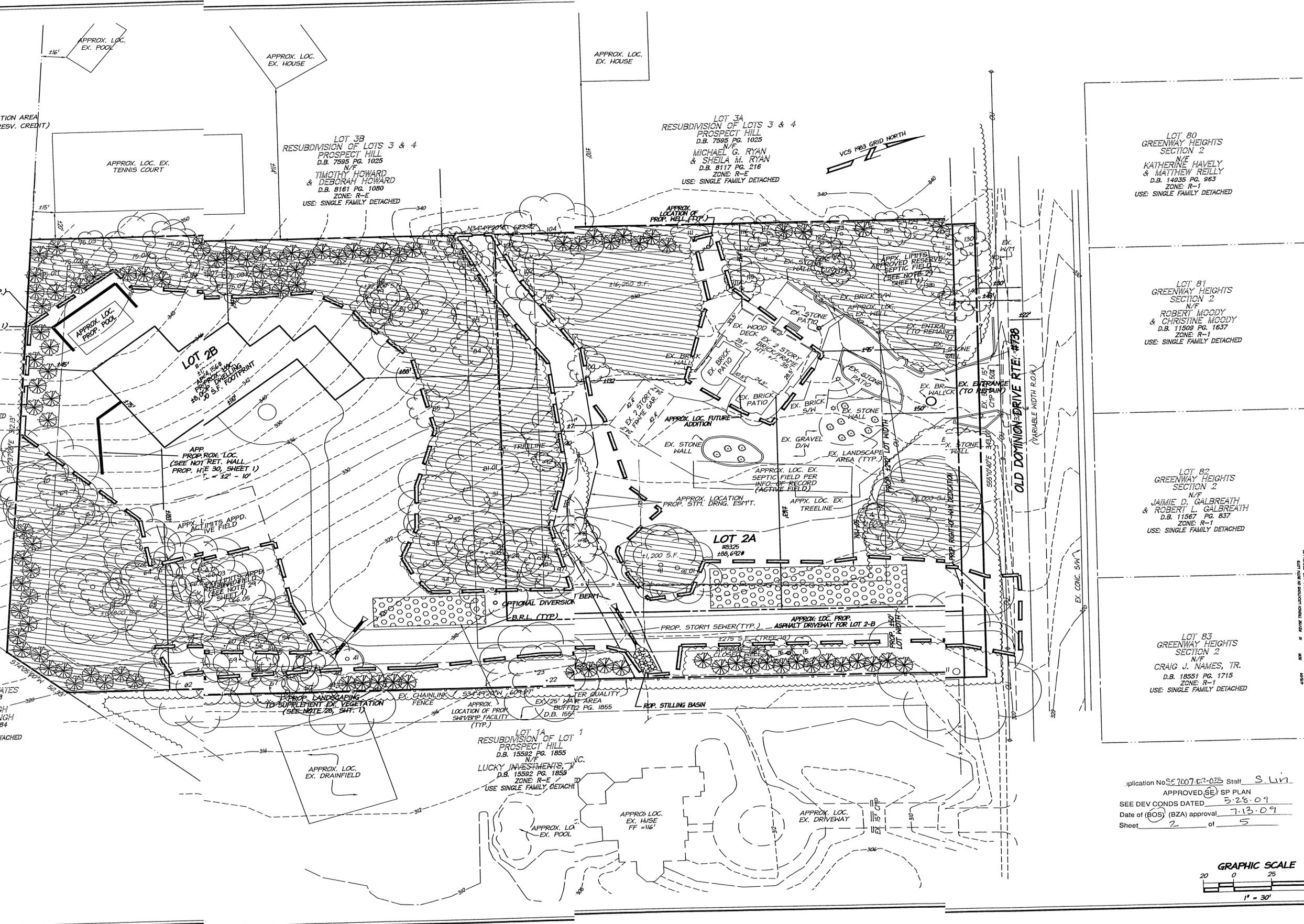
NO.	DATE	DESCRIPTION	REVISION APPROVED BY:
1	4/15/07	ISSUE FOR CONSTRUCTION PERMITS (PART 1 ONLY)	
2	4/15/07	ISSUE FOR CONSTRUCTION PERMITS (PART 2 ONLY)	
3	4/15/07	NO CHANGES TO SHEET	
4	4/15/07	NO CHANGES	
5	4/15/07	ISSUE AFTER U.S. SWP CHECKED FOR TREE PROTECT NETWORK	
6	4/15/07	ISSUE AFTER U.S. SWP CHECKED FOR TREE PROTECT NETWORK	
7	4/15/07	ISSUE AFTER U.S. SWP CHECKED FOR TREE PROTECT NETWORK	

I HEREBY CERTIFY THAT OTHER THAN THE REVISIONS SHOWN HEREON, NO OTHER CHANGES HAVE BEEN MADE.

COMMUNITY HEALTH OF VIRGINIA  
 MATTHEW T. MARSHALL  
 Lic. No. 1525-B  
 4/15/07  
 LAND SURVEYOR

SCALE: N/A  
 SHEET 1 OF 4  
 DATE: JUNE, 2007  
 DRAFT: KMA CHECK: MTT  
 FILE NUMBER: 07065-1-0-5B

- LEGEND**
- ^ EX. GUY WIRE
  - ~ PROP. TREE LINE
  - EX. TREE LINE
  - EX. UTILITY POLE
  - O-O- EX. OVERHEAD UTILITY
  - \* EX. LAMP POST
  - O-O- EX. CHAIN LINK FENCE
  - X-X- EX. WROUGHT IRON FENCE
  - ▨ PROPOSED TREE PRESERVATION AREA (DESIGNATED FOR TREE PRESV. CREDIT)



**LAND DESIGN CONSULTANTS**  
 PLAN FOR SUCCESS  
 WWW.LDC-VA.COM  
 9407 CENTREVILLE ROAD, SUITE 300  
 MANASSAS, VIRGINIA 20110  
 PH: 703-257-5600 FX: 703-257-5665

**SPECIAL EXCEPTION PLAT**

**8325 OLD DOMINION DRIVE**  
 DRANESVILLE DISTRICT  
 FAIRFAX COUNTY, VIRGINIA

NO.	DATE	DESCRIPTION	REVISION APPROVED BY:	APPROVED DATE

I HEREBY CERTIFY THAT OTHER THAN THE REVISIONS SHOWN HEREON, NO OTHER CHANGES HAVE BEEN MADE.

COMMONWEALTH OF VIRGINIA  
 MATTHEW T. MARSHALL  
 Lic. No. 1525-B  
 4/15/09  
 LAND SURVEYOR  
 SCALE:  
 1" = 30'

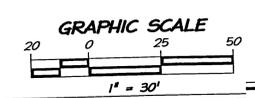
LOT 80  
 GREENWAY HEIGHTS SECTION 2  
 N/F  
 KATHERINE HAVELY & MATTHEW REILLY  
 D.B. 14935 PG. 963  
 ZONE: R-1  
 USE: SINGLE FAMILY DETACHED

LOT 81  
 GREENWAY HEIGHTS SECTION 2  
 N/F  
 ROBERT MOODY & CHRISTINE MOODY  
 D.B. 11509 PG. 1637  
 ZONE: R-1  
 USE: SINGLE FAMILY DETACHED

LOT 82  
 GREENWAY HEIGHTS SECTION 2  
 N/F  
 JAMIE D. GALBREATH & ROBERT L. GALBREATH  
 D.B. 11567 PG. 837  
 ZONE: R-1  
 USE: SINGLE FAMILY DETACHED

LOT 83  
 GREENWAY HEIGHTS SECTION 2  
 N/F  
 CRAIG J. NAMES, TR.  
 D.B. 18551 PG. 1715  
 ZONE: R-1  
 USE: SINGLE FAMILY DETACHED

Application No. SE 1007-E2-025 Staff: S. L. W.  
 APPROVED (SE) SP PLAN  
 SEE DEV CONDS DATED 5.26.09  
 Date of (BOS) (BZA) approval 7.13.09  
 Sheet 2 of 5





**STORMWATER MANAGEMENT NARRATIVE**

THE STORMWATER MANAGEMENT REQUIREMENTS FOR THE SUBJECT PROPERTY SHALL BE SATISFIED VIA THE CONSTRUCTION OF TWO RAIN TANK INFILTRATION TRENCH SYSTEMS. THESE FACILITIES SHALL BE DESIGNED IN ACCORDANCE WITH THE PUBLIC FACILITIES MANUAL (PFM) AND LETTER TO INDUSTRY 01-II.

THE TRENCHES HAVE BEEN DESIGNED FOR THE 10 YEAR 2 HOUR STORM IN ORDER TO PROVIDE DETENTION FOR THE 1, 2 & 10 YEAR STORM EVENTS AND TO MEET BMP REQUIREMENTS. THE SITE CURRENTLY HAS SEVERAL EXISTING BUILDINGS, PAVED SURFACES, AND SOME TREES. CURRENTLY, APPROXIMATELY 12.72 CFS OF RUNOFF IS LEAVING THE SUBJECT PROPERTY UNCONTROLLED AND UNTREATED. WITH THE PROPOSED ATTENUATION, THE POST DEVELOPMENT RUNOFF WILL BE REDUCED SUBSTANTIALLY. THEREFORE, THERE WILL BE A REDUCTION IN RUNOFF LEAVING THE PROPERTY AS A RESULT OF THE PROPOSAL. THE TRENCHES HAVE BEEN SIZED TO PROVIDE WATER QUALITY AND QUANTITY CONTROL FOR THE SUBJECT PROPERTY AS WELL AS PORTIONS OF TWO UPSTREAM PROPERTIES CURRENTLY WITHOUT CONTROLS TO IMPROVE THE EXISTING ON-SITE DRAINAGE ISSUES. THIS ADDITIONAL OFFSITE CONTROL IS BEING PROVIDED ABOVE AND BEYOND THE MINIMUM REQUIREMENTS OF THE PFM AND WILL PROVIDE A WATER QUALITY BENEFIT FOR THE LOCAL WATERSHED.

ON DECEMBER 17, 2007, TERRA ENGINEERING SERVICES, INC. COMPLETED INFILTRATION TESTING IN THE VICINITY OF THE INFILTRATION TRENCHES. PER THIS FIELD INVESTIGATION, NO ROCK OR GROUNDWATER WAS ENCOUNTERED THROUGH A DEPTH OF TEN FEET, WHICH IS APPROX. 4.5 FEET BELOW THE PROPOSED BOTTOM OF THE INFILTRATION TRENCHES. AN AVERAGE INFILTRATION RATE GREATER THAN THE MINIMUM REQUIRED (3.1 & 3.8 INCHES/HOUR OBSERVED) WAS RECORDED AT DEPTHS BELOW SEVEN FEET. THE APPROXIMATE DEPTH OF THE INFILTRATION TRENCHES IS 5 FEET. THEREFORE LDC BELIEVES THE RESULTS OF THIS SUBSURFACE EXPLORATION ILLUSTRATES ADEQUACY OF THE PROPOSED INFILTRATION TRENCHES.

THE FINAL DESIGN OF THE TRENCHES IS SUBJECT TO FURTHER REVIEW BY A GEOTECHNICAL ENGINEER AND FINAL ENGINEERING. ADDITIONAL INFILTRATION TESTING WILL OCCUR AT TIME OF SUBDIVISION PLAN SUBMISSION PER THE REQUIREMENTS OF THE PFM. ALL MAINTENANCE SHALL BE CONDUCTED IN ACCORDANCE WITH CHAPTER 3, STANDARD 3.10 OF THE VIRGINIA STORMWATER MANAGEMENT HANDBOOK.

THE EXISTING DRAINAGE COMPLAINTS ON THE SUBJECT PROPERTY WERE FILED BY THE PROPERTY OWNERS. THESE COMPLAINTS WERE THE RESULT OF UNCONTROLLED RUNOFF GENERATED BY UPSTREAM DEVELOPMENT. THIS RUNOFF HAS CREATED AN ERODED CHANNEL THAT IS BISECTING THE SUBJECT PROPERTY. TO REMEDY THIS ISSUE, THE APPLICANT IS PROPOSING TO REGRADE THIS EXISTING, ERODED SWALE IN ORDER TO REDUCE THE VELOCITY OF THE RUNOFF BELOW AN EROSION RATE AS DETERMINED BY FINAL ENGINEERING. THIS SWALE WILL BE FURTHER ENCUMBERED WITH A STORM DRAINAGE EASEMENT IN CONJUNCTION WITH THE SUBDIVISION PLAN.

THE FACILITIES SHALL BE MAINTAINED BY THE INDIVIDUAL HOMEOWNERS AND THE MAINTENANCE SHALL BE PERFORMED IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS. A PFM MODIFICATION WILL BE SUBMITTED AT TIME OF SUBDIVISION TO PERMIT THESE FACILITIES ON INDIVIDUAL BUILDING LOTS AND TO PERMIT THE USE OF THE RAIN TANK INFILTRATION TRENCH SYSTEMS.

**OUTFALL NARRATIVE**

THE SUBJECT PROPERTY IS LOCATED WITHIN THE BULL NECK RUN WATERSHED. THE SUBJECT PROPERTY MAINTAINS TWO STORM DRAINAGE OUTFALLS. NO FLOODPLAIN OR RPA AREAS EXIST ON THE PROPERTY.

OUTFALL #1 DISCHARGES FROM THE PROPERTY TO THE EAST ONTO THE FRONT OF ADJACENT LOT #1 ARE PROSPECT HILLS. STORMWATER MANAGEMENT AND BEST MANAGEMENT PRACTICES FOR OUTFALL #1 PROVIDED BY A PROPOSED RAIN TANK INFILTRATION SYSTEM TRENCH ON PROPOSED LOT 2A (ATION). A "STORMWATER MANAGEMENT INFORMATION" ON THIS SHEET FOR INFILTRATION TRENCH INFORMATION AND WILL STORM SENEER CULVERT IS PROPOSED UNDER THE PROPOSED DRIVEWAY FOR PROPOSED LOT 2A AND WILL DISCHARGE INTO A STILLING BASIN. THE INVERT OF THIS CULVERT SHALL BE SET AT THE TL FUNCTION AS WATER SURFACE ELEVATION FOR THE PROPOSED INFILTRATION TRENCH. THIS CULVERT SHALL RECEIVING AN OVERFLOW FACILITY FOR STORMS THAT EXCEED THE TEN YEAR EVENT. THE DOWNSTREAM UNCTION WITH SWALE IS CHARACTERIZED AS A GRADED SWALE THAT WAS CONSTRUCTED RECENTLY IN CONJUNCTION WITH A NON-BONDED INFILL LOT GRADING PLAN. THIS SWALE IS LARGELY PARABOLIC IN SHAPE AND PER A RUNOFF THROUGH THE DOWNSTREAM PROPERTY TO AN EXISTING 15" CORRUGATED METAL PIPE AND PER A BENEATH THE EXISTING DRIVEWAY. THIS SWALE MAINTAINS A VERY DENSE STAND OF GRASS OR FLOODING. FIELD INSPECTIN IS IN EXCELLENT CONDITION AND NOT EXPERIENCING ANY SIGNS OF EROSION.

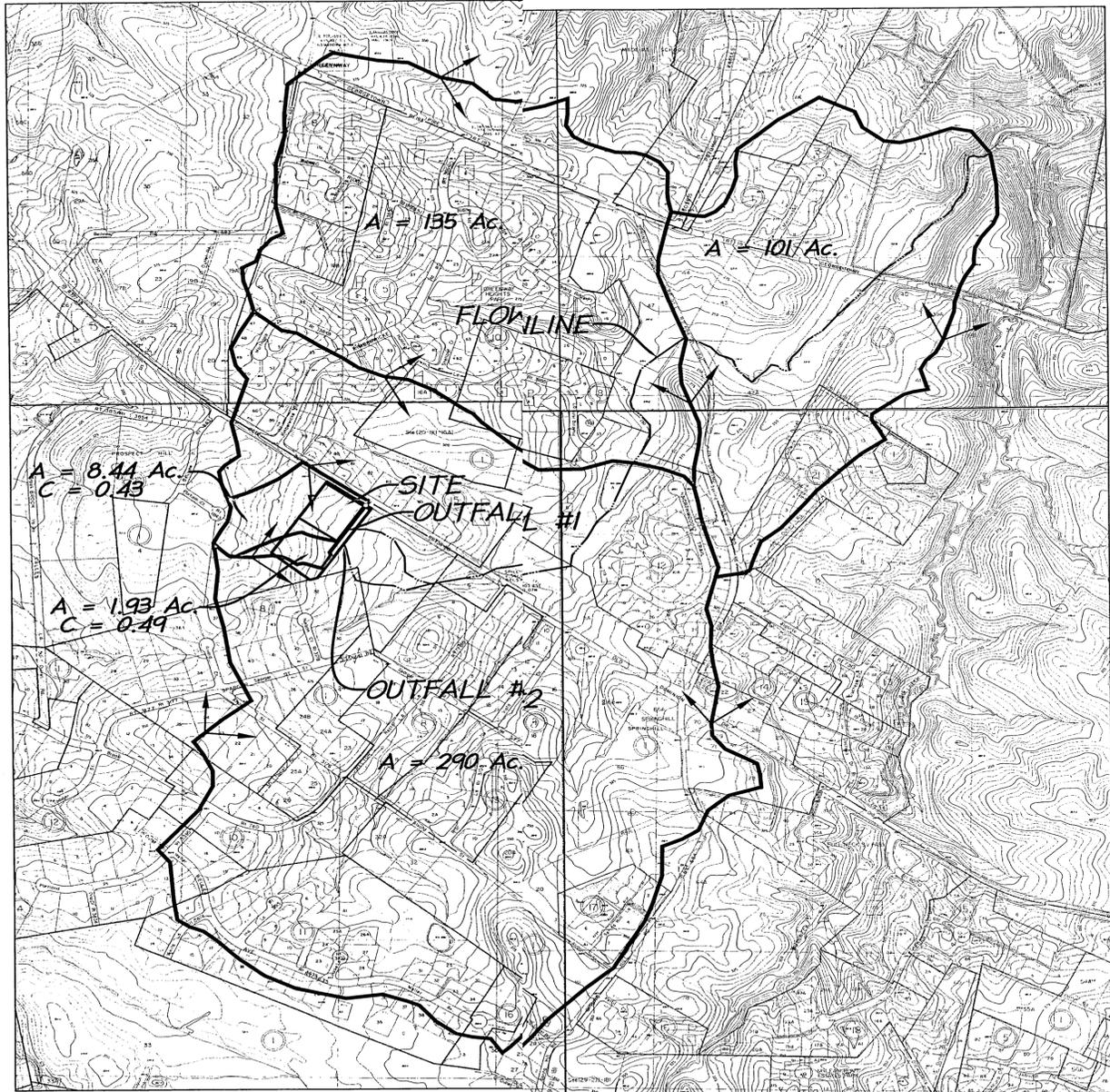
THIS OUTFALL CONVEYS APPROXIMATELY 8.44 ACRES OF DRAINAGE THROUGH THE SUBJECT PINAGE SHED A RESULT OF THE CONSTRUCTION OF THE PROPOSED INFILTRATION TRENCH WITHIN THIS DRA) AND TEN NEARLY ALL SURFACE RUNOFF SHALL BE ELIMINATED DURING PRINCIPAL STORM EVENTS (TWELVE YEAR). THE CULVERT SHALL ONLY FUNCTION DURING HIGH INTENSITY EVENTS AND ULTIMATELY. THIS OVERTOPPING OF THE PROPOSED DRIVEWAY WILL OCCUR IN AN OVERLAND RELIEF CIRCUMSTANCES. OUTFALL IS ADEQUATE IN ACCORDANCE WITH SECTION 6-0202.6A OF THE PUBLIC FACILITIES I

LOT 1A, AS PROSPECT HILLS. RUNOFF THAT EXCEEDS THE TEN YEAR DESIGN CAPACITY OF THE INFILTRATION TRENCH ON LOT 2B SHALL DISCHARGE OVERLAND IN A NON-CONCENTRATED MANNER. AS STATED PER RATE AND DISCHARGE WILL BE IN A NON-CONCENTRATED MANNER AND WILL BE LESS THAN THE EXISTING GOOD STAND VOLUME IN ACCORDANCE WITH PFM SECTION 6-0202.6A. THE EXISTING OUTFALL MAINTAINS A) BE AND IS IN EXCELLENT CONDITION AND BASED UPON VISUAL INSPECTION DOES NOT APPEAR TO BE CHANNEL EXPERIENCING ANY EROSION. THE OUTFALL CONTINUES DOWNSTREAM TO A NATURALLY DEFINED CHANNEL WITHIN AN EXISTING STORM DRAINAGE EASEMENT ON LOT 1C WHERE IT JOINS THE DISCHARGE

THE RAIN TANK INFILTRATION SYSTEM TRENCHES HAVE BEEN DESIGNED TO ACCOMMODATE RUNOFF GREATER THAN THE MINIMUM REQUIREMENTS FOR THE SUBJECT PROPERTY. BOTH TRENCHES SHALL CONTROL ALL ON-SITE, DEVELOPED RUNOFF IN ADDITION TO UPSTREAM, OFFSITE RUNOFF. THESE UPSTREAM AREAS ARE NOT CURRENTLY SERVED BY ANY STORM WATER MANAGEMENT FACILITIES AND MAINTAIN A SUBSTANTIAL AMOUNT OF IMPERVIOUS COVER. THESE FACILITIES SHALL PROVIDE BOTH MAINTAIN QUALITY AND QUANTITY CONTROLS FOR PORTIONS OF THE UPSTREAM PROPERTIES AND WILL SUBSTANTIALLY REDUCE THE VOLUME AND RATE OF CONCENTRATED RUNOFF THAT DISCHARGES THROUGH THE SUBJECTS THE IN ADDITION, THIS APPLICATION SHALL REGRADE THE EXISTING, ERODED SWALE THAT BISECTS THE SUBJECT PROPERTY AS DEEMED APPROPRIATE DURING THE FINAL ENGINEERING. THIS EROSION GRADING CATALYST FOR THE EXISTING DRAINAGE COMPLAINTS THAT WERE FILED WITH THE COUNTY. ADDITION THIS SHALL REDUCE THE VELOCITY BELOW AN EROSION RATE AND PROPERLY STABILIZE IT. IN A CHANNEL SHALL BE ENCUMBERED WITH A STORM DRAINAGE EASEMENT.

THE OUTFALLS JOIN TOGETHER WITHIN AN EXISTING NATURAL CHANNEL THAT IS ENCUMBERED WITH AN EXISTING STORM DRAINAGE EASEMENT ON DOWNSTREAM LOT 1C, THE WELL DEFINED NATURAL CHANNEL WITHIN AN EXISTING FLOODPLAIN EASEMENT TO AN EXISTING WET POND WITHIN THE "CLEAN COUNTRY" ALL LEAVES THE SUBDIVISION. THE TOTAL DRAINAGE AREA TO THIS POINT IS ±300 ACRES. ONCE THE OUTFALLS AT EXISTING WET POND IT CONTINUES AS A NATURAL FLOODPLAIN CHANNEL TO A CULVERT CROSSING AT SPRING HILL ROAD. THE TOTAL DRAINAGE AREA TO THIS POINT IS ±435 ACRES. ONCE THE FLOODPLAIN CROSSES SPRING HILL ROAD THROUGH AN EXISTING CULVERT IT CONTINUES AS A NATURAL CHANNEL CHANNEL TO A CULVERT CROSSING AT GEORGETOWN PIKE AND THEN AS A NATURAL FLOODPLAIN CHANNEL ABOUT 1000' DOWNSTREAM TO A POINT WHERE THE TOTAL DRAINAGE AREA IS ±535 ACRES. A OF 5.0 INVESTIGATION WAS TERMINATED AT THIS POINT AS IT MORE THAN 100 TIMES THE SITE AREA ACRES.

IT IS OUR PROFESSIONAL OPINION THAT THE OUTFALL IS ADEQUATE IN ACCORDANCE WITH THE PFM AS STATED ABOVE.



**DRAINAGE AREA MAP @**  
SCALE: 1" = 500'

**STORMWATER MANAGEMENT INFORMATION**

TYPE OF FACILITIES = INFILTRATION TRENCH, RAIN TANKS, FACILITY MAINTENANCE  
 INFILTRATION TRENCH #1 - PRIVATE/INDIVIDUAL HOMEOWNERS  
 APPROXIMATE REQUIRED (LOT 2A)  
 APPROXIMATE PROPOSED 10-YEAR VOLUME = 10,200 C.F.  
 APPROXIMATE SURFACED VOLUME = 4,500 C.F.  
 APPROXIMATE FINISHED AREA = 3,900 S.F.  
 APPROXIMATE GRADE 1 GRADE = 316.4  
 THIS FACILITY SHALL CRENCH BOTTOM = 313.0  
 OF OFFSITE RUNOFF. CONTROL APPROXIMATELY 5.81 AC.

INFILTRATION TRENCH #2 (LOT 2B)  
 APPROXIMATE PROPOSED 10-YEAR VOLUME = 4,400 C.F.  
 APPROXIMATE SURFACED VOLUME = 1,600 C.F.  
 APPROXIMATE FINISHED AREA = 1,600 S.F.  
 APPROXIMATE GRADE 1 GRADE = 318.4  
 THIS FACILITY SHALL CRENCH BOTTOM = 315.0  
 OF OFFSITE RUNOFF. CONTROL APPROXIMATELY 0.39 AC.

**PRE-DEVELOPMENT SUBJECT PROPERTY**  
 $Q_2 = (5.00)(3.45)(0.35) = 9.54$  CFS  
 $Q_{10} = (5.00)(7.27)(0.35) = 12.72$  CFS

**POST-DEVELOPMENT SUBJECT PROPERTY**  
 $Q_2 = 2.0$  CFS AFTER ATTENUATION  
 $Q_{10} = 3.0$  CFS AFTER ATTENUATION

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8325 OLD DOMINION DRIVE  
 DRANESVILLE DISTRICT  
 FAIRFAX COUNTY, VIRGINIA

NO.	DATE	DESCRIPTION	REVISION APPROVED BY:
1		ISSUE SHEET	
2		UPDATE INFORMATION	
3		NO CHANGES TO SHEET	
4		NO CHANGES	
5		UPDATE OFFICIAL JURISDICTION TO ADDRESS OFFICIAL COMMENTS AND SHEET ERS.	
6		NO CHANGES	
7		UPDATE INFORMATION	
8		UPDATE INFORMATION	

I HEREBY CERTIFY THAT OTHER THAN THE REVISIONS SHOWN HEREON, NO OTHER CHANGES HAVE BEEN MADE.



SCALE: AS SHOWN

SHEET 4 OF 4  
 DATE: DEC., 2007  
 DRAFT: SDR CHECK: MTT  
 FILE NUMBER: 07065-1-0-5B

