

# PW Parkway ES

Prince William County, Virginia

WSSI #21315.03

Preservation Area Site Assessment

**Project No:**

**Plan No:**

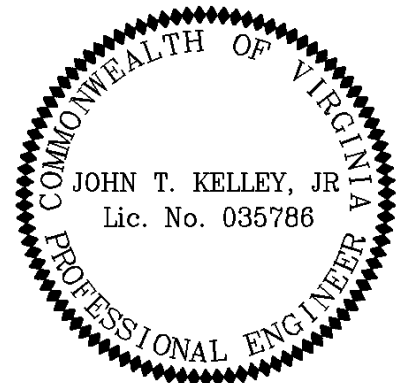
November 13, 2015

*Prepared for:*

Prince William County Public Schools

P.O. Box 389

Manassas, Virginia 20108



*Prepared by:*



a **DAVEY**  company

5300 Wellington Branch Drive, Suite 100

Gainesville, Virginia 20155

Tel: 703-679-5600 Email: [contactus@wetlandstudies.com](mailto:contactus@wetlandstudies.com)

[www.wetlandstudies.com](http://www.wetlandstudies.com)

PRESERVATION AREA SITE ASSESSMENT  
PW PARKWAY ES  
WSSI #21315.03

This technical narrative has been provided to describe the procedure for establishing the Resource Protection Areas (RPAs) within the PW Parkway ES study area. The PW Parkway ES study area is situated on approximately 25 acres and is located east of the intersection of Old Bridge Road and Prince William Parkway in Prince William County, Virginia.

The wetlands and other waters of the U.S. (WOUS) on the study area were delineated and subsequently surveyed by Wetland Studies and Solutions, Inc. (WSSI). Jurisdictional wetlands and other waters of the U.S. within the project study area are described in WSSI's report "Waters of the U.S. Delineation (Including Wetlands) and Resource Protection Area Evaluation, PW Parkway ES (±25 acres)" dated October 23, 2015. A jurisdictional determination (JD) from the U.S. Army Corps of Engineers (COE) is pending.

The results of WSSI's evaluation of flow regime of the on-site streams are summarized in a Perennial Flow Determination (PFD) submitted to Prince William County concurrently with this report and which is pending approval. The wetland and WOUS boundaries have been used to establish the RPA as presented in Attachment I: Preservation Area Site Assessment.

### Delineation of Preservation Areas

Pursuant to the text of the Ordinance and Prince William County Policy #LD-90-15, an RPA has been delineated as shown in Attachment I. The process utilized to determine the precise RPA limits based upon a field investigation is outlined below:

1. Determination if RPA Core Components are Present On-site
  - a. "Tidal Wetlands," defined in DCSM 740.02(AA), *are not* present on this study area.
  - b. "Tidal Shores," defined in DCSM 740.02(Z), *are not* present on this study area.
  - c. "Perennial Water Bodies," defined in DCSM 740.02(Q) to be all water bodies identified as perennial when using a scientifically valid system of in-field indicators (water bodies shall include all areas of natural inflow, including but not limited to: streams, impoundments, lakes and all areas of concentrated flow), *are* present on this study area. Two (2) perennial water bodies, unnamed perennial streams, are present within the study area. Please refer to "Perennial Flow Determination, PW Parkway ES," prepared by WSSI and submitted concurrently with this report for additional discussion of the methods used to determine streams with perennial flow on this project.
  - d. "Nontidal Wetlands," defined in DCSM 740.02(O), *are* present on the study area, as depicted in Attachment I and described in the referenced report by WSSI. Thus, whether or not these wetlands qualify as RPA core components must be assessed.
2. Determination of Which Portions of Nontidal Wetlands Found on Site are Connected by Surface Flow and Contiguous to Tidal Wetlands or Perennial Water Bodies – i.e., Wetlands that are RPA Core Components
  - a. All nontidal wetlands and non-perennial streams (i.e., intermittent and ephemeral streams, as determined by site-specific study) leading into perennial streams were

- examined in the field by WSSI personnel to determine the RPA cutoff, the point at which these features are no longer connected by surface flow to a perennial water body.
- b. The section of an intermittent or ephemeral stream or other non-perennial conveyance without adjacent wetlands, or containing narrow linear wetlands present only within the defined bed and bank or the bottom of such stream or conveyance (i.e., vegetated wetland swales), is *not* considered to have established a continuous connection of wetlands (excluding man-made intervals such as culverts, pipes, etc.) pursuant to Prince William County Policy #LD-90-15, dated December 21, 1990 and the Chesapeake Bay Local Assistance Department June 18, 2007, revised December 10, 2007 “Resource Protection Areas: Non-tidal Wetlands, Guidance on the Chesapeake Bay Preservation Area Designation and Management Regulations.” Wetlands upstream/upslope of locations possessing such characteristics are *not* RPA core components.

3. Determination of the RPA Buffer

A 100-foot-wide buffer, adjacent to and landward of RPA core components and along both sides of any perennial water body, governs the location of the RPA and is known as the “Field-Verified RPA.”

4. Site-Specific Determinations

The RPA core components and RPA buffer established and described above are presented in Attachment I, included in this report. The RPA buffer extends 100 feet landward of the unnamed perennial streams and all wetlands contiguous and connected by surface flow to these streams.

WSSI identified four RPA cutoffs in the field and the following rationale was used to determine these cutoffs:

RPA Cutoff	Rationale
#1 and #2	Per guidance from the Chesapeake Bay Local Assistance Department entitled "RPAs: Non-tidal Wetlands. Guidance on the Chesapeake Bay Preservation Area Designation and Management Regulations", dated June 18, 2007 and revised December 10, 2007, non-perennial conveyance features containing wetlands only within the defined bed and bank (e.g., vegetated swales), are not considered to have established a continuous connection of wetlands, and are not required to be included as RPA features. Therefore, RPA cutoffs were determined to be the point where the vegetated swales connected to the waterbody with perennial flow.
#3	Nontidal wetlands are not located adjacent to these intermittent stream reaches. Therefore, the RPA cutoff was determined to be the point where the intermittent streams flow into the unnamed perennial tributary.
#4	Nontidal wetlands are not located adjacent to this stream reach. Therefore, the RPA cutoff was determined to be at the point (i.e., a headcut located at flag A-25) where the stream channel no longer exhibits perennial flow. The stream channel exhibits intermittent flow upstream of the headcut and perennial flow downstream of the headcut.

5. Intensely Developed Areas (IDAs)

Section 32-504.07 defines IDAs by reference to a set of conditions and areas designated on the Chesapeake Bay Protection Area Overlay District Map. According to this map, the entirety of the study area is located within an IDA. See Exhibit 5 in the attached PW Parkway ES Waters of the U.S. Delineation Report.

6. Certification

This PASA Plan and Narrative, dated November 13, 2015 and the associated technical narrative description of the wetland delineation and stream classification depicted hereon, contained in the report prepared by Wetland Studies and Solutions, Inc., titled "Waters of the U.S. Delineation (Including Wetlands) and Resource Protection Area Evaluation, PW Parkway ES ( $\pm 25$  acres)," dated October 23, 2015, is certified as complete and accurate by John T. Kelley, Jr., P.E. #035786, when evidenced by the seal and signature of said person on the PASA and Narrative.

WETLAND STUDIES AND SOLUTIONS, INC.

Neil Gutherman, WPIT  
Environmental Scientist

Benjamin N. Rosner, PWS, PWD, CE, CT  
Manager – Environmental Services

John T. Kelley Jr., P.E.  
Senior Associate Engineer

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**GENERAL NOTES**

- This site has been addressed by the Prince William County Mapping Office as: 13001 CHINN PARK DRIVE, WOODBRIDGE, VA 22192 (addresses for subdivision lots shall appear on the approved plat for recordation).
- Addresses assigned are for the layout of individual businesses or dwelling units and are for exterior doors as shown on this plan only. Any deviation in design or layout will require that a revised plan be submitted to the Office of Mapping for re-addressing. It is the responsibility of the developer to inform the County Office of Mapping before a change in layout occurs and to submit complete and accurate information for re-addressing. Prince William County does not assume any responsibility where re-addressing is required even though tenants have already occupied a portion of the building.
- Methods and materials used in the construction of the improvements herein shall conform to the current County construction standards and specifications and/or current VDOT standards and specifications.
- The contractor or developer is required to notify the Prince William County Department of Public Works in writing three (3) days prior to the beginning of the construction and specifically request inspection before beginning -- 792-7070.
  - Installation of approved erosion control devices.
  - Clearing and Grading
  - Subgrade excavation.
  - Installing storm sewers or culverts.
  - Setting curb and gutter forms.
  - Placing curb and gutter.
  - Placing other concrete.
  - Placing gravel base.
  - Placing any bituminous surfacing.
  - Installing water mains outside the Service Authority's boundaries.
  - Installing sanitary sewer outside the Service Authority's boundaries.
- Measures to control erosion and siltation, including detention ponds serving as silt basins during construction, must be provided prior to issuance of the site development permit. The approval of these plans in no way relieves the developer or his agent of the responsibilities contained in the Virginia Erosion and Sediment Control Handbook.
- A permit must be obtained from the Office of the Resident Engineer, Virginia Department of Transportation (VDOT) Prince William County, prior to construction in existing State right-of-way, 366-1900.
- Approval of this plan does not guarantee issuance of an entrance permit by VDOT when such permit is required under State law.
- The exact location of all guard rails will be determined by VDOT personnel. "A joint inspection will be held with the Developer, County Representatives, and Representatives, of the Virginia Department of Transportation (VDOT) to determine if and where guard rail and/or paved ditches will be needed. The developer will be responsible for providing guardrail and paved ditches as determined by this joint inspection." Refer to Virginia Department of Transportation (VDOT) Guard Rail and Paved Ditch Specifications.
- An approved set of plans and all applicable permits must be available at the construction site. Also, a representative of the developer must be available at all times.
- Warning signs, markers, barricades or flagmen should be in accordance with the Manual on Uniform Traffic Control Devices (MUTCD).
- All unsuitable material shall be removed from the construction limits of the roadway before placing embankment.
- All pavement sections on the approved plans are based on a minimum CBR value of 10. CBR tests are to be performed by the engineer and submitted to the Prince William County Planning Office for review prior to placement of base material. CBR values less than 10 will require submittal of revised pavement section.
- All roadside ditches at grades of more than 5% shall be paved with cement concrete to the limits indicated on the plans and as required at the field inspection.
- All springs shall be capped and piped to the nearest storm sewer manholes or curb inlet. The pipe shall be minimum 150 mm (6") diameter and conform to VDOT standard SB-1.
- All standard street name signs, traffic control devices, and street lights shall be installed by the developer when the first building unit is occupied.
- Construction debris shall be containerized in accordance with the Virginia Litter Control Act; no less than one litter receptacle shall be provided at the construction site.
- The contractor shall provide adequate means of cleaning mud from trucks and/or other equipment prior to entering public streets, and it is the contractor's responsibility to clean streets, alley dust, and to take whatever measures are necessary to insure that the streets are maintained in a clean, mud and dust free condition at all times.
- Notification shall be given to the appropriate utility company (Service Authority, Virginia-American Water Company, or Dale Service Corporation) prior to construction of water and/or sanitary sewer lines. Information should also be obtained from the appropriate authority concerning permits, cut sheets, and connections to existing lines.
- All sanitary sewers and water mains and appurtenances shall be constructed in accordance with the current standards and specifications of Prince William County and/or the Service Authority.
- The developer and/or contractor shall be responsible to supply all utility companies with copies of plans that have been approved by Prince William County and advising them that all grading shall conform to the approved plans, and further that the utility companies shall be responsible for honoring these plans and the finished grades in the installation of their utility lines.
- Contractors shall notify operators who maintain underground utility lines in the area of proposed excavating or blasting at least two (2) working days, but not more than ten (10) working days, prior to commencement of excavation or demolition. Names and telephone numbers of the operators underground utility lines in Prince William County appear below. These numbers shall also be used to serve in an emergency condition.
 

* Washington Gas Light Co. Virginia Power Co. Northern Virginia Electric Co-op Columbia Gas of Virginia Continental Telephone of VA Colonial Pipeline Co. Transcontinental Gas Pipe Line Corp.	MISS UTILITY 1-800-257-7777	Service Authority 335-7900 (After hours-Emergency 335-7990) Virginia-American Water 491-2136 Dale Service Corporation 494-4161
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- The Service Authority requires that a clean-out be placed within three-tenths (0.3) meters (one foot) of the property line.
- The location of existing utilities shown in these plans are taken from existing records. It shall be the contractor's responsibility to verify the exact horizontal and vertical location of all existing utilities as needed prior to construction. The contractor shall inform the engineer of any conflicts arising from his existing utility verification and the proposed construction.
- The developer will be responsible for any damage to the existing streets and utilities which occurs as a result of his construction project within or contiguous to the existing right-of-way.
- All utilities placed under existing streets shall be bored or jacked.
- When grading is proposed within easements of utilities, letters of permission from all involved companies must be provided to Prince William County Planning Office prior to issuance of grading and/or site development permits.
- The developer will be responsible for the relocation of any utilities which is required as a result of his project. The relocation should be done prior to construction.
- Before burning, blasting, transportation or storage of explosives in Prince William County, a permit shall be obtained from the Fire Marshal's Office, 792-6360.
- Fire and Rescue Services must be notified immediately (792-6810) in the event that unusual items such as tanks, cylinders, unidentified containers, etc. which could contain potentially hazardous materials are discovered or observed. All activities must cease and not be resumed until authorization to proceed is given by the Fire Marshal's Office.
- Sidewalk underdrains shall be installed per Section 650 of the Design and Construction Standards Manual.
- All walkways outside of the right-of-way limits will be maintained by the homeowners association.
- Maintenance of the Storm Drainage or Storm Water Management facilities located therein shall be pursuant to Section 700 of the Prince William County Design and Construction Standards Manual.
- If units shown on this plan will be occupied in phases, a phasing plan must be approved by the engineering inspection branch prior to the issuance of any occupancy permits. (Detached single family subdivision exempt.)
- These plans identify the location of all known gravesites. Gravesites shown on this plan will be protected in accordance with state law. In the event gravesites are discovered during construction, the County's Planning Office must be notified immediately (792-6830). All activities must cease and not be resumed until authorization to proceed is given by the County Planning Office.
- Roof top mechanical equipment, if any, must be enclosed within a wall or similar screening barrier, designed in harmony with the building.
- Individual sign permits will be required from the Zoning Office for all free standing and facade signs prior to erecting the signs.
- All buffer areas shall be screened according to the Design and Construction Standards Manual.
- For proffers statement and proffers analysis, see sheet(s) N/A of \_\_\_\_\_.
- For waivers see sheet(s) N/A of \_\_\_\_\_.
- Anticipated sewage flows: N/A
- Anticipated fire flows: N/A
- Distance to nearest existing school or proposed school site: N/A

**LEGEND**

EXISTING INTERMEDIATE CONTOUR EXISTING INDEX CONTOUR PROPOSED CONTOUR EXISTING EDGE OF PAVEMENT PROPOSED EDGE OF PAVEMENT EXISTING CURB AND GUTTER PROPOSED CURB AND GUTTER TRANSITION FROM CG-6 TO CG-6R EXISTING TELEPHONE LINE PROPOSED TELEPHONE LINE EXISTING STORM SEWER PROPOSED STORM SEWER EXISTING SANITARY SEWER PROPOSED SANITARY SEWER EXISTING ELECTRIC SERVICE PROPOSED ELECTRIC SERVICE EXISTING GAS LINE PROPOSED GAS LINE PROPERTY LINE EASEMENT LINE CENTERLINE LIMITS OF CLEARING AND GRADING EXISTING SPOT ELEVATION PROPOSED SPOT ELEVATION EXISTING TREE DRIP LINE EXISTING TREE PROPOSED TREE	FLOW LINE FENCELINE EXISTING UTILITY POLE PROPOSED UTILITY POLE EXISTING WATERLINE W/ TEE PROPOSED WATERLINE W/ TEE EXISTING FIRE HYDRANT PROPOSED FIRE HYDRANT EXISTING WATER VALVE PROPOSED WATER VALVE PROPOSED WATER METER EXISTING REDUCER PROPOSED REDUCER STOP SIGN HANDICAP RAMP (CG-12) DENOTES LOCATION OF STD. VDOT CG-12 AND/OR JURISDICTIONAL STANDARD RAMP CONSTRUCTION PARKING INDICATOR INDICATES THE NUMBER OF TYPICAL PARKING SPACES TEST PIT LOCATION CRITICAL SLOPE SLOPES TO BE STABILIZED PURSUANT TO VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK VEHICLES PER DAY COUNT PROPOSED BUILDING ENTRANCE EXISTING STREET LIGHT PROPOSED STREET LIGHT PROPOSED STREET NAME SIGN PROPOSED SANITARY LATERAL CLEANOUT SANITARY MAN-HOLE IDENTIFIER STORM DRAIN STRUCTURE IDENTIFIER	33 32.5 20 EX. E/P PROP. E/P EX. C & G CG-6 CG-6    ▽    CG-6R T T EX. 375 mm (15") RCP PROP. 375 mm (15") RCP E E G G 12.0 FT DEC 375 mm (15") OAK OAK 12 16
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- Retaining walls to be masonry construction or equal.
- The County shall maintain drainage, storm water management, and best management practices facilities and systems to ensure that they function properly. The County shall not be responsible for repaving or resurfacing paved areas or maintaining landscaping within easements. The fee title owner shall be responsible for grass mowing with reasonable frequency, if applicable, and for the removal of debris and other matter that has impeded or threatens to impede the free flow of storm water. The fee title owner shall notify the Department of Public Works of any defects with the structures, pipes and fencing within the easement, of any debris or other matter which is beyond the ability of the owner to remove, and of any excessive flooding, sedimentation or soil erosion within the area of easement.
- All existing and proposed utilities must be located underground in accordance to Section 32-250.71 of the zoning ordinance.
- There are no historical features or cemeteries known to exist on this site.
- The approval of these plans shall in no way relieve the developer, the contractor or their agents of any legal responsibility which may be required by the Code of Virginia or any other ordinance enacted by Prince William County.

THE ENGINEER SHALL NOT HAVE CONTROL OVER OR CHARGE OF AND SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES OR FOR SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK SHOWN ON THESE PLANS. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S SCHEDULES OR FAILURE TO CARRY OUT THE WORK. THE ENGINEER IS NOT RESPONSIBLE FOR ACTS OR OMISSIONS OF THE CONTRACTOR, SUBCONTRACTORS, OR THEIR AGENTS OR EMPLOYEES, OR OF ANY OTHER PERSONS PERFORMING PORTIONS OF THE WORK.

THIS PLAN COMPLIES WITH THE NEW PRINCE WILLIAM COUNTY SERVICE AUTHORITY UTILITY STANDARDS MANUAL WHICH WENT INTO EFFECT ON JANUARY 1, 1997. ALL UTILITY PERMITS ISSUED AFTER THIS DATE MUST COMPLY WITH THE CONSTRUCTION CRITERIA IN THE NEW MANUAL, INCLUDING ANY REVISIONS WHICH HAVE BEEN ISSUED.

**DESIGNATED PLANS EXAMINER CERTIFICATE**

1ST SUBMISSION REVIEWED AND RECOMMENDED FOR SUBMISSION

DESIGNATED PLANS EXAMINER    REC. NUMBER    DATE

2ND SUBMISSION REVIEWED AND RECOMMENDED FOR SUBMISSION

DESIGNATED PLANS EXAMINER    REC. NUMBER    DATE

**PWCSA WATER & SEWER MAIN INSPECTION FEES**

WATER MAIN	_____ L.M. (L.F.) x \$ _____ = _____	
SEWER MAIN	_____ L.M. (L.F.) x \$ _____ = _____	
TV SEWER MAIN	_____ L.M. (L.F.) x \$ _____ = _____	
TOTAL = _____		

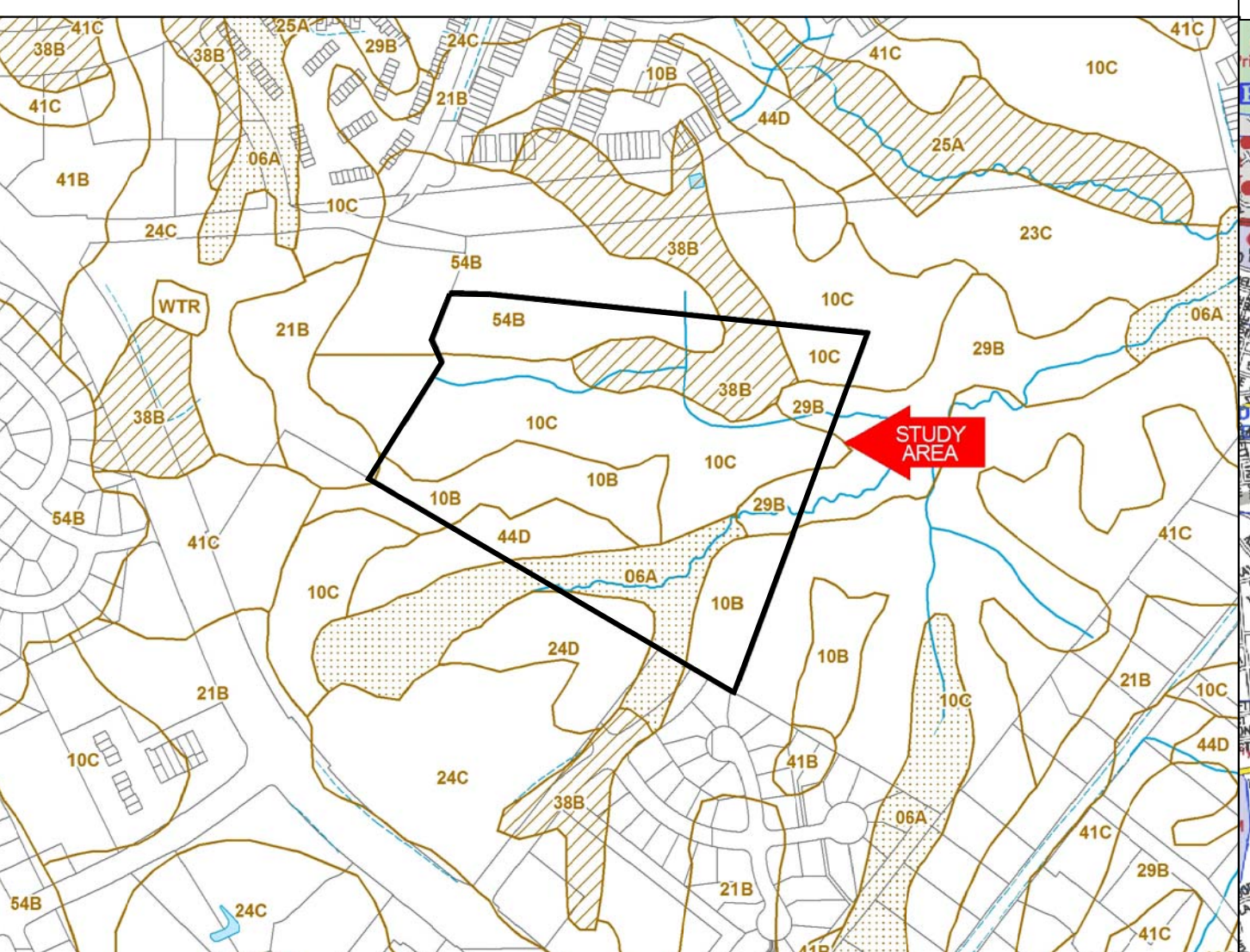
**BOND ESTIMATE**

ITEM	COUNTY BOND	VDOT BOND
TOTAL CONSTRUCTION COST		
ADMINISTRATIVE COST		
INFLATION COST		
TOTAL PERFORMANCE BOND AMOUNT		

**SURVEY AND TOPOGRAPHIC INFORMATION**

- Horizontal and vertical control surveys were performed by PWC DIGITAL DATA in JULY 2014 (Year)
- All elevations are referenced to the North American Vertical Datum of 1988 (NAVD 88).
- Source of topographic mapping is PWC DIGITAL DATA dated JULY 2014
- Boundary survey was performed by PWC DIGITAL DATA dated JULY 2014
- The application of the professional's seal and signature as required by Section 1.14 of the STATE BOARD OF ARCHITECTS, PROFESSIONAL ENGINEERS, LAND SURVEYORS AND CERTIFIED LANDSCAPE ARCHITECTS RULES AND REGULATIONS shall be evidence that the boundary data is correct to the best of the land surveyor's knowledge, and complies with the minimum standards and procedures of the said Board; the topographic information is accurate to within one-half of the contour interval, as shown. Application of the seal and signature indicates acceptance of responsibility for the work shown hereon.

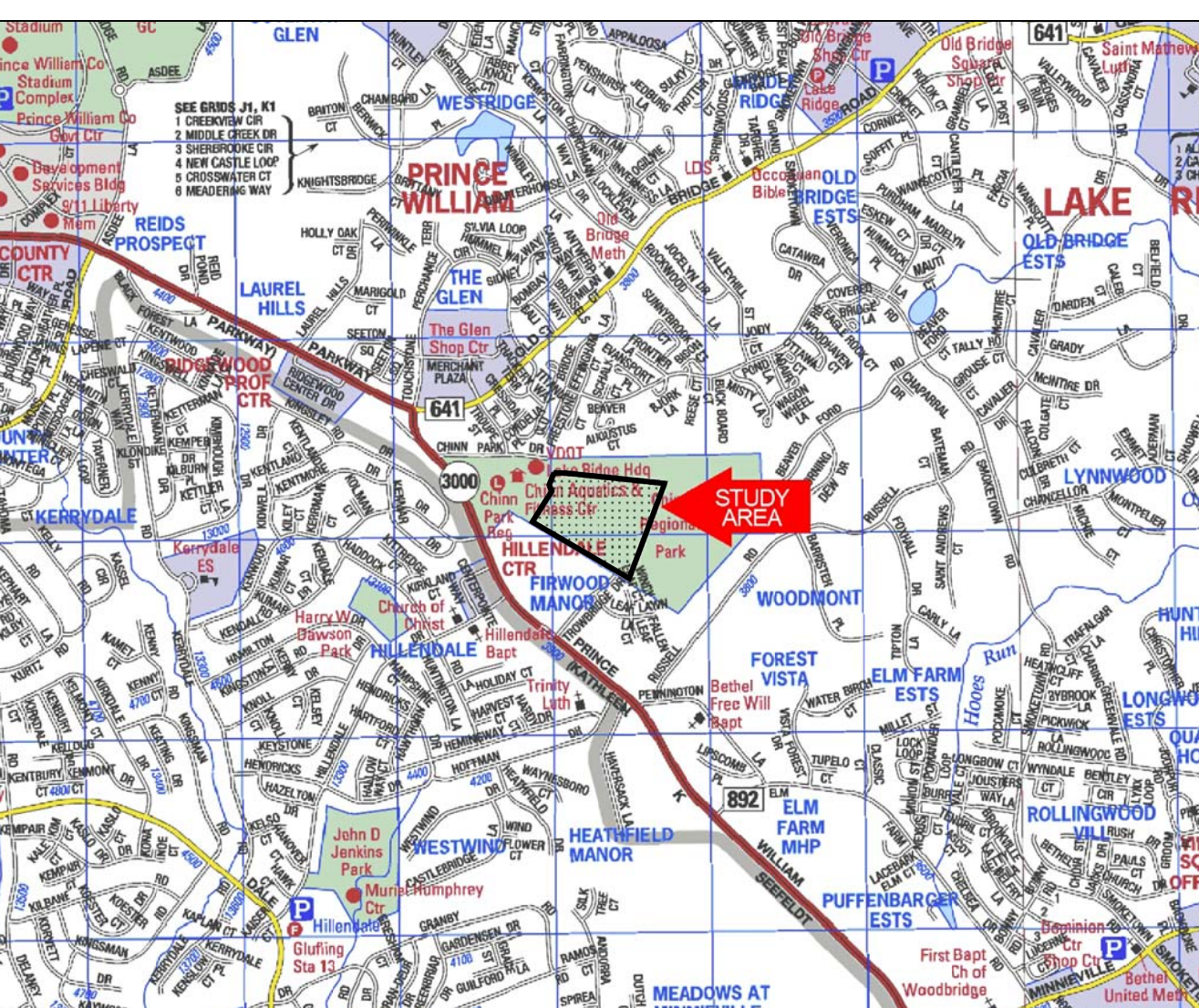
**SOILS MAP (SCALE: 1" = 500')**



**SOILS DATA**

No	SOILS NAME	SLOPE	SOIL CATEGORY	SCS ERODIBILITY **	CHESAPEAKE BAY *	
					HIGHLY ERODIBLE	HIGHLY PERMEABLE
6A	BAILE LOAM	0-4%	III	MODERATE	NO	NO
10B	BUCKHALL LOAM	2-7%	I	MODERATE	NO	NO
10C	BUCKHALL LOAM	7-15%	I	SEVERE	YES	NO
24D	GLENNELG-BUCKHALL COMPLEX	15-25%	I	SEVERE	YES	NO
29B	HOADLY LOAM	2-7%	II	MODERATE	NO	NO
38B	MEADOWVILLE LOAM	0-5%	III	SLT/MOD	NO	NO
44D	OCCOQUAN SANDY LOAM	7-25%	II	SEVERE	YES	NO
54B	URBAN LAND - UDORTMENTS	0-7%	II	SLIGHT	NO	NO

**VICINITY MAP (SCALE: 1" = 2,000')**



**SHEET INDEX**

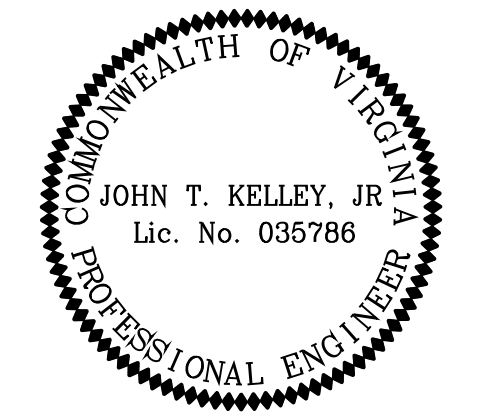
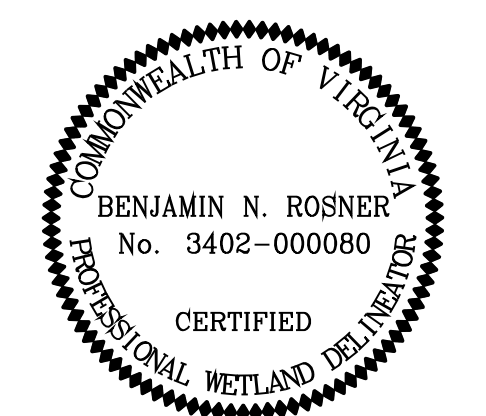
No	SHEET TITLE
1.	COVERSHEET
2.	PRESERVATION AREA SITE ASSESSMENT

**REVISIONS**

DATE	DESIGNER	NO.	DESCRIPTION

**PRINCE WILLIAM COUNTY COVER SHEET**

Project Name: <b>PW PARKWAY ES</b>		Project Number:
Subdivision or Site Plan Name: <b>PW PARKWAY ES</b>	Market Name: <b>PW PARKWAY ES</b>	Plan Number: _____ Plan Type: <b>PASA</b> Revision Number: _____
Magisterial District: <b>OCCOQUAN</b>	Present Zoning & Use: <b>A-1 AGRICULTURAL</b>	Date of Plan: (Month, Day, Year) <b>NOVEMBER 13, 2015</b>
Owner: <b>PWC BOARD OF COUNTY SUPERVISORS</b>	Address, Including Zip Code & Telephone No. <b>1 COUNTY COMPLEX COURT, WOODBRIDGE, VA 22192</b>	
Developer: <b>PRINCE WILLIAM COUNTY PUBLIC SCHOOLS</b>	Address, Including Zip Code & Telephone No. <b>P.O. BOX 389, MANASSAS, VA 20108</b>	
Name, Address & Telephone No. of Engineer: <b>WETLAND STUDIES AND SOLUTIONS, INC.</b> Architect or Surveyor certifying Plan: <b>5300 WELLINGTON BRANCH DRIVE, SUITE 100, GAINESVILLE, VA 20155 703-679-5600</b>		
Parcel Identification Number: <b>8192-79-8407</b>		
Total Area: <b>25.03 AC (part)</b>	Project Area: <b>25.03 AC (part)</b>	Disturbed Area: <b>N/A</b> Impervious Area: <b>N/A</b>
Related Plans Tracking Numbers (Including Rez. & S.U.P.): <b>N/A</b>		BMP Storage/hectare: _____ cm/ha BMP Storage/Acre: _____ ct/ac.

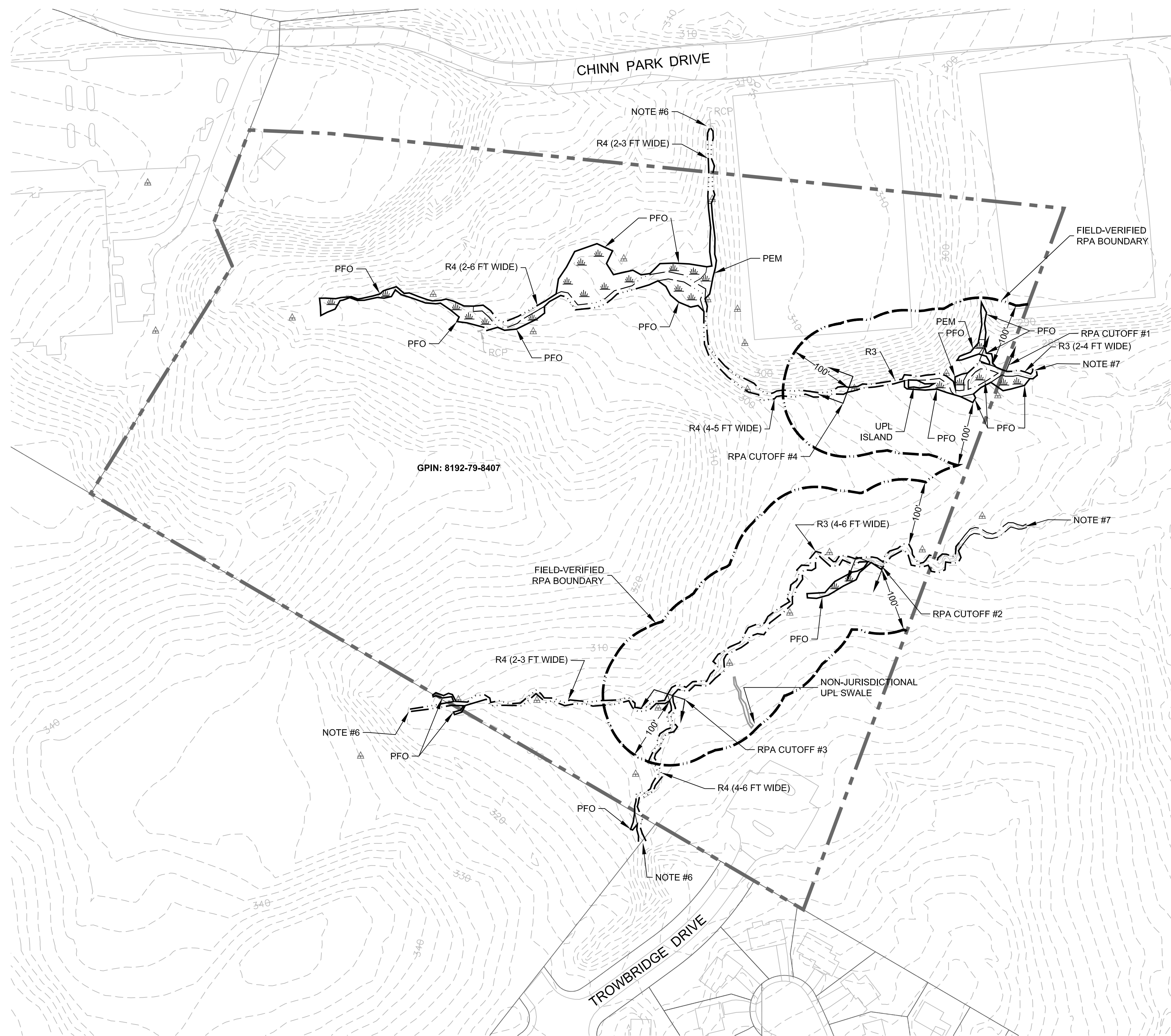


PROFESSIONAL SEAL & SIGNATURE

THESE PLANS ARE IN CONFORMANCE WITH PRINCE WILLIAM COUNTY STANDARDS AND ORDINANCES. ANY DEVIATION OR CHANGE IN THESE PLANS SHALL BE APPROVED BY THE DIRECTOR OF PLANNING PRIOR TO CONSTRUCTION.

Subdivision/Site Plan Name: **PW PARKWAY ES - PRESERVATION AREA SITE ASSESSMENT**    PWC File Number: \_\_\_\_\_





**PRESERVATION AREA SITE ASSESSMENT NOTES:**

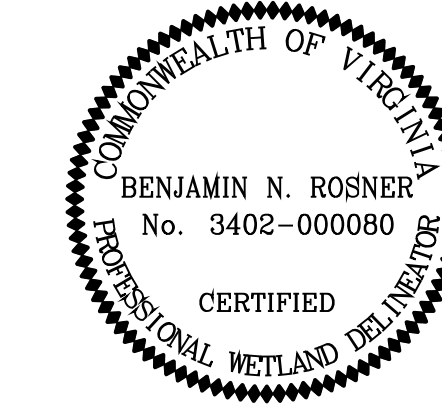
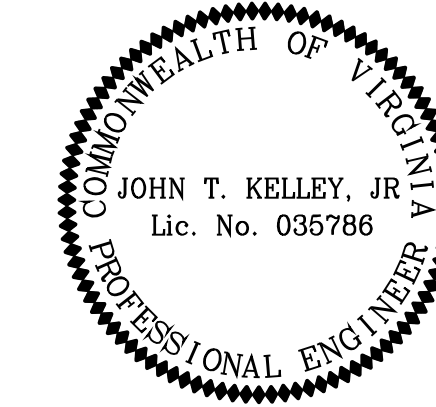
- This Preservation Area Site Assessment (PASA) is prepared from a survey of Wetland Studies and Solutions, Inc.'s (WSSI) waters of the U.S. (WOUS) flagging. A jurisdictional determination (JD) from the U.S. Army Corps of Engineers (COE) verifying this delineation is pending issuance.
  - The delineation was performed pursuant to "Corps of Engineers Wetlands Delineation Manual": Technical Report Y-87-1 (1987 Manual) and subsequent guidance, and modified by the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Eastern Mountains and Piedmont Region*, Version 2.0 dated April 2012.
  - The associated technical narrative description of the wetland delineation depicted hereon is contained in the report prepared by WSSI entitled "Waters of the U.S. (Including Wetlands) Delineation and Resource Protection Area Evaluation, PW Parkway ES (±25 Acres)" dated October 23, 2015.
- Refer to "Perennial Flow Determination, PW Parkway ES," dated November 10, 2015 (submitted to Prince William County concurrently with this PASA), for additional discussion on methods used to determine streams with perennial flow on the property. Copies of the data sheets identified herein are located in the PFD.
- Prince William County Mapped RPA is not located on or within 100-feet of the study area.
- RPA Cutoffs were examined in the field by WSSI personnel to determine the extent of RPA Core Components on the property. The results of this investigation are summarized in the PASA narrative.
- The remainder of this site is designated as a Resource Management Area (RMA), as are all areas of the County not included as an RPA.
- This water of the U.S. (i.e., stream or wetland) originates outside of the study area, upslope.
- This water of the U.S. (i.e., stream or wetland) continues outside of the study area, downslope.

**SURVEY NOTES:**

- This map has been oriented to The Virginia Coordinate System of 1983, North Zone, using real time DGPS. Wetlands and other Waters of the U.S. (i.e. streams) flags, data points, and the monumentation shown were located in the field using conventional survey methods. Accuracy of field locations of wetlands meets or exceeds the standards set by the U.S. Army Corps of Engineers Memo CENAO-CO-R, dated September 30, 1998. Field locations were completed on October 12, 2015.
- The boundary line information shown hereon is for information purposes only and does not constitute a boundary survey by Wetland Studies and Solutions, Inc. (WSSI). Monumentation, including traverse stations and fly points, shown on this drawing should be used to orient wetland locations to any future boundary, topographic, or location survey.
- Topography provided by Prince William County Digital Data and study area boundary information provided by Prince William County Public Schools were used as the base for this Attachment.

**CERTIFICATION**

This Preservation Area Site Assessment (PASA) Plan and Narrative, dated November 13, 2015, and the associated technical narrative descriptions of the wetland delineation depicted hereon (contained in the report prepared by Wetland Studies and Solutions, Inc. titled "Waters of the U.S. (Including Wetlands) Delineation and Resource Protection Area Evaluation, PW Parkway ES (±25 acres)" dated October 23, 2015) are certified as complete and accurate by John T. Kelley, Jr. (Lic. No. 035786), when evidenced by the seal and signature of said person on the PASA and Narrative.

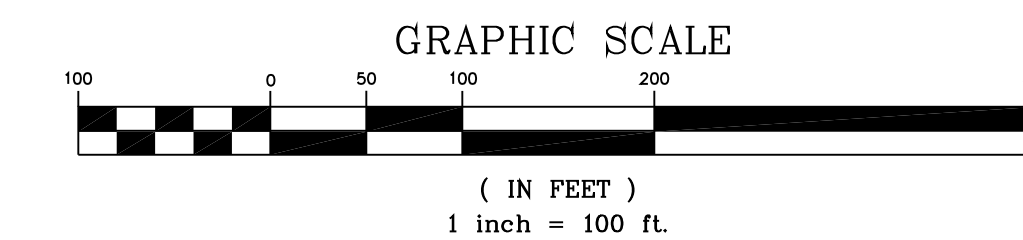


**LEGEND**

- STUDY AREA BOUNDARY
- PERENNIAL STREAM (PER WSSI'S OBSERVATIONS)
- APPROXIMATE LIMITS OF PERENNIAL STREAM (PER WSSI OBSERVATIONS - NOT SURVEYED)
- INTERMITTENT STREAM (PER WSSI'S OBSERVATIONS)
- APPROXIMATE LIMITS OF INTERMITTENT STREAM (PER WSSI OBSERVATIONS - NOT SURVEYED)
- JURISDICTIONAL WETLAND AREAS
- NON-JURISDICTIONAL FEATURE (Pending COE concurrence)
- FIELD-VERIFIED RESOURCE PROTECTION AREA (RPA) BOUNDARY
- RPA CUTOFF
- REINFORCED CONCRETE PIPE
- FLY POINT (WSSI)

**COWARDIN CLASSIFICATION**

- R3 RIVERINE UPPER PERENNIAL
- R4 RIVERINE INTERMITTENT
- PFO PALUSTRINE FORESTED WETLAND
- PEM PALUSTRINE EMERGENT WETLAND

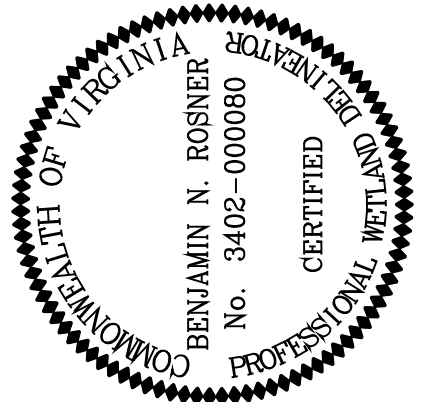


**Attachment I: PRESERVATION AREA SITE ASSESSMENT**

Prepared For: Prince William County Public Schools

**PW Parkway ES**

Prince William County, Virginia



REVISIONS		App. By	By
No.	Date	Description	

Horizontal Datum: VCS NAD 83

Vertical Datum: NAVD 88

Boundary and Topo Source:  
Prince William County Public Schools  
Prince William County Digital Data

Design	Draft	Approved
JMC	NG	JTK

Sheet #  
**2 of 2**

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