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February 18, 2021

Supplement to Complaint of  
The Highlands at Ladd Park HOA (“Ladd Park”)  
dated November 25, 2020

Ladd Park is comprised of over 1,200 homes and is one of the largest neighborhoods in Williamson County. Ladd Park is professionally managed by Ghertner & Company, a property management company that manages hundreds of communities in Middle Tennessee. Ladd Park’s homeowners take pride in their homes and property. In purchasing a home in Ladd Park, each homeowner commits to a number of covenants to preserve the beauty of the neighborhood and to maximize the property values of every homeowner. To this end, many homeowners in Ladd Park have installed lawn irrigation systems.

According to Mike Jones, General Manager of Milcrofton Utility District, a properly installed backflow prevention device on a lawn irrigation system is vital to the safety of the entire public water supply.<sup>1</sup> Ladd Park does not dispute that backflow prevention devices play an important role in the protection of the public water supply. While important, it is but one component of an effective cross connection control program. The events leading to Ladd Park’s complaint reveal a utility district whose cross connection control program is lacking in important ways and is seemingly driven by the convenience of Milcrofton’s staff over the actual safety of the public water supply, which is a far greater threat to the public water supply than the location of a backflow prevention device.

It came as a complete surprise to the homeowners of Ladd Park and Ghertner & Company that Milcrofton enacted a policy requiring the placement of all backflow prevention devices no more than five feet behind the water meter box on a line that is perpendicular to the side property lines of a homeowner’s property (the “Policy”). Furthermore, many lawn irrigation companies who have installed systems in Ladd Park were also completely unaware of this Policy. Mike Jones contends that “[i]t is the sole responsibility of . . . the homeowner and especially [the] irrigation system contractor to inquire about the current requirements of installing a backflow prevention device” with Milcrofton.<sup>2</sup> If an entire neighborhood, a well-respected property management company, and numerous state-licensed lawn irrigation companies were unaware of the Policy, however, it would seem that the source of the Policy itself—Milcrofton—is the root of the problem, not everyone else.

## **I. The Policy Itself Is Unsafe**

The Policy creates conditions conducive to contamination of the public water supply. The Cross-Connection Control Manual and Design Criteria for Cross-Connection Control Plans, Ordinances, and Policy, issued by the Tennessee Department of Environment and Conservation’s Division of Water Supply (the “State Manual”) states, in part, the following:

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<sup>1</sup> Ladd Park Complaint dated November 25, 2020 (“Complaint”), Exhibit D: Email from Mike Jones to Kevin Alonso, October 20, 2020 at 8:26 AM (“The public safety of the entire water system rest (sic) on that backflow device working properly.”).

<sup>2</sup> Id.

The selection of a suitable site and proper installation of backflow prevention units *is essential* if the desired protection is to be obtained. . . . These assemblies should be protected against *mechanical abuse* and freezing. . . . All assemblies should be installed so that they will be easily accessible for testing and repair. . . . If assembly is installed outside, *an acceptable enclosure should also be installed*. Enclosure should provide freeze and vandalism protection, plus allow for easy access to the device for testing and repair. . . .<sup>3</sup>

Milcrofton does not require outside backflow prevention devices for irrigation systems to be enclosed, which is inconsistent with the requirements of the State Manual.<sup>4</sup> Furthermore, because Milcrofton now requires many homeowners to place backflow prevention devices in the middle of their front yards, the devices are now at greater risk of exposure to mechanical abuse and vandalism. Most homeowners prefer to place their backflow prevention devices against an exterior wall of their home—a location where the device is out of the way and less likely to be damaged. Now, the device is more likely to be damaged by a person tripping over it or hitting it with a bicycle, lawnmower, or other vehicle. Neither the homeowner nor Milcrofton would know any damage has been done until perhaps months later upon re-inspection, after the public water supply had already possibly been contaminated. Indeed, the safety of the public water supply seems to be a secondary concern of Milcrofton. After threatening to shut off a Ladd Park resident’s water over the location of his backflow prevention device, Milcrofton inspected the device where it stood and deemed it safe, complete with a bright green door hanger that offered Milcrofton’s congratulations.<sup>5</sup>

## II. The Policy Does Not Protect Milcrofton Staff

Notwithstanding the greater potential for contamination of the public water supply, Milcrofton justified its placement policy as necessary to protect its staff. On two occasions, a Milcrofton staff member was held at gunpoint while inspecting residential backflow prevention devices.<sup>6</sup> Ladd Park agrees that Milcrofton’s staff should be able to do their jobs safely. But the argument that the Policy protects Milcrofton’s staff is specious at best. For example, the Policy is not retroactive. The customer(s) who pulled guns on Milcrofton’s staff will still have backflow prevention devices located in places that Milcrofton considers unsafe. Presumably the vast majority of lawn irrigation systems in Milcrofton’s water district were installed prior to January 22, 2020. The Policy does nothing to promote the safety of Milcrofton’s staff while inspecting those systems. Furthermore, as discussed below, Milcrofton has made no meaningful effort to educate its customers on cross contamination risks and mitigation requirements. So, a homeowner with no knowledge of the

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<sup>3</sup> State Manual, Ch. 5.2, available at <https://www.tn.gov/content/dam/tn/environment/water/ftc/cross-connection/crossconnection.pdf> (emphasis added).

<sup>4</sup> See Milcrofton Utility District Standard Detail No. 16, issued January 22, 2020 and revised September 23, 2020, available at <http://www.milcrofton.com/wp-content/uploads/Backflow-Preventer.pdf> and reissued again as Milcrofton Utility District Standard Detail No. 18 in December 2020, available at <http://www.milcrofton.com/wp-content/uploads/2021-MUD-SPECIFICATIONS.pdf>.

<sup>5</sup> See Complaint, Exhibit E.

<sup>6</sup> See id., Exhibit D.

reason for the Milcrofton staff member's visit could assume that a stranger on their property might intend to cause them or their property harm. Milcrofton is not the only utility in town. Local electric and gas companies manage to protect their staff without requiring their customers to place electric or gas meters in the middle of their lawns instead of alongside an exterior wall of the home.

### III. The Policy Is Unreasonable

In 2002, the Attorney General of the State of Tennessee was asked to provide an opinion regarding a water utility district's ability to remove a water tap from the customer's property if the customer failed to pay the water bill.<sup>7</sup> The water utility district was subject to the same laws, regulations, and oversight as Milcrofton. While acknowledging that water utility districts have broad discretion, the Attorney General noted that they must still act reasonably in light of all relevant facts and circumstances. The Attorney General concluded: "A reviewing agency or court could conclude that this practice [of removing the water tap] is unreasonable because the district could accomplish the same purpose by turning off the water service rather than physically removing the tap."<sup>8</sup>

There are a number of common-sense solutions that would help protect Milcrofton's staff that do not endanger the public water supply, impose additional costs on homeowners, or require homeowners to give up a usable portion of their property. Milcrofton's staff could simply knock on the homeowner's door and announce their presence. Milcrofton could inform homeowner's when inspections would occur on their monthly bills. Milcrofton could even require homeowners to have their backflow prevention device privately inspected and report the results to Milcrofton. A privately managed neighborhood such as Ladd Park could require its property manager to arrange for the inspection of all backflow prevention devices in the neighborhood, which could reduce the inspection load of the water utility district. It doesn't appear that Milcrofton tried any of these approaches—instead opting for an extreme approach that might make its staff feel safer, but at great expense to homeowners and with unnecessary added risk to the public water supply, as discussed above.

### IV. Milcrofton Does Not Have an Effective Cross Connection Control Program

The State Manual goes into great detail concerning the key components of an effective cross connection control program. It even provides water districts a template to use in the development of a cross connection control program.<sup>9</sup> With such detailed guidance at Milcrofton's fingertips, it is unbelievable that Milcrofton has failed to properly implement a cross connection control program by failing to educate the public about its program. Even if we assumed that the Policy were a proper and reasonable exercise of Milcrofton's power (though it is not), Milcrofton's failure to educate its customers undermines the effectiveness of the Policy.

The State Manual plainly states:

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<sup>7</sup> Opinion 02-048, April 16, 2002, available at <https://www.tn.gov/content/dam/tn/attorneygeneral/documents/ops/2002/op02-048.pdf>.

<sup>8</sup> Id.

<sup>9</sup> See State Manual, pg. 77 et seq.

For a comprehensive effective cross connection control program the water purveyor is encouraged to establish a public education program. Public education is *absolutely vital* in helping to control cross-connections at residential establishments. *The Division of Water Supply requests that the water system provide public education to all customers of the water system in the form of an article in the Consumer Confidence Report or a brochure sent out at least once annually.*<sup>10</sup>

Milcrofton believes, however, that the public should educate itself.<sup>11</sup> Instead of investing in public education concerning cross connections, Milcrofton apparently expects homeowners and irrigation system installers to call Milcrofton daily to determine what its current policies are. If one is to believe the Policy is part of a broader cross connection control program, Milcrofton has put minimal effort into educating the public about the Policy—only posting a brief paragraph about it on its webpage.<sup>12</sup> Ladd Park is not aware of any effort by Milcrofton to advise customers of the Policy ahead of the January 2020 board meeting, when it was initially adopted. Milcrofton does not appear to make an agenda for its monthly board meeting available to customers online. Neither customers nor irrigation system installers had reason to believe the state of irrigation installation in part of Williamson County changed between January 21, 2020 and January 22, 2020. Ladd Park is not aware of any meaningful effort by Milcrofton to educate customers of the Policy since its adoption. Many of the irrigation companies who installed systems in Ladd Park in 2020 also did so without knowledge of the new Policy.

Milcrofton’s failure to educate the public about the new Policy is symptomatic of a more troubling concern: Milcrofton has failed to educate the public about its cross connection control program—which the Department considers “absolutely vital in helping to control cross-connections at residential establishments.”<sup>13</sup>

Between December 2019 and October 2020, Milcrofton did not mention its cross connection control program in its monthly billing statements.<sup>14</sup> Milcrofton did, however, twice point customers to the publication of its EPA-mandated Consumer Confidence Report for 2019 (the “CCR”).<sup>15</sup> Notably, however, the 2019 CCR makes no mention of Milcrofton’s cross connection control program. In fact, none of Milcrofton’s CCRs dating back to 2008 mention one word about the cross connection control program.<sup>16</sup> Multiple Ladd Park homeowners have indicated that they have never received any educational materials regarding Milcrofton’s backflow preventer requirements. These facts are interesting in light of the specific request by the Division of Water Supply in the State Manual that “the water system provide public education to all customers of the water system in the form of an article in the Consumer Confidence Report or a brochure sent out at least once annually.”<sup>17</sup>

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<sup>10</sup> Id. at Section 4.7 (emphasis added).

<sup>11</sup> See supra note 2 and accompanying text.

<sup>12</sup> Available at <http://www.milcrofton.com>.

<sup>13</sup> State Manual, Section 4.7.

<sup>14</sup> See Complaint, Exhibit F.

<sup>15</sup> See id.

<sup>16</sup> See <http://www.milcrofton.com/water-quality/>.

<sup>17</sup> State Manual, Section 4.7.

Other utility districts in the area do seem to take their obligation to educate customers about the district's cross connection control programs seriously. The City of Franklin, which provides water service to part of Ladd Park, makes its cross connection control policy available online.<sup>18</sup> So does Nashville's Metro Water Services,<sup>19</sup> the Murfreesboro Water & Sewer Department,<sup>20</sup> and H.B. & T.S. Utility District.<sup>21</sup> Mallory Valley Utility District provides a webpage and electronic pamphlet with educational information.<sup>22</sup>

Perhaps Milcrofton has printed information available at its office, but Ladd Park suspects that most customers today will never set foot on their premises, as customers can set up an account via email, receive electronic billing statements, and pay their bills via an automatic draft program. Milcrofton's failure to take reasonable steps to educate the public about its cross connection control program is not for want of technological savvy. Milcrofton makes sure to update both its webpage and Facebook page to inform the public about any awards or recognition it receives.<sup>23</sup>

## V. Conclusion

Backflow prevention is undoubtedly very important. Ladd Park is a willing partner in efforts to protect the safety of our water supply. To be that partner, however, Ladd Park's residents must be properly educated about cross connection control. It is clearly Milcrofton's duty to educate its customers about cross connection control, which it has utterly failed to do. Ladd Park only recently started to understand cross connection control due to Milcrofton's implementation of the Policy, which ultimately has nothing to do with the safety of the water supply and actually endangers the water supply.

For all of the reasons set forth above, Ladd Park respectfully requests that this Board to invalidate, or require Milcrofton to rescind, the Policy. For any subsequent change to its cross connection control program, this Board should require Milcrofton to provide proper advance notice of proposed changes, allow input from its customers, and require that such changes are reasonable in light of all relevant facts and circumstances. Through appropriate public education and implementation of reasonable, common sense solutions such as those detailed above, Milcrofton can undoubtedly achieve its goal of improving worker safety across the water district without creating greater risk to the water supply or unreasonably burdening customers wishing to install an irrigation system.

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<sup>18</sup> <http://www.franklintn.gov/home/showdocument?id=9000>.

<sup>19</sup> <https://www.nashville.gov/Portals/0/SiteContent/WaterServices/docs/development/Cross%20Connection%20Control%20Plan.pdf><https://www.nashville.gov/Portals/0/SiteContent/WaterServices/docs/development/Cross%20Connection%20Control%20Plan.pdf>.

<sup>20</sup> <https://www.murfreesborotn.gov/DocumentCenter/View/92/Cross-Connection-Program-Procedures-Manual?bidId=>.

<sup>21</sup> <https://hbtsud.com/wp-content/uploads/2009/09/2008-cross-connection-policy1.pdf>.

<sup>22</sup> <https://www.mvud.org/pview.aspx?id=35812>.

<sup>23</sup> See <http://www.milcrofton.com> and <https://www.facebook.com/milcrofton/>



**STATE OF TENNESSEE**  
**Utility Management Review Board**  
Cordell Hull Building  
425 Fifth Avenue North  
Nashville, Tennessee 37243  
Phone (615) 747-5260 Fax (615) 741-1551

**INFORMAL HEARING FORM**

**Project Complaint – Developers or Customers, Tenn. Code Ann. § 7-82-702(a)(9)<sup>1</sup>**

**Contact Information:**

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Customer       Developer

**Name:** The Highlands at Ladd Park HOA

**Utility District:** Milcrofton

**Telephone – Primary:** 615-807-1549

**Telephone – Alternate:**

**Email:** board@laddhoa.com

**Address:** 802 Beamon Drive, Franklin, TN

**Zip Code:** 37064

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<sup>1</sup>Tenn. Code Ann. § 7-82-702(a)(9) provides: “Review and conduct an informal hearing of any decision of any utility district upon a written request of any utility district customer or an affected developer concerning the justness and reasonableness of the utility district’s requirement that the customer or the developer build utility systems to be dedicated to the utility district or the justness and reasonableness of fees or charges against the customer or the developer related to the utility systems. The written complaint must be filed within thirty (30) days after the utility board has taken action upon a written complaint to the board of commissioners of the utility district. In making its decision as to whether the requirements, fees, or charges are just and reasonable, the utility management review board shall take into account the reasonableness of the utility district’s rules, policies, and cost of service as well as any evidence presented during the hearing. Any judicial review of any decision of the board will be held by common law certiorari within the county in which the hearing was held”.

**Jurisdiction:**

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**Has the Utility District Board of Commissioners heard the complaint at a public meeting?**

Yes       No

**Please provide the date of the complaint and attach a copy of it (i.e. minutes of the meeting and/or written description of your remarks) to this form.**

Date: October 28, 2020 (See Exhibit A)

**Allegation of Facts:**

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**Provide a detailed account of facts that led to this complaint. Please lay the case out chronologically and highlight the most important facts.**

Milcrofton enacted a new backflow preventer policy effective January 22, 2020, which required the installation of a backflow prevent no more than five feet behind the homeowner's meter box.

Milcrofton revised this policy effective September 23, 2020 to allow the backflow preventer to be placed on a line perpendicular to the homeowner's side property lines, so long as the line does sit more than five feet behind the homeowner's meter box. See Exhibit B.

Following the adoption of this policy, several members of the Ladd Park community began receiving notices that their irrigation systems were not in compliance with Milcrofton's policies. The letters stated that if the customer failed to comply with Milcrofton's policies within thirty days, Milcrofton would shut off the customer's water. See Exhibit C. We will use Ladd Park homeowner Kevin Alonso's experience to illustrate the basis for our complaint.

On or about October 12, 2020, Mr. Alonso had a seven-zone irrigation system installed by a state-licensed contractor. During the install, a Milcrofton representative arrived at Mr. Alonso's home and confronted the contractor about the new policy. The Milcrofton representative and the contractor disagreed about the placement of the backflow preventer, and the Milcrofton representative left without alerting the homeowner to the contractor's potential non-compliance with the new policy.

On October 19, 2020, after the irrigation system had been completely installed, and the backflow preventer was placed against the front of Mr. Alonso's house, the same Milcrofton representative returned to Mr. Alonso's home and confronted Mr. Alonso about the placement of the backflow preventer, advising him that his newly installed irrigation system was out of compliance with Milcrofton policy.

Mr. Alonso wrote an email to Milcrofton Utility District taking issue with the Milcrofton representative's visit, his failure to advise the homeowner of the issue prior to the completion of the irrigation system installation, and the unreasonableness of the policy itself. Mike Jones, General Manager of Milcrofton Utility District, responded the next day, threatening to shut off Mr. Alonso's water service if the backflow preventer was not moved within thirty days. See Exhibit D for the email exchange.



On October 23, 2020, Milcrofton returned to Mr. Alonso's house to test his backflow preventer. Mr. Alonso was provided with a door hanger advising that the backflow preventer passed its operational test. See Exhibit E. Notwithstanding the fact that Milcrofton deemed Mr. Alonso's backflow preventer to be safe and no threat to the district's water supply, Milcrofton maintained its threat to shut off Mr. Alonso's water if he did not move the backflow preventer.

This matter affects many of the homeowners in Ladd Park. We have reached out to Milcrofton to try to resolve the issue on behalf of our community and requested an opportunity to be heard by the Milcrofton board of commissioners, but we were only given an opportunity to provide the letter attached as Exhibit A, which was read at Milcrofton's October 28, 2020 board meeting. Milcrofton's board declined to consider our complaint further.

**Causes of Action:**

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**Please explain why you believe the utility district's requirements, fees, or charges are reasonable or unreasonable.**

See Supporting Statement.

**Did the utility district follow its policies or procedures? Does the utility district lack policies and procedures that address this type of complaint?**

Per Milcrofton's attorney, Milcrofton has no written policies for notice to customers of proposed rule or policy changes or opportunity to comment.

**Relief Sought:**

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**Please provide detailed information related to the remedy(ies) that you are seeking.**

Milcrofton's Standard Detail No. 16 should be rescinded and subject to notice and public comment prior to any subsequent action. Any subsequent action by Milcrofton on this matter, for the purported reason of worker safety, should be reasonably tailored to accomplish that goal, without substantial added cost to its customers or loss of the use or enjoyment of customer property.

*I hereby certify that the information provided above is true and correct to the best of my knowledge.*

Signature: X  Date: November 25, 2020

Chad Holmes, President  
The Highlands at Ladd Park HOA

Please mail, e-mail, or fax copies of any documentation, such as bills, that the Board would need to review when hearing the case, to:

Cordell Hull Building  
ATTN: UMRB, Comptroller’s Office  
425 Fifth Avenue North  
Fourth Floor  
Nashville, TN 37243  
Phone: (615) 747-5260  
Fax: (615) 741-1551  
utilities@cot.tn.gov

If you will be represented by an attorney, please provide his/her contact information below:

Name: \_\_\_\_\_  
Telephone – Primary: \_\_\_\_\_  
Telephone – Secondary: \_\_\_\_\_  
Email: \_\_\_\_\_  
Address: \_\_\_\_\_  
\_\_\_\_\_   
Zip Code: \_\_\_\_\_

***Under Tenn. Code Ann. § 7-82-702(a)(9), any judicial review of any decision of the Utility Management Review Board will be held by common law certiorari within the county in which the informal hearing was held.***

## Supporting Statement

The Utility Management Review Board has jurisdiction to hear this matter pursuant to Tennessee Code Annotated §7-82-702(a)(9). Milcrofton's requirement that a customer install a backflow preventer on its irrigation system constitutes a requirement that "the customer . . . build utility systems to be dedicated to the utility district" as contemplated by the statute. Ladd Park HOA does not dispute the need for backflow preventers to protect the district's water supply. Ladd Park HOA also does not dispute the need for testing to ensure backflow preventers are in proper working order. Ladd Park HOA does dispute Milcrofton's policy of requiring the backflow preventer to be placed on a line across a homeowner's property that is no more than five feet behind the water meter as arbitrary, unjust, and unreasonable and requests appropriate relief from the Utility Management Review Board for all of Milcrofton's affected customers.

Milcrofton provided no notice of this proposed policy update to its customers or opportunity to comment. The policy was adopted on January 22, 2020. This is the same day as the Milcrofton's regular monthly board meeting. Milcrofton does not appear to make its agenda public prior to its monthly board meetings, making it impossible for customers to know whether any item of business might impact them.

Following the adoption of the new backflow preventer policy, Milcrofton provided no notice to its customers and made minimal effort to advise irrigation contractors of the policy. See Exhibit B, where Mike Jones, Milcrofton's General Manager, admits that Milcrofton did not notify all licensed irrigation contractors of this change. Apparently, contractors are expected to call Milcrofton's office daily to determine whether Milcrofton has instituted any new policies that might affect their work for that day.

With no notice of the proposed change and no notice to customers and many contractors after the change, customers are only finding out about this new requirement upon receiving threats of service disconnection in the middle of a global pandemic, not because their backflow preventer is unsafe, but rather that their backflow preventer is not located where Milcrofton wants. The only indication of any change to any Milcrofton policy on its website beneath a picture of Milcrofton's office. There, a link is provided to "Standard Detail No. 16," which describes Milcrofton's updated backflow preventer policy. See Exhibit B.

The Technical Specifications for Milcrofton Utility District, available to the public on Milcrofton's website,<sup>2</sup> indicate that Milcrofton's backflow preventer requirements only apply to commercial properties. Section 44.1 states: "A reduced pressure backflow preventer must be installed at commercial water services at the discretion of the District." There is no reference to backflow preventer requirements at residential properties. Milcrofton apparently thinks that Standard Detail No. 16 changes this, but Milcrofton has not made any revisions to its Technical Specifications public that would suggest the backflow preventer requirements also apply to residential properties. Milcrofton has not even incorporated Standard Detail No. 16 into its Technical Specifications documentation. A customer or irrigation contractor making good faith efforts to comply with Milcrofton's posted Technical Specifications, even if they located the separate Standard Detail No. 16, could reasonably conclude that Standard Detail No. 16 does not apply to residential properties. The only indication that it might apply to residential properties is buried at the end of the notes: "WHEN INSTALLING AN IRRIGATION SYSTEM

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<sup>2</sup> <http://www.milcrofton.com/wp-content/uploads/Technical-Specs.pdf>

ON A POTABLE WATER LINE CONNECTION, A TEE MUST BE INSTALLED AFTER THE METER WITH AN ISOLATION VALVE PRIOR TO THE BACKFLOW PREVENTION ASSEMBLY TO SEPARATE THE IRRIGATION SYSTEM FROM THE DOMESTIC SUPPLY TO THE HOUSE.”

Most of Milcrofton’s customers will not visit Milcrofton’s office to pay their water bill. Most will not even check the website after setting up their automatic monthly payments. Yet, Milcrofton sends out utility bills each month to each of its customers, and this document is an easy way to notify customers of important changes or announcements. Please see Exhibit F for one customer’s Milcrofton statements since December 2019. In June 2020, Milcrofton even alerted its customers to the annual publication of Milcrofton’s Water Quality Report. However, following Milcrofton’s January board meeting, Milcrofton made no effort to alert its customers to a policy change that would impact anyone interested in installing an irrigation system. Milcrofton did mention irrigation on three statements in July, August, and September 2020. However, Milcrofton only asked customers to notify Milcrofton if they had installed an irrigation system in 2020. If a customer notified Milcrofton as requested, with neither the customer or their irrigation contractor having notice of the new backflow preventer policy, Milcrofton “updated its records” by sending a letter to the customer advising them that they need a backflow preventer installed within thirty days or else the customer’s water service would be terminated. See Exhibit C. The letter makes no mention of Milcrofton’s updated policy. A reasonable customer could understand the letter to be not applicable to them because they had a backflow preventer installed. The letter does not specifically call out the location of the backflow preventer as the problem that would result in the customer’s water being disconnected. Milcrofton identifies a “hazard” and a “major violation of the Safe Drinking Water Act,” but then Milcrofton will subsequently test the backflow preventers where they are located and confirm that they are indeed safe and in compliance. See Exhibit E.

Milcrofton has advised that the reason for the location requirement is for the safety of its staff. On one or two occasions, a Milcrofton worker has been confronted by a homeowner surprised by their presence. Ladd Park HOA does not dispute the need to ensure employee safety. Milcrofton’s employees should be able to feel safe doing their job, which is vital to our community. However, Milcrofton’s chosen remedy is patently unreasonable.

For many homeowners with water meter boxes in their front yard, the location requirement places a tripping hazard in the middle of the homeowner’s yard. It deprives the homeowner of their normal use and enjoyment of the yard and places the water supply at greater risk because the backflow preventer is more likely to be hit by a lawnmower than if it were set against a wall of a house. Installing an irrigation system is meant to enhance the beauty of a homeowner’s yard and increase property value, but the placement of an above-ground backflow preventer in the middle of the yard will invariably decrease value instead. See Exhibit G for a typical front yard in The Crest at Ladd Park in Franklin, Tennessee. The area between the red lines is where the backflow preventer can be placed under Milcrofton’s policy. If the backflow preventer was not planned to be placed in this area, the homeowner may find themselves limited to the area immediately behind the meter box, as shown in Exhibit H.

Furthermore, the argument that the location requirement is necessary to ensure worker safety is specious at best. Because the location requirement does not apply to previously installed systems, the homes that presented safety concerns for Milcrofton’s workers will continue to present safety concerns because they are not required to comply with the location requirement. Mike Jones alleges that his

staff has been held at gunpoint for “wandering around in the bushes” trying to find backflow preventers. A simple solution is available: knock on the homeowner’s door, explain what you are doing, and ask for the location of the backflow preventer.

Furthermore, Mike Jones makes two things clear: first, the water system past the water meter is the customer’s responsibility, and second, the backflow preventer is required to be tested annually. See Exhibit D. If these are true statements, the customer should be able to decide where to place the backflow preventer, and the onus can be placed on the customer to obtain the required testing.

For all of the above-stated reasons, Milcrofton’s backflow preventer location requirement should be rescinded, allowing customers to place the backflow preventer against their home. There are reasonable solutions to address worker safety that do not involve requiring homeowners to give up part of their usable property. We are confident that the good people of Williamson County would be willing to work with Milcrofton to ensure the safety of Milcrofton’s workers and the water supply if Milcrofton simply bothered to ask for assistance.

**Exhibit A**

The Highlands at Ladd Park HOA  
802 Beamon Drive  
Franklin, TN 37064  
October 22, 2020

Milcrofton Utility District  
6333 Arno Road  
Franklin, TN 37064

Dear Milcrofton Utility District Board of Directors

The Highlands at Ladd Park HOA Board of Directors has recently become aware of the 30 notice that has been sent to homeowners who have recently installed irrigation systems and backflows for said irrigation systems. Upon research on your company's home page, the notice of the cross-connection policy from 01/22/2020 and the amendment from 09/23/2020 was discovered. We would like to address this concern on behalf of the homeowners within The Highlands at Ladd Park.

With the amendment to move the backflow device within 5 foot of the meter brings serious impediments to the homeowners of the community. Please review the photo below of a nondescript property in The Highlands at Ladd Park.



P.5

In this photo, the center point is the actual meter, and the subsequent three circles are all 5-foot markers from the meter. With the September 23<sup>rd</sup>, 2020 amendment which would require a 5-foot placement of the backflow device, this homeowner has now lost all functionality of their front yard. The placement within 5 foot creates the following:

- **Safety Concerns:** trip hazards therefore creating legal liability concerns for this homeowner. Additionally, adding possible undue vandalism to this property by someone forcibly removing the backflow device from the front yard.
- **Loss of functionality:** walking, running, and/or playing in the front yard is no longer an option with a backflow present in these locations thus rendering the lawn unusable. Mowing the lawn is now an obstacle
- **Aesthetically unappealing:** with the placement of the backflow in the front of this home makes the home aesthetically unappealing, therefore a significant drop in the property value.

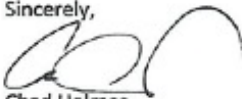
The Highlands at Ladd Park and Williamson County have a high standard when it comes to the aesthetics and curb appeal of its neighborhood. Faux rocks, artificial greenery, and other items of the like for concealment do not go with increasing property values.

We do acknowledge your desire to keep your inspectors and employees safe. The Highlands at Ladd Park HOA would like to offer some compromises to this rule.

- The homeowners within The Highlands at Ladd Park would perform their own annual inspection and provide the certified test results to Milcrofton Utility District within the allotted window.
- If Milcrofton Utility Distribution would rather perform their own inspection of the back-flow devices, the company can call or email the homeowners and schedule an appointment.
- Allow The Highlands at Ladd Park to install the backflow devices on one dedicated side of the home (not in the back yard).

The Highlands at Ladd Park HOA respectfully request to be placed on the November agenda to discuss the options for our association. We look forward to hearing from you soon.

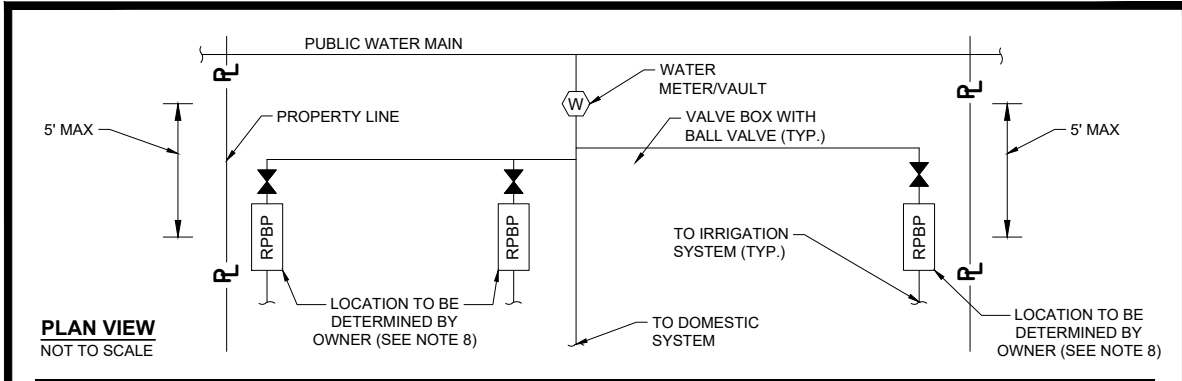
Sincerely,



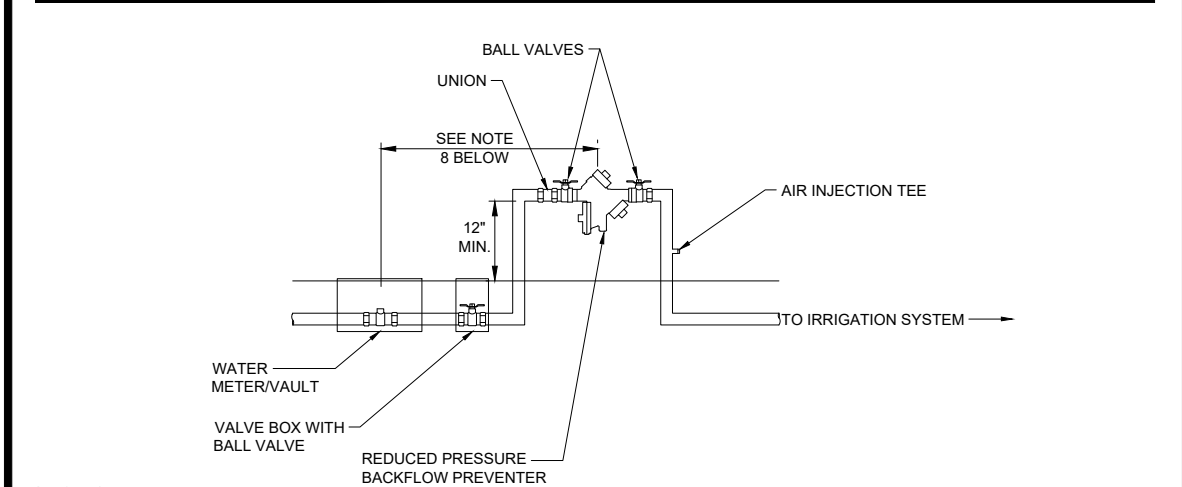
Chad Holmes  
Board of Directors President  
The Highlands at Ladd Park HOA

A6

Exhibit B



PLAN VIEW  
NOT TO SCALE



SECTION VIEW  
NOT TO SCALE

\*\*DETAIL NOT DRAWN TO SCALE AND NOT ALL DETAILS OF ASSEMBLY ARE SHOWN AS THE DETAIL IS FOR GRAPHICAL PURPOSES ONLY TO SHOW INTENT OF INSTALLATION.

NOTES

1. BACKFLOW PREVENTION ASSEMBLY SHALL BE A REDUCED PRESSURE ASSEMBLY TYPE WITH THE MODEL BEING APPROVED BY THE TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION DIVISION OF WATER SUPPLY.
2. BACKFLOW PREVENTION ASSEMBLIES SHALL HAVE APPROVED SHUTOFF VALVES.
3. BACKFLOW PREVENTION ASSEMBLIES SHALL BE INSTALLED IN A MANNER SO TESTING AND REPAIRS CAN BE PERFORMED. CLEARANCES OF A MINIMUM OF 12" ON ALL NON-TESTING SIDES, 36" ON TESTING SIDE FROM OBJECTS INCLUDING BUT NOT LIMITED TO SHRUBBERY, ELECTRIC TRANSFORMERS, AND PHONE AND CABLE PEDESTALS. ASSEMBLIES SHALL BE INSTALLED AT A HEIGHT OF 12" MINIMUM FROM GROUND ELEVATION.
4. BACKFLOW PREVENTION ASSEMBLIES SHALL NOT HAVE ANY TYPE OF ELECTRIC CONTROL VALVE INSTALLED BETWEEN THE MAIN WATER SUPPLY LINE AND THE BACKFLOW PREVENTION ASSEMBLY.
5. BACKFLOW PREVENTION ASSEMBLIES SHALL BE INSTALLED IN A HORIZONTAL POSITION, UNLESS WRITTEN APPROVAL IS OBTAINED FROM THE DISTRICT FOR VERTICAL INSTALLATION.
6. THERE SHALL NOT BE ANY BYPASS IN PLUMBING SYSTEM INSTALLED AROUND BACKFLOW PREVENTION ASSEMBLIES.
7. BACKFLOW PREVENTION ASSEMBLIES SHALL BE INSTALLED WITH TEST COCKS AND 1/4 INCH FLARE FITTINGS FOR TESTING.
8. BACKFLOW PREVENTION ASSEMBLIES FOR IRRIGATION SYSTEMS SHALL BE INSTALLED AT A DISTANCE NO GREATER THAN 5' FROM MUD WATER METER PERPENDICULAR TO RIGHT OF WAY OR ANYWHERE HORIZONTALLY ALONG SUCH LINE BETWEEN THE PROPERTY LINES AS SHOWN IN DETAIL.
9. WHEN INSTALLING AN IRRIGATION SYSTEM ON A POTABLE WATER LINE CONNECTION, A TEE MUST BE INSTALLED AFTER THE METER WITH AN ISOLATION VALVE PRIOR TO THE BACKFLOW PREVENTION ASSEMBLY TO SEPARATE THE IRRIGATION SYSTEM FROM THE DOMESTIC SUPPLY TO THE HOUSE.

BACKFLOW PREVENTER.DWG / Friday, October 2, 2020 10:35:06 AM

<b>BACKFLOW PREVENTER REQUIREMENTS FOR IRRIGATION SYSTEMS</b>	
<b>MILCROFTON UTILITY DISTRICT STANDARD DETAIL NO. 16</b>	
ISSUE DATE :	01/22/2020
DRAWN BY :	CG
REVISION DATE :	09/23/2020
CHECKED BY :	JE





## Exhibit C



10/20/2020

Dear Water Customer:

In keeping requirements of our state approved Cross Connection Control Program, periodic inspections are performed at a customer's facility to identify backflow hazards and to confirm compliance with the program. During a cross connection inspection at your facility, a hazard was identified that will require a reduced pressure backflow preventer to be installed on your water line to protect our system from potential cross contamination. This is a major violation of the Safe Drinking Water Act and our Cross-Connection Control Policy.

You must immediately install a reduced pressure backflow assembly on your system in compliance with Milcrofton Utility District's Cross-Connection Control Manual. MUD will verify compliance with the program and the need for enforcement after **30 days from the above date of this letter**. Please contact us or have your contractor contact us with any questions so that we can clarify and approve the size, location, and orientation of the backflow device. The detail for the backflow device is on the home page of our website, [www.milcrofton.com](http://www.milcrofton.com), or under the water service tab on our website too.

It is you and your contractor's responsibility to have installed the backflow assembly in compliance with Milcrofton's regulations. Failure to comply with the Cross-Connection Control Policy and Manual will result in the disconnection of your water services. If you have any questions, please contact Vicki at [vicki@milcrofton.com](mailto:vicki@milcrofton.com) or by phone at (615) 794-5947 ext. 17. If you need more in-depth information about the Federal and State requirements for backflow prevention you may also call the Tennessee Department of Environment and Conservation at (615) 687-7000. We appreciate your efforts to ensure the safety and water quality of the potable water supply.

Sincerely,  
MILCROFTON UTILITY DISTRICT

A handwritten signature in cursive script that reads "Vicki".

Vicki  
Cross Connection Control Coordinator

**Exhibit D**

**See attached.**

**From:** mike@milcrofton.com  
**Subject:** RE: 1036 Cumberland Valley Drive -- Ladd Park -- Backflow Preventer  
**Date:** October 20, 2020 at 8:26 AM  
**To:** Kevin Alonso kalonso@outlook.com  
**Cc:** scott.speedy@franklin.tn.gov, ken.moore@franklin.tn.gov, Jessica Hargrove jessica.hargrove@ghertner.com, Blake Shelton blakesheltonlawncare@yahoo.com, Rep.Glen.Casada@capitol.tn.gov, Sen.Jack.Johnson@capitol.tn.gov, Kevin Davis kevin@milcrofton.com

---

Mr. Alonso,

My name is Mike Jones and I am the General Manager of Milcrofton Utility District. Milcrofton is a governmental entity under the State of Tennessee. If you have any questions regarding the safety of the public water system please call the Tennessee Department of Environment and Conservation (TDEC) office of Drinking Water at (615) 687-7031 to inquire further about Cross Connections.

It is Milcrofton's water system that you are connected to and are making a cross connection by adding an irrigation system. It is the sole responsibility of you the homeowner and especially your irrigation system contractor to inquire about the current requirements of installing a backflow prevention device with your water provider. There should be further State regulations on these contractors. They don't have to have a license for installing backflow devices yet they have to be tested annually. They also are required by our policy to provide a backflow test at start up. Neither you nor the contractor have provided that initial backflow test. The public safety of the entire water system rest on that backflow device working properly. Just because it's new out of the box doesn't mean it functions correctly. It's State law to test it annually but no state requirement for the initial test or the contractor to be licensed. Regardless of the current State law, Milcrofton requires an initial test, but when we don't know there's a new system installed we don't typically catch them until the next year when we are conducting tests and run across them in system.

We need the initial backflow test in our office immediately. If you can not provide that backflow test we will send a technician out to perform that test this Friday the 20th of October. If Kevin Davis, my operations supervisor, told your contractor the device needs to be installed up here and they failed to do so then that's their choice if they want to come back out and move it at their expense for you. We sent out notification letters because your device wasn't installed in the correct spot. We also sent irrigation system installers in Middle TN letters informing them of the change. We may not have sent every small contractor out there a letter but again it's your and the contractors responsibility to check with the water system provider for their current requirements. It's on multiple locations on our website including at the top of our landing page. If someone comes into the office and signs up for service their handed a copy of the requirements. There's no record on the notes of your customer file of you or Blake Shelton calling in about the backflow requirements before installing the irrigation system.

We're not the only ones in Tennessee with these backflow requirements. First Knox Utility has over 16,000 backflow devices and they require them to be installed directly five feet behind the water meter. Milcrofton's board amended the backflow device installation rule last month to allow the backflow device to be within five feet behind the water meter anywhere between the property lines to allow flexibility when installing the backflow device. Bedford County Water also requires the backflow device behind the water meter. We've required the backflow device behind the water meter in commercial applications for years. Last year alone inside a gated community we had our employee that is wearing a neon yellow vest, driving a truck with Milcrofton written on multiple sides of the vehicle, and clothing with our logo have a shot gun pointed at their head. A few months before that he had a pistol put in his back asking what he was doing in the homeowner's bushes.

Milcrofton has no business wondering around in the bushes of homes searching for backflow devices to ensure the safety of the public water supply. We are also concerned about the safety of our employees. Milcrofton's service stops at the water meter box and from that point on it's your water service line. Therefore the backflow device needs to be within five feet of that water meter box.

Thank you for your email and I hope this further explanation clarifies our requirements. If you feel we have not clearly explained our requirements then you may reach out to the board of Milcrofton before reporting us to the Utility Management Review Board at the State of Tennessee. Please note you have 30 days from the mailed notification to have your backflow device moved or we will disconnect your water service. Also by this Thursday at 4:00 pm we need the initial backflow device test in our office. If we don't have that in our possession by the end of business on Thursday we will send our technician out to test the device regardless of the current location to ensure it's working properly to ensure the safety of all those we serve.

Thanks,

Mike Jones  
 General Manager

O: (615) 716-2260  
 F: (615) 791-9872

-----Original Message-----

**From:** Kevin Alonso <kalonso@outlook.com>  
**Sent:** Monday, October 19, 2020 18:13  
**To:** inspector@milcrofton.com  
**Cc:** mike@milcrofton.com; scott.speedy@franklin.tn.gov; ken.moore@franklin.tn.gov; Jessica Hargrove <jessica.hargrove@ghertner.com>; Blake Shelton <blakesheltonlawncare@yahoo.com>; Rep.Glen.Casada@capitol.tn.gov

Jessica.Hargrove@groffnet.com, Blake.Chenon@starkeshermanhamre.com, Top.Chen.Casada@capitol.tn.gov,  
 Sen.Jack.Johnson@capitol.tn.gov  
 Subject: 1036 Cumberland Valley Drive -- Ladd Park -- Backflow Preventer

Kevin,

Per your visit to my home today, you indicated that my newly installed irrigation system is not in compliance with Milcrofton rules because the backflow preventer is set against my house and not five feet back from the water meter per this policy (<https://nam05.safelinks.protection.outlook.com/?url=http%3A%2F%2Fwww.milcrofton.com%2Fwp-content%2Fuploads%2FBackflow-Preventer.pdf&data=04%7C01%7C%7C01ed8cfa504c936af208d874fbc8f6%7C84df9e7fe9f640afb435aaaaaaaaaaaa%7C1%7C0%7C637387972036718546%7CUnknown%7CTWFpbGZsb3d8eyJWJjoiMC4wLjAwMDAilCJQljoiv2luMzliLjB7Ti6k1haWwiLCJXVCi6Mn0%3D%7C1000&data=OvXKBwOfetVOjxMx6oCEPqgmnbj7%2FRABv9g5WPZA%3D&reserved=0>). As best I can tell, Milcrofton did not give notice to customers of this new rule other than on its website. I certainly was not aware of it, nor were others in my community. I can find no record of any public notice of the proposed rule so that the public could comment. You told me that contractors were given notice of the rule, but the contractors are not the one's liable for non-compliance; the homeowner is. I have not received written notice of this non-compliance, but apparently other homeowners have, and you are threatening to disconnect their water services over it.

This is regulation run amuck.

The only justification for this rule that you could give me was the safety of your workers. They don't want to appear to be breaking into a home by being under a window, for example. I'm sympathetic to concerns about worker safety and don't want anyone put in harms way just doing their job. However, this new rule is unreasonable, and as best as I can determine, Milcrofton is the only water district in the area imposing this new requirement. If this is a safety issue, it should apply to all Milcrofton customers equally. Otherwise, this seems to be more about convenience because you have not remedied the safety hazard with the vast majority of Milcrofton customers. The customer who was frightened by your presence under their window will still be frightened the next time you are under their window because this policy doesn't affect them. It would seem Milcrofton has another tool at its disposal to quiet any safety concerns—knock on the resident's door and announce your presence.

Furthermore, no other utility requires this. My cable and internet provider installed its box on the side of my house, not in the middle of my yard. My gas valve is on the other side of my house against the wall, not in the middle of my yard. My electric meter is also on the side of my house, not in the middle of my yard. My water meter is below ground in the middle of my yard, but it does not impede the use or enjoyment of my property or endanger the safety of people on my property or the property itself.

Regardless of where on the 5-foot line across my property this thing should go, it will either be a safety hazard or impede the use and enjoyment of my lawn. My children will not be able to run freely on the lawn due to this obstruction. If a guest on my property accidentally tripped on it, I would be liable for any injury that person might sustain. This will limit my ability to easily mow my lawn. If I were to put it next to my driveway, as you also suggested, there is a greater likelihood that it will be hit by a vehicle. By requiring this to be positioned in the usable space of a homeowner's yard, you are drastically increasing the likelihood that damage to the water lines will result. I could take your advice and cover it with a faux rock, which would have to be over a foot tall and a few feet wide, but Franklin is one of the most beautiful towns in this state. Does Milcrofton really expect residents to place a large plastic rock in their yards? That's not really the aesthetic Franklin wants.

I am also concerned with the fact that, by your own admission, you stopped by my house on the day our system was being installed and discussed the placement of the backflow preventer with my contractor. My understanding is that you and the contractor disagreed, yet you made no effort to bring this matter to my attention. You did not ring my doorbell or knock on my door. You did not call the district and ask them for my number to call. Due to COVID-19, I work from home. I was here the entire time, but I was not aware of your presence. I could have made a decision regarding this matter. You also did not order the contractor to stop work. Instead, you waited a week to return to my home, after my lawn has been repaired and my beds mulched, to tell me that I have to destroy my yard once again.

I am copying Alderman Speedy and Mayor Moore so that they are aware of this issue affecting Franklin citizens. Because Milcrofton Utility District was created pursuant to state law, I am also copying Representative Casada and Senator Johnson so that they are aware of Milcrofton's activities.

Sincerely,

Kevin Alonso, Esq.  
 615-584-2944

## Exhibit E



# Milcrofton UTILITY DISTRICT

## CONGRATULATIONS!

Your Reduced Pressure Backflow Preventer device **PASSED** its operational test today. You will be charged \$45.00 for this test on your next month's water bill. No further action is required until next year. Questions: call Vicki at (615) 794-5947 extension 17 or email at [vicki@milcrofton.com](mailto:vicki@milcrofton.com)

Exhibit F



6333 Arno Rd Franklin, TN 37064-7902  
Phone: 615-794-5947

Office Hours  
Monday - Friday  
7:30 a.m. - 4:00 p.m.

Customer Name & Service Addr	Account Number & Class	Due Date	Code	
[REDACTED]	[REDACTED]	01/01/2020	Y	
Service	Previous Read	Present Read	Usage	Charge
PREVIOUS BALANC				\$0.00
CUSTOMER MONTHLY CHAR				\$2.13
WATER 11/27/19 - 12/1/19	7710	7920	210	\$1.31
SALES TAX				\$0.34
				<b>\$3.78</b>

Board meets every 4th Wednesday at 9:00 a.m. at the  
MUD IS AN EQUAL OPPORTUNITY PROVIDER AND  
EMPLOYER

**Billing Status Codes**  
Y = Active G = Gone F = Final Bill

Payment must be in our office by 4:00 PM on the 1st to  
avoid a late fee. [www.microfton.com](http://www.microfton.com) Pay by Phone: 615-203-0427

In order to have uninterrupted service your payment must be  
received  
by the 10th of the month.  
If you have a question about your bill, please contact the  
District office  
on or before the 1st of the month. If the amount of the bill is

*Please Detach And Return Bottom Portion With Payment.*

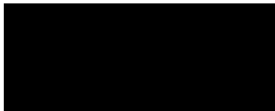


6333 Arno Road  
Franklin, TN 37064-7902  
Phone: 615-794-5947  
Return Service Requested

Account No.	[REDACTED]
Service Address	[REDACTED]
Class	
Billing Date	12/12/2019
Net Bill	<b>\$3.78</b>
Gross Bill After 01/01/2020	\$4.12
Amount Paid	<b>\$ BANKDRAFT DO NOT PAY</b>

Make checks payable to:

MILCROFTON UTILITY DISTRICT  
6333 Arno Road  
FRANKLIN TN 37064-7902





6333 Arno Rd Franklin, TN 37064-7902  
Phone: 615-794-5947

Office Hours  
Monday - Friday  
7:30 a.m. - 4:00 p.m.

Customer Name & Service Addr		Account Number & Class		Due Date	Code
[REDACTED]		[REDACTED]		02/01/2020	Y
Service	Previous Read	Present Read	Usage	Charge	
PREVIOUS BALANC					\$0.00
CUSTOMER MONTHLY CHAR					\$16.00
WATER 12/1/19 - 1/1/20	7920	10075	2155		\$13.44
SALES TAX					\$2.87
					<b>\$32.31</b>

Board meets every 4th Wednesday at 9:00 a.m. at the  
MUD IS AN EQUAL OPPORTUNITY PROVIDER AND  
EMPLOYER

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Payment must be in our office by 4:00 PM on the 1st to  
avoid a www.milcrofton.com Pay by Phone: 615-203-0427

In order to have uninterrupted service your payment must be  
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Please Detach And Return Bottom Portion With Payment.



6333 Arno Road  
Franklin, TN 37064-7902  
Phone: 615-794-5947  
Return Service Requested

Account No.	[REDACTED]
Service Address	[REDACTED]
Class	
Billing Date	01/14/2020
Net Bill	<b>\$32.31</b>
Gross Bill After 02/01/2020	\$35.25
Amount Paid	\$ <b>BANKDRAFT DO NOT PAY</b>

Make checks payable to:

MILCROFTON UTILITY DISTRICT  
6333 Arno Road  
FRANKLIN TN 37064-7902





6333 Arno Rd Franklin, TN 37064-7902  
Phone: 615-794-5947

Office Hours  
Monday - Friday  
7:30 a.m. - 4:00 p.m.

Customer Name & Service Addr		Account Number & Class		Due Date	Code
[REDACTED]		[REDACTED]		03/01/2020	Y
Service	Previous Read	Present Read	Usage	Charge	
PREVIOUS BALANC					\$0.00
CUSTOMER MONTHLY CHAR					\$16.00
WATER 1/1/20 - 2/1/20	10075	12294	2220		\$13.85
SALES TAX					\$2.91
					<b>\$32.76</b>

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District office  
on or before the 1st of the month. If the amount of the bill is

Please Detach And Return Bottom Portion With Payment.



6333 Arno Road  
Franklin, TN 37064-7902  
Phone: 615-794-5947  
Return Service Requested

Account No.	[REDACTED]
Service Address	[REDACTED]
Class	
Billing Date	02/12/2020
Net Bill	<b>\$32.76</b>
Gross Bill After 03/01/2020	\$35.75
Amount Paid	\$ <b>BANKDRAFT DO NOT PAY</b>

Make checks payable to:

MILCROFTON UTILITY DISTRICT  
6333 Arno Road  
FRANKLIN TN 37064-7902







6333 Arno Rd Franklin, TN 37064-7902  
Phone: 615-794-5947

Office Hours  
Monday - Friday  
7:30 a.m. - 4:00 p.m.

Customer Name & Service Addr		Account Number & Class		Due Date	Code
[REDACTED]		[REDACTED]		04/01/2020	Y
Service	Previous Read	Present Read	Usage	Charge	
PREVIOUS BALANC					\$0.00
CUSTOMER MONTHLY CHAR					\$16.00
WATER 2/1/20 - 3/1/20	12294	14692	2398		\$14.96
SALES TAX					\$3.02
					<b>\$33.98</b>

Board meets every 4th Wednesday at 9:00 a.m. at the District Office.  
MUD IS AN EQUAL OPPORTUNITY PROVIDER AND EMPLOYER

**Billing Status Codes**  
Y = Active G = Gone F = Final Bill

Payment must be in our office by 4:00 PM on the 1st to avoid a late fee.  
www.milcrofton.com Pay by Phone: 615-203-0427

In order to have uninterrupted service your payment must be received by the 10th of the month.  
If you have a question about your bill, please contact the District office on or before the 1st of the month. If the amount of the bill is

Please Detach And Return Bottom Portion With Payment.



6333 Arno Road  
Franklin, TN 37064-7902  
Phone: 615-794-5947  
Return Service Requested

Account No.	[REDACTED]
Service Address	[REDACTED]
Class	
Billing Date	03/12/2020
Net Bill	<b>\$33.98</b>
Gross Bill After 04/01/2020	\$37.08
Amount Paid	\$ <b>BANKDRAFT DO NOT PAY</b>

Make checks payable to:

MILCROFTON UTILITY DISTRICT  
6333 Arno Road  
FRANKLIN TN 37064-7902





6333 Arno Rd Franklin, TN 37064-7902  
Phone: 615-794-5947

Office Hours  
Monday - Friday  
7:30 a.m. - 4:00 p.m.

Customer Name & Service Addr		Account Number & Class		Due Date	Code
[REDACTED]		[REDACTED]		05/01/2020	Y
Service	Previous Read	Present Read	Usage	Charge	
PREVIOUS BALANC					\$0.00
CUSTOMER MONTHLY CHAR					\$16.00
WATER 3/1/20 - 4/1/20	14692	17880	3188		\$19.89
SALES TAX					\$3.50
					<b>\$39.39</b>

Board meets every 4th Wednesday at 9:00 a.m. at the  
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EMPLOYER

**Billing Status Codes**  
Y = Active G = Gone F = Final Bill

Payment must be in our office by 4:00 PM on the 1st to  
www.milcrofton.com Pay by Phone: 615-203-0427

In order to have uninterrupted service your payment must be  
received  
by the 10th of the month.  
If you have a question about your bill, please contact the  
District office  
on or before the 1st of the month. If the amount of the bill is

Our 2019 Water Quality Report is now ready for review at  
www.milcrofton.com/wp-content/uploads/CCR-2019.pdf.  
If you do not have  
access to a computer you may stop by our office to pick  
up a copy or call us to  
mail you one if you would like.

Please Detach And Return Bottom Portion With Payment.

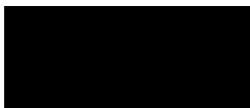


6333 Arno Road  
Franklin, TN 37064-7902  
Phone: 615-794-5947  
Return Service Requested

Account No.	[REDACTED]
Service Address	[REDACTED]
Class	
Billing Date	04/14/2020
Net Bill	<b>\$39.39</b>
Gross Bill After 05/01/2020	\$42.98
Amount Paid	\$ <b>BANKDRAFT DO NOT PAY</b>

Make checks payable to:

MILCROFTON UTILITY DISTRICT  
6333 Arno Road  
FRANKLIN TN 37064-7902





6333 Arno Rd Franklin, TN 37064-7902  
Phone: 615-794-5947

Office Hours  
Monday - Friday  
7:30 a.m. - 4:00 p.m.

Customer Name & Service Addr	Account Number & Class	Due Date	Code	
[REDACTED]	[REDACTED]	06/01/2020	Y	
Service	Previous Read	Present Read	Usage	Charge
PREVIOUS BALANC				\$0.00
CUSTOMER MONTHLY CHAR				\$16.00
WATER 4/1/20 - 5/1/20	17880	21279	3399	\$21.21
SALES TAX				\$3.63
				<b>\$40.84</b>

Board meets every 4th Wednesday at 9:00 a.m. at the  
MUD IS AN EQUAL OPPORTUNITY PROVIDER AND  
EMPLOYER

**Billing Status Codes**  
Y = Active G = Gone F = Final Bill

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avoid a late charge. [www.milcrofton.com](http://www.milcrofton.com) Pay by Phone: 615-203-0427

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[www.milcrofton.com/wp-content/uploads/CCR-2019.pdf](http://www.milcrofton.com/wp-content/uploads/CCR-2019.pdf).  
If you do not have  
access to a computer you may stop by our office to pick  
up a copy or call us to  
mail you one if you would like.

Please Detach And Return Bottom Portion With Payment.

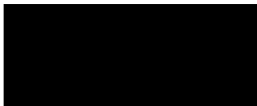


6333 Arno Road  
Franklin, TN 37064-7902  
Phone: 615-794-5947  
Return Service Requested

Account No.	[REDACTED]
Service Address	[REDACTED]
Class	
Billing Date	05/12/2020
Net Bill	<b>\$40.84</b>
Gross Bill After 06/01/2020	\$44.56
Amount Paid	\$ <b>BANKDRAFT DO NOT PAY</b>

Make checks payable to:

MILCROFTON UTILITY DISTRICT  
6333 Arno Road  
FRANKLIN TN 37064-7902





6333 Arno Rd Franklin, TN 37064-7902  
Phone: 615-794-5947

Office Hours  
Monday - Friday  
7:30 a.m. - 4:00 p.m.

Customer Name & Service Address		Account Number & Class		Due Date	Code
[REDACTED]		[REDACTED]		07/01/2020	Y
Service	Previous Read	Present Read	Usage	Charge	
PREVIOUS BALANC					\$0.00
CUSTOMER MONTHLY CHAR					\$16.00
WATER 5/1/20 - 6/1/20	21279	26462	5183		\$32.34
SALES TAX					\$4.71
					<b>\$53.05</b>

Board meets every 4th Wednesday at 9:00 a.m. at the  
MUD IS AN EQUAL OPPORTUNITY PROVIDER AND  
EMPLOYER

**Billing Status Codes**  
Y = Active G = Gone F = Final Bill

Payment must be in our office by 4:00 PM on the 1st to  
avoid a late fee. [www.milcrofton.com](http://www.milcrofton.com) Pay by Phone: 615-203-0427

In order to have uninterrupted service your payment must be  
received  
by the 10th of the month.  
If you have a question about your bill, please contact the  
District office  
on or before the 1st of the month. If the amount of the bill is

Our 2019 Water Quality Report is now ready for review at  
[www.milcrofton.com/wp-content/uploads/CCR-2019.pdf](http://www.milcrofton.com/wp-content/uploads/CCR-2019.pdf).  
If you do not have  
access to a computer you may stop by our office to pick  
up a copy or call us to  
mail you one if you would like.

Please Detach And Return Bottom Portion With Payment.

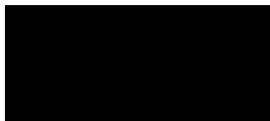


6333 Arno Road  
Franklin, TN 37064-7902  
Phone: 615-794-5947  
Return Service Requested

Account No.	[REDACTED]
Service Address	[REDACTED]
Class	
Billing Date	06/12/2020
Net Bill	<b>\$53.05</b>
Gross Bill After 07/01/2020	\$57.88
Amount Paid	\$ <b>BANKDRAFT DO NOT PAY</b>

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6333 Arno Road  
FRANKLIN TN 37064-7902





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Phone: 615-794-5947

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7:30 a.m. - 4:00 p.m.

Customer Name & Service Addr		Account Number & Class		Due Date	Code
[REDACTED]		[REDACTED]		08/01/2020	Y
Service	Previous Read	Present Read	Usage	Charge	
PREVIOUS BALANC					\$0.00
CUSTOMER MONTHLY CHAR					\$16.00
WATER 6/1/20 - 7/1/20	26462	30733	4271		\$26.65
SALES TAX					\$4.16
					<b>\$46.81</b>

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by the 10th of the month.  
If you have a question about your bill, please contact the  
District office  
on or before the 1st of the month. If the amount of the bill is

If an irrigation system was installed at your property in  
2020, please email the office at vicki@milcrofton.com so  
that your account record can be updated. Thank you!

Please Detach And Return Bottom Portion With Payment.

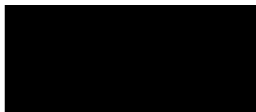


6333 Arno Road  
Franklin, TN 37064-7902  
Phone: 615-794-5947  
Return Service Requested

Account No.	[REDACTED]
Service Address	[REDACTED]
Class	
Billing Date	07/14/2020
Net Bill	<b>\$46.81</b>
Gross Bill After 08/01/2020	\$51.08
Amount Paid	\$ <b>BANKDRAFT DO NOT PAY</b>

Make checks payable to:

MILCROFTON UTILITY DISTRICT  
6333 Arno Road  
FRANKLIN TN 37064-7902





6333 Arno Rd Franklin, TN 37064-7902  
Phone: 615-794-5947

Office Hours  
Monday - Friday  
7:30 a.m. - 4:00 p.m.

Customer Name & Service Addr		Account Number & Class		Due Date	Code
[REDACTED]		[REDACTED]		09/01/2020	Y
Service	Previous Read	Present Read	Usage	Charge	
PREVIOUS BALANC					\$0.00
CUSTOMER MONTHLY CHAR					\$16.00
WATER 7/1/20 - 8/1/20	30733	33192	2459		\$15.35
SALES TAX					\$3.06
					<b>\$34.41</b>

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If an irrigation system was installed at your property in  
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Please Detach And Return Bottom Portion With Payment.

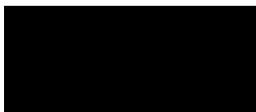


6333 Arno Road  
Franklin, TN 37064-7902  
Phone: 615-794-5947  
Return Service Requested

Account No.	[REDACTED]
Service Address	[REDACTED]
Class	
Billing Date	08/12/2020
Net Bill	<b>\$34.41</b>
Gross Bill After 09/01/2020	\$37.55
Amount Paid	\$ <b>BANKDRAFT DO NOT PAY</b>

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6333 Arno Road  
FRANKLIN TN 37064-7902





6333 Arno Rd Franklin, TN 37064-7902  
Phone: 615-794-5947

Office Hours  
Monday - Friday  
7:30 a.m. - 4:00 p.m.

Customer Name & Service Addr		Account Number & Class		Due Date	Code
[REDACTED]		[REDACTED]		10/01/2020	Y
Service	Previous Read	Present Read	Usage	Charge	
PREVIOUS BALANC					\$0.00
CUSTOMER MONTHLY CHAR					\$16.00
WATER 8/1/20 - 9/1/20	33192	35928	2736		\$17.07
SALES TAX					\$3.22
					<b>\$36.29</b>

Board meets every 4th Wednesday at 9:00 a.m. at the  
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www.milcrofton.com Pay by Phone: 615-203-0427

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If an irrigation system was installed at your property in 2020, please email the office at vicki@milcrofton.com so that your account record can be updated. Thank you!

Please Detach And Return Bottom Portion With Payment.



6333 Arno Road  
Franklin, TN 37064-7902  
Phone: 615-794-5947  
Return Service Requested

Account No.	[REDACTED]
Service Address	[REDACTED]
Class	
Billing Date	09/14/2020
Net Bill	<b>\$36.29</b>
Gross Bill After 10/01/2020	\$39.60
Amount Paid	\$ <b>BANKDRAFT DO NOT PAY</b>

Make checks payable to:

MILCROFTON UTILITY DISTRICT  
6333 Arno Road  
FRANKLIN TN 37064-7902





6333 Arno Rd Franklin, TN 37064-7902  
Phone: 615-794-5947

Office Hours  
Monday - Friday  
7:30 a.m. - 4:00 p.m.

Customer Name & Service Addr		Account Number & Class		Due Date	Code
[REDACTED]		[REDACTED]		11/01/2020	Y
Service	Previous Read	Present Read	Usage	Charge	
PREVIOUS BALANC					\$0.00
CUSTOMER MONTHLY CHAR					\$16.00
WATER 9/1/20 - 10/1/20	35928	40640	4713		\$29.41
SALES TAX					\$4.43
					<b>\$49.84</b>

Board meets every 4th Wednesday at 9:00 a.m. at the district office.  
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Please Detach And Return Bottom Portion With Payment.



6333 Arno Road  
Franklin, TN 37064-7902  
Phone: 615-794-5947  
Return Service Requested

Account No.	[REDACTED]
Service Address	[REDACTED]
Class	
Billing Date	10/13/2020
Net Bill	<b>\$49.84</b>
Gross Bill After 11/01/2020	\$54.38
Amount Paid	<b>\$ BANKDRAFT DO NOT PAY</b>

Make checks payable to:

MILCROFTON UTILITY DISTRICT  
6333 Arno Road  
FRANKLIN TN 37064-7902

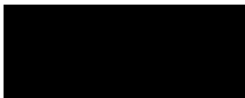
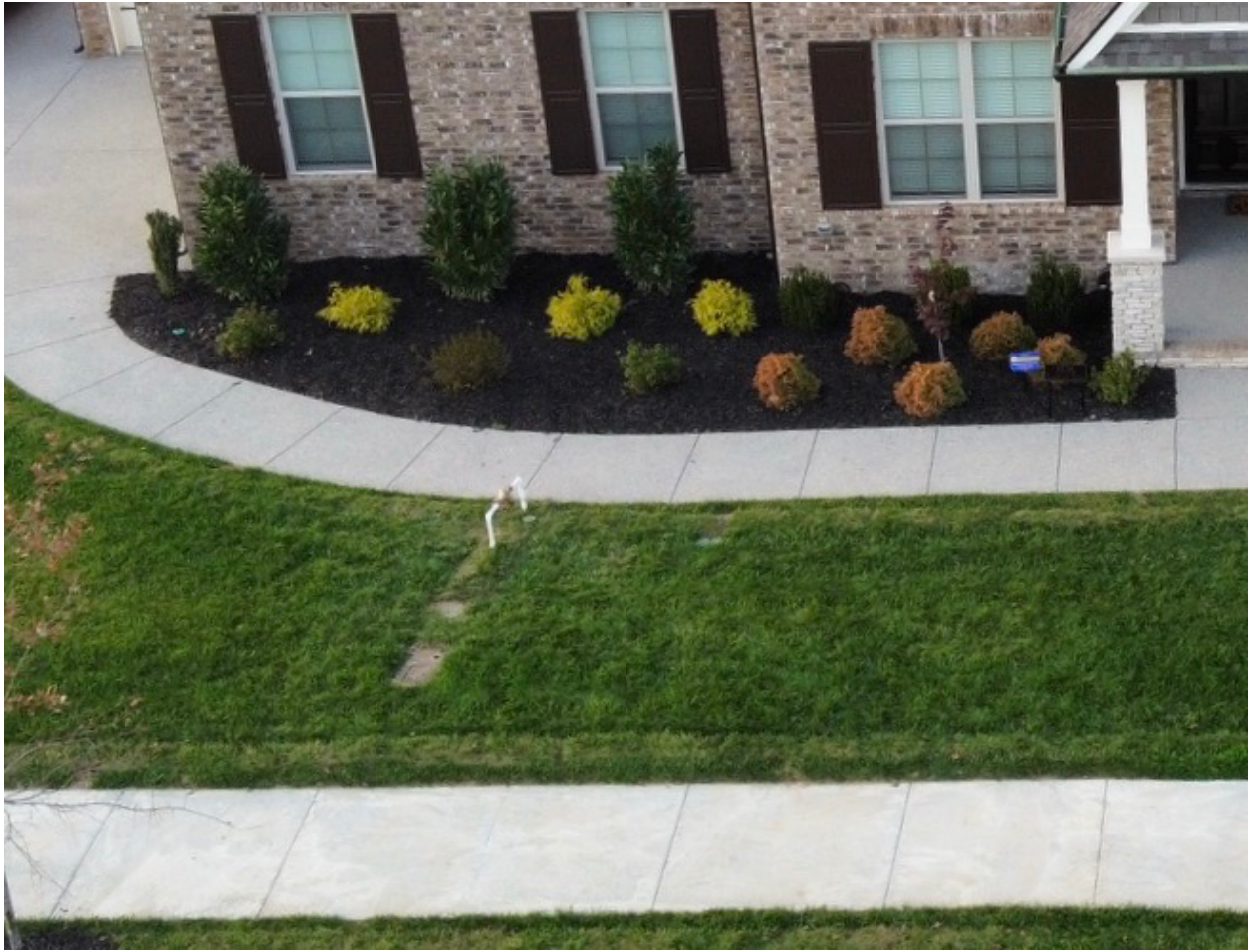




Exhibit G



Exhibit H



Kevin Alonso <[kalonso@outlook.com](mailto:kalonso@outlook.com)>

2/9/2021 10:25 AM

## Fwd: 1036 Cumberland Valley Drive -- Ladd Park -- Backflow Preventer

To Attorney Craig Brent <[craigbrentattorney@comcast.net](mailto:craigbrentattorney@comcast.net)>

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**From:** Kevin Alonso <[kalonso@outlook.com](mailto:kalonso@outlook.com)>  
**Sent:** Thursday, November 5, 2020 3:22:31 PM  
**To:** [mike@milcrofton.com](mailto:mike@milcrofton.com) <[mike@milcrofton.com](mailto:mike@milcrofton.com)>  
**Cc:** [Jessica Hargrove](mailto:jessica.hargrove@laddhoa.com); [board@laddhoa.com](mailto:board@laddhoa.com) <[board@laddhoa.com](mailto:board@laddhoa.com)>  
**Subject:** Re: 1036 Cumberland Valley Drive -- Ladd Park -- Backflow Preventer

Mike,

Can you please share with me Milcrofton's written policies and procedures, if any, with respect to:

- (1) notice of board meetings and opportunity for public input
- (2) rulemaking, including notice to customers of proposed rules and opportunity for comment

Thank you,

Kevin

---

**From:** [mike@milcrofton.com](mailto:mike@milcrofton.com) <[mike@milcrofton.com](mailto:mike@milcrofton.com)>  
**Sent:** Tuesday, October 20, 2020 8:39 AM  
**To:** 'Kevin Alonso'  
**Cc:** [scott.speedy@franklintn.gov](mailto:scott.speedy@franklintn.gov); [ken.moore@franklintn.gov](mailto:ken.moore@franklintn.gov); 'Jessica Hargrove'; 'Blake Shelton';  
[Rep.Glen.Casada@capitol.tn.gov](mailto:Rep.Glen.Casada@capitol.tn.gov); [Sen.Jack.Johnson@capitol.tn.gov](mailto:Sen.Jack.Johnson@capitol.tn.gov); 'Kevin Davis'  
**Subject:** RE: 1036 Cumberland Valley Drive -- Ladd Park -- Backflow Preventer

Mr. Alonso,

You either have been mailed a 30 day notice if you yet don't have it or you are on a list to be sent a 30 day notice to have your backflow device moved. We need that initial backflow device test results in our office by this Thursday at 4:00 pm or the we'll come out and test the backflow device on Friday.

The new state approved Cross Connection Policy was adopted on January 22<sup>nd</sup> and the amended rule to allow the backflow device to be installed within 5 feet behind the meter box but anywhere between the property lines was adopted on September 23, 2020.

Thanks, Mike Jones

---

**From:** Kevin Alonso <[kalonso@outlook.com](mailto:kalonso@outlook.com)>  
**Sent:** Tuesday, October 20, 2020 08:32  
**To:** [mike@milcrofton.com](mailto:mike@milcrofton.com)  
**Cc:** [scott.speedy@franklintn.gov](mailto:scott.speedy@franklintn.gov); [ken.moore@franklintn.gov](mailto:ken.moore@franklintn.gov); [Jessica Hargrove](mailto:jessica.hargrove@laddhoa.com); [Blake Shelton](mailto:blake.shelton@laddhoa.com);

[Rep.Glen.Casada@capitol.tn.gov](mailto:Rep.Glen.Casada@capitol.tn.gov); [Sen.Jack.Johnson@capitol.tn.gov](mailto:Sen.Jack.Johnson@capitol.tn.gov); [Kevin Davis](mailto:Kevin.Davis@milcrofton.com)

**Subject:** Re: 1036 Cumberland Valley Drive -- Ladd Park -- Backflow Preventer

Mike,

To clarify, I have not received any written notice.

Are you saying the 5 ft rule was just adopted on September 23rd?

Kevin

---

**From:** [mike@milcrofton.com](mailto:mike@milcrofton.com) <[mike@milcrofton.com](mailto:mike@milcrofton.com)>

**Sent:** Tuesday, October 20, 2020 8:26:40 AM

**To:** 'Kevin Alonso' <[kalonso@outlook.com](mailto:kalonso@outlook.com)>

**Cc:** [scott.speedy@franklin.tn.gov](mailto:scott.speedy@franklin.tn.gov) <[scott.speedy@franklin.tn.gov](mailto:scott.speedy@franklin.tn.gov)>; [ken.moore@franklin.tn.gov](mailto:ken.moore@franklin.tn.gov) <[ken.moore@franklin.tn.gov](mailto:ken.moore@franklin.tn.gov)>; 'Jessica Hargrove' <[jessica.hargrove@ghertner.com](mailto:jessica.hargrove@ghertner.com)>; 'Blake Shelton' <[blakesheltonlawncare@yahoo.com](mailto:blakesheltonlawncare@yahoo.com)>; [Rep.Glen.Casada@capitol.tn.gov](mailto:Rep.Glen.Casada@capitol.tn.gov) <[Rep.Glen.Casada@capitol.tn.gov](mailto:Rep.Glen.Casada@capitol.tn.gov)>; [Sen.Jack.Johnson@capitol.tn.gov](mailto:Sen.Jack.Johnson@capitol.tn.gov) <[Sen.Jack.Johnson@capitol.tn.gov](mailto:Sen.Jack.Johnson@capitol.tn.gov)>; 'Kevin Davis' <[kevin@milcrofton.com](mailto:kevin@milcrofton.com)>

**Subject:** RE: 1036 Cumberland Valley Drive -- Ladd Park -- Backflow Preventer

Mr. Alonso,

My name is Mike Jones and I am the General Manager of Milcrofton Utility District. Milcrofton is a governmental entity under the State of Tennessee. If you have any questions regarding the safety of the public water system please call the Tennessee Department of Environment and Conservation (TDEC) office of Drinking Water at (615) 687-7031 to inquire further about Cross Connections.

It is Milcrofton's water system that you are connected to and are making a cross connection by adding an irrigation system. It is the sole responsibility of you the homeowner and especially your irrigation system contractor to inquire about the current requirements of installing a backflow prevention device with your water provider. There should be further State regulations on these contractors. They don't have to have a license for installing backflow devices yet they have to be tested annually. They also are required by our policy to provide a backflow test at start up. Neither you nor the contractor have provided that initial backflow test. The public safety of the entire water system rest on that backflow device working properly. Just because it's new out of the box doesn't mean it functions correctly. It's State law to test it annually but no state requirement for the initial test or the contractor to be licensed. Regardless of the current State law, Milcrofton requires an initial test, but when we don't know there's a new system installed we don't typically catch them until the next year when we are conducting tests and run across them in system.

We need the initial backflow test in our office immediately. If you can not provide that backflow test we will send a technician out to perform that test this Friday the 20th of October. If Kevin Davis, my operations supervisor, told your contractor the device needs to be installed up here and they failed to do so then that's their choice if they want to come back out and move it at their expense for you. We sent out notification letters because your device wasn't installed in the correct spot. We also sent irrigation system installers in Middle TN letters informing them of the change. We may not have sent every small contractor out there a letter but again it's your and the contractors responsibility to check with the water system provider for their current requirements. It's on multiple locations on our website including at the top of our landing page. If someone comes into the office and signs up for service their handed a copy of the requirements. There's no record on the notes of your customer file of you or Blake Shelton calling in about the backflow requirements before

installing the irrigation system.

We're not the only ones in Tennessee with these backflow requirements. First Knox Utility has over 16,000 backflow devices and they require them to be installed directly five feet behind the water meter. Milcrofton's board amended the backflow device installation rule last month to allow the backflow device to be within five feet behind the water meter anywhere between the property lines to allow flexibility when installing the backflow device. Bedford County Water also requires the backflow device behind the water meter. We've required the backflow device behind the water meter in commercial applications for years. Last year alone inside a gated community we had our employee that is wearing a neon yellow vest, driving a truck with Milcrofton written on multiple sides of the vehicle, and clothing with our logo have a shot gun pointed at their head. A few months before that he had a pistol put in his back asking what he was doing in the homeowner's bushes.

Milcrofton has no business wondering around in the bushes of homes searching for backflow devices to ensure the safety of the public water supply. We are also concerned about the safety of our employees. Milcrofton's service stops at the water meter box and from that point on it's your water service line. Therefore the backflow device needs to be within five feet of that water meter box.

Thank you for your email and I hope this further explanation clarifies our requirements. If you feel we have not clearly explained our requirements then you may reach out to the board of Milcrofton before reporting us to the Utility Management Review Board at the State of Tennessee. Please note you have 30 days from the mailed notification to have your backflow device moved or we will disconnect your water service. Also by this Thursday at 4:00 pm we need the initial backflow device test in our office. If we don't have that in our possession by the end of business on Thursday we will send our technician out to test the device regardless of the current location to ensure it's working properly to ensure the safety of all those we serve.

Thanks,

Mike Jones  
General Manager

O: (615) 716-2260  
F: (615) 791-9872

-----Original Message-----

From: Kevin Alonso <[kalonso@outlook.com](mailto:kalonso@outlook.com)>

Sent: Monday, October 19, 2020 18:13

To: [inspector@milcrofton.com](mailto:inspector@milcrofton.com)

Cc: [mike@milcrofton.com](mailto:mike@milcrofton.com); [scott.speedy@franklintn.gov](mailto:scott.speedy@franklintn.gov); [ken.moore@franklintn.gov](mailto:ken.moore@franklintn.gov); Jessica Hargrove <[jessica.hargrove@ghertner.com](mailto:jessica.hargrove@ghertner.com)>; Blake Shelton <[blakesheltonlawncare@yahoo.com](mailto:blakesheltonlawncare@yahoo.com)>;

[Rep.Glen.Casada@capitol.tn.gov](mailto:Rep.Glen.Casada@capitol.tn.gov); [Sen.Jack.Johnson@capitol.tn.gov](mailto:Sen.Jack.Johnson@capitol.tn.gov)

Subject: 1036 Cumberland Valley Drive -- Ladd Park -- Backflow Preventer

Kevin,

Per your visit to my home today, you indicated that my newly installed irrigation system is not in compliance with Milcrofton rules because the backflow preventer is set against my house and not five feet back from the

water meter per this policy (<https://nam05.safelinks.protection.outlook.com/?url=http%3A%2F%2Fwww.milcrofton.com%2Fwp-content%2Fuploads%2FBackflow-Preventer.pdf&data=04%7C01%7C%7C01ed8cfafb504c936af208d874fbc8f6%7C84df9e7fe9f640afb435aaaaaaa%7C1%7C0%7C637387972036718546%7CUnknown%7CTWFpbGZsb3d8eyJWljiMC4wLjAwMDAilLCjQljoiv2luMzliLCJBTi6lk1haWwiLCJXVC16Mn0%3D%7C1000&reserved=0>). As best I can tell, Milcrofton did not give notice to customers of this new rule other than on its website. I certainly was not aware of it, nor were others in my community. I can find no record of any public notice of the proposed rule so that the public could comment. You told me that contractors were given notice of the rule, but the contractors are not the one's liable for non-compliance; the homeowner is. I have not received written notice of this non-compliance, but apparently other homeowners have, and you are threatening to disconnect their water services over it.

This is regulation run amuck.

The only justification for this rule that you could give me was the safety of your workers. They don't want to appear to be breaking into a home by being under a window, for example. I'm sympathetic to concerns about worker safety and don't want anyone put in harms way just doing their job. However, this new rule is unreasonable, and as best as I can determine, Milcrofton is the only water district in the area imposing this new requirement. If this is a safety issue, it should apply to all Milcrofton customers equally. Otherwise, this seems to be more about convenience because you have not remedied the safety hazard with the vast majority of Milcrofton customers. The customer who was frightened by your presence under their window will still be frightened the next time you are under their window because this policy doesn't affect them. It would seem Milcrofton has another tool at its disposal to quiet any safety concerns—knock on the resident's door and announce your presence.

Furthermore, no other utility requires this. My cable and internet provider installed its box on the side of my house, not in the middle of my yard. My gas valve is on the other side of my house against the wall, not in the middle of my yard. My electric meter is also on the side of my house, not in the middle of my yard. My water meter is below ground in the middle of my yard, but it does not impede the use or enjoyment of my property or endanger the safety of people on my property or the property itself.

Regardless of where on the 5-foot line across my property this thing should go, it will either be a safety hazard or impede the use and enjoyment of my lawn. My children will not be able to run freely on the lawn due to this obstruction. If a guest on my property accidentally tripped on it, I would be liable for any injury that person might sustain. This will limit my ability to easily mow my lawn. If I were to put it next to my driveway, as you also suggested, there is a greater likelihood that it will be hit by a vehicle. By requiring this to be positioned in the usable space of a homeowner's yard, you are drastically increasing the likelihood that damage to the water lines will result. I could take your advice and cover it with a faux rock, which would have to be over a foot tall and a few feet wide, but Franklin is one of the most beautiful towns in this state. Does Milcrofton really expect residents to place a large plastic rock in their yards? That's not really the aesthetic Franklin wants.

I am also concerned with the fact that, by your own admission, you stopped by my house on the day our system was being installed and discussed the placement of the backflow preventer with my contractor. My understanding is that you and the contractor disagreed, yet you made no effort to bring this matter to my attention. You did not ring my doorbell or knock on my door. You did not call the district and ask them for my number to call. Due to COVID-19, I work from home. I was here the entire time, but I was not aware of your presence. I could have made a decision regarding this matter. You also did not order the contractor to stop work. Instead, you waited a week to return to my home, after my lawn has been repaired and my beds mulched, to tell me that I have to destroy my yard once again.

I am copying Alderman Speedy and Mayor Moore so that they are aware of this issue affecting Franklin citizens. Because Milcrofton Utility District was created pursuant to state law, I am also copying Representative Casada and Senator Johnson so that they are aware of Milcrofton's activities.

Sincerely,

Kevin Alonso, Esq.  
615-584-2944

Kevin Alonso &lt;kalonso@outlook.com&gt;

2/9/2021 10:25 AM

## Fwd: 1036 Cumberland Valley Drive -- Ladd Park -- Backflow Preventer

To Attorney Craig Brent &lt;craigbrentattorney@comcast.net&gt;

---

**From:** Michael Wall <michaelw@bsjfirm.com>  
**Sent:** Monday, November 9, 2020 1:56:17 PM  
**To:** kalonso@outlook.com  
**Cc:** Mike Jones (mike@milcrofton.com) <mike@milcrofton.com>  
**Subject:** FW: 1036 Cumberland Valley Drive -- Ladd Park -- Backflow Preventer

Mr. Alonso,

I am the attorney for Milcrofton. Milcrofton does not have written rules or policies concerning the matters you raised. Milcrofton holds its regular board meeting on the fourth Wednesday of each month. In accordance with the Tennessee Open Meetings Act, members of the public may observe the meeting but do not have a right to participate. Although it is not required, Milcrofton often does put customers on the agenda and give them a chance to speak. A customer spoke at the September 2020 board meeting about the location requirement for backflow prevention devices, which caused the board to loosen that requirement and make it more flexible. At that point, the board decided not to have additional speakers from the public on the same issue.

Mike Jones, the general manager, alluded to Milcrofton's complaint procedure in an earlier email. I am copying Rule 20 from the Rules and Regulations below for your information.

Thank you.

### **20. CUSTOMER COMPLAINT POLICY**

- 20.1 Complaints concerning the availability of service, the quality of service performed, the amount of a bill, and all other complaints may initially be made to the DISTRICT's General Manager or any regular clerical employee in the DISTRICT's office.
- 20.2 Regular clerical employees and the Office Manager are authorized to make adjustments to bills provided the clerical employee or Office Manager can ascertain that a bill is erroneous because of a bookkeeping or accounting error.
- 20.3 When a clerical employee receives a complaint which the clerical employee either cannot resolve or is not authorized to resolve, the clerical employee shall prepare a written summary of the substance of the complaint. This written summary shall be submitted to the Office Manager for resolution. When the Office Manager either



cannot resolve or is not authorized to resolve the complaint, the complaint shall be referred to the General Manager.

20.4 The General Manager is authorized to resolve all other complaints.

20.5 The General Manager or the clerical employee acting on his behalf shall notify the complaining party of the disposition of his or her complaint by telephone, letter, or otherwise within ten (10) days after receipt of the complaint, excluding Saturdays, Sundays, holidays, and any periods during which the General Manager may be unable to act upon the complaint because of his absence from the county. If the complaint has not previously been reduced to writing, the General Manager shall make and file a written notation of the substance of the complaint and of his action and decision on the complaint.

20.6 If the complaining party desires review by the Board, the General Manager shall schedule the complaint for consideration at the Board's next meeting and shall inform the complaining party of the time and place of the meeting.

20.7 If the complaining party appears at a Board meeting to seek review of a complaint, the Board may defer hearing the complaint until a subsequent meeting when the Board determines additional information is needed to resolve the complaint which information can be obtained from the DISTRICT's records.

20.8 When a customer or complaining party shall appear at a Board meeting to make a complaint without previously submitting the complaint to the General Manager, the Board may require the complaining party to present the complaint to the General Manager or other DISTRICT employee in accordance with the procedures set forth in this rule so the Board may be fully informed of the facts before resolving the complaint. In its discretion, however, the Board may hear and consider such a complaint.

Michael J. Wall



The Freedom Center, 223 Rosa L. Parks Avenue, Suite 200 | Nashville, TN 37203 | (615) 254-8801

---

**From:** Kevin Alonso <[kalonso@outlook.com](mailto:kalonso@outlook.com)>

**Sent:** Thursday, November 5, 2020 15:23

**To:** [mike@milcrofton.com](mailto:mike@milcrofton.com)

**Cc:** 'Jessica Hargrove' <[jessica.hargrove@ghertner.com](mailto:jessica.hargrove@ghertner.com)>; [board@laddhoa.com](mailto:board@laddhoa.com)

**Subject:** Re: 1036 Cumberland Valley Drive -- Ladd Park -- Backflow Preventer

Mike,

Can you please share with me Milcrofton's written policies and procedures, if any, with respect to:

- (1) notice of board meetings and opportunity for public input
- (2) rulemaking, including notice to customers of proposed rules and opportunity for comment

Thank you,

Kevin

---

**From:** [mike@milcrofton.com](mailto:mike@milcrofton.com) <[mike@milcrofton.com](mailto:mike@milcrofton.com)>  
**Sent:** Tuesday, October 20, 2020 8:39 AM  
**To:** 'Kevin Alonso'  
**Cc:** [scott.speedy@franklintn.gov](mailto:scott.speedy@franklintn.gov); [ken.moore@franklintn.gov](mailto:ken.moore@franklintn.gov); 'Jessica Hargrove'; 'Blake Shelton';  
[Rep.Glen.Casada@capitol.tn.gov](mailto:Rep.Glen.Casada@capitol.tn.gov); [Sen.Jack.Johnson@capitol.tn.gov](mailto:Sen.Jack.Johnson@capitol.tn.gov); 'Kevin Davis'  
**Subject:** RE: 1036 Cumberland Valley Drive -- Ladd Park -- Backflow Preventer

Mr. Alonso,

You either have been mailed a 30 day notice if you yet don't have it or you are on a list to be sent a 30 day notice to have your backflow device moved. We need that initial backflow device test results in our office by this Thursday at 4:00 pm or the we'll come out and test the backflow device on Friday.

The new state approved Cross Connection Policy was adopted on January 22<sup>nd</sup> and the amended rule to allow the backflow device to be installed within 5 feet behind the meter box but anywhere between the property lines was adopted on September 23, 2020.

Thanks, Mike Jones

---

**From:** Kevin Alonso <[kalonso@outlook.com](mailto:kalonso@outlook.com)>  
**Sent:** Tuesday, October 20, 2020 08:32  
**To:** [mike@milcrofton.com](mailto:mike@milcrofton.com)  
**Cc:** [scott.speedy@franklintn.gov](mailto:scott.speedy@franklintn.gov); [ken.moore@franklintn.gov](mailto:ken.moore@franklintn.gov); 'Jessica Hargrove' <[jessica.hargrove@ghertner.com](mailto:jessica.hargrove@ghertner.com)>; 'Blake Shelton' <[blakesheltonlawncare@yahoo.com](mailto:blakesheltonlawncare@yahoo.com)>;  
[Rep.Glen.Casada@capitol.tn.gov](mailto:Rep.Glen.Casada@capitol.tn.gov); [Sen.Jack.Johnson@capitol.tn.gov](mailto:Sen.Jack.Johnson@capitol.tn.gov); 'Kevin Davis' <[kevin@milcrofton.com](mailto:kevin@milcrofton.com)>  
**Subject:** Re: 1036 Cumberland Valley Drive -- Ladd Park -- Backflow Preventer

Mike,

To clarify, I have not received any written notice.

Are you saying the 5 ft rule was just adopted on September 23rd?

Kevin

**From:** [mike@milcrofton.com](mailto:mike@milcrofton.com) <[mike@milcrofton.com](mailto:mike@milcrofton.com)>  
**Sent:** Tuesday, October 20, 2020 8:26:40 AM  
**To:** 'Kevin Alonso' <[kalonso@outlook.com](mailto:kalonso@outlook.com)>  
**Cc:** [scott.speedy@franklintn.gov](mailto:scott.speedy@franklintn.gov) <[scott.speedy@franklintn.gov](mailto:scott.speedy@franklintn.gov)>; [ken.moore@franklintn.gov](mailto:ken.moore@franklintn.gov) <[ken.moore@franklintn.gov](mailto:ken.moore@franklintn.gov)>; 'Jessica Hargrove' <[jessica.hargrove@ghertner.com](mailto:jessica.hargrove@ghertner.com)>; 'Blake Shelton' <[blakesheltonlawncare@yahoo.com](mailto:blakesheltonlawncare@yahoo.com)>; [Rep.Glen.Casada@capitol.tn.gov](mailto:Rep.Glen.Casada@capitol.tn.gov) <[Rep.Glen.Casada@capitol.tn.gov](mailto:Rep.Glen.Casada@capitol.tn.gov)>; [Sen.Jack.Johnson@capitol.tn.gov](mailto:Sen.Jack.Johnson@capitol.tn.gov) <[Sen.Jack.Johnson@capitol.tn.gov](mailto:Sen.Jack.Johnson@capitol.tn.gov)>; 'Kevin Davis' <[kevin@milcrofton.com](mailto:kevin@milcrofton.com)>  
**Subject:** RE: 1036 Cumberland Valley Drive -- Ladd Park -- Backflow Preventer

Mr. Alonso,

My name is Mike Jones and I am the General Manager of Milcrofton Utility District. Milcrofton is a governmental entity under the State of Tennessee. If you have any questions regarding the safety of the public water system please call the Tennessee Department of Environment and Conservation (TDEC) office of Drinking Water at (615) 687-7031 to inquire further about Cross Connections.

It is Milcrofton's water system that you are connected to and are making a cross connection by adding an irrigation system. It is the sole responsibility of you the homeowner and especially your irrigation system contractor to inquire about the current requirements of installing a backflow prevention device with your water provider. There should be further State regulations on these contractors. They don't have to have a license for installing backflow devices yet they have to be tested annually. They also are required by our policy to provide a backflow test at start up. Neither you nor the contractor have provided that initial backflow test. The public safety of the entire water system rest on that backflow device working properly. Just because it's new out of the box doesn't mean it functions correctly. It's State law to test it annually but no state requirement for the initial test or the contractor to be licensed. Regardless of the current State law, Milcrofton requires an initial test, but when we don't know there's a new system installed we don't typically catch them until the next year when we are conducting tests and run across them in system.

We need the initial backflow test in our office immediately. If you can not provide that backflow test we will send a technician out to perform that test this Friday the 20th of October. If Kevin Davis, my operations supervisor, told your contractor the device needs to be installed up here and they failed to do so then that's their choice if they want to come back out and move it at their expense for you. We sent out notification letters because your device wasn't installed in the correct spot. We also sent irrigation system installers in Middle TN letters informing them of the change. We may not have sent every small contractor out there a letter but again it's your and the contractors responsibility to check with the water system provider for their current requirements. It's on multiple locations on our website including at the top of our landing page. If someone comes into the office and signs up for service their handed a copy of the requirements. There's no record on the notes of your customer file of you or Blake Shelton calling in about the backflow requirements before installing the irrigation system.

We're not the only ones in Tennessee with these backflow requirements. First Knox Utility has over 16,000 backflow devices and they require them to be installed directly five feet behind the water meter. Milcrofton's board amended the backflow device installation rule last month to allow the backflow device to be within five feet behind the water meter anywhere between the property lines to allow flexibility when installing the backflow device. Bedford County Water also requires the backflow device behind the water meter. We've required the backflow device behind the water meter in commercial applications for years. Last year alone inside a gated community we had our employee that is wearing a neon yellow vest, driving a truck with Milcrofton written on multiple sides of the vehicle, and clothing with our logo have a shot gun pointed at their head. A few months before that he had a pistol put in his back asking what he was doing in the homeowner's bushes.

Milcrofton has no business wondering around in the bushes of homes searching for backflow devices to ensure the safety of the public water supply. We are also concerned about the safety of our employees. Milcrofton's service stops at the water meter box and from that point on it's your water service line. Therefore the backflow device needs to be within five feet of that water meter box.

Thank you for your email and I hope this further explanation clarifies our requirements. If you feel we have not clearly explained our requirements then you may reach out to the board of Milcrofton before reporting us to the Utility Management Review Board at the State of Tennessee. Please note you have 30 days from the mailed notification to have your backflow device moved or we will disconnect your water service. Also by this Thursday at 4:00 pm we need the initial backflow device test in our office. If we don't have that in our possession by the end of business on Thursday we will send our technician out to test the device regardless of the current location to ensure it's working properly to ensure the safety of all those we serve.

Thanks,

Mike Jones  
General Manager

O: (615) 716-2260  
F: (615) 791-9872

-----Original Message-----

From: Kevin Alonso <[kalonso@outlook.com](mailto:kalonso@outlook.com)>

Sent: Monday, October 19, 2020 18:13

To: [inspector@milcrofton.com](mailto:inspector@milcrofton.com)

Cc: [mike@milcrofton.com](mailto:mike@milcrofton.com); [scott.speedy@franklintn.gov](mailto:scott.speedy@franklintn.gov); [ken.moore@franklintn.gov](mailto:ken.moore@franklintn.gov); Jessica Hargrove <[jessica.hargrove@ghertner.com](mailto:jessica.hargrove@ghertner.com)>; Blake Shelton <[blakesheltonlawncare@yahoo.com](mailto:blakesheltonlawncare@yahoo.com)>;

[Rep.Glen.Casada@capitol.tn.gov](mailto:Rep.Glen.Casada@capitol.tn.gov); [Sen.Jack.Johnson@capitol.tn.gov](mailto:Sen.Jack.Johnson@capitol.tn.gov)

Subject: 1036 Cumberland Valley Drive -- Ladd Park -- Backflow Preventer

Kevin,

Per your visit to my home today, you indicated that my newly installed irrigation system is not in compliance with Milcrofton rules because the backflow preventer is set against my house and not five feet back from the water meter per this policy (<https://nam05.safelinks.protection.outlook.com/?url=http%3A%2F%2Fwww.milcrofton.com%2Fwp-content%2Fuploads%2FBackflow-Preventer.pdf&data=04%7C01%7C%7C01ed8cfafb504c936af208d874fbc8f6%7C84df9e7fe9f640afb435aaaaaaa%7C1%7C0%7C637387972036718546%7CUnknown%7CTWFpbGZsb3d8eyJWljoiMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6Ikk1haWwiLCJXVCi6Mn0%3D%7C1000&reserved=0>). As best I can tell, Milcrofton did not give notice to customers of this new rule other than on its website. I certainly was not aware of it, nor were others in my community. I can find no record of any public notice of the proposed rule so that the public could comment. You told me that contractors were given notice of the rule, but the contractors are not the one's liable for non-compliance; the homeowner is. I have not received written notice of this non-compliance, but apparently other homeowners have, and you are threatening to disconnect their water services over it.

This is regulation run amuck.

The only justification for this rule that you could give me was the safety of your workers. They don't want to appear to be breaking into a home by being under a window, for example. I'm sympathetic to concerns about worker safety and don't want anyone put in harms way just doing their job. However, this new rule is unreasonable, and as best as I can determine, Milcrofton is the only water district in the area imposing this new requirement. If this is a safety issue, it should apply to all Milcrofton customers equally. Otherwise, this seems to be more about convenience because you have not remedied the safety hazard with the vast majority of Milcrofton customers. The customer who was frightened by your presence under their window will still be frightened the next time you are under their window because this policy doesn't affect them. It would seem Milcrofton has another tool at its disposal to quiet any safety concerns—knock on the resident's door and announce your presence.

Furthermore, no other utility requires this. My cable and internet provider installed its box on the side of my house, not in the middle of my yard. My gas valve is on the other side of my house against the wall, not in the middle of my yard. My electric meter is also on the side of my house, not in the middle of my yard. My water meter is below ground in the middle of my yard, but it does not impede the use or enjoyment of my property or endanger the safety of people on my property or the property itself.

Regardless of where on the 5-foot line across my property this thing should go, it will either be a safety hazard or impede the use and enjoyment of my lawn. My children will not be able to run freely on the lawn due to this obstruction. If a guest on my property accidentally tripped on it, I would be liable for any injury that person might sustain. This will limit my ability to easily mow my lawn. If I were to put it next to my driveway, as you also suggested, there is a greater likelihood that it will be hit by a vehicle. By requiring this to be positioned in the usable space of a homeowner's yard, you are drastically increasing the likelihood that damage to the water lines will result. I could take your advice and cover it with a faux rock, which would have to be over a foot tall and a few feet wide, but Franklin is one fo the most beautiful towns in this state. Does Milcrofton really expect residents to place a large plastic rock in their yards? That's not really the aesthetic Franklin wants.

I am also concerned with the fact that, by your own admission, you stopped by my house on the day our system was being installed and discussed the placement of the backflow preventer with my contractor. My understanding is that you and the contractor disagreed, yet you made no effort to bring this matter to my attention. You did not ring my doorbell or knock on my door. You did not call the district and ask them for my number to call. Due to COVID-19, I work from home. I was here the entire time, but I was not aware of your presence. I could have made a decision regarding this matter. You also did not order the contractor to stop work. Instead, you waited a week to return to my home, after my lawn has been repaired and my beds mulched, to tell me that I have to destroy my yard once again.

I am copying Alderman Speedy and Mayor Moore so that they are aware of this issue affecting Franklin citizens. Because Milcrofton Utility District was created pursuant to state law, I am also copying Representative Casada and Senator Johnson so that they are aware of Milcrofton's activities.

Sincerely,

Kevin Alonso, Esq.  
615-584-2944

IMPORTANT: This communication from the law firm of Branstetter, Stranch & Jennings, PLLC is covered by the Electronic Communications Privacy Act, 18 U.S.C. §§ 2510-2521, and contains information that may be confidential and privileged. Be advised that if you are not the intended recipient(s),

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---

- image003.jpg (4 KB)

2/9/2021 10:20 AM

Jessica Hargrove &lt;jessica.hargrove@ghertner.com&gt;

**Fwd: The Highlands at Ladd Park HOA**

To Attorney Craig Brent &lt;craigbrentattorney@comcast.net&gt;

  
Jessica Hargrove  
Onsite Manager  
Direct Number: 615-807-154950 Vantage Way, Suite 100  
Nashville, TN 37228  
Tel: 615-277-0358  
Fax: 615-523-2395*Excellence in Community Association Management Since 1968*

*We have launched our new owner portal and payment location beginning July 1, 2020. Go to [www.ghertner.com/owner](http://www.ghertner.com/owner) to learn more, login with your account or Sign Up. For the fastest service, please submit all requests (including pool key, maintenance and architectural) and make payments through the owner portal. You may also email your requests directly to [hsr@ghertner.com](mailto:hsr@ghertner.com).*

----- Forwarded message -----

From: **Jessica Hargrove** <jessica.hargrove@ghertner.com>  
Date: Mon, Oct 26, 2020 at 12:46 PM  
Subject: Fwd: The Highlands at Ladd Park HOA  
To: <[mike@milcrofton.com](mailto:mike@milcrofton.com)>

Good Afternoon Mike

You and I spoke earlier this week with regards to the 30 day notice for disconnection that the homeowners within The Highlands at Ladd Park have received with regards to the cross-connection devices they have recently installed for their irrigation systems.

When we spoke you explained that we would not be granted time on the agenda for Wednesday's Milcrofton Utility Distribution's Board of Directors meeting, but rather you would read a letter to them should we compose one.

Please see the attached signed letter from The Highlands at Ladd Park's Board of Directors. We appreciate you taking the time to present this letter and its contents to your director's at Wednesday's meeting.

We look forward to their response.

**Jessica Hargrove**

**Onsite Manager**  
**Direct Number: 615-807-1549**



50 Vantage Way, Suite 100  
Nashville, TN 37228  
**Tel:** 615-277-0358  
**Fax:** 615-523-2395



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----- Forwarded message -----

From: **Jessica Hargrove** <[jessica.hargrove@ghertner.com](mailto:jessica.hargrove@ghertner.com)>

Date: Thu, Oct 22, 2020 at 2:24 PM

Subject: The Highlands at Ladd Park HOA

To: <[mike@milcrofton.com](mailto:mike@milcrofton.com)>, board <[board@laddhoa.com](mailto:board@laddhoa.com)>, Patrick Landrum <[patrick.landrum@ghertner.com](mailto:patrick.landrum@ghertner.com)>

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**Jessica Hargrove**  
**Onsite Manager**  
**Direct Number: 615-807-1549**



50 Vantage Way, Suite 100  
Nashville, TN 37228  
**Tel:** 615-277-0358



Fax: 615-523-2395



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- 
- Milcrofton Board Letter 10.22.2020.pdf (262 KB)

The Highlands at Ladd Park HOA  
802 Beamon Drive  
Franklin, TN 37064  
October 22, 2020

Milcrofton Utility District  
6333 Arno Road  
Franklin, TN 37064

Dear Milcrofton Utility District Board of Directors

The Highlands at Ladd Park HOA Board of Directors has recently become aware of the 30 notice that has been sent to homeowners who have recently installed irrigation systems and backflows for said irrigation systems. Upon research on your company's home page, the notice of the cross-connection policy from 01/22/2020 and the amendment from 09/23/2020 was discovered. We would like to address this concern on behalf of the homeowners within The Highlands at Ladd Park.

With the amendment to move the backflow device within 5 foot of the meter brings serious impediments to the homeowners of the community. Please review the photo below of a nondescript property in The Highlands at Ladd Park.



In this photo, the center point is the actual meter, and the subsequent three circles are all 5-foot markers from the meter. With the September 23<sup>rd</sup>, 2020 amendment which would require a 5-foot placement of the backflow device, this homeowner has now lost all functionality of their front yard. The placement within 5 foot creates the following:

- Safety Concerns: trip hazards therefore creating legal liability concerns for this homeowner. Additionally, adding possible undue vandalism to this property by someone forcibly removing the backflow device from the front yard.
- Loss of functionality: walking, running, and/or playing in the front yard is no longer an option with a backflow present in these locations thus rendering the lawn unusable. Mowing the lawn is now an obstacle
- Aesthetically unappealing: with the placement of the backflow in the front of this home makes the home aesthetically unappealing, therefore a significant drop in the property value.

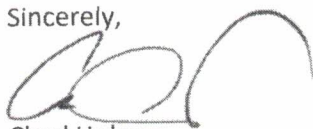
The Highlands at Ladd Park and Williamson County have a high standard when it comes to the aesthetics and curb appeal of its neighborhood. Faux rocks, artificial greenery, and other items of the like for concealment do not go with increasing property values.

We do acknowledge your desire to keep your inspectors and employees safe. The Highlands at Ladd Park HOA would like to offer some compromises to this rule.

- The homeowners within The Highlands at Ladd Park would perform their own annual inspection and provide the certified test results to Milcrofton Utility District within the allotted window.
- If Milcrofton Utility Distribution would rather perform their own inspection of the back-flow devices, the company can call or email the homeowners and schedule an appointment.
- Allow The Highlands at Ladd Park to install the backflow devices on one dedicated side of the home (not in the back yard).

The Highlands at Ladd Park HOA respectfully request to be placed on the November agenda to discuss the options for our association. We look forward to hearing from you soon.

Sincerely,



Chad Holmes

Board of Directors President  
The Highlands at Ladd Park HOA

Craig H Brent Atty <craigbrentattorney@comcast.net>

2/9/2021 3:00 PM

## Fwd: The Highlands at Ladd Park HOA

To Office <craigbrentattorney@comcast.net>

---

Sent from my iPhone

Begin forwarded message:

----- Forwarded message -----

From: **Jessica Hargrove** <jessica.hargrove@ghertner.com>  
Date: Mon, Oct 26, 2020 at 12:46 PM  
Subject: Fwd: The Highlands at Ladd Park HOA  
To: <mike@milcrofton.com>

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We look forward to their response.

**Jessica Hargrove**  
**Onsite Manager**  
**Direct Number: 615-807-1549**



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Nashville, TN 37228  
**Tel:** 615-277-0358  
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Date: Thu, Oct 22, 2020 at 2:24 PM  
Subject: The Highlands at Ladd Park HOA  
To: <[mike@milcrofton.com](mailto:mike@milcrofton.com)>, board <[board@laddhoa.com](mailto:board@laddhoa.com)>, Patrick Landrum <[patrick.landrum@ghertner.com](mailto:patrick.landrum@ghertner.com)>

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**Jessica Hargrove**  
**Onsite Manager**  
**Direct Number: 615-807-1549**



50 Vantage Way, Suite 100  
Nashville, TN 37228  
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- 
- Milcrofton Board Letter 10.22.2020.pdf (262 KB)



**TECHNICAL SPECIFICATIONS**

**FOR**

**MILCROFTON UTILITY DISTRICT**

**M2 Group, LLC**  
P.O. BOX 848  
Franklin, TN 37065

February, 2016  
**REVISED May, 2016**  
**REVISED December, 2016**  
**REVISED March, 2017**  
**REVISED August, 2018**



A handwritten signature in black ink, appearing to read "M. Bryant".

6555 Arno Road • Franklin, Tennessee 37064  
(615) 794-5947 • Fax (615) 791-9872  
Milcrofton Utility District is an Equal Opportunity Provider and Employer

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**STANDARD DRAWINGS – (current date August, 2018 on all drawings)**

Standard Drawing No. 1 - Line Laying Conditions - In Rock or Earth  
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Standard Drawing No. 5a – Thrust Collar Details  
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Standard Drawing No. 7 – Combination Air Valve  
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Standard Drawing No. 9 - Standard Meter Setting Detail  
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Standard Drawing No. 11 - Water Line Casing Detail  
Standard Drawing No. 12 - Backflow Preventer – Indoor Installation  
Standard Drawing No. 13 - Backflow Preventer – Outdoor Installation  
Standard Drawing No. 14 - Blow Off Detail  
Standard Drawing No. 15 - Water Service Line Detail

**Revisions to Technical Specifications:**

**May, 2016** – Section 34.3, page 25 – revised part number for AY McDonald  $\frac{3}{4}$ ” yoke setter

**December, 2016** – Added Section 48, added Standard Detail 5A, updated all other Standard Drawings, revisions/updates to all sections.

**March, 2017** – Revised Section 5 – as-builts to require PDF/CAD files, revised Section 24.2.1, 24.2.4, 24.4.5, 45.2, 46.1, updated all Standard Detail drawings.

**August, 2018** – Revised Sections 32/33 – meter box changes, updated Standard Detail #9, updated notes/date on all Standard Detail drawings.

## **1. SCOPE OF THE WORK**

The following specifications are to be used for installing all water lines and services within the Milcrofton Utility District boundaries. The work to be accomplished under these Specifications consists of the furnishing of all materials, labors, excavation, and grading necessary for the construction of the water lines (including all services, meters, fittings, blow-offs, air release valves, valves, vaults, accessories, and appurtenances) in strict accordance with the Specifications and the applicable Plans. All items to be furnished shall be approved by the Engineer for the District before construction and all items installed shall be approved by the Inspector for the District before acceptance.

## **2. DEFINITIONS**

- 2.1 The term "District" shall mean the Milcrofton Utility District.
- 2.2 The term "Inspector" shall mean the official inspector of the Milcrofton Utility District.
- 2.3 The term "Engineer" shall mean the consulting engineer employed by Milcrofton Utility District.
- 2.4 The term "Developer" shall mean the entity, which has signed a contract with the District for construction of the water system, which will be transferred to the District upon completion and acceptance by the District.
- 2.5 The term "Contractor" shall mean the Contractor performing the construction of the water system for the developer.

## **3. INSPECTION**

The Contractor/Developer shall make provisions to have all work inspected by the Inspector of the Milcrofton Utility District. All lines must be inspected before backfilling and must have pressure tests and disinfection samples observed by the Inspector.

## **4. WARRANTY**

The Contractor shall be responsible for the water line for a minimum of one year after construction and/or the establishment of a maintenance bond with the District, whichever is greater.

## **5. AS-BUILTS**

The Contractor shall supply three hard copy paper sets, 1 PDF file, and 1 CAD file of complete as-builts to the Milcrofton Utility District showing exact locations and sizes of water line installation, prior to the District accepting the water lines and turning on water service.

## **6. LOCATION OF WATER LINES**

- 6.1 The approximate location of the water lines in relation to the limits of rights-of-way, pavement, etc., is shown on the Plans, but is not guaranteed. The location shown attempts to minimize the overall project with rock excavation, pavement replacement, crushed stone for traffic bound roadway, customer water services, etc., considered.

- 6.2 The final location (as constructed) may be varied by the Contractor upon approval by the Engineer and/or Inspector, provided the proposed location is approved by the Tennessee Department of Transportation, the County Highway Department, or other agency or legal entity having jurisdiction. This approval shall be at the expense of the Contractor.
- 6.3 The final location, in any event, may be varied by necessity due to construction conditions at the direction of the Engineer and/or Inspector, or due to the requirements of the Tennessee Department of Transportation, the County Highway Department, or other agency having legal jurisdiction. The construction of pipe lines in the highway, road, or street right-of-way shall not be allowed unless there is no other place to construct the line, and only then upon the written approval of the Engineer and/or District.

## **7. CLEARING AND GRUBBING**

- 7.1 The Contractor shall accomplish all clearing and/or clearing and grubbing within the limits designated on the Plans or as directed by the Inspector, or as required for the construction of the work involved, and shall satisfactorily dispose of all materials so removed. Normally, the width of the area to be cleared will be a minimum of five feet on each side of a water line or structure, or the width of the District easement.
- 7.2 The work under this Paragraph shall consist of the cutting and removal of all trees, stumps, brush, logs, trash, weeds, removal of fences, or other loose or projecting materials within the designated area. Unless otherwise specified, it also shall include the grubbing of stumps, roots, and other natural obstructions which, in the opinion of the Inspector, must be removed to allow the proper staking out and construction work and operate properly the facility upon completion of construction. Disposal shall be by approved burning or other methods satisfactory to the Inspector. Trees, which are designated to remain, shall be properly protected. When clearing is performed on private property, the Contractor will be required, at his own expense, to dispose of the material cleared by hauling away or other methods acceptable to the Inspector. Before the Contractor enters private property, the Developer must have obtained a signed easement approved by the District and the Contractor must inform the property owner of the schedule.
- 7.3 All merchantable timber shall be cut into logs of merchantable length and neatly piled as directed by the Inspector. Unless otherwise specified, merchantable timber shall remain the property of the land owner.
- 7.4 Unless grubbing is specifically not required, all bushes, hedge fences, trees, and stumps within the designated areas, except those occurring under embankments of more than 24 inches in depth, shall be grubbed up so that no root more than three inches in diameter shall be within 18 inches of the finished grade, or within six inches of the surface of any slope. All holes remaining in embankment areas after the grubbing operation, and in excavated areas less than two feet in depth, shall have the sides broken down or leveled if necessary to flatten the slopes, and refilled with acceptable material properly compacted.

## 8. STRIPPING AND TOPSOIL

Before excavation and grading is commenced for buildings, structures, or other work described hereinafter (except pipe line and manholes) or before material is removed from borrow pits, the topsoil shall be removed from the areas affected and stockpiled. When final grading is accomplished, particularly around buildings and other structures, the topsoil shall be spread evenly over the excavated areas. Rough grading shall have been carried approximately six inches below finished grade (except in solid rock, where it shall be carried 12 inches below finished grade) and brought back up to grade with topsoil as set out herein.

## 9. CONSTRUCTION METHODS

- 9.1 Excavation shall be accomplished at such places as are indicated on the Plans to the lines, grades, and elevations shown, or as directed by Inspector, and shall be made in such a manner that the requirements for the pipe lines, structures and/or the formation of embankments as shown on the Plans may be followed. (No excavation shall be started until the Inspector has approved the exact location of the proposed work.) All material encountered (of whatever nature) within the limits designated shall be removed and disposed of as directed. During the process of excavation, the grade and/or pitch shall be maintained in such condition that it will be well drained always. When directed, temporary drains and/or drainage ditches shall be installed at the Contractor's own expense to intercept or divert surface water which may affect the prosecution or condition of the work. If at any time, it is not possible to place excavated material in the proper area of the permanent construction, it shall be stockpiled in approved areas for later use.
- 9.2 Where rock, shale, clay, hard-pan, or other unsatisfactory sub-grade or foundation material is encountered, it shall be excavated to a depth of at least twelve (12") inches below sub-grade, or to such greater depth below sub-grade as the Inspector may direct. The portion so excavated shall be refilled with suitable material properly compacted.
- 9.3 Structure foundations shall be excavated to permit the placing of the full width and length of footings shown on the Plans with full horizontal beds. Rounded or undercut corners at edges of footings will not be permitted. All rock and other hard foundation material shall be freed from all loose material, cleaned, and cut to a firm surface leveled, stepped, or serrated as directed by the Inspector. All seams shall be cleaned out and filled with concrete, mortar, or grout. When masonry is to rest on an excavated surface other than rock, special care shall be taken not to disturb the bottom of the excavation, and the final removal of the foundation material to grade shall not be made until just before the masonry is placed. If the condition of the excavation for foundations and/or footings is such that concrete cannot be placed without becoming mixed with mud, special operations shall be performed to remedy the situation. The Contractor shall place sufficient sand, coarse aggregate, or a combination of such aggregates to stabilize properly the sub-grade, and then place a layer of waterproof sub-grade paper or other similar material to prevent the infiltration of mud or the entire mass of mud shall be removed entirely and replaced with suitable stable material.

## **10. SITE GRADING AND FILLS AROUND THE STRUCTURES AND FOR ACCESS ROADS**

- 10.1 All material used for backfill around and under structures or in access roads shall be of a quality acceptable to the Inspector and shall be free from large or frozen lumps, wood, leaves, grass, roots, and other organic or extraneous material. All spaces excavated and not occupied by footings, foundations, walls or other permanent work shall be refilled with earth up to the surface of the surrounding ground, unless otherwise specified, with sufficient allowance for settlement. In making the fills and terraces around and under structures, the fill shall be placed in layers not exceeding six inches in depth and shall be kept smooth as the work progresses. Each layer of the fill shall be rolled with an approved type roller and/or be compacted to 95% of the Standard Proctor Density as determined by the Method of Test for Moisture Density Relations of Soils A.S.T.M. Designation D-698 and to the satisfaction of the Inspector. When, in the opinion of the Inspector, it is not practicable to roll sections of the fill immediately adjacent to the buildings or structures, then such sections shall be thoroughly compacted by means of tamping, puddling, or both, as may be required by the Inspector. All fills shall be placed to load structures symmetrically.
- 10.2 As set out herein before, rough grading shall be held below finished grade and then the topsoil, which has been stockpiled, shall be spread evenly over the surface. The grading shall be brought to the levels shown on the Drawings or to the elevation established by the Inspectors. Final dressing shall be accomplished by handwork or machine work, or a combination of these methods, as may be necessary to produce a uniform and smooth finish to all parts of the re-grade. The surface shall be free from clods greater than two inches in diameter. Rock and/or shale excavation, which has been removed, may be placed in the fills, but it shall be thoroughly covered. Rock placed in fills shall not be closer than twelve inches from finished grade.
- 10.3 Before the water line construction can begin, the Developer's engineer/surveyor shall submit, in writing, a letter certifying that the entire width of all water line easements has been graded to the final grade and that all roads have been constructed to sub grade. The letter shall be submitted to the Milcrofton Utility District Manager or his representative a minimum of 48 hours before water line construction begins. If the District determines a water line must be adjusted to maintain the minimum and maximum cover as stated in these specifications because water line easements had not been graded to the final grade and/or roads had not been constructed to sub grade before the water line was installed, such adjustment shall be made at the Developer's expense and shall be done before the water lines and appurtenances are accepted by the Milcrofton Utility District for the development or project.

## **11. PREPARATION FOR TRENCHING**

- 11.1 The Contractor shall determine, as far as possible in advance, the location of all existing sewer, culvert, drain, water, electric and gas pipes, and other subsurface structures, and avoid disturbing them in opening his trenches. Sewer, water, and gas services, and other facilities easily damaged by machine trenching within 36 inches of the surface shall be uncovered without damage ahead of trenching machine and left intact or removed without permanent damage ahead of trenching and restored immediately after trenching machine has passed. The Contractor shall protect such existing facilities against danger or damage due to settlement of his backfill.

- 11.2 It shall be the responsibility of the Contractor to inform the Inspector and the utilities of disruption of service as soon as it is known that it has been or will be cut off.
- 11.3 When pipe line is run through wooded terrain, cutting of trees within limits of maximum trench widths, as set forth in these Specifications, will be permitted. However, cutting of additional trees on sides of trench will not be permitted. The Contractor shall obtain specific permission of the Inspector before cutting any tree larger than 4 inches in diameter.

## **12. EXCAVATION FOR PIPE LINE TRENCHES**

- 12.1 The width of the trench shall be only sufficient to permit the pipe to be laid and jointing properly done and the backfill to be placed and compacted as specified. This shall include cutting through pavement, railroad tracks, and sidewalks. In no case, shall the width of the trench at the top of the pipe be greater than the pipe bell diameter plus 18 inches (in dirt) without prior approval of the District or Engineer. Rock excavation shall have a minimum excavation width of the bell diameter of the pipe plus 36 inches (18" each side of the bell diameter). All rock excavation shall be done by an approved blasting method. Trenching machines may only be used where the water line is laid in dirt or will be encased through rock.
- 12.2 If the foundation is good firm earth, the earth shall be paired or shaped to give full support to the lower third of each pipe, and, if necessary, a layer of  $\frac{3}{4}$ " limestone, or other suitable material shall be placed for the foundation. The same means of securing a firm foundation shall be adopted in case the excavation has been made deeper than necessary.
- 12.3 If the foundation is rock, an equalizing bed of sand, fine gravel, crushed stone, or other well compacted, suitable material shall be placed upon the rock. The thickness of these beds shall not be less than six inches and the pipe shall be laid in these beds so that at least the lower third of each pipe is supported throughout its length. If crushed stone is used, it shall be size 33C as described in the Standard Specification of the Tennessee Department of Transportation.
- 12.4 All pipe shall have a minimum cover of 36 inches and a maximum of 48 inches, unless otherwise shown on Contract Drawings. Any variation there from shall be made only at the order of the District.
- 12.5 Where trenching is cut through paving which does not crumble on edges, trench edge shall be cut at least 2 inches deep with straight and neat edges, before excavation is started and care taken to preserve edge to facilitate neat paving.
- 12.6 Trenches shall be dug so that the pipe can be laid to the alignment and depth required and shall be excavated only so far in advance of pipe laying as to reveal obstructions, unless specifically directed by the inspector, no more than 400 feet of trench shall be opened ahead of the pipe laying and not more than 200 feet of open ditch shall be left behind the pipe laying. The contractor shall open the trench far enough ahead to reveal obstructions that necessitate changing the line or grade of the water line.

- 12.7 The trench shall be so braced and drained that workmen may work therein safely and efficiently. Discharge from dewatering pumps shall be conducted to natural drainage channels, drains, or sewers. Water shall not be allowed to run or stand in the trench while the pipe laying is in progress or before the joints are completely set or before the trench has been backfilled. The Contractor shall not open at any time more trench than his available pumping facilities can dewater.
- 12.8 No trench shall be left open or work stopped on trench for a considerable length of time. If such is necessary, trench shall be refilled per backfill operations.
- 12.9 All excavated material shall be piled in a manner that will not endanger the work and that will avoid obstructing sidewalks and driveways. Hydrants under pressure, valve pit covers, valve boxes, curb stop boxes, fire and police call boxes, or other utility controls shall be left unobstructed and accessible until the work is completed. Gutters shall be kept clear or other satisfactory provisions made so that street drainage and natural water courses will not be obstructed. Care shall be taken to prevent, as far as practical, water carriage of excavated materials over street surfaces. All surface material, including sod, which in the opinion of the Inspector is suitable for reuse in restoring the surface, shall be kept separate from the general excavation material as directed by the Inspector.

### **13. SHORING, SHEETING, AND BRACING OF EXCAVATIONS**

- 13.1 When unstable material is encountered or where the depth of excavation exceeds four feet, the sides of the trench or excavation shall be supported by substantial sheeting, bracing, and shoring, or the sides sloped to the angle of repose. The design and installation of all sheeting, sheet piling, bracing and shoring shall be based on computations of pressure exerted by the materials to be retained under existing conditions. Adequate and proper shoring of all excavations shall be the entire responsibility of the Contractor; however, the Engineer may require the submission of Shoring Plans, accompanied by supporting computations, for approval prior to the Contractor undertaking any portion of the work.
- 13.2 Foundations, adjacent to where the excavation is to be made below the depth of the foundation, shall be supported by shoring, bracing, or underpinning if the excavation shall remain open and the Contractor shall be held strictly responsible for any damage to said foundations.
- 13.3 Even though computations shall determine the size of the various components, no timber sheeting less than two inches in thickness will be acceptable. Timber bracing, cross bracing, or struts must measure at least six inches by six inches.
- 13.4 Solid sheeting will be required for wet or unstable material. It shall consist of continuous vertical sheet piling of timber or steel, with suitable shores and braces.
- 13.5 Trench sheeting shall not be removed until sufficient backfill has been placed to protect the pipe.
- 13.6 All sheeting, planking, timbering, bracing, and bridging, shall be placed, renewed, and maintained, if is necessary.

- 13.7 Care shall be taken to avoid excessive backfill loads on the completed pipelines. The requirements that the width of the ditch at the level of the crown of the pipe be not more than the pipe bell diameter plus 18 inches as set out in Paragraph 12.1 herein before, shall be strictly observed.

#### **14. GENERAL REQUIREMENTS FOR TRENCH EXCAVATION**

- 14.1 Unless specifically directed otherwise by the Inspector, not more than four hundred feet of trench shall be opened ahead of the pipe lying, and not more than two hundred feet of open ditch shall be left behind the pipe laying. All barricades, lanterns, watchmen, and other such signs and signals as may be necessary to warn the public of the dangers about open trenches, excavations, and other obstructions, shall be provided by and at the expense of the Contractor.
- 14.2 When so required, or when directed by the Inspector, only one-half of a street crossing or road crossing shall be excavated before placing a temporary bridge over the side of excavated for the convenience of the traveling public. All backfilled ditches shall be maintained in such a manner than they will offer no hazard to the passage of traffic. The convenience of the traveling public and the property owners abutting the improvements shall be taken into consideration. All public or private drives shall be promptly backfilled or bridged at the direction of the Inspector. Excavated materials shall be disposed of to cause the least interference and in every case the disposition of excavated materials shall be satisfactory to the Inspector. The Contractor will cut all streets or roads perpendicular to the road unless otherwise shown on the drawings.

#### **15. UNAUTHORIZED EXCAVATION**

Whenever the excavation is carried beyond or below the lines and grade given by the Engineer, the Contractor shall refill such excavated space with such material and in such a manner as will insure stability of the structure involved.

#### **16. BLASTING**

- 16.1 Blasting for excavation will be permitted only after securing the approval of the Inspector and only when proper precautions are taken for the protection of persons and property. The Inspector will fix the hours of blasting.
- 16.2 All blasting operations shall be conducted in accordance with the municipal ordinances and state laws, and all explosives shall be stored in conformity with all said ordinances and laws. No blasting shall be done within ten (10) feet of any water mains or within the District easement without permission from the Inspector. Any damage done by blasting is the responsibility of the contractor and shall be promptly and satisfactorily repaired by contractor.
- 16.3 To implement these requirements and unless otherwise required by ordinance or law, each crew shall be provided with two metal boxes with suitable locks. One of these boxes shall be for storing explosives and one for caps. The boxes shall always be kept locked except when in actual use. They shall be painted with a bright color and stenciled with the appropriate warning signs. At night, all explosives and caps shall be removed from boxes and stored in a central magazine.



- 16.4 All shots shall be covered with heavy timber or steel blasting mats to prevent flying material. Unless otherwise specified or directed, delay caps should be used to reduce earth vibrations and noise. In sparsely populated areas, the Inspector may permit the Contractor to use regular type caps and/or Primacord.

## **17. SEEDING, SODDING, AND LANDSCAPING**

- 17.1 Unless otherwise specified or shown on the Drawings, all graded areas shall be left smooth and thickly sown with a mixture of bluegrass, Italian rye, Kentucky fescue #31, and/or such other grasses as specified by the Inspector.
- 17.2 When the final grading has been completed, the entire area to be seeded shall be fertilized with ammonium nitrate at the rate of five pounds per 1000 square feet and an approved commercial fertilizer at the rate of ten pounds per 1000 square feet. The analysis of the commercial fertilizer shall be determined by soil tests. After fertilizer has been distributed, the Contractor shall disc or harrow the ground to work the fertilizer thoroughly into the soil. The seed then shall be broadcast, either by hand or by approved sowing equipment, at the rate specified. After the seed has been distributed, the Contractor then shall lightly cover the seed by use of a drag to another approved device. All seed must be certified. The seeded area then shall be covered with straw to a depth of approximately 1-1/2 inches.
- 17.3 Any necessary reseeding or repairing shall be accomplished by the contractor prior to final acceptance. If the construction work is brought to completion when, in the opinion of the Inspector, the season is not favorable for the seeding of the grounds, then the Contractor shall delay this item of the work until the proper season for such seeding as directed by the Inspector.
- 17.4 Sodding shall not be required unless specifically set out in the Detailed Specifications or shown on the Drawings. When sodding is required, it shall be so laid that no voids occur between strips. Weed roots shall be removed as the sod is laid. Sod shall be tamped or rolled immediately after it is laid, and the finished surface shall true to the grade, even and equally form at all points. Well-screened topsoil shall be lightly sprinkled over the sodded area and shall be raked to insure sealing the sod joints. The sodded areas shall be thoroughly watered.
- 17.5 Landscaping, when specified or shown on the Drawings, shall be accomplished as set out in the Detailed Specifications and shown on the Plans.

## **18. OBSTRUCTIONS**

In cases where water lines, gas lines, sanitary sewer lines, storm sewer lines, or other underground structures are encountered, they shall not be misplaced or molested unless necessary, in which case they shall be replaced in as good condition as found as quickly as possible. All such lines or underground structures damaged or molested during construction shall be replaced at the Contractor's expense, unless, in the opinion of the Inspector, such damage was caused through no fault of the Contractor.

**19. TRAFFIC CONTROL AND UTILITIES**

- 19.1 Before beginning work on any public highway or roadway the Contractor shall plan for maintaining traffic as may be required. The applicable regulations of the Tennessee Department of Transportation and/or City/County in which the project is located must be followed. In addition, the Contractor shall make proper arrangements with the authorities of the Public Transportation Systems whenever the work will interfere with established routing and/or schedules.
- 19.2 Should it become necessary to provide additional buying or support of power, lighting, or telephone facilities, the authorities of these utilities shall be consulted by the Contractor so that suitable arrangements can be made for the protection of same.
- 19.3 All costs for temporary or permanent work necessary for protection of utilities, private or public, shall be included in the contract amount to which the items of work pertain, or may be incidental thereto. In addition, the Contractor shall be responsible for any damage to the existing utilities resulting from the construction operations and shall bear the cost of all repair or replacement necessary for correction.
- 19.4 The Contractor shall furnish proper equipment which shall be available always for maintaining streets and roads upon which work is being performed. All such streets and roads shall be maintained suitable for traffic until complete and final acceptance of work.
- 19.5 When the Contractor is cutting to cross a street or a highway, the contractor shall cut half of the street at one time, lay the pipe, and complete the backfilling operation so that traffic may pass over this trench before the opening of the trench in the other half of the street or highway. At points of heavy traffic, this work shall be done at night during period of low traffic. The Engineer, and the agency or legal entity having responsibility for maintenance of the street shall approve the time of making such crossings.

**20. BACKFILLING OF TRENCHES**

- 20.1 Backfilling must be started as soon as practical after the pipe has been laid and jointed and alignment approved. Backfilling shall be conducted always in a manner to prevent damage to the pipe and the exterior protection of the pipe. Placing of the backfill about the pipe shall be done only in the presence of the Inspector after his final inspection and acceptance of the pipe in place. Should there be a deficiency of excavated materials for backfilling due to the rejection of part thereof; the Contractor shall "borrow" earth of acceptable quality as directed by the Inspector. The Contractor shall dispose of excess excavated material off site. It shall be the responsibility of the Contractor to obtain locations or permits for its disposal.
- 20.2 Backfill may consist of excavated material, if such material consists of loam, clay, sand, gravel, or other materials, which in the opinion of the Inspector are suitable for backfilling. All backfill material shall be free from cinders, ashes, refuse, vegetable or organic material, rocks or stones, or other material, which in the opinion of the Inspector, is unsuitable. All public roadways shall be backfilled with  $\frac{3}{4}$ " limestone compacted in 6" - 8" layers.

- 20.3 The backfill material shall be carefully and solidly tamped around the pipe up to the point where the pipe is thoroughly covered with at least 12 inches of material. This material may be ¾" limestone, in rock. The filling of the trench shall be carried on simultaneously on both sides of the pipe in such a manner that the complete pipe line will not be disturbed and injurious side pressures do not occur. Walking or working on the completed pipeline (except and may be necessary in tamping or backfilling) shall not be permitted until the trench has been backfilled to a height of at least one foot above the pipe.
- 20.4 In filling the remainder of the trench, the requirements of the Tennessee Department of Transportation and the County Highway Department shall be met for road crossings, but in general the backfill material free of rock may be placed into the trench without compacting and mounded, then compacted by rolling with the wheel of a grader or high lift whenever this method of backfilling may be used without inconvenience to the public, unless otherwise specified or required because of street or ramp repaving, or otherwise. Where street crossings are made, and street paving is to be replaced, the Contractor will be required to tamp all backfill as is described hereinafter.
- 20.5 Where tamping is required, the backfilling shall be done in layers not to exceed six inches, and firmly tamped into place by use of tampers or reamers.
- 20.6 Backfill material must be uniformly mounded over trench, and excess hauled away, with no rock over 2 inches in diameter. Mounded backfill shall be confined to the width of the trench and not allowed to overlap onto firm original earth, and its height shall not be more than needs for replacement of settlement of backfill. All rock over 2 inches in diameter shall be removed from streets, yards, and fields. Streets and walks shall be broomed to remove all earth and loose rock immediately following backfilling.
- 20.7 At the completion of the job, should any backfill have settled below the surrounding ground, it shall be refilled and compacted to meet the surrounding surface levels.
- 20.8 Backfilling shall not be done in freezing weather, except by permission of the Inspector, and it shall not be made where the material in the trench is already frozen.
- 20.9 In case of damage to any existing structures, repair and restoration shall be made at once and backfill shall not be replaced until this is done. In all cases, restoration and repair shall be such that the damaged structure will be in as good condition and serve its purpose as completely as before uncovering.
- 20.10 The Contractor shall repair or pay damage to any paving or structures injured by bumping into, undermining, crumbling edges, scraping off surfaces, or other careless handling of equipment. Where necessary to drive track equipment up over edge of curb, walk, or paving, edge shall be protected from chipping by proper timbering.
- 20.11 Upon completion, all surplus water line materials furnished by the Contractor and the Contractor shall remove all tools and temporary structures from the site. All dirt, rubbish, and excess earth from the excavation shall be hauled to a dump provided by the Contractor and the construction site left clean to the satisfaction of the Inspector.

- 20.12 The backfilled trench shall be finished so that its appearance is as good as or better than before construction. Across lawns, this may include sod replacement or seeding. Across fields, this may include seeding. In steep areas, sodding may be required. When seeding is necessary, the Contractor shall perform such work during the best season even if he must return to the job several months after completion.
- 20.13 Preliminary clean-ups shall be made during the progress of the job to protect the traveling public and to satisfy the private property owners and the Inspector.
- 20.14 Before final acceptance, the Contractor will be required to remove from the street, roadway, and private property all excess earth or other materials and obtain a release from the agency responsible for the road or street.

## **21. REMOVING AND REPLACING SIDEWALKS, STEPS, FENCES, ETC.**

- 21.1 Where ever sidewalks are removed or disturbed about the construction work, they shall be replaced to the original lines and grades in as good or better condition that which existed prior to the Contractor's operations.
- 21.2 After the sub-base has been brought to satisfactory grade, a 3-inch layer of  $\frac{3}{4}$ " limestone shall be spread over it and thoroughly tamped. Immediately prior to pouring the concrete, the stone shall be wetted thoroughly, or the concrete poured on layer of heavy building paper.
- 21.3 The paving shall consist of 4-1/2 inches of Class "A" concrete, leveled by accurately placed screeds and worked with a wooden float until the mortar appears at the top. After the surface has been floated thoroughly, it shall be brushed to leave markings of a uniform type like the existing walk. All joints and edges shall be finished with and edging tool. The allowance variation shall be 1/8 inch in ten feet, transversely and longitudinally.
- 21.4 Other types of sidewalks such as brick, stone, etc., shall be replaced with materials removed during the progress of the work in equally as good condition as that found before the work started.
- 21.5 Where it becomes necessary in excavating for pipe work to cut fences, remove mailboxes, signs, or culverts, there items shall be replaced after completion of the backfill. Fences shall be restored to their original condition using the same type of materials that were used in the original construction. Mailboxes, etc., shall be replaced in their original condition and location.
- 21.6 Shrubbery, lawns, flowers, whether on public or private property, will be removed ahead of construction as directed by the Inspector, or as shown on the Plans stored, and reset in such a manner as to damage the plants as little as possible.

## 22. REPLACING STREETS AND ROADWAYS

- 22.1 The Contractor shall replace all streets, alleys, driveways, and roadways which may be removed, disturbed, or damaged about his operations under this contract. He shall reconstruct it to the satisfaction of the Tennessee Department of Transportation, the County Highway Department, or other legal entity having jurisdiction. The requirements of the State, County or other legal entity having jurisdiction shall supersede the requirements listed below. The Contractor shall be responsible for adjusting all affected valve boxes so that the valve box tops match the grade of the finished asphalt surface. The re-use of materials removed in making excavations will be permitted, provided said materials are in good condition and acceptable to the Inspectors for the State, County, or other legal entity and the District.
- 22.2 Care shall be exercised to minimize damage to graveled shoulders and paved surfaces.
- 22.3 Gravel, crushed limestone, bituminous materials, or other materials used in the resurfacing of streets shall meet the current requirements of the Tennessee Department of Transportation/State Highway Department Specifications.

### 22.3.1 Traffic Bound Base Course

On all trenches where replacement of streets is required, it shall be handled in the following manner:

22.3.1.1 After the backfill has been compacted and brought up to approximate finish grade, the Contractor then shall place crushed stone when and as directed by the Inspector as a traffic-bound base course, at the proper elevation to allow for settlement but not in such a way as to prevent traffic from using it. Crushed stone shall be Size 33C, of the Standard Specification of the Tennessee Department of Transportation.

22.3.1.2 The Contractor may be required by the Inspector to maintain the traffic bound base course by adding crushed stone as specified herein before in a safe and passable condition for a period of 40 days, or until sufficient settlement has taken place in the opinion of the Inspector and the trenches are ready for final resurfacing.

### 22.3.2 Sub grade for Final Resurfacing

The traffic bound base course herein before described shall comprise the base course for all types of resurfacing. When, in the opinion of the Inspector, the trench has reached a condition of settlement satisfactory for the final resurfacing, the Contractor shall first strip the base course or backfill with crushed stone to obtain the proper sub grade elevation. The sub grade shall then be rolled with an approved type roller or tamped until thoroughly compacted. Any depression shall be filled with crushed stone and the process of rolling or tamping continued until the sub grade has a smooth and uniform surface.

### 22.3.3 Portland Cement Concrete Pavement

Where Portland Cement Concrete Pavement is to be replaced, or is required under bituminous pavement replacement, it shall conform to the existing pavement and/or the Engineer's instruction (not less than 6 inches thick) and be accomplished with Class "A" concrete.

### 22.3.4 Asphalt Concrete Pavement

22.3.4.1 Where asphalt concrete pavement is to be replaced, the sub grade shall be prepared as herein before specified. This sub grade shall comprise the base course upon which the concrete sub slab and/or the bituminous pavement shall be laid. The asphalt top coat shall be a minimum of 2" thick and the asphalt shall be 411-E.

22.3.4.2 Where no Portland Cement Concrete Sub slab is required, the sub grade or base shall be cleaned and broomed thoroughly, and a prime coat of medium tar shall be applied uniformly at the rate of approximately 0.20 to 0.25 gallons per square yard. Where Portland Cement Concrete Sub slab is required, the prime shall be applied at the rate of approximately 0.05 gallons per square yard. The prime shall be applied by a pressure distributor or other approved pressure spray method.

### 22.3.5 Bituminous Surfacing (Surface Treatment)

22.3.5.1 Where bituminous surfacing is to be as shown on the Plans, or as directed by the Inspector, the traffic-bound base shall comprise the sub grade upon which the bituminous surfacing shall be constructed. After the sub grade or base has been prepared, thoroughly cleaned and broomed, a prime coat of medium tar shall be applied at the rate of 0.30 to 0.35 gallons per square yard.

22.3.5.2 When the prime coat has become tacky but not hard, the bituminous material (asphalt of the grade directed by the Inspector) shall be applied in two applications at the rate of 0.35 to 0.45 gallons per square yard for each application. The Contractor shall apply approximately 50 pounds of crushed stone chips per square yard between the two applications of bituminous material, and 35 to 40 pounds of chips after the final application of bituminous material.

22.3.5.3 Materials and workmanship shall conform to Section 58 of the current Standard Specification of the Tennessee Department of Transportation.

### 22.3.6 Untreated Surface

Where the existing surface is untreated gravel or stone, the Contractor shall reuse all native materials possible, using crushed stone as required, replacing the surfacing that is disturbed or removed with crushed stone as herein before specified. The traffic bound base course herein before specified shall comprise

this type of surfacing, except that prior to the final acceptance, the Contractor shall fill in all depressions with crushed stone as herein before specified and shall thoroughly roll and grade to the existing surface.

#### 22.3.7 General

The Contractor shall be held responsible for all damages occurring to the street and road paving due to his operations outside the actual limits of his work and shall replace any such damage to as good (or better) condition than that which existed prior to the Contractor's operations and at no additional expense to the Owner.

### 23. MATERIALS

#### 23.1 Cement

23.1.1 Cement shall be Portland Cement conforming to the "Standard Specifications for Portland Cement", Type 1, ASTM Serial Designation C150, and latest revision. Bulk cement, cement salvaged from discarded or used sacks, or lumped or caked cement will not be accepted.

23.1.2 Cement shall have less than 4% magnesium oxide and less than 1% loss by ignition. All cement shall be in sacks bearing the brand name of the manufacturer. The same brand of cement shall be used throughout the job, unless specifically approved otherwise in writing by the Engineer.

#### 23.2 Concrete Aggregate

23.2.1 Aggregates for all concrete shall conform to the "Standard Specifications of Concrete Aggregates", ASTM Designation C33, and latest revision.

23.2.2 Fine aggregate shall be free of foreign materials. Sand prepared from crushed stone or mountain sand will not be acceptable.

23.2.3 Coarse aggregate shall be one and one-half inches (1-1/2") to No. 4 size.

#### 23.3 Class "A" Concrete

23.3.1 Concrete curbs, gutters, driveways, sidewalks, highways, piers, and collars shall be Ready-Mixed, ASTM Designation C94 with a 28-day compressive strength of 3000 psi, slump 2 to 4 inches.

23.3.2 Concrete for anchors, kickers, cradles, and/or encasement of water lines shall be placed where and as shown on the Plans, or as directed by the Inspector. Concrete for anchors, cradle, and/or encasement shall be Class "C" Concrete with a 28-day compressive strength of 3000 psi and shall be mixed sufficiently wet to permit it to flow under the pipe to form a continuous bed. In tamping concrete, care shall be taken not to disturb the grade or line of the pipe, or to insure the joints.

## 23.4 Metal Reinforcement

Metal Reinforcement shall comply with the following:

- 23.4.1 The requirements of the "Standard Specifications for Intermediate Grade Deformed Billet Steel Concrete Reinforcement Bars" (latest ASTM Serial Designation).
- 23.4.2 Welded wire fabric or cold-drawn wire for concrete reinforcement shall conform to the requirements of the "Standard Specifications for Cold Drawn Steel Wire for Concrete Reinforcement" (latest ASTM Serial Designation).
- 23.4.3 All bar reinforcement shall be new intermediate grade deformed billet steel.
- 23.4.4 All bars shall be deformed bars conforming to ASTM Specifications A-305. Bars with deformations not meeting this Specification will not be acceptable.
- 23.4.5 All bending of bars, hooks, splicing of bars, etc., shall be in accordance with the requirements of the "Building Code Requirements for Reinforced Concrete" (latest ACI Code) as published by the American Concrete Institute, and the "Manual of Standard Practice for Detailing Reinforced Concrete Structures", and the "CRSI Design Handbook" except where shown or called for differently on the Drawings.

## 24. PIPE AND FITTINGS FOR WATER LINES

### 24.1 General

All water line pipes shall be Ductile Iron as specified herein, unless otherwise specified and as approved by the Inspector. No pipe less than 6 inches in diameter will be accepted unless specifically approved by the Engineer and District.

### 24.2 Ductile Iron Water Line and Fittings

24.2.1 Ductile cast iron pipe shall be centrifugally cast in sand-lined or metal-lined molds and shall conform to all requirements of ANSI, A21.51 Standards, and AWWA Specification C151. The pipe is to be slip-type, single gasket joints, and plain end ductile iron pipe with wall thickness class 52. All ductile iron pipe shall be cement lined at no extra cost, in accordance with ANSI A21.4 (AWWA C-104), or latest revision. The same ductile iron pipe manufacturer shall be used throughout the construction of each subdivision phase or section or construction project. All ductile iron class 52 pipe installed in a casing pipe shall be mechanical joint ductile iron pipe with Mega-Lug Glands and Restraints. U.S. Pipe & Foundry, American Cast Iron Pipe Co., and McWane Pipe shall manufacture ductile iron pipe.

24.2.1a Certificate of Inspection, List of Pipe Weights, etc.: The pipe manufacturer shall furnish the District a certificate of inspection, sworn to by the factory inspector in the presence of a Notary Public, stating that the pieces of pipe making up the shipment were made and tested in accordance with ANSI Specifications A21.51 and that they were subjected to and withstood a hydrostatic pressure of 500



pounds per square inch. Each statement shall include the number of pieces of pipe in the shipment and the length of each piece of pipe making up the shipment.

- 24.2.2 The joints shall be of the slip-on type such as "Fastite," "Tyton," or approved equal which employ a single elongated groove gasket to affect the joint seal. The pipe shall be furnished lengths not to exceed 20' or less than 12', and they shall be cement-lined inside and tar-coated outside, complete with accessories and Lubricant. Fittings shall be mechanical joint type, cast or ductile iron ANSI/AWWA-C110/A21.10, complete with all accessories.
- 24.2.3 When delivered to the job site, all pipes shall be received, unloaded, and carefully inspected by the Contractor for damaged or defective pieces. All damaged or defective pieces shall be rejected. If it is necessary to redistribute or haul any pipe to a new location, such handling of the pipe shall be at the Contractor's cost. The Contractor shall properly protect the pipe after it has been unloaded.
- 24.2.4 Fittings shall be in accordance with standard ductile iron mechanical joint fittings as manufactured by the U.S. Pipe and Foundry Company, American Cast Iron Pipe Company, Tyler/Union (McWane), Sigma, or Star. All fittings shall have Mega-Lug Glands with Restraints. The restraints shall be as manufactured by EBAA or approved equal.
- 24.2.5 Magnetic Tape and Locating Wire: All water lines shall have Copperhead 1230B-SF in color blue which is a solid 12-gauge copper wire with a steel coating covered in blue plastic locating wire installed along the side of the pipe. A magnetic tape shall be located a minimum of 18" below finished grade. The Contractor shall install metallic faced or backed tape when backfilling the water main trench. Ends or breaks in the tape shall be securely spliced back together.

### 24.3 Polyvinyl Chloride (PVC) Plastic Pipe (Only for repairs on existing P.V.C. Lines)

- 24.3.1 All plastic pipes shall be made from Type 1, Grade 1, Polyvinyl Chloride Plastic as defined in ASTM Specification D1784, "Specification for Rigid Poly (vinyl chloride) Compounds." The required Class will be a minimum of 200 and if greater will be as shown on the Drawings. All Class 200, 250, or 315 pipes shall have National Sanitation Foundation (N.S.F.) approval and be manufactured in accordance with Commercial Standard CS-256-64 except for the following tests which shall be run at least once each hour, per machine on each size and type of pipe being produced. The pipe shall also meet the requirements of ASTM D2241.

24.3.1.1 Flattening Test: A specimen of pipe at least 2" long shall be flattened between parallel plates in a suitable press until the opposite inside surfaces touch and 100% flattening has occurred. The rate of loading shall be uniform and such that the compression (100% flattening) is completed within two minutes. Upon completion of the test, the specimen shall not be split, cracked or broken.

24.3.1.2 Extrusion Quality Test: The method of testing as described in Section 7.8 of Commercial Standard CS-256-63 shall be followed except

that upon completion of the tests there shall be no flaking, peeling, cracking, or visible deterioration on the inside or outside surface.

- 24.3.1.3 Quick Burst Test: The time of testing each specimen shall be between 60 and 90 seconds.

SDR	PRESSURE RATING	MIN. BURSTING PRESSURE psi
13.5	315	1200
17	250	1000
21	200	800

- 24.3.1.4 Impact Tests: All SDR 13.5 to 21 (315 pounds to 200 pounds pressure rated) pipe. Manufacturer will also provide results of impact tests conducted. Regardless of the number of specimens required for testing Commercial Standard CS-256-63, the Flattening Test, Extrusion Quality Test, Quick Burst Test, and Impact Test will be run at least once each hour per machine on each size and type of pipe being produced. Any specimen failing to meet any of the above-mentioned tests will require that all pipes of the size and type manufactured during that hour be scrapped.

#### 24.4 Joints:

- 24.4.1 The pipe and fittings shall have a push-on joint consisting of a rubber gasket designed to be assembled by the positioning of a continuous molded rubber ring gasket in a recess in the pipe and fitting sockets, thereby compressing the gasket radially to the pipe to form a positive seal. The gasket and angular recess shall be so designed and shaped that the gasket is locked in place against displacement as the joint is assembled. Gasket dimensions shall be in accordance with manufacturer's standard design dimensions and tolerances and shall be of such size and shape to provide an adequate assembly to affect a positive seal under all combinations of joint and gasket tolerance. Gasket shall be vulcanized natural or vulcanized synthetic rubber. No reclaimed rubber shall be used.

- 24.4.2 All joints shall meet the requirements of ASTM D3139.

- 24.4.3 All spigot (plain) ends shall be beveled to accommodate easy insertion into the gasket joint. The spigot (plain) end shall also be stripped to indicate the distance it should be extended into the socket. The joint shall be designed so that the spigot (plain) end may move in the socket as the pipe expands or contracts. The joints shall be designed to provide for the thermal expansions or contractions experienced with a temperature change of at least 75°F.

- 24.4.4 Lubricant furnished for lubricating joints shall be non-toxic, shall not support the growth of bacteria, shall have no deteriorating effects on the gasket or pipe material, and shall not impart taste or odor to water. The lubricant containers shall be labeled with the manufacturer's name.

- 24.4.5 Joints shall be either integral bell or ring type with rubber compression gasket or twin gasket couplings. All gaskets shall be molded in the pipe bell during manufacturing. Pipe and bell must, however, be manufactured by the same manufacturer. Pipe to be as manufactured by Diamond Plastic, National, NAPCO, JM Eagle, or Sanderson.
- 24.5 Pipe Lengths: The pipe shall be furnished in manufacturer's standard 20' lengths. However, the Contractor is advised that the Inspector must approve methods of storage and handling and that the pipe shall be supported within 5' of each end and every 15' thereafter. At no time, will the pipe be dragged or dropped. The pipe shall be stored away from heat or direct sunlight and "stringing" of the pipe along the project will not be allowed.
- 24.6 Fittings: Fittings shall be in accordance with standard ductile iron mechanical joint fittings as manufactured by the U.S. Pipe and Foundry Company, American Cast Iron Pipe Company, Tyler/Union (McWane), Sigma, or Star.
- 24.7 Marking of Pipe: As a minimum, the pipe and fittings shall be the following data applied to each piece:
- 1) Nominal Size
  - 2) Type of Material
  - 3) SDR or Class
  - 4) Manufacturer
  - 5) N.S.F. (National Sanitation Foundation's Seal of approval)
- 24.8 Major Road Crossings: All federal highway, state highway, county roads, city streets and private road water line crossings shall be ductile iron pipe with a steel casing pipe as specified by the Engineer or District.
- 24.9 Magnetic Tape and Locating Wire: All water lines shall have Copperhead 1230B-SF in color blue which is a solid 12-gauge copper wire with a steel coating covered in blue plastic locating wire installed along the side of the pipe. A magnetic tape shall be located 18" below finished grade. The Contractor shall install metallic faced or backed detection tape when backfilling the water main trench. Tape ends or breaks in tape shall be securely spliced back together.
- 24.10 Pipe Handling  
The Contractor will be required to stockpile all pipe, fittings, valves, valve boxes and other materials in central locations, and haul only the amount to the job site that can be laid in one day. Pipe will not be strung along the pipeline. Care must be exercised in the handling of all materials and equipment, and the Contractor will be held responsible for all breakage or damage caused by his workmen, agents, or equipment for handling or moving. Pipes and other castings shall not be thrown or dropped for cars, trucks, or wagons to the ground, but shall be lowered gently and not allowed to roll against or strike other castings and unyielding objects.

## 25. LAYING PIPE

- 25.1 The trench shall be excavated to the required depth and width, bell holes and/or jointing holes shall be dug in advance of pipe laying. The beds of each piece of pipe shall be prepared carefully so that each individual piece of pipe shall have a uniform bearing. Pipe shall be laid in a straight line and grade without kinks or sags and shall be laid in a workmanlike manner. Bell holes and/or jointing holes shall be large enough so that the bell or hub will clear the ground and leave ample room for making the joint and inspection of joints.
- 25.2 All pipes shall have a minimum of 36 inches and a maximum of 48 inches of cover including ditch crossings unless concrete encasement is used as per the Standard Drawings.
- 25.3 Before each piece of pipe is lowered into the trench it shall be swabbed out thoroughly to insure it is being clean. Each piece of pipe shall be lowered separately unless the Inspector gives special permission otherwise.
- 25.4 Care shall be taken to prevent injury to the pipe coating, both inside and outside. No piece of pipe or fitting which is known to be defective shall be laid or placed in the line. If any defective pipe or fitting shall be discovered after the pipeline is laid, it shall be removed and replaced with a satisfactory pipe or fitting without additional charge. In case a length of pipe is cut to fit in a line, it shall be so cut as to leave a smooth end at right angles to the longitudinal axis of the pipe.
- 25.5 All angles or bends in the pipe lines, either vertical or horizontal, shall be satisfactorily braced or anchored against the tendency of movement with joint harness, concrete or equal anchors to the satisfaction of the Inspector.
- 25.6 All pipes must be tested for uniform diameter, straightness, and defects by the Inspector before being lowered into the trench. Rejected pipe shall be marked so as not to impair its value and separated from accepted pipe and removed from the project.
- 25.7 When lying of pipe is stopped or when the line is left for any reason, the exposed end of such pipe shall be closed with plug fitted into the pipe bell to exclude earth and other material. Precautions shall be taken to prevent flotation of pipe by runoff into trench.
- 25.8 PVC pipe shall be laid in accordance with manufacturer's recommendations with manufacturer's printed information on top.
- 25.9 Where bottom of the trench at sub grade is found to be unstable or to include ashes, cinders, any type of refuse, vegetable or other organic material, or large pieces of inorganic material, which in the judgment of the Inspector should be removed, the Contractor shall excavate and remove such unsuitable material to the width and depth ordered by the Inspector. Before the pipe is laid, the sub grade shall be made by backfilling with crushed stone or gravel. The layers shall then be compacted to provide uniform and continuous bearing and support for the pipe at every point between bell recesses.

- 25.10 In rock, the trench shall be excavated to a depth at least twelve inches (12") below the bottom of the pipe and refilled with  $\frac{3}{4}$ " limestone to a sufficient depth to provide a firm bed for the bottom quadrant of the pipe. This twelve (12") inch clearance must also hold under pipe bells.
- 25.11 Joints for ductile iron pipe shall be made with mechanical or slip-on joints per the manufacturer's Specifications with the tools recommended. A copy of the manufacturer's instructions shall be available on-site always when pipe is being laid.
- 25.12 All pipes must be forced and held together, or "homed" at the joints before tightening of joint bolts.
- 25.13 Special molded adapters with stainless steel bands as furnished by pipe manufacturer shall be used for connecting dissimilar pipe to ductile iron pipe.
- 25.14 No walking upon the completed pipe lines will be permitted until trench has been backfilled to a depth of at least 6 inches over the top of the pipe. Exception may be made at the discretion of the Inspector where it is necessary to tamp the backfill around the pipe.
- 25.14.1. No backfilling over pipe, except for securing pipe in place will be allowed until the Inspector has had an opportunity to inspect the joints and alignment in the section laid, but such inspection shall not relieve the Contractor of further liability in case of defective joints. The contractor will not proceed with the backfilling until the Inspector gives permission.
- 25.15 Separation of Water Mains and Sewers
- 25.15.1 Where the water line crosses over a storm or sanitary sewer, a full joint of pipe shall be centered over the sewer using Ductile Iron Pipe. Where the water line is parallel to a sanitary or storm sewer or near a manhole, the water line shall be a minimum of 10 feet from the sewer or manhole and be in a separate trench. Where this separation is not practical, the bottom of the water main shall be at least 18 inches above the top of the sewer. Where the water line is perpendicular to a sanitary or storm sewer, the water line shall have a minimum of eighteen (18") inch vertical separation.
- 25.15.2 When routing a water line around the end of a storm sewer, water line shall clear end wall or wing wall by at least 5 feet.
- 25.16 Location of Water Main in relation to other Utilities
- 25.16.1 All other utility lines (gas, electric, phone, cable, fiber, etc.) crossing an existing water main shall be installed underneath or below the existing water mains to the extent possible.

## 25.17 Crushed Rock or Gravel

25.17.1 Crushed limestone used for backfill or bedding shall be  $\frac{3}{4}$ " limestone from a quarry approved by the Inspector. It shall contain no loam or clay, and all material must be capable of being passed through a  $\frac{3}{4}$ -inch sieve.

25.17.2 Gravel used for backfill or bedding shall consist of natural bank or river gravel consisting of durable particles graded from fine to coarse in a reasonably uniform combination with no boulders or stones larger than  $\frac{3}{4}$  inches in size. It shall be free from slag, cinders, ashes, refuse, and other deleterious or objectionable materials. It shall not contain excessive amounts of loam and clay and shall not be lumpy or frozen. No more than 15% shall be finer than No. 200 sieve.

## 26. VALVES AND VALVE BOXES

26.1 All gate valves (2"-24") shall be of the resilient seat, iron body, non-rising stem, fully bronze mounted, and suitable for working water pressures of 200 psi. Valves shall be of standard manufacture and of the highest quality both as to materials and workmanship as manufactured by the Mueller Company (Model A-2360 2"-12") and (Model A-2361 14"-24"), American Darling (Series 2500), U.S. Pipe (Metroseal 250), M&H or Kennedy Valve (Model C509 2"-12") and (Model C515 14"-24").

26.1a Valves shall meet all applicable requirements of AWWA C509/C515. Valves shall provide bubble tight closure up to 200psi when closed and an unobstructed waterway when open. Valves shall be non-rising stems with clockwise operation to open. The end configuration shall be mechanical joint. Stem seals shall be O-ring capable of replacement under pressure when valve is fully open. If the resilient seat is rubber material, the method used for bonding or vulcanizing shall be proved by ASTM D429. The valves shall be hydrostatically tested with twice the specified rated pressure applied to one side of the gate and zero pressure on the other side. The test shall be made in each direction across the gate. Valves shall be epoxy-coated on the inside including the interior of the gate in accordance with AWWA C550. Outside of the valve including bolt holes shall be coated with epoxy. The gate shall be provided with a drain in the bottom to flush the internal cavity of foreign material each time the valve is opened. All valves 24-inch and greater shall be horizontal in orientation.

26.2 All gate valves shall be furnished with mechanical joint end connections, unless otherwise shown on the Plans or specified herein. The end connections furnished shall be Mega-Lug Glands with Restraints.

26.3 All gate valves shall have the name or monogram of the manufacturer, the year the valve casting was made, the size of the valve, and the working pressure cast on the body of the valve.

26.4 All gate valves shall be provided with a 2-inch square operating nut and shall open by turning to the left (counter clockwise). At least one (1) adjustable operating wrench shall be furnished to the District Inspector per project at the start of construction by the Contractor.

- 26.5 All water valve boxes 16 inches and larger shall be constructed of pre-cast sections in accordance with the details as shown on the Contract Drawings. Valve boxes for 12 inches and smaller shall be as manufactured by Concrete Products of Nashville with cover number 8006 by John Bouchard & Sons Company, Russco, Vulcan or equal. Boxes shall be accurately set to finished grade and shall have backfill well tamped around them to hold them securely in place. All lid covers to valve boxes shall be marked "Water". Concrete valve boxes made in increments of 6", 12" or 18" shall support lids.
- 26.6 Valve boxes where possible must be located out of the pavement area. Where they must be in streets, the boxes must be raised upon final paving. No valves are to be installed in ditches.
- 26.7 All check valves shall be iron body, bronze mounted, and rate for 200 pounds working pressure, suitable for operation in horizontal or vertical lines. Hinge pins and seat rings shall be bronze. A removable cover shall be provided for the removal of internal parts without the necessity of removing the valve from the line. Check valves shall be as manufactured by American or Mueller.
- 26.8 Valves shall be furnished with the type of joints to meet requirements of pipe in which they are to be installed.

## **27. AIR VALVES AND BOXES**

- 27.1 Air valves shall be installed on water lines at the high points in the line or other potential locations for air accumulation or water column separation as shown on the Plans or as directed by MUD. The valve type used shall be a combination air valve manufactured to meet AWWA C-512 and shall be a dual body configuration. The air release valve component of the combination air valve shall have a one-inch (1") diameter inlet and shall be fitted a discharge orifice sized per the table below, or as directed by MUD. The combination air valve shall be equipped with an isolation valve between the air/vacuum component and the air release component. The air/vacuum component of the combination air valve shall be sized to evacuate air during filling of the line based on a maximum fill rate that corresponds to one (1) foot per second of pipeline velocity. The valve shall be adequately sized to prevent water column separation that creates vacuum conditions in the line.

For lines 12" diameter and larger, the combination air valves shall be APCO Series 1800, Crispin AL/PL Series, Cla-Val Series MTP36-CAV, Val-Matic Series VMC-104S/38 or an approved equal.

For lines under 12" diameter, the combination air valves shall be APCO Series 1800, Crispin AL/M Series, Cla-Val Series MTP36, Val-Matic VMC-101S/38 or an approved equal.

The combination air valve must be mounted at the crown of the water line and in a below grade, precast concrete enclosure with at least six inches (6") of head space above the tallest portion of the valve. The enclosure shall be designed with adequate drainage to prevent water infiltration into the valve at high groundwater elevations.

Orifice Sizing Guide (for use when pipeline pressure is 50psi or greater at high point)

Pipeline Diameter, inches	Air Release Orifice Size, inches
6"	1/16"
8"	3/32"
10"	1/8"
12"	1/8"
16"	3/16"
18"	3/16"
20"	1/4"
24"	1/4"
30"	5/16"
36"	3/8"

The box shall be a 2" Metro Style Meter Box less slab as manufactured by Cloud Concrete, Jarrett Concrete, Mid State Plastics, Inc. (MSBCF-1730-18) may be used but must have air release installed with 6" clearance under solid metal lid, or Hula Concrete. The lid shall be a large plate frame and cover as manufactured by John Bouchard and sons, Russco, Vulcan, or equal approved. The cone section of a precast 48" I.D. concrete manhole may also be used or as directed by the District Inspector or Contract Drawings.

## 28. BLOW-OFFS

- 28.1 Blow-offs shall be installed at the location as shown on the Plans or as directed by the Inspector.
- 28.2 Blow-Offs shall be made with 2" brass piping. A gate valve shall be installed prior to the installation of the cap. A reverse kicker shall be installed prior to the gate valve and the gate valve rodded to the kicker. End of water line shall be capped with a mega-lug plug tapped for 2" threaded brass pipe. The blow-off shall consist of 2" brass pipe, 2" threaded gate valve with 2" nut, valve box with frame and cover, and 2" bronze ball valve. A Mainguard Hydrant may be used. See Standard Drawing No. 14 for details.

## 29. FIRE HYDRANTS

- 29.1 Fire hydrants shall be constructed of the highest-grade materials and shall conform, in all respects, to the latest American Water Works Association's Standard Specifications (AWWA 502) and the National Board of Fire Underwriters. Fire hydrants shall be cast iron bodied, fully bronze mounted, suitable for a working pressure of 150 pounds per square inch or a hydrostatic pressure of 300 pounds per square inch. Fire hydrants shall be as manufactured by Mueller Co. (Model A423HS), American Darling (Model B84B with 2100 check valve), M&H (Model 129 with 906 check valve). All hydrants shall have Mega-Lug Glands with Restraints.



- 29.2 All 6-inch fire hydrants shall have 6-inch bell-end connection to 6 inch and larger mains, which shall conform to Table 11.1 of the American Standard Specifications A21.11 for mechanical joint cast iron pressure pipe and fittings. The hydrants shall be a 3-way hydrant with one (1) 4 ½" pump nozzle or two (2) 2 ½" hose nozzles and NST threads together with cap fastened securely to each hydrant. The hydrants shall be provided with a pentagonal 1-1/2-inch operating nut. The bottom valve of the hydrant shall be not less than 5-1/4 inch in diameter with a 36-inch buried depth. The riser barrel shall have an inside diameter of 7 inches. All connection threads shall conform to the Standard Specification of the National Board of Fire Underwriters.
- 29.3 The main valve of the hydrant shall be of the compression type closing with pressure. The valve shall be faced with heavy impregnated waterproof balata or other approved material. The hydrant shall be of the "dry head" type. Hydrants shall have a safety "Breakable Flange" section located above the ground line. Hydrants shall be set so that the distance from the ground line of the hydrants to the top of the hydrants lead shall not be less than 36 inches and turned to be unobstructed by poles or other objects. The hydrants shall be set plumb and shall be set with no less than 3 cubic feet of ¾" limestone about the waste opening to permit proper drainage. All hydrants shall be backed up with a minimum of one cubic foot of 3000-pound mix concrete, dug back to hard ground to provide adequate bearing for the kicker. The waterways of hydrants shall be as free as possible of obstruction, sharp turns, corners, or other causes for resistance. The base of the hydrant shall be constructed in such a manner as to admit a proper mechanical joint connection with mechanical joint pipe.
- 29.4 All fire hydrants and their appurtenances shall be installed within District easements on private property, whenever possible, and not within any public right-of-way, unless otherwise shown on the approved construction drawings.
- 29.5 No fire hydrant will be installed until all system improvements necessary to provide adequate pressure and flow have been made or are in the process of being made.
- 29.6 The service line from the District's system to any fire protection device, whether a fire hydrant, sprinkler system or other, shall be used only for fire protection. Such service line shall not be tapped for any other purpose, unless specifically permitted in writing by the District.
- 29.7 After installation, exposed surfaces of hydrants shall be painted with one coat of red and two coats of Sonneborn's Hydrant Enamel. The color shall be in accordance with the District's Standards.
- 29.8 The Contractor shall provide the District with two (2) collision breakage repair part kits and one (1) valve wrench for the hydrants. These items shall be furnished to the District Inspector per project at the start of construction by the Contractor.

**30. PRIVATE FIRE HYDRANTS AND SPRINKLER SYSTEMS**

Indicator posts and valves shall be required for all privately-owned fire hydrants and/or sprinkler systems on lines from which there is no domestic service, yard hydrant, or other water use. All automatic sprinkler systems and other fire-fighting devices must be metered, and each such installation must have suitable backflow prevention device. The meter and backflow preventer shall be as specified by the District.

**31. INSPECTION OF THE LINES**

31.1 Before the Contractor backfills any of the lines, or earlier, if deemed advisable, they first shall be inspected by the Inspector. Said Inspector shall give the Contractor permission to proceed with the backfilling. If any joints, pipe, fittings, materials or workmanship are found to be defective, they shall be removed and replaced by the Contractor without any additional expense.

31.2 As lines or sections of line are completed, they shall be thoroughly cleaned, disinfected and inspected for leaks. The Contractor shall complete the testing and disinfection as specified below with inspection by said Inspector and completes all clean-up work before requesting a final inspection.

**32. WATER METERS**

32.1 All new water meters shall meet the requirements of the latest AWWA Standard Specification for Cold Water Meters, Displacement Type. Meters shall be housed with a bronze body and lid and cast-iron bottom with hinged cover and shall be of the "frost proof" type. The meter register shall read in gallons and shall be sealed hermetically to prevent condensation and to keep out water and other foreign materials. The meters may be either of the pistons operated, or of the disc operated, type. The meter shall be equipped with a stainless-steel strainer and shall be of the magnetic drive type. The meters in a subdivision shall have consecutive serial numbers.

32.2 The meter sizes required are 3/4 x 3/4 inch through 4 inch, as directed, and shall have minimum capacities as shown in the following table.

<u>Meter Size</u>	<u>Safe Operating Capacity</u>
3/4 x 3/4"	32 gpm
1"	55 gpm
2"	220 gpm
3"	550 gpm
4"	880 gpm

32.3 Meters shall be manufactured by Kamstrup, flowIQ2100 for 3/4"x 3/4" for standard 3/4" meters, flowIQ3101 for 1" meters, flowIQ3250 Type 02-C-01-D-0-8H-8US for 2" meters. Meters 3" and larger shall be Elster EVO-Q4 with AMCO Dual Pulse Output Module meters. Meter fees for 3/4" and 1" shall be paid to the District by the Developer and District will purchase and install them as needed. For other size meters, consult with the District.

### 33. METER BOXES

- 33.1 All meter boxes shall be of the molded plastics type (HDPE), and shall be constructed to a size adequate for the meter to be installed. The meter boxes shall be fully equipped with a removable cover and lid for adequate and proper reading of the meter. The ¾" meter box shall be as manufactured by Sigma (Sigma Part No. RMB132418-SW-W & RMB1324-EXT6-W). The meter box lid shall be a HDPE poly lid with a ductile iron reader door and designed to accommodate the AMI meter reading system. The lid shall be as manufactured by Raven (Part No. RMB1324-L-R). Shop Drawings of the meter boxes shall be subject to the approval of the District and/or Inspector prior to installation. Boxes shall be a minimum of 24 inches deep (SEE STANDARD DETAIL No. 9). Meter boxes RMB173018-SW-W & RMB173012-SW-W shall be used for 1" meters. The lid shall be as manufactured by Raven (Part No. RMB1730-L-R).

### 34. METER FITTINGS

The Contractor shall furnish and install the following for each service.

- 34.1 Bronze Service Saddle (on PVC Water Lines)

All saddles to be bronze and they shall have a thick tapping boss with full length tapered threads and the "O"-ring gasket cemented in place and confined in a retaining groove. Saddles shall be Mueller H-13000 or AY McDonald 3891 (Hinged Saddle).

Before drilling tap into water main, the service saddle shall be air tested at 150 psi for 5 minutes to check for any leaks.

- 34.2 Corporation Stops - Stops shall be of bronze construction with one end having tapered threads (AWWA (cc) Thread) for connection to service saddle and the other end with copper service thread connection. Corporation Stop shall be Mueller B-25008 or AY McDonald 74701BQ (AY Ball Corp. cc x Q compression).
- 34.3 Meter Yoke - Contractor shall install a copper setter meter yoke. The meter yoke shall be the double check valve type, Mueller B-2404-R6A with a 7" rise or AY McDonald 720-207WDMD33 for ¾" and Mueller B2404-R6A with a 10" rise or AY McDonald 720-410WDMD44 for 1". The inlet end shall be a double-purpose type joint, Mueller H-14227. The outlet end shall be a Multipurpose type joint Mueller H-14222. A curb stop shall be installed on the inlet of the meter yoke. The curb stop shall be Mueller B-25170R or AY McDonald 7610WQ for ¾" and Mueller B25107R or AY McDonald 76102WQ for 1".
- 34.4 Fittings - All fittings to be compatible with Municipex Rehau pipe only.
- 34.5 For duplexes, the Contractor shall install a 1" service line to a wye with a 3/4" water line to separate meters. Each side of the duplex to have its own meter.

### **35. SERVICE CONNECTION PIPING**

#### **35.1 Service Connection Piping**

Service connection piping shall be ¾-inch, 1 inch, or 2 inch, Rehau Municipex Pipe meeting AWWA C904 standards, and certified CSA B137.5, ASTM F876 & F877, NSF Standard 14 and 61. The length necessary to run a direct line, without splices from the main to the meter at the property line. Samples shall be submitted to the Inspector for approval. Special care should be taken to protect the service piping from any sharp and/or hard objects by installing earth around the pipe. Cover is to be a minimum of 18 inches at all points.

#### **35.2 Service Pipe Bored Under Highway, Railroad, or Street**

Where it is necessary to cross existing or proposed streets, highways, or railroads, the Contractor shall bore service pipe under said highway, railroad, or street and install a 3" diameter P.V.C., SCH 40 or SDR21, CL.200 encasement pipe so the service line can be installed through the encasement pipe. The encasement pipe shall extend one (1) feet from the main to within one (1) feet of the meter box. A stainless-steel spacer shall be installed at each end of the encasement pipe to center the service line in the encasement pipe. Such service line shall be bored at least four feet under the surface. Open cutting of highways, streets, or roadways will be allowed only when it is impossible to bore and when approved by the Inspector.

### **36. CREEK AND DITCH CROSSING**

36.1 All creek crossings shall be made with mechanical joint ductile iron pipe with Mega-Lug Glands and Restraints, Lok-tight gaskets, and a minimum 12" thick concrete cap.

36.2 Where the water line crosses ditches or culverts, the line shall go under the invert of same at such a depth as to provide adequate cover. If the line is within 36 inches of the bottom of a ditch or within a culvert, it shall be installed per the standard creek crossing detail. (See Standard drawings). The line shall begin to slope on either side of the ditch or culvert at a sufficient distance to hold a uniform gradient in the line without sags or short breaks.

### **37. HIGHWAY, RAILROAD, AND SECONDARY ROAD CROSSINGS**

37.1 The Contractor shall furnish and install at locations shown on the Drawings or where required by Owners or agencies, metal pipe casing for crossing all highways, county and city roadways or railways. Metal pipe casing shall be steel pipe, or pipe as required by the respective Owner or agency having jurisdiction. Crossing shall have a minimum depth of cover of four feet as measured from the top of the casing pipe. The Contractor is responsible for obtaining construction permits and for notifying Owners or Agencies of construction schedules so that they may have a representative at the site to inspect the construction. Specifications published by the owners or agencies when granting permits for this work are to be considered a part of these Specifications. The Contractor shall also be responsible for any bond required by the Owners or agencies, the minimum size of casing pipe for the various sizes of mechanical joint ductile iron carrier pipe shall be as follows:

Ductile Iron Carrier Pipe	Smooth Wall Steel Casing Pipe Diameter/Wall Thickness
6 inch	12 inches / 0.25 inch
8 inch	18 inches / 0.25 inch
10 inch	18 inches / 0.25 inch
12 inch	20 inches / 0.25 inch
14 inch	24 inches / 0.25 inch
16 inch	26 inches / 0.25 inch

- 37.1.2 Pipe under highway or railroad proper shall be installed by the jacking, tunneling, or drilling method, subject to the approval of the Owner or agency involved, the excavated base being made to grade at bottom and no more than one inch larger than the casing at top. Pipe extending beyond the minimum jacking limits may be placed by the open trench method. Jacking methods and procedure shall be as recommended by pipe manufacturer. Adjacent sections shall be completely jointed together, and the joint shall be inspected before jacking is resumed.
- 37.1.3 Jointing of steel pipe shall be by welding at joints.
- 37.1.4 Construction must not interrupt or interfere with highway or railroad traffic. Roadways shall be kept clear at all times.
- 37.1.5 Regardless of the type of water pipe used elsewhere, all highway, secondary road and railroad crossings shall be made of mechanical joint ductile iron pipe. The pipe shall be centered and supported in the casing pipe with a minimum of three (3) spacers per joint with stainless steel band casing spacers Model SSI as manufactured by Advance Product and Systems, Inc., PSI or Cascade. The number of spacers required to be per the manufacturer's recommendation. The ends of the casing pipe to be sealed using Link-Seal with stainless steel bolts or equal.
- 37.1.6 A detail of a typical water line casing is shown in the Standard Drawings.

### **38. DISINFECTION AND FLUSHING OF LINES**

- 38.1 The new water lines shall not be placed in service either temporarily or permanently until they have been disinfected thoroughly, in accordance with the following requirements and to the satisfaction of the Inspector. After pressure testing procedures, have been completed, the Contractor shall fill the lines and flush them thoroughly, removing all foreign material, dirt, etc. No more than 6,000 feet of line may be disinfected at one time.
- 38.2 After the lines have been flushed, a solution of hypochlorite using HTH or equal sufficient to insure a chlorine dosage of at least 50 ppm in the lines shall be introduced into the lines for 24 hours and a residual of at least 25 ppm should be present in the pipe at the end of the 24-hour period. The lines shall be flushed until 2 ppm chlorine residuals remain, then a bacteriological sample taken. If a negative sample is obtained, the lines may be put into service. If a positive sample is obtained however, the disinfection procedure shall be repeated until a negative sample is obtained.

- 38.3 Disinfection, pressure testing, other required testing and flushing are not pay items. The Contractor shall pay for all water used for testing, disinfection, and flushing.
- 38.4 The Contractor shall install a temporary by-pass with a meter around a valve at the point of connection to the District's existing water system. This meter will be for measuring water used by the Contractor for flushing, testing, and disinfecting the new water lines. The meter shall be large enough to pass the required flows and shall be tested for accuracy before being installed.

### **39. PRESSURE TESTING OF THE WATER LINES**

- 39.1 All pipes must be tested under 200 pounds pressure. This may be done from valve-to-valve or by plugging the open end of the pipe. (The tests must be made in the presence of the Inspector.) Each joint shall be thoroughly inspected with all joints made watertight before backfilling around the joint. The Contractor shall furnish all equipment and material for testing.
- 39.2 The duration of each pressure test shall be a minimum of two hours.

### **40. THRUST BLOCKING**

- 40.1 Ends of pipe, bends, and other joints or anchors as shown on the plans shall be backed up with concrete. The Contractor shall provide and place concrete in accordance with the Standard Drawings at every bend and fitting.
- 40.2 This concrete shall be Class "C" Concrete with a 28-day compressive strength of 3500 psi and shall be mixed sufficiently wet to permit it to flow under the pipe to form a continuous bed. This concrete work shall be in accordance with the best practices and shall meet the approval of the Inspector. No additional compensation will be allowed for this concrete.

### **41. FINAL CLEAN UP**

- 41.1 In addition to the preliminary clean-ups during the progress of construction, the Contractor shall make a final clean up to ensure that the construction site is returned as nearly as possible to its original state.
- 41.2 The Contractor is to assure the Owner that all property owners are completely satisfied with the cleanup. The Owner may require that the Contractor obtain releases from property owners.

### **42. AS BUILTS**

Before final acceptance of a water line, the Developer will provide the District with distances of each service from the closest property line and field measurements for any changes from the plans. The Contractor will draw As-Builts from this information for a permanent record of construction. The Developer is responsible for the cost of locating lines or services which are not found where As-Built information shows. As-builts are to be provided digitally to the District (in both CAD & PDF format) and 2 hard copies at the completion of the job and prior to the release of bonds by the District.

### **43. GENERAL WARRANTY**

For a period of at least one year after the final acceptance of the water system by the District in writing, the Developer and the Contractor shall warrant the fitness and soundness of all work done and materials and equipment put in place under the Contract. Neither the final acceptance nor any provision in the Plans or Specifications nor partial or entire occupancy of the premises by the District, shall constitute an acceptance of work not done in accordance with the Specifications or relieve the Developer of liability in respect to workmanship. The Developer shall remedy any defects in the work and pay for the damage to other work resulting there from which shall appear within a period of one (1) year from the date of final acceptance of the work, unless a longer period is specified. The District will give notice of observed defects with reasonable promptness.

### **44. BACKFLOW PREVENTERS**

- 44.1 A reduced pressure backflow preventer must be installed at commercial water services at the discretion of the District. The unit may be mounted above grade inside or outside in a heated flood-proof area in accordance with Standard Drawing 12 and 13 and must meet all requirements of the State Department of Public Health, and any other Federal, State, and Local code requirements.
- 44.2 The backflow preventer device shall contain a minimum of two independently operating check valves with an automatically operated pressure differential relief valve located between the two shut off valves, the device shall be equipped with the necessary appurtenances for testing. During normal flow and at the cessation of normal flow, the pressure between the two check valves shall be less than the supply pressure. In case of leakage of either check valve, the differential relief valve shall operate to maintain this reduced pressure by discharge to the atmosphere. When the inlet pressure is two pounds per square inch or less, the relief valve shall open to the atmosphere, thereby producing an air gap in the device.
- 44.3 The backflow preventer must be tested by the Owner at least once every twelve months by or under the direction of a certified distribution system operator who has special training in testing and maintenance of these devices. The date and other pertinent information concerning the testing and/or repairing of the unit shall be recorded on an operation report attached permanently to the unit. Representatives from the District and from the Tennessee Department of Public Health shall have access for inspection of the backflow preventer at any time.
- 44.4 If sprinklers are installed on a dedicated private line tying directly to a public line with no domestic, fire hydrant, or yard hydrant service a double detector check is required.
- 44.5 Only approved devices manufactured by the following will be approved: Febco, Watts, Ames, Wilkens or Conbraco.

### **45. WATER BOOSTER STATIONS & WATER TANKS**

- 45.1 Water Booster Stations shall be constructed out of concrete block with a poured concrete roof and the exterior of the building to be covered with a brick façade. The interior dimensions of the building will be 20' x 25' x 13' high or as required to house the necessary pumps and equipment. The building will have a concrete floor and will contain as a

minimum the following items; an electric heater, exhaust fan, roll up steel door, monorail steel beam with a minimum 1-ton hand operated hoist or as specified, electrical controls, telemetry system, pressure transducers, flow meter, backflow preventer, electrical surge suppressor and any other items that may be required by the Engineer or the District. The contractor shall be responsible for the installation of all mechanical and electrical equipment etc. for a complete and workable system. The water booster station access road and parking area shall be constructed with asphalt pavement and the area secured with fencing per District specifications. See Section 22 for pavement requirements.

- 45.2 Water Tanks shall be pre-stressed concrete or an approved equal with interior/exterior ladders, OSHA approved safety climbing devices, exterior ladder gate, half travel water level gauge, telemetry system, 2 manhole entryways on sides, 2 roof vents (1 bolt-on hood, 1 manway/roof hatch), and all appurtenances as specified on the plans and specifications. The water tank access road shall be constructed with 2" of asphalt pavement 411-E. See Section 22 for pavement requirements.
- 45.3 All water tanks shall have an automatic mixing system installed. The mixing system shall be as manufactured by Tideflex Technologies or an approved equal. No system requiring electrical or solar power will be accepted unless otherwise approved by the District.

#### 46. TELEMETRY

- 46.1 All water booster stations and water storage tanks shall be equipped with telemetry to monitor water tank levels and to turn on and off the water booster pumps. A flow meter (GE clamp on transducer and flow meter as approved by the District) and a chlorine analyzer as approved by the District must also be supplied. The telemetry system shall be supplied by Dorsett Technologies, Inc. (855-387-2232), local representative Southeastern Automation (865-675-3080). No substitute will be allowed, unless otherwise approved by the District.

#### 47. WATERLINE EASEMENTS

- 47.1 The District requires a twenty (20) feet wide "Exclusive Water Utility Easement" for all proposed water line installations not within subdivisions and a 15 foot-wide "Exclusive Water Utility Easement" for all proposed water line installations within subdivisions. No other utility will be allowed within the District's Exclusive easement except for the utility service crossings. **All electrical, gas, telephone, and cable TV lines and conduits shall be installed under the waterline within the easement.** In subdivisions, the maximum slope across the easement shall be 5:1.

In areas, outside of subdivisions, the maximum slope across the easement shall be 5:1.

- 47.2 All water lines shall be installed outside of any roadways, parking areas, or under any sidewalks. Crossing of any roads, driveways, sidewalks, or other paved obstructions, with the water line, will be permitted at perpendicular crossings only.



## 48. GENERAL CONSTRUCTION PROCEDURES

### 48.1 Shutting Down Water Mains

Where it is necessary to shut off water mains and/or pipes to make connections or for capping mains, the work shall be done as quickly as possible, to cause the least inconvenience possible to the water consumers, but not exceeding 4 hours. All shutdowns shall be scheduled in writing by the Contractor and must be approved in advance by the District. If it is deemed necessary; critical shutdowns shall be scheduled for night and/or weekends. The Contractor shall not operate any valves on existing water mains and/or water mains placed in service under this Contract without prior approval and only under the supervision of the District. The Contractor shall provide all water customers at least 48 hours-notice of an intended shutdown or interruption of water service (medical facilities may require a longer notice due to operational issues).

### 48.2 Maintain Water Service

The water service to consumers, whose connections are to existing mains where the proposed mains under the Contract are to be constructed, must be maintained by the Contractor so that they will not be deprived of water service while proposed mains are being constructed.

### 48.3 Abandon Existing Water Mains

It shall be the responsibility of the Contractor to remove from the grounds all existing valve boxes over valves on abandoned mains. All valves on the abandoned main shall be closed only when directed by the Engineer. On valves to be abandoned, the frame and cover shall be removed and safely stored to prevent loss or damage until picked up by the District. The hole shall be filled with gravel and surface restored. The cost of work necessary to close valves as directed; remove frames and covers; and fill the holes of the valves necessary to abandon existing water mains shall be merged in the unit prices bid and no separate payment shall be allowed. Where it is necessary to remove a valve frame and cover from a paved street/sidewalk, separate payment shall be allowed for temporary and/or permanent pavement restoration.

### 48.4 Construction Procedures

The installation of all mains should generally proceed as follows:

- a. The Contractor may, at his option, begin the installation of the water main at the connection to the existing system by two means in conformance with the following:
  - 1) The Contractor may begin construction without making any connection to the existing system. In this event, the new water line shall be temporarily capped near the proposed connection to the existing system. When the new water line is ready to be filled with water for testing and sampling, it shall be filled through a sufficiently sized copper jumper pipe tapped from the existing to the new water main using a backflow prevention device. Upon completion of all required pressure and sterilization tests, the Contractor shall make the required connection to the existing water main and sleeve the new main into the new connection.
  - 2) The Contractor may begin construction by making the required connection

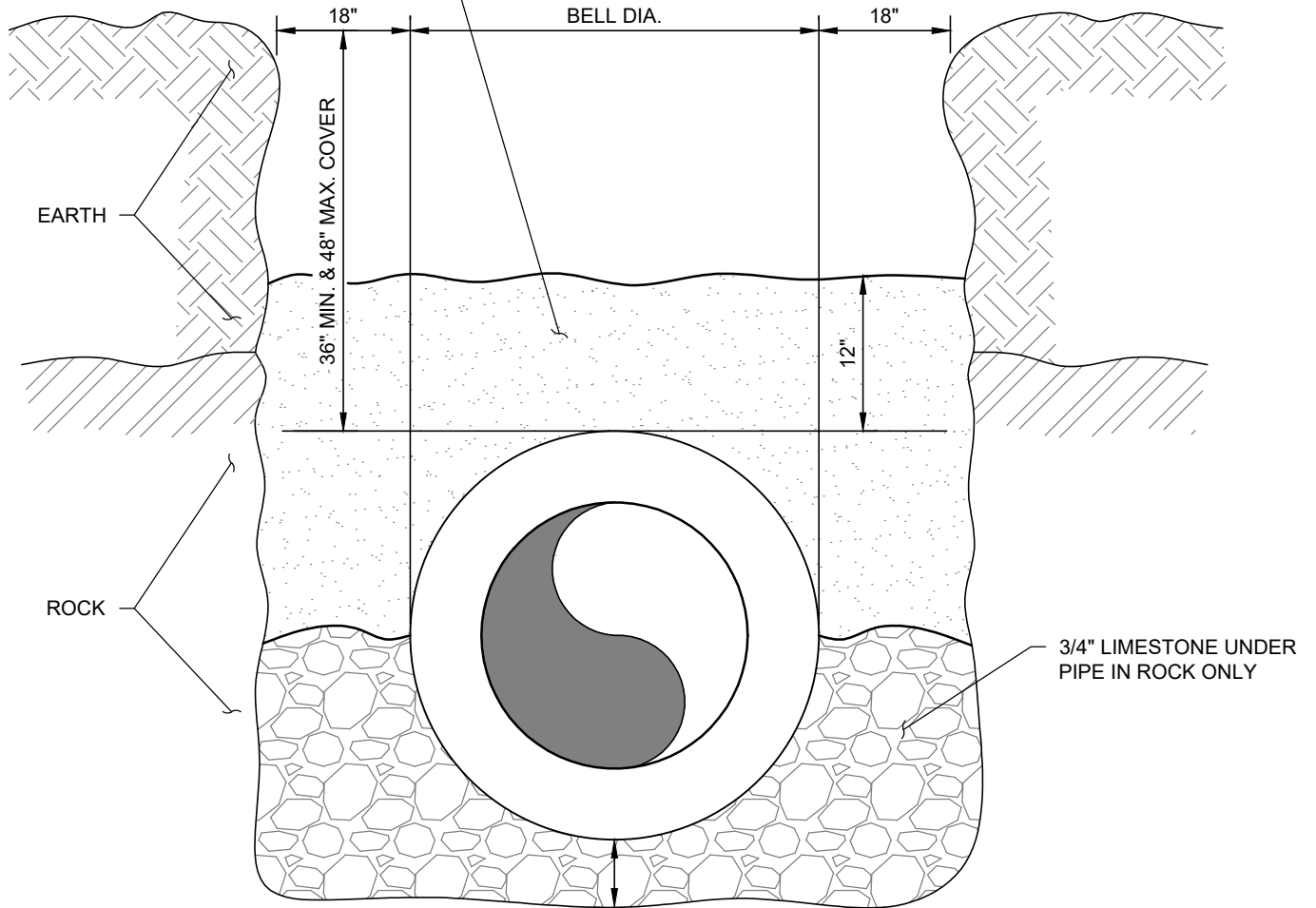
to the existing system. In this event, the existing system shall be separated from the new construction by 2 consecutive valves. These 2 valves must remain closed at all times, and only be operated under the close supervision of the District to fill and/or flush the new pipeline. This connection to the existing system may be made at one connection point only. Any proposed connection points should remain free to allow the new pipe line to be flushed through a fire hydrant or other means. After the new pipeline is filled and flushed, water for the pressure test and samples should be obtained by placing a sufficiently sized copper jumper line around the new valves at the connection point. The new pipeline may be filled through the new valves and eliminate the copper jumper only with the prior approval of the District due to hazardous connection point locations, etc. The disinfection test must be conducted by the Contractor first. No pressure test will be allowed to be conducted on the new pipeline until the required samples have been taken and satisfactory results obtained. The required pressure test should then be conducted by the Contractor. The Contractor shall be responsible that the valves shall pass the required pressure tests. If the valve should leak, it shall be the Contractor's responsibility to cut and cap the line for testing purposes.

- 3) The Contractor shall install all new mains, fittings, valves, and hydrants. Existing mains are to be in service at all times.
- 4) The Contractor shall test, disinfect, and flush the new mains, then place them in service, continuing to maintain service in the existing mains.
- 5) The Contractor shall reconnect and/or tie-over existing service lines from existing mains to new mains and install new service lines.
- 6) After all services are removed from the existing water main, the existing main shall be abandoned by cutting and capping as required. All tie-ins of the new water main shall then be completed.
- 7) The Contractor shall remove from the ground all existing valve boxes over valves on abandoned mains and restore the surface as specified.

**Pursuit of Work:**

- a. The Contractor shall plan and pursue the work in such a manner as to maintain a work area confined to the immediate area of installation and be completed to the extent possible as the job progresses. This means that all valves, fire hydrants, air release valves, blow offs, valve boxes, and other appurtenances shall be installed at the time the water main is installed. As soon as the installation is complete and prior to testing, the excavations shall be backfilled, as specified, and the excess material is to be removed. Any damage claims to private property shall be investigated promptly and followed by such corrective action as may be necessary. The work area shall also be cleaned immediately following the installation.
- b. The purpose of the above requirements is to keep the inconvenience to the public at a minimum. If service lines must be installed later, and the same procedure as outlined above shall be followed upon installation of the service line.

SUITABLE ONSITE BACKFILL MATERIAL PER  
MUD SPECS AND INSPECTOR APPROVAL



12" - 3/4" LIMESTONE (No.57 / 67 STONE) IF IN  
ROCK. IF IN DIRT, NO BEDDING REQUIRED

**LINE LAYING CONDITIONS IN ROCK OR EARTH**

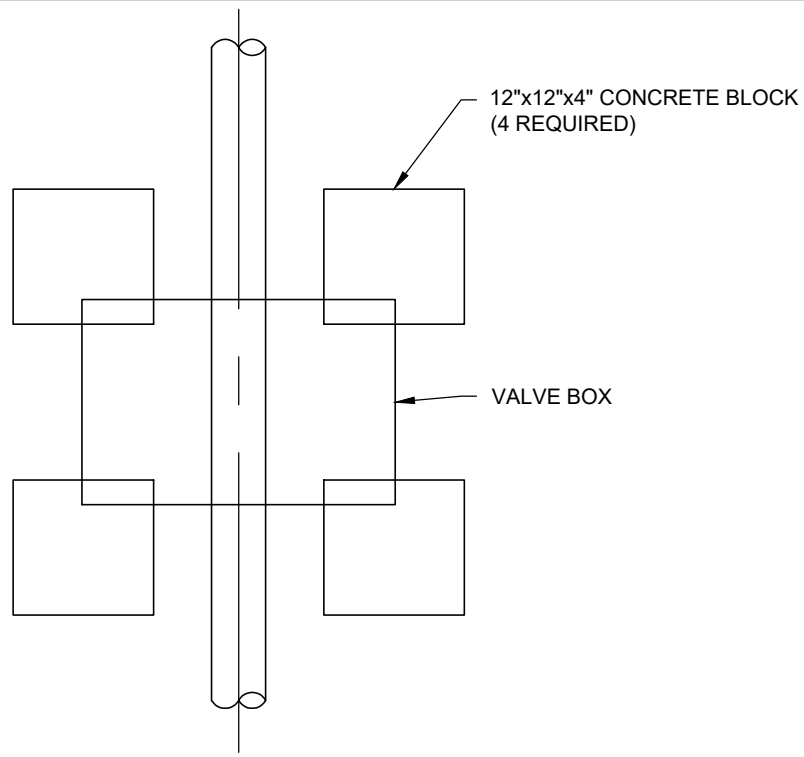
**MILCROFTON UTILITY DISTRICT  
STANDARD DETAIL NO. 1**

ISSUE DATE : AUGUST 2018      DRAWN BY : CCS

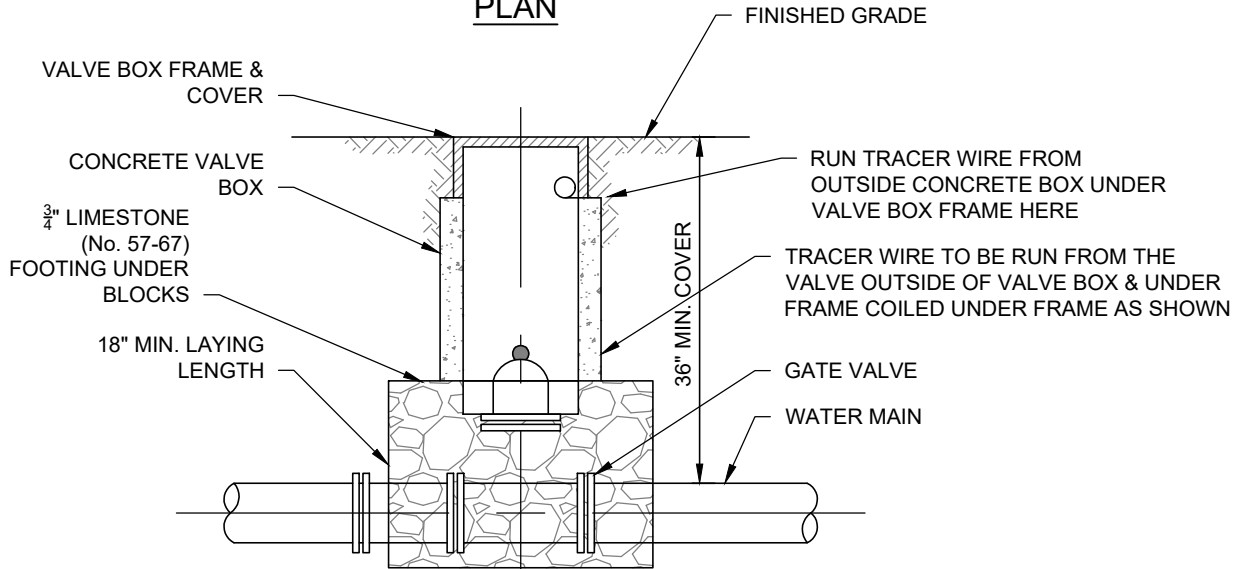
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P.O. BOX 848  
FRANKLIN, TN 37065  
WWW.M2GROUPLLC.COM



**PLAN**



**SECTION**

**NOTES**

1. VALVE BOX SHALL BE INSTALLED SO THAT THE WORD "WATER" ON THE VALVE BOX LID IS PERPENDICULAR WITH THE FLOW LINE OF THE WATER LINE.
2. ALL VALVE BOXES SHALL BE SET TO BE FLUSH WITH FINAL GRADES AND SHALL NOT BE COVERED WITH ANY PAVING, DIRT, SOD, GRASSING, AND/OR LANDSCAPING.
3. THIS DETAIL IS VALID FOR 16" AND SMALLER VALVE SIZES. FOR LARGER SIZES, SEE CONTRACT SPECS. OR CONFIRM WITH DISTRICT.

**LINE VALVE SETTING DETAIL**

**MILCROFTON UTILITY DISTRICT  
STANDARD DETAIL NO. 2**

<b>ISSUE DATE :</b> AUGUST 2018	<b>DRAWN BY :</b> CCS
<b>SCALE :</b> NOT TO SCALE	<b>CHECKED BY :</b> MWB



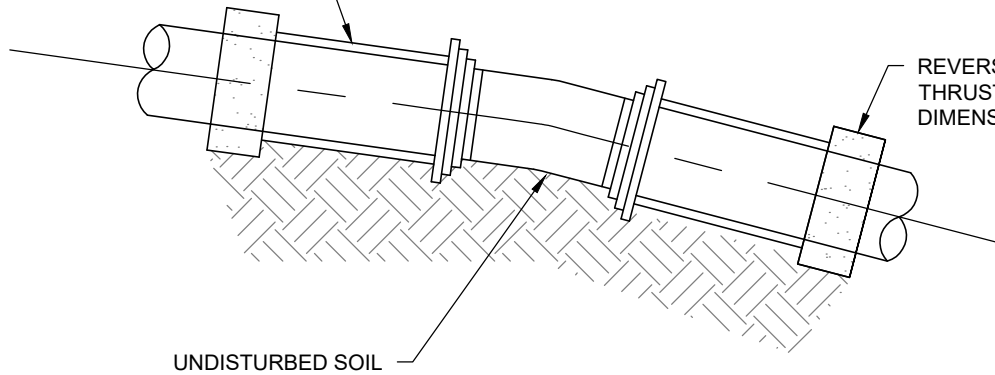
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**NOTE:**

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1. THRUST COLLARS/REVERSE KICKERS NOT DRAWN TO SCALE. SEE DETAIL 5A.

STAINLESS STEEL RODS (SEE TABLE BELOW FOR SIZE & NUMBER REQUIRED)



**NOTES**

1. PIPE TO BE INSTALLED IN TRENCH AS PER DETAIL No. 1
2. THREE (3) LOK-TIGHT GASKETS SHALL BE INSTALLED BEFORE VERTICAL FITTING, AND THREE (3) LOK-TIGHT GASKETS SHALL BE INSTALLED AFTER EACH VERTICAL FITTING.
3. SEE THRUST COLLAR DETAILS ON STANDARD DETAIL 5A FOR REVERSE KICKER DIMENSIONS.
4. ALL BOLTS AND FITTINGS MUST BE WRAPPED IN MINIMUM SIX (6) MIL. PLASTIC.
5. LEAVE APPROXIMATELY 12" CLEARANCE BETWEEN CONCRETE AND FITTING BELLS
6. THRUST BLOCK DIMENSIONS BASED ON 150PSI OPERATING PRESSURE AND 50% ADDITIONAL SURGE PRESSURE.
7. SOIL BEARING PRESSURE USED FOR THRUST BLOCK DIMENSIONS SHOWN IS 4000 PSF. IF SOIL SURROUNDING THRUST BLOCK DOES NOT HAVE THIS CAPACITY, ADDITIONAL THRUST BLOCK VOLUME MAY BE REQUIRED.
8. CONCRETE TO BE USED FOR THRUST BLOCKS TO BE 3500PSI CONCRETE.
9. ELEVATION OF GROUNDWATER IS ASSUMED TO BE BELOW BOTTOM OF THRUST BLOCK.
10. THRUST COLLAR RING MUST BE FACTORY WELDED ON BOTH SIDES ALONG BOTH EDGES OF COLLAR AROUND CIRCUMFERENCE.
11. REINFORCING BARS SHALL BE DEFORMED AND TIED TOGETHER.

RESTRAINT TABLE	
SIZE	No. OF 3/4" DIAMETER RODS REQ'D.
6"	2
8"	2
10"	4
12"	6
16"	8
24"	16
30"	20

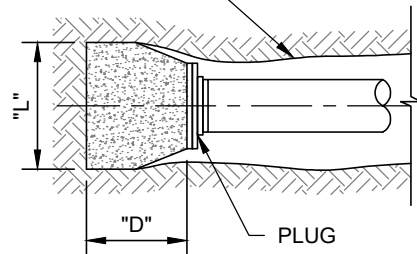
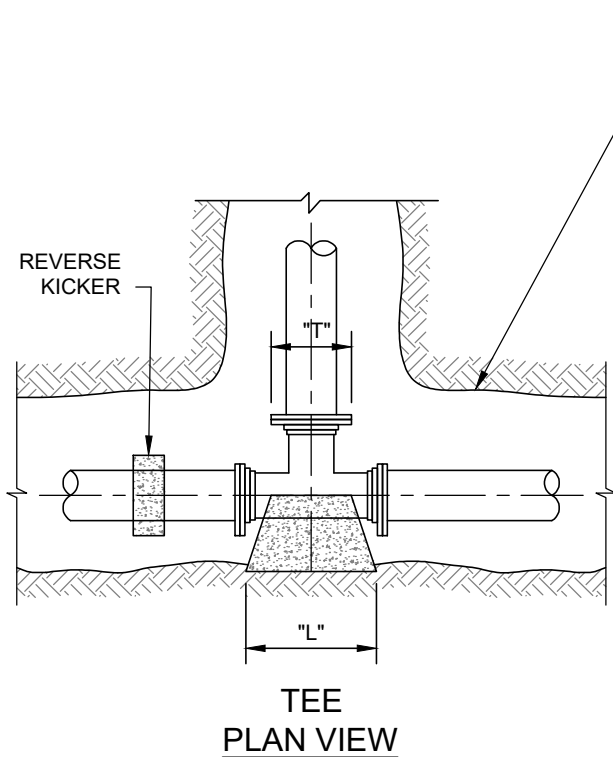
**ANCHOR DETAIL FOR VERTICAL BENDS  
10° OR GREATER (UP OR DOWN)**

**MILCROFTON UTILITY DISTRICT  
STANDARD DETAIL NO. 3**

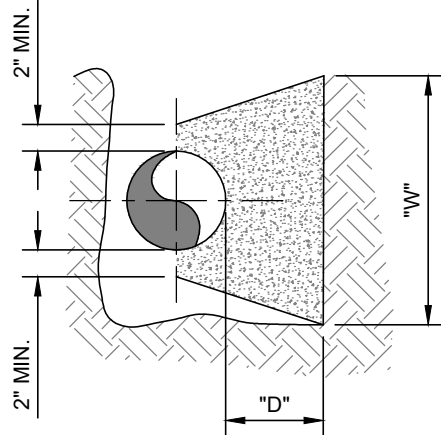
ISSUE DATE :	AUGUST 2018	DRAWN BY :	CCS
SCALE :	NOT TO SCALE	CHECKED BY :	MWB



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**PLUG  
PLAN VIEW**



**TYPICAL SECTION**

TEE							
SIZE	6"	8"	10"	12"	16"	24"	30"
"D"	18"	18"	18"	24"	24"	30"	36"
"L"	19"	25"	31"	38"	50"	75"	93"
"W"	19"	25"	31"	38"	50"	75"	93"
"T"	16"	16"	18"	18"	24"	36"	36"

PLUG							
SIZE	6"	8"	10"	12"	16"	24"	30"
"D"	18"	18"	18"	24"	24"	30"	36"
"L"	19"	25"	31"	38"	50"	75"	93"
"W"	19"	25"	31"	38"	50"	75"	93"
"T"	12"	12"	12"	12"	18"	30"	36"

**NOTES**

1. DEPTH "D" MAY BE GREATER THAN SPECIFIED TO ALLOW WORKING SPACE AGAINST UNDISTURBED EARTH.
2. ALL BOLTS AND FITTINGS MUST BE WRAPPED IN MINIMUM SIX (6) MIL. PLASTIC.
3. LEAVE APPROXIMATELY 12" CLEARANCE BETWEEN CONCRETE AND FITTING BELLS
4. THRUST BLOCK DIMENSIONS BASED ON 150PSI OPERATING PRESSURE AND 50% ADDITIONAL SURGE PRESSURE.
5. SOIL BEARING PRESSURE USED FOR THRUST BLOCK DIMENSIONS SHOWN IS 4000 PSF. IF SOIL SURROUNDING THRUST BLOCK DOES NOT HAVE THIS CAPACITY, ADDITIONAL THRUST BLOCK VOLUME MAY BE REQUIRED.
6. CONCRETE TO BE USED FOR THRUST BLOCKS TO BE 3500PSI CONCRETE.
7. LENGTH (L) AND WIDTH (W) DIMENSIONS CAN BE MODIFIED SLIGHTLY AS LONG AS TOTAL AREA DOES NOT CHANGE, BY WRITTEN DIRECTION OF MUD ONLY TO MEET SITE SPECIFIC CONCERNS.
8. ELEVATION OF GROUNDWATER IS ASSUMED TO BE BELOW BOTTOM OF THRUST BLOCK.

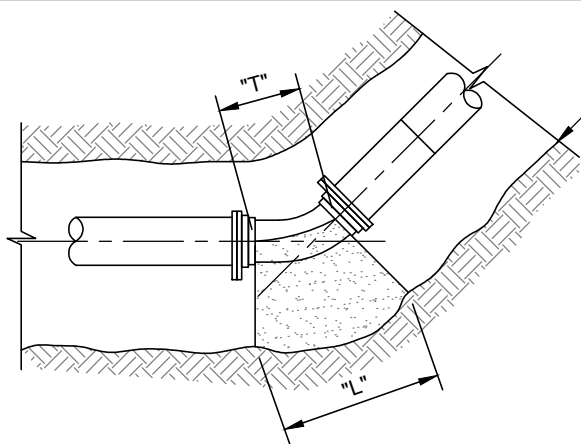
**CONCRETE BLOCKING DETAILS**

**MILCROFTON UTILITY DISTRICT  
STANDARD DETAIL NO. 4**

<b>ISSUE DATE :</b>	<b>AUGUST 2018</b>	<b>DRAWN BY :</b>	<b>CCS</b>
<b>SCALE :</b>	<b>NOT TO SCALE</b>	<b>CHECKED BY :</b>	<b>MWB</b>

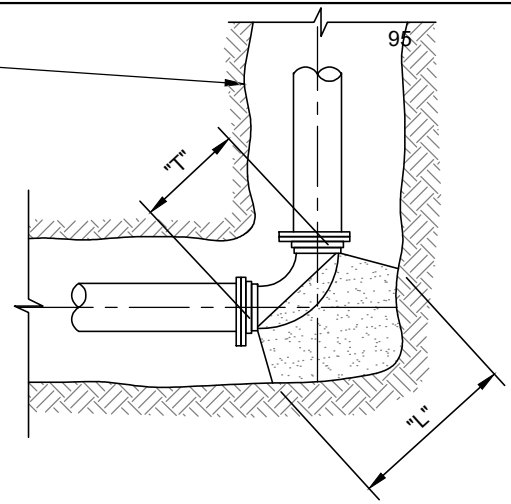


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45° BEND (1/8th)  
 22-1/2° BEND (1/16th)  
 11-1/4° BEND (1/32nd)  
PLAN VIEW

SIDE OF TRENCH



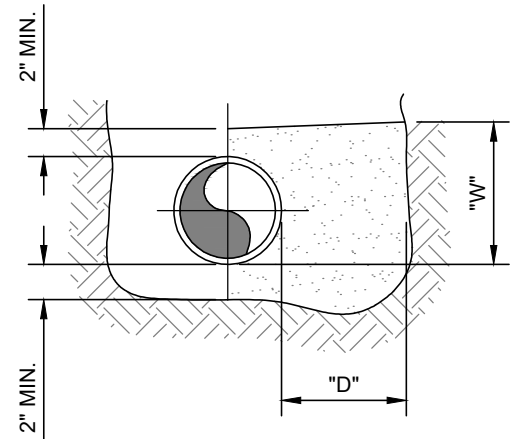
90° BEND (1/4th)  
PLAN VIEW

90° BEND (1/4th)							
SIZE	6"	8"	10"	12"	16"	24"	30"
"D"	18"	18"	18"	24"	24"	30"	36"
"L"	32"	42"	52"	63"	84"	125"	156"
"W"	16"	21"	26"	32"	42"	63"	78"
"T"	16"	16"	18"	18"	24"	36"	36"

45° BEND (1/8th)							
SIZE	6"	8"	10"	12"	16"	24"	30"
"D"	18"	18"	18"	18"	24"	30"	36"
"L"	24"	31"	39"	46"	62"	92"	115"
"W"	12"	16"	20"	23"	31"	46"	58"
"T"	16"	16"	18"	18"	18"	24"	24"

22.5° BEND (1/16th)							
SIZE	6"	8"	10"	12"	16"	24"	30"
"D"	12"	12"	18"	18"	24"	24"	24"
"L"	17"	23"	28"	33"	44"	66"	82"
"W"	9"	12"	14"	17"	22"	33"	41"
"T"	16"	16"	18"	18"	18"	24"	24"

11.25° BEND (1/32nd)							
SIZE	6"	8"	10"	12"	16"	24"	30"
"D"	12"	12"	18"	18"	24"	24"	24"
"L"	12"	16"	20"	24"	32"	47"	59"
"W"	6"	8"	10"	12"	16"	24"	30"
"T"	16"	16"	18"	18"	18"	24"	24"



TYPICAL SECTION

**NOTES**

1. DEPTH "D" MAY BE GREATER THAN SPECIFIED TO ALLOW WORKING SPACE AGAINST UNDISTURBED EARTH.
2. ALL BOLTS AND FITTINGS MUST BE WRAPPED IN MINIMUM SIX (6) MIL. PLASTIC.
3. LEAVE APPROXIMATELY 12" CLEARANCE BETWEEN CONCRETE AND FITTING BELLS
4. THRUST BLOCK DIMENSIONS BASED ON 150PSI OPERATING PRESSURE AND 50% ADDITIONAL SURGE PRESSURE.
5. SOIL BEARING PRESSURE USED FOR THRUST BLOCK DIMENSIONS SHOWN IS 4000 PSF. IF SOIL SURROUNDING THRUST BLOCK DOES NOT HAVE THIS CAPACITY, ADDITIONAL THRUST BLOCK VOLUME MAY BE REQUIRED.
6. CONCRETE TO BE USED FOR THRUST BLOCKS TO BE 3500PSI CONCRETE.
7. LENGTH (L) AND WIDTH (W) DIMENSIONS CAN BE MODIFIED SLIGHTLY AS LONG AS TOTAL AREA DOES NOT CHANGE, BY WRITTEN DIRECTION OF MUD ONLY TO MEET SITE SPECIFIC CONCERNS.
8. ELEVATION OF GROUNDWATER IS ASSUMED TO BE BELOW BOTTOM OF THRUST BLOCK.

**CONCRETE BLOCKING DETAILS**

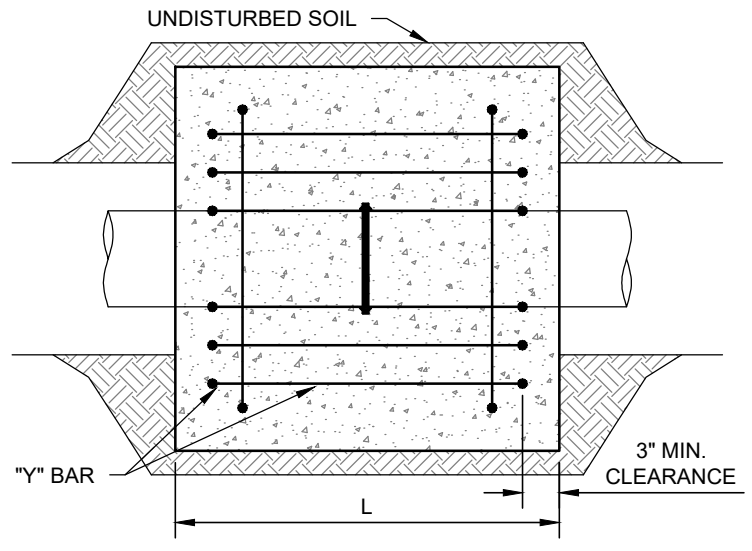
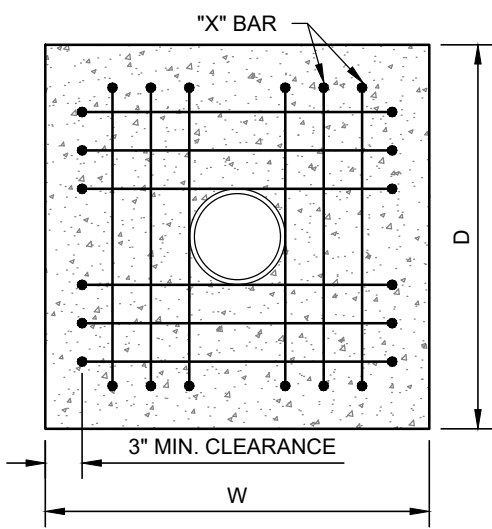
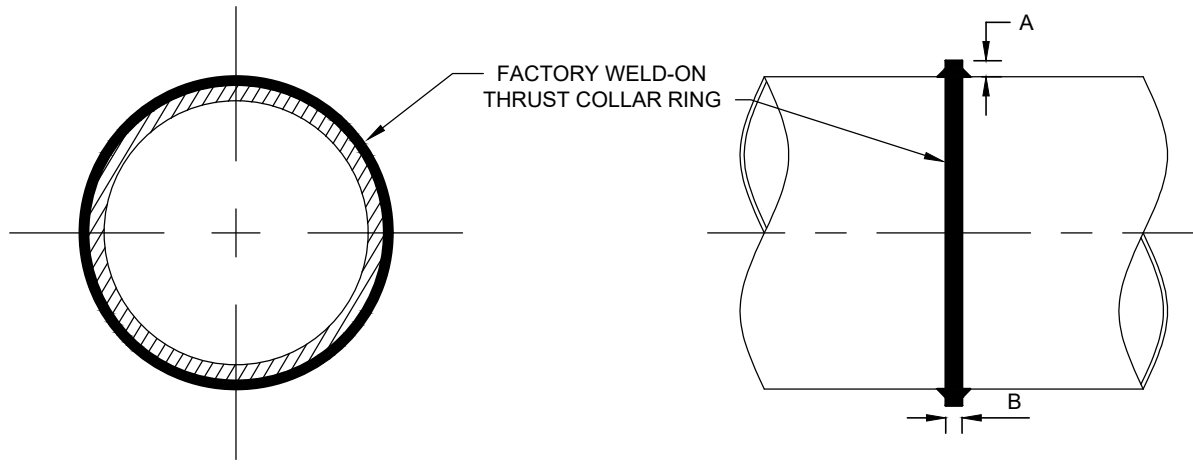
**MILCROFTON UTILITY DISTRICT  
 STANDARD DETAIL NO. 5**

ISSUE DATE : AUGUST 2018      DRAWN BY : CCS

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**NOTES**

1. DEPTH "D" MAY BE GREATER THAN SPECIFIED TO ALLOW WORKING SPACE AGAINST UNDISTURBED EARTH.
2. ALL BOLTS AND FITTINGS MUST BE WRAPPED IN MINIMUM SIX (6) MIL. PLASTIC.
3. LEAVE APPROXIMATELY 12" CLEARANCE BETWEEN CONCRETE AND FITTING BELLS
4. THRUST BLOCK DIMENSIONS BASED ON 150PSI OPERATING PRESSURE AND 50% ADDITIONAL SURGE PRESSURE.
5. SOIL BEARING PRESSURE USED FOR THRUST BLOCK DIMENSIONS SHOWN IS 4000 PSF. IF SOIL SURROUNDING THRUST BLOCK DOES NOT HAVE THIS CAPACITY, ADDITIONAL THRUST BLOCK VOLUME MAY BE REQUIRED.
6. CONCRETE TO BE USED FOR THRUST BLOCKS TO BE 3500PSI CONCRETE.
7. LENGTH (L) AND WIDTH (W) DIMENSIONS CAN BE MODIFIED SLIGHTLY AS LONG AS TOTAL AREA DOES NOT CHANGE, BY WRITTEN DIRECTION OF MUD ONLY TO MEET SITE SPECIFIC CONCERNS.
8. ELEVATION OF GROUNDWATER IS ASSUMED TO BE BELOW BOTTOM OF THRUST BLOCK.
9. THRUST COLLAR RING MUST BE FACTORY WELDED ON BOTH SIDES ALONG BOTH EDGES OF COLLAR AROUND CIRCUMFERENCE.
10. REINFORCING BARS SHALL BE DEFORMED AND TIED TOGETHER.

THRUST COLLAR SIZING							
SIZE	6"	8"	10"	12"	16"	24"	30"
"L"	18"	18"	18"	24"	24"	30"	36"
"D"	19"	25"	31"	38"	50"	75"	93"
"W"	19"	25"	31"	38"	50"	75"	93"
"T"	16"	16"	18"	18"	24"	36"	36"
"A"	2"	2"	2"	2"	2"	3"	4"
"B"	3/8"	3/8"	3/8"	3/8"	3/8"	1/2"	5/8"

REINFORCING REQUIREMENTS						
I.D. PIPE	REBAR SIZE	"X" BAR LENGTH	"X" BAR WEIGHT	"Y" BAR LENGTH	"Y" BAR WEIGHT	NO. REQ'D.
6" - 36"	#5	2'-2" + O.D. PIPE	1.043 LBS/FT	1'-1"	1.1 LBS EACH	X-24, Y-12
48"+	#6	3'-0" + O.D. PIPE	1.502 LBS/FT	1'-3"	1.9 LBS EACH	X-24, Y-12

**THRUST COLLAR DETAILS**

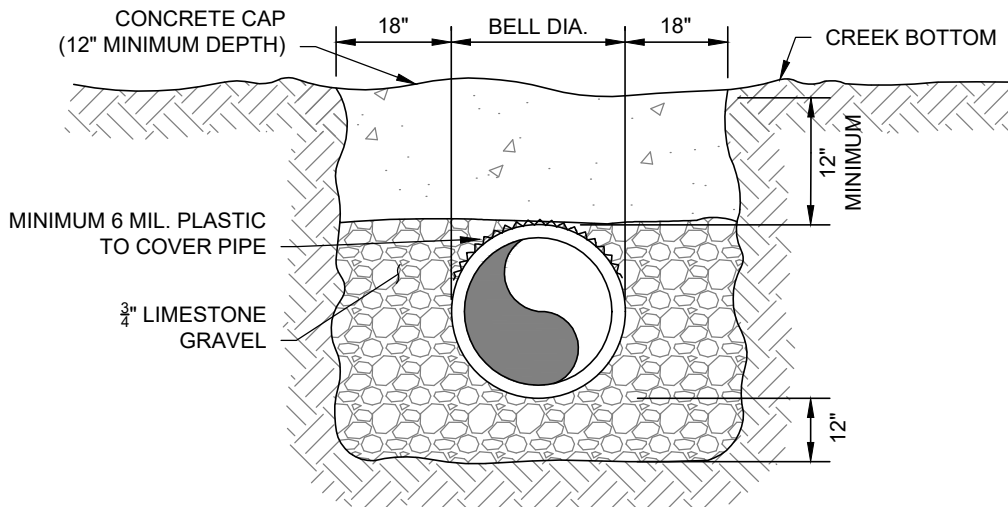
**MILCROFTON UTILITY DISTRICT  
STANDARD DETAIL NO. 5A**

<b>ISSUE DATE :</b> AUGUST 2018	<b>DRAWN BY :</b> CCS
<b>SCALE :</b> NOT TO SCALE	<b>CHECKED BY :</b> MWB

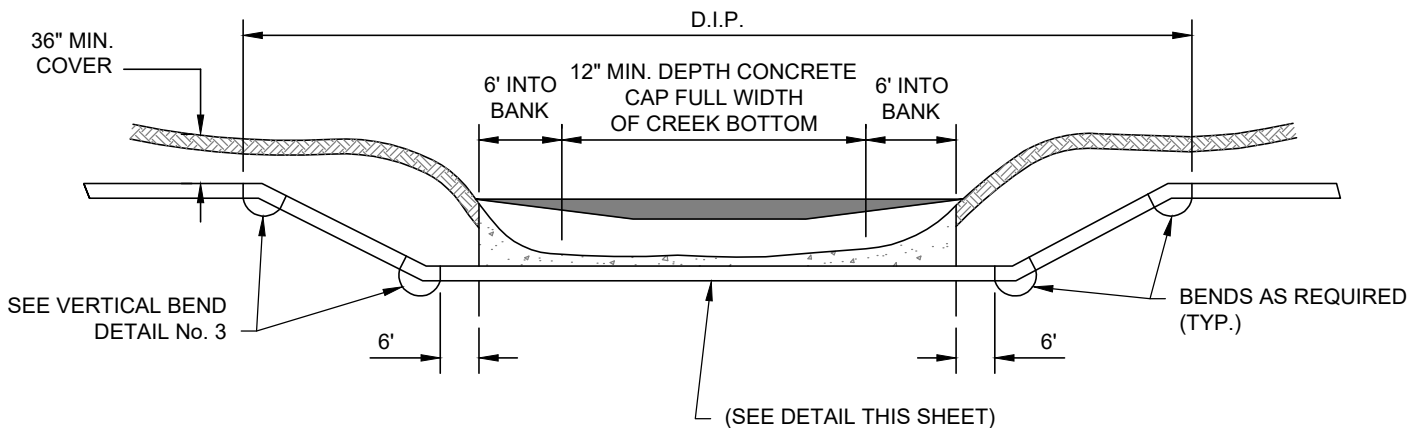


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**TYPICAL SECTION**



**PROFILE**

**NOTES**

1. CONTRACTOR TO FOLLOW PERMIT CONDITIONS FOR ARAP PERMIT AS ISSUED BY TDEC AND NWP PERMIT AS ISSUED BY USACOE.
2. DEVELOPER AND/OR CONTRACTOR IS RESPONSIBLE FOR ENSURING ALL PERMITS HAVE BEEN OBTAINED AND PERMIT REQUIREMENTS ARE FOLLOWED FOR CROSSING OF WATERCOURSES.

**CREEK CROSSING DETAIL**

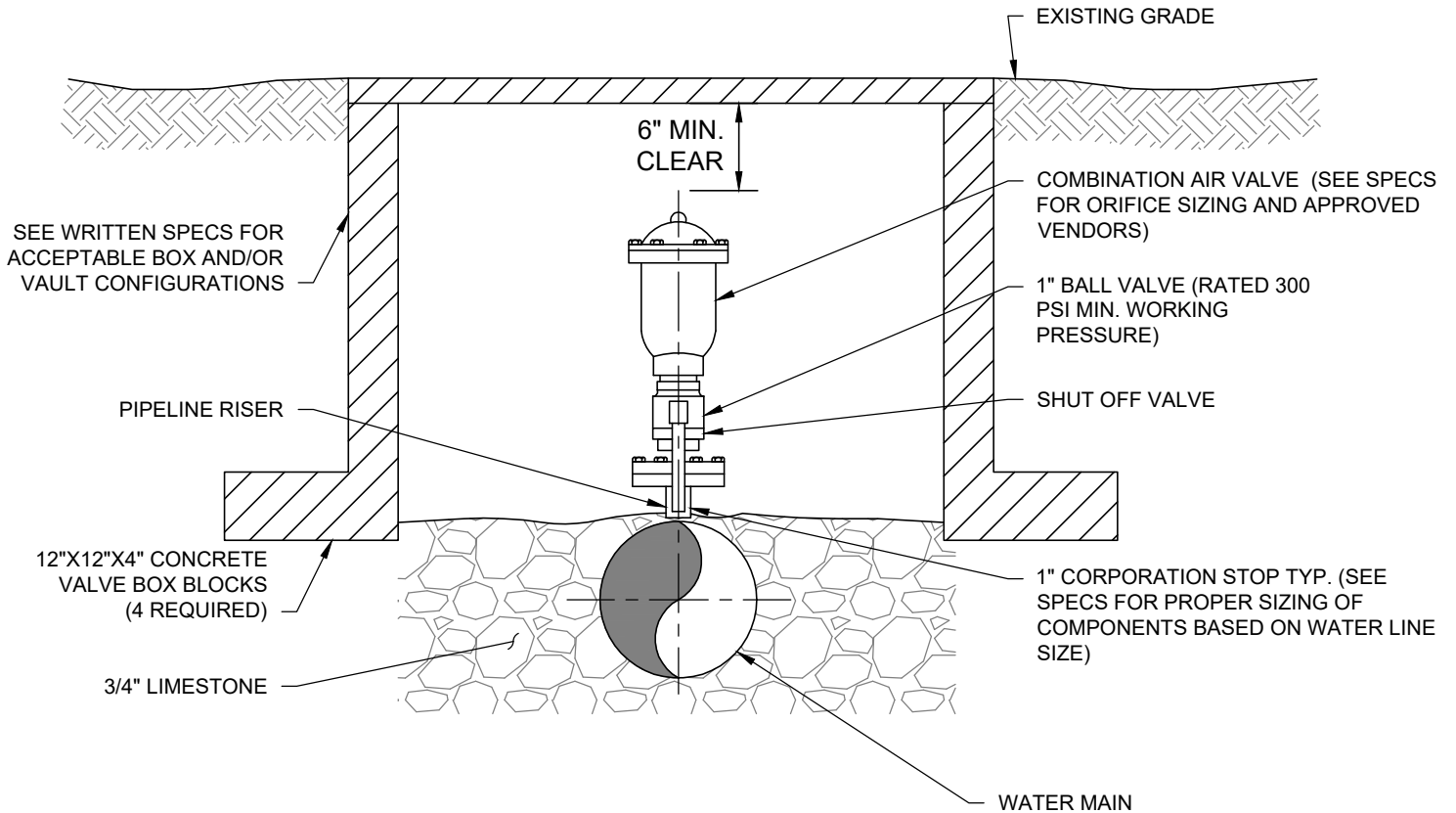
**MILCROFTON UTILITY DISTRICT  
STANDARD DETAIL NO. 6**

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**COMBINATION AIR VALVE**

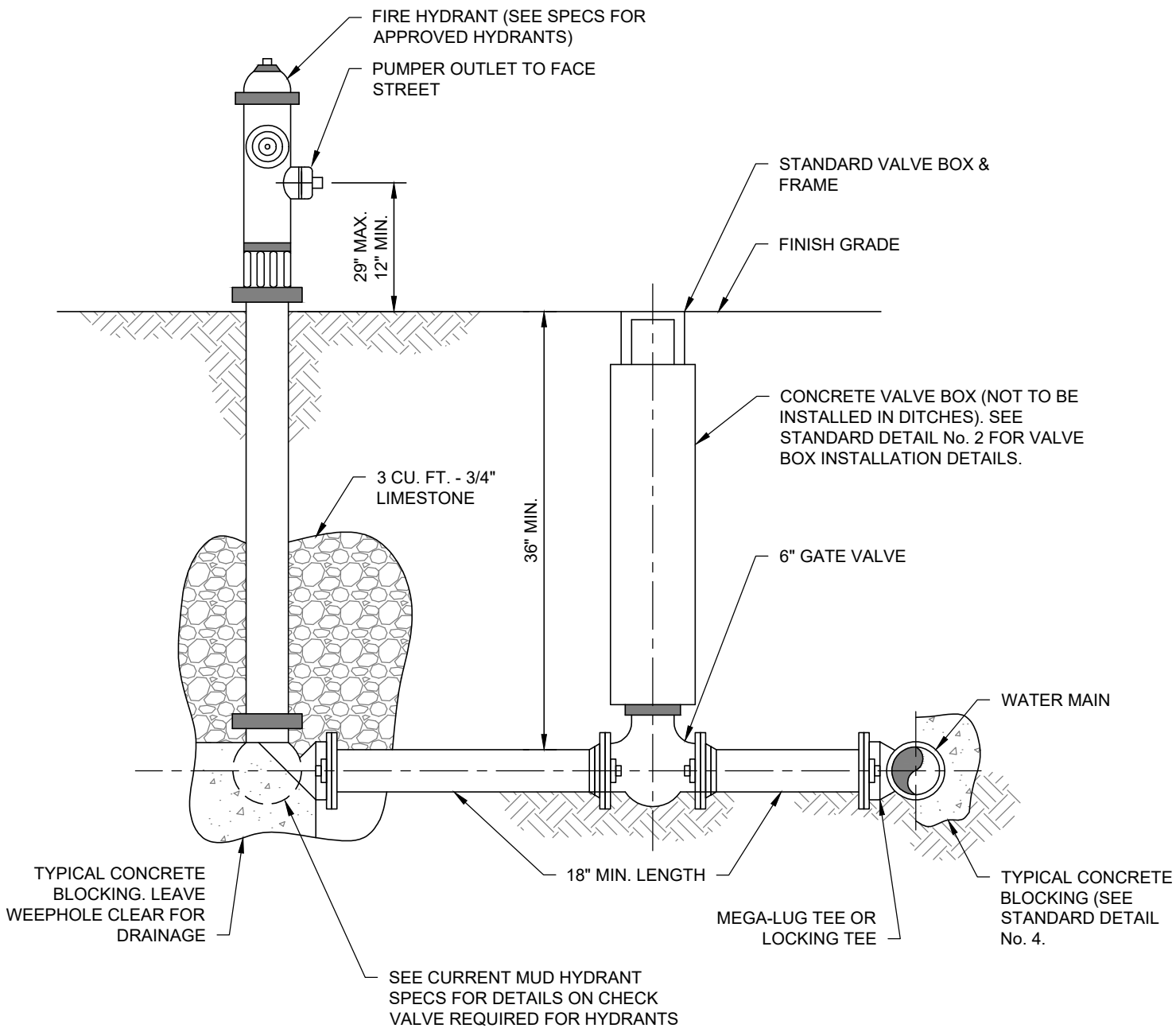
**MILCROFTON UTILITY DISTRICT  
STANDARD DETAIL NO. 7**

**ISSUE DATE :** AUGUST 2018      **DRAWN BY :** CCS

**SCALE :** NOT TO SCALE      **CHECKED BY :** MWB



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**NOTES**

1. FIRE HYDRANT SHALL BE INSTALLED SO THE PUMPER NOZZLE IS POINTED TOWARD THE STREET.
2. ALL M.J. FITTINGS TO INCLUDE MEGA-LUG DEVICES.

**FIRE HYDRANT ASSEMBLY DETAIL**

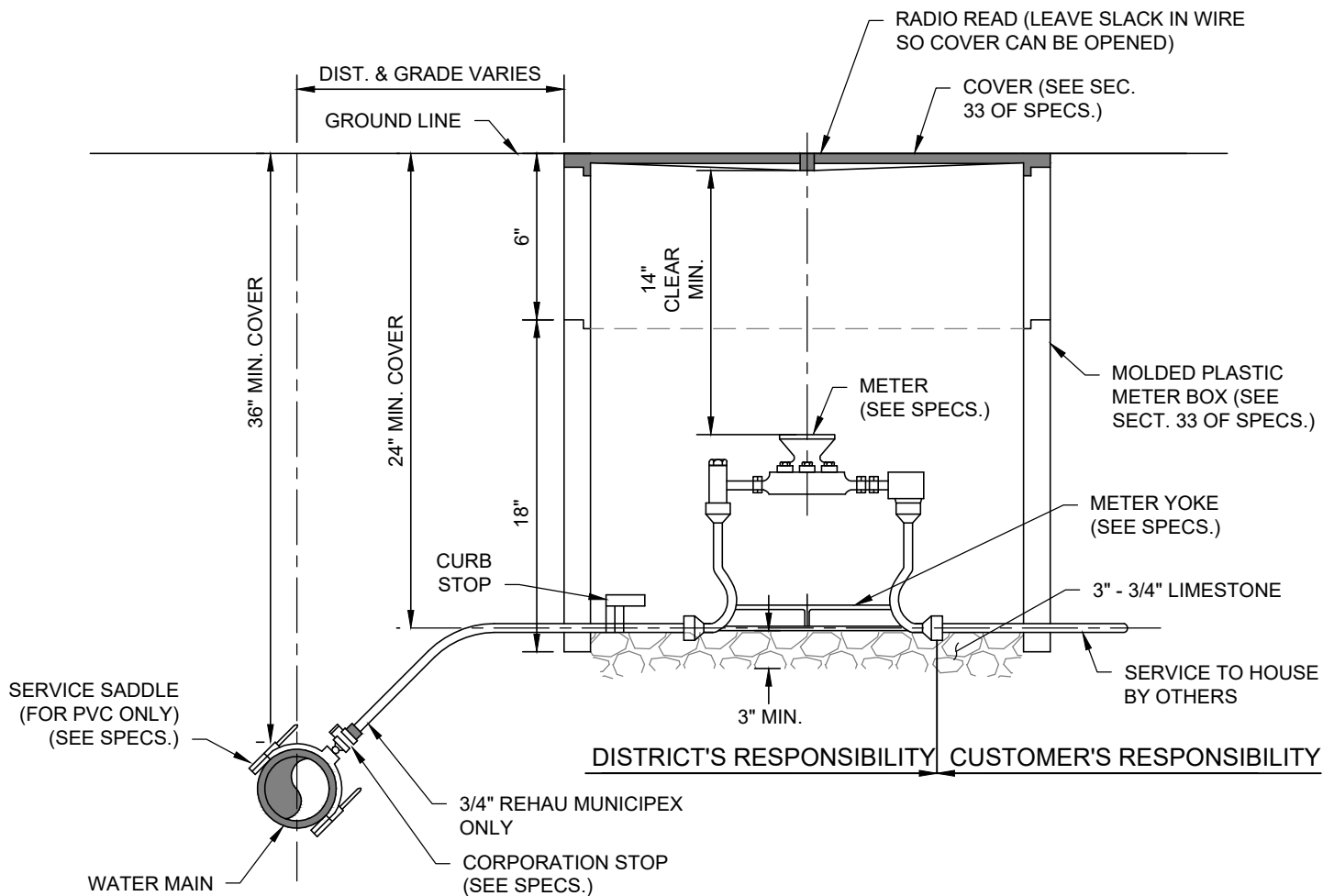
**MILCROFTON UTILITY DISTRICT  
STANDARD DETAIL NO. 8**

ISSUE DATE : AUGUST 2018      DRAWN BY : CCS

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**NOTES**

1. SERVICES UNDER ROADWAY ARE TO BE INSTALLED INSIDE 3" DIA. SCH 40 (WHITE OR BLUE COLOR ONLY) PVC CARRIER PIPE, FROM A POINT 1' BEYOND CORPORATION STOP TO WITHIN 1' OF METER BOX, OR AS DIRECTED/APPROVED BY INSPECTOR.
2. TAP TO BE MADE ON SIDE OF WATER MAIN WITH MUELLER CORPORATION STOP OR APPROVED EQUAL.
3. FOR 3/4" & 1" MUNIPEX CONNECTIONS, PLASTICS INSERTS ONLY ARE PERMITTED.
4. FOR 2" CONNECTIONS, STAINLESS STEEL INSERTS ONLY ARE PERMITTED.
5. STACKED BOXES TO BE SECURED WITH SIX (6) 3" WOOD SCREWS FASTENED AT THE OVERLAPPING CONNECTION SEAM. EACH LONG AND SHORT SIDE OF THE BOX SHALL BE FASTENED WITH TWO (2) AND ONE (1) WOOD SCREW(S) RESPECTIVELY, SECURED FROM THE INSIDE IN AN OUTWARD FACING DIRECTION SO NO SHARP EDGES ARE PROTRUDING INSIDE THE METER BOX.
6. MOUSE HOLES SHALL BE PROVIDED IN LOWER BOX ONLY. THE STACKED UPPER BOX SHALL NOT HAVE MOUSE HOLES.
7. FOR 3/4" METERS: RMB 1324-EXT6-W (BOX)  
RMB 132418-SW-W (BOX)  
RMB 1324L-R (LID)      FOR 1" METERS: RMB 173012-SW-W (BOX)  
RMB 173018-SW-W (BOX)  
RMB 1730L-R (LID)

**STANDARD METER SETTING DETAIL**

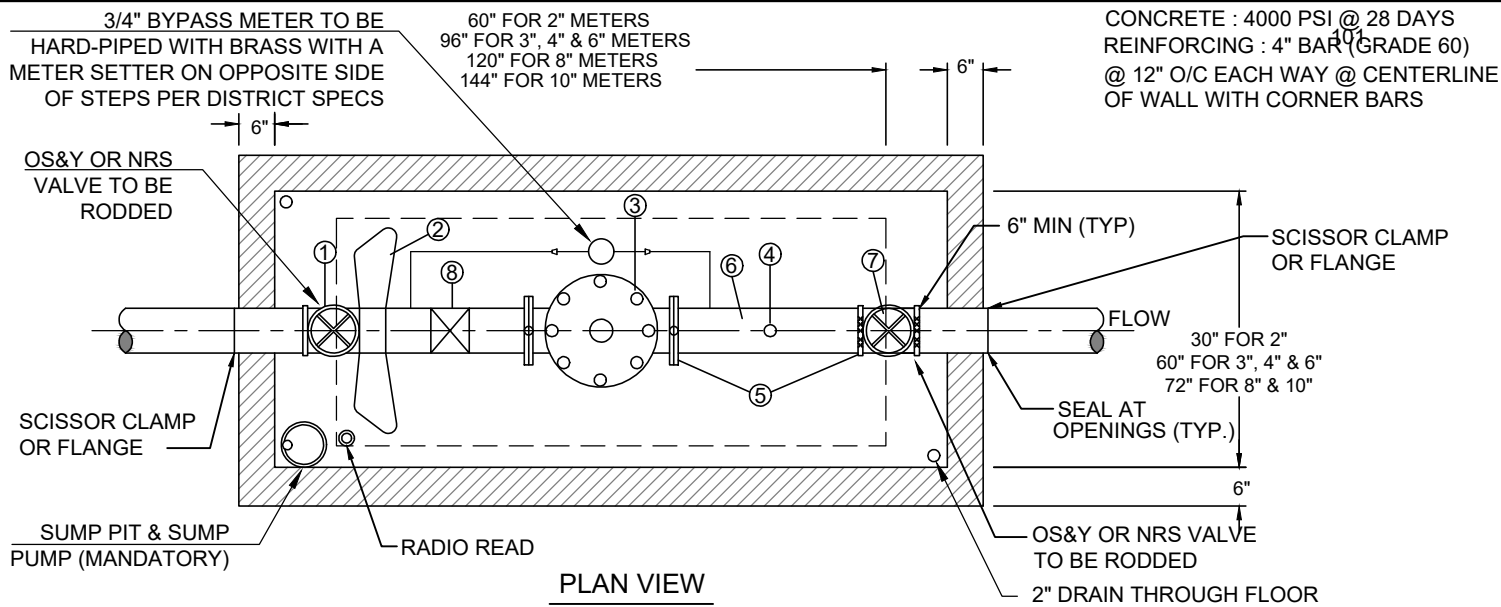
**MILCROFTON UTILITY DISTRICT  
STANDARD DETAIL NO. 9**

ISSUE DATE : AUGUST 2018      DRAWN BY : DT

SCALE : NOT TO SCALE      CHECKED BY : MWB

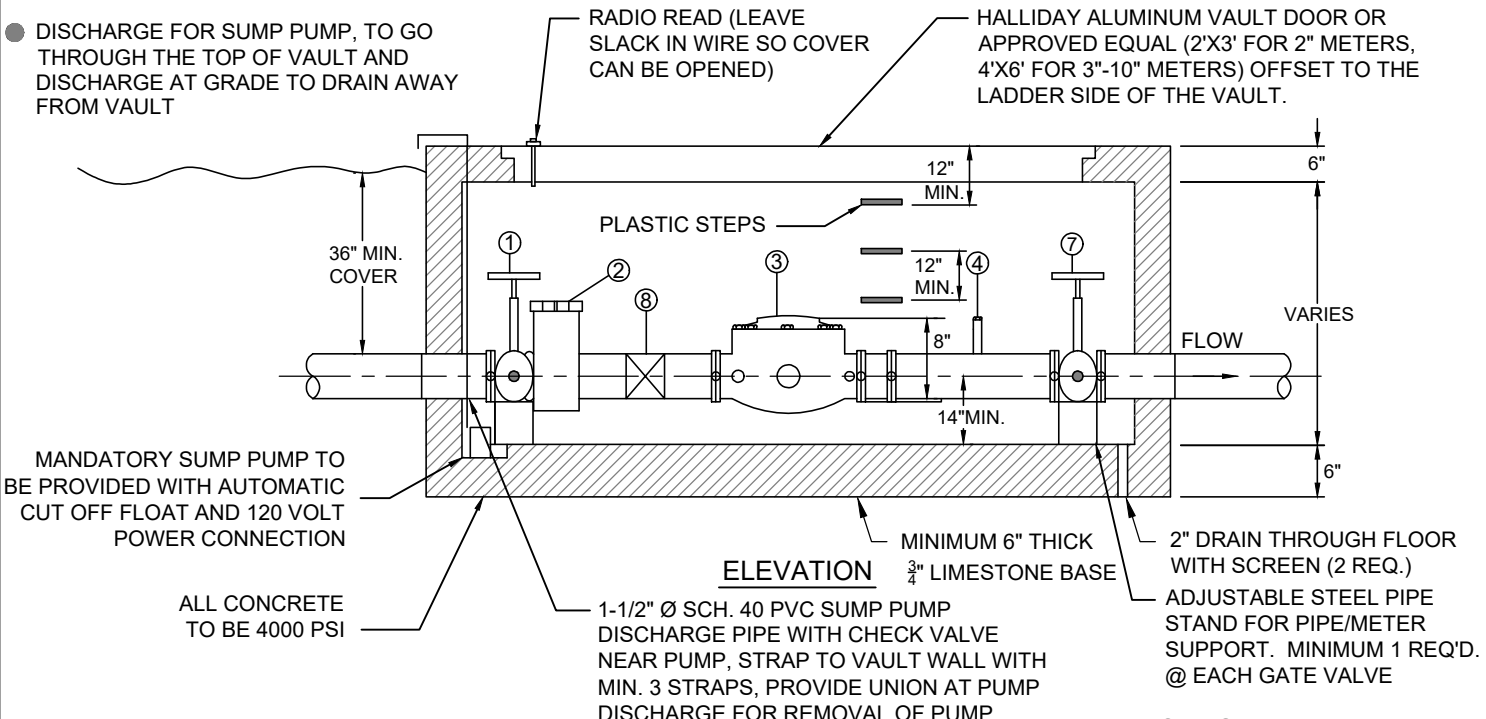


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**PLAN VIEW**

● DISCHARGE FOR SUMP PUMP, TO GO THROUGH THE TOP OF VAULT AND DISCHARGE AT GRADE TO DRAIN AWAY FROM VAULT



**ELEVATION**

**KEY NOTES**

- \* ① OS&Y VALVE OR NRS VALVE W/ HAND WHEEL FOR 3" METERS & LARGER.
  - \*\* ② COMPACT STRAINER
  - ③ ELSTER EVO-Q4 METER FOR 3" METERS & LARGER
  - \* ④ 2" TEST PORT ASSEMBLY (BRASS) W/2" RISER, 2" BALL VALVE & 2" PLUG
  - ⑤ FLANGE COUPLING ADAPTOR W/ SET SCREWS
  - ⑥ SPOOL BY PLAIN PIECE. MIN. 10"
  - \* ⑦ OS&Y VALVE OR NRS VALVE W/ HAND WHEEL FOR 3" METERS & LARGER.
  - ⑧ CHECK VALVE (SEE NOTE No. 1)
- \* BALL VALVE FOR 2" METERS ONLY      \*\* STRAINER NOT REQUIRED FOR 2" METERS ONLY

**NOTES:**

1. IF CHECK VALVE IS NOT SUPPLIED WITH METER, THEN ONE IS REQUIRED.
2. SUMP PUMP TO BE MINIMUM 1/3 H.P. MYERS MC1033 (OR APPROVED EQUAL) AS MANUFACTURED BY PENTAIR W/ FLOAT SWITCH. CONTRACTOR TO ENSURE SUMP DIAMETER IS LARGE ENOUGH TO ACCOMODATE PUMP.

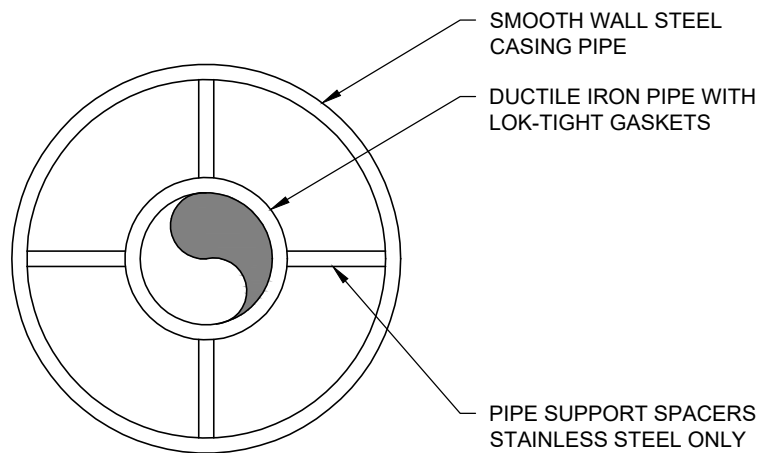
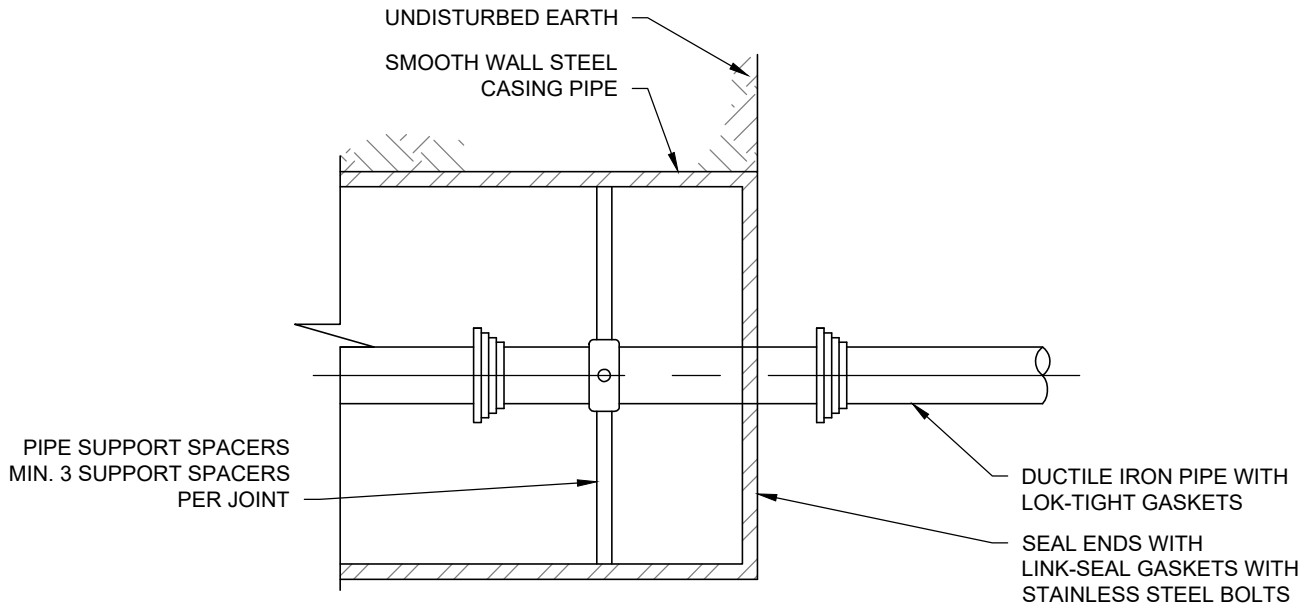
**2" - 10" COMPOUND METER SETTING**

**MILCROFTON UTILITY DISTRICT  
STANDARD DETAIL NO. 10**

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**NOTE**

1. CASING PIPE MATERIAL MUST MEET ALL DISTRICT, COUNTY, CITY OF BRENTWOOD/FRANKLIN, RAILROAD, AND/OR TDOT SPECIFICATIONS.

**WATER LINE CASING DETAIL**

**MILCROFTON UTILITY DISTRICT  
STANDARD DETAIL NO. 11**

ISSUE DATE : AUGUST 2018

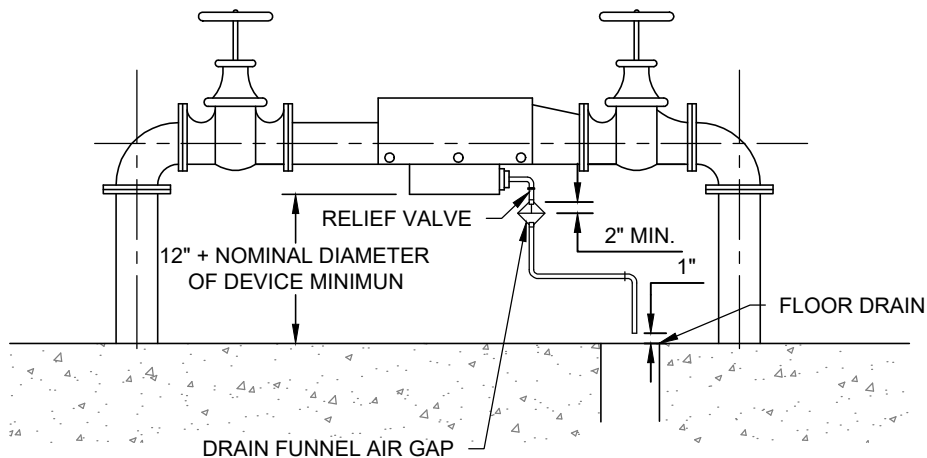
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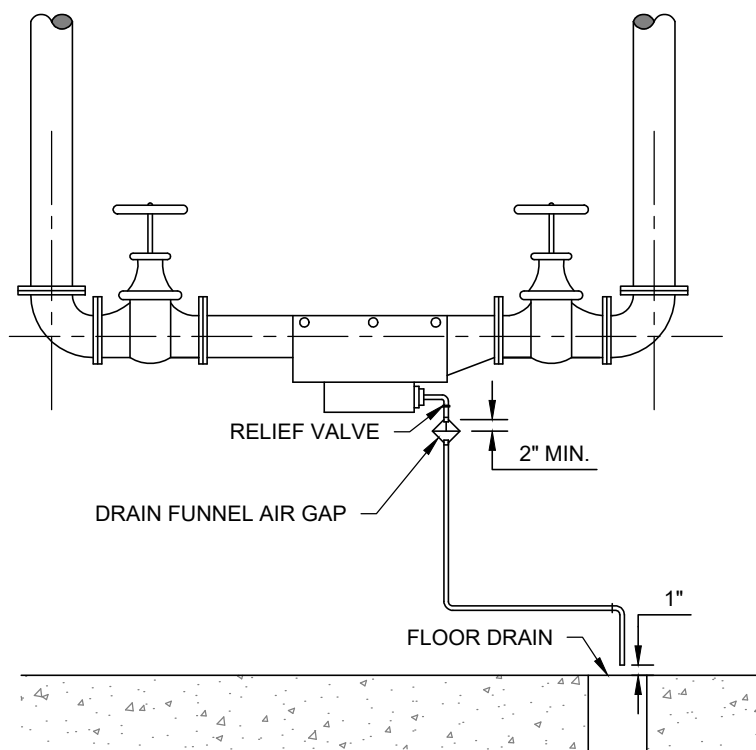
CHECKED BY : MWB



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**STANDARD INSTALLATION**



**ALTERNATE INSTALLATION**

**NOTE**

1. 3/4" RADIO READ BYPASS METER REQUIRED. METER TO BE LOCATED OUTSIDE IN FIRE METER VAULT UNLESS OTHERWISE APPROVED BY THE DISTRICT.

**BACKFLOW PREVENTER - INDOOR  
INSTALLATION STANDARD DETAIL  
(DOUBLE CHECK BACKFLOW PREVENTER)**

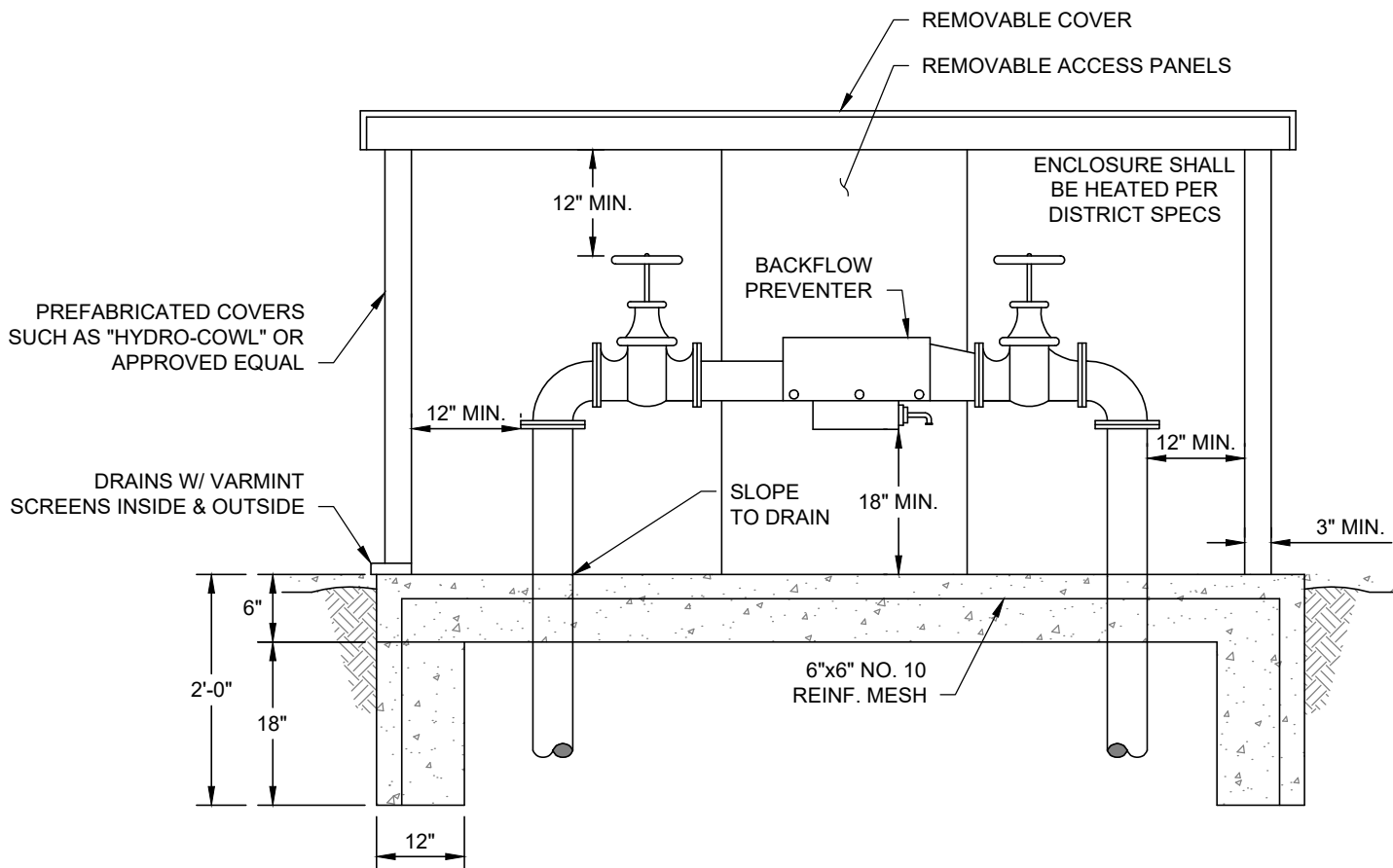
**MILCROFTON UTILITY DISTRICT  
STANDARD DETAIL NO. 12**

ISSUE DATE : AUGUST 2018      DRAWN BY :      CCS

SCALE : NOT TO SCALE      CHECKED BY :      MWB



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**NOTE**

1. COVERS SHALL HAVE A GALVANIZED STEEL LINING WITH HIGH PERFORMANCE CLOSED CELL INSULATION WHICH WILL NOT READILY ABSORB WATER.
2. THIS DRAWING INDICATES MINIMUM INSIDE DIMENSIONS FOR CLEARANCE AND ACCESS ONLY. THE TYPE OF OUTSIDE FINISH IS OPTIONAL WITH OWNER.
3. 3/4" RADIO READ BYPASS METER REQUIRED. LOCATION OF METER TO BE APPROVED BY DISTRICT.

**BACKFLOW PREVENTER - OUTDOOR INSTALLATION  
STANDARD DETAIL  
(DOUBLE DETECTOR CHECK BACKFLOW PREVENTER)**

**MILCROFTON UTILITY DISTRICT  
STANDARD DETAIL NO. 13**

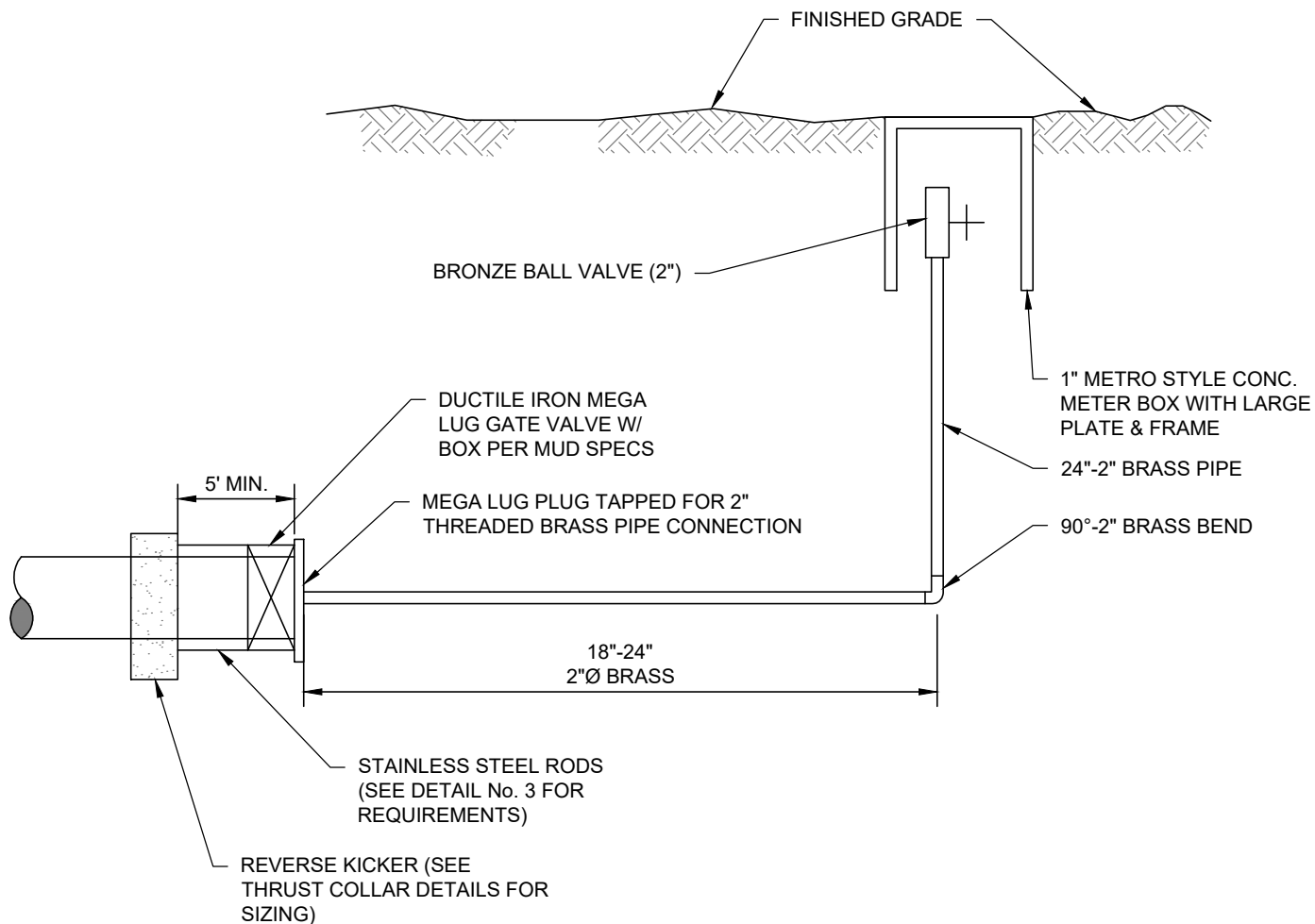
ISSUE DATE : AUGUST 2018      DRAWN BY : CCS

SCALE : NOT TO SCALE      CHECKED BY : MWB



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**BLOW OFF DETAIL**

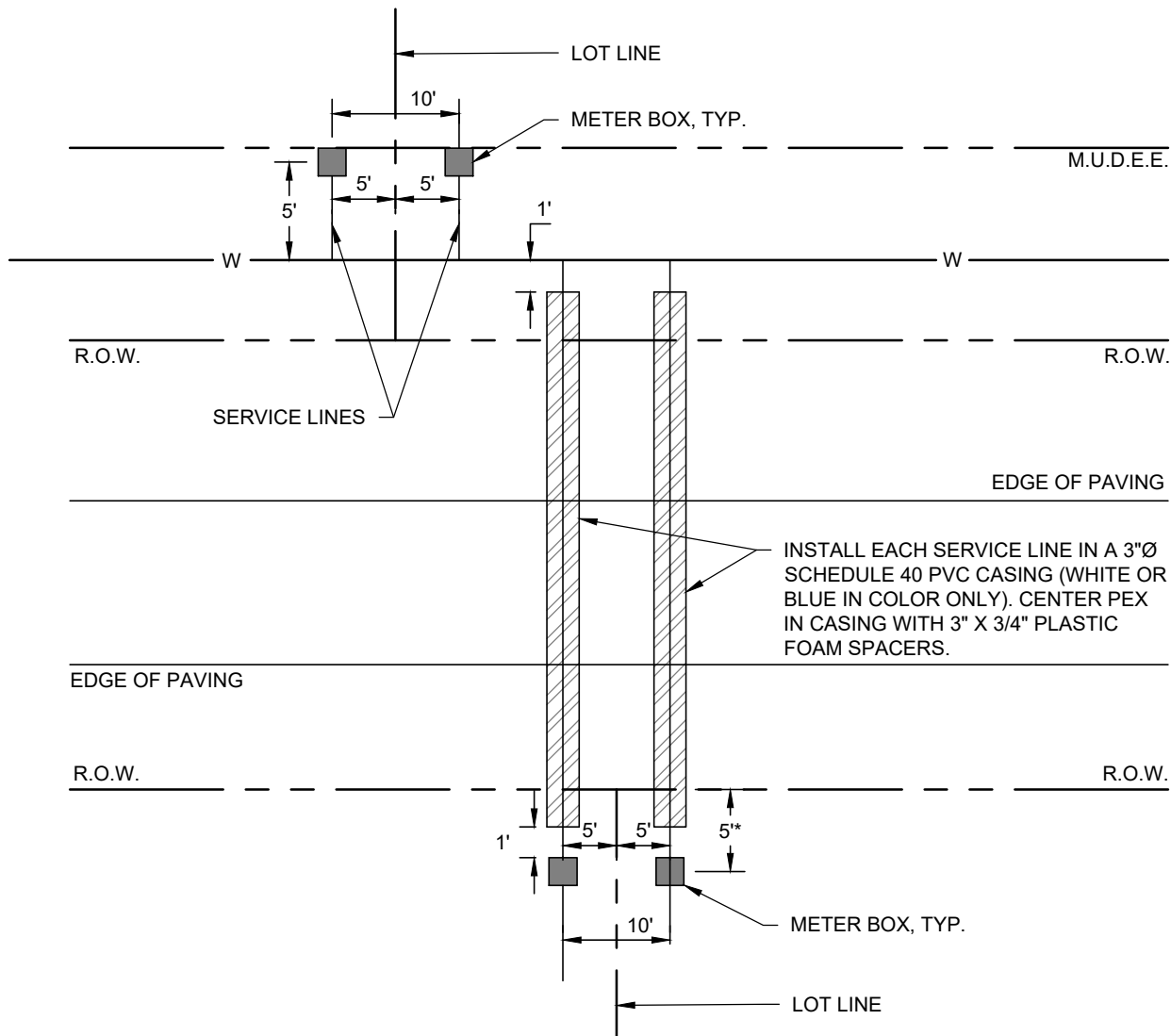
**MILCROFTON UTILITY DISTRICT  
STANDARD DETAIL NO. 14**

ISSUE DATE : AUGUST 2018      DRAWN BY :      CCS

SCALE : NOT TO SCALE      CHECKED BY :      MWB



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**NOTES**

1. SEE APPROVED CONSTRUCTION PLANS FOR FINAL LOCATIONS OF WATER SERVICE LINES AS THEY MAY VARY FROM TYPICAL DETAIL DUE TO LOT/BUILDER REQUIREMENTS.
2. \*VALVE BOX LOCATION MAY VARY DEPENDING ON ACTUAL SITE AND EASEMENT CONDITIONS. CONTRACTOR TO REFER TO APPROVED CONSTRUCTION DRAWINGS AND CONFIRM WITH INSPECTOR PRIOR TO INSTALLATION.

**WATER SERVICE LINE DETAIL (TYP.)**

**MILCROFTON UTILITY DISTRICT  
STANDARD DETAIL NO. 15**

ISSUE DATE : AUGUST 2018      DRAWN BY : CCS

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**BEFORE THE UTILITY MANAGEMENT REVIEW BOARD**

**HIGHLANDS AT LADD PARK** )  
**HOMEOWNERS ASSOCIATION, INC.,** )  
) )  
**Complainant,** )  
) )  
**v.** )  
) )  
**MILCROFTON UTILITY DISTRICT OF** )  
**WILLIAMSON COUNTY, TENNESSEE,** )  
) )  
**Respondent.** )

**BRIEF OF RESPONDENT MILCROFTON UTILITY DISTRICT  
OF WILLIAMSON COUNTY, TENNESSEE**

Respondent Milcrofton Utility District of Williamson County, Tennessee (“Milcrofton”), hereby submits this brief opposing the complaint filed by Highlands at Ladd Park Homeowners Association, Inc. (“Ladd Park HOA”).

**INTRODUCTION**

Milcrofton requires customers with lawn irrigation, swimming pools, and other “cross-connections” to the public water system to install backflow prevention devices. Milcrofton tests the devices annually. Where customers have installed the devices next to their homes, it has caused misunderstandings and dangerous situations when Milcrofton personnel came to perform tests. For example, a single Milcrofton employee has been confronted two different times by a homeowner with a firearm. Milcrofton reasonably responded to this problem by requiring customers, going forward, to install backflow prevention devices near the street. Ladd Park HOA has filed a complaint with the Utility Management Review Board pursuant to Tenn. Code Ann. § 7-82-702(a)(9), but this statute does not pertain to the situation at hand or allow the UMRB to grant relief. The UMRB should dismiss the complaint or, alternatively, find that

Milcrofton's requirements are just and reasonable.

### **BACKGROUND**

Milcrofton is a water utility district organized under the Utility District Law of 1937, Tenn. Code Ann. § 7-82-101, *et seq.* Mike Jones Affidavit ¶ 2. In accordance with regulations by the Tennessee Department of Environment and Conservation ("TDEC"), *see* Tenn. Comp. R. & Regs. 0400-45-01-.17(6), Milcrofton has an ongoing program to detect and control "cross-connections" between Milcrofton's public water system and other systems, such as lawn irrigation and swimming pools. Mike Jones Affidavit ¶ 3. These other systems may have chemicals and other contaminants that flow into the public water system, creating a public health hazard. *Id.*

For many years, Milcrofton's program has required customers with cross-connections to install a backflow prevention device on the customers' side of the water meter. *Id.* ¶ 4. The device must be tested regularly to ensure that it works. *Id.* Milcrofton uses its own personnel to test customers' backflow prevention devices. *Id.*

Testing devices near customers' homes has led to serious incidents. *Id.* ¶ 5. On two separate occasions, a Milcrofton employee named Samuel Jones was confronted by a homeowner with a firearm during a test. Samuel Jones Affidavit ¶ 4.

The first incident occurred in the Breckenridge Subdivision. *Id.* ¶ 5. The employee was testing a device immediately beside a home. *Id.* A man came out of the home, pointed a shotgun at the employee, and asked what he was doing. *Id.*

The second incident occurred in the King's Chapel Subdivision. *Id.* ¶ 6. The employee was testing a device that was located near a home but not immediately beside it. A dog started barking, and then a man came out of the home holding a pistol. *Id.* The employee explained that

he was with Milcrofton and was testing the backflow prevention device. *Id.* The man said something to the effect that he would shoot the employee next time. *Id.*

In each of the two incidents described above, the employee was clearly identified as a Milcrofton employee. *Id.* ¶ 7. He arrived at the home in a truck with the Milcrofton logo, wore clothing with the Milcrofton logo, and also wore a neon reflective safety vest. *Id.*

On several other occasions, people have confronted this employee angrily while he was testing backflow prevention devices near their homes. *Id.* ¶ 8. A dog has also chased him away from a home during a test. *Id.* ¶ 9.

These incidents and others like them caused Milcrofton to reevaluate its cross-connection program to help ensure safety. Mike Jones Affidavit ¶ 5. Milcrofton chose to follow a rule from First Utility District of Knox County, Tennessee, which provides, “Backflow prevention assemblies for irrigation systems shall be installed at a distance no greater than 5’ from First Utility water meter being within utility easement or road right of way.” *Id.* ¶ 19, Ex. D.

On January 22, 2020, Milcrofton updated its Cross-Connection Manual and technical specifications to require a backflow prevention device to be located within five feet of a customer’s water meter box (“the Original Location Rule”). *Id.* ¶¶ 6-7. Milcrofton sent the updated Cross-Connection Manual and the specifications with the Original Location Rule to TDEC, and TDEC sent back a letter of approval. *Id.* ¶ 8, Ex. A.

On September 23, 2020, at the request of a customer, Milcrofton’s Board of Commissioners decided to relax the Original Location Rule. *Id.* ¶ 9. The Board of Commissioners voted “to allow the backflow prevention device to be installed up to 5 feet from the meter box anywhere across the property frontage (laterally) within the property lines as long as it does not exceed a distance of 5 feet behind the meter box” (“the Revised Location Rule”).

*Id.* Also on September 23, 2020, the technical specifications were revised to reflect the Revised Location Rule. *Id.* ¶ 10.

Ladd Park HOA submitted a letter of complaint to the Board of Commissioners over the Revised Location Rule. When the Board of Commissioners failed to take action on the letter, Ladd Park HOA filed its UMRB complaint pursuant to Tenn. Code Ann. § 7-82-702(a)(9). *See* Informal Hearing Form.

Developers like The Jones Company of Tennessee, L.L.C. and Propst Realty Nashville, LLC have developed different sections of The Highlands at Ladd Park PUD Subdivision and arranged for water service from Milcrofton. Mike Jones Affidavit ¶ 13. Ladd Park HOA manages common areas and amenities in The Highlands at Ladd Park PUD Subdivision that were created by the developers. *Id.* ¶ 14.

Ladd Park HOA itself is not a developer. *Id.* Its charter describes it as a non-profit corporation that exists “solely to provide for the acquisition, construction, management, maintenance and care of association property and activities; and generally to engage in any other lawful endeavor or activity in furtherance of the foregoing.” *Id.* ¶ 15, Ex. B.

Ladd Park HOA is a customer of Milcrofton, paying for water service to the aforementioned common areas and amenities in The Highlands at Ladd Park PUD Subdivision. *Id.* ¶ 16. However, Ladd Park HOA has never been subject to either the Original Location Rule adopted on January 22, 2020, or the Revised Location Rule adopted on September 23, 2020. *Id.* ¶ 17. All of Ladd Park HOA’s backflow prevention devices were installed prior to January 22, 2020. *Id.* Milcrofton has never applied or threatened to apply the Original Location Rule or the Revised Location Rule retroactively to devices that were already installed. *Id.*

## ARGUMENT

### I. THE UMRB DOES NOT HAVE AUTHORITY TO ACT ON THIS COMPLAINT

The Utility District Law of 1937 gives the UMRB limited oversight over utility districts.

The statute invoked by Ladd Park HOA provides:

(a) In order to effectuate the purposes of this part, the board has the power and authority to:

\* \* \*

(9) Review and conduct an informal hearing of any decision of any utility district upon a written request of **any utility district customer or an affected developer concerning the justness and reasonableness of the utility district's requirement that the customer or the developer build utility systems to be dedicated to the utility district or the justness and reasonableness of fees or charges against the customer or the developer related to the utility systems.** The written complaint must be filed within thirty (30) days after the utility board has taken action upon a written complaint to the board of commissioners of the utility district. In making its decision as to whether the requirements, fees, or charges are just and reasonable, the utility management review board shall take into account the reasonableness of the utility district's rules, policies, and cost of service as well as any evidence presented during the hearing. Any judicial review of any decision of the board will be held by common law certiorari within the county in which the hearing was held[.]

Tenn. Code Ann. § 7-82-702(a)(9) (emphasis added).

By its plain terms, this statute only allows review by the UMRB when a utility district requires “the customer or the developer” at issue to “build utility systems to be dedicated to the utility district.” Counsel for the UMRB has noted these limitations:

Ladd Park seems to request that the Board require the District to rescind its policy pertaining to backflow preventers and require the District to provide public notice and public comment prior to enacting a new policy on the issue.

\* \* \*

Please be aware that Tenn. Code Ann. § 7-82-702(a)(9) limits the Board's review to whether a utility district's requirement that a customer build utility systems is reasonable and just. Accordingly, the Board will

consider only this issue, and the Board is not authorized to impose any remedy other than a determination on the issue and if necessary, a remand back to the District to adjust its practices accordingly.

Letter from Rachel Buckley to Chad Holmes at 1-2, Dec. 3, 2020.<sup>1</sup>

Ladd Park HOA does not have the right to a hearing in this case. Ladd Park HOA is a homeowners association, not a developer. Mike Jones Affidavit ¶¶ 13-15. Although Ladd Park HOA is a Milcrofton customer, it has never been subject to Milcrofton’s rules concerning the location of backflow prevention devices. *Id.* ¶ 17. Ladd Park HOA does not have standing to assert legal claims on behalf of other Milcrofton customers who were affected by the rules. *See In re Jeremiah N.*, No. E2016-00371-COA-R3-PT, 2017 WL 1655612, at \*15 (Tenn. Ct. App. May 2, 2017) (“To have standing, a party must assert his or her own legal rights and not those of third parties.”).

Furthermore, Milcrofton’s rules do not require anyone to “build utility systems to be dedicated” to Milcrofton. Mike Jones Affidavit ¶ 11. “Dedication” is the process by which a private party gives property to a governmental entity for public use. *See, e.g., State ex rel. Matthews v. Metro. Gov’t of Nashville & Davidson Cnty.*, 679 S.W.2d 946, 948-49 (Tenn. 1984). If a customer is required to have a backflow prevention device, the customer owns and maintains it. Mike Jones Affidavit ¶ 11. Milcrofton merely tests the device periodically to make sure it works, in order to guard against contamination of the public water system. *Id.*

Because Ladd Park HOA’s complaint does not fit within the parameters of the statute, the UMRB cannot exercise review.

It is a fundamental rule of law that the departments, agencies, and commissions of government have no inherent or common-law power of their own. They are purely creatures of statute. Accordingly,

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<sup>1</sup> Counsel to the UMRB determined that the UMRB has jurisdiction over this matter because Ladd Park HOA filed its complaint within the statutory deadline. No determination was made that Ladd Park HOA has a valid complaint or that the UMRB can act upon it.



governmental agencies have only those powers expressly granted by statute and those powers required by necessary implication to enable them to fulfill their statutory mandate. Actions taken by a governmental agency without the required authority are nullities.

*McFarland v. Pemberton*, 530 S.W.3d 76, 91 (Tenn. 2017) (quoting *State ex rel. Comm'r of Transp. v. Med. Bird Black Bear White Eagle*, 63 S.W.3d 734, 768-69 (Tenn. Ct. App. 2001)).

## II. MILCROFTON'S RULE IS JUST AND REASONABLE

As discussed above, Tenn. Code Ann. § 7-82-702(a)(9) does not give the UMRB free-ranging authority to review any utility district rule or policy. The statute only allows the UMRB to determine whether certain requirements for the building and dedication of utility systems are just and reasonable. Ladd Park HOA is complaining about a different type of rule that did not even affect Ladd Park HOA.

If the UMRB chooses to proceed, anyway, then it should “take into account the reasonableness of the utility district’s rules, policies, and cost of service as well as any evidence presented during the hearing.” *See* Tenn. Code Ann. § 7-82-702(a)(9).

Milcrofton’s Original Location Rule was just and reasonable, and the Revised Location Rule is even more so. Customers own their backflow preventing devices, but state law gives Milcrofton the responsibility “to detect and eliminate or protect the system from hazards associated with cross-connections.” *See* Tenn. Comp. R. & Regs. 0400-45-01-.17(6)(b)(1)-(2). Milcrofton could eliminate cross-connections by simply prohibiting customers from attaching their plumbing to lawn irrigation, swimming pools, and the like. Many communities would vehemently oppose such a drastic rule. Instead of flatly prohibiting cross-connections, Milcrofton requires backflow prevention devices and annual testing.

Milcrofton has legitimate safety concerns about testing devices near people’s homes. Testing requires a Milcrofton employee to go to the device physically and stand next to it.

Samuel Jones Affidavit ¶ 3. If a device sits next to a home, a Milcrofton employee has to go there. In recent years, this has led to two frightening confrontations with firearms. *Id.* ¶¶ 4-6. These are just the most extreme incidents. *See id.* ¶¶ 8-9 (describing other incidents with homeowners and a dog). Employee Samuel Jones states, “Going near people’s homes to test backflow prevention devices makes me concerned for my safety. I could be bitten by a dog, shot by a homeowner, or reported to the police.” *Id.* ¶ 10.

These concerns prompted Milcrofton to impose the Original Location Rule requiring devices to be located within five feet of the meter box. Mike Jones ¶¶ 5-7. The meter box is typically located near the street, so employees would not have to intrude very far into the customer’s property to perform backflow testing.

Milcrofton paid attention to the views of its customers, and it responded. At a customer’s request, Milcrofton adopted the Revised Location Rule, allowing customers to choose anywhere along the road frontage to place a device, as long as it is no farther than five feet behind the meter box. *Id.* ¶¶ 9-10.

To avoid creating an undue hardship, Milcrofton has not applied the Original Location Rule or the Revised Location Rule retroactively. *Id.* ¶ 17. Customers have not had to relocate their devices, unless the devices were installed in violation of the rules.

“Ladd Park HOA does not dispute the need to ensure employee safety.” Informal Hearing Form, Supporting Statement at 2. However, it alleges that placing a device in the area designated by the Revised Location Rule may create a “tripping hazard in the middle of the homeowner’s yard,” a greater likelihood of damage from a lawnmower, or bad aesthetics. *Id.* Milcrofton takes these concerns seriously, but they are not as compelling as the safety concerns that motivated Milcrofton to adopt its rules. Whereas Milcrofton has a history of dealing with

angry homeowners and dogs, Ladd Park HOA has not documented a single instance of someone tripping over a device or damaging it with a lawnmower. Furthermore, the device does not have to go “in the middle of the homeowner’s yard”; the Revised Location Rule lets the customer choose the exact spot. With regard to aesthetics, a customer can put the device on the side of the property or put visual barriers around the device. In the end, a customer has the option of not irrigating or installing a pool if the backflow prevention device is too unattractive.

Milcrofton does not have another, easy solution to the problem. Its employees already identify themselves as utility workers with logos and neon vests, but that did not prevent homeowners from brandishing guns. *See* Samuel Jones Affidavit. ¶ 7. Milcrofton also notifies customers by mail when it will be performing tests. Mike Jones Affidavit ¶ 18. However, it cannot spend much time on individual communication with customers. Milcrofton performs more than 3,000 tests each year between April and September. *Id.* To schedule appointments for so many tests, it would have to hire numerous additional employees or independent contractors. *Id.*

Finally, Milcrofton followed the example of another highly respected utility district, First Utility District of Knox County, which also requires devices to be located within five feet of the meter. *Id.* ¶ 19. With the adoption of the Revised Location Rule, Milcrofton now gives customers more flexibility in where to locate the device. *Id.*

Milcrofton has achieved a reasonable balance between safety and other interests. If Milcrofton were forced to test devices near homes and an employee were shot or mauled by a dog, the need for attractive lawns would seem very small in hindsight.

### III. LADD PARK HOA HAS REQUESTED REMEDIES THAT THE UMRB CANNOT GRANT

Ladd Park HOA asks the UMRB to do three things: (1) rescind the technical specifications with the Revised Location Rule; (2) require that Milcrofton give public notice and allow public comment before adopting any such rule in the future; and (3) require that “[a]ny subsequent action by Milcrofton on this matter, for the purported reason of worker safety, should be reasonably tailored to accomplish that goal, without substantial added cost to its customers or loss of the use or enjoyment of customer property.” Informal Hearing Form at 3.

The UMRB cannot provide the requested relief. The statute does not allow the UMRB to review this type of rule in the first place. Even in a proper case, the UMRB can only make a “decision as to whether the requirements, fees, or charges are just and reasonable.” Tenn. Code Ann. § 7-82-702(a)(9). “[T]he Board is not authorized to impose any remedy other than a determination on the issue and if necessary, a remand back to the District to adjust its practices accordingly.” Letter from Rachel Buckley to Chad Holmes at 2, Dec. 3, 2020. Therefore, the UMRB cannot impose notice and comment procedures or vaguely require that rules be “reasonably tailored.”

Milcrofton would add that it fully complied with the Tennessee Open Meetings Act, Tenn. Code Ann. § 8-44-101, *et seq.* The law does not require governmental entities to publish agendas for upcoming general meetings. Furthermore, members of the public have a right to attend public meetings but not to speak at them. *Souder v. Health Partners, Inc.*, 997 S.W.2d 140, 150 (Tenn. Ct. App. 1998); *Whittemore v. Brentwood Planning Comm’n, City of Brentwood*, 835 S.W.2d 11, 18 (Tenn. Ct. App. 1992). Although not required to do so, Milcrofton allowed a customer to speak on the device location issue at the September 23, 2020, Board of Commissioners meeting. Mike Jones Affidavit ¶ 9. This led to the Revised Location

Rule. *Id.*

### CONCLUSION

For the foregoing reasons, the UMRB should dismiss the complaint as outside the UMRB's authority. In the alternative, the UMRB should decide that Milcrofton's requirements concerning the location of backflow prevention devices are just and reasonable.

Respectfully submitted,



---

Michael J. Wall  
BRANSTETTER, STRANCH  
& JENNINGS, PLLC  
The Freedom Center  
223 Rosa L. Parks Avenue, Suite 200  
Nashville, TN 37203  
Phone: (615) 254-8801  
Facsimile: (615) 255-5419  
michaelw@bsjfirm.com

*Attorney for Respondent Milcrofton  
Utility District of Williamson County,  
Tennessee*

**CERTIFICATE OF SERVICE**

The undersigned hereby certifies that on February 18, 2021, the foregoing was served via U.S. Mail, postage prepaid, and email upon:

Highlands at Ladd Park Homeowners  
Association, Inc.  
802 Beamon Drive  
Franklin, TN 37064  
board@laddhoa.com

*Petitioner*



\_\_\_\_\_  
Michael J. Wall

**BEFORE THE UTILITY MANAGEMENT REVIEW BOARD**

**HIGHLANDS AT LADD PARK** )  
**HOMEOWNERS ASSOCIATION, INC.,** )  
) )  
**Complainant,** )  
) )  
**v.** )  
) )  
**MILCROFTON UTILITY DISTRICT OF** )  
**WILLIAMSON COUNTY, TENNESSEE,** )  
) )  
**Respondent.** )

**AFFIDAVIT OF MIKE JONES**

I, Mike Jones, declare as follows:

1. I am over 18 years of age, am of sound mind, and am otherwise competent to testify.
2. Milcrofton Utility District of Williamson County, Tennessee (“Milcrofton”), is a utility district providing water service. I have worked for Milcrofton since April 2008. I have been the general manager since 2010. The general manager is Milcrofton’s highest-ranking employee. In that role, I manage all of Milcrofton’s activities and employees.
3. In accordance with regulations by the Tennessee Department of Environment and Conservation (“TDEC”), Tenn. Comp. R. & Regs. 0400-45-01-.17(6), Milcrofton has an ongoing program to detect and control “cross-connections” between Milcrofton’s public water system and other systems, such as lawn irrigation and swimming pools. These other systems may have chemicals and other contaminants that flow into the public water system, creating a public health hazard.
4. For many years, Milcrofton’s program has required customers with cross-

connections to install a backflow prevention device on the customers' side of the water meter. The device prevents contaminants from flowing into the public water system. However, the device must be tested regularly to ensure that it works. Milcrofton uses its own personnel to test customers' backflow prevention devices.

5. Testing devices near customers' homes has led to serious incidents. One Milcrofton employee, Samuel Jones, has been confronted by two different customers with guns while he was performing tests. These incidents and others like them caused Milcrofton to reevaluate its cross-connection program to help ensure safety.

6. On January 22, 2020, Milcrofton's Board of Commissioners approved an updated Cross-Connection Manual. Section 1.4.3 states that Milcrofton's Standards and Specifications establish requirements to protect the water system from contamination, including "Situations and types of facilities requiring backflow prevention devices (BFDs)" and "Installation requirements." Section 3.2.4 states, "All required devices must be installed pursuant to MUD Standards and Specifications." Section 3.2.6 requires all backflow prevention devices to be tested at least annually. Finally, Section 4.1 says that Milcrofton may modify the Standards and Specifications.

7. On January 22, 2020, Milcrofton's Standards and Specifications were also updated to include Standard Detail No. 16, which required a backflow prevention device to be located within five feet of a customer's water meter box ("the Original Location Rule").

8. I sent the updated Cross-Connection Manual and Standard Detail No. 16 with the Original Location Rule to TDEC. Attached hereto as Exhibit A is TDEC's letter of approval.

9. On September 23, 2020, at the request of a customer, the Board of Commissioners decided to relax the Original Location Rule. The Board of Commissioners voted "to allow the



backflow prevention device to be installed up to 5 feet from the meter box anywhere across the property frontage (laterally) within the property lines as long as it does not exceed a distance of 5 feet behind the meter box” (“the Revised Location Rule”).

10. On September 23, 2020, Standard Detail No. 16 in the Standards and Specifications was revised to reflect the Revised Location Rule.

11. Milcrofton’s policy does not require customers or developers to build utility systems to be dedicated to Milcrofton. If a customer is required to have a backflow prevention device, the customer owns and maintains it. Milcrofton merely tests the device periodically to make sure it works, in order to guard against contamination of the public water system.

12. As Milcrofton’s General Manager, I regularly deal with developers. A developer subdivides or improves real estate. If a project is located within Milcrofton’s service area, the developer applies to Milcrofton for water service.

13. I am familiar with The Highlands at Ladd Park PUD Subdivision, which is located within Milcrofton’s service area. Developers like The Jones Company of Tennessee, L.L.C. and Propst Realty Nashville, LLC have developed different sections of The Highlands at Ladd Park PUD Subdivision and arranged for water service from Milcrofton.

14. The Highlands at Ladd Park Homeowners Association, Inc. (“Ladd Park HOA”) did not develop The Highlands at Ladd Park PUD Subdivision or, to my knowledge, any other subdivision or development. Ladd Park HOA manages common areas and amenities in The Highlands at Ladd Park PUD Subdivision that were created by the developers.

15. Attached hereto as Exhibit B is a copy of Ladd Park HOA’s charter, as recorded with the Register of Deeds Office of Williamson County, Tennessee. The charter states:

8. The corporation is not-for-profit.

\* \* \*

11. The purposes for which the corporation is organized are: to operate a homeowners association solely to provide for the acquisition, construction, management, maintenance and care of association property and activities; and generally to engage in any other lawful endeavor or activity in furtherance of the foregoing, so long as such endeavor or activity does not prevent the corporation from being, or maintaining its status as, a homeowners association as defined by Section 528(c)(1) of the Internal Revenue Code of 1986 or corresponding section of any future federal income tax code.

16. Ladd Park HOA is a customer of Milcrofton. Ladd Park HOA pays for water service to the aforementioned common areas and amenities in The Highlands at Ladd Park PUD Subdivision. Attached hereto as Exhibit C is a list of Milcrofton meters serving Ladd Park HOA at various locations.

17. All of the Milcrofton meters serving Ladd Park HOA are required to have backflow prevention devices. However, Ladd Park HOA has never been subject to either the Original Location Rule adopted on January 22, 2020, or the Revised Location Rule adopted on September 23, 2020. All of Ladd Park HOA's backflow prevention devices were installed prior to January 22, 2020. Milcrofton has never applied or threatened to apply the Original Location Rule or the Revised Location Rule retroactively to devices that were already installed.

18. Milcrofton tests more than 3,000 backflow prevention devices each year between the months of April and September. Milcrofton notifies customers by mail when it will be performing tests. Milcrofton cannot schedule appointments for so many tests without hiring numerous additional employees or independent contractors.

19. I am aware that other water utilities have location requirements for backflow prevention devices similar to Milcrofton's. Attached hereto as Exhibit D is a document entitled "Backflow Preventer Requirements for Irrigation Systems," which I obtained from First Utility District of Knox County, Tennessee, on August 22, 2019. The document states, "Backflow

prevention assemblies for irrigation systems shall be installed at a distance no greater than 5' from First Utility water meter being within utility easement or road right of way." Milcrofton modeled its Original Location Rule after First Utility District's rule. Milcrofton's Revised Location Rule gives customers more flexibility.

**FURTHER AFFIANT SAYETH NAUGHT.**

IN WITNESS WHEREOF, the undersigned has executed this affidavit on this 11<sup>th</sup> day of February, 2021.

  
\_\_\_\_\_  
Mike Jones

State of Tennessee )  
 )  
County of Williamson )



Personally appeared before me, the undersigned, a Notary Public of said County and State, Samuel Jones, with whom I am personally acquainted (or proved to me on the basis of satisfactory evidence), and who, upon oath, acknowledged that he executed the foregoing instrument for the purpose therein contained.

Witness my hand, at Office, this 11<sup>th</sup> day of February, 2021.

Carolyn Sue Davenport  
Notary Public

My commission expires: 10-16-22

# **EXHIBIT A**



STATE OF TENNESSEE  
DEPARTMENT OF ENVIRONMENT AND CONSERVATION  
DIVISION OF WATER RESOURCES

Nashville Environmental Field Office

711 R.S. Gass Blvd.

Nashville, TN 37216

Phone 615-687-7000 Statewide 1-888-891-8332 Fax 615-687-7078

March 4, 2020

Mr. Mike Jones, General Manager  
Milcrofton Utility District  
6333 Arno Road  
Franklin, TN 37064

**RE: Cross-Connection Control Plan - Approved**

Milcrofton Utility District

PWSID #0000247

Williamson County

Dear Mr. Jones:

On January 27, 2020, the Division of Water Resources (Division) received an updated Cross-Connection Control Plan from the Milcrofton Utility District. The Division has reviewed this plan and has determined that it meet the Division's requirements to be approved. The plan is approved for implementation. Please keep a copy of this plan on file and available for review to all water system and Division personnel.

Thank you for your attention to this matter. If you have any questions and/or comments concerning this matter, feel free to contact me at (615) 687-7061, or by email at [mehdi.sadri@tn.gov](mailto:mehdi.sadri@tn.gov)

Sincerely,

Mehdi Sadri  
Environmental Protection Specialist  
Division of Water Resources

cc: e-File

# **EXHIBIT B**

**Secretary of State  
Division of Business Services**

312 Eighth Avenue North  
6th Floor, William R. Snodgrass Tower  
Nashville, Tennessee 37243

DATE: 12/07/06  
REQUEST NUMBER: 5896-2474  
TELEPHONE CONTACT: (615) 741-2286  
FILE DATE/TIME: 12/07/06 1050  
EFFECTIVE DATE/TIME: 12/07/06 1050  
CONTROL NUMBER: 0535634

BK/PG: 4178/619-621

**07006132**

TO:  
HIGHLANDS AT LADD PARK HOMEONERS ASSOC.  
317 DEADERICK ST.  
SUITE 201  
NASHVILLE, TN 37064

CHARTER	
02/08/2007	01:19 PM
BATCH	92240
MTG TAX	0.00
TRN TAX	0.00
REC FEE	5.00
DP FEE	2.00
REG FEE	0.00
TOTAL	7.00

STATE of TENNESSEE, WILLIAMSON COUNTY

**SADIE WADE**  
REGISTER OF DEEDS

RE:  
HIGHLANDS AT LADD PARK HOMEOWNERS ASSOCIATION, INC.  
CHARTER - NONPROFIT

CONGRATULATIONS UPON THE INCORPORATION OF THE ABOVE ENTITY IN THE STATE OF TENNESSEE, WHICH IS EFFECTIVE AS INDICATED.

A CORPORATION ANNUAL REPORT MUST BE FILED WITH THE SECRETARY OF STATE ON OR BEFORE THE FIRST DAY OF THE FOURTH MONTH FOLLOWING THE CLOSE OF THE CORPORATION'S FISCAL YEAR. ONCE THE FISCAL YEAR HAS BEEN ESTABLISHED, PLEASE PROVIDE THIS OFFICE WITH THE WRITTEN NOTIFICATION. THIS OFFICE WILL MAIL THE REPORT DURING THE LAST MONTH OF SAID FISCAL YEAR TO THE CORPORATION AT THE ADDRESS OF ITS PRINCIPAL OFFICE OR TO A MAILING ADDRESS PROVIDED TO THIS OFFICE IN WRITING. FAILURE TO FILE THIS REPORT OR TO MAINTAIN A REGISTERED AGENT AND OFFICE WILL SUBJECT THE CORPORATION TO ADMINISTRATIVE DISSOLUTION.

WHEN CORRESPONDING WITH THIS OFFICE OR SUBMITTING DOCUMENTS FOR FILING, PLEASE REFER TO THE CORPORATION CONTROL NUMBER GIVEN ABOVE. PLEASE BE ADVISED THAT THIS DOCUMENT MUST ALSO BE FILED IN THE OFFICE OF THE REGISTER OF DEEDS IN THE COUNTY WHEREIN A CORPORATION HAS ITS PRINCIPAL OFFICE IF SUCH PRINCIPAL OFFICE IS IN TENNESSEE.

FOR: CHARTER - NONPROFIT

ON DATE: 12/06/06

FROM:  
GULLETT SANFORD ROBINSON & MARTIN PLLC  
PO BOX 198888  
NASHVILLE, TN 37219-8888

	FEES	
RECEIVED:	\$100.00	\$0.00
TOTAL PAYMENT RECEIVED:		\$100.00

RECEIPT NUMBER: 00004055999  
ACCOUNT NUMBER: 00001396



SS-4458

*Riley C. Darnell*

RILEY C. DARNELL  
SECRETARY OF STATE



129  
FILED  
RECEIVED  
STATE OF TENNESSEE  
2006 DEC -7 AM 10:50  
RILEY DARNELL  
SECRETARY OF STATE

CHARTER  
OF  
HIGHLANDS AT LADD PARK HOMEOWNERS ASSOCIATION, INC.

The undersigned, acting as the incorporator of a nonprofit corporation under the Tennessee Nonprofit Corporation Act, adopts the following Articles of Incorporation:

1. The name of the corporation is Highlands at Ladd Park Homeowners Association, Inc.

2. This corporation is a mutual benefit corporation.

3. This corporation is not a religious corporation.

4. The corporation shall have members. The members of the corporation shall be the owners of lots in The Highlands at Ladd Park Subdivision, Williamson County, Tennessee. Upon the conveyance or transfer of the ownership interest in a lot, the new owner or owners shall succeed to the former owner's or owners' membership, and the membership of the former owner or owners shall terminate.

5. The street address of the initial registered office of the corporation is 317 Main Street, Suite 201, Franklin, TN 37064, and the initial registered agent of the corporation is Paul Arnold.

6. The name and address of the incorporator is Wesley D. Turner, 315 Deaderick Street, Suite 1100, Nashville, TN 37219-8888.

7. The street address of the principal office of the corporation is 317 Main Street, Suite 201, Franklin, Tennessee 37064.

8. The corporation is not-for-profit.

9. To the extent allowed by the laws of the State of Tennessee, no present or future director of the corporation (or his or her estate, heirs, and personal representatives) shall be liable to the corporation or its members for monetary damages for breach of fiduciary duty as a director of the corporation. Any liability of a director (or his or her estate, heirs, and personal representatives) shall be further eliminated or limited to the fullest extent allowed by the laws of the State of Tennessee, as may hereafter be adopted or amended.

10. With respect to claims or liabilities arising out of service as a director or officer of the corporation, the corporation shall indemnify and advance expenses to each present and future director and officer (and his or her estate, heirs, and personal representatives) to the fullest extent allowed by the laws of the State of Tennessee, both as now in effect and as hereafter adopted or amended.

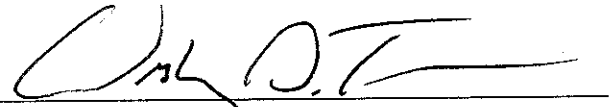
5895-2174

11. The purposes for which the corporation is organized are: to operate a homeowners association solely to provide for the acquisition, construction, management, maintenance and care of association property and activities; and generally to engage in any other lawful endeavor or activity in furtherance of the foregoing, so long as such endeavor or activity does not prevent the corporation from being, or maintaining its status as, a homeowners association as defined by Section 528(c)(1) of the Internal Revenue Code of 1986 or corresponding section of any future federal income tax code.

12. No part of the net earnings of the corporation shall inure to the benefit of, or be distributable to, its directors, officers, members, or other private individuals or person, except that the corporation shall be authorized and empowered to (a) pay reasonable compensation for goods and services rendered, (b) rebate excess membership dues, fees, or assessments, and (c) make payments in furtherance of the purposes set forth in the paragraph just above.

13. Upon the dissolution of the corporation, all assets of the corporation shall be distributed to a non-profit organization with purposes similar to those of the corporation. Such organization shall be chosen by the Board of Directors of the corporation as part of the plan of dissolution of the corporation.

DATED as of this 6 day of December, 2006.

  
\_\_\_\_\_  
Wesley D. Turner, Incorporator

589B-2475

# EXHIBIT C

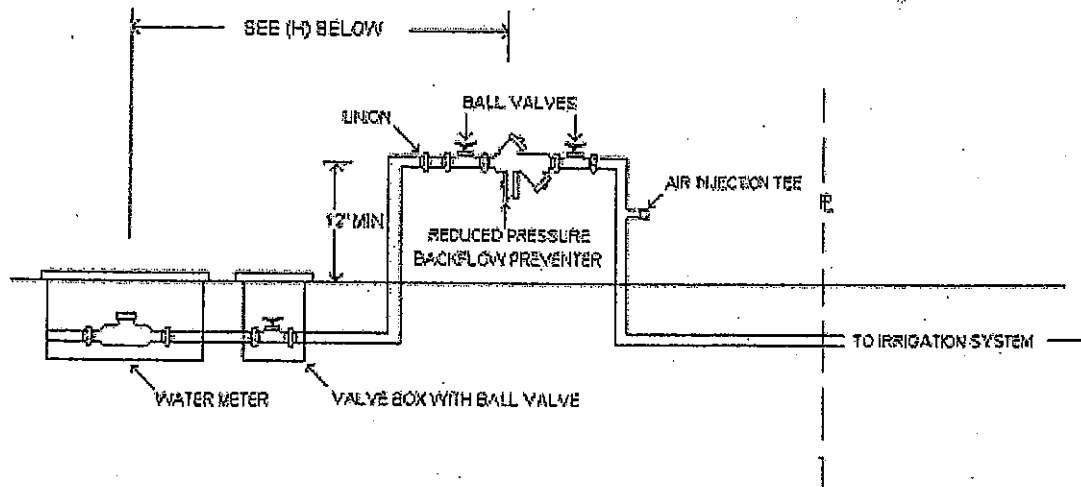
Customer Name	Customer	Location Number	Service Address		Meter Size
HIGHLANDS @ LADD PARK HOA	001140743601	000000011407436	2107 RYECROFT LN - IRRIG.	Current	1 3/4
HIGHLANDS AT LADD PARK HOA	001074400003	000000010744000	4424 ALFRED LADD RD	Current	3/4
HIGHLANDS AT LADD PARK HOA	001074515001	000000010745150	LOT 1 CAROTHERS BL	Current	3/4
HIGHLANDS AT LADD PARK HOA	001140025002	000000011400250	437 WISE-IRRIG @ HIGHL	Current	3/4
HIGHLANDS AT LADD PARK HOA	001140118002	000000011401180	370 TRUMAN RD-IRRIG	Current	1 in
HIGHLANDS AT LADD PARK HOA	001140131001	000000011401310	HIGHLANDS-SEC #5-P	Current	1 in
HIGHLANDS AT LADD PARK HOA	001140202002	000000011402020	ALFRED LADD COMMON	Current	1 in
HIGHLANDS AT LADD PARK HOA	001140518001	000000011405180	PRINCESS/TRUMAN	Current	1 in
HIGHLANDS AT LADD PARK HOA	001140700001	000000011407000	2012 PARKWORTH DR	Current	1 in
HIGHLANDS AT LADD PARK HOA	001140814401	000000011408144	202 BEAMON DRIVE- 2ND AMENITY CENTER	Current	1 in
HIGHLANDS AT LADD PARK HOA - ASSOCIA TN	001141000001	000000011410000	2034 BEAMON DR. IRRIGATION	Current	3/4
HIGHLANDS AT LADD PARK HOA-POOL	001140131501	000000011401315	154 MOLLY BRIGHT LN	Current	3/4

# **EXHIBIT D**



First Utility District  
Of Knox County

**BACKFLOW PREVENTER REQUIREMENTS FOR  
IRRIGATION SYSTEMS**



- (A) Backflow prevention assembly shall be a reduced pressure assembly type with the model being approved by the Tennessee Department of Environment and Conservation Division of Water Supply.
- (B) Backflow prevention assemblies shall have approved shutoff valves.
- (C) Backflow prevention assemblies shall be installed in a manner so testing and repairs can be performed. Clearances of a Minimum of 12" on non-testing side, 36" on testing side from objects including but not limited to shrubbery, electric transformers, and phone and cable pedestals. And installed at a height of 12" from ground.
- (D) Backflow prevention assemblies shall not have any type of electric control valve installed between main water supply line and backflow prevention assemblies.
- (E) Backflow prevention assemblies shall be installed in a horizontal position, unless approved for vertical installation.
- (F) There shall not be any bypass in plumbing system around backflow prevention assemblies.
- (G) Backflow prevention assemblies shall be installed with test cocks and 1/4-in flare fittings for testing.
- (H) Backflow prevention assemblies for irrigation systems shall be installed at a distance no greater than 5' from First Utility water meter being within utility easement or road right of way.

**BEFORE THE UTILITY MANAGEMENT REVIEW BOARD**

**HIGHLANDS AT LADD PARK** )  
**HOMEOWNERS ASSOCIATION, INC.,** )  
) )  
**Complainant,** )  
) )  
**v.** )  
) )  
**MILCROFTON UTILITY DISTRICT OF** )  
**WILLIAMSON COUNTY, TENNESSEE,** )  
) )  
**Respondent.** )

---

**AFFIDAVIT OF SAMUEL JONES**

---

I, Samuel Jones, declare as follows:

1. I am over 18 years of age, am of sound mind, and am otherwise competent to testify.
2. I have worked for Milcrofton Utility District of Williamson County, Tennessee (“Milcrofton”), as a water technician since 2018.
3. One of my major job responsibilities is testing customers’ backflow prevention devices to make sure they work properly. To do this, I have to go to the device physically and stand next to it.
4. Prior to January 22, 2020, I experienced two separate incidents where a person confronted me with a firearm while I was testing a backflow prevention device for Milcrofton.
5. The first incident occurred in Breckenridge Subdivision. I was testing a device immediately beside a home. A man came out of the home, pointed a shotgun at me, and asked what I was doing.
6. The second incident occurred in King’s Chapel Subdivision. I was testing a

device that was located near a home but not immediately beside it. A dog started barking, and then a man came out of the home holding a pistol. I explained that I was with Milcrofton and was testing the backflow prevention device. The man said something to the effect that he would shoot me next time.

7. In each of the two incidents described above, I was clearly identified as a Milcrofton employee. I arrived at the home in a truck with the Milcrofton logo, and I wore clothing with the Milcrofton logo. I was also wearing a neon reflective safety vest each time.

8. On several other occasions, people have confronted me angrily while I was testing backflow prevention devices near their homes.

9. Last year, I was trying to perform a test near someone's home, and a dog chased me away, barking. I had to jump into the back of the Milcrofton truck to get away from the dog.

10. Going near people's homes to test backflow prevention devices makes me concerned for my safety. I could be bitten by a dog, shot by a homeowner, or reported to the police.

**FURTHER AFFIANT SAYETH NAUGHT.**

IN WITNESS WHEREOF, the undersigned has executed this affidavit on this 11<sup>th</sup> day of February, 2021.

  
Samuel Jones





State of Tennessee            )  
  )  
County of Williamson         )

Personally appeared before me, the undersigned, a Notary Public of said County and State, Samuel Jones, with whom I am personally acquainted (or proved to me on the basis of satisfactory evidence), and who, upon oath, acknowledged that he executed the foregoing instrument for the purpose therein contained.

Witness my hand, at Office, this 11<sup>th</sup> day of February, 2021.

Carolyn Sue Davenport  
Notary Public

My commission expires: 10-16-22

**MILCROFTON UTILITY DISTRICT  
BOARD OF COMMISSIONERS MEETING  
January 22, 2020**

The regular monthly meeting of the Board of Commissioners of Milcrofton Utility District was held at 9:00 A.M. on Wednesday, January 22, 2020 at the District's business office located at 6333 Arno Road, Franklin, Tennessee.

Commissioners present for the meeting of January 22, 2020 were Howard Smithson, Carl Scott, Sr., and Danny Cotton. Others present for the meeting were Mike Jones, Kevin Davis, Matt Bryant, and Michael Wall.

Howard Smithson, President, called the meeting to order.

The first order of business was approval of the minutes of the December 20, 2019 board meeting. A motion was made by Howard Smithson and seconded by Carl Scott to approve the minutes of the December 20, 2019 board meeting. After a full discussion, the motion was unanimously approved.

The next order of business was the approval of the Leak Adjustment Log for December 2019. A motion was made by Danny Cotton and seconded by Carl Scott to approve the Leak Adjustment Log for December 2019 in the amount of \$655.39 and the Bad Debt for \$928.18 (copy attached hereto as "Exhibit A"). After a full discussion, the motion was unanimously approved.

The next order of business was a review of the District's financial statements and water loss report.

The next order of business was Mr. Jones and Mr. Bryant giving the board a status update on current projects.

The next order of business was Mr. Jones presenting an updated Cross-Connection Manual. A motion was made by Howard Smithson and seconded by Danny Cotton to sign a resolution adopting the new manual (copy attached hereto as "Exhibit B" of the minutes but "Exhibit A" of the resolution). After a full discussion, the motion was unanimously approved.

The next order of business was the election of officers for the board for 2020. A motion was made by Carl Scott and seconded by Danny Cotton to elect Howard Smithson as President, Danny Cotton as Vice President, and Carl Scott as Secretary/Treasurer. After a full discussion, the motion was approved.


The next order of business was Mr. Jones letting the board know that he had reached out to five contractors on building the water lab room. Mr. Jones expected to receive four bids, but only two contractors turned in bids. A motion was made by Danny Cotton and seconded by Carl Scott to accept the lowest responsible bid of \$17,850.00 by Matt McCormac. After a full discussion, the motion was approved.

The next Board of Commissioners meeting will be held at 9:00 a.m. on Wednesday, February 26, 2020.

There being no further business to come before the Board, a motion was made by Danny Cotton and seconded by Carl Scott to adjourn the meeting. After a full discussion, the motion was approved.

  
Howard Smithson, President

  
Carl Scott Sr., Secretary

  
Danny Cotton, Vice-President

February 26, 2020  
Date

## EXHIBIT A

**MILCROFTON UTILITY DISTRICT  
LEAK ADJUSTMENT LOG FOR DECEMBER 2019**

\*\*\*\*\*

VERED BAUER 4245 N CHAPEL RD	Leak Adjustment Customer Side	\$ 16.02
VERED BAUER 4245 N CHAPEL RD	Leak Adjustment Customer Side	\$ 17.66
CINDA BERG 4512 STAGECOACH CIR	Leak Adjustment Customer Side	\$ 29.32
CINDA BERG 4512 STAGECOACH CIR	Leak Adjustment Customer Side	\$ 18.15
KENNETH CICORA 6280 ARNO RD	Flushing Adjustment	\$ 6.85
POLLY CRAVER 4819 MURFREESBORO RD	Leak Adjustment Customer Side	\$ 78.42
POLLY CRAVER 4819 MURFREESBORO RD	Leak Adjustment Customer Side	\$ 93.78
JACK TOON 6205 ROBERTS RD	Leak Adjustment Customer Side	\$ 20.06
JACK TOON 6205 ROBERTS RD	Leak Adjustment Customer Side	\$ 25.00
JUDITH KLEIN 4716 BENNET HOLLOW RD	Leak Adjustment Customer Side	\$ 43.03
TOM RICE 4715 PEYTONSVILLE RD	Leak Adjustment Customer Side	\$ 54.80
DAVID FOX 8201 PENNWAY CT	Leak Adjustment Customer Side	\$ 34.93
DEEPAK KUMAR 516 PENNYSTONE	Leak Adjustment Customer Side	\$ 13.30

Page 2  
Adjustment Log for December 2019

DEEPAK KUMAR 516 PENNYSTONE	Leak Adjustment Customer Side	\$ 10.58
BONII DYJASEK 3690 N CHAPEL RD	Mud Leak Pinnacle	\$ 16.22
BONII DYJASEK 3690 N CHAPEL RD	Mud Leak Pinnacle	\$ 140.45

\*\*\*\*\*  
**Milcrofton Utility District** \$ 36.82  
**6333 Arno Road**  
 \*\*\*\*\*

\*\*\*\*\*  
 Total Leak Adjustments for Month \$ 655.39  
 \*\*\*\*\*

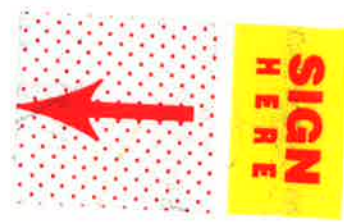
There were 939 customers who had late charges posted to their account on December 3,  
 2019 due to their payments not being received on or before December 2, 2019. \$ 9,236.36  
 \*\*\*\*\*

Howard G. Smithson  
**Howard G. Smithson, President**

Danny B. Cotton  
**Danny B. Cotton, Vice-President**

Carl Scott Sr.  
**Carl Scott, Sr., Secretary/Treasurer**

1-22-2020  
**Date**



**MILCROFTON UTILITY DISTRICT  
Transaction List - Condensed**

142

Sort order: Customer No.  
From: 12/1/2019 Through: 12/31/2019

Limited to :

Transaction Types Write-Off

Deposits Transaction Types

Location No	Account No	Customer Name	Tran Date	Post Date	Type	Receipt No	Amount
10580000	1058000001	D. WILCOX	12/02/2019	12/02/2019	Write-Off		(\$106.55)
10711500	1071150002	B. SAMUELS	12/02/2019	12/02/2019	Write-Off		(\$99.75)
10840210	1084021004	D. ROBERTSON	12/02/2019	12/02/2019	Write-Off		(\$217.20)
10905450	1090545000	F. COWART	12/02/2019	12/02/2019	Write-Off		(\$156.81)
10908040	1090804003	M. ROBERTSON	12/02/2019	12/02/2019	Write-Off		(\$119.57)
11100920	1110092008	R. HOK	12/02/2019	12/02/2019	Write-Off		(\$72.11)
11140980	1114098008	J. DYRDA	12/02/2019	12/02/2019	Write-Off		(\$183.51)
11141240	1114124002	K. ROBINSON	12/02/2019	12/02/2019	Write-Off		(\$47.66)

Transaction Type	Applies To	Transaction Amount
Write-Off	WATER Charge	(\$519.58)
	WATER Delinquency	(\$56.20)
	CUSTOMER MONTHLY CHARGE Charge	(\$272.00)
	CUSTOMER MONTHLY CHARGE Delinquency	(\$80.40)
	SALES TAX Charge	(\$74.98)
		<b>(\$1,003.16)</b>

**Grand Total**

(\$1,003.16)  
 SALES TAX 74.98  
 \$ < 928.18 >

Approved the designated accounts above as uncollectible and written off :

Howard G. Smithson  
**Howard G. Smithson, President**

Danny B. Cotton  
**Danny B. Cotton, Vice-President**

Carl Scott Sr.  
**Carl Scott, Sr., Secretary/Treasurer**

1-22-2020  
**DATE**



---

**Document Title:** Cross-Connection Manual**Released Date:** January 22, 2020**Program:** Cross-Connection Control**Revised Date:** N/A**Department:** Cross Connection**Page:** 1 of 23

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### GOAL

The goal of Milcrofton Utility District (MUD) is to supply safe water to each and every customer under all foreseeable circumstances. Each instance where water is used improperly may create the possibility of backflow due to cross connections threatening the health and safety of customers and chances of realizing this goal. The possibility of backflow due to improper use of water within the customer's premises is especially significant because such cross connections may easily result in the contamination of our water supply mains. Such situations may result in the public water system becoming a transmitter of diseased organisms, toxic materials, or other hazardous substances that may adversely affect large numbers of people. The only protection against such occurrences is the elimination of such cross connections or the isolation of such hazards from the water supply lines by properly installed approved backflow prevention assemblies.

Protect the public water supply from the possibility of contamination or pollution by isolating within the customer's internal distribution system(s) or the customer's private water system(s) such contaminants or pollutants that could backflow into the public water system.

Promote the elimination or control of existing cross connections, actual or potential, between the customer's in-plant potable water system(s) and non-potable water systems, plumbing fixtures, and industrial piping systems.

Provide for the maintenance of a continuing program of cross connection control that will systematically and effectively prevent the contamination or pollution of all potable water systems.

## **PLAN OF ACTION**

MUD is determined to take every reasonable precaution to ensure that cross connections are not allowed to contaminate the water being distributed to its customers. This cross connection plan outlines a course of action designed to control cross connection within the area served by the water provider. This plan is intended to be a practical guide for safeguarding the quality of water distributed from becoming contaminated or polluted through backflow. By following the plan of action, the water provider will ensure that all aspects of the policy/ordinance on Cross Connection are being followed by customer.

Intent: The water provider will implement and use this plan to implement the program to eliminate existing and potential unprotected cross connections. The plan will be implemented to ensure that all codes, ordinances, statutes, and regulations are being followed.



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## DEFINITIONS

**Air Gap.** The vertical, physical separation between a water supply line outlet and the overflow from a non-pressurized receiving vessel.

**Approved Air Gap.** An air gap separation with a minimum distance of at least twice the diameter of the supply line when measured vertically above the overflow rim of the vessel but in no case less than one inch.

**Approved.** Any condition, method, device, or procedure accepted by TDEC DWS and MUD.

**Auxiliary Intake.** Any piping connection or other device whereby water may be secured from any sources other than from MUD.

**Auxiliary Water Supply.** Any water supply on or available to the premises other than the water supplied by MUD.

**Backflow.** The reversal of the intended direction of flow of water causing the potential for mixture of water and other liquids, gases, or other substances into the distribution pipes of a potable water system from any source.

**Backflow Prevention Assembly.** An approved mechanical assembly designed to prevent backflow.

**Backpressure.** A pressure in the downstream piping that is higher than the supply pressure.

**Back-siphonage.** Negative or sub-atmospheric pressure in the supply piping.

**Bypass.** Any system of piping or other arrangement whereby the water may be diverted around a backflow prevention assembly, meter, or any other MUD controlled device.

**Contamination.** The introduction or admission of any foreign substances that causes an adverse affect on the quality of the water.

**Contaminant.** Any physical, chemical, biological, or radiological substance or matter, which may or may not be harmful depending on the concentration.

**Cross Connection.** Any physical arrangement whereby a public water system is connected, directly or indirectly, with any other water supply system, sewer, drain, conduit, pool, storage reservoir, or other device which does or may contain sewage or other waste or liquid which would be capable of imparting contamination to the public water system as a result of backflow. Bypass arrangements, jumper connections, removable sections, swivel, or changeover devices through which, or because of which, backflow could occur are considered to be cross-connections.

**Cross-Connection Control Coordinator.** The person who is vested with the authority and responsibility for the implementation and/or management of the Cross-Connection Control Program.

**Customer.** Any natural or artificial person, business, industry, or governmental entity that obtains water by purchase or without charge from MUD.

**Double Check Valve Assembly.** An assembly of two internally loaded check valves, either spring loaded or internally weighted, installed as a unit between tightly closing resilient seated

shutoff valves and fitted with properly located resilient seated test cocks. This type of device shall only be used to protect against non-health hazard pollutants.

**Failed.** The status of a backflow prevention assembly determined by a performance evaluation based on the failure to meet all minimums set forth by the approved testing procedure.

**Fire System Classifications Protection.** The classes of fire protection systems, as designated by the American Water Works Association (AWWA) “M14” for cross-connection control purposes based on water supply source and the arrangement of supplies, are as follows:

Class 1. Direct connection to the MUD main only; no pumps, tanks, or reservoirs; no physical connection from other water supplies; no antifreeze or other additives of any kind; all sprinkler drains discharging to the atmosphere, dry well, or other safe outlets.

Class 2. Same as Class 1, except booster pumps may be installed in connection from the street mains.

Class 3. Direct connection to MUD mains in addition to any one or more of the following: elevated storage tanks; fire pumps taking suction from above ground covered reservoirs or tanks; and pressure tanks.

Class 4. Directly supplied from MUD mains, similar to Class 1 and Class 2, with an auxiliary water supply dedicated to fire department use and available to the premises, such as an auxiliary supply located within 1700 feet of the pumper connection.

Class 5. Directly supplied from MUD mains and interconnection with auxiliary supplies such as pumps taking suction from reservoirs exposed to contamination, or from rivers, ponds, wells, or industrial water systems; where antifreeze or other additives are used.

Class 6. Combined industrial and fire protection systems supplied from MUD mains only, with or without gravity storage or pump suction tanks.

**Hazard, Degree of.** A term derived from evaluation of the potential risk to public health and the adverse effect of the hazard upon the MUD water distribution system.

**Hazard, Health.** A cross connection or potential cross connection involving any substance that could, if introduced in the MUD system, cause death, illness, or disease.

**Hazard, Non-health.** A cross connection or potential cross connection involving any substance that would not be a health hazard but would constitute a nuisance or be aesthetically objectionable if introduced into the MUD water distribution system.

**Hazard, Plumbing.** A cross connection in a customer’s potable water system plumbing that is not properly protected by an approved air gap or backflow prevention assembly.

**Industrial Fluid.** Any fluid or solution that may be chemically, biologically, or otherwise contaminated or polluted in a form or concentration that could constitute a health, system, pollution, or plumbing hazard if introduced into the MUD water distribution system. This shall include, but is not limited to: polluted or contaminated water; all types of process water or used water originating from the MUD system and that may have deteriorated sanitary quality; chemicals; plating acids and alkalis; circulating cooling water connected to an open cooling tower; cooling towers that are chemically or biologically treated or stabilized with a toxic substance; contaminated natural water systems; oil, gases, glycerin, paraffin, caustic, acid solutions, and other liquids or gases used in industrial processes or for fire purposes.

**Inspection.** An on-site evaluation of an establishment to determine if backflow prevention assemblies are required to protect the MUD water distribution system from actual or potential cross connections.

**Interconnection.** Any system of piping or other arrangement whereby the public water system is connected with a sewer, drain, conduit, pool, storage reservoir, or other device which does or may contain sewage or other waste or liquid which would be capable of imparting contamination to the public water system.

**Passed.** The status of a backflow prevention assembly determined by a performance evaluation in which the assembly meets all minimums set forth by the approved testing procedure.

**Performance Evaluation.** An evaluation of an approved Double Check Valve Assembly or Reduced Pressure Principle Assembly (including approved Detector Assemblies) using the latest approved testing procedures in determining the status of the assembly.

**Pollutant.** A substance that would constitute a non-health hazard and would be aesthetically objectionable if introduced into the MUD water distribution system.

**Pollution.** The presence of a pollutant or substance in the MUD water distribution system that degrades its quality so as to constitute a non-health hazard.

**Potable Water.** Water that meets the criteria of TDEC and the Environmental Protection Agency (EPA) for safe human consumption.

**Public Water Supply.** An entity that furnishes potable water for general use and which is recognized as the public water supply by TDEC DWS.

**Public Water System.** A water system furnishing water to the public for general use that is recognized as a public water supply by the State of Tennessee.

**Reduced Pressure Principle Detector Assembly.** A specially designed assembly composed of a line-size approved reduced pressure principle backflow prevention assembly with a bypass containing a water meter and approved reduced pressure principle backflow prevention assembly specifically designed for such application. The meter shall register for very low flow rates up to 3 gpm and shall show registration for all flow rates. This assembly shall be used to protect against non-health and health hazards.

**Service Connection.** The point of delivery to the customer's water system; the terminal end of a service connection from the MUD water system. It shall include connections to fire hydrants and all other temporary or emergency water service connections to the distribution system.

**Survey.** An evaluation of a premise by a water system performed for the determination of actual or potential cross-connection hazards and the appropriate backflow prevention needed.

**Test.** The series of steps prescribed by the DWS performed to ensure the viability and capability of a BFD to prevent the backflow of water from a customer's premise into the public water system.

## ACRONYMS

<b>AWWA</b>	American Water Works Association
<b>BFD</b>	backflow prevention device
<b>CCC</b>	cross-connection control
<b>CCR</b>	Consumer Confidence Report
<b>CIS</b>	Customer Information System
<b>COM</b>	commercial
<b>CSD</b>	Customer Service Department
<b>DWS</b>	Division of Water Supply
<b>ENS</b>	Engineering New Service
<b>EPA</b>	Environmental Protection Agency
<b>GIS</b>	Geographic Information System
<b>GPM</b>	gallons per minute
<b>MUD</b>	Milcrofton Utility District
<b>NSV</b>	New Service
<b>PSI</b>	pounds per square inch
<b>PWS</b>	public water systems
<b>QA/QC</b>	quality assurance /quality control
<b>QRG</b>	quick reference guide
<b>RES</b>	residential
<b>SDWA</b>	Safe Drinking Water Act
<b>SOP</b>	standard operating procedure
<b>TCA</b>	Tennessee Code Annotated
<b>TCH</b>	Safety and Technical Services
<b>TDEC</b>	Tennessee Department of Environment and Conservation
<b>UGC</b>	Underground Construction

## **I. BACKGROUND AND AUTHORITIES**

### **1.1 ENVIRONMENTAL PROTECTION AGENCY**

Under the provisions of the *Safe Drinking Water Act (SDWA)* of 1974, the Federal Government established, through the Environmental Protection Agency (EPA), the national standards for drinking water. The states are responsible for the enforcement of these standards as well as the supervision of the public water systems (PWSs) and the sources of drinking water. The water supplier, (i.e., MUD) is held responsible for complying with the standards at the source and ensuring that water is delivered to the customer without the quality being compromised as a result of its delivery through the distribution system.

### **1.2 TENNESSEE CODE ANNOTATED**

*Title 68, Chapter 221, Part 7* of the *Tennessee Code Annotated (TCA)* establishes that the people of the State of Tennessee have a right to quality drinking water, part of which requires that public water systems eliminate or control cross connections in the distribution system as outlined in sections 703 and 711 of this Statute.

### **1.3 TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION**

Tennessee Department of Environment and Conservation (TDEC) *Rule 1200-5-1-.17* requires that a PWS do the following:

1. Adopt an ordinance or policy prohibiting the improper installation, allowing the installation, or maintenance of any cross connection, auxiliary intake, or bypass unless the source and quality of water within the facility has been approved.
2. Develop a written plan for a cross-connection control (CCC) program to detect and eliminate or protect the system from cross connections. TDEC DWS must approve this plan.
3. Establish an ongoing program for the detection and elimination of hazards associated with cross connections.
4. Maintain records associated with the CCC program including such items as:
  - Date of inspection
  - Person contacted
  - Follow-up
  - Testing results

### **1.4 MILCROFTON UTILITY DISTRICT**

#### **1.4.1 Backflow Manual**

The Milcrofton Utility District (MUD) Backflow Manual describes how MUD operates the overall program management strategy for achieving compliance and protection of the water distribution system.

### 1.4.2 Rules and Regulations

*MUD's Water Rules and Regulations* prohibits cross connections between MUD's mains and the water from another source, authorizes the public water system to make inspections of the customer's premises, requires that cross-connection hazards be corrected, and provides for enforcement. It is considered to be a sound basis for the control of cross-connection hazards by the operating staff and management of MUD.

### 1.4.3 Standards and Specifications

*MUD's Standards and Specifications* specifies MUD's requirement to protect its water distribution system from contamination and eliminate or control existing cross connections. This document establishes the following:

1. Situations and types of facilities requiring backflow prevention devices (BFDs)
2. Materials necessary for proper selection and installation of BFDs
3. Installation requirements
4. Inspection of new and existing facilities
5. Testing of new and existing BFDs
6. Responsibility of cost for devices, installation, and testing

### 1.4.4 Procedures Manual

The MUD Procedures Manual, located in the Appendices of this document, establishes the standard operating procedures (SOPs), quick reference guides (QRGs), and checklists used for inspecting and re-inspecting premises, conducting follow up visits, notifying customers of testing, inputting customer/device information into the system of record, querying the system of record for devices in need of testing, etc.

## 1.5 ROLES AND RESPONSIBILITIES

Listed in Table 1 are the personnel and their roles and responsibilities for maintaining MUD's CCC Program compliance.

**Table 1. CCC Program Roles and Responsibilities**

<b>Position/Title</b>	<b>Responsibilities</b>
<b>MUD – Backflow Control Service Department</b>	
Manager	<ul style="list-style-type: none"> <li>▪ Oversees compliance of CCC Program</li> <li>▪ Ensures that all aspects of the Cross Connection Manual and MUD's Rules and Regulations are followed</li> <li>▪ Ensures appropriate personnel and resources are allocated to effectively manage the Program</li> <li>▪ Develops/reviews compliance goals based on corporate vision</li> <li>▪ Responsible for CCR</li> </ul>
Coordinator	<ul style="list-style-type: none"> <li>▪ Manages all aspects of the program</li> <li>▪ Reviews all regulatory compliance requirements for applicability</li> <li>▪ Ensures that all aspects of the Cross Connection Manual and MUD's Rules and Regulations are followed</li> <li>▪ Responsible for CCC public awareness</li> <li>▪ Oversees data management and the electronic system of record</li> </ul>

Coordinator (cont.)	<ul style="list-style-type: none"> <li>▪ Coordinates CCC compliance and training with external agencies</li> <li>▪ Coordinates CCC training with internal departments</li> <li>▪ Develops cross connection surveys</li> <li>▪ Ensures that all aspects of the Cross Connection Manual and MUD's Rules and Regulations are followed</li> <li>▪ Receives and maintains data including customer information, device information, test information, and tester information (see Section 4.0, Records and Retention)</li> <li>▪ Distributes First Notices to Test, Second Notices to Test, and Notices of Violation. Queries reports for devices due for testing for Coordinator, contractors, or other applicable personnel</li> </ul>
Inspector	<ul style="list-style-type: none"> <li>▪ Follows all aspects of the Cross Connection Manual and MUD's Rules and Regulations</li> <li>▪ Inspects facilities for cross connections</li> <li>▪ Makes recommendations on required BFDs</li> <li>▪ Tests devices</li> <li>▪ Conducts periodic cross-connection surveys</li> <li>▪ Conducts field inspections to review project specifications and evaluates for potential cross connections for new service installations</li> <li>▪ Coordinates CCC requirements with developers</li> <li>▪ Notifies applicable MUD CCC personnel of any observed or potential cross connections</li> </ul>

#### **MUD – Customer Service Department (CSD)**

Customer Service Representative	<ul style="list-style-type: none"> <li>▪ Receives requests for service and requests for change of service</li> <li>▪ Classifies service to determine if follow up inspection is needed</li> </ul>
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#### **City/County**

Plumbing Inspector	<ul style="list-style-type: none"> <li>▪ Reviews plans for potential cross connections</li> <li>▪ Conducts site inspections for potential cross connections.</li> <li>▪ Issues permits for the installation or alteration of BFDs</li> </ul>
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#### **Other Personnel**

State Certified Backflow Assembly Testers	<ul style="list-style-type: none"> <li>▪ Maintains current State certification</li> <li>▪ Ensures testing equipment is calibrated at least annually and provides current information (certification and calibration) to MUD</li> <li>▪ Tests devices in compliance with pre-established procedures for all fire system backflows</li> <li>▪ Reports results of device tests to MUD promptly</li> <li>▪ Reports installation of new devices to MUD promptly</li> <li>▪ Complies with MUD's CCC program guidelines and Std. and Spec. requirements</li> </ul>
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## II. MUD APPLICABILITY

The CCC Program applies to all areas of MUD's water distribution system. The MUD Cross Connection Control Coordinator shall work with internal MUD personnel, City or County Plumbing Inspectors' Office (if applicable), and any additional agencies to ensure that new or existing connections with customers of the types listed in Table 2 possess appropriate BFDs or maintain approved air gaps. The list of high risk/high hazard facilities are included on Table 2 and notated by an asterisk (\*).

**Table 2. Types of Facilities Requiring Backflow Prevention**

Agricultural processing facilities*	Farms, feedlot operations*	Paper and paper product plants*
Aircraft and missile plants*	Fertilizer plants*	Penal institutions and jails*
Airports	Fertilizer (liquid and spray) distributors	Petroleum process and storage plant*
Amusement Parks	Film laboratory*	Power plants
Animal hospitals and clinics*	Fire suppression systems*	Portable water meters
Apartments – (single and multi-structures)*	Food processing plant*	Printing company
Automotive plants*	Funeral home	Private wells
Automotive repair shops, including radiator and transmission shops*	Greenhouse*	Radioactive materials or substance plants that process/use*
Autopsy facilities*	Hospital*	Railroad terminal*
Auxiliary water systems*	Hotels and motels (single and multi-structure)*	Recreational areas, parks*
Beauty schools and colleges*	Industries (All)	Restaurants and food service facilities*
Beauty shops and hair salons*	Laboratories and research facilities*	Restricted establishments*
Beverage bottling plant*	Laundry – Laundromats*	Rubber plants*
Boat docks and piers*	Lawn sprinkler systems, public or private*	Sand and Gravel plants*
Breweries*	Manufacturing plants (toxins used in plant)*	Sanitarium*
Bulk Distributors and users of pesticides, herbicides, and liquid fertilizers*	Meat packing house and rendering plants*	Schools and colleges*
Bus and truck terminals*	Medical buildings, clinics*	Sewage pumping stations*
Campgrounds and recreational vehicle parks*	Metal plating plant, pickling, and anodizing operations*	Shopping center (occupancy unknown)*
Cannery*	Mobile Home Parks*	Stockyard
Car wash*	Morgue or mortuary*	Swimming pools, ponds, and fountains*
Chemical plants (manufacturing, processing, compounding, or treatment)*	Motion picture studio	Tanneries of all kinds
Chemically contaminated water systems*	Multi-story buildings (3 stories or more)*	Tattoo shops and parlors
Cold storage plants*	Multiple services – inter-connected	Therapeutic tanks and hot tubs
Condominium – single and multi-structures (3 stories or more)*	Nail salons	Travel trailer park or trailers
Dairies and creameries*	Newspapers and printing facilities	Vegetable and food processing facilities*
Dental buildings*	Nursery, botanical*	Waterfront facilities and industries
Dry cleaners*	Nursing or convalescent homes*	Water treatment plants*
Dye works	Oil and gas production, storage or transmission facilities*	Wastewater treatments plants*
Extermination Companies*	Oil refineries*	

### III. COMPLIANCE AND MANAGEMENT POLICIES

#### 3.1 ACTIVE AND ONGOING PROGRAM

MUD is determined to take every reasonable precaution to ensure that unprotected cross connections do not allow contamination of the water distributed to its customers. MUD has established an active, ongoing cross-connection control program in a continuing effort to locate, correct, and monitor all existing cross-connection hazards and to discourage the creation of new problems.

##### 3.1.1 Public Awareness

MUD recognizes that it is important to inform its customers of the health hazards associated with cross connections and to acquaint them with the CCC program to safeguard the quality of the water distributed. MUD will seek to use every practical means available to acquaint customers with the health hazards associated with cross connections in an effort to obtain cooperation and eliminate cross connections. MUD may use one or more of the following methods to increase public awareness regarding cross connections:

- Customer notification letters or brochures
- Brochure for new customers
- Consumer confidence report (CCR)
- Local video and print media
- Presentations to public forums or meetings
- Article on MUD website
- Posters posted at customer service locations

##### 3.1.2 Staffing

MUD has designated staffing to ensure that the Cross-Connection Control Program is pursued in an aggressive and effective manner. The internal, subcontracted, and external personnel are listed in Table 1. MUD has established a Coordinator and Inspector within the backflow control department to further ensure the continued success of the program. MUD also ensures that personnel charged with BFD testing maintain a Certificate of Competency from TDEC DWS.

### 3.1.3 Surveys

MUD will actively survey the distribution system for both residential and commercial customers for cross connections. If it is determined from the survey results that possible cross connections may exist, the premises will be inspected (see Section 3.2.2 for more information on inspections). MUD requires a written survey at the time a customer request a new service connection. MUD staff follows up the surveys with a physical inspection of the property.

MUD shall also conduct residential and commercial survey's based on risk to the public water system. Residential and commercial services not requiring an assembly shall be re-inspected as needed. A premise may be re-inspected upon discovery of any of the following criteria:

- Change in ownership
- Change in occupancy
- Plumbing permit issued
- Irrigation system installed
- Drilling of a well within the MUD system

Inspections may also be performed based on the results of the annual surveys or the issuance of irrigation-only meters. Inspections will likewise be conducted on all new commercial service applications.

## 3.2 ENFORCEMENT

### 3.2.1 Customer Responsibility

Cross connections, created and maintained by the customer for his or her convenience endanger the health and safety of all who depend upon the public water supply. Therefore, the customer who creates a cross-connection problem shall bear the expense of providing necessary backflow protection and for keeping the protective measures in good working order, including installation, repair, and testing of backflow prevention devices or maintaining air gaps as required. Facility types listed in Table 2 or any other premises deemed a threat to the water system by MUD or MUD's authorized personnel shall install and maintain a backflow device or maintain proper backflow prevention measures.

Where there is no direct connection to the water system, but the use of water at the premise could pose a risk, the installation of a hose bibb vacuum breaker is highly suggested. Hose bibb vacuum breakers are used in hose bibb outlets and laboratory fittings where a hose can be attached. These are generally attached to sill cocks and in turn are connected to hose supplied outlets such as garden hoses, slop sink hoses, spray outlets, etc. They consist of a spring loaded check valve that seals against an atmospheric outlet when water supply pressure is turned on and are designed to prevent against back-siphonage situations only where the hose may be immersed in non-potable solutions.

### 3.2.2 Premises Inspection

MUD or its authorized agents shall inspect properties served by the public water system where cross connections with the water system are deemed possible. The frequency of inspections and re-inspection based on potential health hazards involved shall be established by MUD in accordance with guidelines acceptable to TDEC DWS.

MUD or its authorized representative shall have the right to enter at any reasonable time any property served by a connection to the MUD water system for the purpose of inspecting the piping system therein for cross connections, auxiliary intakes, bypasses, or interconnections, or for the testing of BFDs. On request, the owner, lessee, or occupant of any property so served shall furnish any pertinent information regarding the piping system on such property. The refusal of such information or refusal of access, when requested, shall be deemed evidence of the presence of cross connections.

On new residential and commercial installations, MUD personnel will provide onsite evaluation and/or inspection of plans in order to determine the types of BFDs, if any, which will be required. Onsite inspections may be conducted if it is revealed that the customer is a type of facility or contains any of the risks listed in Table 2.

For residential and commercial premises existing prior to the start of this program, MUD will perform evaluations and inspections of plans and/or premises according to guidelines acceptable to TDEC DWS and inform the customer by letter of all of the following:

- Any corrective action deemed necessary
- The method of achieving the correction
- The amount of time allowed for the correction to be made

The period of time required for correction will be determined by the degree of hazard involved and shall not exceed 60 days (refer to Table 3 in Section 3.3.1 for a typical timeframe for BFD installation). All BFDs must be installed, operable, and tested prior to the initiation of water service.

### 3.2.3 Determination of backflow protection

MUD, City/County Plumbing Inspector, Fire Marshal, or other qualified representative shall determine that a backflow device is required where the nature of use of the water supplied to the premises by the water system is such that it is deemed:

- Impractical to provide an effective air-gap separation
- The owner and/or occupant of the premises cannot, or is not willing, to demonstrate to MUD or its designated representative that the water use and protective features of the plumbing are such as to pose no threat to the safety or potability of the water
- The nature and mode of operation within premises are such that frequent alterations are made to the plumbing
- The nature of the premises is such that the use of the structure may change to a use wherein backflow prevention is required
- There is a likelihood that protective measures may be subverted, altered, or disconnected
- The plumbing from a private well enters the building served by the public water supply, in such case MUD shall require the use of an approved protective device on the service line serving the premises to assure that any contamination that may originate in the customer's premises is contained therein
- BFDs shall be used in conjunction with all portable hydrant meter backflow assembly. Portable hydrant meter backflow assembly shall be returned to MUD at least annually for inspection or upon notification by MUD.

Types of facilities requiring BFDs are listed, but not limited to those in Table 2 of Section 2.0.

### 3.2.4 Approved devices and installation

The backflow devices shall be of the type approved by TDEC DWS and MUD as to manufacturer, model, size, and application. The method of installation of the BFD shall be approved by MUD prior to installation and shall comply with the criteria set forth by TDEC DWS and the MUD Cross Connection Manual. The installation shall be at the expense of the owner or occupant of the premises.

Minimum acceptable criteria for the installation of reduced pressure zone type backflow prevention devices and double check valve assemblies each requiring regular inspection and testing shall include the following:

- All required devices must be installed pursuant to MUD Standards and Specifications. All devices shall be installed in accordance with the manufacturer's installation instructions, and shall possess all test cocks and fittings required for testing the device. All fittings shall permit direct connection to test devices.
- The entire device including test cocks and valves shall be easily accessible for testing and repair.
- No device shall be located in an enclosed space including: basements, crawl spaces, under porches, below ground, or inside of buildings starting January 22, 2020. Only existing commercial backflow devices may remain inside commercial structures.
- Reduced pressure backflow prevention devices shall be located a minimum of 12 inches plus the nominal diameter of the device above the floor surface. Maximum height above the floor surface shall not exceed 60 inches.
- Clearance of device from wall surfaces or other obstructions shall be a minimum of 6 inches.

- Devices shall be protected from freezing, vandalism, mechanical abuse, and from any corrosive, sticky, greasy, abrasive, or other damaging environment.
- Devices shall be positioned where discharge from relief port will not create undesirable conditions.
- Devices shall be installed such that they are unable to be bypassed unless redundant backflow protection is available.
- An approved air-gap shall separate the relief port from any drainage system.
- Devices shall be located in an area free from submergence or flood potential.
- A gravity drainage system is required on all installations. Below ground installations will not be permitted.
- Fire hydrant drains shall not be connected to the sewer nor shall fire hydrants be installed in such a manner that back-siphonage/backflow through the drain may occur.
- Where jockey (low volume-high pressure) pumps are utilized to maintain elevated pressure, as in a fire protection system, the discharge of the pump must be on the downstream side of any check valve or backflow prevention device. Where the supply for the jockey pump is taken from the upstream side of the check valve or backflow prevention device, an assembly of the same type as required on the main line shall be installed on the supply line.
- High volume fire pumps shall be equipped with a suction limiting control to modulate the pump if the suction pressure approaches 10 psi. Ideally, such pumps should draw from an in-house reservoir fed by several supply lines. If any of the supply lines have a source other than the public water supply, all supply lines must have air-gap discharges into the reservoir.

### **3.2.5 Alterations or changes to a BFD**

For new installations, MUD along with the City or County Plumbing Inspections Office (when applicable per City/County regulation requirements) shall inspect the site and/or review plans in order to determine the type of backflow prevention device, if any, required, and notify the owners of the required device.

No installation, alteration, or change shall be made of any backflow prevention device connected to the MUD water system for water supply, fire protection, or any other purpose without pre approval from MUD. A copy of such permit shall be displayed in a conspicuous place at the job site at all times, from the time of issuance until the final inspection.

### **3.2.6 Annual inspection and device testing**

MUD shall require, at a minimum, annual successful testing of installed backflow devices as directed by MUD's Cross Connection Control Program. MUD reserves the right to require customers to contract with an independent State Certified Backflow Tester, to use MUD employees to test devices, and/or to charge customers for these tests.

Only BFD tests performed by persons possessing a current TDEC Certificate of Competency in Testing and Evaluation of Backflow Prevention Assemblies along with a current device calibration certificate will be considered official tests by MUD. Records of all tests shall be provided to the MUD CCC Program Administrator and testing shall be conducted within the following criteria:

- Immediately following installation
- Tested annually if active
- Any time BFDs have been partially disassembled for cleaning and repair
- Where there is indication the BFD may not be functioning properly (i.e., excessive or continuous discharges from the relief valve, chatter, or vibration of internal parts)

Where the use of water is critical to the continuance of normal operations or protection of life, property, or equipment, duplicate units shall be required to avoid the necessity of discontinuing water service to test or repair the protective device.

MUD shall require the occupant of the premises to make all repairs indicated promptly, and to keep any protective device working properly. The expense of such repairs shall be borne by the owner or occupant of the premises.

### **3.2.7 Device Repairs**

Should a BFD be found defective or have a status of Failed, MUD requires the BFD to be repaired promptly with manufacturer's specified parts, according to the manufacturer's specified procedure, and placed in proper operating condition within the time limit specified in Tables 4 and 5. Following repairs, the device is to be tested again to verify that it meets performance standards and has a status of Passed. The owner of the BFD will be responsible for maintaining protective measures ensuring the device remains in a good state of repair. The failure to maintain a BFD in proper working order shall be grounds for discontinuance of water service to a premise.

## **3.3 VIOLATIONS OF MUD'S CROSS CONNECTION PROGRAM**

Any premises found to have cross connections, auxiliary intakes, bypasses, or interconnections in violation of the provisions of the MUD Cross Connection Manual shall be allowed a reasonable time within which to comply with the provisions of this manual. Every effort will be made to secure the voluntary cooperation of the customer in correcting cross connection hazards. After a thorough investigation of existing conditions and subsequent finding of a potential hazard to the public water system, the amount of time given to eliminate the hazard or potential hazard shall be determined by MUD.



### 3.3.1 Requirement to Install a BFD – New or Existing Service

If MUD or other authorized personnel determine during review of plans or premises that a BFD is required for a new water installation, a letter shall be issued to the customer by MUD informing the customer of:

- Any corrective action deemed necessary,
- Method of achieving the correction, and
- Time allowed for the correction to be made.

A TDEC certified testers (who has submitted valid TDEC Certification along with current device calibration certificate of their equipment) shall be used by the customer with the “First Notice of Cross Connection, Installation Requirement”. MUD shall determine the timeframe for the installation of an appropriate BFD depending on the degree of hazard presented to the water distribution system. See Table 3 for the typical compliance timeline. Failure to install a BFD as required by MUD or other authorized personnel shall result in denial or termination of water service.

**Table 3. Timeline of Installation of Backflow Prevention Device.**

Day	Type of Notification	Requirements
0	Letter - “First Notice of Cross Connection, Installation Requirement”	Customer shall have backflow device installed and tested <i>within 30 days</i>
30	Letter – “Second Notice of Cross Connection, Installation Requirement”	Customer shall have backflow device installed and tested <i>within 20 days</i>
50	Letter – “Notice of Violation, Final Notice of Installation Requirement”	Customer shall have backflow device installed and tested <i>within 10 business days</i>
61	Termination of MUD water service upon approval of General Manager	Customer shall have backflow device installed and tested and shall set-up an appointment for water service to be restored

### 3.3.2 Failure of an Existing BFD– Residential & Commercial

MUD will notify the residential & commercial customers upon the failure of an existing BFD and request that the appropriate repairs are made. A current and valid ‘TDEC Certificate of Competency in Testing and Evaluation of Backflow Prevention Assemblies’ by the repair/testers shall be used by the customer with the “Notice of Cross Connection, Repair and Test”. A residential customer (res) shall be given 15 days, and a commercial customer (com) shall be given 20 days to have the device repaired and retested according to Section 3.2. If, after 15 days residential customers (res) and 20 days commercial customers (com), the device has not had applicable repairs made and received a status of Passed from a certified tester, then MUD shall issue a “Notice of Violation, Final Notice of Cross Connection, Repair and Test” informing the customer of the intent to terminate water service. Table 4 summarizes the device repair timeframe.

**Table 4. Timeline of Repair – Residential Backflow Prevention Device**

<b>Day</b>	<b>Type of Notification</b>	<b>Requirements</b>
0	Letter - “Notice of Violation”	Customer shall have backflow device repaired and tested <i>within 15 days residential and 20 days commercial</i>
15 res 20 com	Letter – “Notice of Violation, Final Notice to Cross Connection, Repair, and Test”	Customer shall have backflow device repaired and tested <i>within 10 business days</i>
25 res 30 com	Termination of MUD water service upon approval of General Manager	Customer shall have backflow device repaired and tested and shall set-up an appointment for water service to be restored

**3.3.3 Annual Required Testing – Fire System BFD**

The commercial customers, that have a fire line BFD, shall have a total 20 days from the issuing of the “Notice of Violation” to have backflow prevention device(s) tested. If, after 20 days from the original notice, the device has not been tested and any applicable repairs made, and issued a status of Passed, then MUD shall issue a “Notice of Violation, Final Notice to Test” informing the customer of the intent to terminate water service. The time frame allowed to test commercial backflow prevention devices shall be determined by MUD and may be altered depending on the degree of hazard; however the time shall not exceed 30 days. Table 5 summarizes the device testing timeframe:

**Table 5. Timeline of Testing – Commercial Fire Line Backflow Assembly Device**

Day	Type of Notification	Requirements
0	Letter - “Notice of Violation”	Customer shall have backflow device tested and applicable repairs made <i>within 20 days</i>
20	Letter – “Notice of Violation, Final Notice to Test”	Customer shall have backflow device tested, and applicable repairs made <i>within 10 days</i>
30	Termination of MUD water service upon approval of General Manager	Customer shall have backflow device repaired or replaced and shall set-up an appointment for water service to be restored

**3.3.4 Annual Required Testing – Portable Hydrant Meter Backflow Assemblies**

MUD will perform an annual test and repair if needed on all portable hydrant meter backflow assemblies.

**3.4 TERMINATION OF SERVICE**

The failure to correct conditions threatening the safety of the public water system as described in this manual or failure to test a device as prescribed by the State of Tennessee, within the time limits set by MUD, shall be grounds for denial or termination of water service. If proper protection has not been provided after a reasonable time, MUD shall give the customer notification that water service is to be discontinued, and physically separate the public water system from the customer’s on-site piping system in such a manner that the two systems cannot again be connected by an unauthorized person. Water service will not be reinstated until proper installation and/or testing documentation is received by MUD.

The removal, bypassing, or altering of a protective device or the installation thereof so as to render a device ineffective shall constitute grounds for discontinuance of water service. Water service to such premises shall not be restored until the customer has corrected or eliminated such conditions or defects to the satisfaction of MUD.

### 3.5 IMMEDIATE THREAT TO THE WATER SYSTEM

Where cross connections, auxiliary intakes, bypasses, or interconnections are found that constitute a threat warning of immediate concern regarding contamination of the water system, MUD has the right to require immediate corrective action be taken to eliminate the threat warning to the public water system. The list of high risk/high hazard facilities are included on Table 2 and notated by an asterisk (\*).

Expeditious steps may be taken to disconnect the water system from the on-site piping system unless the threat warning is corrected immediately. The time allowed for preparation for a due process hearing shall be in relationship with the risk of hazard to the public, and may follow disconnection when the risk of public health and safety in the opinion of MUD warrants disconnection prior to a due process hearing.

If backflow occurs or is believed to have occurred and there is the potential of contamination within the public water system, MUD will take the necessary steps to protect the health of the customer. These steps include, as necessary, and not limited to:

- Isolate potentially contaminated lines or facilities
- Determine cross connections and hazards
- Separate cross connections from MUD water distribution system
- Notify regulatory entities
- Notify the affected public
- Remove contamination from public water system
- Test and ensure safety of potable water
- Return public water system to service
- Rescind any public notification
- Investigate and document the details including cause, isolation, and correction
- Send report to Nashville TDEC DWS

#### IV. RECORDS AND RETENTION

Listed below are the records maintained by MUD for the CCC Program. Records are maintained as a hard copy, electronic, or hard copy and electronic as applicable. The Administrator in the LRC department maintains the electronic system of record and hard copy records.

**Table 6. Records and retention for CCC Program**

<b>Record</b>	<b>Record Type</b>	<b>Retention Time</b>
Annual public education documents and pamphlets	Hard / electronic copy	Five years
State approved Cross Connection Manual	Hard / electronic copy	Maintained and updated copy retained indefinitely
Records – Initial surveys, recommendations, follow-up, corrective action	Hard / electronic copy	Five years
Master list of establishments with BFDs including location, BFD (make, model, serial number, etc)	Cross connection database	Five years
Customer correspondence / notifications	Cross connection database	Five years
Test records	Hard copies / Cross connection database	Five years
Tester information (name of device tester)	Cross connection database	Five years
Certificate of Competency for each tester	Hard / electronic copy	Five years
Copies of test kit certifications	Hard / electronic copy	Five years
Final Notice	Hard / electronic copy	Five years

#### 4.1 MODIFICATIONS TO BACKFLOW MANUAL, WATER RULES AND REGULATIONS, AND STANDARDS AND SPECIFICATIONS

MUD may modify this Backflow Manual, the Water Rules and Regulations, or the Standards and Specifications relating to cross connection control and BFDs. The Backflow Manual and Water Rules and Regulations will be reviewed as needed to determine if they meet the requirements set forth by TDEC DWS and that they promote an ongoing program. The Manager shall be authorized to modify this manual as needed. Significant modifications shall be reported to General Board of Commissioners and TDEC DWS for their review and approval.

## RESOLUTION

Whereas, the District adopted a policy and plan governing cross-connections, auxiliary intakes, bypasses, and interconnections on December 18, 2002; and the District adopted an update to the original plan on November 19, 2008; and

Whereas, the District has decided to update the Cross-Connection Control Plan

**Now Therefore Be It Hereby Resolved** by the Board of Commissioners that it hereby approves and adopts the Milcrofton Utility District Cross-Connection Manual attached as Exhibit A to this Resolution.

Adopted this 22<sup>nd</sup> day of January, 2020.

  
Howard Smithson, President

  
Danny Cotton, Vice-President

  
Carl Scott Sr., Secretary-Treasurer

**MILCROFTON UTILITY DISTRICT  
BOARD OF COMMISSIONERS MEETING  
September 23, 2020**

The regular monthly meeting of the Board of Commissioners of Milcrofton Utility District was held at 9:00 A.M. on Wednesday, September 23, 2020 at the District's business office located at 6333 Arno Road, Franklin, Tennessee.

Commissioners present for the meeting of September 23, 2020 were Howard Smithson, Carl Scott, Sr., and Danny Cotton. Others present for the meeting were Mike Jones, Kevin Davis, Jason English, John Morgan, and Barney Fullington. Michael Wall was called by phone during the meeting for a brief legal update.

Howard Smithson, President, called the meeting to order.

The first order of business was approval of the minutes of the August 26, 2020 board meeting. A motion was made by Carl Scott and seconded by Danny Cotton to approve the minutes of the August 26, 2020 board meeting. After a full discussion, the motion was unanimously approved.

The next order of business was the approval of the Leak Adjustment Log and Bad Debt for August 2020. A motion was made by Howard Smithson seconded by Danny Cotton to approve the Leak Adjustment Log for August 2020 in the amount of \$1,569.32 and the Bad Debt for \$39.94 (copy attached hereto as "Exhibit A"). After a full discussion, the motion was unanimously approved.

The next order of business was a review of the District's financial statements, water purchase report, and water loss report.

The next order of business was Mr. Jones providing the board a copy of the appraisal report of 6232 Meeks Road (Williamson County Tax Map 116, Parcel 40) for a 20-foot-wide exclusive water line easement for Milcrofton for the Starnes Creek Subdivision offsite improvements. A motion was made by Carl Scott and seconded by Danny Cotton to authorize the filing of an action to condemn this easement. After a full discussion, the motion was unanimously approved.

The next order of business was John Morgan of 5049 Montelena Drive discussing the District's requirement that a backflow prevention device be located within 5 feet of the District's water meter box. Due to the cost of relocating the meter box on his property and the fees associated with reconnecting his plumbing to the meter box, Mr. Morgan requested that the board consider some alternatives. A motion was made by Danny Cotton and seconded by Howard Smithson to update the Standards and Specifications incorporated into the Cross-Connection Control Plan to allow the backflow prevention device to be installed up to 5 feet from the meter box anywhere across the property frontage (laterally) within the property lines as long as it does not exceed a distance of 5 feet behind the meter box. After a full discussion, the motion was unanimously approved.

The next order of business was Mr. Jones presenting to the board the new health insurance premium in the District's current plan with Blue Cross Blue Shield for the 2020-2021 fiscal year. The proposed increase of the health insurance premium in the District's current plan is 10.01%. A motion was made by Carl Scott and seconded by Howard Smithson to continue with the current Blue Cross Blue

Shield plan for the next plan year and make changes to the health plan in 2021-2022. After a full discussion, the motion was unanimously approved.

The next order of business was the board's consideration of changes to employee wages and salaries for the 2020-2021 fiscal year. The board reviewed the recommendations of Mr. Jones set forth in his Wage Increase Report. The board discussed modifications to Mr. Jones' recommendations, which Mr. Jones incorporated in his Wage Increase Report. A motion was made by Carl Scott and seconded by Danny Cotton to accept the wages and salaries in Mr. Jones's Wage Increase Report as modified. After a full discussion, the motion was unanimously approved.

The next order of business was the consideration of employee Christmas bonuses for December 2020. Mr. Jones recommended that each employee be given a Christmas bonus in the amount of 5% of each employee's regular pay (excluding overtime) from January 1, 2020 through October 31, 2020. A motion was made by Howard Smithson and seconded by Carl Scott to approve the employee Christmas bonuses as recommended by Mr. Jones. After a full discussion, the motion was approved.

The next order of business was Mr. Jones presenting the final 2020-2021 fiscal year budget for the board's consideration. A motion was made by Danny Cotton and seconded by Howard Smithson to approve the 2020-2021 fiscal year budget as presented by Mr. Jones (copy attached hereto as "Exhibit B"). After a full discussion, the motion was unanimously approved.

The board took a recess for an executive session to discuss pending and anticipated legal proceedings with Mr. Wall as legal counsel.


The board reconvened the meeting after the recess.

The next order of business was Barney Fullington and Jason English giving the board a brief status update on engineering matters.

The next Board of Commissioners meeting will be held at 9:00 a.m. on Wednesday, October 28, 2020.

There being no further business to come before the Board, a motion was made by Howard Smithson and seconded by Carl Scott to adjourn the meeting. After a full discussion, the motion was approved.

  
Howard Smithson, President

  
Danny Cotton, Vice-President

  
Carl Scott Sr., Secretary

October 28, 2020  
Date



## EXHIBIT A

**MILCROFTON UTILITY DISTRICT  
LEAK ADJUSTMENT LOG FOR AUGUST 2020**

\*\*\*\*\*

JAMES TAYLOR 4039 WILSON PIKE	Leak Adjustment Customer Side	\$ 24.77
JAMES TAYLOR 4039 WILSON PIKE	Leak Adjustment Customer Side	\$ 30.34
JAMES/LYNN EKES 1120 CROSS CREEK DR	Leak Adjustment Customer Side	\$ 147.74
JAMES/LYNN EKES 1120 CROSS CREEK DR	Leak Adjustment Customer Side	\$ 189.58
NICOLE RODGERS 408 COBERT LN	Leak Adjustment Customer Side	\$ 86.22
NICOLE RODGERS 408 COBERT LN	Leak Adjustment Customer Side	\$ 67.62
KELLIE SEBOA 3210 EAST MCEWEN DR	Leak Adjustment Customer Side	\$ 71.19
KELLIE SEBOA 3210 EAST MCEWEN DR	Leak Adjustment Customer Side	\$ 111.99
LINDA CARSON 344 TIPPECANOE DR	Leak Adjustment Customer Side	\$ 87.46
LINDA CARSON 344 TIPPECANOE DR	Leak Adjustment Customer Side	\$ 68.76
JIM FOGLE 107 GUINEVERES RETREAT	Leak Adjustment Customer Side	\$ 66.30
JIM FOGLE 107 GUINEVERES RETREAT	Leak Adjustment Customer Side	\$ 531.55
MURALI ALLU 118 KETCH CT	Leak Adjustment Customer Side	\$ 27.74

ELVA BEARD	Billing Adjustment	\$ 16.51
4085 WILSON PIKE	Flushing line	

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<b>Milcrofton Utility District</b>	\$ 41.55
<b>6333 Arno Road</b>	

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Total Leak Adjustments for Month	\$ 1,569.32
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There were 719 customers who had late charges posted to their account on August 4, 2020 due to their payments not being received on or before August 3, 2020.	\$ 7,956.92
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Howard G. Smithson  
**Howard G. Smithson, President**

Danny B. Cotton  
**Danny B. Cotton, Vice-President**

9-23-2020  
**Date**

Carl Scott Sr.  
**Carl Scott, Sr., Secretary/Treasurer**

MILCROFTON UTILITY DISTRICT  
Transaction List - Detailed

171

Sort order Customer No  
From 8/1/2020 Through 8/31/2020

Limited to

Transaction Types Write-Off

Deposits Transaction Types

Exempt Tax: No

Location No	Account No	Customer Name	Location Address		
Date	Post Date	Type	Applies To	Receipt No	Amount
10557500	1055750012	DENNIS SANDERS	1064 TULLOSS RD		
08/05/2020	08/05/2020	Write-Off	WATER Charge		(\$1.36)
			WATER Delinquency		(\$0.13)
			CUSTOMER MONTHLY CHARGE Charge		(\$32.00)
			CUSTOMER MONTHLY CHARGE Delinquency		(\$3.20)
			SALES TAX Charge		(\$3.25)
					<b>(\$39.94)</b>

Transaction Type	Applies To	Transaction Amount
Write-Off	CUSTOMER MONTHLY CHARGE Charge	(\$32.00)
	CUSTOMER MONTHLY CHARGE Delinquency	(\$3.20)
	SALES TAX Charge	(\$3.25)
	WATER Charge	(\$1.36)
	WATER Delinquency	(\$0.13)
		<b>(\$39.94)</b>
<b>Grand Total</b>		<b>(\$39.94)</b>

Approved the designated accounts above as uncollectible and written off :

Howard G. Smithson  
Howard G. Smithson, President

Danny B. Cotton  
Danny B. Cotton, Vice-Presid. Date

9-23-2020  
DATE

Carl Scott Sr.  
Carl Scott, Sr., Secretary/Treasurer

# MILCROFTON UTILITY DISTRICT BUDGET WORKSHEET

acct#	OPERATING REVENUES	2021 BUDGET 2020-2021	PROJECTED % INCREASE 2020-2021	2019 ACTUAL 2018-2019	2020 EST. ACT. 2019-2020	% INCREASE 2019-2020	2020 BUDGET 2019-2020
400	WATER SALES	\$ 8,864,901	6.0%	7,938,612	8,363,115	5.3%	\$ 8,199,965
780	LESS: BAD DEBTS/BANKRUPTCY	(3,638)	35.2%	(4,585)	(2,691)	-41.3%	(5,071)
410	APPLICATION FEE- RESIDENTIAL	143,300	4.5%	123,600	137,100	10.9%	138,400
412	APPLICATION FEE - BUILDER	54,500	6.0%	45,300	51,400	13.5%	51,800
414	PARTS REPLACEMENT - BUILDER	34,016	20.4%	33,070	28,244	-14.6%	46,599
416	TAP INSTALLATION FEES - RESIDENTIAL	34,000	-15.0%	16,995	40,000	135.4%	25,000
420	METER SALES - RESIDENTIAL	6,500	-25.8%	3,900	8,765	124.7%	4,875
430	INSPECTION FEES	1,400	-50.0%	600	2,800	366.7%	1,000
435	MINOR SUBDIVISION INSTALLATION FEES	8,000	60.0%	24,700	5,000	-79.8%	18,000
440	LABOR CHARGES	2,450	-7.5%	2,061	2,650	28.6%	2,150
445	TRIP CHARGES	17,200	1.5%	16,300	16,950	4.0%	17,400
450	METER RENTAL FEE	3,150	16.7%	5,751	2,700	-53.1%	6,200
455	BACKFLOW TESTING	87,750	7.5%	69,795	81,630	17.0%	81,630
460	FIRE FLOW TEST FEE	7,650	-10.5%	6,300	8,550	35.7%	7,200
470	PENALTIES & TAMPERING CHARGES	76,115	2.4%	75,342	74,364	-1.3%	76,815
480	SERVICE AND CUT-OFF CHARGES	25,709	4.3%	28,375	24,655	-13.1%	30,026
490	RETURNED CHECK CHARGES	1,528	8.4%	1,650	1,410	-14.5%	1,820
	<b>TOTAL OPERATING REVENUE</b>	<b>9,364,531</b>	<b>5.9%</b>	<b>8,387,766</b>	<b>8,846,642</b>	<b>5.5%</b>	<b>8,703,809</b>

acct#	WATER DISTRIBUTION EXPENSES	2020-2021	2020-2021	2018-2019	2019-2020	2019-2020	2019-2020
500	WATER PURCHASED	3,318,025	8.7%	2,969,237	3,053,444	2.8%	3,120,703
510	SALARIES & WAGES-OPERATIONS	416,702	5.0%	367,763	396,859	7.9%	398,600
512	VACATION-OPERATIONS	23,348	5.0%	26,634	22,236	-16.5%	27,155
514	OVERTIME-OPERATIONS	21,519	5.0%	24,574	20,494	-16.6%	24,416
516	SICK TIME-OPERATIONS	19,919	-24.2%	17,935	26,285	46.6%	17,302
518	ON CALL-OPERATIONS	7,646	5.0%	6,930	7,282	5.1%	7,448
520	TRAVEL TIME-OPERATIONS	6,404	5.0%	5,113	6,099	19.3%	4,914
522	HOLIDAY-OPERATIONS	16,706	5.0%	14,939	15,910	6.5%	15,812
524	BIRTHDAY-OPERATIONS	1,584	5.0%	1,549	1,509	-2.6%	1,767
526	CHRISTMAS BONUS-OPERATIONS	17,252	1.7%	15,355	16,971	10.5%	17,537
528	INCENTIVE BONUS-OPERATIONS	8,045	-40.8%	11,387	13,579	19.3%	13,579
530	COMPENSATED ABSENSES-OPERATIONS	1,390	50.8%	922	922	0.0%	3,947
532	PAYROLL TAXES-OPERATIONS	41,243	2.3%	37,011	40,333	9.0%	40,432
534	HEALTH INSURANCE-OPERATIONS	158,261	26.6%	106,088	124,975	17.8%	138,877
536	HEALTH INSURANCE DEDUCTIBLE-OPER	49,684	1.6%	30,048	48,897	62.7%	45,094
538	PENSION CONTRIBUTION-OPERATIONS	126,338	0.0%	131,604	126,338	-4.0%	140,222
542	TRAVEL OPERATIONS	600	100.0%	514	-	-100.0%	508
545	UNIFORM EXPENSE	8,250	12.7%	6,910	7,319	5.9%	7,000
548	METER EXPENSE	260,000	39.9%	1,190,000	185,791	-84.4%	220,301
550	MATERIALS & SUPPLIES	35,019	8.4%	28,847	32,291	11.9%	34,117
552	REPAIRS AND MAINTENANCE	91,736	2.1%	73,219	89,856	22.7%	68,564
554	SMALL PURCHASES - OPERATIONS	16,284	57.6%	10,233	10,335	1.0%	12,152
556	EQUIPMENT MAINTENANCE	25,013	-16.2%	17,650	29,852	69.1%	21,072
558	EQUIPMENT RENTAL	1,250	100.0%	125	-	-100.0%	1,250
560	TRANSPORTATION EXPENSE	32,311	18.1%	36,642	27,357	-25.3%	40,719
562	INSURANCE - VEHICLES	16,915	1.9%	15,713	16,603	5.7%	15,946
564	INSURANCE-WORKMEN'S COMP-OPERATIONS	10,269	1.3%	10,354	10,137	-2.1%	13,471
566	CONTRACTED SERVICES - OTHER	23,219	1.1%	22,270	22,960	3.1%	23,478
568	WATER TESTING	32,423	4.2%	29,791	31,103	4.4%	32,683
570	COMMUNICATIONS-DISTRIBUTION	15,561	4.1%	13,975	14,947	7.0%	16,175
572	UTILITIES-ELECTRICITY-PUMP STATIONS	178,365	1.8%	174,135	175,292	0.7%	180,319
574	UTILITIES-ELECTRICITY-SHOP	1,418	9.5%	1,476	1,295	-12.3%	1,517
576	UTILITIES-GAS-SHOP	973	15.4%	599	843	40.7%	615
580	PERMITS	630	12.5%	360	560	55.6%	270
585	MISCELLANEOUS EXPENSE	2,006	10.4%	1,131	1,817	60.7%	1,961
592	FIRE FLOW TEST EXPENSE	6,800	-10.5%	5,200	7,600	46.2%	6,400
594	DEPRECIATION	2,231,079	7.1%	1,956,266	2,082,399	6.4%	2,357,144
	<b>TOTAL WATER DISTRIBUTION EXPENSES</b>	<b>7,224,186</b>	<b>8.3%</b>	<b>7,362,499</b>	<b>6,670,490</b>	<b>-9.4%</b>	<b>7,073,467</b>

Acct#	GENERAL & ADMINISTRATIVE EXPENSES	2020-2021	2020-2021	2018-2019	2019-2020	2019-2020	2019-2020
610	SALARIES & WAGES-ADMINISTRATIVE	337,937	5.0%	300,242	321,845	7.2%	318,599
612	VACATION-ADMINISTRATIVE	15,436	5.0%	21,762	14,701	-32.4%	21,335
614	OVERTIME-ADMINISTRATIVE	550	15.5%	606	476	-21.5%	639
616	SICK TIME-ADMINISTRATIVE	9,742	10.0%	5,782	8,855	53.1%	6,056
622	HOLIDAY-ADMINISTRATIVE	12,958	5.0%	11,700	12,341	5.5%	12,344
624	BIRTHDAY-ADMINISTRATIVE	1,246	5.0%	1,300	1,187	-8.7%	1,052
626	CHRISTMAS BONUS-ADMINISTRATIVE	14,841	3.6%	13,546	14,327	5.8%	14,260
628	INCENTIVE BONUS-ADMINISTRATIVE	8,670	-14.2%	11,110	10,100	-9.1%	10,100
629	FRINGE ADMIN AUTO INCLUSION	731	3.2%	699	708	1.3%	720
630	COMPENSATED ABSENSES-ADMIN	2,097	63.4%	1,426	1,283	-10.0%	3,132
632	PAYROLL TAXES-ADMINISTRATIVE	30,706	4.6%	28,667	29,363	2.4%	29,405

Acct#	GENERAL & ADMINISTRATIVE EXPENSES	2021 BUDGET 2020-2021	PROJECTED % INCREASE 2020-2021	2019 ACTUAL 2018-2019	2020 EST. ACT. 2019-2020	% INCREASE 2019-2020	2020 BUDGET 2019-2020
634	HEALTH INSURANCE-ADMINISTRATIVE	92,524	10.1%	76,641	84,036	9.6%	87,217
636	HEALTH INSURANCE DEDUCTIBLE-ADMIN	25,015	100.6%	27,357	12,471	-54.4%	24,315
638	PENSION CONTRIBUTION-ADMINISTRATIVE	123,662	0.0%	123,662	123,662	0.0%	109,778
650	MEETING COMPENSATION - COMMISSIONERS	10,800	0.0%	10,800	10,800	0.0%	10,800
655	HEALTH INSURANCE-COMMISSIONERS	35,028	10.1%	34,971	31,815	-9.0%	39,166
660	HEALTH INSURANCE DEDUCTIBLE-COMMIS	32,500	1.4%	32,826	32,051	-2.4%	27,909
665	PAYROLL TAXES-COMMISSIONERS	826	0.0%	826	826	0.0%	826
670	INSURANCE - GENERAL LIABILITY	20,737	2.2%	20,749	20,292	-2.2%	21,181
675	INSURANCE-WORKMEN'S COMP-ADMIN	964	1.8%	3,269	947	-71.0%	3,407
680	INSURANCE - FIDELITY BOND	2,558	2.3%	2,675	2,501	-6.5%	3,206
685	INSURANCE - DIRECTOR & OFFICER	16,752	9.3%	12,447	15,321	23.1%	12,446
695	LEGAL EXPENSES	120,016	26.4%	166,722	94,975	-43.0%	157,117
700	ACCOUNTING, AUDIT, RATE STUDY EXP.	39,970	271.3%	29,570	10,765	-63.6%	10,950
710	DUES, FEES, SUBSCRIPTIONS, & TRAINING	19,787	23.9%	17,657	15,965	-9.6%	17,690
715	COMPUTER SYSTEMS	72,094	4.8%	66,810	68,779	2.9%	72,269
720	PAYMENT SOLUTIONS	8,853	4.0%	8,862	8,514	-3.9%	9,273
725	OFFICE EXPENSE	4,744	3.4%	4,569	4,586	0.4%	4,817
730	OFFICE SUPPLIES	4,801	3.0%	4,089	4,661	14.0%	4,597
735	OFFICE MAINTENANCE EXPENSE	8,792	8.3%	9,019	8,120	-10.0%	9,176
740	BUILDING MAINTENANCE	6,800	100.0%	2,619	-	-100.0%	25,000
745	POSTAGE	60,381	3.7%	56,368	58,227	3.3%	58,736
750	COMMUNICATIONS-OFFICE	6,788	12.9%	7,442	6,010	-19.2%	7,493
755	UTILITIES-ELECTRICITY-OFFICE	4,759	22.5%	4,428	3,884	-12.3%	4,712
760	UTILITIES-GAS-OFFICE	1,047	11.9%	1,002	936	-6.6%	1,183
765	MEALS	3,204	28.7%	2,944	2,489	-15.5%	3,801
770	TRAVEL COMMISSIONERS	2,738	100.0%	2,546	-	-100.0%	2,738
775	TRAVEL ADMINISTRATIVE	1,541	3955.3%	1,034	38	-96.3%	1,541
785	TRAVEL OTHER ENTITIES	-	0.0%	-	-	0.0%	-
<b>TOTAL GENERAL &amp; ADMINISTRATIVE EXPENSES</b>		<b>1,162,595</b>	<b>12.0%</b>	<b>1,128,744</b>	<b>1,037,857</b>	<b>-8.1%</b>	<b>1,148,986</b>
<b>TOTAL OPER., GENERAL, &amp; ADMIN EXPENSES</b>		<b>8,386,782</b>	<b>8.8%</b>	<b>8,491,243</b>	<b>7,708,347</b>	<b>-9.2%</b>	<b>8,222,453</b>
<b>NET ORDINARY INCOME</b>		<b>977,749</b>	<b>-14.1%</b>	<b>(103,477)</b>	<b>1,138,295</b>	<b>-1200.0%</b>	<b>481,356</b>
<b>Acct# CAPITAL CONTRIBUTIONS</b>		<b>2020-2021</b>	<b>2020-2021</b>	<b>2018-2019</b>	<b>2019-2020</b>	<b>2019-2020</b>	<b>2019-2020</b>
800	DEVELOPMENT APPLICATION FEE	38,700	-16.7%	28,570	46,450	62.6%	30,000
810	ADMINISTRATIVE & PROF. FEE	730,198	-13.6%	587,090	844,891	43.9%	619,504
820	STATE PLAN REVIEW FEE	2,538	2.6%	2,677	2,473	-7.6%	2,674
830	TAP FEES IN EXCESS OF INSTALLATION	2,416	49.7%	2,951	1,614	-45.3%	new
840	CAPACITY FEES - RESIDENTIAL	48,500	-10.6%	28,750	54,250	88.7%	37,500
850	CAPACITY FEES - DEVELOPER	1,027,500	-27.0%	928,785	1,406,958	51.5%	1,390,000
855	METER SALES - DEVELOPER	123,825	-7.4%	111,645	133,750	19.8%	180,700
860	FIRE HYDRANT FEE	72,000	-9.4%	64,500	79,500	23.3%	84,000
870	FIRE LINE CAPACITY FEE	53,000	430.0%	36,500	10,000	-72.6%	24,500
880	CONTRACT PAYMENTS IN AID OF CONST.	14,688	-8.8%	10,016	16,113	60.9%	-
890	STATE PAYMENTS IN AID OF CONST.	-	-100.0%	-	2,781,146	100.0%	2,000,000
<b>TOTAL CAPITAL CONTRIBUTIONS</b>		<b>2,113,365</b>	<b>-60.7%</b>	<b>1,801,484</b>	<b>5,377,145</b>	<b>198.5%</b>	<b>4,368,878</b>
<b>Acct# CAPITAL CONTRIBUTIONS (IN-KIND)</b>		<b>2020-2021</b>	<b>2020-2021</b>	<b>2018-2019</b>	<b>2019-2020</b>	<b>2019-2020</b>	<b>2019-2020</b>
900	CONTRIBUTIONS - DONATED SYSTEMS	3,076,426	8.1%	3,888,620	2,846,785	-26.8%	3,182,802
<b>TOTAL CAPITAL CONTRIBUTIONS (IN-KIND)</b>		<b>3,076,426</b>	<b>8.1%</b>	<b>3,888,620</b>	<b>2,846,785</b>	<b>-26.8%</b>	<b>3,182,802</b>
<b>TOTAL CAP. CONTR. &amp; TOT. CAP. CONTR. (IN-KIND)</b>		<b>5,189,791</b>	<b>-36.9%</b>	<b>5,690,104</b>	<b>8,223,930</b>	<b>44.5%</b>	<b>7,551,680</b>
<b>Acct# OTHER NON-OPERATING REVENUE</b>		<b>2020-2021</b>	<b>2020-2021</b>	<b>2018-2019</b>	<b>2019-2020</b>	<b>2019-2020</b>	<b>2019-2020</b>
985	INTEREST INCOME	72,891	-55.1%	229,818	162,406	-29.3%	138,212
987	GAIN/LOSS ON SALE OF ASSETS	2,800	100.0%	4,500	-	-100.0%	150
988	MISCELLANEOUS INCOME	10,017	-54.8%	11,276	22,186	96.8%	3,500
<b>TOTAL NON-OPERATING REVENUE</b>		<b>85,708</b>	<b>-53.6%</b>	<b>245,594</b>	<b>184,592</b>	<b>-24.8%</b>	<b>141,862</b>
<b>TOTAL NON-OPERATING INCOME</b>		<b>5,275,499</b>	<b>-37.3%</b>	<b>5,935,698</b>	<b>8,408,522</b>	<b>41.7%</b>	<b>7,693,542</b>
<b>Acct# OTHER NON-OPERATING EXPENSES</b>		<b>2020-2021</b>	<b>2020-2021</b>	<b>2018-2019</b>	<b>2019-2020</b>	<b>2019-2020</b>	<b>2019-2020</b>
995	INTEREST EXPENSE	145,208	-2.3%	229,554	148,659	-35.2%	230,649
997	INTEREST CAPITALIZED IN CONSTRUCTION	-	0.0%	-	-	0.0%	-
<b>TOTAL OTHER NON-OPERATING EXPENSES</b>		<b>145,208</b>	<b>-2.3%</b>	<b>229,554</b>	<b>148,659</b>	<b>-35.2%</b>	<b>230,649</b>
<b>NET OTHER NON-OPERATING INCOME</b>		<b>5,130,291</b>	<b>-37.9%</b>	<b>5,706,144</b>	<b>8,259,863</b>	<b>44.8%</b>	<b>7,462,893</b>
<b>NET INCOME</b>		<b>6,108,040</b>	<b>-35.0%</b>	<b>5,602,667</b>	<b>9,398,158</b>	<b>67.7%</b>	<b>7,944,249</b>

	2021 BUDGET 2020-2021	PROJECTED % INCREASE 2020-2021	2019 ACTUAL 2018-2019	2020 EST. ACT. 2019-2020	% INCREASE 2019-2020	2020 <sup>174</sup> BUDGET 2019-2020
<b>OTHER CASH REQUIREMENTS</b>						
DEBT SERVICE (PRINCIPAL)	75,521	-72.5%	267,021	274,723	2.9%	72,564
ASSET ACQUISITION & CONSTRUCTION *	11,614,271	599.3%	158,131	1,660,750	950.2%	7,683,650
<b>TOTAL OTHER CASH REQUIREMENTS</b>	<b>11,689,792</b>	<b>504.0%</b>	<b>425,152</b>	<b>1,935,473</b>	<b>355.2%</b>	<b>7,756,214</b>
<b>PROJECTED NET CASH INFLOW (OUTFLOW)</b>	<b>(5,581,752)</b>	<b>-174.8%</b>	<b>5,177,515</b>	<b>7,462,685</b>	<b>44.1%</b>	<b>188,035</b>

\* Planned projects:

OLD SHOP MODIFICATIONS	30,000
WATER LAB	20,000
18K 4 POST LIFT - Drive THRU - w/(2) 9K JACKS	16,578
LEAK CORRELATOR	25,000
30" UPSIZING ENGINEERING AND EASEMENTS	6,259,380
MCKAYS MILL UNDERGROUND BPS	99,000
MCKAYS MILL TANK	1,188,000
HOLLY TREE BPS REPAIRS & UPGRADES	2,241,313
AVALON McEWEN DRIVE EXTENSION	750,000
AVALON TANK BLADDER REPAIR	200,000
McEWEN/WILSON BRIDGE RELOCATION	535,000
MCKAYS MILL UNDERGROUND BPS	250,000
<b>TOTAL ACQUISITION COST 2020-2021</b>	<b>\$ 11,614,271</b>

**MILCROFTON UTILITY DISTRICT  
BOARD OF COMMISSIONERS MEETING  
October 28, 2020**

The regular monthly meeting of the Board of Commissioners of Milcrofton Utility District was held at 9:00 A.M. on Wednesday, October 28, 2020 at the District's business office located at 6333 Arno Road, Franklin, Tennessee.

Commissioners present for the meeting of October 28, 2020 were Howard Smithson, Carl Scott, Sr., and Danny Cotton. Others present for the meeting were Mike Jones, Kevin Davis, Jason English, and Barney Fullington.

Howard Smithson, President, called the meeting to order.

The first order of business was approval of the minutes of the September 23, 2020 board meeting. A motion was made by Danny Cotton and seconded by Carl Scott to approve the minutes of the September 23, 2020 board meeting. After a full discussion, the motion was unanimously approved.

The next order of business was the approval of the Leak Adjustment Log and Bad Debt for September 2020. A motion was made by Howard Smithson and seconded by Danny Cotton to approve the Leak Adjustment Log for September 2020 in the amount of \$1,382.87 and the Bad Debt for \$454.68 (copy attached hereto as "Exhibit A"). After a full discussion, the motion was unanimously approved.

The next order of business was a review of the District's financial statements, water purchase report, and water loss report.

The next order of business was Mr. Jones giving the board a status update on current projects.

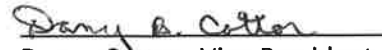
The next order of business was Mr. Jones providing the board a copy of a request from NGU LLC to amend the District's existing easement on Map 36, Parcel 84.00 at the corner of Holly Tree Gap Road and Franklin Road. A motion was made by Howard Smithson and seconded by Carl Scott to allow asphalt paving but no concrete whatsoever within the easement area. The property owner will be responsible for reimbursing the District for any labor to remove the asphalt in case of a water line repair or maintenance and will also be responsible for replacing such asphalt. The District's attorney, Michael Wall, will prepare the easement amendment, and the property owner must pay any legal expenses and recording fees related to the amendment. After a full discussion, the motion was unanimously approved.

The next order of business was Barney Fullington and Jason English giving the board a brief status update on engineering matters.

The next Board of Commissioners meeting will be held at 9:00 a.m. on Wednesday, November 25, 2020.

There being no further business to come before the Board, a motion was made by Howard Smithson and seconded by Carl Scott to adjourn the meeting. After a full discussion, the motion was approved.

  
Howard Smithson, President

  
Danny Cotton, Vice-President

  
Carl Scott Sr., Secretary

November 25, 2020  
Date



## EXHIBIT A

**MILCROFTON UTILITY DISTRICT  
LEAK ADJUSTMENT LOG FOR SEPTEMBER 2020**

\*\*\*\*\*

KENT SINGLETARY 3072 WILSON PIKE	Leak Adjustment Customer Side	\$ 58.20
CHARLES EATON 6250 LADD RD	Leak Adjustment Customer Side	\$ 7.00
CHARLES EATON 6250 LADD RD	Leak Adjustment Customer Side	\$ 33.84
DAN MCGEE 6125 SILVERADO TRACE	Leak Adjustment Customer Side	\$ 333.92
TOM LOEHBIHLER 4859 MURFREESBORO RD	Leak Adjustment Customer Side	\$ 219.91
TOM LOEHBIHLER 4859 MURFREESBORO RD	Leak Adjustment Customer Side	\$ 123.55
MELANIE WATSON 355 WATSON VIEW DR	Leak Adjustment Customer Side	\$ 40.60
NAVEEN KUMAR REDDY BONAM 413 AVON RIVER ROAD	Leak Adjustment Customer Side	\$ 306.71
NAVEEN KUMAR REDDY BONAM 413 AVON RIVER ROAD	Leak Adjustment Customer Side	\$ 117.53
MURALI ALLU 118 KETCH CT	Leak Adjustment Customer Side	\$ 24.46
JAY INC 4449 PEYTONSVILLE - TRINITY	Billing Adjustment	\$ 72.60
*****		
<b>Milcrofton Utility District</b> <b>6333 Arno Road</b>		\$ 44.55
*****		
Total Leak Adjustments for Month		\$ 1,382.87

\*\*\*\*\*

There were no late charges posted in the month of September 2020 due to their payments not being received on or before September 1, 2020.

\$ -

\*\*\*\*\*

Howard G. Smithson  
Howard G. Smithson, President

Danny B. Cotton  
Danny B. Cotton, Vice-President

10-28-2020  
Date

Carl Scott Sr.  
Carl Scott, Sr., Secretary/Treasurer

MILCROFTON UTILITY DISTRICT  
Transaction List - Detailed

179

Sort order: Customer No.  
From: 9/1/2020 Through: 9/30/2020

Limited to :

Transaction Types: Write-Off

Deposits Transaction Types:

Exempt Tax: No

Location No	Account No	Customer Name	Location Address		
Date	Post Date	Type	Applies To	Receipt No	Amount
10335500	1033550010	SHARETA WADE	4295 ARNO RD		
09/01/2020	09/01/2020	Write-Off	WATER Charge		(\$61.14)
			WATER Delinquency		(\$6.12)
			CUSTOMER MONTHLY CHARGE Charge		(\$64.00)
			CUSTOMER MONTHLY CHARGE Delinquency		(\$54.80)
			SALES TAX Charge		(\$12.20)
					<b>(\$198.26)</b>
10679250	1067925004	KEVIN WYATT	6621 COOL SPRINGS RD		
09/01/2020	09/01/2020	Write-Off	WATER Charge		(\$56.03)
			WATER Delinquency		(\$5.61)
			CUSTOMER MONTHLY CHARGE Charge		(\$31.88)
			CUSTOMER MONTHLY CHARGE Delinquency		(\$3.19)
			SALES TAX Charge		(\$8.59)
					<b>(\$105.30)</b>
11201020	1120102010	LIESHA STERLING	136 PENNYSTONE CIR		
09/01/2020	09/01/2020	Write-Off	WATER Charge		(\$119.48)
			WATER Delinquency		(\$11.95)
			CUSTOMER MONTHLY CHARGE Charge		(\$36.80)
			CUSTOMER MONTHLY CHARGE Delinquency		(\$3.68)
			SALES TAX Charge		(\$15.24)
					<b>(\$187.15)</b>

Transaction Type	Applies To	Transaction Amount
Write-Off	CUSTOMER MONTHLY CHARGE Charge	(\$132.68)
	CUSTOMER MONTHLY CHARGE Delinquency	(\$61.67)
	SALES TAX Charge	(\$36.03)
	WATER Charge	(\$236.65)
	WATER Delinquency	(\$23.68)
		<b>(\$490.71)</b>
<b>Grand Total</b>		<b>(\$490.71)</b>

Add back sales tax 36.03  
Acct # 780 Total bad debt expense (454.68)

Approved the designated accounts above as uncollectible and written off :

Howard G. Smithson  
Howard G. Smithson, President

Danny B. Cotton  
Danny B. Cotton, Vice-Presid Date

10-28-2020  
DATE

Carl Scott Sr.  
Carl Scott, Sr., Secretary/Treasurer

**From:** [Mike@Milcrofton.com](mailto:Mike@Milcrofton.com)  
**To:** "[Mike Blair](#)"; "[Rich Buckner](#)"; "[Jessica Hargrove](#)"; "[board](#)"; "[Patrick Landrum](#)"; [buck1947@gmail.com](mailto:buck1947@gmail.com)  
**Subject:** RE: Milcrofton Utilities Water Service  
**Attachments:** [image001.png](#)

---

All,

Just wanted to let you know that I presented your letter and emails to the board. The board took no action as they had already amended the Cross Connection Policy at last month's board meeting to allow the backflow prevention device to be installed five feet behind the water meter anywhere between the property lines.

I know you sent out a notice to residence in Ladd Park that they should acknowledge receipt from us but take no action because you hoped for a compromise. Please also send out a second notice that the 30 day time period stated in their notification letters still stands. If they received a warning letter that their backflow needs to be moved or there service would be disconnected they need to do so before the 30 days expires.

You may also want to let homeowners know they better check with their water provider before making a cross connection (installing an irrigation system) on the latest requirements.

Thanks,

*Mike Jones*

General Manager



O: (615) 716-2260

F: (615) 791-9872

[map](#)

---

**From:** Mike Jones <mike@milcrofton.com>

**Sent:** Sunday, October 25, 2020 17:53

**To:** Mike Blair <mike.blair@laddhoa.com>

**Cc:** Rich Buckner <buck1947@gmail.com>; board <board@laddhoa.com>; Jessica Hargrove <jessica.hargrove@ghertner.com>; Patrick Landrum <patrick.landrum@ghertner.com>; buck1947@gmail.com; scott.speedy@franklintn.gov

**Subject:** Re: Milcrofton Utilities Water Service

Mr. Blair,

I wanted to let you know that I received your email that you forwarded me and that I would present it to the board of Milcrofton on your behalf at the October board meeting on 10/28/2020. I also wanted to let you know that the City of Franklin is a governmental entity under the State of Tennessee and the Milcrofton is a separate governmental entity from the City of Franklin and not subject to COF jurisdiction. Milcrofton's Cross Connection Policy is a state approved plan for our public water system and not subject to any rules or ordinances under the City of Franklin. Feel free to call TDEC office in Nashville regarding our State approved Cross Connection Policy if you disagree with it.

The request to address the board of Milcrofton was denied because at the last board meeting on 9/23/2020, the Cross Connection Policy: backflow prevention device location rule, was amended by the board as a final revision to that policy. The board amended the requirement of the backflow prevention device being no more than five feet from water meter box effective since January 22, 2020. The amended policy effective 9/23/2020 is more flexible and allows the backflow prevention

device to be five feet behind the water meter box anywhere across the property frontage. With that change the board stated that would be the final amendment to the allowable location of the backflow device. See revised backflow detail on our website: <http://www.milcrofton.com/wp-content/uploads/Backflow-Preventer.pdf>

Any customer of the District should first check on the requirements of making a cross connection on our public water system before hiring a contractor to install an irrigation system. In addition that contract who is making the cross connection by installing an irrigation system should first check on the backflow prevention device requirements of that public water system. Per our policy Milcrofton should be given an initial backflow prevention device test result that lets us know the backflow prevention device that was installed is functioning properly by a state of Tennessee licensed certified backflow tester. If these test were being provided to Milcrofton we would then check to see if the devices were installed in the correct location based on Milcrofton's requirements of installing a cross connection (irrigation system) onto our public water system.

Ensuring the public safety of the water system is our primary goal. Each of Milcrofton's water meter boxes is the connection between our public water system and the customer's service line. The backflow prevention device being located within five feet anywhere across the property frontage from that water meter box is the most practical location for such a device. The safety of our employees is also further protected as this is closer to the public right-of-way and away from the customer's residence. Our state licensed backflow device tester had a shotgun pointed at him while wearing a neon yellow vest in a Milcrofton uniform with a Milcrofton marked vehicle parked in front of the house in a gated community while testing a backflow device on the side of the house in the customer's bushes. We also had a pistol pointed at that same backflow tester earlier last year prior to the shotgun incident.

Other public water systems such as First Knox Utility District who has over 12,000 plus backflow prevention devices and Bedford County Water also have the five foot behind the water meter box location for the backflow prevention device. Milcrofton's last adjustment to the policy to allow the backflow prevention device to be five foot behind the water meter box anywhere between the property lines is even more flexible than First Knox and Bedford County Water backflow prevention device policies.

I will respond to you following the October 28th board meeting if any action is taken by the board to your and Mr. Buckner's written request.

Thanks, Mike Jones

General Manager of Milcrofton Utility District

On Oct 24, 2020, at 09:06, Mike Blair <[mike.blair@laddhoa.com](mailto:mike.blair@laddhoa.com)> wrote:

Mike

I wanted to copy you on a letter sent from the President of the FAHOA, Rich Buckner requesting Aldermen Scott Speedy to support Ladd Park in our request to have an exemption granted or alternative plan granted to the new 5 ft rule concerning the placement of backflow preventers in front yards.

Please consider our request at the Milcrofton board meeting Wednesday.

Respectively,

Mike Blair

**Mike Blair**  
**Vice President**  
**Ladd Park HOA**  
 (615) 308-7811

----- Forwarded message -----

From: **Rich Buckner** <[buck1947@gmail.com](mailto:buck1947@gmail.com)>  
 Date: Fri, Oct 23, 2020 at 7:05 PM  
 Subject: Milcrofton Utilities Water Service  
 To: Scott Speedy <[scott.speedy@franklintn.gov](mailto:scott.speedy@franklintn.gov)>  
 Cc: Mike Blair <[mike.blair@laddhoa.com](mailto:mike.blair@laddhoa.com)>

Scott,

I am writing on behalf of the Franklin Alliance of HOA's (FAHOA), and more specifically Ladd Park HOA, regarding an issue they and others are experiencing with Milcrofton Utilities, who supply water for homes in Ladd Park and probably other communities in Ward 3. Below are the facts as I understand them to be. We write today asking that the City please verify the legal and ethical right of Milcrofton requiring back-flow preventers to be moved and in the future installed to a location adjacent to the water meter (within 5') on the homes Milcrofton provides service.

The details are:

Milcrofton Utility policy was changed on 1/22/2020 and most significantly amended on 9/23/2020. These changes were only made public at these times on the Milcrofton website. There was no public forum nor was there any notice sent to homeowners or irrigation contractors of these procedure changes. Evidently the amendment of September 23 requires back-flow preventers to be within 5' of the water meter which creates issues for the homeowner as detailed below. Milcrofton says these changes are necessary to allow them easy access for inspecting back-flow preventers, in essence they seem to be doing this to cut expenses.

Homeowners have no choice on who supplies their water, so homeowners are suddenly in a very difficult spot due to these changes in policy. As you can envision, this has significant impact on the aesthetics of the homes in these communities since water meters are installed by the city generally along the front property line of the home. For homeowners to now pay to move or in the future install ugly back-flow housings above grade in the middle of their front yards has the following significant impacts:

- It has an extreme negative impact on the aesthetics and potential property value of the homes.
- It creates safety concerns which place added liability on the homeowner,
- It results in a loss of functionality in the front yard
- It increases the potential of theft of back-flows (due to their copper content) when they are so easily accessible.

As you will see this is more specifically suspect in that Milcrofton did have any kind of public hearing nor did they give any pre-notice of changes to homeowners or irrigation contractors, they simply revised their standards and updated their website with the

new mandates. They are now evidently sending letters to homeowners to relocate, at the homeowners expense, the back-flow preventers. This has caused considerable questions and confusion to which Milcrofton will not address when asked by the Ladd Park HOA Board of Directors.

In response The Highlands at Ladd Park HOA Board of Directors has offered the following compromises to this new rule:

- The homeowners within The Highlands at Ladd Park would perform their own annual inspection and provide the certified test results to Milcrofton Utility District within the allotted window.
- If Milcrofton Utility Distribution would rather perform their own inspection of the back-flow devices, the company can call or email the homeowners and schedule an appointment.
- Allow The Highlands at Ladd Park to install the backflow devices on one dedicated side of the home (not in the back yard)

Milcrofton Utilities has an upcoming November Board Meeting, the Ladd Park HOA Board of Directors has requested permission to attend and discuss this issue and plead their case in hope of some compromise. They have been denied this opportunity. Scott, if you could request if these new rules are within the City of Franklin's agreement with Milcrofton Utilities and if this variation on City Code is allowable we would appreciate your efforts. Also, if you and the other members of the Board of Mayor and Aldermen can address the rights for a utility company to make changes to their policy without proper public forum of discussion and compromise and to mandate something that is contrary to City of Franklin Code we would also appreciate that effort. Thank you, on behalf of FAHOA's 15 member HOA's representing nearly 4,800 homes in Ward 3, we look forward to your reply.

Rich Buckner

Franklin Alliance of HOA's (FAHOA)

615.218.0945

**From:** [Jessica Hargrove](#)  
**To:** [mike@milcrofton.com](mailto:mike@milcrofton.com)  
**Subject:** Fwd: The Highlands at Ladd Park HOA  
**Date:** Monday, October 26, 2020 12:46:30 PM  
**Attachments:** [Milcrofton Board Letter 10.22.2020.pdf](#)

---

Good Afternoon Mike

You and I spoke earlier this week with regards to the 30 day notice for disconnection that the homeowners within The Highlands at Ladd Park have received with regards to the cross-connection devices they have recently installed for their irrigation systems.

When we spoke you explained that we would not be granted time on the agenda for Wednesday's Milcrofton Utility Distribution's Board of Directors meeting, but rather you would read a letter to them should we compose one.

Please see the attached signed letter from The Highlands at Ladd Park's Board of Directors. We appreciate you taking the time to present this letter and its contents to your director's at Wednesday's meeting.

We look forward to their response.

**Jessica Hargrove**  
**Onsite Manager**  
**Direct Number: 615-807-1549**



50 Vantage Way, Suite 100

Nashville, TN 37228

**Tel:** 615-277-0358

**Fax:** 615-523-2395



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----- Forwarded message -----

**From:** **Jessica Hargrove** <[jessica.hargrove@ghertner.com](mailto:jessica.hargrove@ghertner.com)>  
**Date:** Thu, Oct 22, 2020 at 2:24 PM  
**Subject:** The Highlands at Ladd Park HOA  
**To:** <[mike@milcrofton.com](mailto:mike@milcrofton.com)>, board <[board@laddhoa.com](mailto:board@laddhoa.com)>, Patrick Landrum <[patrick.landrum@ghertner.com](mailto:patrick.landrum@ghertner.com)>



Good Afternoon Mike

You and I spoke earlier this week with regards to the 30 day notice for disconnection that the homeowners within The Highlands at Ladd Park have received with regards to the cross-connection devices they have recently installed for their irrigation systems.

When we spoke you explained that we would not be granted time on the agenda for Wednesday's Milcrofton Utility Distribution's Board of Directors meeting, but rather you would read a letter to them should we compose one.

Please see the attached signed letter from The Highlands at Ladd Park's Board of Directors. We appreciate you taking the time to present this letter and its contents to your director's at Wednesday's meeting.

We look forward to their response.

**Jessica Hargrove**  
**Onsite Manager**  
**Direct Number: 615-807-1549**



50 Vantage Way, Suite 100  
Nashville, TN 37228

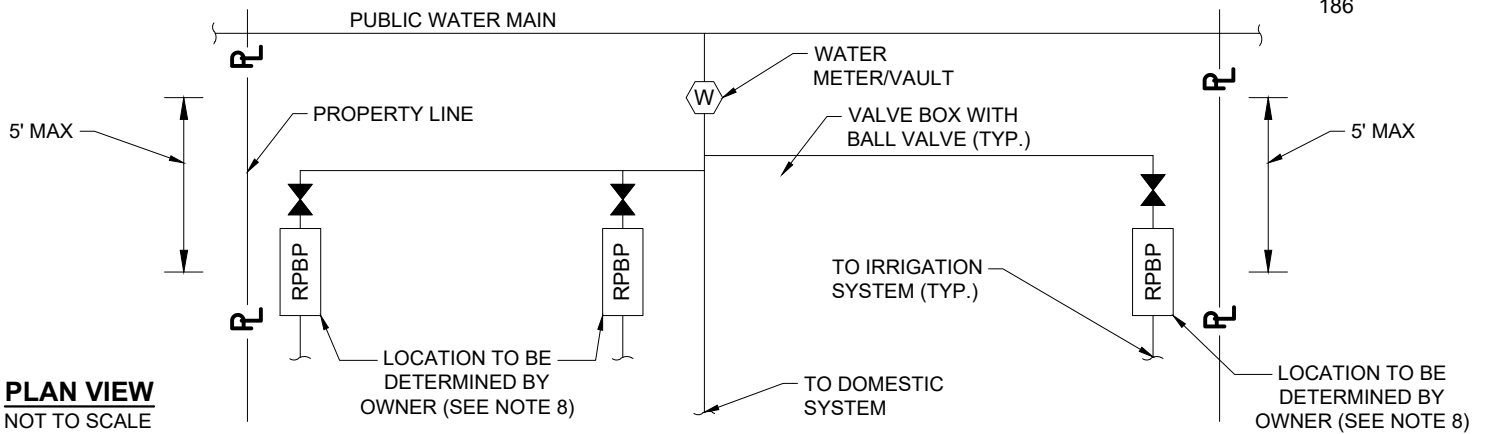
**Tel:** 615-277-0358

**Fax:** 615-523-2395

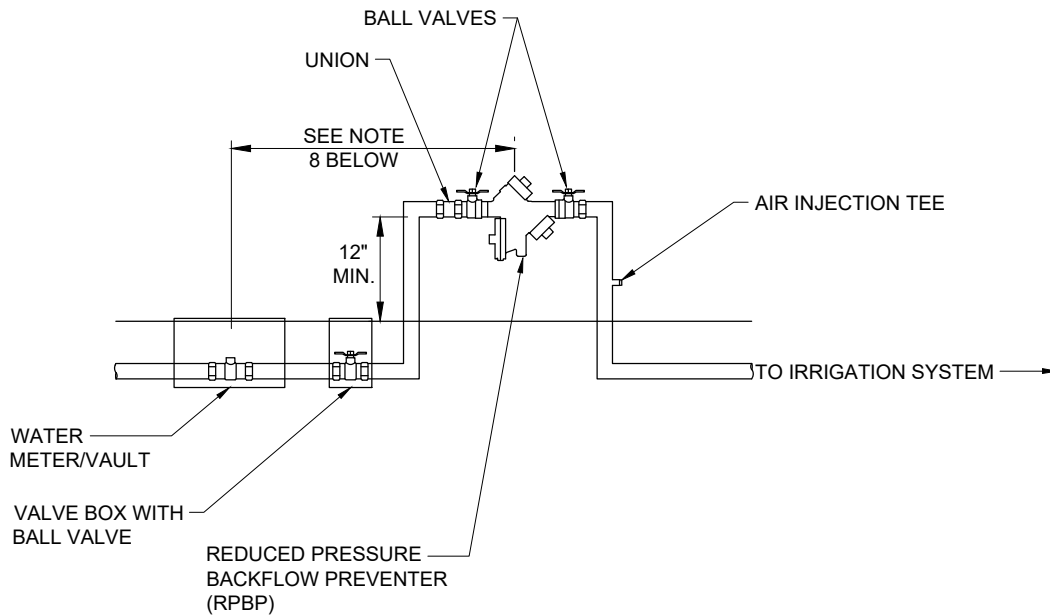


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**PLAN VIEW**  
NOT TO SCALE



**SECTION VIEW**  
NOT TO SCALE

\*\*DETAIL NOT DRAWN TO SCALE AND NOT ALL DETAILS OF ASSEMBLY ARE SHOWN AS THE DETAIL IS FOR GRAPHICAL PURPOSES ONLY TO SHOW INTENT OF INSTALLATION.

**NOTES**

1. BACKFLOW PREVENTION ASSEMBLY SHALL BE A REDUCED PRESSURE ASSEMBLY TYPE WITH THE MODEL BEING APPROVED BY THE TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION DIVISION OF WATER SUPPLY.
2. BACKFLOW PREVENTION ASSEMBLIES SHALL HAVE APPROVED SHUTOFF VALVES.
3. BACKFLOW PREVENTION ASSEMBLIES SHALL BE INSTALLED IN A MANNER SO TESTING AND REPAIRS CAN BE PERFORMED. CLEARANCES OF A MINIMUM OF 12" ON ALL NON-TESTING SIDES, 36" ON TESTING SIDE FROM OBJECTS INCLUDING BUT NOT LIMITED TO SHRUBBERY, ELECTRIC TRANSFORMERS, AND PHONE AND CABLE PEDESTALS. ASSEMBLIES SHALL BE INSTALLED AT A HEIGHT OF 12" MINIMUM FROM GROUND ELEVATION.
4. BACKFLOW PREVENTION ASSEMBLIES SHALL NOT HAVE ANY TYPE OF ELECTRIC CONTROL VALVE INSTALLED BETWEEN THE MAIN WATER SUPPLY LINE AND THE BACKFLOW PREVENTION ASSEMBLY.
5. BACKFLOW PREVENTION ASSEMBLIES SHALL BE INSTALLED IN A HORIZONTAL POSITION, UNLESS WRITTEN APPROVAL IS OBTAINED FROM THE DISTRICT FOR VERTICAL INSTALLATION.
6. THERE SHALL NOT BE ANY BYPASS IN PLUMBING SYSTEM INSTALLED AROUND BACKFLOW PREVENTION ASSEMBLIES.
7. BACKFLOW PREVENTION ASSEMBLIES SHALL BE INSTALLED WITH TEST COCKS AND 1/4 INCH FLARE FITTINGS FOR TESTING.
8. BACKFLOW PREVENTION ASSEMBLIES FOR IRRIGATION SYSTEMS SHALL BE INSTALLED AT A DISTANCE NO GREATER THAN 5' FROM MUD WATER METER PERPENDICULAR TO RIGHT OF WAY OR ANYWHERE HORIZONTALLY ALONG SUCH LINE BETWEEN THE PROPERTY LINES AS SHOWN IN DETAIL.
9. WHEN INSTALLING AN IRRIGATION SYSTEM ON A POTABLE WATER LINE CONNECTION, A TEE MUST BE INSTALLED AFTER THE METER WITH AN ISOLATION VALVE PRIOR TO THE BACKFLOW PREVENTION ASSEMBLY TO SEPARATE THE IRRIGATION SYSTEM FROM THE DOMESTIC SUPPLY TO THE HOUSE.

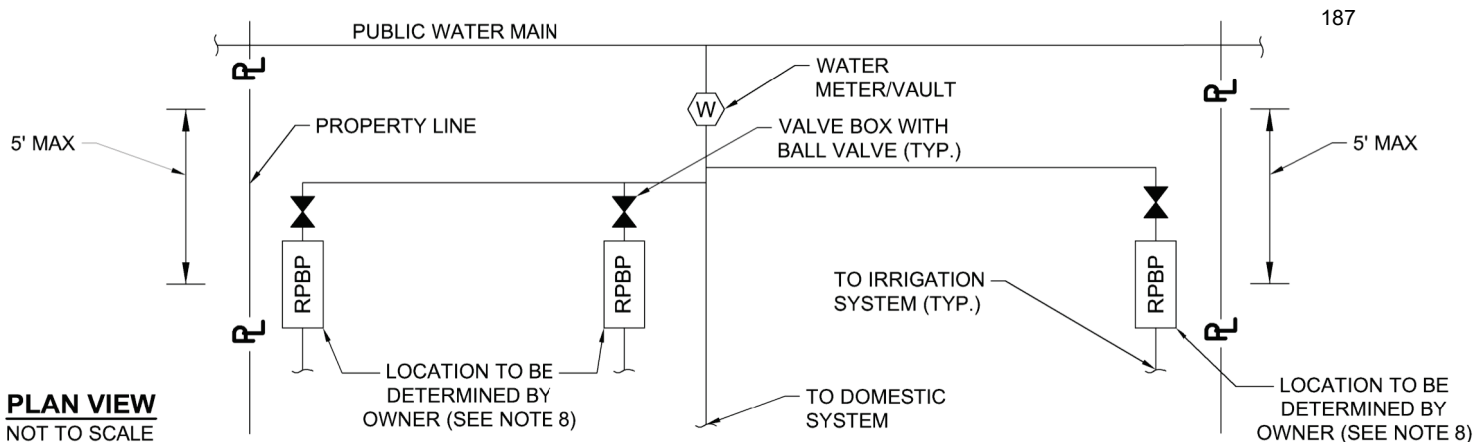
**BACKFLOW PREVENTER REQUIREMENTS FOR IRRIGATION SYSTEMS**

**MILCROFTON UTILITY DISTRICT STANDARD DETAIL NO. 16**

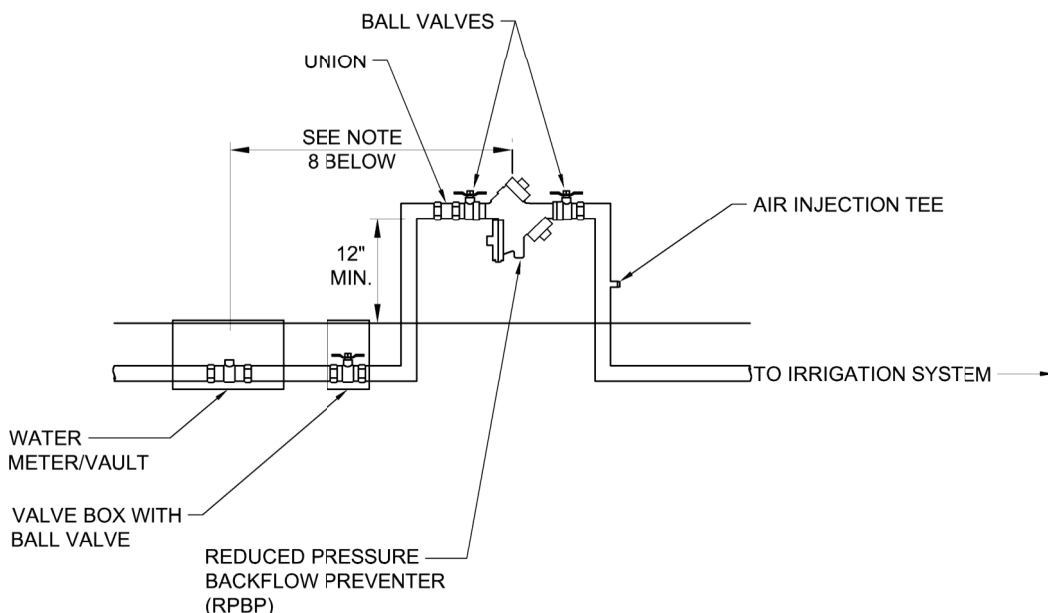
ISSUE DATE :	01/22/2020	DRAWN BY :	CG
REVISION DATE :	09/23/2020	CHECKED BY :	JE



BACKFLOW PREVENTER.DWG / Friday, October 2, 2020 10:35:06 AM



**PLAN VIEW**  
NOT TO SCALE



**SECTION VIEW**  
NOT TO SCALE

\*\*DETAIL NOT DRAWN TO SCALE AND NOT ALL DETAILS OF ASSEMBLY ARE SHOWN AS THE DETAIL IS FOR GRAPHICAL PURPOSES ONLY TO SHOW INTENT OF INSTALLATION.

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**BACKFLOW PREVENTER REQUIREMENTS FOR IRRIGATION SYSTEMS**

**MILCROFTON UTILITY DISTRICT STANDARD DETAIL NO. 18**

ISSUE DATE : DECEMBER 2020	DRAWN BY :	RCG
SCALE : NOT TO SCALE	CHECKED BY :	JEE



BACKFLOW PREVENTER.DWG / Tuesday, December 15, 2020 9:53:21 AM