County of Fairfax, Virginia

To protect and enrich the quality of life for the people, neighborhoods and diverse communities of Fairfax County

June 9, 2010

Richard A. Lanham
3863 Centerview Drive, Suite 300
Chlantilly, VA 20151

RE: Rezoning Application RZ 2009-PR-005

Dear Mr. Lanham:

Enclosed you will find a copy of an Ordinance adopted by the Board of Supervisors at a regular meeting held on June 8, 2010, granting Rezoning Application RZ 2009-PR-005 in the name of Anthony Casolaro. The Board's action rezones certain property in the Providence District from the R-1 District to the R-2 District to permit residential development at a density of 1.5 dwelling units per acre (du/ac). The property is located on the north side of Elm Place between Sandburg Street and Arden Street on approximately 1.33 acres of land [Tax Map 39-4 ((1)) 116] and is subject to the proffers dated May 17, 2010.

The Board also:

- Waived the frontage improvements along Elm Place

Sincerely,

Nancy Vehrs

Nancy Vehrs
Clerk to the Board of Supervisors
NV/ph

Office of the Clerk to the Board of Supervisors
12000 Government Center Parkway, Suite 533
Fairfax, Virginia 22035
Phone: 703-324-3151 ♦ Fax: 703-324-3926 ♦ TTY: 703-324-3903
Email: clerktothebos@fairfaxcounty.gov
http://www.fairfaxcounty.gov/bosclerk

Cc: Chairman Sharon Bulova
Supervisor Lynda Smyth, Providence District
Janet Coldsmith, Director, Real Estate Division, Dept. of Tax Administration
Regina Coyle, Director, Zoning Evaluation Division, DPZ
Diane Johnson-Quinn, Deputy Zoning Administrator, Dept. of Planning and Zoning
Thomas Conry, Dept. Manager. – GIS - Mapping/Overlay
Angela K. Rodeheaver, Section Chief, Transportation, Planning Division
Eric Teitelman, Capital Projects and Operations Div., Dept. of Transportation
Ken Williams, Plans & Document Control, ESRD, DPWES
Department of Highways-VDOT
Sandy Stallman, Park Planning Branch Manager, FCPA
Charlene Fuhrman-Schulz, Development Officer, DHCD/Design Development Division
District Planning Commissioner
Denise James, Office of Capital Facilities/Fairfax County Public Schools
Karyn Moreland, Chief Capital Projects Sections, Dept. of Transportation

At a regular meeting of the Board of Supervisors of Fairfax County, Virginia, held in the Board Auditorium in the Government Center at Fairfax, Virginia, on the 8th day of June, 2010, the following ordinance was adopted:

AN ORDINANCE AMENDING THE ZONING ORDINANCE
PROPOSAL NUMBER RZ 2009-PR-005

WHEREAS, Anthony Casolaro, filed in the proper form an application requesting the zoning of a certain parcel of land herein after described, from the R-1 District to the R-2 District, and

WHEREAS, at a duly called public hearing the Planning Commission considered the application and the propriety of amending the Zoning Ordinance in accordance therewith, and thereafter did submit to this Board its recommendation, and

WHEREAS, this Board has today held a duly called public hearing and after due consideration of the reports, recommendation, testimony and facts pertinent to the proposed amendment, the Board is of the opinion that the Ordinance should be amended,

NOW, THEREFORE, BE IT ORDAINED, that that certain parcel of land situated in the Providence District, and more particularly described as follows (see attached legal description):

Be, and hereby is, zoned to the R-2 District, and said property is subject to the use regulations of said R-2 District, and further restricted by the conditions proffered and accepted pursuant to Va. Code Ann., 15.2-2303(a), which conditions are in addition to the Zoning Ordinance regulations applicable to said parcel, and

BE IT FURTHER ENACTED, that the boundaries of the Zoning Map heretofore adopted as a part of the Zoning Ordinance be, and they hereby are, amended in accordance with this enactment, and that said zoning map shall annotate and incorporate by reference the additional conditions governing said parcel.

GIVEN under my hand this 8th day of June, 2010.

Nancy Vehrs

Nancy Vehrs
Clerk to the Board of Supervisors

Dr. M. Anthony Casolaro
RZ 2009-PR-005
Proffers
May 17, 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 $3,500.00 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 develop and/or maintain the park.

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 $30,000 (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. The Applicant shall have no obligation for trees that die or are dying for reasons unrelated 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 ten (10) year canopy cover as approved by UFMD and shall incorporate native plant species. In addition to this replacement obligation, the Applicant shall also make a payment equal to the value of any Bonded Tree(s) that is dead or dying or improperly removed due to unauthorized activity, the total of which will not exceed the amount of the Tree Bond referenced above. The Applicant shall have no additional payment obligation should the total of such payments(s) exceed the amount of the Tree Bond ($30,000). This payment shall be paid to a fund established by the County for the furtherance of tree preservation objectives. Any funds remaining in the Tree Bond will be released concurrently with the construction bond release, or sooner, if approved by UFMD.

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. **Escalation.** All monetary contributions required by these proffers shall be adjusted upward or downward based on the percentage change in the annual rate of inflation as calculated by referring to the Consumer Price Index for all urban customers (CPI-U), (not seasonally adjusted) as reported by the United States Department of Labor, Bureau of Labor Statistics occurring subsequent to the date of rezoning approval and up to the date of payment. In no event shall an adjustment increase exceed the annual rate of inflation as calculated by the CPI-U.

TITLE OWNER SIGNATURES:

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

5/20/10
Date

8012 ELM PLACE

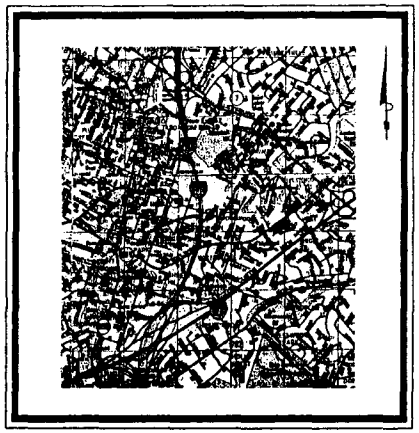
PROVIDENCE DISTRICT FAIRFAX COUNTY, VIRGINIA

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" = 2000'

APPLICANT:

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

PREPARED BY:

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COVER SHEET

8012 ELM PLACE

PROVIDENCE DISTRICT FAIRFAX COUNTY, VIRGINIA

RZ 2009 PR 005
COUNTY PROJECT NUMBER

MATTHEW T. KASSNER
NO. 045088
4/8/10
COMMONWEALTH OF VIRGINIA

PLAN STATUS	
4/7/09	
7/01/09	REVISIONS PER REZ MEETING
8/5/09	REVISIONS PER COMMENTS
9/4/09	REVISIONS PER COMMENTS
9/16/09	REVISIONS PER COMMENTS
9/18/09	REVISIONS PER COMMENTS
10/30/09	REVISIONS PER COMMENTS
2/05/10	REVISIONS PER COMMENTS
2/26/10	REVISIONS PER COMMENTS
3/18/10	REVISIONS PER COMMENTS
4/8/10	REVISIONS PER COMMENTS
DATE	DESCRIPTION

MT	KF	MT
DESIGN	DRAWN	CHKD

SCALE H: N.T.S V:

JOB No. 4668-01-002

DATE MARCH 18, 2010

FILE No. 4668-D-ZP-001

SHEET 1 OF 7

Cad file name: P:\4668 - 8012 Elm Place\4668-01-002 (PLN)\Planning\Engineering\4668-001-002-COV.dwg

GENERAL NOTES:

1. THE PROPERTY DELINEATED ON THESE PLANS IS LOCATED ON FAIRFAX COUNTY TAX ASSESMENT MAP NUMBER 39-4 ((1)) 116. THE SITE IS CURRENTLY ZONED R-1, THE PROPOSED ZONING IS R-2.
2. BOUNDARY INFORMATION OBTAINED FROM CERTIFIED SURVEY BY SDE, INC.
3. TOPOGRAPHIC INFORMATION OBTAINED FROM FIELD RUN TOPOGRAPHIC SURVEY PREPARED BY SDE, INC.
4. TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO HAZARDOUS OR TOXIC SUSBSTANCES AS SET FORTH IN TITLE 40, CODE OF FEDERAL REGULATIONS PART 116.4, 302.4 AND 355; HAZARDOUS WASTE AS SET FORTH IN COMMONWEALTH OF VIRGINIA / DEPARTMENT OF WASTE MANAGEMENT VR 672-10-1 - VIRGINIA HAZARDOUS WASTE MANAGEMENT REGULATION; AND /OR PETROLEUM PRODUCTS AS DEFINED IN TITLE 40 CODE OF FEDERAL REGULATIONS PART 280; TO BE GENERATED, UTILIZED, STORED, TREATED, AND /OR DISPOSED OF ON SITE.
5. THERE ARE NO ZONING OVERLAY DISTRICTS.
6. THERE ARE NO AFFORDABLE DWELLING UNITS (ADU) REQUIRED OR PROPOSED FOR THIS PROJECT
7. NO DENSITY REDUCTIONS ARE REQUIRED BY ZONING SECTION 2-308.
8. 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)

	REQUIRED	PROVIDED LOT 1	PROVIDED LOT 2
NUMBER OF UNITS:		1 SFD DWELLING UNIT (EXIST)	1 SFD DWELLING UNIT
DENSITY:	2 DU/AC (MAX)	1.53 DU/AC	
MINIMUM LOT AREA:	15,000 SF	33,281 SF	24,598 SF
AVERAGE LOT AREA:	18,000 SF	28,940 SF	
MINIMUM LOT WIDTH:	INTERIOR LOT - 100'	102.57'	100'
	CORNER LOT - 125'	N/A	N/A
MAXIMUM BUILDING HEIGHT:	35'	35'	35'
SET BACKS: FRONT / SIDE / REAR	35' / 15' / 25'	83' (EXIST)* / 15' / 138' (EXIST)*	35' / 15' / ±160'
OPEN SPACE:	N/R	N/A	N/A
PARKING:	2 SPACES PER D/U	2 SPACES	2 SPACES
LOT SHAPE FACTOR :		19	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 this application.

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

☑ 1 Plat is at a minimum scale of 1"=50' (unless it is depicted on one sheet with a minimum scale of 1"=100')

☑ 2 A graphic depicting the stormwater management facility(ies) and limits of clearing and grading accommodate the stormwater management facility(ies), storm drainage pipe systems and outlet protection, pond spillways, access roads, site outfalls, energy dissipation devices, and stream stabilization measures as shown on Sheet 4&5.

☑ 3 Provide:

	Facility Name/ Type & No	On-site area served (acres)	Off-site area served (acres)	Drainage area (acres)	Footprint area (sf)	Storage Volume (cf)	If pond, dam height (ft)
LOT 1	INFIL. TRENCH	.079 AC.	0 AC.	.365 AC.	700 S.F.	1746.67 C.F.	N/A
LOT 2	INFIL. TRENCH	.079 AC.	0 AC.	.237 AC.	660 S.F.	1678.50 C.F.	N/A
	Totals						

☑ 4. Onsite drainage channels, outfalls and pipe systems are shown on Sheet 4&5. Pond inlet and outlet pipe systems are shown on Sheet 4&5.

☑ 5. Maintenance access (road) to stormwater management facility(ies) are shown on Sheet 4&5. Type of maintenance access road surface noted on the plat is GRAVEL (asphalt, geoblock, 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 4&5.

☑ 8 A description of the existing conditions of each numbered site outfall extended downstream from the site to a point which is at least 100 times the site area or which has a drainage area of at least one square mile (640 acres) is provided on Sheet 4.

☑ 9. A description of how the outfall requirements, including contributing drainage areas of the Public Facilities Manual will be satisfied is provided on Sheet 4&5.

☑ 10 Existing topography with maximum contour intervals of two (2) feet and a note as to whether it is an air survey or field run is provided on Sheets 2&3.

☑ 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

Cad file name: P:\4668 - 8012 Elm Place\4668-01-002 (PLN)\Planning\Engineering\4668-001-002-NTS.dwg

GENERALIZED DEVELOPMENT PLAN SUBMISSION CHECKLIST:

- TWENTY-THREE (23) COPIES OF A GENERALIZED DEVELOPMENT PLAN PROVIDED HEREIN WITH APPLICATION.
- ONE 8 ½" 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 PENTHOUSES, AND A GRAPHIC DEPICTION OF THE ANGLE OF BULK PLANE, IF APPLICABLE.

-PROPOSED STRUCTURE AND USE, 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 BRIDLE PATHS, AND THE LOCATION OF ALL TRAILS REQUIRED BY THE ADOPTED COMPREHENSIVE PLAN.

-PROPOSED DRIVEWAY LOCATION HAS BEEN PROVIDED ON PLAN. NO TRAILS ARE REQUIRED PER THE FAIRFAX COUNTY TRAILS PLAN. SEE SHEET 3.

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 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, EMBANKMENTS, SPILLWAYS, DAMS, AND APPROXIMATE WATER SURFACE 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 CONVEYANCES INTO WHICH STORMWATER RUNOFF WILL BE CONVEYED. WHEN THERE IS 2500 SQUARE FEET OR MORE OF LAND DISTURBING ACTIVITY ON THE ENTIRE 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 OFTWENTY-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 NORTHERN 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 AIR 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 1930 IS TO REMAIN AND EXISTING SHED IS TO BE RAZED. EXISTING SHED HAS NO CONCRETE SLAB 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 2-309 (OPEN SPACE) OF THE ZONING ORDINANCE.

-IN ACCORDANCE WITH THE ADOPTED COMPREHENSIVE PLAN, THE PROPOSED DEVELOPMENT WILL PROVIDE RESIDENTIAL DEVELOPMENT AT 2 DWELLING UNITS PER ACRE AND WILL CONFORM TO APPLICABLE ORDINANCES, 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 GIS MAP #39-4, 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 6 & 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 OR OUR KNOWLEDGE, THERE ARE NO KNOWN GRAVES, MARKERS, 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.

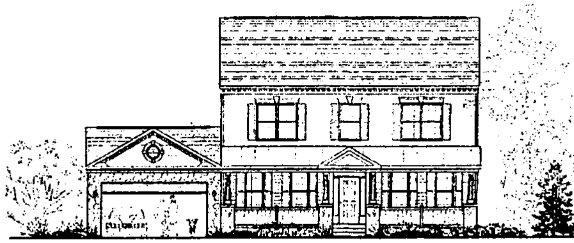
-THE PROPERTY HEREON IS IN THE OWNERSHIP OF DR. ANTHONY CASOLARO IN DEED BOOK 18314 PAGE 670 AMONG THE LAND RECORDS OF FAIRFAX COUNTY.

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

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NOTES AND TABULATIONS
8012 ELM PLACE
PROVIDENCE DISTRICT — FAIRFAX COUNTY, VIRGINIA

RZ 2009 PR 005
COUNTY PROJECT NUMBER

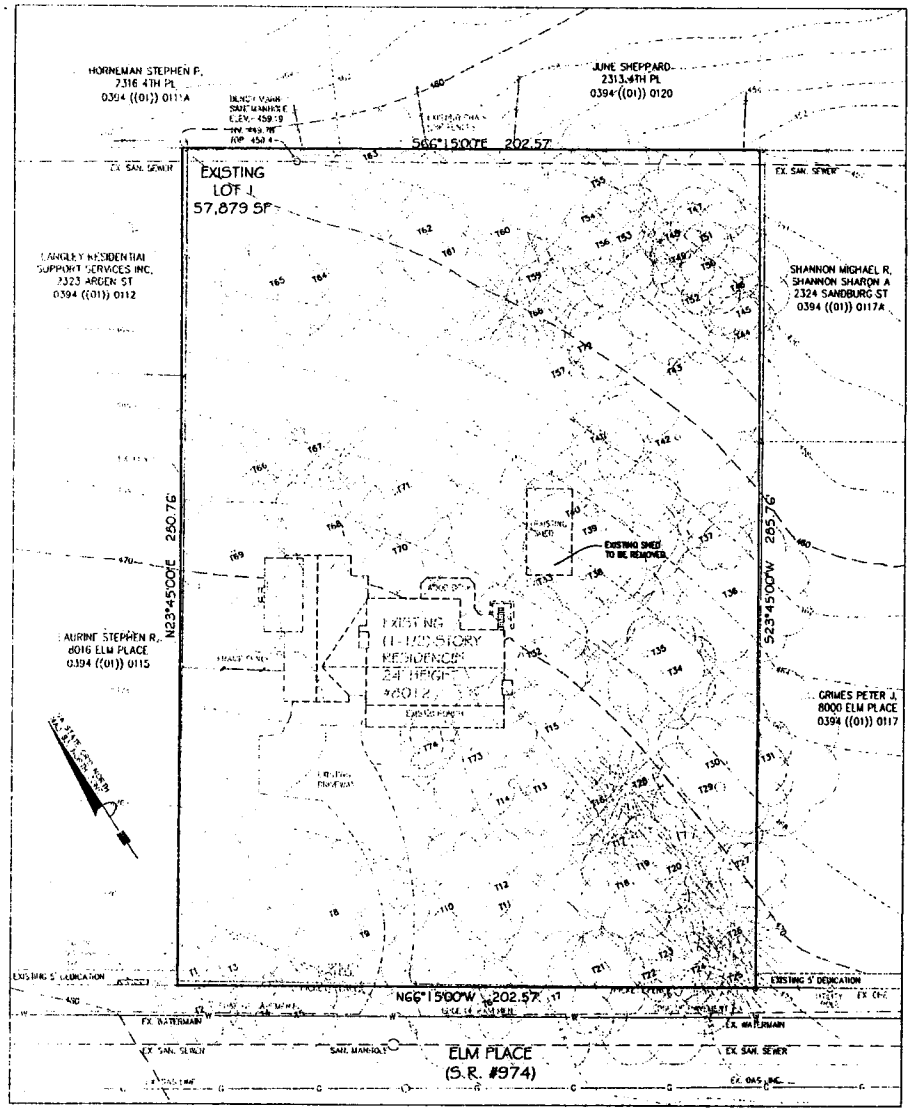
MATTHEW J. TAUSCHER NO. 000868 — 4/9/10

PLAN STATUS

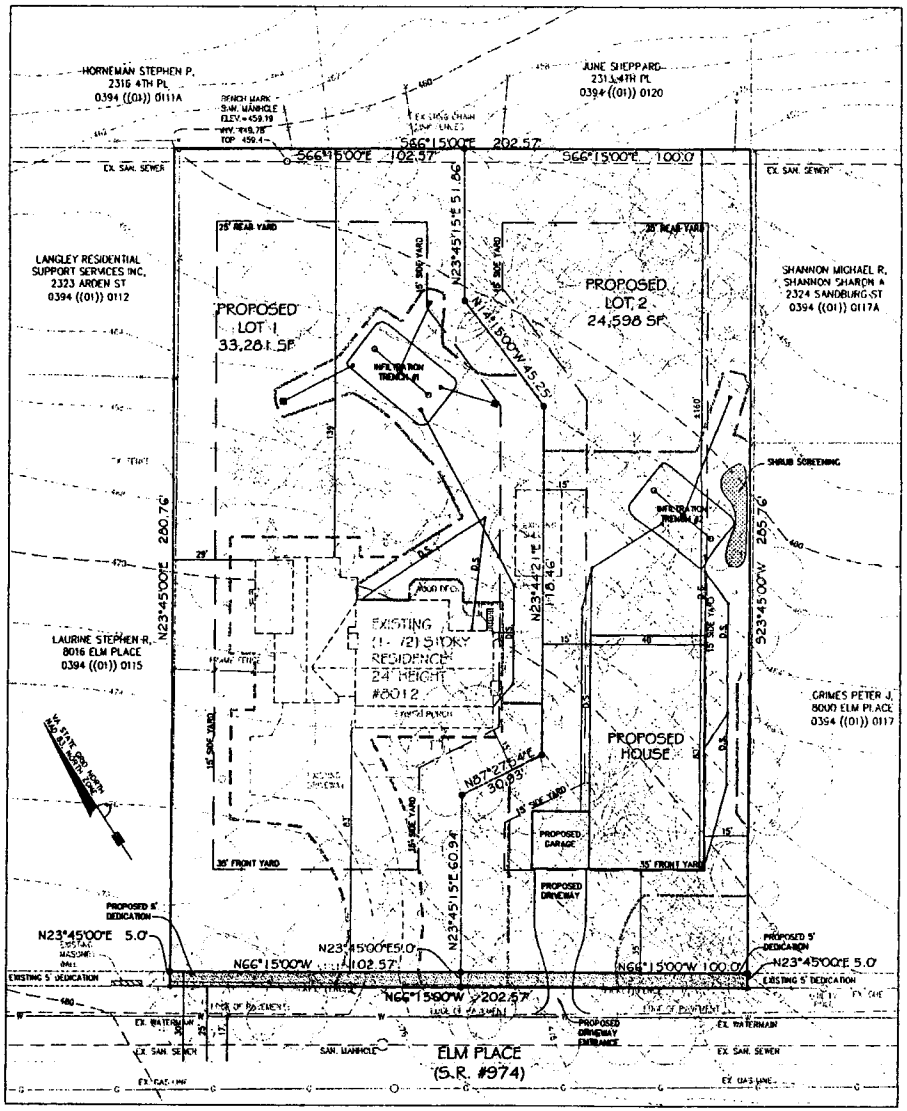
DATE	DESCRIPTION
4/17/09	
7/20/09	REVISIONS PER COMMENTS
8/5/09	REVISIONS PER COMMENTS
9/4/09	REVISIONS PER COMMENTS
9/16/09	REVISIONS PER COMMENTS
9/18/09	REVISIONS PER COMMENTS
10/29/09	REVISIONS PER COMMENTS
2/05/10	REVISIONS PER COMMENTS
2/26/10	REVISIONS PER COMMENTS
3/18/10	REVISIONS PER COMMENTS
4/8/10	REVISIONS PER COMMENTS

DESIGN	DRAWN	CHKD
MT	KF	MT

SCALE: H: AS NOTED V:
JOB No. 4668-01-002
DATE: MARCH 18, 2010
FILE No. 4668-D-ZP-001



EXISTING CONDITIONS PLAN



GENERALIZED DEVELOPMENT PLAN

LEGEND

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

GRAPHIC SCALE

(IN FEET)
1 inch = 30 ft.

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EXISTING CONDITIONS & GENERALIZED DEVELOPMENT PLAN

8012 ELM PLACE

PROVIDENCE DISTRICT — FAIRFAX COUNTY, VIRGINIA

RZ 2009-PR-005
COUNTY PROJECT NUMBER

COMMONWEALTH OF VIRGINIA
MATTHEW L. TAUSCHER
NO. 042662
4/9/10

PLAN STATUS	
4/17/09	
7/20/09	REVISIONS PER COMMENTS
8/5/09	REVISIONS PER COMMENTS
9/8/09	REVISIONS PER COMMENTS
9/15/09	REVISIONS PER COMMENTS
9/15/09	REVISIONS PER COMMENTS
10/29/09	REVISIONS PER COMMENTS
2/05/10	REVISIONS PER COMMENTS
2/26/10	REVISIONS PER COMMENTS
3/18/10	REVISIONS PER COMMENTS
4/8/10	REVISIONS PER COMMENTS
DATE	DESCRIPTION

MT	KF	MT
DESIGN	DRAWN	CHKD

SCALE H: 1"=20'
V:

JOB No. 4668-01-002

DATE MARCH 18, 2010

FILE No. 4668-D-ZP-001

SHEET 3 OF 7

Cad file name: P:\4668 - 8012 Elm Place\4668-01-002 (PLAN)\Planning\Engineering\4668-001-002-CDP.dwg

OUTFALL NARRATIVE

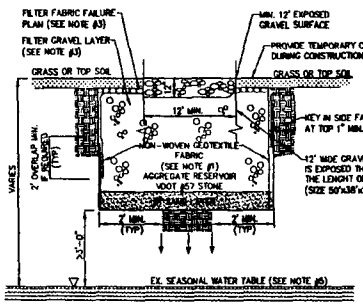
THE SITE DRAINS ONTO A NATURAL SWAL AT THE NORTH OF THE SITE.

BEFORE DEVELOPEMENT THE NEW LOT 2 SHEETS FROM ELM PLACE TO THE NORTHERN BOUNDRY 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 SANDELING STREET THROUGH TO THE RETENTION POND OF THE SHREVE HILL SUBDIVISION. THE FLOW CONTINUES ALONG MORGAN LANE TO GULBERT ACROSS IDYLWOOD RD PROCEEDING TOWARD THE NORHTER EDGE OF THE WOOD TRAIL TOWARD THE BELTWAY IN A CLOSED CONDUIT CONVEYENCE SYSTEM.

AFTER DEVELOPMENT OF THE SITE, SOME ON SITE FLOW MAY BE ROUTED THROUGH A 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 DEMINISHED RATE NOT TO EXCEED 1.68 CFS DURING A 10N YEAR STORM THROUGH A 8" DRAINAGE PIPE TO A POINT ABONE THE NATURAL SWAL LOW POINT.

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

NOTE:
FOR THE DESIGN OF THE SWM /BMP (INFILTRATION TRENCH) AND ASSUMED RATE OF 0.54 IN/HR HAS BEEN USED. THIS DESIGN IS SUBJECT TO CHANGE WITH CONSTRUCTION DRAWINGS AND ACTUAL FIELD TEST OF THE INFILTRATION PERC TEST.



INFILTRATION TRENCH DETAIL

NO SCALE

NOTE:
1. USE NON-WOVEN GEOTEXTILE FABRIC WITH AOS OF 70-100 US SIEVE OR 0.25MM - 0.15MM AS DETERMINED BY ASTM D4751 AND A TRAPEZOIDAL TEAR STRENGTH OF 45 lb OR 0.2 KN AS DETERMINED BY ASTM D4533.
2. AN 8 IN. DEEP BOTTOM SAND LAYER (VDOT 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 CLOGGING.
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 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 = 0.62 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 720 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 = 720 - 30.33 = 698.67 CF

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

DEPTH OF TRENCH = (1,764.75 / (20 x 35)) = 2.49 FT

USE 1 TRENCHE(S) OF EACH SIZE (35'L x 20'W x 2.5'D)

STORAGE VOLUME PROVIDED = 1750 CF

RATE OF DISCHARGE: Q(out) = 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 III, 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 = 4,595 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 = 4,595 x 2 / 12 x 0.9 = 689.25 CF

NUMBER OF TRENCHES PROVIDED = 1 NOS

THE TRENCH RECEIVES = 689.25 CF, USE 680 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 = 680 - 28.60 = 651.40 CF

USING #57 STONE @ 40% VOID, VOLUME OF TRENCH = 651.40 / 0.40 = 1,628.50 CF

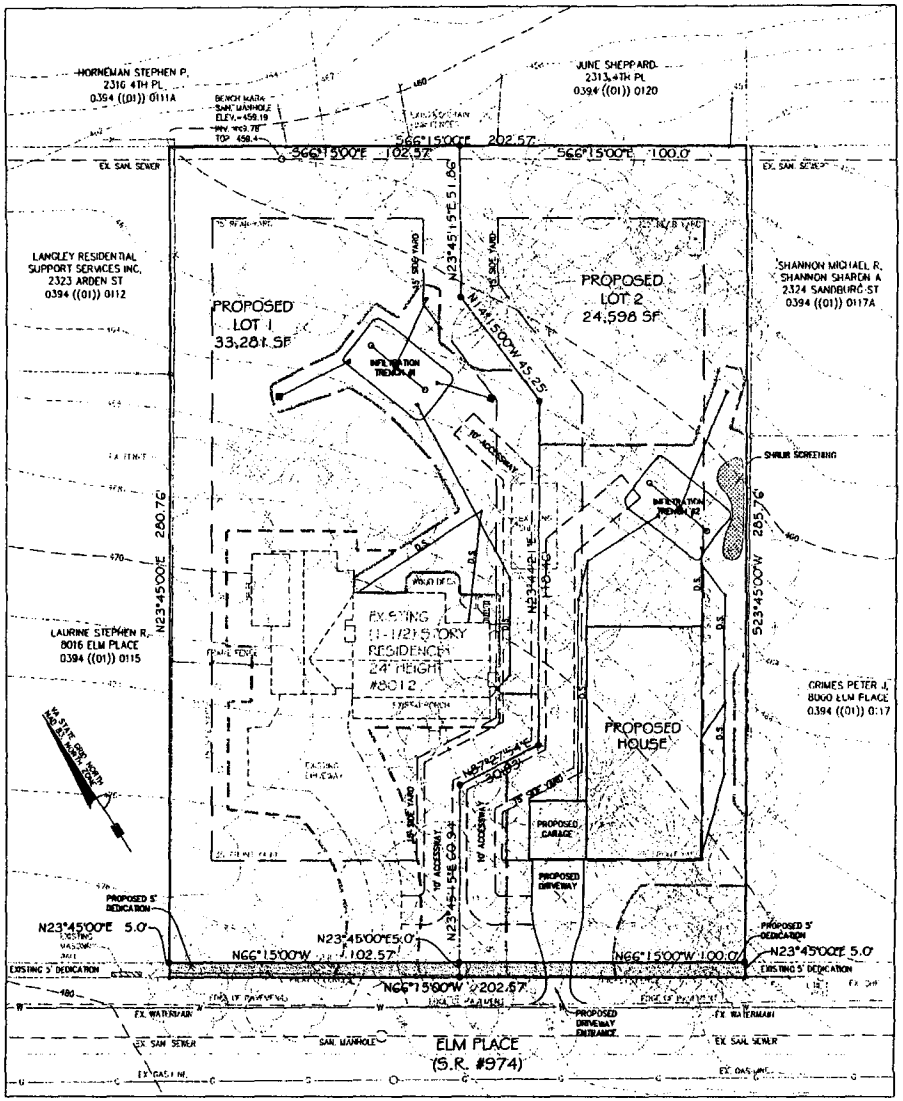
DEPTH OF TRENCH = (1,628.50 / (20 x 33)) = 2.38 FT

USE 1 TRENCHE(S) OF EACH SIZE (33'L x 20'W x 2.4'D)

STORAGE VOLUME PROVIDED = 1584 CF

RATE OF DISCHARGE: Q(out) = 0.26 IN / HR x 1 IN / 12 x 660 SF = 14.30 CF / HR

INFILTRATION TIME REQUIRED = 651.40 / 14.30 = 44.15 HRS = < 48 HRS, OK



GRAPHIC SCALE

(IN FEET)
1 inch = 20 ft.

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INFILTRATION TRENCH DESIGN LOT 1 AND LOT 2

8012 ELM PLACE

PROVIDENCE DISTRICT — FAIRFAX COUNTY, VIRGINIA

RZ 2009-PR-005
COUNTY PROJECT NUMBER

MATTHEW J. TRUCHON
LICENSED
04/06/10
COMMONWEALTH OF VIRGINIA

PLAN STATUS	
4/17/09	
7/7/009	REVISIONS PER COMMENTS
8/5/09	REVISIONS PER COMMENTS
9/8/09	REVISIONS PER COMMENTS
9/15/09	REVISIONS PER COMMENTS
9/18/09	REVISIONS PER COMMENTS
10/29/09	REVISIONS PER COMMENTS
2/03/10	REVISIONS PER COMMENTS
2/26/10	REVISIONS PER COMMENTS
3/18/10	REVISIONS PER COMMENTS
4/6/10	REVISIONS PER COMMENTS
DATE	DESCRIPTION

MT	KF	MT
DESIGN	DRAWN	CHKD

SCALE H: 1"=20' V:

JOB No. 4668 01-002

DATE: MARCH 18, 2010

FILE No. 4668-0 ZP-001

SHEET 4 OF 7

Cad file name: P:\4668 - 8012 Elm Place\4668-01-002 (PLN)\Planning\Engineering\4668-001-002A-trench-design.dwg

Northern Virginia BMP Handbook 11/03/02

BMP Facility Design Calculations

Plan Name: ELM PLACE LOT 1 — Date: OCTOBER 16, 2009
Plan Number: — Engineer: MAHESH ADHIKARI

I. Water Quality Narrative

WATER QUALITY REQUIREMENT FOR THIS LOT IS PROVIDED THROUGH A INFILTRATION TRENCH (DESIGN IS FOR 2YR 2HR STORM IS UTILIZED) WITH EFFICIENCY RATING OF 70%. THIS WILL PROVIDE PHOSPHORUS REMOVAL EFFICIENCY OF GREATER THEN 40% REQUIRED BY ORDINANCE.

II. Watershed Information

TOTAL SITE AREA=34,429 S.F. OR 0.790 AC.

Part 1: List all of the Subareas and "C" Factors used in the BMP Computations

Subarea Designation and Description (1)	"C" (2)	Acres (3)
BUILDING AREA (CONTROLLED)	0.90	0.080
DRIVEWAY (CONTROLLED)	0.90	0.024
WALKWAY (CONTROLLED)	0.90	0.008
PERVIOUS AREA (CONTROLLED)	0.35	0.275
DRIVEWAY (UNCONTROLLED)	0.90	0.008
PERVIOUS AREA (UNCONTROLLED)	0.35	0.396

NOTE: Rational formula "C" factors are taken from the general zoning values listed in Appendix 6-1 or 6-2 depending on the location of the BMP facility (Fairfax County Public Facilities Manual Chart A6-10 or Prince William County Design and Construction Standards Manual, Exhibit 1).

Appendix 6-4a Calculations Worksheet

Northern Virginia BMP Handbook 11/03/02

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

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

(B) Subarea Designation (1)	"C" (2)		Acres (3)		Product (4)
BUILDING AREA (CONTROLLED)	0.90	X	0.080	=	0.072
DRIVEWAY (CONTROLLED)	0.90	X	0.024	=	0.022
WALKWAY (CONTROLLED)	0.90	X	0.008	=	0.007
PERVIOUS AREA (CONTROLLED)	0.35	X	0.275	=	0.096
DRIVEWAY (UNCONTROLLED)	0.90	X	0.008	=	0.007
PERVIOUS AREA (UNCONTROLLED)	0.35	X	0.396	=	0.138

(b) Total = 0.343

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

Part 3: Compute the Total Phosphorus Removal for the Site

Subarea Designation (1)	BMP Type (2)		Removal Eff. (%) (3)		Area Ratio (4)		"C" Factor Ratio (5)		Product (6)
A1	INF. TRENCH	X	70%	X	0.101	X	2.063	=	14.799
A2	INF. TRENCH	X	70%	X	0.030	X	2.063	=	4.369
A3	INF. TRENCH	X	70%	X	0.009	X	2.063	=	1.485
A4	INF. TRENCH	X	70%	X	0.548	X	0.864	=	16.889

(c) Total = 40.667 %

Appendix 6-4c Calculations Worksheet

Northern Virginia BMP Handbook 11/03/02

Part 4: Determine Compliance with Phosphorus Removal Requirement

(A) Initial Requirement (a) 40.00%

- Water Supply Overlay District (Occoquan Watershed) = 50% (Fairfax County and Prince William County)
- Chesapeake Bay Preservation Area (New Development) = 40% (Fairfax County) 50% (Prince William County)
- Chesapeake Bay Preservation Area (Redevelopment) = (1-0.0 x (Tpre / Tpost)) x 100 = __%

(B) If Line 3(a) 40.667 ≥ Line 4(a) 40.00 , then Phosphorus removal requirement is satisfied.

Northern Virginia BMP Handbook 11/03/02

BMP Facility Design Calculations

Plan Name: ELM PLACE LOT 2 — Date: OCTOBER 16, 2009
Plan Number: — Engineer: MAHESH ADHIKARI

I. Water Quality Narrative

WATER QUALITY REQUIREMENT FOR THIS LOT IS PROVIDED THROUGH A INFILTRATION TRENCH (DESIGN IS FOR 2YR 2HR STORM IS UTILIZED) WITH EFFICIENCY RATING OF 70%. THIS WILL PROVIDE PHOSPHORUS REMOVAL EFFICIENCY OF GREATER THEN 40% REQUIRED BY ORDINANCE.

II. Watershed Information

TOTAL SITE AREA=23,484 S.F.

Part 1: List all of the Subareas and "C" Factors used in the BMP Computations

Subarea Designation and Description (1)	"C" (2)	Acres (3)
BUILDING AREA (CONTROLLED)	0.90	0.083
DRIVEWAY (CONTROLLED)	0.90	0.033
PERVIOUS AREA (CONTROLLED)	0.35	0.136
PERVIOUS AREA (UNCONTROLLED)	0.35	0.397

NOTE: Rational formula "C" factors are taken from the general zoning values listed in Appendix 6-1 or 6-2 depending on the location of the BMP facility (Fairfax County Public Facilities Manual Chart A6-10 or Prince William County Design and Construction Standards Manual, Exhibit 1).

Appendix 6-4a Calculations Worksheet

Northern Virginia BMP Handbook 11/03/02

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

(A) Area of the site (a) 0.639 acres

(B) Subarea Designation (1)	"C" (2)		Acres (3)		Product (4)
BUILDING AREA (CONTROLLED)	0.90	X	0.083	=	0.075
DRIVEWAY (CONTROLLED)	0.90	X	0.033	=	0.031
PERVIOUS AREA (CONTROLLED)	0.35	X	0.136	=	0.047
PERVIOUS AREA (UNCONTROLLED)	0.35	X	0.397	=	0.139

(b) Total = 0.267

(C) Weighted average "C" factor (b) / (a) = (c) 0.42

Part 3: Compute the Total Phosphorus Removal for the Site

Subarea Designation (1)	BMP Type (2)		Removal Eff. (%) (3)		Area Ratio (4)		"C" Factor Ratio (5)		Product (6)
A1	INF. TRENCH	X	70%	X	0.154	X	1.667	=	21.900
A2	INF. TRENCH	X	70%	X	0.043	X	1.667	=	3.001
A3	INF. TRENCH	X	70%	X	0.803	X	0.789	=	13.371

(c) Total = 40.189 %

Appendix 6-4c Calculations Worksheet

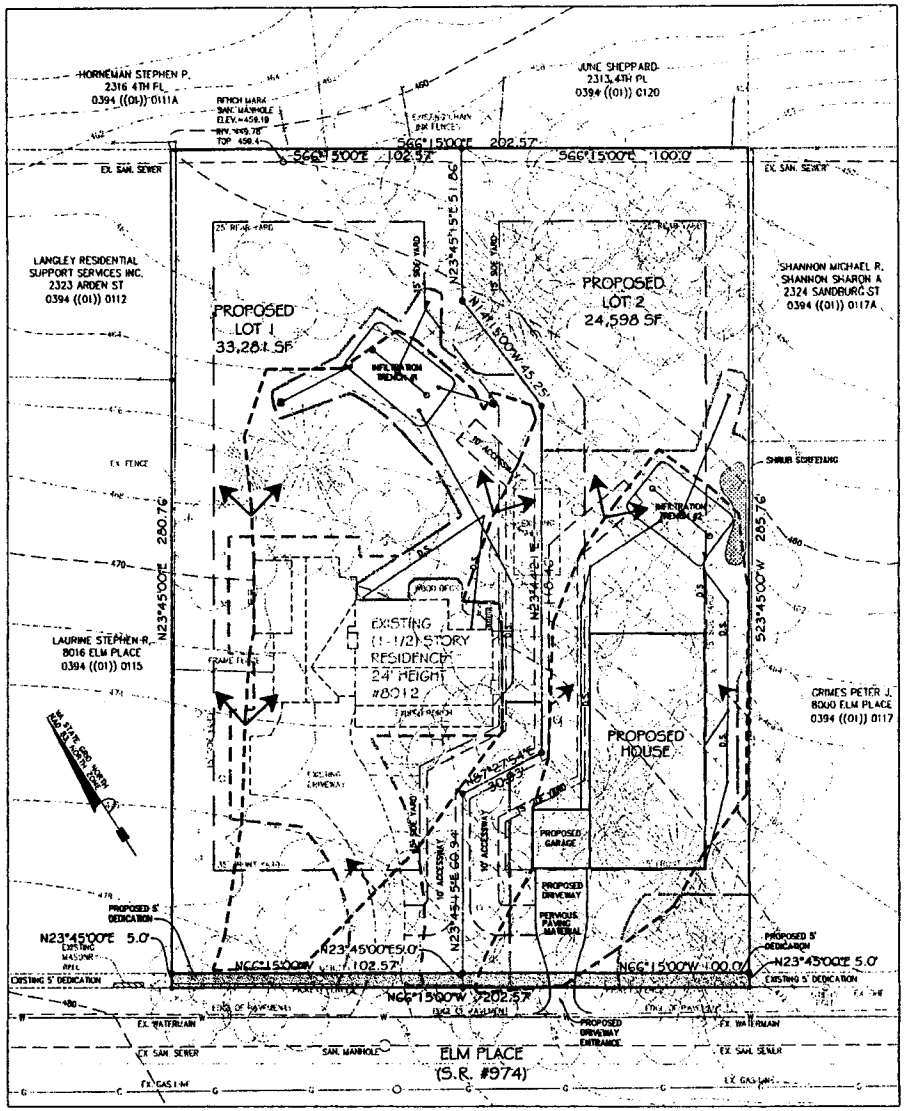
Northern Virginia BMP Handbook 11/03/02

Part 4: Determine Compliance with Phosphorus Removal Requirement

(A) Initial Requirement (a) 40.00%

- Water Supply Overlay District (Occoquan Watershed) = 50% (Fairfax County and Prince William County)
- Chesapeake Bay Preservation Area (New Development) = 40% (Fairfax County) 50% (Prince William County)
- Chesapeake Bay Preservation Area (Redevelopment) = (1-0.0 x (Tpre / Tpost)) x 100 = __%

(B) If Line 3(a) 40.189 ≥ Line 4(a) 40.00 , then Phosphorus removal requirement is satisfied.



DRAINAGE DIVIDE PLAN
1"=20'

GRAPHIC SCALE
(IN FEET)
1 inch = 20 ft.

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BMP CALCULATIONS

8012 ELM PLACE

PROVIDENCE DISTRICT — FAIRFAX COUNTY, VIRGINIA

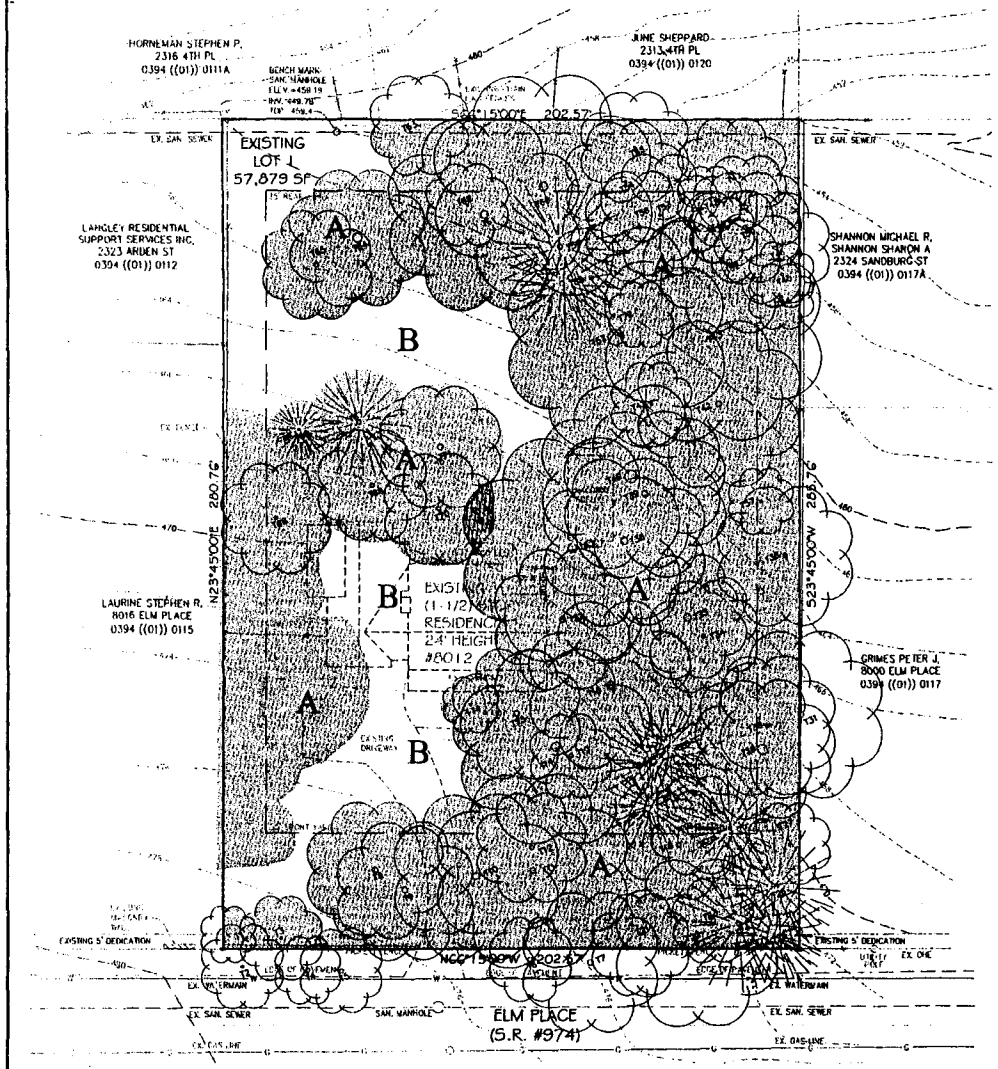
RZ 2009-PR-005
COUNTY PROJECT NUMBER

MATTHEW J. DUSCHER
NO. 00088
1/8/10

PLAN STATUS		
4/7/09		
7/20/09	REVISIONS PER COMMENTS	
8/5/09	REVISIONS PER COMMENTS	
9/8/09	REVISIONS PER COMMENTS	
9/16/09	REVISIONS PER COMMENTS	
9/18/09	REVISIONS PER COMMENTS	
10/29/09	REVISIONS PER COMMENTS	
2/25/10	REVISIONS PER COMMENTS	
3/26/10	REVISIONS PER COMMENTS	
3/18/10	REVISIONS PER COMMENTS	
4/6/10	REVISIONS PER COMMENTS	
DATE	DESCRIPTION	
MT DESIGN	KF DRAWN	MT CHKD
SCALE H 1"=20' V:		
JOB No. 4668-01-002		
DATE MARCH 18, 2010		
FILE No. 4668-D-ZP-001		
SHEET 5 OF 7		

P:\4668 - 8012 Elm Place\4668-01-002 (PLN)\Planning\Engineering\4668-001-002A-trench-design.dwg, 4/7/2010 6:33:15 PM, 4'

Cad file name: P:\4668 - 8012 Elm Place\4668-01-002 (PLN)\Planning\Engineering\4668-001-002A-trench-design.dwg



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

TREE INVENTORY

8102 Elm Place, Fairfax, VA
Date of site visit: January 7, 2010
Certified Arborist: Gregg D. Eberly MA-4611A

* Denotes offsite tree

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	0.68	Preserve
*2	Gleditsia triacanthos	Honey Locust	12	0.55	0.4	Preserve
3	Quercus rubra	Red Oak	12	0.7	0.72	Preserve
*4	Gleditsia triacanthos	Honey Locust	18	0.55	0.64	Preserve
*5	Gleditsia triacanthos	Honey Locust	18	0.55	0.48	Preserve
*6	Quercus alba	White Oak	20	0.8	0.2	Preserve
*7	Quercus prinus	Chestnut 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	0.6	Preserve
11	Quercus prinus	Chestnut 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	DEAD	Remove
14	Quercus alba	White Oak	36	0.8	0.6	Preserve
15	Quercus alba	White Oak	30	0.8	0.4	Remove
16	Pinus strobus	White Pine	24	0.55	0.8	Remove
17	Pinus strobus	White Pine	12	0.55	0.8	Remove
18	Quercus prinus	Chestnut Oak	18	0.75	0.76	Remove
19	Quercus prinus	Chestnut Oak	20	0.75	0.76	Remove
20	Pinus strobus	White Pine	10	0.55	0.8	Remove
21	Acer rubrum	Red Maple	10	0.7	0.6	Preserve
22	Quercus prinus	Chestnut Oak	20	0.75	0.72	Preserve
23	Quercus alba	White Oak	18	0.8	0.72	Preserve
24	Pinus strobus	White Pine	16	0.55	0.76	Preserve
25	Quercus rubra	Red Oak	8	0.7	0.6	Preserve
26	Pinus strobus	White Pine	18	0.55	0.8	Preserve
27	Nyssa sylvatica	Black Gum	10	0.8	0.72	Remove
28	Quercus rubra	Red Oak	10	0.7	0.76	Remove
29	Quercus prinus	Chestnut Oak	42	0.75	0.28	Remove
30	Quercus prinus	Chestnut Oak	18	0.75	0.76	Remove
*31	Quercus prinus	Chestnut Oak	24	0.75	0.76	Preserve
32	Carya glabra	Pignut Hickory	24	0.75	0.76	Remove
33	Quercus prinus	Chestnut Oak	36	0.75	0.76	Remove
34	Quercus alba	White Oak	15	0.8	0.76	Remove
35	Quercus prinus	Chestnut Oak	30	0.75	0.76	Remove
36	Quercus alba	White Oak	18	0.8	0.76	Remove
37	Quercus prinus	Chestnut Oak	10	0.75	0.68	Remove
38	Quercus alba	White Oak	30	0.8	0.76	Remove
39	Quercus alba	White Oak	20	0.8	0.72	Remove
40	Quercus alba	White Oak	52	0.8	0.76	Preserve
41	Carya glabra	Pignut Hickory	12	0.75	0.72	Preserve
42	Quercus alba	White Oak	24	0.8	0.64	Remove
43	Quercus prinus	Chestnut 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	0.72	Preserve
47	Carya glabra	Pignut Hickory	15	0.75	0.76	Preserve
48	Quercus prinus	Chestnut Oak	8	0.75	0.72	Preserve
49	Carya glabra	Pignut Hickory	8	0.75	0.72	Preserve
50	Carya glabra	Pignut Hickory	18	0.75	0.68	Preserve
51	Quercus prinus	Chestnut Oak	12	0.75	0.72	Preserve
52	Quercus alba	White Oak	21	0.8	0.72	Preserve
53	Quercus prinus	Chestnut Oak	12	0.75	0.6	Preserve
54	Quercus alba	White Oak	12	0.8	0.72	Preserve
55	Acer rubrum	Red Maple	10	0.7	0.72	Preserve
56	Quercus prinus	Chestnut Oak	10	0.75	0.72	Preserve
57	Quercus alba	White Oak	60	0.8	0.76	Preserve
58	Pinus strobus	White Pine	18	0.55	0.8	Preserve
59	Pinus strobus	White Pine	20	0.55	0.8	Preserve
60	Quercus rubra	Red Oak	36	0.7	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	Fagus grandifolia	American Beech	10	0.8	0.8	Preserve
64	Prunus serotina	Black Cherry	40	0.55	0.68	Preserve
65	Morus alba	White Mulberry	18	0.45	0.4	Preserve
66	Thuja occidentalis	Eastern Arborvitae	12	0.6	0.72	Preserve
67	Picea abies	Norway Spruce	18	0.7	0.72	Preserve
68	Acer rubrum	Red Maple	18	0.7	0.76	Preserve
69	Morus alba	White Mulberry	15	0.45	0.48	Preserve
70	Prunus serotina	Black Cherry	18	0.55	0.8	Preserve
71	Prunus serotina	Black Cherry	24	0.55	0.76	Preserve
72	Carya glabra	Pignut Hickory	8	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

Notes:
1. Condition and Species Rating are based on formula provided by the *Guide for Plant Appraisal* published by the ISA.
2. All trees indicated are to be cleared from the site due to construction aspects.
3. All trees with a minimum 8" D.B.H. were inventoried and evaluated.
4. Trees 73 & 74 have been generally located in field and were not part of tree survey.
5. Neither the Property Arborist or Bowman Consulting condones the implementing of any suggested tree preservation or removal techniques without the representipermission of the adjacent property owner or HOA, given the loss of border tree and boundary line trees.

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 FENCE LINE
- EXISTING TREE/TREE LINE
- EXISTING UTILITY POLE

VA STATE GRID NORTH
NAD 83 NORTH ZONE

GRAPHIC SCALE
(IN FEET)
1 inch = 20 ft.

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Fax: (703) 481-9720
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EXISTING VEGETATION MAP
8012 ELM PLACE
PROVIDENCE DISTRICT
FAIRFAX COUNTY, VIRGINIA

RZ 2009-PR-005
COUNTY PROJECT NUMBER

MATTHEW J. TAUSCHER
NO. 046608
4/6/10

PLAN STATUS	
4/1/09	
7/30/09	REVISIONS PER COMMENTS
8/5/09	REVISIONS PER COMMENTS
9/8/09	REVISIONS PER COMMENTS
9/16/09	REVISIONS PER COMMENTS
9/18/09	REVISIONS PER COMMENTS
10/29/09	REVISIONS PER COMMENTS
2/05/10	REVISIONS PER COMMENTS
2/26/10	REVISIONS PER COMMENTS
3/18/10	REVISIONS PER COMMENTS
4/6/10	REVISIONS PER COMMENTS
DATE	DESCRIPTION

MT	IGF	MT
DESIGN	DRAWN	CHKD

SCALE H 1" = 20'
V

JOB No. 4668-01-002
DATE MARCH 18, 2010
FILE No. 4668 0-ZP-001

SHEET 6 OF 7

Cad file name: P:\4668 - 8012 Elm Place\4668-01-002 (PLN)\Planning\Engineering\4668-001-002-EVM.dwg