Workflow Information Packet

Land Development Linear Projects

This packet is intended to assist the Contractor with general information regarding pre-construction meeting topics, inspections, and key project milestone checklists. This information is a guide and should be applied, as warranted, to the Project.

Typical Construction Flow Diagram for Land Development Linear Projects

Construction Plans Approved and Construction Permit Issued by Loudoun Water

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Pre-Construction Meeting Occurs
(submit request through website)

Attendees should include, at a minimum: LW – PM, Inspector, Inspections Supervisor & Mgr, Field Services (Commercial), Reclaimed Mgr (as necessary); General Contractor (PM & Site Superintendent), other subcontractors as deemed necessary

Pre-Con Agenda Discussed

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Inspections Occur Throughout Construction Project, as Required

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Beneficial Use Inspection Requirements are Completed by Contractor

Beneficial Inspection Occurs (submit request through website)

Payment and Performance Bond Reduction
(Must be requested in writing, after beneficial use inspection is complete)

Applying for a Meter

Request Connection Invoice
(submit request through Loudoun Water Website)

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Final Inspection Requirements are Completed by Contractor

Final Inspection Occurs (submit request through website)

Payment and Performance Bond released (after final letter items are received)

Maintenance Bond in place (for one year)

Loudoun Water Land Development Linear Projects – General Workflow Procedure

1. Loudoun Water (LW) reviews the construction plans and once approved, the Developer provides all information required in the approval letter. The Manager of Land Development signs the construction permit and LW emails the Developer a copy of the executed construction permit, the contact information for the LW inspector assigned to the project, and this Workflow Information Packet.
2. The Developer or designee requests a preconstruction meeting by submitting the "Pre-Construction Meeting Request" form found on the LW website (please note that this is separate from the Loudoun County pre-construction meeting). During the pre-construction meeting, the scope of the project and any specific construction related issues are discussed. A pre-construction agenda can be found within this document.
3. Inspections take place throughout the installation of the water and sewer utilities. The Developer or designee can request a Beneficial Use Inspection once those requirements are completed (see checklist attached), by submitting the "Beneficial Use Inspection Request" form found on the LW website.
4. The inspector passes the Beneficial Use Inspection or asks for certain items to be completed before passing this inspection. Once passed, the Developer may request a reduction in the performance bond. This reduction is granted only after the record drawing fees are paid and lien releases are provided.
5. In conjunction with the Beneficial Use Inspection obligations, the project may reach a point where the entire project or a portion of the project meets the requirements of Beneficial Use and is approved to obtain a meter(s). To begin the process to receive a meter, visit the LW website and submit the online "Request for Connection Invoice" form.
6. After the Connection Invoice Request form is received by LW, LW emails the requestor a quote for the cost of the meter(s), connection charges, and the availability charge. The requestor should confirm with LW that the quote includes the correct size of meter(s) needed, the total cost, and then LW will issue an invoice. Once the invoice is paid, visit the LW website and request the meter(s) by submitting the online form "Meter Request Form". Please note, with the request of a meter, building lateral sewer inspections (from the test tee to the building) should have been completed. The project plumber requests these inspections via the LW website – "Lateral Request Form". If there are any concerns about the

actual meter setter length for commercial meters, this should be confirmed at this time. The meter set is then scheduled for delivery. *Note: Please include the contact name/phone number for the field contact person with the online meter request form.* LW will set the meter for all residential or commercial (less than 1½") or provide the contractor with the meter (commercial) if the meter crock is set up correctly, for contractor installation (1½" and greater).

7. The Developer or designee can request Final Inspection once requirements are completed (see checklist attached) and by submitting the "Final Inspection Form" found on the LW website. The inspector walks the job with the contractor to verify compliance with the requirements and documents any punch list items. Upon request from the contractor, the inspector can provide written documentation of the punch list items. Once the items are addressed and verified by the inspector, the inspector passes the Final Inspection.
8. LW sends a letter to the developer asking for actual construction costs, a maintenance bond, lien release, list of materials used and executed deed. Once LW reviews and approves all documents, the performance bond is released. The VDOT land use permit (LUP-IPP) can now be submitted to LW for signature.
9. After one year, the maintenance bond is released, and the project is considered closed, barring no defects in the work.

A few notes for reclaimed meters:

The processes for potable water service connections, noted above, also apply to reclaimed water service connections. The following items outline additional requirements for reclaimed water service connections. For a complete overview of reclaimed water design and installation requirements, please reference the Reclaimed Water Information Packet available on LW's website at: https://www.loudounwater.org/developers-new-construction/pre-design.

1. Irrigation systems connecting to reclaimed water service must submit an irrigation site plan (i.e. design) and list of system components to LW for approval prior to installation.
2. All reclaimed water service connections require a signed Reclaimed Water Service Agreement for each building and/or irrigation system that wishes to connect to the system, prior to the release of a meter set.

3. The reclaimed water connection, building plumbing, and/or irrigation system needs to be inspected by the LW engineer and the backflow prevention technician prior to the release of a meter set. These inspections include the signage, labeling, pressure testing, backflow prevention, and demonstration that the installation is in conformance with the approved design. This inspection can be scheduled as soon as the interior plumbing is completed and/or when the irrigation system is installed.

Pre-Construction Agenda

Date: _____

Inspector: _____

Job Number: _____

- □ Introduction of Teams
- □ Verify Construction Plans (Rev and Date) Match Inspector's Plans; Current Standard Details

Job Details Discussion:

- □ Inspector presence on site
- □ Cut sheets –email copy to Inspector and provide hard copy
- □ Water line installation
- □ Water quality samples
- □ Sewer installation, including discussion of slopes
- □ Blocking/Cross-blocking
- □ Gravel Requirements
- □ Marking tape/tracer wire
- □ Bypass Pumping or shutting off valves – Plan and schedule
- □ Yellow Hydrants for Construction water
  - Policy for Yellow Hydrants and obtaining hydrant meter; Note on Std Detail G-5;
  - Construction Water: Rates and Usage
- □ Fire Lines
- □ Questions/schedule regarding approved materials
- □ Meters (size, type, std details that are applicable)
- □ Meter Crock Protection – Protective Orange Fencing (residential)
- □ Backflow Prevention
- □ Grease Interceptor, oil water separator – material submittal to LW
- □ Other Project Specific Items (reclaimed water, grinder pumps, onsite/offsite work, etc.)
- □ Project phasing
- □ Utility Protection

General Information

- □ Memorandums to the Industry (see Loudoun Water website for full list)
- □ Workflow Information Packet for Land Development Projects - Checklists
  - Beneficial Use Inspection Minimum Requirements (request inspection on website)
  - Final Inspection Minimum Requirements (request inspection on website)
  - Meter Installation/Transfer Requirements
  - CCTV Inspection Requirements
- □ OT Policy (request/cancel on website)
- □ LW calendar (online website) and Holidays

LOUDOUN WATER

Pre-Construction Meeting – Attendance

Date: _____

Location: _____

Printed Name	Title	Company	Email	Phone Number

Printed Name	Title	Company	Email	Phone Number

Requirements for Beneficial Use Inspection

Date:_____ Project Number:_____

Inspector:_____

Sewer System:

- □ All manholes to be cleaned (all benches should be installed)
- □ Hydrostatic testing completed and passed (mains)
- □ Sanitary lines flushed and CCTV inspection completed
- □ Removal or relocation of bulk heads / plugs
- □ House to main lateral installed and tested (for Connection Invoice Request)

Water System:

- □ Pressure testing completed and passed (mains) (150 psi minimum)
- □ Fire line pressure testing completed and passed (200 psi test pressure)
- □ Water quality samples taken and passed (Contractor to record flushing time and provide to Inspector)
- □ Curb and Gutter installed
- □ Water service lines installed and approved
- □ Fire Hydrants – Reflective white top; bollards installed as required by plans
- □ For commercial applications, Backflow Preventer to be installed and Backflow Test Sheets submitted to Loudoun Water

General:

- □ Base asphalt installation surrounding all valves and manholes (anything in the street); includes snow caps on manholes and valves as needed
- □ Contractor has located all valves and manholes
- □ Contractor to verify all valves and fire hydrants are in working condition
- □ Contractor to verify proper frame and covers for manholes (per detail); easement manhole frame and cover bolted to top of manhole
- □ Concrete pads poured for LW utilities not in asphalt / finished grading of non asphalt areas around LW utilities
- □ Cleanout's are capped and protected

LOUDOUN WATER

Requirements for Final Inspection

Date:_____ Project Number:_____

Inspector:_____

General:

- □ All manholes to be cleaned
- □ Sanitary lines flushed and final CCTV inspection completed
- □ Final paving
- □ Contractor has located all valves and manholes
- □ Contractor has verified all valves and fire hydrants are in working condition
- □ Fire hydrants to be painted in accordance with approved drawings and details
  NOTE: Any hydrants that as "yellow hydrants" during construction will be checked for damage; damaged components to be repaired by Contractor
- □ Restoration of project easement areas completed by contractor (general grading and seeded/straw)
- □ Check meter crocks (refer to "Requirements for Meter Installation/Transfer" checklist for criteria)
- □ Cathodic protection test passed and locating wire on PVC water mains and pressure force mains; All documentation received by Loudoun Water
- □ Marker posts installed, where applicable, per Loudoun Water Standard Detail
- □ Completed punch list items as generated during the Beneficial Inspection
- □ Verify any reclaimed (above grade) hydrants on site are locked out with proper locking collar (provided by Loudoun Water)
- □ Confirm final status for flushing station has been executed (i.e., remaining, removed, relocated, replaced).

Requirements for Meter Installation / Transfer

Date:_____ Project Number:_____

Inspector:_____

NOTE: A failed meter crock inspection will result in a $45.00 re-inspection fee and the need to re-schedule meter delivery.

General:

- □ Installation meets requirements of Standard Detail for the project meter - refer to standard detail(s) within contract drawings, connection packet or the *Loudoun Water Engineering Design Manual, Standard Details* (www.loudounwater.org).
- □ All necessary Loudoun Water inspections have been passed
- □ Invoice connection requested (via website https://www.loudounwater.org/content/request-connection-invoice) and all meter fees have been paid to Loudoun Water
- □ All associated piping connections not leaking
- □ Tracer wire is installed per detail
- □ Grade around crock is correct
- □ Cover set to grade
- □ Frame is level and centered on crock
- □ Meter setter is level and centered in meter crock
- □ Meter setter is set to correct min/max level from grade
- □ Maintain accessibility within the 5 foot easement from center of meter crock
- □ Meter crock is installed in grass area, unless specifically approved by LW during design; If exception exists, meter crock must be surrounded by one type of medium (i.e.,concrete sidewalk, grass, brick, asphalt, etc)

Additional specifics for commercial meter installation:

- □ Flared connections at meter setter are located inside meter crock
- □ The correctly sized meter setter is installed for the meter size requested and is adjusted to correct meter dimension. NOTE: Loudoun Water's standard practice is not to allow the use of meter adaptors. (Reference the Loudoun Water Engineering Manual (EDM), Table 4.6 – Meter Types, Capacities, Locations and Service Connections)
- □ Correct meter crock is installed for the meter size requested
- □ Bottom of crock has appropriate gravel/bedding layer (no dirt layers between gravel)
- □ Debris and rocks are removed from bottom of crock

NOTE: Request all meters via the website https://www.loudounwater.org/content/water-meter-request
All meters are delivered to the site by Loudoun Water
Meters 1-inch and below are installed by Loudoun Water
Meters 1 ½ - inch and above are installed by the Contractor

Requirements for CCTV Inspections

Date:_____ Project Number:_____

Inspector:_____

General:

- □ Manhole frames are set
- □ All necessary Loudoun Water inspections have been passed
- □ Bulk Heads / Plugs are removed
- □ Manhole sewer lines are vacuumed and/or flushed and free of debris, grease, rocks, gravel, etc
  Note: CCTV Crew may inspect past the last manhole for the job to ensure debris was not flushed to existing sanitary line
- □ No leaks at joints, connections, inverts, or in manhole
- □ Free of low spots

Additional specifics for CCTV1 inspection (occurs immediately preceding Beneficial Inspection):

- □ All manholes have base asphalt
- □ All manholes not in pavement and/or still having active construction nearby must have 3-sided orange fence
- □ All inverts finished

Additional specifics for CCTV2 inspection (occurs immediately preceding Final Inspection):

- □ Final paving

Loudoun Water Utility Protection – Information for Excavators

- A valid Miss Utility ticket is required for all excavation work, throughout the life of the project
    - When to call in ticket
        - When work is to start within 30 working days
        - Normal ticket is valid for 15 working days
        - Wait period is 48 hours starting at 7AM the next business day
    - Providing proper scope for the ticket
        - Less than 1 mile of work per ticket
        - Less than 15 working days of work to be performed
        - Communicate accurate scope for ticket
        - White-lining is encouraged
    - When to update ticket
        - If work will occur longer than 15-day ticket
        - Update ticket on day 12 to avoid expired excavation ticket
        - If scope of work on ticket has changed, enter new ticket before old ticket expires and update the scope
    - Excavator to make every effort to protect the marks
- For excavation work occurring within the property lines of Loudoun Water owned facilities, a Miss U ticket may be responded to as "private utilities" by Loudoun Water; however, the Contractor will still coordinate with a Loudoun Water Technician for private markings inside the property area, as required under the contract.
- The Contractor should adhere to all excavation guidelines set forth by the Underground Utility Damage Prevention Act and any additional Loudoun Water project specific needs, i.e.,
    - Hand digging vs mechanized equipment near utilities
    - Blasting near utilities
    - Heavy equipment crossing utilities

Utility Protection Team:

Charlie Thompson – Supervisor – 703-508-7168

Michael Cox – Technician – 571-439-9862

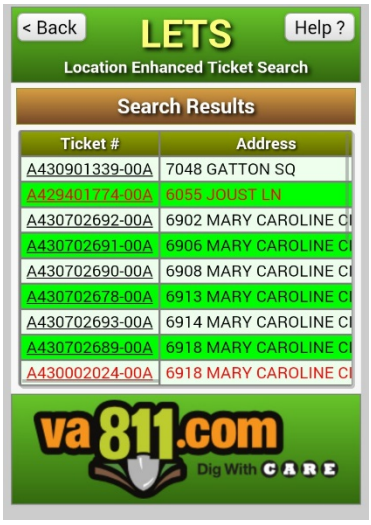
Jamie Elliott – Technician – 571-233-8374

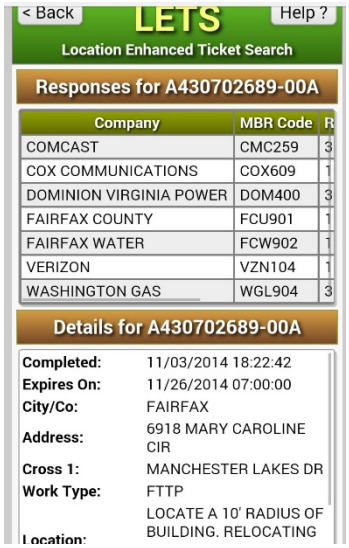
Charles Rhodes – Technician – 571-291-5169

Justin Scarlett – Technician – 571-919-1657

Nathan Vannoy – Technician – 571-919-9877

Using Location Enhanced Ticket Search (LETS)





- Use GPS to search for tickets within 1000 feet of your mobile device.
- Access by going to lets.va811.com. Bookmark this site!
- You can look for active tickets or any ticket that was active in the last 30 days.
- Check positive response codes, double check that scope and polygon cover excavation area, and confirm expiration date using information provided in LETS.
- OR – you can access ticket search online at va811.com, click on “Tickets” button and “Ticket Search”

Free Training Available from VA811!

VA811 offers a variety of free training, online and in person.

Online

Underground Utility Damage Prevention Act (Law Training) via Computer Based Training – VA811 offers training on the Underground Utility Damage Prevention Act and trenchless excavation. Go to va811.com/computer-based-training-programs for more information.

Web Ticket Entry Training via Teleconference – Learn how to enter tickets online! VA811 offer Web Ticket Entry training via teleconference for those who have experience calling in tickets.

In Person

Web Ticket Entry Training – Learn how to enter tickets online! In the Northern Virginia region, this training is offered at the HCCA’s offices in Manassas. Find upcoming trainings on the VA811 website.

Underground Utility Damage Prevention Act (Law Training) in SPANISH – Currently, the law presentation is only offered in Spanish in person.

Code	Description
10	Marked.
11	Marked; abandoned utility lines may be in the area.
12	Marked up to privately owned utility; contact private utility owner for locate.
13	Marked up to privately owned utility; contact private utility owner for locate. Abandoned utility lines may be in the area.
30	No conflict; utility is outside of stated work area.
31	No conflict; utility is outside of stated work area. Abandoned utility lines may be in the area.
32	No conflict; privately owned utility on property. Contact private utility owner for locate
33	No conflict; privately owned utility on property. Contact private utility owner for locate. Abandoned utility lines may be in the area.
35	Used in response to excavator's 3-hour ticket after having observed clear evidence of the presence of an unmarked Verizon utility line in proposed excavation. If Verizon has determined it has no utility lines in conflict with the proposed excavation as delineated on the ticket, Verizon shall, within 30 minutes, respond to the excavator-operator information exchange system (Positive Response) with Code 35.
40	Agree to meeting as proposed by excavator.
41	Mutually agreed to alternative meeting time and location.
50	Installation records, maps or other documents have been provided.
51	Records or information regarding private sewer laterals have been provided.
52	Records regarding private sewer laterals have been provided on an accessible electronic system.
53	Agreed to an on-site meeting to provide additional information regarding private sewer laterals.
60	Locator and excavator agreed and documented marking schedule.
61	Locator and excavator agreed and documented marking schedule. Abandoned utility lines may be in the area.
70	Critical facility marked; locator or utility operator will contact excavator and operator must be present during excavation.
71	Critical facility not marked; locator or utility operator will contact excavator and operator must be present during excavation.
80	The status of the utility line has been determined to be abandoned.
81	Mutually agreed to alternative time to determine if the utility line is abandoned.
82	The utility line in question does not belong to this operator.
90	Locator could not gain access to property; locator will contact excavator.
91	Incorrect address information; please call Miss Utility and provide correct information.
93	Scope of work is too large; please call Miss Utility to reschedule.
94	Marking instructions are unclear; please call Miss Utility to reschedule.
96	No response required from this terminal.
97	Extraordinary circumstances exist.