



APPLICATION ACCEPTED: February 18, 2009
PLANNING COMMISSION: April 22, 2010
BOARD OF SUPERVISORS: Not yet scheduled

County of Fairfax, Virginia

April 15, 2010

STAFF REPORT ADDENDUM

APPLICATION RZ 2009-PR-005

PROVIDENCE DISTRICT

APPLICANT: Anthony Casolaro

PRESENT ZONING: R-1

REQUESTED ZONING: R-2

PARCEL: 39-4 ((1)) 116

ACREAGE: 1.33 Acres

PLAN MAP: Residential; 3-4 du/ac

RZ PROPOSAL: The applicant seeks to rezone a single 1.33 acre parcel from R-1 to R-2 to permit the construction of one additional single-family detached dwelling. The existing single-family detached dwelling would remain.

**REQUESTED WAIVERS/
MODIFICATIONS:** Waiver of frontage improvements along Elm Place

STAFF RECOMMENDATIONS:

Staff recommends denial of RZ 2009-PR-005; however, if it is the intent of the Board of Supervisors to approve RZ 2009-PR-005, staff recommends that such approval be subject to the proffers consistent with those contained in Attachment 1.

Kelli Goddard-Sobers

It should be noted that it is not the intent of the staff to recommend that the Board, in adopting any conditions proffered by the owner, relieve the applicant/owner from compliance with the provisions of any applicable ordinances, regulations, or adopted standards.

It should be further noted that the content of this report reflects the analysis and recommendation of staff; it does not reflect the position of the Board of Supervisors.

The approval of this special exception does not interfere with, abrogate or annul any easement, covenants, or other agreements between parties, as they may apply to the property subject to this application.

For information, contact the Zoning Evaluation Division, Department of Planning and Zoning, 12055 Government Center Parkway, Suite 801, Fairfax, Virginia 22035-5505, (703) 324-1290.

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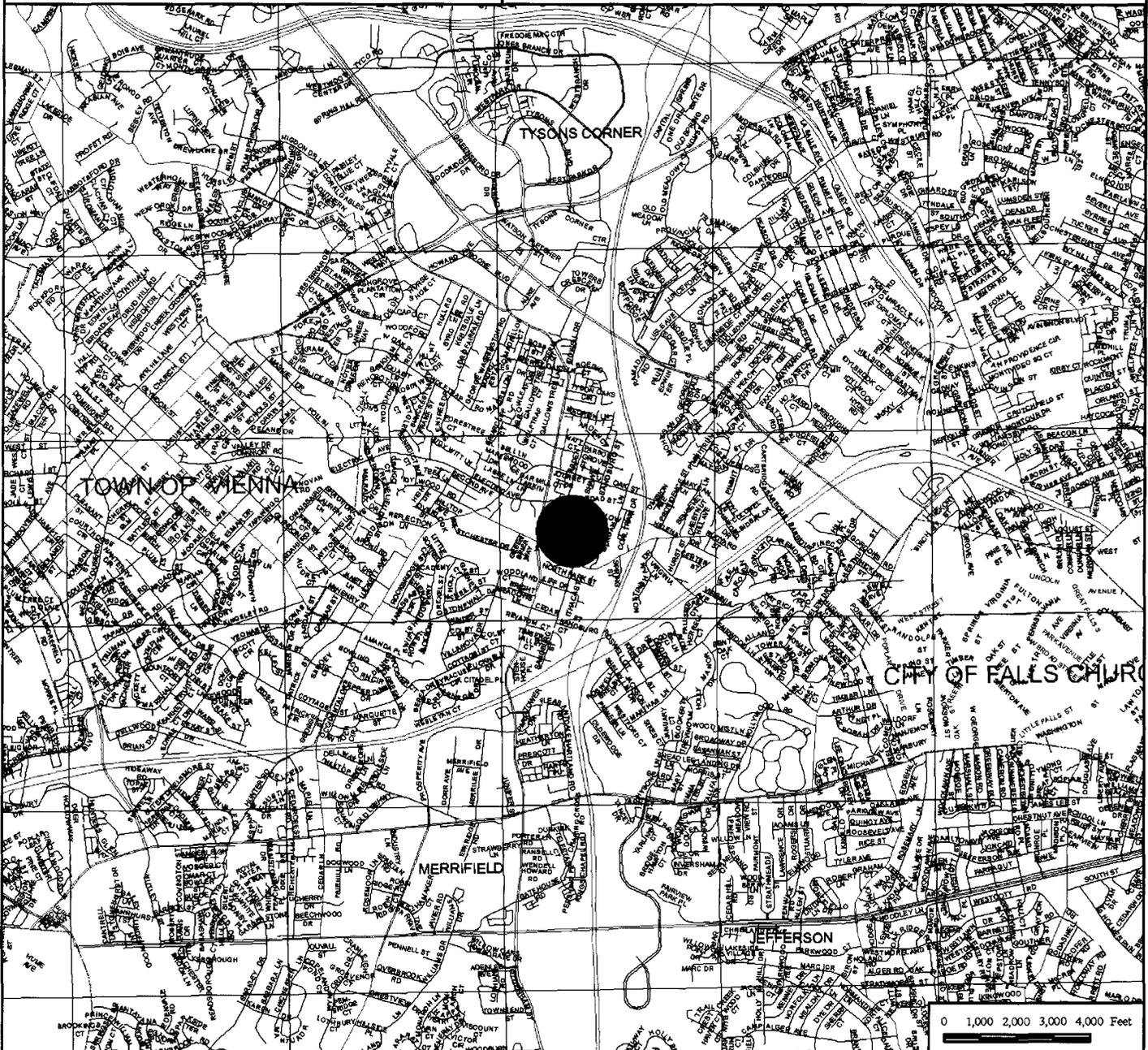


Americans with Disabilities Act (ADA): Reasonable accommodation is available upon 7 days advance notice. For additional information on ADA call (703) 324-1334 or TTY 711 (Virginia Relay Center).

Rezoning Application

RZ 2009-PR-005

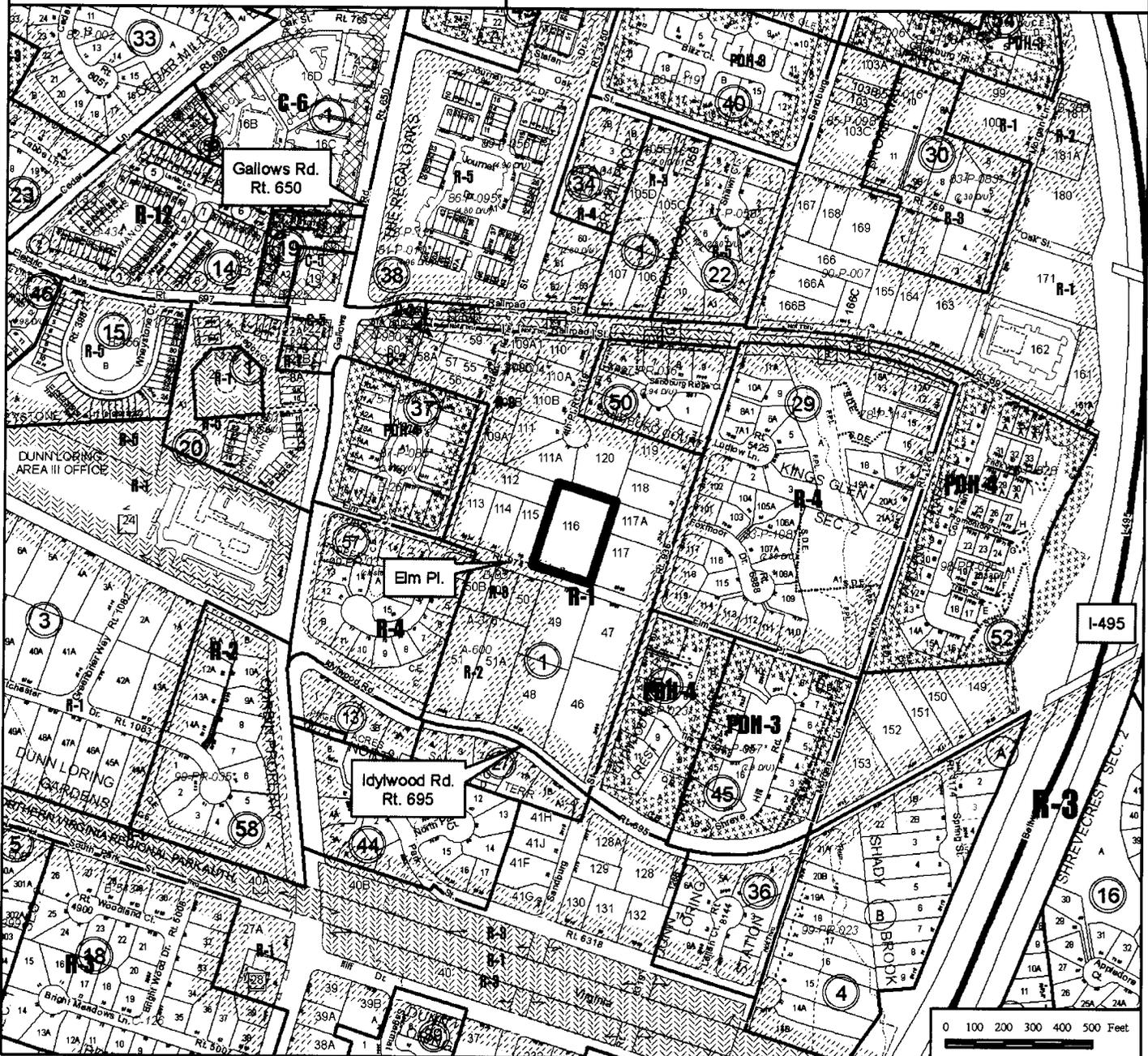
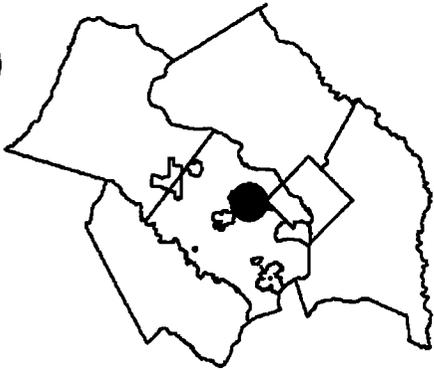
Applicant: ANTHONY CASOLARO
Accepted: 02/18/2009
Proposed: RESIDENTIAL
Area: 1.33 AC OF LAND; DISTRICT - PROVIDENCE
Zoning Dist Sect:
Located: NORTH SIDE OF ELM PLACE BETWEEN
SANDBURG STREET AND ARDEN STREET
Zoning: FROM R- 1 TO R- 2
Overlay Dist:
Map Ref Num: 039-4 /01/ /0116



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8012 ELM PLACE

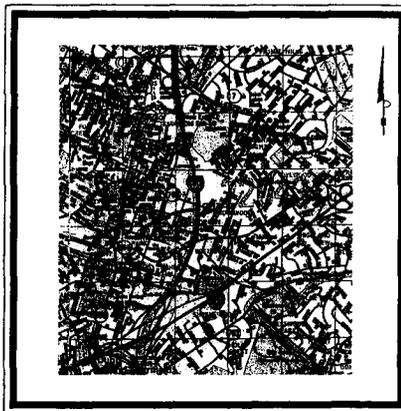
PROVIDENCE DISTRICT FAIRFAX COUNTY, VIRGINIA

GENERALIZED DEVELOPMENT PLAN

RZ 2009-PR-005

SHEET INDEX

1. COVER SHEET
2. NOTES AND TABULATIONS
3. EXISTING CONDITIONS & GENERALIZED DEVELOPMENT PLAN
4. INFILTRATION TRENCH DESIGN LOT 1 AND LOT 2
5. BMP CALCULATIONS
6. EXISTING VEGETATION MAP
7. TREE PRESERVATION PLAN



VICINITY MAP
SCALE: 1" = 200'

APPLICANT:

DR. ANTHONY CASOLARO
8012 ELM PLACE
DUNN LORING, VIRGINIA 22027

PREPARED BY:

BOWMAN CONSULTING GROUP, LTD.
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CHANTILLY, VA. 20151

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COVER SHEET
8012 ELM PLACE
PROVIDENCE DISTRICT
FAIRFAX COUNTY, VIRGINIA

RZ 2009-PR-005
COUNTY PROJECT NUMBER



PLAN STATUS	
4/17/08	REVISION PER COMMENTS
7/20/08	REVISION PER COMMENTS
8/26/08	REVISION PER COMMENTS
9/29/08	REVISION PER COMMENTS
9/16/09	REVISION PER COMMENTS
9/18/09	REVISION PER COMMENTS
11/20/09	REVISION PER COMMENTS
2/26/10	REVISION PER COMMENTS
3/2/10	REVISION PER COMMENTS
3/10/10	REVISION PER COMMENTS
4/28/10	REVISION PER COMMENTS
DATE	DESCRIPTION
MT	KP
DESIGN	DRAWN
SCALE	"N" KEY'S
JOB No.	4668-01-002
DATE:	MARCH 18, 2010
FILE No.	4668-D-ZP-001

GENERAL NOTES:

- THE PROPERTY DELINEATED ON THESE PLANS IS LOCATED ON FAIRFAX COUNTY TAX ASSESSMENT MAP NUMBER 30-4 (03) 116. THE SITE IS CURRENTLY ZONED R-1, THE PROPOSED ZONING IS R-2.
- BOUNDARY INFORMATION OBTAINED FROM CERTIFIED SURVEY BY SDE, INC.
- TOPOGRAPHIC INFORMATION OBTAINED FROM FIELD RUN SURVEY PREPARED BY SDE, INC.
- TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO HAZARDOUS OR TOXIC SUBSTANCES AS SET FORTH IN TITLE 40, CODE OF FEDERAL REGULATIONS PART 116.4, 302.4 AND 304; HAZARDOUS WASTE AS SET FORTH IN COMMERCIALITY OF VIRGINIA / DEPARTMENT OF WASTE MANAGEMENT NR 572-10-1 - VIRGINIA HAZARDOUS WASTE MANAGEMENT REGULATION; AND /OR PETROLEUM PRODUCTS AS DEFINED IN TITLE 40 CODE OF FEDERAL REGULATIONS PART 260; TO BE GENERATED, UTILIZED, STORED, TREATED, AND /OR DISPOSED OF ON SITE.
- THERE ARE NO ZONING OVERLAY DISTRICTS.
- THERE ARE NO AFFORDABLE DWELLING UNITS (ADU) REQUIRED OR PROPOSED FOR THIS PROJECT.
- NO DENSITY REDUCTIONS ARE REQUIRED BY ZONING SECTION 2-308.
- THERE ARE NO PROPOSED RECREATIONAL FACILITIES PROPOSED FOR THIS DEVELOPMENT.

SITE TABULATIONS:

SITE AREA: 57,879 SF / 1.329 ACRES
 EXISTING ZONE: R-1 RESIDENTIAL
 PROPOSED ZONE: R-2 RESIDENTIAL

BULK REGULATIONS (R-2 ZONE)

NUMBER OF UNITS:	REQUIRED	PROPOSED	
		LOT 1	LOT 2
DENSITY:	2 DU/AC (MAX)	1 SFD DWELLING UNIT (EXIST)	1 SFD DWELLING UNIT
MINIMUM LOT AREA:	15,000 SF	33,291 SF	24,588 SF
AVERAGE LOT AREA:	18,000 SF		
MINIMUM LOT WIDTH:	IN FRONT LOT - 100' CORNER LOT - 125'	102.87'	28,940 SF
MAXIMUM BUILDING HEIGHT:	35'	35'	35'
SET BACKS:			
FRONT	35'	87' (EXIST)*	35'
SIDE	15'	15'	15'
REAR	25'	130' (EXIST)*	240'
OPEN SPACE:	N/A	N/A	N/A
PARKING:	2 SPACES PER D/U	2 SPACES	2 SPACES
LOT SHAPE FACTOR:		18	28

* NOTE: SETBACKS INDICATED FOR LOT #1 ARE DEMONSTRATED FOR THE PURPOSE OF LOCATING THE EXISTING STRUCTURE ON THE LOT.

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

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

This information is required under the following Zoning Ordinance paragraphs:
 Special Permits (9-011 2.1 & 2.2) Special Exceptions (9-011 2.1 & 3.1)
 Cluster Subdivision (9-016 10 & 11) Commercial Re-zoning Districts (9-022 2A (12) & (14))
 Development Plans PRC Districts (16-302 3 & 4) PRC Plans (16-303 1 & 10)
 PDP # Districts (General PRC) (16-302 17 & 10) Amendments (16-302 17 & 10)

1. Plat is at a minimum scale of 1"=50' (unless it is depicted on one sheet with a minimum scale of 1"=100')
2. A graphic depicting the stormwater management facilities and limits of clearing and grading accommodate the stormwater management facilities, storm drainage pipe systems and culvert construction, pond, wetland, access roads, site outlets, energy dissipation devices, and stream stabilization measures as shown on Sheet 482.
3. Provide:

Facility Name/Type & No.	On-site area served (acres)	Off-site area served (acres)	Drainage Area (acres)	Footprint Area (sq ft)	Storage Volume (cf)	Height (ft)
LOT 1 SW TRENCH	0.79 AC	0 AC	360 AC	700 SF	1748.67 CF	N/A
LOT 2 SW TRENCH	0.79 AC	0 AC	360 AC	800 SF	1978.50 CF	N/A
4. Create drainage channels, outlets and pipe systems as shown on Sheet 482. Pond inlet and outlet pipe systems are shown on Sheet 482.
5. Maintenance access (road) to stormwater management facilities is shown on Sheet 482. Type of maintenance access road surface noted on the plat is GRAVEL, unless gravel, gravel etc.
6. Landscaping and tree preservation shown in and near the stormwater management facility is shown on Sheet 7.
7. A stormwater management narrative which contains a description of how detention and best management practices requirements will be met is provided on Sheet 482.
8. A description of the existing conditions of each numbered site outlined downstream from the site to a point which is at least 100 times the site area or which has a drainage area of at least one square mile (640 acres) as provided on Sheet 482.
9. A description of how the outlet requirements, including contributing drainage areas of the Plaque Facilities Manual will be satisfied is provided on Sheet 482.
10. Existing topography with minimum contour intervals of two (2) feet and a note as to whether it is an air survey or field run is provided on Sheet 283.
11. A submission waiver is requested for: USE OF INFILTRATION TRENCH ON PRIVATE LOTS/PARTIAL DETENTION REQUIREMENTS
12. Stormwater management is not required because: N/A

GENERALIZED DEVELOPMENT PLAN SUBMISSION CHECKLIST:

- TWENTY-THREE (23) COPIES OF A GENERALIZED DEVELOPMENT PLAN PROVIDED HEREIN WITH APPLICATION.
- ONE 8 1/2" X 11" REDUCTION OF THE PLAN PROVIDED HEREIN WITH APPLICATION.
- A GENERALIZED DEVELOPMENT PLAN, AT A SCALE OF NOT LESS THAN ONE INCH EQUALS ONE HUNDRED FEET (1"=100'), SHALL SHOW THE FOLLOWING:
 - A. SCALE AND NORTH ARROW, WITH NORTH, TO THE EXTENT FEASIBLE, ORIENTED TO THE TOP OF THE PLAN. SCALE AND NORTH ARROW HAVE BEEN PROVIDED ON PLAN, SEE SHEET 3-7.
 - B. EXCEPT FOR SINGLE FAMILY DETACHED DWELLINGS, THE APPROXIMATE LOCATION AND DIMENSIONS OF ALL PROPOSED STRUCTURES AND USES, TO INCLUDE THE MAXIMUM HEIGHT IN FEET OF ALL STRUCTURES AND PORCHES, AND A GRAPHIC DEPICTION OF THE ANGLE OF BULK PLANE, IF APPLICABLE. EXCEPTED STRUCTURES AND USES INCLUDING MAXIMUM HEIGHT OF STRUCTURE HAS BEEN PROVIDED ON PLAN, SEE SHEETS 2 & 3.
 - C. THE PROPOSED TRAFFIC CIRCULATION PLAN INCLUDING MAJOR STREETS AND MAJOR PEDESTRIAN, BIKE AND/OR BIRDLE PATHS, AND THE LOCATION OF ALL TRAILS REQUIRED BY THE ADOPTED COMPREHENSIVE PLAN. PROPOSED PEDESTRIAN LOCATION HAS BEEN PROVIDED ON PLAN. NO TRAILS ARE REQUIRED PER THE FAIRFAX COUNTY TRAILS PLAN, SEE SHEET 1.
 - D. ALL PROPOSED MAJOR OPEN SPACE AREAS AND THE APPROXIMATE LOCATION OF ALL PROPOSED COMMUNITY AND PUBLIC FACILITIES. THERE IS NO OPEN SPACE REQUIREMENT FOR THIS SITE, THEREFORE NO MAJOR OPEN SPACE AREAS HAVE BEEN PROPOSED. THERE ARE NO PROPOSED COMMUNITY OR PUBLIC FACILITIES.
 - E. THE PROPOSED PLAN FOR ALL MAJOR SANITARY SEWER IMPROVEMENTS. N/A

- F. APPROXIMATE LOCATION, ESTIMATED SIZE OF FOOTPRINT IN ACRES AND TYPE OF ALL PROPOSED STORMWATER MANAGEMENT FACILITIES, INCLUDING THE FULL EXTENT OF SIDE SLOPES, DRAINWAYS, SPILLWAYS, DAMS, AND APPROPRIATE WATER SPACE ELEVATION FOR DESIGN STORMS, IF APPLICABLE. IN ADDITION, A PRELIMINARY STORMWATER MANAGEMENT PLAN THAT INCLUDES INFORMATION ABOUT THE ADEQUACY OF DOWNSTREAM DRAINAGE, INCLUDING THE SUFFICIENCY OF CAPACITY OF ANY STORM DRAINAGE PIPES AND OTHER CONDUITS INTO WHICH STORMWATER RUNOFF WILL BE CONVEYED, WHEN THERE IS 2500 SQUARE FEET OR MORE OF LAND DISTURBING ACTIVITY ON THE DUTY APPLICATION PROPERTY, IN ADDITION TO THE ABOVE, THE PRELIMINARY STORMWATER MANAGEMENT PLAN SHALL INCLUDE:
 - (1) A GRAPHIC DEPICTING INFORMATION AS DESCRIBED WITHIN DETAILED APPLICATION CHECKLIST.
 - (2) A PRELIMINARY STORMWATER MANAGEMENT NARRATIVE SETTING FORTH THE REQUIRED INFORMATION WITHIN THE DETAILED APPLICATION CHECKLIST.

-STORM WATER OUTFALL ANALYSIS AND BMP CALCULATIONS FOR PROPOSED INFILTRATION TRENCH HAVE BEEN PROVIDED, SEE SHEETS 4 & 5.

G. THE LOCATION OF ALL EXISTING UTILITY EASEMENTS HAVING A WIDTH OF TWENTY-FIVE (25) FEET OR MORE, AND ALL MAJOR UNDERGROUND UTILITY EASEMENTS REGARDLESS OF WIDTH.

-IN THE APPLICANT'S KNOWLEDGE, THERE ARE NO EXISTING UTILITY EASEMENTS HAVING A WIDTH OF 25 FEET OR GREATER, THERE IS A SANITARY SEWER LINE ALONG THE SUBDIVISION PROPERTY LINE WITHOUT RECORD OF AN EASEMENT.

H. A SCHEDULE SHOWING THE NUMBER OF PARKING SPACES PROVIDED AND THE NUMBER REQUIRED BY THE PROVISIONS OF ARTICLE 11 OF THE ZONING ORDINANCE. A SCHEDULE SHOWING THE NUMBER OF PARKING SPACES PROVIDED AND THE NUMBER REQUIRED HAS BEEN PROVIDED, SEE SHEET 2.

I. EXISTING TOPOGRAPHY WITH A MAXIMUM CONTOUR INTERVAL OF TWO (2) FEET AND A STATEMENT INDICATING WHETHER IT IS AN SURVEYOR FIELD RUN.

-TOPOGRAPHIC INFORMATION PROVIDED ON SHEETS 3-7 AS PREPARED BY A FIELD RUN SURVEY COMPLETED BY SDE, INC.

J. A DELINEATION OF THOSE GENERAL AREAS THAT HAVE SCENIC ASSETS OR NATURAL FEATURES DESERVING OF PROTECTION AND PRESERVATION, AND A STATEMENT OF HOW SUCH WILL BE ACCOMPLISHED.

-IN THE APPLICANT'S OPINION, THE SITE HAS NO SCENIC ASSETS OR NATURAL FEATURES DESERVING OF PROTECTION OR PRESERVATION.

K. A STATEMENT OR VISUAL PRESENTATION OF HOW ADJACENT AND NEIGHBORING PROPERTIES SHALL BE PROTECTED FROM ANY ADVERSE EFFECTS PROMPTED BY THE PROPOSED DEVELOPMENT, TO INCLUDE VEHICULAR ACCESS PLANS AND DIMENSIONS OF ALL PERIPHERAL YARDS THAT WILL BE PROVIDED.

-ALL REQUIRED PERIPHERAL YARDS FOR PROPOSED STRUCTURE HAVE BEEN PROVIDED IN ACCORDANCE WITH THE BULK REGULATIONS SET FORTH IN SECTION 3-207 OF THE FAIRFAX COUNTY ZONING ORDINANCE, SEE SHEETS 2 & 3.

L. A DELINEATION OF ALL EXISTING STRUCTURES, AND AN INDICATION OF THEIR DATE OF CONSTRUCTION IF KNOWN, AND WHETHER THEY WILL BE RETAINED OR DEMOLISHED.

-EXISTING DWELLING CONSTRUCTED circa 1980 IS TO REMAIN AND EXISTING SHED IS TO BE RAISED. EXISTING SHED HAS NO COMPLETE 3-4' AND MINIMAL FOUNDATION WORK, SEE SHEET 3.

M. A STATEMENT SETTING FORTH THE MAXIMUM GROSS FLOOR AREA AND FAR PROPOSED FOR ALL USES OTHER THAN RESIDENTIAL.

-N/A

N. A STATEMENT OR PRESENTATION SETTING FORTH THE MAXIMUM NUMBER OF DWELLING UNITS PROPOSED, AND THE DENSITY AND THE OPEN SPACE CALCULATIONS BASED ON THE PROVISIONS OF SECTIONS 2-308 (MAXIMUM DENSITY) AND 2-308 (OPEN SPACE) OF THE ZONING ORDINANCE.

-IN ACCORDANCE WITH THE ADOPTED COMPREHENSIVE PLAN, THE PROPOSED DEVELOPMENT WILL PROVIDE RESIDENTIAL DEVELOPMENT AT A DENSITY UNITS PER ACRE AND WILL CONFORM TO THE PUBLIC OPENSPACE, REGULATIONS AND ADOPTION STANDARDS, A MAXIMUM OF 2 DWELLING UNITS HAVE BEEN PROPOSED WITH THIS PLAN, FOR A DENSITY OF 1.53 DU/AC, SEE SHEETS 2 & 3, THERE IS NO OPEN SPACE REQUIREMENTS FOR THE SITE.

O. A STATEMENT OF THOSE SPECIAL AMENITIES THAT ARE PROPOSED WITHIN THE DEVELOPMENT.

-THERE ARE NO SPECIAL AMENITIES THAT ARE PROPOSED WITH THIS PLAN.

P. A STATEMENT OF THE PUBLIC IMPROVEMENTS, BOTH ON AND OFF-SITE, THAT ARE PROPOSED FOR DEDICATION AND/OR CONSTRUCTION, AND AN ESTIMATE OF THE TIMING OF PROVIDING SUCH IMPROVEMENTS.

-STREET FRONTAGE DEDICATION IS PROPOSED WITH THIS DEVELOPMENT AS SHOWN ON SHEET 3. DEDICATION WILL OCCUR WITH APPROVAL OF SITE PLAN.

Q. A STATEMENT SETTING FORTH THE PROPOSED APPROXIMATE DEVELOPMENT SCHEDULE.

-DEVELOPMENT IS ANTICIPATED TO COMMENCE UPON APPROVAL OF SITE PLAN.

R. APPROXIMATE DELINEATION OF ANY FLOODPLAIN DESIGNATED BY THE FEDERAL INSURANCE ADMINISTRATION, UNITED STATES GEOLOGICAL SURVEY, OR FAIRFAX COUNTY, THE APPROXIMATE DELINEATION OF ANY RESOURCE PROTECTION AREA AND RESOURCE MANAGEMENT AREA AND THE APPROXIMATE DELINEATION OF ANY ENVIRONMENTAL QUALITY CORRIDOR AS DEFINED IN THE ADOPTED COMPREHENSIVE PLAN, AND, IF APPLICABLE, THE DISTANCE OF ANY EXISTING AND PROPOSED STRUCTURES FROM THE FLOODPLAIN, RESOURCE PROTECTION AREA AND RESOURCE MANAGEMENT AREA, OR ENVIRONMENTAL QUALITY CORRIDOR.

-IN ACCORDANCE WITH FEMA ISSUED FLOOD MAPS, THERE IS NO 100-YEAR FLOODPLAIN ON THE SITE. IN ACCORDANCE WITH FAIRFAX COUNTY GS MAP 436-4, THERE ARE NO RESOURCE PROTECTION AREAS (RPA) OR ENVIRONMENTAL QUALITY CORRIDORS (EQC) ON THE SITE.

S. ANY PROPOSED IMPROVEMENTS TO THE PUBLIC RIGHT(S)-OF-WAY AND DELINEATION OF THE EXISTING CENTERLINE OF ALL STREETS ABUTTING THE PROPERTY, INCLUDING DIMENSIONS FROM THE EXISTING CENTERLINE TO THE EDGE OF THE PAVEMENT AND TO THE EDGE OF THE RIGHT-OF-WAY.

-THERE HAVE BEEN NO IMPROVEMENTS TO THE PUBLIC RIGHT-OF-WAY PROPOSED WITH THIS PLAN. THE EXISTING CENTERLINE OF THE STREET ABUTTING THE PROPERTY (ELM PLACE) HAS BEEN DELINEATED. DIMENSIONS HAVE BEEN SHOWN FROM THE EXISTING CENTERLINE TO THE PAVEMENT AND TO THE EDGE OF THE RIGHT-OF-WAY, SEE SHEET 3.

T. A PLAN SHOWING LIMITS OF CLEARING, PROPOSED LANDSCAPING AND SCREENING IN ACCORDANCE WITH ARTICLE 13 OF THE ZONING ORDINANCE, A DELINEATION OF EXISTING VEGETATION, TO INCLUDE EXISTING VEGETATION TO BE PRESERVED, AND WHEN THERE IS 2500 SQUARE FEET OR MORE OF LAND DISTURBING ACTIVITY, AN EXISTING VEGETATION MAP.

-THE PROPOSED LIMITS OF CLEARING HAS BEEN PROVIDED, SEE SHEET 3. AN EXISTING VEGETATION MAP AND TREE PRESERVATION PLAN HAVE BEEN PROVIDED, SEE SHEETS 4 & 7 RESPECTIVELY.

U. APPROXIMATE DELINEATION OF ANY GRAVE, OBJECT OR STRUCTURE MARKING A PLACE OF BURIAL IF KNOWN, AND A STATEMENT INDICATING HOW THE PROPOSED DEVELOPMENT WILL IMPACT THE BURIAL SITE.

-TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO KNOWN GRAVES, MONUMENTS, OBJECTS OR STRUCTURES MARKING A PLACE OF BURIAL.

V. A STATEMENT WHICH CONFIRMS THE OWNERSHIP OF THE SUBJECT PROPERTY, AND THE NATURE OF THE APPLICANT'S INTEREST IN SAME.

-THE PROPERTY HEREON IS IN THE OWNERSHIP OF DR. ANTHONY CASARDO IN DEED BOOK 18314, PAGE 870, AMONG THE LAND RECORDS OF FAIRFAX COUNTY.

REQUESTED MODIFICATION /WAIVERS:

1. WAIVER/MODIFICATION TO ALLOW INFILTRATION TRENCH FOR SWM DETENTION AND BMP PURPOSES ON INDIVIDUAL PRIVATE RESIDENTIAL LOTS.
2. PARTIAL WAIVER OF SWM DETENTION REQUIREMENTS.

ILLUSTRATIVE ELEVATION

N.T.S



PROPOSED HOUSE ELEVATION AND MATERIAL GRAPHICS PROVIDED FOR ILLUSTRATIVE PURPOSES ONLY AND SUBJECT TO REVISION WITH FINAL ARCHITECTURAL DESIGN

Bowman
CONSULTING

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 Suite 200
 Chantilly, Virginia 20151
 Phone: (703) 484-1000
 Fax: (703) 484-1070
 www.bowmanconsulting.com

NOTES AND TABULATIONS
 8012 ELM PLACE
 FAIRFAX COUNTY, VIRGINIA

PROVIDENCE DISTRICT

RZ 2008-PR-005

COUNTY BOARD DISTRICT



PLAN STATUS

DATE	DESCRIPTION
01/17/08	REVISION PER COMMENTS
02/04/08	REVISION PER COMMENTS
02/05/08	REVISION PER COMMENTS
02/07/08	REVISION PER COMMENTS
02/10/08	REVISION PER COMMENTS
02/11/08	REVISION PER COMMENTS
02/12/08	REVISION PER COMMENTS
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02/26/08	REVISION PER COMMENTS
02/27/08	REVISION PER COMMENTS
02/28/08	REVISION PER COMMENTS
02/29/08	REVISION PER COMMENTS
02/30/08	REVISION PER COMMENTS

MT KF MT
 DESIGN GRAB AND
 SCALE RE AS NOTED
 JOB No. 4668-01-002
 DATE: MARCH 18, 2010
 FILE No. 4668-0-2P-001

SHEET 2 OF 7

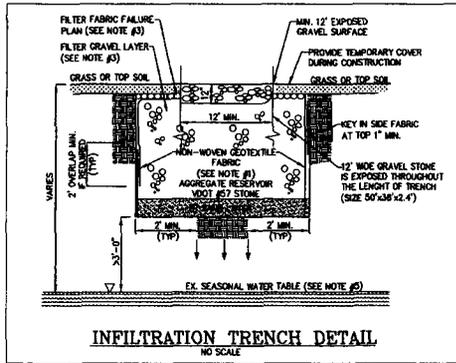
OUTFALL NARRATIVE

THE SITE DRAINS ONTO A NATURAL SWAL AT THE NORTH OF THE SITE. BEFORE DEVELOPMENT THE NEW LOT 2 SHEETS FROM ELM PLACE TO THE NORTHERN BOUNDARY OF THE SITE ONTO THE NATURAL SWAL WHICH CONVEYS FLOW THROUGH A 1/2 ACRE LOT OWNED BY MR. DUNLOP ONTO A DRAINAGE SYSTEM THAT PASSES UNDER SANDBURG STREET THROUGH TO THE RETENTION POND OF THE SHREVE HILL SUBDIVISION. THE FLOW CONTINUES ALONG MORGAN LANE TO COLBERT AROUND EDWOOD RD PROCEEDING TOWARD THE NORTHERN EDGE OF THE 1960 TRAIL TOWARD THE BELTWAY IN A CLOSED CONDUIT CONVEYANCE SYSTEM.

AFTER DEVELOPMENT OF THE SITE, SOME ON SITE FLOW MAY BE ROUTED THROUGH AN INFILTRATION TRENCH FOR RETENTION AND TREATMENT. THE REMAINING DIMINISHED FLOWS OF THE SITE WILL CONTINUE TO SHEET FLOW ACROSS THE SITE TO THE EXISTING NATURAL SWAL. AFTER DETECTION THE TRENCH WILL DISCHARGE AT A DIMINISHED RATE NOT TO EXCEED 1.68 CFS DURING A TEN YEAR STORM THROUGH A 6" DRAINAGE PIPE TO A POINT ABOVE THE NATURAL SWAL LOW POINT.

SWM/RMP NARRATIVE: TWO INFILTRATION TRENCHES HAVE BEEN DESIGNED FOR STORMWATER MANAGEMENT/RMP STORM WATER QUANTITY AND QUALITY MANAGEMENT PER FAIRFAX COUNTY REQUIREMENTS AS SHOWN ON THE PLANS.

NOTE: FOR THE DESIGN OF THE SWM/RMP (INFILTRATION TRENCH) AND ASSUMED RATE OF 0.56 IN/HR HAS BEEN USED. THIS DESIGN IS SUBJECT TO CHANGE WITH CONSTRUCTION DRAWINGS AND ACTUAL FIELD TEST OF THE INFILTRATION PERIC TEST.



- NOTE:**
1. USE NON-WOVEN GEOTEXTILE FABRIC WITH AOS OF 70-100 US SIEVE OR 0.2mm - 0.19mm AS DETERMINED BY ASTM D4753 AND A TRIANGULAR TENSILE STRENGTH OF 45 LB OR 0.25N AS DETERMINED BY ASTM D4833.
 2. AN 8 IN. DEEP BOTTOM SAND LAYER (VOID FINE AGGREGATE, GRADING A OR B) IS REQ'D.
 3. FOR AN AGGREGATE SURFACE TRENCH, FILTER FABRIC SHALL SURROUND ALL OF THE AGGREGATE FILL MATERIAL EXCEPT THE TOP ONE FOOT. A SEPARATE PIECE OF FABRIC SHALL BE USED FOR THE TOP LAYER TO ACT AS A FAILURE PLANE. THIS TOP PIECE CAN THEN BE REPLACED AND REPLACED UPON CLOSING.
 4. GEOTEXTILE FABRIC SHALL NOT BE EXPOSED TO DIRECT SUNLIGHT FOR MORE THAN 24 HOURS PRIOR TO INSTALLATION.
 5. DEPTH OF SEASONAL WATER TABLE (IF ANY) SHALL BE DETERMINED AT TIME OF FINAL ENGINEERING DESIGN.

INFILTRATION TRENCH DESIGN - LOT 1

TOTAL RAINFALL ACCUMULATION = 2 INCH (INFILTRATION DESIGN III, PFM PLATE 8-3)

DURATION OF STORM = 2-HR AND 2-HR STORM (PFM, FAIRFAX COUNTY VA, 2003 8-1303.4A)

IMPERVIOUS AREA TO BE TREATED = 4,858 SF

INFILTRATION RATE AS ASSUMED PER FAIRFAX COUNTY SOILS MAP = 0.52 IN / HR

INFILTRATION RATE (PER VIRGINIA STORMWATER MANAGEMENT HANDBOOK: 3.1010 8-3) = 0.28 IN / HR

VOLUME IN = 4,858 x 2 / 12 = 0.9 = 728.70 CF

NUMBER OF TRENCHES PROVIDED = 1 NOS

THE TRENCH RECEIVES = 728.70 CF, USE 729 CF

TRENCH DIMENSION PROVIDED:

LENGTH = 35 FEET
WIDTH = 20 FEET

SURFACE AREA OF TRENCH = 20 x 35 = 700 SF

VOLUME OUT = 0.26 IN / HR x 2 (HR) x 11 IN / 12 x 700 SF = 30.33 CF

STORAGE VOLUME REQUIRED = 729 - 30.33 = 698.67 CF

USING #57 STONE @ 40% VOID, VOLUME OF TRENCH = 698.67 / 0.40 = 1,746.67 CF

DEPTH OF TRENCH = (1,746.67 / (20 x 35)) = 2.49 FT

USE 1 TRENCH(ES) OF EACH SIZE (33L x 20W x 2.5D)

STORAGE VOLUME PROVIDED = 1750 CF

RATE OF DISCHARGE: $Q(t) = 0.26 \text{ IN} / \text{HR} \times 11 \text{ IN} / 12 \times 700 \text{ SF} = 15.17 \text{ CF} / \text{HR}$

INFILTRATION TIME REQUIRED = 698.67 / 15.17 = 46.08 HRS < 48 HRS, OK

INFILTRATION TRENCH DESIGN - LOT 2

TOTAL RAINFALL ACCUMULATION = 2 INCH (INFILTRATION DESIGN III, PFM PLATE 8-3)

DURATION OF STORM = 2-HR AND 2-HR STORM (PFM, FAIRFAX COUNTY VA, 2003 8-1303.4A)

IMPERVIOUS AREA TO BE TREATED = 4,595 SF

INFILTRATION RATE AS ASSUMED PER FAIRFAX COUNTY SOILS MAP = 0.52 IN / HR

INFILTRATION RATE (PER VIRGINIA STORMWATER MANAGEMENT HANDBOOK: 3.1010 8-3) = 0.26 IN / HR

VOLUME IN = 4,595 x 2 / 12 = 0.9 = 689.25 CF

NUMBER OF TRENCHES PROVIDED = 1 NOS

THE TRENCH RECEIVES = 689.25 CF, USE 690 CF

TRENCH DIMENSION PROVIDED:

LENGTH = 33 FEET
WIDTH = 20 FEET

SURFACE AREA OF TRENCH = 33 x 20 = 660 SF

VOLUME OUT = 0.26 IN / HR x 2 (HR) x 11 IN / 12 x 660 SF = 28.60 CF

STORAGE VOLUME REQUIRED = 690 - 28.60 = 661.40 CF

USING #57 STONE @ 40% VOID, VOLUME OF TRENCH = 661.40 / 0.40 = 1,653.50 CF

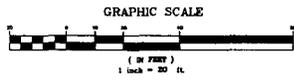
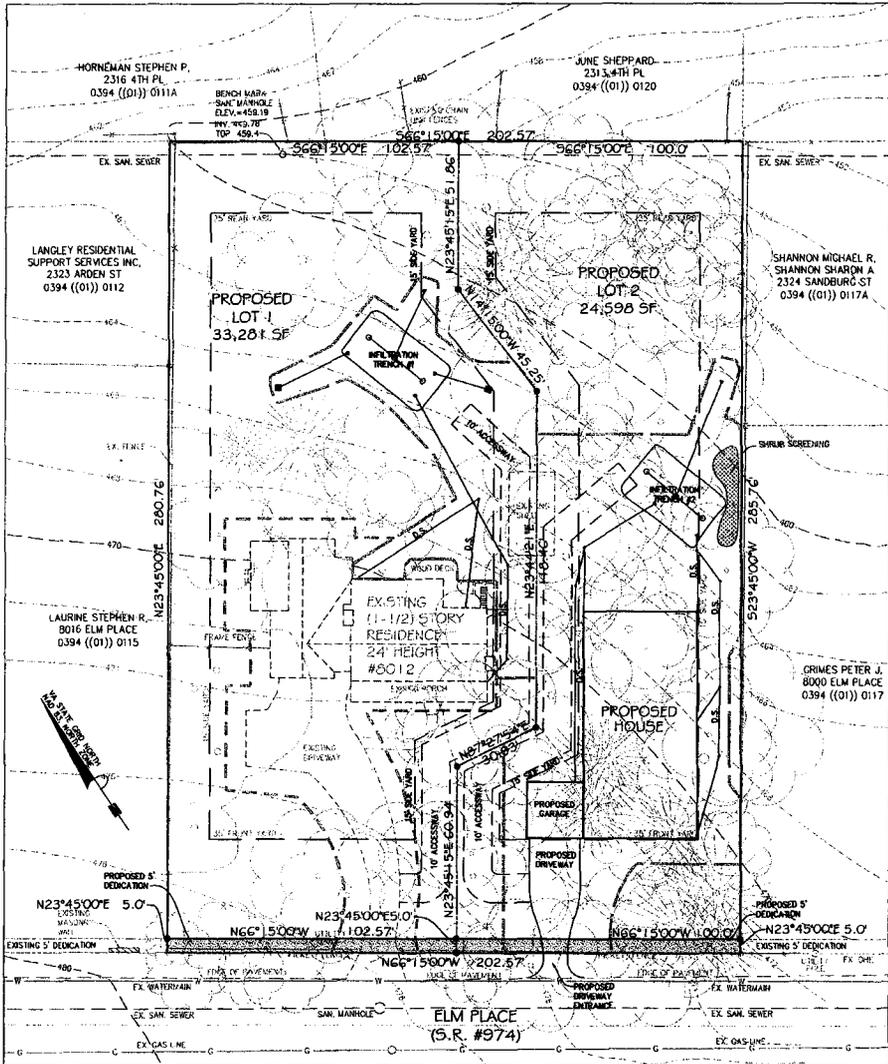
DEPTH OF TRENCH = (1,653.50 / (20 x 33)) = 2.39 FT

USE 1 TRENCH(ES) OF EACH SIZE (33L x 20W x 2.4D)

STORAGE VOLUME PROVIDED = 1584 CF

RATE OF DISCHARGE: $Q(t) = 0.26 \text{ IN} / \text{HR} \times 11 \text{ IN} / 12 \times 660 \text{ SF} = 14.30 \text{ CF} / \text{HR}$

INFILTRATION TIME REQUIRED = 661.40 / 14.30 = 46.15 HRS < 48 HRS, OK



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INFILTRATION TRENCH DESIGN LOT 1 AND LOT 2
8012 ELM PLACE
FAIRFAX COUNTY, VIRGINIA
PROVIDENCE DISTRICT



DATE	DESCRIPTION
4/7/10	REVISION PER COMMENTS
7/26/10	REVISION PER COMMENTS
8/24/10	REVISION PER COMMENTS
9/16/10	REVISION PER COMMENTS
10/29/10	REVISION PER COMMENTS
11/25/10	REVISION PER COMMENTS
12/22/10	REVISION PER COMMENTS
1/19/11	REVISION PER COMMENTS
4/16/11	REVISION PER COMMENTS
5/10/11	REVISION PER COMMENTS
6/14/11	REVISION PER COMMENTS
7/14/11	REVISION PER COMMENTS
8/10/11	REVISION PER COMMENTS
9/14/11	REVISION PER COMMENTS
10/11/11	REVISION PER COMMENTS
11/14/11	REVISION PER COMMENTS
12/14/11	REVISION PER COMMENTS
1/14/12	REVISION PER COMMENTS
2/14/12	REVISION PER COMMENTS
3/14/12	REVISION PER COMMENTS
4/14/12	REVISION PER COMMENTS
5/14/12	REVISION PER COMMENTS
6/14/12	REVISION PER COMMENTS
7/14/12	REVISION PER COMMENTS
8/14/12	REVISION PER COMMENTS
9/14/12	REVISION PER COMMENTS
10/14/12	REVISION PER COMMENTS
11/14/12	REVISION PER COMMENTS
12/14/12	REVISION PER COMMENTS

RZ 2008-PF-005
COUNTY PROJECT NUMBER

JOB No. 4688-01-002
DATE: MARCH 18, 2010
FILE No. 4688-02F-001

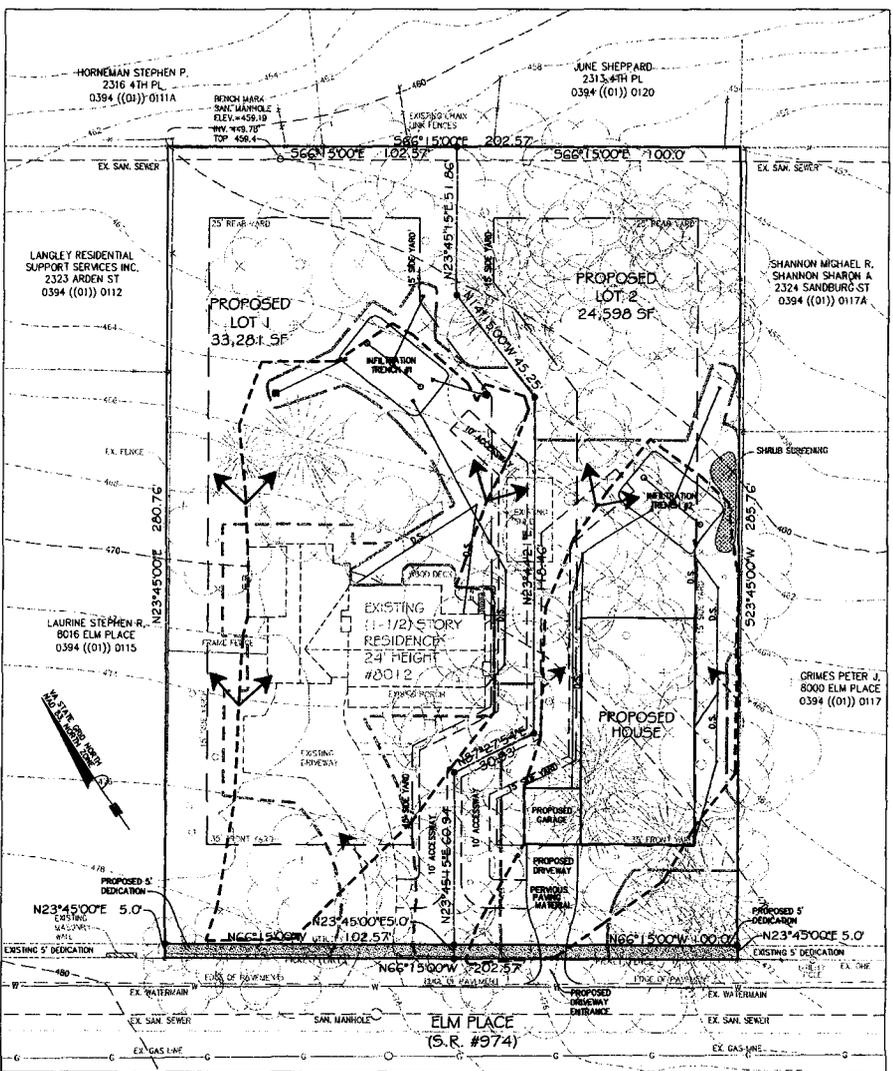
P:\4688 - 8012 Elm Place\4688-01-002 (PLN)\Printing\Engineering\4688-01-002A-trench-design.dwg

Business Consulting Center, LLC
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 Suite 300
 Chantilly, Virginia 20151
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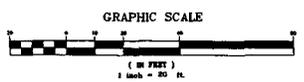
BMP CALCULATIONS
 8012 ELM PLACE
 FAIRFAX COUNTY, VIRGINIA
 PROVIDENCE DISTRICT

RZ 2008-PR-005
 COUNTY PROJECT NUMBER


PLAN STATUS
 1/17/10 REVISION PER COMMENTS
 8/5/09 REVISION PER COMMENTS
 1/23/09 REVISION PER COMMENTS
 5/16/09 REVISION PER COMMENTS
 9/18/09 REVISION PER COMMENTS
 1/28/09 REVISION PER COMMENTS
 2/25/10 REVISION PER COMMENTS
 2/26/10 REVISION PER COMMENTS
 3/19/10 REVISION PER COMMENTS
 4/21/10 REVISION PER COMMENTS
 DATE DESCRIPTION
 MT NF MT
 DESIGN DRAWN CHKD
 SCALE H: 1"=20'
 V: 1"=20'
 JOB No: 4668-01-002
 DATE: MARCH 18, 2010
 FILE No: 4668-02P-001



DRAINAGE DIVIDE PLAN
 1"=20'



Northwest Virginia BMP Handbook 11/8/02
BMP Facility Design Calculations
 Plan Name: ELM PLACE LOT 1
 Date: OCTOBER 16, 2009
 Engineer: JAY-EDM ADRIAN

I. **Water Quality Requirement**
 WATER QUALITY REQUIREMENT FOR THIS LOT IS PROVIDED THROUGH A BEST MANAGEMENT PRACTICE (DESIGN # FOR-219 2ND STAGE IS UTILIZED) WITH EFFICIENCY RATING OF 70%. THIS WILL PROVIDE PHOSPHORUS REMOVAL EFFICIENCY OF GREATER THAN 40% REQUIRED BY ORDINANCE.

II. **Watershed Information**
 TOTAL SITE AREA=34,428 S.F. OR 0.779 AC
 Part 1 - List all of the Subareas and "C" Factors used in the BMP Calculations

Subarea Designation and Description (1)	"C" Factor (2)	Acres (3)
BUILDING AREA (CONTROLLED)	0.30	0.080
DRIVEWAY (CONTROLLED)	0.30	0.024
PERVIOUS AREA (CONTROLLED)	0.30	0.028
PERVIOUS AREA (UNCONTROLLED)	0.30	0.775
DRIVEWAY (UNCONTROLLED)	0.30	0.028
PERVIOUS AREA (UNCONTROLLED)	0.30	0.365

NOTE: Rational formula "C" factors are taken from the general coding values listed in Appendix 4-1 or 4-2 depending on the location of the BMP facility (Prince William County Public Facilities Manual/Chart A6-19 or Prince William County Design and Construction Standards Manual, Exhibit 1).

Appendix 4-4a
 Calculations Worksheet

Northwest Virginia BMP Handbook 11/8/02
Part 2 - Determine the Weighted Average "C" Factor for the Site

(A) Area of the site (a) 0.79 acres

Subarea Designation (1)	"C" Factor (2)	Acres (3)	Product (4)
BUILDING AREA (CONTROLLED)	0.30	0.080	0.024
DRIVEWAY (CONTROLLED)	0.30	0.024	0.007
PERVIOUS AREA (CONTROLLED)	0.30	0.028	0.009
PERVIOUS AREA (UNCONTROLLED)	0.30	0.775	0.232
DRIVEWAY (UNCONTROLLED)	0.30	0.028	0.009
PERVIOUS AREA (UNCONTROLLED)	0.30	0.365	0.109

(b) Total = 0.342
 (c) Weighted average "C" factor (b)/(a) = 0.53

Part 3 - Determine the Total Phosphorus Removed for the Site

Subarea Designation (1)	BMP Type (2)	Removal Eff. (%) (3)	Area (4)	"C" Factor Ratio (5)	Product (6)
A1	MF TRENCH	70%	0.300	2.087	14,728
A2	MF TRENCH	70%	0.024	2.087	1,482
A3	MF TRENCH	70%	0.028	2.087	1,482
A4	MF TRENCH	70%	0.340	2.087	15,829

(d) Total = 20,482 %

Appendix 4-4a
 Calculations Worksheet

Northwest Virginia BMP Handbook 11/8/02
Part 4 - Determine Compliance with Phosphorus Removal Requirements

- (A) Subarea Requirement (a) 20,000
- Water Supply Overlay District (Occoquan Watershed) = 50% (Prince County and Prince William County)
 - Chattahoochee Bay Preservation Area (Slow Development) = 40% (Prince County) 50% (Prince William County)
 - Chattahoochee Bay Preservation Area (Redevelopment) = 50%
- (B) If Line 3(a) 20,482 > Line 4(a) 20,000, then Phosphorus removal requirement is satisfied.

Northwest Virginia BMP Handbook 11/8/02
BMP Facility Design Calculations
 Plan Name: ELM PLACE LOT 2
 Date: OCTOBER 16, 2009
 Engineer: JAY-EDM ADRIAN

I. **Water Quality Requirement**
 WATER QUALITY REQUIREMENT FOR THIS LOT IS PROVIDED THROUGH A BEST MANAGEMENT PRACTICE (DESIGN # FOR-219 2ND STAGE IS UTILIZED) WITH EFFICIENCY RATING OF 70%. THIS WILL PROVIDE PHOSPHORUS REMOVAL EFFICIENCY OF GREATER THAN 40% REQUIRED BY ORDINANCE.

II. **Watershed Information**
 TOTAL SITE AREA=23,424 S.F.
 Part 1 - List all of the Subareas and "C" Factors used in the BMP Calculations

Subarea Designation and Description (1)	"C" Factor (2)	Acres (3)
BUILDING AREA (CONTROLLED)	0.30	0.080
DRIVEWAY (CONTROLLED)	0.30	0.024
PERVIOUS AREA (CONTROLLED)	0.30	0.028
PERVIOUS AREA (UNCONTROLLED)	0.30	0.775
DRIVEWAY (UNCONTROLLED)	0.30	0.028
PERVIOUS AREA (UNCONTROLLED)	0.30	0.365

NOTE: Rational formula "C" factors are taken from the general coding values listed in Appendix 4-1 or 4-2 depending on the location of the BMP facility (Prince William County Public Facilities Manual/Chart A6-19 or Prince William County Design and Construction Standards Manual, Exhibit 1).

Appendix 4-4a
 Calculations Worksheet

Northwest Virginia BMP Handbook 11/8/02
Part 2 - Determine the Weighted Average "C" Factor for the Site

(A) Area of the site (a) 0.538 acres

Subarea Designation (1)	"C" Factor (2)	Acres (3)	Product (4)
BUILDING AREA (CONTROLLED)	0.30	0.080	0.024
DRIVEWAY (CONTROLLED)	0.30	0.024	0.007
PERVIOUS AREA (CONTROLLED)	0.30	0.028	0.009
PERVIOUS AREA (UNCONTROLLED)	0.30	0.775	0.232
DRIVEWAY (UNCONTROLLED)	0.30	0.028	0.009
PERVIOUS AREA (UNCONTROLLED)	0.30	0.365	0.109

(b) Total = 0.247
 (c) Weighted average "C" factor (b)/(a) = 0.46

Part 3 - Determine the Total Phosphorus Removed for the Site

Subarea Designation (1)	BMP Type (2)	Removal Eff. (%) (3)	Area (4)	"C" Factor Ratio (5)	Product (6)
A1	MF TRENCH	70%	0.184	1.937	2,108
A2	MF TRENCH	70%	0.043	1.937	881
A3	MF TRENCH	70%	0.050	1.937	881
A4	MF TRENCH	70%	0.350	1.937	13,371

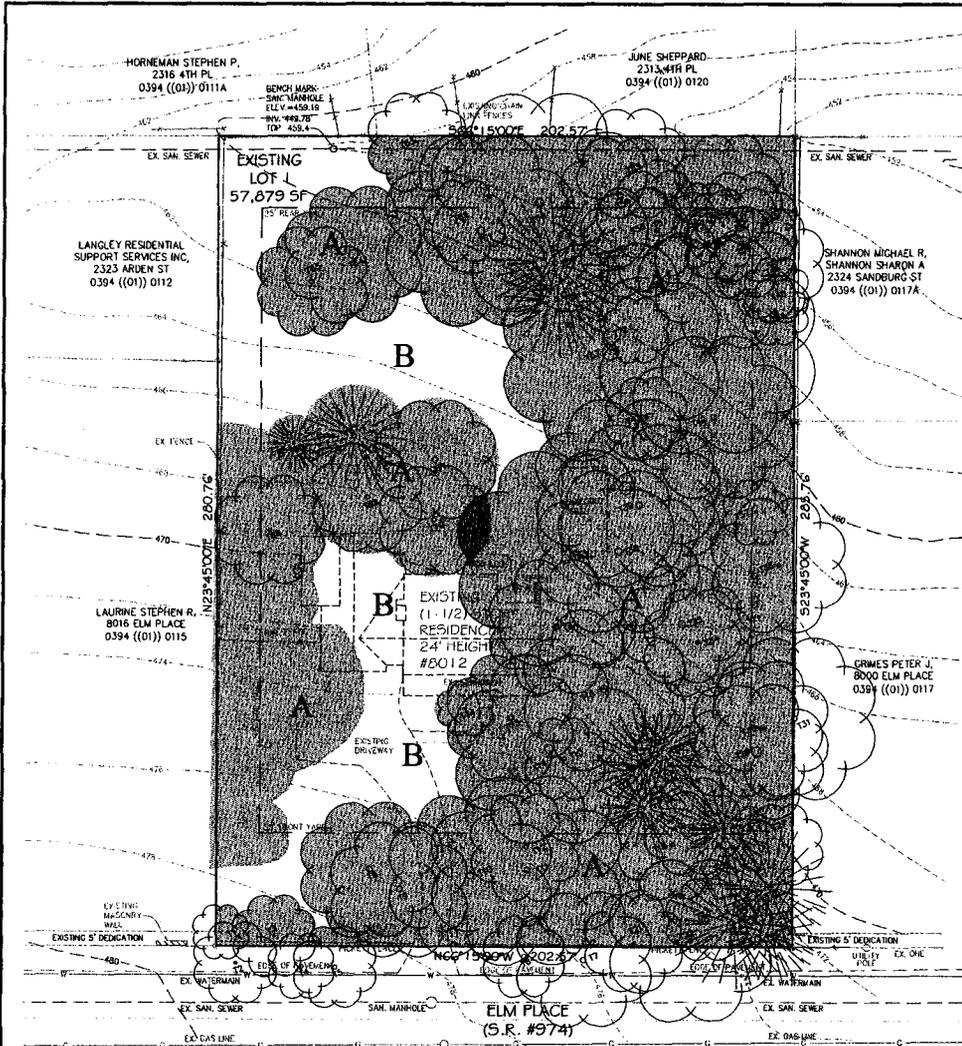
(d) Total = 17,188 %

Appendix 4-4a
 Calculations Worksheet

Northwest Virginia BMP Handbook 11/8/02
Part 4 - Determine Compliance with Phosphorus Removal Requirements

- (A) Subarea Requirement (a) 20,000
- Water Supply Overlay District (Occoquan Watershed) = 50% (Prince County and Prince William County)
 - Chattahoochee Bay Preservation Area (Slow Development) = 40% (Prince County) 50% (Prince William County)
 - Chattahoochee Bay Preservation Area (Redevelopment) = 50%
- (B) If Line 3(a) 17,188 < Line 4(a) 20,000, then Phosphorus removal requirement is not satisfied.

P:\4668 - 8012 Elm Place\4668-01-002 (PLN)\Proming\Engineering\4668-01-002A-1-tranck-design.dwg



TREE INVENTORY
 8102 Elm Place, Fairfax, VA
 Date of site visit: January 7, 2010
 Certified Arborist: Gregg D. Deary MA-4161A

Tree #	Botanic Name	Common Name	Caliper (DBH) (inches)	Species Rating (0-100%)	Condition Rating (0-100%)	Preserve/Remove
1	Prunus serotina	Black Cherry	8	0.55	0.60	Preserve
2	Quercus macrocarpa	Honey Locust	12	0.55	0.4	Preserve
3	Quercus rubra	Red Oak	15	0.7	0.72	Preserve
4	Quercus macrocarpa	Honey Locust	15	0.55	0.64	Preserve
5	Quercus macrocarpa	Honey Locust	16	0.55	0.69	Preserve
6	Quercus alba	White Oak	20	0.6	0.2	Preserve
7	Quercus prinus	Chickadee Oak	24	0.75	0.72	Preserve
8	Quercus rubra	Red Oak	24	0.7	0.72	Preserve
9	Quercus alba	White Oak	24	0.6	0.72	Preserve
10	Quercus alba	White Oak	30	0.6	0.6	Preserve
11	Quercus prinus	Chickadee Oak	24	0.75	0.72	Preserve
12	Quercus alba	White Oak	18	0.6	0.72	Preserve
13	Quercus rubra	Red Oak	18	0.7	0.60	Remove
14	Quercus alba	White Oak	36	0.6	0.6	Preserve
15	Quercus alba	White Oak	30	0.6	0.4	Remove
16	Prunus serotina	Black Cherry	24	0.55	0.6	Remove
17	Prunus serotina	Black Cherry	12	0.55	0.6	Remove
18	Quercus prinus	Chickadee Oak	18	0.75	0.72	Remove
19	Quercus prinus	Chickadee Oak	20	0.75	0.72	Remove
20	Prunus serotina	Black Cherry	10	0.55	0.6	Remove
21	Acer rubrum	Red Maple	10	0.7	0.6	Remove
22	Quercus prinus	Chickadee Oak	20	0.75	0.72	Remove
23	Quercus alba	White Oak	16	0.6	0.72	Remove
24	Prunus serotina	Black Cherry	16	0.55	0.72	Remove
25	Quercus rubra	Red Oak	8	0.7	0.6	Remove
26	Prunus serotina	Black Cherry	18	0.55	0.6	Remove
27	Prunus serotina	Black Cherry	10	0.7	0.72	Remove
28	Quercus prinus	Chickadee Oak	42	0.75	0.60	Remove
29	Quercus prinus	Chickadee Oak	18	0.75	0.72	Remove
30	Quercus prinus	Chickadee Oak	24	0.75	0.72	Remove
31	Quercus prinus	Chickadee Oak	24	0.75	0.72	Remove
32	Carya alberta	Pignut Hickory	24	0.75	0.72	Remove
33	Quercus prinus	Chickadee Oak	36	0.75	0.72	Remove
34	Quercus alba	White Oak	18	0.6	0.72	Remove
35	Quercus prinus	Chickadee Oak	30	0.75	0.72	Remove
36	Quercus alba	White Oak	18	0.6	0.72	Remove
37	Quercus prinus	Chickadee Oak	10	0.75	0.60	Remove
38	Quercus alba	White Oak	30	0.6	0.72	Remove
39	Quercus alba	White Oak	26	0.6	0.72	Remove
40	Quercus alba	White Oak	52	0.6	0.72	Remove
41	Carya alberta	Pignut Hickory	12	0.75	0.72	Remove
42	Quercus alba	White Oak	24	0.6	0.64	Remove
43	Quercus prinus	Chickadee Oak	30	0.75	0.72	Remove
44	Carya alberta	Pignut Hickory	12	0.75	0.72	Remove
45	Carya alberta	Pignut Hickory	12	0.75	0.72	Remove
46	Quercus alba	White Oak	15	0.6	0.92	Remove
47	Carya alberta	Pignut Hickory	15	0.75	0.72	Remove
48	Quercus prinus	Chickadee Oak	8	0.75	0.72	Remove
49	Carya alberta	Pignut Hickory	8	0.75	0.72	Remove
50	Carya alberta	Pignut Hickory	18	0.75	0.60	Remove
51	Quercus prinus	Chickadee Oak	12	0.75	0.72	Remove
52	Quercus alba	White Oak	21	0.6	0.72	Remove
53	Quercus prinus	Chickadee Oak	12	0.75	0.6	Remove
54	Quercus alba	White Oak	12	0.6	0.72	Remove
55	Acer rubrum	Red Maple	10	0.7	0.72	Remove
56	Quercus prinus	Chickadee Oak	10	0.75	0.72	Remove
57	Quercus alba	White Oak	56	0.6	0.72	Remove
58	Prunus serotina	Black Cherry	18	0.55	0.6	Remove
59	Prunus serotina	Black Cherry	20	0.55	0.6	Remove
60	Quercus alba	White Oak	36	0.7	0.72	Remove
61	Quercus alba	White Oak	33	0.6	0.72	Remove
62	Prunus serotina	Black Cherry	10	0.55	0.6	Remove
63	Prunus serotina	Black Cherry	10	0.6	0.6	Remove
64	Prunus serotina	Black Cherry	40	0.55	0.60	Remove
65	Prunus serotina	Black Cherry	18	0.46	0.4	Remove
66	Prunus serotina	Black Cherry	8	0.75	0.72	Remove
67	Thalictrum flavum	Flowering Thalictrum	12	0.6	0.72	Remove
68	Prunus serotina	Black Cherry	18	0.7	0.72	Remove
69	Acer rubrum	Red Maple	18	0.55	0.6	Remove
70	Prunus serotina	Black Cherry	18	0.55	0.6	Remove
71	Prunus serotina	Black Cherry	24	0.55	0.72	Remove
72	Carya alberta	Pignut Hickory	8	0.75	0.72	Remove
73	Quercus rubra	Red Oak	24	0.7	0.6	Remove
74	Carya alberta	Pignut Hickory	10	0.75	0.72	Remove

LEGEND

- EXISTING 10' CONTOUR
- EXISTING 2' CONTOUR
- EDGE OF PAVEMENT
- APPROXIMATE LIMIT OF DISTURBANCE
- EXISTING GAS LINE
- EXISTING WATER LINE
- EXISTING SANITARY SEWER LINE
- EXISTING SEWER LINE
- EXISTING TREE/TREE LINE
- EXISTING UTILITY POLE

COVER TYPE	PRIMARY SPECIES	INDUSTRY SPECIES	RECOMMENDATION	CONDITION	AREA
A UPLAND FOREST	QUERCUS PRINUS QUERCUS ALBA	SUBURBAN LAWN AND LANDSCAPE IN NATIVE FOREST SIGNIFICANT DECLINE IN INDIVIDUAL TREES APPARENT	SUB-CLIMAX	POOR TO GOOD	1.11 ACRES
B DEVELOPED	N/A	LAWN AND LANDSCAPE, HOUSE, AND HARDSCAPE	N/A	POOR TO GOOD	

- Condition and Species Rating are based on formula provided by the International Society of Arboriculture published by the ISA.
- All trees indicated are to be retained from the site due to construction activity.
- All trees with a minimum 8" D.B.H. were inventoried and evaluated.
- Tree 23 & 74 have been generally located as dead and were not part of tree survey.
- Minor changes in species or diameter condition compared to the results of any aerial or ground photography or manual techniques without the agreement of the adjacent property owner or HOA, given the laws of border line and boundary line trees.

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 Fax: (703) 441-0270
 www.bowmanconsulting.com

EXISTING VEGETATION MAP
8012 ELM PLACE
 FAIRFAX COUNTY, VIRGINIA
 PROVIDENCE DISTRICT

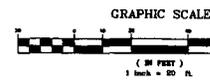
RZ 2008-PR-605
 COUNTY PROJECT NUMBER



PLAN STATUS

4/17/10	REVISIONS PER COMMENTS
6/16/10	REVISIONS PER COMMENTS
8/10/10	REVISIONS PER COMMENTS
9/16/10	REVISIONS PER COMMENTS
9/18/10	REVISIONS PER COMMENTS
10/29/10	REVISIONS PER COMMENTS
2/26/11	REVISIONS PER COMMENTS
2/27/11	REVISIONS PER COMMENTS
3/18/11	REVISIONS PER COMMENTS
4/6/11	REVISIONS PER COMMENTS
DATE	DATE

MT DESIGN ICF MT
 SCALE: 1" = 20'
 JOB No. 4688-01-002
 DATE: MARCH 18, 2010
 FILE No. 4688-0-ZP-001



**A GLOSSARY OF TERMS FREQUENTLY
USED IN STAFF REPORTS WILL BE
FOUND AT THE BACK OF THIS REPORT**

BACKGROUND

The applicant, Anthony Casolaro, requests approval to rezone a single 1.33-acre parcel from the R-1 District to the R-2 District to permit the lot to be subdivided into two lots. The existing single-family detached dwelling would remain on proposed Lot #1 while a new single-family detached dwelling would be built on proposed Lot #2. The proposed subdivision would result in an overall density of 1.5 dwelling units per acre.

On November 18, 2009, the Staff Report for RZ 2009-PR-005 was published. In this report, staff recommended denial of the proposed application for the following reasons:

- The applicant failed to demonstrate how the proposed development would not preclude adjacent properties from being able to redevelop in the future in accordance with the site-specific recommendations in the Comprehensive Plan;
- The proposed development would have resulted in an extensive amount of clearing and grading to accommodate the proposed dwelling, pool, detached garage, two driveways, two infiltration trenches and their associated pipe systems;
- A large number of trees would have been lost due to the extensive clearing and grading required for the proposed development;
- The location for the infiltration trench on proposed Lot 2 would have required an extensive pipe system to convey the stormwater runoff to the infiltration trench which required further clearing and grading of the site;
- The proposed stormwater proffer would have allowed a change to the type of stormwater management facility without Board approval which, in turn, could have created a significant impact on the character of the neighborhood and resulted in a significant loss of trees;
- The applicant declined to provide frontage improvements or to escrow funds for these improvements;
- A proffer commitment was not made to the Housing Trust Fund; and
- A proffer commitment was not made to the installation of Energy Star appliances.

On April 8, 2010, a revised GDP was submitted which addressed some of the unresolved issues cited above. The revised GDP includes the following changes:

- The building footprint for the proposed dwelling has been reduced;
- The proposed detached garage at the rear of the dwelling has been replaced with an attached garage at the front of the dwelling;
- The proposed driveway to access the detached garage has been removed;
- The proposed driveway at the front of the house has been reduced in size;
- The proposed pool has been removed;
- The infiltration trenches have been moved closer to rear of the existing and proposed dwellings and the trenches have been reduced in size;
- The proposed pipe systems which provide access to the infiltration trenches on both lots have been reduced in length;
- The existing vegetation map (EVM) and tree preservation plan have been revised and now show that there are a total of 74 trees, not 36 trees on site; and
- The number of trees proposed for preservation has been increased from 14 to 55.

In addition to the changes on the GDP, on March 19, 2010, the applicant submitted a revised statement of justification dated March 18, 2010, to elaborate on the applicant's position on the lack of consolidation in the development proposal. The applicant also submitted revised proffers dated April 8, 2010, in response to some of staff's concerns, which included the following revisions:

- Proffer 5 (Housing Trust Fund Contribution) has been added. The applicant is now proffering to contribute \$1,500 to the Housing Trust Fund.
- Proffer 6 (Stormwater Detention/Water Quality) has been amended. The applicant has now committed to construct the infiltration trenches shown on the GDP. The applicant is also reserving the right to pursue innovative stormwater detention and water quality measures, subject to the review of Department of Public Works and Environmental Services (DPWES). Additionally, the applicant is proffering the use of pervious paving materials in the new driveway on proposed Lot # 2.
- Proffer 8 (Architecture and Building Materials) has been added. This proffer also commits to the installation of Energy Star-rated appliances in the new dwelling.

- Proffer 9 (Dedication) now commits to a contribution of \$5,000 to the Providence District Trail Fund.
- Proffer 11i (Tree Appraisal) has been added. The proffer states that the applicant will have a professional arborist determine the replacement value of all trees 12-inches in diameter or greater that are located within 25 feet of the limits of clearing and grading and shown to be saved and preserved on Sheet 7 of the GDP. Additionally, the applicant is proffering to post a letter of credit or bond in the amount of \$7,500, payable to the County of Fairfax to ensure preservation and/or the replacement of these bonded trees that die or are dying due to unauthorized construction activities.
- Proffer 12 (Existing Structure on Proposed Lot 1) has been added to state that the construction of additions or accessory structures, including replacement of the existing structures, which conform with the applicable Zoning Ordinance provisions and these proffers, may be permitted without an amendment to the proffers and the GDP.

ANALYSIS

GDP

The changes the applicant has made to the GDP address the majority of the issues cited in the staff report. As discussed in the staff report under Development Criteria 2, 3, and 4, an extensive amount of clearing and grading would have been required for the proposed development, which would have resulted in the loss of the majority of the trees on site. Under this new development proposal, the proposed amount of clearing and grading has been reduced considerably. The proposed dwelling footprint has been reduced; the proposed detached garage with its driveway and the pool have been removed; and the driveway proposed at the front of the new dwelling, the stormwater management facilities, and their associated stormwater pipe systems have all been reduced in size. As a result, a significant number of trees can now be preserved.

The applicant has also stated that a partial waiver of the stormwater detention requirements will be requested at site plan, so that smaller stormwater management facilities can be built to save more trees. The infiltration trench proposed on Lot # 2 has also been moved closer to the rear of the proposed dwelling. In staff's opinion, this new location is better as the stormwater runoff flows towards that area of the property. As a result, an extensive pipe system will no longer be required to direct stormwater towards the infiltration trench. Overall, the total number of trees proposed for preservation has increased from 14 to 55.

Statement of Justification

Consolidation

The applicant proposes to rezone a single lot in the center of a block. In the staff report, staff raised concerns about the lack of consolidation and its impacts on the adjacent lots. It should be noted that the Plan text for this site recommends *“substantial consolidation of adjacent parcels to ensure coordinated development.”* The applicant has provided additional information in the revised statement of justification, to demonstrate that the proposed rezoning of this single lot would not impede the adjacent parcels from redeveloping in the future, in accordance with the Comprehensive Plan’s recommendation. The applicant argues that there would be enough acreage for the adjacent parcels to the east and west of the subject site to be consolidated. The resultant lots would also have frontage on the existing public roads. Furthermore, these lots would have adequate access and utilities. Therefore, the proposed development of this single lot would not hinder the adjacent properties from developing in the future, in accordance with the Comprehensive Plan’s recommendation. However, staff continues to believe that a better development could be achieved with the inclusion of additional parcels within the rezoning.

Rain Barrels

The applicant has also stated that rain barrels would be considered for use on the property to help mitigate stormwater runoff impacts.

Proffers

The applicant has added proffers which now include: a commitment to the use of Energy Star appliances in the new dwelling; an escrow to the Providence District Trail Fund for frontage improvements; and a contribution to the Housing Trust Fund. However, it should be noted that the applicant has proffered to contribute \$1,500 to the Housing Trust Fund. Typically, these contributions are based on 0.5% of the sales price of the new home. Based on this formula, HCD calculates that the contribution would be approximately \$3,500.

Proffer 12 (Existing Structure on Proposed Lot 1) was also added to allow for the replacement and construction of additions to the existing house, within the depicted limits of clearing and grading on the GDP, and for the construction of accessory structures that conform with the applicable Zoning Ordinance provisions and the proffers.

Additionally, some proffers have been amended. Proffer 6 (Stormwater Detention/Water Quality) has been revised to demonstrate the applicant’s commitment to the use of the proposed infiltration trenches depicted on the GDP. This proffer also states that the applicant is reserving the right to pursue innovative stormwater detention and water quality measures, subject to DPWES’s review. The applicant is also proffering the use of pervious paving materials in the new driveway at the front of the proposed dwelling on Lot 2.

Finally, Proffer 11i (Tree Appraisal) has been added to state that a tree appraisal would be done by a professional arborist to determine the replacement costs of all trees 12 inches or greater in diameter within 25 feet of the limits of clearing and grading, and that a letter of credit or tree bond shall be posted in the amount of \$7,500 to ensure the preservation of all of these trees. The purpose of the tree bond is to provide a remedy for unapproved disruption to the trees proffered to be preserved. Staff believes that the proposed bond amount is insufficient, as the costs to replace many of the mature trees on site, far exceeds \$7,500. The existing mature trees on site are a significant factor in ensuring that the proposed development retains the character of the surrounding neighborhood. If any of the large trees on site die due to unauthorized construction activities, the applicant would be unable to replace these trees with very little recompense. Staff continues to urge the applicant to proffer a larger tree bond based on the value of the trees.

CONCLUSIONS AND RECOMMENDATIONS

Staff Conclusions

Although the revised plan and proffers have addressed the majority of staff's concerns, several issues remain outstanding: insufficient contribution to the Housing Trust Fund; lack of consolidation for the proposed development; and an insufficient amount for the tree preservation bond. For these reasons, staff cannot support this application.

Staff Recommendations

Staff recommends denial of RZ 2009-PR-005. However, if it is the intention of the Board of Supervisors to approve RZ 2009-PR-005, staff recommends such approval be subject to the execution of proffers consistent with those found in Addendum 1 of this report.

It should be noted that it is not the intent of staff to recommend that the Board, in adopting any conditions proffered by the owner, relieve the applicant/owner from compliance with the provisions of any applicable ordinances, regulations, or adopted standards.

The approval of this rezoning does not interfere with, abrogate, or annul any easement, covenants, or other agreements between parties, as they may apply to the property subject to this application.

It should be further noted that the content of this report reflects the analysis and recommendations of staff; it does not reflect the position of the Board of Supervisors.

ATTACHMENTS

1. Proposed Proffers
2. Affidavit
3. Statement of Justification
4. Reduction of the GDP revised through March 18, 2010
5. Stormwater Management Analysis

Dr. M. Anthony Casolaro
RZ 2009-PR-005
Proffers
April 8, 2010

Pursuant to Section 15.2-2303 (a) of The Code of Virginia, 1950, as amended, the undersigned; Dr. M. Anthony Casolaro, the Applicant and Owner, for his self and his successors and assigns (hereinafter referred to as the "Applicant") filed for the rezoning for the property located at Tax Map 39-4 ((1)) Parcel 116 (hereinafter referred to as the "Application Property") hereby agrees to the following Proffers, provided that the Fairfax County Board of Supervisors approves RZ 2009-PR-005, the rezoning of the Application Property to the R-2 Zoning District, as proffered herein.

1. **Substantial Conformance.** The Applicant proffers that the Application Property, consisting of approximately 1.329 acres, shall be developed in substantial conformance with the Generalized Development Plan ("GDP") entitled 8012 Elm Place, containing 7 sheets and prepared by Bowman Consulting, dated April 17, 2009 and last revised April 8, 2010.
2. **Minor Modifications.** Minor modifications from what is shown on the GDP and these Proffers, which may become occasioned as a part of final architectural and engineering design, may be permitted as determined by the Zoning Administrator in accordance with the provisions set forth in Section 18-204 of the Fairfax County Zoning Ordinance.
3. **Successors and Assigns.** Each reference to Applicant in this Proffer Statement shall include within its meaning, and shall be binding upon, Applicant's successor(s) in interest, assigns, and/or developer(s) of the Application Property or any portion of the Application Property.
4. **Maximum Density.** A maximum of 2 dwelling units shall be permitted on the Application Property.
5. **Housing Trust Fund Contribution.** At time of building permit approval for proposed Lot 2, the Applicant shall contribute \$1,500.00 to Fairfax County for the Fairfax County Housing Trust Fund.
6. **Storm Water Detention/Water Quality.** The Applicant will provide stormwater management and stormwater quality devices on both Lots 1 and 2, as generally depicted on the GDP, subject to the requirements of the Fairfax County Public Facilities Manual (PFM). The Applicant reserves the right to pursue innovative stormwater detention and water quality measures, subject to the review and approval of Fairfax County DPWES. Pervious paving materials will be used in the driveway for the new house on Lot 2.
7. **Fairfax County Park Authority Contribution.** At the time of building permit approval for proposed Lot 2, the Applicant shall contribute \$2,679.00 to the Fairfax County Park Authority (FCPA). Said contribution shall be used by the FCPA for the community park known as South Railroad Street Park located in Dunn Loring at Sandburg Street and Morgan Lane and to be used to maintain the park in its present condition.
8. **Architecture and Building Materials.** The house elevation is shown for illustrative purposes only. Building materials will include stone and/or brick veneer accents and fiber cement board (Hardie Plank) or other oversized lapping textured siding. Energy Star rated appliances will be used in the house. Should Energy Star rated appliances not be available on certain appliances, the Applicant will use appliances which consume no more than 25% more energy than the appliance using the least amount of energy according to the "Energy Guide" label.

9. **Dedication.** Right-of-way along Elm Street to 30 feet from the existing centerline and as shown on the GDP shall be dedicated and conveyed in fee simple to the Board of Supervisors. Such dedication shall occur at the time of subdivision plan approval for the property or upon demand of Fairfax County, whichever occurs first. In addition, at time of subdivision plan approval, the Applicant shall contribute \$5,000 to the Providence District Trails Fund. Said contribution shall satisfy any and all frontage improvements in the Right-of-Way for the Application Property, now or in the future.

10. **Water and Sewer.** The Applicant shall be responsible for constructing all facilities to connect the Application Property to public water and sewer.

11. **Tree Preservation and Landscaping.**

a. **Plantings.** New plantings within the site areas shall be only of native and indigenous species appropriate to the location and climate of the area.

b. **Tree Preservation Plan.** The Applicant shall submit a Tree Preservation Plan and Narrative as part of the first and all subsequent subdivision plan submissions. The preservation plan and narrative shall be prepared by a Certified Arborist or a Registered Consulting Arborist, and shall be subject to the review and approval of the Urban Forest Management Division, DPWES. The tree preservation plan shall include a tree inventory that identifies the location, species, critical root zone, size, crown spread and condition analysis percentage rating for all individual trees to be preserved, as well as all on and off-site trees, living or dead with trunks 8 inches in diameter and greater (measured at 4 ½ -feet from the base of the trunk or as otherwise allowed in the latest edition of the Guide for Plant Appraisal published by the International Society of Arboriculture) located within 25 feet to either side of the limits of clearing and grading. The tree preservation plan shall provide for the preservation of those areas shown for tree preservation, those areas outside of the limits of clearing and grading shown on the GDP and those additional areas in which trees can be preserved as a result of final engineering. The tree preservation plan and narrative shall include all items specified in PFM 12-0506 and 12-0508. Specific tree preservation activities that will maximize the survivability of any tree identified to be preserved, such as: crown pruning, root pruning, mulching, fertilization, and others as necessary, shall be included in the plan.

c. **Tree Preservation Walk-Through.** The Applicant shall retain the services of a certified arborist or landscape architect, and shall have the limits of clearing and grading marked with a continuous line of flagging prior to the walk-through meeting. During the tree-preservation walk-through meeting, the Applicant's certified arborist or landscape architect shall walk the limits of clearing and grading with an UFMD, DPWES, representative to determine where adjustments to the clearing limits can be made to increase the area of tree preservation and/or to increase the survivability of trees at the edge of the limits of clearing and grading, and such adjustment shall be implemented. Trees that are identified as dead or dying may be removed as part of the clearing operation. Any tree that is so designated shall be removed using a chain saw and such removal shall be accomplished in a manner that avoids damage to surrounding trees and associated understory vegetation. If a stump must be removed, this shall be done using a stump-grinding machine in a manner causing as little disturbance as possible to adjacent trees and associated understory vegetation and soil conditions.

d. **Limits of Clearing and Grading.** The Applicant shall conform strictly to the limits of clearing and grading as shown on the GDP, subject to allowances specified in these proffered conditions and for the installation of utilities and/or trails as determined necessary by the Director of DPWES, as described herein. If it is determined necessary to install utilities and/or trails in areas protected by the limits of clearing and grading as shown on the GDP, they shall be located in the least disruptive manner necessary as determined by the UFMD, DPWES. A replanting plan shall be developed and implemented, subject to approval by the UFMD, DPWES, for any areas protected by the limits of clearing and grading that must be disturbed for such trails or utilities.

e. **Tree Preservation Fencing:** All trees shown to be preserved on the tree preservation plan shall be protected by tree protection fence. Tree protection fencing in the form of four (4) foot high, fourteen (14) gauge welded wire attached to six (6) foot steel posts driven eighteen (18) inches into the ground and placed no further than ten (10) feet apart or, super silt fence to the extent that required trenching for super silt fence does not sever or wound compression roots which can lead to structural failure and/or uprooting of trees shall be erected at the limits of clearing and grading as shown on the demolition, and phase I & II erosion and sediment control sheets, as may be modified by the "Root Pruning" proffer below.

f. **Tree Protection Fencing.** All tree protection fencing shall be installed after the tree preservation walk-through meeting but prior to any clearing and grading activities, including the demolition of any existing structures. The installation of all tree protection fencing shall be performed under the supervision of a certified arborist, and accomplished in a manner that does not harm existing vegetation that is to be preserved. Three (3) days prior to the commencement of any clearing, grading or demolition activities, but subsequent to the installation of the tree protection devices, the UFMD, DPWES, shall be notified and given the opportunity to inspect the site to ensure that all tree protection devices have been correctly installed. If it is determined that the fencing has not been installed correctly, no grading or construction activities shall occur until the fencing is installed correctly, as determined by the UFMD, DPWES.

g. **Root Pruning.** The Applicant shall root prune, as needed to comply with the tree preservation requirements of these proffers. All treatments shall be clearly identified, labeled, and detailed on the erosion and sediment control sheets of the subdivision plan submission. The details for these treatments shall be reviewed and approved by the UFMD, DPWES, accomplished in a manner that protects affected and adjacent vegetation to be preserved, and may include, but not be limited to the following:

- (1) Root pruning shall be done with a trencher or vibratory plow to a depth of 18 inches.
- (2) Root pruning shall take place prior to any clearing and grading, or demolition of structures.
- (3) Root pruning shall be conducted with the supervision of a certified arborist.
- (4) An UFMD, DPWES, representative shall be informed when all root pruning and tree protection fence installation is complete.

h. **Site Monitoring.** During any clearing or tree/vegetation/structure removal on the Applicant Property, a representative of the Applicant shall be present to monitor the process and ensure that the activities are conducted as proffered and as approved by the UFMD. The Applicant shall retain the services of a certified arborist or landscape architect to monitor all construction and demolition work and tree preservation efforts in order to ensure conformance with all tree preservation proffers, and UFMD approvals. The monitoring schedule shall be described and detailed in the Landscaping and Tree Preservation Plan, and reviewed and approved by the UFMD, DPWES.

i. **Tree Appraisal.** The Applicant shall retain a professional arborist with experience in plant appraisal, to determine the replacement value of all trees 12 inches in diameter or greater on the Application Property located within 25 feet of the limits of clearing and grading and shown to be saved and preserved on Sheet 7 of the GDP. These trees and their value shall be identified on the Tree Preservation Plan submitted at the time of first submission of the subdivision plan. The replacement shall take into consideration the age, size and condition of these trees and shall be determined by the so-called "Trunk Formula Method" contained in the latest edition of the Guide for Plant Appraisal published by the International Society of Arboriculture, subject to review and approval by UFMD. The Location Factor of the Trunk Formula Method shall be based on projected post-development Contribution and Placement ratings. The Site rating component shall be equal to at least 80%.

Prior to subdivision plan approval, the Applicant shall post a letter of credit or bond in the amount of \$7,500 (the "Tree Bond"), payable to the County of Fairfax to ensure preservation and/or replacement of the trees in accordance with the above paragraph (the "Bonded Trees") that die or are dying due to unauthorized construction activities. At any time prior to final bond release for the subdivision, should any Bonded Trees die, be removed, or are determined to be dying a meeting shall be conducted between UFMD and the Applicant's certified professional arborist in an effort to determine the cause of death and whether or not it is due to unauthorized construction activities meaning that the Applicant did not follow the GDP and Proffers. If the decision of the UFMD's representative is that the death or dying trees was caused by unauthorized construction activities, the Applicant shall replace such trees at their expense. The replacement trees shall be of size, species and/or canopy cover as approved by UFMD. Upon release of the construction bond, any amount remaining in the Tree Bond required by this proffer shall be returned/released to the Applicant.

12. **Existing Structure on Proposed Lot 1.** Construction of additions or accessory structures, including replacement of the existing structure, that conform with the applicable Zoning Ordinance provisions and these proffers, may be permitted without an amendment to these Proffers and the GDP. Such construction of additions or accessory structures, including replacement of the existing structure shall conform strictly to the limits of clearing and grading as shown on the GDP, subject to allowances specified in these proffered conditions and in Proffer 11.d above.

13. **Escalator Clause.** In the event that the monetary contributions set forth in this Proffer Statement are paid to the Board within eighteen (18) months of the approval of this rezoning, as applied for, said contributions shall be in the amounts stated herein. Any monetary contributions required hereby which are paid to the Board after eighteen (18) months following approval of this rezoning, shall be adjusted in accordance with the Urban Consumer Price Index ("CPI-U") published by the United States Department of Labor, such that at the time contributions are paid, they shall be adjusted by the percentage change in the CPI-U from that date eighteen (18) months after approval hereof, to the most recently available CPI-U to the date the contributions are actually paid, subject to a cap of six percent (6%) per year, non-compounded.

TITLE OWNER SIGNATURES:

Dr. M. Anthony Casolaro
Title Owner of TM 39-4 ((1)) 116

Date

REZONING AFFIDAVIT

DATE: MARCH 18, 2010
 (enter date affidavit is notarized)

I, RICHARD A. LANHAM, do hereby state that I am an
 (enter name of applicant or authorized agent)

(check one) applicant
 applicant's authorized agent listed in Par. 1(a) below 103701d

in Application No.(s): RZ 2009-PR-005
 (enter County-assigned application number(s), e.g. RZ 88-V-001)

and that, to the best of my knowledge and belief, the following information is true:

1(a). The following constitutes a listing of the names and addresses of all **APPLICANTS, TITLE OWNERS, CONTRACT PURCHASERS, and LESSEES** of the land described in the application,* and, if any of the foregoing is a **TRUSTEE,**** each **BENEFICIARY** of such trust, and all **ATTORNEYS and REAL ESTATE BROKERS**, and all **AGENTS** who have acted on behalf of any of the foregoing with respect to the application:

(NOTE: All relationships to the application listed above in BOLD print must be disclosed. Multiple relationships may be listed together, e.g., Attorney/Agent, Contract Purchaser/Lessee, Applicant/Title Owner, etc. For a multiparcel application, list the Tax Map Number(s) of the parcel(s) for each owner(s) in the Relationship column.)

NAME (enter first name, middle initial, and last name)	ADDRESS (enter number, street, city, state, and zip code)	RELATIONSHIP(S) (enter applicable relationships listed in BOLD above)
M. ANTHONY CASOLARO	8012 Elm Place, Dunn Loring, VA 22027	Applicant/Title Owner
Bowman Consulting Group, Ltd.	3863 Centerview Drive, Suite 300 Chantilly, VA 20151	Agent/Engineer
Richard A. Lanham	3863 Centerview Drive, Suite 300 Chantilly, VA 20151	Agent/Engineer
Victor Montes	2308 Providence Street Falls Church, VA 22043	Former Agent

(check if applicable) There are more relationships to be listed and Par. 1(a) is continued on a "Rezoning Attachment to Par. 1(a)" form.

* In the case of a condominium, the title owner, contract purchaser, or lessee of 10% or more of the units in the condominium.

** List as follows: Name of trustee, Trustee for (name of trust, if applicable), for the benefit of: (state name of each beneficiary).

REZONING AFFIDAVIT

DATE: MARCH 18, 2010
(enter date affidavit is notarized)

103701d

for Application No. (s): RZ 2009-PR-005
(enter County-assigned application number(s))

1(b). The following constitutes a listing*** of the SHAREHOLDERS of all corporations disclosed in this affidavit who own 10% or more of any class of stock issued by said corporation, and where such corporation has 10 or less shareholders, a listing of all of the shareholders, and if the corporation is an owner of the subject land, all of the OFFICERS and DIRECTORS of such corporation:

(NOTE: Include SOLE PROPRIETORSHIPS, LIMITED LIABILITY COMPANIES, and REAL ESTATE INVESTMENT TRUSTS herein.)

CORPORATION INFORMATION

NAME & ADDRESS OF CORPORATION: (enter complete name, number, street, city, state, and zip code)
BOWMAN CONSULTING GROUP, LTD.
3863 CENTERVIEW DRIVE, SUITE 300
CHANTILLY, VA 20151

DESCRIPTION OF CORPORATION: (check one statement)

- There are 10 or less shareholders, and all of the shareholders are listed below.
- There are more than 10 shareholders, and all of the shareholders owning 10% or more of any class of stock issued by said corporation are listed below.
- There are more than 10 shareholders, but no shareholder owns 10% or more of any class of stock issued by said corporation, and no shareholders are listed below.

NAMES OF SHAREHOLDERS: (enter first name, middle initial, and last name)
Gary P. Bowman

NAMES OF OFFICERS & DIRECTORS: (enter first name, middle initial, last name & title, e.g. President, Vice President, Secretary, Treasurer, etc.)

This corporation is not an owner of the subject land; therefore, no officer and director information is required.

(check if applicable) There is more corporation information and Par. 1(b) is continued on a "Rezoning Attachment 1(b)" form.

*** All listings which include partnerships, corporations, or trusts, to include the names of beneficiaries, must be broken down successively until: (a) only individual persons are listed or (b) the listing for a corporation having more than 10 shareholders has no shareholder owning 10% or more of any class of stock. *In the case of an APPLICANT, TITLE OWNER, CONTRACT PURCHASER, or LESSEE* of the land that is a partnership, corporation, or trust, such successive breakdown must include a listing and further breakdown of all of its partners, of its shareholders as required above, and of beneficiaries of any trusts. Such successive breakdown must also include breakdowns of any partnership, corporation, or trust owning 10% or more of the APPLICANT, TITLE OWNER, CONTRACT PURCHASER, or LESSEE* of the land. Limited liability companies and real estate investment trusts and their equivalents are treated as corporations, with members being deemed the equivalent of shareholders; managing members shall also be listed. Use footnote numbers to designate partnerships or corporations, which have further listings on an attachment page, and reference the same footnote numbers on the attachment page.*

REZONING AFFIDAVIT

DATE: MARCH 18, 2010
(enter date affidavit is notarized)

103701d

for Application No. (s): RZ 2009-PR-005
(enter County-assigned application number(s))

1(c). The following constitutes a listing*** of all of the PARTNERS, both GENERAL and LIMITED, in any partnership disclosed in this affidavit:

PARTNERSHIP INFORMATION

PARTNERSHIP NAME & ADDRESS: (enter complete name, number, street, city, state and zip code)

N/A

(check if applicable) [] The above-listed partnership has no limited partners.

NAMES AND TITLE OF THE PARTNERS (enter first name, middle initial, last name, and title, e.g. General Partner, Limited Partner, or General and Limited Partner)

(check if applicable) [] There is more partnership information and Par. 1(c) is continued on a "Rezoning Attachment to Par. 1(c)" form.

*** All listings which include partnerships, corporations, or trusts, to include the names of beneficiaries, must be broken down successively until: (a) only individual persons are listed or (b) the listing for a corporation having more than 10 shareholders has no shareholder owning 10% or more of any class of stock. *In the case of an APPLICANT, TITLE OWNER, CONTRACT PURCHASER, or LESSEE* of the land that is a partnership, corporation, or trust, such successive breakdown must include a listing and further breakdown of all of its partners, of its shareholders as required above, and of beneficiaries of any trusts. Such successive breakdown must also include breakdowns of any partnership, corporation, or trust owning 10% or more of the APPLICANT, TITLE OWNER, CONTRACT PURCHASER or LESSEE* of the land. Limited liability companies and real estate investment trusts and their equivalents are treated as corporations, with members being deemed the equivalent of shareholders; managing members shall also be listed.* Use footnote numbers to designate partnerships or corporations, which have further listings on an attachment page, and reference the same footnote numbers on the attachment page.

REZONING AFFIDAVIT

DATE: MARCH 18, 2010
(enter date affidavit is notarized)

103701d

for Application No. (s): RZ 2009-PR-005
(enter County-assigned application number(s))

1(d). One of the following boxes **must** be checked:

In addition to the names listed in Paragraphs 1(a), 1(b), and 1(c) above, the following is a listing of any and all other individuals who own in the aggregate (directly and as a shareholder, partner, and beneficiary of a trust) 10% or more of the **APPLICANT, TITLE OWNER, CONTRACT PURCHASER, or LESSEE*** of the land:

Other than the names listed in Paragraphs 1(a), 1(b), and 1(c) above, no individual owns in the aggregate (directly and as a shareholder, partner, and beneficiary of a trust) 10% or more of the **APPLICANT, TITLE OWNER, CONTRACT PURCHASER, or LESSEE*** of the land.

2. That no member of the Fairfax County Board of Supervisors, Planning Commission, or any member of his or her immediate household owns or has any financial interest in the subject land either individually, by ownership of stock in a corporation owning such land, or through an interest in a partnership owning such land.

EXCEPT AS FOLLOWS: (NOTE: If answer is none, enter "NONE" on the line below.)

NONE

(check if applicable) There are more interests to be listed and Par. 2 is continued on a "Rezoning Attachment to Par. 2" form.

REZONING AFFIDAVIT

DATE: MARCH 18, 2010
(enter date affidavit is notarized)

103701d

for Application No. (s): RZ 2009-PR-005
(enter County-assigned application number(s))

3. That within the twelve-month period prior to the public hearing of this application, no member of the Fairfax County Board of Supervisors, Planning Commission, or any member of his or her immediate household, either directly or by way of partnership in which any of them is a partner, employee, agent, or attorney, or through a partner of any of them, or through a corporation in which any of them is an officer, director, employee, agent, or attorney or holds 10% or more of the outstanding bonds or shares of stock of a particular class, has, or has had any business or financial relationship, other than any ordinary depositor or customer relationship with or by a retail establishment, public utility, or bank, including any gift or donation having a value of more than \$100, singularly or in the aggregate, with any of those listed in Par. 1 above.

EXCEPT AS FOLLOWS: (NOTE: If answer is none, enter "NONE" on line below.)

NONE

(NOTE: Business or financial relationships of the type described in this paragraph that arise after the filing of this application and before each public hearing must be disclosed prior to the public hearings. See Par. 4 below.)

(check if applicable) [] There are more disclosures to be listed and Par. 3 is continued on a "Rezoning Attachment to Par. 3" form.

4. That the information contained in this affidavit is complete, that all partnerships, corporations, and trusts owning 10% or more of the APPLICANT, TITLE OWNER, CONTRACT PURCHASER, or LESSEE* of the land have been listed and broken down, and that prior to each and every public hearing on this matter, I will reexamine this affidavit and provide any changed or supplemental information, including business or financial relationships of the type described in Paragraph 3 above, that arise on or after the date of this application.

WITNESS the following signature:

Richard A. Lanham

(check one)

[] Applicant

[x] Applicant's Authorized Agent

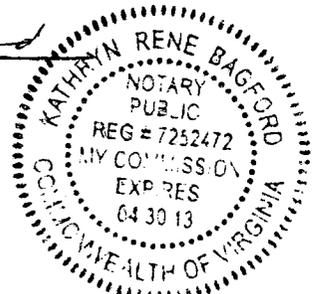
RICHARD A. LANHAM

(type or print first name, middle initial, last name, and title of signee)

Subscribed and sworn to before me this 18 day of March 2010, in the State/Comm. of Virginia, County/City of Fairfax.

Kathryn Rene Bagford
Notary Public

My commission expires: April 30, 2013





March 18, 2010

Ms. Kelli-Mae Goddard-Sobers
Department of Planning & Zoning
12055 Government Center Parkway
Suite 801
Fairfax, Virginia 22035

**Re: RZ 2009-PR-005, 8012 Elm Place (Casolaro Property)
Statement of Justification**

Dear Ms. Goddard-Sobers:

The following is submitted as a Statement of Justification for the above referenced rezoning application. The Applicant, Dr. Anthony Casolaro, is the title owner of the 1.33 acre property located at 8012 Elm Place in Dunn Loring, Virginia. The property is currently zoned R-1 with an existing single family detached residence. This application proposes a rezoning to the R-2 zoning district for the creation of one (1) additional residential lot. Proposed Lot 1 includes the existing residence and will be approximately 33,281 s.f. in area. Proposed Lot 2 includes the proposed residence and will be approximately 24,598 s.f. in area.

The proposed lots are generally consistent in size and shape with the 4 parcels to the east and 4 parcels to the west of the application property. All of those lots are zoned R-1, but the size of those existing lots is consistent with an R-2 zoning designation.

The Fairfax County Comprehensive Plan, 2007 Edition Area II, Vienna Planning District, Amended through 7-13-2009, V-2- Cedar Community Planning Sector, page 57, permits a range of 3 to 4 dwelling units per acre. The plan text states that "Development above the low end of the Plan density range should meet the following conditions:"

- *Provision of a substantial landscaped screen to ensure the elimination of any adverse visual impact upon nearby residentially planned areas from Gallows Road and the commercially-zoned parcel in the southeast quadrant of Gallows Road and Railroad Street.*

As this application proposes a density below the low end of the density range (1.5 dwelling units per acre), this condition is not applicable. In addition, the Application Property is not near Gallows Road or Railroad Street.

- *Substantial consolidation of adjacent parcels to ensure coordinated development.*

As this application proposes a density below the low end of the density range (1.5 dwelling units per acre), consolidation of adjacent parcels is not necessary or contemplated by this application.

- *Provision of coordinated vehicular access so as not to exacerbate traffic flows along Gallows Road.*

As this application proposes a density below the low end of the density range (1.5 dwelling units per acre), this condition is not applicable. This application proposes one (1) additional lot.

In addition, the following justification is provided to meet the Residential Development Criteria contained in The Fairfax County Comprehensive Plan, 2007 Edition, Land Use Appendix 9:

Site Design, Neighborhood Context and Consolidation – the proposed residence and SWM/BMP measures are designed to minimize the limits of clearing and grading and promote tree preservation. Pervious paving materials will be used for the proposed driveway and building materials for the proposed residence will include stone and/or brick veneer accents and fiber cement board (Hardie Plank) or other oversized lapping textured siding.

This application proposes a density below the low end of the density range recommended in the Comprehensive Plan. This application is consistent with both the existing neighborhood density and the low end of the density range in the Comprehensive Plan. If the properties to the east and west of the Application Property develop, this application would not preclude those parcels from developing within the density range contemplated by the Comprehensive Plan or prevent those parcels from developing in a coordinated fashion.

The 4 parcels to the east total approximately 1.9 acres and at 3 units per acre would yield 2 additional lots under the Comprehensive Plan. The 4 parcels to the west total approximately 2.4 acres and would yield 3 additional lots under the Plan. All 8 of these parcels enjoy frontage on existing public roads and have adequate access and utilities.

Environmental - the application proposes SWM and BMP measures on each lot. These measures include the use of infiltration trenches. The use of rain barrel(s) at the rear of the residence may also be considered in the design. These facilities have been designed to reduce the limits of clearing and grading and provide for preservation of existing trees. Pervious paving materials for the driveway on proposed Lot 2 and energy saving appliances will be used in the new residence. The application includes a waiver/modification to allow infiltration trench for SWM and BMP purposes on individual private residential lots and a partial waiver of stormwater detention requirements. The Applicant is also reserving the right to pursue additional innovative stormwater detention and water quality measures, subject to the review and approval of Fairfax County DPWES.

Tree Preservation and Tree Cover – the application includes extensive proffers, as recommended by County staff, to address tree preservation and tree cover requirements. There are currently 74 existing trees on the property, and the application proposes the preservation of 54 of those trees. Tree removal includes dead trees and those trees necessary to accommodate the modest residence on proposed Lot 2 and stormwater management (SWM) and best management practices (BMP) required by the County Public Facilities Manual (PFM).

Transportation – at time of subdivision plan approval or at the request of the Board of Supervisors, whichever occurs first, the Applicant has proposed right-of-way dedication, in fee simple, along Elm Street to 30 feet from the existing centerline. In addition, at time of subdivision plan approval, the Applicant has proposed a contribution of \$5,000 to the Providence District Trails Fund. Said contribution will satisfy any and all frontage improvements in the Right-of-Way for the Application Property, now or in the future.

Public Facilities/Fairfax County Park Authority – at time of building permit, the Applicant has proposed a lump sum contribution of \$2,679.00 to the Fairfax County Park Authority to be used for the community park known as South Railroad Street Park located in Dunn Loring at Sandburg Street and Morgan Lane and to be used to maintain the park in its present condition.

Affordable Housing – at time of building permit, the Applicant has proposed a lump sum contribution of \$1,500.00 to the Fairfax County Housing Trust fund.

Should you have any questions, please contact me at 703-787-3410.

Very truly yours,



Richard A. Lanham

8012 ELM PLACE

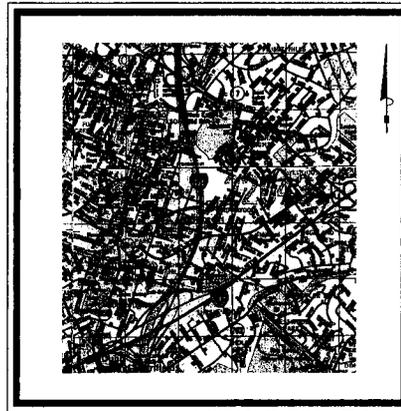
PROVIDENCE DISTRICT FAIRFAX COUNTY, VIRGINIA

GENERALIZED DEVELOPMENT PLAN

RZ 2009-PR-005

SHEET INDEX

1. COVER SHEET
2. NOTES AND TABULATIONS
3. EXISTING CONDITIONS & GENERALIZED DEVELOPMENT PLAN
4. INFILTRATION TRENCH DESIGN LOT 1 AND LOT 2
5. BMP CALCULATIONS
6. EXISTING VEGETATION MAP
7. TREE PRESERVATION PLAN



VICINITY MAP
SCALE: 1" = 200'

APPLICANT:

DR. ANTHONY CASOLARO
8012 ELM PLACE
DUNN LORING, VIRGINIA 22027

PREPARED BY:

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Chantilly, Virginia 20151
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COVER SHEET
8012 ELM PLACE
FAIRFAX COUNTY, VIRGINIA
PROVIDENCE DISTRICT

RZ 2009-PR-005
COUNTY PROJECT NUMBER



PLM STATUS	
4/17/09	REVISIONS PER COMMENTS
7/20/09	REVISIONS PER COMMENTS
8/5/09	REVISIONS PER COMMENTS
9/8/09	REVISIONS PER COMMENTS
9/17/09	REVISIONS PER COMMENTS
9/15/09	REVISIONS PER COMMENTS
10/28/09	REVISIONS PER COMMENTS
2/25/10	REVISIONS PER COMMENTS
2/25/10	REVISIONS PER COMMENTS
3/18/10	REVISIONS PER COMMENTS
4/8/10	REVISIONS PER COMMENTS

DATE	DESCRIPTION
MT	MT
DESIGN	DRAWN
SCALE	H. N.T.S.
	CHKD

JOB No. 4668-01-002
DATE: MARCH 18, 2010
FILE No. 4668-D-ZP-001

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 10000 Woodloch Forest Drive
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 Chantilly, Virginia 20151
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EXISTING CONDITIONS & GENERALIZED DEVELOPMENT PLAN
 8012 ELM PLACE
 FAIRFAX COUNTY, VIRGINIA
 PROVIDENCE DISTRICT

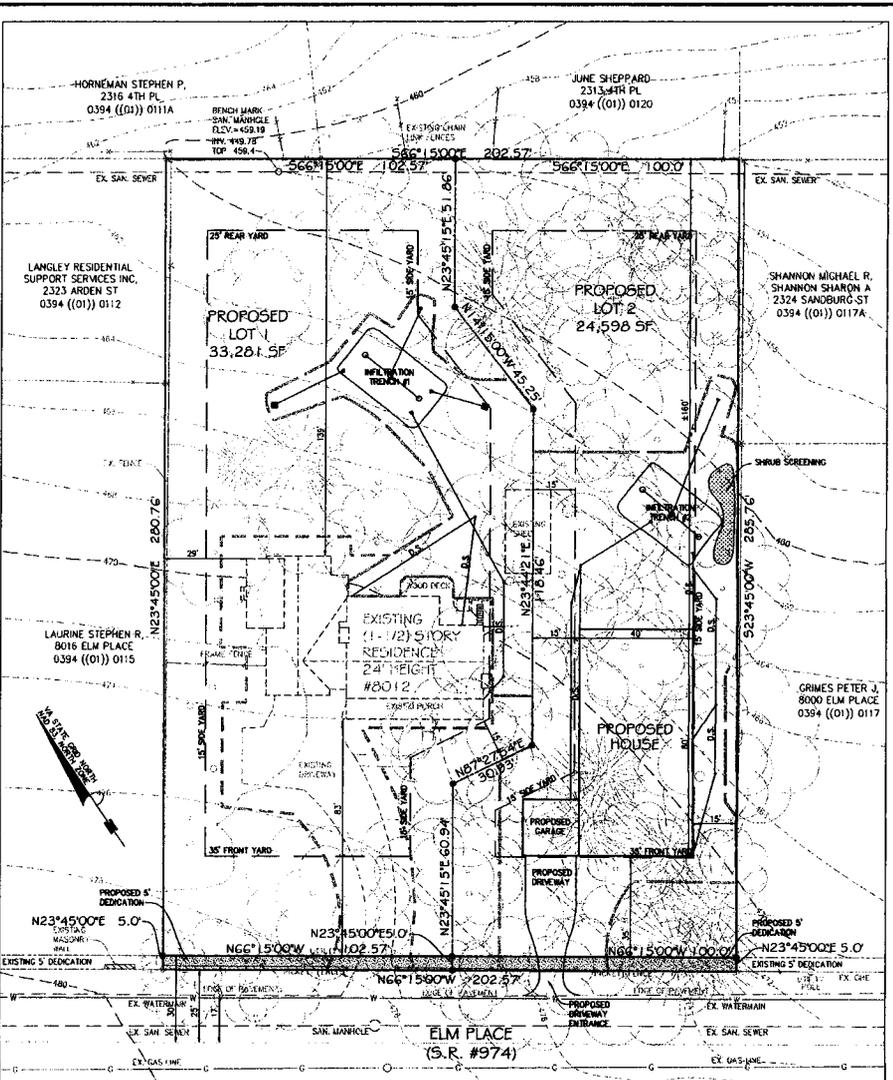
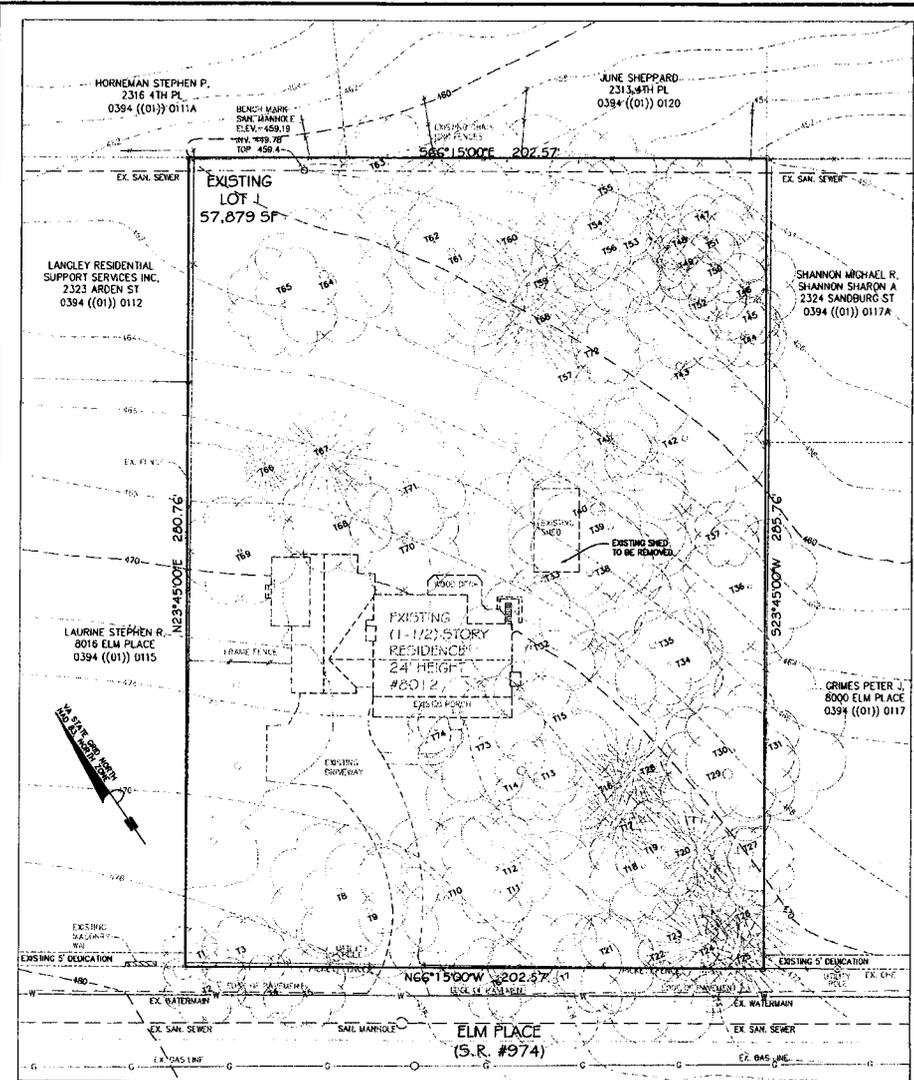
RZ 2009 PR-005
 COUNTY PROJECT NUMBER



PLAN STATUS

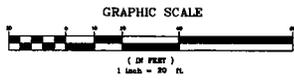
2/17/10	REVISIONS PER COMMENTS
7/20/10	REVISIONS PER COMMENTS
8/25/10	REVISIONS PER COMMENTS
9/24/10	REVISIONS PER COMMENTS
9/24/10	REVISIONS PER COMMENTS
9/24/10	REVISIONS PER COMMENTS
10/29/10	REVISIONS PER COMMENTS
12/02/10	REVISIONS PER COMMENTS
2/26/11	REVISIONS PER COMMENTS
3/18/11	REVISIONS PER COMMENTS
4/28/11	REVISIONS PER COMMENTS
04/11	DESCRIPTION

MT	MF	MT
DESIGN	DRAWN	CHKD
SCALE	1" = 20'	
JOB No.	4568-01-002	
DATE:	MARCH 18, 2010	
FILE No.	4568-02P-001	



LEGEND

- | | | | | | |
|-------------|----------------------|-------|---|---|-----------------------|
| --- 10' --- | EXISTING 10' CONTOUR | ----- | APPROXIMATE LIMIT OF DISTURBANCE | ⊕ | EXISTING UTILITY POLE |
| --- 2' --- | EXISTING 2' CONTOUR | ----- | ADDITIONAL LIMIT OF DISTURBANCE (LOT 1) | ⊕ | PROPOSED SPOT |
| --- 0' --- | PROPOSED CONTOUR | ----- | EXISTING GAS LINE | ⊕ | TEST PIT LOCATION |
| --- | EDGE OF PAVEMENT | ----- | EXISTING WATER LINE | ⊕ | PROPOSED DOWN SPOUT |
| --- | EXISTING FENCE LINE | ----- | EXISTING SANITARY SEWER LINE | ⊕ | PROPOSED YARD INLET |
| | | ----- | EXISTING TREE/TREE LINE | ⊕ | |



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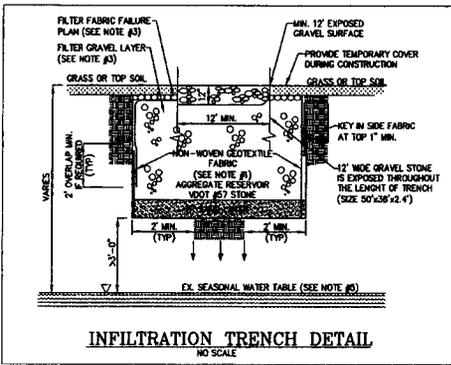
OUTFALL NARRATIVE

THE SITE DRAINS ONTO A NATURAL SWAL AT THE NORTH OF THE SITE. BEFORE DEVELOPMENT THE NEW LOT 2 SHEETS FLOW FROM ELM PLACE TO THE NORTHERN BOUNDARY OF THE SITE ONTO THE NATURAL SWAL WHICH CONVEYS FLOW THROUGH A 1/2 ACRE LOT OWNED BY MR DUNLOP ONTO A DRAINAGE SYSTEM THAT PASSES UNDER SANDBURG STREET THROUGH TO THE RETENTION POND OF THE SWINE HILL SUBDIVISION. THE FLOW CONTINUES ALONG HORSHAM LANE TO GILBERT ACROSS ILLWOOD RD PROCEEDING TOWARD THE NORTHERN EDGE OF THE WINDY TRIAL TOWARD THE BELTWAY IN A CLOSED CONDUIT CONDUIT SYSTEM.

AFTER DEVELOPMENT OF THE SITE, SOME ON SITE FLOW MAY BE ROUTED THROUGH AN INFILTRATION TRENCH FOR RETENTION AND TREATMENT. THE REMAINING DEMINISHED FLOWS OF THE SITE WILL CONTINUE TO SHEET FLOW ACROSS THE SITE TO THE EXISTING NATURAL SWAL. AFTER DETENTION THE TRENCH WILL DISCHARGE AT A DIMINISHED RATE NOT TO EXCEED 1.48 CFS DURING A TEN YEAR STORM THROUGH A 6" DRAINAGE PIPE TO A POINT ABOVE THE NATURAL SWAL LOW POINT.

SMB/BMP NARRATIVE:
TWO INFILTRATION TRENCHES HAVE BEEN DESIGNED FOR STORMWATER MANAGEMENT /BMP. STORM WATER QUANTITY AND QUALITY MANAGEMENT PER FAIRFAX COUNTY REQUIREMENTS AS SHOWN ON THE PLANS.

NOTE:
FOR THE DESIGN OF THE SMB /BMP (INFILTRATION TRENCH) AND ASSUMED RATE OF 0.26 IN /HR HAS BEEN USED. THIS DESIGN IS SUBJECT TO CHANGE WITH CONSTRUCTION DRAWINGS AND ACTUAL FIELD TEST OF THE INFILTRATION PERC TEST.



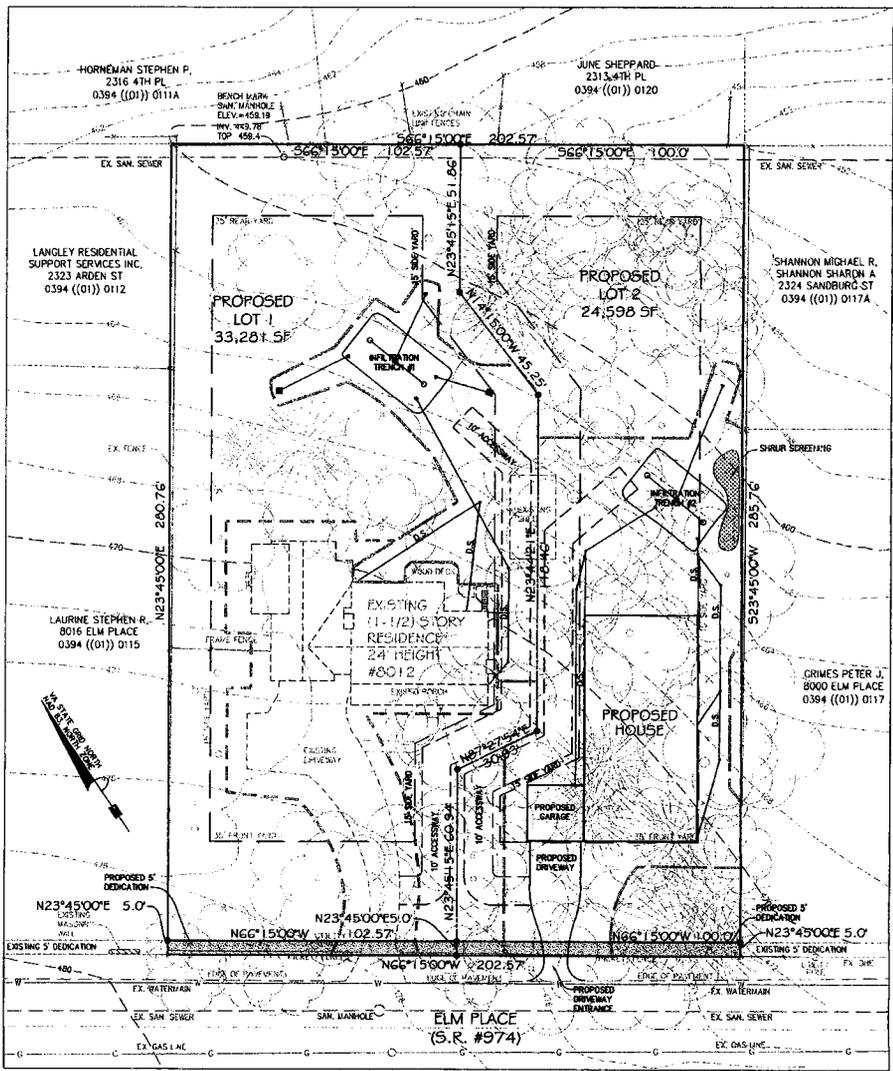
- NOTE:**
1. USE NON-WOVEN GEOTEXTILE FABRIC WITH AOS OF 70-100 US SIEVE OR 0.2MM - 0.15MM AS DETERMINED BY ASTM D4751 AND A TRAPEZOIDAL TEAR STRENGTH OF 45 LB OR 0.2 IN AS DETERMINED BY ASTM D4333.
 2. AN 8 IN. DEEP BOTTOM SAND LAYER (VOID FINE AGGREGATE, GRADING A OR B) IS REQUIRED.
 3. FOR AN AGGREGATE SURFACE TRENCH, FILTER FABRIC SHALL SURROUND ALL OF THE AGGREGATE. FILL MATERIAL EXCEPT THE TOP ONE FOOT. A SEPARATE PIECE OF FABRIC SHALL BE USED FOR THE TOP LAYER TO ACT AS A FAILURE PLANE. THIS TOP PIECE CAN THEN BE REPLACED AND REPLACED UPON GLOTTING.
 4. GEOTEXTILE FABRIC SHALL NOT BE EXPOSED TO DIRECT SUNLIGHT FOR MORE THAN 24 HOURS PRIOR TO INSTALLATION.
 5. DEPTH OF SEASONAL WATER TABLE (IF ANY) SHALL BE DETERMINED AT TIME OF FINAL ENGINEERING DESIGN.

INFILTRATION TRENCH DESIGN - LOT 1

TOTAL RAINFALL ACCUMULATION = 2 INCH (INFILTRATION DESIGN II, PFM PLATE 6-3)
DURATION OF STORM = 2-YR AND 2-HR STORM (PFM, FAIRFAX COUNTY VA. 2003 6-1303.4A)
IMPERVIOUS AREA TO BE TREATED = 4,858 SF
INFILTRATION RATE AS ASSUMED PER FAIRFAX COUNTY SOILS MAP = 0.52 IN / HR
INFILTRATION RATE (PER VIRGINIA STORMWATER MANAGEMENT HANDBOOK: 3.1010 B-3) = 0.26 IN / HR
VOLUME IN = 4,858 x 2 / 12 x 0.9 = 728.70 CF
NUMBER OF TRENCHES PROVIDED = 1 NOS
THE TRENCH RECEIVES = 728.70 CF, USE 729 CF
TRENCH DIMENSION PROVIDED:
LENGTH = 35 FEET
WIDTH = 20 FEET
SURFACE AREA OF TRENCH = 20 x 35 = 700 SF
VOLUME OUT = 0.26 IN / HR x 2 (HR) x 1 IN / 12 x 700 SF = 30.33 CF
STORAGE VOLUME REQUIRED = 729 - 30.33 = 698.67 CF
USING #57 STONE @ 40% VOID, VOLUME OF TRENCH = 698.67 / 0.40 = 1,746.67 CF
DEPTH OF TRENCH = (1,746.75 / (20 x 35)) = 2.49 FT
USE 1 TRENCH(ES) OF EACH SIZE (35L x 20W x 2.5D)
STORAGE VOLUME PROVIDED = 1750 CF
RATE OF DISCHARGE: Q(in) = 0.26 IN / HR x 1 IN / 12 x 700 SF = 15.17 CF / HR
INFILTRATION TIME REQUIRED = 698.67 / 15.17 = 46.06 HRS = < 48 HRS, OK

INFILTRATION TRENCH DESIGN - LOT 2

TOTAL RAINFALL ACCUMULATION = 2 INCH (INFILTRATION DESIGN II, PFM PLATE 6-3)
DURATION OF STORM = 2-YR AND 2-HR STORM (PFM, FAIRFAX COUNTY VA. 2003 6-1303.4A)
IMPERVIOUS AREA TO BE TREATED = 4,858 SF
INFILTRATION RATE AS ASSUMED PER FAIRFAX COUNTY SOILS MAP = 0.52 IN / HR
INFILTRATION RATE (PER VIRGINIA STORMWATER MANAGEMENT HANDBOOK: 3.1010 B-3) = 0.26 IN / HR
VOLUME IN = 4,858 x 2 / 12 x 0.9 = 689.25 CF
NUMBER OF TRENCHES PROVIDED = 1 NOS
THE TRENCH RECEIVES = 689.25 CF, USE 690 CF
TRENCH DIMENSION PROVIDED:
LENGTH = 33 FEET
WIDTH = 20 FEET
SURFACE AREA OF TRENCH = 33 x 20 = 660 SF
VOLUME OUT = 0.26 IN / HR x 2 (HR) x 1 IN / 12 x 660 SF = 28.60 CF
STORAGE VOLUME REQUIRED = 689 - 28.60 = 631.40 CF
USING #57 STONE @ 40% VOID, VOLUME OF TRENCH = 631.40 / 0.40 = 1,578.50 CF
DEPTH OF TRENCH = (1,578.50 / (20 x 33)) = 2.30 FT
USE 1 TRENCH(ES) OF EACH SIZE (33L x 20W x 2.4D)
STORAGE VOLUME PROVIDED = 1584 CF
RATE OF DISCHARGE: Q(in) = 0.26 IN / HR x 1 IN / 12 x 660 SF = 14.30 CF / HR
INFILTRATION TIME REQUIRED = 631.40 / 14.30 = 44.15 HRS = < 48 HRS, OK



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INFLTRATION TRENCH DESIGN LOT 1 AND LOT 2
8012 ELM PLACE
FAIRFAX COUNTY, VIRGINIA
PROVIDENCE DISTRICT

RZ 2008-PF-005
COUNTY PROJECT NUMBER



PLAN STATUS

4/17/09	REVISION PER COMMENTS
8/5/09	REVISION PER COMMENTS
8/16/09	REVISION PER COMMENTS
8/17/09	REVISION PER COMMENTS
8/18/09	REVISION PER COMMENTS
10/29/09	REVISION PER COMMENTS
2/26/10	REVISION PER COMMENTS
3/18/10	REVISION PER COMMENTS
4/10/10	REVISION PER COMMENTS

DATE	DESCRIPTION	
MT	KF	MT
DESIGN	CH	CH
SCALE	1" = 20'	

JOB No. 4668-01-002
DATE: MARCH 18, 2010
FILE No. 4668-02P-001

SHEET 4 OF 7

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BMP Facility Design Calculations

Northam Virginia BMP Handbook 11/06/02

Plan Name: ELM PLACE LOT 1 Date: OCTOBER 18, 2009
 Plan Number: Engineer: MAMESH ADRIKAR

I. Water Quality Narrative

WATER QUALITY REQUIREMENT FOR THIS LOT IS PROVIDED THROUGH A WETLAND TRONCH DESIGN B FOR 278 278 STORM IS UTILIZED WITH EFFICIENCY RATING OF 70%. THIS WILL PROVIDE PHOSPHORUS REMOVAL EFFICIENCY OF GREATER THAN 40% REQUIRED BY ORDINANCE.

II. Watershed Information

TOTAL SITE AREA=36,428 S.F. OR 0.829 AC
 Part 1: List all of the Subareas and "C" Factors used in the BMP Calculations

Subarea Designation and Description (1)	"C" Factor (2)	Acres (3)
BUILDING AREA (CONTROLLED)	0.80	0.080
DRIVEWAY (CONTROLLED)	0.80	0.054
WALKWAY (CONTROLLED)	0.80	0.008
PERVIOUS AREA (CONTROLLED)	0.30	0.077
PERVIOUS AREA (UNCONTROLLED)	0.80	0.009
PERVIOUS AREA (UNCONTROLLED)	0.30	0.385

NOTE: Rational formula "C" factors are taken from the general zoning values listed in Appendix 4-1 to 4-2 depending on the location of the BMP facility (Public County Public Facilities Manual Chart A6-18 or Prince William County Design and Construction Standards Manual, Table 1).

Appendix 4-4a
Calculations Worksheet

Part 2: Compute the Weighted Average "C" Factor for the Site

(A) Area of the site (a)	(b) 0.78	score
(B) Subarea Designation (1)	"C" Factor (2)	Acres (3)
BUILDING AREA (CONTROLLED)	0.80	0.080
DRIVEWAY (CONTROLLED)	0.80	0.054
WALKWAY (CONTROLLED)	0.80	0.008
PERVIOUS AREA (CONTROLLED)	0.30	0.077
PERVIOUS AREA (UNCONTROLLED)	0.80	0.009
PERVIOUS AREA (UNCONTROLLED)	0.30	0.385

(C) Weighted average "C" factor (b) Total = 0.342
 (b) / (a) = 0.43

Part 3: Compute the Total Phosphorus Removed for the Site

Subarea Designation (1)	BMP Type (2)	Removal Eff. (%) (3)	Area (Acres) (4)	"C" Factor (5)	Product (6)
A1	WF TRONCH	70%	0.361	0.78	14,798
A2	WF TRONCH	70%	0.050	0.78	1,386
A3	WF TRONCH	70%	0.008	0.78	161
A4	WF TRONCH	70%	0.348	0.78	18,829

(c) Total = 34,174

Appendix 4-4c
Calculations Worksheet

Part 4: Determine Compliance with Chesapeake Bay Preservation Requirements

(A) Select Requirement (a) 50.00%

- Water Supply Overlay District (Chesapeake Watershed) = 50% (Public County and Prince William County)
- Chesapeake Bay Preservation Area (Bays Development) = 40% (Public County)
- Chesapeake Bay Preservation Area (Recreation) = 50% (Prince William County)
- Chesapeake Bay Preservation Area (Floodplain) = 100%

(B) If Line 3(a) is less than or equal to Line 4(a) 50.00%, then Phosphorus removal requirement is satisfied.

BMP Facility Design Calculations

Northam Virginia BMP Handbook 11/06/02

Plan Name: ELM PLACE LOT 2 Date: OCTOBER 18, 2009
 Plan Number: Engineer: MAMESH ADRIKAR

I. Water Quality Narrative

WATER QUALITY REQUIREMENT FOR THIS LOT IS PROVIDED THROUGH A WETLAND TRONCH DESIGN B FOR 278 278 STORM IS UTILIZED WITH EFFICIENCY RATING OF 70%. THIS WILL PROVIDE PHOSPHORUS REMOVAL EFFICIENCY OF GREATER THAN 40% REQUIRED BY ORDINANCE.

II. Watershed Information

TOTAL SITE AREA=24,424 S.F.
 Part 1: List all of the Subareas and "C" Factors used in the BMP Calculations

Subarea Designation and Description (1)	"C" Factor (2)	Acres (3)
BUILDING AREA (CONTROLLED)	0.80	0.080
DRIVEWAY (CONTROLLED)	0.80	0.063
PERVIOUS AREA (CONTROLLED)	0.30	0.067
PERVIOUS AREA (UNCONTROLLED)	0.30	0.287

NOTE: Rational formula "C" factors are taken from the general zoning values listed in Appendix 4-1 to 4-2 depending on the location of the BMP facility (Public County Public Facilities Manual Chart A6-18 or Prince William County Design and Construction Standards Manual, Table 1).

Appendix 4-4a
Calculations Worksheet

Part 2: Compute the Weighted Average "C" Factor for the Site

(A) Area of the site (a)	(b) 0.338	score
(B) Subarea Designation (1)	"C" Factor (2)	Acres (3)
BUILDING AREA (CONTROLLED)	0.80	0.080
DRIVEWAY (CONTROLLED)	0.80	0.063
PERVIOUS AREA (CONTROLLED)	0.30	0.067
PERVIOUS AREA (UNCONTROLLED)	0.30	0.194

(C) Weighted average "C" factor (b) Total = 0.247
 (b) / (a) = 0.73

Part 3: Compute the Total Phosphorus Removed for the Site

Subarea Designation (1)	BMP Type (2)	Removal Eff. (%) (3)	Area (Acres) (4)	"C" Factor (5)	Product (6)
A1	WF TRONCH	70%	0.154	0.73	21,899
A2	WF TRONCH	70%	0.043	0.73	8,881
A3	WF TRONCH	70%	0.025	0.73	1,371

(c) Total = 32,151

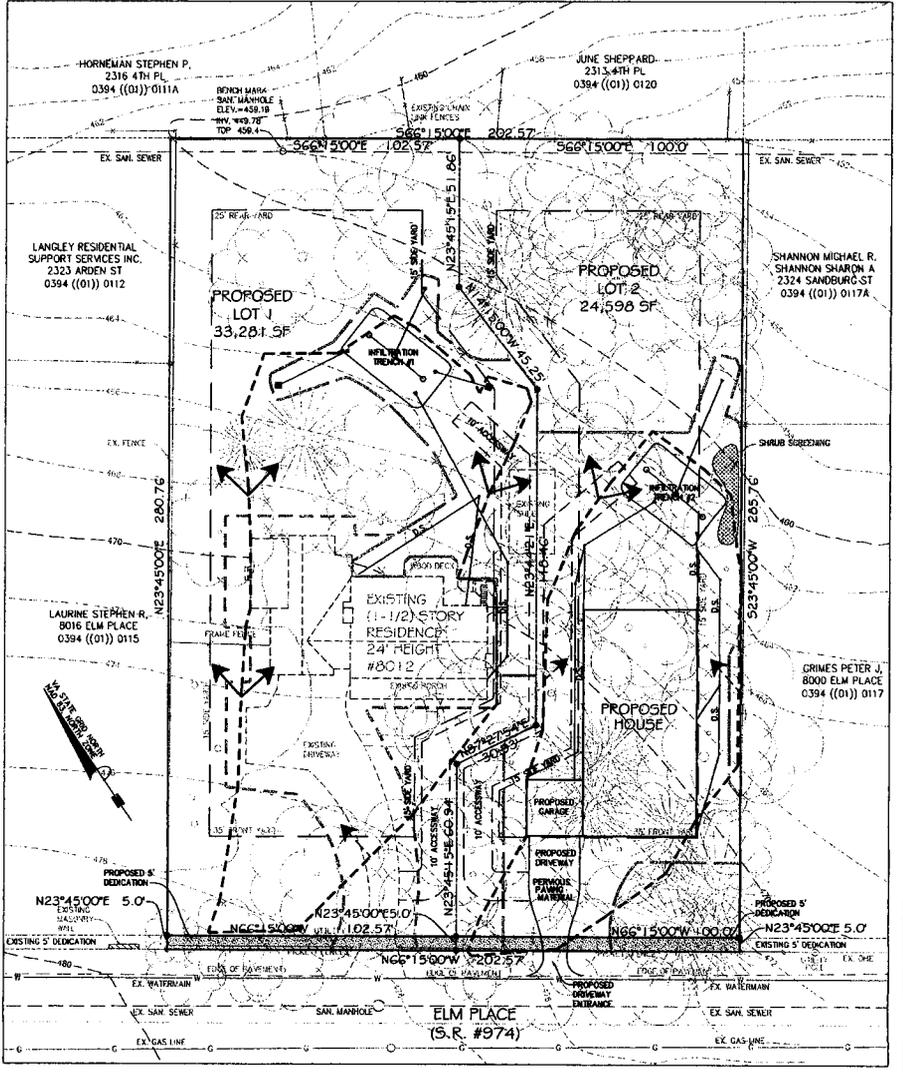
Appendix 4-4c
Calculations Worksheet

Part 4: Determine Compliance with Chesapeake Bay Preservation Requirements

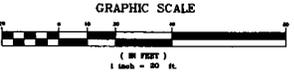
(A) Select Requirement (a) 50.00%

- Water Supply Overlay District (Chesapeake Watershed) = 50% (Public County and Prince William County)
- Chesapeake Bay Preservation Area (Bays Development) = 40% (Public County)
- Chesapeake Bay Preservation Area (Recreation) = 50% (Prince William County)
- Chesapeake Bay Preservation Area (Floodplain) = 100%

(B) If Line 3(a) is less than or equal to Line 4(a) 50.00%, then Phosphorus removal requirement is satisfied.



DRAINAGE DIVIDE PLAN
1"=20'



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BMP CALCULATIONS
 8012 ELM PLACE
 FAIRFAX COUNTY, VIRGINIA
 PROVIDENCE DISTRICT

972009-PR-005
 COUNTY PROJECT NUMBER

Mamesh Adrikar
 MAMESH ADRIKAR
 4/30

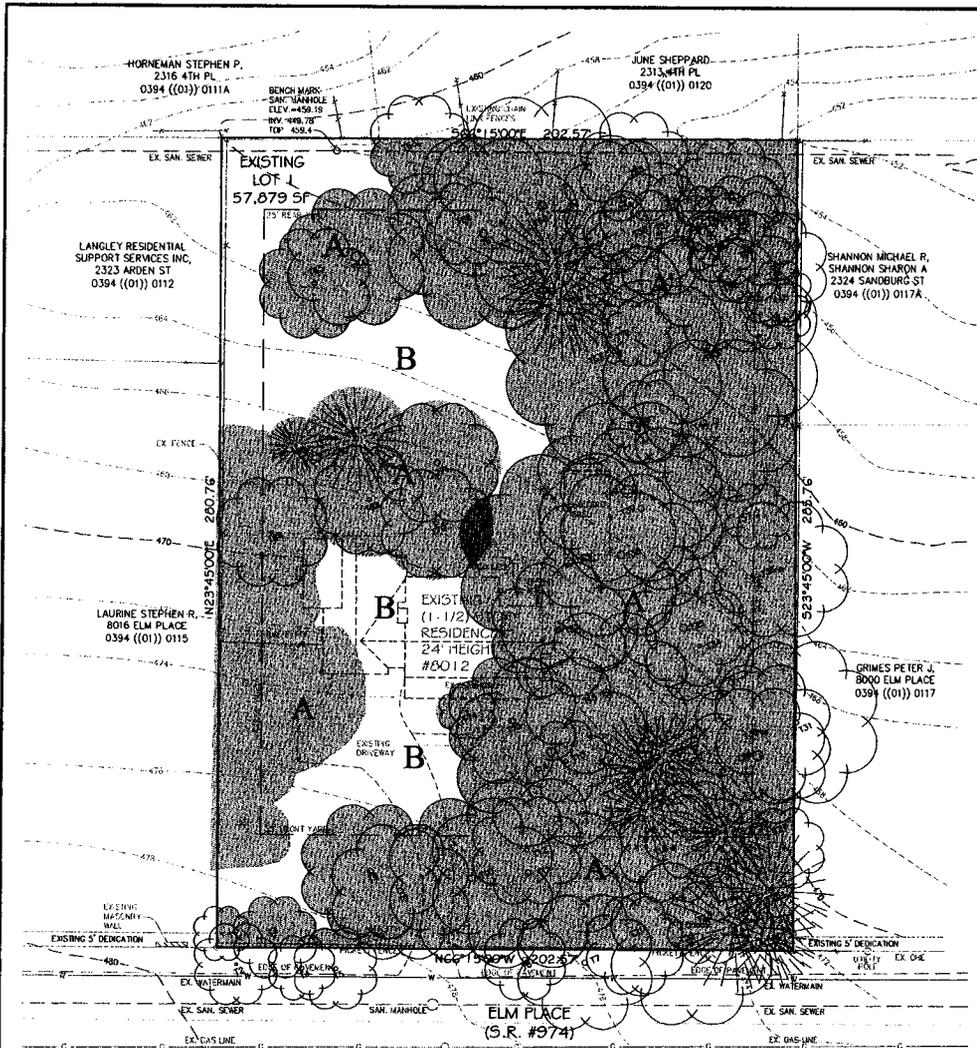
PLAN STATUS

4/17/09	REVISION PER COMMENTS
4/20/09	REVISION PER COMMENTS
5/11/09	REVISION PER COMMENTS
5/19/09	REVISION PER COMMENTS
5/21/09	REVISION PER COMMENTS
5/22/09	REVISION PER COMMENTS
5/27/09	REVISION PER COMMENTS
6/10/09	REVISION PER COMMENTS

DATE DESCRIPTION
 MT HP MT
 DESIGN DRAWN CHECK
 SCALE H: 1"=20'
 JOB No. 4688-01-002
 DATE: MARCH 18, 2010
 FILE No. 4688-D-27-001

SHEET 5 of 7

P:\6688 - 8012 Elm Place\6688-01-002 (Plan)\Planning\Engineering\6688-01-002A-tranch-design.dwg



TREE INVENTORY
 0102 Elm Place, Fairfax, VA
 Date of visit: January 7, 2010
 Certified Arborist: Gregg D. Dierly MA-4C1 CA

Tree #	Botanical Name	Common Name	Caliper (DBH) (inches)	Species Rating (D-100%)	Condition Rating (C-100%)	Preserve/Remove
1	Prunus serotina	Black Cherry	8	0.54	0.60	Preserve
2	Gladiolus truncatellus	Honey Locust	12	0.55	0.4	Preserve
3	Quercus alba	White Oak	12	0.7	0.72	Preserve
4	Gladiolus truncatellus	Honey Locust	16	0.55	0.4	Preserve
5	Gladiolus truncatellus	Honey Locust	16	0.55	0.40	Preserve
6	Quercus alba	White Oak	20	0.8	0.8	Preserve
7	Quercus prinus	Chickadee Oak	24	0.75	0.72	Preserve
8	Quercus rubra	Red Oak	24	0.7	0.76	Preserve
9	Quercus alba	White Oak	24	0.8	0.72	Preserve
10	Quercus alba	White Oak	30	0.8	0.8	Preserve
11	Quercus prinus	Chickadee Oak	24	0.75	0.76	Preserve
12	Quercus alba	White Oak	18	0.8	0.76	Preserve
13	Quercus rubra	Red Oak	18	0.7	0.60	Preserve
14	Quercus alba	White Oak	30	0.8	0.8	Preserve
15	Quercus alba	White Oak	30	0.8	0.8	Preserve
16	Prunus serotina	Black Cherry	24	0.55	0.5	Preserve
17	Prunus serotina	Black Cherry	12	0.55	0.2	Preserve
18	Quercus prinus	Chickadee Oak	18	0.75	0.76	Preserve
19	Quercus prinus	Chickadee Oak	20	0.75	0.76	Preserve
20	Prunus serotina	Black Cherry	10	0.55	0.8	Preserve
21	Acacia saligna	Red Maple	10	0.7	0.6	Preserve
22	Quercus prinus	Chickadee Oak	20	0.75	0.72	Preserve
23	Quercus alba	White Oak	18	0.8	0.72	Preserve
24	Prunus serotina	Black Cherry	8	0.55	0.76	Preserve
25	Quercus rubra	Red Oak	8	0.7	0.6	Preserve
26	Prunus serotina	Black Cherry	18	0.55	0.8	Preserve
27	Maple acerifolia	Red Maple	10	0.8	0.76	Preserve
28	Quercus rubra	Red Oak	10	0.7	0.76	Preserve
29	Quercus prinus	Chickadee Oak	42	0.75	0.20	Substrate
30	Quercus prinus	Chickadee Oak	18	0.75	0.76	Preserve
31	Quercus prinus	Chickadee Oak	24	0.75	0.76	Preserve
32	Carya glabra	Pignut Hickory	24	0.75	0.76	Substrate
33	Quercus prinus	Chickadee Oak	30	0.75	0.76	Substrate
34	Quercus alba	White Oak	15	0.8	0.76	Substrate
35	Quercus prinus	Chickadee Oak	30	0.75	0.76	Substrate
36	Quercus alba	White Oak	25	0.8	0.76	Substrate
37	Quercus prinus	Chickadee Oak	10	0.75	0.60	Substrate
38	Quercus alba	White Oak	30	0.8	0.76	Substrate
39	Quercus alba	White Oak	32	0.8	0.76	Substrate
40	Quercus alba	White Oak	32	0.8	0.76	Substrate
41	Carya glabra	Pignut Hickory	12	0.75	0.72	Preserve
42	Quercus alba	White Oak	24	0.8	0.64	Preserve
43	Quercus prinus	Chickadee Oak	30	0.75	0.72	Preserve
44	Carya glabra	Pignut Hickory	12	0.75	0.76	Preserve
45	Carya glabra	Pignut Hickory	12	0.75	0.72	Preserve
46	Quercus alba	White Oak	15	0.8	0.76	Preserve
47	Carya glabra	Pignut Hickory	15	0.75	0.76	Preserve
48	Quercus prinus	Chickadee Oak	8	0.75	0.72	Preserve
49	Carya glabra	Pignut Hickory	9	0.75	0.72	Preserve
50	Carya glabra	Pignut Hickory	18	0.75	0.62	Preserve
51	Quercus prinus	Chickadee Oak	12	0.75	0.72	Preserve
52	Quercus alba	White Oak	31	0.8	0.72	Preserve
53	Quercus prinus	Chickadee Oak	12	0.75	0.6	Preserve
54	Quercus alba	White Oak	12	0.8	0.72	Preserve
55	Acacia saligna	Red Maple	10	0.7	0.76	Preserve
56	Quercus prinus	Chickadee Oak	10	0.75	0.72	Preserve
57	Quercus alba	White Oak	22	0.8	0.76	Preserve
58	Prunus serotina	Black Cherry	16	0.55	0.8	Preserve
59	Prunus serotina	Black Cherry	20	0.55	0.8	Preserve
60	Quercus rubra	Red Oak	33	0.8	0.76	Preserve
61	Quercus alba	White Oak	33	0.8	0.76	Preserve
62	Prunus serotina	Black Cherry	10	0.55	0.6	Preserve
63	Fraxinus pennsylvanica	Honey Locust	10	0.6	0.6	Preserve
64	Prunus serotina	Black Cherry	40	0.55	0.65	Preserve
65	Morus alba	White Mulberry	18	0.45	0.4	Preserve
66	Rhus glabra	Flowering Dogwood	12	0.6	0.72	Preserve
67	Prunus alba	Handy Spruce	15	0.7	0.72	Preserve
68	Acacia saligna	Red Maple	16	0.7	0.76	Preserve
69	Morus alba	White Mulberry	15	0.45	0.45	Preserve
70	Prunus serotina	Black Cherry	16	0.55	0.8	Preserve
71	Prunus serotina	Black Cherry	24	0.55	0.76	Preserve
72	Carya glabra	Pignut Hickory	9	0.75	0.76	Preserve
73	Quercus rubra	Red Oak	24	0.7	0.6	Preserve
74	Carya glabra	Pignut Hickory	10	0.75	0.76	Preserve

- LEGEND**
- EXISTING 10' CONTOUR
 - EXISTING 2' CONTOUR
 - EDGE OF PAVEMENT
 - APPROXIMATE LIMIT OF DISTURBANCE
 - G- EXISTING GAS LINE
 - EXISTING WATER LINE
 - EXISTING SANITARY SEWER LINE
 - X- EXISTING FENCE LINE
 - EXISTING TREE/TREE LINE
 - EXISTING UTILITY POLE

COVER TYPE	PRIMARY SPECIES	INDICATOR SPECIES	SUCCESSION STAGE	CONDITION	AREA
A UPLAND FOREST	QUERCUS PRINUS QUERCUS ALBA	SUBURBAN LAWN AND LANDSCAPE W/ NATIVE FOREST; SIGNIFICANT DECLINE IN INDIVIDUAL TREES APPARENT	SUB-CLIMAX	POOR TO GOOD	1.11 ACRES
B DEVELOPED	N/A	LAWN AND LANDSCAPE, HOUSE AND HANGAR	N/A	POOR TO GOOD	

- Notes:**
- Condition and Species Rating are based on forms provided by the Garden of Eatin' Association, published by the G.A.
 - All trees indicated to be to be cleared from the site due to construction impacts.
 - All trees with a minimum 8" D.B.H. were inventoried and evaluated.
 - Tree 73 & 74 have been generally located in field and were not part of tree survey.
 - Include the Project Number or District Number. Consider the replacement of any suggested tree preservation or removal techniques without the agreement/consent of the adjacent property owner or HOA, given the laws of border-line and boundary trees.

Bowman
 CONSULTING

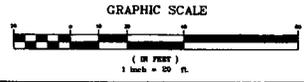
Bowman Consulting Group, Ltd.
 1400 Westhampton Place
 Chesapeake, Virginia 23061
 Phone: (757) 444-1000
 Fax: (757) 444-9700
 www.bowmanconsulting.com

EXISTING VEGETATION MAP
 8012 ELM PLACE
 FAIRFAX COUNTY, VIRGINIA
 PROVIDENCE DISTRICT

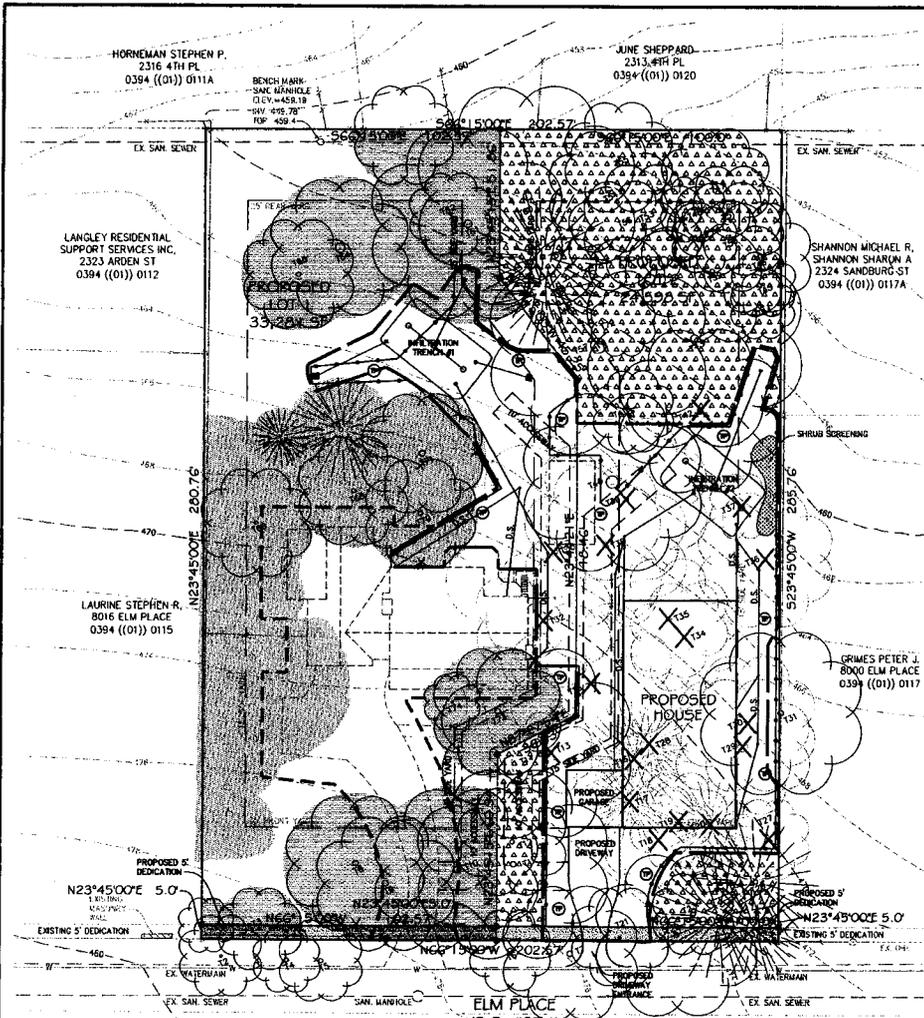
RZ 2009-PJ-005
 COUNTY PROJECT NUMBER

PLAN SHEET
 4/17/10
 4/10/10

DATE: MARCH 18, 2010
 JOB No. 4668-01-002
 FILE No. 4668-02P-001
 SHEET 6 OF 7



P:\4668 - 8012 Elm Place\4668-01-002 (PLAN)\Planning\Engineering\4668-01-002-001.dwg, 4/7/2010 10:42:43 AM, 17



LOT 1 TREE PRESERVATION CALCULATIONS

Item	Units	Amount
1. Total Area of Lot	Sq. Ft.	10,000.00
2. Area of Existing Structures	Sq. Ft.	1,500.00
3. Area of Proposed Structures	Sq. Ft.	2,000.00
4. Area of Existing Driveways	Sq. Ft.	500.00
5. Area of Proposed Driveways	Sq. Ft.	1,000.00
6. Area of Existing Paved Surfaces	Sq. Ft.	1,000.00
7. Area of Proposed Paved Surfaces	Sq. Ft.	1,500.00
8. Total Area of Impervious Surfaces	Sq. Ft.	4,500.00
9. Total Area Available for Tree Preservation	Sq. Ft.	5,500.00
10. Total Area of Tree Canopy Credit	Sq. Ft.	5,500.00

Item	Units	Amount
1. Total Area of Lot	Sq. Ft.	10,000.00
2. Area of Existing Structures	Sq. Ft.	1,500.00
3. Area of Proposed Structures	Sq. Ft.	2,000.00
4. Area of Existing Driveways	Sq. Ft.	500.00
5. Area of Proposed Driveways	Sq. Ft.	1,000.00
6. Area of Existing Paved Surfaces	Sq. Ft.	1,000.00
7. Area of Proposed Paved Surfaces	Sq. Ft.	1,500.00
8. Total Area of Impervious Surfaces	Sq. Ft.	4,500.00
9. Total Area Available for Tree Preservation	Sq. Ft.	5,500.00
10. Total Area of Tree Canopy Credit	Sq. Ft.	5,500.00

NOTE: FINAL TREE SAVE CANOPY CREDIT AREAS, TREE PRESERVATION METHODS (INCLUDING TREE PROTECTION FENCE, ROOT PRUNING, ETC.), TREE PRESERVATION TARGET CALCULATIONS AND 10-YEAR TREE CANOPY CREDIT CALCULATIONS ARE SUBJECT TO CHANGE FOLLOWING FINAL ENGINEERING.

GENERAL TREE PRESERVATION NOTES:

- PRIOR TO ANY CONSTRUCTION ACTIVITY, ALL INDIVIDUAL TREES AND GROUPS OF TREES SHOWN TO BE PRESERVED ON THE TREE PRESERVATION PLAN SHALL BE PROTECTED BY FENCING A MINIMUM OF FOUR FEET IN HEIGHT, PLACED AT THE LIMITS OF CLEARING AND GRADING, OR AS DETERMINED BY FAIRFAX COUNTY URBAN FORESTRY DIVISION REPRESENTATIVES DURING THE PRE-CONSTRUCTION MEETING.
- THE TREE PROTECTION FENCING SHALL BE MADE CLEARLY VISIBLE TO ALL CONSTRUCTION PERSONNEL WITH SIGNS POSTED EVERY 25 FEET ON THE FENCE STATING IN ENGLISH AND SPANISH THAT IT IS A TREE PRESERVATION AREA AND NO ENTRY IS PERMITTED. THE FENCING SHALL BE INSTALLED PRIOR TO ANY WORK BEING CONDUCTED ON THE SITE, INCLUDING THE REMOVAL OF ANY EXISTING STRUCTURES OR FENCES. DISTURBANCE ON ADJACENT SITES SHALL BE MINIMIZED.
- ALL CONSTRUCTION MOBILIZATION ACTIVITY, MATERIALS STORAGE, AND MOTORIZED EQUIPMENT SHALL BE PROHIBITED BEYOND THE LIMITS OF CLEARING AND GRADING SHOWN ON THE SITE PLAN AND THE TREE PRESERVATION PLAN UNLESS PREVIOUSLY APPROVED BY FAIRFAX COUNTY URBAN FORESTRY DIVISION.
- CLEARING OPERATIONS: TREES TO BE REMOVED SHALL BE FELLED IN SUCH A MANNER AS TO PRESERVE THE TREES THAT ARE TO REMAIN. TREES DIRECTLY ADJACENT TO BUT WITHIN THE LIMITS OF CLEARING AND GRADING SHALL BE FELLED BY HAND, WITH A CHAIN SAW, AND THE STUMPS SHALL REMAIN IN PLACE OR SHALL BE GROUND OUT.

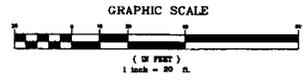
LOT 2 TREE PRESERVATION CALCULATIONS

Item	Units	Amount
1. Total Area of Lot	Sq. Ft.	10,000.00
2. Area of Existing Structures	Sq. Ft.	1,500.00
3. Area of Proposed Structures	Sq. Ft.	2,000.00
4. Area of Existing Driveways	Sq. Ft.	500.00
5. Area of Proposed Driveways	Sq. Ft.	1,000.00
6. Area of Existing Paved Surfaces	Sq. Ft.	1,000.00
7. Area of Proposed Paved Surfaces	Sq. Ft.	1,500.00
8. Total Area of Impervious Surfaces	Sq. Ft.	4,500.00
9. Total Area Available for Tree Preservation	Sq. Ft.	5,500.00
10. Total Area of Tree Canopy Credit	Sq. Ft.	5,500.00

Item	Units	Amount
1. Total Area of Lot	Sq. Ft.	10,000.00
2. Area of Existing Structures	Sq. Ft.	1,500.00
3. Area of Proposed Structures	Sq. Ft.	2,000.00
4. Area of Existing Driveways	Sq. Ft.	500.00
5. Area of Proposed Driveways	Sq. Ft.	1,000.00
6. Area of Existing Paved Surfaces	Sq. Ft.	1,000.00
7. Area of Proposed Paved Surfaces	Sq. Ft.	1,500.00
8. Total Area of Impervious Surfaces	Sq. Ft.	4,500.00
9. Total Area Available for Tree Preservation	Sq. Ft.	5,500.00
10. Total Area of Tree Canopy Credit	Sq. Ft.	5,500.00

LEGEND

- EXISTING 10' CONTOUR
- EXISTING 2' CONTOUR
- EDGE OF PAVEMENT
- APPROXIMATE LIMIT OF DISTURBANCE
- ADDITIONAL LIMIT OF DISTURBANCE (LOT 1)
- EXISTING GAS LINE
- EXISTING WATER LINE
- EXISTING SANITARY SEWER LINE
- EXISTING FENCE LINE
- EXISTING TREE/TREE LINE
- LOT 1 TREE SAVE CANOPY CREDIT AREA
- LOT 2 TREE SAVE CANOPY CREDIT AREA
- PROPOSED ROOT PRUNING
- PROPOSED TREE PROTECTION FENCE
- EXISTING TREES TO BE PRESERVED
- EXISTING TREES TO BE REMOVED



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 Fax: (703) 441-9720
 www.bowmanconsulting.com

TREE PRESERVATION PLAN
 8012 ELM PLACE
 FAIRFAX COUNTY, VIRGINIA
 PROVIDENCE DISTRICT

RZ 2009-PF-005
 COUNTY PROJECT NUMBER



DATE	DESCRIPTION
4/7/09	REVISION PER COMMENTS
8/6/09	REVISION PER COMMENTS
9/16/09	REVISION PER COMMENTS
9/18/09	REVISION PER COMMENTS
10/20/09	REVISION PER COMMENTS
2/25/10	REVISION PER COMMENTS
3/18/10	REVISION PER COMMENTS
4/9/10	REVISION PER COMMENTS

DATE	DESCRIPTION	
MT	VF	MT
DESIGN	DRAWING	CHD
SCALE	1" = 20'	
JOB No.	4688-01-002	
DATE:	MARCH 18, 2010	
FILE No.	4688-01-001	
SHEET	7 of 7	



County of Fairfax, Virginia

MEMORANDUM

DATE: March 19, 2010

TO: Kelli Goddard-Sobers, Staff Coordinator
Zoning Evaluation Division
Department of Planning and Zoning

FROM: Beth Forbes, Stormwater Engineer *BF*
Environmental and Site Review Division
Department of Public Works and Environmental Services

SUBJECT: Rezoning Application #RZ 2009-PR-005, Casolaro Property, General
Development Plat dated March 18, 2010, LDS Project #2829-ZONAV-001-B-1,
Tax Map #039-4-01-0116, Providence District

We have reviewed the subject application and offer the following stormwater management comments.

Chesapeake Bay Preservation Ordinance (CBPO)

There is no Resource Protection Area (RPA) on this site.

Water quality controls are required (PFM 6-0401.2A). An infiltration trench is shown on each lot. A PFM modification allowing the trenches to be located on individual single-family lots would make it possible to provide the required controls. This modification is likely to be approved.

The results of an infiltration test performed near the northeastern corner of the lot indicated that the area may not fully support infiltration. Restricted-outfall pipes (PFM Plate 85-6) may be necessary for the facilities to provide adequate controls.

Floodplain

There are no floodplains on the property.

Downstream Drainage Complaints

There are no downstream drainage complaints on file.

Department of Public Works and Environmental Services
Land Development Services, Environmental and Site Review Division
12055 Government Center Parkway, Suite 535
Fairfax, Virginia 22035-5503
Phone 703-324-1720 • TTY 711 • FAX 703-324-8359



Kelli Goddard-Sobers, Staff Coordinator
Rezoning Application #RZ 2009-PR-005, Casolaro Property
March 19, 2010
Page 2 of 2

Stormwater Detention

Detention is required, if not waived (PFM 6-0301.3). The applicant indicates a modification to allow infiltration trenches on each single-family lot will be pursued in order to provide detention. This modification is likely to be approved. A partial detention waiver may also be pursued. This modification is likely to be approved if the applicant can demonstrate that a) providing full detention would impact the tree-save area and b) adequate outfall exists without the full detention.

Site Outfall

An outfall statement has been provided. Before any subdivision can be approved, a demonstration of adequate outfall meeting the requirements in PFM Section 6-0204 must be provided.

Please contact me at 703-324-1720 if you have any questions or require additional information.

BF/

cc: Craig Carinci, Director, Stormwater Planning Division, DPWES
Jeremiah Stonefield, Chief, Stormwater & Geotechnical Section, ESRD, DPWES
Zoning Application File