

6.1 REQUIREMENTS FOR PRIVATE DEVELOPMENT

6.1.01 Purpose and Applicability

- A. These requirements are supplemental requirements for private developments.
- B. The entirety of the standards are still applicable to all projects.

6.1.02 General Requirements for Public Water and Sewer Projects

- A. The Developer/Owner of any project for which public water and/or sewer service is required shall be responsible for preparing Water and Sewer Plans for the necessary extensions, expansions and/or modifications to public utilities systems in accordance with DPU Standards and all applicable Federal, State, and Local requirements. The design shall be performed under the direction of a registered professional engineer with a current registration in the Commonwealth of Virginia in accordance with Title 54.1, Chapter 3 of the Code of Virginia, 1950, as amended. Where applicable, certain design tasks may be performed under the direction of a certified land surveyor in accordance with Sec. 54.1-408 of the above- cited code.
- B. The design of all water and sewer infrastructure shall conform to the latest versions of the Virginia Department of Environmental Quality *Sewage Collection and Treatment (SCAT) Regulations* (12VAC9), the Virginia Department of Health *Waterworks Regulations* (12VAC25-790), and the applicable requirements of other State and Federal Agencies having jurisdiction.
- C. All design and construction work shall conform to the requirements of these Standards and Specifications (“Standards”) of the Goochland County Department of Public Utilities (hereinafter referred to as “Department” or “DPU”). Where the requirements of the State and County are in conflict, the more restrictive requirements shall govern.
- D. The Developer shall be responsible for obtaining the review and necessary approvals of water and sewer plans by any/all applicable County, State, and Federal agencies having jurisdiction. Copies of such approvals shall be submitted to the Department prior to final approval of the plans by the Department.
- E. Sanitary sewer lines and water lines are to be designed to serve the entire sewer shed or service area of which the subdivision or development is a part. This necessitates consideration of future potential development of property(ies) beyond the development or subdivision in question.
- F. The Developer is required to design and construct the necessary water and sewer infrastructure for his subdivision or development project, properly sized and at

appropriate location(s) to permit future extensions to be made at the limits of said project. To the greatest extent possible, elevations and inverts of sewer systems shall be designed and constructed such that future extensions can serve the entire area that naturally drains towards the system.

- G. As determined by DPU, water and sewer utilities shall be designed and constructed to the limits of the development so that future extensions to adjoining properties will not disrupt existing improvements.
- H. Sewer designs shall include documentation of the adequacy of downstream facilities. This includes all downstream gravity sewers, sewage pump stations, and the receiving Wastewater Treatment Plant. Drawings shall include the name of the facility and the facility owner's name and address for any downstream pump stations, as well as for the receiving Wastewater Treatment Plant.
- I. Water designs shall include documentation of the adequacy of the overall water system. This includes all existing and proposed water lines, pressure regulating valves and booster pump stations. Drawings shall include the name of the facility and the facility owner's name and address for any control valves or booster stations.
- J. Water and Sewer Plans for all projects which may impact public water or sewer utilities infrastructure shall be submitted to the Department of Public Utilities for review and approval.
- K. A commercial or industrial establishment that utilizes an individual private well and requests connection to the County's sanitary sewer system is required to have a water meter installed at owner's expense on the well serving the establishment.
 - 1. The water meter will be used by DPU for the purpose of computing sewer usage charges.
 - 2. The water meter and meter enclosure must meet the requirements of these Standards and must be installed on the water service line from the private well to the establishment.
 - 3. The water meter shall be placed in a location which is accessible by DPU and approved by the Utility Engineer.
 - 4. The appropriate sewer connection fees and other applicable charges shall be paid before issuance of a connection permit for the establishment.
- L. Requests for temporary water and/or sewer service for construction trailers shall be directed to the Utility Engineer.
- M. All existing water and sewer services to the project parcel(s) shall be shown on the water and sewer plans. If existing services will no longer not be utilized after construction is completed, they shall be included on a demolition plan and shall be abandoned as follows:

1. Water services shall be abandoned by severing the service line at the corporation stop or tee (i.e., at the main line), installing a plug, and closing any associated valve(s).
 2. Sewer laterals shall be properly plugged at the main unless approved otherwise.
- N. A limited number of hydrant meters are available for construction purposes and wash downs only. These are offered on a first-come, first-served basis. Contact the DPU office for details.

6.1.03 Laws and Regulations

- A. The Developer/Owner shall keep fully informed of all State and Federal laws and local ordinances, and regulations which may in any manner affect those employed or engaged in the work, or which in any way may affect the conduct of the work, and of all such orders or decrees of bodies or tribunals having jurisdiction or authority over same.
- B. The Developer/Owner shall protect and indemnify the County and its officers and agents against any claim or liability arising from or based on the violation of such laws, ordinances, regulations, orders, or decrees, whether by himself or by his Employees, Contractors, Consultants, or any other person or entity to which he has delegated any part of the Work.
- C. Attention is called to Rules and Regulations Governing the Safety and Health of Employees Engaged in Construction as adopted by the Safety and Health Codes Commission of the Commonwealth of Virginia and all latest revisions thereto, and issued by the Department of Labor and Industry.
- D. The Developer/Owner shall be responsible for assuring that the Contractor performs all construction operations in accordance with the U.S. "Occupational Safety and Health Act of 1970", the Standards of the U.S. Department of Labor, Occupational Safety and Health Administration, and the latest amendments thereto.

6.1.04 Plan Review Process

- A. When Plan of Development (POD) or Land Disturbance Plan (LDP) is Required

1. For projects which require a POD/LDP, the Water and Sewer Plans shall be included as part of the plan set submitted to the County with the POD/LDP application.
2. The POD/LDP application shall include a Utilities Design Folder. This Design Folder shall contain the following documents, as applicable, which may not have been included on the Water and Sewer Plans:
 - a. Engineering Report with support calculations
 - b. System Layout Plan
 - c. Overall Water and Sewer Plan
 - d. Information Sheet(s) for Utility Agreement(s)
 - e. Plan Review Checklist
 - f. Domestic Meter Sizing Form
 - g. Complete Water Model results
 - h. Fire Flow Estimate Form
 - i. Notice of Intent to Discharge Non-Domestic Wastewater
 - j. Any other design documentation related to the Plans.
3. Prior to approval of the Water and Sewer Plans, a Utility Agreement or Agreements must be prepared by the Owner/Develop using the appropriate Template. An original, signed, Agreement must be submitted to the Department for review. Since the Agreement(s) must be executed by the Owner and the County prior to approval of the Plans or issuance of Building Permits, it is recommended that the Owner prepare and submit all necessary Agreements as early in the process possible to avoid potential delays.
4. For phased Projects, the Developer shall prepare an Overall Water and Sewer Plan (Overall Plan) for the Project. The Overall Plan shall be submitted to the Department prior to, or coincident with, submission of Water and Sewer Plans for the first phase of the project. All comments and issues related to the Overall Plan must be addressed, and approval from DPU received, before any construction plans for the Project will be approved.
5. When all administrative and technical requirements have been satisfied, the Department will approve the Water and Sewer Plans for the Project. It shall be noted that DPU approval of the Plans does not constitute County

approval of any POD or LDP, and shall not be interpreted as permission to start construction of water and/or sewer infrastructure.

6. The Developer must receive final approval from the County of the POD/LDP prior to applying for a Utility Construction Permit (UTL).
7. Once applicable Utility Agreement(s) has/have been executed, an appropriate Surety has been posted by the Owner, and any required off-site easements have been recorded, the Owner may apply for a Utility Construction Permit (UTL) for the Project.
8. Shop drawings as described elsewhere in these Standards must be submitted to DPU, reviewed, and accepted prior to start of construction. To avoid potential delays in construction, the Department recommends these be submitted with the UTL Application package.
9. After issuance of a UTL, and prior to start of construction, the Owner or his Contractor must contact DPU to schedule a pre-construction meeting. A copy of the Utility Permit will be provided to the Owner and/or his Contractor at the pre-construction meeting. Construction shall not commence until a pre-construction meeting has been held.
10. Proposed revisions to the approved Water and Sewer Plans shall be submitted directly to the Department. The submission package for the revised plans shall include:
 - a. A transmittal letter written by the Design Engineer which clearly describes and justifies the proposed revisions.
 - b. Two paper copies of the revised plans which clearly indicate the proposed revisions by highlighting them in yellow and providing detailed notes and labels describing the revisions.

B. Water and Sewer Plans Which Include Only Utility Improvements (UTP)

1. The Utility Plan (UTP) process is for “stand-alone” Water and Sewer Plans which are not part of a POD/LDP or other development plan. Offsite Water and Sewer improvements required for a development project often fall into this category.
2. Prior to preparation of a UTP, the Developer or his Engineer shall schedule a meeting with DPU to define the scope of the project and the extent of the improvements to be included on the UTP.
3. Water and Sewer Plans subject to the UTP process shall be submitted directly to DPU. A complete Utilities Design Folder shall be submitted to the Department along with the Plans. The Utilities Design Folder shall

contain, as applicable, the following documents which may not have been included on the utility plans:

- a. Engineering Report with supporting calculations
 - b. System Layout Plan
 - c. Overall Water and Sewer Plan
 - d. Information Sheet(s) for Utility Agreement(s)
 - e. Plan Review Checklist
 - f. Domestic Meter Sizing Form
 - g. Water model
 - h. Fire Flow Estimate Form
 - i. Notice of Intent to Discharge Non-Domestic Wastewater
 - j. Any other design documentation related to the Plans.
4. The Owner or his Engineer shall submit the following for review and approval: three paper sets of the complete application and one digital version (.pdf or compatible) of the documents included in said application. Applications for sewage pumping stations or other major facilities may require additional submissions.
 5. DPU shall route a copy of the Water and Sewer Plans to the County Department of Community Development's Environmental Division for review. The Plans will not be approved by DPU until all comments from the Environmental Division have been addressed.
 6. Once the Plans have been approved by DPU, applicable Utility Agreement(s) has/have been executed, an appropriate Surety has been posted by the Owner, and any required off-site easements have been recorded, the Owner may apply for a Utility Construction Permit (UTL) for the Project.
 7. Shop drawings as described elsewhere in these Standards must be submitted to DPU, reviewed, and accepted prior to start of construction. To avoid potential delays in construction, the Department recommends these be submitted with the UTL Application package.
 8. After the issuance of a UTL, and prior to start of construction, the Owner or his Contractor must contact DPU to schedule a pre-construction meeting. A copy of the Utility Permit will be provided to the Owner and/or his

Contractor at the pre-construction meeting. Construction shall not commence until a pre-construction meeting has been held.

9. Proposed revisions to the approved Water and Sewer Plans shall be submitted directly to the Department. The submission package for the revised plans shall include:
 - a. A transmittal letter written by the Design Engineer which clearly describes and justifies the proposed revisions.
 - b. Two paper copies of the revised plans which clearly indicate the proposed revisions by highlighting them in yellow and providing detailed notes and labels describing the revisions.

6.1.05 Engineering Report and System Layout Map

A. Engineering Report

1. Except as noted below, an Engineering Report shall be prepared by the Developer's Engineer for every project which involves construction of new water and/or sewer facilities to be owned and operated by Goochland County. An Engineering Report is not required for a minor sewer extension. A minor sewer extension is defined as follows:
 - a. Fewer than 15 residential lots are to be served by the extension.
 - b. No offsite areas are served by the extension, and
 - c. The diameter of the sewer line does not exceed 8 inches.
2. When required, the Engineering Report shall be submitted to, and must be approved by, the Department of Public Utilities (DPU), prior to submission of any utility plans.
3. The Engineering Report shall include the following:
 - a. Projected water demand and sewage flows generated by the project, as applicable.
 - b. A System Layout Map which incorporates all proposed construction together with enough of the surrounding area to clearly outline the interrelationship of the two.
 - c. Proposed sizing of sewer lines with calculations showing they are designed to serve the entire sewer shed or service area.
 - d. Proposed sizing of water lines with calculations (water model

results) showing they are adequate for domestic and fire flows, including any applicable off-site areas to be served.

- e. Existing and proposed developments shall be shown as well as existing and proposed utilities.
- f. Where phased development is contemplated, the extent of each phase shall be clearly delineated.
- g. All other design calculations associated with the Water and Sewer Plans.
- h. A complete list of all off-site easements needed to construct the Project, including Tax Map Numbers, current landowner information, total parcel area and total area within proposed easements.
- i. Additional requirements shall be imposed as detailed in other divisions of these standards and as required by DPU.

B. System Layout Map

- 1. The System Layout Map shall delineate the sewer shed area boundaries for sewer projects and pressure zone boundaries for water projects. The project area(s) shall be clearly depicted within these defined boundaries.
- 2. Using the Comprehensive Plan, Utilities Master Plan, and other available data, the System Layout Map shall show present and future development, proposed interim and future utilities, and any existing utilities that will be affected by or effect the proposed utilities.
- 3. Existing and proposed ground elevations shall be shown at contour intervals not exceeding 5 feet unless otherwise approved.
- 4. Proposed utilities and easements necessary to serve properties adjacent to the project shall be shown on the map.

6.1.06 Federal, State, and Local Approvals

- A. Permit conditions for construction and maintenance shall be shown on the plans where any Nationwide or Individual Permit, Virginia Water Protection Permit, Virginia Department of Health or Virginia Department of Environmental Quality Construction Permit, Plan of Development, Virginia Power Right-of-Way Crossing Permit, Railroad Crossing Permit, etc. is required.

- B. Plans for erosion and sediment control must be approved by the County before a DPU Utility Construction Permit (UTL) will be issued for construction of water and sewer facilities. A preconstruction meeting with County Environmental personnel is required at the project site prior to the start of construction.
- C. Where VDOT Right of Way (ROW) is used, the contractor shall obtain a VDOT Land Use Permit before construction is started. The contractor shall capture a video recording of the ROW and adjacent properties to assess the condition and provide a guideline for restoration of the property after completion. Copies of the video recordings shall be submitted to the County before the start of construction.
- D. All wetlands shall be indicated on the plans. The Contractor shall obtain all required permits from all authorities having jurisdiction, prior to going through, under, or in any way impacting a wetland.

6.1.07 Easements

- A. The Developer/Owner shall be responsible for obtaining all easements and is responsible for any/all easement acquisition costs.
- B. Where off-site easements are to be used, the contractor shall capture a digital video recording of the easements and adjacent areas to assess the existing conditions and provide a guideline for restoration of the property after completion. Copies of the video recordings shall be submitted to the County before the start of construction.
- C. Offsite utility easements shall be recorded prior to the start of construction. All utility easements shall be recorded prior to acceptance by the County.

6.1.08 Permits

- A. The Developer must obtain all required Federal, State, and Local licenses and permits and pay all charges and expenses connected with the work and be responsible for all damages to persons or property which may occur in connection with the prosecution of the work.
- B. A Utility Construction Permit (UTL) issued by the Department is required prior to the start of construction.
- C. Misunderstanding or ignorance of any law, regulation, or requirement shall not be considered a valid reason for failure to secure the necessary permits.

6.1.09 Project Meetings

- A. The Developer or his Contractor shall invite the DPU Inspector to any/all project meetings regarding water and sewer utilities or related issues.

6.1.10 Shop Drawings/Submittals

- A. All information necessary to give a comprehensive idea of the construction contemplated shall be shown on the plans. Shop Drawings and Submittals shall be prepared for all equipment and materials to be used in construction of the project. These Shop Drawings and Submittals, as well as such additional information, details or working drawings as may be needed to accurately describe the project shall be provided to the Department for review and concurrence. Any work performed or materials ordered prior to acceptance by DPU of Shop Drawings and Submittals shall be at the sole risk of the Contractor.
- D. It is expressly understood that DPU concurrence with Shop Drawings, Submittals, or other working drawings does not constitute approval by DPU, and in no way relieves the Developer/Owner or his Contractor from responsibility for errors or omissions in dimensions or quantities or for failure to meet applicable standards.

6.1.11 Quality Control

- A. It is the intent of these Standards to describe definitively and fully the character of materials and workmanship required, and to require first class work and new materials in all aspects of the project.
- B. The Owner shall ensure that his Contractor employs careful and competent superintendents, foremen, and workmen.
- C. The Owner shall ensure that the equipment and tools used by his Contractor are in good repair and safe to use.
- D. The Owner shall ensure that his Contractor personally supervises the work and when not personally present shall be represented by a Superintendent who shall have full authority to act as the Contractor's representative. All orders and instructions given to the Superintendent shall have the same force and meaning as if given to the Contractor or in person. The Owner shall ensure that the Superintendent or Contractor is on site at all times while work is being performed, including all times when subcontractors are working.
- E. During inclement weather, no work shall be done except as can be done satisfactorily and in a workmanlike manner to secure first class construction throughout.
- F. If unforeseen conditions arise during Construction, the Contractor shall notify the Inspector and Engineer.
- G. Any proposed deviations from the Plans shall be submitted to the County for

review and approval prior to execution.

- H. Testing Laboratory Services: Tests called for other than by public authorities shall be made by approved independent laboratories with the full cooperation of the Contractor.
- I. Additional Testing Services: DPU shall have the authority to require additional testing services to assure the Work complies with the Utility Plans and these Standards. This testing shall be performed at the Owner's expense.

6.1.12 Discrepancies

- A. Any discrepancies found between the site conditions, the Plans, and the County's Standards, and/or any inconsistencies or ambiguities in the Plans or Specifications shall be immediately reported to the Department and to the Developer's Engineer in writing. The Developer/Owner shall have his Engineer promptly correct such inconsistencies or ambiguities in writing for approval by the Department. Work done by the Contractor after discovery of such discrepancies, inconsistencies or ambiguities, but prior to final resolution, shall be done at the Developer/Owner's risk.

6.1.13 Responsibilities

- A. The Developer/Owner is responsible for the Contractor's work.
- B. The Contractor shall take all precautions to prevent injuries to persons and property in or about the work.
- C. Upon completion of construction of public utilities, and prior to applying for any form of acceptance, the developer/owner shall submit to DPU a statement signed by a licensed professional engineer certifying that the construction work was completed in substantial accordance with the approved plans and specifications, revised only as approved by DPU. This statement is called a Construction Completion Statement, and it shall be based upon inspections performed or supervised by the certifying licensed professional engineer during and after construction. These inspections must be adequate to ensure the truth of the Construction Completion Statement.
- D. The Developer/Owner shall repair, restore, and/or replace all damaged work which occurs or exists prior to Final Acceptance.

End of Section 6.1