Site Plan Approval Packet

February 2019



Department of Planning and Community Development
233 West Broaddus Avenue
Bowling Green, VA 22427
www.co.caroline.va.us

Phone: 804-633-4303 Fax: 804-633-1766



Site Plan Procedures and Requirements

The land development application is for use by all applicants requiring site plan approval, including commercial, industrial, residential subdivisions and Planned Unit Developments (PUD). Site plans must be prepared by a licensed surveyor or engineer.

Procedures for Site Plan Review and Approval

Pre-application Meeting

• Applicants need to meet with the Planning Department staff prior to plan development.

Preliminary/Final Site Plan Application Submittal

- Application deadlines for site plan submittals are typically the first day of the month. Contact the Planning Department for exact date.
- Application shall include ten (10) copies of the full site construction plans (prepared in accordance with the Caroline County Zoning Ordinance and the attached worksheets) for review, a digital (pdf) of the site plan, a completed site plan application and all required fees.
- All plan sheets shall be on standard 24 x 36 sheets.

Agency Review of Complete Plans

• Once a land development application is officially filed, the application and plans will be reviewed for minimum requirements. If the application is determined incomplete, the applicant will be notified in writing of the deficiencies. If the application is determined to be complete, it will be forwarded to each review agency for written comments.

Technical Review Committee

- Agency representatives will provide written comments to the Planning Department.
- All comments will be included in a written response to the applicant from the Planning Department within fifteen (15) business days from the date of the Technical Review Committee Meeting.
- Revisions to the site plan shall be made in accordance with Technical Review Committee comments.

Site Plan Revisions and Agency Review

 Submittal shall include one set of revised plans and one copy of the written response letter for each agency requiring revisions. All plans shall be returned to the Planning Department for distribution.

Revisions Still Required

• Repeat Site Plan Revision process as previously outlined if needed. An additional \$100 fee will be applied to any application requiring more than three (3) submittals.

Site Plan Approval

- The Department of Planning, VDOT, Department of Utilities, and the Building Official will sign ten (10) copies of the site plan upon approval. The County will return four (4) copies of the approved site plan to the applicant. Applicant must keep one copy of the fully approved plans on site at all times during construction. Once fully approved plans have been distributed, all other plans (early land disturbance, grading, etc) must be replaced with the signed copies.
- If the applicant would like more than four signed copies of the plan, then additional copies shall be provided.

Permits

 Site plan approval does not constitute a permit to begin construction and/or installation of improvements. A separate Building/Zoning/Land Disturbance permit application is required. Prior to issuance of a permit, the applicant is required to submit an application, pay appropriate fees, post bond (or other financial assurances) and schedule an on-site preconstruction meeting with staff.

*Note: Approval for clearing, grubbing and grading requires a separate permit and separate set of Erosion & Sediment Control/Stormwater plans to be approved with the permit. Prior to permit issuance, a bond and RLD will need to be submitted.

If you have further questions please feel free to call the Department of Planning and Community Development at (804) 633-4303.



Site Plan Submittal Checklist

The following information must be submitted for ALL REQUESTS:

Site Plan & Application	PAGE
☐ Ten (10) sets of 24x36 plans, folded (unless over 35 pages)	
□ Digital (pdf) of the Site Plan (CD or link to a download)	
☐ Completed Land Development Application - separate document	
☐ Completed Project Information Sheet	6-7
☐ Completed Chesapeake Bay Preservation Area WQIA	8
☐ Investigation worksheets for Graves, Memorials and Historic Significance	9
Completed Site Plan Checklists	
☐ Site Plan — General	10-13
☐ Drainage Plan & Analysis	14
☐ Erosion & Sediment Control Plan	14-17
☐ Landscaping Plan	18
 □ Lighting Plan (Plans are to be incorporated into the comprehensive site plan and not submitted separately) 	19
□ Water & Sewer Plan	20-28
□ Virginia Department of Transportation	29-31
Other Required Documents	
☐ Water & Sewer Extension Application (required with initial submission)	24
☐ Land Developer's Agreement (prior to site plan approval)	
☐ Letter of Credit or Surety Bond (prior to permit issuance)	
Required Fee(s)	
☐ Planning: \$1500 plus \$50 per acre. Round up acreage fractions when comp (See Land Development Application)	outing fees.
□ Public Utilities: A \$350 deposit (separate check) must accompany any site pwith public water and/or sewer.	olan submittal

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A copy of the standard notes listed below are included in the packet for convenience. Other notes may be required. Please consult with the Planning Department to obtain copies.

		PAGE	
	☐ Erosion & Sediment Control Notes	17	
	☐ Public Utilities General Utility Construction Notes	27-28	
	□ Construction Notes for VDOT	30-31	
	Construction Notes for VDO1	50 51	
Unle	ss otherwise specified in this application, failure to provide all ir	nformation required ab	ove shall
	t in an incomplete application which shall not be deemed comp		
	ected.		
Prepa	ared By:	Title:	
Signa	ture:		
For C	Office Use Only below this line		
Date	Reviewed:	-	
	Complete		
_			
	Incomplete: List deficiencies		
Revie	ewer:		

Project Information Sheet

Project Name:			
Tax Map #s:			
Total Area (acres):			
Total Disturbed Area (acres):			
Is the area within a Chesapeake Bay Preservation Area (RMA)?	☐ Yes	□ No	
Does the project contain a Resource Protection Area (RPA)?	☐ Yes	□ No	
If Yes, is there any encroachment in the buffer?	☐ Yes	□ No	
 If Yes, please complete Water Quality Impact Statemen 	it (Page 8)		
• If Yes, how was the RPA Determined?			
□ GIS			
☐ On-site investigation (include documentation)			
• If Yes, what is the total area of encroachment (ft²)?			
Does the project contain wetlands/streams?	☐ Yes	□ No	
 If Yes, will there be any wetlands impact? *include ACOE/DEQ confirmation and/or permit(s)* 	☐ Yes	□ No	

Project Information Sheet

Owner's Name and Address:			
Phone:			
Email Address:			
Developer's Name and Address:			
Phone:			
Email Address:			
• Engineer/Surveyor's Name and Address:			
Phone:			
Email Address:			

Chesapeake Bay Preservation

Water Quality Impact Assessment

Date:	Project Name:		
Tax Map #s:	Owner's Name:		
Address:			
Business Phone:	E-mail:		
	eake Bay Preservation Area Maps? Dection on the proposed development site? De County Soil Survey?	□ Yes □ Yes □ Yes	□ No □ No □ No
Resource Protection Area: De	oes the site contain the following (check all tha	t apply):	
☐ Tidal Wetlands ☐ Tid	dal Shores 🔲 A 100-foot buffer adjacent to	o any RPA con	nponent
☐ Nontidal wetlands connect	ed by surface flow & contiguous to tidal wetlar	nds or tributar	ry streams
☐ Not Applicable			
Resource Management Area:	Does the site contain the following (check all th	nat apply):	
☐ Highly erodible soils	☐ Highly permeable soils	☐ Flood	olain
☐ Nontidal wetlands	☐ Within 300 feet of an RPA Buffer		
☐ Not Applicable			
Site specific information and su on county mapping resources.	pporting calculations may be provided to show	development	is not an RMA as indicated
Location of any RPA features, 10 plan sheets.	00-year floodplains and wetlands must be field	surveyed and	shown on all applicable site
	nce within a Chesapeake Bay Preservation Area		☐ No ature of the disturbance:
loading. Attach BMP design an must also sign, notarize and red	worksheets from the Virginia Stormwater Mand d calculations to the application. If a structura cord a maintenance agreement. through a review of mapping resources and site cle XV, Section 17 of the Caroline County Zoning	I BMP is requi	red, the property owner
Signature:	Profe	ssional License	e:
Name (Printed):	VA Lic	ense Number	:

Worksheet for Graves, Memorials, Places of Burial and Historical Significance

I certi	fy that I have investigated the property located at:
and d	escribed as tax map # (s):
Whic	n is undergoing either a site plan or subdivision review by Caroline County and find that:
	Graves, objects or structures marking places of burial or historical significance DO EXIST on the property.
	Graves, objects or structures marking places of burial or historical significance DO NOT EXIST on the property.
This i	nformation was verified by:
	Deed description
	Visual verification
	Soil borings
	Other, specify:
propo the p	ocation of such features that have been identified on the property will be shown on the osed Site Plan and/or Subdivision Plan along with notes that describe the methods to be used in reservation of these features. This shall be certified by the person responsible for the opment of the Site Plan or Subdivision Plan.
Signa	ture: Date:

Engineer/Surveyor Seal

Site Plan Checklist

FAILURE TO ANSWER EACH QUESTION SHALL RESULT IN AN INCOMPLETE APPLICATION. IF "NOT APPLICABLE" PLEASE EXPLAIN USING A SEPARATE SHEET

Yes	S No	o N/A			
			1)		The following information shall be provided on the site plan cover sheet:
			a)	Pro	oject Name
				b)	Voting District, County and State
				c)	Name(s), address(es) and phone number(s) of owner(s), developer and engineer who prepared the site plan.
			d)	She	eet index with number and title of sheets
				e)	Date of completion of the plan and any subsequent revisions
				f)	A vicinity map, at a scale no greater than 1"=2000'
			2)		The following shall be included in an information block on the site plan cover sheet :
				a)	Zoning of the property
				b)	Case numbers for any associated rezoning, SPEX, Variance, etc.
				c)U	Ise of the property
				d)	Tax Map and Parcel Number(s)
				e)	Total site acreage
				f)	Existing/proposed building square footage
				g)	Parking required and provided
				h)	Loading spaces required and provided
				i)	List any applicable overlay districts for the property
				j)	Chesapeake Bay Preservation Area Designation (include source of data - GIS or on-site evaluation)
				k)	Maximum building height is < 35'
				l)	Revision Block
				m)	Applicable permit # (s) for Army Corps of Engineers and Department of Environmental Quality
				n)	Note stating that any and all asphalt, concrete or other driving surfaces, where new or replaced must be able to support a total imposed load of fire apparatus weighing at least 75,000 pounds. An engineer's certification shall be submitted to Caroline County prior to issuance of a Certificate of Occupancy.

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Site Plan Checklist Continued

Yes No N/A

	3)	The following shall be included in a site tabulation chart on the site plan:
	a)	Area of the building and the percent of the site occupied by the building
	b)	Area of open space and the total percent of the site in open space
	c)	Total area of land disturbance and impervious area
	4)	Accepted proffered conditions, special use permit conditions, if any, and any waiver or variances granted must be reproduced on a plan sheet.
	5)	North arrow on each applicable plan sheet
	6)	The scale of the site plan shall be as follows:
	a)	For projects containing more than 200 acres – not more than 200':1"
	b)	For projects containing 50-199 acres – not more than 100':1"
	c)I	For projects containing 10-49 acres – not more than 50':1"
	d)	For projects containing less than 10 acres – not more than 30':1"
	7)	A legend showing all symbols used on the plan
	8)	The boundaries of the property involved by courses and distances with a linear precision of closure of one (1) foot in ten-thousand (10,000) feet; County and/or town boundaries; property lines; existing easements; streets; buildings; waterways; burial sites or cemeteries; and major tree masses.
	9)	Provide the owner names, tax map and parcel number and zoning for all adjacent properties
	10)	Topography at intervals of two (2) feet, unless waived or requested at a greater interval by the director. Reference source and date of all topography.
	11)	The general location and character of construction of proposed streets, alleys, driveways, curb cuts, entrances and exits, existing and proposed.
	12)	Location and dimensions of all off-street parking and loading areas and the location of on street parking if used to meet off-street parking requirements.

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Site Plan Checklist Continued

Yes No N/A 13) Location and method of screening for all outdoor waste receptacles on site. Provide a detail of the fence enclosure and gate on the plans. The location(s) and size(s) of sanitary and storm sewers, water mains, 14) culverts, and other underground structures, both existing and planned, in or near the project. 15) All existing easements must reference recordation information. Sanitary facilities, if private, including primary and secondary drainfields. 16) Show all existing gas, electric, telephone and cable lines. 17) Location of all internal landscaped areas 18) 19) General location, height and material for all fences, walls, screen plantings, berms and peripheral landscaping. The dimensions of required perimeter and front buffer(s), if any, shall be shown. General location and orientation of proposed signs. 20) 21) The location of any identified wetlands, as determined based on field delineation and source of the wetland information. Where any wetlands and/or stream disturbance is proposed, a copy of all required State and Federal permits shall be submitted or a letter from the appropriate agencies stating that no permits are required. The location of any Chesapeake Bay Preservation Areas shall determined by 22) field delineation. 23) Show the location, width, and recordation information for all existing drainage easements. All proposed easements need to be a minimum of twenty (20) feet. Provide all information required for compliance with Article XV, Section 17 24) of the Caroline County Zoning Ordinance, Chesapeake Bay Preservation

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Area.

Site Plan Checklist Continued

Yes No N/A		
	25)	Delineate the 100-year floodplain and provide the FIRM Community Panel Number.
	26)	Show the limits of all land disturbance associated with the proposed project.
	27)	The general location of proposed lots, setback lines, easements, proposed reservations for parks, parkways, playgrounds, bike, pedestrian and shared use paths, school sites and open space.
	28)	A tabulation of the total number of dwelling units of various types in the project and the overall project density in dwelling units per acre, gross or net, as required by district regulations.
	29)	Signature block with date space for applicable agencies which may include Department of Planning & Community Development, Department of Utilities, Virginia Department of Transportation, and Caroline County Building Official.
	30)	Provide DEQ VSMP/CGP Approval letter.

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FAILURE TO ANSWER EACH QUESTION SHALL RESULT IN AN INCOMPLETE APPLICATION. IF "NOT APPLICABLE" PLEASE EXPLAIN USING A SEPARATE SHEET

Drainage Plan and Analysis Checklist

Yes No N/A	'es No N/A				
	1)	Provide pre- and post development drainage areas in acres (supported by outline contour maps).			
	2)	Provide the location and description of all existing and proposed drainage structures, pipes, roof drains, swales, ditches, curbs, and channels and the direction of flow of each. Flag/locate discharge locations (outfall) in the field/site.			

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Erosion & Sediment Control Plan Checklist

Yes	s No	N/A			
			1)		Provide a narrative that includes the following:
				a)	A brief project description of the nature and purpose of the land disturbing activity and the amount of grading involved.
				b)	A description of the existing topography, vegetation and drainage.
				c)	A description of neighboring areas such as streams, lakes, residential areas, roads, etc., which might be affected by the site development.
				d)	A brief description of the soils on the site giving such information as soil name, mapping unit, erodibility, and permeability.
				e)	A description of areas on site which have potential serious erosion problems.
				f)	A description of the methods that will be used to control erosion and sedimentation on the site.
				g)	A brief description and specifications of how the site will be stabilized after construction is complete.
				h)	A brief summary of stormwater management considerations of downstream receiving channels.
				i)	A schedule of regular inspection and repair of erosion and sediment control structures should be set forth.
				j)	Any calculations for the design of such items as sediment traps, sediment basins, diversions, etc.
				k)	A description of the steps of construction including any specific phases that will be implemented in the completion of the erosion and sediment control plan.
			2)		Provide a vicinity map.
			3)		Provide the existing and proposed topography of the site.
			4)		Show the existing tree lines, grassy areas, or unique vegetation.
			5)		Show the boundaries of different soil types.
			6)		Provide a north arrow.

Erosion & Sediment Control Plan Checklist continued

Yes	s No	o N/A		
			7)	Show the areas with potentially serious erosion problems.
			8)	Provide the drainage breaks and the direction of flow within the drainage areas. Include a drainage map showing entire pre- and post-development drainage areas for all onsite and off-site drainage.
			9)	Delineate the limits of land disturbance associated with the proposed project.
			10)	Show the location of the erosion and sediment control measures to be used on the site. Sediment traps and basins shall include top and bottom dimensions, contour lines, and show tie-ins to existing grades.
			11)	Provide detail drawings of all structural practices used to control erosion and sedimentation for the proposed project.
			12)	Provide a seeding schedule on the plan.
			13)	Provide erosion and sediment control notes (see approved notes Page 18).
			14)	Provide evidence that no more land than is necessary to provide for the desired use or development shall be disturbed.
			15)	Environmental site assessment information consisting of:
			a)	Base flood hazard areas (100-year flood plain).
			b)	Location of all tidal and non-tidal wetlands.
			c)L	ocation of all tidal shores.
			16)	A copy of all applicable U.S. Army Corps of Engineers and state permits necessary for activities in state waters, wetlands and streams.
			17)	Cost estimates for all materials and construction.
			18)	Include a water quality impact assessment for any proposed development within an RPA.

Erosion and Sediment Control Notes

- 1. ALL APPROPRIATE EROSION AND SEDIMENT CONTROLS ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN CLEARING AND GRADING.
- 2. SEDIMENT BASINS AND TRAPS, DIVERSION DIKES, SEDIMENT BARRIERS AND OTHER MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE ANY UPSLOPE LAND DISTURBANCE TAKES PLACE.
- 3. ALL SEWER LINES NOT IN STREETS ARE TO BE MULCHED AND SEEDED WITHIN 7 DAYS AFTER BACKFILL.
- 4. All temporary earth berms, dams, diversions and sediment controls are to be mulched and seeded immediately after grading. Hay, straw or comparable mulch is required.
- 5. ALL LAND, ON OR OFF SITE, WHICH IS DISTURBED BY CONSTRUCTION AND WHICH IS NOT BUILT UPON OR SURFACED SHALL BE ADEQUATELY STABILIZED TO CONTROL EROSION AND SEDIMENTATION.
- 6. ALL EROSION AND SEDIMENT CONTROL, INCLUDING SEEDING AND MULCHING, SHALL BE IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS CONTAINED IN THE CAROLINE COUNTY EROSION AND SEDIMENT CONTROL ORDINANCE AND THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK (VESCH), THIRD EDITION 1992.
- 7. ADDITIONAL EROSION AND SEDIMENT CONTROLS SHALL BE INSTALLED IF ON SITE INSPECTIONS REVEAL PROBLEMS.
- 8. STOCKPILED TOPSOIL MUST HAVE APPROPRIATE EROSION AND SEDIMENT CONTROLS.
- 9. DISCHARGE FROM DEWATERING OPERATIONS SHALL BE PROPERLY FILTERED AND DISCHARGED IN A MANNER THAT DOES NOT CAUSE EROSION.
- 10. ALL MEASURES ARE TO BE INSPECTED DAILY BY A QUALIFIED PERSON. ANY DAMAGED STRUCTURAL MEASURES SHALL BE REPAIRED BY THE CLOSE OF THE FOLLOWING DAY. EROSION AND SEDIMENT CONTROLS SHALL BE REMOVED AFTER AREAS HAVE BEEN STABILIZED, BUT NOT BEFORE APPROVAL BY A CAROLINE COUNTY INSPECTOR.
- 11. The areas used for burning debris shall be seeded using appropriate seeding mixture recommended in plan after debris removal is completed.
- 12. PERMANENT OR TEMPORARY SEEDING SHALL BE APPLIED TO DENUDED AREAS WITHIN 7 DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SEEDING SHALL BE APPLIED WITHIN 7 DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT (UNDISTURBED) FOR LONGER THAN 30 DAYS. PERMANENT SEEDING SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR.
- 13. Before newly constructed stormwater conveyance channels are made operations, adequate outlet protection and any temporary or permanent channel lining shall be installed in both the conveyance channel and the receiving channel.
- 14. ALL DRAINAGE CALCULATIONS ARE BASED ON THE METHODS SET FORTH IN THE VIRGINIA DEPARTMENT OF HIGHWAYS (VDOT) DRAINAGE MANUAL AND VESCH 1992. ALL DRAINAGE CULVERTS AND OUTLET DITCHES SHALL BE DESIGNED FOR A 10 YEAR FREQUENCY STORM AND DONE IN ACCORDANCE WITH MS-19*.
- 15. These erosion and sediment control notes apply to all land disturbing activity associated with this project, including road, sewer line and water line construction.

16.	. This project will start	AND BE COMPLETED BY	
тU.	. I DIS PNOJECT WILL STANT	AND DE COMPLETED DI	

*A VARIANCE MAY BE REQUESTED FOR SITES THAT:

- RESULT IN NO INCREASE IN 2- AND 10-YR STORMS;
- SMALL SITES WITH INSIGNIFICANT RUNOFF
- MEET QUANTITY REQUIREMENTS OF THE VA STORMWATER MANAGEMENT REGULATIONS.

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FAILURE TO ANSWER EACH QUESTION SHALL RESULT IN AN INCOMPLETE APPLICATION. IF "NOT APPLICABLE" PLEASE EXPLAIN USING A SEPARATE SHEET

Landscaping Plan Checklist

_	No □	N/A □	1)		Location of existing and proposed landscaping.
			2)		Plant Schedule indicating:
				a)	Latin and common plant names
				b)	Number of plants
				c)(Caliper, height and/or spread at time of planting
			3)		Detail of required landscape screening and/or berm, if applicable.
			4)		A finished grading plan shall be included and drawn in conjunction with all elements of the landscape plan.
			5)		Narrative to include:
				a)	Planting schedule
				b)	Method of installation with appropriate details
			6)		All existing trees on the site, or where there are groups of trees, must be outlined. However, all trees in excess of twenty (20) inches in diameter, measured at four and one-half (4.5) feet above the ground must be shown as individual specimens.
			7)		Show all trees desired to be removed.
			8)		All trees and/or groups of trees to be preserved shall be shown. In the event of cut and fill, excavation, or the laying of utility lines in proximity to trees that are shown to be preserved, the method of preservation shall be shown. Methods of preservation shall be consistent with those described in the Virginia Erosion and Sediment Control Handbook, 3 rd Edition, 1992, STD & SPEC 3.38.
			9)		Any required berms shall be installed with a minimum height of four (4) feet with a maximum slope of 4 to 1.
			10)	Cost estimates for all materials and installation.

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Lighting Plan Checklist

Yes No	N/A	
	1)	Location of existing and proposed exterior light fixtures (building and freestanding).
	2)	Photometric diagram showing illumination levels at all property lines.
	3)	Two (2) copies of fixture cutsheets for each proposed fixture.
*If no lig	ghting is sho	wn, then none is approved until a plan is submitted to the Planning Office.
Prepare	r's Signature	
5.		

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CAROLINE COUNTY DEPARTMENT OF PUBLIC UTILITIES WATER & SEWER EXTENSION PROCEDURE

The following steps are required for the approval of Water and Sewer Extensions of the Caroline County Utility Systems. These steps are set forth to permit Caroline County to expedite the approval of your request. If these steps are not followed delays may occur in the approval process. This application for an extension of the Utility Systems must be submitted with the site plan for your development.

- 1. Fill out and submit an application for an extension of the Caroline County Utility Systems.
- 2. Caroline County Charges for actual expense incurred in reviewing and approving construction plans plus a 20% administrative fee which will be billed in arrears upon approval. Plans will not be reviewed without submittal of the application and payment of initial fees. The remainder of the Extension Fee will be invoiced after approval of plans, but prior to signing. NO REVIEW OF PLANS WILL COMMENCE UNTIL SUCH TIME AS THE APPLICATION HAS BEEN RECEIVED AND THE FEE PAID.
- 3. Public Utilities requires five (5) sets of plans as part of the site development submittal. The County will require four (4) sets of fully executed plans and (1) set in a PDF electronic format. Applicants are reminded that a fully executed set of plans must be on site at all times during construction.
- 4. Plans must include a cost estimate based on unit values with quantities provided certified by the design engineer (water and sewer take off). The estimates will also be the basis of your development's utility bonds that must be approved by the Public Utilities Department as part of the site development process. Placement of the take offs on the plans is advisable, but at minimum two (2) typed take offs are required by the Public Utilities Department.
- 5. If plans contain utility lines in excess of 12" in diameter, elevated storage, well and/or treatment, approval by the Virginia Department of Health will be required prior to approval of these plans by the County. The County will require five (5) sets of VDH approved plans to provide the final approval of the project.
- 6. Submittals must include flow projections for the proposed development and a water model (CAD) for the proposed water system including fire flow and static and residual pressures at all hydrants in the development. Static pressures and storage available to your development can be obtained from the Public Utilities Department at (804) 633-4390 during the design process.
- 7. All plans shall be in accordance with Caroline County Specifications and Standards.

- 8. All plan sheets must be 24"X36". One (1) set of half sized plans will be provided for the County and the County will stamp half sized plans for use by the owner should they desire.
- 9. The utility extension title sheet providing the portion of each sheet pictorially and in writing must be provided. Match lines must be included on each sheet.
- 10. In all cases elevations will be stated in terms of mean sea level (mls) and bench marks provided with engineer certified elevation.
- 11. If extension includes pumping stations, wells, elevated storage, etc. the County will not approve the development infrastructure for constructions unless such items are represented on the final set of plans. Individual items such as pumping stations, wells and/or treatment, elevated storage, etc. will be approved as individual plans.
- 12. Revision of the plans will require the submittal of adequate revised plan sheets to the Department of Public Utilities to permit revision of all plans sets in their control. Developers should keep in mind that they must also maintain an approved set of plans on the project at all times therefore copies of the revised sheets to revise their plans should also be submitted.
- 13. Caroline County's interpretation of specifications shall be binding on all parties.
- 14. All inspections and testing, whether performed by County staff or third party inspectors, shall be at the applicant's expense
- 15. Caroline County's published "Guidelines for Flushing & Testing of Water Lines", "General Utility Construction Notes", and "Erosion and Sediment Control Notes" shall be included in the plans.
- 16. The Review Checklist shall be included with the plan submittal.

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Checklist for Water and Sewer Plans

Pro	Project Name:							
	Existing utilities to be extended to service this project are shown on Sheet No(s) or Approved Utility Plan No							
Yes	N	lo N/A						
			1)	Virginia registered engineer's stamp & signature				
			2)	Plan and profile sheets are 24" x 36"				
			3)	Project vicinity map				
			4)	Owner/developer name and address shown on plans				
			5)	I.S.O. Fire Flow computations shown in plans (where applicable)				
			6)	Domestic water meter calculations shown on plans in accordance with A.W.W.A. Manual M-22 (where applicable)				
			7)	Water System designed to provide adequate domestic service and fire protection to owner's property " diameter line required to adequately serve this project in accordance with County standards.				
			8)	Sanitary Sewer Service area map submitted with plans with calculations shown " diameter line required to adequately serve this project in accordance with County standards				
			9)	Overall water and sanitary sewer plan submitted for phased projects. Fire hydrants and valve locations shown on overall water plan				
			10)	Deflection angles shown on all manholes				
			11)	Standard water and sewer notes shown on plans				
			12)	Benchmarks shown every 500 feet				

	13)	Direction of flow arrows sh	own on sanitary sewer			
	14)	All underground utility con	flicts profiled and resolved			
	15)	This project has been desig and State Regulations (which	ned in accordance with the latest County Standard chever is more restrictive)			
	16)	·	wer lines connect to existing facilities that have by the county for operations and maintenance			
	17)		essary for the completion of this project have been eir Deed Book and Page numbers are shown on the			
	18)	A list of the approximate m notes are show on the plan	of the approximate material quantities to be used and the following are show on the plans:			
	PVC	ary Sewer blastic shall be ASTM 34 PSM SDR 35 min;	Water PVC plastic pipe shall be AWWA C-900 Table 2 Class 150 (min) Ductile Iron pipe shall be ANSI/ AWWA C151 Class 52 for 12" and smaller and Class 51 for 16" or larger			
	19)		ubmitted in accordance with Section 6 of the State Board of Health Waterworks Regulations.			
I hereby cer	tify that	I have compiled with the abo	ve and do herewith submit these plans for approval.			
Signature			Certificate Number			
Printed/Typ	od Name		 Date			

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MUST BE INCLUDED WITH INITIAL SUBMISSION **CAROLINE COUNTY PUBLIC UTILITIES** WATER AND SEWER EXTENSION APPLICATION

Name of Development:	
General Location of Developmen	nt:
Developer:	
Contact:	
Address:	
Telephone:	
E-Mail:	
Engineering Design Firm:	
Contact:	
Address:	
Telephone:	
Fax:	
Email:	
Number of Lots:	
Plan Date:	
Number of Sheets per Set:	
Developer Authorized Signature:	
,	
	(Print Name)
	(Title) Below This Line for Office Use only
Date Received: In	nitial Application Fee: Receipt #
February 2019	

24

Guidelines for Flushing and Testing of Water Lines

Installation of New Water Lines

Construction should begin in the proximity of existing waterlines to facilitate future installation of the double check with gate valve and testing corporation stop assembly (i.e. jumper) and tie-in. Connection to any existing water line is not allowed until contractor is ready to test new waterlines prior to placing them in service unless jumper is a certified backflow presenter. Coordinate acceptable "backflow" assembly with the Public Utilities Department inspector prior to commencing work. Contractor shall be responsible for all labor and equipment required for flushing, dechlorination, erosion prevention, and repair of any damaged caused by any and all waterline flushing prior to final acceptance.

Initial Flushing

Initial flushing of new water lines, including all hydrants and dead-end waterlines, may commence after jumper has been installed and connection to the existing waterline has been completed. A safe and stable discharge that allows the usage of a pitot gauge for flow measurement must be provided. Utility personnel will verify that initial flushing is properly performed and all air and debris have been removed from the new waterline. All waterlines shall be initially flush as a minimum rate of 2.5 feet per second (fps) and for the duration necessary to provide a minimum of 2 complete water turnovers within the new waterlines.

Main Size	4"	6"	8"	12"	16"
Flow (gpm)	98	220	400	900	1,500
Gallons/Foot	0.065	1.47	2.61	5.87	10.44

Pressure Testing

Conduct pressure test in accordance with Caroline County Water and Sewer Specification for Construction.

Disinfection

Liquid sodium hypochlorite shall be used. Use of calcium hypochlorite tablets is prohibited without prior written consent from the Director of Public Utilities. The disinfection solution shell be fed at a continuous rate and mixed with the water entering the pipe from existing system so that the chlorine concentration of the water disinfection solution in the pipe is elevated to and maintained at a minimum concentration of 50 mg/l available chlorine.

Low Flow Flushing

Low flow flushing shall not begin until the disinfection solution has been in the new waterline for at least 24 hours and a satisfactory chlorine residual had been verified by Utilities staff. Low flow flushing is a low velocity flush of approximately 1 fps and shall be maintained long enough for the disinfection solution to be entirely removed from the new water lines and the normal distribution system chlorination is observed. Low flow flushing shall not end until the water is visibly clear. Utilities staff will verify that low flow flushing is properly performed.

Bacteriological Testing

Bacteriological Testing shall consist of at least two samples and tested by a State of Virginia certified laboratory. The two samples shall be collected at least 24 hours apart at pipe intervals determined by the inspector (not exceeding 2,000 feet apart and at the ends of all branch lines and cul-de-saca). The contractor shall be responsible for the expense and coordination of the sample collection and testing. Two consecutive negative tests for caliform from all sample locations shall constitute adequate disinfection of the new waterlines. Original of all applicable documentation and test results must be provided to the Utility inspector prior to issuance of a final acceptance.

Removal of the Jumper and Final Flush

Once Utility Inspector approval has been granted the contractor may remove the jumper and perform needed flushing on the new waterline to remove any remaining air and debris.

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CAROLINE COUNTY PUBLIC UTILITIES GENERAL UTILITY CONSTRUCTION NOTES

- 1. All water and sewer construction and materials shall be in accordance with the latest edition of the Caroline County "Standard Specifications and Details for Construction of Water and Sewer Lines" and related work, the Commonwealth of Virginia Waterworks Regulations and the Sewage Collection and Treatment Regulations.
- 2. The Contractor shall contact the Caroline County Public Utilities Department to schedule a preconstruction conference at least 48 hours prior to beginning any construction activity on water and or sewer improvements. All work shall be subject to inspection by County inspectors.
- 3. The Contractor shall include in applicable bid price, the cost of locating and uncovering all sewer manholes and all valve boxes after completion of all paving and adjust them to the final road grades.
- 4. The Contractor is responsible for obtaining all required permits for the work.
- 5. The location of existing utilities across or along the line of the proposed work is not necessarily shown on the plans and where shown is only approximately correct. The Contractor shall, on his own initiative and at no extra cost, locate all underground lines and structures as necessary and shall pot hole existing underground lines as directed by the Department of Public Utilities. The Contractor shall be responsible for any damage to underground structures.
- 6. The Contractor shall call "Miss-Utility" at 811 or 1-800-552-7001 prior to the start of work
- 7. Water and sewer connections shall not be backfilled prior to approval by Caroline County Department of Public Utilities.
- 8. All water lines shall have a minimum cover of 3.5 feet.
- 9. Datum for all elevations shown in NAVD 88.
- 10. Restrained joint pipe shall be utilized at all water stub-outs and dead ends for a minimum of 60 feet or back to the far side of the nearest valve, tee, or cross, whichever is shorter, unless another distance is specifically called out on the plans.
- 11. It is the intent of these drawings to show all necessary work. Any item of work not specifically shown, but necessary to eligibility for acceptance, is hereby implied.
- 12. No more than 100 feet of trench may be open at one time. Backfilling of trenches shall be compacted when backfilling.
- 13. No trenches shall be left open overnight.
- 14. Contractor shall install a construction entrance wherever construction vehicles enter or exit undeveloped areas.
- 15. Contractor shall conform to the guidelines as presented in the Virginia Erosion and Sediment Control Handbook, as pertinent to his work.
- 16. The Contractor shall verify the location of all underground utilities and their actual material type. Caroline County Public Utility Department uses the available records and does not guarantee the location and or utility material type.
- 17. Install metallic marking and tracer wire at all trenches containing buried, gravity and pressure pipelines.
- 18. The Contractor shall notify Caroline County Public Utilities Department in writing 72 hours before connecting to existing utility lines. All water line connections shall follow the Caroline

- County Public Utilities guidelines for flushing and testing of water lines prior to making any connections.
- 19. Engineer shall certify that unpaved streets are to sub-grade prior to Contractor installing water & sewer lines. Curb and gutter, if required, shall be installed prior to acceptance of water & sewer lines.
- 20. The Contractor shall maintain current utility services when working on existing water lines, in circumstances were this is not possible the connection shall be made at night or during the lowest demand period established by the Caroline County Public Utilities Department.
- 21. The Contractor is responsible for all site safety and the ways, means and methods of construction.
- 22. No structures or planting of trees shall be permitted in utility easements.
- 23. Service saddles must be used on all water connections.
- 24. Fire hydrants shall be installed in accordance with standard drawing 107.
- 25. Vandal proof covers shall be used on all manholes in easements. Watertight covers shall be used in flood plains. The manhole covers shall be in accordance with the standard drawings.
- 26. Four sets of prints and one set of electronic PDF file of the as-built drawings must be submitted to the Department of Public Utilities prior to tentative acceptance of the work by the County.
- 27. Final acceptance of work by Caroline County Department of Public Utilities shall not be made until all work shown on the approved plans and in accordance with the Caroline County standards are completed.
- 28. A permit from the Virginia Department of Transportation (VDOT) is required for all work within a public road right-of-way.
- 29. A wetlands permit may be required from the U.S. Army Corps of Engineers for this development. For information concerning such a requirement, contact the Corps at (804) 462-5382
- 30. Contractor shall be informed and comply with the Virginia Overhead High Voltage Line Safety Act. All costs to cover lines, flaglines, or disconnect service shall be at the contractor's expense.
- 31. Contractor shall comply with no lead regulations for water infrastructure.

32.	. Based	on graphical	determination,	the property d	escribed h	erein lies w	ithin flood zon	е
	<i>"</i>	_", areas outs	side of the 0.2%	á annual chance	flood plai	n, as deterr	mined by the U	nited
	States	Federal Eme	rgency Manage	ement Agency a	nd as shov	vn in the Flo	ood Insurance	Rate
	Map (F	FIRM) Commi	unity	, Panel Numbe	r	with an eff	fective date of	

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VIRGINIA DEPARTMENT OF TRANSPORTATION SITE PLAN SUBMITTAL CHECKLIST

Mandatory items needed before review by District Land Development Section All plans must be submitted through appropriate county and VDOT Residency first

1	Residential or Commercial Entrances
	Sight distances shown on plan Speed Limit shown on plan Sight Distance Plan & Profile
	Right hand turn lane length Right hand taper length Turn Lane Warrant Analysis
	Left hand turn lane length Left hand taper length Turn Lane Access Program
2	Formal Traffic Analysis by certified engineering firm
3	Mainline Culverts**
	Culvert types Diameters Additional Culverts
	Additional end sections Additional end treatments CD-1 with end sections
	CD-1 with end sections Drainage Calculations
4	Drop Inlets and Manhole Information if applicable
5	Additional Protective Covering
	Standard EC-1 EC-2 EC-3 Paved Ditch
6	Drainage
	Drainage Easements Drainage Calculations
7	Additional Drainage
	Additional Drainage Easements Drainage Calculations
8	Private Driveway Culvert Sizes**
9	Typical Road Section
10	Road Design Categories
11	Horizontal Alignment Curve Data
12	Vertical Alignment Curve Data
13	Utility Location
14	General Construction Plan and Plat Notes shown on plans
15	Roadway Signage
10	Stop signs, stop bars, speed limit signs, street signs, other special signs
	Location of guardrail Stopping sight distance
16	VDOT signature approval block on plan
17	Adequate location map to include route numbers
** (Corrugated metal pipes require soils testing for pH and resistivity for plan approval.

CONSTRUCTION NOTES FOR VDOT (Revised 9/19/2017)

- 1. Subdivisions only These requirements were prepared in accordance with the requirements of (select one):
 - o VDOT's 2005 Subdivision Street Requirements (SSR)
 - o VDOT's 2009 Secondary Street Acceptance Requirements (SSAR)
 - o VDOT's 2011 Secondary Street Acceptance Requirements (SSAR 2011)
- 2. All work shown hereon shall be in strict accordance with the current Standards and Specifications of the Virginia Department of Transportation (VDOT) and County Ordinances.
- 3. It is the intent of these drawings to show all necessary work. Any item of work not specifically shown, but necessary to eligibility for acceptance is hereby implied.
- 4. A VDOT permit must be obtained prior to starting construction within any State Highway Rights-of-Way.
- 5. The contractor/owner shall perform CBR testing on the subgrade in accordance with VDOT specifications by a certified geotechnical engineer to determine base and pavement designs, and this information must be forwarded to VDOT and reviewed prior to placement of aggregate base.
- 6. The contractor/owner must specify in writing to VDOT prior to construction, the type of subbase, base and surface pavement to be utilized on each street for each traffic group.
- 7. The contractor shall notify VDOT 72 hours prior to placement of base materials and prior to the placement of asphalt material to ensure VDOT's ability to perform testing, such as proof-rolling, depth checks, compaction, and contamination. Option: A certified analysis from a private engineering/testing firm may be submitted within 7 working days of the required tests. 72 hours notice is still required prior to each activity.
- 8. All culvert and driveway pipes shall be of a type approved by VDOT and the Locality. Note that the use of corrugated metal pipe in any location will only be considered after the requirements of standard PC-1, Tables C and D of the 2016 Road and Bridge Standards are addressed.
- 9. All entrance pipes for driveways shall be a minimum of 12" in diameter, and 30' in length (concrete culverts may be 28' in length), unless otherwise approved by VDOT. Driveway culverts in cul-de-sacs shall be concrete. See approved road plans for the proper culvert sizes.
- 10. Contractor must verify all dimensions and elevations in the field before starting construction and notify the design engineer of any discrepancies.
- 11. The contractor shall erect street signs and traffic control signs as indicated on the subdivision construction plans. The signs shall conform to VDOT and County specifications. All proposed signs are to be installed per STP-1 of the 2016 Road and Bridge Standards. All pavement markings installed within VDOT Right-of-way will be Type B Class I Thermoplastic.
- 12. A minimum 35' pavement fillet radius is recommended.
- 13. The contractor shall do such overlot grading as necessary to preclude the ponding of water adjacent to the roadway.
- 14. Slope easements will be required at all locations where the top of the cut or the toe of the fill exceeds the proposed dedication of right-of-way. See plat for exact location.

- 15. If running water is present in any outlet channel during construction where ditch protection is required, the bottom of the channel shall be lined with rip-rap stone with EC-1 placement. Further, EC-2 or EC-3 must have a minimum width of 4' in fill sections, and 5' in cut sections.
- 16. The contractor shall be responsible to see that all erosion and sediment control standards are met, and the contractor must seed and mulch all disturbed areas along with all graded areas within the proposed right-of-way in accordance with VDOT standards and specifications.
- 17. Final location of manholes, valves, fire hydrants, and other appurtenances shall not conflict with or constrict roadway drainage. Contractor shall adjust manholes and/or ditch alignment to ensure proper roadside drainage, compatible with existing field conditions.
- 18. All water, sanitary sewer, and storm sewer trenches shall be compacted to 95% density in 6" layers. Compaction tests may be required by VDOT.
- 19. VDOT will require density tests from a certified engineering firm for all culvert installations with a diameter of 36" or larger.
- 20. Video inspection may be required on all storm sewer systems prior to final construction approval. A VDOT inspector must be on-site during the video inspection process.
- 21. The contractor needs to contact Fredericksburg District Traffic Signals at (855) 475-2335 for a mark out of the traffic signal equipment a minimum of 72 hours prior to work beginning when working within a 1,000 feet of a traffic signal.
- 22. The final footage and location for VDOT standard guardrail is to be established prior to the completion of fine grading by joint inspection with the contractor, VDOT, and the owner's representative. Any guardrail installation, removal, or adjustments must be made by a VDOT-certified guardrail contractor.
- 23. Whenever tying in to an existing road, VDOT's WP-2 standard will apply, which include milling and overlay of the adjacent travel lane.
- 24. A pavement leveling course may be required to meet the intended cross-slope and typical section.
- 25. All storm structures shall have IS-1 invert shaping, and SL-1's (safety landings) will be required in all structures with a depth over 12'. ST-1's (steps) are required in any structure with a depth of 4' or greater.



PLANNING & DEVELOPMENT APPLICATION

DEPARTMENT OF PLANNING & COMMUNITY DEVELOPMENT
233 WEST BROADDUS AVENUE
BOWLING GREEN, VA 22427
(804) 633-4303
WWW.CO.CAROLINE.VA.US

DATE SUBMITTED:	CASE NUMBER:
*NOTE: AN APPLICATION SHALL NOT BE DEEMED OFFICIALLY FILED UNTIL ALL REQ TO THIS DEPARTMENT.	
1. Type of Request	
□ Rezoning: From To	☐ PROFFER AMENDMENT(REZONING CASE #)
☐ SPECIAL EXCEPTION:(ORDINANCE SECTION)	□ SITE PLAN:MAJORMINO
☐ VARIANCE:	☐ ADMINISTRATIVE APPEAL
☐ COMP. PLAN AMENDMENT	☐ OTHER
☐ Subdivision (Major)Preliminary Final	CONCEPT
☐ Subdivision (other)MinorBLA/Vacation	FAMILY
2. Property Information	
TAX MAP NUMBER	Current Zoning
Acreage of Request	Total Acreage
Physical Address/Location	
Voting District	
UTILITIES:PUBLICPRIV	ateexistingnew

3. APPLICANT / OWNER INFORMATION

OWNER OF RECORD:		
NAME		
Mailing Address		
Mailing Address		
PHONE NUMBER	E-MAIL	
APPLICANT:		
NAME		
MAILING ADDRESS		
Mailing Address		
PHONE NUMBER	E-MAIL	
AGENT/DEVELOPER/ENGINEER:		
Name		
Mailing Address		
Mailing Address		
PHONE NUMBER	E-MAIL	
MAIN POINT OF CONTACT:		
NAME		
MAILING ADDRESS		
Mailing Address		
Phone Number	E-MAIL	

4. I/We read this completed application, understand its intent and freely consent to its filing. The information provided is accurate to the best of my/our knowledge. I understand that the County may approve, conditionally approve, or deny the request for which I am applying. Furthermore, I grant permission to the Department of Planning and Community Development and other authorized government agents to enter the property and make such investigations as they deem necessary to evaluate the request.

		OR	
Owner Signature		AGENT/APPLICANT SIGNATURE	
Owner's Name		AGENT/APPLICANT NAME	
Date		DATE	
5. FEE SCHEDULE			
Rezoning	BASE FEE	+ (<u>\$50</u>) = ACREAGE \$/ACRE	
Proffer Amendment		+ (x \$100) = No. of Requests \$/Request	
Special Exception	BASE FEE		
SITE PLAN: MAJOR		+ (x <u>\$50</u>) =	
SITE PLAN: MINOR	\$400 BASE FEE	x =	TOTAL
COMP PLAN AMENDMENT	BASE FEE	X = Number of Requests	TOTAL
VARIANCE/ADM. APPEAL			TOTAL
Subdivision: Minor Type:		\$200 - BLA \$100 - VACATION =	TOTAL
Subdivision: Major		+ (x <u>\$50</u>) =	
Concept Plan	Base Fee \$250		TOTAL
		Number of Requests	TOTAL
OTHER		X =	TOTAL
□CHECK #	□Cash	□Charge red	CEIPT #
REVIEW BY / COMMENTS:			