

ENVIRONMENTAL SITE ASSESSMENT

THERE ARE NO TIDAL WETLANDS, SHORES, TRIBUTARY STREAMS, CONNECTED NON-TIDAL WETLANDS, FLOOD PLAINS, OR BUFFER AREAS FOR SHORES, STREAMS AND WETLANDS LOCATED ON THIS SITE. THERE ARE NO WETLANDS PERMITS REQUIRED FOR THE DEVELOPMENT OF THIS SITE.

THIS SITE IS NOT KNOWN TO POSSESS ANY SOILS OR MATERIALS CONTAMINATED WITH HEAVY METALS, PETROLEUM PRODUCTS, PCB'S, PESTICIDES, FLY ASH, OR OTHER TOXIC OR HAZARDOUS MATERIALS. IF ANY CONTAMINATED SOILS, CONTAMINATED MATERIALS, UNDERGROUND STORAGE TANKS, COMBUSTIBLE GASES, LANDFILLS, DUMPS OR DISPOSAL AREAS ARE ENCOUNTERED DURING CONSTRUCTION, THE DEVELOPER/OWNER SHALL HAVE IT REMOVED OR TREATED IN ACCORDANCE WITH ALL LOCAL, STATE AND/OR FEDERAL EPA STANDARDS. NONE OF THE AFOREMENTIONED ITEMS OR CONDITIONS IS EXPECTED TO BE ENCOUNTERED ON THIS SITE.

WATER SERVICE INSTALLATION NOTES:

- VIRGINIA - AMERICAN WATER COMPANY WILL INSTALL AND MAINTAIN ALL WATERMAINS, SERVICE CONNECTIONS AND METER SETTINGS.
- PERMITS FOR THE INSTALLATION OF WATER FACILITIES ON-SITE MUST BE OBTAINED BY THE DEVELOPER FROM THE ALEXANDRIA DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES.
- ALL WATER FACILITY CONSTRUCTION, INCLUDING BACKFLOW PREVENTION DEVICES, SHALL CONFORM TO VIRGINIA - AMERICAN WATER COMPANY STANDARDS AND SPECIFICATIONS, ALEXANDRIA CITY STANDARDS AND THE STATE BOARD OF HEALTH WATERWORKS REGULATIONS.
- LOCATION AND DEPTH OF THE EXISTING WATERMAIN IS TO BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

STORMWATER MANAGEMENT/WATER QUALITY NARRATIVE:

THIS 2.00 ACRE SITE IS LOCATED AT THE END OF PICKETT STREET NORTH. THE SITE IS PRESENTLY 0% IMPERVIOUS (SITE IS COMPLETELY WOODED). THIS DEVELOPMENT PROPOSES THE CONSTRUCTION OF TWO SINGLE-FAMILY DWELLINGS UTILIZING LOW-IMPACT DEVELOPMENT PROCEDURES. THE LOW-IMPACT DEVELOPMENT PROCEDURES INCLUDE, DIRECTING DOWNSPOUTS TO INFILTRATION BASINS, GRAVEL AND PAVEMENT DRIVES. THE LOW-IMPACT DEVELOPMENT PROCEDURE WILL SATISFY THE REQUIREMENT FOR PROVIDING ON-SITE STORMWATER QUALITY STRUCTURES. A FEE IN LIEU OF CONSTRUCTION OF A BMP TO TREAT THE ON-SITE IMPERVIOUS AREA SHALL BE SUBMITTED TO THE CITY OF ALEXANDRIA. THE "FEE IN LIEU OF CONSTRUCTION" SHALL BE BASED ON A PRO-RATA SHARE AMOUNT FOR THE PROPOSED IMPERVIOUS AREA. ANY REQUIRED FACILITIES SHALL BE CONSTRUCTED, INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY OF ALEXANDRIA.

GENERAL NOTES

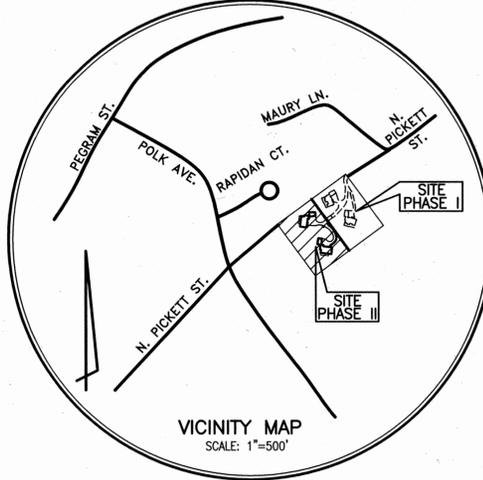
- TAX MAP: 39.01-02-05
- ZONE: R-20 (RESIDENTIAL)
- USE: EXISTING, VACANT LAND PROPOSED, TWO (2) SINGLE FAMILY DWELLINGS
- OWNER: ELSIE V. MASON
2815 S. ARLINGTON RIDGE RD.
ARLINGTON VA. 22202
(DB 685, PG 518)
CONTRACT PURCHASER / APPLICANT:
SUTTON BUILDING CORPORATION
502 LLOYD LANE
ALEXANDRIA, VA 22302
(GREG SUTTON)
- PARKING DISTRICT: 3
- TOPOGRAPHIC AND BOUNDARY SURVEYS WERE FIELD RUN ON THIS PROPERTY BY R.C. FIELDS, JR. & ASSOC. P.C.
- EXISTING UTILITIES SHOWN ARE TAKEN FROM AVAILABLE RECORDS AND/OR FIELD OBSERVATIONS. LOCATION AND DEPTH OF ALL EXISTING UTILITIES TO BE VERIFIED BY CONTRACTOR PRIOR TO CONSTRUCTION. FOR EXACT LOCATIONS OF EXISTING UTILITIES CONTACT "MISS UTILITY" AT 1-800-257-7777 AT LEAST 72 HOURS BEFORE THE START OF ANY EXCAVATIONS OR CONSTRUCTION. INTERFERENCE OR DISRUPTION OF UTILITY SERVICE WILL NOT BE THE RESPONSIBILITY OF R.C. FIELDS, JR. & ASSOC., P.C.
- PLAN SUBJECT TO RESTRICTIONS OF RECORD. A TITLE REPORT WAS NOT FURNISHED FOR THE PREPARATION OF THESE PLANS.
- ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS AND SPECIFICATIONS OF THE CITY OF ALEXANDRIA AND THE VIRGINIA AMERICAN WATER COMPANY.
- ALL NEW UTILITIES TO BE PLACED UNDERGROUND.
- NEW CONSTRUCTION MUST COMPLY WITH THE CURRENT EDITION OF THE UNIFORM STATEWIDE BUILDING CODE.
- ALL EROSION AND SEDIMENT CONTROLS ARE TO BE PLACED AND MAINTAINED IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE CITY OF ALEXANDRIA AND/OR THE CURRENT EDITION OF THE VIRGINIA EROSION & SEDIMENT CONTROL HANDBOOK.
- TREE PROTECTION WILL BE PROVIDED TO THE SATISFACTION OF THE CITY ARBORIST. TREE PROTECTION MUST BE ESTABLISHED PRIOR TO BEGINNING OF CONSTRUCTION AND MAINTAINED THROUGHOUT THE CONSTRUCTION PROCESS.
- NO UTILITIES MAY BE INSTALLED OUTSIDE THE APPROVED LIMITS OF CLEARING OR WITHIN TREE PROTECTION ZONES.
- ALL REQUIRED STREET LIGHTING WILL BE PROVIDED AS REQUIRED BY THE CITY OF ALEXANDRIA.
- WALL CHECK SURVEYS ARE REQUIRED FOR INDIVIDUAL LOTS AFTER DWELLING WALLS HAVE BEEN RAISED TO THE FIRST JOIST BEARING LEVEL ABOVE GRADE.
- THE APPLICANT SHALL SUBMIT A UNIT LOCATION SURVEY OR PARTIAL AS-BUILT PLAN FOR PLANNING STAFF APPROVAL PRIOR TO ISSUANCE OF EACH CERTIFICATE OF OCCUPANCY PERMIT. THE APPLICANT SHALL SUBMIT FINAL "AS-BUILT" PLAN FOR ENTIRE PROJECT PRIOR TO APPLYING FOR CERTIFICATE OF OCCUPANCY PERMIT FOR THE LAST DWELLING UNIT.
- THE APPLICANT SHALL LOCATE AND SCREEN ALL UTILITY STRUCTURES (EXCEPT FIRE HYDRANTS) VISIBLE FROM A PUBLIC RIGHT-OF-WAY OR PROPERTY TO THE SATISFACTION OF THE DIRECTOR OF P&Z. FINAL LOCATION OF TRANSFORMERS AND/OR SWITCHES IS SUBJECT TO ENGINEERING BY DOMINION VIRGINIA POWER.
- THIS SITE HAS BEEN IDENTIFIED TO CONTAIN MARINE CLAYS. A GEOTECHNICAL REPORT SHALL BE SUBMITTED FOR REVIEW PRIOR TO THE RELEASE OF THIS PLAN. ALL WORK WITHIN A PROBLEM SOILS AREA SHALL BE PERFORMED UNDER THE SUPERVISION OF THE GEOTECHNICAL ENGINEER.

TREE NOTES:

IF ANY OF THE LARGER CALIPER TREES (>12") ARE DAMAGED OR DESTROYED DURING THE CONSTRUCTION PROCESS THE APPLICANT SHALL REPLACE THE TREE(S) WITH THE LARGEST CALIPER TREE(S) OF COMPARABLE SPECIES THAT ARE AVAILABLE OR CAN BE TRANSPLANTED TO THE SATISFACTION OF THE CITY ARBORIST AND DIRECTOR OF P&Z. THE REMAINING TREE CALIPER SHALL BE PLANTED ON-SITE OR ADJACENT TO THE SITE. IN ADDITION, A FINE WILL BE PAID BY THE APPLICANT IN AN AMOUNT NOT TO EXCEED \$10,000 FOR EACH TREE THAT IS DESTROYED IF THE APPROVED TREE PROTECTION METHODS HAVE NOT BEEN FOLLOWED. THE REPLACEMENT TREES SHALL BE INSTALLED AND IF APPLICABLE THE FINE SHALL BE PAID PRIOR TO THE ISSUANCE OF THE LAST CERTIFICATE OF OCCUPANCY PERMIT. PLACE UNDERGROUND UTILITIES AND UTILITY STRUCTURES UNDER PROPOSED STREETS OR AWAY FROM PROPOSED LANDSCAPE AREAS TO THE EXTENT FEASIBLE, TO MINIMIZE ANY IMPACT ON THE ROOT SYSTEMS OF THE PROPOSED LANDSCAPING, TO THE SATISFACTION OF THE DIRECTOR OF T&ES AND THE CITY ARBORIST. ALL LANDSCAPING SHALL BE MAINTAINED IN GOOD CONDITION AND REPLACED AS NEEDED. ALL PLANT MATERIALS AND SPECIFICATIONS SHALL BE IN ACCORDANCE WITH THE CURRENT AND MOST UP TO DATE EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK (ANSI Z60.1) AS PRODUCED BY THE AMERICAN ASSOCIATION FOR NURSERYMEN; WASHINGTON, D.C.

TREE PROTECTION NOTE:

THE CONTRACTOR AND/OR THE APPLICANT SHALL FOLLOW RECOMMENDED HORTICULTURAL PRACTICES TO INSURE THE HEALTH AND VITALITY OF THE TREES DESIGNATED FOR PROTECTION PRIOR TO, DURING AND AFTER CONSTRUCTION OF THE PROPOSED HOUSES. IN THE EVENT TREES WHICH ARE PROTECTED, ARE DAMAGED OR DIE, OTHER THAN AS THE RESULT OF DISEASE OR ACTS OF GOD, REPLACEMENT TREES MEASURING 2 1/2" IN CALIPER SHALL BE PLANTED FOR EACH INCH OF CALIPER THAT IS LOST. NO CONSTRUCTION MATERIALS OR EQUIPMENT SHALL BE STORED OR STAGED WITHIN THE DRIP LINES OF TREES DESIGNATED FOR PROTECTION. ANY REQUIRED CONSTRUCTION OCCURRING WITHIN THE DRIP LINE OF TREES DESIGNATED FOR SAVING SHALL FOLLOW RECOMMENDED GUIDELINES AS ESTABLISHED BY THE INDEPENDENT ARBORIST. A COPY OF THE INDEPENDENT ARBORIST REPORT SHALL BE PROVIDED TO THE CONTRACTOR PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES.



LEGEND

ITEM	EXISTING	PROPOSED
CURB & GUTTER	[Symbol]	[Symbol]
CONC. WALK	[Symbol]	[Symbol]
FIRE HYDRANT	[Symbol]	[Symbol]
STRUCTURES	[Symbol]	[Symbol]
WATER MAINS	[Symbol]	[Symbol]
GAS MAINS	[Symbol]	[Symbol]
TELEPHONE LINES	[Symbol]	[Symbol]
STORM SEWER	[Symbol]	[Symbol]
SANITARY SEWER	[Symbol]	[Symbol]
PAVING	[Symbol]	[Symbol]
FENCES	[Symbol]	[Symbol]
POWER LINES	[Symbol]	[Symbol]
SPOT ELEVATIONS	+124.5	+124.5
CONTOURS	-124	-124
BLDG. ENTRANCE	[Symbol]	[Symbol]

GEOTECHNICAL ENGINEER NOTE:
THE GEOTECHNICAL INFORMATION FOR THIS PROJECT WAS PROVIDED BY: AVER TECHNOLOGIES INC., 13104 QUEENSDALE DR., WOODBRIDGE VA. 22193. ALL CONSTRUCTION INVOLVING PROBLEM SOILS SHALL BE PERFORMED UNDER THE DIRECTION OF A GEOTECHNICAL ENGINEER.

SHEET INDEX

- COVER SHEET
- DEVELOPMENT SPECIAL USE PERMIT CONDITIONS
- NOTES AND CORRESPONDENCE
- SITE DEVELOPMENT PLAN
- POOL GRADING DETAIL
- LOT 503 HOUSE DETAIL
- LOT 503 BMP DESIGN AND CALCULATIONS
- LOT 503 BMP DETAILS AND INFORMATION
- EROSION / SEDIMENT CONTROLS - PHASE I
- EROSION / SEDIMENT CONTROLS - PHASE II
- EROSION / SEDIMENT CONTROL DETAILS
- PLAN AND PROFILE: ACCESS ROAD & WATERLINE
- PLAN AND PROFILE: SANITARY LATERALS
- RETAINING WALL DETAILS AND X-SECTIONS
- ON-SITE DRAINAGE X-SECTIONS & ROOF DRAIN DETAILS
- LANDSCAPE PLAN
- FIRE SERVICE PLAN
- EXISTING CONDITIONS PLAN
- RECORD PLAT (FOR INFORMATION ONLY)
- EXISTING STORM SEWER OUTFALL PROFILES
- OFF-SITE DRAINAGE DIVIDES AND OUTFALL ANALYSIS

PROJECT NARRATIVE:

THIS PROJECT PROPOSES THE CONSTRUCTION OF TWO (2) SINGLE-FAMILY DWELLINGS ON A 2 ACRE SITE WITHIN THE R-20 ZONING DISTRICT. A PROPOSED ACCESS AISLE / EMERGENCY VEHICLE ACCESS EASEMENT CONNECTS THE SITE TO NORTH PICKETT STREET. THE PROPERTY, WHICH IS CURRENTLY VACANT, IS BOUNDED ON ALL SIDES BY RESIDENTIAL PROPERTIES WITHIN THE R-20 ZONING DISTRICT. THE PROPERTY ALONG THE NORTHEAST BOUNDARY IS CURRENTLY UNDER DEVELOPMENT. THE REMAINING SURROUNDING PROPERTIES ARE OCCUPIED BY SINGLE-FAMILY DWELLINGS. THE TWO (2) PROPOSED DWELLING LOTS WILL AVERAGE 43,560 SQUARE FEET, EXCEEDING THE MINIMUM LOT SIZE OF 20,000 SQUARE FEET IN THE R-20 ZONING DISTRICT. ALL PROPOSED LOTS WILL BE SERVED BY PUBLIC SEWER AND WATER. A "FEE IN LIEU OF" PROVIDING ON-SITE BMP'S WILL SATISFY THE CHESAPEAKE BAY PRESERVATION ORDINANCE REQUIREMENT FOR TREATING THE WATER QUALITY VOLUME. A STORMWATER DETENTION WAIVER HAS BEEN APPROVED FOR THE DEVELOPMENT OF THIS SITE (SEE SHEET 3). THE LOCATION OF THE PROPOSED DWELLINGS HAS BEEN DESIGNED TO ALLOW FOR AN ADEQUATE BUFFER FROM ADJACENT PROPERTIES.

ARCHAEOLOGY NOTES

THIS PROPERTY HAS THE POTENTIAL TO YIELD ARCHEOLOGICAL RESOURCES WHICH COULD PROVIDE INSIGHT INTO MILITARY ACTIVITIES IN ALEXANDRIA DURING THE CIVIL WAR. THERE HAVE BEEN REPORTS THAT CIVIL WAR PERIOD ARTIFACTS HAVE BEEN RECOVERED FROM THE AREA. THE TOPOGRAPHY OF THE SITE, A RIDGE OVERLOOKING SEMINARY ROAD AND HOLMES RUN, MAKES IT A LIKELY LOCATION FOR MILITARY ENCAMPMENTS.

ALL ARCHEOLOGICAL WORK WILL BE CARRIED OUT IN ACCORDANCE WITH THE "CITY OF ALEXANDRIA ARCHEOLOGICAL STANDARDS" AND IS SUBJECT TO THE APPROVAL OF THE CITY ARCHEOLOGIST.

IF DETERMINED TO BE APPROPRIATE BY THE CITY ARCHEOLOGIST, A PLAQUE WILL BE ERECTED ON THIS PROPERTY SUMMARIZING ITS HISTORICAL AND ARCHEOLOGICAL SIGNIFICANCE. THE WORDING ON THE PLAQUE WILL BE APPROVED BY ALEXANDRIA ARCHEAEOLOGY.

ALL ARCHEOLOGICAL PRESERVATION MEASURES MUST BE COMPLETED PRIOR TO GROUND DISTURBING ACTIVITIES (SUCH AS CORING, GRADING, FILLING, VEGETATION REMOVAL, UNDERGROUND UTILITIES, PILE DRIVING, LANDSCAPING AND OTHER EXCAVATIONS AS DEFINED IN SECTION 2-151 OF THE ZONING ORDINANCE). TO CONFIRM, CALL ALEXANDRIA ARCHEAEOLOGY AT (703) 838-4399.

THE APPLICANT SHOULD NOT ALLOW ANY OTHER METAL DETECTION TO BE CONDUCTED ON THE PROPERTY, UNLESS AUTHORIZED BY ALEXANDRIA ARCHEAEOLOGY.

AREA TABULATION:

TOTAL SITE AREA	87,120 SQ. FT. or 2.0000 AC.
TOTAL LOT AREA (2 LOTS)	87,120 SQ. FT. or 2.0000 AC.
AVERAGE LOT AREA (2 LOTS)	43,560 SQ. FT. or 1.0000 AC.
MINIMUM LOT AREA REQUIRED (R-20)	20,000 SQ. FT. or 0.4591 AC.
MINIMUM LOT AREA PROVIDED (LOT 504)	39,519 SQ. FT. or 0.9072 AC.
MINIMUM LOT WIDTH REQUIRED	100 ft. (INT.) 120 ft. (CORNER)
MINIMUM LOT FRONTAGE REQUIRED	75 ft.*
ON-SITE DISTURBED AREA	39,876 SQ. FT. or 0.9154 AC.
DENSITY ALLOWED	2.18 DU/AC
DENSITY PROVIDED	1.00 DU/AC
EXISTING IMPERVIOUS AREA(ON-SITE)	0 SQ. FT. or 0.0000 AC.
PROPOSED IMPERVIOUS AREA(ON-SITE)	18,440 SQ. FT. or 0.42 AC.
PROPOSED PERCENTAGE OF IMPERVIOUS AREA	21.0% of site (WQV Default Applies)
	(SEE CALCULATIONS ON SHEET 3)
PROPOSED DISTURBED AREA	51,292 SQ. FT. OR 1.1775 AC.

SPECIAL USE PERMIT NOTE:

A SPECIAL USE PERMIT (#2003-0036) HAS BEEN APPROVED FOR AN OUTLOT SUBDIVISION WITH NO PUBLIC STREET FRONTAGE.

APPLICABLE WAIVERS & MODIFICATIONS NOTE:

A STORMWATER DETENTION WAIVER DSP# 2003-0036 WAS APPROVED BY MS. EMILY BAKER, CITY ENGINEER ON DECEMBER 1, 2003. SEE SHEET 3 FOR APPROVAL LETTER.

PARKING TABULATION:

PARKING REQUIRED: TWO (2) SPACES PER DWELLING UNIT FOR A TOTAL OF (4) SPACES.

PARKING PROVIDED: TWO (2) IN EACH GARAGE AND TWO (2) IN EACH DRIVEWAY FOR A TOTAL OF 8 SPACES. EACH SPACE SHALL BE A MINIMUM OF 9'X18.5" IN SIZE.

NO LOADING SPACES REQUIRED OR PROVIDED.

EXISTING VPD = 0, PROPOSED VPD = 20 (10 PER DWELLING).

APPROVED
SPECIAL USE PERMIT NO. 2003-0036
DEPARTMENT OF PLANNING & ZONING

DIRECTOR: _____ DATE: _____
DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES

SITE PLAN NO. *10/16/09*
DIRECTOR: _____ DATE: _____

CHAIRMAN, PLANNING COMMISSION: _____ DATE: _____
DATE RECORDED: _____

INSTRUMENT NO. _____ DEED BOOK NO. _____ DATE: _____

THIS DRAWING IS A SERVICE DOCUMENT OF R.C. FIELDS, JR. & ASSOC., P.C. AND MAY NOT BE USED OR REPRODUCED WITHOUT THE WRITTEN PERMISSION OF THE ENGINEER AND/OR LAND SURVEYOR.

EXISTING UTILITIES SHOWN ON THIS PLAN TAKEN FROM AVAILABLE RECORDS AND/OR FROM FIELD OBSERVATIONS.

FOR EXACT LOCATIONS OF EXISTING UNDERGROUND UTILITIES, NOTIFY "MISS UTILITY" AT 1-800-257-7777, 72 HOURS BEFORE THE START OF ANY EXCAVATION OR CONSTRUCTION.

LOCATION AND DEPTH OF ALL EXISTING UNDERGROUND UTILITIES TO BE VERIFIED BY CONTRACTOR PRIOR TO CONSTRUCTION. INTERFERENCE OR DISRUPTION OF SAME WILL NOT BE THE RESPONSIBILITY OF THIS OFFICE.

ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS AND SPECIFICATIONS OF CITY OF ALEXANDRIA, VIRGINIA. © 2004 R.C. FIELDS JR. & ASSOC.

DSUP #2003-0036

ESI PEER REVIEW

R.C. FIELDS, JR. & ASSOCIATES
A PROFESSIONAL CORPORATION
LAND SURVEYING • SITE PLANNING • SUBDIVISION DESIGN
730 S. Washington Street, PH. (703) 549-6422
Alexandria, Virginia 22314 FAX (703) 549-6422

THE COMMONWEALTH OF VIRGINIA
RONALD J. KELLER
Lic. No. 1457-B
7 OCT. 2009
LAND SURVEYOR

COVER SHEET
PICKETT'S RIDGE II
CITY OF ALEXANDRIA, VIRGINIA

DATE	REVISION
3/31/04	MIN. SUB. REVIEW
5/12/04	PER COMMENTS
2/3/09	POOL LOT 504
6/19/09	LOWER PATIO
7/27/09	PER COMMENTS
08/10/09	DWLG. LOT 503
08/15/09	PER COMMENTS
10/7/09	PER COMMENTS

DESIGN: P.A.W.
DRAWN: R.K.B.
SCALE: AS NOTED
DATE: MARCH 4, 2004
SHEET 1 OF 17
FILE: 00-02

DSP2003-0036 R11

DEVELOPMENT SPECIAL USE PERMIT PLAN
PICKETT'S RIDGE II
CITY OF ALEXANDRIA, VIRGINIA

STORMWATER RUNOFF CONSIDERATIONS:

A STORMWATER DETENTION WAIVER HAS BEEN APPROVED FOR THE DEVELOPMENT OF THIS SITE, SEE SHEET 4. THEREFORE IT COMPLIES WITH THE PEAK FLOW REQUIREMENTS OF ARTICLE XII OF THE ALEXANDRIA ZONING ORDINANCE. WATER QUALITY STANDARDS ASSOCIATED WITH THE CHESAPEAKE BAY PRESERVATION ORDINANCE SHALL BE MET BY PAYING A "FEE IN LIEU OF" CONSTRUCTING ON-SITE BMP'S.

PHASE I ZONING TABLES; FOR INFORMATION ONLY!

SETBACK TABLE

FRONT	SETBACKS REQUIRED			SETBACKS PROVIDED			SETBACK MODIFICATIONS		
	FRONT	SIDE	REAR	FRONT	SIDE	REAR	FRONT	SIDE	REAR
501	40'	1/2 BLDG. HT. (12' MIN.)	BLDG. HT. (12' MIN.)	157'	12'	59'			
502	40'	1/2 BLDG. HT. (12' MIN.)	BLDG. HT. (12' MIN.)	92'	25'	33'			

NOTE: FOR SIDE SETBACKS, EACH UNIT MUST MEET A SETBACK HEIGHT OF 24 FT. TO UTILIZE A 12 FT. SETBACK. (EX. THE UNIT ON LOT 501 HAS A MINIMUM SIDE SETBACK OF 12 FEET, THE PORTION OF THE DWELLING AT THE CLOSEST POINT IS THE GARAGE WHICH HAS A HEIGHT OF 24 FEET, THEREFORE THE SIDE SETBACK ON LOT 501 IS ONE-HALF OF THE PROPOSED BUILDING HEIGHT). IF THE SETBACK HEIGHT OF THE UNIT INCREASES, THE SETBACK MUST INCREASE AS WELL. THE REAR SETBACKS PROVIDED MUST EQUAL THE REAR BUILDING HEIGHT OF EACH UNIT. AS THE REAR HEIGHT INCREASES THE SETBACK INCREASES THE SAME. THESE SETBACKS WILL BE CONSISTENT WITH THE CITY OF ALEXANDRIA ZONING REQUIREMENTS.

ZONING TABULATION

LOT AREA	MAX. F.A.R. ALLOWED	MAX. F.A.R. PROVIDED	FLOOR AREA ALLOWED	FLOOR AREA PROVIDED	MIN. FRONTAGE REQUIRED	MIN. FRONTAGE PROVIDED
501 56,473 SQ.FT.	0.25	0.25	14,118 SQ.FT.	9,455 SQ.FT.	75'	20'
502 30,647 SQ.FT.	0.25	0.25	7,661 SQ.FT.	7,661 SQ.FT.	75'	20'

*NOTE: A SPECIAL USE PERMIT HAS BEEN APPROVED TO REDUCE REQUIRED STREET FRONTAGE.

SETBACK TABLE

FRONT	SETBACKS REQUIRED			SETBACKS PROVIDED			SETBACK MODIFICATIONS		
	FRONT	SIDE	REAR	FRONT	SIDE	REAR	FRONT	SIDE	REAR
504	40'	1/2 BLDG. HT. (12' MIN.)	BLDG. HT. (12' MIN.)	61'	13'	65'			
503	40'	1/2 BLDG. HT. (12' MIN.)	BLDG. HT. (12' MIN.)	90'	37'	85'			

NOTE: FOR SIDE SETBACKS, EACH UNIT MUST MEET A SETBACK HEIGHT OF 26 FT. TO UTILIZE A 13 FT. SETBACK. (EX. THE UNIT ON LOT 504 HAS A MINIMUM SIDE SETBACK OF 13 FEET, THE PORTION OF THE DWELLING AT THE CLOSEST POINT IS THE GARAGE WHICH HAS A HEIGHT OF 26 FEET, THEREFORE THE SIDE SETBACK ON LOT 504 IS ONE-HALF OF THE PROPOSED BUILDING HEIGHT). IF THE SETBACK HEIGHT OF THE UNIT INCREASES, THE SETBACK MUST INCREASE AS WELL. THE REAR SETBACKS PROVIDED MUST EQUAL THE REAR BUILDING HEIGHT OF EACH UNIT. AS THE REAR HEIGHT INCREASES THE SETBACK INCREASES THE SAME. THESE SETBACKS WILL BE CONSISTENT WITH THE CITY OF ALEXANDRIA ZONING REQUIREMENTS.

ZONING TABULATION

LOT AREA	MAX. F.A.R. ALLOWED	MAX. F.A.R. PROVIDED	FLOOR AREA ALLOWED	GROSS FLOOR AREA PROVIDED	NET FLOOR AREA PROVIDED	MIN. FRONTAGE REQUIRED	MIN. FRONTAGE PROVIDED
504 39,519 SQ.FT.	0.25	0.25	9,880 SQ.FT.	11,148 SQ.FT.	9,800 SQ.FT.	75'	0*
503 47,601 SQ.FT.	0.25	0.23	11,900 SQ.FT.	13,345 SQ.FT.	10,602 SQ.FT.	75'	0*

MAX. HEIGHT PROVIDED

MAX. HEIGHT PROVIDED	AVERAGE FINISH GRADE
504 35'	193.6
503 35'	190.37

*NOTE: A SPECIAL USE PERMIT (#2003-0036) HAS BEEN APPROVED FOR AN OUTLOT SUBDIVISION WITH NO PUBLIC STREET FRONTAGE.

DRIVEWAY ACCESS EASEMENT NOTE:
THE PROPOSED DRIVEWAY ACCESS EASEMENT HAS A TOTAL AREA OF 3,707 SQ.FT. A PORTION OF THE EMERGENCY VEHICLE EASEMENT (EVE) ON LOT 502 WILL BE VACATED AS THE NEW TURNAROUND PROVIDED ON LOTS 503 & 504 WILL PROVIDE ADEQUATE TURNAROUND. THIS WILL BE DONE AFTER THE PROPOSED EMERGENCY VEHICLE EASEMENT IS RECORDED.

Docket No. 2003-0036
DEVELOPMENT PERMIT
PICKETT'S RIDGE II

Planning Commission
February 19, 2004

ISSUE: Consideration of the Planning Commission's recommendation with respect to the proposed site plan and subdivision plat for the proposed development.

APPLICANT: Sutton, Ronald
By: Duncan W. Blair, Attorney

LOCATION: 13 Buzzard's Gap
ZONE: R-20/Residential

CITY COUNCIL ACTION, FEBRUARY 14, 2004: City Council adopted the Planning Commission's recommendation with the following amendments to the conditions of the Ordinance: 1. A bond for all existing trees and landscaping designated to be retained, in an amount determined by the Director of Parks, Recreation and Cultural Activities, and the cost of trees and landscaping required to be installed, shall be provided and maintained for a period of five years. Amend condition number 9: (a) A perpetual public access easement and vehicle ingress/egress easement shall be recorded by the applicant for the entire portion of the internal private street. The easement shall provide public vehicular and pedestrian access. (b) (1) The applicant shall provide a 15-foot wide perpetual public pedestrian access easement running from the private street starting generally at the common boundary line between Lots 503 and 504, thence, running generally south along such common boundary line and west along the southern boundary line of Lot 503, and terminating at the southwest corner of Lot 503 on the unopened right-of-way of North Pickett Street. (2) The retaining wall at the point where such pedestrian easement connects to the private street, and all other site features and improvements, shall be designed and constructed to accommodate such pedestrian easement, to the satisfaction of the Directors of Planning and Zoning, Transportation and Environmental Services, and of Parks, Recreation and Cultural Activities. (3) No construction or improvements for public use of the easement area, except for construction necessary to accommodate the pedestrian easement required under Paragraph (b)(2), shall be permitted unless and until approved by City Council, but no amendment to the site plan or ordinance shall be required. Prior to granting any such approval, planning on the proposed public use and any construction or improvements therefor shall be conducted by the Park and Recreation Commission, Planning Commission and also include input from the Environmental Policy Commission. Notice as provided in Section 11-301 of the Zoning Ordinance shall be given for such hearings. (4) Signage to the satisfaction of the Director of Parks, Recreation and Cultural Activities, shall be provided at the final heads connecting to the public right-of-way of North Pickett Street, and at the south of the site, and at the connection to the private street, in the event of construction or improvement of the easement for public use as approved by City Council. (c) A plat showing the easements and all required documentation shall be submitted to the City Attorney, Department of Planning and Zoning and Department of Transportation and Environmental Services with the site plan submission. The easements shall be approved by the City Attorney and recorded on the land records prior to release of the final site plan to the satisfaction of the City Attorney. (d) All of the easements shall be provided to the initial purchasers of each lot, and, in the event, as the signage required by Paragraph (B)(4) is installed, to subsequent purchasers, to the satisfaction of the City Attorney.

CITY COUNCIL ACTION, FEBRUARY 21, 2004: City Council deferred action on this item until the February 24, 2004, Legislative Meeting.

PLANNING COMMISSION ACTION, FEBRUARY 3, 2004: On a motion by Mr. Dunn, seconded by Ms. Fossum, the Planning Commission voted to recommend approval of the proposed site plan, subject to compliance with all applicable codes, ordinances and staff recommendations, with amendments to conditions #9 and #29. The motion carried on a vote of 4 to 3 with Mr. Williams, Mr. Komoroske and Mr. Leibach voting against the motion to delete 1 to 13 public access easement.

A prior motion was made by Mr. Komoroske and seconded by Mr. Robinson, to amend staff condition #9 to provide a public access easement on lot 502 to enable a future pedestrian connection to the existing public right-of-way on the western portion of the site, rather than the easement on the western portion of lot 502 and lot 503 as recommended by staff. Mr. Leibach expressed the desire to retain the larger easement area as recommended by staff. The motion failed on a vote of 3 to 4, with Ms. Fossum, Mr. Dunn, Mr. Jennings and Mr. Leibach voting against the motion.

Reason: The Planning Commission generally agrees with the staff analysis.

Staff Recommendation: The Planning Commission generally agrees with the staff analysis.

Comments: The Planning Commission generally agrees with the staff analysis. The Planning Commission generally agrees with the staff analysis. The Planning Commission generally agrees with the staff analysis.

Bill Hunt, of 829 Quaker Lane and member of the Alexandria Historic Site Steering Committee, expressed overall support of the project with concern about the site plan requiring a public access easement. He recommended leaving the area open with the option of a bond for a future connection.

Ann Bechtel Hunt, of 829 Quaker Lane and member of the Alexandria Historic Site Steering Committee, spoke in support of the project, but expressed concern about the possibility of a easement for a future trail connection. She believes the city should consider this option in the future.

Jack Sharkey, of 815 Rapidan Court, spoke about the history of the site and the easement area. He expressed opposition to any requirements. He stated that no one has stated the current easement in 20 years and with concern for the steep topography and safety issues regarding that area. He expressed concern for future development problems with the area if the church were ever to sell the property.

Jane Piro, of 825 Rapidan Court, expressed agreement with Mr. Sharkey with particular concerns about the proposed trail and that kids would misbehave in the area.

Kayvon Larson, of 107 West Howell Avenue and member of the Alexandria Environment Steering Committee, spoke in support of the project and as it is called out for in the Open Space Plan of the city. He stated that the Planning Commission should keep the door open for the future.

Staff recommends approval subject to the following conditions:

1. The applicant shall realize an additional 10% of the adjacent area to the satisfaction of P&Z.
2. The applicant shall provide a bond for the retention of trees and landscaping for a period of five years.
3. The applicant shall provide a bond for the retention of trees and landscaping for a period of five years.

15. All retaining walls shall be constructed with a natural stone. Any protective fencing or railing atop retaining walls shall be visually unobtrusive and of a decorative metal material to the satisfaction of the Directors of P&Z and Code Enforcement. Additional retaining walls other than those shown on the preliminary site plan shall be permitted so long as they are consistent with existing trees or prevent any extensive grading, or additional tree loss or prevent slopes greater than 3:1 (P&Z) (DSUP/2002-0049)

16. Basements, including those different and/or larger than those shown on the site plan, shall be permitted, provided that they:

- a. Meet all zoning requirements;
- b. Do not encroach on the conservation area; and
- c. Are within a 10-foot grading envelope as depicted on the approved site plan.

17. All dwellings shall be equipped with a residential fire sprinkler system conforming to the 2003 International Building Code (IBC) based on remote fire access issues to the site. (Code Enforcement) (DSUP/2002-0049)

Legal/Procedural:
18. The developer shall provide a signed disclosure statement from each purchaser prior to the release of a certificate of occupancy permit for that unit. The prospective purchasers shall be informed of the restrictions imposed on the landowners by the elements of this proposed site plan, including:

- a. Conservation Area Covenants;
- b. Public ingress/egress easement and emergency vehicle easement restrictions;
- c. Sanitary sewer easements;
- d. Public access easement/path through the site extending from Polk Avenue to North Pickett Street at Maury Lane;
- e. Zoning limitations on the construction of future building additions and/or decks larger than what is shown on the site plan. (P&Z) (PC) (DSUP/2002-0049)

19. The applicant shall provide a signed disclosure statement from each purchaser prior to the release of a certificate of occupancy permit for that unit. The prospective purchasers shall be informed of the restrictions imposed on the landowners by the elements of this proposed site plan, including:

- a. Conservation Area Covenants (as set forth in Condition No. 3);
- b. Exterior building improvements by future residents, including above ground decks not included on the approved plans; different from the approved plans, shall require the approval of the Director of Planning and Zoning and must be consistent with the special use permit conditions;
- c. Building additions, including decks are limited to the building envelope depicted on the approved site plan;
- d. All required landscaping and screening, including trees and landscaping in the conservation area, shall be maintained in good condition;
- e. No ground disturbing activities shall occur within the "limits of disturbance" areas or areas of trees preserved as a condition of this special use permit.

20. The subject site shall not be subdivided beyond the four lots being created under this development site plan. (City Council) (DSUP/2002-0049)

21. Prior to approval of the final site plan, the applicant shall execute and submit a maintenance agreement with the City for stormwater quality Best Management Practices (BMPs). (T&ES) Environmental:

22. Solid waste services shall be provided by the City. Solid-waste pick-up will be collected from the existing pavement at N. Pickett Street and Maury Lane. The developer must provide adequate space within each unit to accommodate a City Standard super-cup and recycling container. The containers must be placed inside the units or within an enclosure that completely screens them from view. The developer must purchase the standard containers from the City or provide containers that are compatible with City collection system and approved by the Director of Transportation and Environmental Services. (T&ES) (DSUP/2002-0049)

23. The surface appurtenances associated with the on-site structural stormwater Best Management Practices (BMPs) shall be marked to the satisfaction of the Director of T&ES to identify them as part of a structural BMP system. (T&ES)

24. The applicant shall be responsible for maintaining stormwater Best Management Practices (BMPs) until sale to an owner. Prior to transferring responsibility for the BMPs to the owner, the applicant shall execute a maintenance service contract with a private contractor for a minimum of three years and transfer the contract to the owner. A copy of the contract shall also be placed in the BMP Operation and Maintenance Manual. Prior to release of the performance bond, a copy of the contract shall be submitted to the City. (T&ES)

25. The applicant shall furnish the owner(s) with an Owner's Operation and Maintenance Manual for all the Best Management Practices (BMPs) used on site. The manual shall include at a minimum: an explanation of the functions and operations of the BMP(s); drawings and diagrams of the BMP(s) and any supporting utilities; catalog cuts on maintenance requirements; manufacturer contact names and phone numbers; a copy of the executed maintenance service contract; and a copy of the maintenance agreement with the City. Prior to release of the performance bond, a copy of the Operation and Maintenance Manual shall be submitted to the City on a digital media. (T&ES)

26. Due to the extensive alteration of the driveway on the adjacent Phase I property, the entire shared roadway for both the Phase 1 and 2 projects must be paved with asphalt to the satisfaction of the Directors of T&ES, P&Z and Code Enforcement. The private driveways on individual lots (not encumbered by emergency vehicle easements) may be paved with gravel or decorative paving materials. A stormwater fee must be paid based on all new impervious areas (including areas that were previously compacted gravel on the Phase I site) at a rate set by the Director of T&ES. (T&ES) (P&Z) (PC)

27. The Phase II driveway and retaining wall area impacts an Oak tree that was identified to be saved on the Phase I project. Replace such tree with additional trees of significant caliper equal, cumulatively, to the tree being removed prior to issuance of a certificate of occupancy permit. (T&ES) (P&Z) (PC)

28. The applicant is advised that all stormwater designs that require analysis of pressure hydraulic systems and/or inclusion into a design of flow control structures must be sealed by a professional engineer, registered in the Commonwealth of Virginia. If applicable, the Director of T&ES may require resubmission of all plans that do not meet this standard. (T&ES) (L.S.U.) (2002-0049) Plan must demonstrate to the satisfaction of the Director of T&ES that the storm water management is controlled in non-erosive manner. Identify how runoff from the driveways will be handled. Insure appropriate drainage measures are implemented to prevent flooding. Provide a storm water management narrative explaining measures taken. (T&ES) (DSUP/2002-0049)

29. The applicant shall incorporate in its site plan design, the Low Impact Development techniques including but not limited to Roof Downspout System, Gravel/porous material driveways, Gravel/porous material path, Vegetated Filter Strip or their combination to the satisfaction of Director of T&ES. (T&ES) (DSUP/2002-0049)

30. The stormwater Best Management Practices (BMPs) required for this project shall be constructed and installed under the direct supervision of the design professional or his designated representative. Prior to release of the performance bond, the design professional shall submit a written certification to the Director of T&ES that the BMPs are:

- a. Constructed and installed as designed and in accordance with the approved Final Site Plan;
- b. Clean and free of debris, soil, and litter by either having been installed or brought into service after the site was stabilized. (T&ES)

31. For any surface-installed Best Management Practices, i.e. Bio-Retention Filters, Vegetated Swales, etc. are employed for this site, descriptive signage for the BMPs is required to be installed to the satisfaction of the Director of Transportation and Environmental Services. (T&ES) (DSUP/2002-0049)

32. All stormwater inlets shall be duly marked with the name of watershed it drains into to the satisfaction of the Director of T&ES. (T&ES) (DSUP/2002-0049)

33. Provide a drainage map for the area flowing to the chosen BMP, including topographic information and storm drains. (T&ES) (DSUP/2002-0049)

34. If the units will sell as individual units and a home owner's association is established the following two conditions shall apply:

- a. The Developer shall furnish the Homeowner Association with a copy of the Operation and Maintenance Manual for all the Best Management Practices (BMPs) used on site. The manual shall include at a minimum: an explanation of the functions and operations of the BMP(s); drawings and diagrams of the BMP(s) and any supporting utilities; requirements and a copy of the Maintenance Agreement with the City;
- b. The Developer shall furnish each home purchaser with a brochure explaining the storm water BMP(s) installed on the site, outlining the responsibilities of the Homeowner and the Homeowner's Association (HOA) with respect to maintenance requirements. Upon activation of the HOA, the Developer shall furnish five copies of the brochure to the HOA for distribution to subsequent homeowners. Prior to release of the performance bond, a copy of the Operation and Maintenance Manual shall be submitted to the City on a digital media. (T&ES)

35. The site is located on marine clay area as delineated on City map of marine clay areas. Prior to the release of the final site plan, provide geotechnical report, sealed by a professional engineer, registered in the Commonwealth of Virginia, with recommendations for proposed cut slopes, embankments, pavement and retaining wall designs. (T&ES)

36. Due to the existing steep slopes and vegetation, maintenance and access for the proposed 10' sanitary sewer main extending along the southern property line of Lot 501 will be extremely difficult. Since this sanitary sewer serves a single lot, revise proposed 10' sewer main to an adequately sized sanitary lateral to serve Lot 501 and remove proposed City sanitary sewer easement. (T&ES)

37. Roof drains discharging on the surface shall be designed to be non-erosive along the entire surface flow path. (T&ES)

38. If fireplaces are to be included in the development, the applicant is required to install gas fireplaces to reduce air pollution and odors. Animal screens must be installed on chimneys. (T&ES)

39. All stormwater inlets shall be duly marked with the name of watershed it drains into to the satisfaction of the Director of T&ES. (T&ES)

40. Plan must demonstrate to the satisfaction of the Director of T&ES that adequate stormwater outlet is available to the site or else developer is to design and build any on or off site improvements to discharge to an adequate outfall. (T&ES)

41. During the construction phase of this development, the site developer, its contractor, certified land disturber, or owner's other agents shall implement a waste and refuse control program. This program shall control wastes such as discarded building materials, concrete truck washout, chemicals, litter or trash, trash generated by construction workers or mobile food vendor businesses serving them and sanitary waste at the construction site and prevent its off site migration that may cause adverse impacts to the neighboring properties or the environment to the satisfaction of the Directors of Transportation and Environmental Services and Code Enforcement. All wastes shall be disposed off site properly in accordance with all applicable federal, state and local laws. (T&ES)

42. The building footprints for each unit shall be limited to the building envelope depicted on the preliminary plan unless otherwise necessary to retain additional trees to the satisfaction of the Director of P&Z. (P&Z) (DSUP/2002-0049)

43. Freestanding subdivision or development signs that differentiates the proposed development from the existing neighborhood shall be prohibited. (P&Z) (DSUP/2002-0049)

44. A temporary informational sign shall be installed on the site prior to the approval of the final site plan for the project and shall be displayed until construction is complete or replaced with a marketing sign incorporating the required information; the sign shall notify the public of the nature of the upcoming project and shall provide a phone number for public questions regarding the project. (P&Z) (DSUP/2002-0049)

45. The applicant shall identify a person who will serve as liaison to the community throughout the duration of construction. The name and telephone number of this individual shall be provided in writing to residents, whose property abuts the site, and to the Directors of P&Z and T&ES. (P&Z) (DSUP/2002-0049)

46. Show all utility structures, including transformers, on the final development plan. All utility structures (except fire hydrants) shall be clustered where possible and located so as not to be visible from a public right-of-way or private street. When such a location is not feasible, such structures shall be located and screened to the satisfaction of the Director of P&Z. (P&Z) (DSUP/2002-0049)

47. Any inconsistencies between the various drawings shall be reconciled to the satisfaction of the Directors of P&Z and T&ES. (P&Z) (DSUP/2002-0049)

48. The final site plan shall include a zoning tabulation that clearly depicts the permitted and proposed net/gross floor areas, height, yard setbacks, and all other applicable zoning requirements for each individual lot. This information sheet shall also be attached to all building permits. (P&Z) (DSUP/2002-0049)

49. The applicant shall attach a copy of the final released site plan to each building permit document application and be responsible for insuring that the building permit drawings are consistent and in compliance with the final released site plan prior to review and approval of the building permit by the Departments of Planning and Zoning and Transportation and Environmental Services. (P&Z) (DSUP/2002-0049)

50. Submit a building location survey to Planning staff prior to applying for a certificate of occupancy permit for each unit. The location survey shall show all improvements to the lot including easements, restrictions and limits of the Conservation Area as shown on the final development plan. The applicant shall submit the final "as-built" site plan for the entire project prior to applying for a certificate of occupancy permit for the final dwelling unit. (P&Z) (PC) (DSUP/2002-0049)

51. Temporary construction trailer(s) shall be permitted and be subject to the approval of the Director of P&Z. Temporary structures for sales personnel, as well as sales/marketing signs, shall be permitted, with the size and site design for such temporary structures, including signs, subject to approval by the Director of Planning and Zoning. (P&Z) (PC) (DSUP/2002-0049)

52. Provide a lighting plan with the final site plan to the satisfaction of the Director of T&ES in consultation with the Chief of Police. The plan shall include:

- a. show existing and proposed street lights and site lights;
- b. indicate the type of fixture, and show mounting height, and strength of fixture in Lumens or Watts;
- c. provide manufacturer's specifications for the fixtures; and
- d. provide lighting calculations to verify that lighting meets City Standards. (T&ES/Police) (DSUP/2002-0049)

53. Prior to the release of the final site plan, provide written verification for construction easement and grading on adjacent properties. (T&ES) (DSUP/2002-0049)

54. Provide proposed elevation (contours and spot elevations) in sufficient details on grading plan to clearly show the drainage patterns. (T&ES)

55. The site is located on marine clay area as delineated on City map of marine clay areas. Prior to the release of the final site plan, provide geotechnical report, sealed by a professional engineer, registered in the Commonwealth of Virginia, with recommendations for proposed cut slopes, embankments, pavement and retaining wall designs. (T&ES)

56. Prior to the release of the final site plan, provide geotechnical report, sealed by a professional engineer, registered in the Commonwealth of Virginia, with recommendations for proposed cut slopes, embankments, pavement and retaining wall designs. (T&ES)

57. Roof drains discharging on the surface shall be designed to be non-erosive along the entire surface flow path. (T&ES)

58. The applicant shall provide a geotechnical report, sealed by a professional engineer, registered in the Commonwealth of Virginia, with recommendations for proposed cut slopes, embankments, pavement and retaining wall designs. (T&ES)

59. All archaeological work shall be carried out in accordance with the City of Alexandria Archaeological Standards and subject to the approval of the City Archaeologist. (Archaeology)

60. If determined to be appropriate by the City Archaeologist, a plaque will be erected on the property summarizing its historical and archaeological significance. The wording on the plaque will be approved by Alexandria Archaeology. (Archaeology)

61. The applicant shall not allow any other metal detection to be conducted on the property, unless authorized by Alexandria Archaeology. (Archaeology)

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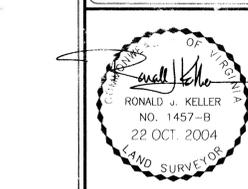
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R.C. FIELDS, JR. & ASSOCIATES
A PROFESSIONAL CORPORATION
LAND SURVEYING • SITE PLANNING • SUBDIVISION DESIGN
730 S. Washington Street, PH. (703) 549-6422
Alexandria, Virginia 22314 FAX (703) 549-6422



CITY DEPARTMENT COMMENTS
Legend: C - code requirement R - recommendation S - suggestion F - finding

Transportation and Environmental Services
C-1 Bond for the public improvements must be posted prior to release of the plan.
C-2 The sewer tap fee must be paid prior to release of the plan.
C-3 All easements and/or dedications must be recorded prior to release of the plan.
C-4 Plans and profiles of utilities and roads in public easements and/or public right-of-way must be approved prior to release of the plan.
C-5 All drainage facilities must be designed to the satisfaction of T&ES. Drainage divide maps and computations must be provided for approval.
C-6 All utilities serving the site must be underground.
C-7 Provide site lighting per minimum city standards.
C-8 The applicant shall comply with the City of Alexandria's Noise Control Code, Title 11, Chapter 5, which is the maximum permissible noise level as measured at the property line.
C-9 The applicant must comply with the Article XIII of the City's zoning ordinance which includes requirements for stormwater pollutant load reductions, treatment of the water quality volume default stormwater quantity management.

C-10 The applicant must comply with the City of Alexandria, Erosion and Sediment Control Code, Section 5, Chapter 4. This includes naming a Responsible Land Disturber on the Erosion and Sediment Control sheets prior to engaging in land disturbing activities in accordance with Virginia Erosion and Sediment Control Law.
C-11 All required permits from Virginia Department of Environmental Quality, Environmental Protection Agency, Army Corps of Engineers, Virginia Marine Resources must be in place for all project construction and mitigation work prior to release of the final site plan. This includes the new state requirement for a VPDES permit for all construction activities greater than one acre.
F-1 Provide the reference to the source of meridian on all north arrows (T&ES)

F-2 Clarify the limits of disturbance for this project. The line types used to represent the disturbance for the Phase 1 and 2 projects should be different. (T&ES)

Code Enforcement
C-1 All dwellings shall be equipped with a residential fire sprinkler system conforming to the 2003 International Building Code (IBC) based on remote fire access issues to the site. Condition met, agreed to by applicant.

C-2 Proposed road grade shall not exceed 10% in order to facilitate adequate fire and ambulance access. Angles of approach and departure shall not exceed 6%. Grade and transitions shall noted on plans. Condition met. Grade profile indicates grades within specified limits

C-3 Minimum access roadway width shall be 22 feet. Roadway shall be dedicated as Emergency Easement. Easement of emergency vehicle easement in designated turn around shall be shown on plans. Easements shown at 18 foot, consistent with Phase I. Extent of Easements shown on plans.

C-4 Roadway shall have vehicular turnaround which complies with City standards for emergency vehicles. Turnaround radii shall be noted on plans. Turnaround area shall be level grade 60 feet prior to centerline of turn around area. Wings of turn around shall be level for a minimum of 10 feet from center line of turn around area. The current proposed turnaround is unacceptable as it promotes the use of 5% grades to be included for turn around purposes. Turn around area must be level

level. Revised turnaround is acceptable with 0% grade as shown on plans.

C-5 Proposed hydrant at "T" intersection is acceptable.

C-6 New construction must comply with the current edition of the Uniform Statewide Building Code (USBC). Condition Met. Shown as Note 11 on Sheet 1.

C-7 A soils report must be submitted with the building permit application. Condition met, shown as Note 19 on Sheet 1.

C-8 A Certificate of occupancy shall be obtained prior to any occupancy of the building or portion thereof, in accordance with USBC 118.0. Condition Met. Shown as Note 21 on Sheet 1.

C-9 Prior to the issuance of a demolition permit or land disturbance permit, a rodent abatement plan shall be submitted to Code Enforcement that will outline the steps that will be taken to prevent the spread of rodents from the construction site to the surrounding community and sewers. Condition met. Shown as Note on Sheet 2.

C-10 Roof drainage systems must be installed so as neither to impact upon, nor cause erosion/damage to adjacent property. Condition met, Shown as Note on Sheet 2.

F-1 Replace General Note 11 with the following: New construction must comply with the current edition of the Uniform Statewide Building Code (USBC). Condition Met. Revised wording completed.

F-2 Emergency Vehicle turn around limits are not identified on plan. Condition met. EVE limits shown on plan.

F-3 Size of water mains are not shown. Condition Met - Water Main Size Shown on Plans.

F-4 Plan should note if structures are to be equipped with an automatic fire suppression system. Condition met. Shown as Note 34 on Sheet 1.

F-5 North Arrow is not shown on all sheets of plan. Condition met.

F-6 The use of gravel roadways is not supported by Code Enforcement as a means for emergency vehicles to access the proposed dwelling units. Condition met. Applicant agrees to pave roadways.

Alexandria Archeology:

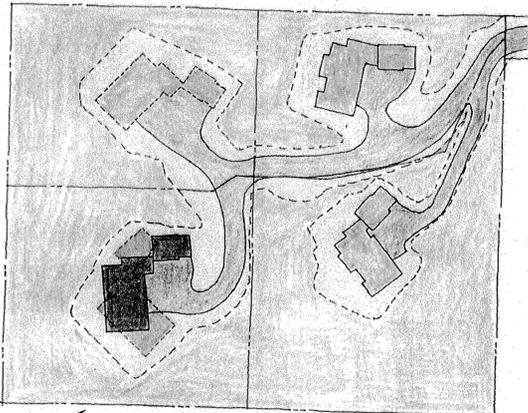
F-1 The archaeological fieldwork on this project was completed by John Milner Associates (703/354-9737), Joe Balicki field director, in June of 2003, but no report has been received.

C-1 For the archaeological requirements of this project to be satisfied, Alexandria Archaeology must receive a site report on this project.

Health Department:

No comments

Attachment 1 DSUP#2003-0036
Pickett's Ridge II



Unit Orientation Proposed by Applicant
Alternative Unit Orientation Proposed by Staff

SITE CONTACT SIGN DETAIL NO SCALE
SIGN DIMENSIONS 2' DIA.



(703) 683-1210
www.gsutton.com
www.suttonbuilding.com
FOR INFORMATION CONTACT:
GREG SUTTON

NOTE: SIGN TO BE POSTED AT SITE ENTRANCE.

TRANSPORTATION & ENVIRONMENTAL SERVICES
P.O. Box 178
Alexandria, Virginia 22313
ci.alexandria.va.us

Construction & Inspection (703) 838-4324
Site Plan (703) 838-4318

Engineering (703) 838-4328
Street Lights (703) 838-4721

December 1, 2003

R.C. Fields, Jr., L.S.
R.C. Fields, Jr. & Associates
718 Jefferson Street
Alexandria, VA 22314

Re: Pickett's Ridge II
DSP#2003-0036
Request for Stormwater Detention/Quantity Waiver

Dear Mr. Fields:

The City has reviewed your letter dated November 13, 2003, requesting relief from Alexandria Zoning Ordinance, Article XIII, Section 117-A detention requirements. The City finds the approach described in said letter acceptable and grants your request.

The City will require that the proposed stormwater runoff is proven to be controlled in a non-erosive manner with supporting geotechnical and engineering analysis presented during the final site plan review and to remind you and the applicant that the project must adhere to the erosion and sediment control regulations of the City and State.

Reference to this approval must be noted on the project plans.

Sincerely,
Emily Baker
Emily Baker, P.E.
City Engineer

cc: Kevin Shunk, Watershed Program Administrator
Lisa T. Jaatinen, P.E., Civil Engineer III
Geoff Byrd, Site Plan Coordinator

DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES
Division of Environmental Quality
P.O. Box 178 - City Hall
Alexandria, Virginia 22313
http://alexandriava.gov/tes/DEQ/

October 7, 2009

Roger Bohr
RC Fields and Associates
730 S. Washington Street
Alexandria, VA 22314

RE: Sutton Property
Lot 503, Finley Drive
DSP 2003-0036

Dear Mr. Bohr:

This is in regard to your letter, dated September 9, 2009 requesting to meet the water quality management performance criteria requiring BMP treatment in a Resource Management Area (Article XIII, Section 13-109(E)(5)(a & b)) by participating in the City's Water Quality Improvement Fund. You have requested to pay a fee in lieu of providing an on-site BMP as outlined in Article XIII, Section 13-110(A)(2). You have agreed to provide additional monetary contribution of \$1,248.00 (624 square feet impervious surface x \$2/square foot) to the Alexandria Water Quality Improvement Fund.

Your request has been approved. The procedure now is to scan your request letter onto your final plan on a sheet that is labeled BMP Details or something similar. Your final plan will be eligible for approval when you have paid the fee (\$1,248.00), and the \$377 owed on Lot 504, for a total of \$1,625. The approval of the plan (with your request therein) will act as the approval of your request.

Sincerely,
Claudia Hamblin-Katnik
Claudia Hamblin-Katnik, Ph.D.
Watershed Program Administrator

cc: Shanna Sizemore, Site Plan Coordinator

STORMWATER RUNOFF INFO:
(RUNOFF ANALYSIS UTILIZING RATIONAL METHOD)

- I. TOTAL SITE AREA = 87,120 SQ.FT. OR 2.0000 ACRES
EXISTING IMPERVIOUS AREAS = 0 SQ.FT. OR 0.0000 ACRES
PROPOSED IMPERVIOUS AREAS = 18,440 SQ.FT. OR 0.42 ACRES
- II. WEIGHTED "C" FACTOR CALCULATION
PRE-DEVELOPMENT "C" = (2.00 x 0.3) + (0.00 x 0.9) + 2.0000 = 0.30
POST-DEVELOPMENT "C" = (1.58 x 0.3) + (0.42 x 0.9) + 2.0000 = 0.43
- III. PEAK DISCHARGE FOR DESIGN STORMS (Tc = 10 MIN.)
PRE-DEVELOPMENT
Q2 PRE = ACI = (2.0000) (0.30) (4.90) = 2.94 CFS
Q10 PRE = ACI = (2.0000) (0.30) (7.00) = 4.20 CFS
POST-DEVELOPMENT
Q2 POST = ACI = (2.0000) (0.43) (4.90) = 4.21 CFS
Q10 POST = ACI = (2.0000) (0.43) (7.00) = 6.02 CFS
- IV. POST-DEVELOPMENT INCREASES
Q2 INCREASE = 1.37 CFS Q10 INCREASE = 1.82 CFS
- V. MINIMUM STORMWATER STORAGE VOLUME REQUIRED:
1.82 CFS x 600 SEC. = 1,092 CUBIC FEET
(STORMWATER DETENTION WAIVER HAS BEEN APPROVED)
- VI. STORMWATER QUALITY VOLUME (WQV) REQUIRED:
WQV = 1,816 x Ia, WHERE Ia IS THE AREA OF INCREASED IMPERVIOUS SURFACES FROM THE SITE IN ACRES
WQV = 1,816 x 0.42 (ACRES)
WQV = 763 CUBIC FEET (REFER TO WORKSHEET "A", WQV DEFAULT APPLIES)

NOTE: A "FEE IN LIEU" OF CONSTRUCTING BMP'S FACILITIES IS BEING PAID TO THE CITY OF ALEXANDRIA FOR IMPERVIOUS SURFACES NOT TREATED BY ON-SITE FACILITIES. THEREFORE THIS SITE MEETS ALL BMP (WATER QUALITY) REQUIREMENTS.

SITE INFORMATION:

TOTAL SITE AREA = 87,120 SQ.FT. OR 2.0000 ACRES
LAND USE: SINGLE FAMILY RESIDENTIAL DWELLINGS
EXISTING IMPERVIOUS AREA = 0.00 ACRES (0.0%)
PROPOSED IMPERVIOUS AREA = 0.42 ACRES (21.0%)

EXISTING LAND USE / SITE COVERAGE:
WOODED (UNDISTURBED) = 2.00 ACRES

WATERSHED INFORMATION: (HOLMES RUN)
OVERALL LAND USE DESCRIPTION "C" ACRES
WOODED AREAS 0.30 2.00

PROJECT DESCRIPTION (PICKETT'S RIDGE II)

REDEVELOPMENT	IMPERVIOUS	PERVIOUS	TOTAL
DRAINAGE AREA	0.42	1.58	2.0
SITE AREA	0.151	0.129	0.280
ON-SITE TREATED	---	---	---
OFF-SITE TREATED	---	---	---
TOTAL TREATED	0.151	0.129	0.280
ON-SITE IMPERVIOUS AREAS DISCONNECTED BY A VEGETATIVE BUFFER	N/A		
TOTAL TREATED OR DISCONNECTED			0.28*

WATER TREATMENT ON-SITE			
BMP TYPE	AREA TREATED BY BMP (ACRES)	IMPERVIOUS AREA TREATED BY BMP (ACRES)	BMP EFFICIENCY (%)
BIO-RETENTION FILTERS	0.280 AC.	0.151 AC.	50

TOTAL WQV TREATED: NO (PAYMENT OF "FEE IN LIEU OF" FOR UNTREATED AREAS)
DETENTION ON SITE: NO (SEE WAIVER, SHEET 3)
PROJECT IS WITHIN WHICH WATERSHED? CAMERON / HOLMES RUN
PROJECT DISCHARGES TO WHICH BODY OF WATER? CAMERON RUN

NOTE: A "FEE-IN-LIEU" OF BMP CONSTRUCTION (\$1.50 PER SQUARE FOOT OF IMPERVIOUS AREA INCREASE) IS BEING PROVIDED FOR THIS SITE. THE FEE AMOUNT IS BASED IN THE TOTAL IMPERVIOUS AREA FOR PHASE 2, PICKETT'S RIDGE AND FOR THE ASPHALT TRAVEL AISLE PORTION LOCATED IN PHASE 1, PICKETT'S RIDGE (EXCLUSIVE OF THOSE AREAS TREATED BY BMPs ON LOT 503). THE ASPHALT TRAVEL AISLE ON PHASE 1, PICKETT'S RIDGE WAS PROPOSED AS GRAVEL OR PAVERS, DSUP #2003-0036, COMMENT #10 REQUIRES ASPHALT PAVING ON INTERNAL TRAVEL AISLES AND EMERGENCY VEHICLE EASEMENTS.

*ADDITIONAL IMPERVIOUS AREAS ASSOCIATED WITH PLAN REVISIONS ARE CALCULATED AT \$2.00 PER SQUARE FOOT.

STORMWATER MANAGEMENT/WATER QUALITY NARRATIVE:

THIS 2.00 ACRE SITE IS LOCATED AT THE END OF PICKETT STREET NORTH. THE SITE IS PRESENTLY 0% IMPERVIOUS (SITE IS COMPLETELY WOODED). THIS DEVELOPMENT PROPOSES THE CONSTRUCTION OF TWO SINGLE-FAMILY DWELLINGS UTILIZING LOW-IMPACT DEVELOPMENT PROCEDURES. THE LOW-IMPACT DEVELOPMENT PROCEDURES INCLUDE GRAVEL DRIVES AND DIRECTIONAL BORING FOR SANITARY LATERAL CONSTRUCTION TO REDUCE DISTURBED AREAS. THE LOW-IMPACT DEVELOPMENT PROCEDURES WILL HELP SATISFY THE REQUIREMENT FOR PROVIDING ON-SITE STORMWATER QUALITY STRUCTURES. BIO-RETENTION FACILITIES ARE PROPOSED TO TREAT THE MAJORITY OF IMPERVIOUS SURFACES ON LOT 503. A FEE IN LIEU OF CONSTRUCTION OF A BMP TO TREAT THE ON-SITE THE REMAINING IMPERVIOUS AREA HAS BEEN SUBMITTED TO THE CITY OF ALEXANDRIA. THE "FEE IN LIEU OF CONSTRUCTION" SHALL BE BASED ON A PRO-RATA SHARE AMOUNT FOR THE PROPOSED IMPERVIOUS AREA. ANY REQUIRED FACILITIES SHALL BE CONSTRUCTED, INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE REQUIREMENTS OF THE CITY OF ALEXANDRIA.

ALEXANDRIA VIRGINIA PHOSPHOROUS LOADING COMPUTATIONS

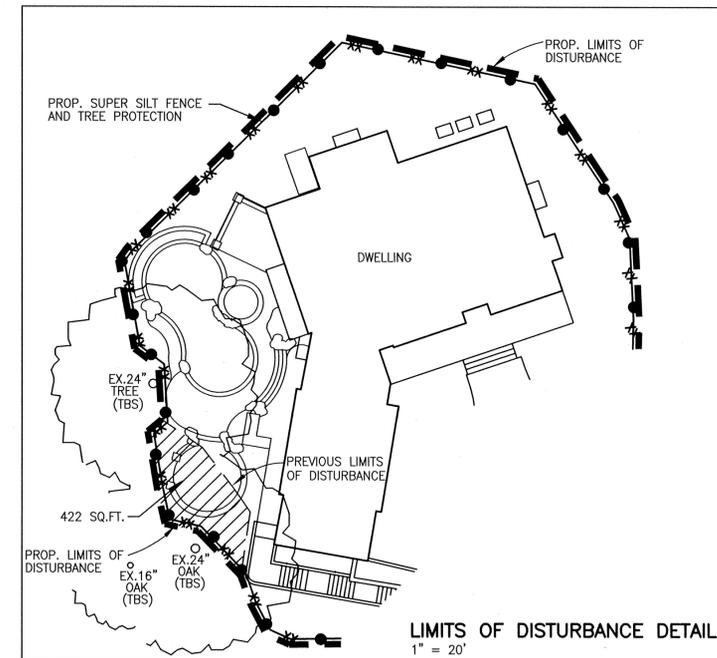
WORKSHEET A: NEW DEVELOPMENT (SUBAREA #7)
1. COMPILER SITE-SPECIFIC DATA AND DETERMINE SITE IMPERVIOUSNESS (SITE)
POST-DEVELOPMENT
A* = 2.0 ACRES RV-POST = 0.05 + 0.009 (SITE)
Ia** STRUCTURES = 0.20 ACRES = 0.05 + 0.009 (21)
PARKING LOT = ACRES = 0.239
ROADWAY = 0.19 ACRES
OTHER = 0.03 ACRES RWATERSHED IS EMBEDDED IN THE FORMULA
WALKS = ACRES IN STEP 4.
TOTAL Ia = 0.42 ACRES

I SITE = (TOTAL Ia/A) x 100 = 21.0 (PERCENT EXPRESSED IN WHOLE NUMBERS)
*A IS THE TOTAL AREA OF THE SITE
**Ia IS THE TOTAL AMOUNT OF IMPERVIOUS COVER.

2. DETERMINE NEED TO CONTINUE
I SITE = 21.0% (FROM STEP 1)
I WATERSHED = 41%

IF I SITE < I WATERSHED STOP AND SUBMIT ANALYSIS TO THIS POINT.
WQV DEFAULT PREVAILS. SEE P. 1-8 OF THE ALEXANDRIA SUPPLEMENT.

PROVIDE THE DEFAULT WATER QUALITY VOLUME. WATER QUALITY IS BEING ACHIEVED IN THE FOLLOWING WAYS: ON-SITE GRASS LINED SWALES, ON SITE ACCESS WAYS (EXCLUSIVE OF EMERGENCY VEHICLE EASEMENTS ARE CONSTRUCTED OF GRAVEL THAT WILL PROVIDE FILTRATION AND WILL ENSURE NON-CONCENTRATED FLOWS. BIO-RETENTION FACILITIES ARE PROPOSED TO TREAT THE MAJORITY OF IMPERVIOUS SURFACES ON LOT 503. A "FEE IN LIEU OF" TREATMENT OF ON-SITE RUNOFF SHALL BE SUBMITTED TO THE CITY OF ALEXANDRIA TO MEET WATER QUALITY REQUIREMENTS FOR AREAS NOT TREATED BY A BMP.



NOTES:

ALTERATIONS TO THE EXISTING STRUCTURE MUST COMPLY WITH THE 2006 EDITION OF THE UNIFORM STATEWIDE BUILDING CODE (USBC).

ALTERATIONS TO THE EXISTING STRUCTURE AND/OR INSTALLATION AND/OR ALTERING OF EQUIPMENT THEREIN REQUIRES A BUILDING PERMIT. FIVE SETS OF PLANS, BEARING THE SIGNATURE AND SEAL OF A DESIGN PROFESSIONAL REGISTERED IN THE COMMONWEALTH OF VIRGINIA, MUST ACCOMPANY THE WRITTEN APPLICATION. THE PLANS MUST INCLUDE ALL DIMENSIONS, CONSTRUCTION ALTERATIONS DETAILS, KITCHEN EQUIPMENT, ELECTRICAL, PLUMBING, AND MECHANICAL LAYOUTS AND SCHEMATICS.

CONSTRUCTION PERMITS ARE REQUIRED FOR THIS PROJECT. PLANS SHALL ACCOMPANY THE PERMIT APPLICATIONS THAT FULLY DETAILS THE CONSTRUCTION AS WELL AS LAYOUTS AND SCHEMATICS OF THE MECHANICAL, ELECTRICAL, AND PLUMBING SYSTEMS.

APPROVED
SPECIAL USE PERMIT NO. 2003-0036

DEPARTMENT OF PLANNING & ZONING

DIRECTOR _____ DATE _____
DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES

SITE PLAN NO. *10/16/09* DATE _____
DIRECTOR _____

CHAIRMAN, PLANNING COMMISSION _____ DATE _____

DATE RECORDED _____

INSTRUMENT NO. _____ DEED BOOK NO. _____ DATE _____

DSUP #2003-0036



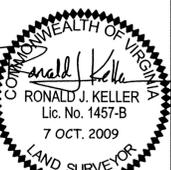
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EXISTING UTILITIES SHOWN ON THIS PLAN ARE TAKEN FROM AVAILABLE RECORDS AND/OR FROM FIELD OBSERVATIONS. FOR EXACT LOCATIONS OF EXISTING UNDERGROUND UTILITIES, NOTIFY "MISS UTILITY" AT 1-800-257-7777, 72 HOURS BEFORE THE START OF ANY EXCAVATION OR CONSTRUCTION.

LOCATION AND DEPTH OF ALL EXISTING UNDERGROUND UTILITIES TO BE VERIFIED BY CONTRACTOR PRIOR TO CONSTRUCTION. INTERFERENCE OR DISRUPTION OF SAME WILL NOT BE THE RESPONSIBILITY OF THIS OFFICE.

ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS AND SPECIFICATIONS OF THE CITY OF ALEXANDRIA, VIRGINIA.

R.C. FIELDS, JR. & ASSOCIATES
A PROFESSIONAL CORPORATION
LAND SURVEYING • SITE PLANNING • SUBDIVISION DESIGN
730 S. Washington Street PH. (703) 549-6422
Alexandria, Virginia 22314 FAX (703) 549-6422



NOTES AND CORRESPONDENCE
PICKETT'S RIDGE II
CITY OF ALEXANDRIA, VIRGINIA

DATE	REVISION
5/12/04	PER COMMENTS
7/29/04	PER COMMENTS
8/10/04	PER COMMENTS
10/22/04	FINAL MYLARS
2/3/09	POOL LOT 504
5/19/09	LOWER PATIO
7/27/09	PER COMMENTS
08/10/09	DWLG. LOT 503
09/15/09	PER COMMENTS
10/7/09	PER COMMENTS

DESIGN: P.A.W.
DRAWN: R.K.B.

SCALE: AS NOTED

DATE: MARCH 4, 2004

SHEET 3 OF 17

FILE: 00-02

DSP 2003-0036 R11

ROOF DRAIN NOTE:
ROOF DRAINAGE SYSTEMS SHALL BE INSTALLED SO AS NEITHER TO IMPACT UPON, NOR CAUSE DAMAGE/EROSION TO ADJACENT PROPERTIES. ROOF DRAIN AND DOWNSPOUT LOCATIONS SHOWN ARE PRELIMINARY, FINAL LOCATIONS TO BE DETERMINED BY ARCHITECT AND BUILDER.

SPECIAL USE PERMIT NOTE:
A SPECIAL USE PERMIT (#2003-0036) FOR AN OUTLOT SUBDIVISION HAS BEEN APPROVED FOR THIS DEVELOPMENT.

UTILITY NOTES:
ALL WATER MAINS SHOWN OR PROPOSED WITH THIS PLAN SHALL BE OWNED AND MAINTAINED BY VIRGINIA AMERICAN WATER COMPANY. ALL DOMESTIC WATER SERVICES SHOWN ON THIS PLAN SHALL BE OWNED AND MAINTAINED FROM THE METER TO THE DWELLING BY THE PROPERTY OWNER.

DOWNSPOUT NOTE:
IN THE EVENT THE LEVEL SPREADER SYSTEM FAILS TO KEEP STORMWATER RUNOFF FROM IMPACTING ADJACENT PROPERTIES, THE OWNER WILL BE REQUIRED TO PROVIDE ADDITIONAL PROTECTIVE MEASURES AS DETERMINED BY THE DIRECTOR OF T. & E.S.

DISCHARGE NOTE:
IN THE EVENT, DAYLIGHTING OF DOWNSPOUTS, SUMP DUMP DISCHARGE AT GRADE, AND GRADING ON THE PROPERTY ADVERSELY IMPACTS AND /OR CREATES A NUISANCE ON THE PUBLIC RIGHT OF WAY AND / OR ON THE ADJACENT PROPERTIES THEN THE OWNER SHALL BE RESPONSIBLE TO PROVIDE ADDITIONAL IMPROVEMENTS TO THE DOWNSPOUT DISCHARGE, SUMP PUMP DISCHARGE, AND / OR THE GRADING TO THE SATISFACTION OF THE DIRECTOR, TRANSPORTATION AND ENVIRONMENTAL SERVICES (T&ES).

KENA TEMPLE AACNMS, SUBDIV. OF PARCEL "B"

OUTLOT 3328-03-02-01
39.01-02-38 TRUSTEES OF FREE METHODIST CHURCH 4901 POLK AVE. ALEX. VA. 22304 ZONE:R-20 USE: CHURCH

OUTLOT 3328-03-02-02-01
39.01-02-35 TRUSTEES OF FREE METHODIST CHURCH 4901 POLK AVE. ALEX. VA. 22304 ZONE:R-20 USE: CHURCH

39.01-02-14 LEON OR BEATRICE C. FRED 4823 PEACOCK AVE. ALEX. VA. 22304 ZONE:R-12 USE: RES.

PROPERTY OF KENA TEMPLE AACNMS LOT 3

POOL / PATIO CONSTRUCTION ACCESS NOTE:
THE CONTRACTOR SHALL ACCESS THE AREA OF THE PROPOSED POOL AND PATIO, IN THE REAR OF THE DWELLING ON LOT 504, BY GOING AROUND THE EAST AND NORTH SIDES OF THE DWELLING. CONSTRUCTION VEHICLES SHALL NOT BE PERMITTED OUTSIDE OF THE LIMITS OF DISTURBANCE. ALL AREAS DENOTED SHALL BE STABILIZED AS PER SODDING SPECIFICATIONS ON SHEET 7.

RODENT ABATEMENT NOTE:
A RODENT ABATEMENT PLAN WILL BE PROVIDED TO THE SATISFACTION OF THE CITY OF ALEXANDRIA. AN EXTERMINATOR MUST BE CONTRACTED AT THE OWNERS'/ DEVELOPERS EXPENSE TO PROVIDE ABOVE GROUND "BAIT BOXES" AT THE EXTERMINATORS DISCRETION ALONG THE PERIMETER OF THE PROPS AT ONE WEEK PRIOR TO THE BEGINNING OF EXCAVATION. PROOF OF WORK PERFORMED BY EXTERMINATOR MUST BE REPORTED TO MR. ED TURNER, CITY OF ALEXANDRIA CODE ENFORCEMENT. A COPY MUST BE FAXED TO (FAX) 838-3880.

CONSERVATION COVENANT NOTE:
THE LOTS CREATED WITH THIS PLAN SHALL BE RESTRICTED BY A CONSERVATION COVENANT. THE CONSERVATION COVENANT STIPULATES THE PROTECTION AND PRESERVATION OF EXISTING TREES AND LIMITS TREE REMOVAL AND ACTIVE USES WITHIN THE DESIGNATED AREA. SEE RESTRICTIVE DEED LANGUAGE FOR DETAILS OF CONSERVATION COVENANT.

FENCE NOTE:
THIS PLAN PROPOSES NO NEW FENCES.

STORMWATER DETENTION WAIVER NOTE:
A WAIVER OF STORMWATER DETENTION HAS BEEN APPROVED FOR THE DEVELOPMENT OF THIS SITE, SEE SHEET 3.

STORMWATER QUALITY NOTE:
STORMWATER QUALITY COMPLIANCE SHALL BE MET BY PROVIDING A "FEE IN LIEU OF" PAYMENT TO THE CITY OF ALEXANDRIA.

FOUNDATION DRAIN NOTE:
THE PROPOSED DWELLING ON LOTS 503 & 504 DO NOT REQUIRE A SUMP PUMP FOR FOUNDATION DRAINAGE. FOUNDATION DRAINS WILL OUTFALL BY GRAVITY. SEE SHEET 11 FOR FOUNDATION DRAIN OUTFALL CALCULATIONS AND RIP-RAP OUTLET PROTECTION.

SANITARY LATERAL TRENCHLESS CONSTRUCTION NOTE:
THIS PROJECT WILL UTILIZE "TRENCHLESS" CONSTRUCTION TECHNIQUES FOR THE INSTALLATION OF THE SANITARY LATERALS. THE CONTRACTOR SHALL UTILIZE A DIRECTIONAL BORING MACHINE OR OTHER SUITABLE EQUIPMENT WHICH WILL ALLOW FLEXIBILITY IN THE INSTALLATION OF THE LATERALS WHERE THEY WILL HAVE THE LEAST IMPACT ON EXISTING TREES. "TRENCHLESS" CONSTRUCTION TECHNIQUES WILL MINIMIZE OPEN CUTTING ON THE SITE. THESE CONSTRUCTION TECHNIQUES WILL NOT REQUIRE EROSION / SEDIMENT CONTROLS BECAUSE THERE IS NO OPEN CUTTING OF THE GROUND. SEE SHEET 7A FOR DETAILS AND INFORMATION ON DIRECTIONAL BORING AND TRENCHLESS CONSTRUCTION.

PEDESTRIAN ACCESS EASEMENT NOTE:
THE RESERVATION FOR THE FUTURE PEDESTRIAN ACCESS EASEMENT SHALL BE RESERVED FOR THE USE OF THE CITY OF ALEXANDRIA. THE UTILIZATION OF THIS RESERVE AREA AND CREATION OF AN EASEMENT SHALL REQUIRE A PUBLIC HEARING AND CITY COUNCIL APPROVAL. ANY REQUIRED SIGNS SHALL STATE THAT THE PEDESTRIAN ACCESS SHALL NOT BE PERMITTED AFTER DARK. SIGNS SHALL BE POSTED IN ENGLISH AND SPANISH.

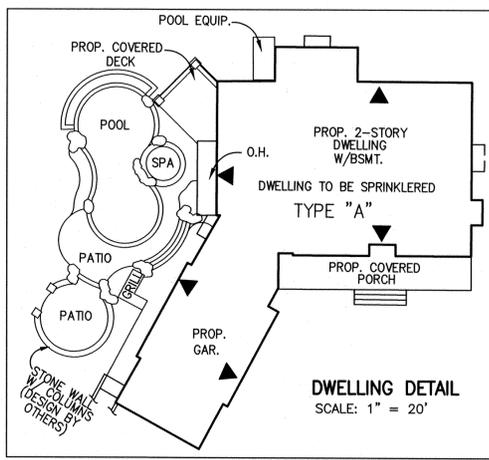
RETAINING WALL NOTE:
THE RETAINING WALLS PROPOSED WITH THIS PLAN SHALL BE CONSTRUCTED OF "PENNSYLVANIA FIELDSTONE" PROVIDED BY LUCK STONE, 1700 S. STERLING BLVD., STERLING VA. 20164, OR APPROVED EQUIVALENT. ALL RETAINING WALLS SHOWN ON THIS PLAN ARE FOR GRADING PURPOSES ONLY. ACTUAL MATERIALS AND DESIGN SPECIFICATIONS BY OTHERS. SEPARATE PERMITS SHALL BE SUBMITTED AT THE TIME OF RETAINING WALL CONSTRUCTION, IF REQUIRED. NO RETAINING WALLS PROPOSED BY THIS PLAN EXCEED 24" IN HEIGHT. SHOULD ANY CHANGES TO THE SITE GRADING RESULT IN RETAINING WALLS GREATER THAN 4" IN HEIGHT THEN THE RETAINING WALLS SHALL BE SCREENED IN ACCORDANCE WITH THE DSEP CONDITIONS. ANY PROTECTIVE FENCING OR RAILING ATOP THE RETAINING WALLS SHALL BE VISUALLY UNOBTRUSIVE AND OF A DECORATIVE METAL MATERIAL, TO THE SATISFACTION OF THE DIRECTORS OF P&Z AND CODE ENFORCEMENT.

HVAC NOTE:
THE PROPOSED HVAC LOCATIONS SHOWN ARE APPROXIMATE. PROPOSED HVAC UNITS WILL BE SCREENED FROM PUBLIC VIEW IN ACCORDANCE WITH THE REQUIREMENTS OF PLANNING AND ZONING. FINAL LOCATIONS TO BE DETERMINED DURING CONSTRUCTION.

ACCESS ROAD NOTE:
THE CONTRACTOR SHALL PROVIDE A 1/4" PER FOOT CROSS-SLOPE ON THE PROPOSED ACCESS ROADWAY AS SHOWN ON THE DETAIL PROVIDED ON SHEET 8 OF THIS PLAN.

TOTAL DISTURBED AREA = 51,292 SQ. FT. OR 1.1775 AC.

OFF-SITE TREE NOTE:
THE APPLICANT MUST NOTIFY THE ADJACENT PROPERTY OWNER (LOT 501) WHEN CONSTRUCTION WILL OCCUR. ALL POSSIBLE MEASURES MUST BE TAKEN TO REDUCE IMPACT TO THE 12" TREE ON LOT 501. IF THE TREE IS DAMAGED DURING CONSTRUCTION, A REPLACEMENT TREE SHALL BE PLANTED.



SEE SHEET 4B FOR LOT 503 DWELLING DETAILS

TREE SAVE NOTE:
ALL TREES LOCATED WITHIN THE LIMITS OF DISTURBANCE ARE TO BE REMOVED. TREES LOCATED OUTSIDE THE LIMITS OF DISTURBANCE ARE TO BE SAVED. PLAN SHOWS DIMENSIONS FROM LIMITS OF DISTURBANCE TO TREES TO BE SAVED THAT HAVE DRIP LINES LOCATED WITHIN THE AREAS OF DISTURBANCE.

DSUP #2003-0036

ESI PEER REVIEW

ITEM	EXISTING	PROPOSED
CURB & GUTTER		
CONC. WALK	WALK	
FIRE HYDRANT		
STRUCTURES		
WATER MAINS	W	W
GAS MAINS	G	G
TELEPHONE LINES	T	T
STORM SEWER		
SANITARY SEWER		
PAVING		
FENCES		
POWER LINES		
SPOT ELEVATIONS	+124.5	+124.5
CONTOURS	124	124
BLDG. ENTRANCE		

APPROVED
SPECIAL USE PERMIT NO. 2003-0036

DIRECTOR	DATE
DIRECTOR	10/16/09
CHAIRMAN, PLANNING COMMISSION	DATE
DATE RECORDED	
INSTRUMENT NO.	DEED BOOK NO. DATE

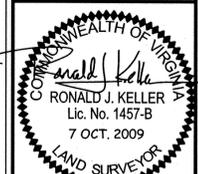
EXISTING UTILITIES SHOWN ON THIS PLAN TAKEN FROM AVAILABLE RECORDS AND/OR FROM FIELD OBSERVATIONS.

FOR EXACT LOCATIONS OF EXISTING UNDERGROUND UTILITIES, NOTIFY "MISS UTILITY" AT 1-800-257-7777, 72 HOURS BEFORE THE START OF ANY EXCAVATION OR CONSTRUCTION.

LOCATION AND DEPTH OF ALL EXISTING UNDERGROUND UTILITIES TO BE VERIFIED BY CONTRACTOR PRIOR TO CONSTRUCTION. INTERFERENCE OR DISRUPTION OF SAME WILL NOT BE THE RESPONSIBILITY OF THIS OFFICE.

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SITE DEVELOPMENT PLAN
PICKETT'S RIDGE II
CITY OF ALEXANDRIA, VIRGINIA

DATE	REVISION
10/19/04	STEPS/RET.WALL LOT 504
10/23/04	LIMITS / TREES
6/12/07	GRAVEL DRIVE (EVE)
11/21/07	POOL DESIGN
2/3/09	POOL LOT 504
6/19/09	LOWER PATIO
7/27/09	PER COMMENTS
08/10/09	DWLG. LOT 503
09/15/09	PER COMMENTS
10/7/09	PER COMMENTS

DESIGN: P.A.W.
DRAWN: R.K.B.

SCALE: 1" = 30'

DATE: MARCH 4, 2004

SHEET 4 OF 17

FILE: 00-02

DISPAND3-0036 R11

September 9, 2009

Ms. Claudia Hamblin-Katnik
City Hall - Alexandria
Watershed Program Administrator
301 King Street, Room 3900
Alexandria, VA 22314

RE: Revision to Lot 503, Pickett's Ridge II

Dear Ms. Hamblin-Katnik:

On behalf of our client we are requesting to provide a monetary contribution to the Alexandria Water Quality Improvement Fund for that portion of the project's Water Quality Volume which is not being treated by a BMP. This project is a revision to a previously approved plan that has made previous contributions to the Alexandria Water Quality Improvement Fund. We are requesting that we provide additional monies to compensate for the impervious areas not treated by on-site BMP Facilities.

This project is providing Bio-Retention Facilities on lot 503 to treat the majority of the impervious surfaces, to include most of the proposed dwelling and the asphalt paved portion of the travel aisle on Lot 503. A small portion of the proposed dwelling (624 square feet) is not treated by BMPs due to size and location restraints. A BMP Facility placed in an area sufficient to capture roof runoff from the portion left untreated would increase the disturbed area and encroach into areas where mature trees are to be saved. We feel that the mature trees and existing wooded area that the downspouts from the untreated portion flow through will provide a measure of water quality while preserving existing vegetation.

CALCULATION OF FEE REQUIREMENTS:

624 x 2.00 = \$1,248*

*No determination has been made as to what previous monies have been paid. The amount shown is the maximum amount calculated for untreated areas on Lot 503 in accordance with the most recent plan revision.

We are requesting to provide the above monetary contribution to the Alexandria Water Quality Improvement Fund for portions of the site where we are unable to provide an on-site stormwater infiltration facility or connect the proposed downspouts and subsurface drain to an existing storm sewer inlet. This site is unsuitable for any type of infiltration facility, as a result of the presence of Marine Clay in this part of Alexandria. The construction of a filter facility is not feasible for all impervious surfaces due to limited space within previously approved limits of disturbance and the length of the outfall pipe from such a facility would impact existing mature trees. Also, this property was previously granted a waiver of BMP's in lieu of contributions to the Alexandria Water Quality Improvement Fund.

I have attached a copy of the plan revision for your use while reviewing our request.

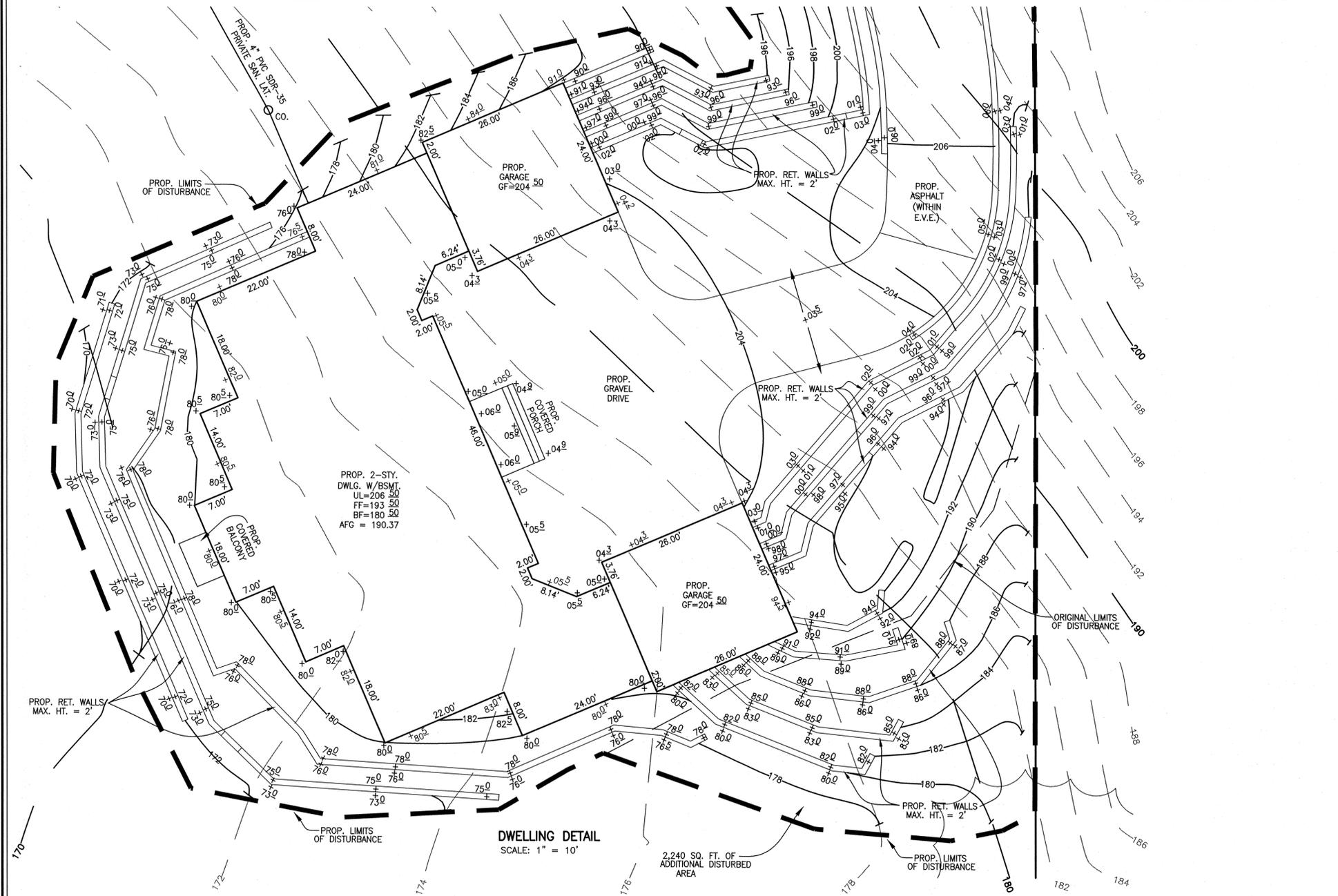
Once approved I will include this request letter along with your approval letter as part of the plan revision for this project that will be submitted to the City of Alexandria for review and approval.

Thank you for your attention to this matter.

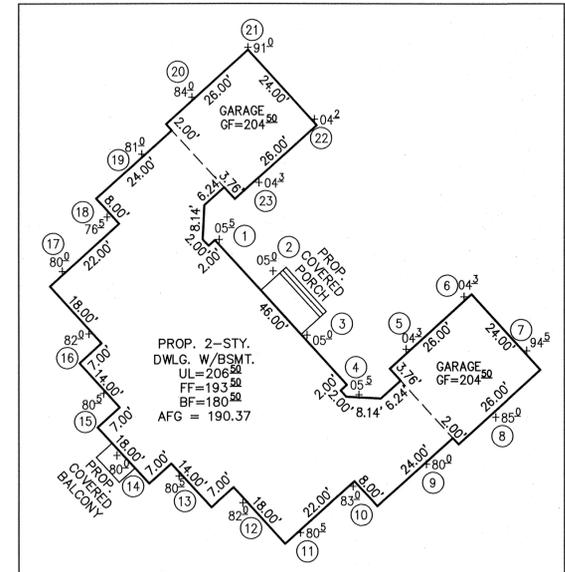
Respectfully,
R.C. FIELDS, JR. & ASSOCIATES, P.C.

Roger K. Bohr
Project Designer

J:\2000\0002\Documents\Letter-Claudia-081009-LOT 503.doc

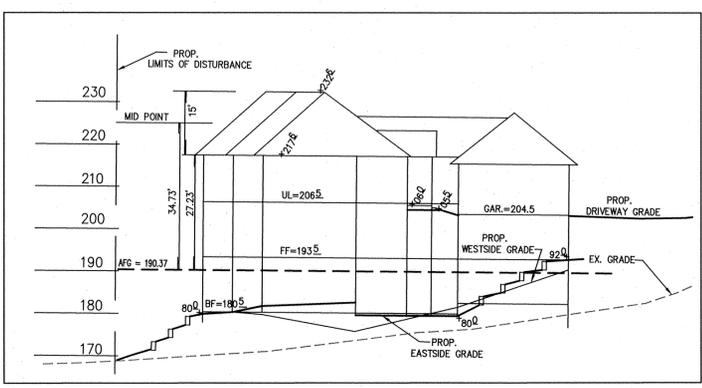


BUILDING HEIGHT CERTIFICATE SCALE: 1" = 20'



SPOTS	ELEV.
1	205.5
2	205.0
3	205.0
4	205.5
5	204.3
6	204.3
7	194.5
8	185.0
9	180.0
10	183.0
11	180.5
12	182.0
13	180.5
14	180.0
15	180.5
16	182.0
17	180.0
18	176.5
19	181.0
20	184.0
21	191.0
22	204.2
23	204.3

SUB-TOTAL=4,378.6
AVG. GRADE PLANE=190.37



LEGEND	EXISTING	PROPOSED
CURB & GUTTER		
CONC. WALK	WALK	
FIRE HYDRANT		
STRUCTURES		
WATER MAINS	W	W
GAS MAINS	G	G
TELEPHONE LINES	T	T
STORM SEWER		
SANITARY SEWER		
PAVING		
FENCES		
POWER LINES		
SPOT ELEVATIONS	+124.5	+124.5
CONTOURS	124	124
BLDG. ENTRANCE		

DSUP #2003-0036

ESI PEER REVIEW

APPROVED
SPECIAL USE PERMIT NO. 2003-0036

DEPARTMENT OF PLANNING & ZONING

DIRECTOR DATE

DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES

SITE PLAN NO. DATE

CHAIRMAN PLANNING COMMISSION DATE

INSTRUMENT NO. DEED BOOK NO. DATE

DATE	REVISION
08/10/09	DWLG. LOT 503
09/15/09	PER COMMENTS
10/7/09	PER COMMENTS

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EXISTING UTILITIES SHOWN ON THIS PLAN TAKEN FROM AVAILABLE RECORDS AND/OR FROM FIELD OBSERVATIONS.

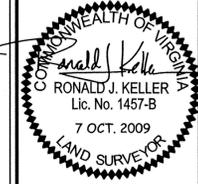
FOR EXACT LOCATIONS OF EXISTING UNDERGROUND UTILITIES, NOTIFY "MISS UTILITY" AT 1-800-257-7777, 72 HOURS BEFORE THE START OF ANY EXCAVATION OR CONSTRUCTION.

LOCATION AND DEPTH OF ALL EXISTING UNDERGROUND UTILITIES TO BE VERIFIED BY CONTRACTOR PRIOR TO CONSTRUCTION. INTERFERENCE OR DISRUPTION OF SAME WILL NOT BE THE RESPONSIBILITY OF THIS OFFICE.

ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS AND SPECIFICATIONS OF CITY OF ALEXANDRIA, VIRGINIA. © 2004 R.C. FIELDS JR. & ASSOC.

DESIGN: P.A.W.
DRAWN: R.K.B.
SCALE: AS NOTED
DATE: MARCH 4, 2004
SHEET **4B** OF **17**
FILE: **00-02**

R.C. FIELDS, JR. & ASSOCIATES
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LAND SURVEYING • SITE PLANNING • SUBDIVISION DESIGN
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ALEXANDRIA, VIRGINIA 22314 FAX (703) 549-6422



LOT 503 HOUSE DETAIL
PICKETT'S RIDGE II
CITY OF ALEXANDRIA, VIRGINIA

DSP2003-0036 R11

DRAINAGE TO BMP FACILITY "A":

C=0.51 Tc = 5 MINUTES
 A=0.0702 I 10 = 9.00
 Q10 = 0.32 CFS

BIO-RETENTION FILTER CALCULATIONS ("A"):

WATER QUALITY VOLUME (WQV) = (I)(1816)
 (WHERE I IS THE IMPERVIOUS AREA IN ACRES,
 AND 1816 IS A COEFFICIENT OF THE FIRST 1/2 INCH OF RUNOFF)
 IMPERVIOUS AREA (I) TO BMP = 0.0247 ACRES (1,076 SQ.FT.)
 WATER QUALITY VOLUME (WQV) REQUIRED = 0.0247 X 1816 = 44.9 CU. FT.
 Af = WQV/Hf
 Af = 44.9/0.5
 Af = 89.8 SQ.FT. (REQUIRED)
 FILTER AREA PROPOSED = 100 SQ.FT. SURFACE AREA (50 CU.FT. PONDING)

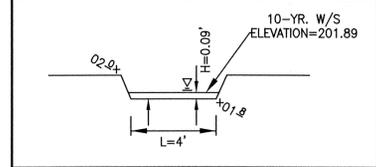
DRAIN TIME THROUGH FACILITY "A" :

tf = (WQV)(df)/[(kf/12)(0.5hf+df)Af]
 tf = (44.9)(2.5)/[(1.5/12)(0.5*0.5+2.5)100]
 tf = 3.27 HOURS < 24 HOURS OK

WEIR CALCULATION:

$H = \left(\frac{Q_{10}}{C \cdot L}\right)^{0.667} - H = \left(\frac{0.32}{3 \cdot 8}\right)^{0.667} - H = 0.09'$ FILTER "A"

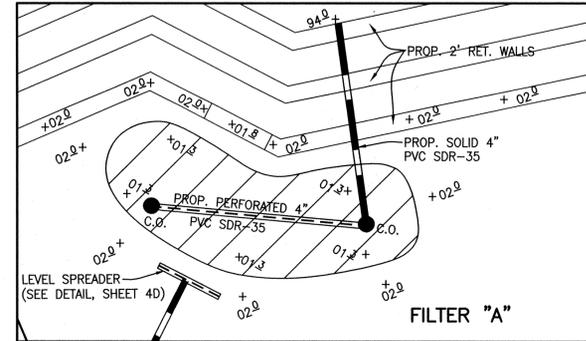
WEIR DETAIL NTS



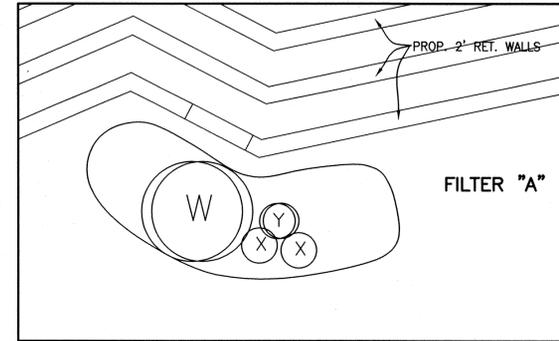
TRAPAZOIDAL WEIR MUST BE 0.09' IN HEIGHT TO CARRY THE 10-YEAR STORM. THE MAXIMUM QUANTITY ABLE TO PASS A WEIR OF THIS LENGTH AND HEIGHT IS AS FOLLOWS:

$Q = C \cdot L \cdot H^{1.5}$ $Q = 3.0 \cdot 4 \cdot 0.2^{1.5}$ $Q = 1.07$ CFS

BIO-RETENTION FILTER DETAIL SCALE: 1"=5'



BIO-RETENTION PLANTING DETAIL SCALE: 1"=5'



BIO-RETENTION PLANTING SCHEDULE (TOTAL):

ITEM	NO.	BOTANICAL NAME	COMMON NAME	SIZE	COMMENTS
W	5	ACER RUBRUM	RED MAPLE	1" CAL.	B & B
X	9	VIBURNUM DENTATUM	ARROW-WOOD	2 GALLON CONTAINER	
Y	8	LINDERA BENZOIN	SPICE BUSH	2 GALLON CONTAINER	

NO TREES OR SHRUBS WITH A DEEP TAPROOT SHOULD BE PLANTED IN A BIO-RETENTION BASIN AREA. SUBSTITUTE PLANTINGS MAY BE UTILIZED DUE TO THE AVAILABILITY OF A LISTED SPECIES. SUBSTITUTE PLANT TYPES MAY ALSO BE SELECTED BY THE CONTRACTOR TO MORE CLOSELY RESEMBLE THE PLANTINGS IN ADJACENT LANDSCAPED AREAS. THE CONTRACTOR SHALL LANDSCAPE THE BIO-RETENTION FACILITIES TO BLEND IN WITH THE OVERALL DESIGN OF THE SITE. CONSULT THE DESIGN ENGINEER BEFORE SELECTION OF ALTERNATIVE PLANTS.

BIO-RETENTION FILTER PLANTING CALCULATIONS:

THE PROPOSED BIO-RETENTION FILTERS SHALL BE PLANTED AT A RATE OF 10 TREES AND SHRUBS PER 1,000 SQ. FT. OF BASIN AREA AT A RATIO OF 3:1 (SHRUBS : TREES). SHRUBS SHOULD BE CLUSTERED AROUND AND UNDER TREES TO SIMULATE "NATURAL" CONDITIONS (VA. STORMWATER MANAGEMENT HANDBOOK 3.11-5). SUBSTITUTE PLANTINGS ARE ENCOURAGED TO MATCH ADJACENT SITE LANDSCAPING AND CREATE AN OVERALL COHESIVE LANDSCAPE DESIGN.

BIO-RETENTION FILTER "A"
 AREA = 100 SQ.FT. (SURFACE AREA)
 100/1,000 x 10 = 1.00 (OR 1)
 1 TREE AND 3 SHRUBS (4 PLANTINGS) PROVIDED.

BIO-RETENTION FILTER "B"
 AREA = 254 SQ.FT. (SURFACE AREA)
 254/1,000 x 10 = 2.54 (OR 3)
 2 TREES AND 8 SHRUBS (10 PLANTINGS) PROVIDED.

BIO-RETENTION FILTER "C"
 AREA = 130 SQ.FT. (SURFACE AREA)
 130/1,000 x 10 = 1.30 (OR 2)
 1 TREE AND 3 SHRUBS (4 PLANTINGS) PROVIDED.

BIO-RETENTION FILTER "D"
 AREA = 80 SQ.FT. (SURFACE AREA)
 80/1,000 x 10 = 0.80 (OR 1)
 1 TREE AND 3 SHRUBS (4 PLANTINGS) PROVIDED.

DRAINAGE TO BMP FACILITY "B":

C=0.62 Tc = 5 MINUTES
 A=0.1311 I 10 = 9.00
 Q10 = 1.18 CFS

BIO-RETENTION FILTER CALCULATIONS ("B"):

WATER QUALITY VOLUME (WQV) = (I)(1816)
 (WHERE I IS THE IMPERVIOUS AREA IN ACRES,
 AND 1816 IS A COEFFICIENT OF THE FIRST 1/2 INCH OF RUNOFF)
 IMPERVIOUS AREA (I) TO BMP = 0.0696 ACRES (3,031 SQ.FT.)
 WATER QUALITY VOLUME (WQV) REQUIRED = 0.0696 X 1816 = 126.4 CU. FT.
 Af = WQV/Hf
 Af = 126.4/0.5
 Af = 252.8 SQ.FT. (REQUIRED)
 FILTER AREA PROPOSED = 254 SQ.FT. SURFACE AREA (127 CU.FT. PONDING)

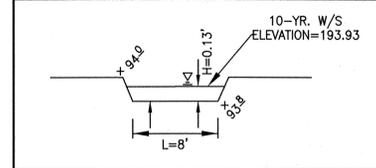
DRAIN TIME THROUGH FACILITY "B" :

tf = (WQV)(df)/[(kf/12)(0.5hf+df)Af]
 tf = (126.4)(2.5)/[(1.5/12)(0.5*0.5+2.5)254]
 tf = 3.62 HOURS < 24 HOURS OK

WEIR CALCULATION:

$H = \left(\frac{Q_{10}}{C \cdot L}\right)^{0.667} - H = \left(\frac{1.18}{3 \cdot 8}\right)^{0.667} - H = 0.13'$ FILTER "B"

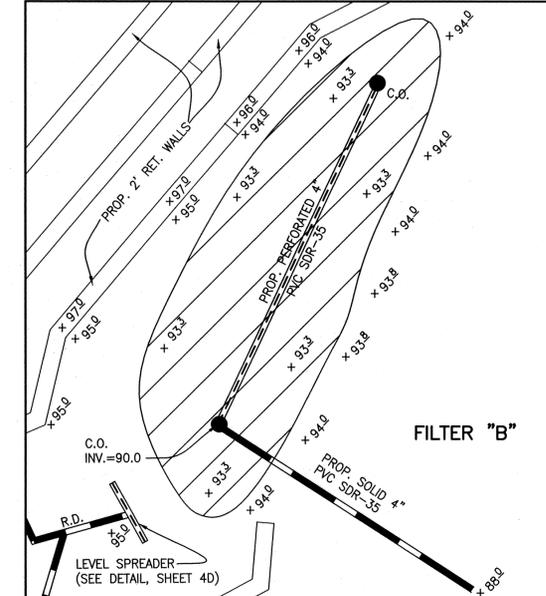
WEIR DETAIL NTS



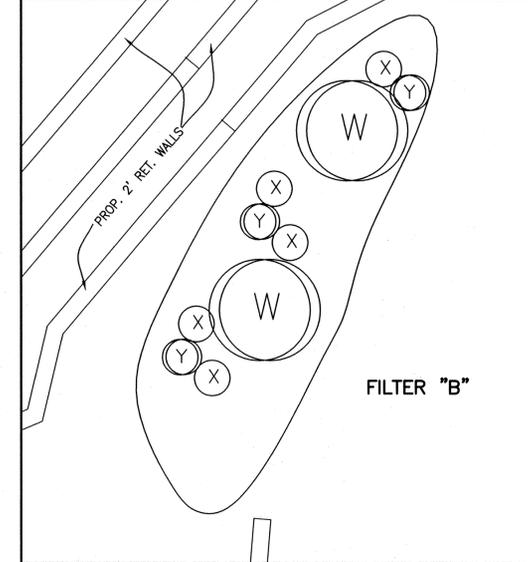
TRAPAZOIDAL WEIR MUST BE 0.13' IN HEIGHT TO CARRY THE 10-YEAR STORM. THE MAXIMUM QUANTITY ABLE TO PASS A WEIR OF THIS LENGTH AND HEIGHT IS AS FOLLOWS:

$Q = C \cdot L \cdot H^{1.5}$ $Q = 3.0 \cdot 8 \cdot 0.2^{1.5}$ $Q = 2.15$ CFS

BIO-RETENTION FILTER DETAIL SCALE: 1"=5'



BIO-RETENTION PLANTING DETAIL SCALE: 1"=5'



DRAINAGE TO BMP FACILITY "C":

C=0.77 Tc = 5 MINUTES
 A=0.0451 I 10 = 9.00
 Q10 = 0.31 CFS

BIO-RETENTION FILTER CALCULATIONS ("C"):

WATER QUALITY VOLUME (WQV) = (I)(1816)
 (WHERE I IS THE IMPERVIOUS AREA IN ACRES,
 AND 1816 IS A COEFFICIENT OF THE FIRST 1/2 INCH OF RUNOFF)
 IMPERVIOUS AREA (I) TO BMP = 0.0350 ACRES (1,523 SQ.FT.)
 WATER QUALITY VOLUME (WQV) REQUIRED = 0.0350 X 1816 = 63.6 CU. FT.
 Af = WQV/Hf
 Af = 63.6/0.5
 Af = 127.1 SQ.FT. (REQUIRED)
 FILTER AREA PROPOSED = 130 SQ.FT. SURFACE AREA (65 CU.FT. PONDING)

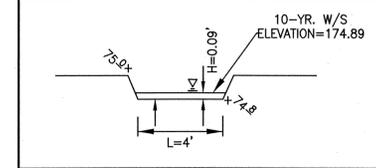
DRAIN TIME THROUGH FACILITY "C" :

tf = (WQV)(df)/[(kf/12)(0.5hf+df)Af]
 tf = (63.6)(2.5)/[(1.5/12)(0.5*0.5+2.5)130]
 tf = 3.56 HOURS < 24 HOURS OK

WEIR CALCULATION:

$H = \left(\frac{Q_{10}}{C \cdot L}\right)^{0.667} - H = \left(\frac{0.31}{3 \cdot 4}\right)^{0.667} - H = 0.09'$ FILTER "C"

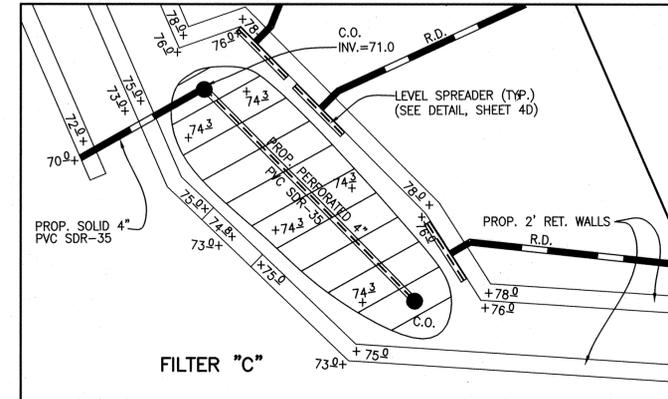
WEIR DETAIL NTS



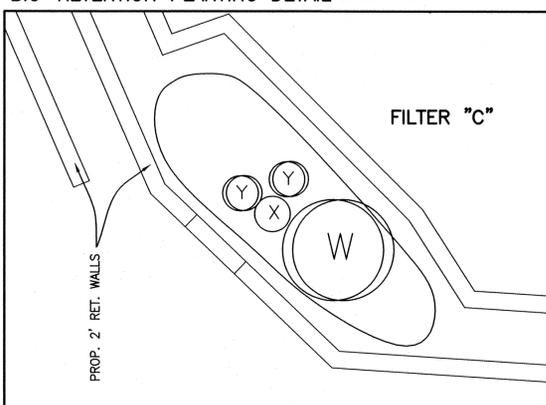
TRAPAZOIDAL WEIR MUST BE 0.09' IN HEIGHT TO CARRY THE 10-YEAR STORM. THE MAXIMUM QUANTITY ABLE TO PASS A WEIR OF THIS LENGTH AND HEIGHT IS AS FOLLOWS:

$Q = C \cdot L \cdot H^{1.5}$ $Q = 3.0 \cdot 4 \cdot 0.2^{1.5}$ $Q = 1.07$ CFS

BIO-RETENTION FILTER DETAIL SCALE: 1"=5'



BIO-RETENTION PLANTING DETAIL SCALE: 1"=5'



DRAINAGE TO BMP FACILITY "D":

C=0.68 Tc = 5 MINUTES
 A=0.0340 I 10 = 9.00
 Q10 = 0.21 CFS

BIO-RETENTION FILTER CALCULATIONS ("D"):

WATER QUALITY VOLUME (WQV) = (I)(1816)
 (WHERE I IS THE IMPERVIOUS AREA IN ACRES,
 AND 1816 IS A COEFFICIENT OF THE FIRST 1/2 INCH OF RUNOFF)
 IMPERVIOUS AREA (I) TO BMP = 0.0216 ACRES (942 SQ.FT.)
 WATER QUALITY VOLUME (WQV) REQUIRED = 0.0216 X 1816 = 39.2 CU. FT.
 Af = WQV/Hf
 Af = 39.2/0.5
 Af = 78.4 SQ.FT. (REQUIRED)
 FILTER AREA PROPOSED = 80 SQ.FT. SURFACE AREA (40 CU.FT. PONDING)

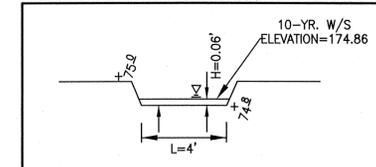
DRAIN TIME THROUGH FACILITY "D" :

tf = (WQV)(df)/[(kf/12)(0.5hf+df)Af]
 tf = (39.2)(2.5)/[(1.5/12)(0.5*0.5+2.5)80]
 tf = 3.56 HOURS < 24 HOURS OK

WEIR CALCULATION:

$H = \left(\frac{Q_{10}}{C \cdot L}\right)^{0.667} - H = \left(\frac{0.18}{3 \cdot 4}\right)^{0.667} - H = 0.06'$ FILTER "D"

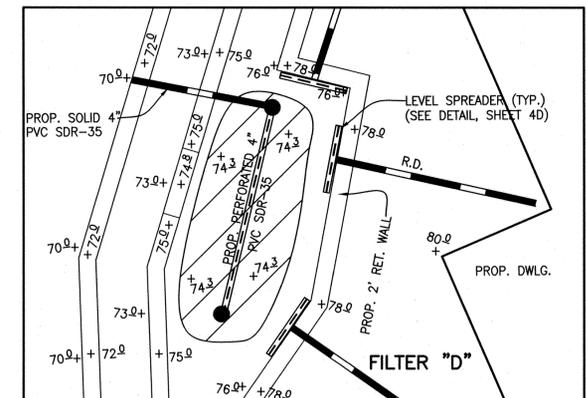
WEIR DETAIL NTS



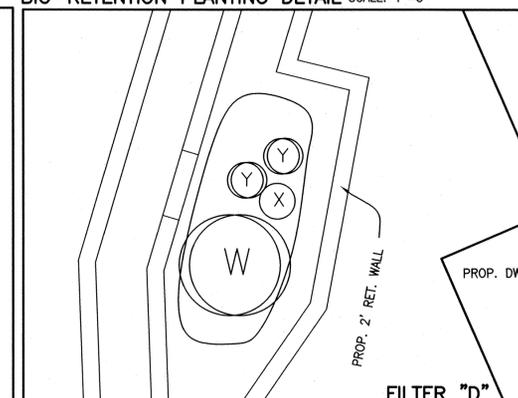
TRAPAZOIDAL WEIR MUST BE 0.06' IN HEIGHT TO CARRY THE 10-YEAR STORM. THE MAXIMUM QUANTITY ABLE TO PASS A WEIR OF THIS LENGTH AND HEIGHT IS AS FOLLOWS:

$Q = C \cdot L \cdot H^{1.5}$ $Q = 3.0 \cdot 4 \cdot 0.2^{1.5}$ $Q = 1.07$ CFS

BIO-RETENTION FILTER DETAIL SCALE: 1"=5'



BIO-RETENTION PLANTING DETAIL SCALE: 1"=5'



ITEM	EXISTING	PROPOSED
CURB & GUTTER		
CONC. WALK	WALK	
FIRE HYDRANT		
STRUCTURES		
WATER MAINS	W	W
GAS MAINS	G	G
TELEPHONE LINES	T	T
STORM SEWER		
SANITARY SEWER		
PAVING		
FENCES		
POWER LINES		
SPOT ELEVATIONS	+124.5	+124.5
CONTOURS	-124	-124
BLDG. ENTRANCE		

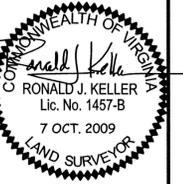
APPROVED
 SPECIAL USE PERMIT NO. 2003-0036
 DEPARTMENT OF PLANNING & ZONING
 DIRECTOR: [Signature] DATE: 10/16/09
 DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES
 SITE PLAN NO. [Signature] DATE: 10/16/09
 CHAIRMAN, PLANNING COMMISSION: [Signature] DATE: [Signature]
 INSTRUMENT NO. DEED BOOK NO. DATE

DSUP #2003-0036

ESI PEER REVIEW

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 LOCATION AND DEPTH OF ALL EXISTING UNDERGROUND UTILITIES TO BE VERIFIED BY CONTRACTOR PRIOR TO CONSTRUCTION. INTERFERENCE OR DISRUPTION OF SAME WILL NOT BE THE RESPONSIBILITY OF THIS OFFICE.
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 730 S. Washington Street PH. (703) 549-6422
 Alexandria, Virginia 22314 FAX (703) 549-6422



LOT 503 BMP DESIGN AND CALCULATIONS
PICKETT'S RIDGE II
 CITY OF ALEXANDRIA, VIRGINIA

DATE	REVISION
08/10/09	DWLG. LOT 503
09/15/09	PER COMMENTS
10/17/09	PER COMMENTS

DESIGN: P.A.W.
 DRAWN: R.K.B.
 SCALE: AS NOTED
 DATE: MARCH 4, 2004
 SHEET **4C** OF **17**
 FILE: **00-02**

DSUP2003-0036 Ru

TABLE 3.11 - 6
Example Maintenance Schedule for Bioretention Basin

Description	Method	Frequency	Time of the year
SOIL			
Inspect and Repair Erosion	Visual	Monthly	Monthly
ORGANIC LAYER			
Remulch any void areas	By hand	Whenever needed	Whenever needed
Remove previous mulch layer before applying new layer (optional)	By hand	Once every two to three years	Spring
Any additional mulch added (optional)	By hand	Once a year	Spring
PLANTS			
Removal and replacement of all dead and diseased vegetation considered beyond treatment	See planting specifications	Twice a year	3/15 to 4/30 and 10/1 to 11/30
Treat all diseased trees and shrubs	Mechanical or by hand	N/A	Varies, depends on insect or disease infestation
Watering of plant material shall take place at the end of each day for fourteen consecutive days after planting has been completed	By hand	Immediately after completion of project	N/A
Replace stakes after one year	By hand	Once a year	Only remove stakes in the spring
Replace any deficient stakes or wires	By hand	N/A	Whenever needed
Check for accumulated sediments	Visual	Monthly	Monthly

BMP OPERATION AND MAINTENANCE NOTE:

THE DEVELOPER SHALL HAVE AVAILABLE AND PROVIDE TO SUBSEQUENT OWNERS AN OPERATION AND MAINTENANCE MANUAL FOR ALL BEST MANAGEMENT PRACTICES (BMPs) ON THE PROJECT. THE MANUAL SHALL INCLUDE AN EXPLANATION OF THE FUNCTIONS AND OPERATIONS OF THE BMP AND ANY SUPPORTING UTILITIES, CATALOG CUTS ON ANY MECHANICAL EQUIPMENT, A SCHEDULE OF ROUTINE MAINTENANCE FOR THE BMPs AND SUPPORTING EQUIPMENT, AND A COPY OF THE MAINTENANCE AGREEMENT WITH THE CITY. THE BMP SHALL BE MAINTAINED IN ACCORDANCE WITH THE TABLE ON THIS SHEET.

ITEM	EXISTING	PROPOSED
CURB & GUTTER		
CONC. WALK		
FIRE HYDRANT		
STRUCTURES		
WATER MAINS		
GAS MAINS		
TELEPHONE LINES		
STORM SEWER		
SANITARY SEWER		
PAVING		
FENCES		
POWER LINES		
SPOT ELEVATIONS	+124.5	+124.5
CONTOURS	-124	-124
BLDG. ENTRANCE		

BMP/WATER QUALITY NARRATIVE:

THIS PLAN PROPOSES THE INSTALLATION OF FOUR BIO-RETENTION AREAS TO TREAT A MAJORITY OF THE RUNOFF FROM THE ROOF AREAS AND THE ASPHALT PORTION OF THE TRAVEL AISLE ON LOT 503. THERE ARE NO WATER QUALITY CONTROLS CURRENTLY IN PLACE ON THE SITE.

RUNOFF WILL BE DIRECTED TO THE BMPs BY SURFACE GRADING AND THE PROPOSED ROOF DRAIN SYSTEM. THE BIO-RETENTION FILTERS ARE SIZED ACCORDING TO THE DIRECTED RUNOFF FROM ON-SITE IMPERVIOUS AREAS. THE SOIL LAYERS ARE PLANTED WITH TREES, SHRUBS AND OTHER WATER TOLERANT VEGETATION THAT ABSORB POLLUTANTS TRAPPED IN THE PLANTING BED. THE BIO-RETENTION FACILITIES WILL TREAT RUNOFF IN THE MULCH AND PLANTING SOIL LAYERS AND THEN RUNOFF WILL BE COLLECTED BY PERFORATED UNDERDRAINS FOR THE FILTERS. THE UNDERDRAINS FOR THE FILTERS SHALL BE PIPED TO DAYLIGHT AND SURFACE FLOW THROUGH AN ESTABLISHED WOODED AREA ON-SITE. ALTHOUGH DESIGNED PRIMARILY FOR WATER QUALITY THE BIO-RETENTION FILTERS WILL SLOW THE RATE OF RUNOFF FROM THE SITE AS THE STORMWATER WORKS ITS WAY THROUGH THE FACILITIES. DRAIN TIME THROUGH THE FACILITIES IS APPROXIMATELY 3 HOURS. RUNOFF CALCULATIONS FOR THE SITE HAVE NOT UTILIZED ANY DETENTION PROVIDED BY THESE FACILITIES. A DETENTION WAIVER WAS PREVIOUSLY APPROVED FOR THIS PROJECT.

BIO-RETENTION FILTERS ARE PRESENTLY RECOGNIZED AS A BMP WITH AN EFFICIENCY OF BETWEEN 50 AND 65 PERCENT AS PER THE VIRGINIA STORMWATER MANAGEMENT HANDBOOK DEPENDING ON THE VOLUME TREATED. THESE BIO-RETENTION FILTERS ARE SIZED USING THE 50 PERCENT EFFICIENCY STANDARD (CAPTURING AND TREATING THE FIRST 0.5" OF RUNOFF) AND WILL BE A PRIVATELY OWNED AND OWNER MAINTAINED STRUCTURE THAT WILL REQUIRE THE OWNER TO EXECUTE A MAINTENANCE AGREEMENT WITH THE CITY OF ALEXANDRIA.

BIO-RETENTION AREA SEQUENCE OF CONSTRUCTION:

- CONSTRUCTION OF THE BIO-RETENTION AREAS MAY ONLY COMMENCE ONCE UPSTREAM AREAS ARE COMPLETELY STABILIZED. CONSULT COUNTY INSPECTOR BEFORE BEGINNING CONSTRUCTION. THE SITE SHOULD BE STABILIZED TO THE POINT THAT EROSION AND SEDIMENT CONTROLS ARE NO LONGER NECESSARY.
- EXCAVATE BIO-RETENTION AREA TO THE PROPOSED DEPTH. IT IS CRITICAL TO KEEP SEDIMENT OUT OF THE EXCAVATION.
- INSTALL THE FILTER FABRIC, GRAVEL TO THE SPECIFIED DEPTH, THE 4" PERFORATED PIPE, AND THE NON-PERFORATED PIPE TO CONNECT TO THE EXISTING STORM SEWER SYSTEM. DO NOT COMPACT THE GRAVEL. INSTALL FILTER FABRIC OVER TOP GRAVEL.
- FILL BIO-RETENTION FILTER OR BASIN WITH PLANTING SOIL MIX TO THE DEPTH SHOWN ON THE DETAIL AND SPECIFICATIONS. VERIFY THE SURFACE ELEVATION OF THE PLANTING BED TO ENSURE THE ADEQUATE PONDING OF WATER. THE ELEVATIONS OF THE BED ARE CRITICAL IN THE FUNCTIONING OF THE SYSTEM. THE SOIL SHALL BE PLACED IN LIFTS LESS THAN 6 INCHES AND LIGHTLY COMPACTED BY TAMPING WITH A BUCKET FROM A DOZER OR BACKHOE (MINIMAL COMPACTION REQUIRED).
- PLANT VEGETATION SPECIFIED IN THE PLANTING PLAN AND SCHEDULE FOR THE BIO-RETENTION AREA. ANY PLANT SUBSTITUTIONS REQUIRED DUE TO AVAILABILITY MUST BE APPROVED BY THE DESIGN ENGINEER AND THE FAIRFAX COUNTY URBAN FOREST MANAGEMENT DIVISION. THE MULCH LAYER SHOULD BE APPLIED ONCE THE TREE AND SHRUBS ARE PLANTED. THE MULCH MUST BE WELL AGED, UNIFORM IN COLOR AND FREE OF FOREIGN MATERIAL. WELL AGED MULCH IS DEFINED AS MULCH HAVING BEEN STORED OR STOCKPILED FOR AT LEAST 12 MONTHS. ANY GROUND COVER SPECIFIED AS PLUGS MAY BE INSTALLED ONCE THE AREA HAS BEEN MULCHED. GROUND COVER ESTABLISHED BY SEEDING AND/OR CONSISTING OF GRASS SHOULD NOT BE COVERED WITH MULCH.
- CONSTRUCTION OF THE BIO-RETENTION AREA SHOULD BE PERFORMED IN A TIMELY MANNER AND PREFERABLY DURING A PERIOD OF EXPECTED DRY WEATHER. THE FACILITY SHOULD BE CONSTRUCTED AND FULLY STABILIZED AND OPERATIONAL IN A MATTER OF A FEW DAYS. MAINTAIN SILT FENCE AROUND THE BIO-RETENTION AREAS UNTIL ALL AREAS ABOVE THEM ARE STABILIZED.

GROUNDCOVER NOTE:

A MIX OF PERENNIAL GROUNDCOVERS SHALL BE USED FOR THE BIO-RETENTION FACILITIES TO LINK WITH SURROUNDING LANDSCAPES AND CREATE AN ORNAMENTAL PLANTING AREA WITHIN THE FRONT YARDS. SPECIES MAY INCLUDE BUT ARE NOT LIMITED TO:
 CHRYSOGONUM VIRGINIANUM (GREEN & GOLD)
 AQUILEGIA CANADENSIS (RED COLUMBINE)
 EUPATORIUM RUGOSUM (WHITE SNAKEROOT)
 PHLOX DIVARICATA (WOODLAND PHLOX)
 SOLIDAGO RUGOSA (WRINKLELEAF GOLDENROD)

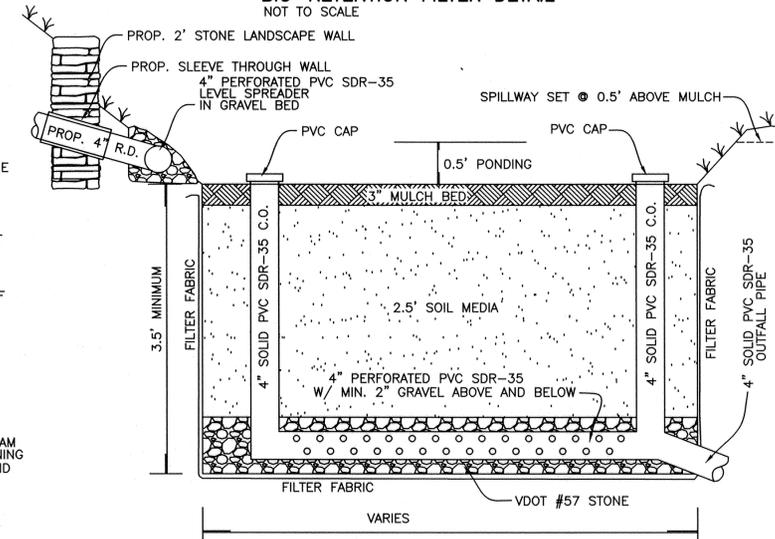
MULCH NOTE:

A MULCH LAYER SHALL BE PROVIDED ON TOP OF THE PLANTING SOIL. AN ACCEPTABLE MULCH LAYER SHALL INCLUDE SHREDDED HARDWOOD OR SHREDDED WOOD CHIPS OR OTHER SIMILAR PRODUCT. APPROVED MULCH PRODUCTS ALL MUST BE WELL AGED, UNIFORM IN COLOR, AND FREE OF FOREIGN MATERIAL INCLUDING PLANT MATERIAL.

BIO-RETENTION AREA PLANT SPECIFICATIONS

- ROOT STOCK OF THE PLANT MATERIAL SHALL BE KEPT MOIST DURING TRANSPORT FROM THE SOURCE TO THE JOB SITE AND UNTIL PLANTED.
- WALLS OF PLANTING PIT SHALL BE DUG SO THAT THEY ARE VERTICAL.
- THE DIAMETER OF THE PLANTING PIT MUST BE A MINIMUM OF SIX INCHES (6") LARGER THAN THE DIAMETER OF THE BALL OF THE TREE.
- THE PLANTING PIT SHALL BE DEEP ENOUGH TO ALLOW 1/8" OF THE BALL TO BE ABOVE THE EXISTING GRADE. LOOSE SOIL AT THE BOTTOM OF THE PIT SHALL BE TAMPED BY HAND. THE APPROPRIATE AMOUNT OF FERTILIZER SHALL BE PLACED IN THE BOTTOM OF THE PIT.
- THE PLANT SHALL BE REMOVED FROM THE CONTAINER AND PLACED IN THE PLANTING PIT BY LIFTING AND CARRYING THE PLANT BY ITS' BALL (NEVER LIFT BY BRANCHES OR TRUNK).
- SET THE PLANT STRAIGHT AND IN THE CENTER OF THE PIT SO THAT 1/8" OF THE DIAMETER OF THE ROOT BALL IS ABOVE THE FINAL GRADE.
- BACKFILL PLANTING PIT WITH EXISTING SOIL.
- MAKE SURE PLANT REMAINS STRAIGHT DURING BACKFILLING PROCEDURE.
- NEVER COVER THE TOP OF THE BALL WITH SOIL. MOUND SOIL AROUND THE EXPOSED BALL (1/4").
- TREES SHALL BE BRACED BY USING 2" BY 2" WHITE OAK STAKES. STAKES SHALL BE PLACED PARALLEL TO WALKWAYS AND BUILDINGS. STAKES ARE TO BE EQUALLY SPACED ON THE OUTSIDE OF THE TREE BALL. UTILIZING HOSE AND WIRE THE TREE IS BRACED TO THE STAKES.
- BECAUSE OF THE HIGH LEVELS OF NUTRIENTS IN RUNOFF TO BE TREATED, BIO-RETENTION PLANTS SHOULD NOT REQUIRE CHEMICAL FERTILIZATION.

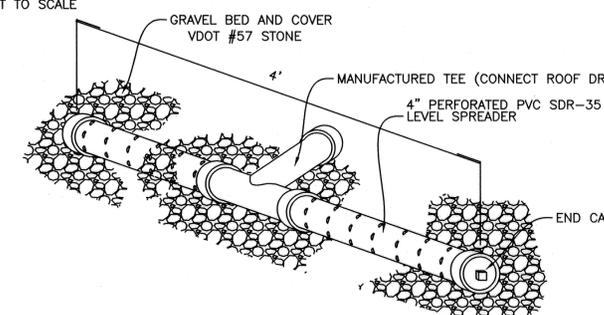
BIO-RETENTION FILTER DETAIL
NOT TO SCALE



FILTER FABRIC NOTE:

THE FILTER CLOTH IN THE FILTER LAYER SHALL BE NEEDLED, NON WOVEN, POLY PROPYLENE GEOTEXTILE FABRIC. THE FABRIC ROLL SHOULD BE CUT WITH SUFFICIENT DIMENSIONS TO COVER THE ENTIRE WETTED PERIMETER OF THE FILTER AREA WITH A SIX-INCH MINIMUM OVERLAP.

ROOF DRAIN LEVEL SPREADER DETAIL
NOT TO SCALE



SOILS TESTING NOTE:

CONTRACTOR TO PROVIDE A SOILS ANALYSIS OF THE PROPOSED PLANTING SOIL FOR THE BIO-RETENTION FILTER TO THE DESIGN ENGINEER AND OWNER AT THE TIME OF INSTALLATION. A MEDIA MIX OF 60% WASHED SAND, 25% SILT, 5-15% CLAY AND GREATER THAN 1.5% ORGANIC COMPOST MEETING THE REQUIREMENTS OF TABLE 6.32. ANY TOPSOIL UTILIZED SHALL BE A SANDY LOAM, LOAMY SAND, SILT LOAM OR LOAM PER USDA TEXTURAL CLASSIFICATION. FINAL SOIL MIXTURE SHALL MEET THE REQUIREMENTS IN TABLE 6.33. EACH BIORETENTION AREA SHALL HAVE A SOIL TEST PERFORMED ON THE FINAL SOIL MIXTURE AND SHALL BE SUBMITTED TO OEQ.

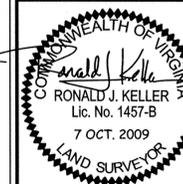
DSUP #2003-0036

**ESI
PEER REVIEW**

APPROVED
SPECIAL USE PERMIT NO. 2003-0036
 DEPARTMENT OF PLANNING & ZONING
 DIRECTOR _____ DATE _____
 DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES
 SITE PLAN NO. _____ DATE 10/16/09
 DIRECTOR _____
 CHAIRMAN, PLANNING COMMISSION _____ DATE _____
 DATE RECORDED _____
 INSTRUMENT NO. _____ DEED BOOK NO. _____ DATE _____

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 EXISTING UTILITIES SHOWN ON THIS PLAN TAKEN FROM AVAILABLE RECORDS AND/OR FROM FIELD OBSERVATIONS.
 FOR EXACT LOCATIONS OF EXISTING UNDERGROUND UTILITIES, NOTIFY "MISS UTILITY" AT 1-800-257-7777, 72 HOURS BEFORE THE START OF ANY EXCAVATION OR CONSTRUCTION.
 LOCATION AND DEPTH OF ALL EXISTING UNDERGROUND UTILITIES TO BE VERIFIED BY CONTRACTOR PRIOR TO CONSTRUCTION. INTERFERENCE OR DISRUPTION OF SAME WILL NOT BE THE RESPONSIBILITY OF THIS OFFICE.
 ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS AND SPECIFICATIONS OF CITY OF ALEXANDRIA, VIRGINIA. © 2004 R.C. FIELDS JR. & ASSOC.

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 FAX (703) 549-6422



LOT 503 BMP DETAILS AND INFORMATION
PICKETT'S RIDGE II
 CITY OF ALEXANDRIA, VIRGINIA

DATE	REVISION
08/10/09	DWLG. LOT 503
09/15/09	PER COMMENTS
10/7/09	PER COMMENTS

DESIGN: P.A.W.
 DRAWN: R.K.B.
 SCALE: AS NOTED
 DATE: MARCH 4, 2004
 SHEET **4D** OF **17**
 FILE: **00-02**

VIRGINIA UNIFORM CODING SYSTEM
KEY DESCRIPTIONS

SF	SILT FENCE STD. & SPEC. 3.05	---
SSF	SUPER SILT FENCE STD. & SPEC. 3.05	---
TP	TREE PROTECTION STD. & SPEC. 3.38	---
CE	CONSTRUCTION ENTRANCE WITH WASH RACK STD. & SPEC. 3.02	---
IP	INLET PROTECTION STD. & SPEC. 3.07	---
TS	TEMPORARY SEEDING STD. & SPEC. 3.31	---
DD	TEMPORARY DIVERSION DIKE STD. & SPEC. 3.09	---
ST	SEDIMENT TRAP STD. & SPEC. 3.13	---

LEGEND
DENOTES LIMITS OF
CLEARING AND GRADING

DENOTES DRAINAGE DIVIDE

LEGEND

ITEM	EXISTING	PROPOSED
CURB & GUTTER	---	---
CONC. WALK	---	---
FIRE HYDRANT	---	---
STRUCTURES	---	---
WATER MAINS	---	---
GAS MAINS	---	---
TELEPHONE LINES	---	---
STORM SEWER	---	---
SANITARY SEWER	---	---
PAVING	---	---
FENCES	---	---
POWER LINES	---	---
SPOT ELEVATIONS	+124.5	+124.5
CONTOURS	-124-	-124-

THIS SHEET TO BE USED FOR EROSION/SEDIMENT CONTROLS

REFER TO SITE DEVELOPMENT PLAN SHEET FOR FINAL LOCATIONS, LAYOUT, DIMENSIONS AND GRADING.

TOTAL DISTURBED AREA = 51,292 SQ. FT. OR 1.1775 AC.

DRAINAGE DIVIDE NOTE:
SEE SHEET 7 FOR ON-SITE AND OFF-SITE DRAINAGE DIVIDES, RUNOFF COMPUTATIONS AND OUTFALL INFORMATION.

SANITARY LATERAL TRENCHLESS CONSTRUCTION NOTE:
THIS PROJECT WILL UTILIZE "TRENCHLESS" CONSTRUCTION TECHNIQUES FOR THE INSTALLATION OF THE SANITARY LATERALS. THE CONTRACTOR SHALL UTILIZE A DIRECTIONAL BORING MACHINE OR OTHER SUITABLE EQUIPMENT WHICH WILL ALLOW FLEXIBILITY IN THE INSTALLATION OF THE LATERALS WHERE THEY WILL HAVE THE LEAST IMPACT ON EXISTING TREES. "TRENCHLESS" CONSTRUCTION TECHNIQUES WILL MINIMIZE OPEN CUTTING ON THE SITE. THESE CONSTRUCTION TECHNIQUES WILL NOT REQUIRE EROSION / SEDIMENT CONTROLS BECAUSE THERE IS NO OPEN CUTTING OF THE GROUND. SEE SHEET 7A FOR DETAILS AND INFORMATION ON DIRECTIONAL BORING AND TRENCHLESS CONSTRUCTION.

PHASE 1 - SEDIMENT CONTROL PLAN:

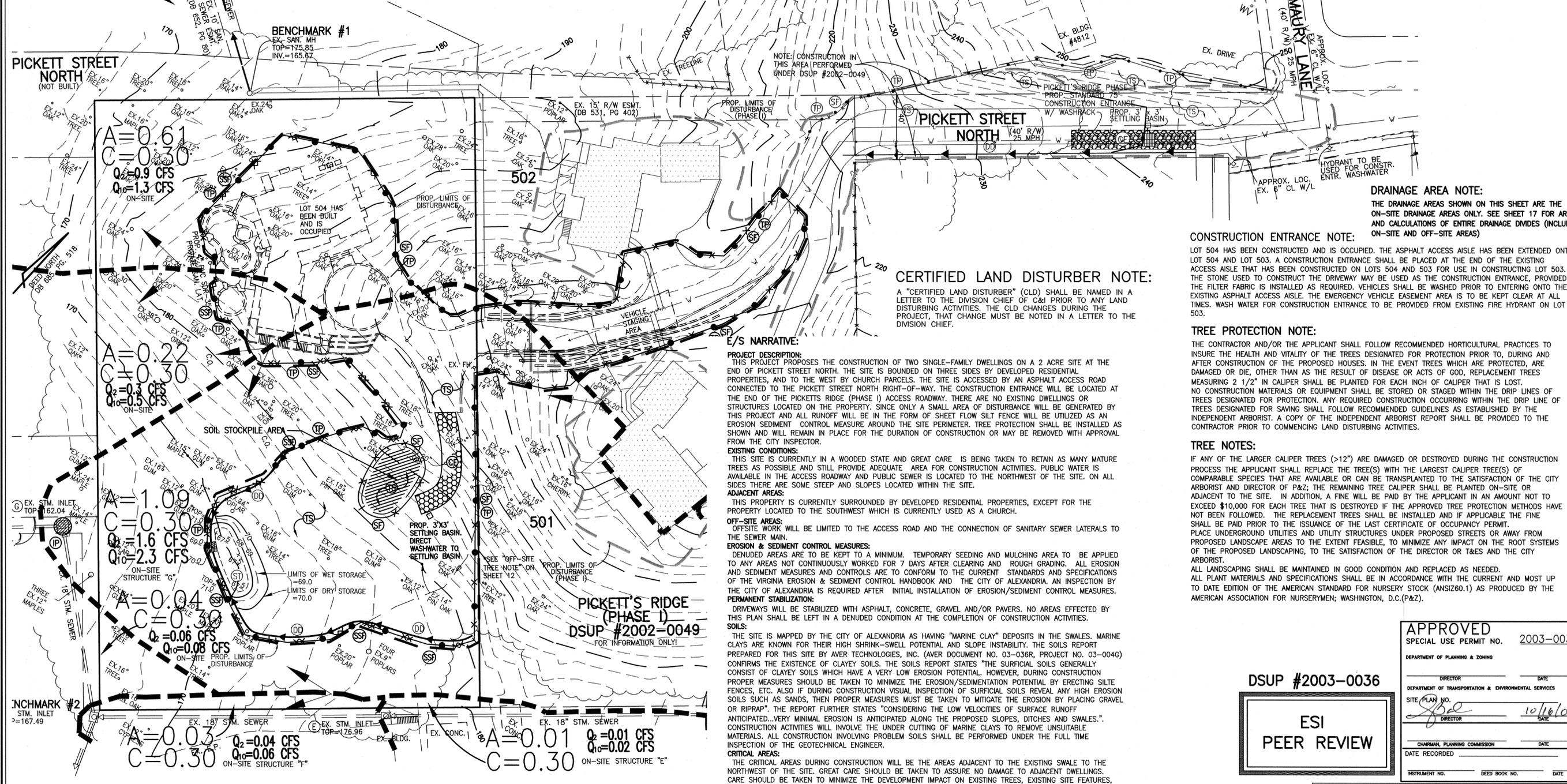
1. THE FIRST STEP IN CONSTRUCTION SHALL BE THE DELINEATION OF THE LIMITS OF CLEARING AND GRADING WITH SURVEYORS TAPE. NO FURTHER ACTIONS SHALL BE TAKEN UNTIL A CITY INSPECTOR APPROVES THE LOCATION OF THE LIMITS.
2. A STANDARD CONSTRUCTION ENTRANCE WILL BE INSTALLED FROM THE END OF THE EXISTING ACCESS ROAD TO ACCESS THIS SITE FOR CONSTRUCTION. ALL VEHICLES MUST BE CLEANED PRIOR TO ENTERING ONTO THE RIGHT-OF-WAY. WASH WATER WILL BE PROVIDED BY TAPPING THE EXISTING BLOWOFF LOCATED WITHIN THE ACCESS ROAD EASEMENT.
3. INSTALL SILT FENCE, SUPER SILT FENCE AND TREE PROTECTION.
4. ONCE PERIMETER CONTROLS HAVE BEEN INSTALLED AND APPROVED BY A CITY INSPECTOR, THE REMAINDER OF THE SITE MAY BE CLEARED AND UTILITY INSTALLATION EXCAVATIONS MAY BEGIN. CONTRACTOR SHOULD VERIFY THEIR LOCATION FOR ADEQUATE TIE-INS.
5. ONCE INSTALLATION OF EROSION AND SEDIMENT CONTROLS HAVE BEEN COMPLETED AND DEEMED ADEQUATE BY THE INSPECTOR PROPOSED CONSTRUCTION MAY BEGIN.

MAINTENANCE PROGRAMS:
THE SITE SUPERINTENDENT, OR REPRESENTATIVE, SHALL MAKE A VISUAL INSPECTION OF ALL MECHANICAL CONTROLS AND NEWLY STABILIZED AREAS (I.E. SEEDED AND MULCHED AND/OR SODDED AREAS) ON A DAILY BASIS; ESPECIALLY AFTER A HEAVY RAINFALL EVENT TO ENSURE THAT ALL CONTROLS SHALL BE REPAIRED PRIOR TO THE END OF THE WORK DAY INCLUDING RE-SEEDING AND MULCHING OR RE-SODDING IF NECESSARY. ANY EXCESS BUILDUP OF SEDIMENTS ALONG PERIMETER SHALL BE DISPOSED OF BY SPREADING ON THE SITE OR HAULING AWAY IF NOT SUITABLE FOR FILL.

SEEDING SCHEDULE:
(COASTAL PLAIN REGION)

PRACTICE	SPECIES	RATE	APPLICATION DATES
TS	OATS (AVENA SATIVA)	50-100 lbs./acre	FEB. 15 TO APRIL 30
	RYE (SECALE CEREALE)	50-110 lbs./acre	FEB.15 TO APRIL 30, SEPT. 1 TO NOV. 15
	50/50 MIX OF ANNUAL RYEGRASS AND CEREAL (WINTER) RYE	50-100 lbs./acre	SEPT. 1 TO FEB. 15 (WINTER SEED)

NOTE: REFER TO THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK FOR OTHER SEED VARIETIES THAT MAY BE APPLICABLE. OTHER SEED VARIETIES AND MIXES MAY BE UTILIZED IF THERE IS A PROBLEM WITH PRODUCT AVAILABILITY. CONTACT THE DESIGN ENGINEER AND/OR THE CITY INSPECTOR FOR THE APPLICABILITY OF OTHER SEED MIXTURES.



NOTE: CONSTRUCTION IN THIS AREA PERFORMED UNDER DSUP #2082-0049

CERTIFIED LAND DISTURBER NOTE:
A "CERTIFIED LAND DISTURBER" (CLD) SHALL BE NAMED IN A LETTER TO THE DIVISION CHIEF OF C&I PRIOR TO ANY LAND DISTURBING ACTIVITIES. THE CLD CHANGES DURING THE PROJECT, THAT CHANGE MUST BE NOTED IN A LETTER TO THE DIVISION CHIEF.

E/S NARRATIVE:
PROJECT DESCRIPTION:
THIS PROJECT PROPOSES THE CONSTRUCTION OF TWO SINGLE-FAMILY DWELLINGS ON A 2 ACRE SITE AT THE END OF PICKETT STREET NORTH. THE SITE IS BOUNDED ON THREE SIDES BY DEVELOPED RESIDENTIAL PROPERTIES, AND TO THE WEST BY CHURCH PARCELS. THE SITE IS ACCESSED BY AN ASPHALT ACCESS ROAD CONNECTED TO THE PICKETT STREET NORTH RIGHT-OF-WAY. THE CONSTRUCTION ENTRANCE WILL BE LOCATED AT THE END OF THE PICKETT'S RIDGE (PHASE I) ACCESS ROADWAY. THERE ARE NO EXISTING DWELLINGS OR STRUCTURES LOCATED ON THE PROPERTY. SINCE ONLY A SMALL AREA OF DISTURBANCE WILL BE GENERATED BY THIS PROJECT AND ALL RUNOFF WILL BE IN THE FORM OF SHEET FLOW SILT FENCE WILL BE UTILIZED AS AN EROSION SEDIMENT CONTROL MEASURE AROUND THE SITE PERIMETER. TREE PROTECTION SHALL BE INSTALLED AS SHOWN AND WILL REMAIN IN PLACE FOR THE DURATION OF CONSTRUCTION OR MAY BE REMOVED WITH APPROVAL FROM THE CITY INSPECTOR.

EXISTING CONDITIONS:
THIS SITE IS CURRENTLY IN A WOODED STATE AND GREAT CARE IS BEING TAKEN TO RETAIN AS MANY MATURE TREES AS POSSIBLE AND STILL PROVIDE ADEQUATE AREA FOR CONSTRUCTION ACTIVITIES. PUBLIC WATER IS AVAILABLE IN THE ACCESS ROADWAY AND PUBLIC SEWER IS LOCATED TO THE NORTHWEST OF THE SITE. ON ALL SIDES THERE ARE SOME STEEP SLOPES LOCATED WITHIN THE SITE.

ADJACENT AREAS:
THIS PROPERTY IS CURRENTLY SURROUNDED BY DEVELOPED RESIDENTIAL PROPERTIES, EXCEPT FOR THE PROPERTY LOCATED TO THE SOUTHWEST WHICH IS CURRENTLY USED AS A CHURCH.

OFF-SITE AREAS:
OFFSITE WORK WILL BE LIMITED TO THE ACCESS ROAD AND THE CONNECTION OF SANITARY SEWER LATERALS TO THE SEWER MAIN.

EROSION & SEDIMENT CONTROL MEASURES:
DENuded AREAS ARE TO BE KEPT TO A MINIMUM. TEMPORARY SEEDING AND MULCHING AREA TO BE APPLIED TO ANY AREAS NOT CONTINUOUSLY WORKED FOR 7 DAYS AFTER CLEARING AND ROUGH GRADING. ALL EROSION AND SEDIMENT MEASURES AND CONTROLS ARE TO CONFORM TO THE CURRENT STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION & SEDIMENT CONTROL HANDBOOK AND THE CITY OF ALEXANDRIA. AN INSPECTION BY THE CITY OF ALEXANDRIA IS REQUIRED AFTER INITIAL INSTALLATION OF EROSION/SEDIMENT CONTROL MEASURES.

PERMANENT STABILIZATION:
DRIVEWAYS WILL BE STABILIZED WITH ASPHALT, CONCRETE, GRAVEL AND/OR PAVERS. NO AREAS EFFECTED BY THIS PLAN SHALL BE LEFT IN A DENuded CONDITION AT THE COMPLETION OF CONSTRUCTION ACTIVITIES.

SOILS:
THE SITE IS MAPPED BY THE CITY OF ALEXANDRIA AS HAVING "MARINE CLAY" DEPOSITS IN THE SWALES. MARINE CLAYS ARE KNOWN FOR THEIR HIGH SHRINK-SWELL POTENTIAL AND SLOPE INSTABILITY. THE SOILS REPORT PREPARED FOR THIS SITE BY AVER TECHNOLOGIES, INC. (AVER DOCUMENT NO. 03-0368, PROJECT NO. 03-0046) CONFIRMS THE EXISTENCE OF CLAYEY SOILS. THE SOILS REPORT STATES "THE SURFICIAL SOILS GENERALLY CONSIST OF CLAYEY SOILS WHICH HAVE A VERY LOW EROSION POTENTIAL. HOWEVER, DURING CONSTRUCTION PROPER MEASURES SHOULD BE TAKEN TO MINIMIZE THE EROSION/SEDIMENTATION POTENTIAL BY ERECTING SILT FENCES, ETC. ALSO IF DURING CONSTRUCTION VISUAL INSPECTION OF SURFICIAL SOILS REVEAL ANY HIGH EROSION SOILS SUCH AS SANDS, THEN PROPER MEASURES MUST BE TAKEN TO MITIGATE THE EROSION BY PLACING GRAVEL OR RIPRAP". THE REPORT FURTHER STATES "CONSIDERING THE LOW VELOCITIES OF SURFACE RUNOFF ANTICIPATED...VERY MINIMAL EROSION IS ANTICIPATED ALONG THE PROPOSED SWALES, DITCHES AND SWALES". CONSTRUCTION ACTIVITIES WILL INVOLVE THE UNDER CUTTING OF MARINE CLAYS TO REMOVE UNSUITABLE MATERIALS. ALL CONSTRUCTION INVOLVING PROBLEM SOILS SHALL BE PERFORMED UNDER THE FULL TIME INSPECTION OF THE GEOTECHNICAL ENGINEER.

CRITICAL AREAS:
THE CRITICAL AREAS DURING CONSTRUCTION WILL BE THE AREAS ADJACENT TO THE EXISTING SWALE TO THE NORTHWEST OF THE SITE. GREAT CARE SHOULD BE TAKEN TO ASSURE NO DAMAGE TO ADJACENT DWELLINGS. CARE SHOULD BE TAKEN TO MINIMIZE THE DEVELOPMENT IMPACT ON EXISTING TREES, EXISTING SITE FEATURES, AND PUBLIC FACILITIES WITHIN THESE AREAS DURING CONSTRUCTION ACTIVITIES. ON-SITE TREES ARE CONSIDERED TO BE A CRITICAL AREA AND SPECIAL CARE SHOULD BE TAKEN DURING CONSTRUCTION ACTIVITIES. SILT FENCE AND TREE PROTECTION SHALL BE UTILIZED IN TREE SAVE AREAS TO ENSURE SAFETY OF TREES.

STORMWATER RUNOFF CONSIDERATIONS:
THE PROPOSED DEVELOPMENT WILL HONOR ALL NATURAL DRAINAGE DIVIDES. THIS SITE WILL UTILIZE METHODS OF LOW IMPACT DEVELOPMENT. THESE METHODS, WHICH INCLUDE THE DIRECTING OF STORMWATER RUNOFF FROM IMPERVIOUS AREAS OVER VEGETATED PORTIONS OF THE SITE, WILL RECHARGE THE GROUNDWATER ON SITE. A WAIVER OF STORMWATER DETENTION HAS BEEN APPROVED FOR THIS SITE AND A "FEE IN LIEU OF" PROVIDING ON-SITE BMP'S WILL SATISFY THE CHESAPEAKE BAY PRESERVATION ORDINANCE REQUIREMENT FOR TREATING THE WATER QUALITY VOLUME.

CONSTRUCTION ENTRANCE NOTE:
LOT 504 HAS BEEN CONSTRUCTED AND IS OCCUPIED. THE ASPHALT ACCESS AISLE HAS BEEN EXTENDED ONTO LOT 504 AND LOT 503. A CONSTRUCTION ENTRANCE SHALL BE PLACED AT THE END OF THE EXISTING ACCESS AISLE THAT HAS BEEN CONSTRUCTED ON LOTS 504 AND 503 FOR USE IN CONSTRUCTING LOT 503. THE STONE USED TO CONSTRUCT THE DRIVEWAY MAY BE USED AS THE CONSTRUCTION ENTRANCE, PROVIDED THE FILTER FABRIC IS INSTALLED AS REQUIRED. VEHICLES SHALL BE WASHED PRIOR TO ENTERING ONTO THE EXISTING ASPHALT ACCESS AISLE. THE EMERGENCY VEHICLE EASEMENT AREA IS TO BE KEPT CLEAR AT ALL TIMES. WASH WATER FOR CONSTRUCTION ENTRANCE TO BE PROVIDED FROM EXISTING FIRE HYDRANT ON LOT 503.

TREE PROTECTION NOTE:
THE CONTRACTOR AND/OR THE APPLICANT SHALL FOLLOW RECOMMENDED HORTICULTURAL PRACTICES TO INSURE THE HEALTH AND VITALITY OF THE TREES DESIGNATED FOR PROTECTION PRIOR TO, DURING AND AFTER CONSTRUCTION OF THE PROPOSED HOUSES. IN THE EVENT TREES WHICH ARE PROTECTED, ARE DAMAGED OR DIE, OTHER THAN AS THE RESULT OF DISEASE OR ACTS OF GOD, REPLACEMENT TREES MEASURING 2 1/2" IN CALIPER SHALL BE PLANTED FOR EACH INCH OF CALIPER THAT IS LOST. NO CONSTRUCTION MATERIALS OR EQUIPMENT SHALL BE STORED OR STAGED WITHIN THE DRIP LINES OF TREES DESIGNATED FOR PROTECTION. ANY REQUIRED CONSTRUCTION OCCURRING WITHIN THE DRIP LINE OF TREES DESIGNATED FOR SAVING SHALL FOLLOW RECOMMENDED GUIDELINES AS ESTABLISHED BY THE INDEPENDENT ARBORIST. A COPY OF THE INDEPENDENT ARBORIST REPORT SHALL BE PROVIDED TO THE CONTRACTOR PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES.

TREE NOTES:
IF ANY OF THE LARGER CALIPER TREES (>12") ARE DAMAGED OR DESTROYED DURING THE CONSTRUCTION PROCESS THE APPLICANT SHALL REPLACE THE TREE(S) WITH THE LARGEST CALIPER TREE(S) OF COMPARABLE SPECIES THAT ARE AVAILABLE OR CAN BE TRANSLANTED TO THE SATISFACTION OF THE CITY ARBORIST AND DIRECTOR OF P&Z. THE REMAINING TREE CALIPER SHALL BE PLANTED ON-SITE OR ADJACENT TO THE SITE. IN ADDITION, A FINE WILL BE PAID BY THE APPLICANT IN AN AMOUNT NOT TO EXCEED \$10,000 FOR EACH TREE THAT IS DESTROYED IF THE APPROVED TREE PROTECTION METHODS HAVE NOT BEEN FOLLOWED. THE REPLACEMENT TREES SHALL BE INSTALLED AND IF APPLICABLE THE FINE SHALL BE PAID PRIOR TO THE ISSUANCE OF THE LAST CERTIFICATE OF OCCUPANCY PERMIT. PLACE UNDERGROUND UTILITIES AND UTILITY STRUCTURES UNDER PROPOSED STREETS OR AWAY FROM PROPOSED LANDSCAPE AREAS TO THE EXTENT FEASIBLE, TO MINIMIZE ANY IMPACT ON THE ROOT SYSTEMS OF THE PROPOSED LANDSCAPING, TO THE SATISFACTION OF THE DIRECTOR OR T&ES AND THE CITY ARBORIST. ALL LANDSCAPING SHALL BE MAINTAINED IN GOOD CONDITION AND REPLACED AS NEEDED. ALL PLANT MATERIALS AND SPECIFICATIONS SHALL BE IN ACCORDANCE WITH THE CURRENT AND MOST UP TO DATE EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK (ANSIZ60.1) AS PRODUCED BY THE AMERICAN ASSOCIATION FOR NURSERYMEN; WASHINGTON, D.C.(P&Z).

DSUP #2003-0036

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DEPARTMENT OF PLANNING & ZONING

DIRECTOR _____ DATE _____

DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES

SITE PLAN NO. _____ DATE 10/16/09

DIRECTOR _____ DATE _____

CHAIRMAN, PLANNING COMMISSION _____ DATE _____

DATE RECORDED _____

INSTRUMENT NO. _____ DEED BOOK NO. _____ DATE _____

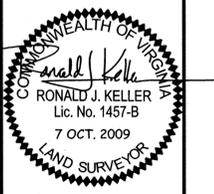
VPDES PERMIT NOTE:
THIS PLAN DISTURBS MORE THAN ONE-HALF OF AN ACRE, THEREFORE A VPDES PERMIT IS REQUIRED AND A COPY SHALL BE FILED WITH THE CITY.

LIMITS OF DISTURBANCE NOTE:
THE PROPOSED LIMITS OF DISTURBANCE CONFORM TO THE LIMITS AS SHOWN ON THE DSUP PLAN. OFF-SITE DISTURBANCE WILL BE REQUIRED FOR THE CONSTRUCTION OF THE EXTENSION OF THE ACCESS TRAVEL AISLE AND THE INSTALLATION OF UTILITIES.

STAGING AREA NOTE:
CONSTRUCTION STAGING AREAS WILL BE PROVIDED A VARIOUS PINTS ALONG THE ACCESS AISLE, DEPENDING ON CONSTRUCTION ACTIVITIES. ALL EXCAVATED MATERIAL WILL BE STOCKPILED OR TRUCKED OFF-SITE.

TREE SAVE NOTE:
ALL TREES LOCATED WITHIN THE LIMITS OF DISTURBANCE ARE TO BE REMOVED. TREES LOCATED OUTSIDE THE LIMITS OF DISTURBANCE ARE TO BE SAVED. PLAN SHOWS DIMENSIONS FROM LIMITS OF DISTURBANCE TO TREES TO BE SAVED THAT HAVE DRIP LINES LOCATED WITHIN THE AREAS OF DISTURBANCE.

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Alexandria, Virginia 22314 FAX (703) 549-6422



EROSION SEDIMENT CONTROLS - PHASE I
PICKETT'S RIDGE II
CITY OF ALEXANDRIA, VIRGINIA

DATE	REVISION
5/31/04	MIN. SUB. REVIEW
5/21/04	FINAL
9/20/05	COMBINE ROAD/DWLG
10/14/05	PER COMMENTS
08/10/09	DWLG. LOT 503
09/15/09	PER COMMENTS
10/7/09	PER COMMENTS

DESIGN: P.A.W.
DRAWN: R.K.B.

SCALE: 1" = 30'

DATE: MARCH 4, 2004

SHEET 5 OF 17

FILE: 00-02

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LOCATION AND DEPTH OF ALL EXISTING UNDERGROUND UTILITIES TO BE VERIFIED BY CONTRACTOR PRIOR TO CONSTRUCTION. INTERFERENCE OR DISRUPTION OF SAME WILL NOT BE THE RESPONSIBILITY OF THIS OFFICE.

ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS AND SPECIFICATIONS OF CITY OF ALEXANDRIA, VIRGINIA.

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DSUP2003-0036 R11

VIRGINIA UNIFORM CODING SYSTEM KEY DESCRIPTIONS

- (SF) SILT FENCE STD. & SPEC. 3.05
- (TP) TREE PROTECTION STD. & SPEC. 3.38
- (IP) INLET PROTECTION STD. & SPEC. 3.07
- (TS) PERMANENT SEEDING STD. & SPEC. 3.31
- (SO) SODDING STD. & SPEC. 3.33

SANITARY LATERAL TRENCHLESS CONSTRUCTION NOTE:

THIS PROJECT WILL UTILIZE "TRENCHLESS" CONSTRUCTION TECHNIQUES FOR THE INSTALLATION OF THE SANITARY LATERALS. THE CONTRACTOR SHALL UTILIZE A DIRECTIONAL BORING MACHINE OR OTHER SUITABLE EQUIPMENT WHICH WILL ALLOW FLEXIBILITY IN THE INSTALLATION OF THE LATERALS WHERE THEY WILL HAVE THE LEAST IMPACT ON EXISTING TREES. "TRENCHLESS" CONSTRUCTION TECHNIQUES WILL MINIMIZE OPEN CUTTING ON THE SITE. THESE CONSTRUCTION TECHNIQUES WILL NOT REQUIRE EROSION / SEDIMENT CONTROLS BECAUSE THERE IS NO OPEN CUTTING OF THE GROUND. SEE SHEET 7A FOR DETAILS AND INFORMATION ON DIRECTIONAL BORING AND TRENCHLESS CONSTRUCTION.

LEGEND

- DENOTES LIMITS OF CLEARING AND GRADING
- DENOTES DRAINAGE DIVIDE

SOIL STOCKPILE AREA NOTE:

SOIL TAKEN FROM LOT 504 FOR CONSTRUCTION OF THE POOL SHALL BE STOCKPILED AT THE END OF THE ROADWAY (AT TIME OF POOL CONSTRUCTION). THE STOCKPILE AREA SHALL BE ENCOMPASSED WITH SILT FENCE UNTIL BEING USED AS FILL (IF SUITABLE) FOR THE CONSTRUCTION OF LOT 503.

TREE NOTES:

IF ANY OF THE LARGER CALIPER TREES (>12") ARE DAMAGED OR DESTROYED DURING THE CONSTRUCTION PROCESS THE APPLICANT SHALL REPLACE THE TREE(S) WITH THE LARGEST CALIPER TREE(S) OF COMPARABLE SPECIES THAT ARE AVAILABLE OR CAN BE TRANSPLANTED TO THE SATISFACTION OF THE CITY ARBORIST AND DIRECTOR OF P&Z; THE REMAINING TREE CALIPER SHALL BE PLANTED ON-SITE OR ADJACENT TO THE SITE. IN ADDITION, A FINE WILL BE PAID BY THE APPLICANT IN AN AMOUNT NOT TO EXCEED \$10,000 FOR EACH TREE THAT IS DESTROYED IF THE APPROVED TREE PROTECTION METHODS HAVE NOT BEEN FOLLOWED. THE REPLACEMENT TREES SHALL BE INSTALLED AND IF APPLICABLE THE FINE SHALL BE PAID PRIOR TO THE ISSUANCE OF THE LAST CERTIFICATE OF OCCUPANCY PERMIT. PLACE UNDERGROUND UTILITIES AND UTILITY STRUCTURES UNDER PROPOSED STREETS OR AWAY FROM PROPOSED LANDSCAPE AREAS TO THE EXTENT FEASIBLE, TO MINIMIZE ANY IMPACT ON THE ROOT SYSTEMS OF THE PROPOSED LANDSCAPING, TO THE SATISFACTION OF THE DIRECTOR OR T&ES AND THE CITY ARBORIST. ALL LANDSCAPING SHALL BE MAINTAINED IN GOOD CONDITION AND REPLACED AS NEEDED. ALL PLANT MATERIALS AND SPECIFICATIONS SHALL BE IN ACCORDANCE WITH THE CURRENT AND MOST UP TO DATE EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK (ANSIZ60.1) AS PRODUCED BY THE AMERICAN ASSOCIATION FOR NURSERYMEN; WASHINGTON, D.C.(P&Z).

TREE PROTECTION NOTE:

THE CONTRACTOR AND/OR THE APPLICANT SHALL FOLLOW RECOMMENDED HORTICULTURAL PRACTICES TO INSURE THE HEALTH AND VITALITY OF THE TREES DESIGNATED FOR PROTECTION PRIOR TO, DURING AND AFTER CONSTRUCTION OF THE PROPOSED HOUSES. IN THE EVENT TREES WHICH ARE PROTECTED, ARE DAMAGED OR DIE, OTHER THAN AS THE RESULT OF DISEASE OR ACTS OF GOD, REPLACEMENT TREES MEASURING 2 1/2" IN CALIPER SHALL BE PLANTED FOR EACH INCH OF CALIPER THAT IS LOST. NO CONSTRUCTION MATERIALS OR EQUIPMENT SHALL BE STORED OR STAGED WITHIN THE DRIP LINES OF TREES DESIGNATED FOR PROTECTION. ANY REQUIRED CONSTRUCTION OCCURRING WITHIN THE DRIP LINE OF TREES DESIGNATED FOR SAVING SHALL FOLLOW RECOMMENDED GUIDELINES AS ESTABLISHED BY THE INDEPENDENT ARBORIST. A COPY OF THE INDEPENDENT ARBORIST REPORT SHALL BE PROVIDED TO THE CONTRACTOR PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES.

VPDES PERMIT NOTE:

THIS PLAN DISTURBS MORE THAN ONE-HALF OF AN ACRE, THEREFORE A VPDES PERMIT IS REQUIRED AND A COPY SHALL BE FILED WITH THE CITY.

THIS SHEET TO BE USED FOR EROSION/SEDIMENT CONTROLS PHASE II ONLY!

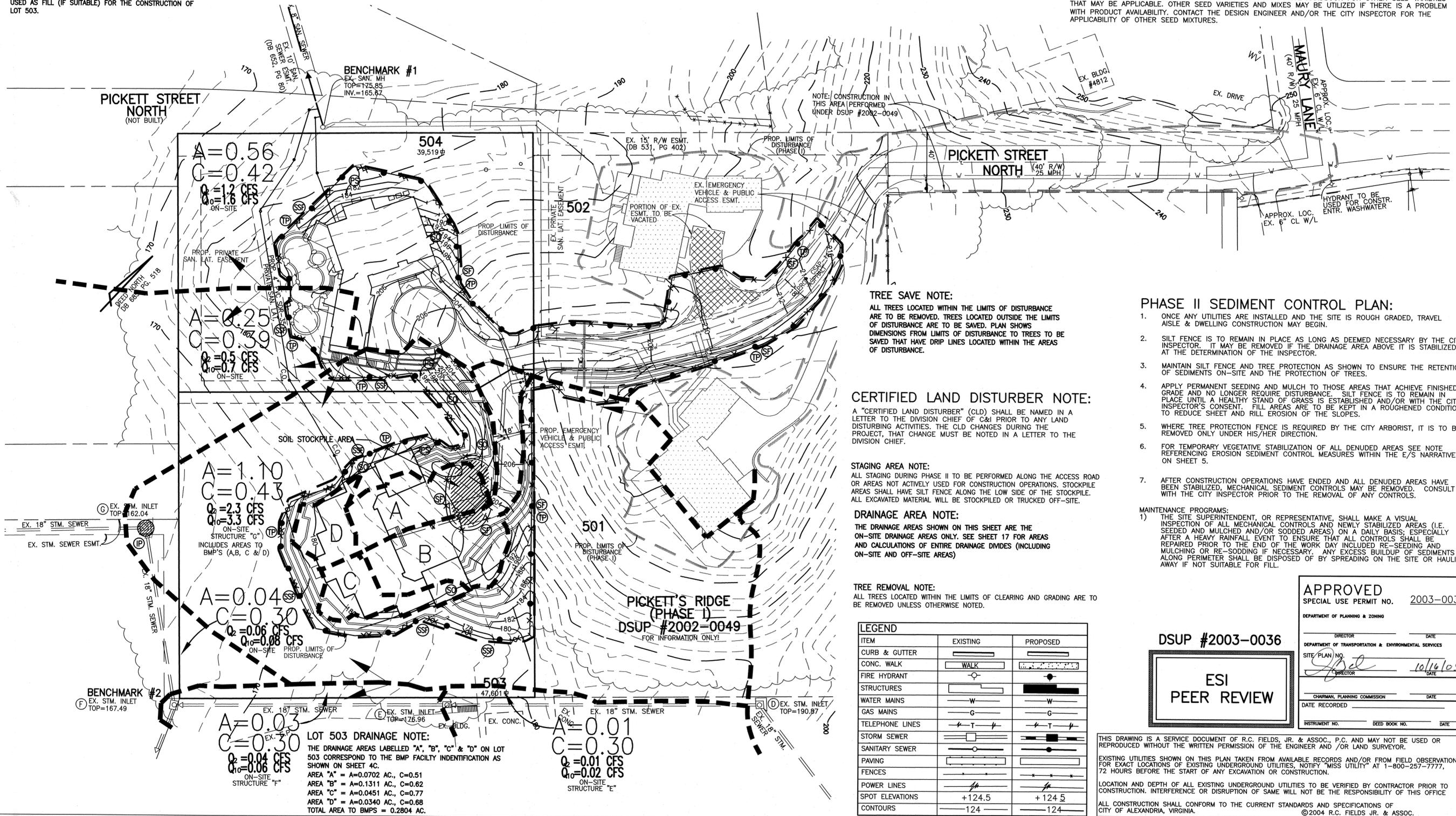
REFER TO SITE DEVELOPMENT PLAN SHEET FOR FINAL LOCATIONS, LAYOUT, DIMENSIONS AND GRADING.

TOTAL DISTURBED AREA = 51,292 SQ. FT. OR 1.1775 AC.

SEEDING SCHEDULE: (COASTAL PLAIN REGION)

PRACTICE	SPECIES	RATE	APPLICATION DATES
(PS)	KENTUCKY 31 TALL FESCUE	200-250 lbs./acre	APPLY IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS FOR TIME OF YEAR APPLICABILITY; UTILIZE TEMPORARY SEEDING UNTIL APPROPRIATE TIME TO APPLY PERMANENT SEEDING.
	KENTUCKY BLUEGRASS	(4.5 - 5.5 lbs. per 1,000 sq. ft.)	
	TALL FESCUES (IMPROVED)		

NOTE: REFER TO THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK FOR OTHER SEED VARIETIES THAT MAY BE APPLICABLE. OTHER SEED VARIETIES AND MIXES MAY BE UTILIZED IF THERE IS A PROBLEM WITH PRODUCT AVAILABILITY. CONTACT THE DESIGN ENGINEER AND/OR THE CITY INSPECTOR FOR THE APPLICABILITY OF OTHER SEED MIXTURES.



TREE SAVE NOTE:

ALL TREES LOCATED WITHIN THE LIMITS OF DISTURBANCE ARE TO BE REMOVED. TREES LOCATED OUTSIDE THE LIMITS OF DISTURBANCE ARE TO BE SAVED. PLAN SHOWS DIMENSIONS FROM LIMITS OF DISTURBANCE TO TREES TO BE SAVED THAT HAVE DRIP LINES LOCATED WITHIN THE AREAS OF DISTURBANCE.

CERTIFIED LAND DISTURBER NOTE:

A "CERTIFIED LAND DISTURBER" (CLD) SHALL BE NAMED IN A LETTER TO THE DIVISION CHIEF OF C&I PRIOR TO ANY LAND DISTURBING ACTIVITIES. THE CLD CHANGES DURING THE PROJECT, THAT CHANGE MUST BE NOTED IN A LETTER TO THE DIVISION CHIEF.

STAGING AREA NOTE:

ALL STAGING DURING PHASE II TO BE PERFORMED ALONG THE ACCESS ROAD OR AREAS NOT ACTIVELY USED FOR CONSTRUCTION OPERATIONS. STOCKPILE AREAS SHALL HAVE SILT FENCE ALONG THE LOW SIDE OF THE STOCKPILE. ALL EXCAVATED MATERIAL WILL BE STOCKPILED OR TRUCKED OFF-SITE.

DRAINAGE AREA NOTE:

THE DRAINAGE AREAS SHOWN ON THIS SHEET ARE THE ON-SITE DRAINAGE AREAS ONLY. SEE SHEET 17 FOR AREAS AND CALCULATIONS OF ENTIRE DRAINAGE DIVIDES (INCLUDING ON-SITE AND OFF-SITE AREAS)

TREE REMOVAL NOTE:

ALL TREES LOCATED WITHIN THE LIMITS OF CLEARING AND GRADING ARE TO BE REMOVED UNLESS OTHERWISE NOTED.

PHASE II SEDIMENT CONTROL PLAN:

- ONCE ANY UTILITIES ARE INSTALLED AND THE SITE IS ROUGH GRADED, TRAVEL AISLE & DWELLING CONSTRUCTION MAY BEGIN.
- SILT FENCE IS TO REMAIN IN PLACE AS LONG AS DEEMED NECESSARY BY THE CITY INSPECTOR. IT MAY BE REMOVED IF THE DRAINAGE AREA ABOVE IT IS STABILIZED, AT THE DETERMINATION OF THE INSPECTOR.
- MAINTAIN SILT FENCE AND TREE PROTECTION AS SHOWN TO ENSURE THE RETENTION OF SEDIMENTS ON-SITE AND THE PROTECTION OF TREES.
- APPLY PERMANENT SEEDING AND MULCH TO THOSE AREAS THAT ACHIEVE FINISHED GRADE AND NO LONGER REQUIRE DISTURBANCE. SILT FENCE IS TO REMAIN IN PLACE UNTIL A HEALTHY STAND OF GRASS IS ESTABLISHED WITH THE CITY INSPECTOR'S CONSENT. FILL AREAS ARE TO BE KEPT IN A ROUGHENED CONDITION TO REDUCE SHEET AND RILL EROSION OF THE SLOPES.
- WHERE TREE PROTECTION FENCE IS REQUIRED BY THE CITY ARBORIST, IT IS TO BE REMOVED ONLY UNDER HIS/HER DIRECTION.
- FOR TEMPORARY VEGETATIVE STABILIZATION OF ALL DENUDED AREAS SEE NOTE REFERENCING EROSION SEDIMENT CONTROL MEASURES WITHIN THE E/S NARRATIVE ON SHEET 5.
- AFTER CONSTRUCTION OPERATIONS HAVE ENDED AND ALL DENUDED AREAS HAVE BEEN STABILIZED, MECHANICAL SEDIMENT CONTROLS MAY BE REMOVED. CONSULT WITH THE CITY INSPECTOR PRIOR TO THE REMOVAL OF ANY CONTROLS.

MAINTENANCE PROGRAMS:

- THE SITE SUPERINTENDENT, OR REPRESENTATIVE, SHALL MAKE A VISUAL INSPECTION OF ALL MECHANICAL CONTROLS AND NEWLY STABILIZED AREAS (I.E. SEEDED AND MULCHED AND/OR SODDED AREAS) ON A DAILY BASIS; ESPECIALLY AFTER A HEAVY RAINFALL EVENT TO ENSURE THAT ALL CONTROLS SHALL BE REPAIRED PRIOR TO THE END OF THE WORK DAY INCLUDED RE-SEEDING AND MULCHING OR RE-SODDING IF NECESSARY. ANY EXCESS BUILDUP OF SEDIMENTS ALONG PERIMETER SHALL BE DISPOSED OF BY SPREADING ON THE SITE OR HAULING AWAY IF NOT SUITABLE FOR FILL.

LEGEND

ITEM	EXISTING	PROPOSED
CURB & GUTTER	—	—
CONC. WALK	—	—
FIRE HYDRANT	—	—
STRUCTURES	—	—
WATER MAINS	—	—
GAS MAINS	—	—
TELEPHONE LINES	—	—
STORM SEWER	—	—
SANITARY SEWER	—	—
PAVING	—	—
FENCES	—	—
POWER LINES	—	—
SPOT ELEVATIONS	+124.5	+124.5
CONTOURS	—124	—124

DSUP #2003-0036

ESI PEER REVIEW

APPROVED

SPECIAL USE PERMIT NO. 2003-0036

DEPARTMENT OF PLANNING & ZONING

DIRECTOR _____ DATE _____

DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES

SITE PLAN NO. _____ DATE 10/16/09

CHAIRMAN, PLANNING COMMISSION _____ DATE _____

INSTRUMENT NO. _____ DEED BOOK NO. _____ DATE _____

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EXISTING UTILITIES SHOWN ON THIS PLAN TAKEN FROM AVAILABLE RECORDS AND/OR FROM FIELD OBSERVATIONS. FOR EXACT LOCATIONS OF EXISTING UNDERGROUND UTILITIES, NOTIFY "MISS UTILITY" AT 1-800-257-7777, 72 HOURS BEFORE THE START OF ANY EXCAVATION OR CONSTRUCTION.

LOCATION AND DEPTH OF ALL EXISTING UNDERGROUND UTILITIES TO BE VERIFIED BY CONTRACTOR PRIOR TO CONSTRUCTION. INTERFERENCE OR DISRUPTION OF SAME WILL NOT BE THE RESPONSIBILITY OF THIS OFFICE

ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS AND SPECIFICATIONS OF CITY OF ALEXANDRIA, VIRGINIA.

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Alexandria, Virginia 22314 FAX (703) 549-6422

COMMONWEALTH OF VIRGINIA

RONALD J. KELLER
Lic. No. 1457-B
7 OCT. 2009
LAND SURVEYOR

EROSION/SEDIMENT CONTROLS - PHASE II

PICKETT'S RIDGE II

CITY OF ALEXANDRIA, VIRGINIA

DATE	REVISION
5/31/04	MIN. SUB. REVIEW
7/29/04	PER COMMENTS
9/10/04	PER COMMENTS
10/22/04	FINAL MYLARS
9/20/05	COMBINE ROAD/DWLG
10/14/05	PER COMMENTS
7/27/09	PER COMMENTS
08/10/09	DWLG. LOT 503
09/15/09	PER COMMENTS
10/7/09	PER COMMENTS

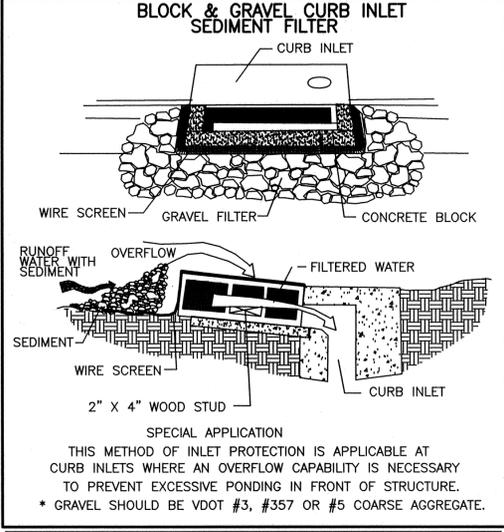
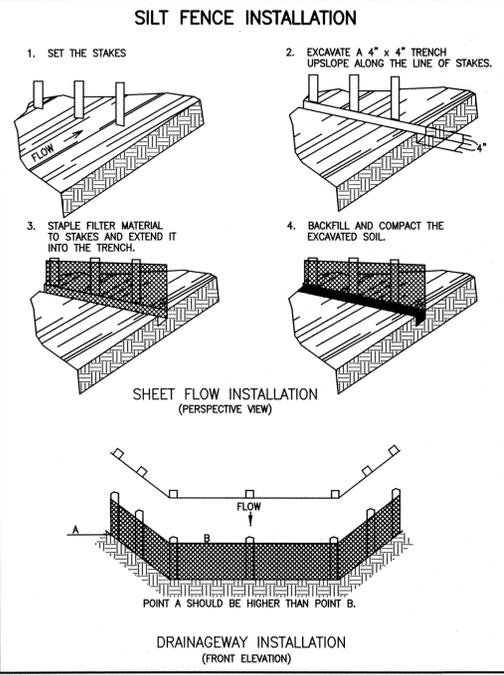
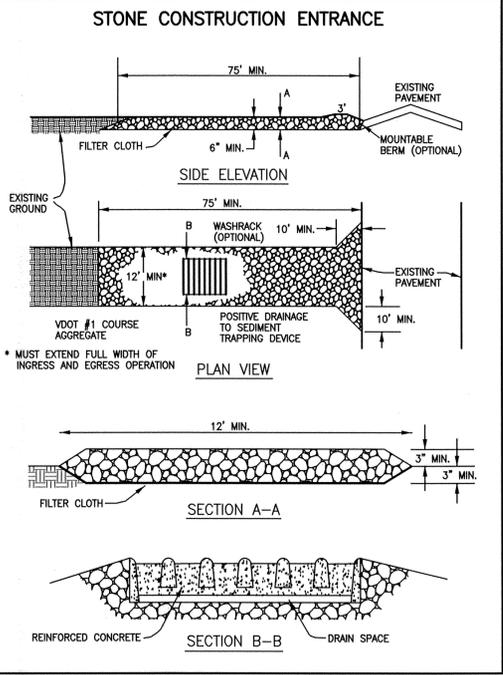
DESIGN: P.A.W.
DRAWN: R.K.B.

SCALE: 1" = 30'

DATE: MARCH 4, 2004

SHEET 6 OF 17

FILE: 00-02



SANITARY LATERAL TRENCHLESS CONSTRUCTION NOTE:

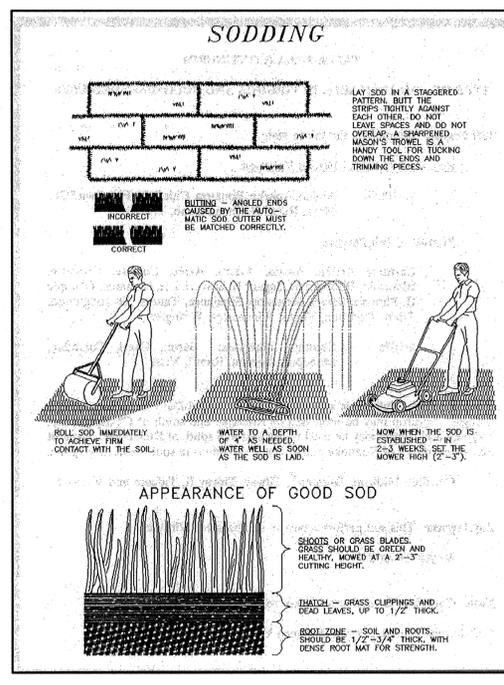
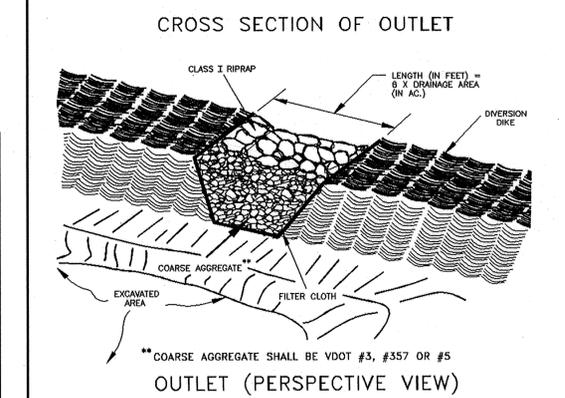
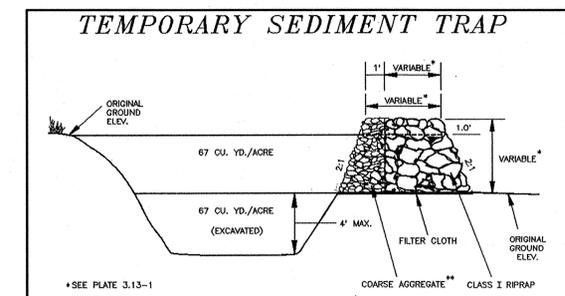
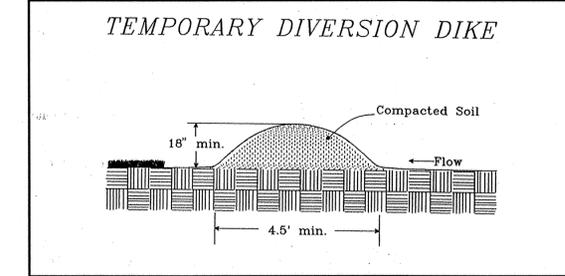
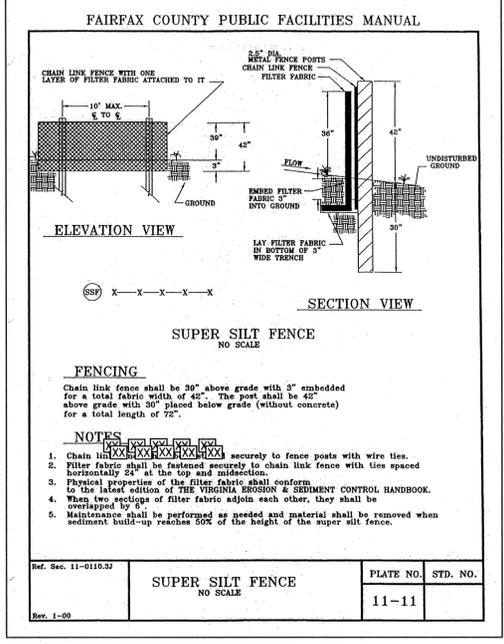
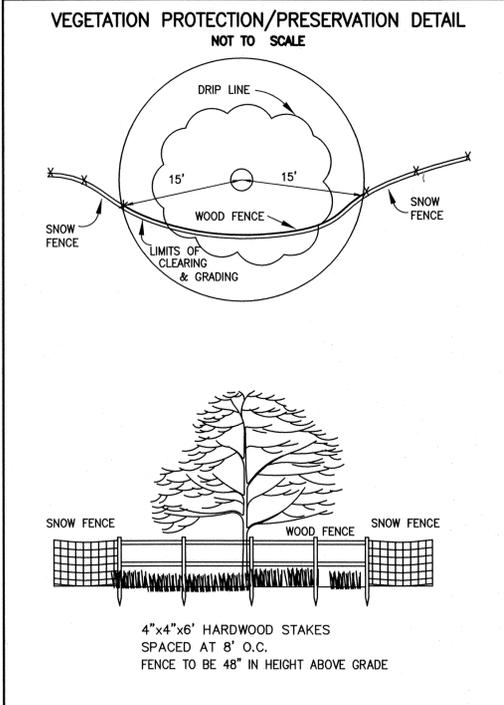
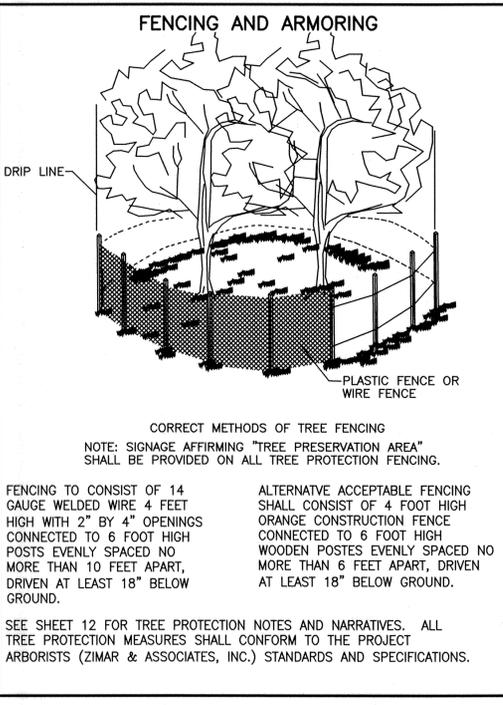
THIS PROJECT WILL UTILIZE "TRENCHLESS" CONSTRUCTION TECHNIQUES FOR THE INSTALLATION OF THE SANITARY LATERALS. THE CONTRACTOR SHALL UTILIZE A DIRECTIONAL BORING MACHINE OR OTHER SUITABLE EQUIPMENT WHICH WILL ALLOW FLEXIBILITY IN THE INSTALLATION OF THE LATERALS WHERE THEY WILL HAVE THE LEAST IMPACT ON EXISTING TREES. "TRENCHLESS" CONSTRUCTION TECHNIQUES WILL MINIMIZE OPEN CUTTING ON THE SITE. THESE CONSTRUCTION TECHNIQUES WILL NOT REQUIRE EROSION / SEDIMENT CONTROLS BECAUSE THERE IS NO OPEN CUTTING OF THE GROUND. SEE SHEET 7A FOR DETAILS AND INFORMATION ON DIRECTIONAL BORING AND TRENCHLESS CONSTRUCTION.

GENERAL EROSION & SEDIMENT CONTROL NOTES:

1. THE FIRST STEP IN CONSTRUCTION SHALL BE THE DELINEATION OF THE LIMITS OF CLEARING AND GRADING WITH SURVEYORS TAPE. NO FURTHER ACTIONS SHALL BE TAKEN UNTIL A CITY INSPECTOR APPROVES THE LOCATION OF THE LIMITS.
2. THE DEVELOPER AND CONTRACTORS ARE TO KEEP DENUDED AREAS TO A MINIMUM. AN EROSION AND SEDIMENT CONTROL PLAN IS INCLUDED WITH THESE FINAL PLANS FOR APPROVAL BY T&ES FOR REFERENCE BY THE EROSION AND SEDIMENT CONTROL PERMIT. ALL EROSION / SEDIMENT CONTROL MEASURES WILL CONFORM TO THE CURRENT STANDARDS OF THE CITY OF ALEXANDRIA AND THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.
3. 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 §4VAC50-30 EROSION AND SEDIMENT CONTROL REGULATIONS.
4. T&ES MUST BE NOTIFIED ONE WEEK PRIOR TO THE PRE-CONSTRUCTION CONFERENCE, ONE WEEK PRIOR TO THE COMMENCEMENTS OF LAND DISTURBING ACTIVITY, AND ONE WEEK PRIOR TO THE FINAL INSPECTION.
5. ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN CLEARING. AN INSPECTION BY THE CITY OF ALEXANDRIA IS REQUIRED AFTER INITIAL INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND BEFORE ANY CLEARING OR GRADING CAN BEGIN.
6. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
7. PRIOR TO COMMENCING ANY LAND DISTURBING ACTIVITIES IN AREAS OTHER THAN THOSE INDICATED ON THESE PLANS (INCLUDING, BUT NOT LIMITED TO, OFF-SITE BORROW OR WASTE AREAS), THE CONTRACTOR SHALL SUBMIT A SUPPLEMENTARY EROSION CONTROL PLAN TO THE OWNER FOR REVIEW AND APPROVAL BY THE CITY OF ALEXANDRIA.
8. ALL DISTURBED AREAS OF THE SITE THAT ARE NOT TO BE WORKED FOR SEVEN OR MORE CALENDAR DAYS MUST BE STABILIZED.
9. ALL TEMPORARY EARTH BERMS, DIVERSIONS AND SEDIMENT CONTROL DAMS SHALL BE SEEDED AND MULCHED OR OTHERWISE STABILIZED AS SOON AS POSSIBLE BUT NO LATER THAN 48 HOURS AFTER GRADING.
10. 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.
11. DURING DEWATERING OPERATIONS, WATER WILL BE PUMPED THROUGH AN APPROVED FILTERING DEVICE.
12. THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES DAILY AND AFTER EACH RUNOFF-PRODUCING RAINFALL EVENT. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY.
13. PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL NOT BE WORKED FOR SEVEN OR MORE CALENDAR DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR.
14. ANY STOCKPILED MATERIAL WHICH WILL REMAIN IN PLACE LONGER THAN 7 DAYS IS TO BE SEEDED FOR TEMPORARY VEGETATION AND MULCHED WITH STRAW MULCH OR OTHERWISE STABILIZED. ALL APPLICABLE EROSION AND SEDIMENT CONTROL MEASURES MUST BE EMPLOYED FOR STOCKPILE AREAS.
15. ANY DENUDED SLOPES, EITHER DISTURBED OR CREATED BY THIS PLAN THAT EXCEED 25% ARE TO BE SODDED AND PEGGED FOR STABILITY AND EROSION CONTROL.
16. TO THE EXTENT POSSIBLE ALL TREE PROTECTION SHALL BE INSTALLED AT THE DRIP LINE OF THE TREE(S).
17. AT THE COMPLETION OF THE PROJECT AND PRIOR TO THE RELEASE OF THE BOND ALL DISTURBED AREAS SHALL BE STABILIZED AND ALL TEMPORARY EROSION AND SEDIMENT CONTROL SHALL BE REMOVED.

R.C. FIELDS, JR. & ASSOCIATES
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COMMONWEALTH OF VIRGINIA
RONALD J. KELLER
NO. 1457-B
7 OCT. 2009
LAND SURVEYOR



SEDIMENT TRAP COMPUTATIONS

STR.	DRAIN AREA (AC.)	REQ. STOR. IN CU. YDS.	REQ. STOR. IN CU. FT.	WET STOR. VOL (V ₁)	DRY STOR. VOL (V ₂)	TOTAL STOR. PROVIDED (CU FT.)	OUTLET SIZE/TYPE
1	0.67	89.8	2,424	A ₁ =981 D ₁ =1.5	1,251	1,485, 2,735	6" STONE OUTLET

WET STORAGE VOLUME (V₁) CALCULATED AS FOLLOWS: $V_1 = 0.85 \times A_1 \times D_1$
where V₁ = WET STORAGE VOLUME IN CUBIC FEET.
A₁ = THE SURFACE AREA OF THE FLOODED AREA AT THE BASE OF THE STONE OUTLET IN SQUARE FEET
D₁ = THE MAXIMUM DEPTH IN FEET, MEASURED FROM LOW POINT IN THE TRAP TO THE BASE OF THE STONE OUTLET.

DRY STORAGE VOLUME (V₂) CALCULATED AS FOLLOWS: $V_2 = \frac{A_1 + A_2}{2} \times D_2$
where V₂ = THE DRY STORAGE VOLUME IN CUBIC FEET.
A₂ = THE SURFACE AREA OF THE FLOODED AREA AT THE BASE OF THE STONE OUTLET IN SQUARE FEET
D₂ = THE DEPTH IN FEET, MEASURED FROM BASIN OF THE STONE OUTLET TO THE CREST OF THE STONE OUTLET.

CONCERNING UTILITY WORK:
NO MORE THAN 500 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME. ALL EXCAVATED MATERIAL TO BE REPLACED INTO THE TRENCH SHALL BE STOCKPILED ON THE HIGH SIDE OF THE TRENCH. IF ANY TRENCH WORK WILL REMAIN OPEN AFTER THE END OF THE WORKDAY ALL NEEDED EROSION AND SEDIMENT CONTROLS SHALL BE EMPLOYED. APPLICABLE SAFETY REGULATIONS SHALL BE COMPLIED WITH.

THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES AS NECESSARY TO PREVENT EROSION AND SEDIMENTATION AND AS DETERMINED BY THE CITY OF ALEXANDRIA.

TREE NOTES:

IF ANY OF THE LARGER CALIPER TREES (>12") ARE DAMAGED OR DESTROYED DURING THE CONSTRUCTION PROCESS THE APPLICANT SHALL REPLACE THE TREE(S) WITH THE LARGEST CALIPER TREE(S) OF COMPARABLE SPECIES THAT ARE AVAILABLE OR CAN BE TRANSPLANTED TO THE SATISFACTION OF THE CITY ARBORIST AND DIRECTOR OF P&Z; THE REMAINING TREE CALIPER SHALL BE PLANTED ON-SITE OR ADJACENT TO THE SITE. IN ADDITION, A FINE WILL BE PAID BY THE APPLICANT IN AN AMOUNT NOT TO EXCEED \$10,000 FOR EACH TREE THAT IS DESTROYED IF THE APPROVED TREE PROTECTION METHODS HAVE NOT BEEN FOLLOWED. THE REPLACEMENT TREES SHALL BE INSTALLED AND IF APPLICABLE THE FINE SHALL BE PAID PRIOR TO THE ISSUANCE OF THE LAST CERTIFICATE OF OCCUPANCY PERMIT.

PLACE UNDERGROUND UTILITIES AND UTILITY STRUCTURES UNDER PROPOSED STREETS OR AWAY FROM PROPOSED LANDSCAPE AREAS TO THE EXTENT FEASIBLE, TO MINIMIZE ANY IMPACT ON THE ROOT SYSTEMS OF THE PROPOSED LANDSCAPING, TO THE SATISFACTION OF THE DIRECTOR OR T&ES AND THE CITY ARBORIST.

ALL LANDSCAPING SHALL BE MAINTAINED IN GOOD CONDITION AND REPLACED AS NEEDED.

ALL PLANT MATERIALS AND SPECIFICATIONS SHALL BE IN ACCORDANCE WITH THE CURRENT AND MOST UP TO DATE EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK (ANSIZ60.1) AS PRODUCED BY THE AMERICAN ASSOCIATION FOR NURSERYMEN; WASHINGTON, D.C.

TREE PROTECTION NOTE:

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APPROVED
SPECIAL USE PERMIT NO. 2003-0036

DEPARTMENT OF PLANNING & ZONING

DIRECTOR _____ DATE _____

DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES

SITE PLAN NO. *0036* DATE *10/16/09*

DIRECTOR _____ DATE _____

CHAIRMAN, PLANNING COMMISSION _____ DATE _____

DATE RECORDED _____

INSTRUMENT NO. _____ DEED BOOK NO. _____ DATE _____

DSUP #2003-0036

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LOCATION AND DEPTH OF ALL EXISTING UNDERGROUND UTILITIES TO BE VERIFIED BY CONTRACTOR PRIOR TO CONSTRUCTION. INTERFERENCE OR DISRUPTION OF SAME WILL NOT BE THE RESPONSIBILITY OF THIS OFFICE

ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS AND SPECIFICATIONS OF CITY OF ALEXANDRIA, VIRGINIA

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EROSION/SEDIMENT CONTROL DETAILS
PICKETT'S RIDGE II
CITY OF ALEXANDRIA, VIRGINIA

DATE	REVISION
3/31/04	MIN. SUB. REVIEW
5/21/04	FINAL
7/29/04	PER COMMENTS
9/10/04	PER COMMENTS
10/22/04	FINAL MYLARS
09/15/09	PER COMMENTS
10/7/09	PER COMMENTS

DESIGN: P.A.W.
DRAWN: R.K.B.

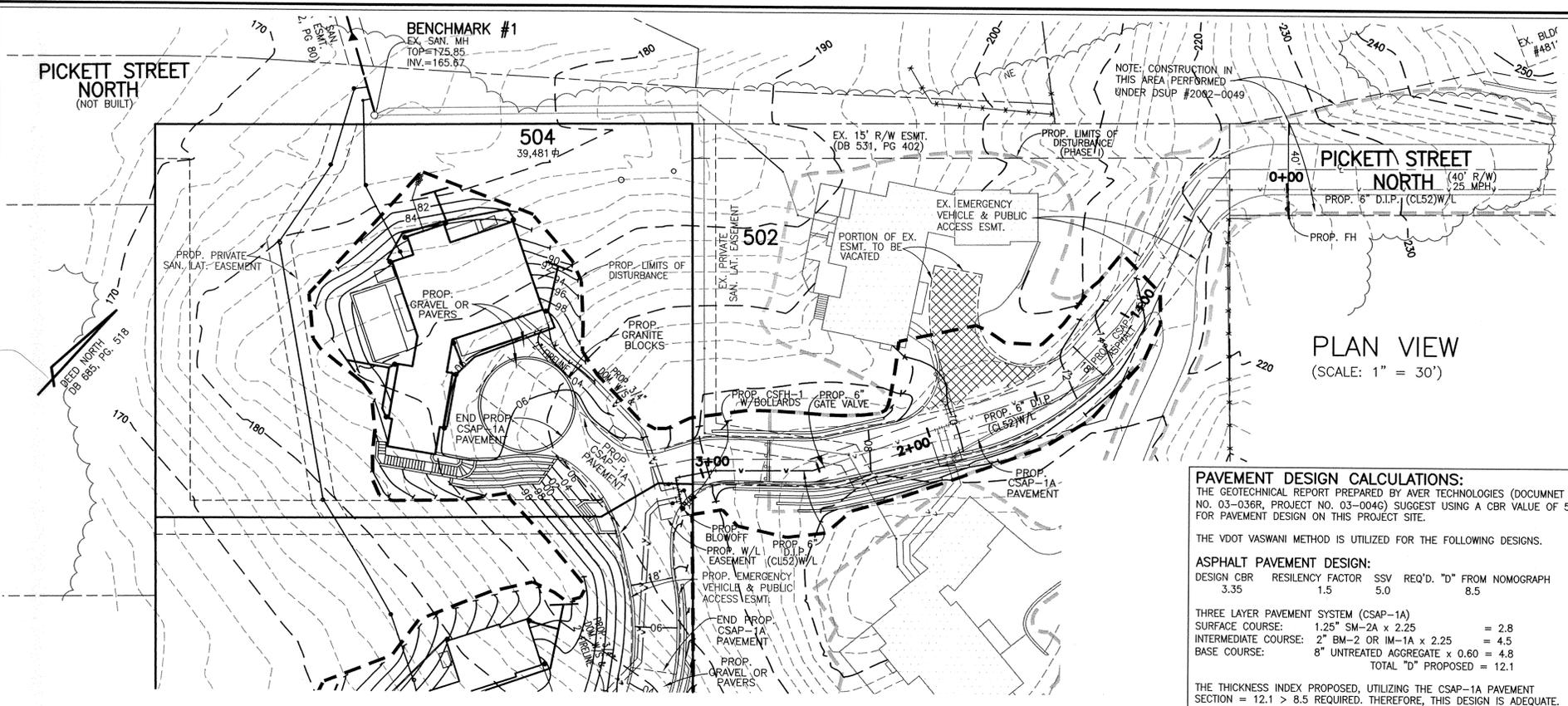
SCALE: AS NOTED

DATE: MARCH 4, 2004

SHEET 7 OF 17

FILE: 00-02

DSP2003-0036 R11



PAVEMENT DESIGN CALCULATIONS:
 THE GEOTECHNICAL REPORT PREPARED BY AVER TECHNOLOGIES (DOCUMNET NO. 03-036R, PROJECT NO. 03-004G) SUGGEST USING A CBR VALUE OF 5 FOR PAVEMENT DESIGN ON THIS PROJECT SITE.

THE VDOT VASWANI METHOD IS UTILIZED FOR THE FOLLOWING DESIGNS.

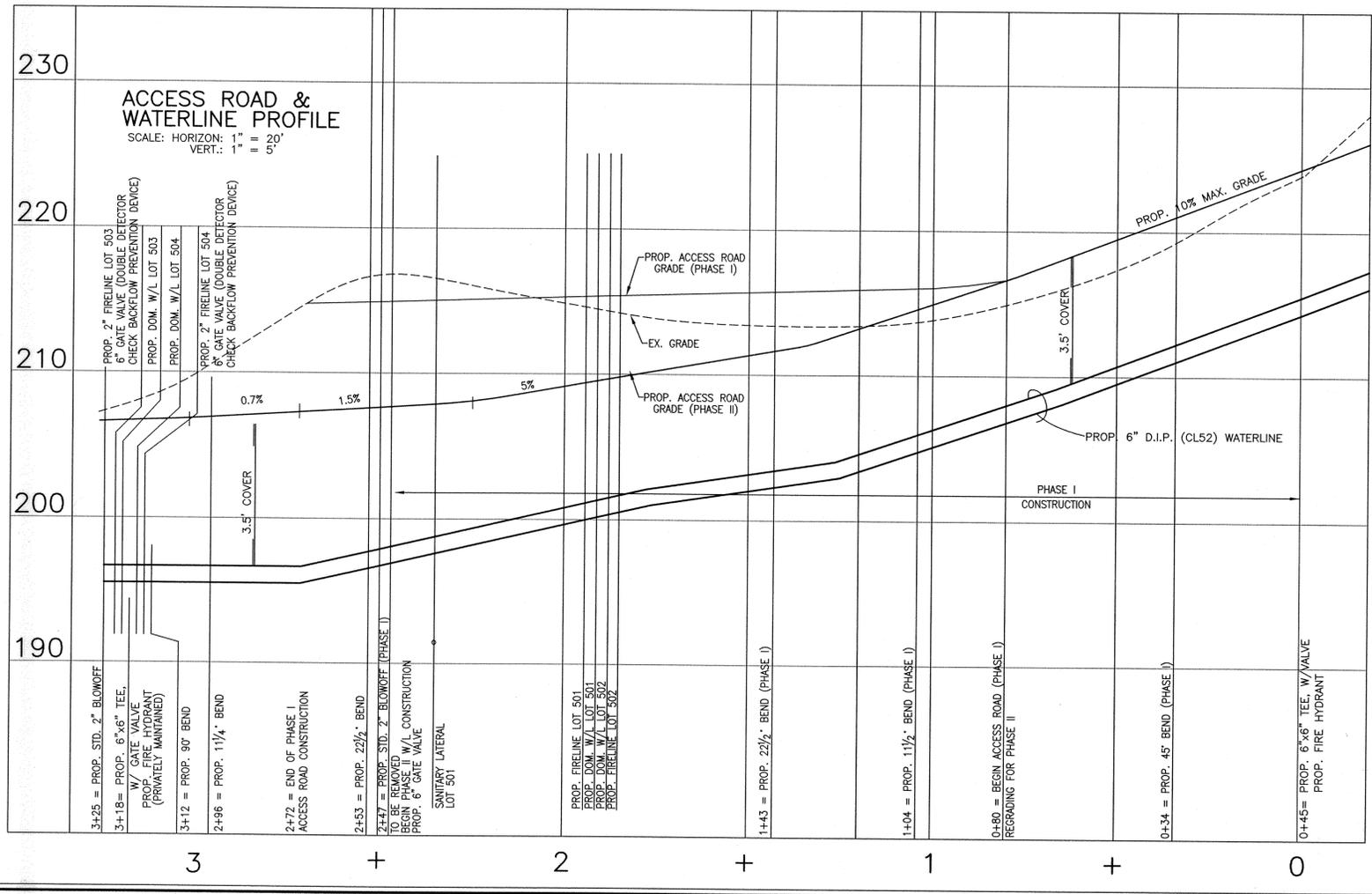
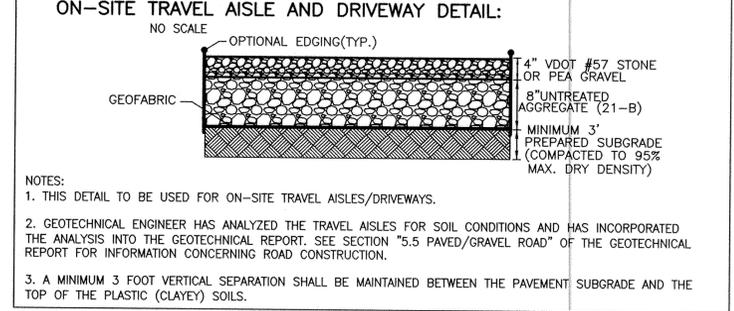
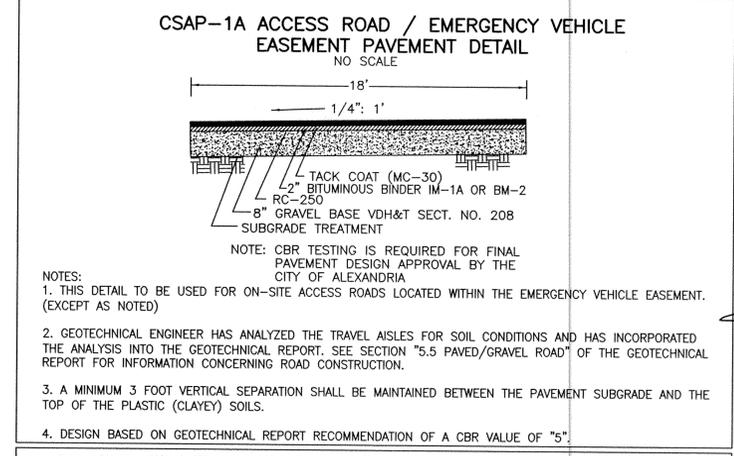
ASPHALT PAVEMENT DESIGN:
 DESIGN CBR RESILIENCY FACTOR SSV REQ'D. "D" FROM NOMOGRAPH
 3.35 1.5 5.0 8.5

THREE LAYER PAVEMENT SYSTEM (CSAP-1A)
 SURFACE COURSE: 1.25" SM-2A x 2.25 = 2.8
 INTERMEDIATE COURSE: 2" BM-2 OR IM-1A x 2.25 = 4.5
 BASE COURSE: 8" UNTREATED AGGREGATE x 0.60 = 4.8
 TOTAL "D" PROPOSED = 12.1

THE THICKNESS INDEX PROPOSED, UTILIZING THE CSAP-1A PAVEMENT SECTION = 12.1 > 8.5 REQUIRED. THEREFORE, THIS DESIGN IS ADEQUATE.

PAVEMENT AND SUBBASE NOTE:
 PAVEMENT DESIGN IS BASED ON A PRELIMINARY CBR VALUE OF 5 AS PER GEOTECHNICAL REPORT. FINAL CBR TESTING IS REQUIRED TO DETERMINE ACTUAL DESIGN CBR'S. APPROVAL OF THE FINAL PAVING DESIGN IS REQUIRED BY THE CITY OF ALEXANDRIA. ALL SUBBASE AND BASE MATERIAL WITHIN PAVEMENT AREAS AND TO A DISTANCE OF AT LEAST 2 FEET BEYOND THE PAVEMENT PERIMETER AND ALL SUBSEQUENT LIFTS OF ENGINEERED FILL WILL REQUIRE COMPACTION TO A MINIMUM OF 95 PERCENT OF MAXIMUM DRY DENSITY AS DETERMINED IN ACCORDANCE WITH ASTM SPECIFICATION D698, STANDARD PROCTOR METHOD.

A SMOOTH GRADE SHALL BE MAINTAINED FROM THE CENTERLINE OF THE EXISTING ROAD TO THE PROPOSED CURB & GUTTER OR ACROSS NEWLY PAVED AREAS TO PRECLUDE THE FORMING OF FALSE GUTTERS AND/OR THE PONDING OF ANY WATER IN THE ROADWAY OR IN PARKING AREAS.



WATER SERVICE INSTALLATION NOTES:
 1. VIRGINIA - AMERICAN WATER COMPANY WILL INSTALL AND MAINTAIN ALL WATERMANS, SERVICE CONNECTIONS AND METER SETTINGS.
 2. PERMITS FOR THE INSTALLATION OF WATER FACILITIES ON-SITE MUST BE OBTAINED BY THE DEVELOPER FROM THE ALEXANDRIA DEPARTMENT OF TRANSPORTATION AND ENVIRONMENTAL SERVICES.
 3. ALL WATER FACILITY CONSTRUCTION, INCLUDING BACKFLOW PREVENTION DEVICES, SHALL CONFORM TO VIRGINIA - AMERICAN WATER COMPANY STANDARDS AND SPECIFICATIONS, ALEXANDRIA CITY STANDARDS AND THE STATE BOARD OF HEALTH WATERWORKS REGULATIONS.
 4. LOCATION AND DEPTH OF THE EXISTING WATERMAIN IS TO BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
 5. FIRE SERVICE LINES SHALL BE A MINIMUM OF 2".
 6. A DOUBLE DETECTOR CHECK BACKFLOW PREVENTION DEVICE IS REQUIRED ON ANY SERVICE 1 1/2" OR LARGER. FIRE SERVICE LINES REQUIRE A DOUBLE DETECTOR CHECK BACKFLOW VALVE.
 7. ANY FIRE HYDRANTS LOCATED OUTSIDE OF THE PUBLIC RIGHT-OF-WAY SHALL BE PRIVATELY MAINTAINED.
 8. ALL WATER MAINS SHOWN OR PROPOSED WITH THIS PLAN SHALL BE OWNED AND MAINTAINED BY VIRGINIA AMERICAN WATER COMPANY.

GRAVEL TRAVEL AISLE MAINTENANCE NOTE:
 AN AGREEMENT WITH THE GEOTECHNICAL ENGINEER (AVER TECHNOLOGIES, INC. 13104 QUEENSDALE DR. WOODBRIDGE VA. 22193) WILL BE EXECUTED FOR A 10 YEAR PERIOD TO ENSURE THE GRAVEL ROAD MAINTAINS H20 LOADING STANDARDS. AN ANNUAL TEST AND REPORT WILL BE PERFORMED AND PROVIDED TO THE CITY OF ALEXANDRIA CODE ENFORCEMENT BRANCH AND TO THE HOMEOWNERS ASSOCIATION FOR VERIFICATIONS. RECOMMENDATIONS WILL BE MADE AT THAT TIME BY THE GEOTECHNICAL ENGINEER AND COORDINATED WITH THE CITY AND THE HOMEOWNERS ASSOCIATION.

LEGEND

ITEM	EXISTING	PROPOSED
CURB & GUTTER	—	—
CONC. WALK	—	—
FIRE HYDRANT	—	—
STRUCTURES	—	—
WATER MAINS	—	—
GAS MAINS	—	—
TELEPHONE LINES	—	—
STORM SEWER	—	—
SANITARY SEWER	—	—
PAVING	—	—
FENCES	—	—
POWER LINES	—	—
SPOT ELEVATIONS	+124.5	+124.5
CONTOURS	-124	-124
BLDG. ENTRANCE	△	▲

PAVER DETAIL NOTE:
 SEE SHEET 10 FOR PAVEMENT DETAIL.

DRIVEWAY CONSTRUCTION MATERIAL NOTE:
 THE PROPOSED DRIVEWAYS (AREAS OUTSIDE OF THE EMERGENCY VEHICLE EASEMENT) SHALL BE CONSTRUCTED OR PAVED OR GRAVEL TO THE SATISFACTION OF THE DIRECTORS OF T&ES AND P&Z. THE INSTALLATION OF PAVERS SHALL BE PART OF THE "LOW IMPACT DEVELOPMENT" PROCEDURES.

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EXISTING UTILITIES SHOWN ON THIS PLAN TAKEN FROM AVAILABLE RECORDS AND/OR FROM FIELD OBSERVATIONS. FOR EXACT LOCATIONS OF EXISTING UNDERGROUND UTILITIES, NOTIFY "MISS UTILITY" AT 1-800-257-7777, 72 HOURS BEFORE THE START OF ANY EXCAVATION OR CONSTRUCTION.

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ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS AND SPECIFICATIONS OF CITY OF ALEXANDRIA, VIRGINIA.
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DSUP #2003-0036
**ESI
 PEER REVIEW**

APPROVED
 SPECIAL USE PERMIT NO. 2003-0036
 DEPARTMENT OF PLANNING & ZONING

DIRECTOR: [Signature] DATE: 9/26/07
 DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES
 SITE PLAN NO. [Signature] DATE: 9/26/07
 DIRECTOR: [Signature]

CHAIRMAN, PLANNING COMMISSION: _____ DATE: _____
 DATE RECORDED: _____
 INSTRUMENT NO. _____ DEED BOOK NO. _____ DATE: _____

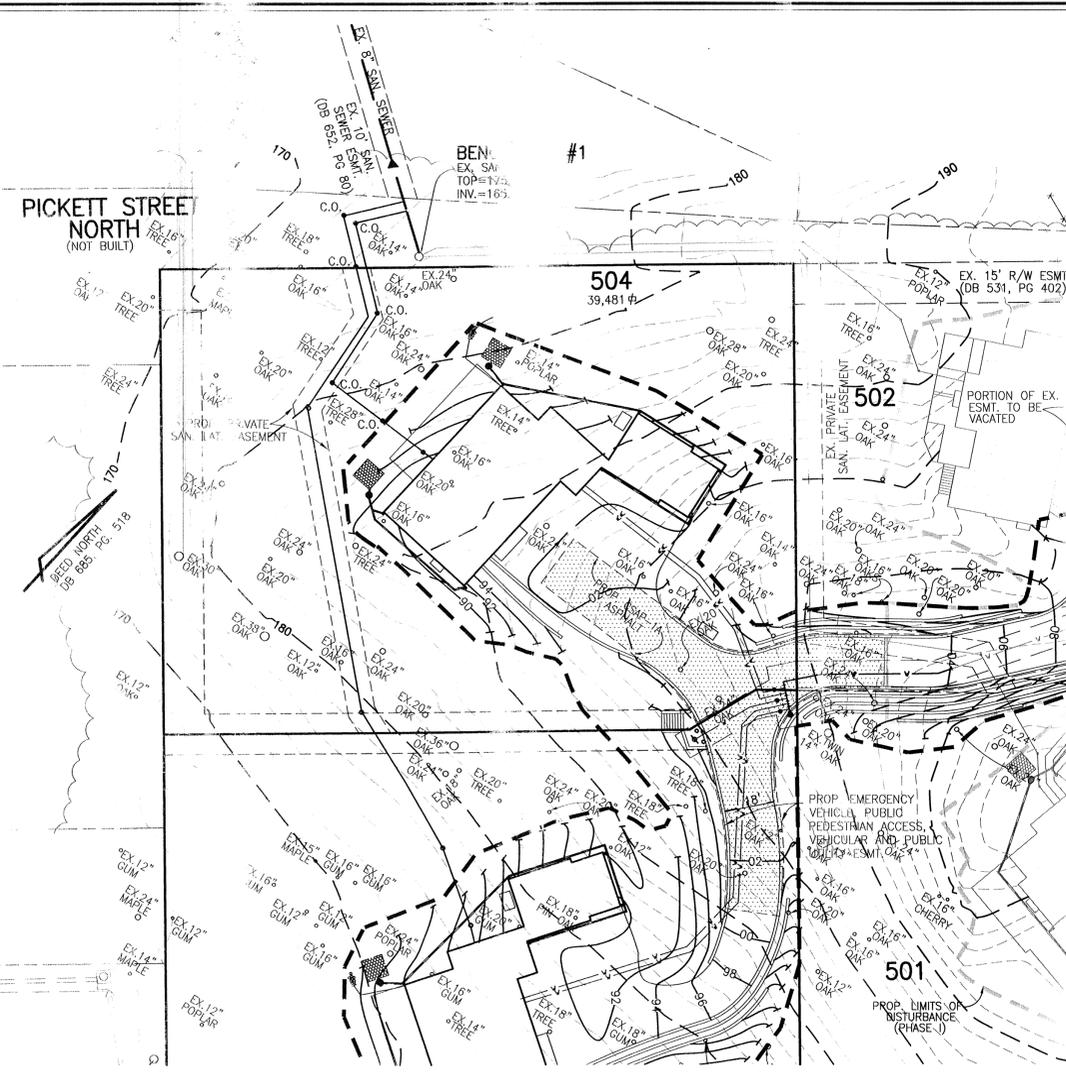
R.C. FIELDS, JR. & ASSOCIATES
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 718 Jefferson Street
 Alexandria, Virginia 22314 (703) 549-6422

COMMONWEALTH OF VIRGINIA
 RONALD J. KELLER
 NO. 1457-B
 22 OCT. 2004
 LAND SURVEYOR

PLAN AND PROFILE; ACCESS ROAD & WATERLINE
PICKETT'S RIDGE II
 CITY OF ALEXANDRIA, VIRGINIA

DATE	REVISION
3/31/04	MIN. SUB. REVIEW
7/29/04	PER COMMENTS
8/10/04	PER COMMENTS
10/22/04	FINAL MFLARS
9/20/05	COMBINE ROAD/DWLG
10/14/05	PER COMMENTS
11/28/05	FIRE HYDRANT LOCATION
6/12/07	GRAVEL DRIVE (EVE)

DESIGN: P.A.W.
 DRAWN: R.K.B.
 SCALE: AS NOTED
 DATE: MARCH 4, 2004
 SHEET 8 OF 17
 FILE: 00-02



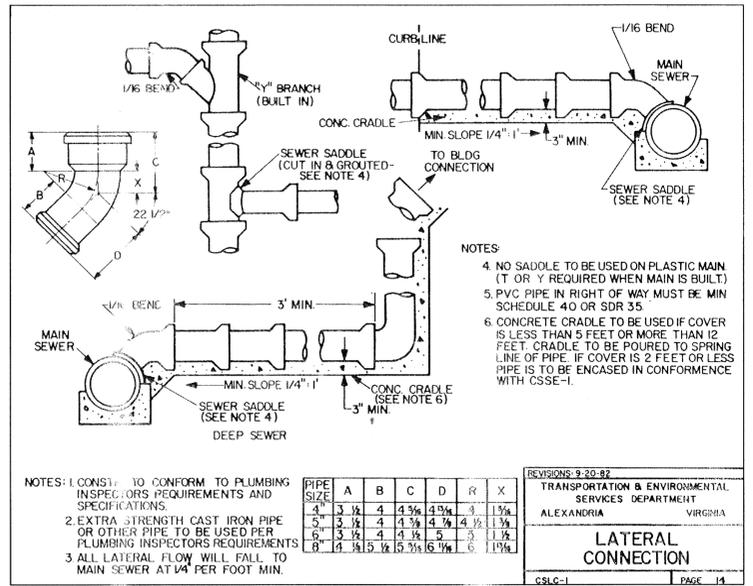
PLAN VIEW
SCALE: 1" = 30'

SANITARY LATERAL LOT 504
SCALE: HORIZ. 1"=30', VERT. 1"=5'

SANITARY LATERAL LOT 503
SCALE: HORIZ. 1"=30', VERT. 1"=5'

195									
190									
185									
180									
175									
170									
165									

195									
190									
185									
180									
175									
170									
165									



NOTES:

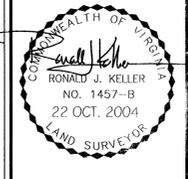
- CONSTRUCTION TO CONFORM TO PLUMBING INSPECTORS REQUIREMENTS AND SPECIFICATIONS.
- EXTRA STRENGTH CAST IRON PIPE OR OTHER PIPE TO BE USED PER PLUMBING INSPECTORS REQUIREMENTS
- ALL LATERAL FLOW WILL FALL TO MAIN SEWER AT 1/4" PER FOOT MIN.

PIPE SIZE	A	B	C	D	R	X
4"	3 1/2	4	4 3/4	4 5/8	3	1 3/4
5"	3 3/4	4	4 3/4	4 7/8	4	1 3/4
6"	3 3/4	4	4 3/4	5	5	1 3/4
8"	4	4 1/2	5	5 1/2	6	1 1/2

REVISIONS: 9-20-92
TRANSPORTATION & ENVIRONMENTAL SERVICES DEPARTMENT
ALEXANDRIA VIRGINIA
LATERAL CONNECTION
CSLC-1 PAGE 14

SANITARY LATERAL TRENCHLESS CONSTRUCTION NOTE
THIS PROJECT WILL UTILIZE "TRENCHLESS" CONSTRUCTION TECHNIQUES FOR THE INSTALLATION OF THE SANITARY LATERALS. THE CONTRACTOR SHALL UTILIZE A DIRECTIONAL BORING MACHINE OR OTHER SUITABLE EQUIPMENT WHICH WILL ALLOW FLEXIBILITY IN THE INSTALLATION OF THE LATERALS WHERE THEY WILL HAVE THE LEAST IMPACT ON EXISTING TREES. "TRENCHLESS" CONSTRUCTION TECHNIQUES WILL MINIMIZE OPEN CUTTING ON THE SITE. THESE CONSTRUCTION TECHNIQUES WILL NOT REQUIRE EROSION / SEDIMENT CONTROLS BECAUSE THERE IS NO OPEN CUTTING OF THE GROUND. THE CONTRACTOR SHALL PROVIDE DETAILED INFORMATION CONCERNING "TRENCHLESS" CONSTRUCTION TECHNIQUES TO T.A.E.S. AND CONSTRUCTION AND INSPECTIONS DIVISION PRIOR TO PERFORMING WORK.

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PLAN AND PROFILE; SANITARY LATERALS
PICKETT'S RIDGE II
CITY OF ALEXANDRIA, VIRGINIA

DSUP #2003-0036

ESI
PEER REVIEW

APPROVED
SPECIAL USE PERMIT NO. 2003-0036
DEPARTMENT OF PLANNING & ZONING
DIRECTOR: [Signature] DATE: 11/23/04
DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES
SITE PLAN NO. 1212104
DIRECTOR: [Signature] DATE: 12/2/04
DATE RECORDED: 10/22/04

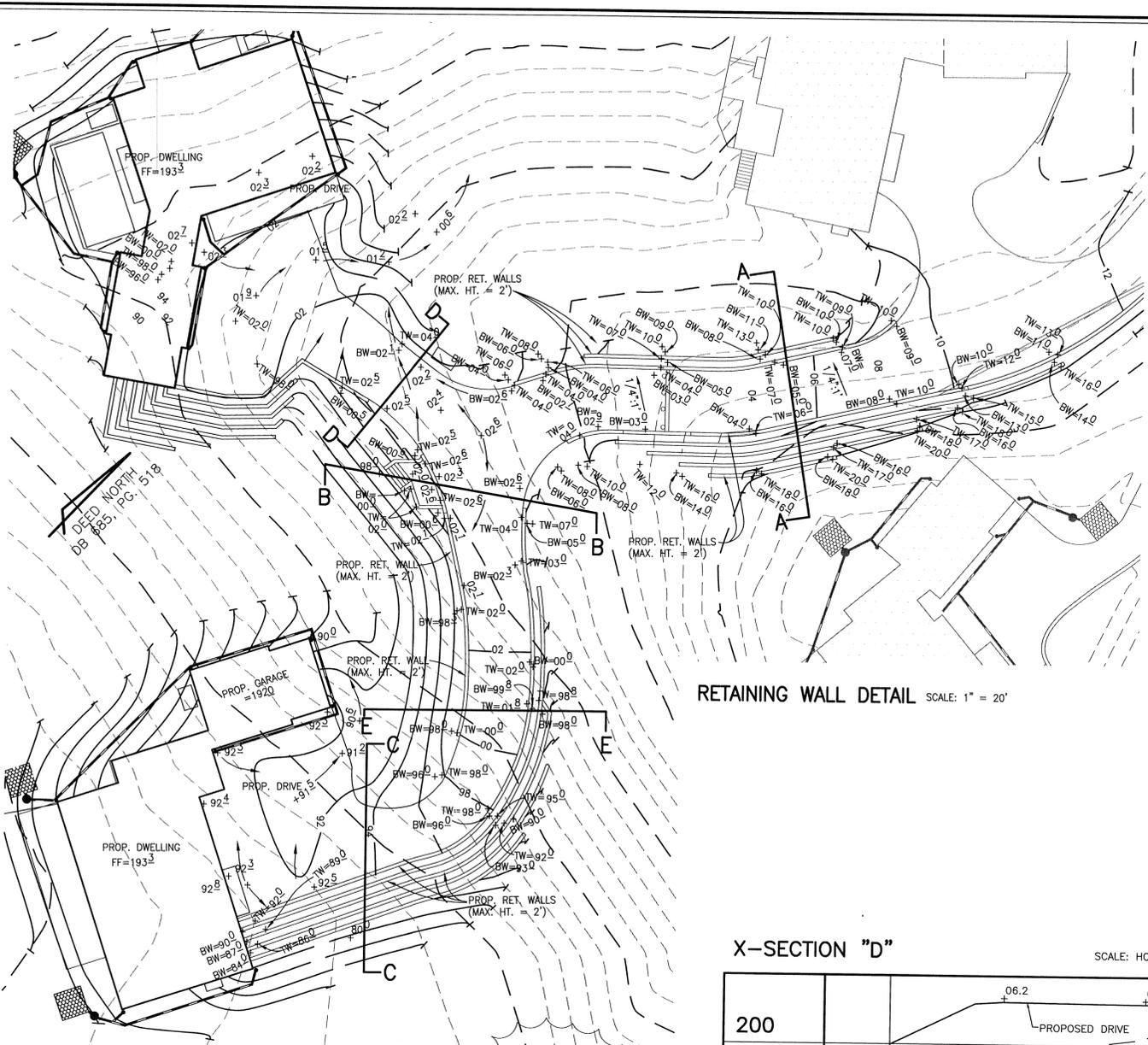
ITEM	EXISTING	PROPOSED
CURB & GUTTER	—	—
CONC. WALK	WALK	—
FIRE HYDRANT	○	●
STRUCTURES	—	—
WATER MAINS	—W—	—W—
GAS MAINS	—G—	—G—
TELEPHONE LINES	—T—	—T—
STORM SEWER	—	—
SANITARY SEWER	—	—
PAVING	—	—
FENCES	—	—
POWER LINES	—	—
SPOT ELEVATIONS	+124.5	+124.5
CONTOURS	—124—	—124—
BLDG. ENTRANCE	△	▲

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DATE	REVISION
5/31/04	MIN. SUB. REVIEW
5/12/04	PER COMMENTS
7/29/04	PER COMMENTS
9/10/04	PER COMMENTS
10/22/04	FINAL M.Y.A.S.

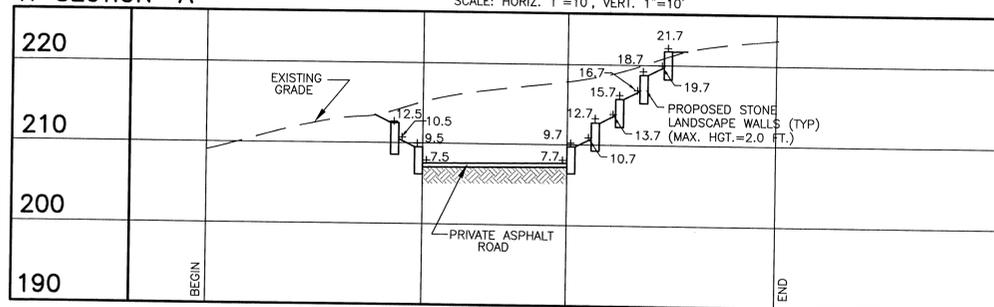
DESIGN: P.A.W.
DRAWN: R.K.B.
SCALE: 1" = 30'
DATE: MARCH 4, 2004
SHEET 9 OF 17
FILE: 00-02

DSP #2003-0036
Pickett's Ridge II

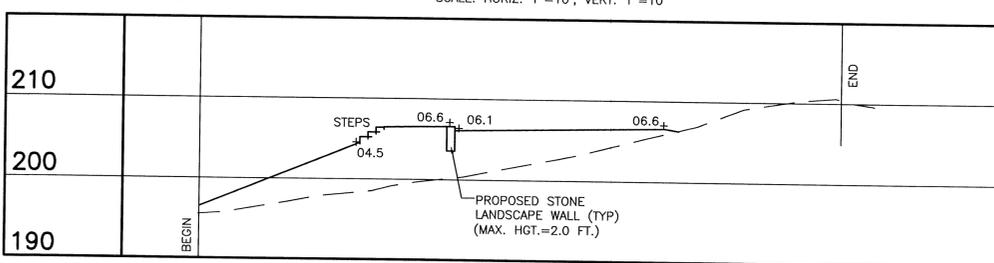


RETAINING WALL DETAIL SCALE: 1" = 20'

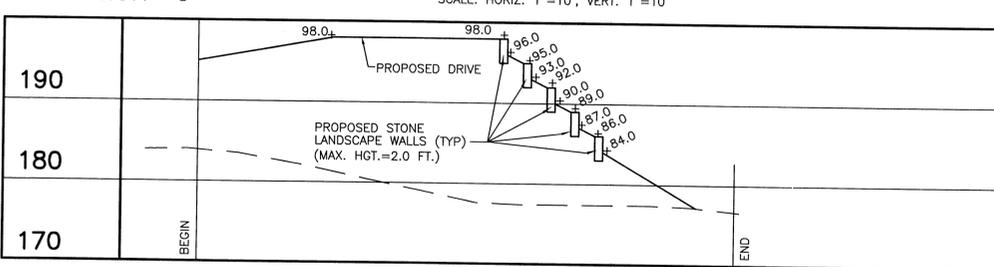
X-SECTION "A"



X-SECTION "B"

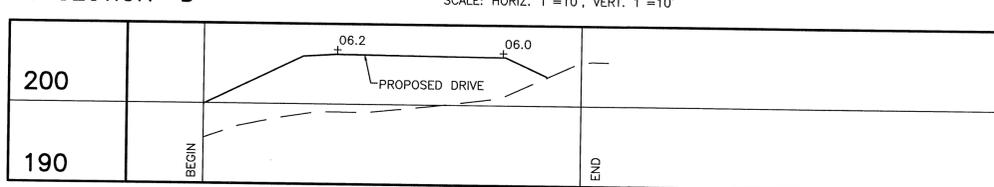


X-SECTION "C"

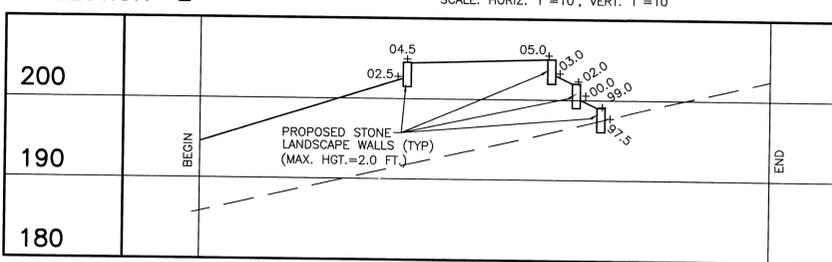


PRIVATE ROAD NOTE:
SEE SHEET 8 FOR PRIVATE ACCESS ROAD DETAIL.

X-SECTION "D"



X-SECTION "E"



RETAINING WALL NOTE:

THE RETAINING WALLS PROPOSED WITH THIS PLAN SHALL BE CONSTRUCTED OF "PENNSYLVANIA FIELDSTONE" PROVIDED BY LUCK STONE, 1700 S. STERLING BLVD., STERLING VA. 20164, OR APPROVED EQUIVARIANT. ALL RETAINING WALLS SHOWN ON THIS PLAN ARE FOR GRADING PURPOSES ONLY. ACTUAL MATERIALS AND DESIGN SPECIFICATIONS BY OTHERS. SEPARATE PERMITS SHALL BE SUBMITTED AT THE TIME OF RETAINING WALL CONSTRUCTION, IF REQUIRED. NO RETAINING WALLS PROPOSED BY THIS PLAN EXCEED 24" IN HEIGHT. SHOULD ANY CHANGES TO THE SITE GRADING RESULT IN RETAINING WALLS GREATER THAN 4" IN HEIGHT THEN THE RETAINING WALLS SHALL BE SCREENED IN ACCORDANCE WITH THE DSUP CONDITIONS. ANY PROTECTIVE FENCING OR RAILING ATOP THE RETAINING WALLS SHALL BE VISUALLY UNOBTRUSIVE AND OF A DECORATIVE METAL MATERIAL, TO THE SATISFACTION OF THE DIRECTORS OF P&Z AND CODE ENFORCEMENT.

LEGEND

ITEM	EXISTING	PROPOSED
CURB & GUTTER		
CONC. WALK		
FIRE HYDRANT		
STRUCTURES		
WATER MAINS		
GAS MAINS		
TELEPHONE LINES		
STORM SEWER		
SANITARY SEWER		
PAVING		
FENCES		
POWER LINES		
SPOT ELEVATIONS	+124.5	+124.5
CONTOURS	-124	-124
BLDG. ENTRANCE		

DSUP #2003-0036

ESI
PEER REVIEW

APPROVED
SPECIAL USE PERMIT NO. 2003-0036
DEPARTMENT OF PLANNING & ZONING

DIRECTOR _____ DATE _____
DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES

SITE PLAN NO. *utilites*
DIRECTOR _____ DATE _____

CHAIRMAN, PLANNING COMMISSION _____ DATE _____
DATE RECORDED _____

INSTRUMENT NO. _____ DEED BOOK NO. _____ DATE _____

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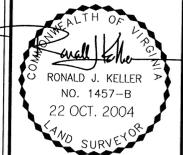
EXISTING UTILITIES SHOWN ON THIS PLAN TAKEN FROM AVAILABLE RECORDS AND/OR FROM FIELD OBSERVATIONS.

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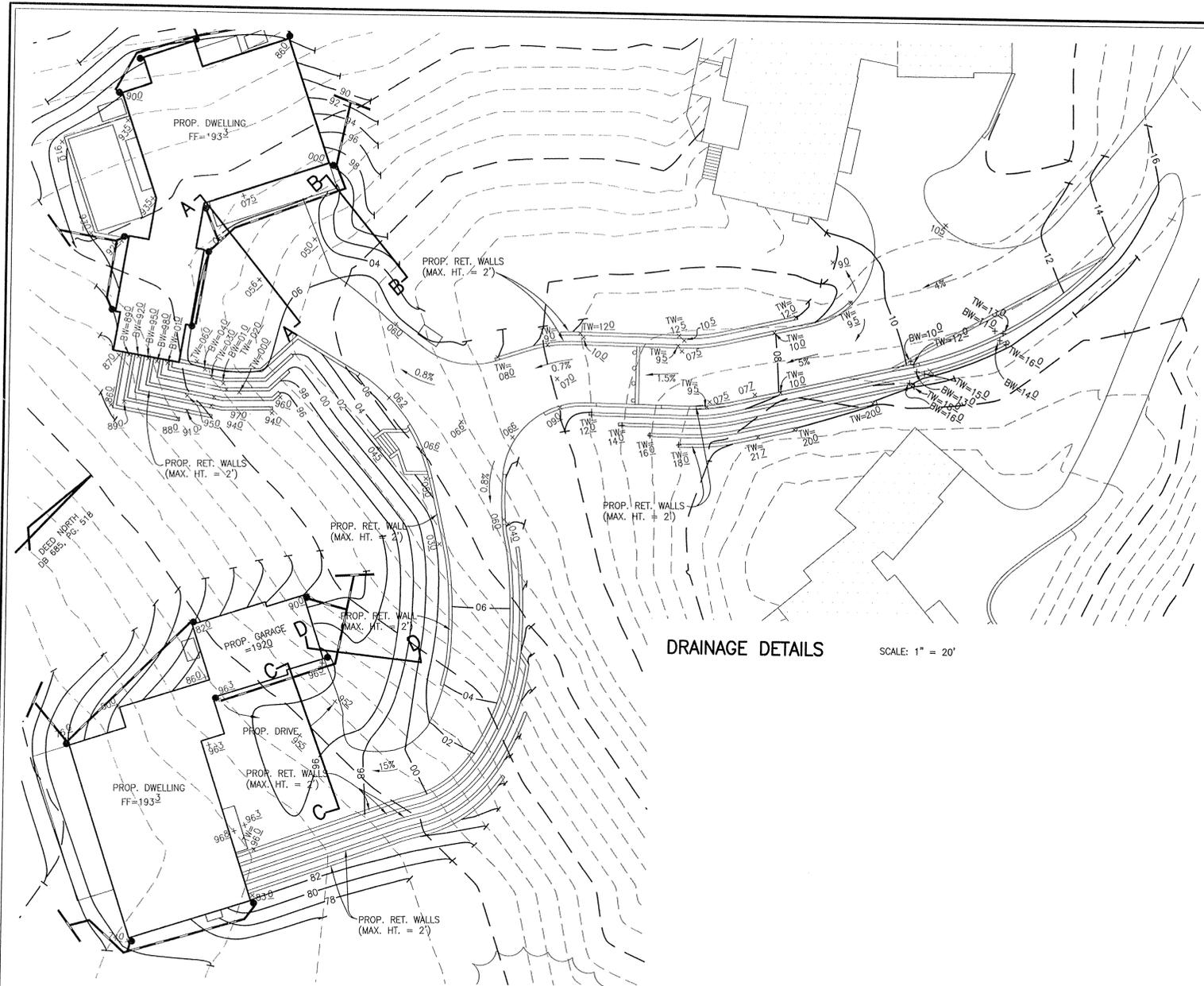
RETAINING WALL DETAILS
PICKETT'S RIDGE II
CITY OF ALEXANDRIA, VIRGINIA

DATE	REVISION
5/12/04	PER COMMENTS
7/29/04	PER COMMENTS
9/10/04	PER COMMENTS
10/22/04	FINAL MYLARS
9/20/05	COMBINE ROAD/DWLG
10/14/05	PER COMMENTS

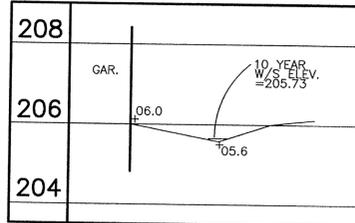
DESIGN: P.A.W.
DRAWN: R.K.B.
SCALE: AS NOTED
DATE: MARCH 4, 2004
SHEET 10 OF 17
FILE: 00-02

DSP #2003-0036
Pickett's Ridge II

DSP #2003-0036 R



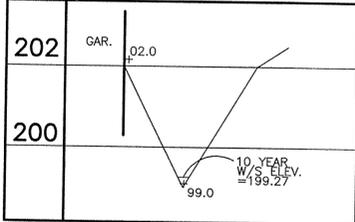
X-SECTION "A" SCALE: HORIZ. 1"=20', VERT. 1"=2'



$I_{10} = 9.0$
 $A = 0.060$ ac.
 $C = 0.9$
 $n = 0.030$
 $s = 1.2\%$
 $Q_{10} = 0.46$ cfs
 $v = 1.6$ fps

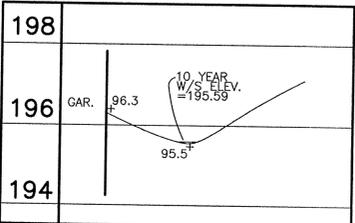
ALLOWABLE VELOCITIES FOR ERODIBLE LININGS:
 EARTH - NO VEGETATION
 STIFF CLAY CLEAR WATER WATER CARRYING WATER CARRYING
 CLAY SOILS 3.75 FPS FINE SILTS SAND AND GRAVEL 5.0 FPS 3.0 FPS
 (A-7-6 SOILS)
 NOTE: VELOCITIES FOR SOIL TYPE WERE NON-EROSIVE. 5.0 FPS IS THE PERMISSIBLE VELOCITY FOR EARTH LININGS PER E&S CONTROL HANDBOOK.

X-SECTION "B" SCALE: HORIZ. 1"=20', VERT. 1"=2'



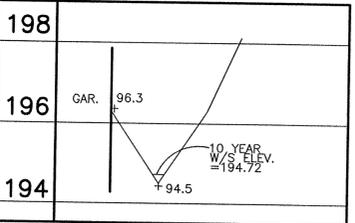
$I_{10} = 9.0$
 $A = 0.106$ ac.
 $C = 0.90$
 $n = 0.030$
 $s = 5.0\%$
 $Q_{10} = 0.86$ cfs
 $v = 2.8$ fps

X-SECTION "C" SCALE: HORIZ. 1"=20', VERT. 1"=2'



$I_{10} = 9.0$
 $A = 0.064$ ac.
 $C = 0.90$
 $n = 0.015$
 $s = 2.76\%$
 $Q_{10} = 0.52$ cfs
 $v = 2.46$ fps

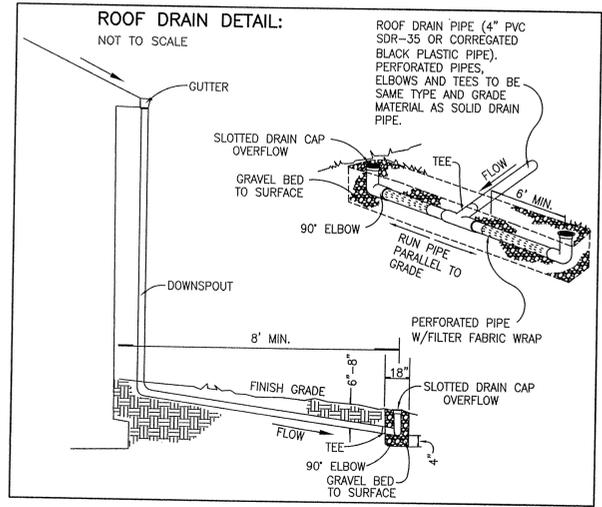
X-SECTION "D" SCALE: HORIZ. 1"=20', VERT. 1"=2'



$I_{10} = 9.0$
 $A = 0.099$ ac.
 $C = 0.9$
 $n = 0.030$
 $s = 4.8\%$
 $Q_{10} = 0.8$ cfs
 $v = 2.5$ fps

FOR CLAY SOILS VELOCITIES < 3.75 FPS ARE CONSIDERED ACCEPTABLE AND NON-EROSIVE

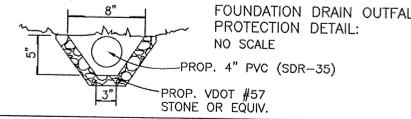
DRAINAGE DETAILS SCALE: 1" = 20'



FOUNDATION DRAIN CALCULATIONS:

LOT 503
 INV. @ DWELLING = 170.0
 INV. @ PIPE END = 169.0
 LENGTH = 25'
 SLOPE = 4.0%
 PIPE = 4" PVC (SDR-35)
 LOT 504
 INV. @ DWELLING = 179.5
 INV. @ PIPE END = 178.5
 LENGTH = 25'
 SLOPE = 4.0%
 PIPE = 4" PVC (SDR-35)

USING AN "n" VALUE OF 0.015, THE MAXIMUM FLOW RATE FROM THE FOUNDATION DRAIN IS 0.37 cfs.
 FOUNDATION DRAIN OUTFALL PROTECTION:
 RIP-RAP CHANNEL
 SLOPE = 8% MAX.
 LENGTH = 3' MIN.
 $n = 0.030$
 VELOCITY = 3.5 fps
 FOR CLAYEY SOILS VELOCITY < 3.8 FPS CONSIDERED NON-EROSIVE



ITEM	EXISTING	PROPOSED
CURB & GUTTER		
CONC. WALK	WALK	
FIRE HYDRANT		
STRUCTURES		
WATER MAINS	W	W
GAS MAINS	G	G
TELEPHONE LINES	T	T
STORM SEWER		
SANITARY SEWER		
PAVING		
FENCES		
POWER LINES		
SPOT ELEVATIONS	+124.5	+124.5
CONTOURS	-124	-124
BLDG. ENTRANCE		

DSUP #2003-0036

ESI
 PEER REVIEW

APPROVED
 SPECIAL USE PERMIT NO. 2003-0036
 DEPARTMENT OF PLANNING & ZONING
 DIRECTOR DATE
 DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES
 SITE PLAN NO. 5/24/04
 DIRECTOR DATE
 CHAIRMAN, PLANNING COMMISSION DATE
 DATE RECORDED
 INSTRUMENT NO. DEED BOOK NO. DATE

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ON-SITE DRAINAGE X-SECTIONS & ROOF DRAIN DETAILS
PICKETT'S RIDGE II
 CITY OF ALEXANDRIA, VIRGINIA

DATE	REVISION
5/12/04	PER COMMENTS
7/29/04	PER COMMENTS
9/10/04	PER COMMENTS
10/22/04	FINAL MYLARS
9/20/05	COMBINED ROAD/DWLG
10/14/05	PER COMMENTS
3/21/06	REMOVE INFIL BASIN
3/22/06	DOWNSPOUTS

DESIGN: P.A.W.
 DRAWN: R.K.B.
 SCALE: AS NOTED
 DATE: MARCH 4, 2004
 SHEET 11 OF 17
 FILE: 00-02

DSP #2003-0036
 Pickett's Ridge II

2003-0036

TREE NOTES:

IF ANY OF THE LARGER CALIPER TREES (>12") ARE DAMAGED OR DESTROYED DURING THE CONSTRUCTION PROCESS THE APPLICANT SHALL REPLACE THE TREE(S) WITH THE LARGEST CALIPER TREE(S) OF COMPARABLE SPECIES THAT ARE AVAILABLE OR CAN BE TRANSPLANTED TO THE SATISFACTION OF THE CITY ARBORIST AND DIRECTOR OF P&Z; THE REMAINING TREE CALIPER SHALL BE PLANTED ON-SITE OR ADJACENT TO THE SITE. IN ADDITION, A FINE WILL BE PAID BY THE APPLICANT IN AN AMOUNT NOT TO EXCEED \$10,000 FOR EACH TREE THAT IS DESTROYED IF THE APPROVED TREE PROTECTION METHODS HAVE NOT BEEN FOLLOWED. THE REPLACEMENT TREES SHALL BE INSTALLED AND IF APPLICABLE THE FINE SHALL BE PAID PRIOR TO THE ISSUANCE OF THE LAST CERTIFICATE OF OCCUPANCY PERMIT.
 PLACE UNDERGROUND UTILITIES AND UTILITY STRUCTURES UNDER PROPOSED STREETS OR AWAY FROM PROPOSED LANDSCAPE AREAS TO THE EXTENT FEASIBLE, TO MINIMIZE ANY IMPACT ON THE ROOT SYSTEMS OF THE PROPOSED LANDSCAPING, TO THE SATISFACTION OF THE DIRECTOR OR T&ES AND THE CITY ARBORIST.
 ALL LANDSCAPING SHALL BE MAINTAINED IN GOOD CONDITION AND REPLACED AS NEEDED. ALL PLANT MATERIALS AND SPECIFICATIONS SHALL BE IN ACCORDANCE WITH THE CURRENT AND MOST UP TO DATE EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK (ANSI Z60.1) AS PRODUCED BY THE AMERICAN ASSOCIATION FOR NURSERYMEN; WASHINGTON, D.C.

TREE PROTECTION NOTE:

THE CONTRACTOR AND/OR THE APPLICANT SHALL FOLLOW RECOMMENDED HORTICULTURAL PRACTICES TO INSURE THE HEALTH AND VITALITY OF THE TREES DESIGNATED FOR PROTECTION PRIOR TO, DURING AND AFTER CONSTRUCTION OF THE PROPOSED HOUSES. IN THE EVENT TREES WHICH ARE PROTECTED, ARE DAMAGED OR DIE, OTHER THAN AS THE RESULT OF DISEASE OR ACTS OF GOD, REPLACEMENT TREES MEASURING 2 1/2" IN CALIPER SHALL BE PLANTED FOR EACH INCH OF CALIPER THAT IS LOST. NO CONSTRUCTION MATERIALS OR EQUIPMENT SHALL BE STORED OR STAGED WITHIN THE DRIP LINES OF TREES DESIGNATED FOR PROTECTION. ANY REQUIRED CONSTRUCTION OCCURRING WITHIN THE DRIP LINE OF TREES DESIGNATED FOR SAVING SHALL FOLLOW RECOMMENDED GUIDELINES AS ESTABLISHED BY THE INDEPENDENT ARBORIST. A COPY OF THE INDEPENDENT ARBORIST REPORT SHALL BE PROVIDED TO THE CONTRACTOR PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES.

LANDSCAPE NOTES:

- ALL LANDSCAPING AND TREE PLANTINGS REQUIRED BY THIS PLAN SHALL CONFORM TO THE CURRENT STANDARDS AND SPECIFICATIONS OF THE AMERICAN STANDARDS FOR NURSERY STOCK (ANSI Z60.1).
- FOR DETAILS AND SPECIFICATIONS FOR THE INSTALLATION OF ALL REQUIRED LANDSCAPE PLANTINGS REFER TO THE LANDSCAPE SPECIFICATION GUIDELINES, 4TH EDITION, 1993 BY THE LANDSCAPE CONTRACTORS ASSOCIATION FOR THE DISTRICT OF COLUMBIA AND VIRGINIA.
- ANY TREE PROTECTION MEASURES REQUIRED BY THIS PLAN SHALL BE PROVIDED TO THE SATISFACTION OF THE CITY ARBORIST.
- VEGETATION DESIGNATED FOR PROTECTION SHALL RECEIVE ENHANCED LEVEL OF MAINTENANCE THROUGHOUT THE ENTIRE CONSTRUCTION PERIOD. MAINTENANCE SHALL INCLUDE, BUT NOT BE LIMITED TO, ITEMS SUCH AS: MONITORING HEALTH, GROWTH AND VIGOR OF VEGETATION, SELECTIVE PRUNING, WATERING, FERTILIZATION, INSTALLATION OF MULCH AND IN-KIND REPLACEMENT OF SEVERELY OR TERMINALLY DAMAGED VEGETATION. MAINTENANCE SHALL BE DIRECTED BY THE PROJECT ARBORIST TO THE SATISFACTION OF THE DIRECTOR OF RECREATION, PARKS AND CULTURAL ACTIVITIES.
- NO CONSTRUCTION DEBRIS, FILL AND/OR MATERIALS SHALL BE PLACED OR STORED BENEATH THE CANOPY COVER OF PROTECTED TREES.
- TREES SHALL BE LIMBED UP TO 6 FEET AS THEY MATURE. LOW GROWING PLANTS AND SHRUBS SHALL NOT EXCEED 3 FEET IN HEIGHT WHEN THEY REACHED MATURITY.
- COORDINATE FINAL TREE LOCATIONS WITH THE CITY ARBORIST. LOCATE TREES SO THEY DO NOT CONFLICT WITH THE PROPOSED SITE LIGHTING PLAN.
- THE EXISTING TREES TO BE REMOVED WILL BE EVALUATED TO DETERMINE IF THEY ARE ABLE TO BE SUCCESSFULLY TRANSPLANTED. THIS EVALUATION WILL CONSIDER THE SPECIES OF THE TREE AND THE CURRENT CONDITION AND HEALTH OF THE TREE.
- ALL LANDSCAPING SHALL BE MAINTAINED IN GOOD CONDITION AND REPLACED AS NEEDED. ALL PLANT SPECIFICATIONS SHALL BE IN ACCORDANCE WITH THE CURRENT AND MOST UP TO DATE EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK (ANSI Z60.1) AS PRODUCED BY THE AMERICAN ASSOCIATION FOR NURSERYMEN; WASHINGTON, D.C..
- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH LANDSCAPE SPECIFICATIONS GUIDELINES 4TH EDITION AS PRODUCED BY THE LANDSCAPE CONTRACTORS ASSOCIATION (LCA) OF MARYLAND, DISTRICT OF COLUMBIA AND VIRGINIA; GAITHERSBURG, MARYLAND.
- ALL MATERIALS' SPECIFICATIONS WILL BE IN ACCORDANCE WITH THE INDUSTRY STANDARD FOR GRADING PLANT MATERIAL - THE AMERICAN STANDARD FOR NURSERY STOCK (ANSI Z60.1).
- MAINTENANCE OF ALL TREES AND LANDSCAPE MATERIALS WILL CONFORM TO THE ACCEPTED INDUSTRY STANDARDS SET FORTH BY THE LANDSCAPE CONTRACTORS ASSOCIATION, AMERICAN SOCIETY OF LANDSCAPE ARCHITECTS, THE INTERNATIONAL SOCIETY OF ARBORICULTURE, AND THE AMERICAN NATIONAL STANDARDS INSTITUTE.

PROTECTION AND PRESERVATION OF EXISTING VEGETATION

A. PROTECTION AND PRESERVATION METHODS
 VEGETATION DESIGNATED FOR PROTECTION AND/OR PRESERVATION SHALL BE ENCLOSED IN A PROTECTION ZONE WHICH ESTABLISHES LIMITS OF CONSTRUCTION DISTURBANCE TO THE ROOT AREA OF DESIGNATED PLANT MATERIAL. ALL PROTECTION ZONES AND MEASURES SHALL BE ESTABLISHED TO THE SATISFACTION OF THE DIRECTOR OF RECREATION, PARKS AND CULTURAL ACTIVITIES. FENCING SHALL BE INSTALLED AT THE PERIMETER OF ALL PROTECTION ZONES. FENCING SHALL BE INSTALLED IN ACCORDANCE WITH THE MOST RECENT PUBLICATION OF THE 'CITY OF ALEXANDRIA VEGETATION PROTECTION/PRESERVATION DETAIL' APPROVED MATERIALS FOR FENCING SHALL BE IN ACCORDANCE WITH THE FOLLOWING MINIMUM REQUIREMENTS:
 1) WITHIN 15 FEET OF VEGETATION TO BE PROTECTED/PRESERVED: PROVIDE CHAIN LINK OR WOOD FENCE.
 2) EXCEEDING 15 FEET OF VEGETATION TO BE PROTECTED/PRESERVED: PROVIDE PLASTIC OR WOOD 'SNOW-FENCE.'
 3) VEGETATION OF SPECIMEN QUALITY, HISTORIC DESIGNATION OR CULTURAL VALUE. PROVIDE EXTRAORDINARY MEASURES TO ENSURE COMPLETE PROTECTION/PRESERVATION.
 * TYPE OF MATERIAL SPECIFIED MAY VARY DUE TO SITE DISTURBANCE LIMITS AND PROXIMITY TO DESIGNATED VEGETATION, SPECIAL OR PAVED AREAS. SILT, EROSION CONTROL OR GEOTECHNICAL FABRIC MATERIALS ARE NOT ACCEPTABLE FOR USE AS VEGETATION PROTECTION FENCE MATERIALS. AREAS WHICH ENCOMPASS GROUPINGS, OR INDIVIDUAL SPECIMEN VEGETATION DESIGNATED FOR PROTECTION AND/OR PRESERVATION SHALL NOT BE VIOLATED THROUGHOUT THE ENTIRE CONSTRUCTION PERIOD BY ACTIONS INCLUDING, BUT NOT LIMITED TO:
 1) PLACING, STORING OR STOCKPILING BACKFILL OR CONSTRUCTION RELATED SUPPLIES.
 2) FELLING TREES INTO THE DESIGNATED AREA.
 3) BURNING WITHIN OR IN CLOSE PROXIMITY.
 4) MODIFYING SITE TOPOGRAPHY IN A MANNER WHICH CAUSES DAMAGE BY COLLECTION/PONDING OR FLOW CHARACTERISTICS OF SITE DRAINAGE.
 5) TRENCHING OR GRADING OPERATIONS.
 6) OPERATING EQUIPMENT OR MACHINERY.
 7) PARKING OF CONSTRUCTION VEHICLES.
 8) TEMPORARY OR PERMANENT PAVING OR IMPERVIOUS SURFACE INSTALLATION.
 9) TEMPORARY OR PERMANENT UTILITY CONSTRUCTION INSTALLATION.
 10) DISPOSAL OF CONSTRUCTION DEBRIS OR CHEMICAL POLLUTANTS.

B. MAINTENANCE
 VEGETATION DESIGNATED FOR PROTECTION AND/OR PRESERVATION SHALL RECEIVE AN ENHANCED LEVEL OF MAINTENANCE THROUGHOUT THE ENTIRE CONSTRUCTION PERIOD. MAINTENANCE SHALL INCLUDE, BUT NOT BE LIMITED TO, ITEMS SUCH AS: MONITORING HEALTH, GROWTH AND VIGOR OF VEGETATION, SELECTIVE PRUNING, WATERING, FERTILIZATION, INSTALLATION OF MULCH AND IN-KIND REPLACEMENT OF SEVERELY OR TERMINALLY DAMAGED VEGETATION. MAINTENANCE SHALL BE TO THE SATISFACTION OF THE DIRECTOR OF RECREATION, PARKS AND CULTURAL ACTIVITIES.
 C. REPLACEMENT OF DAMAGED VEGETATION
 IN-KIND REPLACEMENT OF DAMAGED EXISTING VEGETATION SHALL BE LOCATED ON PRIVATE OR PUBLIC LANDS TO THE SATISFACTION OF THE DIRECTOR OF RECREATION, PARKS AND CULTURAL ACTIVITIES.* IN-KIND REPLACEMENT OF DAMAGED VEGETATION SHALL AT A MINIMUM BE PERFORMED AT A RATIO OF ONE TREE (IN ACCORDANCE WITH SECTION IV. SPECIFICATION OF PLANT MATERIAL BELOW) PER INCH OF THE SUM TOTAL CALIPER INCH MEASUREMENT OF TREE(S) OR GROUPING OF VEGETATION WHICH ARE DEEMED SEVERELY OR TERMINALLY DAMAGED.* APPLICANT, OWNER OR SUCCESSOR LIABILITY FOR IN-KIND REPLACEMENT OF DAMAGED VEGETATION SHALL EXTEND FOR A PERIOD OF TWO CALENDAR YEARS FROM DATE OF CERTIFICATE OF OCCUPANCY.
 * FOR THE PURPOSES OF THIS INFORMATION, 'IN-KIND' REFERENCES THE SPECIES, CHARACTER AND PROJECTED MATURE SIZE OF SUBJECT VEGETATION. REMEDY REQUIREMENTS SHALL BE DETERMINED BY THE DIRECTOR RECREATION, PARKS AND CULTURAL OCCUPANCY AFFAIRS AND BASED UPON SEVERITY OF DAMAGE.

WORK OR CONSTRUCTION RELATED ACTIVITIES WITHIN AREAS DESIGNATED FOR PROTECTION AND/OR PRESERVATION OF EXISTING VEGETATION SHALL BE ACCOMPLISHED ONLY WITH PRIOR APPROVAL OF THE DIRECTOR OF RECREATION, PARKS AND CULTURAL ACTIVITIES.

CROWN COVER CALCULATION:
 EXISTING SITE AREA 87,120 SQ. FT.
 REQUIRED CROWN COVER (25%) 21,780 SQ. FT.
 EXISTING CROWN COVER 86,225 SQ. FT.
 EXISTING CROWN COVER (TO BE SAVED) 51,263 SQ. FT.
 PROPOSED CROWN COVER 31,250 SQ. FT.
 TOTAL CROWN COVERAGE PROVIDED 82,513 SQ. FT.

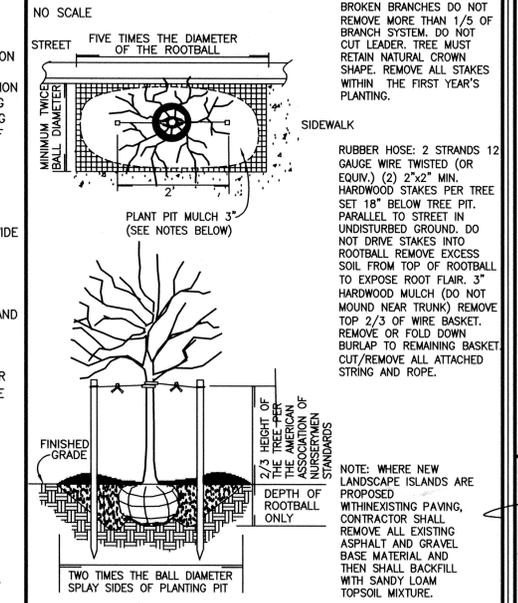
TREE SAVE NOTE:
 ALL TREES LOCATED WITHIN THE LIMITS OF DISTURBANCE ARE TO BE REMOVED. TREES LOCATED OUTSIDE THE LIMITS OF DISTURBANCE ARE TO BE SAVED. PLAN SHOWS DIMENSIONS FROM LIMITS OF DISTURBANCE TO TREES TO BE SAVED THAT HAVE DRIP LINES LOCATED WITHIN THE AREAS OF DISTURBANCE.

PLANTING SCHEDULE

LEGEND	QUAN.	BOTANICAL NAME	COMMON NAME	COVER EACH	COVER TOTAL	SIZE AND COMMENTS
A	5	QUERCUS ALBA	WHITE OAK	1250 SQ.FT.	6,250 SQ.FT.	SINGLE LEADER FULLY UPRIGHT - 2" CAL. B&B
B	20	CUPRESSUS LEYLANDI	LEYLAND CYPRESS	250 SQ.FT.	5,000 SQ.FT.	SINGLE LEADER FULLY UPRIGHT (6'-8"HT.) B&B
C	8	CORNUS FLORIDA	DOGWOOD	250 SQ.FT.	2,000 SQ.FT.	SINGLE LEADER FULLY UPRIGHT - 1" CAL. B&B
D	11	FAGUS GRANDIFOLIA	AMERICAN BEECH	1250 SQ.FT.	13,750 SQ.FT.	SINGLE LEADER FULLY UPRIGHT - 2" CAL. B&B
E	7	JUNIPERUS VIRGINIANA	EASTERN RED CEDAR	250 SQ.FT.	1,750 SQ.FT.	SINGLE LEADER FULLY UPRIGHT (6'-8"HT.) B&B
F	10	ILEX OPACA	AMERICAN HOLLY	250 SQ.FT.	2,500 SQ.FT.	SINGLE LEADER FULLY UPRIGHT (6'-8"HT.) B&B

TOTAL DISTURBED AREA = 51,292 SQ. FT. OR 1.1775 AC.

TREE PLANTING DETAIL

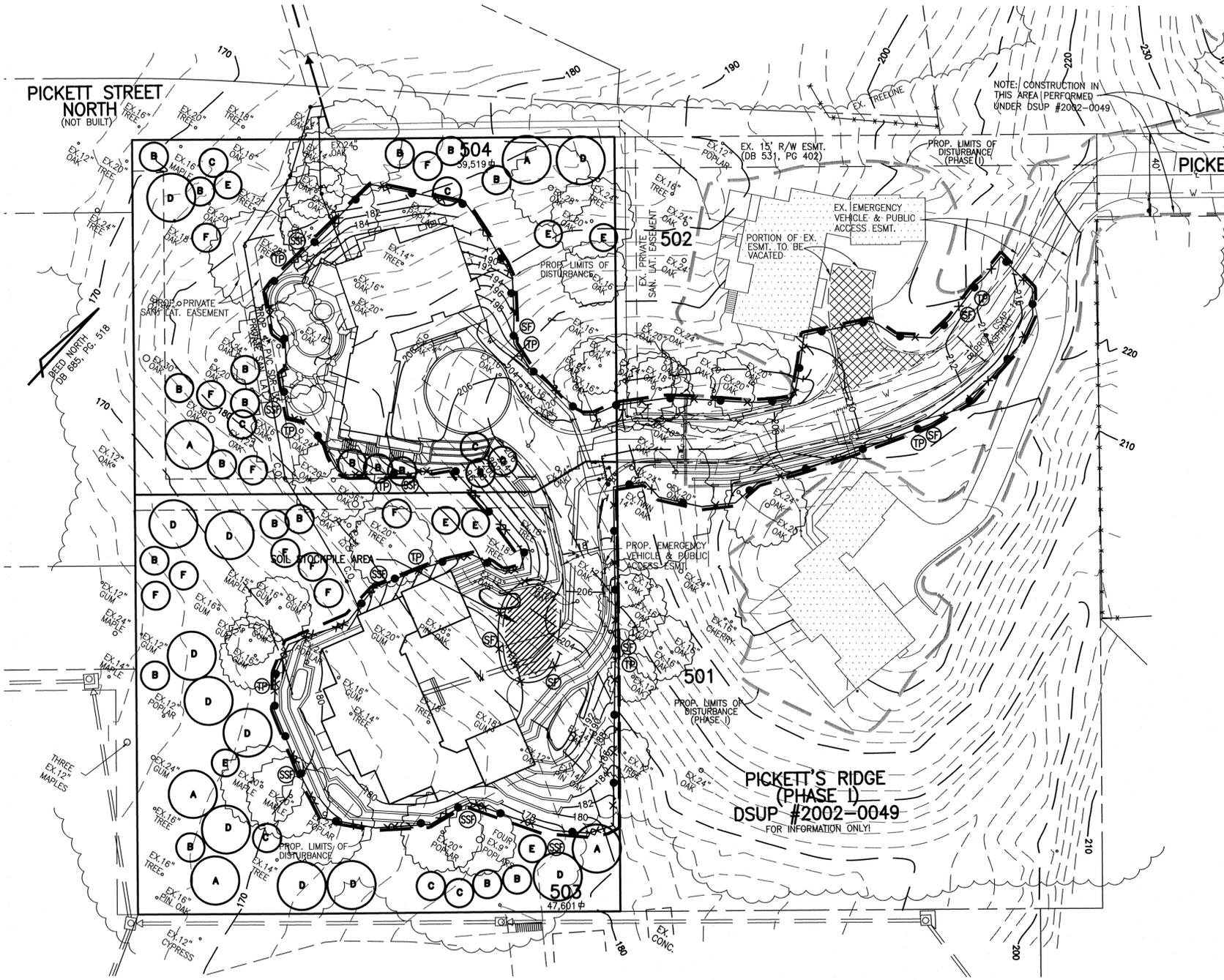


TREE PROTECTION DETAIL NOTE:

SEE SHEET 7, EROSION / SEDIMENT CONTROL DETAILS, TREE PROTECTION DETAILS.

OFF-SITE TREE NOTE:

THE APPLICANT MUST NOTIFY THE ADJACENT PROPERTY OWNER (LOT 501) WHEN CONSTRUCTION WILL OCCUR. ALL POSSIBLE MEASURES MUST BE TAKEN TO REDUCE IMPACT TO THE 12" TREE ON LOT 501. IF THE TREE IS DAMAGED DURING CONSTRUCTION, A REPLACEMENT TREE SHALL BE PLANTED.



- LEGEND:**
- (A) DENOTES PROPOSED TREE LOCATION
 - "T.B.R." DENOTES TO BE REMOVED.
 - (TP) DENOTES PROPOSED TREE PROTECTION FENCE (STANDARD & SPEC. #3.38)

DSUP #2003-0036

ESI PEER REVIEW

APPROVED
 SPECIAL USE PERMIT NO. 2003-0036

DEPARTMENT OF PLANNING & ZONING

DIRECTOR _____ DATE _____

DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES

SITE/PLAN NO. _____ DATE 10/16/09

CHAIRMAN, PLANNING COMMISSION _____ DATE _____

INSTRUMENT NO. _____ DEED BOOK NO. _____ DATE _____

LEGEND

ITEM	EXISTING	PROPOSED
CURB & GUTTER	[Symbol]	[Symbol]
CONC. WALK	[Symbol]	[Symbol]
FIRE HYDRANT	[Symbol]	[Symbol]
STRUCTURES	[Symbol]	[Symbol]
WATER MAINS	[Symbol]	[Symbol]
GAS MAINS	[Symbol]	[Symbol]
TELEPHONE LINES	[Symbol]	[Symbol]
STORM SEWER	[Symbol]	[Symbol]
SANITARY SEWER	[Symbol]	[Symbol]
PAVING	[Symbol]	[Symbol]
FENCES	[Symbol]	[Symbol]
POWER LINES	[Symbol]	[Symbol]
SPOT ELEVATIONS	+124.5	+124.5
CONTOURS	-124	-124
BLDG. ENTRANCE	[Symbol]	[Symbol]

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EXISTING UTILITIES SHOWN ON THIS PLAN TAKEN FROM AVAILABLE RECORDS AND/OR FROM FIELD OBSERVATIONS.

FOR EXACT LOCATIONS OF EXISTING UNDERGROUND UTILITIES, NOTIFY 'MISS UTILITY' AT 1-800-257-7777, 72 HOURS BEFORE THE START OF ANY EXCAVATION OR CONSTRUCTION.

LOCATION AND DEPTH OF ALL EXISTING UNDERGROUND UTILITIES TO BE VERIFIED BY CONTRACTOR PRIOR TO CONSTRUCTION. INTERFERENCE OR DISRUPTION OF SAME WILL NOT BE THE RESPONSIBILITY OF THIS OFFICE.

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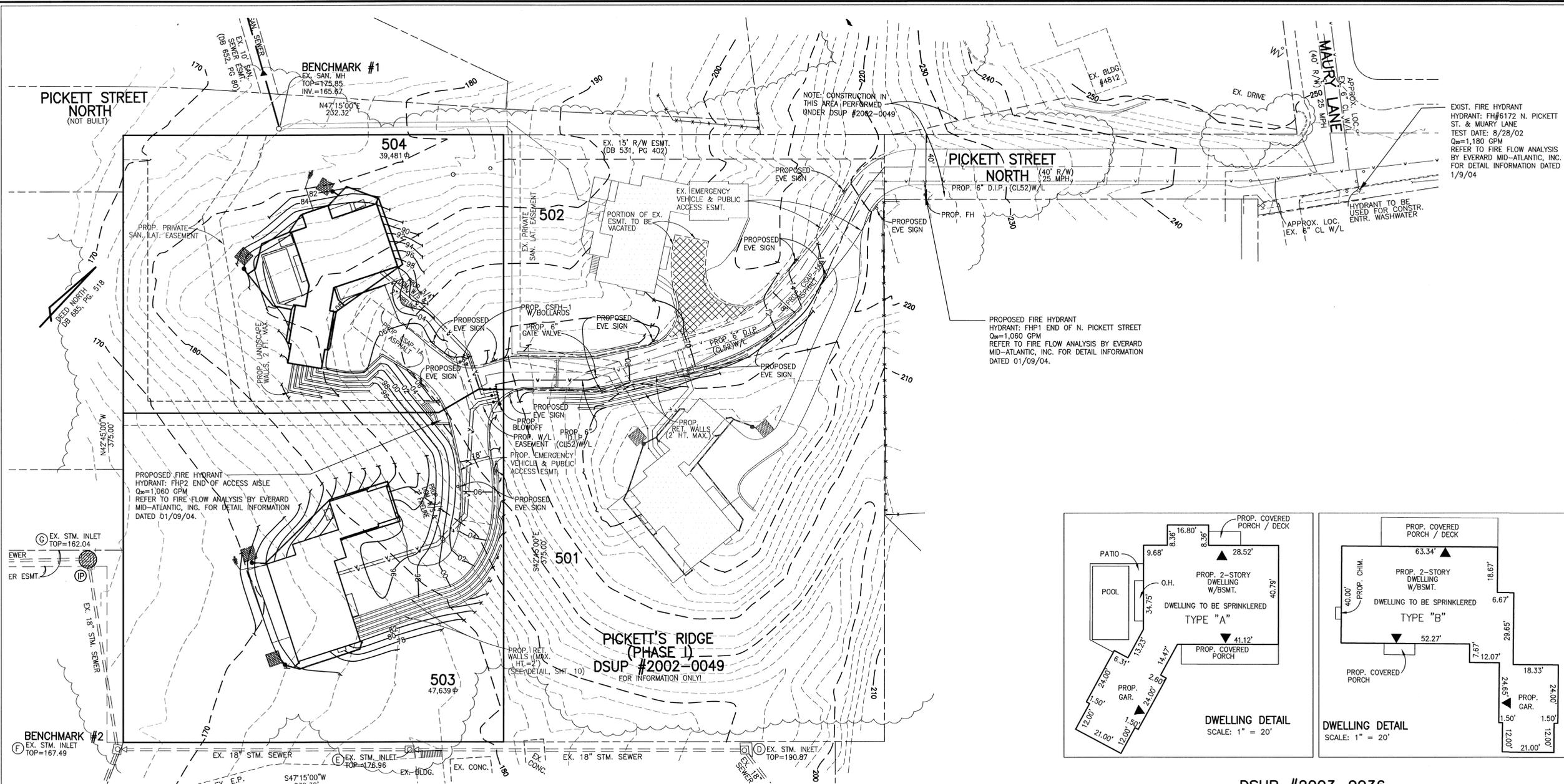
LAND SURVEYOR
 RONALD J. KELLER
 Lic. No. 1457-B
 7 OCT. 2009

LANDSCAPE PLAN AND TREE PRESERVATION PLAN
PICKETT'S RIDGE II
 CITY OF ALEXANDRIA, VIRGINIA

DATE	REVISION
10/22/04	FINAL MYLARS
9/20/05	COMBINED ROAD/DWLG
10/14/05	PER COMMENTS
10/19/04	STEPS/RET.WALL LOT 504
10/23/04	LIMITS / TREES
11/21/08	POOL DESIGN
7/27/09	PER COMMENTS
08/10/09	DWLG. LOT 503
09/15/09	PER COMMENTS
10/7/09	PER COMMENTS

DESIGN: P.A.W.
 DRAWN: R.K.B.
 SCALE: 1" = 30'
 DATE: MARCH 4, 2004
 SHEET 12 OF 17
 FILE: 00-02

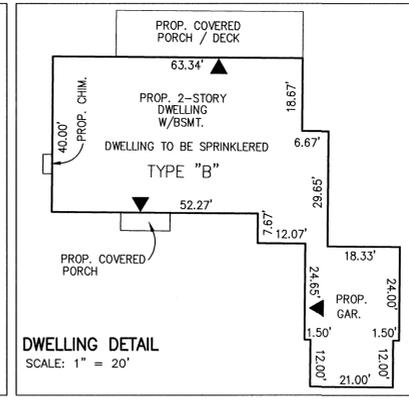
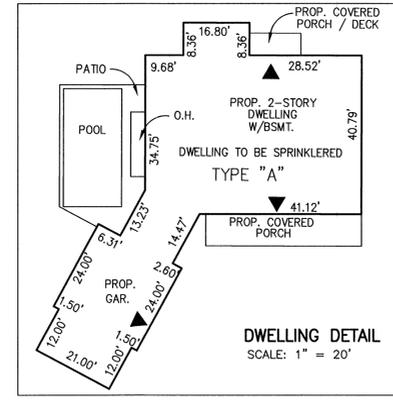
DSP2003-0036 P11



EXIST. FIRE HYDRANT
 HYDRANT: FH#6172 N. PICKETT
 ST. & MAURY LANE
 TEST DATE: 8/28/02
 Q₁₀₀=1,180 GPM
 REFER TO FIRE FLOW ANALYSIS
 BY EVERARD MID-ATLANTIC, INC.
 FOR DETAIL INFORMATION DATED
 1/9/04

PROPOSED FIRE HYDRANT
 HYDRANT: FH#1 END OF N. PICKETT STREET
 Q₁₀₀=1,060 GPM
 REFER TO FIRE FLOW ANALYSIS BY EVERARD
 MID-ATLANTIC, INC. FOR DETAIL INFORMATION
 DATED 01/09/04.

PROPOSED FIRE HYDRANT
 HYDRANT: FH#2 END OF ACCESS AISLE
 Q₁₀₀=1,060 GPM
 REFER TO FIRE FLOW ANALYSIS BY EVERARD
 MID-ATLANTIC, INC. FOR DETAIL INFORMATION
 DATED 01/09/04.



SIGN SPECIFICATIONS

FIRE LANE SIGNS SHALL BE METAL CONSTRUCTION, 12 INCHES WIDE AND 18 INCHES IN HEIGHT. PROVIDE RED LETTERS ON REFLECTIVE WHITE BACKGROUND WITH A 3/8 INCH RED TRIM STRIP AROUND THE ENTIRE OUTER EDGE OF THE SIGN.

THE LETTERING SHALL BE "NO PARKING FIRE LANE" PLACED AS SHOWN IN FIGURE 2. LETTERING SIZE SHALL BE AS FOLLOWS.

"NO PARKING" - 2 INCHES
 "FIRE LANE" - 2 1/2 INCHES

ARROWS (WHERE APPLICABLE) - 1 INCH BY 6 INCHES SOLID SHAFT WITH SOLID HEAD 1 1/2 INCHES WIDE AND 2 INCHES DEEP.

SIGNS SHALL BE MOUNTED WITH THE BOTTOM OF THE SIGN 7 FEET ABOVE THE ROADWAY, AND FIGURE 2 - FIRE LANE SIGN SHALL BE PROPERLY ATTACHED TO A SIGN POST OR OTHER APPROVED STRUCTURE AS DESIGNATED BY THE FIRE MARSHAL. POSTS FOR SIGNS, WHEN REQUIRED, SHALL BE METAL AND SECURELY MOUNTED.

SIGNS SHALL FACE IN THE DIRECTION OF VEHICLE TRAVEL. IN AREAS WHERE FIRE LANES INVOLVE TWO-WAY TRAFFIC, DOUBLE MOUNTED SIGNS SHALL BE PROVIDED. THE MAXIMUM DISTANCE BETWEEN SIGNS SHALL BE 100 FEET. OTHER SPECIAL SIGNS OR MODIFICATIONS TO FIRE LANE SIGNS SHALL BE APPROVED BY THE FIRE MARSHAL.



BUILDING INFORMATION:

USE: DETACHED SINGLE FAMILY RESIDENTIAL
 USE GROUP: R-3
 TYPE OF CONSTRUCTION: 5B
 NUMBER OF STORIES: TWO(2)

	TYPE "A"	TYPE "B"
FLOOR AREA (GROSS):	11,151 S.F.	11,157 S.F.
FLOOR AREA (NET):	9,800 S.F.	9,800 S.F.
BASEMENT, GROSS (INCLUDES PORCH):	4,517 S.F.	4,519 S.F.
1ST FLOOR, GROSS (INCLUDES PORCH):	4,517 S.F.	4,519 S.F.
2ND FLOOR, GROSS (INCLUDES PORCH):	4,517 S.F.	4,519 S.F.
ATTIC, GROSS:	0 S.F.	0 S.F.
GARAGE, GROSS:	828 S.F.	828 S.F.
FRONT PORCH, GROSS (2 STORY PORCH):	180 S.F.	180 S.F.
BUILDING FOOT PRINT AREA:	4,299 S.F.	4,301 S.F.
BUILDING HEIGHT: 35'		
SPRINKLERS: YES		
ALARM SYSTEM: MONITORED MANUAL FIRE ALARM		
REQUIRED FIRE FLOW: 1000 GPM (PER FIRE FLOW ANALYSIS)		
AVAILABLE FIRE FLOW: 1060 GPM (PER FLOW TEST ON 1/6/04)		

REFER TO FIRE FLOW ANALYSIS BY EVERARD MID-ATLANTIC, INC. FOR DETAIL INFORMATION DATED 01/09/04.

FIRE PROTECTION PLAN NOTES:

- ALL TRAVEL LANES DEDICATED AS EMERGENCY VEHICLE ACCESS AISLES SHALL BE PAVED WITH CITY STANDARD CSAP-1A PAVEMENT SECTION.
- ALL NEW CONSTRUCTION SHALL COMPLY WITH THE CURRENT EDITION OF THE UNIFORM STATEWIDE BUILDING CODE (USBC).
- THE PROPOSED DWELLINGS ARE TO BE FULLY SPRINKLERED, IN ACCORDANCE WITH NFPA 13D.
- EMERGENCY VEHICLE AISLE WIDTHS SHALL BE PROVIDED TO THE SATISFACTION OF THE DIRECTOR OF CODE ENFORCEMENT.
- PARKING WILL BE LIMITED TO THE DESIGNATED PARKING AREAS.
- A FIRE FLOW ANALYSIS BY EVERARD MID-ATLANTIC (DATED 01/09/04) WAS APPROVED IN FEBRUARY 2004.

THIS SHEET TO BE USED FOR FIRE SERVICE PLAN ONLY

REFER TO SITE DEVELOPMENT SHEET FOR FINAL LOCATIONS, LAYOUT, DIMENSIONS & GRADING.

ALL BUILDINGS PROPOSED WITH THIS PLAN ARE RESIDENTIAL.

TOTAL DISTURBED AREA = 47,916 SQ. FT. OR 1.10 AC.

DSUP #2003-0036

ESI
 PEER REVIEW

LEGEND

ITEM	EXISTING	PROPOSED
CURB & GUTTER	---	---
CONC. WALK	---	---
FIRE HYDRANT	○	●
STRUCTURES	▭	▭
WATER MAINS	W	W
GAS MAINS	G	G
TELEPHONE LINES	---T---	---T---
STORM SEWER	---	---
SANITARY SEWER	---	---
PAVING	---	---
FENCES	---	---
POWER LINES	---	---
SPOT ELEVATIONS	+124.5	+124.5
CONTOURS	124	124
BLDG. ENTRANCE	△	▲

APPROVED
 SPECIAL USE PERMIT NO. 2003-0036

DEPARTMENT OF PLANNING & ZONING

DIRECTOR DATE

DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES

SITE PLAN NO. *1/12/05*
 DIRECTOR DATE

CHAIRMAN, PLANNING COMMISSION DATE

DATE RECORDED

INSTRUMENT NO. DEED BOOK NO. DATE

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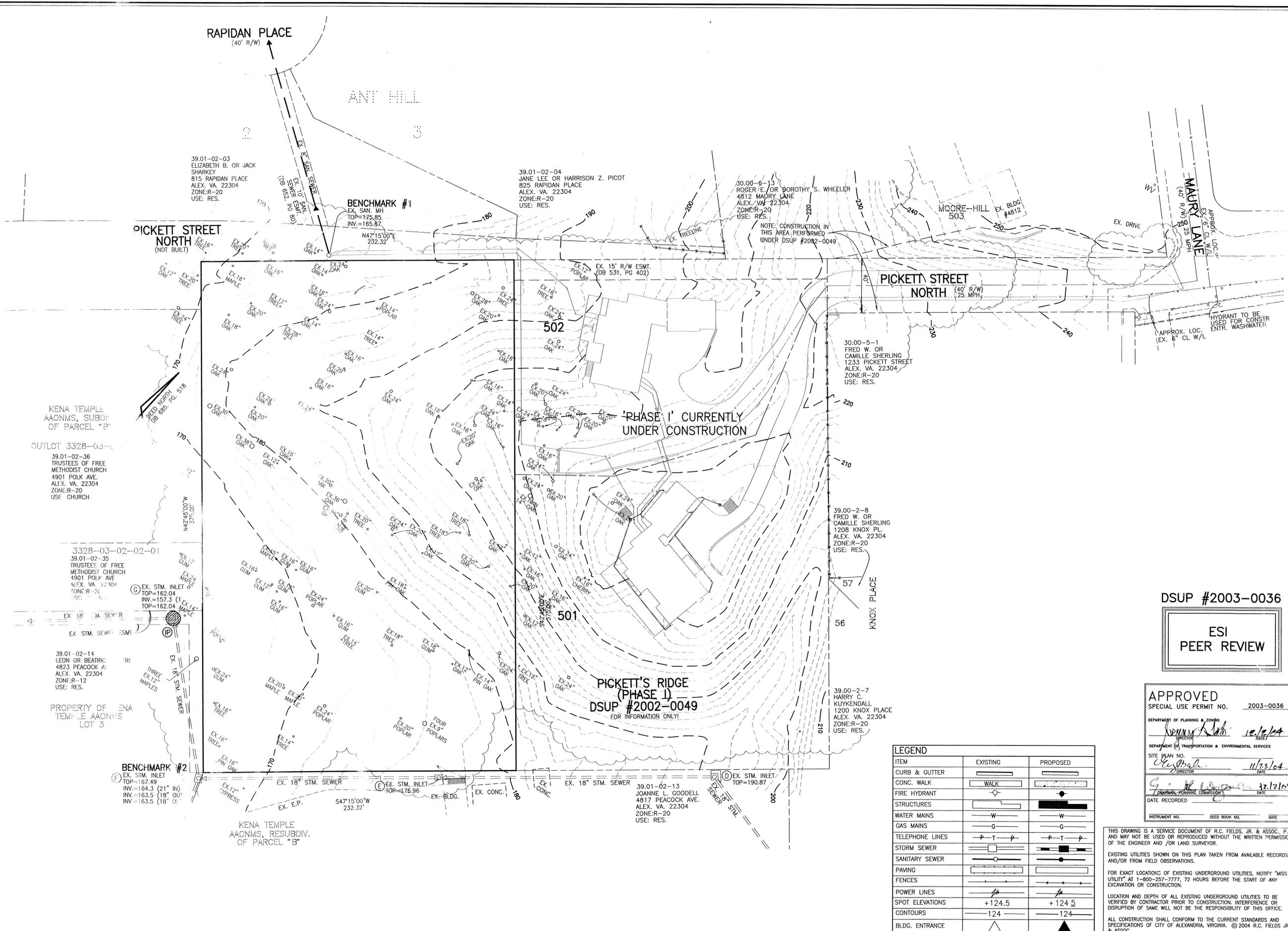
FIRE SERVICE PLAN
PICKETT'S RIDGE II
 CITY OF ALEXANDRIA, VIRGINIA

DATE	REVISION
3/31/04	MIN. SUB. REVIEW
5/12/04	PER COMMENTS
7/29/04	PER COMMENTS
9/10/04	PER COMMENTS
10/22/04	FINAL MTLARS
10/14/05	PER COMMENTS

DESIGN: P.A.W.
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 SHEET 13 OF 17
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DSUP #2003-0036
 Pickett's Ridge II

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COMMONWEALTH OF VIRGINIA
 RONALD J. KELLER
 NO. 1457-B
 22 OCT 2004
 LAND SURVEYOR

EXISTING CONDITIONS
PICKETT'S RIDGE II
 CITY OF ALEXANDRIA, VIRGINIA

DSP #2003-0036
 Pickett's Ridge II

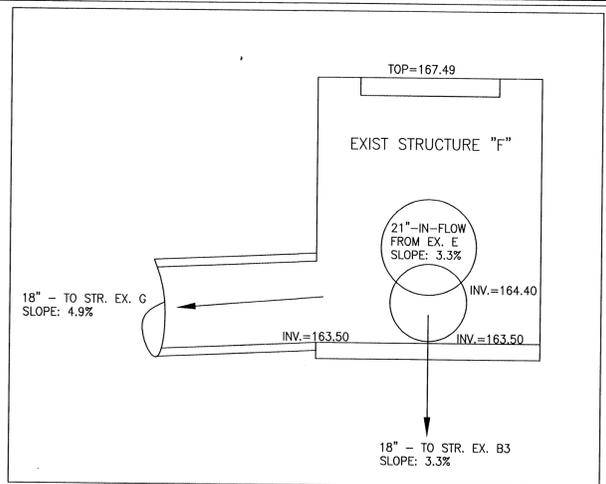
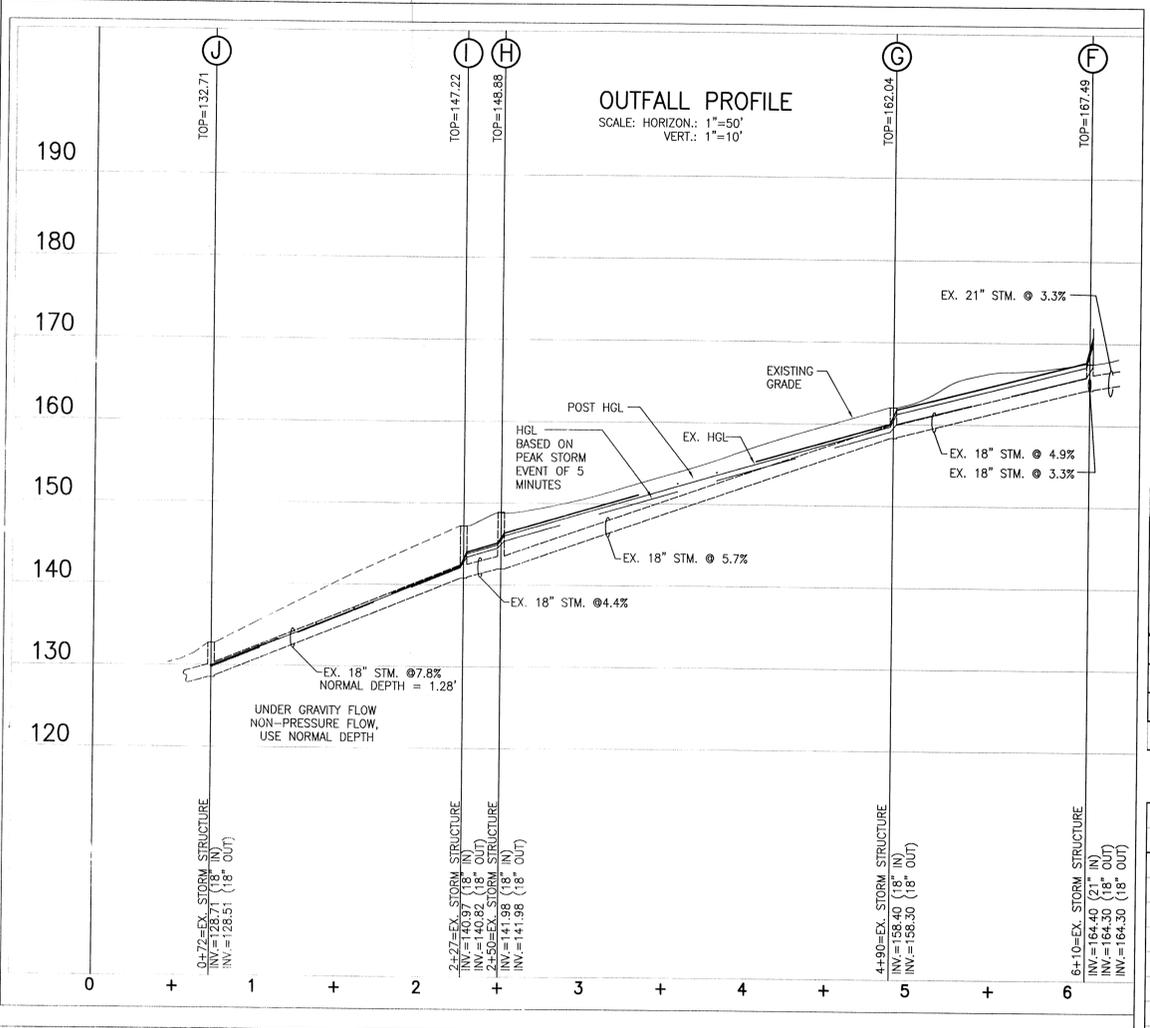
DSUP #2003-0036
ESI
PEER REVIEW

APPROVED
 SPECIAL USE PERMIT NO. 2003-0036
 DEPARTMENT OF PLANNING & ZONING
 DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES
 DATE: 12/12/04
 DATE RECORDED: 12/21/04

ITEM	EXISTING	PROPOSED
CURB & GUTTER	---	---
CONC. WALK	WALK	---
FIRE HYDRANT	○	●
STRUCTURES	---	---
WATER MAINS	W	W
GAS MAINS	G	G
TELEPHONE LINES	-T-	-T-
STORM SEWER	---	---
SANITARY SEWER	---	---
PAVING	---	---
FENCES	---	---
POWER LINES	---	---
SPOT ELEVATIONS	+124.5	+124.5
CONTOURS	124	124
BLDG. ENTRANCE	△	▲

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 EXISTING UTILITIES SHOWN ON THIS PLAN TAKEN FROM AVAILABLE RECORDS AND/OR FROM FIELD OBSERVATIONS.
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 ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS AND SPECIFICATIONS OF CITY OF ALEXANDRIA, VIRGINIA. © 2004 R.C. FIELDS JR. & ASSOC.

DATE: 12/12/04
 DESIGN: P.A.W.
 DRAWN: R.K.B.
 SCALE: 1" = 30'
 DATE: MARCH 4, 2004
 SHEET 14 OF 17
 FILE: 00-02



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DSUP #2002-0049

ESI
PEER REVIEW

HGL CALCULATIONS:

Struct. Number	Struct. Info.		HGL @										H (Adj. Surface Flow)	H (Adj. Inlet Shaping)	HGL @ Struct. Inlet	Top Struct. Elev.	HGL Elev. Below Top Struct.	INLET NUMBER									
	Surface Flow	Inlet Shaping	WSE	r	Factor	Do	Qo	Lo	S'	HF	Outlet	Ao							Vo	Hb	Q	Di	Ai	V	H	Angle 'K' Value	H _i
I	no	yes	142.00	0.015	18	22.6	154.0	0.0780	0.08	142.08	1.77	12.79	0.63	22.60	18	1.77	12.79	0.89	0.43	1.09	2.62	2.62	1.31	143.39	147.22	3.83	I
H	yes	yes	143.39	0.015	18	22.6	23.0	0.0490	1.13	144.51	1.77	12.79	0.63	19.90	18	1.77	11.26	0.69	0.00	0.00	1.32	1.72	0.86	145.37	148.88	3.51	H
G	yes	yes	145.37	0.015	18	19.9	240.0	0.0570	13.68	159.05	1.77	11.26	0.49	13.80	18	1.77	7.81	0.33	0.70	0.66	1.49	1.93	0.97	160.02	162.04	2.02	G
F	yes	yes	160.02	0.015	18	13.8	120.0	0.0490	5.88	165.90	1.77	7.81	0.24	25.30	21	2.41	10.52	0.60	0.70	1.20	2.04	2.65	1.33	167.23	167.49	0.26	F

BASED ON PEAK STORM EVENT OF 5 MINUTES

Struct. Number	Struct. Info.		HGL @										H (Adj. Surface Flow)	H (Adj. Inlet Shaping)	HGL @ Struct. Inlet	Top Struct. Elev.	HGL Elev. Below Top Struct.	INLET NUMBER									
	Surface Flow	Inlet Shaping	WSE	r	Factor	Do	Qo	Lo	S'	HF	Outlet	Ao							Vo	Hb	Q	Di	Ai	V	H	Angle 'K' Value	H _i
I	no	yes	142.18	0.015	18	26.2	154.0	0.0780	0.08	142.26	1.77	14.83	0.85	26.20	18	1.77	14.83	1.19	0.43	1.47	3.52	3.52	1.76	144.02	147.22	3.20	I
H	yes	yes	144.02	0.015	18	26.2	23.0	0.0490	1.13	145.14	1.77	14.83	0.85	24.10	18	1.77	13.64	1.01	0.00	0.00	1.86	2.42	1.21	146.35	148.88	2.53	H
G	yes	yes	146.35	0.015	18	24.1	240.0	0.0570	13.68	160.03	1.77	13.64	0.72	19.30	18	1.77	10.92	0.65	0.70	1.30	2.67	3.47	1.73	161.77	162.04	0.27	G
F	yes	yes	161.77	0.015	18	19.3	120.0	0.0490	5.88	167.65	1.77	10.92	0.46	36.80	21	2.41	15.30	1.27	0.70	2.54	4.28	5.56	2.78	170.43	167.49	-2.94	F

BASED ON PROPOSED CONDITION (WATERSHED - TIME OF 10 MINUTES)

HYDRAULIC GRADE LINE COMPUTATION TERMS

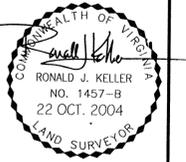
Do = Outflow Pipe Diameter, inches	Di = Inflow Pipe Diameter, inches
Qo = Discharge for Outflow Pipe, cfs	Qi = Discharge of pipe into junction, cfs
Lo = Length of Outflow Pipe, ft.	Ai = Area of Inflow Pipe, sq.ft.
S' = Friction slope of Outflow Pipe, ft/(Manning's Eq.)	Vi = Qi/Ai, Velocity of inflow, fps
HF = Lo * S', Friction Head Loss, ft.	MDOT = 0.35
Ao = Area of Outflow Pipe, sq.ft.	Hi = 0.35 (Vi^2/2g) Expansion Loss, ft.
Vo = Qo/Ao, Velocity of outflow, fps	PFM = 0.10
Ho = 0.25 (Vo^2/2g) Contraction Loss, ft.	Angle "K" Value = Choose value based on angle of pipes at junction
MDOT = 0.25	** Note: Round off angles to values given.
PFM = 0.05	Ha = K(Vi^2/2g) Bend Loss, ft.
	Ht = Ho + Hi + Ha Total Head Loss, ft.

where g = 32.2 ft/sec^2

JUNCTION BEND LOSSES

Angle (deg.)	"K" Values
90	= 0.70
80	= 0.66
70	= 0.61
60	= 0.55
50	= 0.47
40	= 0.38
30	= 0.28
25	= 0.22
20	= 0.16
15	= 0.10

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730 S. Washington Street
Alexandria, Virginia 22314
PH. (703) 549-6422
FAX (703) 549-6422



EXISTING STORM SEWER OUTFALL PROFILE
PICKETT'S RIDGE II
CITY OF ALEXANDRIA, VIRGINIA

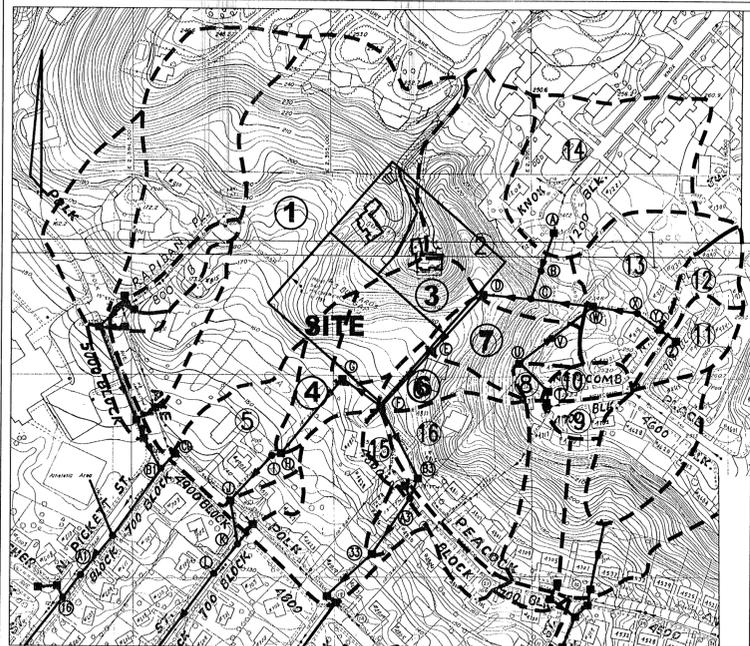
APPROVED
SPECIAL USE PERMIT NO. 2002-0049

DEPARTMENT OF PLANNING & ZONING
DATE: 11/23/04

DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES
DATE: 12/2/2004

DATE	REVISION
7/29/04	PER COMMENTS
10/22/04	FINAL MYLARS
DESIGN:	D.K.
DRAWN:	R.K.B.
SCALE:	AS NOTED
DATE:	MAY 12, 2004
SHEET	16 OF 17
FILE:	00-02

DSP #2003-0036
Pickett's Ridge II



PRE-DEVELOPMENT SCALE: 1" = 200'

POST-DEVELOPMENT SCALE: 1" = 200'

RUNOFF NARRATIVE:

THIS PROJECT PROPOSES THE CONSTRUCTION OF TWO DWELLINGS UPON A VACANT PARCEL LOCATED AT THE END OF N. PICKETT STREET (PHASE 2 OF THE PICKETT'S RIDGE DEVELOPMENT). THE "LOW IMPACT DEVELOPMENT TECHNIQUES" USED IN THIS DEVELOPMENT WILL INCLUDE THE USE OF PAVERS OR PERVIOUS GRAVEL FOR THE DRIVEWAY AREAS NOT LOCATED WITHIN THE EMERGENCY VEHICLE EASEMENT AND THE DISCHARGE FROM THE ROOF DRAINS WILL BE RELEASED INTO INFILTRATION BASINS. THESE PRACTICES WILL HELP REDUCE RUNOFF AND ENHANCE WATER QUALITY THROUGH NATURAL ABSORPTION OF NUTRIENTS. A DETENTION WAIVER HAS BEEN APPROVED BY T&ES FOR THE DEVELOPMENT OF THIS SITE (SEE SHEET 3). THE GRAVEL TRAVEL AISLE PROPOSED WITH PHASE 1 OF PICKETT'S RIDGE SHALL BE REVISED TO ASPHALT TO COMPLY WITH EMERGENCY VEHICLE ACCESS REQUIREMENTS. THE EXISTING ON-SITE SWALES HAVE BEEN ANALYZED AND FOUND TO BE NON-EROSIVE (SEE CALCULATIONS AND X-SECTIONS SHEET 11).

THE RUNOFF FOR THIS SITE IS DISTRIBUTED THROUGH THREE (3) PRINCIPAL DRAINAGE DIVIDES (SHOWN ON PRE- & POST-DEVELOPMENT DRAINAGE MAPS ABOVE). DRAINAGE DIVIDE AREA #1 IS 7.81 ACRES (PRE-DEVELOPMENT ON-SITE AREA CONTRIBUTING IS 0.61 AC.) THAT FLOWS FROM THE DWELLINGS LOCATED ON MAURY LANE THROUGH THE BACK YARDS OF DWELLINGS LOCATED ON RAPIDAN PLACE AND IS COLLECTED IN A STORM INLET ("C1") LOCATED ON THE NORTH SIDE OF POLK AVENUE. THE WESTERLY PORTION OF THE SITE, INCLUDING THE PORTIONS OF THE EXISTING ACCESS DRIVE, IS INCLUDED WITHIN DRAINAGE DIVIDE AREA #1. THE UPPER PORTIONS OF THE DRAINAGE AREA CONSIST OF STEEP SLOPES CREATED DURING THE CONSTRUCTION OF THE DWELLINGS ON MAURY LANE. TOWARDS THE MIDDLE OF THE DRAINAGE AREA THE FLOW BECOMES CHANNELIZED AND THEN RETURNS TO SHEET FLOW IN THE LOWER PORTIONS OF THE DRAINAGE AREA. THE SHEET FLOW TRAVELS TO THE POLK AVENUE PAVEMENT AREA AND IS THEN COLLECTED WITHIN THE CITY STORM SEWER SYSTEM AND CONVEYED DOWN N. PICKETT STREET WITHIN A 21" PIPE. THE PROPOSED CONSTRUCTION WITHIN THIS DRAINAGE AREA WILL RESULT IN A Q10 INCREASE OF 0.3 CFS (BASED ON THE 15 MIN. Tc).

DRAINAGE DIVIDE AREA #3 IS 1.65 ACRES (PRE-DEVELOPMENT ON-SITE CONTRIBUTING AREA IS 1.09 AC.) OF UNDEVELOPED LAND THAT INCLUDES THE SOUTHERN PORTION OF THE SITE. THE DRAINAGE FROM THIS AREA IS CONVEYED BY OVERLAND FLOW AND COLLECTED WITHIN A STORM INLET ("F"). THE STORM INLET IS CONNECTED TO TWO 18" PIPE WITHIN THE CITY STORM SEWER SYSTEM. ONE OF THE 18" PIPE CONVEYS THE RUNOFF TO THE STORM SEWER OUTFALL LOCATED ON POLK AVE. AND CONTINUES TO OUTFALL IN THE CITY STORM SEWER SYSTEM ON OWEN ST. THE OTHER PIPE CONVEYS THE RUNOFF TO THE STORM SEWER LOCATED IN PEACOCK AVENUE. AND CONTINUES TO OUTFALL IN THE CITY STORM SEWER SYSTEM IN NAYLOR STREET. DRAINAGE DIVIDE AREA #3 WILL HAVE AN INCREASE IN IMPERVIOUS AREAS WHICH INCLUDE PORTIONS OF THE TRAVEL AISLE AND ONE DWELLING. THE PROPOSED CONSTRUCTION WILL RESULT IN A Q10 INCREASE OF 1.0 CFS (BASED ON THE 10 MIN. Tc).

DRAINAGE DIVIDE AREA #4 IS 0.91 ACRES (PRE-DEVELOPMENT ON-SITE CONTRIBUTING AREA IS 0.22 AC.) OF UNDEVELOPED LAND THAT SURFACE FLOWS TO A STORM SEWER INLET ("H") CONNECTED TO AN 18" PIPE IN THE CITY STORM SEWER SYSTEM. THE STORM SEWER INLET IS LOCATED IN AND FOLLOWS THE OUTFALL OF DRAINAGE AREA #3. DRAINAGE DIVIDE AREA #4 WILL HAVE AN INCREASE IN IMPERVIOUS AREA FROM PORTIONS OF A PROPOSED DWELLING AND DRIVE. THIS INCREASE IN IMPERVIOUS AREA WILL RESULT IN A Q10 INCREASE OF 0.20 CFS (BASED ON THE 10 MIN. Tc).

PORTIONS OF THIS SITE ARE ALSO LOCATED WITHIN DRAINAGE AREAS #7 AND #6, BUT THERE IS NO INCREASE IN IMPERVIOUS AREAS ON THOSE SITE PORTIONS, NOR DOES THE SUBJECT EFFECT THOSE AREAS WITH ANY LAND DISTURBANCE.

THE POST-DEVELOPMENT RUNOFF FOR THE SITE HONORS THE EXISTING DRAINAGE DIVIDES AND IS CONVEYED WITHIN THE SAME THREE DRAINAGE AREAS AS THE PRE-DEVELOPMENT RUNOFF. THE ON-SITE DRIVES (EXCLUSIVE OF THE EMERGENCY VEHICLE EASEMENTS) WILL BE CONSTRUCTED OF GRAVEL OR PAVERS AS PART OF A LOW IMPACT DEVELOPMENT DESIGN.

THE DEVELOPMENT OF THIS SITE WILL HAVE A TOTAL Q10 INCREASE OF 1.5 CFS ON THE ON-SITE OUTFALL DRAINAGE AREAS (#1, 3, 4, 6 & 7). THE OUTFALL DRAINAGE AREAS CONNECTED TO THE SITE INCLUDE A TOTAL DRAINAGE AREA THAT IS 12.2 ACRES IN SIZE AND GENERATES A Q10 OF 30.2 CFS. THE TOTAL CONTRIBUTING AREA IDENTIFIED FOR THE SITE OUTFALL IS 27.1 ACRES AND 81 CFS. THE INCREASE OF 1.5 CFS WILL HAVE NO ADVERSE IMPACT UPON THE DRAINAGE OUTFALL, OR THE ADJACENT AND DOWNSTREAM PROPERTIES.

PRE-DEVELOPMENT DRAINAGE AREA CALCULATIONS:

* AREA #1(Tc=15 MIN.) A=7.81 AC. C=0.37 Q10=17.5 CFS	AREA #9(Tc=5 MIN.) A=0.34 AC. C=0.52 Q10=1.6 CFS	* AREA #2(Tc=10 MIN.) A=3.20 AC. C=0.37 Q10=8.4 CFS	AREA #10(Tc=5 MIN.) A=0.35 AC. C=0.53 Q10=1.7 CFS	* AREA #3(Tc=10 MIN.) A=1.69 AC. C=0.32 Q10=3.8 CFS	AREA #11(Tc=5 MIN.) A=0.68 AC. C=0.49 Q10=2.9 CFS	AREA #4(Tc=10 MIN.) A=0.91 AC. C=0.30 Q10=1.9 CFS	AREA #12(Tc=5 MIN.) A=0.42 AC. C=0.52 Q10=1.9 CFS	AREA #5(Tc=10 MIN.) A=1.45 AC. C=0.40 Q10=4.1 CFS	AREA #13(Tc=10 MIN.) A=1.90 AC. C=0.51 Q10=6.9 CFS	AREA #6(Tc=5 MIN.) A=0.63 AC. C=0.50 Q10=2.3 CFS	AREA #14(Tc=10 MIN.) A=3.30 AC. C=0.50 Q10=11.7 CFS	AREA #7(Tc=5 MIN.) A=1.17 AC. C=0.30 Q10=3.2 CFS	AREA #15(Tc=5 MIN.) A=0.73 AC. C=0.55 Q10=3.6 CFS	AREA #8(Tc=5 MIN.) A=0.17 AC. C=0.50 Q10=0.7 CFS	AREA #16(Tc=10 MIN.) A=2.36 AC. C=0.42 Q10=7.0 CFS
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* DENOTES DRAINAGE AREAS THAT INCLUDE ON-SITE RUNOFF FROM THE SITE DEVELOPMENT. DRAINAGE AREA TC REPRESENTED ABOVE.

POST-DEVELOPMENT DRAINAGE AREA CALCULATIONS:

* AREA #1(Tc=15 MIN.) A=7.77 AC. C=0.38 Q10=17.8 CFS	AREA #9(Tc=5 MIN.) A=0.34 AC. C=0.52 Q10=1.6 CFS	* AREA #2(Tc=10 MIN.) A=3.20 AC. C=0.37 Q10=8.4 CFS	AREA #10(Tc=5 MIN.) A=0.35 AC. C=0.53 Q10=1.7 CFS	* AREA #3(Tc=10 MIN.) A=1.70 AC. C=0.40 Q10=4.8 CFS	AREA #11(Tc=5 MIN.) A=0.68 AC. C=0.49 Q10=2.9 CFS	AREA #4(Tc=10 MIN.) A=0.94 AC. C=0.32 Q10=2.1 CFS	AREA #12(Tc=5 MIN.) A=0.42 AC. C=0.52 Q10=1.9 CFS	AREA #5(Tc=10 MIN.) A=1.45 AC. C=0.40 Q10=4.1 CFS	AREA #13(Tc=10 MIN.) A=1.90 AC. C=0.51 Q10=6.9 CFS	AREA #6(Tc=5 MIN.) A=0.63 AC. C=0.40 Q10=2.3 CFS	AREA #14(Tc=10 MIN.) A=3.30 AC. C=0.50 Q10=11.7 CFS	AREA #7(Tc=5 MIN.) A=1.17 AC. C=0.30 Q10=3.2 CFS	AREA #15(Tc=5 MIN.) A=0.73 AC. C=0.55 Q10=3.6 CFS	AREA #8(Tc=5 MIN.) A=0.17 AC. C=0.42 Q10=0.7 CFS	AREA #16(Tc=10 MIN.) A=2.36 AC. C=0.42 Q10=7.0 CFS
---	---	--	--	--	--	--	--	--	---	---	--	---	--	---	---

SUMMARY SHEET FOR Tc or Tt COMPUTATIONS
(Solved for Time using Length/Velocity)

Pickett's Ridge Subdivision
North Pickett Street
City of Alexandria, Virginia

Subarea descr.	Tc or Tt	Time (hrs)
SUBAREA #1 (Pickett St.)	Tc	0.24 OR 15 MINUTES
SUBAREA #2 (Owen St.)	Tc	0.32 OR 20 MINUTES

Tc or Tt DATA
.....

DESCRIPTION	LENGTH (feet)	VELOCITY (ft/sec)	TIME	
			minutes	hours
A-SHEET FLOW	190	0.29	11.1	= 0.19
B-SHALLOW CONC. FLOW	900	5.50	3.0	= 0.05
C-OPEN CHANNEL FLOW	50	2.53	0.3	= 0.01
TOTAL Tc --->			14.4	= 0.25 USE 15 MINUTES

(OVERALL SYSTEM TIME OF CONCENTRATION)

DESCRIPTION	LENGTH (feet)	VELOCITY (ft/sec)	TIME	
			minutes	hours
A-SHEET FLOW	230	0.15	6.2	= 0.10
B-SHALLOW CONC. FLOW	300	5.60	1.0	= 0.02
C-CLOSED CHANNEL FLOW	1330	14.70	1.5	= 0.03
TOTAL Tc --->			8.7	= 0.15 USE 10 MINUTES

(OVERALL SYSTEM TIME OF CONCENTRATION)

OUTFALL NARRATIVE:

THIS SITE PROPOSES THE CONSTRUCTION OF TWO DWELLINGS WITH APPROXIMATELY 16,400 SQ. FT. (19%) IMPERVIOUS COVER ON A 2.00 ACRE SITE. A STORMWATER DETENTION WAIVER HAS BEEN APPROVED FOR THE DEVELOPMENT OF THIS SITE (SEE APPROVAL LETTER, SHEET 3). THIS SITE SHALL UTILIZE "LOW IMPACT DEVELOPMENT TECHNIQUES" TO INCLUDE GRAVEL OR PAVER DRIVES AND ROOF DRAINS CONNECTED TO INFILTRATION BASINS.

THE NORTHWESTERLY PORTION OF THIS SITE (APPROXIMATELY 0.6 ACRES) IS CONVEYED WITHIN EXISTING SWALES AND VIA OVERLAND SHEET FLOW TO THE UN-BUILT PORTION OF THE NORTH PICKETT STREET RIGHT-OF-WAY. THE RUN-OFF FLOWS TOWARDS AN INLET LOCATED ON THE NORTH SIDE OF POLK AVENUE. THE STORMWATER IS CARRIED UNDER POLK AVENUE AND INTO A CITY MAINTAINED 21" STORM SEWER OUTFALL LOCATED WITHIN NO. PICKETT STREET. THE EXISTING PEAK 10-YEAR STORM FLOW TO THIS POINT IS 17.5 CFS. THIS SITE DEVELOPMENT PROPOSES A Q10 INCREASE OF 0.3 CFS (1.8% INCREASE OR 17.8 CFS TOTAL) TO THE STORM SEWER OUTFALL LOCATED WITHIN NO. PICKETT STREET.

THE SOUTHERLY PORTION OF THE SITE (APPROXIMATELY 1.2 ACRES) FLOWS TOWARDS THE CITY MAINTAINED STORM SEWER LOCATED ALONG THE SOUTHEASTERLY PROPERTY LINE. THE STORM SEWER COLLECTS THE RUNOFF VIA YARD INLETS AND CONVEYS IT VIA CLOSED CONDUIT IN CITY MAINTAINED STORM SEWERS TO NORTH OWEN STREET. WITHIN THIS AREA THE RUNOFF IS SPLIT INTO TWO DIRECTIONS AT STRUCTURE #F. HALF OF THE RUNOFF ENTERING STRUCTURE #F IS CONVEYED TO OWEN STREET WHILE THE OTHER HALF IS CONVEYED TO NAYLOR STREET. THIS SPLIT ALLOWS FOR A DECREASED AMOUNT OF RUNOFF TO ENTER THE EXISTING STORM SEWER SYSTEM WITHIN OWEN STREET. WITH THIS DECREASED AMOUNT OF RUNOFF ENTERING THIS SECTION OF STORM SEWER WHICH IS PRESENTLY SURCHARGED WHEN EVALUATED FOR A 10 YEAR STORM AT A TC OF 10 MINUTES BUT WILL NOT BE OVER BURDENED BY THE MINIMAL INCREASE IN RUNOFF PRODUCED BY THIS PROJECT. THEREFORE IN OUR OPINION, THOUGH THE EXISTING STORM SEWER IS SURCHARGED, THE RUNOFF FROM THIS PROJECT WILL NOT PLACE AN OVERWHELMING BURDEN ON THE EXISTING STORM SEWER SYSTEM. THE HGL IS MAINTAINED BELOW THE GROUND AND AFTER CONSTRUCTION THERE WILL ONLY BE AN INCREASE OF JUST 1.0 CFS TO THIS PORTION OF THE OUTFALL.

A SMALLER PORTION OF THE SITE FLOWS OVERLAND THROUGH THE METHODIST CHURCH SITE TO AN EXISTING YARD INLET (AN INCREASE OF 0.2 CFS IS SENT TO THE INLET).

THE TOTAL Q10 INCREASE OF 1.5 CFS FROM THIS SITE AND SPREAD THROUGH THREE DISTINCT DRAINAGE AREAS, WILL HAVE NO ADVERSE IMPACTS ON ADJACENT OR DOWNSTREAM PROPERTIES. THE OUTFALL FOR THIS SITE IS CONVEYED THROUGH EXISTING SWALES (AT NON-EROSIVE RATES) AND VIA OVERLAND FLOW TO THE CITY MAINTAINED STORM SEWER SYSTEM. THEREFORE, WE ARE OF THE OPINION THE EXISTING SURCHARGED CONDITION OF THE OUTFALL FOR THIS SITE WILL NOT EXPERIENCE A SIGNIFICANT DECREASE IN EFFICIENCY TO CONVEY THE RECEIVING RUNOFF AND THAT THE EXISTING SURCHARGED SYSTEM WILL CONTINUE TO FUNCTION AS IT PRESENTLY DOES WITHOUT IMPACTING ANY ADJACENT STRUCTURES.

DSUP #2002-0049

ESI PEER REVIEW

APPROVED
SPECIAL USE PERMIT NO. 2002-0049

DEPARTMENT OF PLANNING & ZONING
DIRECTOR: [Signature] DATE: 11/23/04

DEPARTMENT OF TRANSPORTATION & ENVIRONMENTAL SERVICES
DIRECTOR: [Signature] DATE: 11/23/04

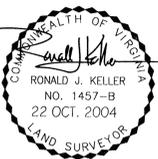
CITY OF ALEXANDRIA PLANNING COMMISSION
DATE RECORDED: 12/10/04

INSTRUMENT NO. _____ DEED BOOK NO. _____ DATE _____

DATE	REVISION
7/29/04	PER COMMENTS
10/22/04	FINAL MYLARS

DESIGN: P.A.W
DRAWN: R.K.B
SCALE: AS NOTED
DATE: MAY 12 2004
SHEET 17 OF 17
FILE: 00-02

R.C.F. FIELDS, JR. & ASSOCIATES
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DSP #2003-0036
Pickett's Ridge II

#03-0036