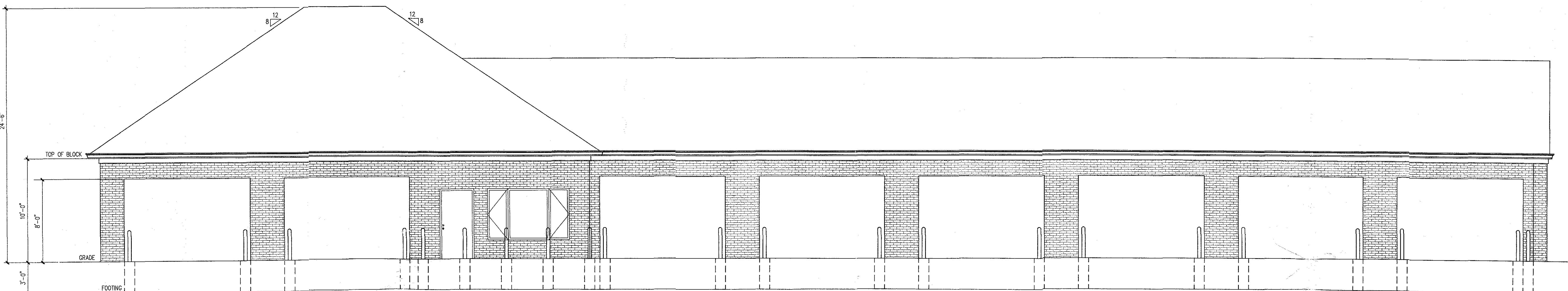


# DOUTY CAR WASH SITE PLAN

LEE DISTRICT  
COUNTY OF FAUQUIER, VIRGINIA  
SPMA 04-LE-001  
PIN: 6899-24-9836-000

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**Building Front Elevation**

SCALE: 1" = 5'

**DOUTY CAR  
WASH  
SITE PLAN**  
LEE DISTRICT  
COUNTY OF FAUQUIER, VIRGINIA



## CONTRACT OWNER & DEVELOPER

**DOUTY ENTERPRISES, LLC**  
3243 CISMONT COURT  
WOODBRIDGE, VA 22192  
703-491-1237

## PARKING TABULATION

Fauquier County Zoning Ordinance Section 7-104  
Required Parking for Car Wash:  
4 Spaces per bay/stall  
Plus 1 space per employee  
Plus 10 Stacking spaces per automated bay

For this site, the ordinance requires:  
\*20 Stacking Spaces (10 x 2 Automated bays)  
\*24 Parking Spaces (4x6 Self serve bays)

\* Parking for self serve bays is accommodated by stacking spaces.

There are no employees on-site.

See sheet 7 for delineation of stacking/parking.

## FAUQUIER COUNTY BOND

Subtotal: \$ 39,666.13  
Admin & Contig 25%: \$ 9,916.53  
Total Cost: \$ 49,582.66

## APPROVAL BLOCK

**Rickmond Engineering, Inc.**

Engineering Surveying Land Planning  
Vint Hill • P.O. Box 861647 1643 Merrimac Trail  
Warrenton, VA 20187 Williamsburg, VA 23185  
Voice: (540)349-7730 Voice: (757)229-1776  
Fax: (540)349-7731 Fax: (757)229-4683  
www.rickmond.com

No.	By	Revision	App.	Date
3	SLB	3rd REVIEW COMMENTS	PAB	2/18/2004
2	SAG	2nd REVIEW COMMENTS	JWS	11/4/2003
1	SLB	1st REVIEW COMMENTS	JWS	9/26/2003

Date: 12 MAY 2003

Project No.: 03511

Sheet No.: 1 OF 9

BEFORE DIGGING CALL "MISS UTILITY" OF VIRGINIA AT 1 - 800 - 552 - 7001

## GENERAL NOTES

1. THIS SITE PLAN IS FOR THE CONSTRUCTION OF A CAR WASH FACILITY WITH VACUUM STATIONS, ITS ASSOCIATED TRAVELWAYS, PARKING, AND UTILITY INFRASTRUCTURE.
2. THE BOUNDARY INFORMATION SHOWN HEREON, IS TAKEN FROM A PLAT PREPARED BY MARSH & LEGGE, LAND SURVEYORS, P.L.C., DATED APR. 10, 2002, UNDER THE DIRECTION OF RICKMOND ENGINEERING, INC. RECORDED IN DEED BOOK 1061 ON PAGE 619.
3. THE EXISTING CONDITIONS SHOWN HEREON, ARE AN AMALGAMATION OF EXISTING CONDITIONS, CONDITIONS CURRENTLY UNDER CONSTRUCTION, AND A SITE PLAN (LIBERTY STATION - MAS 03-03) RECENTLY APPROVED BY FAUQUIER COUNTY.
4. THE PROPERTY SHOWN HEREON IS KNOWN AS THE COMMERCIAL PROPERTY OF REYNARD'S CROSSING, IT IS 0.775 ACRES. IT IS ZONED C-2, COMMERCIAL HIGHWAY. THE ABOVE MENTIONED EXISTING CONDITIONS (LIBERTY STATION SITE PLAN) ARE TIED TO THE CONCEPT DEVELOPMENT PLAN (RZ 99-L-04), MODIFIED PER DISCUSSIONS WITH THE COUNTY SUPERVISOR, DIRECTOR OF PLANNING AND COMMUNITY DEVELOPMENT AND THE ZONING ADMINISTRATOR TO MORE CLOSELY MATCH RECOMMENDATIONS FOR THE NEW COMPREHENSIVE PLAN CURRENTLY PROPOSED. THIS IS A "BY-RIGHT" DEVELOPMENT UNDER THE CONDITIONS OF THE ABOVE MENTIONED REZONING CASE.
5. THIS PROPERTY FALLS IN ZONE C AS SHOWN ON PANEL 510055 0360 OF THE FLOOD INSURANCE RATE MAPS FOR THE COUNTY OF FAUQUIER, EFFECTIVE DATE 11-1-79. THERE IS NO 100 YEAR FLOOD PLAIN ON THIS SITE.
6. THE CONTRACTOR SHALL OBTAIN, AT HIS OWN EXPENSE, ANY PERMITS, BONDS, OR INSPECTIONS, IF REQUIRED BY ANY GOVERNMENT AGENCY.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE COUNTY AND THE ENGINEER OF ANY CHANGES OR CONDITIONS ATTACHED TO PERMITS OBTAINED.
8. DETAILS AND MATERIALS, WHERE INDICATED, REFER TO VDOT, FCWSA AND OR COUNTY OF FAUQUIER STANDARDS.
9. RICKMOND ENGINEERING, INC. DOES NOT CERTIFY TO THE LOCATION OF OR THE EXISTENCE OF ANY UNDERGROUND UTILITIES. THE UNDERGROUND UTILITIES SHOWN ARE FROM AVAILABLE RECORDS. THIS DOES NOT CONSTITUTE A GUARANTEE OF THEIR ACTUAL LOCATION OR THAT THEY HAVE ALL BEEN SHOWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DIGGING OF TEST HOLES AT THE PROPOSED CROSSINGS, PRIOR TO BEGINNING ANY CONSTRUCTION. THESE TEST HOLES WILL BE MADE TO VERIFY ALL EXISTING CONDITIONS. IF CONDITIONS ARE FOUND IN THE FIELD WHICH ARE MATERIALLY DIFFERENT FROM THE PLANS, OR WHICH WILL PREVENT INSTALLATION OF PROPOSED UTILITIES IN ACCORDANCE WITH THE PLAN, THE CONTRACTOR SHALL NOTIFY RICKMOND ENGINEERING, INC. AT (540) 349-7730 SO THE APPROPRIATE REVISIONS CAN BE MADE TO THE PLANS.
10. CONTRACTOR SHALL NOTIFY OPERATIONS WHO MAINTAIN EXISTING UNDERGROUND UTILITY LINES IN THE AREA OF PROPOSED EXCAVATION OR BLASTING AT LEAST TWO (2) WORKING DAYS, BUT NOT MORE THAN TEN (10) WORKING DAYS PRIOR TO COMMENCEMENT OF EXCAVATION OR DEMOLITION. CONTRACTOR SHALL CONTACT "MISS UTILITY" AT 1-800-257-7777 PRIOR TO COMMENCEMENT OF ANY EXCAVATION.
11. THE CONTRACTOR SHALL PROVIDE ADEQUATE MEANS FOR CLEANING TRUCKS AND/OR EQUIPMENT OF MUD, PRIOR TO ENTERING THE RIGHT-OF-WAY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CLEAN STREETS OF MUD AND/OR ALLAY DUST OR TAKE WHATEVER MEASURE NECESSARY TO ENSURE THAT THE STREETS ARE KEPT IN A CLEAN AND DUST FREE CONDITION AT ALL TIME.
12. SUBGRADE DEPTH IS BASED ON A CBR VALUE OF 6, BASED ON AN ACTUAL DETERMINATION PER SOIL TESTS (OR) AN ESTIMATE WHICH WILL BE REVISED ONCE THE SOIL TESTS OF SUBGRADE ARE PERFORMED. ALL SUBGRADE TO BE COMPAKTED TO A MINIMUM OF 95%, WITH THE FINAL 1' OF FILL BEING COMPAKTED TO A MINIMUM 100 % OF THEORETICAL DENSITY AT WITHIN 20 % OF OPTIMUM MOISTURE CONTENT PER AASHTO-T99 METHOD A.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ANY DISCONNECTION OF EXISTING UTILITIES AS NECESSARY.
14. THE CONTRACTOR SHALL NOTIFY THE FCWSA INSPECTOR (349-2092) A MINIMUM OF 48 HOURS PRIOR TO THE START OF CONSTRUCTION OF WATER AND SEWER UTILITIES.
15. DURING CONSTRUCTION OPERATIONS, AN EXPERIENCED GEOTECHNICAL ENGINEER SHOULD BE UTILIZED TO IDENTIFY PLASTIC CLAY SOILS WHICH REQUIRE UNDERCUTTING AND/OR REPLACEMENT
16. CONTROLLED FILLS:  
 A.) CONTROLLED COMPAKITION SHALL OCCUR IN ALL SUBGRADE AREAS FOR PAVEMENT, TRENCHES FOR UTILITIES, AND IN ANY OTHER AREA SO DESIGNATED ON THE DRAWINGS.  
 B.) CONTROLLED FILLS MUST BE COMPAKTED TO A MINIMUM OF 95 %, WITH THE FINAL 1' OF FILL BEING COMPAKTED TO A MINIMUM 100 % OF THEORETICAL DENSITY AS DETERMINED BY METHODS AS PER STANDARD PROCTOR AASHTO-T99 OR ASTM-D698. DENSITY MUST BE VERIFIED BY A QUALIFIED GEOTECHNICAL ENGINEER.  
 C.) CONTROLLED FILLS SHALL BE COMPAKTED IN EIGHT (8) INCH LIFTS (LOOSE THICKNESS) AND MOISTURE CONDITIONED TO WITHIN 20 % OF THE OPTIMUM MOISTURE CONTENT, TO THE SPECIFIED DENSITY, BEGINNING FROM THE EXISTING GROUND SURFACE, UNLESS OTHERWISE APPROVED IN WRITING BY A QUALIFIED GEOTECHNICAL ENGINEER.  
 D.) ALL VEGETATION AND TOPSOIL MUST BE REMOVED FROM THE SURFACE OF ANY AREA TO RECEIVE CONTROLLED FILL. FILL FOR AREAS OF LESS THAN FIVE (5) FEET IS TO BE DENUDED OF ALL VEGETATION AND SCARIFIED AND COMPAKTED TO A DEPTH OF SIX (6) INCHES TO THE SAME DENSITY AS THE CONTROLLED FILL TO BE PLACED THEREON.

## STORMWATER MANAGEMENT AND BEST MANAGEMENT PRACTICES

THIS SITE IS PLANNED TO BE DEVELOPED IN CONJUNCTION WITH THE PROPOSED LIBERTY STATION SITE PLAN (MAS 03-03), WHICH ARE SHOWN AS EXISTING CONDITIONS IN THIS SITE PLAN. THE LIBERTY STATION DEVELOPMENT HAS A DRY POND AS ITS PROPOSED SWM/BMP FACILITY. THE LIBERTY STATION DRY POND WAS DESIGNED TO ACCOMMODATE THE INCREASED STORMWATER RUNOFF FROM THIS CAR WASH FACILITY, AS WELL AS TO TREAT THE RUNOFF IN ACCORDANCE WITH THE FAUQUIER COUNTY BMP REQUIREMENTS. THIS POND WILL PEAK SHAVE THE RUNOFF FROM THIS SITE (SEE RUNOFF CALCULATIONS BELOW), AND ACHIEVE A 40 % POLLUTANT REMOVAL EFFICIENCY FOR PORTIONS OF THE SITE WHICH DRAIN INTO IT (SEE ATTACHED CALCULATIONS BELOW, WHICH IS THE LIBERTY STATION BMP FACILITY). ALL PROPOSED IMPERVIOUS AREA FROM THE CAR WASH FACILITY WILL DRAIN, BY WAY OF A GRASSED SWALE, INTO THE LIBERTY STATION DRY POND. SEE SHEET 5 FOR DRAINAGE DIVIDES.

Carwash Site Stormwater Management Computations (Rational Method)			
Total Site Area	0.7748 Acres		
Proposed Impervious Area	0.5303 Acres		
Proposed Permeable Area	0.2245 Acres		
Proposed Composite C'	0.72		
2 Year Storm Intensity	5.4 In / Hour		
10 Year Storm Intensity	7.27 In / Hour		
Time of Concentration	5 Minutes		
Predevelopment Runoff Rates			
2 Year Storm	1.46 CFS		
10 Year Storm	2.25 CFS		
Post Development Runoff Rates			
2 Year Storm	3.00 CFS		
10 Year Storm	4.04 CFS		
This indicates an increase in stormwater runoff in the post development. This increase will be routed through the Liberty Station SWM/BMP pond (see chart to right) for water quality and peaking.			

Liberty Station's SWM/BMP Pond Stage Storage Discharge Table					
Stage(lt)	Elev(lt)	Total Storage (cuft)	SWM Storage (cuft)	Discharge From 3" x 22' Std Invert = 307.05	Emergency Overflow, Di-7 Grade Inlet Top = 308.00 Invert = 305.20
0.0	305.2	0	0	0	0
0.3	305.28	597	0	0	0
0.5	305.32	2,386	0	0	0
0.7	305.32	5,369	0	0	0
0.9	305.36	7,701	0	0	0
1.1	305.36	11,172	0	0	0
1.3	305.36	14,643	0	0	0
1.5	305.36	18,110	0	0	0
1.7	305.36	21,584	0	0	0
1.8	307	23,320	0	0	0
1.9	307.1	26,052	2,732	0.07	0
2.1	307.3	31,518	8,198	0.78	0
2.3	307.5	36,984	13,654	1.26	0
2.5	307.7	42,450	19,220	1.60	2-yr Srm
2.7	307.9	47,916	24,595	1.88	10-yr Srm
2.8	308	50,649	27,329	2.00	0
3.0	308.2	61,178	37,858	1.88	2.98
3.2	308.4	71,707	48,387	1.94	8.43
3.4	308.6	82,237	58,917	1.76	15.48
3.6	308.8	92,765	69,446	1.50	21.09
3.8	309	103,294	79,975	1.30	26.28

Liberty Station SWM Computations (from Liberty Station Site Plan)			
NOTE: The Site area of the Car Wash was included in the overall site area for the Liberty Station SWM Pond			
Total Predevelopment Site Runoff Rates			
2 Year Storm 21.01 CFS			
10 Year Storm 29.42 CFS			
Total Post-Development Site Discharge Rates			
2 Year Storm 11.93 CFS			
10 Year Storm 15.73 CFS			
This indicates a net decrease from the entire Liberty Station site for both 2-year and 10-year run-off conditions.			

## Legend

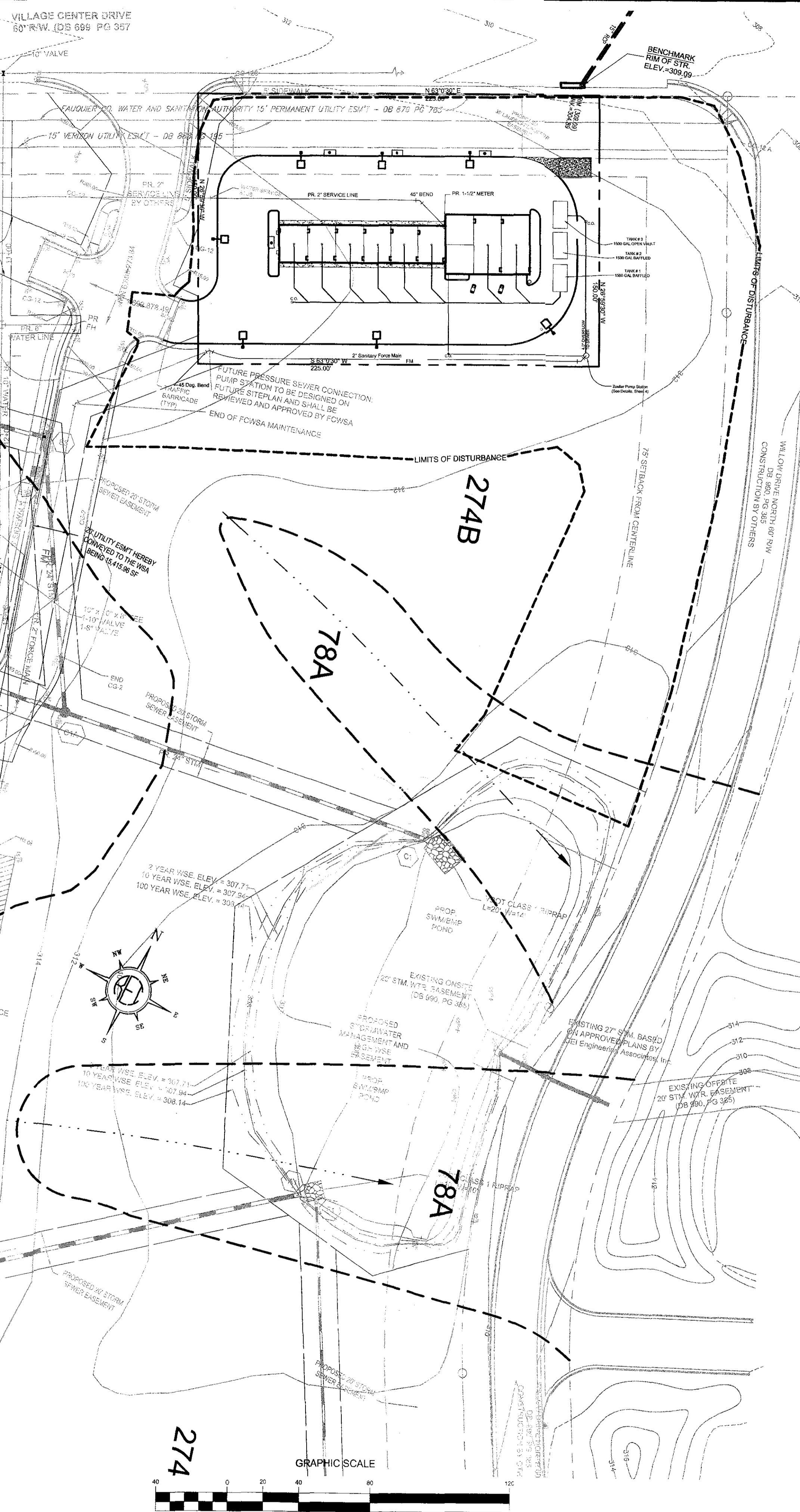
Soils delineation line - - - - -  
See sheet 8 for soils plan.

## BENCH MARK DATUM

HORIZONTAL ORIENTATION IS BASED ON VA NAD 83(93)  
NORTH ZONE STATE GRID; VERTICAL DATUM IS BASED  
ON NAV 88 ELEVATIONS ESTABLISHED BY GPS  
METHODS.

## ZONING USE

C2-CAR WASH-PERMITTED USE  
3-314 MOTOR VEHICLE RELATED USES  
(CATEGORY 14)



## EX. CULVERT COMPUTATIONS

CULVERT NAME	DRAINAGE AREA (ACRES)	RUN-OFF COEFF. (C)	C/A	TIME OF CONCEN. (MIN)	10 YR. RAINFALL (IN)	RUNOFF (CFS)	CULVERT GEOMETRY			INLET CONTROL			OUTLET CONTROL			CONTROLLING HEADWATER (ELEV)													
							NO. OF BARRELS	BARREL DIAMETER (FT)	MATERIAL	BARREL LENGTH (FT)	INVERTS (ELEV)	OUT (ELEV)	SLOPE (FT/FT)	HEADWATER (ELEV)	FLOW/AREA (CFS)	INLET COEFFICIENT	ENTRANCE LOSS (FT)	MANNSING LOSS (FT)	OUTLET TAIL (FT)	OUTLET HEADWATER (ELEV)	INLET/OUTLET								
PRE. DEV.	1.11	0.52	0.58	5	7.27	4.20	1	1.25	CMP	61	304.89	304.47	0.007	4.20	1.23	0.0379	0.69	-0.5	0.68	305.57	3.42	0.0078	0.00	0.025	0.52	0.16	0.00	305.17	INLET
POST DEV.	0.61	0.68	0.41	5	7.27	3.02	1	1.25	CMP	61	304.89	304.47	0.007	3.02	1.23	0.0379	0.69	-0.5	0.47	305.36	2.46	0.0078	0.00	0.025	0.27	0.09	0.00	304.83	INLET

BEFORE DIGGING CALL "MISS UTILITY"  
OF VIRGINIA AT 1-800-552-7001

## Site Plan Car Wash

## SWM and BMP Narratives and Comps

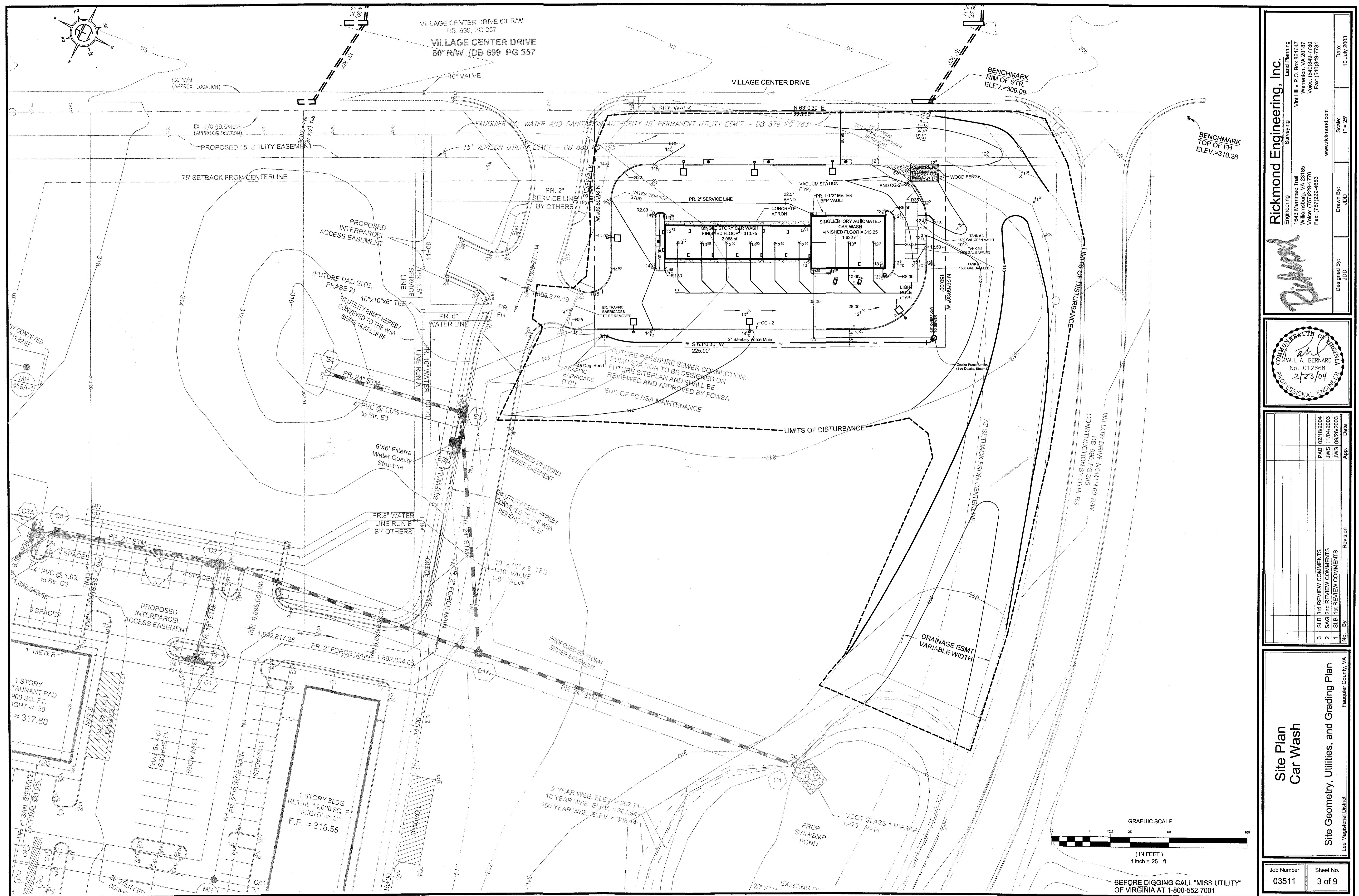
## Site Overview and Comps

Lee Magisterial District

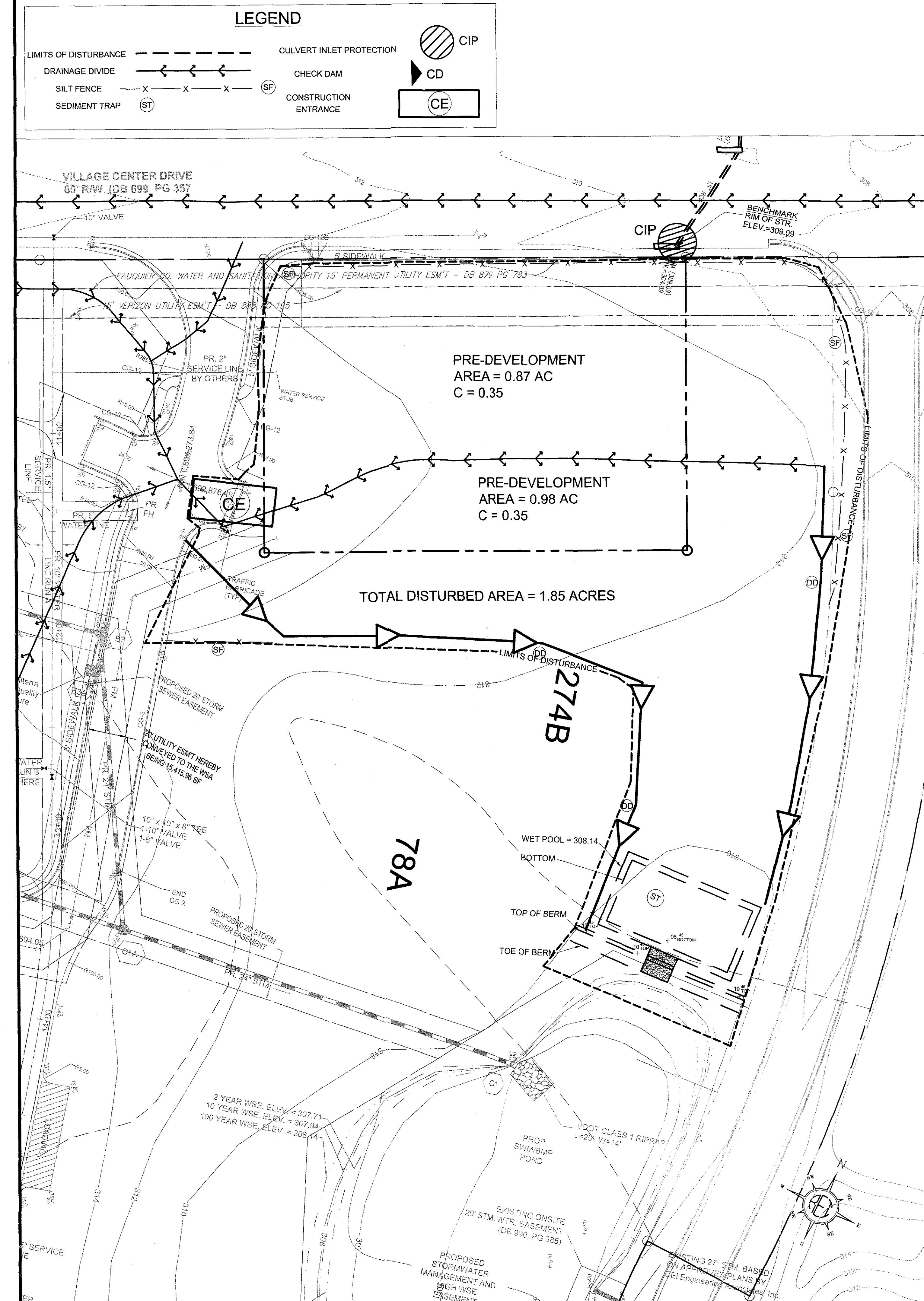
**Rickmond Engineering, Inc.**  
Engineering Surveying Land Planning  
1643 Merrimac Trail Williamsburg, VA 23185  
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Engineering Surveying Land Planning  
1







#### EROSION AND SEDIMENT CONTROL NARRATIVE

- PROJECT DESCRIPTION**  
THIS PROJECT CONSISTS OF APPROXIMATELY 1.85 ACRES OF DISTURBED AREA. THE AREA BEING DISTURBED IS FOR THE CONSTRUCTION OF A 4,100 SF CARWASH, ITS ASSOCIATED PARKING, AND UTILITY INFRASTRUCTURE.
- EXISTING SITE CONDITIONS AND SOILS NOTE:**  
THE SITE PROPOSED IS IN A FIELD CONDITION AND IT SLOPES FROM EAST TO WEST. THE TOPOGRAPHY OF THE SITE SLOPES FROM 1.5 TO 20 %. (THESE CONDITIONS ARE THE PROPOSED IMPROVEMENTS ON THE SITE PLAN MAS 03-L-03, LIBERTY STATION). THERE ARE NO KNOWN CRITICAL AREAS ON THIS SITE.
- ADJACENT AREAS**  
THIS SITE IS BORDERED BY VILLAGE CENTER DRIVE TO THE NORTH, ROUTE 17 TO THE WEST, AND TO THE SOUTH AND EAST BY THE LIBERTY STATION DEVELOPMENT (MAS 03-03).
- DATES OF CONSTRUCTION**  
CONSTRUCTION IS SCHEDULED TO BEGIN IN THE FALL OF 2003.
- OFF-SITE AREAS**  
THERE ARE OFF-SITE AREAS TO BE DISTURBED WITH THIS PROJECT.
- SOILS**  
SEE SHEET 7 FOR SOILS INFORMATION.
- Critical Areas**  
THERE ARE NO CRITICAL AREAS ON THIS SITE.
- EROSION AND SEDIMENT CONTROL MEASURES, AND MINIMUM STANDARDS**
  - STONE CONSTRUCTION ENTRANCE TO REMOVE SOIL FROM TRUCK TIRES BEFORE LEAVING SITE.
  - CULVERT INLET PROTECTION TO PROTECT EXISTING CULVERTS FROM SILT LADDEN WATER.
  - SILT FENCE TO RETAIN SILT WHILE ALLOWING WATER TO FLOW THROUGH.
  - SEDIMENT TRAP IS USED TO TRAP SILT FROM CONCENTRATED FLOWS BY STORING SILT LADDEN WATER AND ALLOWING THE SILT TO SETTLE TO THE BOTTOM OF THE TRAP.
  - PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN 7 DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN 7 DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN 30 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN 1 YEAR.
  - A PERMANENT VEGETATIVE COVER SHALL BE ESTABLISHED ON DENUDED AREAS NOT OTHERWISE PERMANENTLY STABILIZED. PERMANENT VEGETATION SHALL NOT BE CONSIDERED ESTABLISHED UNTIL A GROUND COVER IS ACHIEVED THAT IS UNIFORM, MATURE ENOUGH TO SURVIVE, AND WILL INHIBIT EROSION.
  - STABILIZATION MEASURES SHALL BE APPLIED TO EARTHEN STRUCTURES SUCH AS DAMS, DIKES, AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION.
  - SEDIMENT TRAPS AND SHALL BE DESIGNED AND CONSTRUCTED BASED UPON THE TOTAL DRAINAGE AREA TO BE SERVED BY THE TRAP OR BASIN.
  - THE MINIMUM STORAGE CAPACITY OF A SEDIMENT TRAP SHALL BE 134 CUBIC YARDS PER ACRE OF DRAINAGE AREA AND THE TRAP SHALL ONLY CONTROL DRAINAGE AREAS OF LESS THAN 3 ACRES.
  - CUT AND FILL SLOPES SHALL BE DESIGNED AND CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. SLOPES THAT ARE FOUND TO BE ERODING EXCESSIVELY WITHIN 1 YEAR OF PERMANENT STABILIZATION SHALL BE PROVIDED WITH ADDITIONAL SLOPE STABILIZING MEASURES UNTIL THE PROBLEM IS CORRECTED.
  - BEFORE NEWLY CONSTRUCTED STORM WATER CONVEYANCE CHANNELS OR PIPES ARE MADE OPERATIONAL, ADEQUATE OUTLET PROTECTION AND ANY REQUIRED TEMPORARY OR PERMANENT CHANNEL LINING SHALL BE INSTALLED IN BOTH THE CONVEYANCE AND RECEIVING CHANNEL.
  - MS-16. UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS IN ADDITION TO OTHER APPLICABLE CRITERIA:
    - NO MORE THAN 500 LINEAR FEET OF TRENCH MAY BE OPEN AT ONE TIME.
    - EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF THE TRENCHES.
    - 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.
    - MATERIAL USED FOR BACK FILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION.
    - RESTABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THESE REGULATIONS.
    - APPLICABLE SAFETY REGULATIONS SHALL BE COMPLIED WITH.
  - WHERE CONSTRUCTION VEHICLE ACCESS ROUTES INTERSECT PAVED OR PUBLIC ROADS, PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT BY VEHICULAR TRACTING ONTO THE PAVED SURFACE, WHERE SEDIMENT IS TRANSPORTED ONTO A PAVED OR PUBLIC SURFACE, THE ROAD SURFACE SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED FROM THE ROADS BY SHOVELING OR SWEEPING AND TRANSPORTED TO A SEDIMENT CONTROL DISPOSAL AREA. STREET WASHING SHALL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER. THIS PROVISION SHALL APPLY TO INDIVIDUAL DEVELOPMENT LOTS AS WELL AS LARGER LAND DISTURBANCE ACTIVITIES.
  - ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER TEMPORARY MEASURES ARE NO LONGER NEEDED, UNLESS OTHERWISE AUTHORIZED BY THE LOCAL PROGRAM AUTHORITY. TRAPPED SEDIMENT AND THE DISTURBED SOIL AREAS RESULTING FROM DISPOSITION OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SEDIMENTATION.
  - PROPERTIES AND WATER WAYS DOWN STREAM FROM DEVELOPMENT SITES SHALL BE PROTECTED FROM SEDIMENT DEPOSITION, EROSION AND DAMAGE DUE TO INCREASES IN VOLUME, VELOCITY AND PEAK FLOW RATE OF STORM WATER RUN OFF FOR THE STATED FREQUENCY STORM OF 24 HOUR DURATION IN ACCORDANCE WITH THE FOLLOWING STANDARDS AND CRITERIA:
  - PERMANENT STABILIZATION**  
THE SITE WILL BE SODDED AND SPRINKLED TO PROMOTE STABILITY OF GRASSED AREAS.
  - STORM WATER RUN-OFF CONSIDERATIONS**  
STORM WATER RUN-OFF COMPUTATIONS ARE PROVIDED ON SHEET 2.
  - CALCULATIONS**  
SEE SHEET 2 FOR SWMM/BMP CALCULATIONS AND SHEET 6 FOR SEDIMENT TRAP COMPUTATIONS.
  - RESPONSIBLE LAND DISTURBER**  
EDWARD LUNCEFORD #403C
  - PHASING OF LAND DISTURBING ACTIVITIES**
    - STAGE I**
      - CONTACT MISS UTILITY TO LOCATE EXISTING UTILITIES, THEN HAND DIG TEST PITS OVER EXISTING UTILITIES.
      - CONSTRUCT THE TEMPORARY CONSTRUCTION ENTRANCE WITH WASH RACK IN REQUIRED AS SHOWN ON THE PHASE 1 EROSION AND SEDIMENTATION CONTROL PLAN.
      - INSTALL CULVERT INLET PROTECTION FOR EXISTING CULVERT ALONG VILLAGE CENTER DRIVE.
      - INSTALL SEDIMENT TRAP (SEE SEDIMENT TRAP NOTE ON SHEET 5) AND SILT FENCE AS SHOWN ON THE PHASE 1 EROSION AND SEDIMENTATION CONTROL PLAN.
      - CLEAR AND GRUB THE REST OF THE SITE.
    - STAGE II**
      - CLEAR REMAINDER OF SITE.
      - ROUGH GRADE THE SITE.
      - CONSTRUCT BUILDINGS, UTILITIES, AND ASSOCIATED INFRASTRUCTURE.
      - FINAL GRADE THE SITE.
      - STABILIZE CRITICAL SLOPE AREAS.
      - CLEAR AND DISPOSE OF SEDIMENT IN POND.

#### 14. MAINTENANCE PROGRAM

- CONSTRUCTION ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS OF WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR THE WASHING AND REWORKING OF EXISTING STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY STRUCTURES USED TO TRAP SEDIMENT. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY. THE USE OF WATER TRUCKS TO REMOVE MATERIALS DROPPED, WASHED, OR TRACKED ONTO ROADWAYS WILL NOT BE PERMITTED UNDER ANY CIRCUMSTANCES.
- SILT FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL, AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY. CLOSE ATTENTION SHALL BE PAID TO THE REPAIR OF DAMAGED SILT FENCE RESULTING FROM END RUNS AND UNDER CUTTING. SHOULD THE FABRIC ON A SILT FENCE DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE EXPECTED USABLE LIFE, AND THE BARRIER STILL BE NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY. SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE HALF THE HEIGHTS OF THE BARRIER. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, PREPARED AND SEEDED.
- CULVERT INLET PROTECTION SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NEEDED. AGGREGATE SHALL BE REPLACED OR CLEANED WHEN INSPECTION REVEALS THAT CLOGGED VOIDS ARE CAUSING PONDING PROBLEMS WHICH INTERFERE WITH ON-SITE CONSTRUCTION. SEDIMENT SHALL BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE HALF THE DESIGN DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE. TEMPORARY STRUCTURES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFUL PURPOSE, BUT NOT BEFORE THE UP SLOPE AREA DRAINAGE AREA HAS BEEN PERMANENTLY STABILIZED.
- TRAP SEDIMENT SHALL BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE HALF THE DESIGN VOLUME OF THE WET STORAGE. SEDIMENT REMOVAL FROM THE BASIN SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE OR CAUSE SEDIMENTATION PROBLEMS. SILT TRAP, OUTLET STONE SHALL BE CHECKED REGULARLY TO ENSURE THAT FILTRATION PERFORMANCE IS MAINTAINED. STONE CHOKED WITH SEDIMENT SHALL BE REMOVED AND CLEANED OR REPLACED. THE STRUCTURE SHOULD BE CHECKED REGULARLY TO ENSURE THAT IT IS STRUCTURALLY SOUND AND HAS NOT BEEN DAMAGED BY EROSION OR CONSTRUCTION EQUIPMENT. THE HEIGHT OF THE STONE OUTLET SHOULD BE CHECKED TO ENSURE THAT ITS LEVEL IS AT LEAST 1 FOOT BELOW THE TOP OF THE EMBANKMENT.
- CONTROLS MAY BE REMOVED AFTER THE AREAS ABOVE THEM HAVE BEEN STABILIZED AND WITH THE APPROVAL OF THE SITE INSPECTOR.
- DEVICES SHOWN ARE TO BE CONSIDERED MINIMUM EROSION AND SEDIMENTATION CONTROLS. ADDITIONAL CONTROLS MAY BE NECESSARY DUE TO THE CONTRACTOR'S PHASING OR OTHER UNANTICIPATED CONDITIONS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ADDITIONAL DEVICES AS NECESSARY TO THOSE SHOWN IN ORDER TO CONTROL EROSION AND SEDIMENTATION. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS IN THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.
- THE CONTRACTOR IS TO PROVIDE ADEQUATE MEANS OF CLEANING AND REMOVING ALL LAYING DUST AS NECESSARY, BY APPLYING EITHER MOISTURE, CALCIUM CHLORIDE, OR BOTH MATERIALS, ALONG THOSE SECTION OF THE PROJECT ADJACENT TO EXISTING DWELLINGS OR PUBLIC ACCESS.

#### 15. PERMANENT STABILIZATION

ONCE ALL EARTHWORK HAS BEEN COMPLETED AND THE SITE IS STABILIZED, PERMANENT SEEDING IS TO BE CONDUCTED AS STATED BELOW, AND IN ACCORDANCE WITH SECTION 3.32 OF THE 1992 VIRGINIA EROSION AND SEDIMENTATION CONTROL HANDBOOK, FOR THE PIEDMONT AREA. SEE DETAILS ON SHEET 6 FOR QUANTITY REQUIREMENTS.

#### 16. MINIMUM STANDARDS:

- MS 2**  
DURING CONSTRUCTION OF THE PROJECT, SOIL STOCKPILES AND BORROW AREAS SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. THE APPLICANT IS RESPONSIBLE FOR THE TEMPORARY PROTECTION AND PERMANENT STABILIZATION OF ALL SOIL STOCKPILES ON SITE AS WELL AS BORROW AREAS AND SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE.

#### MS 4

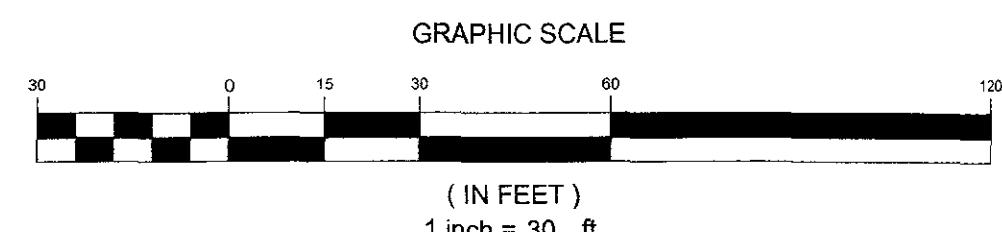
SEDIMENT BASINS AND TRAPS, PERIMETER DIKES, SEDIMENT BARRIERS AND OTHER MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND-DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UPSLOPE LAND DISTURBANCE TAKES PLACE.

#### MS 10

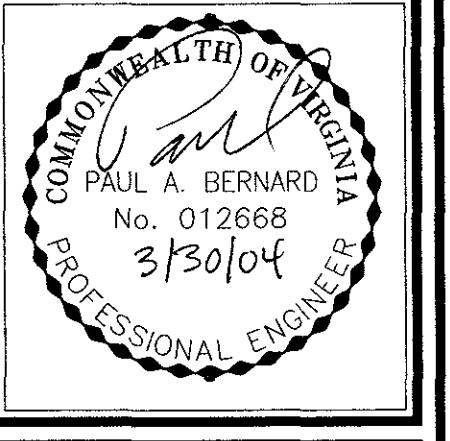
ALL STORM SEWER INLETS THAT ARE MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT SEDIMENT LADEN WATER CANNOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT.

#### MS 19 REQUIREMENT

THIS PROJECT WILL CONTROL STORMWATER RUNOFF FROM THIS SITE USING A PERMANENT STORMWATER MANAGEMENT CONTROL SYSTEM. REFER TO STORMWATER MANAGEMENT NARRATIVE SECTION OF THESE PLANS.



BEFORE DIGGING CALL "MISS UTILITY"  
OF VIRGINIA AT 1-800-552-7001

<b>Rickmond Engineering, Inc.</b>	
Land Planning	Vint Hill • P.O. Box 161647 Warren, VA 20187 Voice: (540) 345-7730 Fax: (540) 345-7731
Surveying	1643 Marimac Trail Williamsburg, VA 23185 Voice: (757) 228-1776 Fax: (757) 223-4483
Engineering	1643 Marimac Trail Williamsburg, VA 23185 Voice: (757) 228-1776 Fax: (757) 223-4483
Drawn By:	JDD
Designed By:	JDD
Date:	10 July 2003
 PAUL A. BERNARD No. 012668 3/30/04	
Job Number	03511
Sheet No.	5 of 9





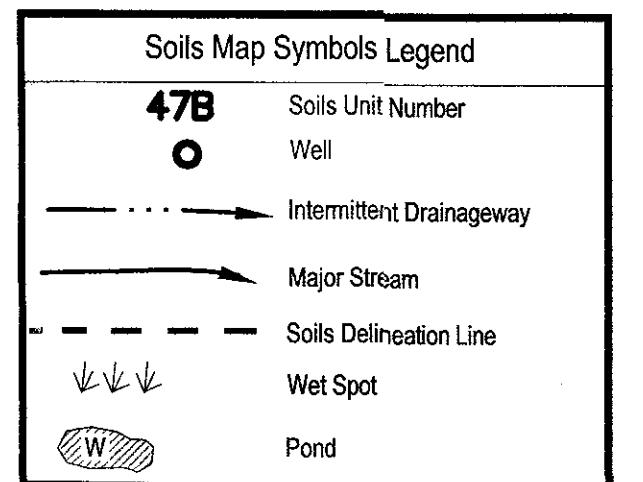


THIS SHEET PROVIDED FOR SOILS INFORMATION FROM APPROVED  
LIBERTY STATION MAS03-L-03

MAP UNIT SYMBOL	SOIL NAME	SLOPE	SOIL CHARACTERISTICS	EROSION HAZARD K Factor (soil eroded per unit rainfall)	USE POTENTIAL GENERAL DEVELOPMENT USES	POTENTIAL FOR DEVELOPMENT USING CONVENTIONAL SEPTIC TANK & DRAINFIELD
73A**	Penn loam	0 - 3%	Moderately deep, well drained, red silty soils on nearly level surfaces developed in residuum overlying shale, sandstone and fine-grained sandstone.	0.37, 0.24 B	Bearing Capacity: low Shrink-swell Potential: low	POOR shallow to rock
78A	Dulles silt loam	0 - 3%	Deep, Moderately well and slowly drained yellowish brown soils with intermittent high water table, water tables on broad, low areas, and in some concave areas; developed in local colluvium and residuum from red Triassic shale	0.43, 0.43 D	Very Poor may be shallow, high water table; low bearing capacity with either high salt content and shrink-swell clay in the subsoil	NOT SUITED high water table; landscape position (swale)
200	CUT AND /OR FILL	3 - 8%				HIGHLY VARIABLE
274B	Ashburn Gravelly silt loam	3 - 8%	Moderately deep, moderately well drained yellowish brown silty soils with seasonal perched water tables on level to slightly concave slopes; developed from thin fluvial cappings over Triassic shale	0.37, 0.24 C	FAIR seasonal witness; low bearing capacity where up to 15% to 35% surface gravels	POOR shallow to rock perched water table

Notes:

- The soils indicated on this plan are based on a Type 1, 400 scale. Soil Study was prepared by the County Soil Scientist.
- This project is on public sewer and water, therefore, drainfields not an issue.
- A small portion of the site has highly variable development potential. The remaining is fair.
- Due to commercial nature of the project, a geotechnical study will be prepared as part of the site planning and design. The proposed buildings on this site are single story, therefore bearing capacities not excessive.
- Due to the moderate potential for erosion problems, site plans for developing these sites will need to include detailed E & S Plans.

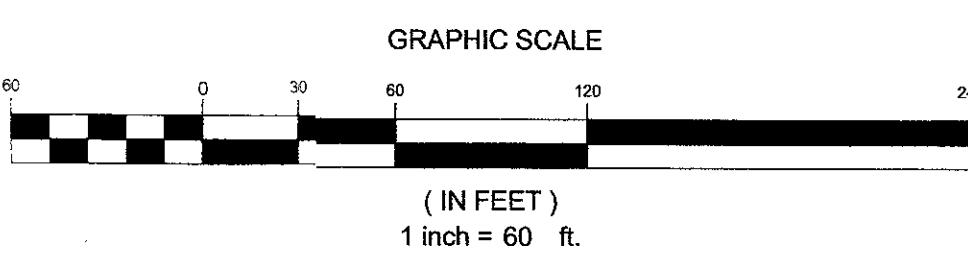


This report has been written by a CPSS as required in Section 9-5 of the Subdivision Ordinance of Fauquier County.

VA Certified Professional Soil Scientist Date  
CPSS #3401-00160

## LIBERTY STATION SITE PLAN SOIL MAP

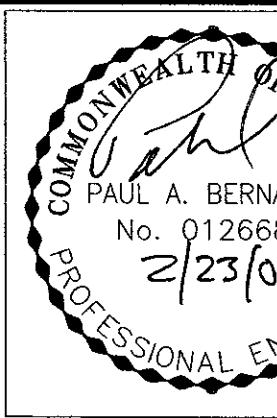
FAUQUER COUNTY, VA  
LEE DISTRICT



BEFORE DIGGING CALL "MISS UTILITY"  
OF VIRGINIA AT 1-800-552-7001

Job Number 02509  
Sheet No. 8 of 9

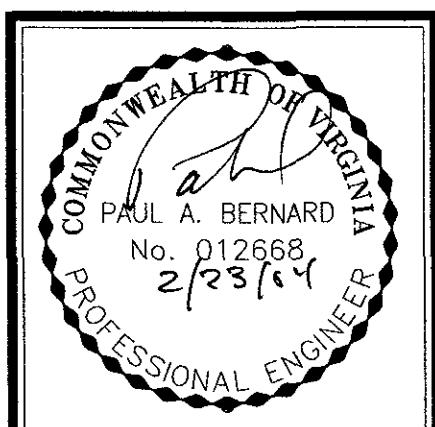
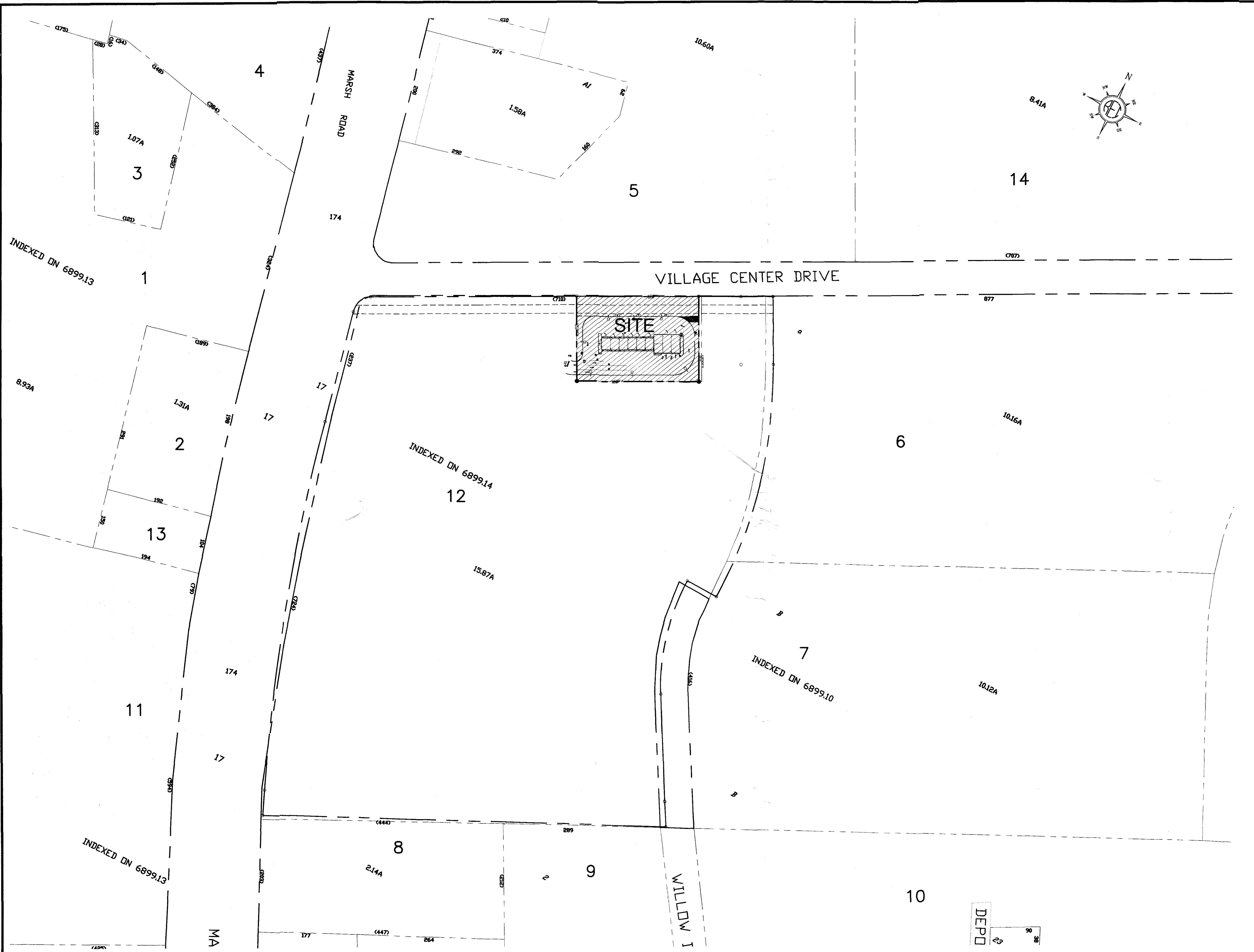
**Rickmond Engineering, Inc.**  
Engineering Surveying  
1643 Merriweather Trail  
Williamsburg, VA 23185  
Voice: (757) 222-1776  
Fax: (757) 223-4633  
www.rickmond.com



1	SLB 1st REVIEW COMMENTS	JWS 09/26/2003	App	Date
1	2nd REVIEW COMMENTS	JWS 09/26/2003	App	Date

Land Planning  
Vint Hill • P. O. Box 861647  
Warren, VA 20187  
Voice: (540) 349-7730  
Fax: (540) 349-7731

Date: 12/4/02



# Site Plan Car Wash

# Adjacent Land Owners Plan

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1	Carter W. Kehoe POB 2 Bealeton, VA 22712 Deed Book 273 Page 591 PIN: 6899-24-0759 Zone: R4 Use: Residential Acreage: 8.93
2	Wendell P. Ennis 6275 Beach Rd. Midland, VA 22728 Deed Book 538 Page 494 PIN: 6899-24-3818 Zone: C1C Use: Office Acreage: 1.3146
3	Wendell P. Ennis 6275 Beach Rd. Midland, VA 22728 Deed Book 273 Page 591 PIN: 6899-25-0237 Zone: R4 Use: Residential Acreage: 1.07
4	Cedar Grove Cemetery Co. Marsh Rd. Bealeton, VA 22712 Cedar Grove Cemetery Company P. O. Box 342 Bealeton, Virginia 22712 Deed Book 69 Page 169 PIN: 6899-25-0575 Zone: R4 Use: Cemetery Acreage: 2.00
5	Bealeton Village Partnership 5272 River Rd. #360 Bethesda, MD 20816 Deed Book 724 Page 1781 PIN: 6899-25-8868 Zone: C3 Use: Commercial Retail Acreage: 10.5972
6	North Forty Aspen LP 611 Research Rd. Ste C Richmond, VA 23236 Deed Book 880 Page 1591 PIN: 6899-35-6574 Zone: Not Listed Use: Multi-Family Residential Acreage: 10.0862
7	North Forty Aspen Plus LP 1642 Pleasure House Rd. Ste. 104 Virginia Beach, VA 23455 Deed Book 880 Page 1620 PIN: 6899-35-8059 Zone: Pryyyy Use: Multi-Family Residential Acreage: 10.12
8	Carl R. Faller POB 96 Bealeton, VA 22712 Deed Book 521 Page 756 PIN: 6899-34-0300 Zone: C1 Use: Retail Acreage: 2.14
9	Bealeton Landmarks LLC 11166 Willow Dr. Bealeton, VA 22712 P.O. Box 17 Philo, CA 95466 Deed Book 852 Page 689 PIN: 6899-34-4286 Zone: C1PvC1 Use: Vacant Acreage: 4.5764
10	Washington Homes Inc. of Virginia 4090-A Lafayette Center Dr. Chantilly, VA 20151 Deed Book 954 Page 555 PIN: 6899-44-6708 Zone: R4y Use: Single-Family Residential Acreage: 24.2305
11	Revathi Rathinasamy 10840 Jennifer Marie Pl. Fairfax Station, VA 22039 Deed Book 756 Page 438 PIN: 6899-14-2426 Zone: R4 Use: Residential Acreage: 52.24
12	Cranes Corner, LLC P.O. Box 1065 Warrenton, VA 20188 Deed Book 948 Page 1833 PIN: 6899-24-9836 Zone: C2vvvv Use: Commercial Acreage: 15.459
13	Donald Gibson 11088 Marsh Road Bealeton, VA 22712 Deed Book 24 Page PIN: 6899-24-3666 Zone: C1C Use: Residential Acreage: 0.4592
14	Elaine Milestone 5272 River Road, #360 Bethesda, MD 20816 Deed Book 686 Page 134 PIN: 6899-36-4057 Zone: C3C Use: Multi-Family Residential

<h1>Rickmond Engineering, Inc.</h1>	
<b>Engineering</b>	<u>Surveying</u>
<b>1643 Merimac Trail Williamsburg, VA 23185 Voice: (757)229-1776 Fax: (757)229-4683</b>	
<b>Vint Hill • P.O. Box 861647 Warrenton, VA 20187 Voice: (540)349-7730 Fax: (540)349-7731</b>	
<a href="http://www.rickmond.com">www.rickmond.com</a>	
<b>Drawn By: SAG</b>	<b>Scale: 1" = 80'</b>
<b>Date: 10 July 2000</b>	

No.	By	Revision	App.	Date
3	SLB	3rd REVIEW COMMENTS	PAB	02/18/2004
2	SAG	2nd REVIEW COMMENTS	JWS	11/04/2003
1	SLB	1st REVIEW COMMENTS	JWS	09/26/2003

Job Number	Sheet No.
03511	9 of 9

Acreage: 8.406