

GENERAL NOTES

- TAX MAP # 12-1-(88)-4A2
- TOTAL PROPERTY ACREAGE: 39,961 SF OR 0.9174 AC
- TOTAL DISTURBED AREA: 28,780 SF OR 0.660 AC
- WATERSHED FOR SUBJECT PROPERTY: DIFFICULT RUN
- ZONE: R-1
 SETBACKS:
 FRONT: 40'
 SIDES: 20'
 REAR: 25'
 MAX. BUILDING HEIGHT: 35'
- NO TITLE REPORT HAS BEEN FURNISHED TO THIS FIRM, THEREFORE THIS PLAN DOES NOT PURPORT TO IDENTIFY OR SHOW ALL POSSIBLE EASEMENTS OR INCUMBRANCES.
- ALL CONSTRUCTION SHALL CONFORM TO FAIRFAX COUNTY AND VIRGINIA DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS WHERE APPLICABLE.
- PROFFERED OR CONDITIONED SITE: YES NO
- WATER SUPPLY: PUBLIC WELL
- SEWER SERVICE: PUBLIC PRIVATE
- BOUNDARY BY: _____ DATE: _____
- TOPO BY: SDE, INC. DATE: 10/20/2010
- TOPO DATUM: U.S.G.S AND CONTOUR INTERVAL 2'
- CONSTRUCTION LOCATED WITHIN:
 SLOPES OVER 15%: YES NO
 R.P.A.: YES NO
 R.M.A.: YES NO
 OVERLAY DISTRICT: YES NO
 WETLANDS: YES NO
- ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL CONFORM TO THE LATEST EDITION OF THE "VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK" AND AS MODIFIED BY FAIRFAX COUNTY CODE 104-1-8.
- TO THE BEST OF OUR KNOWLEDGE THERE ARE NO KNOWN GRAVE SITES ON THIS PROPERTY.
- THIS LOT RECORDED PRIOR TO AUGUST 1, 1978 AND AS SUCH IS NOT REQUIRED TO MEET CURRENT LOT WIDTH AND SIZE REQUIREMENTS UNDER FAIRFAX COUNTY ZONING ORDINANCE, ARTICLE 2-405. APPLIES N/A
- SEPARATE BUILDING PERMIT REQUIRED FOR RETAINING WALLS 2.0 FEET AND HIGHER.
- FOR SLOPES 3:1 OR GREATER PERMANENT GROUND STABILIZATION COVER PER FAIRFAX COUNTY FPM SECTION 6-1503.4 SHALL BE PROVIDED TO PREVENT EROSION OF THE SLOPE BANKS. NO SLOPES GREATER THAN 2:1 ARE PERMITTED. MINIMUM 2% GRADE REQUIRED FOR ALL GRADED AREAS OF THE LOT.
- CONTRACTOR TO STAKE OUT THE PROPERTY LINE WHERE CLEARING AND GRADING LIMITS ARE COINCIDENT OR ADJACENT TO THE PROPERTY LINE.
- CONTRACTOR TO ENSURE NO SEDIMENT IS CONVEYED ONTO OFFSITE PROPERTIES AND FOR THE STABILIZATION OF ALL DISTURBED AREAS.
- ALL UTILITIES CONNECTIONS ARE IN PLACE. THEREFORE NO NEW UTILITIES CONNECTIONS ARE PROPOSED BY THIS DEVELOPMENT UNLESS IT IS DEEMED NECESSARY.
- CONTRACTOR TO MAINTAIN POSITIVE SURFACE FLOW AWAY FROM BUILDING IN ACCORDANCE WITH BUILDING CODE. BUILDING TO BE PROPERLY WATERPROOFED BY THE CONTRACTOR IN ACCORDANCE WITH BUILDING CODE.
- CONTRACTOR SHALL VERIFY ALL GRADES WITHIN PROJECT SITE PRIOR TO CONSTRUCTION AND SHALL IMMEDIATELY NOTIFY DESIGN ENGINEER OF ANY DISCREPANCIES BETWEEN FIELD ELEVATIONS AND ELEVATIONS ON THIS PLAN.
- NO SUBSURFACE INVESTIGATION HAS BEEN MADE BY THIS COMPANY FOR THE SUBJECT PROPERTY.
- CONTRACTOR SHALL INSTALL TEMPORARY TREE PROTECTION AROUND EXISTING TREES AND TAKE CARE DURING CONSTRUCTION AND GRADING ACTIVITIES. NO EXISTING TREES ARE TO BE REMOVED DURING CONSTRUCTION IF POSSIBLE. IF IT IS NECESSARY FOR MECHANIZED EQUIPMENT TO TRAVEL OVER THE EXISTING ROOT SYSTEM OF A LARGE TREE, CONTRACTOR SHALL PROVIDE MEASURES TO PROTECT THE ROOT SYSTEM FROM DAMAGE.
- NO HAZARDOUS OR TOXIC SUBSTANCES WILL BE GENERATED, UTILIZED, STORED, TREATED, OR DISPOSED OF NOR HAVE BEEN OBSERVED ON THE SUBJECT PROPERTY.

EXISTING PROPERTY OWNER

NAME: VERSAILLES CUSTOM HOMES AND DEVELOPMENTS INC.
 ADDRESS: 627 WALKER ROAD, GREAT FALLS, VA 22066
 D.B. 21284, PAGE 2026

VDOT NOTE

- METHODS AND MATERIALS USED SHALL CONFORM TO CURRENT COUNTY/TOWN AND VDOT STANDARDS AND SPECIFICATIONS.
- THE DEVELOPER IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING ROADS AND UTILITIES WHICH OCCUR AS A RESULT OF PROJECT CONSTRUCTION WITHIN OR CONTIGUOUS TO THE EXISTING RIGHT-OF-WAY.
- OVERLAY OF EXISTING PAVEMENT SHALL BE MINIMUM OF 1.25" DEPTH. ANY COSTS ASSOCIATED WITH PAVEMENT OVERLAY, OR THE MILLING OF EXISTING PAVEMENT TO OBTAIN REQUIRED DEPTH, SHALL BE ASSUMED BY THE DEVELOPER.
- ALL DAMAGES TO EXISTING ROAD AS A RESULT OF CONSTRUCTION ACTIVITIES SHALL BE THE RESPONSIBILITY OF THE DEVELOPER/CONTRACTOR AND WILL BE RESTORED TO THE SATISFACTION OF VIRGINIA DEPARTMENT OF TRANSPORTATION. PAVEMENT PATCH FOR UTILITY SERVICE SHALL BE IN ACCORDANCE WITH VDOT STANDARDS.
- EXISTING DRIVEWAY WILL BE USED FOR PROPOSED REDEVELOPMENT BUILDING. NO NEW CURB CUT IS NECESSARY FOR THIS PROJECT.

EXISTING UTILITY NOTE

THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE LOCATION OF ALL UTILITIES BEFORE COMMENCING WORK AND FOR ANY DAMAGES WHICH OCCUR BY HIS FAILURE TO LOCATE OR PRESERVE THESE UNDERGROUND UTILITIES. IF, DURING CONSTRUCTION OPERATIONS, THE CONTRACTOR ENCOUNTERS UTILITIES OTHER THAN THOSE INDICATED BY MISS UTILITY & MEMBER UTILITY COMPANIES, HE SHALL IMMEDIATELY NOTIFY THE ENGINEER AND OWNER AND TAKE NECESSARY AND PROPER STEPS TO PROTECT THE FACILITY AND ASSURE THE CONTINUANCE OF SERVICE.
 THE CONTRACTOR IS REQUIRED BY LAW TO NOTIFY MISS UTILITY (1-800-552-7001) AT LEAST 48 HOURS IN ADVANCE OF ANY WORK ON THIS PROJECT.

LEGAL LOT CERTIFICATE

I HEREBY CERTIFY THAT ALL APPROPRIATE COUNTY APPROVALS WERE OBTAINED IN ACCORDANCE WITH THE PROCESS REQUIRED BY THE SUBDIVISION ORDINANCE IN EFFECT AT THE TIME OF THE CREATION OF IRENE CHARPENTIER BETIUS PROPERTY, LOT 4A2. THE LOT WAS APPROVED BY FAIRFAX COUNTY AND RECORDED IN DEED BOOK 5844, PAGE 1033 AND RECORDED MAY 4, 1984 AMONG THE LAND RECORD OF FAIRFAX COUNTY.

RESPONSIBLE LAND DISTURBER CERTIFICATION
 Effective July 1, 2001.

Amendments to the Virginia Erosion Sediment Control Law, 101-563 and 101-566 of the code of Virginia

OWNER/DEVELOPER/ INFORMATION

PROJECT NAME: 1008 SPRINGVALE ROAD PROJECT #:
 DISTRICT: DRANESVILLE #1 TAX MAP AND PARCEL #: 12-1-(88)-4A2
 OWNER/DEVELOPER/ PERMITTEE: NAME: VERSAILLES CUSTOM HOMES AND DEVELOPMENTS INC.
 ADDRESS: 627 WALKER ROAD, GREAT FALLS, VA 22066
 PHONE: _____ D.B. 21284, PAGE 2026

RESPONSIBLE LAND DISTURBER INFORMATION

CERTIFICATE / LICENSE HOLDER NAME: _____ PHONE: _____
 ADDRESS: _____
 TYPE OF CERTIFICATE: _____ CERTIFICATE / LICENSE : _____
 APPLICANT / AGENT SIGNATURE _____ DATE _____

FRONT YARD SURFACING LIMIT

TOTAL AREA IN FRONT YARD = 7638 SF
 AREA SURFACED IN FRONT YARD = 500 SF
 PERCENTAGE OF SURFACED AREA = 6.5%
 ALLOWABLE PERCENTAGE FOR R-1 ZONE = 25%
 6.5% < 25% (GOOD)

IMPERVIOUS ACREAGE

DESCRIPTIONS	DEVELOPMENT LEVEL		IMPERVIOUSNESS ACREAGE COMPUTATION	
	PRE	POST	PRE	POST
SITE AREA IN ACRES	A1	A2	0.617	0.917
COMPOSITE RATIONAL C FACTOR	C1	C2	0.25	0.36
FRACTIONAL IMPERVIOUSNESS	I1	I2	0.00	0.16
TOTAL IMPERVIOUS ACRES	(A1xI1)	(A2xI2)	0.000	0.151
INCREASE IN IMPERVIOUS ACRES	(A2xI2) - (A1xI1)		0.151	

STORMWATER RUNOFF CALCULATIONS:

IMPERVIOUS C- FACTOR = 0.90
 PERVIOUS C-FACTOR = 0.25
 TIME OF CONCENTRATION = 5 MIN
 RAINFALL INTENSITY, I2 = 5.45 IN/HR
 RAINFALL INTENSITY, I10 = 7.27 IN/HR

IMPERVIOUS AREA COMPUTATIONS

	PRE DEVELOPMENT	POST DEVELOPMENT
HOUSE & FRONT STEPS	0	3,957
SIDEWALK	0	333
DRIVEWAY	0	2,301
	0	6,591
PERVIOUS AREA	39,961	33,370
TOTAL LOT AREA	39,961	39,961
TOTAL LOT AREA = 39,961 SF OR 0.917 AC		
INCREASE IN IMPERVIOUSNESS = 6,591 SF OR 0.151 AC		
TOTAL PERCENTAGE OF IMPERVIOUSNESS = (6591 x 100%) / 39,961 = 16.49%		

"C" FACTOR

A PRE-DEVELOPMENT
 $= (0 \times 0.9 + 39961 \times 0.25) / 39961 = 0.25$

B POST-DEVELOPMENT
 $= (6591 \times 0.9 + 33070 \times 0.25) / 39961 = 0.36$

PRE-DEVELOPMENT (OVERALL)

(5 MIN Tc) Q2 = (0.25 x 5.45 x 0.917) = 1.25 CFS
 (5 MIN Tc) Q10 = (0.25 x 7.27 x 0.917) = 1.67 CFS

POST-DEVELOPMENT (OVERALL)

(5 MIN Tc) Q2 = (0.36 x 5.45 x 0.917) = 1.79 CFS
 (5 MIN Tc) Q10 = (0.36 x 7.27 x 0.917) = 2.38 CFS

POST DEVELOPMENT CHANGE IN RUNOFF

2-YEAR 1.79 - 1.25 = 0.54 CFS INCREASE
 10-YEAR 2.38 - 1.67 = 0.71 CFS INCREASE

CBPO NOTES

THIS PLAN COMPLIES FULLY WITH AMENMENT CHAPTER 118 (CHESAPEAKE BAY PRESERVATION ORDINANCE) OF THE CODE OF THE COUNTY OF FAIRFAX, EFFECTIVE NOV. 18, 2003.

WETLANDS CERTIFICATE

I HEREBY CERTIFY THAT ALL WETLANDS PERMITS REQUIRED BY LAW WILL BE OBTAINED PRIOR TO COMMENCING LAND DISTURBANCE ACTIVITIES.

OWNER NAME: _____ SIGNATURE: _____ DATE: 11/18/2010

APPROVED FOR GRADING

Lot 4A2

ONLY
 Done 11/18/2010

A BUILDING HEIGHT CERTIFICATION

A SETBACK CERTIFICATION

BASED ON A FIELD SURVEY IS REQUIRED PRIOR TO RUP ISSUANCE

Any damage to a VDOT right-of-way resulting from construction activity will require the property owner to obtain a VDOT permit and post a bond

No appurtenances in the VDOT right-of-way

POINT	EXISTING ELEVATION	PROPOSED ELEVATION
1	332.80	332.50
2	330.60	332.50
3	328.80	332.50
4	328.10	330.00
5	326.00	325.20
6	324.80	324.00
7	324.90	323.85
8	324.20	323.85
9	323.90	323.85
10	324.70	323.85
11	326.40	324.50
12	327.30	326.60
13	329.00	332.90
14	330.00	332.95
15	330.80	332.95
16	332.30	332.90
AVE.	327.78	328.43

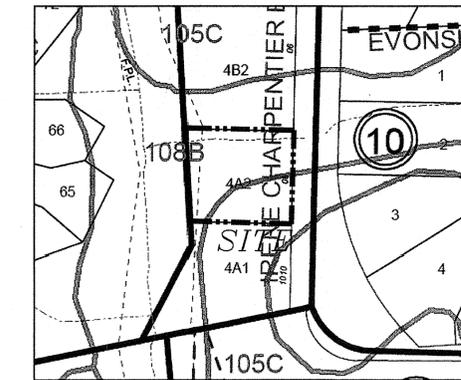
BUILDING HEIGHT CERTIFICATION
 SCALE: 1"=20'



FRONT ELEVATION
 N.T.S.

BUILDING HEIGHT = 362.69' - 327.78' = 34.91'

34.91' < 35' (OK)



SOILS MAP
 (N.T.S.)

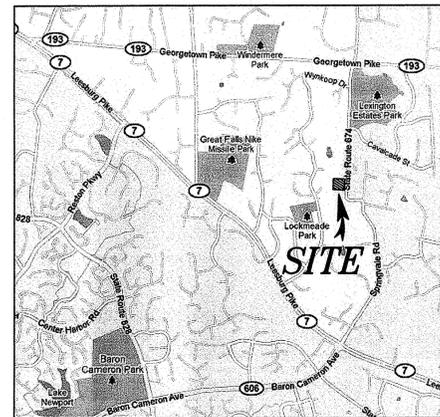
MAP UNIT SYMBOL	MAP UNIT NAME	% OF SITE	FOUNDATION SUPPORT	SUBSURFACE DRAINAGE	SLOPE STABILITY	ERODABILITY	PROBLEM CLASS, OLD	PROBLEM CLASS, NEW
108B	WHEATON-SUMERDUCK COMPLEX, 2-7% SLOPE	60%	MARGINAL	POOR	FAIR	MEDIUM	B	IVB
105C	WHEATON-GLENELG COMPLEX, 7-15% SLOPE	40%	GOOD	GOOD	FAIR	HIGH	C	IVB

BEFORE YOU START WORK YOU ARE REQUIRED TO NOTIFY THE SITE INSPECTOR AT 324 1950. FAILURE TO NOTIFY CAN RESULT IN A VIOLATION AND A CHARGE PER COMPLIANCE INSPECTION.

NO EARTH DISTURBANCE OR CONSTRUCTION ALLOWED UNTIL PERMIT # 103074167 IS ISSUED

SHEET INDEX

- GENERAL NOTES
- SITE GRADING PLAN
- EROSION & SEDIMENT CONTROL PLAN
- E & S CONTROL NOTES AND DETAILS
- ADEQUATE OUTFALL ANALYSIS
- APPROVED SEPTIC SYSTEM DESIGN
- TREE CONSERVATION PLAN
- TREE CONSERVATION NOTES
- WETLAND STUDY AND RPA DELINEATION
- WETLAND STUDY AND GEOTECHNICAL REQUIREMENTS
- GEOTECHNICAL REQUIREMENTS



VICINITY MAP
 (N.T.S.)

SDE, INC.

ENGINEERS · PLANNERS · ARCHITECTS · LANDSCAPE ARCHITECTS · SURVEYORS
 LEESBURG PIKE, SUITE 305N
 FALLS CHURCH, VA 22043 PH: (703) 556-0800

1008 SPRINGVALE ROAD
 LOT 4A2

FAIRFAX COUNTY
 MAGISTRAL DISTRICT: DRANESVILLE #1

GENERAL NOTES

DESIGNED BY: SDE, INC.

DRAWN BY: B.H.

CHECKED BY: HAMID T., PE

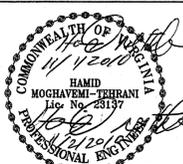
SCALE: N/A

DATE: 11/01/2010

PROJECT/FILE #

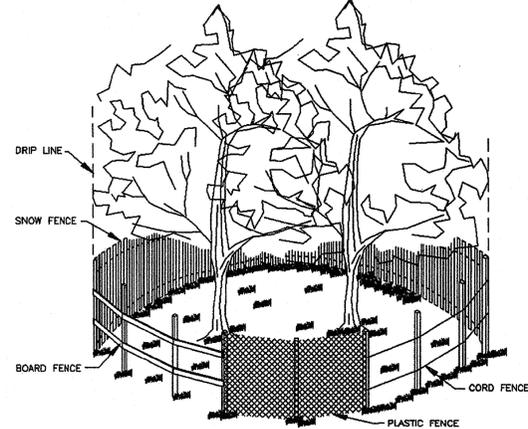
SHEET NUMBER

1 OF 9

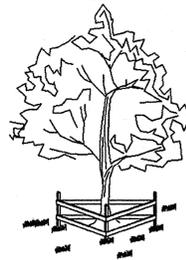


1996-1NF-00-1

FENCING AND ARMORING



CORRECT METHODS OF TREE FENCING

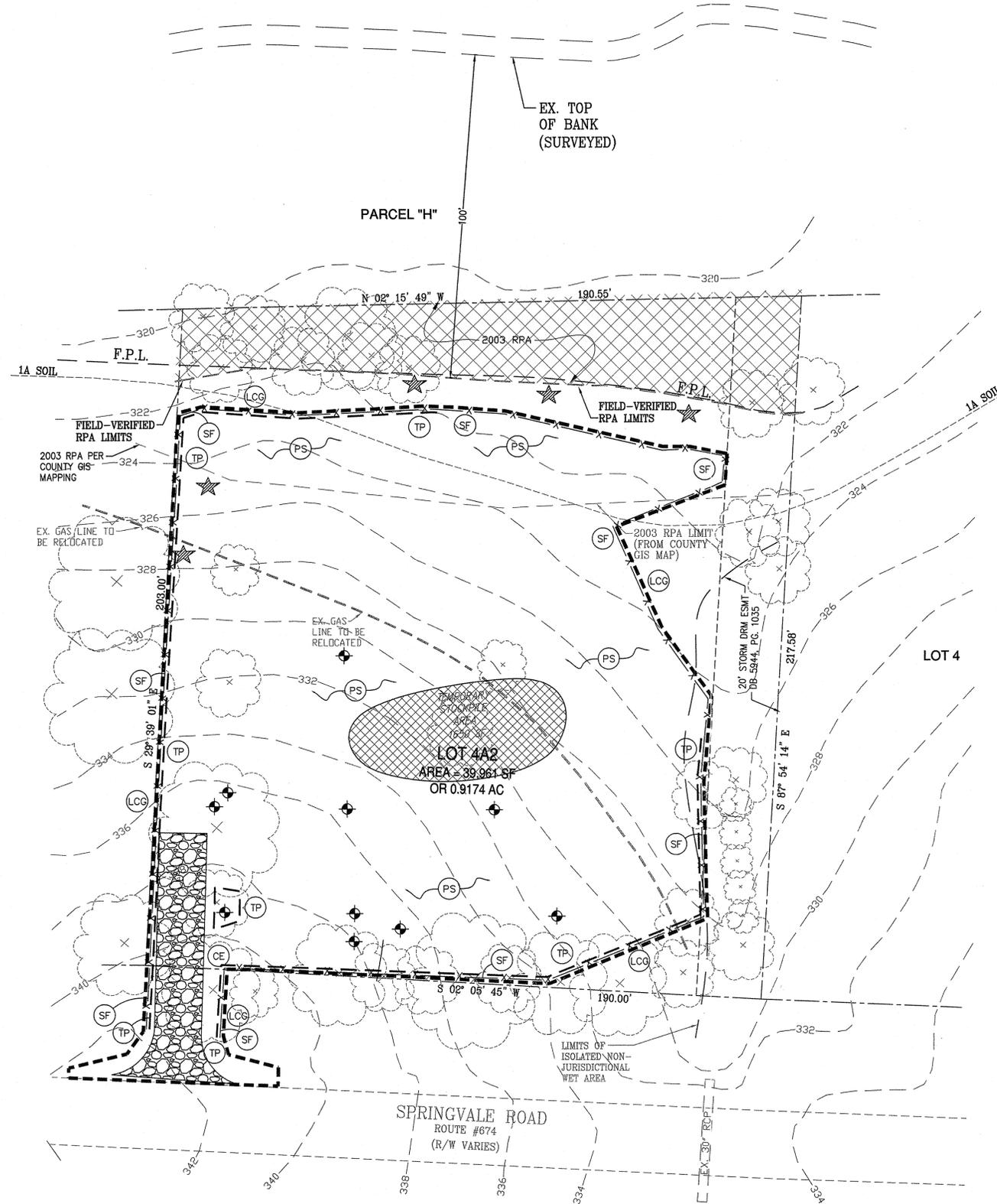


CORRECT TRUNK ARMORING

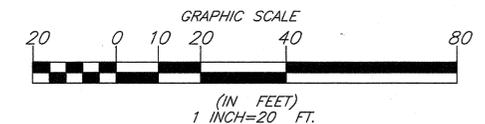
TRIANGULAR BOARD FENCE

Source: Va. DSWC

Plate 3.38-2



VCS83



SDE, INC.

ENGINEERS · PLANNERS · ARCHITECTS · LANDSCAPE ARCHITECTS · SURVEYORS
 LEESBURG PIKE, SUITE 305N
 FALLS CHURCH, VA 22043 PH: (703) 556-0800

1008 SPRINGVALE ROAD

LOT 4A2

MAGISTERIAL DISTRICT: DRANESVILLE #1 FAIRFAX COUNTY

EROSION & SEDIMENT CONTROL PLAN



DESIGNED BY: SDE, INC.

DRAWN BY: B.H.

CHECKED BY: HAMID T., PE

SCALE: 1":20'

DATE: 11/01/2010

PROJECT/FILE #

SHEET NUMBER

3 OF 9

PROJECT DESCRIPTION

THIS PROJECT IS INFILL DEVELOPMENT IN WHICH ONE HOUSE WILL BE CONSTRUCTED ON A CURRENTLY UNOCCUPIED AND RECENTLY SUBDIVIDED LOT. A NEW DRIVEWAY WILL BE ADDED ONTO SPRINGVALE ROAD ALONG WITH NEW A WELL AND SEPTIC FIELD. AN EXISTING GAS LINE MUST BE MOVED AS WELL.

EXISTING SITE CONDITIONS

THE TOTAL SITE AREA IS 0.917 ACRES AND 0.660 ACRES WILL BE DISTURBED. THE DISTURBED AREA IS CURRENTLY GRASSY AND LIGHTLY WOODED MOSTLY ALONG THE EDGE. THE SITE IS MODERATELY SLOPED WITH A RELATIVELY CONSISTENT SLOPE OF 11% AS THE ENTIRE SHEET FLOWS IN A WESTWARD DIRECTION TOWARDS THE REAR OF THE LOT. THERE IS AN EXISTING DRAINAGE EASEMENT ALONG THE NORTHEGE OF THE LOT CONTAINING A SWALE THAT RECEIVES OFF-SITE RUNOFF AND FLOWING WESTWARD. THIS DRAINAGE EASEMENT WILL REMAIN UNDISTURBED.

ADJACENT AREAS

THE SITE IS SURROUNDED ON ALL SIDES BY SINGLE FAMILY DETACHED HOUSES WITH LOTS ZONED R-1 AND BY SPRINGVALE ROAD IN THE FRONT. THERE IS A CREEK TO THE REAR OF THE LOT BEYOND THE PROPERTY LIMITS.

OFF-SITE AREAS

THERE WILL BE CONSTRUCTION IN THE VDOT RIGHT-OF-WAY IN ORDER TO INSTALL THE NEW DRIVEWAY ENTRANCE, AND THERE WILL BE REGRADING UP TO THE VDOT RIGHT-OF-WAY LINE FOR THE NEW SEPTIC FIELD WHICH MAY DAMAGE THE HEALTH OF EXISTING TREES AND NECESSITATE THEIR REMOVAL.

SOILS

THE SOILS ON THE SITE WITH DESCRIPTIONS AND CHARACTERISTICS ARE SHOWN ON SHEET 1 OF THIS PLAN.

CRITICAL AREAS

THE REAR PORTION OF THE LOT (WHICH WILL REMAIN UNDISTURBED) IS A DESIGNATED RPA DETERMINED BY A 100 FOOT OFFSET FROM THE TOP OF BANK OF THE EXISTING STREAM IN THE REAR. ADDITIONALLY WITHIN THE UNDISTURBED DRAINAGE EASEMENTS THERE ARE SMALL AMOUNTS OF LAND THAT ARE PERPETUALLY WET ALTHOUGH THEY ARE NOT A PART OF CONNECTED WETLANDS. THERE IS A STEEP SLOPE ALONG THE PROPOSED RETAINING WALL ALONG THE DRIVEWAY AS WELL. CARE WILL BE TAKEN TO AVOID ANY EROSION OR ENVIRONMENTAL DISTURBANCE IN THESE CRITICAL AREAS MARKED WITH THIS SYMBOL.

EROSION AND SEDIMENT CONTROL PROGRAM:

1. INSTALL A CONSTRUCTION ENTRANCE.
2. INSTALL SILT FENCE FENCE AND SUPER SILT FENCE ALONG THE LIMIT OF DISTURBANCE AS SHOWN ON THE PLAN.
3. CLEAR AND ROUGH GRADE AS NECESSARY AS INDICATED ON THE PLANS.
4. CONSTRUCT INFILTRATION TRENCH.
5. PERFORM STABILIZATION SUCH AS TEMPORARY AND PERMANENT SEEDING FOR ALL DENUDED AREAS. SODDING (WHERE DESIGNATED ON THE PLANS OR AT THE OPTION OF THE DEVELOPER).

OPTION OF THE DEVELOPER

1. SODDING SHALL BE PERFORMED IN ACCORDANCE WITH VESCH SPECIFICATION 3.33.
1. PRIOR TO SOIL PREPARATION, AREAS TO BE SODDED SHALL BE BROUGHT TO FINAL GRADE IN ACCORDANCE WITH THE APPROVED PLAN.
2. SOIL TESTS SHOULD BE MADE TO DETERMINE THE EXACT REQUIREMENTS FOR LIME AND FERTILIZER. SOIL TEST MAY BE CONDUCTED BY THE STATE LABORATORY AT VPI & SU OR A REPUTABLE COMMERCIAL LABORATORY. INFORMATION ON STATE SOIL TESTS IS AVAILABLE FROM COUNTY OR CITY AGRICULTURE EXTENSION AGENTS.
3. PRIOR TO LAYING SOD, THE SOIL SURFACE SHALL BE CLEAR OF TRASH, DEBRIS, LARGE ROOTS, BRANCHES, STONES, AND CLODS IN EXCESS OF 1" IN LENGTH OR DIAMETER. SOD SHALL NOT BE APPLIED TO GRAVEL OR OTHER NON-SOIL SURFACES.
4. ANY IRREGULARITIES IN THE SOIL SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS SHALL BE FILLED OR LEVELED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.
5. AREA TO BE TOP SOILED AND TOPSOIL USED SHALL FULFILL THE REQUIREMENTS OF TOP SOILING, VESCH SPEC. 3.30. NO SOD SHALL BE SPREAD ON SOIL THAT HAS BEEN TREATED WITH SOIL STERILANTS OR ANY OTHER TOXIC HERBICIDES UNTIL ENOUGH TIME HAS ELAPSED TO PERMIT DISSIPATION OF TOXIC MATERIALS.
6. SOD SHALL NOT BE LAID IN EXCESSIVELY WET OR DRY WEATHER AND SHOULD BE INSTALLED WITHIN 36 HOURS AFTER DELIVERY.
7. SOD SHOULD NOT BE LAID ON FROZEN SOIL SURFACES AND SHALL BE INSTALLED PER PLATE 3.33-1 OF VESCH.
8. QUALITY OF SOD SHALL BE STATE CERTIFIED TO ENSURE GENETIC PURITY AND HIGH QUALITY.

PERMANENT STABILIZATION

1. PERMANENT SEEDING SHALL BE PERFORMED IN ACCORDANCE WITH VESCH SPECIFICATION 3.32.
1. PERMANENT VEGETATION COVER MUST MEET THE REQUIREMENTS OF MINIMUM STANDARDS #3 (MS-3).
2. PLANT SELECTION SHALL BE BASED UPON TABLES 3.32 A&B DEPENDING ON CLIMATE, TOPOGRAPHY, SOILS, AND SITE CONDITIONS.
3. THE PLANTING SOIL MUST HAVE ENOUGH FINE GRAINED SOIL, SUFFICIENT PORE SPACE, SUFFICIENT DEPTH AND BE FREE FROM TOXIC OR EXCESSIVE QUANTITIES OF ROOTS AND SHALL BE APPLIED IN ACCORDANCE WITH VESCH STD 3.30.
4. THE SITE WILL BE PERMANENTLY STABILIZED BY MEANS OF PERMANENT SEEDING, THE BUILDING, THE RETAINING WALL, AND ASPHALT DRIVEWAY.

STANDARDS AND SPECIFICATIONS FOR DUST CONTROL

1. THE CONTRACTOR SHALL CONDUCT OPERATIONS AND MAINTAIN THE PROJECT SITE AS TO MINIMIZE THE CREATION AND DISPERSION OF DUST. DUST CONTROL SHALL BE USED THROUGHOUT THE WORK AT THE SITE.
2. THE CONTRACTOR MUST PROVIDE CLEAN WATER, FREE FROM SALT, OIL AND OTHER DELETERIOUS MATERIAL TO BE USED FOR ON-SITE DUST CONTROL.
3. THE CONTRACTOR SHALL SUPPLY WATER SPRAYING EQUIPMENT CAPABLE OF ACCESSING ALL WORK AREAS.
4. THE CONTRACTOR SHALL IMPLEMENT STRICT DUST CONTROL MEASURES DURING ACTIVE CONSTRUCTION PERIODS ON-SITE. THESE CONTROL MEASURES WILL GENERALLY CONSIST OF WATER APPLICATIONS THAT SHALL BE APPLIED A MINIMUM OF ONCE PER DAY DURING DRY WEATHER OR MORE OFTEN AS REQUIRED TO PREVENT DUST EMISSIONS.
5. FOR WATER APPLICATION TO UNDISTURBED SOIL SURFACES, THE CONTRACTOR SHALL:
 - A. APPLY WATER WITH EQUIPMENT CONSISTING OF TANK, SPRAY BAR, PUMP WITH DISCHARGE PRESSURE GAUGE.
 - B. ARRANGE SPRAY BAR HEIGHT, NOZZLE SPACING AND SPRAY PATTERN TO PROVIDE COMPLETE COVERAGE OF GROUND WITH WATER.
 - C. DISPENSE WATER THROUGH NOZZLES ON SPRAY BAR AT 20 PSI (1.37.8 K Pa) MINIMUM. KEEP AREAS DAMP WITHOUT CREATING NUISANCE CONDITIONS SUCH AS PONDING.
6. FOR WATER APPLICATION TO SOIL SURFACES DURING DEMOLITION AND/OR EXCAVATION, THE CONTRACTOR SHALL:
 - A. APPLY WATER WITH EQUIPMENT CONSISTING OF A TANK, PUMP WITH DISCHARGE GAUGE, HOSES AND MIST NOZZLES.
 - B. LOCATE TANK AND SPRAYING EQUIPMENT SO THAT THE ENTIRE EXCAVATION AREA CAN BE MISTED WITHOUT INTERFERING WITH DEMOLITION AND/OR EXCAVATION EQUIPMENT OR OPERATIONS. KEEP AREAS DAMP WITHOUT CREATING NUISANCE CONDITIONS SUCH AS PONDING.
 - C. APPLY WATER SPRAY IN A MANNER TO PREVENT MOVEMENT OF SPRAY BEYOND THE SITE BOUNDARIES.

SILT FENCE

1. SILT FENCE SHALL COMPLY WITH VESCH CHAPTER 3 PAGES 21-22.
1. SYNTHETIC FILTER FABRIC SHALL BE A PEROUS SHEET OF PROPYLENE, NYLON, POLYESTER, OR ETHYLENE YARN AND SHALL BE CERTIFIED BY MANUFACTURER OR SUPPLIER AS CONFORMING TO THE REQUIREMENTS NOTED IN TABLE 3.05-B OF THE VESCH.
2. SYNTHETIC FILTER FABRIC SHALL CONTAIN ULTRAVIOLET RAY INHIBITORS AND STABILIZERS TO PROVIDE A MINIMUM OF SIX MONTHS OF EXPECTED USABLE CONSTRUCTION LIFE AT A TEMPERATURE RANGE OF 0 DEGREES FAHRENHEIT TO 120 DEGREES FAHRENHEIT.
3. IF WOODEN STAKES ARE UTILIZED FOR SILT FENCE CONSTRUCTION, THEY MUST HAVE A DIAMETER OF 2" WHEN OAK IS USED AND 4" WHEN PINE IS USED. WOODEN STAKES MUST HAVE A MINIMUM LENGTH OF 5'.
4. IF STEEL POSTS (STANDARD "U" AND "T" SECTION) ARE UTILIZED FOR SILT FENCE CONSTRUCTION, THEY MUST HAVE A MINIMUM WEIGHT OF 1.33 POUNDS PER LINEAR FOOT AND SHALL HAVE A MINIMUM LENGTH OF 5'.

5. WIRE FENCE REINFORCEMENT FOR SILT FENCE USING STANDARD STRENGTH FILTER CLOTH SHALL BE A MINIMUM OF 14 GAUGE AND SHALL HAVE A MAXIMUM MESH SPACING OF 6".
6. THE HEIGHT OF A SILT FENCE SHALL BE A MINIMUM OF 16" ABOVE THE ORIGINAL GROUND SURFACE AND SHALL NOT EXCEED 34" ABOVE GROUND ELEVATION.

NOTE: SILT FENCE SHOULD BE USED FOR DRAINAGE AREAS THAT ARE NO LARGER THAN 0.25 ACRES PER 100' OF SILT FENCE LENGTH. THE MAXIMUM SLOPE LENGTH BEHIND THE BARRIER IS 100'. THE MAXIMUM GRADIENT BEHIND THE BARRIER IS 2:1. SILT FENCE IS BEST USED WHEN THE SLOPE ABOVE THE FENCE, EITHER CUT OR FILL, IS NOT STEEPER THAN 3:1.

GENERAL EROSION AND SEDIMENT CONTROL NOTES

- ES-1: UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO THE MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND VIRGINIA REGULATIONS VR-625-02-00 EROSION AND SEDIMENT CONTROL AND COUNTY REGULATIONS.
- ES-2: THE PLAN APPROVING AUTHORITY MUST BE NOTIFIED ONE WEEK PRIOR TO THE PRECONSTRUCTION CONFERENCE, ONE WEEK PRIOR TO THE COMMENCEMENT OF LAND DISTURBING ACTIVITY, AND ONE WEEK PRIOR TO THE FINAL INSPECTION.
- ES-3: ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP OF CLEARING.
- ES-4: A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
- ES-5: PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN AREAS OTHER THAN THOSE INDICATED ON THESE PLANS (INCLUDING, BUT NOT LIMITED TO, OFF-SITE BORROW OR WASTE AREAS), THE OWNER SHALL SUBMIT A SUPPLEMENTARY EROSION CONTROL PLAN TO THE OWNER FOR REVIEW AND APPROVAL BY FAIRFAX COUNTY.
- ES-6: THE OWNER IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY FAIRFAX COUNTY.
- ES-7: ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED.
- ES-8: IF REQUIRED, DURING DEWATERING OPERATIONS, WATER WILL BE PUMPED INTO AN APPROVED FILTERING DEVICE.
- ES-9: THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES PERIODICALLY AND AFTER EACH RUNOFF-PRODUCING RAINFALL EVENT. ANY NECESSARY REPAIRS OR CLEANUP REQUIRED TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY.
- ES-10: PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN (7) DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN (7) DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN 30 DAYS.
- ES-11: DURING CONSTRUCTION OF THE PROJECT, SOIL STOCKPILES AND BORROW AREAS SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES.
- ES-12: A PERMANENT VEGETATIVE COVER SHALL BE ESTABLISHED ON DENUDED AREAS NOT OTHERWISE PERMANENTLY STABILIZED.
- ES-13: CUT AND FILL SLOPES SHALL BE DESIGNED AND CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. ADDITIONAL SLOPE STABILIZATION MEASURES SHOULD BE PROVIDED TO PREVENT EXCESSIVE EROSION ON SLOPES.
- ES-14: CONCENTRATED RUNOFF SHALL NOT FLOW DOWN CUT OR FILL SLOPES UNLESS CONTAINED WITHIN AN ADEQUATE TEMPORARY OR PERMANENT CHANNEL, FLUME OR SLOPE DRAIN STRUCTURE.
- ES-15: ADEQUATE DRAINAGE PROTECTION SHALL BE MADE WHENEVER WATER SEEPS FROM A SLOPE FACE.
- ES-16: ALL STORM SEWER INLETS (IF ANY) THAT ARE MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED.
- ES-17: ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS TO WORKING WITHIN OR CROSSING A WATERCOURSE SHALL BE MET.
- ES-18: ALL UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH VESCH CHAPTER 8, PAGE 22.
 - A. NO MORE THAN 500 FEET OF TRENCH MAY BE OPEN AT ONE TIME.
 - B. EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES.
 - C. EFFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFF-SITE PROPERTY.
 - D. MATERIAL USED FOR BACKFILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION.
 - E. RESTABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THESE REGULATIONS.
 - F. APPLICABLE SAFETY REGULATIONS SHALL BE COMPLIED WITH.
- ES-19: PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT BY VEHICULAR TRACKING ONTO THE PAVED SURFACE AREA, WHERE CONSTRUCTION VEHICLE ACCESS ROUTES INTERSECT PUBLIC OR PAVED ROADS.
- ES-20: ALL TEMPORARY EROSION/SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION WITH THE PERMISSION OF THE INSPECTOR.

MAINTENANCE PROGRAM

1. ALL TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE INSPECTED DAILY AND AFTER EACH SIGNIFICANT RAINFALL BY THE SITE SUPERINTENDENT FOR STRUCTURAL DAMAGE, EROSION, OR ANY OTHER UNDESIRABLE CONDITIONS. ANY DAMAGED STRUCTURES ARE TO BE REPAIRED IMMEDIATELY (PRIOR TO THE END OF THE WORKING DAY) INCLUDING RESEEDING AND MULCHING OR RESODDING IF NECESSARY.
2. TEMPORARILY AND PERMANENTLY SEEDED AREAS DAMAGED BY RAINFALL ARE TO BE RESEEDED AND MULCHED WITHIN TWO (2) DAYS AND WHENEVER GROUND COVER HAS NOT BEEN ADEQUATELY ESTABLISHED TO PREVENT EROSION.
3. ADDITIONAL SLOPE STABILIZATION MEASURES MUST BE PROVIDED FOR SLOPES WHICH ARE FOUND TO BE ERODING EXCESSIVELY WITHIN ONE (1) YEAR UNTIL THE PROBLEM IS CORRECTED.
4. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN THE DEPTH IS EQUAL TO ONE-HALF (1/2) THE HEIGHT OF THE FENCE. SILT FENCES AND SUPER SILT FENCES WILL BE CHECKED REGULARLY AND DAMAGED FENCES WILL BE REPAIRED OR REPLACED IMMEDIATELY.
5. THE MATERIAL REMOVED FROM THE EROSION AND SEDIMENT CONTROL STRUCTURES MAY BE DISPOSED OF BY SPREADING THE MATERIAL ON-SITE OR BY HAULING IT AWAY, IF NOT SUITABLE FOR PLACEMENT AS TOPSOIL.
6. NO AREA SHALL BE LEFT DENUDED FOR A PERIOD LONGER THAN SEVEN (7) DAYS EXCEPT FOR THAT PORTION OF THE SITE IN WHICH WORK WILL BE CONTINUOUS BEYOND SEVEN (7) DAYS. IN THE EVENT SUCH MAXIMUM PERIOD IS EXCEEDED AND ANY SUCH AREAS REMAIN EXPOSED WITHOUT COVER, THE COUNTY WILL (IN THE EVENT THE DEVELOPER OR BUILDER DOES NOT) INSTALL THE NECESSARY TEMPORARY OR PERMANENT VEGETATIVE STABILIZATION MEASURES TO ACHIEVE ADEQUATE EROSION AND SEDIMENT CONTROL.
7. NO SEDIMENT CONTROL STRUCTURES SHALL BE REMOVED WITHOUT APPROVAL OF THE FAIRFAX COUNTY SITE INSPECTOR. CALL "MISS UTILITY"

8. TELEPHONE 1-800-552-7001FOR UTILITY LOCATION AT LEAST 48 HOURS BEFORE BEGINNING CONSTRUCTION.

FAIRFAX COUNTY PRIORITY RATING FORM FOR E&S CONTROL

PROJECT NAME: 1008 SPRINGVALE ROAD PROJECT NUMBER: _____
 TAX MAP: # 12-1 (BB) 4A2 : HAMID M. TEHRANI DATE: 10/25/2010

A. Percentage of Denuded Area to Total Site Area		Rating	
a. > 60%	[X]	5	
b. 31 to 60%	[]	3	
c. 10 to 30%	[]	1	

If the denuded area is greater than 10 acres, the project is initially rated a high priority.

B. Watercourse Crossing		Rating	
a. Yes	[]	0	
b. No	[X]	0	

* If yes the project is initially rated a high priority.

C. Distance of Denuded Area to Downstream Adjacent Property.		Rating	
a. < 50-feet	[X]	5	
b. 50 to 150-feet	[]	3	
c. > 150-feet	[]	0	

D. Distance of Any Portion of the Denuded Area to Natural Watercourse		Rating	
a. < 50-feet	[X]	5	
b. 50 to 150-feet	[]	3	
c. > 150-feet	[]	0	

E. Minimum Vegetative Buffer (Trees, Shrubs, Grasses and Other Plants)		Rating	
a. < 50-feet	[X]	0	
b. 50 to 150-feet	[]	-3	
c. > 150-feet	[]	-5	

F. Distance Between the site Outfall and any Downstream, Wet Pond, Wetland, Parkland or other Land Deemed Environmentally Sensitive by the Director.

a. < 2,500 feet	[X]	5
b. 2,500 to 5,000-feet	[]	3
c. > 5,000-feet	[]	0

G. Critical slopes Within 50-feet of Adjacent Property.

* Are there any slopes of 0 to 7%; greater than or equal to 300-feet in length; or	[]	5
* Are there any slopes of 7 to 15%; greater than or equal to 150-feet in length; or	[X]	0
* Are there any slopes greater than 15% and greater than or equal to 75-feet in length	[]	0

If Yes to any of the above

Not applicable if critical slope is > 50-feet from adjacent property.	[X]	0
H. Soil Erodibility (Based on k Factor)		Rating
a. High (= or > 0.37)	[X]	5
b. Medium (0.24 to 0.36)	[]	3
c. Low (< 0.24)	[]	1

TOTAL/OVERALL RATING: **25**

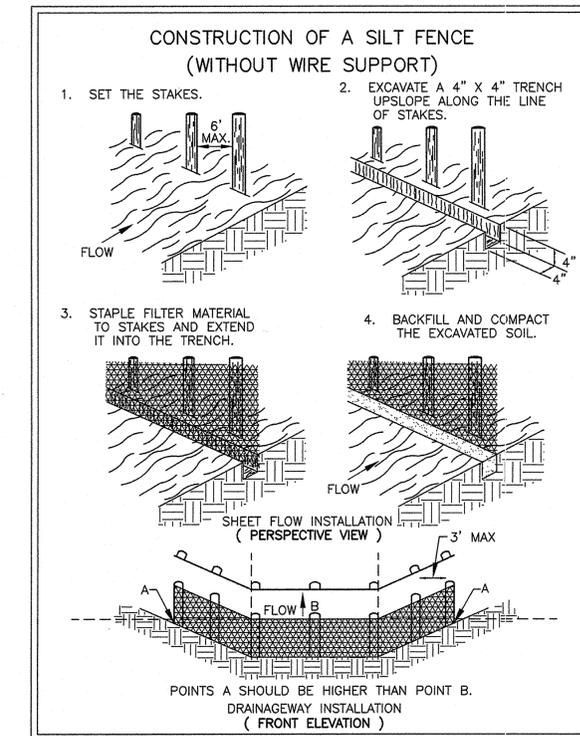
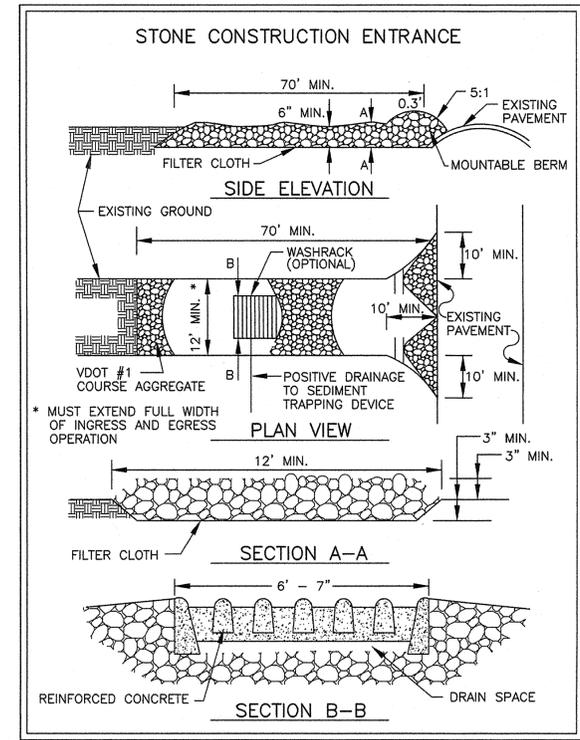
OVERALL RATING: _____ PRIORITY: (Mark with an 'X')

If > 22 High [X]
 If > 14 and < or = to 22 Medium []
 If < or = to 14 Low []

PROJECT PRIORITY LEVEL: HIGH

** Reserve for Fairfax County use**

APPROVED BY: _____ DATE: _____
 Plan Reviewer



- GENERAL LAND CONSERVATION NOTES**
1. NO DISTURBED AREA WHICH IS NOT ACTIVELY BEING WORKED SHALL REMAIN DENUDED FOR MORE THAN 14 CALENDAR DAYS UNLESS OTHERWISE AUTHOR-IZED BY THE DIRECTOR.
 2. ALL E&S CONTROL MEASURES APPROVED WITH THE PHASE I E&S CONTROL PLAN SHALL BE PLACED AS THE FIRST STEP IN GRADING.
 3. ALL STORM AND SANITARY SEWER LINES NOT IN STREETS SHALL BE SEEDED AND MULCHED WITHIN 14 DAYS AFTER BACKFILL. NO MORE THAN 500' (150 M) SHALL BE OPEN AT ANY ONE TIME.
 4. ELECTRIC POWER, TELEPHONE AND GAS SUPPLY TRENCHES SHALL BE COMPACTED, SEEDED AND MULCHED WITHIN 14 DAYS AFTER BACKFILL.
 5. ALL TEMPORARY EARTH BERMS, DIVERSIONS AND SEDIMENT CONTROL DAMS SHALL BE SEEDED AND MULCHED FOR TEMPORARY VEGETATIVE COVER IMMEDIATELY (AS SOON AS POSSIBLE BUT NO LATER THAN 48 HR) AFTER COMPLETION OF GRADING. STRAW OR HAY MULCH IS REQUIRED. ALL SOIL STOCKPILES SHALL BE SEEDED AND MULCHED WITHIN 14 DAYS AFTER GRADING.
 6. DURING CONSTRUCTION, ALL STORM SEWER INLETS SHALL BE PROTECTED BY SEDIMENT TRAPS, MAIN-TAINED AND MODIFIED DURING CONSTRUCTION PROGRESS AS REQUIRED.
 7. ANY DISTURBED AREA NOT COVERED BY § 11-0406.1 AND NOT PAVED, SODDED OR BUILT UPON BY NOVEMBER 1, OR DISTURBED AFTER THAT DATE, SHALL BE MULCHED IMMEDIATELY WITH HAY OR STRAW MULCH AT THE RATE OF 2 TONS/ACRE (4483 KG/HA) AND OVER-SEEDED BY APRIL 15.
 8. AT THE COMPLETION OF ANY PROJECT CON-STRUCTION AND PRIOR TO BOND RELEASE, ALL TEMPORARY SEDIMENT CONTROLS SHALL BE REMOVED AND ALL DENUDED AREAS SHALL BE STABILIZED.

SDE, INC.

ENGINEERS · ARCHITECTS · LANDSCAPE ARCHITECTS · SURVEYORS

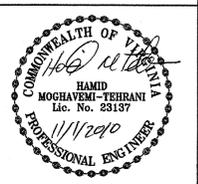
1008 SPRINGVALE ROAD
 LOT 4A2
 LEESBURG PIKE, SUITE 305N
 FALLS CHURCH, VA 22043 PH: (703) 556-0800

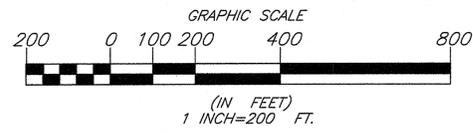
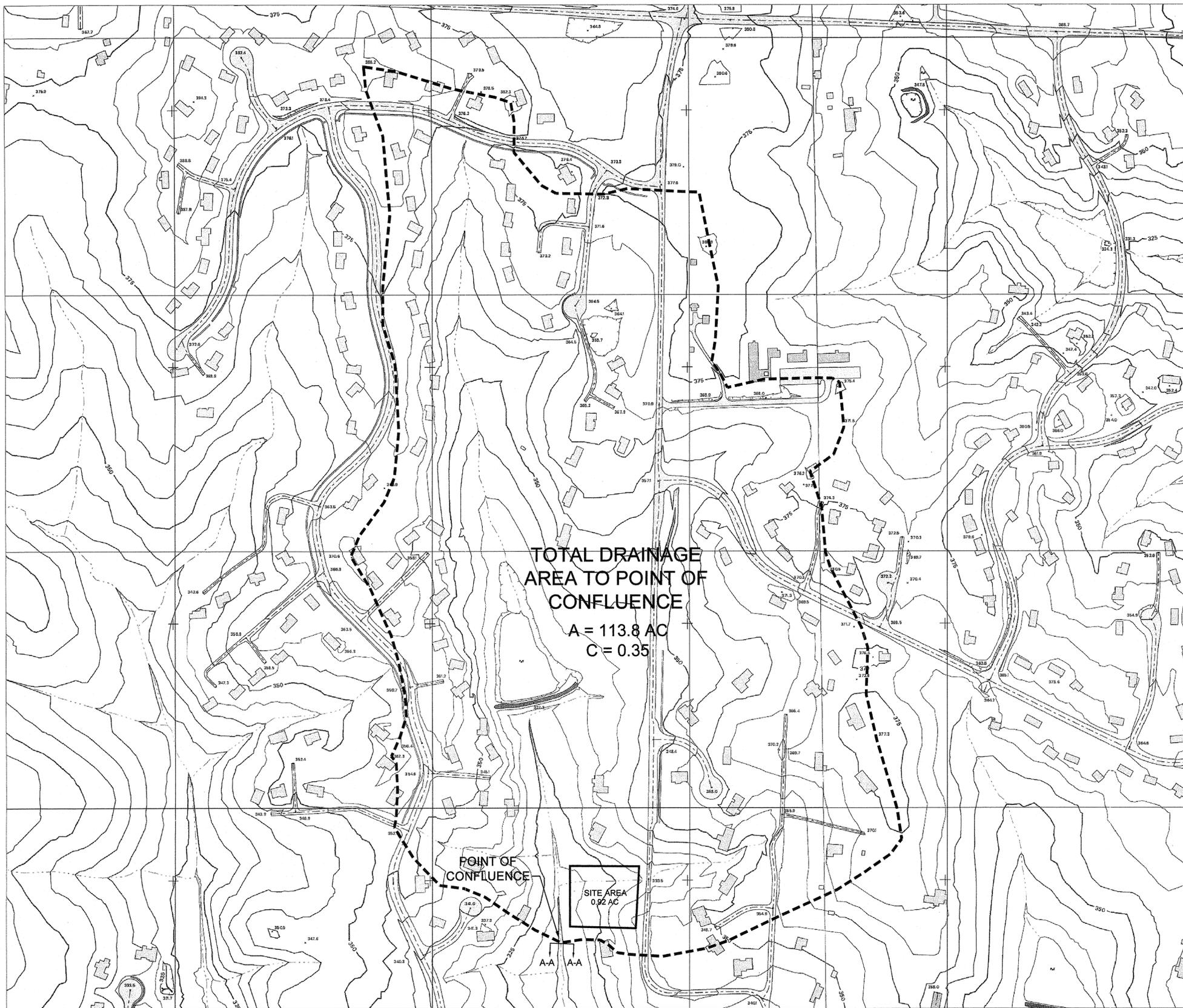
MAGISTERIAL DISTRICT: DRANESVILLE #1
 FAIRFAX COUNTY

E&S CONTROL NOTES AND DETAILS

DESIGNED BY: SDE, INC.
 DRAWN BY: B.H.
 CHECKED BY: HAMID T., PE
 SCALE: N/A
 DATE: 11/01/2010
 PROJECT/FILE #
 SHEET NUMBER

4 OF 9





STORMWATER MANAGEMENT CERTIFICATION

THIS SITE IN POST DEVELOPMENT CONDITIONS WILL COMPRISE OF 17.3% IMPERVIOUS AREA WHICH IS LESS THAN 18%. ALL RUNOFF WILL SHEET FLOW IN A SOUTHWARD DIRECTION THROUGH THE WOODED AREA IN THE BACK OF THE LOT. THEREFORE, NO STORMWATER MANAGEMENT PRACTICES ARE REQUIRED.

ADEQUATE OUTFALL NARRATIVE

THE SITE CONSISTS OF 0.8043 AC. OF TOTAL SITE AREA. THE ENTIRE PROPERTY SHEET FLOWS DIRECTLY INTO AN UNNAMED CREEK WHICH IS ADJACENT TO THE PROPERTY. THERE IS NO OFF-SITE DRAINAGE ONTO THE SITE EXCEPT FOR AN EXISTING DRAINAGE EASEMENT AND SWALE ALONG THE NORTH EDGE OF THE PROPERTY.

UNDER POST-DEVELOPMENT CONDITIONS, THE SITE WILL GENERATE A TOTAL 10-YR RUNOFF OF 2.42 CFS WITH AN AVERAGE 'C' FACTOR OF 0.36. ACCORDING TO THE FAIRFAX COUNTY PUBLIC FACILITIES MANUAL CODE 6-0203.2B, THE DOWNSTREAM DRAINAGE SYSTEM MUST BE PROVEN ADEQUATE UP TO A POINT OF CONFLUENCE AT WHICH THE TOTAL DRAINAGE AREA IS AT LEAST 100 TIMES GREATER THAN THE CONTRIBUTING DRAINAGE AREA OF THE SITE. THE CONTRIBUTING DRAINAGE AREA OF THE SITE IS 0.92 ACRES AND AT THE POINT OF CONFLUENCE IMMEDIATELY OFF THE SITE, THE TOTAL DRAINAGE AREA IS APPROXIMATELY 113.8 AC WHICH IS AT LEAST 100 TIMES THE CONTRIBUTING DRAINAGE AREA.

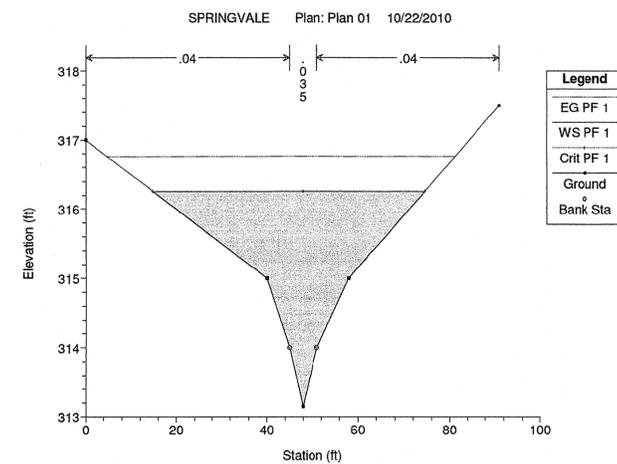
A CROSS SECTION OF THE CREEK IS SHOWN HERE WITH A HYDRAULIC ANALYSIS PERFORMED BY HEC-RAS. A FLOW ANALYSIS OUTPUT TABLE IS ALSO SHOWN WITH POST-DEVELOPMENT CONDITIONS.

THEREFORE, IT IS THE OPINION OF THE ENGINEER THAT ADEQUATE OUTFALL EXISTS FOR THIS SITE.

POST-DEVELOPMENT RUNOFF TO CROSS SECTIONS:

FOR A 100-YR STORM, $T_c = 15$ MIN
 $I = 7.05$ IN/HR

SECTION A-A, $Q_{100} = CWA$
 $= 0.35 \times 7.05 \times 113.8$
 $= 280.8$ CFS



Plan: Plan 01 UNNAMED UNNAMED RS: 200 Profile: PF 1

E.G. Elev (ft)	316.78	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.51	Wt. n-Val.	0.040	0.035	0.040
W.S. Elev (ft)	316.28	Reach Len. (ft)	48.10	48.10	48.10
Crit W.S. (ft)	316.25	Flow Area (sq ft)	24.59	16.09	22.73
E.G. Slope (ft/ft)	0.009363	Area (sq ft)	24.59	16.09	22.73
Q Total (cfs)	280.80	Flow (cfs)	78.96	124.39	79.45
Top Width (ft)	58.74	Top Width (ft)	30.15	6.00	23.60
Vel Total (ft/s)	4.43	Avg. Vel. (ft/s)	3.13	7.73	3.49
Max Chl Dpth (ft)	3.11	Hydr. Depth (ft)	0.82	2.68	0.96
Conv. Total (cfs)	2801.9	Conv. (cfs)	795.4	1285.5	821.1
Length Wtd. (ft)	48.10	Wetted Per. (ft)	30.28	6.24	23.71
Min Ch. El (ft)	313.15	Shear (lb/sq ft)	0.47	1.51	0.56
Alpha	1.66	Stream Power (lb/ft s)	91.00	0.00	0.00
Frcin Loss (ft)	0.45	Cum Volume (acre-ft)	0.03	0.02	0.03
C & E Loss (ft)	0.00	Cum SA (acres)	0.03	0.01	0.03

SDE, INC.
 ENGINEERS · PLANNERS · ARCHITECTS · LANDSCAPE ARCHITECTS · SURVEYORS
 LEESBURG PIKE, SUITE 305N
 FALLS CHURCH, VA 22043 PH: (703) 556-0800

1008 SPRINGVALE ROAD
 LOT 442
 MAGISTERIAL DISTRICT: DRANESVILLE #1
 FAIRFAX COUNTY

ADEQUATE OUTFALL ANALYSIS



DESIGNED BY: SDE, INC.

DRAWN BY: B.H.

CHECKED BY: HAMID T., PE

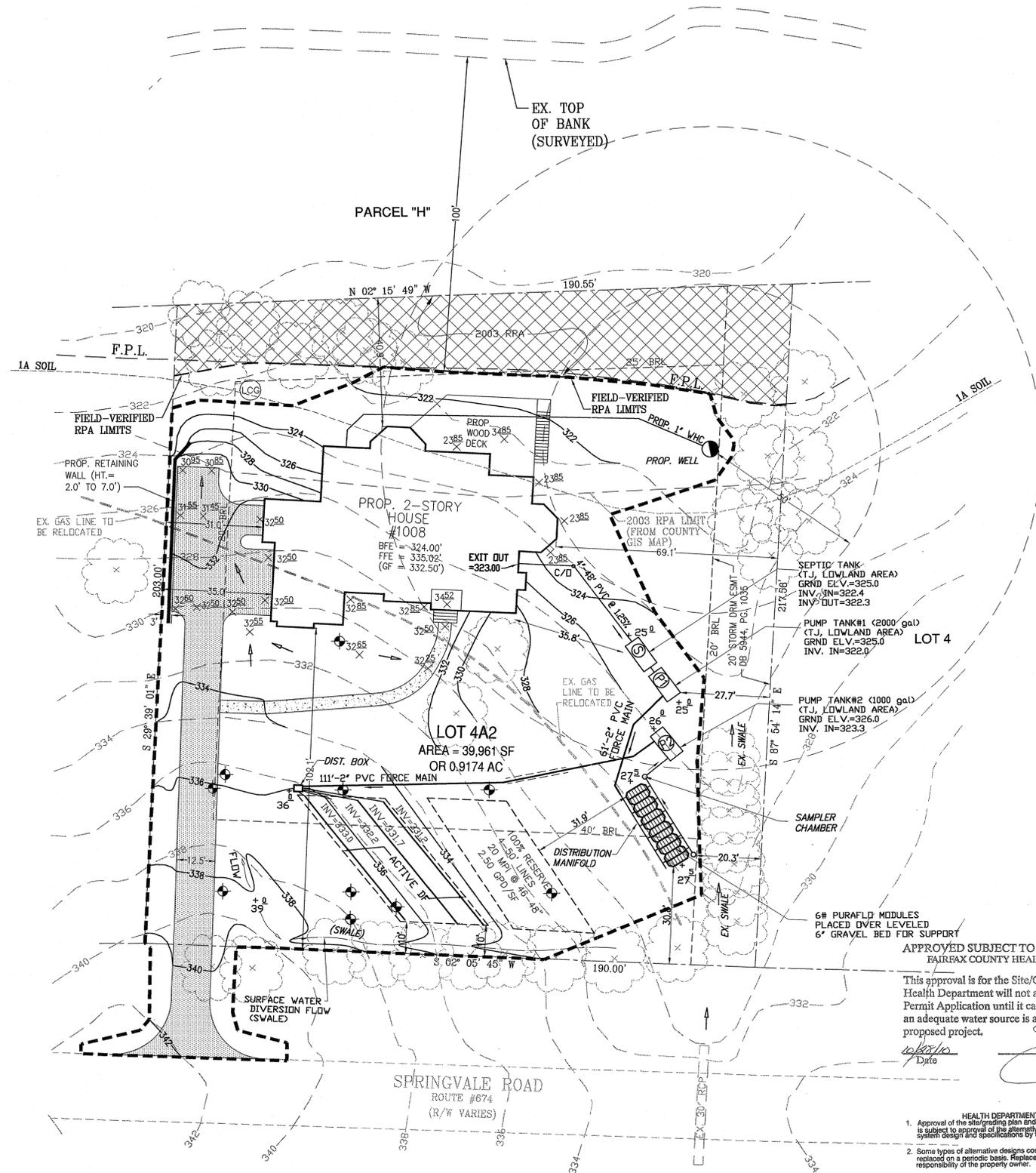
SCALE: 1"=200'

DATE: 11/01/2010

PROJECT/FILE #

SHEET NUMBER

5 OF 9



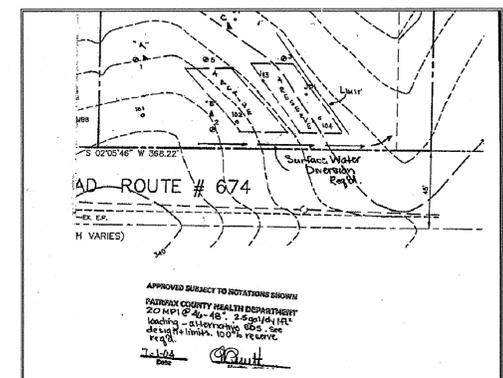
GENERAL NOTES

1. STUDY PURPOSE: INSTALLATION OF A NEW SEPTIC SYSTEM WITH PRE-TREATMENT UNITS FOR A NEW 5-BEDROOM HOUSE ON VACANT LOT 4A2.
2. TAX MAP # 012-1-8B-4A2.
3. THIS PLAT IS SUBJECT TO RESTRICTIONS OF RECORD.
4. EXISTING 2 FT CONTOUR IS BASED ON FIELD RUN TOPOGRAPHIC PERFORMED BY SDE.
5. CONTRACTOR/OWNER:
SHAWN KHORSHIDI
1008 SPRINGVALE ROAD
GREAT FALLS, VIRGINIA
6. THE BOUNDARY INFORMATION IS BASED ON SURVEY RECORD PLAT.
7. NEW WELL TO BE INSTALLED AT THE LOCATION SHOWN.
8. THE DRAINFIELD HAS BEEN DESIGNED WITH 100% RESERVE AREA.
9. SURFACE FLOW TO BE DIVERTED AWAY FROM THE DRAINFIELD AND NO SURFACE WATER STAGNANT ON THE DRAINFIELD.
10. NO FILLING TO BE DONE DURING THE ACTIVE DRAINFIELD GRADING.
11. UNTREATED BUILDING PAPER OR OTHER SUITABLE MATERIAL SHALL BE PLACED AT THE INTERFACE OF THE GRAVEL AND SOIL TO PREVENT MITIGATION OF FINES TO THE BOTTOM OF THE TRENCH AND COVERED WITH TOPSOIL TO THE GROUND SURFACE.
12. FORCE MAIN SHOULD BE PRESSURE TESTED IN PLACE AT PUMP SHUT-OFF HEAD BEFORE OPERATION OF THE SYSTEM.
13. THE ADSORPTION TRENCH WILL BE BOX CUT TO THE LIMIT SHOWN ON THE PLANS, AND FINISH WITH A LEVELLED SURFACE.

SIZE OF DRAINFIELD

ACTIVE FIELD (ABSORPTION TRENCHES):
 NUMBER OF BEDROOMS = 5 (BR)
 ABSORPTION AREA REQUIRED = 5 BR X 150 GAL/DAY/2.5 GAL/DAY/SQFT = 300 SQ FT (MINIMUM 400 SQ FT)
ABSORPTION AREA PROVIDED:
 LENGTH = 50 FT
 WIDTH = 2 FT
 TRENCHES=4
 AREA = 50 FT X 2 FT X 4 = 400 SQ FT (EQUAL TO MIN.), [OK]
100% RESERVE FIELD:
 SAME AS ACTIVE DRAINFIELD
 (NOTE: ONLY 1 KITCHEN AND 1 LAUNDRY TO BE PERMITTED)

APPROVED RATE & NOTES

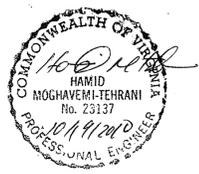
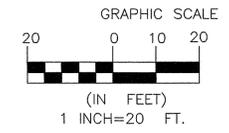


DRAINFIELD NOTES

1. THE DRAINFIELD HAS BEEN DESIGNED WITH 100% RESERVE AREA.
2. SURFACE FLOW TO BE DIVERTED AWAY FROM THE LOT AND NO SURFACE WATER STAGNANT ON THE DRAINFIELD.
3. NO FILLING TO BE DONE DURING THE ACTIVE DRAINFIELD GRADING.
4. UNTREATED BUILDING PAPER OR OTHER SUITABLE MATERIAL SHALL BE PLACED AT THE INTERFACE OF THE GRAVEL AND SOIL TO PREVENT MITIGATION OF FINES TO THE BOTTOM OF THE TRENCH AND COVERED WITH TOPSOIL TO THE GROUND SURFACE.
5. FORCE MAIN SHOULD BE PRESSURE TESTED IN PLACE AT PUMP SHUT-OFF HEAD BEFORE OPERATION OF THE SYSTEM.
6. THE ADSORPTION TRENCHES WILL BE BOX CUT TO THE LIMIT SHOWN ON THE PLANS, AND FINISH WITH A LEVELLED SURFACE.

LEGEND

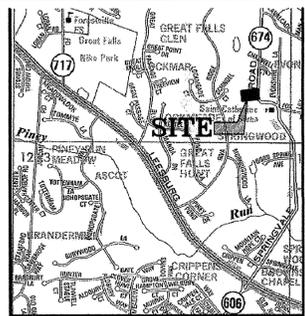
- EP ----- EDGE OF PAVEMENT
- EX. 2' CONTOUR
- 232.4 EX. SPOT ELEVATION
- 32.8 PROP. SPOT ELEVATION
- ⊕ TEST HOLE



APPROVED SUBJECT TO NOTATION SHOWN
 FAIRFAX COUNTY HEALTH DEPARTMENT
 This approval is for the Site/Grading Plan only. The Health Department will not approve the Building Permit Application until it can be determined that an adequate water source is available to serve the proposed project.
 Date: 10/27/10
 Health Official: [Signature]

- HEALTH DEPARTMENT NOTES:**
1. Approval of the site/grading plan and building permit application is subject to approval of the alternative sewage disposal system design and specifications by the Health Department.
 2. Some types of alternative designs contain media that must be replaced on a periodic basis. Replacement of the media is the responsibility of the property owner.
 3. This sewage disposal system is designed to accommodate 200 GPD average daily flow for a 5 bedroom, 2 kitchen, laundry dwelling.

FAIRFAX COUNTY HEALTH DEPARTMENT
 DIVISION OF ENVIRONMENTAL HEALTH
 Approval of plot plan only. This is not a permit to install a water supply or a sewage disposal system. All existing or proposed underground utility lines and easements must be located a minimum of 10' feet from all subsurface disposal systems. No subsurface disposal systems may be in an underground utility easement. All water service lines must be located a minimum of 10 feet from all subsurface disposal systems.
 Date: 10/27/10
 Health Official: [Signature]



VICINITY MAP
 SCALE: N.T.S.

STRUCTURAL AND CONSTRUCTION NOTES:

1. SEPTIC TANK: 2,000 GALLON CONCRETE SEPTIC TANK (HANDOVER TOP JOINT OR EQUIVALENT) WITH ZABEL FILTER. TANK MUST BE COMPLY WITH LOCAL AND STATE HEALTH DEPARTMENT REGULATIONS. CONTRACTOR IS RESPONSIBLE FOR PROPER SEALING OF ALL JOINTS.
 2. PUMP TANK #1: 2,000 GALLON CONCRETE PUMP TANK (HANDOVER TOP JOINT OR EQUIVALENT). PUMP TANK MUST COMPLY WITH LOCAL & STATE HEALTH DEPARTMENT REGULATIONS. CONTRACTOR IS RESPONSIBLE FOR PROPERLY SEALING TANK. PUMP TO BE ZOLLER N161, 0.5 HP PUMP OR EQUIVALENT. CONTROL PANEL TO BE AN ORENCO MODEL MVD DAX PRO BNM WITH 1" CONDUIT, PROGRAMMABLE TIME, EVENT COUNTER AND ALARM. PUMP AND ALARM TO BE SEPARATE CIRCUITS. THE PUMP WILL REMAIN ON FOR 64.8 SECONDS AND CLOSE FOR 2 HOURS.
 3. FORCE MAIN (PUMP #1): 2" PVC FORCE MAIN SCH. 40, 61 FEET HORIZONTAL DISTANCE AND 10.2 FEET VERTICAL PUMP DISTANCE WITH ANTICIPATED FLOW OF 58 GPM AT THE TOTAL DYNAMIC HEAD OF 33 FT.
 4. SEWER HOUSE CONNECTION: 4" PVC PIPE, SCHEDULE 40, 48 FEET LONG AND INSTALLED AT A SLOPE OF 1.25%.
 5. DRAINFIELD:
 - (A) ACTIVE: THE ACTIVE DRAINFIELD WILL HAVE 2 FEET WIDE TRENCH AT THE DESIGN DEPTH. THE NUMBER OF TRENCHES, SPACING AND LENGTH WILL BE AS PER DESIGNED DATA GIVEN ON THIS SHEET. CONTRACTOR IS RESPONSIBLE FOR STABILIZATION (GRADING AND SEEDING) OF SITE UPON COMPLETION OF INSTALLATION TO PROMOTE DRAINAGE AWAY FROM THE SITE. (SEE ATTACHED NOTE FOR MORE DETAILS).
 - (B) RESERVE: THE SEPTIC SYSTEM WILL HAVE 100% RESERVE DRAINFIELD. THE NUMBER OF TRENCHES, LENGTH AND INSTALLED DEPTH WILL BE SAME AS ACTIVE SYSTEM.
 6. SIX (6) PURAFLO MODULES ON 6" GRAVEL SUPPORTING PAD. MODULES GRAVITY FEED TO THE PUMP TANK #2. THE 2" FORCE MAIN FROM THE PUMP TANK #2 FEED TO THE DISTRIBUTION TANK.
- CONTRACTOR MUST ENSURE THAT INVERT ELEVATION OF DISTRIBUTION GRID IS AS MENTIONED ON THE DESIGN. BACKFILL WITH SOIL 12" BELOW MODULE LIDS. MODULE LIDS MUST REMAIN EXPOSED.

SDE, INC.
 ENGINEERS · PLANNERS · ARCHITECTS · LANDSCAPE ARCHITECTS · SURVEYORS
 7777 LEESBURG PIKE, SUITE 305N
 FALLS CHURCH, VA 22043 PH: (703) 556-0800

LOT 4A2, IRENE C BETTUS PROPERTY
1008 SPRINGVALE ROAD
 MAGISTERIAL DISTRICT: DRANESVILLE
 FAIRFAX COUNTY

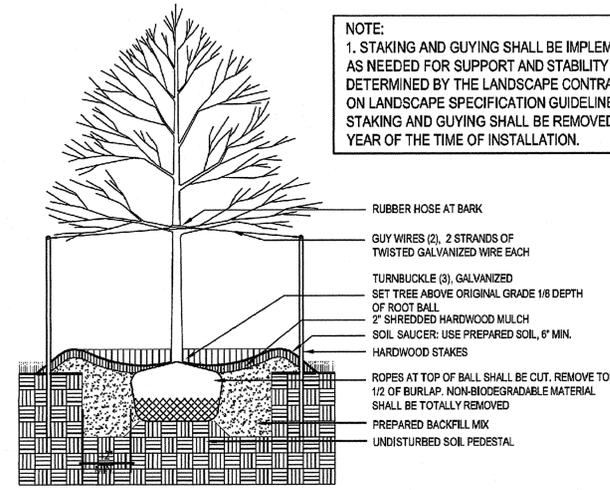
SEPTIC SYSTEM DESIGN

DESIGNED BY:
 SDE, INC.
 DRAWN BY: S.L.
 CHECKED BY:
 HAMID T., PE
 SCALE: 1"=20'
 DATE: 10/20/2010
 PROJECT/FILE #
 SHEET NUMBER
 6 OF 9

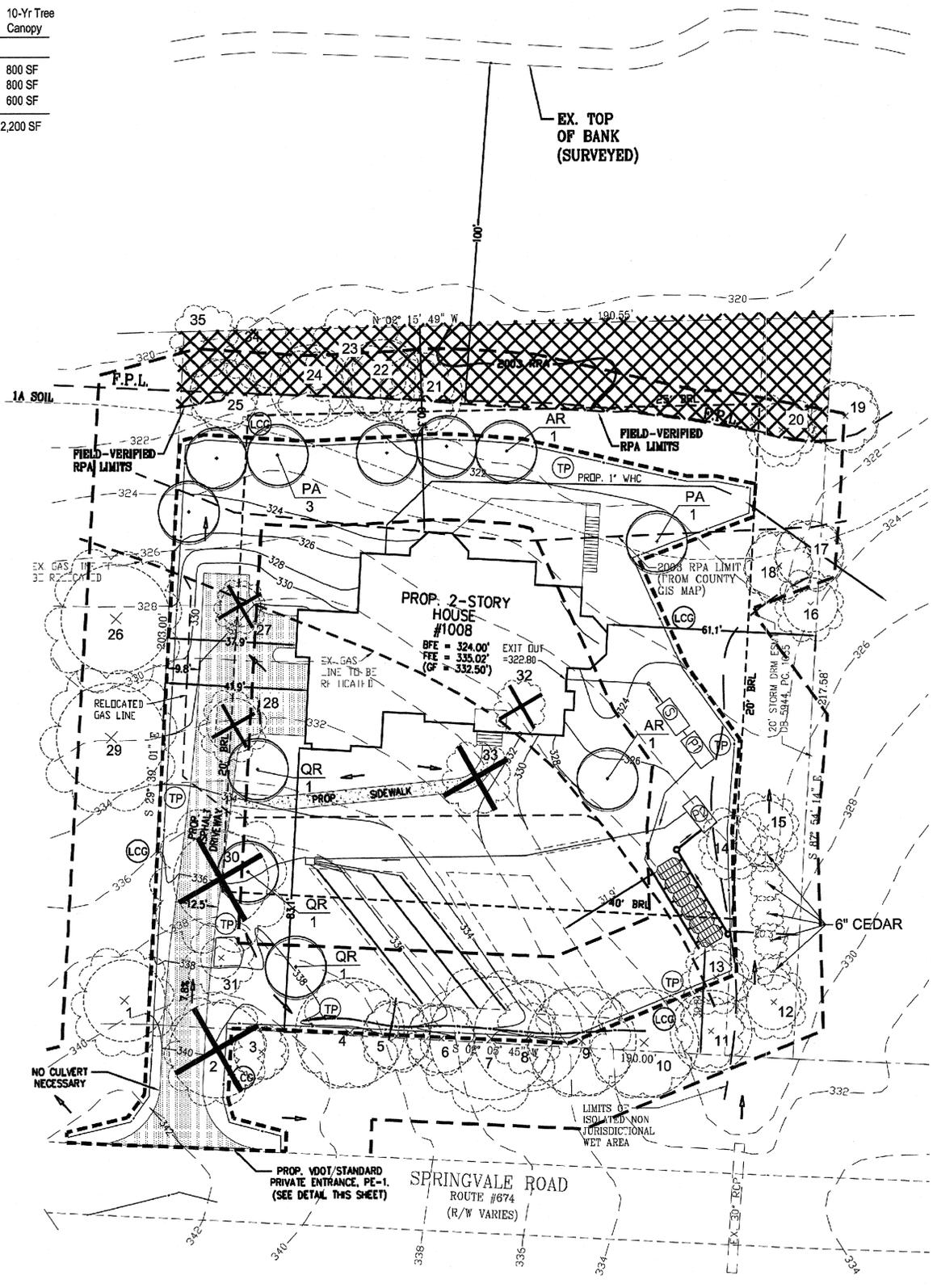
PLANT LIST	Key	Qty	Botanical Name	Common Name	Size	Type	Spacing	Remarks	10-Yr Tree Canopy Credit	10-Yr Tree Canopy
OVERSTORY TREES										
QR	4	Acer rubrum "Red Sunset"	Red Sunset Maple	2-2.5" Cal.	B & B	As Shown	Single stem	Single stem	200 SF	800 SF
PA	4	Platanus acerifolia	London planetree	2-2.5" Cal.	B & B	As Shown	Single stem	Single stem	200 SF	800 SF
QR	3	Quercus rubra	Red Oak	2-2.5" Cal.	B & B	As Shown	Single stem	Single stem	200 SF	600 SF
Total -									2,200 SF	

PLAN ID#	FIELD TAG #	SIZE DBH(in)	CRZ R(ft)	CONDITION %	CANOPY POSITION	CROWN DENSITY %	AVERAGE CANOPY SPREAD (ft.)	TREE CANOPY CREDIT (sq.ft.)	PROBLEMS/COMMENTS	ACTION TO BE TAKEN
1	-	Pin Oak	12	12	75	Dominant	80	30	-	Off Site
2	-	Red Oak	14	14	80	Dominant	85	30	-	In VDOT ROW
3	-	Blue Spruce	8	8	80	Intermediate	90	15	-	In VDOT ROW
4	-	White Pine	16	16	75	Dominant	90	90	-	Prune, root prune, mulch
5	-	Austrian Pine	10	10	65	Intermediate	50	20	-	Broken Limbs
6	-	Austrian Pine	10	10	60	Co-dominant	60	20	-	Codominant leaders
7	-	White Pine	18	18	75	Dominant	90	40	1200	-
8	-	White Pine	16	16	75	Dominant	90	30	700	Broken Limbs
9	-	White Pine	16	16	75	Co-dominant	90	30	700	Codominant leaders
10	-	White Pine	16	16	75	Dominant	80	30	700	-
11	-	Yellow Poplar	12	12	75	Dominant	50	20	300	Minor Branch Die-back
12	-	Red Maple	8	8	70	Dominant	80	20	-	In Drainage Easement
13	-	Virginia Pine	8	8	60	Dominant	50	20	300	-
14	-	Hackberry	8	8	50	Intermediate	75	20	-	In Drainage Easement
15	-	Red Oak	8	8	60	Dominant	65	20	-	Prune
16	-	Red Maple	8	8	75	Co-dominant	80	20	-	In Drainage Easement
17	-	Red Maple	10	10	75	Dominant	80	15	-	In Drainage Easement
18	-	Red Maple	10	10	75	Dominant	80	20	-	In Drainage Easement
19	-	Red Maple	10	10	75	Dominant	80	20	-	Off Site
20	-	Red Maple	(5)8	8	70	Co-dominant	75	20	-	In Drainage Easement
21	-	Pear	12	12	70	Dominant	80	20	-	Prune, root prune, mulch
22	-	Pear	12	12	70	Dominant	80	20	-	Prune, root prune, mulch
23	-	White Pine	16	16	50	Dominant	60	30	700	Chlorotic
24	-	Pear	12	12	70	Dominant	80	20	-	Prune, root prune, mulch
25	-	Austrian Pine	10	10	70	Dominant	65	20	300	Codominant leaders
26	-	Silver Maple	16	16	70	Dominant	75	40	-	Off Site
27	-	Red Oak	6	6	75	Dominant	75	15	-	Remove
28	-	Red Oak	8	8	75	Dominant	80	20	-	Remove
29	-	Silver Maple	16	16	70	Dominant	75	40	-	Off Site
30	-	Red Oak	14	14	75	Dominant	75	40	-	Remove
31	-	Red Oak	6	6	80	Dominant	80	15	175	Prune, root prune, mulch
32	-	Hackberry	6, 8	8	80	Dominant	60	15	-	Remove
33	-	Sassafras	10	10	80	Dominant	80	15	-	Remove
34	-	Red Maple	(3)10	10	70	Co-dominant	80	30	700	Prune
35	-	Red Maple	14	14	70	Dominant	80	30	700	Prune
Total Credit									6,475 SF	

NOTE:
1. STAKING AND GUYING SHALL BE IMPLEMENTED ONLY AS NEEDED FOR SUPPORT AND STABILITY AS DETERMINED BY THE LANDSCAPE CONTRACTOR BASED ON LANDSCAPE SPECIFICATION GUIDELINES. ALL STAKING AND GUYING SHALL BE REMOVED WITHIN ONE YEAR OF THE TIME OF INSTALLATION.



1 DECIDUOUS TREE PLANTING
NTS



TREE CANOPY COVER REQUIREMENTS

GROSS SITE AREA	39,961 SF (0.92 AC)
- STORM DRAIN ESM'T AREA (DEDUCTION)	4,334 SF (0.10 AC)
- DRAIN FIELD AREA (DEDUCTION)	2,000 SF (0.05 AC)
= ADJUSTED GROSS SITE AREA	33,627 SF (0.77 AC)
ZONING:	R-1
TREE CANOPY COVER REQUIRED (33,627 SF X 30%)	10,088 SF
TREE CANOPY COVER PROVIDED:	
LANDSCAPE PROVIDED	2,200 SF
TREE SAVE AREA (6,475 SF X 1.25)	8,093 SF
TOTAL	10,293 SF

TREE PRESERVATION TARGET CALCULATIONS AND STATEMENT

PRE-DEVELOPMENT AREA OF EXISTING TREE CANOPY	10,250 SF (0.23 AC)
PERCENTAGE OF GROSS SITE AREA COVERED BY EXISTING TREE CANOPY	25 %
PERCENTAGE OF 10-YEAR TREE CANOPY REQUIRED FOR SITE (R-1)	30 %
PERCENTAGE OF CANOPY REQUIREMENT THAT SHOULD BE MET THROUGH TREE PRESERVATION	7.5 %
PERCENTAGE OF CANOPY REQUIREMENT THAT WILL BE MET THROUGH TREE PRESERVATION	100 %
HAS THE TREE PRESERVATION TARGET BEEN MET?	YES

LEGEND:

- PROPOSED LARGE DECIDUOUS TREE
- LIMITS OF CLEARING AND GRADING
- 25' BEYOND LCG
- EXISTING TREE TO BE REMOVED
- EXISTING TREE TO BE PRESERVED
- TREE PROTECTION
- CRITICAL ROOT ZONE (CRZ)

CERTIFIED ARBORIST
ISA
Wm. O'Kelly Russell
11-15-10
PREPARED BY:
WM. O'KELLY RUSSELL
ISA Certified Arborist, MA-5009A

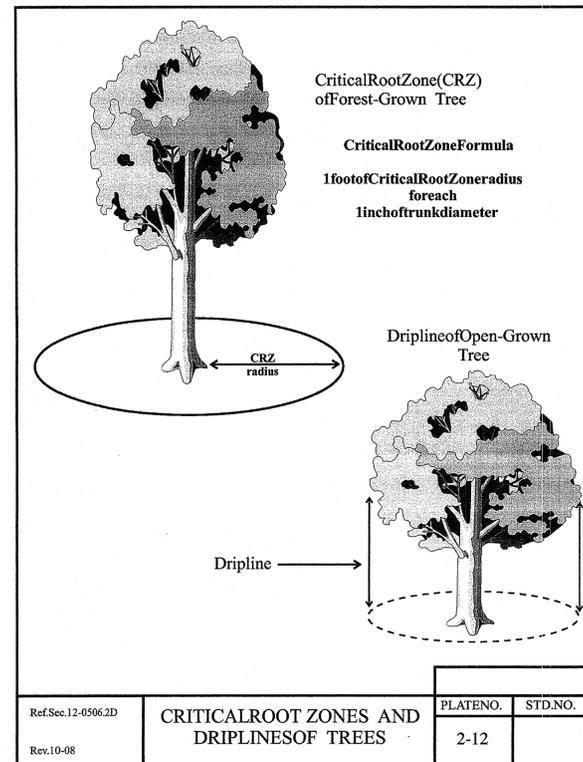


PLAN DATE	DESCRIPTION	REV. BY	APPROVED	DATE
10/21/10				
11/15/10				

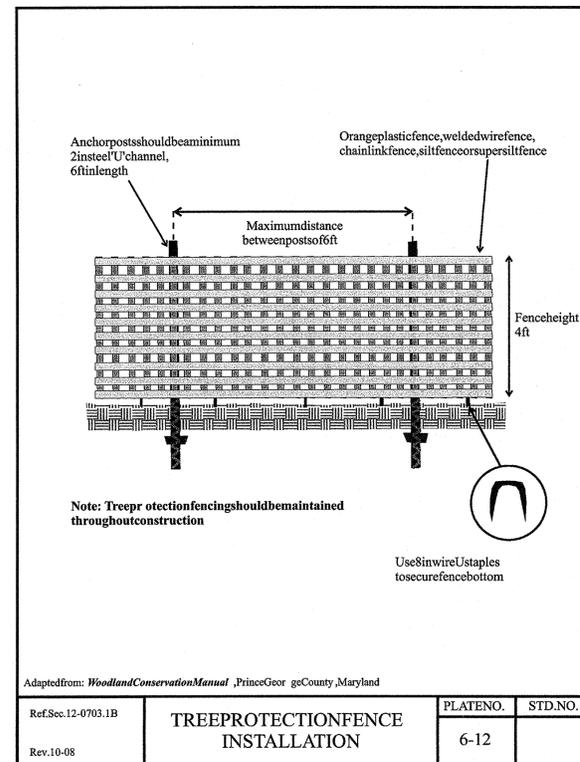
Wm. O'Kelly Russell, RLA
Planning • Landscape Architecture • Arboriculture
17485 Tripod Blvd., Dumfries, VA 22026
(703) 221-3381
wro_ollrussell@hotmail.com

TREE CONSERVATION PLAN
1008 SPRINGVALE ROAD
MASON DISTRICT FAIRFAX COUNTY, VIRGINIA
C.I. 2
DATE: 11-15-2010
SCALE: 1"=20'

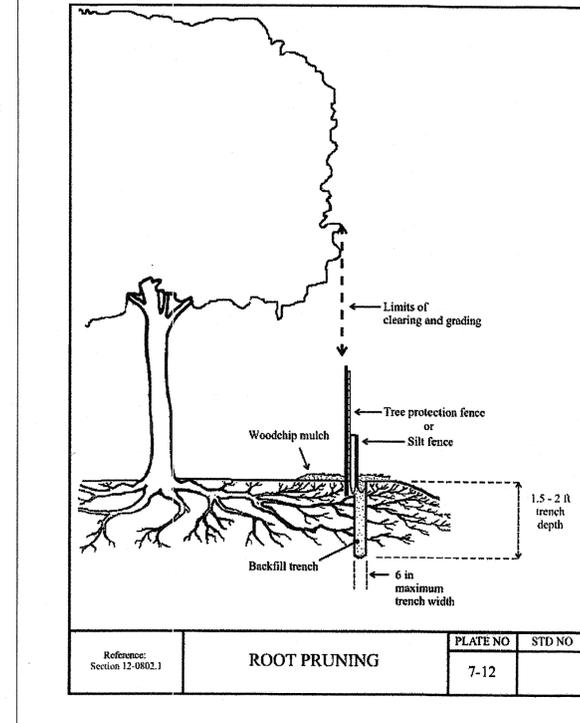
FAIRFAX COUNTY PUBLIC FACILITIES MANUAL



FAIRFAX COUNTY PUBLIC FACILITIES MANUAL



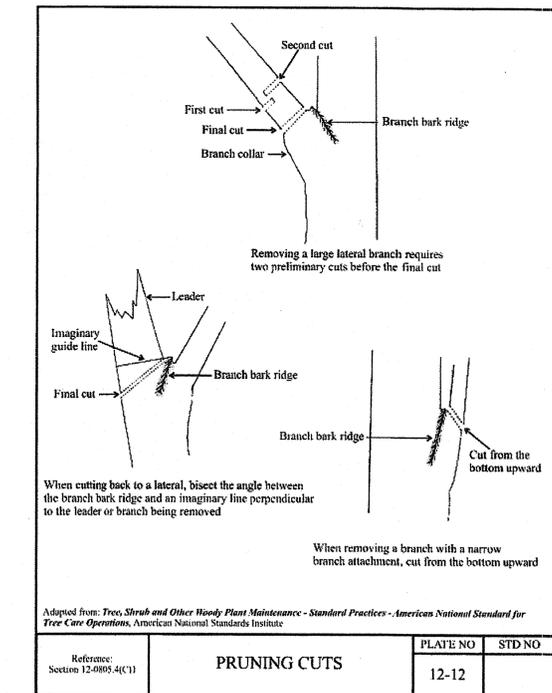
FAIRFAX COUNTY PUBLIC FACILITIES MANUAL



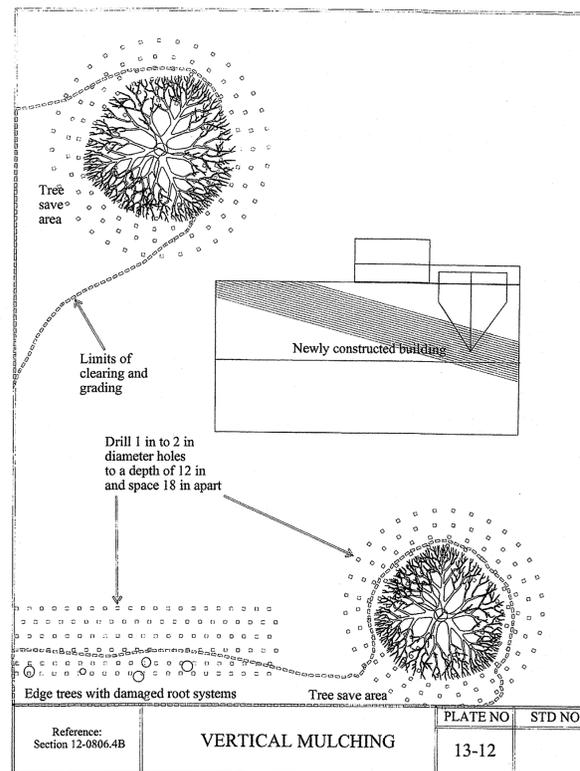
NOTES:

1. THE LIMITS OF CLEARING AND GRADING SHALL BE ACCURATELY FLAGGED PRIOR TO ANY CONSTRUCTION ACTIVITY ON-SITE.
2. ALL INDIVIDUAL TREES TO BE SAVED WILL BE TAGGED APPROPRIATELY WITH BRIGHTLY-COLORED SURVEYOR'S RIBBON AT A HEIGHT OF 5'-6'.
3. TREE PROTECTION FENCE SHALL BE INSTALLED IN THE FIELD IN CONJUNCTION WITH THE COUNTY'S URBAN FORESTER. PROTECTION FENCE IS SUBJECT TO RELOCATION BASED UPON THE URBAN FORESTER'S REVIEW. FINAL APPROVAL BY THE URBAN FORESTER MUST BE OBTAINED PRIOR TO COMMENCING ANY CONSTRUCTION ACTIVITIES.
4. TREE PROTECTION FENCE SHALL BE INSTALLED AT THE DRIPLINE OF THE TREES TO BE PRESERVED, OR AT THE LIMITS OF CLEARING AND GRADING, WHICHEVER IS A GREATER DISTANCE FROM THE TRUNK OF THE TREE TO BE PRESERVED. NOTE THAT THERE MAY BE TREES WHERE THE TREE PROTECTION FENCE MAY BE SLIGHTLY WITHIN THE DRIPLINE LIMITS. SEE THIS SHEET FOR DETAILS OF THE TREE PROTECTION TO BE UTILIZED.
5. VEHICULAR TRAFFIC AND THE STOCKPIILING OF ANY CONSTRUCTION MATERIALS, INCLUDING TOPSOIL STOCK PILES, IS PROHIBITED WITHIN THE DRIP LINE OF ANY TREE TO BE SAVED.
6. ROOT PRUNING IS TO BE PERFORMED WHEREVER GRADES WILL BE ALTERED WITHIN THE ROOT ZONE OF A TREE TO BE PRESERVED. THE ENTIRE AREA OF ROOT PRUNING IS TO BE COMPLETED IN ONE OPERATION. ROOT PRUNING MACHINERY SHALL BE USED TO A DEPTH OF 18". IF A TRENCHER IS USED, THE TRENCH SHALL BE BACKFILLED IMMEDIATELY TO PREVENT ROOT DEHYDRATION. WHENEVER POSSIBLE, ROOT PRUNING TRENCHES SHOULD BE MULCHED WITH WOOD CHIPS OR MULCH TO A DEPTH OF FOUR INCHES.
7. 1-2 INCHES OF MULCH SHALL BE SPREAD AT THE LIMITS OF CLEARING AND GRADING, AND A ROOT BIO-STIMULANT SHALL BE APPLIED TO THE ROOTS SYSTEMS IN THIS AREA BY A LICENSED TREE CARE PROFESSIONAL, AND/OR CERTIFIED ARBORIST.
8. MULCH AS GREAT AN AREA AS POSSIBLE AROUND TREE TO RETAIN MOISTURE, INCREASE FERTILITY OF SOIL, PROTECT ROOTS IN WINTER AND HASTEN ROOT REGENERATION.
9. WATER TREES WELL DURING JUNE, JULY, AUGUST, AND SEPTEMBER.
10. A PRIVATE CERTIFIED ARBORIST SHALL BE REQUIRED TO IMPLEMENT, OVERSEE, AND MONITOR SITE WORK AS IT AFFECTS TREES DURING THE LIFE OF THE PROJECT. MONITORING OF THE PRESERVED TREES SHALL BE CONDUCTED ON A WEEKLY BASIS DURING THE INITIAL PHASES OF CONSTRUCTION. THE GENERAL CONTRACTOR SHALL BE SUBJECT TO REQUIREMENTS OF THE COUNTY'S URBAN FORESTER AS IT RELATES TO PRESERVATION MEASURES.
11. TREES BEING REMOVED SHALL NOT BE FELLED, PUSHED OR PULLED INTO TREES BEING RETAINED. WHEN TREES TO BE REMOVED ARE IN VERY CLOSE PROXIMITY TO TREES TO BE PRESERVED, THEY SHALL BE FELLED BY HAND, WITH A CHAIN SAW.
12. EQUIPMENT OPERATORS SHALL NOT CLEAN ANY PART OF THEIR EQUIPMENT BY SLAMMING IT AGAINST THE TRUNKS OF TREES TO BE RETAINED.
13. TRENCHING SHALL BE DONE AS FAR AWAY FROM THE TRUNKS OF TREES AS POSSIBLE.
14. ROOTS EXPOSED BY TRENCHING SHALL NOT BE LEFT EXPOSED TO AIR. THEY SHALL BE COVERED WITH SOIL AS SOON AS POSSIBLE OR PROTECTED AND KEPT MOISTENED WITH WET BURLAP OR PEAT MOSS UNTIL THE TRENCH CAN BE FILLED.
15. THE ENDS OF DAMAGED AND CUT ROOTS SHALL BE CUT OFF SMOOTHLY.
16. ALL WORK SHALL CONFORM TO THE FAIRFAX COUNTY PUBLIC FACILITIES MANUAL, THE APPROVED TREE PRESERVATION PLAN, AND THE ZONING PROFFERS AND CONDITIONS, WHERE IT AFFECTS TREES.
17. TREES TO BE REMOVED WITHIN THE VDOT R.O.W. MUST HAVE WRITTEN PERMISSION TO DO SO PRIOR TO REMOVAL.

FAIRFAX COUNTY PUBLIC FACILITIES MANUAL



FAIRFAX COUNTY PUBLIC FACILITIES MANUAL



PL. DATE	REV. BY	APPROVED	DATE

PL. DATE: 10/21/10

DESCRIPTION: REVISION APPROVED BY DIVISION OF DESIGN REVIEW

Wm. O'Kelly Russell, RLA
 Planning • Landscape Architecture • Arboriculture
 17485 Trippel Blvd., Dumfries, VA 22026
 (703) 221-3381
 w.o.kellyrussell@naimail.com

TREE CONSERVATION PLAN

1008 SPRINGVALE ROAD

MASON DISTRICT FAIRFAX COUNTY, VIRGINIA

C.I. Z

DATE: 10-21-10

SCALE: 1"=20'

SHEET 8 OF 9

FILE No.



PREPARED BY:
 WM. O'KELLY RUSSELL
 ISA Certified Arborist, MA-5009A

Wm. O'Kelly Russell
 10-21-10

RPA Boundary Location Certification
(The following certification statement is to be placed on the plan, signed, and sealed by the licensed professional submitting the plan.)

RPA Boundary Location Certification

The lot depicted on this infill lot grading plan includes an RPA. The locations of all RPA features have been verified in the field.

Checklist of RPA features which are present:

- YES NO
- (1) A tidal wetland;
- (2) A tidal shore;
- (3) A water body with perennial flow;
- (4) A nontidal wetland connected by surface flow and contiguous to a tidal wetland or water body with perennial flow;
- (5) A buffer area as follows:
- (i) Any land within a major floodplain;
- (ii) Any land within 100 feet of a feature listed in (1) through (4).

Supporting Documents:

- Jurisdictional determination or verification letter from the U.S. Army Corps of Engineers for all Waters of the U.S.

I hereby certify that:

Each of the individual features listed above, which together comprise the RPA, have been reviewed and the locations of the features and final RPA boundary shown on the plan are in conformance with the requirements of the Chesapeake Bay Preservation Ordinance.

Signature: Hamid Tehrani Date: 11/21/2010

HAMID TEHRANI, P.E. 23137

Name: Virginia license number



P. O. Box 1064
Warrenton, VA 20188

October 27, 2010

U.S. Army COE
Northern VA Field Office
16139 Triangle Shopping Plaza
Suite 213
Dumfries, VA 22026

Ref: Request for Wetland Boundary Confirmation
1008 Springvale Road
Fairfax County, VA

Dear Sirs:

Please provide jurisdictional wetland/waters boundary confirmation for the above referenced parcel. The purpose of the request is to confirm the wetland boundary in the vicinity of the site and therefore allow confirmation of the RPA boundary in the area. This confirmation is required as part of the Fairfax County plan approval process for a special exception plat at the above referenced address.

Attached please find a vicinity map, site plan, and data forms based on previous field observations. Thank you for your assistance and please do not hesitate to contact me if you have any questions or need additional information.

Sincerely,

George E. Walker Jr.
George E. Walker Jr.
CPSS, CPG, OSE

Attachments



P. O. Box 1064
Warrenton, VA 20188

October 27, 2010

Suburban Development Engineering, Inc.
7777 Leesburg Pike, Suite 305N
Falls Church, VA 22043

Attn: Mr. Hamid Tehrani, P.E.

Ref: Wetland Delineation
1008 Springvale Road
Fairfax County, Virginia

Dear Mr. Tehrani:

Per your request a wetland delineation was conducted for the above referenced property. The delineation was conducted to identify where, if present, the jurisdictional wetland/waters of the U.S. boundary is located in the area of the property so the Chesapeake Bay Resources Protection Area boundary could be defined.

The study consisted of a review of readily available mapping references and a field investigation to observe soils, hydrology and vegetation on and in the vicinity of the subject property. The study did identify an area which demonstrated wetland characteristics on the subject property; however, this area is not contiguous to the perennial stream which is located just west of the subject property and it is unknown if the US Army COE would claim jurisdiction over this isolated area. The stream located west of the subject property would be considered a jurisdictional water of the U.S.

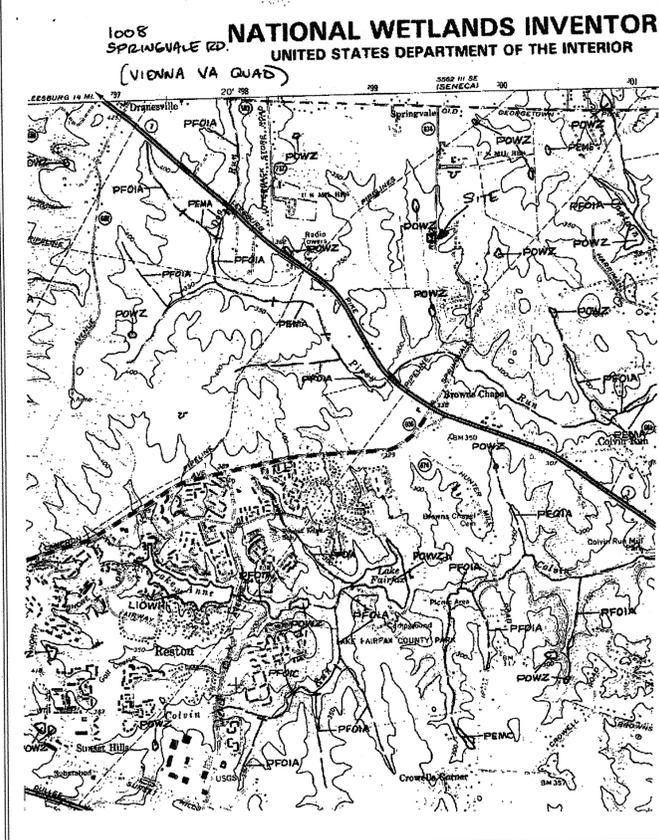
Attached please find a plan showing surveyed data point locations, and the location of the wetland/jurisdictional boundary based on the observed field conditions and other available data. Also attached are the data forms for each of the data points.

Thank you for the opportunity to be of service and please do not hesitate to call if you have any questions or need additional information.

Sincerely,

George E. Walker, Jr.
George E. Walker, Jr. CPSS, CPG, OSE

Attachment



SDE, INC.
ENGINEERS · PLANNERS · ARCHITECTS · LANDSCAPE ARCHITECTS · SURVEYORS
LEESBURG PIKE, SUITE 305N
FALLS CHURCH, VA 22043 PH: (703) 556-0800

1008 SPRINGVALE ROAD
LOT 4A2
FAIRFAX COUNTY
MAGISTERIAL DISTRICT: DRANESVILLE #1

WETLAND STUDY
AND RPA
DELINEATION

DESIGNED BY:
SDE, INC.

DRAWN BY: B.H.

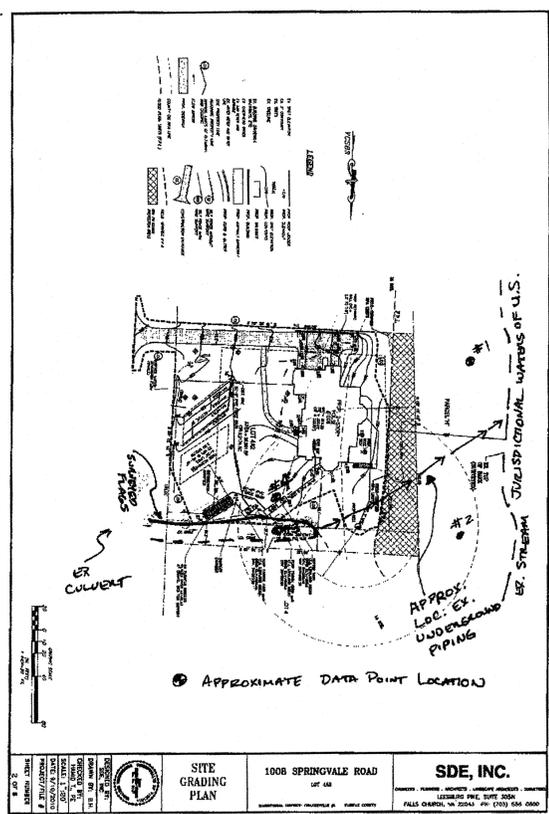
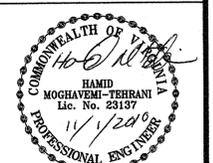
CHECKED BY:
HAMID T., PE

SCALE: N/A

DATE: 11/01/2010

PROJECT/FILE #

SHEET NUMBER
9 OF 9



DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: 1008 SPRINGVALE ROAD Date: 10/11/10

Applicant/Owner: SDE, INC. County: FAIRFAX

Investigator: George Walker CPSS, CPG, OSE State: VA

Do Normal Circumstances exist on the site? No
Is the site significantly disturbed (Atypical Situation)? Yes
Is the area a potential Problem Area? Yes

Community ID: #1
Transect ID:
Plot ID:

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. EAST PEGONIA	T	FAC-I			
2. RED MAPLE	T	FAC			
3. PINE	T	FAC-I			
4. AMERICAN BLACKBERRY	SUB	FAC-I			
5. COY. GALERINA	H	FAC			
6. STATE HONEY-SUCKLE	H	FAC			
7. JACARANDA	H	FAC-I			

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-I): 37 - 54%

HYDROLOGY

Recorded Data (Describe in Remarks):
Streams, Lakes, or Tide Gauge
Aerial Photographs
Other
No Recorded Data Available

Field Observations:
Depth of Surface Water: NONE (in.)
Depth to Free Water in PIE: +18 (in.)
Depth to Saturated Soil: +18 (in.)

Wetland Hydrology Indicators:
Primary Indicators:
- Inundated
- Saturated in Upper 12 inches
- Water Marks
- Drift Lines
- Sediment Deposits
- Drainage Patterns in Wetlands
Secondary Indicators (2 or more required):
- Oxidized Root Channels in Upper 12 inches
- Water-Strained Leaves
- Local Soil Survey Data
- FAC-Natural Test
- Other (Explain in Remarks)

1008 SPRINGVALE RD.
DATA POINT #1

SOILS

Map Unit Name (Series and Phase): 1A+ MIXED ALLUVIAL Stratum Class: P/SP

Taxonomy (Subgroup): _____ Field Observations: _____
Confirm Mapped Type? No

Depth (inches)	Location	Mottle Color (Munsell)	Mottle Colors (Observed)	Mottle Abundance (%)	Texture, Consistency, Structure, etc.
0-4	A	10YR 3/2			ORGANIC SALT LOAM
4-15	B ₁	10YR 4/4			SILT LOAM, SOME SCLC
15-24	B _{2c}	2.5 Y 5/2	10YR 4/4		DISTURBED/25% HEAVY SILT LOAM

Hydric Soil Indicators:
- Heloid
- Holic Epigeon
- Sulfur Color
- Aquic Wetness Regime
- Reducing Conditions
- Gleyed or Low-Chrome Colors

Conclusions:
- High Organic Content in Surface Layer in Sandy Soils
- Later on Local Hydric Soils List
- Later on National Hydric Soils List
- Other (Explain in Remarks)

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes (Circle)
Wetland Hydrology Present? Yes (Circle)
Hydric Soils Present? Yes (Circle)

Is this Sampling Point Within a Wetland? Yes (Circle)

DATA FORM
ROUTINE WETLAND DETERMINATION
(1987 COE Wetlands Delineation Manual)

Project/Site: 1008 SPRINGVALE ROAD Date: 10/11/10

Applicant/Owner: SDE, INC. County: FAIRFAX

Investigator: George Walker CPSS, CPG, OSE State: VA

Do Normal Circumstances exist on the site? No
Is the site significantly disturbed (Atypical Situation)? Yes
Is the area a potential Problem Area? Yes

Community ID: #2
Transect ID:
Plot ID:

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. AMERICAN BLACKBERRY	SUB	FAC-I			
2. JACARANDA	H	FAC-I			
3. COY. GALERINA	H	FAC-I			
4. WILD LIME	A	FAC-I			
5. BLACK NIGHTSHADE	H	FAC-I			

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-I): 25 - 40%

HYDROLOGY

Recorded Data (Describe in Remarks):
Streams, Lakes, or Tide Gauge
Aerial Photographs
Other
No Recorded Data Available

Field Observations:
Depth of Surface Water: NONE (in.)
Depth to Free Water in PIE: +18 (in.)
Depth to Saturated Soil: +18 (in.)

Wetland Hydrology Indicators:
Primary Indicators:
- Inundated
- Saturated in Upper 12 inches
- Water Marks
- Drift Lines
- Sediment Deposits
- Drainage Patterns in Wetlands
Secondary Indicators (2 or more required):
- Oxidized Root Channels in Upper 12 inches
- Water-Strained Leaves
- Local Soil Survey Data
- FAC-Natural Test
- Other (Explain in Remarks)

1008 SPRINGVALE ROAD
DATA POINT #2

SOILS

Map Unit Name (Series and Phase): 1A+ - MIXED ALLUVIAL Drainage Class: SP
 Taxonomy (Subgroup): _____ Field Observations: _____
 Confirm Mapped Type? (Yes/No) _____

Soil Description:
 Depth (Inches) Horizon Matrix Color (Munsell) Mottled Colors (Munsell) Mottle Abundance/ Size/Contrast Texture, Concretions, Structures, etc.

0-2 A 10YR 8/2 _____ ORGANIC SILT LOAM
2-18 B1 10YR 5/3 10YR 4/6 DISTINCT 1/8" SILT LOAM
18-24 B2 10YR 5/1 10YR 4/4 DISTINCT 1/8" HEAVY SILT LOAM

Hydric Soil Indicators:
 Histoc: _____ Concretions: _____
 Mottled Epipedon: _____ High Organic Content in Surface Layer in Sandy Soils
 Sulfidic Color: _____ Organic Staining in Sandy Soils
 Aquic Moisture Regime: _____ Labeled on Local Hydric Soil List
 Reducing Conditions: _____ Labeled on National Hydric Soil List
 Clayed or Low-Chrome Colors: _____ Other (Explain in Remarks)

Remarks: _____

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes (Circled) No (Circle)
 Wetland Hydrology Present? Yes (Circled) No (Circle)
 Hydric Soils Present? Yes (Circled) No (Circle)

Is this Sampling Point Within a Wetland? Yes (Circled) No (Circle)

Remarks: _____

Approved by HOUFACE 3192

Appendix B Blank and Example Data Forms

B3

DATA FORM
ROUTINE WETLAND DETERMINATION
 (1987 COE Wetlands Determination Manual)

Project/Site: 1008 SPRINGVALE RD. Date: 10/1/10
 Applicant/Owner: S/O SDE, INC. County: FAIRFAX
 Investigator: George Walker, CSS, CFS, OSE State: VA

Do Normal Circumstances exist on the site? Yes (Circled) No (Circle)
 Is the site significantly disturbed (Atypical Situation)? Yes (Circled) No (Circle)
 Is the area a potential Problem Area? Yes (Circled) No (Circle)

Community ID: #3
 Transect ID: _____
 Plot ID: _____

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>RAPID RATTLE</u>	<u>I</u>	<u>FAC</u>			
2. <u>ACUTE TRIENTHIS</u>	<u>H</u>	<u>FAC</u>			
3. <u>SMALL MILLETOID</u>	<u>H</u>	<u>FAC</u>			
4. <u>SEED RAIN</u>	<u>H</u>	<u>FAC</u>			
5. <u>CRACKING TRICHOPTERIS</u>	<u>H</u>	<u>FAC</u>			
6. <u>SMALL BURNING NETTLE</u>	<u>H</u>	<u>FAC</u>			

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC): 6/6 - 100%

Remarks: _____

HYDROLOGY

Recorded Data (Describe in Remarks):
 Streams, Lakes, or Tide Gauge: _____
 Aerial Photographs: _____
 Other: _____
 No Recorded Data Available

Field Observations:
 Depth of Surface Water: NONE (in)
 Depth to Free Water in Pit: +18 (in)
 Depth to Saturated Soil: +18 (in)

Wetland Hydrology Indicators:
 Primary Indicators:
 Inundated: _____
 Submerged in Upper 12 Inches: _____
 Water Marks: _____
 Drift Lines: _____
 Sediment Deposits: _____
 Drainage Patterns in Wetlands: _____
 Secondary Indicators (2 or more required):
 Oxidized Root Channels in Upper 12 Inches
 Water-Stained Leaves
 Local Soil Survey Data
 FAC-Neutral Test
 Other (Explain in Remarks): _____

Remarks: _____

B2

Appendix B Blank and Example Data Forms

1008 SPRINGVALE RD.
DATA POINT #3

SOILS

Map Unit Name (Series and Phase): GLENVILLE SILT LOAM Drainage Class: SP
 Taxonomy (Subgroup): _____ Field Observations: _____
 Confirm Mapped Type? (Yes/No) _____

Soil Description:
 Depth (Inches) Horizon Matrix Color (Munsell) Mottled Colors (Munsell) Mottle Abundance/ Size/Contrast Texture, Concretions, Structures, etc.

0-4 A 10YR 4/2 _____ ORGANIC SILT LOAM
4-8 B1 10YR 4/3 _____ SILT LOAM
8-15+ B2 10YR 4/1 10YR 5/6 DISTINCT 1/8" HEAVY SILT LOAM
10YR 4/4

Hydric Soil Indicators:
 Histoc: _____ Concretions: _____
 Mottled Epipedon: _____ High Organic Content in Surface Layer in Sandy Soils
 Sulfidic Color: _____ Organic Staining in Sandy Soils
 Aquic Moisture Regime: _____ Labeled on Local Hydric Soil List
 Reducing Conditions: _____ Labeled on National Hydric Soil List
 Clayed or Low-Chrome Colors: _____ Other (Explain in Remarks)

Remarks: _____

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes (Circled) No (Circle)
 Wetland Hydrology Present? Yes (Circled) No (Circle)
 Hydric Soils Present? Yes (Circled) No (Circle)

Is this Sampling Point Within a Wetland? Yes (Circled) No (Circle)

Remarks: _____

Approved by HOUFACE 3192

Appendix B Blank and Example Data Forms

B3

DATA FORM
ROUTINE WETLAND DETERMINATION
 (1987 COE Wetlands Determination Manual)

Project/Site: 1008 SPRINGVALE ROAD Date: 10/1/10
 Applicant/Owner: S/O SDE, INC. County: FAIRFAX
 Investigator: George Walker, CSS, CFS, OSE State: VA

Do Normal Circumstances exist on the site? Yes (Circled) No (Circle)
 Is the site significantly disturbed (Atypical Situation)? Yes (Circled) No (Circle)
 Is the area a potential Problem Area? Yes (Circled) No (Circle)

Community ID: #4
 Transect ID: _____
 Plot ID: _____

VEGETATION

Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator
1. <u>CRACKING TRICHOPTERIS</u>	<u>H</u>	<u>FACU</u>			
2. <u>CRACKING TRICHOPTERIS</u>	<u>H</u>	<u>FACU</u>			
3. <u>SMALL MILLETOID</u>	<u>H</u>	<u>FACU</u>			

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC): 0/3 - 0%

Remarks: (YARD AREA)

HYDROLOGY

Recorded Data (Describe in Remarks):
 Streams, Lakes, or Tide Gauge: _____
 Aerial Photographs: _____
 Other: _____
 No Recorded Data Available

Field Observations:
 Depth of Surface Water: NONE (in)
 Depth to Free Water in Pit: +18 (in)
 Depth to Saturated Soil: +18 (in)

Wetland Hydrology Indicators:
 Primary Indicators:
 Inundated: _____
 Submerged in Upper 12 Inches: _____
 Water Marks: _____
 Drift Lines: _____
 Sediment Deposits: _____
 Drainage Patterns in Wetlands: _____
 Secondary Indicators (2 or more required):
 Oxidized Root Channels in Upper 12 Inches
 Water-Stained Leaves
 Local Soil Survey Data
 FAC-Neutral Test
 Other (Explain in Remarks): _____

Remarks: _____

B2

Appendix B Blank and Example Data Forms

1008 SPRINGVALE ROAD
DATA POINT #4

SOILS

Map Unit Name (Series and Phase): GLENVILLE (B1) Drainage Class: SP
 Taxonomy (Subgroup): _____ Field Observations: _____
 Confirm Mapped Type? (Yes/No) _____

Soil Description:
 Depth (Inches) Horizon Matrix Color (Munsell) Mottled Colors (Munsell) Mottle Abundance/ Size/Contrast Texture, Concretions, Structures, etc.

0-4 A 10YR 4/3 _____ ORGANIC SILT LOAM
4-14 B1 10YR 5/3 _____ SILT LOAM
14-24 B2 10YR 4/6 10YR 7/1 DISTINCT 1/8" SILT LOAM/HEAVY SILT LOAM

Hydric Soil Indicators:
 Histoc: _____ Concretions: _____
 Mottled Epipedon: _____ High Organic Content in Surface Layer in Sandy Soils
 Sulfidic Color: _____ Organic Staining in Sandy Soils
 Aquic Moisture Regime: _____ Labeled on Local Hydric Soil List
 Reducing Conditions: _____ Labeled on National Hydric Soil List
 Clayed or Low-Chrome Colors: _____ Other (Explain in Remarks)

Remarks: _____

WETLAND DETERMINATION

Hydrophytic Vegetation Present? Yes (Circled) No (Circle)
 Wetland Hydrology Present? Yes (Circled) No (Circle)
 Hydric Soils Present? Yes (Circled) No (Circle)

Is this Sampling Point Within a Wetland? Yes (Circled) No (Circle)

Remarks: _____

Approved by HOUFACE 3192

Appendix B Blank and Example Data Forms

B3

GEOTECHNICAL REQUIREMENTS
 Single Family Home @
 1008 Springvale Road
 Great Falls, Fairfax County, Virginia
 GDE Project No.: E10018

By
 Geo Design & Engineering, Inc.
 4515 Daly Drive, Suite E
 Chantilly, Virginia 20151
 Ph: 703-961-8130
 Fax: 703-961-8133
 Email: mak@geodesigneng.com

Site Geology

The site is geologically located in the Appalachian Piedmont Physiographic Province. A study of the area geology from the available literature and field observation indicates that the site is underlain by Peters Creek Schist of Early Cambrian and/or Late Precambrian age.

The Peters Creek is described as fine to coarse grained, lustrous, greenish-gray to gray, reddish weathering, quartz-rich schist and lesser mica gneiss and light to medium gray, fine to medium grained, well-bedded metagraywacke and semi-pelitic schist. The Peters Creek is polymetamorphic and has undergone a prograde event that ranges from chlorite grade to sillimanite grade. The depositional environment has been interpreted to be a turbidite under high energy conditions in a large submarine fan. The saprolite is generally thick with vein quartz a random occurrence.

Subsurface Conditions

GDE engineers observed approximately 12 inches of topsoil at the both the test locations. The soils underlying the topsoil were residual soils and described as orange brown and brown, and were classified as sandy silt (USCS Classification: ML). These soils were moist to wet near the termination depth of 8 to 8.75 feet below the existing surface grades. The residual soils extended to the hole termination depths of 8 feet and 8.75 feet below the existing surface elevations at HA-1 and HA-2, respectively. The blow counts recorded from the DCP tests performed within these soils ranged from 7 blows to 30 blows per 1.75 inch of penetration.

Versailles Custom Homes
 1008 Springvale Road

GDE Project No.: E10018
 October 27, 2010

Groundwater Observations

GDE did not observe groundwater in the test borings during hand augering or at completion. The test borings were backfilled upon completion for safety reasons; therefore 24-hour groundwater readings were not recorded.

It shall be noted that the groundwater conditions presented in this report are based on the observations made at the time of our field activities. Fluctuations in groundwater levels are possible seasonally, especially in response to changes in precipitation. We recommend that the Contractor determine the actual groundwater levels at the time of construction to evaluate groundwater impact on the proposed construction procedures.

Site Preparation and Earthwork

The construction areas, building pad and driveway, shall be stripped of trees, vegetation, topsoil and organic matter. Following excavating the basement to the proposed elevation, the subgrade shall be observed by GDE engineer for evaluation and recommendations. Soft soils were not encountered during subsurface exploration field work. However, if any soft soils or existing uncontrolled fill are encountered at or below the basement planned subgrade, they shall be removed as directed by GDE engineer or a qualified representative to suitable-bearing subgrade and replaced with approved controlled fill.

Controlled fill placement shall extend laterally beyond the structure footprint a minimum distance of 5 feet at subgrade elevation or depth of fill, whichever is greater. The fill shall be placed at a slope of 3H:1V or shallower. Controlled fill for the building pad shall be placed to an elevation 8 inches below the floor slab-on-grade. Footing trenches for the house shall be excavated after the building pad has been properly prepared.

The on-site soils classified as ML can generally be used as controlled fill subject to moisture adjustment at the time of placement. If off-site material is imported for use as controlled fill, we recommend using materials consisting of GW, GP, GM, SW, SP, SC and SM. Imported as well as on site ML and CL soils are subject to the following restrictions:

Liquid Limit < 40
 Plasticity Index < 20

All controlled fill soils shall be free from topsoil, organics, and other unsuitable materials, and shall not contain rock fragments greater than 4 inches in their greatest dimension.

Controlled fill shall be placed in loose horizontal lifts of maximum 8 inches thick, and compacted uniformly with proper equipment. Controlled fill shall be compacted to at least ninety-five percent (95%) of the maximum dry density as established by ASTM D-698, AASHTO T-99 or VTM-1 test methods. Moisture content of the fill soils shall be

Versailles Custom Homes
 1008 Springvale Road

GDE Project No.: E10018
 October 27, 2010

SDE, INC.
 ENGINEERS · PLANNERS · ARCHITECTS · LANDSCAPE ARCHITECTS · SURVEYORS
 LEESBURG PIKE, SUITE 305N
 FALLS CHURCH, VA 22043 PH: (703) 556-0800

1008 SPRINGVALE ROAD
 LOT 4A2
 MAGISTERIAL DISTRICT: DRANESVILLE #1 FAIRFAX COUNTY

WETLAND STUDY AND GEOTECHNICAL REQUIREMENTS



DESIGNED BY:
 SDE, INC.

DRAWN BY: B.H.

CHECKED BY:
 HAMID T., PE

SCALE: N/A

DATE: 11/01/2010

PROJECT/FILE #

SHEET NUMBER
 9.1 OF 9

