

**GLOVERSVILLE BOARD OF WATER COMMISSIONERS**  
MEETING MINUTES – JULY 11, 2023

The Regular meeting of the Board of Water Commissioners was held and brought to order at their office, 67-73 S Main St., Gloversville, NY on July 11, 2023, at 6:08 PM with President Antonucci presiding.

Roll Call

<u>Commissioners-----</u>	
Antonucci	PRESENT
Capano	PRESENT
Isabella	PRESENT
White	PRESENT
Chittenden	PRESENT

**Others in Attendance:** Water Superintendent, Anthony Mendetta; Clerk of the Board, Christine Linart, Andrew White, Chief Water Treatment Plant Operator; and Jake Gordon from C.T. Male Associates.

Christine then explained to the Board that she had Audits that she had to pull out of our regular Audit List.

These items must be voted on separately due to a conflict with Commissioner Capano.

The Audits #22658, #22674, and #22692 in the amount of \$400.41 payable to Gloversville True Value needed to be voted on with Commissioner Capano having to abstain from voting to approve.

Commissioner Isabella made a motion to approve Audit's 22658, 22674, and 22692 in the amount of \$400.41 payable to Gloversville True Value. The motion was seconded by Commissioner Antonucci.

<u>Commissioner</u>	<u>Yes</u>	<u>No</u>	<u>Absent</u>	<u>Abstain</u>
Antonucci	X			
Isabella	X			
Capano				X
White	X			
Chittenden	X			

Christine then explained to the Board that she had Audits that she had to pull out of our regular Audit List.

These items must be voted on separately due to a conflict with Commissioner Isabella.

The Audit #22699 in the amount of \$82,112.00 payable to Main Motors needed to be voted on with Commissioner Isabella having to abstain from voting to approve.

Commissioner Antonucci made a motion to approve Audit#22699 in the amount of \$82,112.00 payable to Main Motors. The motion was seconded by Commissioner White.

<u>Commissioner</u>	<u>Yes</u>	<u>No</u>	<u>Absent</u>	<u>Abstain</u>
Antonucci	X			
Isabella				X
Capano	X			
White	X			
Chittenden	X			

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The remaining audited bills were presented and reviewed:

Runnings Supply Inc	-299.99
Vincent C Perrella	-195.95
Fidelis Care	-527.71
Anthony Mendetta	-113.62
Anna May Yost	-989.40
Arlene Smith	-989.40
Karla Putman	-989.40
Michael LaPorta	-989.40
Bobcat of Gloversville-Johnstown LLC	-1,821.00
CDPHP	-20,405.00
Century Linen Service, Inc	-45.50
Commissioner of Finance	-1,970.95
Core & Main	-2,456.68
Cranesville Block Company Inc	-181.13
Daily Gazette	-834.98
H & M Equipment Co Inc	-19.68
Hach Company Inc	-168.43
National Grid	-1,334.62
S & J Enterprises Inc	-147.10
Security Supply Corp	-315.61
Stephen Miller General Contractor Inc	-144.00
United States Postal Service	-756.16
United States Postal Service	-315.00
Avanti Control Systems Inc	-1,000.00
Century Linen Service, Inc	-45.50
Daily Gazette	-120.36
Data West Corporation Inc	-180.00
Emmons Metro LLC	-1,480.00
Empire BlueCross Retiree Solutions	-7,055.52
Ferguson Enterprises LLC	-418.40
Frontier Communications Corporation	-754.44
H & M Equipment Co Inc	-61.59
Holland Company Inc	-10,398.30
Howell Benefit Services, WEBSURANCE TRUST	-422.93
Jeffrey F Lehner dba JFL Inc of Fulton Co	-251.91
JH Consulting Group Inc	-1,590.00
Kingsboro Lumber Co Inc	-331.17
Marcus Noble Inc	-2.00
Mark & Patricia Jagielski	-2,041.20
National Grid	-522.86
NBT Credit Services	-49.44
Runnings Supply Inc	-326.22
Spectrum	-107.98
Telecon Wireless	-485.32
Twin Bridges Waste & Recycling LLC	-137.50
UDig NY Inc	-102.00
WB Mason Co Inc	-158.21
Payroll Account NBT Bank	-23,858.86

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Payroll Account NBT Bank	-1,754.84
Morgan White Administrators	-744.27
Morgan White Administrators	-688.54
Payroll Account NBT Bank	-26,297.03
Payroll Account NBT Bank	-1,941.32
Payroll Account NBT Bank	-26,293.62
Payroll Account NBT Bank	-1,944.12
	<b>-147,576.16</b>

**CAPITAL PROJECT AUDIT:**

C.T. Male Associates -	\$ 12,277.50
Cranesville Block Co. -	\$ 28.65
Cushing Stone Co -	\$ 533.00
Environmental Design Partnership	\$ 7,770.00
Ti-Sales Inc. -	\$ 60,925.26

A motion was made by Commissioner Antonucci that the audited bills listed above are ordered paid. The motion was seconded by Commissioner Capano.

Commissioner	Yes	No	Absent	Abstain
Antonucci	X			
Isabella	X			
Capano	X			
White	X			
Chittenden	X			

The minutes of the April, May, and June meetings were presented, and a motion was made to accept the minutes by Commissioner Antonucci. The motion was seconded by Commissioner Isabella.

Commissioner	Yes	No	Absent	Abstain
Antonucci	X			
Isabella	X			
Capano	X			
White	X			
Chittenden	X			

**Old Business**

Jake Gordon, an engineer with CT Male, was in attendance regarding the water bill at 201 W Fulton St., also known as 199 W Fulton St for billing purposes. Jake read the statement previously submitted by Bryant Schur at the previous Board Meeting regarding his high-water bill and wanted to respond after reviewing the information in the statement. Jake did prepare and give to the Board a written Engineering Review of the Grievance Letter from Mr. Schur, a copy of which to be included with these minutes. Jake stated although he isn't a meter expert, he referenced that a third party did indeed test the meter in question, and it met all AWWA standards. Jake's general opinion regarding the meter is that if the water service can supply enough water to the building and the meter is working correctly, then the water bill should be correct.

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Jake broke down the points in Bryant's statement as follows:

1. Bryant stated that he used the Hazen Williams formula to determine if the water usage was correct. Jake stated that after review, the formula in the document is not the actual Hazen Williams equation. In his letter Jake actually states what the actual Hazen - Williams equation is. Therefore, Bryant cannot accurately predict results without using all the variables that are in the actual Hazen-Williams equation. Bryant's equation only used diameter, pressure, and flow rate for his calculations which would not correctly determine accurate results. Jake explained that the variables needed for accurate results include pressure loss in feet, length feet of pipe, flow rate in gallons per minute, roughness coefficient of the pipe, and pipe diameter in inches.
2. Bryant stated that a toilet's maximum daily leakage could not exceed 200 gallons per day according to a USGS study. Jake was unable to find the USGS study and offered to review it if Bryant could provide the study to us. Jake then went on to state that the amount of water that can pass through any faucet or pipe is determined by numerous variables including pipe size, material, roughness coefficient of the pipe, pipe length, and pressure.

Bryant stated that a toilet leaking 200 gallons of water a day would cause a decrease in pressure and cause the toilet to overflow. Jake stated a toilet could easily handle 200 gallons of water per day or .14 gallons a minute. A toilet's flush rate is much greater than that. Without verifying the plumbing configuration and basing the equation on known variables, a 200-gallon loss per day would only equate to a 0.003PSI loss which is immeasurable. Jake went on to explain that for a 10 PSI reduction in pressure to occur in Bryant's building 11.3 GPM would need to be flowing through a ¾" service. Jake admitted that there was confusion and that the size of the service there is actually a 1" service which would cause the 11.3GPM figure to be higher. At 11.3 GPM it would equate to almost 3.2 million gallons . With a 1" service or ¾" service, Jake's opinion as an engineer is that the building could easily support a 3.2-million-gallon flow rate over the 200-day billing cycle that Mr. Schur was billed for. Also, a 3" sewer line could adequately handle the water going into it without overflowing the toilet. Jake also addressed Bryant's concerns about reducing fittings near the meter. Jake was unable to locate any installation requirements by the meter manufacturer which specifies distance between the meter connection points and any upstream/downstream fittings. Jake stated that it is very common for these types of meters to be installed on services and then reduced to match the meter. Also, Ti-Sales stated that the strainer in the meter is there to prevent a vortex from occurring.

3. Superintendent Mendetta also contacted Ti-Sales to get confirmation on what the max flow rate of water a T-10 meter going through ¾" piping could supply and was told on the low side it would be 1/8 gallon and the high side would be 20 gallons per minute. This would be at 100% accurate plus or minus 1.5%.
4. Commissioner Isabella asked where the idea of vandalism came from regarding the property. Superintendent Mendetta stated that due to gathering historical data for the previous meeting Anthony was at the property and saw the meter spinning, as the account was still showing a usage of 1000 cu ft per day. The maintenance worker confirmed that it was a toilet flapper in the vacant apartment causing the high usage. At the last Board meeting, Bryant Schur said that due to vandalism, someone had broken into the vacant apartment and sabotaged the flapper which caused the current high usage. Jake Gordon said for scale with the size of the building and service size, it is within reason to use the amount of water that was showing went through the meter.

The Board would like to turn the matter over to the City Attorney.

A motion was made by Commissioner Isabella to have the Water Superintendent turn the Bryant Schur matter over to the City Attorney. The motion was seconded by Commissioner Antonucci.

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Commissioner	Yes	No	Absent	Abstain
Antonucci	X			
Isabella	X			
Capano	X			
White	X			
Chittenden	X			

**Superintendent's Report**

Superintendent Mendetta discussed the following Project Updates with the Board:

**1. Meter Project**

We began to gather a list of customers from Hydro for non-compliance, anyone that has received three letters and door tags and has not scheduled a new meter change out. District #3 has about 150 non-compliant customers. We are currently making sure address updates are correct to Hydro. There is a meeting with Ti-Sales tomorrow to prevent any unnecessary shut offs. We suspended shutting water off until we are sure the homeowner has received their three letters. We are currently 80-85% complete with the project.

**2. Jackson Summit Dam Replacement Project – Given by Jake Gordon**

Construction on the project is going well and ahead of schedule. The original substantial completion date is in November and the last concrete pour should be done by the end of August. In the scope of work, there was included the replacement of a 20" valve inside the gatehouse. Jake explained that up at the dam we have a gatehouse/low level drain house that has a few valves in it which includes a mud line, a low-level drain, and an 8" bypass. Downstream there is vault with a valve to control the outlet to the creek. In the scope of work CT Male made a mistake and listed an 18" valve, instead of a 20" valve to be replaced. Due to the mistake in plans, Jake received an Extras Cost from Keller totaling \$23,000 for the 20" valve correction. This cost includes the 20" valve, 20" adapters to connect new pipe to existing pipe, labor to remove 18" pipe/fittings from the existing vault and replace with 20". Also, Keller included labor costs for some boulder/rock excavation and backfilling. That was a cost of \$5,461. Jake is working with the contractor on this amount. It took a lot longer excavating around the pipe ; however, Keller did not notify us they were back on site working so C.T. Male was not able to have anyone there to confirm the hours for the boulder/rock excavation. Jake is looking into how many hours for excavation and how much time CT Male's mistake cost. Before adding any additional cost for excavation, Jake believes CT Male's portion to cover would be \$11,500. The breakdown is a \$475 credit on the balance for returning the 18" fittings, \$4,800 for the 20" valve, \$4,154 for the 20" adapters we provided and \$2,048 in labor to dismantle the structure and reconnect. Jake could reduce the contract by \$11,500.

Jake also mentioned that the upper building needs valves. There is grant money available under the WQIP Program through the NYS DEC and we already received a quote from Keller that the project would cost about \$100,000. We would need a grant application and engineering report prepared. The grant application would cost \$4,800 and the engineering report would be \$7,200. Jake proposed that C.T. Male prepare the Engineering Report and Grant application at no cost to take care their portion of the Extras costs from Keller. Jake also mentioned that there may still be money owed to us from the Keller labor costs after he is done negotiating with them. The additional Keller cost for labor was due to the valve being built above grade inside a vault for access. A soil investigation is done before excavation, so it is known what they are digging in. This was done right before the bid and added without going back for soil boring. The location and scope were vague for the contractors to put the vault in place of the existing vault, which could only be done if the valves could be operated above. So, due to not being able to use the existing vault, there was more excavation in the other area. Keller is claiming extra time as they had to now excavate around big boulders. Jake is working through some things with the contractor regarding extra work and the \$5,500 outstanding to see if they will accept some of the responsibility and CT male to accept some as well.

Anthony informed the Board that there is a WQIP grant with a 25% match. For the estimated \$100,000 project, it would cover \$75,000 and \$25,000 would be our share. The project might cost a bit more since the building needs repair and a new roof. This

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would need to go back out for bid. This is a good program for high hazard dams, especially with the condition of valves to make sure we have properly operating valves in an emergency.

Jake has contacted the DEC regarding the Engineering Assessment (EA) and Inspection Maintenance Plan (IMP) to see if it needs to be updated because it is not updated currently due to the status of construction at this time. Jake will reach out to the grant administrators to see if the EA and IMP need to be updated to pursue grant funding.

A motion for us to have C.T. Male apply for WQIP grant and prepare an Engineering Report if we are eligible without updated EA and IMP was made by Commissioner Antonucci and the motion was seconded by Commissioner Capano.

Commissioner	Yes	No	Absent	Abstain
Antonucci	X			
Isabella	X			
Capano	X			
White	X			
Chittenden	X			

An update was given on the budget for the Jackson Summit Project and the second payment application has been submitted for \$300,000 payable through the CDBG program. Of the \$50,000 allowance, \$18,000 has been spent. The \$32,000 remaining is for any extras that may come up. There is the extra slab cost of \$50,000, and we are not certain as to how it will affect the total budget since we bid in quantities and Keller is coming in under our original estimates, which may reduce total cost. When Jake originally estimated the size of the slab, he was off and did not include subbase materials causing the lower estimated cost. The slab cost was actually \$50,000. We'll know if we stay within our contingency budget by the end of July to mid-August when we receive pay app #4.

**3. Plant Project**

Jake stated everything is in the State's hands and we're in a waiting period. NYS EFC red tape is slow, but it is in the review stage as everything has been provided. Anthony and Andrew are discussing changing or adding to the scope of work by going back to our original conditioner configuration, going from updating our hydro-turbine to installing solar fields, and adding other scope in the past month with the change in scope resubmitted to EFC. The only thing outstanding is the agreement between the City of Gloversville and the Water Works which Anthony had signed by the mayor. They wanted us to reach out to the Bond Council to make sure that they were ok with one entity bonding for another one and the Commissioner of Finance said we should reach back out to the EFC regarding the agreement. The EFC lawyer said the agreement language that was signed was good from their perspective. The Clerk will reach back out to the Commissioner of Finance regarding the request and any confusion over it. In six weeks from today we should close on the grant and go out to bid. Jake suggested that we talk to EFC to see if we could move forward with at least the Engineering portion of the project.

**4. Lead Serviced Line Replacement Bid**

We have received bids to use up the remainder of the Lead Line Grant contractor portion of \$110,000. We had three bids as follows:

- Bellamy: \$349,850
- Ex Caliber: \$381,750
- Grant St Construction: \$265,100

Fifty services that need lead line replacement would be chosen on streets that are being paved. We supply materials and the contractor will use unit pricing to complete lead line services up to \$110,000. The Superintendent from Grant St Construction is local and comes with many good references. The Engineering Design Partnership (EDP) recommended Grant St Construction to fulfill this bid. We will concentrate on Third St and Seventh Ave for these lead line service replacements.

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Regarding the rest of the lead line replacements and the EFC regarding the new bipartisan infrastructure money, they are in the process of writing award letters based on the IUP listing, which we submitted with the engineering report. It is a 70% grant with a 30% match.

Water Board President Gary Antonucci sponsored the following resolution and moved for its adoption:

**RESOLUTION NO. 2023-14**

**RESOLUTION OF THE GLOVERSVILLE BOARD OF WATER COMMISSIONERS WITH AN ADDRESS OF 67-73 S. MAIN STREET, GLOVERSVILLE NEW YORK 12078 AUTHORIZING THE AWARD OF CONTRACT FOR THE GLOVERSVILLE WATER DEPARTMENT'S 2023 LEAD SERVICE LATERAL REPLACEMENT PROJECT WITH THE BOARD OF WATER COMMISSIONERS AUTHORIZING THE WATER SUPERINTENDENT TO EXECUTE SAID CONTRACT.**

**WHEREAS**, the Gloversville Water Works own and operates a water supply, treatment, and distribution system for the City of Gloversville, New York; and

**WHEREAS**, the Gloversville Board of Water Commissioners proposes to undertake the Gloversville Water Works 2023 Lead Service Lateral Replacement Project

**WHEREAS**, bids were solicited and opened on Monday, July 10, 2023, at 2pm Local Time.

**NOW, THEREFORE**, be it hereby

**RESOLVED**, that Grant Street Construction Inc. be awarded the bid for the Gloversville Water Works 2023 Lead Service Lateral Replacement Project with a base bid of \$265,100.00 at unit prices as specified in Bid Documents. With costs not to exceed \$110,000.00.

**RESOLVED**, by the Board of Water Commissioners that the Water Superintendent is authorized to execute a contract agreement with Grant Street Construction and any and all other contracts, documents, and instruments necessary to bring about the Gloversville Water Works Lead Service Lateral Replacement Project and to fulfill the Board of Water Commissioner' obligations under the contract agreement.

A motion was made by Commissioner Capano seconded by Commissioner Chittenden that the above resolution be adopted.

Votes Taken:

	<u>Yes</u>	<u>No</u>
Commissioner Antonucci	X	
Commissioner Isabella	X	
Commissioner Capano	X	
Commissioner White	X	
Commissioner Chittenden	X	

Adopted : July 11, 2023

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**5. Watershed Dump Truck**

The dump truck was put out to bid starting at \$5,000 with no bids.

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A motion was made to rebid the dump truck out for \$3,500 by Commissioner Capano. The motion was seconded by Commissioner Isabella.

Commissioner	Yes	No	Absent	Abstain
Antonucci	X			
Isabella	X			
Capano	X			
White	X			
Chittenden	X			

**6. Aspen Hills**

The Town of Johnstown has asked if the Gloversville Water Department would consider taking samples for the Aspen Hills water district. They need daily chlorine residuals, monthly bacteria samples, and quarterly THM samples taken. Duties would be split between Anthony Mendetta with a Grade D license and Andrew White with a 1A license. Anthony and Andrew came up with prices at \$1,200 for Sampling and \$9,000 for the operator costs based on one (1) hour per day for the entire year. Anthony proposed that Andrew and Anthony receive \$3,000 for the additional duties and the Water Dept. get the additional \$3,000 for providing the service to the Town. The Town offered to either pay for sampling and operation costs on a yearly basis or issue a tax waiver in perpetuity on our property taxes for the price of \$10,200. After discussion, it was decided to table this for now.

**7. Retirement**

Chris Ashbey will be retiring on 7/22/23. Jamie Mulhall will be taking over the Lab Tech duties. Per the contract she will receive an additional \$1.22/hr. for the lab technician.

**8. 57 Montgomery St**

During a lead line replacement at 57 Montgomery St using a boring tool, the wrong air tool lubricant was used and entered into the line. DOH was called by the Superintendent and a flushing process was started on the lines and water provided to the residents. DOH advised that four tests were needed to clear the property, all four tests were done at a cost of \$200 each, they came back negative and DOH cleared the property for being safe to use. Additional back flow and cross contamination training is being put in place for employees, a check valve was installed to prevent cross contamination and the equipment has all been disinfected. Additionally, the correct bio-degradable air tool lubricant was purchased. The entire service was completed and covered under our Lead Line Replacement Grant Program.

**9. 44 N Main St**

During the meter project an installer advised the Water Department that the meter was plumbed before the meter feeding 4 apartments causing the owner to only receive a minimum bill which is theft of water. Upon finding the issue, the Water Department corrected the issue on 6/8/23 and as of 7/10/23 there was 1896 cu ft of water used since the new V4 meter installation. For 6 months it should be about \$464 for water usage. The Superintendent will look further into the issue to determine when the possible theft of services began.

**Chief Water Treatment Plant Operator's Report**

Two bills were received from Puthaven for damage to the excavator and stump grinder. The stump grinder was only used for 3 hours, and the repairs they are billing for came to \$1,082. The excavator supposedly has boom lift shield and wiper arm damage. The Superintendent is going to speak to the owner regarding the repair charges and hold off paying the bill.

The Plant valves need to be replaced soon regardless of grant funding. The valves are approximately \$18,000 plus labor. The waste valves don't have an override if they fail. It would be good to get the valves in the next budget unless EFC can get the grant funding moved along. Possibly reaching out to Elise Stefanik to see if she can get the grant moved along in the review process.



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**Clerk of the Board Report:**

Water Board President Gary Antonucci Sponsored the following resolution and moved for its adoption:

**RESOLUTION NO. 2023-15**

**A RESOLUTION OF THE GLOVERSVILLE BOARD OF WATER COMMISSIONERS WITH AN ADDRESS OF 67-73 S. MAIN STREET, GLOVERSVILLE NEW YORK 12078 FOR THE WATER BOARD PRESIDENT TO EXECUTE AN AGREEMENT BETWEEN THE CITY OF GLOVERSVILLE AND THE GLOVERSVILLE WATER DEPARTMENT WITH THE CITY AUTHORIZING THE GLOVERSVILLE WATER DEPARTMENT TO ENTER INTO AN AGREEMENT WITH THE NEW YORK STATE ENVIRONMENTAL FACILITES CORPORATION (EFC) TO CARRY OUT WATER IMPROVEMENT RELATED ACTIVITIES**

**WHEREAS**, the Gloversville Board of Water Commissioners proposes to undertake the Gloversville Water Treatment Plant and Distribution System Improvements Project (the "Project") which will include multiple structural, mechanical, and treatment equipment and process improvements to the Gloversville Water Treatment Plant and Distribution System.

**WHEREAS**, the Gloversville Board of Water Commissioners desires to authorize the Water Board President to execute an agreement between the City of Gloversville and the Gloversville Water Board with the City giving authorization to the Water Board to enter into an agreement with the New York State Environmental Facilities Corporation in order to carry out Water Improvement Related Activities.

**NOW, THEREFORE**, this 11<sup>th</sup> Day of July 2033 be it

**RESOLVED**, by the Gloversville Water Works Board of Water Commissioners that the Water Board President is hereby authorized to execute an agreement between the City of Gloversville and the Gloversville Water Works giving the Water Board authorization to enter into an agreement with the New York State Environmental Facilities Corporation. With such agreement to allow the New York State Environmental Facilities Corporation to assist the Gloversville Water Department in obtaining access to low-cost capital financing, grants, and expert technical assistance to carry out Water Improvement related activities and projects.

A motion was made by Commissioner Isabella seconded by Commissioner White that the above resolution be adopted.

**Votes Taken:**

	<u>Yes</u>	<u>No</u>
Commissioner Antonucci	X	
Commissioner Isabella	X	
Commissioner Capano	X	
Commissioner White	X	
Commissioner Chittenden	X	

Adopted : July 11, 2023

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**1. Adjustments:**

- a. 58 W Pine St – Adjustment from Sewer Board of \$466.25.
- b. 19 John St – Adjustment due to estimated read was too high. Read when meter came out was 9837 and the last estimated read was 13387. A credit is due for water \$102.64, sewer credit is \$77.39, and infrastructure credit is \$24.89.

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A motion was made by Commissioner Isabella and seconded by Commissioner Capano to accept the above adjustments.

<u>Commissioner</u>	<u>Yes</u>	<u>No</u>	<u>Absent</u>	<u>Abstain</u>
Antonucci	X			
Isabella	X			
Capano	X			
White	X			
Chittenden	X			

The Board requested the Clerk to separate out her hours spent working on Hydro issues for reimbursement. She has calculated hours up until 6/15/23 which will be billed to Ti-Sales. Christine is tracking any time spent on the meter project.

The Clerk also provided an up-to-date financial statement to the Board members.

Commissioner Antonucci made a motion to go into Executive Session. The motion was seconded by Commissioner White.

<u>Commissioner</u>	<u>Yes</u>	<u>No</u>	<u>Absent</u>	<u>Abstain</u>
Antonucci	X			
Isabella	X			
Capano	X			
White	X			
Chittenden	X			

Commissioner Antonucci made a motion to leave Executive Session. The motion was seconded by Commissioner Capano.

<u>Commissioner</u>	<u>Yes</u>	<u>No</u>	<u>Absent</u>	<u>Abstain</u>
Antonucci	X			
Isabella	X			
Capano	X			
White	X			
Chittenden	X			

Commissioner Isabella made a motion to adjourn the meeting. The motion was seconded by Commissioner Antonucci.

<u>Commissioner</u>	<u>Yes</u>	<u>No</u>	<u>Absent</u>	<u>Abstain</u>
Antonucci	X			
Isabella	X			
Capano	X			
White	X			
Chittenden	X			

The next meeting will be held on August 8, 2023.

# C.T. MALE ASSOCIATES

Engineering, Surveying, Architecture, Landscape Architecture & Geology, D.P.C.

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June 26, 2023

Mr. Anthony Mendetta, Superintendent  
Gloversville Water Works  
67-73 South Main Street  
Gloversville, NY 12078

Re: 199 West Fulton Street  
Engineering Review of Grievance Letter

Dear Mr. Mendetta:

As requested, C.T. Male has reviewed the letter the Water Works received from the property owner of 199 West Fulton Street, a 4-unit apartment building in the City of Gloversville. The property owner is disputing their recent water bill of \$10,345.47 for 143,000 cubic feet or 1,070,000 gallons of water. It is our understanding that the billing period accounted for 201 days and not 173 days as noted in the letter.

The below list summarizes three of the Owner's claims regarding the water use, in **bold text**, followed by our response, in *italicized text*, below the comment:

1. **The Hazen-Williams formula is:  $Q = 0.0408 * D^2 * P^{0.54}$ ;**  
Where,  
**Q = flowrate in gallons per minute (GPM)**  
**D = pipe diameter in inches**  
**P = water pressure in pounds per square inch (psi).**

*The presented formula is not the Hazen-Williams formula, or a derivation of the Hazen-Williams formula that we are familiar with. We welcome the Owner to provide the source of the equation for our review. The Hazen-Williams formula is:*

$$h_f = \frac{10.44 * L * Q^{1.85}}{C^{1.85} d^{4.87}} \text{ (Eq. 17.29 of the Civil Engineering Reference Manual, 15th Edition by Michael R. Lindeburg, PE)}$$

*Where,  
 $h_f$  = headloss in feet  
 $L$  = length of pipe in feet  
 $Q$  = flow in GPM  
 $C$  = Roughness coefficient of the pipe  
 $d$  = pipe diameter in inches*

*The equation used in the letter does not account for the roughness coefficient of the pipe and does not use headloss, or pressure loss, as a variable to calculate flow. We note that the Owner of the property does correctly describe the Hazen-Williams equation on page 12 of 16.*

# C.T. MALE ASSOCIATES

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Mr. Mendetta

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2. **The maximum daily leakage of a large 2-gallon toilet cannot exceed 200 gallons per day.**

*We were unable to locate the referenced United States Geological Survey (USGS) study and therefore we are unable to comment on the data presented in the letter, though we aren't disputing the study may exist. However, the amount of water which can flow through any pipe/faucet is determined by numerous variables including pipe size, pipe material, the roughness coefficient of the pipe, the length of the pipe and the pressure. We are unaware how the USGS could have defined a maximum leakage given all the variables involved. We welcome the author submit the study for our review.*

3. **A leakage more than 200 gallons per day from a toilet would decrease the water pressure in the building and cause the toilet to overflow.**

*The pressure in the building at any location is a relatively straightforward concept but can be difficult to predict due to the many variables outlined in our response to Item 1, however we can estimate the pressure to the building by making some assumptions based on some known variables. We'll use 200 gallons per day as the basis for the pressure loss calculation.*

$$200 \text{ GPD} = 0.14 \text{ GPM}$$

*We are unable to review and analyze the configuration of the existing plumbing in the building, so for the purpose of this review, we will focus pressure loss between the water main and the meter in the building. Using the Hazen Williams Equation, the pressure loss between the water main in the street and the building can be estimated assuming a 50-foot, 3/4-inch copper water service at 0.14 GPM where the roughness coefficient (C) is 130.*

$$h_f = \frac{10.44 * 50 \text{ ft} * 0.14 \text{ gpm}^{1.85}}{130^{1.85} * 0.75 \text{ inch}^{4.87}}$$

$$h_f = 0.007 \text{ feet, or approximately } 0.003 \text{ psi loss}$$

*With an approximate service pressure of 90 psi in this area of the City, this flow rate would not noticeably reduce pressures in the building.*

*Using the assumptions listed above regarding the characteristics of the water service, for a 10 psi reduction in service pressure to occur, 11.3 GPM (16,272 GPD) would need to be flowing through the 3/4-inch water service. The velocity in a 3/4-inch pipe at 11 GPM is approximately 8 feet per second (FPS) which is high, but an acceptable velocity hydraulically.*

*According to the letter from the property owner, the toilet is filled by a 3/8" line. 2.75 GPM (3960 GPD) would result in a water velocity of 8 FPS in this line. Using the Hazen Williams equation to calculate pressure loss at the service line to the toilet, we find that pressure loss is approximately 0.86 PSI assuming the 3/8" line is 2 feet in length. Note that we are unable to comment on the specific configuration of the internal plumbing including the diameter of the plumbing pipes or the number of and location of valves and fittings. All these factors can impact dynamic pressure.*

## C.T. MALE ASSOCIATES

June 26, 2023  
Mr. Mendetta  
Page - 3

*11 GPM over a 201-day billing period is 3,182,840 gallons.  
2.75 GPM over a 201-day billing period is 765,950 gallons.*

*The minimum service pressure according to the Recommended Standards for Water Works, commonly referred to as the Ten State Standards, is 35 PSI. Neither 11 GPM nor 2.75 GPM will reduce the pressure in the building to less than 35 psi given the assumptions noted previously. Other conditions within the service line or within the internal plumbing system such as severely tuberculated pipe, pinched/collapsed/blocked pipe, or partially closed valves could have a significant impact on expected pressures.*

*The purpose of this exercise was to show that 1,070,000 gallons could have easily flowed through the meter over a 201-day billing period (average of 3.7 GPM) with no indication of a problem.*

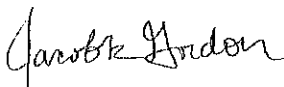
*A toilet drain can easily handle 0.14 GPM (200 GPD) and can easily handle 2.75 GPM (3960 GPD).*

Regarding the author's concerns over the presence of reducing fittings near the meter, we were unable to locate any installation requirements by the meter manufacturer which specifies minimum distance between the meter connection points and any upstream and downstream fittings. We do note, it is common for manufacturers to require minimum lengths of straight pipe, equal in diameter to the meter, upstream and downstream of the meter depending on the type of meter. We reviewed the parts list for a Neptune T10 meter (attached) which shows that a strainer is a standard component of the meter. Strainers, in part, act to equalize flow velocities across the meter and are commonly used on all types of meters. When used, they typically reduce the length of straight-pipe required on other types of meters. We understand the meter was sent out for third-party testing and the accuracy level of the meter met the appropriate American Water Works Association (AWWA) standards.

As noted herein, there are many factors which impact flow and pressure. The Owner's letter and this comment letter does not account for 'typical' water use from the 4 apartments or 'atypical' water use from the four apartments or multiple plumbing connections which may be leaking. We cannot comment on how often and for how long fixtures are open in the four apartments in the building.

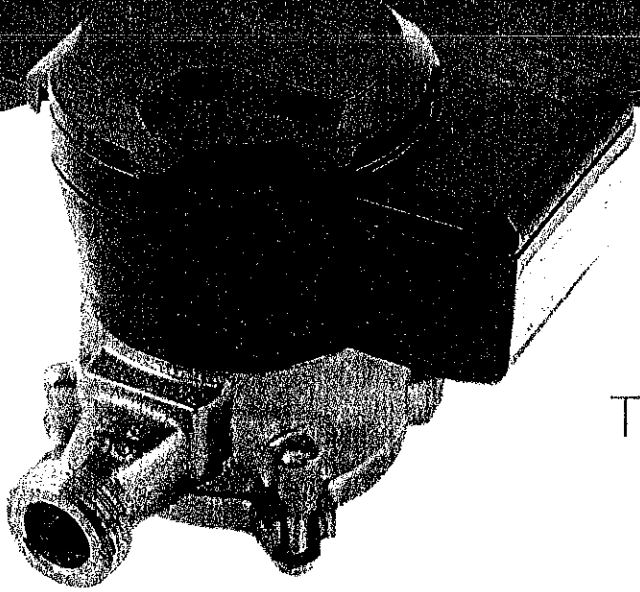
Please do not hesitate to contact me if you have any questions or concerns related to the information contained in this letter.

Sincerely,  
C.T. MALE ASSOCIATES



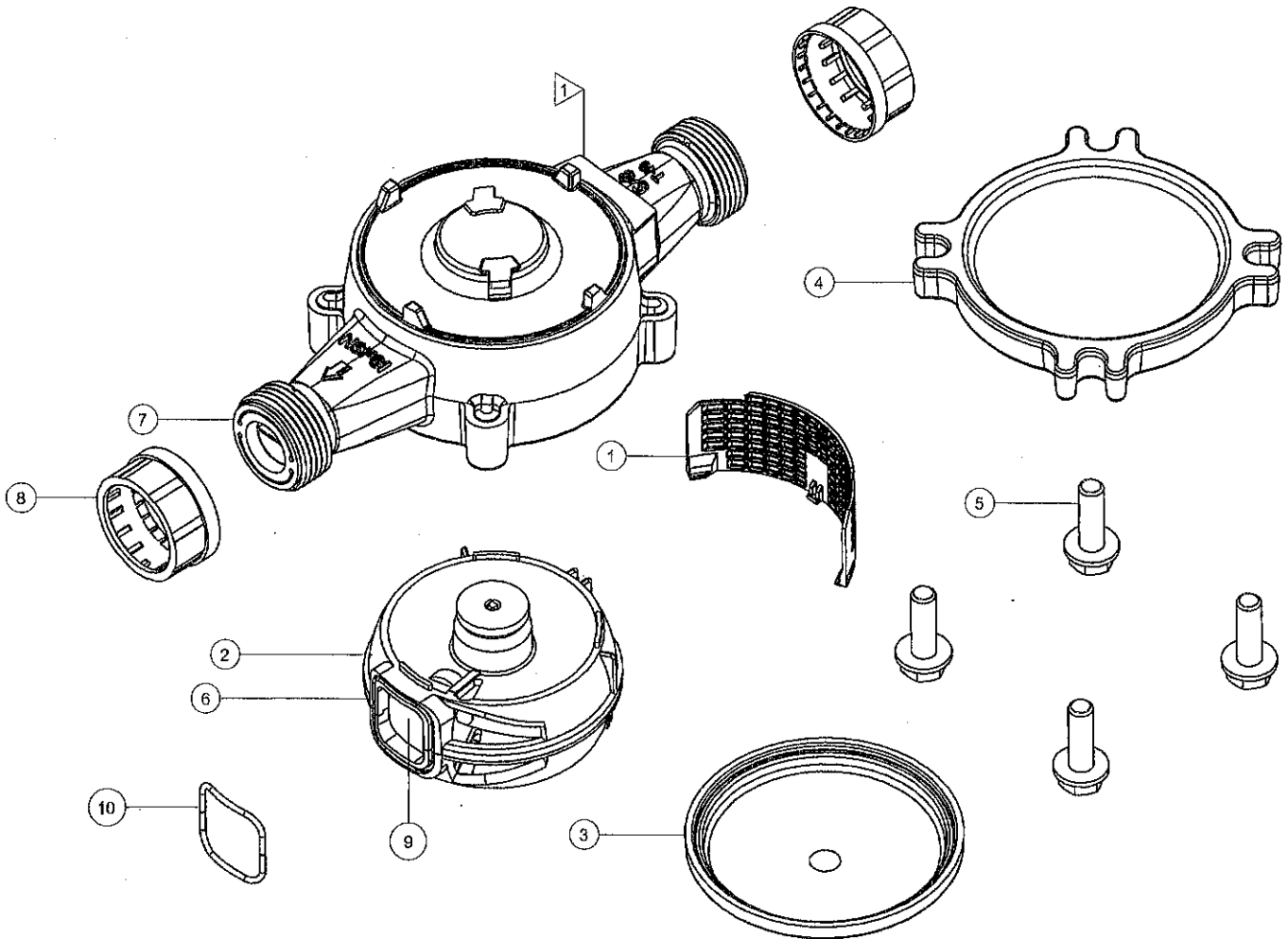
Jacob R. Gordon, P.E.  
Regional Office Manager

c: Charles R. Kortz, PE, Vice President of Engineering and Operations



# T-10<sup>®</sup> Meter Parts List

[#winyourday](#)



**T-10 PRODUCED JULY 2011 AND BEYOND**

- \* T-10 has serial number pad on the inlet side
- \* Date code is cast on the bottom of the inlet and outlet port

ITEM NO.	DESCRIPTION	PART NUMBER
		5/8", 5/8" X 3/4"
	Register	
1	Strainer	9399-006
2	Chamber complete <sup>1</sup>	9400-900
3	Gasket/Liner, Bottom Cap <sup>2</sup>	8340-072
4	Bottom Cap, Plastic <sup>3</sup>	9397-503
	Bronze <sup>4</sup>	9397-124
	Cast Iron <sup>5</sup>	9397-012
5	Bolt and Washer	
	SST-302 (w/washer)	8353-106
	SST-316 (w/washer)	8353-105
6	Thrust Roller	81-500
7	Spud Plug	1787-101
8	Spud Cap Plastic	1788-008
9	Diaphragm	9391-001
10	O-Ring	9386-004

#### **T-10 PRODUCED JULY 2011 AND BEYOND**

<sup>1</sup> Chamber has fully open outlet port (see picture on page 2)

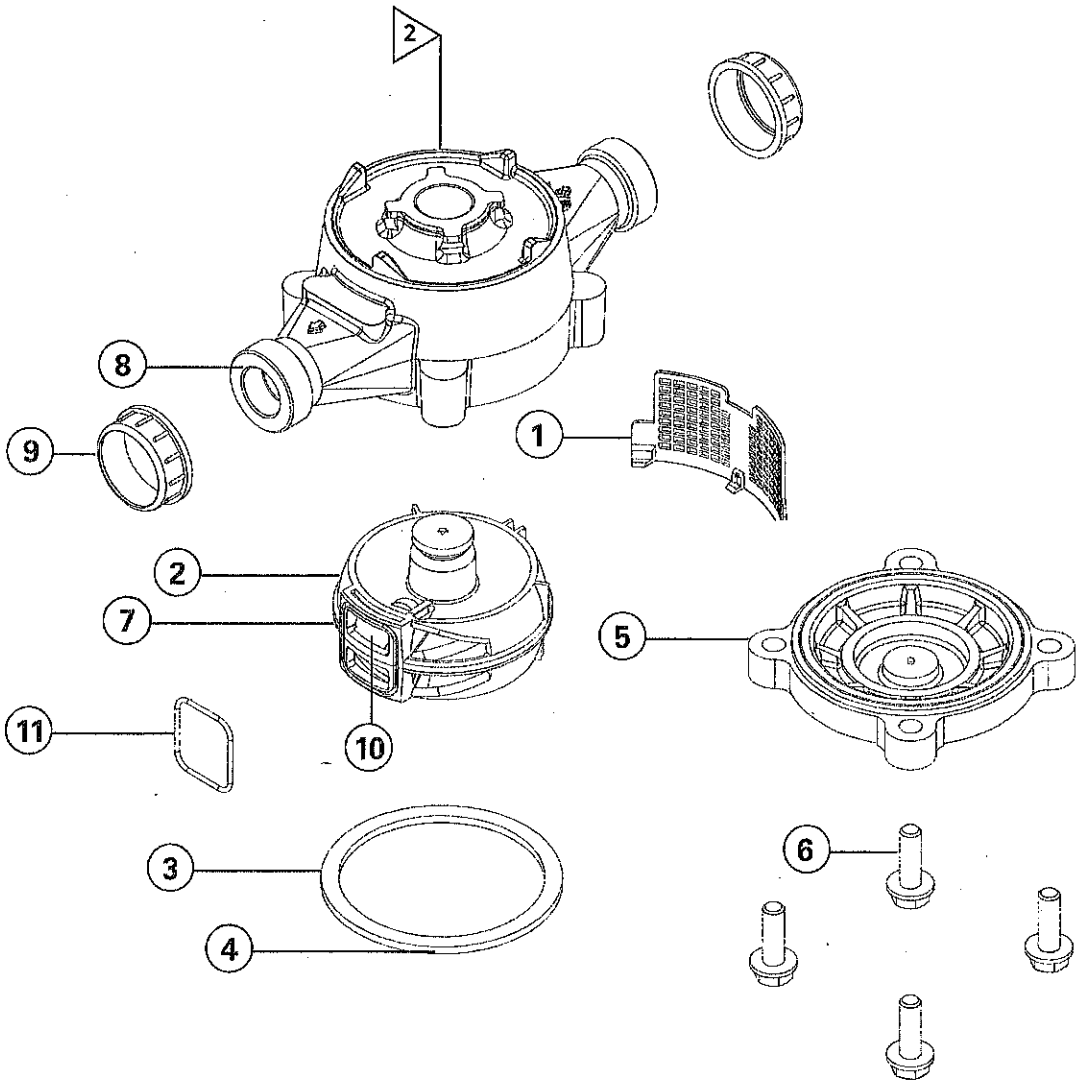
<sup>2</sup> Liner/gasket is white in color

<sup>3</sup> Plastic bottom cap has a raised Neptune logo

<sup>4</sup> Bronze bottom cap has a raised Neptune logo

<sup>5</sup> Cast Iron bottom cap has a recessed Neptune logo





**2 T-10 PRODUCED PRIOR TO JULY 2011**

- \* T-10 has serial number pad on the outlet side
- \* Date code is cast on the bayonet area under the register

ITEM NO.	DESCRIPTION	PART NUMBER		
		3/4", 5/8" X 3/4" *	3/4"	1"
	Register			
1	Strainer	9399-005	9831-001	9381-002
2	Chamber Complete <sup>1</sup>	9400-605	9826-200	9826-300
3	Gasket, Bottom Cap <sup>2</sup>	8340-069	8340-034	8340-038
4	Liner, Bottom Cap <sup>3</sup>	9398-001	9832-001	9841-001
5	Bottom Cap, Plastic <sup>4</sup>	9397-501		
	Bronze <sup>5</sup>	9397-023	9833-024	9842-024
	Cast Iron <sup>6</sup>	9397-010	9833-010	9842-010
6	Bolt and Washer			
	SST-302 (w/washer)	8353-106	8353-106	8353-106
	SST-316 (w/washer)	8353-105	8353-105	8353-105
7	Thrust Roller	81-500	81-500	190-500
8	Spud Plug	1787-101	1787-101	1787-102
9	Spud Cap Plastic	1788-008	1789-008	1790-007
10	Diaphragm	9391-001	9829-001	9840-001
11	O-Ring	9386-001	9386-002	9386-003

**\* T-10 PRODUCED PRIOR TO JULY 2011**

<sup>1</sup> Chamber is jointed in the middle of the outlet port (see picture on page 4)

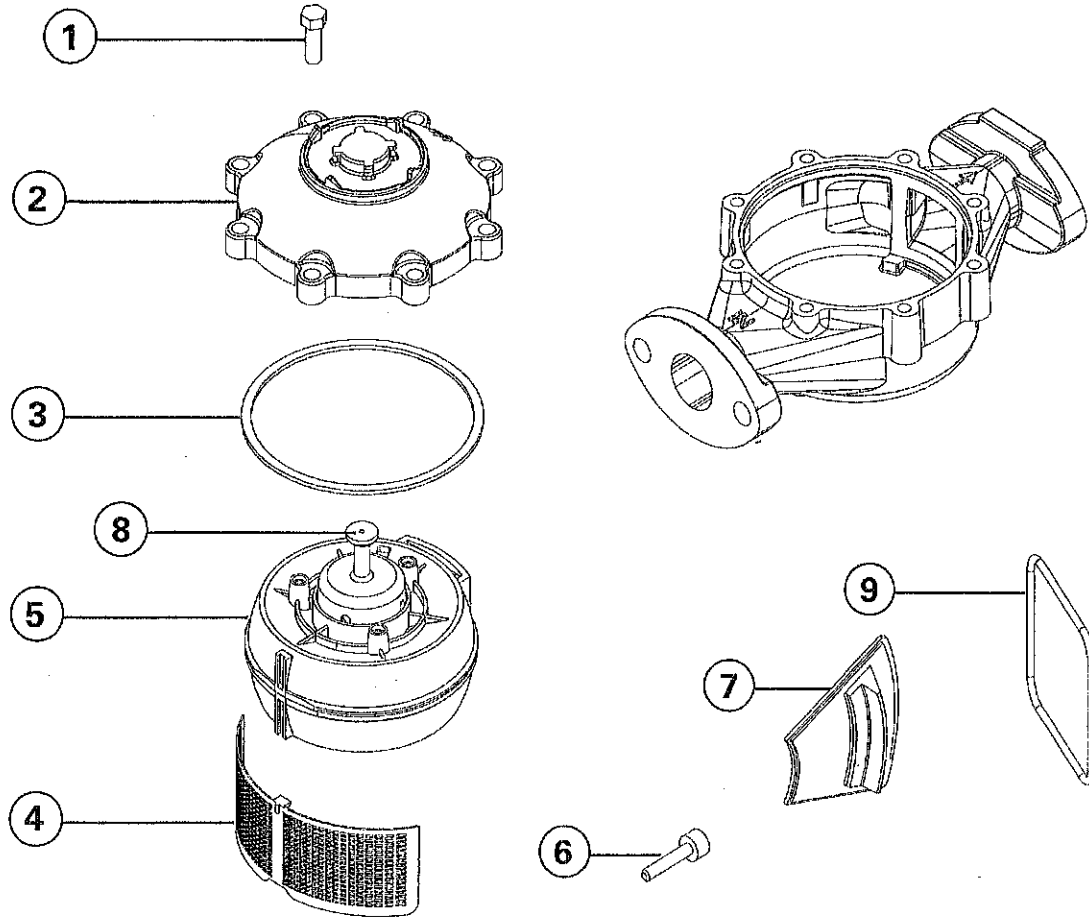
<sup>2</sup> T-10 uses black gasket

<sup>3</sup> Not required with SP or bronze bottom caps

<sup>4</sup> T-10 plastic bottom cap has a Trident logo raised on the center

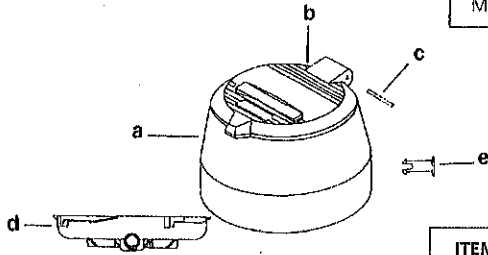
<sup>5</sup> T-10 bronze bottom cap has a recessed Neptune logo or no logo visible

<sup>6</sup> T-10 cast iron bottom cap has no logo



ITEM NO.	DESCRIPTION	PART NUMBER	
		SP CHAMBER	
		1 1/2"	2"
1	Bolts	8307-051	8307-051
2	Cover, Maincase	9082-002	9080-002
3	Gasket, Maincase	9083-001	9083-002
4	Strainer	9084-001	9084-002
5	Chamber Complete	9098-600	9098-610
6	Thrust Roller	9850-100	9850-100
7	Diaphragm	9086-101	9086-102
8	Control Block Assembly	9097-000	9097-010
9	O-Ring	8316-607	8316-606

REGISTRATION	5/8"	3/4"	1"	1 1/2"	2"
Cu. Ft.	9107-012	9107-022	9107-032	9107-042	9107-052
Gal.	9107-011	9107-021	9107-031	9107-041	9107-051
M <sup>3</sup>	9107-013	9107-023	9107-033	9107-043	9107-053



ITEM NO.	GOLD DESCRIPTION	BRONZE	PLASTIC	COLOR
	Register Box Assembled	9131-100	9131-000	
a	Register Box (Brz Box & Lid only)	9133-202	9133-001	
b	Register Cover	N/A	9132-001	
c	Hinge Pin, Register	N/A	8350-007	
d	Retainer Ring	9105-001	9105-001	
	Seal Pin, D/R Register, ProRead Register	9106-002	9106-001	9106-002
e	Seal Pin, High Profile Reg Box		9309-501	
	Screw, Seal Wire Register	8460-011		
	Seal Pin, Old Direct Read	9309-501		

SIZE	REGISTRATION	DIRECT READ	PROREAD* INSIDE 4-WHEEL ENCODER	PROREAD* INSIDE 6-WHEEL ENCODER	PROREAD* PIT 4-WHEEL ENCODER	PROREAD* PIT 6-WHEEL ENCODER	E-CODER INSIDE	E-CODER PIT	R900/ INSIDE	R900/ PIT
5/8"	Cu. Ft.	R82F11	R62F11	R62F12	R72F11	R72F12	RE2F11	RH2F11	RD2F11	RW2F11
	Gal.	R82G11	R62G11	R62G12	R72G11	R72G12	RE2G11	RH2G11	RD2G11	RW2G11
	m <sup>3</sup>	R82M11	R62M11	R82M12	R72M11	R72M12	RE2M11	RH2M11	RD2M11	R22M11
3/4"	Cu. Ft.	R82F21	R62F21	R62F22	R72F21	R72F22	RE2F21	RH2F21	RD2F21	RW2F21
	Gal.	R82G21	R62G21	R62G22	R72G21	R72G22	RE2G21	RH2G21	RD2G21	RW2G21
	m <sup>3</sup>	R82M21	R62M21	R62M22	R72M21	R72M22	RE2M21	RH2M21	RD2M21	RW2M21
1"	Cu. Ft.	R82F31	R62F31	R62F32	R72F31	R72F32	RE2F31	RH2F31	RD2F31	RW2F31
	Gal.	R82G31	R62G31	R62G32	R72G31	R72G32	RE2G31	RH2G31	RD2G31	RW2G31
	m <sup>3</sup>	R82M31	R62M31	R62M32	R72M31	R72M32	RE2M31	RH2M31	RD2M31	RW2M31
1 1/2"	Cu. Ft.	R82F42	R62F41	R62F42	R72F41	R72F42	RE2F41	RH2F41	RD2F41	RW2F41
	Gal.	R82G42	R62G41	R62G42	R72G41	R72G42	RE2G41	RH2G41	RD2G41	RW2G41
	m <sup>3</sup>	R82M42	R62M41	R62M42	R72M41	R72M42	RE2M41	RH2M41	RD2M41	RW2M41
2"	Cu. Ft.	R82F52	R62F51	R62F52	R72F51	R72F52	RE2F51	RH2F51	RD2F51	RW2F51
	Gal.	R82G52	R62G51	R62G52	R72G51	R72G52	RE2G51	RH2G51	RD2G51	RW2G51
	m <sup>3</sup>	R82M52	R62M51	R62M52	R72M51	R72M52	RE2M51	RH2M51	RD2M51	RW2M51

\* Registers do not include ARB<sup>SM</sup> remote receptacles. When ordering 1" registers for 10 Cu.Ft. registration, add SA68.



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