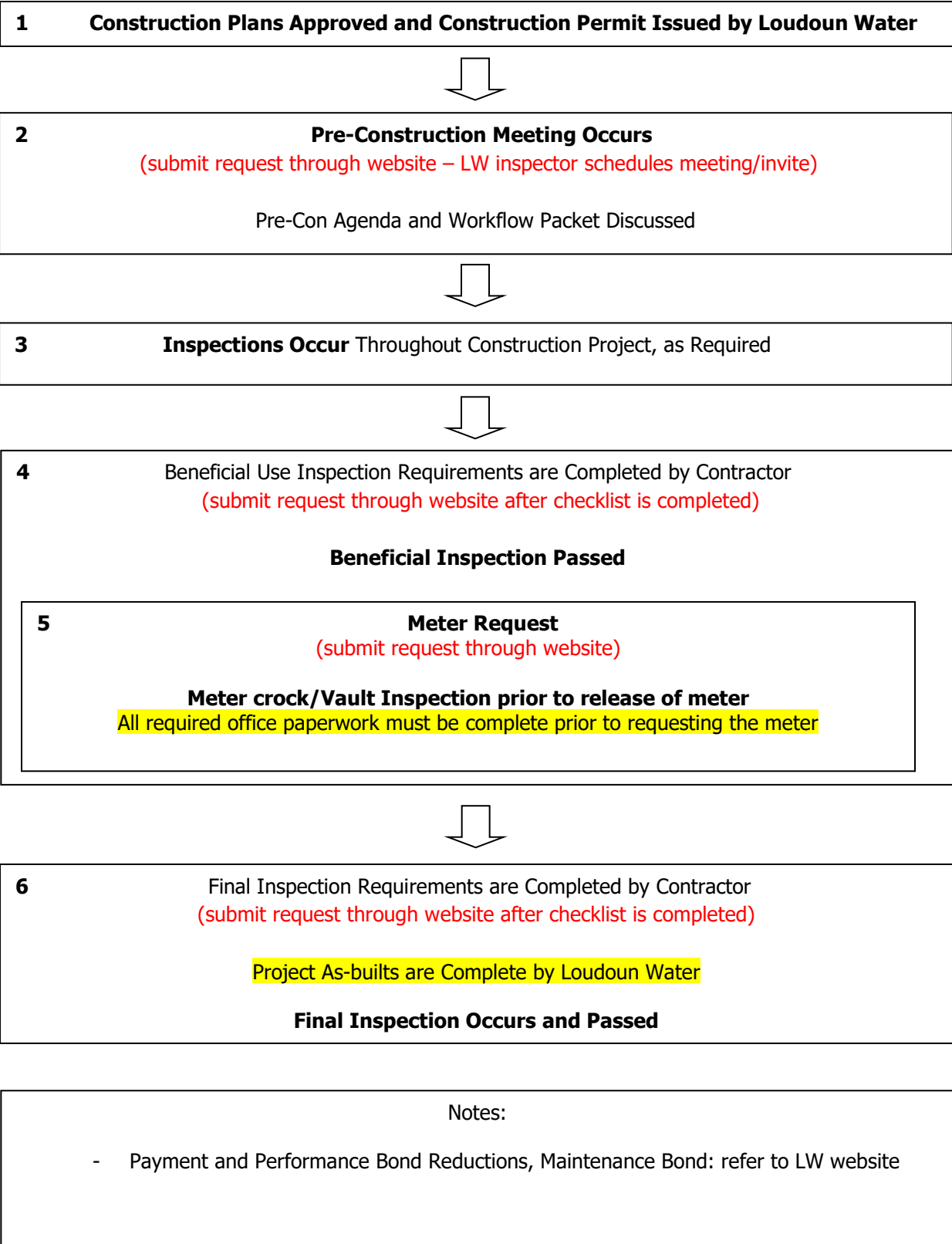


Workflow Information Packet

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



Loudoun Water Land Development Linear Projects – General Workflow Procedure

1. Construction Plans Approved – Construction Permit Issued

- Loudoun Water (LW) reviews the construction plans and provides an approval letter containing a list of requirements for permit
- Once all requirements are met, the Manager of Land Development signs the construction permit
- LW emails the Developer a copy of the executed construction permit, the contact information for the LW inspector assigned to the project, and Workflow Information Packet.

2. Pre-Construction Meeting

- “Pre-Construction Meeting Request” made via LW website.
- LW Inspector sets meeting and sends invite.
 - Required attendees: General Contractor Project Manager and/or Site Superintendent and Piping Contractor.
 - *Pre-con meeting agenda:* Discuss scope of the project and specific construction related issues to include construction water, utility protection, bypass plans, tie-in, meter release, reclaimed water, etc. (see workflow packet pre-con agenda).

3. Inspections

- Occur throughout the installation of the water and sanitary.
- Notes:
 - *Building lateral sewer inspections from the test tee to the building:* observed by LW; project plumber requests the inspection(s) via the LW website – “Lateral Request Form”
 - *Fire lines:* LW only inspects installation and pressure test to the limit of public right of way or property line. For continuation to the building, acquire fire service permit and inspections from Loudoun County Building and Development.
 - *Fill and Flush during commissioning:* Refer to the LW website “Commercial and Industrial Wastewater Treatment Program” and the [Temporary Sanitary Sewer Discharge Application](#)

4. Beneficial Inspection

- Beneficial Use Inspection checklist completed.
- “Beneficial Use Inspection Request” made via the LW website.
- The LW inspector:
 - Walks the project for beneficial inspection.
 - Generates a punch list as required.
 - Re-walks the site when all punch list items are complete.
 - **Passes** the Beneficial Use Inspection.

5. Meter Request

- “How to Obtain a Meter” (see LW website):
 - Beneficial Use Inspection passed.
 - Request for “Connection Invoice” made via LW website.
 - Connection Invoice paid.
 - **Administrative paperwork is complete with LW Engineer.**
 - “Request Your Meter” made via LW website.
 - Backflow devices must have passed test results submitted via LW website (“Online Backflow Test Report” form).
 - **Pass meter crock/vault inspection** with the Field Services team, which occurs at meter delivery.

6. Final Inspection

- “Final Inspection” checklist completed.
- **Project As-builts are complete by Loudoun Water.**
- “Final Inspection Request” made via the LW website.
- The LW inspector:
 - Walks the project for final inspection.
 - Generates a punch list as required.
 - Re-walks the site when all punch list items are complete.
 - **Passes** the Final Inspection.

Note for Occupancy Permit Requests:

<https://www.loudounwater.org/occupancy-sign-applications-occupancy-permits>

- For Loudoun Water Occupancy Sign-Off Applications / Occupancy Permits signatures - email the permit to occupancypermit@loudounwater.org.
- Occupancy permit sign-off from Loudoun Water can occur after the site has received the domestic meter.

Notes for Reclaimed Water Projects:

The processes for potable water service connections also apply to reclaimed water service connections; however, there are additional regulations required by Virginia DEQ.

1. Any activity that could impact reclaimed water service must be coordinated with LW Inspector (5 day notice) to include: reclaimed water tie-ins, bypasses, etc.
2. Reclaimed Water Service Agreement to be executed and provided to Loudoun Water prior to meter release.
3. All reclaimed line testing will be performed using potable water.
4. Flushing of reclaimed water piping must be directed to an approved sanitary manhole and cannot be put to ground or stormwater facilities; LW inspector will test for chlorine residual to achieve 1 mg/L.
5. LW Reclaimed Water inspection required prior to meter release.
 1. Required inspections include: signage, labeling, color-coding, and differential pressure test (performed by contractor in the presence of LW representative).
 2. **Pass meter crock/vault inspection** with the Field Services team, which occurs at meter delivery.
6. Backflow devices must have passed test results submitted via LW website.
7. Irrigation requirements:
 1. Submit an irrigation design and component cut sheets to LW for review and approval.
 2. Inspection prior to meter release.

Pre-Construction Agenda

Date: _____

Inspector: _____

Project Number: _____

- Introduction of Teams
- Construction Plans (Rev and Date) confirmation; Current Standard Details

Job Details Discussion:

- Inspector presence on site
- Cut sheets –email copy to Inspector and provide hard copy
- Gravel Requirements
- Marking tape/tracer wire
- Casing pipe/concrete encasement
- Questions/schedule regarding approved materials
- Other Project Specific Items (structures/walls near/crossing LW utilities, flush/fill commissioning, onsite/offsite work, etc.)
- Project phasing/scheduling – occupancy/meter needs?
- Utility Protection – protection of existing LW utilities; protection of new utilities; critical crossings; retaining walls, structures near easements/crossing utilities; reclaimed crossings
- Sewer installation (slopes, materials, installation)
- Grease Interceptor, oil water separator – material submittal to LW; who is installing; inspection requirements
- Grinder Pumps
- Bypass Pumping or shutting off valves – Plan and schedule
- Water line installation
- Blocking/Cross-blocking
- Water quality samples
- Meters (size, type, std details that are applicable)
- Backflow Prevention
- Meter Crock Protection – Protective Orange Fencing (residential)
- Meter crock inspection roles – inspector vs field service
- Hydrants for Construction water
 - Hydrants and obtaining hydrant meter
 - Construction Water: Rates and Usage
- Fire Lines
- Reclaimed system – installation, flushing/discharge, filling, testing, coordination/notification

General Information

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

Requirements for Beneficial Use Inspection

Date: _____ Project Number: _____

Inspector: _____

Sewer System:

- All manholes to be cleaned (all invert/benching work to be completed)
- Hydrostatic testing completed and passed (mains)
- Sanitary lines flushed and CCTV inspection completed (refer to "Requirements for CCTV Inspection" checklist for criteria)
- 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 all backflow device installations, provide backflow test reports to Loudoun Water by submitting through the LW website
- Meter crocks/vaults installed per standard details (LW field service has last inspection prior to meter release/placement – see "Requirements for Meter installation/Meter Transfer")

NOTE: Meter request occurs after all pertinent field inspections are passed and any required administrative paperwork is complete with the LW Engineer.

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, manholes, and any other grade-level appurtenances
- 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

Requirements for Final Inspection

Date: _____ Project Number: _____

Inspector: _____

NOTE: Final Inspection should be requested after project as-builts are completed by Loudoun Water

General:

- Final paving
- Contractor has located all valves, manholes, and any other grade-level appurtenances
- All manholes to be cleaned
- Sanitary lines flushed and final CCTV inspection completed (refer to "Requirements for CCTV Inspection" checklist for criteria)
- 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 painted for construction usage during construction, will be checked for proper operation and any 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 CCTV Inspections

Note: Loudoun Water performs the CCTV Inspection prior to beneficial and final inspections.

General:

- All necessary Loudoun Water inspections have been passed
- Manhole frames are set/sealed/no leaks
- 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

Requirements for Meter Installation/Transfer (Meter Crock/Vault Inspection)

A failed meter crock inspection results in a re-inspection fee and the need to re-schedule meter delivery

NOTE: Meter release occurs after all pertinent field inspections are passed and any required administrative paperwork is complete with the LW Engineer.

- All meters are delivered to the site by LW, once LW field service team inspect the crock/vault.
 - Meters 1-inch and below are installed by Loudoun Water
 - Meters 1 ½ - inch and above are installed by the Contractor

Prior to Submitting Meter Request

General:

- Connection Invoice paid
- Beneficial Inspection passed
- Backflow devices must have passed test results submitted via LW website.
- All associated piping connections not leaking
- Corp stop/isolation valve is turned on; check valves are operational
- Tracer wire is installed per detail
- Grade around crock/vault is correct and cover installed to grade (crock)
- Frame is level and centered on crock and frame tabs (3) are within crock
- Meter setter is level, centered in meter crock, set to correct min/max level from grade
- Maintain easement accessibility around crock/vault
- ☒ Meter crock is installed in grass area, unless approved by LW during design
- Bottom of crock has appropriate gravel/bedding layer (no dirt layers between gravel)
- Debris and rocks are removed from bottom of crock/vault
- Correct meter crock/setter is installed for the meter size requested. *Loudoun Water's standard practice is not to allow the use of meter adaptors.*

Additional specifics for commercial meter installation:

- Flared connections at meter setter are located inside meter crock
- Power Requirements:
 - Sump pump installed/powered by outlet
 - NEMA box installed/powered
 - Grounding harness installed for meter
- Vault pipes aligned to accept meter
- H2O rated hatch installed and accessible; ladder installed
- Reclaimed pipe purple and labeled

Requirements for Temporary Hydrant Request

Date: _____ Project Number: _____

Inspector: _____

Is a temporary construction hydrant(s)/water needed on the active construction site? Contractor should be prepared to discuss the following at the pre-construction meeting:

- Contractor proposed plan, including:
 - Reason for request (why existing yellow hydrants are not the preferred option)
 - Proposed location of hydrant(s)
 - New infrastructure*
 - No more than 2 hydrants can be designated construction hydrants at a time
 - Preferred includes new infrastructure or temporary hydrant installed – usage after testing and sampling complete.
 - No temporary yard hydrants
 - No use of a blow-off unless approved by inspector
 - No use of a transmission main hydrant
 - Anticipated use of hydrant(s)
 - Hours of use per day and number of days per week
 - Uses of hydrant(s), for example truck washing, dust control, equipment testing, etc.
 - Date in which the hydrant(s) use will end – hydrant must be painted red prior to Final Inspection
 - Acknowledgement that hydrant component parts may need to be replaced prior to terminating use based on the condition determination of the hydrant(s) by Loudoun Water inspector (part of beneficial and/or final inspection)
 - Acknowledgement that temporary construction hydrant will be painted blue (Rustoleum Safety Blue); white bonnet remains white.

The Loudoun Water inspector will work with the Contractor to determine if the proposed plan is acceptable. Once the plan is agreed upon, the Contractor must use a Loudoun Water issued hydrant meter (to obtain a hydrant meter <https://www.loudounwater.org/commercial-customers/obtaining-hydrant-meter>).

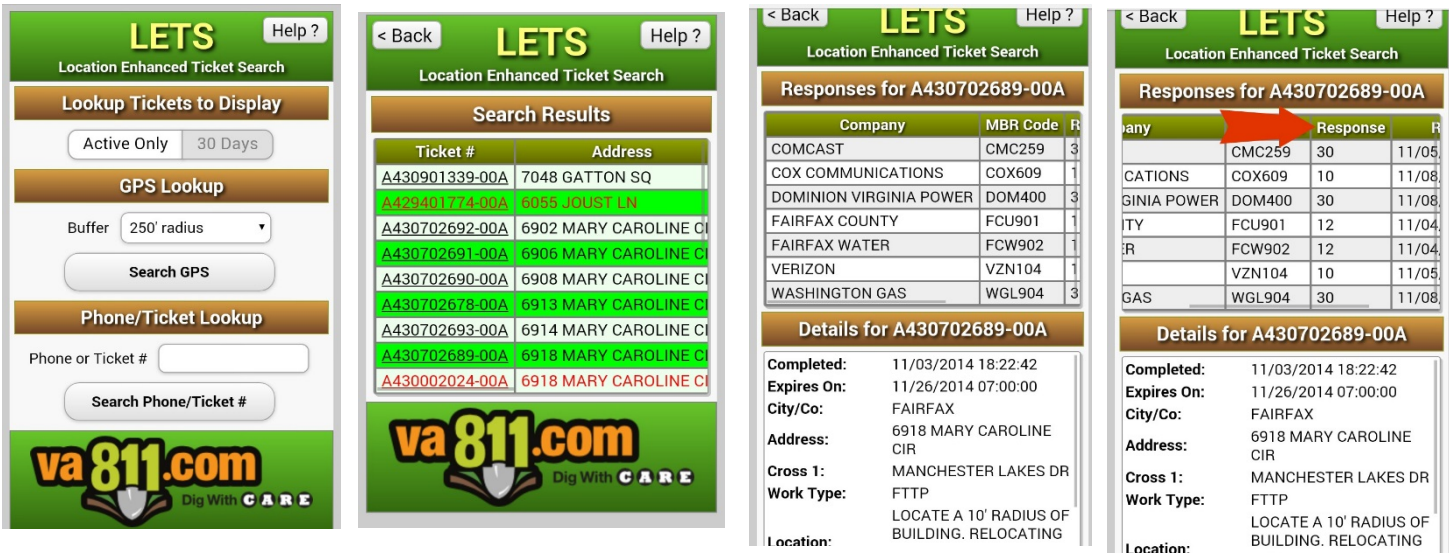
*If Contractor is proposing to use an existing hydrant near the construction site that is Loudoun Water owned, Contractor needs to apply for a temporary hydrant permit from the office.

NOTE: If the adjacent landowner hydrant is not Loudoun Water owned, the hydrant cannot be used.

Loudoun Water Utility Protection – Information for Excavators

- A valid Miss Utility ticket is required for all excavation work, throughout the life of the project
 - o 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
 - o 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
 - o 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
 - o 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.,
 - o Hand digging vs mechanized equipment near utilities
 - o Blasting near utilities
 - o Heavy equipment crossing utilities

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.