

Firgrove Mutual Water Company

Development Guide

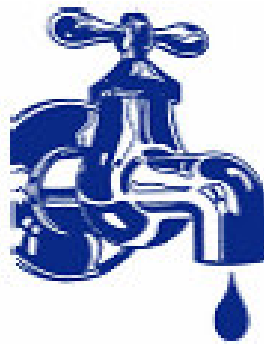


Table of Contents

- 1 Receipt Form**
- 2 Developer Policies, Procedures, and Requirements**
- 3 Developer Extension Contract**
- 4 Forms**
- 5 Standard Plan Sheet Layout**
- 6 Standard Specifications**
- 7 Standard Details**
- 8 Standard Water Notes to Contractor**
- 9 Disk**
- 10 Standard Detail Plan Sheets**
- 11 Firgrove Forms**

Owner/Developer/Engineer Receipt Form

I/We _____ have received the Development Guide
on behalf of the _____ project, located at
_____,
parcel number(s) _____.

Signature

Date

Name

Address

City, State, Zip

Phone Number

Firgrove Mutual Water Company

Developer Policies, Procedures, and Requirements

I. Planning

- A. Developers/property owners within Firgrove's service area requesting water service will be required to submit a water availability request.
 - 1. Water availabilities will typically be processed within 10 working days. You will receive a phone call when it is complete and ready to be picked up. Special circumstances, such as system modeling and evaluation, may require additional processing time. This will be communicated to you within the 10 working days. If the request is for more than ten units, it will be presented to Firgrove's Board of Trustees for review. Board meetings are held once a month; therefore, these requests may require as much as a 45 day wait.
 - 2. Processing fees apply per the current schedule.
 - 3. Fire flows issued are the standard for Pierce County based on the type of project; additional fire flow amounts may be available upon request.
 - 4. No final signatures for occupancy will be issued until the required system installation is complete and accepted by Firgrove. If there is any question as to whether a fire hydrant will be required for the project, the final signature will not be completed. If no hydrants or other water system components need to be installed, the final signature may then be obtained.
 - 5. Upon approval, water availabilities are valid for up to one year.
- B. Any business or residence requesting a Certificate of Water Availability subjects the property to review by Firgrove to verify that the property meets Firgrove's current meter sizing and other standards. Any property with an undersized meter, which is brought to the attention of Firgrove by way of water availability request, tenant improvement, or other building change, will be required to upgrade its meter to the size that meets Firgrove's current standards. Credit will be given for any existing shares at the current rate.

II. Design and Construction

- A. Water system design/extensions/improvements will take into consideration but not limited to improving water quality, looping, pressure, flow, redundancy, mapping, hydraulic modeling, easement acquisition, and service reliability.
- B. Water system design/extensions/improvements will be installed by the developer/property owner or their contractor, but will be reviewed, inspected, and approved by Firgrove as the project progresses.
- C. Construction shall be performed in compliance with Firgrove's requirements, as well as appropriate municipal, county, state, and federal agencies.
- D. Developers/property owners should take state and local design standards into consideration, however, Firgrove will ultimately approve the design.
- E. Developers/individual property owners requesting water service will be required to extend the water main from an existing main location to the development/property. If the existing main does not meet the needs of the project and/or Firgrove's Water System Plan requirements, the developer/individual property owner may be required to upgrade the main in order to meet the needs of the property.
- F. Water main(s) should be extended to the far end of the property as a minimum, and extensions may be required in more than one direction, as determined by Firgrove.

- G. It is the responsibility of the owner/developer or their engineer to locate and/or survey ALL existing water mains and appurtenances and pothole, if necessary, to determine depth and location for design and construction.
- H. The water main size will be determined by Firgrove based upon the adopted Water System Plan and/or Firgrove's updated system grid map or required hydraulic modeling. Typically, 8" water mains are used for residential and 12" mains are used for commercial developments.
- I. Easements shall be a minimum of 16' wide (see Section VII B for easement types). Locations are at Firgrove's discretion. Single and/or consecutive easements shall run in a straight line from end to end. Water mains shall be offset at 5' or 11' from easement edges, as determined by Firgrove. The main shall be valved approximately at the entrance to and exit from the easement. No services are permitted on these private easements. No permanent structures are permitted within an easement and Firgrove is not responsible for the maintenance of the easement area. Materials and construction specifications can be found in the specifications section of the standard detail plan sheets. The Owner/Developer shall pay for all related easement acquisition and mapping fees.
- J. Firgrove may require that a well, tank, pump station, intertie, or other facility be provided. Such facilities will be of sufficient size and configuration to meet company, city, county, state, and federal standards/regulations. Firgrove may also require upsizing and/or installation of lines or facilities to accommodate future system requirements. In unique circumstances, Firgrove may reduce some other requirements of the project.
- K. All private wells must be decommissioned per Tacoma Pierce County Health Department and Firgrove Cross Connection Control standards and documentation must be provided to Firgrove.

III. Submittal Requirements

- A. Plans must be formatted to Firgrove's Standard Plan Sheet and must incorporate the following specific items:
 - 1. Project name and description.
 - 2. Owner and Engineer contact information.
 - 3. Parcel number and address.
 - 4. Vicinity map.
 - 5. Engineered scale and North arrow.
 - 6. 22" x 34" at a maximum scale of 1" = 50'.
 - 7. NO topography, contours, elevations.
 - 8. Show NO existing or proposed utilities on plan unless a conflict exists with a crossing or Firgrove's required depth of bury. Any conflicts will require detail profiles on a separate plan sheet at the conflict location only.
 - 9. Show existing/surveyed items such as fences, sheds, retaining walls that will remain in place. Show all residential and/or commercial structures and ALL wells.
 - 10. Water lines and appurtenances shall be weighted and clearly distinguishable on plans. Show existing water in non-weighted format but still clearly distinguishable. Line size, type, and length shall be called out within keynotes.
 - 11. Off-site improvements shall have separate sheets.
 - 12. Design shall follow all company standards and specifications.
 - 13. Provide any restoration details required.
 - 14. Specifications and Standard Water Notes to Contractor have been provided on the standard plan sheets, no additional notes are permitted on the plan sets without Firgrove's consent.
 - 15. First submittal shall be two copies (standard detail plan sheets need not be included). All subsequent submittals shall include four copies with standard detail plan sheets attached.

16. Use revision blocks.
17. NO changes are permitted to water plans unless requested by Firgrove or specifically coordinated with Firgrove (i.e., do not move valves, change pipe footages, relocate hydrants, etc.).
18. Stamped, signed plan sets with standard detail plan sheets attached are the only sets permissible and approved for construction, reproduction, and other distribution.
19. Redlines must be returned with all submittals.
20. Firgrove requires a copy of the Fire Prevention Bureau's approval; this must be received prior to water plan approval.

IV. Fees

- A. Water system extension/improvements will be at the developer/owner's expense.
- B. Firgrove may approve a latecomer's agreement when mains are extended by a developer/property owner past property owned by others. In this case, the developer/property owner would be reimbursed by the intervening property owners according to their frontage on the main when connection is made, at 50% for each side of the street, except when properties only border on one side of the main. Such reimbursement will be limited to the developer's original expense, less a 10% administrative fee payable to Firgrove, as reviewed and approved by Firgrove for a period of up to ten years following the date of the agreement. Request for a latecomer's agreement should be made in writing by the developer/property owner within 30 days of final water acceptance by Firgrove.
- C. Firgrove may require the developer/property owner to provide water rights, well systems, and/or additional purchased water which may be required to serve the project.
- D. Developer/property owners requesting water service for property that currently fronts an existing water main will be required to pay the normal share charge and hookup fee. No latecomer's charge will be required unless there is an agreement in place.
- E. Developer/property owners are required to pay the estimated cost of the project, as an up-front deposit, for Firgrove's time, materials, and other charges in relation to the project. Time spent and materials used will be billed to the deposit on account. Additional deposit fees may be required if warranted by the project. Upon completion and acceptance of the work by Firgrove, a final accounting of project costs will be prepared and an invoice or refund will be processed.
- F. If the Developer substantially completes the extension(s) (after completion of pressure testing and purity) and desires plat approval prior to the final construction of all items, such as paving of streets within the development, then at Firgrove's option and as a condition of service, a deposit in the amount of approximately 150% of the cost of work yet to be completed may be made to Firgrove.
- G. Connection costs, such as share charges and hook up fees, shall be paid at the time of individual unit connection. The amount shall be per the current Rates, Fees, & Charges schedule and may only be prepaid if a building permit has been issued.
- H. Firgrove will provide an Estimate of all costs associated with the project. Developer fees will be associated with Firgrove's latest Rates, Fees, & Charges schedule.

V. Metering and Meter Installation

- A. Commercial developments shall have a minimum 1½" meter. This requirement is based on system development necessary to provide the required fire flow guarantee, possible use change, and facility size. It does not take fixture count into consideration. Residential properties require a standard ¾" meter.

- B. Separate irrigation meters are required for commercial properties at the developer's expense. Firgrove does not recognize deduct meters. A separate irrigation meter is required for each individually irrigated parcel.
- C. Duplexes requesting connection to the Firgrove system shall have two meters due to potential condominium options, larger lots, and higher potential for individual irrigation systems. The connection fees shall be $\frac{2}{3}$ of a share per unit, one full meter installation fee, and one drop in meter installation fee unless in a development where both meter installation fees shall be drop in. This shall also apply to all townhome and duplex style condominiums.
- D. All apartment buildings and condominiums with 3 or more units shall be permitted to select one meter or individual meters. The connection fees shall be $\frac{2}{3}$ of a share per unit and appropriate meter installation fees. The selection of the meter size will be at Firgrove's determination.
- E. Any unit being added to an undivided parcel where there is a current residence shall be considered an accessory dwelling unit (ADU). These units shall pay for $\frac{2}{3}$ of a current residential share charge but will not have a separate meter or pay for a separate hookup fee. The ADU will be required to connect to the existing unit's water service line. If and when the property does subdivide, each property must have individual water service. The ADU will then be required to pay the remaining $\frac{1}{3}$ share at current rates and the appropriate hookup fee. The ADU will also be required to run a separate water service line from the unit to the new meter location.
- F. Service lines, the lines from the meter to the customer, are the responsibility of the customer. Firgrove installs the water meters and will not do so unless the service line has been run to the meter box. Service lines shall not be extended for more than 350 feet in length, except at Firgrove's discretion.
- G. Properties undergoing redevelopment will have any and all existing water meters removed from the premises upon vacation due to cross connection hazards, meter damage from construction, inappropriate use, vandalism, and potential water theft. Firgrove field personnel will remove the meter and identify the location on the property with blue painted stakes. The developer/contractor is responsible for protection of existing meter boxes and service stubs. The developer/contractor/ builder will have the option of reusing these services for irrigation or other uses appropriate to service size. Any services not reused will have shares credited toward new services, and the contractor will be required to remove all unused services.

VI. Conservation and Cross Connection Control

- A. The developer will provide a minimum of six inches of amended topsoil or equivalent for all areas of individual lots, parks, and other areas that are to be landscaped or turfed at the time of the completion of construction. An agreement will be signed committing the developer/property owner to this policy.
- B. Cross connection control is required on all properties that have a potential to contaminate the potable water system. An agreement will be signed committing the developer/ property owner to this policy.
 - 1. Commercial buildings must be protected by a reduced pressure backflow assembly (RPBA) on the domestic water line where it enters the building, so long as no connections are made upstream from the RPBA.
 - 2. Fire control systems must be protected by a double check detector assembly (DCDA) or a reduced pressure detector assembly (RPDA) on any chemical systems.
 - 3. Irrigation systems must be protected by one of the following backflow assemblies:
 - a. Atmospheric vacuum breaker (AVB)
 - b. Pressure vacuum breaker assembly (PVBA)

- c. Double check valve assembly (DCVA)
- d. Reduced pressure backflow assembly if any chemical or fertilizer is injected (RPBA)
- 4. Swimming pools, hot tubs, or circulating tubs connected to the potable water system must be protected by a reduced pressure backflow assembly (RPBA). Atmospheric vacuum breakers (AVB) must protect hose bibs used to fill swimming pools, hot tubs, etc.
- C. The owner, plumber, or superintendent must coordinate backflow inspections and a walk-through on all commercial facilities with Firgrove.
- D. All notes for backflow assemblies, etc., shall be cross referenced on mechanical, fire, and plumbing plans as needed.

VII. Administrative Requirements

- A. When developers commence construction, the developer will provide Firgrove with appropriate insurance and bonding, as required by the current contract.
- B. Firgrove requires easement for all water mains located on private property.
 - 1. Plat map easements are sufficient for all private roads. Firgrove needs to be expressly named on the plat map, not just listed as “utilities”, and provided with three copies of the final plat.
 - 2. A separate easement document will be needed for all other easements (i.e., lot lines). This easement should be granted on the form provided and must have three exhibits attached representing the legal description of the real property (Exhibit A), the legal description of the easement (Exhibit B), and a depiction of the easement on the real property (Exhibit C). This document will be recorded so that potential buyers of the properties are aware that an additional easement condition exists specifically on their property. Firgrove must approve the easement prior to execution. Upon approval, the easement may be executed and the original must be submitted to Firgrove for recording.
- C. Firgrove requires clear and legible record as-built drawings for all water system installations. Firgrove's inspector keeps a field record of all changes made to the water system in the field. This copy will be compared to the construction foreman's copy, which should then be given to the engineer.

All relevant structures should be survey located. The survey location of the points should be based on the Washington State Plane South coordinate system, NAD 83/91 horizontal datum and NAVD 88 vertical datum.

The as-built submittal will include a text document identifying the method of collection: RTK, GPS, or conventional survey and the published survey grade reference points used to establish the coordinate datum. Alternately, projects surveyed using RTK constrained to the Washington Reference Station Network as their method of establishing the coordinate datum, will be accepted.

The survey data can be included as point blocks in a digital ACAD file, may be submitted as an ESRI shape file or may be submitted as an ASCII point file. All points must be attributed to include the type of structure and the following items (in addition to geographic location):

Component	Location Point	Attributes
Valve	Center of Lid	size, type, mfg, yr, closed/open, depth of valve
Hydrant	Center top	size, type, mfg, yr, depth of bury, stortz
PRV	Center hatch	size: main valve & bypass, elevation @ top of pipe, type, mfg, yr

Meter	Center box	size, type, mfg, yr
Air Vac	Center box	size, mfg, yr
Blow-Off	Center box	size, mfg, yr

The engineer should use the original electronic plans, make the changes as noted (not in legislative edit) and submit to Firgrove for approval. Firgrove requires four folded hard copies, as well as electronic copies in both AutoCAD and PDF formats. The Fire Marshal will need copies of as-builts also; please contact their office for their requirements.

- D. Firgrove requires a bill of sale deeding the water system and appurtenances over to them. Please use the form provided. The original should be submitted to Firgrove. DO NOT include meter costs or service line (from the meter to the structure) costs in your bill of sale. Do include all other portions of water lines from taps to meter stops. Fittings, bends, thrust blocks and other underground appurtenances shall be averaged into the line footages. All above ground appurtenances such as valves, blow-offs, and hydrants as well as services shall be itemized. This document does not need to be recorded.
- E. The project shall not receive final acceptance without the required documents, unless Firgrove determines an alternative document submittal schedule.
- F. Terms and conditions of any contract or requirements with Firgrove shall be met and the General Manager shall have the authority to modify the contract or requirements, as well as the policies, when in the best interest of Firgrove. Notification of major policy exceptions shall be reported to the Board of Trustees in a timely manner.

VIII. System Installation by Firgrove

Firgrove installs individual hydrants and meters but reserves the right to contract them out.

IX. Warranty

- A. The developer/property owner shall warrant that the installation of system components has been in conformance with all Firgrove, city, county, state, and federal requirements.
- B. The developer is responsible, upon notification from Firgrove, for making all repairs, restorations, and/or corrections to the water system improvements and related construction, such as roads and landscaping. These repairs/corrections shall be made at the developer's sole expense for a two-year period of time from the date of the project's acceptance. The repairs/corrections must be made in a timely manner. Under emergency circumstances, the repairs/corrections may be made by Firgrove and billed to the developer.