Guide to New Residential Construction

Water & Sewer



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Dear Customer:

I would like to personally welcome and thank you for considering investing in our community. The Clinton Utilities Board (CUB) is committed to providing you with excellent and responsive service, and it is our desire to assist you in making your project a success. We are pleased to provide you with this brief guide to introduce you to our Water & Sewer Department's policies and procedures regarding new residential construction.

We would also like to take this opportunity to tell you a little about who we are. The Water & Sewer Department is a division of the CUB that provides service to more than 6,500 water accounts and more than 4,500 wastewater, or "sewer" accounts.

CUB supplies drinking water to customers within the City of Clinton as well as portions of the Claxton Community. Our award-winning Dennis Barbe Memorial Water Treatment Plant is located on the banks of the Clinch River and has a capacity of 3.3 million gallons of water per day. The drinking water is conveyed by a distribution system consisting of more than 140 miles of water mains.

The CUB Water Reclamation Facility provides wastewater treatment service to customers within the City of Clinton. On an average day we treat more than 1.6 million gallons of wastewater, with the capacity to treat up to 3.0 million gallons per day. Our wastewater collection system has more than 110 miles of piping.

We hope this guide will make it easier for you to do business with CUB's Water & Sewer Department and will provide answers to most of your questions. Telephone numbers and web site references are provided throughout for additional information. Please feel free to contact us with any questions or issues not addressed in this guide.

Thank you for allowing us to serve you.

CLINTON UTILITIES BOARD

Gregory (Greg) J. Fay, CEO

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This handbook is provided for informational purposes only and is not intended to be a legal document. Information is current as of the revision date that appears on the front cover. For more recent updates and amendments, please visit Clinton Utilities Board's web site at www.clintonub.com or call 865-457-9232 and ask to speak to the Water Department.

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Process Overview

- **Step 1:** Submit request for water and sewer availability to CUB's Director Water & Sewer Department using the *Water and/or Sewer Service Availability* form included in Appendix 6.
- **Step 2:** For residential development (more than one Single Family Dwelling) Director performs a capacity study and schedules a Conceptual Development and/or Pre-Design meeting with Owner/Developer and/or their Engineer as necessary
- **Step 3:** Director sends letter of availability and outlines requirements for service to Owner/Developer
- **Step 4:** Is the construction of a water or sewer extension necessary to serve the proposed development?
 - No? Skip to step 14
 - Yes? Continue with step 5
 - **Step 5:** Submit two sets of construction plans to Director for approval and signature
 - **Step 6:** Submit CUB's approved/signed drawings to the appropriate Plans Review Section(s) of the Tennessee Department of Environment and Conservation (TDEC) along with fees as may be required.
 - **Step 7:** CUB and Owner's Engineer receive approval letters and stamped plans from TDEC.
 - **Step 8:** Pre-construction meeting is scheduled with Director
 - **Step 9:** Owner/Developer/Contractor constructs water and or sewer extensions (including all water and sewer service lines) in accordance with CUB's current *Standard Specifications for Construction of Water and Sewer Utilities*.
 - **Step 10:** Schedule with CUB Water and Sewer Construction Supervisor, to review and approve all construction prior to backfilling operations.
 - **Step 11:** Owner/Developer/Contractor pressure tests new construction and disinfects new water mains all in accordance with CUB current *Standards* and TDEC requirements. CUB performs sampling of the water main to ensure compliance with TDEC Rules and Regulations.
 - **Step 12:** After sampling and testing are satisfactorily completed, and all checklist items have been satisfactorily addressed, and after Owner/Developer/Contractor delivers copies of recorded easements and construction As-Built Documents to CUB, CUB approves construction of new mains and accepts them for ownership and maintenance.
 - **Step 13:** For <u>new water and sewer main construction:</u> The contractor makes the ³/₄ or 1-inch taps on the water mains, and 6-inch taps on the sewer mains, and completes service line construction to property lines or rights-of-way as

appropriate, per CUB's current Standard Specifications for Construction of Water and Sewer Utilities.

Step 14: For developments where there are <u>existing mains</u>, developer calls CUB to schedule a CUB construction crew to make the water and/or sewer tap (s). Developer's appropriately licensed contractor performs the construction of the water and/or sewer service lateral from the main "tap" to the edge of Right of Way or property line to be served as determined by CUB.

Step 15: Customer/Owner/Developer's contractor installs the water meter box, meter setters, and service line in strict accordance with CUB's current *Standard Specifications for Construction of Water and Sewer Utilities*.

Step 16: Developer contacts CUB's Water & Sewer Department to request inspection of completed service lateral prior to backfilling operations. Contractor is required to also contact appropriate agencies with jurisdiction to ensure compliance with their requirements for backfilling materials, operations and inspections, including asphalt and concrete surface repairs or replacement.

Process End: Once all items are installed correctly and pass final inspections of all agencies involved and all required charges, and/or deposits are paid in accordance with CUB's latest Schedule of Charges (Appendix 7), CUB accepts the approved improvements for ownership and maintenance. Applications for Water and Sewer service can be made at this time.

Process Detail

1: Availability Request

All proposed new developments within the Department's water or sewer service areas require a determination of the availability of water and/or sewer services.

Developers and property owners, or their representatives, should contact CUB Director - Water & Sewer, to determine water and sewer availability. Requests for water and sewer availability shall be made using the *Water and/or Sewer Service Availability* form included in Appendix 6 via letter addressed to:

Director-W&S Department Clinton Utilities Board P. O. Box 296 Clinton, TN 37717

The following information must be included:

- Location of the property with tax map and parcel number (a GIS print is acceptable)
- Total acreage of the site to be served
- Intended type of development or use of the property (i.e. Residential Single-Family Houses, Apartments, Condominiums, etc...)
- Projected total water supply need in gallons per day (GPD)
- Projected total wastewater flow in gallons per day (GPD)
- Approximate number of lots and/or residences to be served

2: Capacity Study

Upon receipt of a request for availability, the Director will perform a capacity study based on the projected flows for the proposed development in gallons per day (GPD) based upon TDEC's design criteria for water and wastewater improvements.

3: Availability Letter

Following the review, the Director will send an availability letter to confirm the point of connection for the water and sanitary sewer, as well as:

- Existing water and sewer main size(s)
- Requirements for service by CUB

The statement of water and sewer availability is effective for one year from the date of the availability letter.

If, after approval of water and sewer availability, construction has not begun within the established time period, a renewal of the availability statement will be required. Any changes in all applicable departmental regulations/specifications and charges in force at that time will be imposed.

4: Water and Sewer Extensions

Is a water or sewer extension necessary?

- No? Skip to step 14
- Yes? Continue with step 5

5: Construction Plans

For new developments (where water and/or sewer services are requested), and/or where a proposed development requires the extension of a public water main or sewer line, the owner/developer/builder shall provide to CUB a set of plans and specifications, adhering to CUB's water (Appendix 4) and/or sewer design checklists (Appendix 5). A State of Tennessee Registered Professional Engineer must have prepared both a plan and a profile (if a profile is required) of the development and utilities construction plans.

Two sets of engineered plans must be submitted to CUB's Director – Water & Sewer. The professional engineer's seal and signature must be affixed to the proposed plans. Plans will be reviewed and returned, with CUB's comments and any necessary revisions, in a timely manner.

The approved plans must be signed by CUB prior to the owner's engineer submitting the plan (and specifications) to Tennessee Department of Environment and Conservation (TDEC) for their approval.

6: Plan Submittal Requirements

Submit CUB's approved/signed drawings to the appropriate Plans Review Section(s) of the Tennessee Department of Environment and Conservation (TDEC) along with fees as may be required.

CUB has listed in its current *Standard Specifications for Construction of Water and Sewer Construction*, which has been posted on CUB's web site at www.clintonub.com for easy access, general guidelines for all proposed water and sewer system extension plans. These guidelines are intended to aid in the preparation of construction plans and are not intended to supersede standards of the Tennessee State Health Department criteria; and these guidelines should not be considered as all-inclusive requirements. A general discussion follows:

Engineering Design Report

The engineering design report (if required) shall contain the following information:

- Topographic map indicating the area to be served indicating total acreage of the proposed development and calculations supporting all water main sizing.
- Current and proposed zoning/density for the area.
- Compare service elevation with proposed buildings and pressure system information
- Total number of units for the proposed development.
- Water usage of the proposed system, both present and future additional phases. Show calculated total and peak flows of the proposed development. Normally, a peak factor ranging from 2.5 to 4 shall be used in the calculations. Calculate the projected ultimate usage for the area based on CUB's projections as well. Proposed usage will be based on State design criteria and projections of population density, for a minimum of a 20-year period.
- Compare with the CUB Master Water Plan for the area of proposed development and incorporate any required improvements into the project. Where two or more alternatives exist for providing public facilities, each of which is feasible and practical, a summary of the alternate plans shall be provided with reason for selecting the one recommended, including financial considerations of the options.

• General system layout of the development.

State of Tennessee Requirements for Connections to Public Mains

In addition to department requirements, all state health department requirements in effect at the time of construction shall be followed. In case of conflict, the more stringent requirement shall apply to the proposed construction. Online resources for additional information regarding state requirements:

Sewer: www.state.tn.us/environment/gwp/
Water: www.state.tn.us/environment/dws/

Construction Plan Design Guidelines

Construction plan design guidelines are addressed in further detail in CUB's current Standard Specifications for Construction of Water and Sewer Utilities. Plans will be reviewed and returned to the engineer with any necessary revisions indicated. Specific design considerations are included in the CUB Water Design Checklist in Appendix 4, and the CUB Wastewater Design Checklist in Appendix 5. Additional requirements for the format and content of the plans in regards to easements are as follows:

Recording Easements

Easements for water and sanitary sewer mains and services may be documented in two ways:

- 1. Easement Document on Standard Form
 Submit to CUB's Director, Water & Sewer Department, and include map and parcel number, legal owner's name, instrument number or deed book and page number, legal description of the easement, scale drawing or exhibit/map showing the easement, and notarized signature of owner. CUB must approve and will record the easement at the developer's expense.
- 2. Recorded with Subdivision Plat

A preliminary development plan of the subdivision must be provided at the time of plan submittal. This plat must clearly define the easement to be recorded. A licensed Professional Engineer or Registered Land Surveyor will seal the final subdivision plat assuring that the easement is recorded, as shown on the preliminary plat.

Easement Requirements

When constructing public sanitary sewer lines or water mains outside a public right of way, an easement must be provided and conveyed to CUB. Documentation of the easement should be submitted to CUB for approval. Following CUB's approval, the Developer shall record it with the Register of Deeds for Anderson Co. Recording fees are the responsibility of the Developer.

General Requirements: Minimum width = 15-feet for all Permanent easements. Depending on specific site conditions such as terrain, depth of mains, and/or accessibility by vehicle, additional easement widths may be required.

7: CUB receives the approvals of TDEC's Plans Review Section(s)

8: Pre-Construction Meeting

After all approvals and easements required are obtained, a pre-construction meeting will be held. The project engineer, developer and contractor are required to attend the pre-construction meeting conducted by CUB's Director, Water & Sewer Department and staff. The contractor shall provide water and/or sewer construction cut sheets in acceptable CUB format where

applicable. The agenda for the meeting includes construction requirements and any questions on materials and any other specific concerns relating to the project.

9: Water/Sewer Construction

Construct public water and/or sewer mains and/or extensions, including all water and sewer service connections, to CUB specifications and inspected in accordance with **Item 10: Inspections** below.

A Tennessee licensed municipal utility contractor (for sewer or water) or licensed master plumber (for water) is required to perform all proposed public utility extension work. Contractors shall construct all water and/or sewer facilities according to CUB's current *Standard Specifications for Construction of Water and Sewer Utilities* and the City of Clinton Municipal Code.

All water and sewer related construction scheduled to be conveyed to CUB for ownership and maintenance shall be consistently monitored by owner/engineer/contractor during construction to ensure CUB/TDEC-approved plans and specifications are strictly adhered to. Also, CUB must inspect all facilities prior to backfill (see **Section 10: Inspections**).

Following CUB's final inspection and prior to final acceptance, the owner/developer shall develop and complete CUB-approved forms for deeds of conveyance of easements and/or property, have them signed and notarized as conveying the required easements to CUB, and then have all easements and property transactions properly recorded in the Anderson County Register of Deeds. Developer will ensure that one copy of each recorded deed is sent to CUB upon completion of construction and prior to CUB's final acceptance. CUB also requires that AsBuilt Record Drawings of the completed project be provided to CUB electronically in AutoCAD or .pdf format prior to CUB's final acceptance.

Temporary meters for water main construction

If water service is required for construction of the new mains, a temporary meter with backflow preventer may be issued by CUB for use on a public fire hydrant. Un-metered use of CUB fire hydrants and service lines is strictly prohibited. Please call the CUB Water & Sewer Department to request a temporary meter for use on a fire hydrant.

10: Inspections

All water and sewer related construction scheduled to be conveyed to CUB for ownership and maintenance shall be consistently monitored by owner/engineer/contractor during construction to ensure CUB/TDEC-approved plans and specifications are strictly adhered to. Also, CUB must inspect all facilities prior to backfill. The owner/engineer/contractor shall contact CUB preferably at least 24-hours in advance of intent to construction and backfill to schedule CUB's inspection. The owner/engineer/contractor shall enlist the services of a Tennessee-registered professional engineer to supervise the testing and certification of construction.

The owner/developer is responsible for the costs of all inspections and testing for compliance.

The test reports shall be given to CUB in a written format including, but not be limited to, the following test results: soil compaction, hydrostatic pressure, bacteria, mandrel, air, vacuum, etc.

Owner/developer must request inspections of water and/or sewer extensions, taps and service lines, preferably at least five (5) working days in advance of needing such services by contacting CUB Water & Sewer Construction Supervisor, at (865)-220-6245.

11: Testing Water/Sewer Mains, Sampling Water Mains

Contractor will make a service tap to create a sample point on new mains after tapping sleeve and valve (TS&V) and construction tap on existing main has been made. The contractor will run a copper jumper, complete with a double detector check valve, to the main line. (The TS&V will remain closed at all times during this process.) Testing shall be as required by CUB and TDEC.

12: Completion of Construction, Acceptance by CUB

CUB's requirements for construction of water and sewer improvements are included in its current Standard Specifications for the Construction of Water and Sewer Utilities.

13: Taps and Tap Policy

If the Owner/Developer requests to make the necessary tap(s), then such work shall be done by a licensed municipal utility contractor or licensed master plumber in accordance with requirements of CUB's *Tap Policy* in Appendix 1.

14: Service Application

No service connection will be allowed prior to the deeding of the water and/or sewer main extension(s) to CUB, and prior to the acceptance by CUB, unless the appropriate early release forms have been signed, notarized, and provided to CUB.

Developers and property owners, or their representatives must complete CUB Application for water and/or sewer service, including any necessary taps and/or meters.

15: Service Taps Made by CUB

The contractor notifies CUB of their intent to excavate to expose a main to allow CUB to perform a tap. On the mutually agreed-to day and time, the contractor will excavate to expose the main and allow CUB to make the tap.

See Appendix 2 – Tap Scheduling Guidelines and Appendix 3 – Guidelines for Basic Residential Domestic Water Meter Installation and Requirements for additional details for taps to be made by CUB.

16: Service Line Installations

The contractor will typically construct the service line(s). Following CUB's approval of the service line installation, CUB will allow the contractor to connect the service line to the CUB-made tap. The contractor will then perform the backfilling operations in accordance with the requirements of, and with the required inspections and approvals of all agencies with jurisdiction over the disturbed area and the methods of backfilling and surface repair, which may include but is not limited to the following:

- City of Clinton Public Works Department
- o Tennessee Department of Transportation
- Anderson County Highway Department
- Specific Railroad company or authority

17: Residential Meters

For all installations, the contractor or licensed plumber must provide and install the water service setting including the water service line, meter box and meter setters in accordance with CUB's current Standard Specifications for Construction of Water and Sewer Utilities.

Appendix 1 - Tap Policy

It is the desire of CUB and its Water & Sewer Department to promote development within our service areas. CUB realizes that when Owner/Developer invests in constructing water and/or wastewater improvements to serve new developments (whether residential, commercial, or industrial) they must consider the costs of such improvements. CUB encourages all Owners and Developers to meet with CUB's Director - Water & Sewer Department early in their design process to discuss ways in which CUB's current *Standard Specifications for Construction of Water and Sewer Utilities* and Tennessee Department of Environment and Conservation (TDEC) requirements can be met in the most logical, efficient and cost-effective manner.

As addressed earlier in this Guideline, where water and/or wastewater main extensions are required to serve new development, and when the Owner/Developer would like for CUB to take over such improvements for ownership and maintenance, all construction must be performed in accordance with CUB's current *Standard Specifications for Construction of Water and Sewer Utilities* and the requirements of TDEC. In order to ensure compliance, CUB is required to inspect all construction activities prior to any backfilling operations by the contractor. Such inspection services must be scheduled at least 24-hours in advance through CUB's Water & Sewer Department. For scheduling inspections, please contact CUB's Water & Sewer Department at (865) 220-6243 or by contacting CUB Water & Sewer Construction Supervisor, at (865)-220-6245.

- 1. For new development (new water and sewer main construction) which will connect to newly constructed mains, which have been accepted by CUB for ownership and maintenance, CUB will allow the Owner/Developer to perform the tapping of the new mains provided that CUB performs the inspection and approves all such tapping and service line construction prior to backfilling operations. See Appendix 2 Tap Scheduling Guidelines for details in regards to scheduling.
 - a. Water Services installed by Customer's Contractor must be installed in accordance with CUB's current *Standard Specifications for Construction of Water & Sewer Utilities*, by a Municipal Utility (MU) certified Tennessee-licensed contractor.
 - b. Contractor shall install and test connections on main. After being properly installed and tested, Contractor may tap main. After tap is made, Contractor may complete installation of service in accordance with CUB's current *Standard Specifications for Construction of Water & Sewer Utilities*. CUB will need to inspect this installation prior to contractor's backfilling operations. Coordination of Contractor's tapping this main and CUB's final inspection of completed service, must be made with CUB Water & Sewer Department Construction Supervisor preferably at least 24 hours prior to work beginning.

- 2. For new development which will connect to an existing CUB (public) main, CUB shall perform (or contract for) the actual tapping of the main. See Appendix 2 Tap Scheduling Guidelines for details in regards to scheduling.
 - a. Water Services installed by Customer's Contractor must be installed in accordance with CUB's current *Standard Specifications for Construction of Water & Sewer Utilities*, by a Municipal Utility (MU) certified Tennessee-licensed contractor or licensed master plumber.
 - b. After CUB installed tap is made, Contractor may complete installation of service in accordance with CUB's current *Standard Specifications for Construction of Water & Sewer Utilities*. CUB will need to inspect this installation prior to contractor's backfilling operations. Coordination of CUB's tapping this main for the contractor and final inspection of completed service, must be made with CUB Water & Sewer Department Construction Supervisor preferably at least three (3) working days prior to work beginning.

Appendix 3 – Guidelines for Basic Residential Domestic Water Meter Installation and Requirements addresses the manner in which water service is established with individual customers within a new development.

3. For existing customers who desire to relocate, replace their connection, or add another connection, to an existing public main and/or service line, CUB shall perform (or contract for) the actual tapping of the main. Customer's plumbing contractor may install the services if they meet the qualifications, including licensing and/or bonding requirements if any, established by the agency with jurisdiction over the street, road, railroad, etc. that will be affected by the contractor's installation of the new service(s).

Should this customer desire that CUB perform the excavation, tap, and installation of the service line(s) and appurtenances, this customer will be billed by CUB for their cost-recovery of their costs of performing this work for the customer.

4. When CUB is asked to perform the installation of the services (taps, service lines, cleanouts or setters, meter box, etc.)

Residential, Commercial/Industrial Tap Fees 3/4" through 2" *

A. CUB Installed Water Service 3/4" through 2"

- 1. Long Side where water main is located inside, but beyond centerline, or across a 30-foot paved street and within 5 foot of pavement. Meter is set at ROW line of service property, approximately 5 foot from pavement. Typically, 40 feet in length. CUB excavates main and meter pit, bores under paved area, makes connection to main, installs copper setter and box, then backfills as necessary. Follow up with contractor to repair yard and or asphalt/concrete as necessary. CUB will develop an estimate of the recovery costs for performing this construction and will invoice the Owner/Developer. Once the invoiced amount has been paid in full to CUB, CUB will schedule the construction.
- 2. Short Side where water main is located inside, but before centerline, or outside of street on same side of street within ROW. Typically, 5-10 feet in length. CUB excavates main and meter pit, bores under paved area (if necessary), makes connection to main, installs copper setter and box at ROW line of service property, then backfills as necessary. Follow up with contractor to repair yard and or asphalt/concrete as necessary. CUB will

develop an estimate of the recovery costs for performing this construction and will invoice the Owner/Developer. Once the invoiced amount has been paid in full to CUB, CUB will schedule the construction.

- **B.** CUB installed Standard Depth minimum 6" diameter Sewer Service (based on a ³/₄" through 2" water meter at same location). Depth of main is equal to or less than 4 feet.
- 1. Long Side where sewer main is located inside, but beyond centerline, or across a 30-foot paved street and within 5 feet of pavement. Cleanout is set at ROW line. Typically, a service line is approximately 40 feet in length. CUB cuts asphalt, excavates main, installs tee in main as necessary, installs service piping under street, installs tee and cleanout at ROW of serviced property, then backfills as necessary. CUB then follows up with its contractor to repair yard and or asphalt/concrete as necessary. CUB will develop an estimate of the recovery costs for performing this construction and will invoice the Owner/Developer. Once the invoiced amount has been paid in full to CUB, CUB will schedule the construction.
- 2. Short Side where sewer main is located on customer's side of the street, but before centerline. This would also apply to a tap made in an easement between properties. Cleanout is set at ROW line or 10 feet from any main in an easement situation. Typically, this type of a service line is 10 feet in length. CUB cuts asphalt, excavates main, installs tee in main as necessary, installs service piping, installs tee and cleanout at ROW of service property, then backfills as necessary. CUB then follows up with its contractor to repair yard and or asphalt/concrete as necessary. CUB will develop an estimate of the recovery costs for performing this construction and will invoice the Owner/Developer. Once the invoiced amount has been paid in full to CUB, CUB will schedule the construction.
- C. CUB Installed Extended Depth minimum 6" diameter Sewer Service (based on a ¾" through 2" water meter at same location). Depth of main is greater than 6 foot deep. CUB would enlist the services of a contractor with the necessary equipment required to work at these extended depths. Cost to customer would be difference between CUB Standard depth cost and additional costs from Contractor.
- **D. CUB Installed Low-Pressure Sewer System**. CUB installs Grinder Pump, Control Panel, piping to main and main connection. CUB will develop an estimate of the recovery costs for performing this construction and will invoice the Owner/Developer. Once the invoiced amount has been paid in full to CUB, CUB will schedule the construction.

E. Core into manhole.

- 1. Any of the above Sewer Service Connections requiring connection into a manhole would also require an additional service charge from a Coring Contractor. The cost to the customer would be the actual costs from the Coring Contractor.
- 5. Customer's Contractor Installed Water Services 3/4" through 2"

a. Water Services installed by Customer's Contractor must be installed in accordance with CUB's current *Standard Specifications for Construction of Water & Sewer Utilities*, by contractor.

b. After CUB installed tap is made, Contractor may complete installation of service in accordance with CUB's current *Standard Specifications for Construction of Water & Sewer Utilities*. CUB will need to inspect this installation prior to backfill. Coordination of CUB's tapping the main for the contractor and final inspection of completed service, must be made with CUB Water & Sewer Department Construction Supervisor preferably at least three (3) working days prior to work beginning.

6. Customer's Contractor installed minimum 6" diameter Sewer Service

- a. Sewer Services installed by Customer's Contractor must be installed in accordance with CUB's current *Standard Specifications for Construction of Water & Sewer Utilities*, by the Customer's contractor. CUB will need to inspect this work as it is being performed by the contractor and prior to any backfilling operations.
- b. The design and coordination of this should be handled on an individual basis, due to the many variables in design, inspection and testing that may be required. Coordination of CUB's inspection of this during all phases of installation of service, must be made with CUB Water & Sewer Department Construction Supervisor preferably at least three (3) working days prior to work beginning.
 - Inspection and interaction with CUB will likely consist of several site visits to insure compliance with specification.

7. Customer's Contractor installed Low-Pressure Sewer Services (LPSS)

- a. No LPSS shall be used for a project unless received prior approval from CUB.
- b. LPSS must be installed in accordance with CUB's current *Standard Specifications for Construction of Water & Sewer Utilities*, by the Customer's Municipal Utility (MU) certified Tennessee-licensed contractor. CUB will need to inspect this work as it is being performed by the contractor and prior to any backfilling operations.
- c. After CUB installed tap is made, Contractor may complete installation of service in accordance with CUB's current *Standard Specifications for Construction of Water & Sewer Utilities*. CUB will need to inspect the service installation prior to backfill. Coordination of CUB's tapping the main for the contractor and final inspection of completed service, must be made with CUB Water & Sewer Department Construction Supervisor preferably at least three (3) working days prior to work beginning.
 - Inspection and interaction with CUB will likely consist of several site visits to insure compliance with specifications. Costs of the LPSS and Installation to be the sole responsibility of Customer.

8. Inspections of Customer Sewer Installations and Connections.

a. CUB must inspect Sewer Connections to ensure service pipe is properly connected to the Cleanout at the right-of-way (ROW) in accordance with CUB's current *Standard Specifications for Construction of Water & Sewer Utilities*. Coordination of CUB's inspection must be made with CUB Water & Sewer Department Construction Supervisor, at (865)-220-6245.

Appendix 2 - Tap Scheduling Guidelines

Any service that will be connected to a Clinton Utilities Board (CUB) water or wastewater main must be scheduled through CUB's Water & Sewer Department. In order to schedule the tap, CUB will need to be provided with the City of Clinton Public Works Department's written approval for excavation and proof of payment of all bonds and fees (as may be required by the City of Clinton or other agency with jurisdiction), as well as the Tennessee One Call number.

Appointment times may be scheduled between the hours of 8:30 a.m. through 2:30 p.m., Monday through Friday, allowing for a 30-minute travel time.

For scheduling taps please contact CUB's Water & Sewer Department at (865) 220-6243 or by contacting CUB Water & Sewer Construction Supervisor, at (865)-220-6245.

Appendix 3 - Guidelines for Basic Residential Domestic Water Service Setting Installation and Requirements

The following guidelines and procedures have been developed for installation of residential meters.

- Clinton Utilities Board (CUB) furnishes 5/8, 3/4-inch residential domestic meters only. Costs for larger meters shall be the customer's responsibility.
- CUB-approved Meter Setters with curb stops and check valves must be installed in a CUB-approved meter box for any residential water meter by a Municipal Utility (MU) certified Tennessee-licensed contractor or a licensed plumber.
 - CUB-approved Backflow Devices are required for all residential irrigation systems and any must be furnished and maintained by customer at customer's expense.
 - Service configurations, elevations, and materials shall be as per CUB's current Standard Specifications for Construction of Water & sewer Utilities.
 - New and existing dwellings may split service connection for irrigation with backflow device behind meter and before split.
 - Meter and meter boxes are not allowed to be installed in driveways unless a variance is granted by CUB's Director – Water & Sewer Department.
 - CUB-approved base material is required with a three to four-inch clearance between service line and the top of the base material. Masonry brick may be used to support meter.
 - All pipes in meter boxes must be of brass or copper material. No plastic galvanized or cast iron pipe is allowed.
 - CUB will allow one "Y" or "T" off of street side service line for irrigation. CUB
 is not responsible for pressure loss or fluctuation realized as a result of this type of
 connection.
- An account for service must be set up in order to schedule the meter set from CUB. A
 Municipal Utility (MU) certified Tennessee-licensed contractor or a licensed plumber
 will be responsible for installation and testing according to all current and applicable
 CUB and TDEC specifications, for the meter setter and water service line. They are
 also required to service the water service setting and meter box excluding the CUB
 water meter during the one-year warranty period. The warranty period begins at the
 date of the final inspection approval issued by CUB.
- Water Service Settings inspections are automatically scheduled based on the date of meter installation request. A change in schedule may be requested through CUB's Water & Sewer Department at (865) 220-6243 or Customer Service Department (865) 457-9232.

- The initial water service setting inspection will be automatically scheduled within five (5) working days from date of issuance of a meter by CUB, unless a change is requested by plumber or contractor. The initial inspection will include the construction of the meter box, box depth, meter setter, service line material, box location, couplings, etc... The contractor, plumber, developer, and/or customer will be notified of any changes or repairs that are necessary. CUB's W&S Department office staff will notify the contractor/plumber/account holder of failing inspections.
- The final meter inspection will be automatically scheduled for approximately thirty (30) calendar days after the passing date of the initial inspection unless a change is requested by the plumber or contractor. Inspection will include integrity of box, meter setter, and yard grading immediately around the box. The plumber, developer, and/or customer will be notified of any repairs that are necessary. CUB's W&S Department office staff will notify the contractor/plumber/account holder of failing inspections.

Appendix 4 - CUB Water Design Checklist

Design Criteria

The requirements below are critical items required by Tennessee Department of Environment and Conservation (TDEC) and the Rules, Regulations, Rates, and Policies of CUB's Water Department. The engineer must ensure all requirements are met. CUB strongly recommends a pre-design conference to review the development layout, including topography and water features, to ensure a successful project.

TDEC Requirements

The following items are required by TDEC's General and Detailed Plans of Water Distribution Systems:

- 1. All plans shall be on standard 24" x 36" plan sheets
- 2. Maximum scale for plans and profiles: Horizontal 50 feet/inch; Maximum vertical scale: 10 feet/inch.
- 3. Must include the name of water system and county in which it is located.
- 4. The engineer's name, address, and telephone number must appear on Page 1.
- 5. Plans must be stamped/sealed and signed by a Tennessee Licensed Professional Engineer.
- 6. Include a vicinity or location map showing the location of the project if a complete system map is not included.
- 7. A key map that shows the location of detailed drawings is required when the project is comprehensive.
- 8. Maps must clearly show the location, size, and material of all existing and newly planned water lines and appurtenances related to the project.
- 9. Stream crossings, including elevations of the stream bed and the normal / extreme high and low water levels must be included.
- 10. Maps must clearly show how the location of proposed water lines coincides with nearby roads, bridges, and other identifiable objects.
- 11. All valves, fire hydrants, tees, reducers, enlargers, bends, and other appurtenances must be visible on maps.
- 12. A hydraulic profile (or data and computations showing hydraulics or proposed additions) must be included. CUB also requires the lowest and highest static and residual pressure to be calculated and shown on the plans. **Note:** Careful attention to development sites and finished floor elevations is necessary to ensure adequate water pressure. The Engineer is responsible for providing accurate elevation data and determining finished floor elevations adequate for service. The Engineer shall contact the Fire Marshall's Office and/or Regional Fire Department to determine the required fire flow for the development.
- 13. Plans must be clear and legible.

CUB Note: Public water mains on private property or in alleys are not normally approved.

CUB requires the following items, in addition to the list above:

- The <u>first</u> page (Cover Sheet) of the plans must include the following:
 - Project layout map (not less than 1" =1000 feet) with project name and design date.
 - Developer's name, address, and phone number.
 - Property owner's name, address, and phone number.
 - Servicing utility's name, address, and phone number (CUB, 1001 Charles G. Seivers Blvd., Clinton, TN 37716, (865) 457-9232).

The items below must be included in the plans:

- All plans shall include a Benchmark based on USGS Datum and referenced to State Plane Coordinates.
- Rights of Way and Easements needed for the water that falls inside / outside of the property.
- Lot lines and locations shown on all plan views, including lot numbers.
- Street names, edge of pavement locations, and the appropriate rights of way.
- Locations of proposed service connections. Taps must be spaced to avoid conflict with sanitary sewer laterals.
- A 100-foot stationing of water lines and stationing of all appurtenances on plan and included profile views.
- Sufficient details shown to allow for material take off and location of lines in the field by a third party.
- In areas where the topographic features are dense, detail sheets may be required on a scale of 1" =20 feet, with the clearance between the proposed main and existing structures clearly defined and noted.
- Show all topographic features such as driveways, pavement, sidewalks, Right-of-Way, Easements, property lines, storm drainage structures, etc...
- Show all property lines on the plans as well as map and parcel information for each parcel. Where possible show lot numbers and/or street addresses.
- Water lines shall be shown on the overall plan. Indicate all conflicts with other utilities and label all sleeves, valves and fire hydrants, proposed service locations, etc...
- Plan / profile sheets shall be drawn for water lines 12 inches in diameter and larger.
- All plans must show the locations of the existing utilities, including but not limited to gas lines, underground utilities conduits, power and telephone poles, water mains, sanitary sewer lines, storm sewers, etc... with measurements and/or details of proposed clearances of same. The source of the utility locations must be noted on the plans.
- The relevant elevations of all pipe lines and conflicting structures at utility crossings (this includes a short profile view of all utility crossings of the water line where new utility lines are being constructed).
- When included, profiles must be on the same sheet as the plan and oriented in the same direction (they can also be included as inserts on a plan sheet if appropriate).

- Project name, date, scale, north arrow, and sheet numbers on all pages.
- Inclusion of CUB detail sheets.
- Revisions tabulated on resubmissions.
- Include the radius of all turns where joint deflection is to be used to curve the water line. For 8 inch pipes, the maximum deflection per joint is 5 degrees. For curves tighter than this, please include the appropriate bends as part of the plans.
- When crossing under an interstate, highway, or railroad, the Carrier Pipe (waterline) and Casing Pipe will be approved by the appropriate agency with jurisdiction. Developer, Contractor and/or Customer shall be responsible for any/all fees and permitting associated with the crossing.
- Typically, the water distribution system shall be a minimum of 6-inch C-900 PVC or ductile iron pipe.
- All water mains shall have a minimum 36 inches of cover in paved and non-paved areas.
- A minimum of 10 feet of horizontal clearance between water mains and sanitary sewer shall be maintained whenever possible. When the 10 feet of separation is not possible, a minimum vertical separation of 18 inches shall be maintained. When the vertical separation cannot be maintained, the sewer must be built to water main specifications. Whenever sewers must cross under water mains, the sewer shall be laid at such an elevation that the top of the sewer is at least 18 inches below the bottom of the water main.
- Any mains/services to be abandoned shall be cut and capped at a point and in a manner to be determined by CUB.
- Water mains proposed to serve property where the serviceability is questionable shall indicate the service elevation, where this condition exists and must be clearly indicated on the plan and profile. On lots where the structure will be above the service elevation, 20 P.S.I. must be provided at the street with the lot served by a privately-owned and maintained booster pump with a TDEC-approved backflow prevention device.
- A connection must be provided for each parcel or proposed lot. The tap location will be shown on the plans and an appropriately sized service extension to the curb or property line indicated, where applicable, for each parcel.
- Easements agreements with owners of private property involved with construction must be obtained and right-of-entry notification executed before construction begins.
- The developer (owner) and/or contractor shall adhere to CUB current *Standard Specifications for Construction of Water and Sewer Utilities*.
- The developer (owner) and/or contractor must install 3-way valve clusters at all roadway intersections.
- The developer (owner) and / or contractor must install all water taps, service lines, copper meter setters (meter yolks), and casings per CUB standard specifications for the new development.
- The developer (owner) and / or contractor must install all fire hydrants (not to exceed 500 feet) and appurtenances per CUB standard specifications for new development.
- A number of other agencies, including but not limited to the following, may also require approval of construction plans:

City of Clinton Public Works Department

Tennessee Department of Transportation

Tennessee Department of Environment and Conservation Anderson County Highway Department

General Design Notes:

The following notes must appear on all plans:

- 1. All work to be performed will be in accordance with the Clinton Utilities Board's current *Standard Specifications for Construction of Water and Sewer Utilities*.
- 2. Pre-construction conference shall be conducted with Clinton Utilities Board's representatives, design engineer, and utility contractor prior to any utility's construction activities begin.
- 3. Water line materials, installation, testing, and disinfection per the Clinton Utilities Board's current *Standard Specifications for Construction of Water and Sewer Utilities*.
- 4. Contractor to install short-side and long-side service laterals and shall include a 1" corporation stop (Ford FB1000-4-Q), 1" HDPE line, and a 3/4" x 1" "Y" branch connection (Ford), or approved interchangeable equivalent. All long-side 1" service lines shall be encased with 3" PVC and 3/4" service lines shall be encased with 2" PVC. Individual lot's 3/4 inch service laterals corporation stop (Ford FB1000-3-Q), or approved interchangeable equivalent.
- 5. Contractor shall provide and install a meter box and yoke. The meter box must be manufactured by Old Castle Carson (0015-B Series), meter lid (Sigma-LC217) and the Copper Setter (Meter Yoke) shall be a Ford-1 inch (VBH74-10W-11-44NL), Ford ¾ inch (VBH72-7W-11-33NL), 1-inch Curb Stop (Ford- B41-444Q), 3/4-inch Curb Stop (Ford- B41-333Q), or approved interchangeable equivalent.
- 6. Contractor shall install the following water lines service saddles required for this project, or approved interchangeable equivalent:

SIZE	MANUFACTURER	PART NUMBER	INFORMATION
6" X ³ / ₄ "	Ford	S70-603	OR APPROVED
6" X 1"	Ford	S70-604	INTERCHANGEABLE EQUIVALENT
8" X 3/4"	Ford	S70-803	
8" X 1"	Ford	S70-804	
10" X ¾"	Smith-Blair	313-121207-000	
10" X 1"	Smith-Blair	313-121214-000	

- 7. Contractor must perform all water line taps required for this project.
- 8. Any mains/services to be abandoned shall be cut and capped at a point and in a manner to be determined by CUB.

- 9. Fire hydrants for this project must be Mueller Super Centurion #200 (yellow open counterclockwise), with 5 1/4" opening valve. Hydrants must be painted according to the standards listed below, in accordance with the latest NFPA code for marking hydrants and / or in accordance with City of Clinton fire department's standards:
 - **Red** < 500 gpm
 - o **Orange** 500-999 gpm
 - o **Green** 1,000-1,499 gpm
 - \circ **Light Blue** >= 1,500 gpm
- 10. Construction Inspection and Testing must be supervised by CUB and / or a representative of the design engineering firm so that the required professional engineer certification can be made to CUB. CUB will not accept utilities that have not been certified in writing.

Appendix 5 - CUB Wastewater Design Checklist

Design Criteria

The requirements below are critical items required by Tennessee Department of Environment and Conservation (<u>TDEC</u>) and the Rules, Regulations, Rates, and Policies of CUB's Water Department. The engineer must ensure all requirements are met. CUB strongly recommends a pre-design conference to review the development layout, including topography and sewer features, to ensure a successful project.

TDEC Requirements

The following items are required by TDEC's General and Detailed Plans of Wastewater Collection Systems:

TDEC Requirements: General Plan of Sewer

- 1. All plans must be approximately 24" x 36"
- 2. Include a vicinity or location map showing the location of the project if a complete system map is not included.
- 3. A key map that shows the location of detailed drawings is required when the project is comprehensive.
- 4. The plans shall show the location, size, and direction of flow of all proposed and existing sewers draining to the concerned treatment facility.
- 5. Plans must be stamped/sealed and signed by a Tennessee Licensed Professional Engineer.
- 6. Hydraulic calculations are required for all lines in the project. All receiving lines must be shown to be adequate for the proposed project and must appear either on the plans or in the supplementary report using the TDEC format (TDEC Design Criteria for Sewage Works Item 2.1.5 / Appendix 2-B).
- 7. Topography and elevations, both existing and any changes proposed, and all bodies of water (including the direction of flow and high water elevations) should be clearly shown.
- 8. Plans must be clear and legible.

TDEC Requirements: Plan and Profiles of Sewers

- Profiles for sewer detail should have a horizontal scale of not more than 1 inch = 50 feet (CUB's requirement is more restrictive than TDEC) and a vertical scale of not more than 1 inch = 10 feet. Plan views should be drawn to a corresponding horizontal scale.
- Locations of streets and sewers.
- Sewer Details Lines of ground surface, pipe type and size, manhole stationing, invert and surface elevation at each manhole, and grade of sewer between adjacent manholes. Manholes should be labeled on the plan and also on the profile correspondingly. The distance between manholes should be no more than 400 feet.
- When there is any question of the sewer being sufficiently deep to serve any residence or other source, the elevation and location of the basement floor or other low point source shall be plotted on the profile of the server which is to serve the house or source in question.

- Locations of all special features, such as inverted siphons, concrete encasements, elevated sewers, and flow monitoring key manholes.
- Location of all existing structures below and above ground which might interfere with the proposed construction; particularly water mains, gas mains, storm drains, etc.
- Detailed drawings of all stream crossings with elevations of the stream bed and or normal and extreme high and low water levels to include 25- and 100-year flood plain (see TDEC 2.4.3 Sewers in Relations to Streams).
- Detailed drawings of special sewer joints, cross sections, and appurtenances such as manholes, flush valves, inspection chambers, etc.
- Location of adjacent streams and the extent of streamside vegetation.
- General topography, including trees within 25 feet of center lines, of the proposed sewer main.

CUB Requirements

CUB requires the following items, in addition to the list above:

- The <u>first</u> page of the plans must include the following:
 - Project layout map (not less than 1"=1000 feet) with project name and design date.
 - The developer's name, address, and phone number.
 - The property owner's name, address, and phone number.
 - The engineer's name, address, and phone number.
 - Servicing utility's name, address, and phone number (CUB, 1001 Charles G. Seivers Blvd., Clinton, TN. (865) 457-9232)
- The items below must be included in the plans:
 - Profiles must be on the same sheet as the plan and oriented in the same direction.
 - Overall project and project layout map with project name and design date.
 - Rights of way and easements needed for the sewer that falls inside / outside of the property.
 - Lot lines and locations shown on all plan views, including lot numbers.
 - Street names, edge of pavement locations, and the appropriate rights of way.
 - Location and size of services including the distance upstream from downstream manhole and length of 6-inch lateral and depth of the lateral needed at the end of the lateral to serve the lot.
 - Inverts for the manholes including inlet inverts and outlet inverts, rather than a single manhole, and the centerline invert. The outlet invert should be a minimum of 0.1 feet lower than the invert.
 - Manhole deflection angles shall be on the plan sheets
 - A 100-foot stationing of sewer lines and stationing of all appurtenances on plan and included profile views.
 - Project name, date, scale, north arrow, and sheets numbers on all pages.
 - Inclusion of all CUB detail sheets.
 - Revisions tabulated on resubmissions.
 - Inclusion of all benchmarks. All plans shall include a Benchmark based on USGS Datum and referenced to State Plane Coordinates. Benchmark and its elevation are to be shown on the plan set. Benchmark must be maintained through the completion of the project.

- In areas where the topographic features are dense, detail sheets may be required on a scale of 1" =20 feet, with the clearance between the proposed main and existing structures clearly defined and noted.
- Show all topographic features such as driveways, pavement, sidewalks, Right-of Way, Easements, property lines, storm drainage structures, etc...
- Show all property lines on the plans as well as map and parcel information for each parcel. Where possible show lot numbers and/or street addresses.
- All plans must show the locations of the existing utilities and/or indicate all conflicts with other utilities, including but not limited to gas lines, underground utilities conduits, power and telephone poles, water mains, sanitary sewer lines, storm sewers, etc... with measurements and/or details of proposed clearances of same. The source of the utility locations must be noted on the plans.
- The relevant elevations of all pipelines and conflicting structures at utility crossings (this includes a short profile view of all utility crossings of the water line where new utility lines are being constructed).
- When crossing under an interstate, highway, or railroad, the Carrier Pipe (waterline) and Casing Pipe will be approved by the appropriate agency with jurisdiction.
 Developer, Contractor and/or Customer shall be responsible for any/all fees and permitting associated with the crossing.
- A minimum of 10 feet of horizontal clearance between water mains and sanitary sewer shall be maintained whenever possible. When the 10 feet of separation is not possible, a minimum vertical separation of 18 inches shall be maintained. When the vertical separation cannot be maintained, the sewer must be built to water main specifications. Whenever sewers must cross under water mains, the sewer shall be laid at such an elevation that the top of the sewer is at least 18 inches below the bottom of the water main.
- Any mains/services to be abandoned shall be cut and capped at a point and in a manner to be determined by CUB.
- A connection must be provided for each parcel or proposed lot. The tap location will be shown on the plans and an appropriately sized service extension to the curb or property line indicated, where applicable, for each parcel.
- Easements agreements with owners of private property involved with construction must be obtained and right-of-entry notification executed before construction begins.
- The developer (owner) and / or contractor must adhere to CUB Standard Specifications and Details,
- The engineer shall provide documentation of the new sewer collections system's Hydraulic Analysis.
- The Sewer Collection System must be a minimum of 8-inch diameter. Gravity sewers 12 inches or less in diameter shall be either ductile iron pipe or PVC (SDR 26). Ductile Iron Pipe w/ PROTECTO 401 shall be used for trench depths of 12 feet or greater and underneath roadways. Gravity sewers greater than 12 inches in diameter shall be Class 150 ductile iron pipe.

- The developer (owner) and / or contractor is responsible for installing all 6-inch sewer taps, 6-inch sewer lines, and 6-inch cleanout per CUB Standards and Specifications for the new development.
- The Sewer Lateral Discharge (Main Floor Elevation) must be a minimum of 6 inches above the top of the lowest of the two adjacent manholes.
- The developer (owner) and / or contractor is responsible for installing a minimum of SDR 26 pipe for sanitary sewer services to a depth of 12 feet. Any sanitary sewer services that are over 12 feet deep shall require water line and / or mechanical joint quality pipe.
- Requests for a Low-Pressure Sewer System must receive pre-approval prior to the pre-design/planning stage
- A number of other agencies, including but not limited to the following, may also require approval of construction plans:

City of Clinton Public Works Department
Tennessee Department of Transportation
Tennessee Department of Environment and Conservation
Anderson County Highway Department

Design Notes

The following notes must appear on all plans:

- 1. All work to be performed will be in accordance with Clinton Utilities Board's Water and Wastewater Department (current edition) specification and details.
- 2. Pre-construction conference shall be conducted with Clinton Utilities Board's representatives, design engineer, and utility contractor prior to any utility's construction activities beginning.
- 3. Sewer line materials, installation and testing per Clinton Utilities Board's water and wastewater department standards (current edition).
- 4. All service laterals shall be 6" to Property Line/Right-Of-Way/Easement and installed at a minimum 1% slope unless field verified by the engineer. A 6" x 4" increaser bushing eccentric (part number 32642) or approved equal shall be used for single family residential connection.
- 5. Service laterals cleanout shall be as manufactured by Nibco, Charlotte, Spears or approved equal and extend 3" above finished grade to mark sewer service connections until building connection is made.
- 6. Sewer lateral discharge main floor elevation shall be a minimum of 6" above the top of the lowest of the two adjacent manholes.
- 7. No individual e-one grinder pump systems shall be used on this project unless received prior approval from CUB. Individual basement pumps may be used and maintained by the property owner in order to pump basements to the main level (where necessary).
- 8. If pump stations are required for this project, they must receive prior approval from CUB.
- 9. Construction and inspection must be supervised by CUB and/or a representative of the design engineering firm so that the required professional engineer certification can be made to CUB. CUB will not accept utilities that have not been certified in writing.

Appendix 6 - Water and/or Sewer Service Availability Date: _____ Location: Address, or parcel number Requested By: Name Contact Information: Address Phone Number: () Email: _____ I am requesting information on the availability **Sewer Availability** Water Availability **of:** (Check all that apply) The Following Information Must be Included for Subdivisions and/or Multi-Unit Developments: Location of the property with tax map and parcel number (a GIS print is acceptable) Total acreage of the site to be served Intended type of development or use of the property (i.e. Residential Single-Family Homes, Apartments, Condominiums, etc...) ☐ Projected total water supply needs in gallons per day (GPD) Projected total wastewater flows in gallons per day (GPD) Approximate number of lots and/or residences to be served Mail to: and sewer availability may be made utilizing this from via letter addressed to: Director-W&S Department

Developers and property owners, or their representatives, should contact CUB's Director, Water & Sewer Department to determine water and sewer availability. Requests for water

Clinton Utilities Board P. O. Box 296 Clinton, TN 37717

Or by email to:

Director-Water & Sewer with a copy to Water & Sewer Construction Supervisor

Director – Water & Sewer	Greg Jones P.E.	(865)-220-6240	email: gjones@clintonub.com
Construction Supervisor	Jay Bailey	(865)-220-6245	email: jbailey@clintonub.com
Admin. Secretary	Katelyn Roberts	(865)-220-6243	email: kroberts@clintonub.com

Appendix 7 - Schedule of Charges

Description

Amount (Effective July 1, 2019)

Water Taps

³ / ₄ " Water Tap	Cost Recovery
1" Water Tap	\$600 *
1 ½" Water Tap	\$1,000 *
2" Water Tap	\$1,750 *
3" Water Tap	\$3,500 *
4" Water Tap	\$5,000 *
6" Water Tap	\$7, 250 *

^{*-} or Cost Recovery whichever is higher

<u>Sewer Taps – Based on Water Tap Size</u>

³ / ₄ " Water Tap	Cost Recovery
1" Water Tap	\$550 *
1 ½" Water Tap	\$700 *
2" Water Tap	\$800 *
3" Water Tap	\$800 *
4" Water Tap	\$800 *
6" Water Tap	\$1,000 *

^{*-} or Cost Recovery whichever is higher

Cost Recovery:

CUB will hold the developer/owner responsible for costs incurred by CUB in support and construction of the residential project.

Capital Charge (Effective July 1, 2020):

Water and Sewer one-time capital charge of \$200 (per lot/per service), will be paid by the developer/owner at the time CUB approves the design plans for construction.