



### AGENDA ITEM FORM

**TYPE OF AGENDA ITEM:**

- CONSENT AGENDA
- PRESENTATION
- ACTION ITEM
- TOWN MANAGER & STAFF COMMENTS
- PUBLIC HEARING
  - Duly Advertised

**PURPOSE OF ITEM:**

- INFORMATION ONLY
- DISCUSSION ONLY
- DISCUSSION AND/OR DECISION
  - Introduction     Resolution
  - Ordinance         Grant/MOU
  - By Motion          Bylaws

**PRESENTER:** Laura O'Dell

**PRESENTER TITLE:** Zoning Administrator

**AGENDA ITEM:** Grace Church Conditional Use Permit

**BACKGROUND / SUMMARY:**

A Conditional Use Permit was received by Grace Church on October 17, 2013. The request was to "convert our non conforming conditional use permitted to a conforming conditional use permit." It was explained to the applicant that the permit would need to be for the parking lot expansion. Grace Church is currently nonconforming, Town Code does not allow for any expansion of a nonconforming use, or to convert a nonconforming use to a conforming use by way of CUP. The Town Code does however allow for Churches pursuant to a Conditional Use Permit. Therefore, the expansion of the parking lot would need to be approved by Conditional Use Permit.

The Planning Commission reviewed the application on November 18, 2013. The Planning Commission passed a motion made by Commissioner Padberg, which read, "motion to not recommend for approval because of failure to meet the spirit of Town Zoning Ordinance and Chesapeake Bay guidelines." The Planning Commission passed the motion unanimously. The reasoning that the Planning Commission used to deny the application was the following: the parking lot expansion of 200 spaces was going to be almost entirely in the Resource Protection Area, the expansion of the parking lot would also be in the Floodplain District and Chesapeake Bay Preservation Area Overlay District, disturbance and contamination of creek, and the expansion would be in violation of district regulations.

**ATTACHMENTS:**

Application packet, staff report, water quality impact assessment report

**REQUESTED ACTION:**

Review, discuss, and consider for public hearing on January 7, 2014

**FOR MORE INFORMATION, CONTACT:**

Phone#: 703-221-3400

Name: Laura O'Dell

E-mail: lodell@dumfriesva.gov

**FOR USE DURING MEETING**

**VOTE:**

PASSED

NOT PASSED

Y	N		Y	N		Y	N	
<input type="checkbox"/>	<input type="checkbox"/>	Brewer	<input type="checkbox"/>	<input type="checkbox"/>	Foreman	<input type="checkbox"/>	<input type="checkbox"/>	Forrester
<input type="checkbox"/>	<input type="checkbox"/>	Reynolds	<input type="checkbox"/>	<input type="checkbox"/>	Toney	<input type="checkbox"/>	<input type="checkbox"/>	Washington
<input type="checkbox"/>	<input type="checkbox"/>	Wood						

**AT A REGULAR MEETING OF THE DUMFRIES TOWN COUNCIL HELD ON TUESDAY, DECEMBER 10, 2013, IN COUNCIL CHAMBERS, 17755 MAIN STREET, DUMFRIES, VIRGINIA: ON A MOTION DULY MADE BY \_\_\_\_\_, AND SECONDED BY \_\_\_\_\_, THE FOLLOWING RESOLUTION WAS ADOPTED BY THE FOLLOWING VOTE:**

Charles C. Brewer,;  
Gerald M. Foreman, II, ;  
Kristin W. Forrester, ;  
Helen D. Reynolds, ;  
Willie J. Toney, ;  
Gwen P. Washington, ;  
Derrick R. Wood, ;

**RESOLUTION TO AUTHORIZE THE TOWN MANAGER ADVERTISE A PUBLIC HEARING FOR A CONDITIONAL USE PERMIT TO ALLOW FOR GRACE CHURCH TO EXPAND THE CHURCH PARKING LOT BY APPROXIMATELY 200 SPACES LOCATED IN THE RESOURCE PROTECTION AREA AT 17889 FRALEY BOULEVARD**

**WHEREAS**, the Town of Dumfries has received a conditional use permit application to allow for a parking lot expansion of approximately 200 spaces at Grace Church in the B-1 General Business Zoning District located at 17889 Fraley Boulevard; and

**WHEREAS**, Churches are only allowed by Conditional Use Permit in the B-1 General Business District, making Grace Church a nonconforming use, which requires a conditional use permit for the expansion of the nonconforming use of the parking lot; and

**WHEREAS**, the Planning Commission reviewed the application on November 18, 2013, and on November 18, 2013 when the Planning Commission voted to not recommend for approval because of failure to meet the spirit of Town Zoning Ordinance and Chesapeake Bay guidelines; and

**WHEREAS**, the Town Council reviewed the application at the December 10, 2013 Town Council meeting and directed staff to move forward with scheduling a public hearing on the conditional use permit.

**NOW, THEREFORE, BE IT RESOLVED** by Town Council that the Town Manager is authorized to advertise for a public hearing to be held on January 7, 2014 to consider the conditional use permit for Grace Church located at 17889 Fraley Boulevard.

By Order of Council:

\_\_\_\_\_  
Gerald M. Foreman, Mayor

ATTEST: \_\_\_\_\_  
Dawn Hobgood, Town Clerk

**NOTICE OF JOINT PUBLIC HEARING**

**BY THE TOWN COUNCIL AND PLANNING COMMISSION  
OF THE TOWN OF DUMFRIES, VIRGINIA ON**

**January 7, 2014 at 7:00 PM  
or as soon thereafter as may be heard  
Located at 17755 Main Street, Dumfries, VA 22026**

The Town Council and Planning Commission of the Town of Dumfries hereby gives notice of a public hearing on a Conditional Use Permit application to allow for Grace Church to expand their nonconforming parking lot by approximately 200 parking spaces into the Resource Protection Area located at 17889 Fraley Boulevard. This property is located in the B-1 General Business District which only allows a place of worship to operate by Conditional Use Permit.

All supporting material is available for public inspection at the Office of the Town Clerk at 17755 Main Street, Dumfries, Virginia 22026 between the hours of 8:30 AM and 5:00 PM; M-F. The public hearing is being held in a public facility believed to be accessible to persons with disabilities. Any person with questions on the accessibility of the facility or needing to discuss accommodation of a disability should contact the Town Clerk at 703-221-3400 or [dhobgood@dumfriesva.gov](mailto:dhobgood@dumfriesva.gov), during normal working hours.

Please post on December 25, 2013 and January 1, 2014



## DUMFRIES, VIRGINIA

Virginia's Oldest Continuously Chartered Town  
CHARTERED 1749 INCORPORATED 1961

17755 Main Street  
Dumfries, Virginia 22026-2386  
Tel: 703-221-3400 / Fax: 703-221-3544  
www.dumfriesva.gov

**To:** Town Council

**From:** Laura O'Dell, Town Planner/Zoning Administrator

**Date:** December 10, 2013

**RE:** Conditional Use Permit to allow for the expansion of a nonconforming structure of 200 parking spaces at Grace Church located at 1006 Williamstown Drive.

### STAFF REPORT

#### **I. Background is as follows:**

- A. Request - This is a Conditional Use Permit request to allow for the expansion of a nonconforming parking lot of approximately 200 additional parking spaces which will encroach nearly entirely into the Resource Protection Area (RPA), with the exception of 8 spaces not being in the RPA. In addition approximately 58 of the proposed parking spaces are located within the 100 Year Floodplain. Grace Church became legally nonconforming with the passage of the 2011 Zoning Text Amendments. Expansion of a nonconforming structure is not permitted by Town Code. However in the B-1 District, Churches and Places of Worship are permitted by Conditional Use Permit. The approval of the Conditional Use permit is necessary to allow for a lawful expansion.
- B. Site Location - This site is located in the Chesapeake Bay Preservation Area Overlay District (CBPA-OD) and the FP-1 Floodplain District. The site is identified by the following GPIN numbers:8189-91-2623

The site is 6.4 acres and located on the corner of Fraley Boulevard and Williamstown Drive, facing Fraley Boulevard.

- C. Comprehensive Plan - The site is designated as Mixed Use Office/Retail/Residential in the Future Land Use Map dated January 1993.
- D. Zoning -The site is currently zoned B-1, General Business, within the CBPA-OD, and within the FP-1 Floodplain District.
- E. Surrounding Land Uses - The subject site is bordered on the North by two vacant lots and then an auto repair and sales establishments. The subject site is bordered on the south by Dumfries Commerce Center a mixed use building. To the East the property is bordered by a South Cove townhouse development. Directly across the street is a

vacant undisturbed 6.1 acre site. All adjacent lots are zoned B-1 with the exception of the R-3 residential South Cove Subdivision.

- F. Previous Use of the Property - The site was undeveloped prior to Grace Church being constructed in early 2012. The site plan was approved for the construction of the church February 23, 2012.

## II. Current Situation is as follows:

- A. Applicant has submitted an application for a Conditional Use Permit to allow for the expansion of the nonconforming parking lot on site, of approximately 200 spaces. The majority of the spaces (with the exception of 8) will be located entirely in the RPA. The site became nonconforming with the passage of the 2011 Zoning Text Amendments which required that all Churches and Places of Worship only be allowed by approval of a Conditional Use Permit.
- B. Town Code Sec. 70-576 Continuation states: "No such nonconforming use and/or structure shall be enlarged or increased, nor extended to occupy a greater area of land that was occupied on January 18, 1979, or at the effective date of any amendment of this chapter, unless enlargement does not increase in nonconformity or results in a change to a use permitted in the district."
- C. Furthermore Town Code Sec. 70-1 defines Structure as: "Anything constructed or erected, the use of which requires location on the ground, or attachment to something having a permanent location on the ground, except utility poles. Structures shall be defined as, but not limited to; stadiums, tents, reviewing stands, platforms, stagings, observation towers, telecommunications towers, solar energy devices, water tanks, trestles, piers, wharfs, swimming pools, storage bins, fences, signs, buildings, **parking lots**, driveways, patios, gasoline pumps and pump islands, underground storage tanks, stormwater management and retention facilities.
- D. The subject site currently contains 1 primary structure built in 2012 totaling 25,000 square feet of gross floor area, 6,404 square feet of usable floor area, and 650 unfixed seats. For the use of Churches and Places of Worship, the Town Code requires 1 parking space for every 4 seats of the maximum seating capacity, or 1 for each 100 square feet of usable floor area in the main place of assembly in places which do not have fixed seats. The current parking lot contains 187 spaces, by Town Code only 163 spaces are required. The current parking lot meets the Town Code requirements for parking per Code Sect. 70-13(1).
- E. The Site Plan approved in 2012 shows an encroachment into the RPA. The property currently encroaches and the applicant wishes to encroach substantially more. Town Code Sect. 70-444(b) states that "The purpose of the CBPA-OD is to control and regulate the runoff at the source to protect against and minimize pollution and deposition of sediment in wetlands, streams, and lakes in the Town and tributaries of the Chesapeake Bay."

- F. Floodplain District FP-1 Town Code Sec. 70-352(c)(4) District Provisions, Permitted Uses, states: "Accessory industrial and commercial use, such as yard areas, pervious parking and loading areas, airport landing strips, etc." Therefore, parking areas are permitted provided that they are in compliance with the provisions of the underlying district and are not prohibited by any other ordinance and provided that they do not require structures, fill, or storage of materials and equipment (Sec. 70-352c).

### **III. Project description:**

- A. The narrative details submitted as part of the proposal includes:

1. Expansion of approximately 200 parking spaces in the RPA, by means of grass pavers.

### **IV. Issues for review of the Conditional Use Permit, in order of importance, are as follows:**

- A. Comprehensive Plan – Is the proposed project consistent with the Comprehensive Plan?
- The proposed use is fairly consistent with the comprehensive plan in that the church is a use that serves the public at a neighborhood level while being located along a major thoroughfare. The Comprehensive Plan Future Land Use Map shows this area as Mixed Use with Office/Retail/Residential. Grace Church has proven to be a compatible use.
- B. Zoning Ordinance, Intent of B-1 zoning – Does the proposed project promote the intent of the B-1, CBPA-OD, and Floodplain District FP-1 zoning districts?
- The proposed expansion mixes well with the B-1 District, is permitted in the FP-1 District provided it does not conflict with other district regulations, but does not promote the intent of the CBPA-OD.

1. The intent for the B-1 zoning district is as follows:

This district is intended to provide sufficient space in appropriate locations for a wide variety of commercial and miscellaneous service activities, generally serving a wide area and located particularly along certain existing major thoroughfares where a general mixture of commercial and service activity now exists, but which uses are not characterized by extensive warehousing, frequent heavy trucking activity, open storage of material, or the nuisance factors of dust, odor, or noise associated with manufacturing.

2. The intent for the CBPA-OD is as follows:

The purpose of this division is to control and regulate runoff at the source to protect against and minimize pollution and deposition of sediment in wetlands, streams, and lakes in the town and are tributaries of the Chesapeake Bay. The intent of the town council of the town and the purpose of the overlay district are to assist in protection of the Chesapeake Bay and its uses or

appurtenances within the Chesapeake Bay drainage area. Regulations in this division shall encourage and promote:

- (1) Protection of existing high quality state waters;
- (2) Restoration of all other state waters to a condition or quality that will permit all reasonable public uses and will support the propagation and growth of all aquatic life, including game fish, which might reasonably be expected to inhabit them;
- (3) Safeguarding of the clean waters of the commonwealth from pollution;
- (4) Preventing any increase in pollution;
- (5) Reducing existing pollution; and
- (6) Promoting water resource conservation in order to provide for the health, safety, and welfare of the present and future citizens of the town.

3. The intent for the Floodplain District FP-1 is as follows:

The purpose of these districts is to prevent the loss of life and property, the creation of health and safety hazards, the disruption of commerce and governmental services, the extraordinary and unnecessary expenditure of public funds for flood protection and relief, and the impairment of the tax base by:

- (1) Regulating uses, activities, and development which, alone or in combination with other existing or future uses, activities, and development, will cause unacceptable increases in flood heights, velocities, and frequencies.
- (2) Restricting or prohibiting certain uses, activities, and development from locating within areas subject to flooding.
- (3) Requiring all those uses, activities, and developments that do occur in floodprone areas to be protected and/or floodproofed against flooding and flood damage.
- (4) Protecting individuals from buying lands and structures which are unsuited for intended purposes because of flood hazards.

C. Valid Public Purpose – Does the proposed project qualify as a valid public purpose and add benefit to the Town?

- The use will benefit the residents of the Town of Dumfries who currently attend church at Grace Church by offering more parking for attendees.

D. Conditions – Are there any conditions that should be applied to the use to limit the impact of the use on the surrounding area?

#### **Attachments**

- A. Area Maps
- B. Application Packet

**SITE LOCATION MAP**



Aerial Imagery and mapping courtesy of the Commonwealth of Virginia. Data taken from Prince William County Mapper 11/13/2013.



WILLIAMSTOWN DR

QUANTICO CREEK

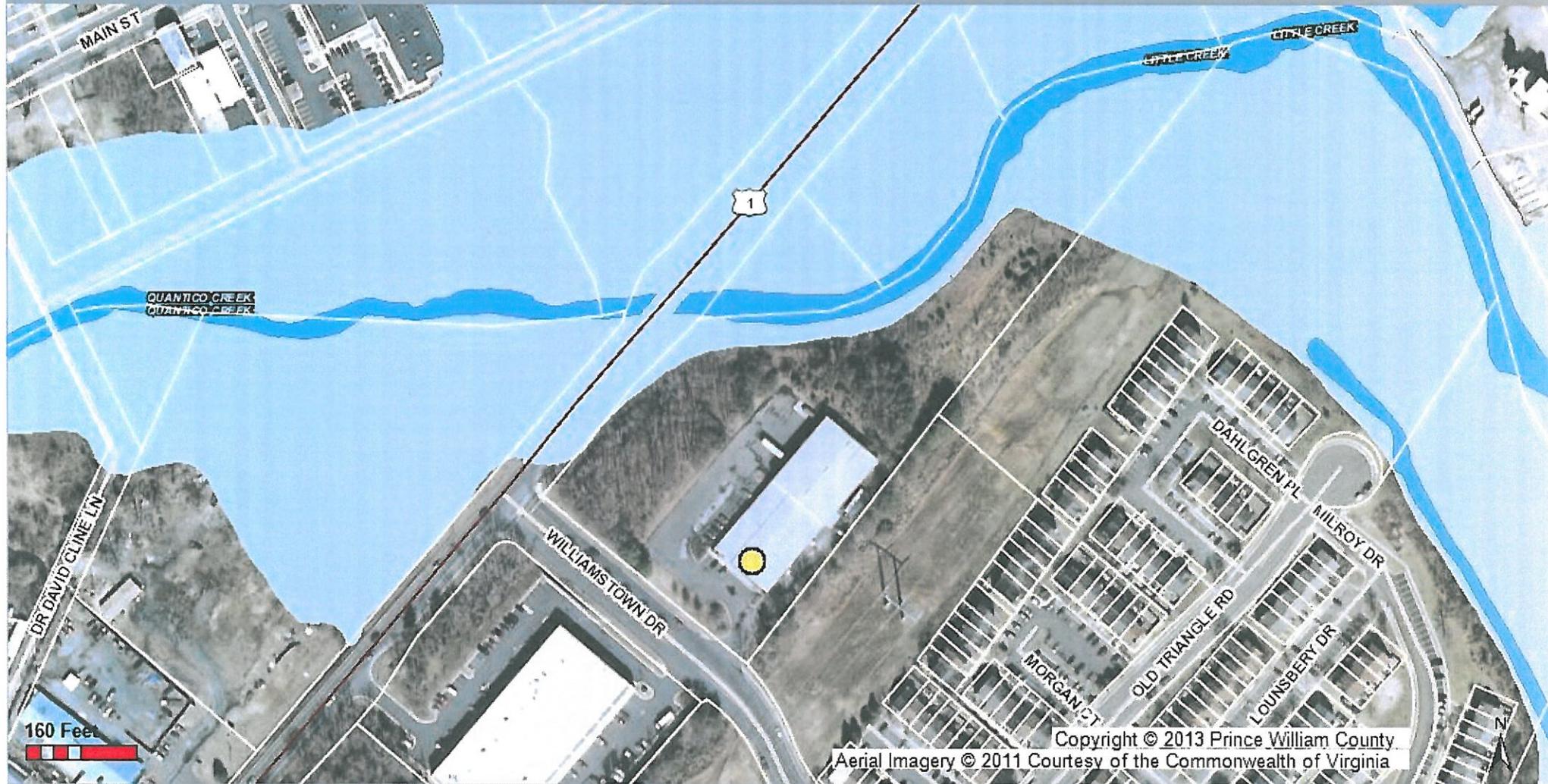
SITE LOCATION

1

MORGAN CT

OLD TRIANGLE

## Floodplain Boundary



The information contained on this page is not to be construed or used as a legal description. Map information is believed to be accurate but accuracy is not guaranteed. Any errors or omissions should be reported to the Prince William County Geographic Information Systems Division of the Department of Information Technology. In no event will Prince William County be liable for any damages, including loss of data, lost profits, business interruption, loss of business information or other pecuniary loss that might arise from the use of this map or the information it contains.

GPIN  
8189-91-2423

### BMP Facility Design Calculations

Plan Name: Grace Baptist Church Proposed Improvements  
 Date: 4/25/2013  
 Plan Number: 54901.00  
 Engineer: christopher consultants

#### I. Water Quality Narrative:

The water quality control requirements for the proposed improvements for this site is 44.35% phosphorus removal based on the removal rate from the approved plans requirements. A portion of the site is located in a Resource Protection Area (RPA).

To meet the requirements one Filterra and two Stormfilters are proposed as well as ensuring all areas within the RPA shall be pervious pavement. Each Filterra and stormfilter has a removal rate of 65%. The removal rate for the pervious pavement is 50%.

No offsite storm runoff is being treated.

#### II. Watershed Information

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

Subarea Designation & Description	"C"	Acres
A1-Filterra #1	0.83	0.13
A2-Stormfilter	0.85	0.43
A3- Stormfilter - Roof Drain	0.90	0.29
A4-Filter through Porous Pavement	0.78	1.06
A5-Porus Pavement	0.30	1.15
A6-Open Space	0.67	1.30
A6-Uncontrolled	0.53	2.05

Phosphorus Removal - "Chesapeake Bay Method"

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

(A) Area of the Site (a) ac 6.41

(B) Subarea Designation	"C"		Acres		Product
A1-Filterra #1	0.83	x	0.13	=	0.11
A2-Stormfilter	0.85	x	0.43		0.37
A3- Stormfilter - Roof Drain	0.90	x	0.29		0.26
A4-Filter through Porous Pavement	0.78	x	1.06		0.83
A5-Porus Pavement	0.30	x	1.15		0.35
A6-Open Space	0.67	x	1.30		0.87
A6-Uncontrolled	0.53	x	2.05		1.09

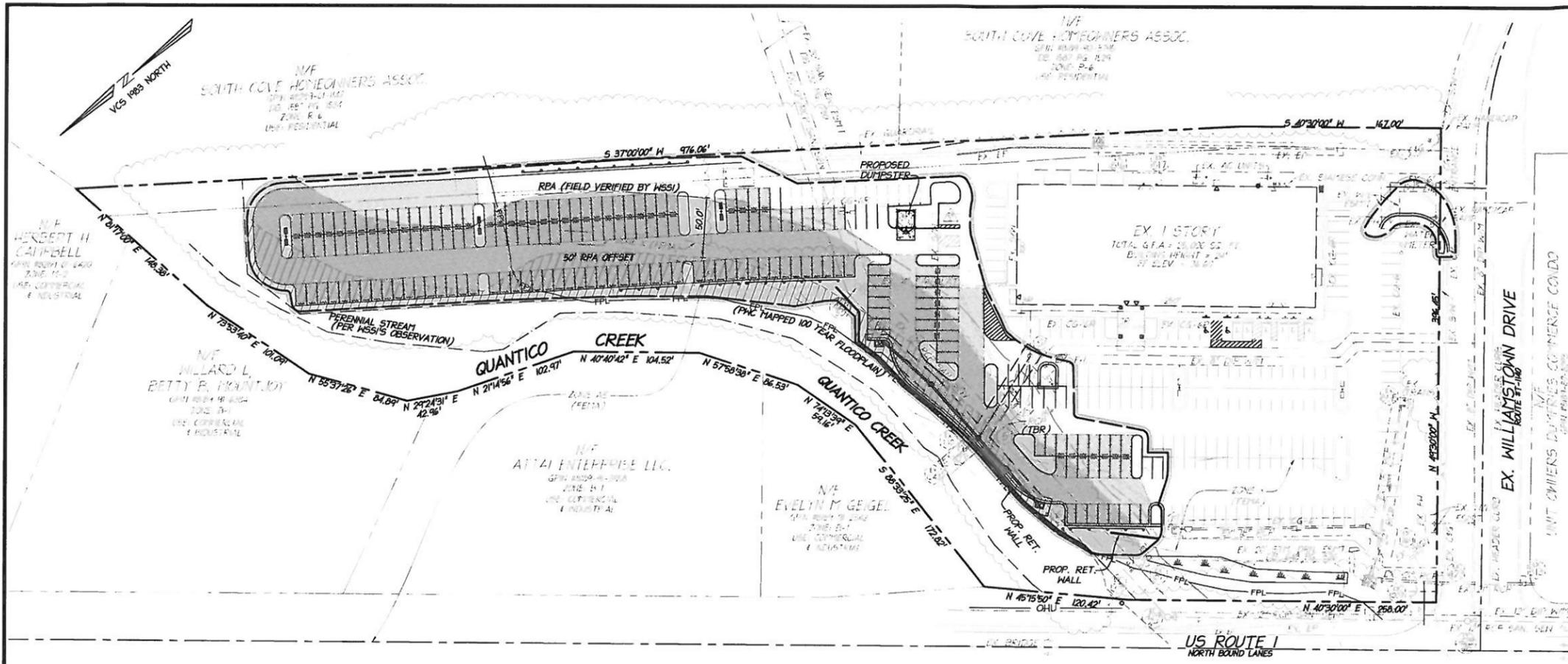
(b) Total = 3.87

(C) Weighted average "C" factor

(b) / (a) = (c)

**0.60**





DATE	REVISION

**LEGEND**

- LIMITS OF CLEARING & GRADING
- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED SPOT ELEVATION
- EXISTING TREE LINE
- EXISTING WATER LINE
- PROPOSED WATER LINE
- PROPOSED STORM SEWER
- EXISTING STORM SEWER
- EXISTING SANITARY SEWER
- EDGE OF PAVEMENT
- CG-6 CURB & GUTTER
- EXISTING CG-6
- PARKING LIGHT
- PARKING SPACE
- BUILDING ENTRANCE
- EX. TREE
- EX. UTILITY POLE
- EX. OVERHEAD UTILITY WIRE
- JURISDICTIONAL WETLANDS FIELD VERIFIED BY HSSI

TOTAL RPA DISTURBANCE: 56,745 SF (MAJOR WQIA REQUIRED)  
 RPA DISTURBANCE: 19,196 SF (BEYOND 50' RPA OFFSET LINE)

**NARRATIVE**

**PROJECT DESCRIPTION:** THIS SITE IS LOCATED IN THE TOWN OF DUMFRIES AT THE SOUTHWEST CORNER OF THE INTERSECTION OF US ROUTE 1 AND WILLIAMSTOWN DRIVE. THE EXISTING SITE CONSISTS OF APPROXIMATELY 6.406 ACRES WITH A 25,000 SF BUILDING AND 187 PARKING SPACES. THE PROPOSED PROJECT CONSISTS OF INCREASING THE TOTAL PARKING SPACES TO 381. THE TOTAL DISTURBANCE ASSOCIATED WITH THIS PROJECT WILL BE APPROXIMATELY 2.11 ACRES.

**RESOURCE PROTECTION AREA:** THE FIELD-VERIFIED LIMITS OF RESOURCE PROTECTION AREA (RPA) DEPICTED ON THIS PLAN IS BASED ON THE SURVEYED LOCATION OF THE PERENNIAL WATER BODIES AND JURISDICTIONAL WETLANDS THAT ARE RPA CORE COMPONENTS. THE RPA EXTENDS 100 FEET LANDWARD ON THE RPA CORE COMPONENTS. THE FIELD WORK WAS PERFORMED ON AUGUST 26, 2011 BY WETLAND STUDIES AND SOLUTIONS, INC.

**RPA ENCROACHMENT:** BASED ON THE PREVIOUSLY APPROVED GRACE CHURCH PLAN APPROXIMATELY 4,990 SF OF RPA WAS ENCROACHED AND WITH THAT SAME PLAN APPROXIMATELY 5,345 SF OF LANDSCAPING WAS PROVIDED WITHIN THE ENCROACHMENT AND ELSEWHERE ON SITE PER THE TOWN OF DUMFRIES CODE SECTION 70-45(C)4.B.2. WITH THIS PROJECT APPROXIMATELY 56,745 SF OF ADDITIONAL ENCROACHMENT INTO THE RPA, OF WHICH APPROXIMATELY 46,875 SF IS POROUS CRETE PAVERS AND GRASS PAVERS AND THE REST WILL BE FOR GRADING PURPOSES.

**EXISTING VEGETATION:** THE EXISTING VEGETATION WITHIN THE RPA ENCROACHMENT CONSISTS OF 1' TO 4' CALIPER RIVER BIRCH, 1' TO 2' CALIPER JUNIPER TREES, 1' TO 3' CALIPER HEMLOCK TREES, 2' TO 5' CALIPER MAPLE AND OAK TREES AND SOME UNDERGROWTH SHRUBS AND TREES.

**BEST MANAGEMENT PRACTICES:** THERE ARE TWO FILTERRA UNITS AND A STORMCEPTER EXISTING ONSITE FOR BEST MANAGEMENT PRACTICES (BMP). WITH THIS PROJECT ONE OF THE FILTERRA UNITS WILL BE REPLACED WITH A STORMFILTER AND ANOTHER STORMFILTER IS PROPOSED AND POROUS CONCRETE PAVERS AND GRASS PAVERS WILL BE USED FOR MITIGATION OF THE PROPOSED ENCROACHMENT INTO THE RPA. SEE SHEETS 10 & 11 BMP COMPUTATIONS & DETAILS OF THE GRACE CHURCH SITE PLAN.

**PROPOSED RE-VEGETATION:** THE PROPOSED RE-VEGETATION FOR THE ENCROACHMENT INTO THE RPA WILL INCLUDE TREES, ORNAMENTAL GRASSES, GRASS PAVERS AND POROUS CONCRETE PAVERS. THERE ARE PROPOSED TREES AND ORNAMENTAL GRASSES WITHIN THE ENCROACHED AREA ALONG WITH THE GRASS PAVERS AND POROUS CONCRETE PAVERS TO MITIGATE THE EFFECTS OF THE BUFFER ENCROACHMENT AND IS EQUAL TO THE AREA OF ENCROACHMENT INTO THE BUFFER AREA SHALL BE ESTABLISHED ELSEWHERE ON THE LOT OR PARCEL. SEE SHEETS 16 & 17 LANDSCAPE PLAN & DETAILS OF THE GRACE CHURCH SITE PLAN.

**MAJOR WATER QUALITY IMPACT ASSESSMENT:**

**DESCRIBE THE EXISTING SITE CONDITIONS:**

**TOPOGRAPHY:** THE SITE IS CURRENTLY CONSISTS OF A 25,000 SF BUILDING AND 187 PARKING SPACES AND THE REST OF THE SITE IS CHARACTERIZED BY THE EXISTING GRADE CONSISTING OF SLOPES RANGING FROM A MODERATE 2% TO A STEEP 25%.

**SOILS:** THE MAJORITY OF THE SITE IS COMPRISED OF HYDROLOGIC SOILS GROUP (HSG) C SOILS AND A PORTION OF THE SITE IN HSG D SOILS. THE SOILS ENCOUNTERED ON-SITE IN THE SOIL TEST BORINGS GENERALLY, CONSISTED OF NATURAL SOILS CONSISTING OF SANDY CLAY (CL, CH), CLAYEY SAND (SC) WITH VARYING AMOUNTS OF ROCK FRAGMENTS, AND WEATHERED METASEDIMENTARY ROCK (PHYLLITE).

**MAJOR WATER QUALITY IMPACT ASSESSMENT CONT.**

**HYDROLOGY:** QUANTICO CREEK FLOWS ALONG THE NORTHERN BOUNDARY OF THE PROPERTY. THE ENTIRE SITE DRAINS INTO QUANTICO CREEK, THROUGH OVERLAND FLOW OR VIA TWO STORM SEWER PIPE SYSTEMS.

**GEOLOGY:** IN GENERAL, THERE ARE SOME AREAS ON THE PROPERTY THAT HAVE THE DEPTH TO THE WATERTABLE GREATER THAN 6' AND SOME AREAS THAT THE DEPTH TO THE WATERTABLE IS LESS THAN 1' BELOW THE SURFACE. IN GENERAL, THE DEPTH TO BEDROCK THROUGH THE PROPERTY RANGES FROM 4' TO GREATER THAN 6' BELOW THE SURFACE.

**ADJACENT LANDS:** THE SITE FRONTAGE TOWARD THE SOUTH IS WILLIAMSTOWN ROAD, A FOUR-LANE ROAD WITH CURB AND GUTTER. TOWARD THE EAST PROPERTY LINE IS A POWER LINE AND SINGLE FAMILY ATTACHED HOMES. TOWARD THE NORTH OF THE PROPERTY IS QUANTICO CREEK AND TOWARD THE WEST IS US ROUTE 1 (JEFFERSON DAVIS HIGHWAY).

**DESCRIBE THE IMPACTS OF DEVELOPMENT ON:**

**TOPOGRAPHY:** NATURAL CONDITIONS WILL BE MAINTAINED OUTSIDE OF THE LIMITS OF CLEARING AND GRADING. AREAS WITHIN THE CLEARING AND GRADING WILL BE REGRADED TO PROVIDE A TRANSITION FROM THE POROUS CONCRETE PAVERS AND GRASS PAVERS BACK TO EXISTING GRADE.

**SOILS:** IF EXTRA FILL IS REQUIRED, THE ADDITION MAY CHANGE THE SURFACE SOIL TYPE AT THE FILL LOCATION.

**HYDROLOGY:** THE PARKING EXPANSION FOR THIS PROJECT WILL BE DONE WITH POROUS CONCRETE PAVERS AND GRASS PAVERS AND MATCH THE EXISTING TOPOGRAPHY OF THE SITE. BY USING THE POROUS CONCRETE PAVERS AND GRASS PAVERS THIS WILL NOT AFFECT THE HYDROLOGY FOR THE SITE. THE POLLUTANT REMOVAL AND MAINTAINING THE PRE-DEVELOPMENT TIME OF CONCENTRATION WILL BE MET BEFORE DISCHARGING IN TO QUANTICO CREEK.

**GEOLOGY:** THERE WILL BE NO IMPACT ON THE SITE'S GEOLOGY.

**ADJACENT LANDS:** THERE WILL BE NO IMPACT TO THE SITE'S ADJACENT LANDS.

**DISTURBANCE/DESTRUCTION OF WETLANDS AND JUSTIFICATION FOR SUCH ACTION:** WITH THIS PROJECT THERE WILL BE NO WETLAND DISTURBANCE.

**DISRUPTIONS/REDUCTIONS IN THE SUPPLY OF WATER TO THE WETLANDS/STREAMS:** DURING CONSTRUCTION, WITHIN THE LIMITS OF CLEARING AND GRADING, SILT FENCE AND SUPER SILT FENCE WILL BE PLACED TO PROTECT THE STREAM FROM EXCESSIVE SEDIMENT DISCHARGED TO QUANTICO CREEK. THESE MEASURES WILL DISRUPT AND/OR REDUCE THE AMOUNT OF WATER DRAINING DIRECTLY TO QUANTICO CREEK. AFTER CONSTRUCTION STORMWATER RUN OFF VOLUMES WILL BE MANAGED BY THE ONE EXISTING FILTERRA, STORMCEPTER AND TWO STORMFILTERS ALONG WITH THE POROUS CONCRETE PAVERS AND GRASS PAVERS IN ORDER TO MAINTAIN PRE-DEVELOPMENT DISCHARGE LEVELS.

**DISRUPTIONS TO EXISTING HYDROLOGY INCLUDING WETLAND AND STREAM CIRCULATION PATTERNS:** WATER WILL NEED TO BE TEMPORARILY DIVERTED WHILE THE CONSTRUCTION OF THE PARKING AREA OCCURS. THE PARKING AREA WILL MATCH THE EXISTING TOPOGRAPHY AND THE FLOW PATTERNS WILL BE RESTORED TO PRE-DEVELOPMENT CONDITION.

**DESCRIPTION OF PROPOSED FILL MATERIAL:** THE CONTROLLED FILL SHALL BE CLEAN MINERAL SOILS, FREE OF ROOTS, WOODY VEGETATION, OVERSIZED STONES, ROCKS, OR OTHER OBJECTIONABLE MATERIAL. THE MAJORITY OF EXISTING SITE SOIL WILL BE USABLE.

**LOCATION OF DREDGE MATERIAL AND LOCATION OF DUMPING AREA FOR SUCH MATERIAL:** NO DREDGING WILL BE REQUIRED FOR THIS PROJECT.

**MAJOR WATER QUALITY IMPACT ASSESSMENT CONT.**

**ESTIMATION OF PRE- AND POST-DEVELOPMENT POLLUTANT LOADS IN RUNOFF:**

**SIMPLE METHOD POLLUTANT LOAD EQUATION:**  
 $L = (0.05 + (0.009 \times I)) \times A \times 2.26$  (Eq. 5-15 - VA SWM HANDBOOK)  
 L = RELATIVE TOTAL PHOSPHOROUS LOAD (POUNDS PER YEAR)  
 I = PERCENT IMPERVIOUS COVER (PERCENT EXPRESSED IN WHOLE NUMBERS)  
 A = APPLICABLE AREA (ACRES)

**PRE-DEVELOPMENT CONDITION:**  
 I = 38% (EXISTING IMPERVIOUS COVER); A = 6.41 ACRES THEREFORE L = 5.73 LB/YR

**POST-DEVELOPMENT CONDITION:**  
 I = 38% (PROPOSED IMPERVIOUS COVER); A = 6.41 ACRES THEREFORE L = 5.73 LB/YR  
 NO IMPERVIOUS COVER IS BEING ADDED WITH THIS PROJECT THEREFORE, NO REDUCTION IN POLLUTANT LOAD IS REQUIRED.

**ESTIMATION OF PERCENT INCREASE IN IMPERVIOUS SURFACE ON SITE AND TYPES OF SURFACING MATERIALS USED:** THE EXISTING IMPERVIOUS AREA FOR THE SITE IS 38% WHICH COMPRISES OF THE BUILDING ROOF, PARKING AND SIDEWALKS. WITH THE PROPOSED DEVELOPMENT THERE WILL BE NO INCREASE IN IMPERVIOUS AREA BECAUSE POROUS CONCRETE PAVERS AND GRASS PAVERS ARE BEING USED FOR THE PARKING AREA.

**PERCENT OF SITE TO BE CLEARED FOR THE PROJECT:** CURRENTLY THE SITE IS 56% CLEARED AND WITH THIS PROJECT THERE WILL BE AN ADDITIONAL 16% CLEARED.

**ANTICIPATED DURATION AND PHASING SCHEDULE OF CONSTRUCTION:** THE ESTIMATED DURATION OF CONSTRUCTION IS 6 MONTHS. THERE WILL BE TWO PHASES OF CONSTRUCTION.

**PHASE I**  
 THE CONSTRUCTION ENTRANCE SHALL BE INSTALLED FIRST THEN PERIMETER CONTROLS ARE TO BE INSTALLED (SILT FENCE, SUPER SILT FENCE AND TREE PROTECTION) AS SHOWN ON THE PHASE I PLAN. ONCE THE AFOREMENTIONED CONTROL MEASURES ARE IN PLACE, AN INSPECTION CAN BE SCHEDULED AND COMPLETED. INSPECTION REQUESTS MUST BE MADE 48 HOURS IN ADVANCE. FOLLOWING THE INSPECTOR'S APPROVAL OF THE PHASE I CONTROL MEASURES, COMMENCEMENT OF THE PHASE II CONSTRUCTION UNDER STAGE TWO PERMIT APPROVAL WILL THEN BE AUTHORIZED. LIMITS OF CLEARING AND GRADING SHOWN ON THE PHASE I PLAN ARE FOR THE PLACEMENT OF PERIMETER CONTROLS UNDER THE PHASE I PERMIT ONLY. ALL PERIMETER CONTROLS SHALL REMAIN THRU THE DURATION OF PHASE II CONSTRUCTION.

**PHASE II**  
 THE CONSTRUCTION OF PARKING AREAS AND UNDERGROUND UTILITIES WILL COMMENCE. ALL CONTROL DEVICES ARE TO REMAIN IN PLACE FOR THE DURATION OF THE LAND DISTURBING ACTIVITIES. THE STORM SEWER PIPES AND THE STRUCTURES WILL BE INSTALLED UTILIZING AS MUCH OF THE ALREADY IN PLACE EROSION CONTROLS AS POSSIBLE. THE BASE STONE FOR THE PARKING AREA WILL BE APPLIED WITHIN 5 DAYS OF REACHING FINAL GRADE OF THE SUBGRADE. ONCE THE PARKING AREA IS BROUGHT TO NEAR FINAL GRADE IN SUCH A MANNER THAT THE STORM SEWER IS FUNCTIONAL, INLET PROTECTION CAN BE INSTALLED. ALL DISTURBED AREAS THAT ARE NOT TO BE CONSTRUCTED UPON SHALL BE PERMANENTLY SEEDED AND MULCHED PER THE VIRGINIA EROSION AND SEDIMENT CONTROL REQUIREMENTS AS SOON AS FINAL GRADE IS ACHIEVED. DURING THIS PHASE, FINAL SEEDING OF THE SITE WILL TAKE PLACE. ALL STORM INLETS WILL REMAIN PROTECTED AS SHOWN ON PLANS UNTIL GRASS HAS STARTED TO GROW ALONG ALL THE GRADED AREAS IN THEIR VICINITY. ONCE ALL CONSTRUCTION AND FINAL GRADING IS FINISHED, THE PROCESS OF REMOVING ALL EROSION CONTROL DEVICES MAY BEGIN.

**MAJOR WATER QUALITY IMPACT ASSESSMENT CONT.**

**LISTING OF ALL REQUISITE PERMITS FROM ALL APPLICABLE AGENCIES NECESSARY TO DEVELOP PROJECT:** VDOT PERMIT FOR CONSTRUCTION WITHIN THE STATE RIGHT OF WAY.

**DESCRIPTIONS OF THE PROPOSED MITIGATION MEASURES:**

**PROPOSED EIS CONTROL CONCEPTS:** SILT FENCE, SUPER SILT FENCE, INLET PROTECTION, RESTABILIZATION

**PROPOSED STORMWATER MANAGEMENT SYSTEM:** FILTERRA, STORMCEPTOR, STORMFILTER, POROUS CONCRETE PAVERS AND GRASS PAVERS

**CREATION OF WETLANDS TO REPLACE THOSE LOST:** NO DISTURBANCE IN WETLANDS

**MINIMIZING EXCAVATION AND FILL:** MINIMIZE THE LIMITS OF CLEARING AND GRADING.

**LANDSCAPING AND CLEARING ELEMENTS:**

**IDENTIFY AND DELINEATE THE LOCATION OF PLANT MATERIAL:** THE EXISTING TREE LINE HAS BEEN SHOWN TO DELINEATE THE LOCATION OF TREES BEING REMOVED WITHIN THE CLEARING LIMITS WITH IS PROJECT.

**DESCRIBE THE IMPACT THE DEVELOPMENT OR USE WILL HAVE ON THE EXISTING VEGETATION:**  
 THE CLEARING AND GRADING IS BASED ON THE CLEARING NEEDED TO INSTALL THE POROUS CONCRETE PAVERS & GRASS PAVERS AND THE RETAINING WALL.

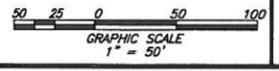
THE EXISTING TREE LINE HAS BEEN SHOWN TO DELINEATE THE LOCATION OF TREES BEING REMOVED.

THE EXISTING VEGETATION WITHIN THE RPA ENCROACHMENT CONSISTS OF 1' TO 4' CALIPER RIVER BIRCH, 1' TO 2' CALIPER JUNIPER TREES, 1' TO 3' CALIPER HEMLOCK TREES, 2' TO 5' CALIPER MAPLE AND OAK TREES AND SOME UNDERGROWTH SHRUBS AND TREES.

**DESCRIBE THE POTENTIAL MEASURES FOR MITIGATION:**  
 A REPLANTING SCHEDULE HAS BEEN ADDED THAT INCLUDES A LIST OF PLANTS AND TREES BEING USED, SEE SHEET 17

THE AREA WHERE THE POROUS CONCRETE PAVERS AND GRASS PAVERS ARE BEING PROPOSED, THE EXISTING TOPOGRAPHY WILL BE USED TO MINIMIZE AREA OF CLEARING AND GRADING.

THE TREES BEING USED IN THE REPLANTING ARE INDIGENOUS SPECIES SUCH AS AGER RUBRUM (RED MAPLE), GLEDITIA TRIACANTHOS INERMIS (THORNLESS HONEYLOCUST) & QUERCUS BICOLOR (SWAMP WHITE OAK)



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MAJOR WATER QUALITY IMPACT ASSESSMENT

#1006 WILLIAMSTOWN DRIVE  
 GRACE CHURCH  
 MINOR SITE PLAN AMENDMENT  
 TOWN OF DUMFRIES, VIRGINIA

PROJECT NO: 11046.002.00  
 SCALE: 1"=50'  
 DATE: 10-14-2013  
 DESIGN: MY  
 DRAWN: PF  
 CHECKED:  
 SHEET No. 1 of 1  
 101470