

#### CERTIFICATE OF AUTHENTICITY

THIS IS TO CERTIFY THAT THE FOLLOWING ELECTRONIC RECORDS ARE TRUE AND ACCURATE REPRODUCTIONS OF THE ORIGINAL RECORDS OF JAMES CITY COUNTY GENERAL SERVICES DEPARTMENT- STORMW ATER DIVISION; WERE SCANNED IN THE REGULAR COURSE OF BUSINESS PURSUANT TO GUIDELINES ESTABLISHED BY THE LIBRARY OF VIRGINIA AND ARCHIVES; AND HAVE BEEN VERIFIED IN THE CUSTODY OF THE INDIVIDUAL LISTED BELOW.

**BMP NUMBER:** 88014

DATE VERIFIED: December 7, 2021

**QUALITY ASSURANCE TECHNICIAN:** Charles E. Lovett II

Charles E. Sovett II

LOCATION: WILLIAMSBURG, VIRGINIA

**NOTES: CERTIFY & UPLOAD** 

## Maintenance Agreement

2. Deeds/Easements/
Agreements/Property
Records

## 3. ConstructionCertificate



#### Stormwater Management/BMP Facilities Record Drawing and Construction Certification Forms

(Note: In accordance with the requirements of the Chesapeake Bay Preservation Ordinance, Chapter 23, Section 23-10(4), BMP's shall be designed and constructed in accordance with the manual entitled James City County Guidelines for Design and Construction of Stormwater Management BMP's. Erosion and sediment control policy and approved plans generally require that at the completion of the project and prior to release of surety, an "as-built" plan prepared by a registered Professional Engineer or Certified Land Surveyor must be provided for the drainage system for the project, including any Best Management Practice (BMP) facilities. In addition, for BMP facilities involving the construction of an impounding structure or dam embankment, certification is required by a Professional Engineer who has inspected the structure during its construction. Currently there are over 20 water quality type BMP's accepted by the County.)

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Section 1 - Site Information:			HII Enoing		Protection
Project Name: White Hall Section 5			14	1 7 2015	tion
(5) (5)					
Project Location: 3611 Rochambeau Drive			1		
BMP Location: Storm piping within Section 5				EIVED	
County Plan No.: S-0053-2013					
2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0					
Project Type: Residential Business	Tax Map/Pa	arcel No.: 1220100022	2		
Commercial Office	BMP ID Co	de (if known):			
Institutional Industrial	Zoning Dist	rict: R2			
Public Roadway		Residential (single fam	ily detached units)		
Other		f or acres): 14.2 acres			
Brief Description of Stormwater Management/I Storm piping within Section 5 of White Hall	BMP Facility:				
Nearest Visible Landmark to SWM/BMP Facil	ity: <u>Williams</u> l	ourg Christian Acaden	ıy		
Nearest Vertical Ground Control (if known):					
JCC Geodetic Ground Control	USGS	Temporary	Arbitrary	Other	
Station Number or Name:					
Datum or Reference Elevation:					
Control Description:					
Control Location from Subject Facility					
	*				

Section 2 - Stormwate	er Management/BMP Facility Construction Information:
Approx. Construction of Facility Monitored by Name of Site Work Construction of Professional IDate of Completion for	ing Held for Construction of SWM/BMP Facility:  Yes No Unknown  Start Date for SWM/BMP Facility:  Spring 2015  County Representative during Construction:  Yes No Unknown  ontractor Who Constructed Facility:  George Nice & Sons  Firm Who Routinely Monitored Construction:  GET  r SWM/BMP Facility:  Spring 2015  ng/Construction Certification Submittal:  June 2015
Stormwater Managem reviewed and approve	ng and Construction Certifications are required within thirty (30) days of the completion of tent and/or BMP facility construction. Record Drawings and Construction Certifications must be ted by the James City County Engineering and Resource Protection Division prior to final to and bond or surety release.)
Section 3 - Owner/De	signer/Contractor Information:
Owner/Developer: (No	ote: Site Owner or Applicant responsible for development of the project.)
	Name: The Villages at White Hall  Mailing Address: 11237 Nuckols Road  Glen Allen, VA 23059  Business Phone: (804) 762-4800 Fax: (804) 762-9769  Contact Person: Jonathan Ridout Title:
Design Professional:	(Note: Professional Engineer or Certified Land Surveyor responsible for the design and preparation of plans and specifications for the Stormwater Management / BMP facility.)
	Firm Name: AES Consulting Engineers  Mailing Address: 5248 Olde Towne Road, Suite 1  Williamsburg, VA 23188  Business Phone: (757) 253-0040  Fax: (757) 220-8994  Responsible Plan Preparer: T. Ryan Stephenson, P.E.  Title: Project Manager  Plan Name: White Hall Section 5  Firm's Project No. 9048-20A  Plan Date: November 7, 2013  Sheet No.'s Applicable to SWM/BMP Facility://///
BMP Contractor: (Not	e: Site Work Contractor directly responsible for construction of the Stormwater Management/BMP facility.)  Firm Name: George Nice & Sons Mailing Address: 129 Industrial Blvd. Toano, VA 23168
	Business Phone: <u>(757) 565-2885</u>

Fax: (757) 565-1526

Contact Person: Ray Nice	
Site Foreman/Supervisor:	
Specialty Subcontractors and Purpos GET (Geotechnical)	e (for BMP Construction Only):
Section 4 - Professional Certifications:	
preparation of a Record Draw drainage system for the project Registered Professional Engin certification of Stornwater Mana	al Engineer or Certified Land Surveyor is responsible for wing, sometimes referred to as an As-Built plan, for the including any Stornwater Management/BMP Facilities, An age is responsible for the inspection, monitoring and agement BMP facilities during its construction.)
Record Drawing and Construction Certifications for Stor	mwater Management/BMP Facilities
Record Drawing Certification  Firm Name: AES Consulting Engineers  Mailing Address: 5248 Olde Towne Road, Suite 1  Williamsburg, VA 23188	Construction Certification  Firm Name: GET Solutions, Inc.  Mailing Address: 1592-E Penniman Rd  Williamshing, VA 23185
Business Phone: (757) 253-0040	Business Phone: 7577 564-6452
Fax: (757) 220-8994 Name: T. Ryan Stephenson, P.E.	Fax: (757) 564-6453
Title: Project Manager	Name: Joseph R. Rabinson, P.E.
Signature: Proc Malager	Title: Project Engineer
Date: 6/16/15	Signature: Date: (a)16/15
I hereby certify to the best of my knowledge and belief that this record drawing represents the actual condition of the Stormwater Management/BMP facility. The facility appears to conform to the provisions of the approved design plan, specifications design, and stormwater management plan, except a facility noted.  T. RYAN STEPHENSON Lic. No 044405  (Seal)  Virginia Registeres polesials for linear or Certified Land Surveyor	I hereby certify to the best of my knowledge and belief that this Stormwater Management/BMP facility was monitored and constructed in accordance with the provisions of the approved plan, specifications, and stormwater management plan, except as specifically noted.  **ALTH O**  **Lic. No. 050157*  Lic. No. 050157*  (Seal)  Virginia Registered Brofessional Engarteer
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#### <u>Section 5 - Record Drawing and Construction Certification Requirements and Instructions:</u>

- Pre-Construction Meeting Provides an opportunity to review SWM/BMP facility construction, maintenance and operation plans and addresses any questions regarding construction and/or monitoring of the structure. The design engineer, certifying professionals (if different), Owner/Applicant, Contractor and County representative(s) are encouraged to attend the preconstruction meeting. Advanced notice to the Engineering and Resource Protection Division is requested. Usually, this requirement can be met simultaneously with Erosion and Sediment Control preconstruction meetings held for the project.
- A fully completed STORMWATER MANAGEMENT / BMP FACILITIES, RECORD DRAWING and CONSTRUCTION CERTIFICATION FORM and RECORD DRAWING CHECKLIST. All applicable sections shall be completed in their entirety and certification statements signed and sealed by the registered professional responsible for individual record drawing and/or construction certification.
- The Record Drawing shall be prepared by a Registered Professional Engineer or Certified Land Surveyor for the drainage system of the project including any Best Management Practices.
- V Construction Certification - Construction of Stormwater Management / BMP facilities which contain impoundments, embankments and related engineered appurtenances including subgrade preparation, compacted soils, structural fills, liners, geosynthetics, filters, seepage controls, cutoffs, toe drains, hydraulic flow control structures, etc. shall be visually observed and monitored by a Registered Professional Engineer or his/her authorized representative. The Engineer must certify that the structure, embankment and associated appurtenances were built in accordance with the approved design plan, specifications and stormwater management plan and standard accepted construction practice and shall submit a written certification and/or drawings to the Engineering and Resource Protection Division as required. Soil and compaction test reports, concrete test reports, inspection reports, logs and other required construction material or installation documentation may be required by the Engineering and Resource Protection Division to substantiate the certification, if specifically requested. The Engineer shall have the authority and responsibility to make minor changes to the approved plan, in coordination with the assigned County inspector, in order to compensate for unsafe or unusual conditions encountered during construction such as those related to bedrock, soils, groundwater, topography, etc. as long as changes do not adversely affect the integrity of the structure(s). Major changes to the approved design plan or structure must be reviewed and approved by the original design professional and the James City County Environmental Division.
- Record Drawing and Construction Certifications are required within **thirty (30) days** of the completion of Stormwater Management / BMP facility construction. Submittals must be reviewed and accepted by James City County Engineering and Resource Protection Division prior to final inspection, acceptance and bond/surety release.

**Dual Purpose Facilities** - Completion of construction also includes an interim stage for Stormwater Management / BMP facilities which serve dual purpose as temporary sediment basins during construction and as permanent stormwater management / BMP facilities following construction, once development and stabilization are substantially complete. For these dual purpose facilities, construction certification is required once the temporary sediment basin phase of construction is complete. Final record drawing and construction certification of additional permanent components is required once permanent facility construction is complete.

Interim Construction Certification is required for those dual purpose embankment-type facilities that are generally ten (10) feet or greater in dam height (\*) and may not be converted, modified or begin function as a permanent SWM / BMP structure for a period generally ranging from six (6) to eighteen (18) months or more from issuance of a Land Disturbance permit for construction.

Interim or final record drawing and construction certifications are not required for temporary sediment basins which are designed and constructed in accordance with current minimum standards and specifications for temporary sediment basins per the Virginia Erosion and Sediment Control Handbook (VESCH); have a temporary service life of less than eighteen (18) months; and will be removed completely once associated disturbed areas are stabilized, <u>unless</u> a distinct hazard to the public's health, safety and welfare is determined by the Engineering and Resource Protection Division due to the size or presence of the structure or due to evidence of improper construction.

(\*Note: Dam Height as referenced above is generally defined as the vertical distance from the natural bed of the stream or waterway at the downstream toe of the embankment to the top of the embankment structure in accordance with 4VAC50-20-30, Virginia Impoundment Structure Regulations and the Virginia Dam Safety Program.)

- Record Drawings shall provide, at a minimum, all information as shown within these requirements and the attached **RECORD DRAWING CHECKLIST** specific to the type of SWM/BMP facility being constructed. Other additional record data may be formally requested by the James City County Engineering and Resource Protection Division. (Note: Refer to the current edition of the James City County Guidelines for Design and Construction of Stormwater Management BMP's manual for a complete list of acceptable BMP's. Currently there are over 20 acceptable water quality type BMP's accepted by the County.)
- Record Drawings shall consist of blue/black line prints and a reproducible (mylar, sepia, diazo, etc.) set of the approved stormwater management plan including applicable plan views, profiles, sections, details, maintenance plans, etc. as related to the subject SWM / BMP facility. The set shall indicate "RECORD DRAWING" in large text in the lower right hand corner of each sheet with record elevations, dimensions and data drawn in a clearly annotated format and/or boxed beside design values. Approved design plan values, dimensions and data shall not be removed or erased. Drawing sheet revision blocks shall be modified as required to indicate record drawing status. Elevations to the nearest 0.1' are sufficiently accurate except where higher accuracy is needed to show positive drainage. Certification statements as shown in Section 4 of the Record Drawing and Construction Certification Form, or similar forms thereof, and professional signatures and seals, with dates matching that of the record drawing status in the revision or title block, are also required on all associated record drawing plans, prints or reproducibles.
- Submission Requirements Initial and subsequent submissions for review shall consist of a minimum of one (1) blue/black line set for record drawings and one copy of the construction certification documents with appropriate transmittal. Under certain circumstances, it is understood that the record drawing and construction certification submissions may be performed by different professional firms. Therefore, record drawing submission may be in advance of construction certification or vice versa. Upon approval and prior to release of bond/surety, final submission shall include one (1) reproducible set of the record drawings, one (1) blue/black line set of the record drawings and one (1) copy of the construction certification. Also for current and/or future incorporation into the County BMP database and GIS system,

#### **Stormwater Management/BMP Facilities Record Drawing and Construction Certification Forms**

Page 6

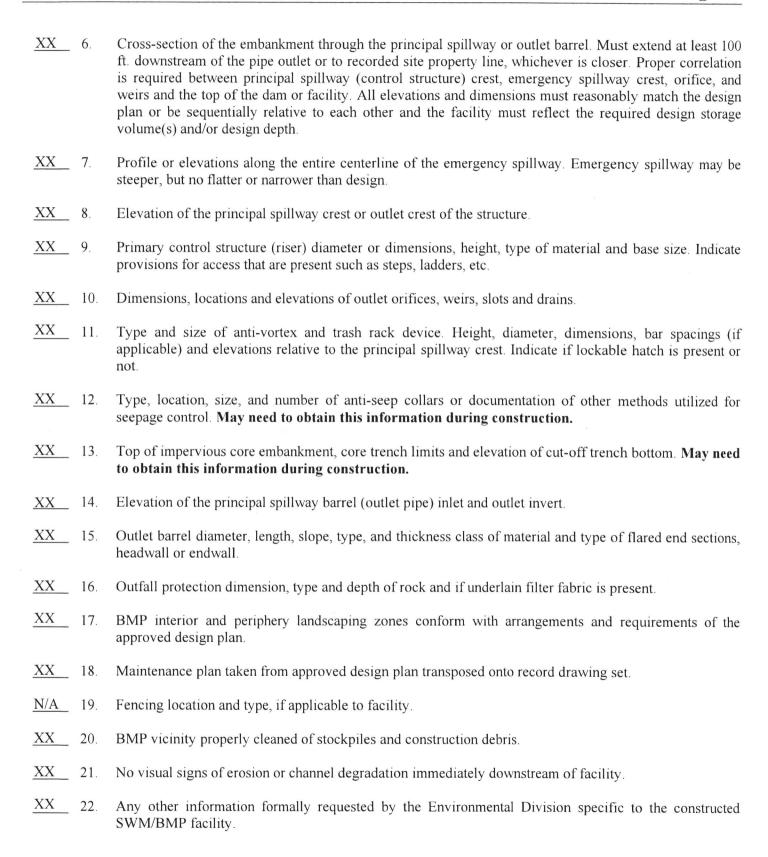
it is requested that the record drawings also be submitted to the Engineering and Resource Protection Division on a diskette or CD-ROM in an acceptable electronic file format such as \*.dxf, \*.dwg, etc. or in a standard scanned and readable format. The electronic file requirement can be discussed and coordinated with Engineering and Resource Protection Division staff at the time of final submission.

(Key for Checklist is as follows: XX Acceptable N/A Not Applicable Inc Incomplete)

ĺ.	Meth	ods and Presentation: (Required for all Stormwater Management/BMP facilities.)
XX	_ 1.	All constructed facilities meet approved design plans, unless otherwise shown. Record information or deviations from approved design plan shown in clearly annotated format and/or boxed beside design values.
XX	2.	Elevations to the nearest 0.1' unless higher accuracy is needed to show positive drainage.
XX	_ 3.	All plan sheets labeled with "RECORD DRAWING" in large text in lower right hand corner. (Approved County Plan Number and BMP ID Code can be included if known).
XX	4.	All plan sheet revision blocks modified to indicate date and record drawing status.
XX	_ 5.	All plan sheets have certification statements and certifying professional's signature and seal.
I.	Mini	mum Standards: (Required for all Stormwater Management / BMP facilities, as applicable.)
XX	_ 1.	All requirements of Section I (Methods and Presentation) apply to this section.
XX	_ 2.	Plan Views: Show general location, arrangement and dimensions. Location and alignment shall generally match approved design plans.
XX	_ 3.	Profile or elevations along top or berm of the facility. At a minimum, elevations are required at each end, at intervals not to exceed 50 feet and where low spots may be present. Top of embankment or berm elevations must be no less than design elevation plus any settlement allowances.
XX	_ 4.	Top widths, berm widths, and embankment side slopes.
XX	_ 5.	Show length, width and depth of facility or grading, contours or spot elevations as required to verify permanent pool and design storage volumes were met or were reasonably close to the approved design. Evaluation of as-built grading, contours, spot elevations, or cross-sections, may be necessary by the professional to ensure approved design configurations, depths and volumes were closely maintained. If grading or elevations are significantly different from the approved plan, the Engineering and Resource Protection Division shall be contacted immediately to determine whether the variation is acceptable or whether further evidence will be required. Facilities which do not closely resemble approved plan grades, elevations or configurations may require regrading by the Contractor; check volumetric computations.

freeboard were closely maintained.

and/or a check hydraulic routing to ensure approved design water surface elevations, discharges or



II.	Grou	p A - Wet Ponds (Includes A-1 Small Wet Ponds; A-2 Wet Ponds; A-3 Wet Ext Det Ponds.)
	_ A1.	All requirements of Section II, Minimum Standards, apply to Group A facilities.
	_ A2.	Principal spillway consists of reinforced concrete pipe with O-Ring gaskets for watertight joint construction.
	_ 3.	Sediment forebays or pretreatment devices provided at inlets to pond. Generally 4 to 6 ft. deep.
	_ A4.	Access for maintenance and equipment is provided to the forebay(s). Access corridors are at least 12 ft wide, have a maximum slope of 15 percent and are adequately stabilized to withstand heavy equipment or vehicle use.
	_ A5.	Adequate fixed vertical sediment depth markers installed in the forebay(s) for future sediment monitoring purposes.
	_ A6.	Pond liner (if required) provided. Either clay liners, polyliners, bentonite liners or use of chemical soil additives based on requirements of the approved plan.
	_ A7.	Minimum 6 percent slope safety bench extending a minimum of 15 feet outward from normal pool edge and/or an aquatic bench extending a minimum of 10 feet inward from the normal shoreline with a maximum depth of 12 inches below the normal pool elevation, if applicable, per the approved design plans. (Note: Safety benches may be waived if pond side slopes are no steeper than 4H:1V).
	_ A8.	No trees are present within a zone 15 feet around the embankment toe and 25 feet from the principal spillway structure.
	_ A9.	Wet permanent pool, typically 3 to 6 feet deep, is provided and maintains level within facility.
	_ A10	Low flow orifice has a non-clogging mechanism.
	_ A11	. A pond drain pipe with valve was provided.
	_ A12	. Pond side slopes are not steeper than 3H:1V, unless approved plan allowed for steeper slope.
	_ A13	End walls above barrels (outlet pipe) greater than 48 inch in diameter are fenced to prevent a fall hazard.

V.	Group	B - Wetlands (Includes B-1 Shallow Marsh; B-2 Ext Det Shallow Wetlands; B-3 Pond Wetland System and B-4 Pocket Wetland)
	_ B1.	Same requirements as Group A Wet Ponds.
	B2.	Minimum 2:1 length to width flow path provided across the facility.
	_ B3.	Micropool provided at or around outlet from BMP (generally 3 to 6 ft. deep).
	_ B4.	Wetland type landscaping provided in accordance with approved plan. Includes correct pondscaping zones, plant species, planting arrangements, wetland beds, etc. Wetland plants include 5 to 7 emergent wetland species. Individual plants at 18 inches on center in clumps.
	B5.	Adequate wetland buffer provided (Typically 25 ft. outward from maximum design water surface elevation and 15 ft. setback to structures).
	_ B6.	No more than one-half (1/2) of the wetland surface area is planted.
	_ B7.	Topsoil or wetland mulch provided to support vigorous growth of wetland plants.
	_ B8.	Planting zones staked or flagged in field and locations subsequently established by appropriate field surveying methods for record drawing presentation

V.	Group	C - Infiltration Practices (Includes C-1 Infiltration Trench; C-2 Infiltration Trench; C-3 Infiltration Basin; and C-4 Infiltration Basin)
	C1.	All requirements of Section II, Minimum Standards, apply to Group C facilities as applicable.
	C2.	Facility is not located on fill slopes or on natural ground in excess of six (6) percent.
	C3.	Pretreatment devices provided prior to entry into the infiltration facility. Acceptable pretreatment devices include sediment forebays, sediment basins, sediment traps, sump pits or inlets, grass channels, plunge pools or other acceptable measures.
	C4.	Three (3) or more of the following pretreatment devices provided to protect long term integrity of structure: grass channel; grass filter strip; bottom sand layer; upper filter fabric layer; use of washed bank run gravel aggregate.
_	C5.	Sides of infiltration practice lined with filter fabric.
	C6.	Facility was not used for erosion and sediment control purposes and sediment was prevented from entering the facility to the greatest extent possible during construction.
	C7.	Stabilization and acceptable vegetative cover established over contributing drainage area prior to conveyance of stormwater to the facility.
	C8.	Minimum one hundred (100) foot separation horizontally from any known water supply well and minimum one hundred (100) foot separation upslope from any building.
	C9.	Minimum twenty-five (25) foot separation down gradient from any structure.
	C10.	Stormwater outfalls provided for overflow associated with larger design storms.
	C11.	No visual signs of erosion or channel degradation immediately downstream of facility.
	C12.	Facility does not currently cause any apparent surface or subsurface water problems to downgrade properties.
	C13.	Observation well provided.
	C14.	Adequate, direct access provided to the facility for future maintenance, operation and inspection.

VI.	Group	<b>D - Filtering Systems</b> (Includes D-1 Bioretention Cells; D-2 Surface Sand Filters; D-3 Underground Sand Filters; D-4 Perimeter Sand Filters; D-5 Organic Filters; and D-6 Pocket Sand Filters)
	_ D1.	All requirements of Section II, Minimum Standards, apply to Group D facilities.
	_ D2.	Sediment pretreatment devices provided.
	_ D3.	For D-1 BMPs (Bioretention Cells), pretreatment consisting of a grass filter strip below level spreader (deflector); a gravel diaphragm; and mulch and planting soil layers were provided.
	_ D4.	For D-1 BMPs (Bioretention Cells), plantings consist of native plant species; vegetation provided was based on zones of hydric tolerances; trees and understory of shrubs and herbaceous materials were provided; woody vegetation is absent from inflow locations; and trees are located around facility perimeter.
	_ D5.	Facility was not used for erosion and sediment control purposes and sediment was prevented from entering the facility to the greatest extent possible during construction.
	_ D6.	No visible signs of accumulated silt/sediment were present in the facility following construction or alternately, accumulated silt/sediment was properly removed.
-	_ D7.	Filtering system is off-line from storm drainage conveyance system.
·-	_ D8.	Overflow outlet has adequate erosion protection.
	_ D9.	Deflector, diversion, flow splitter or regulator structure provided to divert the water quality volume to the filtering structure.
	_ D10.	Minimum four (4) inch perforated underdrain provided in a clean aggregate envelope layer beneath the facility.
	_ D11.	Minimum fifty (50) foot separation from any slope fifteen (15) percent or greater. Minimum one hundred (100) foot separation horizontally from any known water supply well. Minimum one hundred (100) foot separation upslope and twenty-five (25) foot separation downslope from any building.
	_ D12.	Stabilization and acceptable vegetative cover established over contributing drainage area prior to conveyance of stormwater to the facility.
U-	_ D13.	No visual signs of erosion or channel degradation immediately downstream of facility.
	_ D14.	Adequate, direct access provided to the pretreatment area and/or filter bed for future maintenance.

#### STORMWATER MANAGEMENT/BMP FACILITIES AS-BUILT PLAN CHECKLIST

VII.	<u>Group</u>	E - Open Channel Systems (Includes E-1 Wet Swales (Check Dams); E-2 Dry Swales; and E-3 Biofilters)
	E1.	All requirements of Section II, Minimum Standards, apply to Group E facilities as applicable.
	E2.	Open channel system has constructed longitudinal slope of less than four (4) percent.
	E3.	No visual signs of erosion in the open channel system's soil and/or vegetative cover.
	E4.	Open channel side slopes are no steeper than 2H:1V at any location. Preferred channel sideslope is 3H:1V or flatter.
	E5.	No visual signs of ponding are present at any location in the open channel system, except at rock check dam locations for E-1 systems (Wet Swales).
	E6.	For E-2 BMPs (Dry Swales), an underdrain system was provided.
	E7.	Treated timber or rock check dams provided as pretreatment devices for the open channel system.
	E8.	Gravel diaphragm provided in areas where lateral sheet flow from impervious surfaces are directly connected to the open channel system.
	E9.	Grass cover/stabilization in the open channel system appears adaptable to the specific soils and hydric conditions for the site and along the channel system.
***************************************	E10.	Open channel system areas with grass covers higher than four (4) to six (6) inches were properly mowed.
	E11.	Facility was not used for erosion and sediment control purposes and sediment was prevented from entering the facility to the greatest extent possible during construction.
	E12.	No visible signs of accumulated silt/sediment were present in the facility following construction or alternately, accumulated silt/sediment was properly removed and no adverse affects to the function of the facility are anticipated.
	E13.	For E-3 BMPs (Biofilters), the bottom width is six (6) feet maximum at any location.
	E14.	For E-3 BMPs (Biofilters), sideslopes are 3H:1V maximum at any location.
	E15.	For E-3 BMPs (Biofilters), the constructed channel slope is less than or equal to three (3) percent at any location.
	E16.	For E-3 BMPs (Biofilters), the constructed grass channel is approximately equivalent to the constructed roadway length.

VIII.	<u>Group</u>	<b>F - Extended Dry Detention</b> (Includes F-1 Timber Walls; and F-2 Dry Extended Detention with Forebay)
	_ F1.	All requirements of Section II, Minimum Standards, apply to Group F facilities.
	_ F2.	Basin bottom has positive slope and drainage from all basin inflow points to the riser (or outflow) location.
	_ F3.	Timber wall BMP used in intermittent stream only. (ie. Prohibited in perennial streams.)
	_ F4.	Forebay provided approximately 20 ft. upstream of the facility. Forebays generally 4 to 6 feet in depth.
2	_ F5.	A reverse slope pipe, vertical stand pipe or mini-barrel and riser was provided to prevent clogging.
	_ F6.	Principal spillway and outlet barrel provided consisting of reinforced concrete pipe with O-Ring gaskets for watertight joint construction.
	_ F7.	Mini-barrel and riser, if used, contains a removable trash rack to reduce clogging.
	_ F8.	Low flow orifice, if used, has a minimum diameter of three (3) inches or two (2) inches if internal orifice control was utilized and a small, cage type external trash rack.
	_ F9.	Timbers properly reinforced or concrete footing provided if soil conditions were prohibitive.
	_ F10.	Timber wall cross members extended to a minimum depth of two (2) feet below ground elevation.
	_ F11.	Protection against erosion and scour from the low flow orifice and weir-flow trajectory provided.
	_ F12.	Stilling basin or standard outlet protection provided at principal spillway outlet.
	_ F13.	Adequate, direct access provided to the facility. Access corridor to facility is at least ten (10) feet wide; slope is less than twenty (20) percent and appropriate stabilization provided for equipment and vehicle use. Access extends to forebay, standpipe and timber wall, as applicable.
	_ F14.	No visual signs of undercutting of timber walls or clogging of the low orifice were present.
	_ F15.	No visual signs of erosion or channel degradation immediately downstream of facility.
	_ F16.	No visible signs of accumulated silt/sediment were present in the facility following construction or alternately, accumulated silt/sediment was properly removed and no adverse affects to the function of the facility are anticipated.

IX.	Group	G - Open Spaces (Includes All Open Space Types G-1; G-2; and G-3)
	_ G1.	All requirements of Section II, Minimum Standards, apply to Group G facilities as applicable.
	_ G2.	Constructed impervious areas appear to conform with locations indicated on the approved plan and appear less than sixty (60) percent impervious in accordance with the requirements of the James City County Chesapeake Bay Preservation Ordinance.
	_ G3.	Dedicated open space areas are in undisturbed common areas, conservation easements or are protected by other enforceable instruments that ensure perpetual protection.
	_ G4.	Provisions included to clearly specify how the natural vegetated areas utilized as dedicated open space will be managed and field identified (marked).
	_ G5.	Adequate protection measures were implemented during construction to protect the defined dedicated open space areas.
	_ G6.	Dedicated open space areas were not disturbed during construction (ie. cleared, grubbed or graded).

(Key for Checklist is as follows: XX Acceptable N/A Not Applicable Inc Incomplete)

#### X. Storm Drainage Systems (Associated with BMP's Only)

(Includes all incidental stormwater drainage conveyance systems associated with SWM/BMP facilities such as onsite or offsite storm drains, open channels, inlets, manholes, junctions, outlet protections, deflectors, etc. These facilities are external to the treatment function of, but are directly associated with drainage to and/or from a constructed SWM/BMP facility. The intent of this portion of the certification is to accurately identify the type and quantity of inflow or outflow points associated with the facility for future reference. The Professional may use his/her own discretion to determine inclusive facilities to meet the intent of this section. As a general rule, storm drainage systems would include incidental facilities to the nearest access structure upslope or downslope from the normal physical limits of the facility or 800 feet of storm drainage conveyance system length, whichever is less.)

XX	_ SD1.	All requ	irements of Section II, Minimum Standards, apply to Storm Drainage Systems.
XX	_ SD2.	Horizon	tal location of all pipe and structures relative to the SWM/BMP facility.
XX	_ SD3.	Type, to	p elevation and invert elevation of all access type structures (inlets, manholes, etc.).
XX	_ SD4.	Materia	type, size or diameter, class, invert elevations, lengths and slopes for all pipe segments.
XX	_ SD5.	Class, le	ength, width and depth of riprap and outlet protections or dimensions of special energy dissipation es.
XI.	_ O1.	All requ	(Includes any non-typical, specialty, manufactured or innovative stormwater management/BMP practices or systems generally accepted for use as or in conjunction with other acceptable stormwater management/BMP practices. Requires evidence of prior satisfactory industry use and prior Environmental Division approval, waiver or exception.)  irements of Section II, Minimum Standards, apply to this section.
	_ O2.		ation criteria to be determined on a case-by-case basis by the Engineering and Resource Protection a specific to the proposed SWM/BMP facility.

XII.	Refere	ences (The James City County Record Drawing and Construction Certification Forms and Checklists for Stormwater Management/BMP facilities were developed using the following sources and references.)
		Baltimore County, Maryland Soil Conservation District, As-Built Stormwater Management Pond Checklist.
		James City County, Virginia, Guidelines for Design and Construction of Stormwater Management BMP's (October 1999).
		James City County, Virginia, Stormwater Detention/Retention Basin Design Checklist and Erosion and Sediment Control and Stormwater Management Design Plan Checklists.
		James City County Stormwater Policy Framework, Final Report of the James City County BMP Policy Project, October 1998, The Center for Watershed Protection.
		Prince Georges County, Maryland, As-Built Requirements Retention or Detention Pond/Basin.
		Prince William County, Virginia, Stormwater Management Fact Sheet.
		Stafford County, Virginia, As-Built Plan Checklist.
		Stormwater Management Design Manual, NRCS Maryland Code No. 378, Pond Standards and Specifications.
		USEPA/Watershed Management Institute, Stormwater Management Inspection Forms.
		Virginia Impounding Structure Regulations (Dam Safety), Department of Conservation & Recreation, 1997.
		Virginia Erosion and Sediment Control Handbook, Third Edition 1992, Virginia Department of Conservation and Recreation, Division of Soil and Water Conservation.
		Virginia Stormwater Management Handbook, 1999 edition, Virginia Department of Conservation and Recreation, Division of Soil and Water Conservation.

## 4. Record Drawings(As Builts)

#### GENERAL NOTES

1. ZONING IS R2, RESIDENTIAL DISTRICT, CLUSTER OVERLAY WITH PROFFERS. CASE # Z-11-05/SUP-18-05/MP-08-05

THE MASTER PLAN WAS AMENDED ON MARCH 13, 2007 AND APPROVED BY THE PLANNING DIRECTOR ON MARCH 21, 2007 AS CASE # MP-01-07.

ALL PROPOSED UTILITIES SHALL BE PLACED UNDERGROUND AS PER JAMES CITY COUNTY SUBDIVISION ORDINANCE SECTION 19-33.

4. CONTACT MISS UTILITY (1-800-552-7001) FOR EXISTING UTILITY LOCATIONS 48 HOURS PRIOR TO COMMENCING THE

5. EXISTING UTILITY LOCATIONS INDICATED ARE APPROXIMATE. FIELD VERIFY PRIOR TO COMMENCING THE WORK.

THE CONTRACTOR SHALL SATISFY HIMSELF AS TO ALL SITE CONDITIONS PRIOR TO CONSTRUCTION.

7. A LAND DISTURBING PERMIT AND SILTATION AGREEMENT, WITH SURETY ARE REQUIRED FOR THIS PROJECT.

8. VERIFY ALL DIMENSIONS AND NOTIFY JAMES CITY SERVICE AUTHORITY PRIOR TO ANY EXCAVATION OR DEMOLITION WITHIN

9. NO BUILDING OR STRUCTURE SHALL EXCEED 35 FEET IN HEIGHT FROM GRADE.

APPROVED SEPTEMBER 13, 2005.

10. CONTRACTOR SHALL BE RESPONSIBLE FOR ESTABLISHING AND MAINTAINING ALL LINES AND GRADES REQUIRED.

11. ALL UTILITY AND SURVEY DATA SHOWN ON THE DRAWINGS HAVE BEEN PROVIDED BY AES CONSULTING ENGINEERS. INFORMATION HAS BEEN OBTAINED FROM THE BEST AVAILABLE SOURCES AT THE TIME OF THE SURVEY BUT IS NOT REPRESENTED AS BEING COMPLETE AND ACCURATE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND PROTECT EXISTING UTILITIES AND UNDERGROUND STRUCTURES. DAMAGE TO EXISTING UTILITIES AND UNDERGROUND STRUCTURES SHALL BE REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE DEVELOPER.

12. ANY EXISTING UNUSED WELLS SHALL BE ABANDONED IN ACCORDANCE WITH STATE PRIVATE WELL REGULATIONS AND JAMES CITY COUNTY CODE.

13. CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF CONSTRUCTION EFFORTS WITH VIRGINIA NATURAL GAS, DOMINION VIRGINIA POWER, VERIZON TELEPHONE, HAMPTON ROADS SANITATION DISTRICT, APPROPRIATE TELEVISION CABLE COMPANY, AND OTHERS THAT MAY BE REQUIRED

14. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FOR THE WORK INDICATED.

15. THE CONTRACTOR SHALL REESTABLISH ALL PROPERTY PINS, MONUMENTS, WATER METERS, DRAINAGE CULVERTS, FENCES, UTILITY POLES, DRIVEWAYS, CURBS, GUTTERS, ETC. DISTURBED DURING CONSTRUCTION AT NO ADDITIONAL COST TO THE

16. THE CONTRACTOR SHALL COMPLY WITH ALL PROVISIONS OF THE VIRGINIA UNDERGROUND UTILITY DAMAGE PREVENTION ACT (SECTION 56-265.14 ET. SEQ. CODE OF VIRGINIA, 1950, AS AMENDED) AND HEREBY AGREES TO HOLD THE DEVELOPER AND THE ENGINEER HARMLESS AGAINST ANY LOSS, DAMAGE, OR CLAIMS OF ANY NATURE WHATSOEVER ARISING OUT OF THE CONTRACTOR'S FAILURE TO COMPLY WITH THE REQUIREMENTS OF SAID ACT.

17. THE CONTRACTOR IS REQUIRED TO COMPLY WITH THE VIRGINIA OVERHEAD HIGH VOLTAGE LINE SAFETY ACT (SECTIONS 59.1-406 THROUGH 59.1-414, CODE OF VIRGINIA, 1950, AS AMENDED). THE CONTRACTOR IS REQUIRED TO VISIT THE SITE AND NOTE THE POSITION OF OVERHEAD CABLES PRIOR TO CONSTRUCTION

18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING AND MAINTAINING EROSION AND SEDIMENT CONTROL MEASURES AS SHOWN ON THE DRAWINGS AND FOR EXCAVATION STOCKPILES, STAGING AREAS, MOBILIZATION SITES, BEDDING/BACKFILL STOCKPILES AND OTHER LAND DISTURBANCES NOT SPECIFICALLY ADDRESSED IN THE DRAWINGS OR CONTRACT DOCUMENTS. EROSION AND SEDIMENT CONTROL MEASURES SHALL MEET OR EXCEED THE MINIMUM STANDARDS OF THE "VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK" (LATEST PUBLICATION) AND THE REQUIREMENTS OF THE LOCAL GOVERNING AUTHORITY.

19. THE ABSENCE OF THE DEVELOPER OR THE ENGINEER AT THE JOB SITE DOES NOT, IN ANY WAY, RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO PERFORM THE WORK IN ACCORDANCE WITH THE DRAWINGS, CONTRACT DOCUMENTS, ADDENDA, AND WRITTEN AUTHORIZED PLAN REVISIONS.

20. THE CONTRACTOR SHALL INSTALL PIPE, FITTINGS, AND MANHOLES IN DRY TRENCH CONDITIONS AND IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION. THE CONTRACTOR SHALL PROVIDE ALL DEWATERING, WELL POINTING, SHEETING, TRENCH BOXES, AND TRENCH STABILIZATION AS REQUIRED AT NO ADDITIONAL COST TO THE DEVELOPER.

21. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LAWS, ORDINANCES, RULES, REGULATIONS, AND ORDERS OF ANY BODY HAVING JURISDICTION. THE CONTRACTOR SHALL ERECT AND MAINTAIN, AS REQUIRED BY THE CONDITIONS AND PROGRESS OF THE WORK, ALL NECESSARY SAFEGUARDS FOR SAFETY AND PROTECTION.

22. CONTOUR INTERVAL IS 1 FOOT.

23. THIS PROPERTY LIES IN ZONE X (AREAS DETERMINED TO BE OUTSIDE THE 500 YEAR FLOOD PLAIN) PER F.I.R.M. # 510201 0010 B DATED 2/6/91.

24. STORM STRUCTURES, SEWER AND BEDDING SHALL CONFORM TO THE VDOT ROAD AND BRIDGE STANDARDS AND VDOT SPECIFICATIONS. ALL PIPE BEDDING SHALL BE IN ACCORDANCE WITH PB-1 AND MANUFACTURER SPECS. AND GUIDELINES, AND STORM SEWER MANHOLES DEEPER THAN 4 FEET SHALL HAVE STEPS (ST-1). ALL REINFORCED CONCRETE PIPE (RCP) SHALL BE CLASS III UNLESS OTHERWISE NOTED.

25. DEVELOPER: THE VILLAGES AT WHITE HALL 11237 NUCKOLS ROAD GLEN ALLEN, VA 23059 CONTACT: JONATHAN RIDOUT PHONE NO.: 804.762.4800 FAX NO.: 804.762.9769

26. THE PROFESSIONAL WHOSE SEAL IS AFFIXED HEREON SHALL ACT AS THE "RESPONSIBLE LAND DISTURBER" FOR PURPOSES OF PLAN APPROVAL ONLY. PRIOR TO ISSUANCE OF THE LAND DISTURBING PERMIT, THE CONTRACTOR OR DEVELOPER SHALL PROVIDE THE NAME OF A "RESPONSIBLE LAND DISTURBER" WHO SHALL ASSUME RESPONSIBILITY AS THE "RESPONSIBLE LAND DISTURBER" FOR THE CONSTRUCTION PHASE OF THE PROJECT. THE CONTRACTOR OR DEVELOPER SHALL PROVIDE WRITTEN NOTIFICATION SHOULD THE "RESPONSIBLE LAND DISTURBER" CHANGE DURING

27. CONTRACTOR SHALL BE REQUIRED TO REGISTER FOR A VIRGINIA STORMWATER MANAGEMENT PROGRAM (VSMP) PERMIT.

28. HORIZONTAL DATUM - NAD83 (1192) VIRGINIA STATE PLAIN COORDINATE SYSTEM SOUTH ZONE VERTICAL DATUM - NGVD29 VIRGINIA STATE PLAIN COORDINATE SYSTEM SOUTH ZONE. JAMES CITY COUNTY MONUMENTS USED - 302, 303, 305, 340

29. STORM WATER MANAGEMENT FOR THIS PROJECT IS TO BE IN COMPLIANCE WITH APPROVED MASTER STORM WATER MANAGEMENT PLAN COUNTY ID SWM-002-06/C-096-06. SPECIFICALLY, RUNOFF FROM THIS SITE DRAINS TO EXISTING BMP # 1-2 (SP-0046-2007).

30. NEW MONUMENTS SHALL BE SET IN ACCORDANCE WITH SECTIONS 19-34 THRU 19-36 OF THE JAMES CITY COUNTY SUBDIVISION ORDINANCE.

31. THE STORMWATER MANAGEMENT/BMP FACILITY AND ASSOCIATED STORMWATTER CONVEYANCE SYSTEMS AS PROPOSED FOR THIS PROJECT WILL REQUIRE SUBMISSION, REVIEW, AND APPROVAL OF A RECORD DRAWING (AS-BUILT) AND CONSTRUCTION CERTIFICATION PRIOR TO RELEASE OF THE POSTED BOND/SURETY.

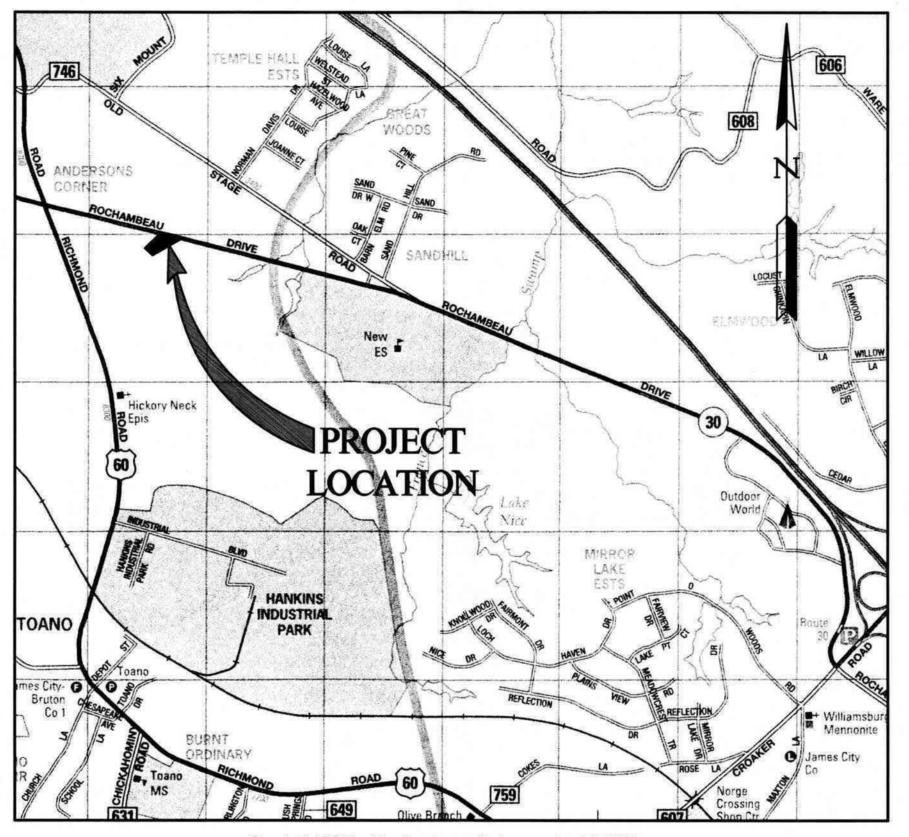
32. VDOT SHALL NOT BE RESPONSIBLE FOR MAINTAINING ANY SIDEWALK LOCATED OUTSIDE OF STATE MAINTAINED RIGHT-OF-WAY LIMITS.

33. ALL PRIVATE ENTRANCES SHALL BE INSTALLED IN ACCORDANCE WITH THE CURRENT VDOT STANDARDS AND SPECIFICATIONS. IT IS THE DEVELOPER'S RESPONSIBILITY TO ENSURE THAT BUILDERS HAVE PROPERLY INSTALLED ALL CONCRETE ENTRANCES AND ENTRANCE CULVERTS.

## SECTION 5 DRAINAGE RECORD DRAWING



#### STONEHOUSE DISTRICT JAMES CITY COUNTY, VIRGINIA



Copyright ADC The Map People permitted use number 21004223 VICINITY MAP

(APPROX. SCALE 1"=2000')

County Project No.: S-0053-2013 Original Submittal Date: November 7, 2013

#### INDEX OF SHEETS

SHEET NO.

----- EXISTING CONTOUR ELEV.

LEGEND

WATER

SANITARY SEWER

STORM SEWER

FORCE MAIN

MANHOLE

CURB DROP INLET

YARD DROP INLET

LARED END SECTION

FIRE HYDRANT ASSEMBLY

BLOW-OFF VALVE

AIR RELEASE ASSEMBLY

CLEAN OUT

WATER METER

STREETLIGHT

CENTERLINE/BASELINE

PROPERTY LINE

Q DITCH/SWALE CONGRETE LINED DITCH

EC-3 LINED DITCH

EXISTING TREELINE

LIMITS OF CLEARING

SILT FENCE

INLET PROTECTION

CHECK DAM

STRAW BALE BARRIER RIP RAP

ROLL TOP GUTTER

GROUND ELEVATION

PROPOSED TOP OF CURB ELEV.

GRADING LINE TIE-IN

(BY OTHERS)

REVERSE ROLL TOP GUTTER XXXXXXX

SHEET DESCRIPTION

PROPOSED

----FM.---

CONON

--X---X-

EXISTING:

--- EX. W ---

— EX. FM —

Indicates and an artist

R1	COVER SHEET
02	OVERALL DEVELOPMENT
03	ENVIRONMENTAL INVENTORY PLAN
04	OVERALL PLAN
05	PRELIMINARY PLAT
06	ROAD AND UTILITY PLAN
R7	GRADING DRAINAGE AND EROSION AND SEDIEMENT CONTROL PLAN
08	MULTI-USE PATH AND GRADING PLAN
09	PHASE I EROSION AND SEDIMENT CONTROL PLAN
10	OVERALL DRAINAGE PLAN
11	ROAD AND UTILITY PROFILES
12	NOTES AND DETAILS
13	NOTES AND DETAILS
14	NOTES AND DETAILS
15	LANDSCAPE PLAN

SITE DATA TAX MAP PARCEL ID: ADDRESS: PROJECT AREA: DISTURBED AREA: PROPOSED IMPERVIOUS AREA: 4.12 AC FLOOD HAZARD MAP:

1220100022 3611 ROCHAMBEAU DRIVE 14.2 AC 10.24 AC

LANDSCAPE NOTES AND DETAILS

TRAFFIC CONTROL PLAN

LIGHTING PLAN

FEMA PANEL NUMBER # 510201 0010 B DATED 2/6/91 - ZONE X AREA DETERMINED TO BE OUTSIDE THE 500-YEAR FLOOD PLAIN. JAMES CITY COUNTY WARE CREEK WATERSHED Y062

WATERSHED INFORMATION: HUC CODE: NO. OF STREETLIGHTS:

PARKING CALCULATIONS

41 DETACHED UNITS X 2 SPACES/UNIT = 82 SPACES

41 DETACHED UNITS X 4 SPACES/UNIT (2 DRIVEWAY & 2 GARAGE) = 164 SPACES

DRAINAGE RECORD DRAWING-6/16/15

EC.

Project Contacts: HWP/TRS

Project Number: 9048-20A

Sheet Number

NONE

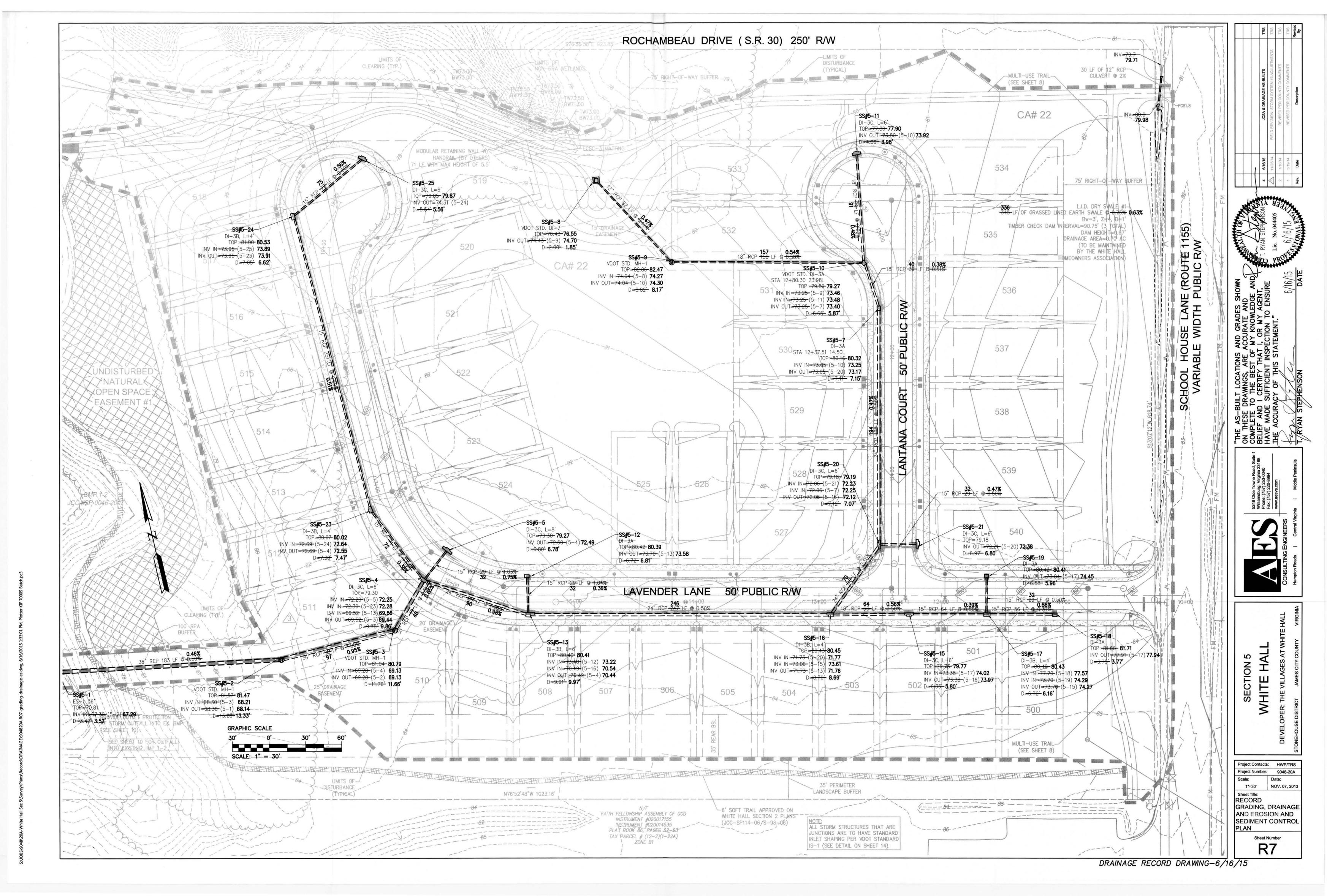
Sheet Title:

RECORD

COVER SHEET

Date:

NOV. 07, 2013



## 5. ConstructionDrawings

## 6. Design Calculations

### 7. Reports

### 8. Correspondence

### 9. Inspections

### 10. Permitting

## 11. Miscellaneous(ex. photos)

# 12. ProjectDevelopmentDocuments