Taylorsville-Bennion Improvement District

1800 West 4700 South, Taylorsville, Utah 84129

NOTICE OF REGULAR MEETING
OF THE BOARD OF TRUSTEES OF
TAYLORSVILLE-BENNION IMPROVEMENT DISTRICT

The meeting of the Board of Trustees of the Taylorsville-Bennion Improvement District will be held at the District Office, 1800 West 4700 South, on November 20, 2024, at 4:00 pm, with a public hearing starting at 6:00 pm.

1. Call to order - Opening Prayer
2. Public Comments
3. Approval of Common Consent Items: Minutes for Board meeting held on October 18, 2024, calendar and upcoming events, trustees expense report, accounts payable report, electronic fund transfers report
4. Administrative Matters
    a. Discussion on an updated District logo
    b. Consider approval of Resolution 24-13 – Religious Accommodation Policy
    c. Consider signing the Memorandum of Understanding with CVWRF
5. Engineering and Development Matters
    a. Consider awarding contracts for engineering services
    b. Consider approval of updated Standards and Specifications
6. Finance and Information Matters
    a. Consider approval of the 2025 Tentative Budget
    b. Review proposed Rate and Fee Schedule for 2025
7. Risk & Asset Management Matters
    a. Review the District's Conservation Plan update
    b. Consider closing out the District Fuel Tank Replacement Project
    c. Consider closing out the District Landscaping Improvement Project
8. Discussion and Reports
    a. General Manager- review conference schedule for 2025, review District Board Meeting schedule for 2025, Review JVWCD Board Meeting schedule for 2025, review new JVWCD Trustee division boundaries, review public hearing agenda
    b. Director of Engineering/Development - Project and development updates
    c. Director of Finance/Information - October financials, EUM
    d. Director of Operations/Maintenance – October water reports
    e. Director of Risk/Asset Management – October customer water usage reports
    f. Trustees – Any updates, discussion, or reports
9. Closed Meeting
    a. To discuss the character, professional competence, or physical or mental health of an individual
10. Public Hearing
    a. Seek public input on proposed rate and fee increases as well as the District's Conservation Plan update
11. Administrative Matters
    a. Consider approval of Resolution 24-14 – Adoption of the Rate and Fee Schedule for 2025
    b. Consider approval of Resolution 24-15 – Water Conservation Plan Update
12. Adjourn

Reasonable accommodation will be made for disabled persons needing assistance to attend or participate in this meeting. Please contact Dora Dominguez at 801- 968-9081 at least 48 hours before the meeting. Members of the Board and District staff may participate electronically.

MINUTES
TAYLORSVILLE-BENNION IMPROVEMENT DISTRICT
Board Meeting
October 18, 2024
Taylorsville-Bennion Board Room

Board Members Present

Don Russell	Board Chair
Matthew Swensen	Trustee
Kelton Kleinman	Trustee

Staff Members Present

Mark Chalk	General Manager/Clerk
Bruce Hicken	Director of Finance & Information/Treasurer
Tammy North	Director of Engineering & Development
Shawn Robinson	Director of Operations & Maintenance
Dan McDougal	Director of Risk & Asset Management
Dora Dominguez	Executive Assistant & Office Supervisor

The Board Chair opened the meeting at 2:01 p.m. and welcomed everyone. Matthew Swensen offered the invocation.

Public Comments
There were no public comments.

Approval of Common Consent Items
The Board Chair discussed the approval of common consent items including the Minutes of the Strategic Planning Board meeting held on October 2, 2024, the expense report, accounts payable, and the electronic fund transfers report. The next Board meeting was confirmed for November 20, 2024, at 4:00 pm, followed by a public hearing at 6:00 pm. The Board Chair confirmed his attendance at the UASD Conference. The District Fall luncheon will be held on October 23 and the Board was invited to attend.

The accounts payable report in the board book contains construction, operation, and maintenance vouchers #22844-23146 for a total of 303 vouchers, with a dollar amount of $2,462,838.87. The accounts payable report also includes electronic fund transfers with a dollar amount of $331,320.24. The Board Chair inquired about check #23146 payable to the Utah State Treasurer for $377.96. Mr. Hicken explained that the check was sent to the Utah State Treasurer's office for unclaimed property funds.

The following motion was made by Trustee Swensen, seconded by Trustee Kleinman:

RESOLVED: To approve the common consent items. The motion passed unanimously with the following votes:

Trustee Russell	Yes
Trustee Swensen	Yes
Trustee Kleinman	Yes

Finance and Information Matters

Preliminary 2025 Budget review

Mr. Hicken introduced the Preliminary Budget Summary for 2025. He noted that the rate study recommended a 3% increase in water and sewer rates. The preliminary budgeted revenue for 2025 is $23,910,000, up $780,000 from 2024. Mr. Hicken remarked that the proposed Operation and Maintenance budget will increase by $1,036,900, or 5.1%, over the previous budget.

Mr. Hicken reviewed the expenses that had significant changes from the previous budget. The Water Operations and Maintenance Expense budget includes a one-time cost of $300,000 to abandon waterlines. The depreciation budget increased by $480,000, but it does not affect the District's cash position. Jordan Valley water purchase budget increased by $119,000. There is a carryover balance of $60,000 for tank cleaning. This project was supposed to be completed by the end of the year, but the contractor might not be able to get it done. District flows to CVWRF have significantly decreased due to the construction of the siphon, resulting in a savings of $329,500 in 2025. Mr. Hicken indicated that if the costs of abandoning the waterlines, depreciation, and tank cleaning were eliminated to "normalize" the budget, the increase to the budget would be 1% rather than 5.1%. The 1% compares well to the CPI increase of 2.6% as of July.

Salary changes are budgeted to be a 2.6% COLA based on the Bureau of Labor Statistics Western Region figure for July, with 0-3% for annual merit increase. The total number of employees is expected to increase from 35 to 36 by the end of 2025. Ten Operators will be eligible for operator exams and thereby receive up to an additional $60,000 in compensation. Six-grade promotions could result in additional compensation of $22,000. Salaries and wages are budgeted to increase by $184,200, or 5.2%.

Employee insurance benefits are scheduled to increase by 4.6% for medical and a 5.6% increase for dental. Long-term disability insurance has no rate increase. The overall cost increase over 2024 is $35,915. There is a possibility of a trustee election in 2025, therefore, $50,000 has been set aside to contract with the County for the potential election. The Contingency account remains the same as 2024 at $300,000. Bond payment number 5 of 20 of the Series 2021 Bond will be made in 2025, for $1,159,000. The District anticipates receiving the grant funding for $1,600,000 to help offset the cost of the Meadowbrook Waterline Replacement Project.

Capital projects for 2025 include the 1130 West Water Line Replacement, District Building, Barker Replacement Well, Meadowbrook Waterline Replacement, Middle Zone Line Engineering, CIPP Sewer Lining, Manhole Upgrades, Auto Purchase (7 vehicles), Sale of Surplus Vehicles, Server Room improvements, and the Central Valley Plant Upgrades.

Mr. Hicken remarked that the District is constantly looking for ways to be more effective, and efficient, and save money for the District. He highlighted the one-time and annually recurring District savings related to the 2025 District budget.

One-time savings:

- $1,600,000 - Grant funding for the Meadowbrook Waterline
- $1,500,000 – Completing Large Meter Replacement project In-house
- $600,000 – Partner with UDOT to avoid mobilization, traffic control, and restoration costs on the Redwood Road waterline replacement project
- $368,000 – KID paid $168K to TBID and the existing contractor bid $200,000 resulting from accelerating a portion of 4700 South Waterline Replacement
- $90,000 – Initial bid for tank cleaning was $150K-$286K, tank cleaning budget for 2025 is $60,000
- $52,000 – Completing the 40-Year Water Rights Plan and Conservation Plan In-house
- $??? – Completed the Lead and Copper Rule Compliance In-house

Annual recurring savings:

- $580,000 – Reduced flow to CVWRF resulting from the siphon
- $440,000 – Interest savings of $8.8M over 20 years due to the historically low interest rate of 1.6% on the bond
- $440,000 – Recovery of lost revenue from the meter replacement
- $433,000 – Flushing program being done In-house
- $7,500 – Investing in the Valve Repair Kit reduces labor, excavation & material expenses

Review proposed Rate and Fee Schedule changes for 2025

Mr. Hicken indicated that the Rate and Fee Schedule has been adjusted to reflect the 3% rate increase in water and sewer rates as had been recommended in the rate study. Other fees were adjusted to reflect actual or market prices for materials, labor, and equipment.

Trustee Swensen asked if TBID was planning to increase property taxes. Mr. Hicken indicated that property taxes will remain the same. The General Manager noted that TBID has not increased property taxes in at least the last 20 years and is currently not planning to raise them in the future either.

Administrative Matters

Discussion on cost-of-living adjustment

As the Board had requested, The General Manager and Mr. Hicken presented options to help employees close the gap between housing costs, increased costs of living, and the CPI. Three options were presented including doing nothing, providing a 7%- 10% one-time bonus, or doing a 1%, 3%, or 5% salary adjustment.

Trustee Kleinman noted that the purpose of looking at these options is to help solve a long-term problem. He would lean towards a salary increase over a one-time bonus. He remarked that the CPI through July was 2.6% but it only reflects the cost-of-living increase over the last year, it does not reflect the total increase over the past few years. Trustee Kleinman indicated that the District is efficiently ran and employees are who make things happen. He referred to the one-time and recurring District savings that employees, including the Executive Management Team, made happen. Employees deserve the best the District can for them because of their dedication and hard work. Mr. Kleinman considers that the District must think forward and make a salary adjustment to help retain and attract great talent. However, he wants to be certain that the District can comfortably absorb the cost of whatever decision is made, without detriment to District residents.

Trustee Swensen remarked that as a Board of Trustees for TBID, part of their responsibility is to take care of employees and do the best possible. He considers that the best approach would be a salary increase for all employees. Trustee Swensen pondered that a one-time bonus to reward performance would be a great way to incentivize employees to continue to exceed expectations. Nonetheless, he was concerned about the taxation on a one-time bonus.

The Board Chair remarked that the District was generous on medical insurance and holidays. He considered that a one-time bonus for everyone would be the best way to proceed. He noted that the bonus should be based on amount and not percentage regardless of tenure as long as the employee is in good standing.

The Board Chair asked what had caused the $580,000 savings at Central Valley. The Engineer remarked that there was an unknown leak at the lift station, and water was infiltrating from the river. The District was not aware of this issue until the siphon was built. This resulted in a reduced flow to Central Valley which has reduced our costs on an ongoing basis.

The Board asked Executive Management for their thoughts on the cost-of-living adjustment. Executive Management stated that it is important to the District that employees have a comfortable lifestyle which has not been possible nowadays. TBID employees have great District knowledge, and experience, and are very dedicated which often results in savings for the District. Making a salary adjustment at this time would potentially prevent turnover in the future when employees start seeking other jobs to help close the gap between housing costs and wages. A 5% increase in salary would amount to $178,000 a year. The recurring savings from the siphon alone is approximately $580,000 a year. Therefore, a reasonable salary increase could easily be absorbed by the recurring savings from the siphon alone, let alone the other ongoing savings that have been realized recently by staff.

The Board decided that a 3% salary increase for all employees would be appropriate to help with the cost of living. Also, a pool of money will be available to reward performance at management's discretion. Trustee Swensen mentioned that the top performers be the only ones that qualify for a bonus this time and that we should consider something between 7-10% for those employees. The General Manager will present a detailed proposal to the Board at the next board meeting.

Discussions and Reports

General Manager – Review the public hearing procedures

The General Manager reviewed the public hearing procedures and noted that in the past each speaker has been allotted two minutes to comment. The Board Chair will make adjustments as needed.

Director of Engineering & Development – Projects and development updates

The Engineer reported on the following projects:

Fuel Tanks – Tanks have been installed. The diesel tank was upgraded to 10,000 gallons.

BRT – TBID water lines were rerouted due to this project. Meters are being installed.

Cypress Cove – The District is providing sewer for this project, and it has been installed.

McDonalds on Redwood – A grease trap was installed. It has never had a grease trap before.

4700 South and Bangerter – The relocation of the water and sewer lines is almost complete
Miscellaneous City Projects

- Sharon Dr – TBID water line was looped
- Skate Park on 6200 S – Water vault will be relocated, and a new sewer line will be installed
- Frontage Rd – Water lines and a couple of meter vaults were relocated

Director of Finance & Information – September financials, EUM
Mr. Hicken indicated that interest rates are still at about 5.5%. Cash available for operations is at a good level. Water sales were $112K over budget, and total operation revenue was $1.2M over budget year to date. Summit Vista made a big payment on impact fees. However, some of that money will be refunded because they adjusted their plans to a smaller meter size. Year-to-date, the District is over budget $1.2M in total sales. For the last two years, the District has been under budget in water sales. The new water sales normal has not been reached yet. Utilities show $390K under budget because Rocky Mountain Power did not generate a bill in August. The District is waiting for a bill to be generated.

Trustee Swensen inquired if Rocky Mountain Power (RMP) had gone through with their 40% proposed increase. The General Manager and Mr. Hicken remarked that RMP decided to do the increase gradually over three years, at about 15% each year, and the impact is reflected in the budget.

Operations & Maintenance – September water reports
Mr. Robinson indicated that September had record-high temperatures and there was no precipitation. The water year ended slightly above the 10-year average. Water sales for September were 200-acre feet more than last year. The District still has 3 wells running in October. All wells will be shut down at the end of October. The District will be on Jordan Valley water for the remainder of the year.

Risk & Asset Management – September customer water usage reports
Mr. McDougal reported that 21% of residential customers were still in Tier 3 and 6% in Tier 4. There was a slight increase in Tiers 3 and 4 over last year. Mr. McDougal indicated that the District continues to participate in landscaping and water conservation meetings sponsored by the Taylorsville City Green Committee. Attendance in the Fall and Winter tends to drop off with most people attending in the spring.

Trustees – Updates, discussions, or reports
The Board Chair asked how often someone from the District attends Jordan Valley Board meetings and City Council meetings. The General Manager remarked that he presents at the City Council meeting 3 times a year in person and attends Jordan Valley Board meetings remotely every month. He noted that Jordan Valley is proposing a restructuring of its board of trustees' seats. Jordan Valley is planning to visit each entity to share the new board of trustee's structure. The Board Chair would like to be invited to this meeting with Jordan Valley.

The Taylorsville Journal will be running an article about TBID winning the awards for best groundwater and best overall water at AWWA Intermountain Section.

Trustee Swensen noted that his neighborhood was flushed last week, and everything went well.

The Board Chair thanked the Executive Management Team for a great financial and operational year.

Adjourn – The following motion was made by Trustee Kleinman, seconded by Trustee Swensen:

RESOLVED: To adjourn the Board meeting at 3:33 p.m. The motion passed unanimously with the following votes:

Trustee Russell	Yes
Trustee Swensen	Yes
Trustee Kleinman	Yes

Donald Russell, Chair of the Board of Trustees

December 2024

Sun	Monday	Tuesday	Wednesday	Thurday	Friday	Sat
1	2	3	4	5	6	7
8	9	10	11 J V Board Mtg 3:00 pm	12	13	14
15	16	17	18 TBID Board Mtg 2:00 pm Public Hearing 3:00 pm	19 C V Board Mtg 12:00 pm	20 Holiday Luncheon Noon	21
22	23	24 District Closes at noon	25 **Christmas Day**	26	27	28
29	30	31 District Closes at 2:00 pm				

Taylorsville-Bennion Improvement District
P. O. Box 18579
1800 West 4700 South
Taylorsville, Utah 84118
Telephone (801) 968-9081 Fax (801) 963-3199

Board Meeting Schedule 2024

Wednesday, January 17 at 2:00 pm

Wednesday, February 21 at 2:00 pm

Friday, March 15 at 2:00 pm

Wednesday, April 17 at 2:00 pm

Wednesday, May 22 at 10:30 am

Tuesday, June 18
Board Meeting 2:00 pm
Public Hearing 3:30 pm

Thursday, July 18 at 10:00 am

Monday, August 26 at 2:00 pm

Monday, September 16 at 2:00 pm **CANCELLED**

Budget and Strategic Planning Session
Wednesday, October 2 at 8:00 am

Friday, October 18 at 2:00 pm

Wednesday, November 20
Board Meeting at 4:00 pm
Public Hearing at 6:00 pm

Wednesday, December 18
Board meeting at 2:00 pm
Budget and Public Hearing 3:00 pm

TRUSTEES ATTENDANCE AND EXPENSE REPORT

Board Meeting Attendance	Wednesday, January 17, 2024	Wednesday, February 21, 2024	Friday, March 15, 2024	Wednesday, April 17, 2024	Wednesday, May 22, 2024	Tuesday, June 18, 2024	Thursday, July 18, 2024	Monday, August 26, 2024	Wednesday, October 2, 2024	Friday, October 18, 2024					Board Meetings Attended (Year-To-Date)
BOARD MEMBER															
Don Russell	1	1	1	1	1	1	1	1	1	1					10
Matt Swensen	1	1	1	1	1	1	1	1	1	1					10
Kelton Kleinman	1	1	1	1	1	1	1	1	1	1					10

Expenses Through October 2024

Meeting and Training Expenses	Utility Management Conf Feb 13-16	Utah Water Users Conf Mar 19-22	AWWA ACE Conf Jun 11-13	WEFTEC Oct 7-9										M&IE Occurances (Maximum 12)	M&IE	Travel Expense Reimbursement: Hotel, Transporation, Parking, etc.	Total Monthly Expense
BOARD MEMBER																	
Don Russell	1	1	1	1										4	$280.00	$2,033.73	$2,313.73
Matt Swensen			1											1			$0.00
Kelton Kleinman														0			$0.00
																Trustees Monthly Expense Total	$2,313.73

Accounts Payable

Check Register Thursday, November 14, 2024

Check No.	Issue Date	Name	Description	Amt	GL Acct
23120	10/4/2024	POWELL, MATTHEW	CLOSED ACCOUNT REFUND - 60800408	$223.35	11159
				Total:	$223.35
23121	10/4/2024	PRATHER, TRENT	CLOSED ACCOUNT REFUND - 10027706	$161.44	11159
				Total:	$161.44
23122	10/4/2024	SHERMAN, PATRICIA TOVAL DEBO	CLOSED ACCOUNT REFUND - 50199601	$0.24	11159
	10/4/2024	SHERMAN, PATRICIA TOVAL DEBO	CLOSED ACCOUNT REFUND - 50199601	$116.72	11159
	10/4/2024	SHERMAN, PATRICIA TOVAL DEBO	CLOSED ACCOUNT REFUND - 50199601	$109.29	11159
	10/4/2024	SHERMAN, PATRICIA TOVAL DEBO	CLOSED ACCOUNT REFUND - 50199601	$0.16	11159
	10/4/2024	SHERMAN, PATRICIA TOVAL DEBO	CLOSED ACCOUNT REFUND - 50199601	$0.26	11159
				Total:	$226.67
23123	10/4/2024	SMOCK, MICHAEL R & SCOTT	CLOSED ACCOUNT REFUND - 60519300	$71.35	11159
				Total:	$71.35
23124	10/4/2024	VENEY, THE ESTATE OF REBECCA	CLOSED ACCOUNT REFUND - 20068002	$299.81	11159
				Total:	$299.81
23125	10/9/2024	KILGORE CONTRACTING	APWA	$241.01	25485
	10/9/2024	KILGORE CONTRACTING	APWA	$237.60	25485
				Total:	$478.61
23126	10/9/2024	FERGUSON WATERWORKS #1616	1" BRASS FITTINGS	$127.91	25485
				Total:	$127.91
23127	10/9/2024	JORDAN VALLEY W C DIST	WATER DELIVERIES FROM 9/1/24 - 9/30/24	$67,594.13	25445
				Total:	$67,594.13
23128	10/9/2024	LES OLSON CO.	MONTHLY AGREEMENT ON SHARP MX-4070V	$219.10	45215
	10/9/2024	LES OLSON CO.	MONTHLY AGREEMENT ON SHARP MX-4071	$75.41	45215
				Total:	$294.51
23129	10/9/2024	LOWE'S	CONCRETE STUD	$22.05	25485
	10/9/2024	LOWE'S	BRUSH FOR CLEANING GRAFFITI	$26.54	25485
	10/9/2024	LOWE'S	BALL VALVE	$37.59	25485
	10/9/2024	LOWE'S	PARTS TO REPAIR UNIT #6	$22.50	25841
	10/9/2024	LOWE'S	CONDUIT COUPLINGS	$21.41	25735
	10/9/2024	LOWE'S	STEEL	$45.48	25485
				Total:	$175.57
23130	10/9/2024	METERWORKS	INSTALLATION OF METERS	$8,833.00	58850
				Total:	$8,833.00
23131	10/9/2024	OLYMPUS INSURANCE AGENCY	ENDORSEMENT TO POLICY PHPK2639087 - ADD 10 VEHICLES	$4,994.00	45320
				Total:	$4,994.00
23132	10/9/2024	PARKLAND USA dba RHINEHART O	RIDGELINE DEF	$377.52	45430
				Total:	$377.52
23133	10/9/2024	POLLARDWATER	FIRE HOSES FOR FLUSHING HYDRANTS	$540.76	25485
				Total:	$540.76
23134	10/9/2024	PRABIN PRADHAN	UNIFORM ALLOWANCE REIMBURSEMENT - PRABIN PRADHAN	$58.96	45435
				Total:	$58.96

Check No.	Issue Date	Name	Description	Amt	GL Acct
23135	10/9/2024	QUADIENT FINANCE USA INC	SUPPLY PURCHASE	$194.75	45110
	10/9/2024	QUADIENT FINANCE USA INC	POSTAGE - 7900 0440 8112 4996	$1,029.15	45130
				Total:	$1,223.90
23136	10/9/2024	QUADIENT INC	STANDARD MAINTENANCE, METER RENTAL,	$642.00	45220
				Total:	$642.00
23137	10/9/2024	SMITH & EDWARDS CO OGDEN	UNIFORM PURCHASE - ALICIA SIGAR	$94.97	25435
				Total:	$94.97
23138	10/9/2024	UPS STORE	CAMERA TRACKER TO PEARPOINT/REPAIR	$138.45	35810
				Total:	$138.45
23139	10/9/2024	VANGUARD CLEANING SYSTEMS	OFFICE CLEANING - OCTOBER 2024	$765.00	45080
				Total:	$765.00
23140	10/9/2024	VERIZON	ACCOUNT #242465846-00001 08/11/24 TO 09/10/24	$717.81	25140
	10/9/2024	VERIZON	ACCOUNT #942295884-00001 08/11/24 TO 09/10/24	$1,636.44	45145
				Total:	$2,354.25
23141	10/9/2024	WINDRIVER INV L.C.	HAULING OFF SPOIL PILE	$225.00	25485
				Total:	$225.00
23142	10/9/2024	WORKER COMP. FUND OF UT	2024 POLICY ACCT #76704 7/1/24-9/30/24	$5,986.00	45310
				Total:	$5,986.00
23143	10/9/2024	ZIONS 1ST NATIONAL BANK	BOND PAYMENT	$120,000.00	11170
				Total:	$120,000.00
23144	10/9/2024	BARRY J CRAWFORD	Replace void ck 19938/5132 Autumnwood Ln	$44.87	11159
				Total:	$44.87
23145	10/9/2024	CIRILA E CRAWFORD	Replace void ck#19938/5132 Autumn Wood Ln	$44.87	11159
				Total:	$44.87
23146	10/10/2024	UTAH STATE TREASURER	UNCLAIMED PROPERTY FOR 2023/87-6113323	$377.96	12110
				Total:	$377.96
23147	10/16/2024	PNL CONSTRUCTION INC	HYDRANT PERMIT/METER DEPOSIT REFUND	$132.50	23120
				Total:	$132.50
23148	10/16/2024	RIDGE ROCK INC	HYDRANT PERMIT/METER DEPOSIT REFUND	$312.50	23120
				Total:	$312.50
23149	10/17/2024	AIRGAS USA, LLC	ACETYLENE & OXYGEN-REFILL	$327.37	45430
				Total:	$327.37
23150	10/17/2024	AUTOZONE, INC.	MOTOR TREATMENT	$44.60	45430
				Total:	$44.60
23151	10/17/2024	BATTERY SYSTEMS INC	GENERATOR BATTERIES	$514.32	25670
	10/17/2024	BATTERY SYSTEMS INC	GENERATOR BATTERIES	$423.72	25670
				Total:	$938.04
23152	10/17/2024	BIOGRASS SOD FARMS	SOD FOR REPAIRS	$63.70	25485
				Total:	$63.70
23153	10/17/2024	CASH/DORA DOMINGUEZ	DRILL BIT	$22.54	25485
	10/17/2024	CASH/DORA DOMINGUEZ	DINNER IN LIEU OF FLOWERS - KARL SLADE	$54.62	45110
				Total:	$77.16
23154	10/17/2024	DESERET NEWS	STATEMENT OF QUALIFICATIONS FOR ENGINEERING POOL	$55.80	45110
				Total:	$55.80

Check No.	Issue Date	Name	Description	Amt	GL Acct
23155	10/17/2024	DHHS - UNIFIED STATE LABORATO	ENVIROMICRO WATER SAMPLES 9/1 TO 9/30/24	$41.80	25455
				Total:	$41.80
23156	10/17/2024	DONALD G RUSSELL	WEFTEC-TAXI-DON RUSSELL-NEW ORLEANS, LA-10/5/2024-10/8/24	$80.00	45120
	10/17/2024	DONALD G RUSSELL	WEFTEC- HOTEL-DON RUSSELL-NEW ORLEANS, LA-10/5/2024-10/8/24	$1,435.29	45120
	10/17/2024	DONALD G RUSSELL	WEFTEC-AIRFARE-DON RUSSELL-NEW ORLEANS, LA-10/5/2024-10/8/24	$488.96	45120
	10/17/2024	DONALD G RUSSELL	RISK CONFERENCES, JV BOARD MEETING, CHAMBERWEST MEETING-MILEAGE	$68.65	45120
	10/17/2024	DONALD G RUSSELL	WEFTEC-MILEAGE-DON RUSSELL-NEW ORLEANS, LA-10/5/2024-10/8/24	$29.48	45120
	10/17/2024	DONALD G RUSSELL	WEFTEC-M&IE-DON RUSSELL-NEW ORLEANS, LA-10/5/2024-10/8/24	$280.00	45120
				Total:	$2,382.38
23157	10/17/2024	DURA CRETE	BUILDING DRAINAGE BOXES	$368.00	58080
				Total:	$368.00
23158	10/17/2024	HP INC.	PLOTTER INK	$123.46	45215
				Total:	$123.46
23159	10/17/2024	INTERMOUNTAIN FARMERS ASSO	AMDRO ROACH BLOCK	$16.99	45430
				Total:	$16.99
23160	10/17/2024	INTERMOUNTAIN FUSE SUPPL	LOW ZONE SOUTH CONTACTORS	$4,169.66	25735
				Total:	$4,169.66
23161	10/17/2024	KILGORE CONTRACTING	1 LOAD ASPHALT - FOR REPAIRS-3760 W & SOUTHRIDGE	$154.80	25485
	10/17/2024	KILGORE CONTRACTING	1 LOAD ASPHALT - FOR REPAIRS-HAYDEN DR	$272.03	25485
				Total:	$426.83
23162	10/17/2024	MARK CHALK	REIMBURSEMENT - FOR OCTOBER OFFICE LUNCHEON	$509.99	45110
	10/17/2024	MARK CHALK	REIMBURSEMENT FOR OFFICE CHAIR - FOR TAMMY NORTH	$599.99	45110
				Total:	$1,109.98
23163	10/17/2024	OWEN EQUIPMENT COMPANY	HOSE REEL WIND GUIDE REPAIR	$7,582.79	35805
				Total:	$7,582.79
23164	10/17/2024	PEHP-LIFE & FSA	FSA - OCTOBER 2024	$699.99	12250
				Total:	$699.99
23165	10/17/2024	ROCK CANYON OIL	USED FILTER PICKUP	$500.00	25485
				Total:	$500.00
23166	10/17/2024	RONALD STOCK	WEFTEC CONF-CAR RENTAL-RON STOCK,NEW ORLEANS, LA 10/5/24 TO 10/09/24	$86.11	45120
	10/17/2024	RONALD STOCK	WEFTEC CONF-M&IE-RON STOCK,NEW ORLEANS, LA 10/5/24 TO 10/09/24	$360.00	45120
				Total:	$446.11
23167	10/17/2024	SALT LAKE MAILING	SEPTEMBER '24 STATEMENTS	$8,775.38	45130
				Total:	$8,775.38
23168	10/17/2024	SHAWN ROBINSON	WEFTEC - M&IE - SHAWN ROBINSON - NEW ORLEANS, LA - 10/5/24 to 10/9/24	$360.00	45120
	10/17/2024	SHAWN ROBINSON	WEFTEC - UBER/LIFT - SHAWN ROBINSON - NEW ORLEANS, LA - 10/5/24 to 10/9/24	$140.58	45120
	10/17/2024	SHAWN ROBINSON	WEFTEC - HOTEL - SHAWN ROBINSON - NEW ORLEANS, LA - 10/5/24 to 10/9/24	$1,262.32	45120

Check No.	Issue Date	Name	Description	Amt	GL Acct
23168	10/17/2024	SHAWN ROBINSON	WEFTEC - AIRPORT PARKING - SHAWN ROBINSON - NEW ORLEANS, LA - 10/5/24 to 10/9/24	$59.00	45120
				Total:	$1,821.90
23169	10/17/2024	STEVE REGAN CO	DIESEL SPRAYER	$221.39	25485
				Total:	$221.39
23170	10/17/2024	TAMMY NORTH	WEFTEC - AIRFARE - TAMMY NORTH - NEW ORLEANS, LA -10/5/24 to 10/9/24	$438.95	45120
	10/17/2024	TAMMY NORTH	WEFTEC - M&IE - TAMMY NORTH - NEW ORLEANS, LA -10/5/24 to 10/9/24	$360.00	45120
	10/17/2024	TAMMY NORTH	WEFTEC - UBER/LIFT - TAMMY NORTH - NEW ORLEANS, LA -10/5/24 to 10/9/24	$81.38	45120
	10/17/2024	TAMMY NORTH	WEFTEC - HOTEL - TAMMY NORTH - NEW ORLEANS, LA -10/5/24 to 10/9/24	$1,262.32	45120
				Total:	$2,142.65
23171	10/17/2024	TERRAWORKS	LANDSCAPE IMPROVEMENTS	$214,559.40	58440
				Total:	$214,559.40
23172	10/17/2024	WETCO INC	FLOW METER CHANGES - KEARNS BOOSTER	$920.00	25140
				Total:	$920.00
23173	10/17/2024	WHEELER MACHINERY CO	PARTS SHIPPING	$35.00	25815
				Total:	$35.00
23174	10/29/2024	STACYWITBECK	REFUND-CONNECTION FEES 2" TAP BRT PROJECT	$661.46	27550
				Total:	$661.46
23175	10/30/2024	A TO Z LANDSCAPING INC	LANDSCAPE WELLS & RESEV-MONTHLY CONTRACT OCTOBER	$12,991.86	25505
				Total:	$12,991.86
23176	10/30/2024	AMAZON CAPITAL SERVICES	UNIFORM ALLOWANCE - ZACH GARDNER	$52.79	35435
	10/30/2024	AMAZON CAPITAL SERVICES	3 SPACE HEATERS	$107.88	45110
	10/30/2024	AMAZON CAPITAL SERVICES	HARD DRIVE	$69.99	45210
	10/30/2024	AMAZON CAPITAL SERVICES	SAFETY VESTS	$74.75	45430
	10/30/2024	AMAZON CAPITAL SERVICES	RETURN OF SAFETY VESTS	($74.75)	45430
	10/30/2024	AMAZON CAPITAL SERVICES	UNIFORM ALLOWANCE - DON SMOLKA	$130.24	25435
	10/30/2024	AMAZON CAPITAL SERVICES	CAUTION TAPE, WET/DRY VAC FILTER	$71.59	45430
	10/30/2024	AMAZON CAPITAL SERVICES	PENCILS, DRYLINE, HIGHLIGHTERS, STICKY NOTES, SECURITY ENEVELOPES	$99.41	45110
	10/30/2024	AMAZON CAPITAL SERVICES	SMALL SIZE SAFETY VESTS	$71.94	45430
	10/30/2024	AMAZON CAPITAL SERVICES	GATE ACTIVATED LIGHTS	$8.35	45430
	10/30/2024	AMAZON CAPITAL SERVICES	UNIFORM ALLOWANCE -JOSH SHELL	$119.98	45435
	10/30/2024	AMAZON CAPITAL SERVICES	UNIT 132 - PARTS ORGANIZER	$19.51	45430
				Total:	$751.68
23177	10/30/2024	ANSER-FONE, INC.	ANSWERING SERVICE F3454	$410.00	45145
				Total:	$410.00
23178	10/30/2024	AT&T MOBILITY	WIRELESS SERVICE/GPS 9/10/24-10/09/24-ACCT # 878306871	$43.23	45145
				Total:	$43.23
23179	10/30/2024	AUTOMENDERS INC	UNIT #114 COLLSION REPAIR	$3,226.29	35840
				Total:	$3,226.29
23180	10/30/2024	AUTOZONE, INC.	WIPERS FOR BRIAN'S TRUCK	$34.48	25840
				Total:	$34.48
23181	10/30/2024	BUCHANAN ACCESS SYSTEMS LL	BLUETOOTH VEHICLE PRESENCE DETECTOR	$877.00	45430

Check No.	Issue Date	Name	Description	Amt	GL Acct
				Total:	$877.00
23182	10/30/2024	C-A-L RANCH STORES	UNIFORM PURCHASE-JOSHUA SHELL	$59.99	45435
				Total:	$59.99
23183	10/30/2024	CCI SERVICE	SERVICE RTU-2	$450.00	45430
				Total:	$450.00
23184	10/30/2024	CHEMTECH-FORD	FLUORIDE (IC)	$25.00	25455
				Total:	$25.00
23185	10/30/2024	COMMERCIAL LIGHTING SUPP	LIGHT TOMBSTONES	$55.50	45430
	10/30/2024	COMMERCIAL LIGHTING SUPP	SHOP LIGHT BULBS	$259.00	45430
				Total:	$314.50
23186	10/30/2024	CRUS OIL INC	68 OIL	$360.70	45430
	10/30/2024	CRUS OIL INC	RETURN OF FUEL FILTER	($25.47)	45430
	10/30/2024	CRUS OIL INC	FILTERS	$29.30	45430
	10/30/2024	CRUS OIL INC	FUEL/WTR FILTER	$30.70	45430
				Total:	$395.23
23187	10/30/2024	CUMMINS SALES & SERVICE	GENERATOR TRANSFER SWITCH - PLYMOUTH VIEW	$2,397.76	58680
				Total:	$2,397.76
23188	10/30/2024	DANIEL R. McDOUGAL	UNIFORM REIMBURSEMENT- DAN MCDOUGAL	$58.96	45435
				Total:	$58.96
23189	10/30/2024	DIV ENVIRONMENTAL RESPONSE	2025 UST REG FEE ASSESSMENT	$260.00	25485
				Total:	$260.00
23190	10/30/2024	DOMINION ENERGY	DOMINION GAS #2648820000	$61.79	45425
				Total:	$61.79
23191	10/30/2024	DORA DOMINGUEZ	REIMBURSEMENT FOR EXAM TRAINING - BRIGHTON GRIMES	$400.00	45120
	10/30/2024	DORA DOMINGUEZ	UNIFORM ALLOWANCE - DORA DOMINGUEZ	$58.96	45435
				Total:	$458.96
23192	10/30/2024	FABIAN VANCOTT	PROFESSIONAL SERVICES	$420.00	45155
				Total:	$420.00
23193	10/30/2024	FERGUSON WATERWORKS #1616	1 1/2" Y'S	$266.00	25485
	10/30/2024	FERGUSON WATERWORKS #1616	3/4" SETTER	$278.95	25485
	10/30/2024	FERGUSON WATERWORKS #1616	3/4" SETTERS	$6,122.37	25485
	10/30/2024	FERGUSON WATERWORKS #1616	3/4" INSTATITES	$1,835.00	25485
	10/30/2024	FERGUSON WATERWORKS #1616	8" MACRO	$484.94	25485
	10/30/2024	FERGUSON WATERWORKS #1616	MACROS AND SLEEVES	$1,977.06	25485
	10/30/2024	FERGUSON WATERWORKS #1616	2" METER BOXES	$1,246.80	25485
	10/30/2024	FERGUSON WATERWORKS #1616	3/4" VALVES, INSTATITES	$4,743.90	25485
	10/30/2024	FERGUSON WATERWORKS #1616	BRASS FITTINGS	$1,835.00	25485
				Total:	$18,790.02
23194	10/30/2024	FILTER TECHNOLOGIES INC	AIR FILTER	$276.48	25606
				Total:	$276.48
23195	10/30/2024	GRANITE CONSTRUCTION CO	LOAD OF EZ STREET	$1,995.00	25485
				Total:	$1,995.00
23196	10/30/2024	HOME DEPOT CREDIT SERVICES	SOCKET SET, COUPLER	$81.62	45430

Check No.	Issue Date	Name	Description	Amt	GL Acct
23196	10/30/2024	HOME DEPOT CREDIT SERVICES	CARPET SPOT REMOVER	$8.98	45080
	10/30/2024	HOME DEPOT CREDIT SERVICES	DRAIN PIPE	$25.96	58080
	10/30/2024	HOME DEPOT CREDIT SERVICES	DRAIN PIPE	$39.64	58080
				Total:	$156.20
23197	10/30/2024	HOSE & RUBBER SUPPLY	TORPEDO FITTINGS	$70.20	25485
				Total:	$70.20
23198	10/30/2024	HYDRO SPECIALTIES CO	1 1/2" SETTERS	$6,766.52	25485
				Total:	$6,766.52
23199	10/30/2024	INTERMOUNTAIN FARMERS ASSO	ICE MELT	$539.23	45430
				Total:	$539.23
23200	10/30/2024	KILGORE CONTRACTING	APWA	$1,711.97	25485
				Total:	$1,711.97
23201	10/30/2024	LANCE FISHER	UNIFORM ALLOWANCE - LANCE FISHER	$21.44	45435
	10/30/2024	LANCE FISHER	UNIFORM ALLOWANCE - LANCE FISHER	$24.99	45435
				Total:	$46.43
23202	10/30/2024	METERWORKS	CELLULAR METERS	$743.33	58850
				Total:	$743.33
23203	10/30/2024	MONSEN ENGINEERING LLC	LEVELING ROD	$176.90	35470
				Total:	$176.90
23204	10/30/2024	MURRAY CITY CORP UTILITY BILL	POWER ACCT #44292-1052697 09/05/24-10/04/24	$64.75	25425
				Total:	$64.75
23205	10/30/2024	OPEN AIRE SCREEN PRINTING & E	UNIFORM PURCHASE - SPENCER MARTIN	$71.44	35435
	10/30/2024	OPEN AIRE SCREEN PRINTING & E	EMBROIDERY	$275.88	45435
				Total:	$347.32
23206	10/30/2024	OWEN EQUIPMENT COMPANY	WATER VACTOR PARTS	$2,230.47	25851
				Total:	$2,230.47
23207	10/30/2024	PARKLAND USA dba RHINEHART O	UNLEADED - WATER	$6,960.59	25280
	10/30/2024	PARKLAND USA dba RHINEHART O	MOTOR OIL	$983.60	45430
	10/30/2024	PARKLAND USA dba RHINEHART O	UNLEADED - SEWER	$4,640.40	35280
	10/30/2024	PARKLAND USA dba RHINEHART O	DIESEL - SEWER	$10,997.36	35285
	10/30/2024	PARKLAND USA dba RHINEHART O	UNLEADED - SEWER	$4,636.04	35280
	10/30/2024	PARKLAND USA dba RHINEHART O	UNLEADED - WATER	$6,954.03	25280
	10/30/2024	PARKLAND USA dba RHINEHART O	DIESEL - WATER	$16,496.03	25285
				Total:	$51,668.05
23208	10/30/2024	PEHP - HEALTH/DENTAL	EMPLOYEES HEALTH INSURANCE #1070	$64,478.34	12251
				Total:	$64,478.34
23209	10/30/2024	PEHP-LIFE & FSA	LIFE INS PREMIUMS-1070	$1,077.01	12251
				Total:	$1,077.01
23210	10/30/2024	PREFERRED PAVING INC	4700 S 1800 W	$3,320.00	25485
	10/30/2024	PREFERRED PAVING INC	4704 S CATHAY CIR	$3,169.00	25485
				Total:	$6,489.00
23211	10/30/2024	REVIZE LLC	LOGO DESIGN ALTERATIONS	$200.00	45526
				Total:	$200.00
23212	10/30/2024	ROCKY MOUNTAIN CARE CLINIC	CDL PHYSICAL EXAM/DON SMOKLA	$65.00	45110

Check No.	Issue Date	Name	Description	Amt	GL Acct
				Total:	$65.00
23213	10/30/2024	ROCKY MOUNTAIN POWER	POWER/UTILITIES	$18,519.29	35425
	10/30/2024	ROCKY MOUNTAIN POWER	POWER/UTILITIES	$13,889.48	45425
	10/30/2024	ROCKY MOUNTAIN POWER	POWER/UTILITIES	$430,573.59	25425
				Total:	$462,982.36
23214	10/30/2024	ROCKY MOUNTAIN WIRE ROPE &	CABLE FOR PULLING LINES	$206.08	25485
				Total:	$206.08
23215	10/30/2024	SMITH & EDWARDS CO OGDEN	UNIFORM PURCHASE - JAMES JUKES	$49.99	25435
	10/30/2024	SMITH & EDWARDS CO OGDEN	UNIFORM PURCHASE - SPENCER MARTIN	$79.98	35435
				Total:	$129.97
23216	10/30/2024	SPACKMAN ENTERPRISES ENVIR C	FUELING SYSTEM	$419,747.00	58080
				Total:	$419,747.00
23217	10/30/2024	STANDARD INSURANCE COMPAN	POLICY #166778 11/1/2024	$728.98	12252
				Total:	$728.98
23218	10/30/2024	STEPSAVER, INC	6480 LBS SALT/MILLRACE TREATMENT	$960.34	25510
				Total:	$960.34
23219	10/30/2024	UNITED RENTALS (NORTH AMERI	ROAD PLATE	$594.98	25485
	10/30/2024	UNITED RENTALS (NORTH AMERI	ROAD PLATE	$255.55	25485
				Total:	$850.53
23220	10/30/2024	UPS STORE	CAMERA TRACKER TO PEARPOINT/REPAIR	$120.14	35810
				Total:	$120.14
23221	10/30/2024	UTAH STATE TAX COMMISSION	STATE TAX WITHHOLDING ID # 11923560-003-WTH	$12,766.86	12225
				Total:	$12,766.86
23222	10/30/2024	VANGUARD CLEANING SYSTEMS	QUARTERLY SPRAY AND BUFF SERVICES	$350.00	45080
				Total:	$350.00
23223	10/30/2024	VERIZON	ACCOUNT #242465846-00001 09/11/24 TO 10/10/24	$871.72	45145
	10/30/2024	VERIZON	ACCOUNT #942295884-00001 09/11/24 TO 10/10/24	$1,786.92	45145
				Total:	$2,658.64
23224	10/30/2024	WINDRIVER INV L.C.	HAULING OFF SPOIL PILE	$240.00	25485
				Total:	$240.00
23225	10/30/2024	ZAYO GROUP LLC	TELEPHONE SERVICE - ACCT #707129 / 10-15-24 TO 11-14-24	$1,912.10	45145
				Total:	$1,912.10
23226	11/12/2024	ACE DISPOSAL INC	GARBAGE SERVICE #008557 11/01/24 TO 11/30/24	$140.93	45490
				Total:	$140.93
23227	11/12/2024	AFLAC	AFLAC PREMIUM/OCTOBER 2024	$667.12	12245
				Total:	$667.12
23228	11/12/2024	AIRGAS USA, LLC	HOSE COUPLERS	$4.49	45430
				Total:	$4.49
23229	11/12/2024	ALBRETSEN'S CONCRETE & CONS	CONCRETE REPAIR- 4390 S 2700 W ROXBOROUGH	$1,065.00	25485
				Total:	$1,065.00
23230	11/12/2024	ALL PIPE WORKS INC	CARBON STEEL SPOOLS	$4,830.00	58850
				Total:	$4,830.00
23231	11/12/2024	BLUE STAKES OF UTAH 811	BLUE STAKES	$677.00	45430

Check No.	Issue Date	Name	Description	Amt	GL Acct
				Total:	$677.00
23232	11/12/2024	C-A-L RANCH STORES	UNIFORM PURCHASE-JAMES JUKES	$25.00	35435
				Total:	$25.00
23233	11/12/2024	CCI SERVICE	SEMI-ANNUAL PREVENTIVE MAINTENANCE CONTRACT #C06226-05	$1,431.50	45430
				Total:	$1,431.50
23234	11/12/2024	CENTRAL VALLEY WATER REC	WATER SAMPLES (SUBDIVISION)	$1,008.00	25455
	11/12/2024	CENTRAL VALLEY WATER REC	FACILITY OPERATIONS	$200,071.34	35420
	11/12/2024	CENTRAL VALLEY WATER REC	PRETREATMENT WASTE SAMPLES	$1,125.00	35480
	11/12/2024	CENTRAL VALLEY WATER REC	LOAN PAYMENT	$136,806.93	35420
	11/12/2024	CENTRAL VALLEY WATER REC	MONTHLY CIP	$54,315.25	58875
	11/12/2024	CENTRAL VALLEY WATER REC	PRETREATMENT FIELD	$1,589.74	35055
	11/12/2024	CENTRAL VALLEY WATER REC	NET LAB COSTS	$8,397.16	35060
				Total:	$403,313.42
23235	11/12/2024	CHEMTECH-FORD	FLUORIDE (IC)	$25.00	25455
				Total:	$25.00
23236	11/12/2024	CITI CARDS	GENERAL MGR BREAKFAST MEETING W/ TRUSTEE RUSSELL	$34.57	45110
	11/12/2024	CITI CARDS	TBID ANNIVERSARY LUNCHEON DESSERT	$62.40	45110
	11/12/2024	CITI CARDS	STRATEGIC PLANNING MEETING - BREAKFAST	$40.58	45110
	11/12/2024	CITI CARDS	INVOICE #20887663 9/15/24	$3,850.79	45145
	11/12/2024	CITI CARDS	STRATEGIC PLANNING MEETING - LUNCH	$126.37	45110
	11/12/2024	CITI CARDS	CLOROX WIPES, LYSOL, DISH DETERGENT	$89.24	45430
	11/12/2024	CITI CARDS	FEBREZE	$19.98	45080
	11/12/2024	CITI CARDS	KITCHEN SUPPLIES, CHOCOLATE & NUTS, TUMS, ADVIL, FOIL SHEET LESNWIPES	$405.83	45110
	11/12/2024	CITI CARDS	SHORING TRAILER IDENTIFICATION DECALS	$842.16	45430
	11/12/2024	CITI CARDS	SAFETY MEETING REFRESHMENTS-RANDY'S CERTIFICATION	$58.50	45110
	11/12/2024	CITI CARDS	INTEREST	$184.14	45110
	11/12/2024	CITI CARDS	4611 SALEM CT/3963 DIMRALL	$370.00	25485
	11/12/2024	CITI CARDS	REGISTRATION-PROFESSIONAL DEVELOPMENT SERIES 10/15/24	$35.00	45120
	11/12/2024	CITI CARDS	WEFTEC 2024 CONF REGISTRATION - DON RUSSELL - NEW ORLEANS - 10/5/24 to 10/9/24	($270.00)	45120
	11/12/2024	CITI CARDS	TRI-DISTRICT MANAGERS MEETING	$52.04	45110
	11/12/2024	CITI CARDS	NOTARY RENEWAL	$95.00	45110
	11/12/2024	CITI CARDS	WEFTEC 2024 CONF- HOTEL - RON STOCK - NEW ORLEANS - 10/6/24 to 10/11/24	$1,577.90	45120
	11/12/2024	CITI CARDS	WEFTEC 2024 CONF- HOTEL PARKING - RON STOCK - NEW ORLEANS - 10/6/24 to 10/11/24	$58.47	45120
	11/12/2024	CITI CARDS	SAFETY MEETING REFRESHMENTS-ANTHONY'S PROMOTION	$58.50	45110
	11/12/2024	CITI CARDS	SAFETY MEETING REFRESHMENTS-ANTHONY'S PROMOTION	$8.19	45110
	11/12/2024	CITI CARDS	SAFETY MEETING REFRESHMENTS-RANDY'S CERTIFICATION	$7.40	45110
				Total:	$7,707.06
23237	11/12/2024	COMCAST	BUSINESS INTERNET ACCT #8495 44 301 1019988	$259.89	45145
				Total:	$259.89

Check No.	Issue Date	Name	Description	Amt	GL Acct
23238	11/12/2024	FERGUSON WATERWORKS #1616	SWR SDL, MEASURE WHL	$252.19	35470
	11/12/2024	FERGUSON WATERWORKS #1616	PARTS	$2,998.75	25485
	11/12/2024	FERGUSON WATERWORKS #1616	WRENCHES AND SLEEVES	$1,473.97	25485
				Total:	$4,724.91
23239	11/12/2024	FORD PRO	TRUCKS GPS - ACCOUNT #A00872482	$520.00	45220
				Total:	$520.00
23240	11/12/2024	HOSE & RUBBER SUPPLY	FEMALE PIPE FLANGE , BLACK PIPE BUSHING, CAMLOCK	$327.81	35470
				Total:	$327.81
23241	11/12/2024	JONES COMPLETE CAR CARE	#124 - OIL CHANGE, TIRE ROTATION	$98.40	25840
				Total:	$98.40
23242	11/12/2024	KILGORE CONTRACTING	1 LOAD ASPHALT - FOR REPAIRS	$158.60	25485
	11/12/2024	KILGORE CONTRACTING	1 LOAD ASPHALT - FOR REPAIRS	$232.20	25485
	11/12/2024	KILGORE CONTRACTING	1 LOAD ASPHALT - FOR REPAIRS	$98.40	25485
	11/12/2024	KILGORE CONTRACTING	1 LOAD ASPHALT - FOR REPAIRS	$236.93	25485
	11/12/2024	KILGORE CONTRACTING	TOP SOIL	$72.83	25485
	11/12/2024	KILGORE CONTRACTING	APWA	$189.00	25485
	11/12/2024	KILGORE CONTRACTING	4 LOADS APWA	$1,467.32	25485
				Total:	$2,455.28
23243	11/12/2024	LES OLSON CO.	MONTHLY AGREEMENT ON SHARP MX-4071	$92.33	45215
	11/12/2024	LES OLSON CO.	MONTHLY AGREEMENT ON SHARP MX-4070V	$249.35	45215
				Total:	$341.68
23244	11/12/2024	LOWE'S	STEEL YARD CART	$170.05	45430
	11/12/2024	LOWE'S	TOOLS	$49.36	45430
	11/12/2024	LOWE'S	MIXED FUEL	$97.26	45430
	11/12/2024	LOWE'S	BOARDS FOR UNIT #6	$25.04	25485
	11/12/2024	LOWE'S	INSULATION FOR WELLS	$135.84	25607
				Total:	$477.55
23245	11/12/2024	MALLORY SAFETY & SUPPLY LLC	TRAFFIC VESTS	$1,575.43	45430
				Total:	$1,575.43
23246	11/12/2024	METERWORKS	CELLULAR METERS	$3,948.91	58850
	11/12/2024	METERWORKS	FIRSTNET CELLULAR DATA PLAN ANNUAL SUBSCRIPTION	$6.32	45220
	11/12/2024	METERWORKS	CELLULAR METERS	$1,514.42	58850
	11/12/2024	METERWORKS	FIRSTNET CELLULAR DATA PLAN ANNUAL SUBSCRIPTION	$12.64	45220
	11/12/2024	METERWORKS	CELLULAR METERS	$10,575.30	58850
	11/12/2024	METERWORKS	CELLULAR METERS	$1,596.66	58850
	11/12/2024	METERWORKS	CELLULAR METERS	$1,029.04	58850
				Total:	$18,683.29
23247	11/12/2024	NORTHERN LAKE SERVICE INC	UCMR5 TESTING SE2	$840.00	25450
				Total:	$840.00
23248	11/12/2024	OLYMPUS INSURANCE AGENCY	NOTARY BOND - DORA DOMINGUEZ	$50.00	45110
				Total:	$50.00
23249	11/12/2024	QUADIENT FINANCE USA INC	POSTAGE - 7900 0440 8112 4996	$1,000.00	45130
				Total:	$1,000.00

Check No.	Issue Date	Name	Description	Amt	GL Acct
23250	11/12/2024	ROCKY MOUNTAIN CARE CLINIC	DOT 5 PANEL - TAGGERT ANDERSEN	$45.00	45110
	11/12/2024	ROCKY MOUNTAIN CARE CLINIC	DOT 5 PANEL - DON SMOLKA	$45.00	45110
				Total:	$90.00
23251	11/12/2024	STRANG LLC	HAULING OFF DIRT/FINLAYSON	$800.00	25485
				Total:	$800.00
23252	11/12/2024	SUPREME LUBE AND OIL	UNIT 111 - OIL CHANGE, TIRE ROTATION	$130.72	25840
				Total:	$130.72
23253	11/12/2024	SYNERGY GRAFIX	NEW OFFICE HOURS	$131.34	45430
				Total:	$131.34
23254	11/12/2024	TAMMY WEBSTER	UNIFORM ALLOWANCE REIMBURSEMENT-TAMMY WEBSTER	$58.96	45435
				Total:	$58.96
23255	11/12/2024	UPS STORE	TRACTOR BODY TO REPAIR	$120.95	35810
	11/12/2024	UPS STORE	SENDING TURBITY METER FOR REPAIR-HACH COMPANY	$116.19	45430
	11/12/2024	UPS STORE	CAMERA CONTROLLER TO PEARPOINT	$128.94	35810
				Total:	$366.08
23256	11/12/2024	VANGUARD CLEANING SYSTEMS	OFFICE CLEANING - NOVEMBER 2024	$765.00	45080
				Total:	$765.00
23257	11/12/2024	WESTAR SUPPLY INC	VARIOUS MANHOLE RISERS	$2,228.66	35470
				Total:	$2,228.66
23258	11/12/2024	WHEELER MACHINERY CO	BACKHOE BLADE BOLTS	$33.36	25815
				Total:	$33.36
23259	11/12/2024	WINDRIVER INV L.C.	HAULING OFF SPOIL PILE	$135.00	25485
				Total:	$135.00
23260	11/12/2024	ZIONS 1ST NATIONAL BANK	BOND PAYMENT	$120,000.00	11170
				Total:	$120,000.00
23261	11/14/2024	RUSSELL, DONALD G.	Payroll Check	$5,000.00	45010
				Total:	$5,000.00
23262	11/14/2024	SWENSEN, MATTHEW	Payroll Check	$5,000.00	45010
				Total:	$5,000.00
23263	11/14/2024	KLEINMAN, KELTON	Payroll Check	$5,000.00	45010
				Total:	$5,000.00
23264	11/14/2024	2011 WEST 4700 SOUTH LLC	CLOSED ACCOUNT REFUND-40352603	$192.83	11159
	11/14/2024	2011 WEST 4700 SOUTH LLC	CLOSED ACCOUNT REFUND-40352603	$1,124.38	11159
	11/14/2024	2011 WEST 4700 SOUTH LLC	CLOSED ACCOUNT REFUND-40352603	$267.96	11159
	11/14/2024	2011 WEST 4700 SOUTH LLC	CLOSED ACCOUNT REFUND-40352603	$444.84	11159
	11/14/2024	2011 WEST 4700 SOUTH LLC	CLOSED ACCOUNT REFUND-40352603	$312.54	11159
				Total:	$2,342.55
23265	11/14/2024	ALBINO-ORTIZ, RICARDO	CLOSED ACCOUNT REFUND-60116708	$14.28	11159
	11/14/2024	ALBINO-ORTIZ, RICARDO	CLOSED ACCOUNT REFUND-60116708	$19.65	11159
	11/14/2024	ALBINO-ORTIZ, RICARDO	CLOSED ACCOUNT REFUND-60116708	$5.41	11159
	11/14/2024	ALBINO-ORTIZ, RICARDO	CLOSED ACCOUNT REFUND-60116708	$9.65	11159
	11/14/2024	ALBINO-ORTIZ, RICARDO	CLOSED ACCOUNT REFUND-60116708	$18.05	11159
				Total:	$67.04

Check No.	Issue Date	Name	Description	Amt	GL Acct
23266	11/14/2024	ALLRED, BYRON LINCOLN	CLOSED ACCOUNT REFUND-60035301	$146.72	11159
				Total:	$146.72
23267	11/14/2024	BDQ HOLDINGS LLC	CLOSED ACCOUNT REFUND-50132701 / 3881 RIDGEVIEW WY	$87.00	11159
	11/14/2024	BDQ HOLDINGS LLC	CLOSED ACCOUNT REFUND-50132701 / 3881 RIDGEVIEW WY	$25.42	11159
	11/14/2024	BDQ HOLDINGS LLC	CLOSED ACCOUNT REFUND-50132701 / 3881 RIDGEVIEW WY	$21.73	11159
	11/14/2024	BDQ HOLDINGS LLC	CLOSED ACCOUNT REFUND-50132701 / 3881 RIDGEVIEW WY	$26.31	11159
	11/14/2024	BDQ HOLDINGS LLC	CLOSED ACCOUNT REFUND-50132701 / 3881 RIDGEVIEW WY	$15.85	11159
				Total:	$176.31
23268	11/14/2024	BERBER, DANIEL L	CLOSED ACCOUNT REFUND-40315201	$54.16	11159
				Total:	$54.16
23269	11/14/2024	BETTER BUSINESS BUREAU OF UT	CLOSED ACCOUNT REFUND-60844700 / 3703 W 6200 S	$143.97	11159
	11/14/2024	BETTER BUSINESS BUREAU OF UT	CLOSED ACCOUNT REFUND-60844700 / 3703 W 6200 S	$11.17	11159
				Total:	$155.14
23270	11/14/2024	BIRD, JEREK & BREANNA	CLOSED ACCOUNT REFUND-60107705	$60.29	11159
	11/14/2024	BIRD, JEREK & BREANNA	CLOSED ACCOUNT REFUND-60107705	$120.38	11159
	11/14/2024	BIRD, JEREK & BREANNA	CLOSED ACCOUNT REFUND-60107705	$131.32	11159
	11/14/2024	BIRD, JEREK & BREANNA	CLOSED ACCOUNT REFUND-60107705	$86.11	11159
	11/14/2024	BIRD, JEREK & BREANNA	CLOSED ACCOUNT REFUND-60107705	$110.60	11159
				Total:	$508.70
23271	11/14/2024	BORDELON, JORDAN C & WHITNE	CLOSED ACCOUNT REFUND-20131205	$126.73	11159
				Total:	$126.73
23272	11/14/2024	BOWEN, JUSTIN L & AUBREY	CLOSED ACCOUNT REFUND-60083501	$32.02	11159
	11/14/2024	BOWEN, JUSTIN L & AUBREY	CLOSED ACCOUNT REFUND-60083501	$51.83	11159
	11/14/2024	BOWEN, JUSTIN L & AUBREY	CLOSED ACCOUNT REFUND-60083501	$18.80	11159
	11/14/2024	BOWEN, JUSTIN L & AUBREY	CLOSED ACCOUNT REFUND-60083501	$34.60	11159
	11/14/2024	BOWEN, JUSTIN L & AUBREY	CLOSED ACCOUNT REFUND-60083501	$15.55	11159
				Total:	$152.80
23273	11/14/2024	COLLINS, CHANDLER JAMES	CLOSED ACCOUNT REFUND-60482711	$57.82	11159
	11/14/2024	COLLINS, CHANDLER JAMES	CLOSED ACCOUNT REFUND-60482711	$37.83	11159
	11/14/2024	COLLINS, CHANDLER JAMES	CLOSED ACCOUNT REFUND-60482711	$29.51	11159
	11/14/2024	COLLINS, CHANDLER JAMES	CLOSED ACCOUNT REFUND-60482711	$33.35	11159
	11/14/2024	COLLINS, CHANDLER JAMES	CLOSED ACCOUNT REFUND-60482711	$38.35	11159
				Total:	$196.86
23274	11/14/2024	DENIRO, MICHAEL	CLOSED ACCOUNT REFUND-40320506	$138.22	11159
				Total:	$138.22
23275	11/14/2024	FIELD, MARCI	CLOSED ACCOUNT REFUND-60007904	$91.09	11159
				Total:	$91.09
23276	11/14/2024	GOLDING, GERALD	CLOSED ACCOUNT REFUND-10064502	$19.90	11159
	11/14/2024	GOLDING, GERALD	CLOSED ACCOUNT REFUND-10064502	$3.26	11159
	11/14/2024	GOLDING, GERALD	CLOSED ACCOUNT REFUND-10064502	$1.67	11159
	11/14/2024	GOLDING, GERALD	CLOSED ACCOUNT REFUND-10064502	$2.30	11159

Check No.	Issue Date	Name	Description	Amt	GL Acct
				Total:	$27.13
23277	11/14/2024	GRAHAM, CHRISTINE M	CLOSED ACCOUNT REFUND-20173604	$69.00	11159
				Total:	$69.00
23278	11/14/2024	GRANGE FAMILY TRUST, THE	CLOSED ACCOUNT REFUND-60144101	$92.18	11159
				Total:	$92.18
23279	11/14/2024	HANCOCK-TRUSTEE, MICHAEL D	CLOSED ACCOUNT REFUND-10026500	$50.88	11159
	11/14/2024	HANCOCK-TRUSTEE, MICHAEL D	CLOSED ACCOUNT REFUND-10026500	$11.36	11159
	11/14/2024	HANCOCK-TRUSTEE, MICHAEL D	CLOSED ACCOUNT REFUND-10026500	$13.26	11159
	11/14/2024	HANCOCK-TRUSTEE, MICHAEL D	CLOSED ACCOUNT REFUND-10026500	$13.16	11159
	11/14/2024	HANCOCK-TRUSTEE, MICHAEL D	CLOSED ACCOUNT REFUND-10026500	$2.87	11159
				Total:	$91.53
23280	11/14/2024	HAY LIVING TRUST, BOYD L & KA	CLOSED ACCOUNT REFUND-50165900	$2.79	11159
	11/14/2024	HAY LIVING TRUST, BOYD L & KA	CLOSED ACCOUNT REFUND-50165900	$6.30	11159
	11/14/2024	HAY LIVING TRUST, BOYD L & KA	CLOSED ACCOUNT REFUND-50165900	$7.58	11159
	11/14/2024	HAY LIVING TRUST, BOYD L & KA	CLOSED ACCOUNT REFUND-50165900	$0.12	11159
				Total:	$16.79
23281	11/14/2024	HENRIQUEZ, JORGE & MARIA ELIZ	CLOSED ACCOUNT REFUND-20065901	$13.02	11159
	11/14/2024	HENRIQUEZ, JORGE & MARIA ELIZ	CLOSED ACCOUNT REFUND-20065901	$22.72	11159
	11/14/2024	HENRIQUEZ, JORGE & MARIA ELIZ	CLOSED ACCOUNT REFUND-20065901	$61.40	11159
	11/14/2024	HENRIQUEZ, JORGE & MARIA ELIZ	CLOSED ACCOUNT REFUND-20065901	$21.10	11159
	11/14/2024	HENRIQUEZ, JORGE & MARIA ELIZ	CLOSED ACCOUNT REFUND-20065901	$34.62	11159
				Total:	$152.86
23282	11/14/2024	HOANG, LIEM & MAI	CLOSED ACCOUNT REFUND-20174700	$18.83	11159
	11/14/2024	HOANG, LIEM & MAI	CLOSED ACCOUNT REFUND-20174700	$69.55	11159
	11/14/2024	HOANG, LIEM & MAI	CLOSED ACCOUNT REFUND-20174700	$13.77	11159
	11/14/2024	HOANG, LIEM & MAI	CLOSED ACCOUNT REFUND-20174700	$10.57	11159
	11/14/2024	HOANG, LIEM & MAI	CLOSED ACCOUNT REFUND-20174700	$17.48	11159
				Total:	$130.20
23283	11/14/2024	HOOK c/o TRUSTEE'S , RYAN E	CLOSED ACCOUNT REFUND-60702101	$173.13	11159
				Total:	$173.13
23284	11/14/2024	INSIGNIA PROPERTY FUND LLC	CLOSED ACCOUNT REFUND-60658504 / 6329 FAIRWIND DR	$5.03	11159
	11/14/2024	INSIGNIA PROPERTY FUND LLC	CLOSED ACCOUNT REFUND-60658504 / 6329 FAIRWIND DR	$29.33	11159
	11/14/2024	INSIGNIA PROPERTY FUND LLC	CLOSED ACCOUNT REFUND-60658504 / 6329 FAIRWIND DR	$4.56	11159
	11/14/2024	INSIGNIA PROPERTY FUND LLC	CLOSED ACCOUNT REFUND-60658504 / 6329 FAIRWIND DR	$5.11	11159
				Total:	$44.03
23285	11/14/2024	JASPER, TODD & ROSITA	CLOSED ACCOUNT REFUND-10415402	$84.40	11159
				Total:	$84.40
23286	11/14/2024	JAUSSI, JOHN	CLOSED ACCOUNT REFUND-40230699	$14.11	11159
				Total:	$14.11
23287	11/14/2024	JENSEN FAMILY TRUST, THE	CLOSED ACCOUNT REFUND-60048500	$71.82	11159
				Total:	$71.82
23288	11/14/2024	JOHNSON TRUST, BRIG E	CLOSED ACCOUNT REFUND-60092602	$61.31	11159

Check No.	Issue Date	Name	Description	Amt	GL Acct
				Total:	$61.31
23289	11/14/2024	JUCO, SANDRA OKOSHI & CRISTIN	CLOSED ACCOUNT REFUND-20017003	$100.23	11159
				Total:	$100.23
23290	11/14/2024	KINROSS, KATHRYN	CLOSED ACCOUNT REFUND-60387200	$252.80	11159
				Total:	$252.80
23291	11/14/2024	LING, KONG L	CLOSED ACCOUNT REFUND-50351401	$239.31	11159
				Total:	$239.31
23292	11/14/2024	MARTINEZ PENA, JESUS GIOVANI	CLOSED ACCOUNT REFUND-60772805	$163.19	11159
				Total:	$163.19
23293	11/14/2024	MEDRANO, BENJAMIN	CLOSED ACCOUNT REFUND-10157801	$18.78	11159
	11/14/2024	MEDRANO, BENJAMIN	CLOSED ACCOUNT REFUND-10157801	$24.74	11159
	11/14/2024	MEDRANO, BENJAMIN	CLOSED ACCOUNT REFUND-10157801	$31.37	11159
	11/14/2024	MEDRANO, BENJAMIN	CLOSED ACCOUNT REFUND-10157801	$2.29	11159
	11/14/2024	MEDRANO, BENJAMIN	CLOSED ACCOUNT REFUND-10157801	$26.55	11159
	11/14/2024	MEDRANO, BENJAMIN	CLOSED ACCOUNT REFUND-10157801	$15.52	11159
				Total:	$119.25
23294	11/14/2024	MH TRUST	CLOSED ACCOUNT REFUND-60206000	$18.58	11159
	11/14/2024	MH TRUST	CLOSED ACCOUNT REFUND-60206000	$21.49	11159
	11/14/2024	MH TRUST	CLOSED ACCOUNT REFUND-60206000	$10.30	11159
	11/14/2024	MH TRUST	CLOSED ACCOUNT REFUND-60206000	$18.94	11159
	11/14/2024	MH TRUST	CLOSED ACCOUNT REFUND-60206000	$6.27	11159
				Total:	$75.58
23295	11/14/2024	MOORMAN, DAVE	CLOSED ACCOUNT REFUND-50202804	$122.12	11159
				Total:	$122.12
23296	11/14/2024	NELSON, SUSAN C	CLOSED ACCOUNT REFUND-60205300	$23.26	11159
	11/14/2024	NELSON, SUSAN C	CLOSED ACCOUNT REFUND-60205300	$11.17	11159
	11/14/2024	NELSON, SUSAN C	CLOSED ACCOUNT REFUND-60205300	$21.26	11159
	11/14/2024	NELSON, SUSAN C	CLOSED ACCOUNT REFUND-60205300	$4.82	11159
				Total:	$60.51
23297	11/14/2024	O'LEARY, CALEB	CLOSED ACCOUNT REFUND-10354609	$24.47	11159
	11/14/2024	O'LEARY, CALEB	CLOSED ACCOUNT REFUND-10354609	$143.40	11159
	11/14/2024	O'LEARY, CALEB	CLOSED ACCOUNT REFUND-10354609	$22.25	11159
	11/14/2024	O'LEARY, CALEB	CLOSED ACCOUNT REFUND-10354609	$27.08	11159
	11/14/2024	O'LEARY, CALEB	CLOSED ACCOUNT REFUND-10354609	$24.14	11159
				Total:	$241.34
23298	11/14/2024	OPENDOOR LABS INC	CLOSED ACCOUNT REFUND-60029502 / 6123 DON CARLOS D	$20.65	11159
	11/14/2024	OPENDOOR LABS INC	CLOSED ACCOUNT REFUND-60029502 / 6123 DON CARLOS D	$17.39	11159
	11/14/2024	OPENDOOR LABS INC	CLOSED ACCOUNT REFUND-60029502 / 6123 DON CARLOS D	$693.96	11159
	11/14/2024	OPENDOOR LABS INC	CLOSED ACCOUNT REFUND-60029502 / 6123 DON CARLOS D	$17.16	11159
	11/14/2024	OPENDOOR LABS INC	CLOSED ACCOUNT REFUND-60029502 / 6123 DON CARLOS D	$15.53	11159
				Total:	$764.69
23299	11/14/2024	OPENDOOR PROPERTY LLC	CLOSED ACCOUNT REFUND-60777903/4530 W 620 S	$22.29	11159

Check No.	Issue Date	Name	Description	Amt	GL Acct
23299	11/14/2024	OPENDOOR PROPERTY LLC	CLOSED ACCOUNT REFUND-60777903/4530 W 620 S	$7.90	11159
	11/14/2024	OPENDOOR PROPERTY LLC	CLOSED ACCOUNT REFUND-60777903/4530 W 620 S	$8.86	11159
	11/14/2024	OPENDOOR PROPERTY LLC	CLOSED ACCOUNT REFUND-60777903/4530 W 620 S	$10.51	11159
	11/14/2024	OPENDOOR PROPERTY LLC	CLOSED ACCOUNT REFUND-60777903/4530 W 620 S	$54.66	11159
	11/14/2024	OPENDOOR PROPERTY LLC	CLOSED ACCOUNT REFUND-60777903/4530 W 620 S	$8.73	11159
				Total:	$112.95
23300	11/14/2024	PARKER, MARK B	CLOSED ACCOUNT REFUND-10212700	$11.26	11159
	11/14/2024	PARKER, MARK B	CLOSED ACCOUNT REFUND-10212700	$25.97	11159
	11/14/2024	PARKER, MARK B	CLOSED ACCOUNT REFUND-10212700	$31.71	11159
	11/14/2024	PARKER, MARK B	CLOSED ACCOUNT REFUND-10212700	$23.50	11159
	11/14/2024	PARKER, MARK B	CLOSED ACCOUNT REFUND-10212700	$75.82	11159
				Total:	$168.26
23301	11/14/2024	PEARSON, BRETT J & FRANCIE N	CLOSED ACCOUNT REFUND-40281402	$49.51	11159
	11/14/2024	PEARSON, BRETT J & FRANCIE N	CLOSED ACCOUNT REFUND-40281402	$17.51	11159
	11/14/2024	PEARSON, BRETT J & FRANCIE N	CLOSED ACCOUNT REFUND-40281402	$32.48	11159
	11/14/2024	PEARSON, BRETT J & FRANCIE N	CLOSED ACCOUNT REFUND-40281402	$32.97	11159
	11/14/2024	PEARSON, BRETT J & FRANCIE N	CLOSED ACCOUNT REFUND-40281402	$30.03	11159
				Total:	$162.50
23302	11/14/2024	ROMERO FAMILY TRUST, CASSOL	CLOSED ACCOUNT REFUND-10265403	$119.19	11159
				Total:	$119.19
23303	11/14/2024	RYAN RLT, BERNARD N RYAN JR	CLOSED ACCOUNT REFUND-40332500	$106.97	11159
				Total:	$106.97
23304	11/14/2024	TILTON LIVING TRUST, JUDY K	CLOSED ACCOUNT REFUND-50195500	$76.80	11159
				Total:	$76.80
23305	11/14/2024	TPP 217 TAYLORSVILLE LLC / SOU	CLOSED ACCOUNT REFUND-60823699	$589.72	11159
	11/14/2024	TPP 217 TAYLORSVILLE LLC / SOU	CLOSED ACCOUNT REFUND-60823699	$520.00	11159
	11/14/2024	TPP 217 TAYLORSVILLE LLC / SOU	CLOSED ACCOUNT REFUND-60823699	$40.44	11159
	11/14/2024	TPP 217 TAYLORSVILLE LLC / SOU	CLOSED ACCOUNT REFUND-60823699	$560.56	11159
	11/14/2024	TPP 217 TAYLORSVILLE LLC / SOU	CLOSED ACCOUNT REFUND-60823699	$1.90	11159
				Total:	$1,712.62
23306	11/14/2024	TRAN REVOCABLE TRUST	CLOSED ACCOUNT REFUND-10143700	$112.98	11159
				Total:	$112.98
23307	11/14/2024	TRAN REVOCABLE TRUST	CLOSED ACCOUNT REFUND-50341301	$484.90	11159
				Total:	$484.90
23308	11/14/2024	WARBURTON, WILLIAM R	CLOSED ACCOUNT REFUND-40022405	$90.12	11159
				Total:	$90.12
23309	11/14/2024	WARD, ARLEN G	CLOSED ACCOUNT REFUND-60708900	$179.92	11159
				Total:	$179.92
23310	11/14/2024	WHITE, M SCOTT & DARCY	CLOSED ACCOUNT REFUND-10110301	$0.44	11159
	11/14/2024	WHITE, M SCOTT & DARCY	CLOSED ACCOUNT REFUND-10110301	$6.82	11159
	11/14/2024	WHITE, M SCOTT & DARCY	CLOSED ACCOUNT REFUND-10110301	$15.32	11159
	11/14/2024	WHITE, M SCOTT & DARCY	CLOSED ACCOUNT REFUND-10110301	$5.75	11159

Check No.	Issue Date	Name	Description	Amt	GL Acct
				Total:	$28.33
23311	11/14/2024	YEATES, ROBERT E	CLOSED ACCOUNT REFUND-60641903	$117.46	11159
				Total:	$117.46
				Report Total:	$2,151,870.36

Electronic Fund Transfers

Taylorsville-Bennion Improvement District
Summary of Electronic Fund Transfers
October, 2024

Payroll Summary

	Current Month Actual	*Current Month Budget*	*Variance*	*% Variance*
Total	**$ 276,430.40**	**$ 288,500.00**	**$ (12,069.60)**	**-4.18%**

	Year to Date Amount	*Year to Date Budget*	*Variance*	*% Variance*
Total	**$ 2,754,097.74**	**$ 2,885,000.00**	**$ (130,902.26)**	**-4.54%**

Department	*# of Employees*	*Regular Hours*	*Overtime Hours*
Administration	5	866.70	
Office	9	1,560.06	
Maintenance	21	3,640.14	86.50
Total	**35**	**6,066.90**	**86.50**

Other Electronic Payments

	Direct Deposit	*Date Paid*
Payroll 1	$ 100,648.79	10/15/2024
Payroll 2	$ 100,282.15	10/31/2024
Total	$ 200,930.94	

	IRS - Payroll Taxes	*Date Paid*
Payroll 1	$ 36,200.17	10/15/2024
Payroll 2	$ 35,672.07	10/31/2024
Total	$ 71,872.24	

	URS - Retirement	*Date Paid*
Payroll 1	$ 32,600.78	10/15/2024
Payroll 2	$ 32,764.56	10/31/2024
Total	$ 65,365.34	

New Logo

Current Logo

Resolution of the Board of Trustees

RESOLUTION # 24-13

RELIGIOUS ACCOMMODATION POLICY

IT IS HEREBY RESOLVED by the Board to adopt the following policy as follows:

General Policy:
This policy ensures the District complies with Title VII of the Civil Rights Act of 1964 and Utah Code § 67-27-106, protecting employees' rights to religious accommodation without discrimination. The District will not discriminate based on religious beliefs or practices and will, on request, provide reasonable accommodations unless it causes undue hardship to the District. Other exceptions to the law may apply including times where the tasks relate to training, safety, or legal obligations.

An employee's good faith request to be relieved from performing a task that would conflict with the employee's sincerely held religious beliefs or conscience will generally be considered, provided that the employee complies with the requirements of state and/or federal law, as applicable, and this Policy, but the District has no responsibility to accommodate an employee's mere personal preference and the law does not protect beliefs merely because they are strongly held. Furthermore, social, political, or economic philosophies may not qualify as religious beliefs and practices.

If the District has a bona fide doubt about the basis for the accommodation request, it is entitled to make a limited inquiry into the facts and circumstances of the employee's claim that the belief or practice at issue is religious and/or based on conscience and is sincerely held and gives rise to a need for the requested accommodation.

This policy is intended to complement, not replace applicable law. The District and employees are encouraged to refer to the law when questions arise as to specific application of this policy.

Requesting Accommodation:
Employees should notify their supervisor of the request for accommodation. Informal requests can be resolved directly with supervisors. The supervisor may ask the employee to submit a written request on the Religious/Conscience Accommodation Request Form which can be obtained from Human Resources, or the employee may choose to fill out the form at the outset

if they prefer. Supervisors will evaluate requests, considering the nature of the work and potential hardships. Meetings may be held to discuss and implement accommodations. Unless otherwise agreed, the District shall respond to an accommodation request as soon as practicable, but at least one week from the date of the request. If an accommodation proposed by the employee is burdensome, alternative solutions will be explored.

Undue Hardship:
Whether an accommodation would constitute an undue hardship is to be determined on a case-by-case basis, and in consultation with relevant law and legal cases if necessary. Factors may include, but are not limited to, cost, disruption, and impact on operations. Accommodations must not violate laws, compromise safety, or infringe on others' rights. Employees must be able to perform the essential functions of the job, either with or without a reasonable accommodation, and an accommodation will be considered unduly burdensome if it results in the employee being unable to perform the essential functions of the job.

No Retaliation and Right to Appeal:
No retaliation will be taken against employees for requesting accommodation. An employee who disagrees with the resolution of the accommodation request may ask the General Manager/CEO to reconsider that decision within 2 business days after receiving the District's official decision, and may appeal the decision as a grievance in accordance with the District's Policies and Procedures that govern employee conduct. **Once the employee has exhausted the internal process, including a formal grievance, allowing the District to address the employee's concerns, the employee may seek redress by filing an action against the District in Utah District Court, but requesting a reconsideration or pursuing a grievance appeal does not extend the time limit for initiating a legal action under Utah Code § 67-27-105(6), which is 180 calendar days after receipt of the District's response to the employee's Religious/Conscience Accommodation submittal.**

PASSED, APPROVED AND ADOPTED this 20th day of Nov., 2024.

Don Russell, Board Chair

Mark Chalk, District Clerk

MEMORANDUM OF UNDERSTANDING

This Memorandum of Understanding ("MOU") is entered into with an effective date of _____ ___, 2024 ("Effective Date") by and between Central Valley Water Reclamation Facility ("CVWRF"), a Utah Interlocal Entity, and Taylorsville-Bennion Improvement District, a governmental entity ("Member") to document the parties' understanding regarding their respective ownership and maintenance responsibilities.

RECITALS

WHEREAS, Member owns, operates, and maintains a system for the collection and conveyance of wastewater, which includes Member-owned pipelines, pump stations, structures, and other facilities ("Collection System"); and

WHEREAS, CVWRF owns, operates, and maintains wastewater treatment facilities, including interceptor lines, vaults, siphons, flow meter stations, and related structures and appurtenances for centralized treatment of wastewater ("CVWRF Facilities"); and

WHEREAS, CVWRF and Member are each a party to the Central Valley Reclamation Facility Amended and Restated Interlocal Agreement entered into and deemed effective January 1, 2017, as amended ("Interlocal Agreement"); and

WHEREAS, pursuant to the Interlocal Agreement, each Member Entity, (as that term is defined in the Interlocal Agreement), is responsible for operating and maintaining its own Collection System, and CVWRF is responsible for operating the CVWRF Facilities; and

WHEREAS, the parties desire to record their intentions as to the points of interconnection between Member's Collection System and CVWRF's Facilities, and to outline their mutual understanding regarding ownership and maintenance responsibilities.

AGREEMENT

NOW, THEREFORE, the parties express their mutual understanding as follows:

1. **Point of Connection**. The "Point of Connection" is defined as the outside edge of Member's Collection System facilities where it physically connects to the CVWRF Facilities. Attached hereto and incorporated by reference into this MOU is Exhibit A, which provides detailed descriptions and locations of the Points of Connection that are in existence or are known as of the date of this MOU. The parties acknowledge and agree that Member owns the facilities on one side of the Point of Connection and CVWRF owns the facilities on the opposite side of the Point of Connection as depicted in Exhibit A. Notwithstanding the foregoing, for "Integrated Facilities," as defined in Paragraph 3, the Point of Connection is not the point where Member's pipe enters a CVWRF structure, but rather the outside edge of Member's Collection System where it physically connects to CVWRF's interceptor lines, as depicted in Exhibit A.

2. **Maintenance Responsibilities**. Except as provided in Paragraph 3, the parties acknowledge and agree that Member is responsible for all maintenance, repair, and

operation of the Collection System, including blue-staking the Collection System, and CVWRF is responsible for all maintenance, repair, and operation of the CVWRF Facilities, including blue-staking the CVWRF Facilities.

3. **Integrated Facilities**. It is understood that in certain instances, pipelines or components of the Collection System owned by Member may run through or within structures that are part of the CVWRF Facilities ("Integrated Facilities"). In these situations, notwithstanding the location of the components of the Collection System being located within CVWRF Facilities structures, Member shall retain responsibility for cleaning and maintaining such components of the Collection System as noted in Exhibit A, including maintaining the integrity of any pipeline lining.

4. **Pipeline Affected by Structure Replacement**. For Integrated Facilities, in the event CVWRF replaces or significantly alters a CVWRF Facilities structure through which any components of Member's Collection System run, resulting in the need to remove or replace such component of the Collection System, the following shall apply:

    a. CVWRF shall be responsible for the cost of replacing the impacted section of Member's Collection System as part of the structure's replacement or alteration.

    b. The replacement of the impacted portion of the Collection System will be done in a manner that is in conformance with Member's specifications and standards. Member shall have the right to inspect all construction pertaining to the impacted portion of the Collection System being replaced. Upon completion of construction, Member shall provide written approval of the new components of the impacted portion of the Collection System as a condition of Member accepting ownership of the same.

    c. Upon completion of such replacement, Member will own the newly installed portion of the Collection System, and Member will assume all responsibility for maintenance, repair, and operation of the replaced segment as provided in this MOU.

5. **Notification and Coordination**. CVWRF agrees to provide Member reasonable advance notice of construction, replacement, or significant alteration of CVWRF Facility structures with Integrated Facilities that could impact portions of Member's Collection System. Both parties commit to coordinating their efforts to minimize disruption.

6. **Term and Termination**. This MOU may be terminated by either party in such party's sole discretion by giving thirty days advance notice to the other party. This MOU will automatically terminate upon termination or expiration of the Interlocal Agreement.

7. **Modification of Exhibit.** Exhibit A to this MOU may be updated from time to time as any new Point of Connection is created, or an existing Point of Connection is modified by executing an amendment to this MOU, the form of which is attached hereto at Exhibit B.

8. **Interlocal Agreement not Modified**. This MOU is not intended to and does not amend, interpret, provide a course of dealing between the parties, or otherwise modify the Interlocal Agreement. In the event of a conflict between the Interlocal Agreement and this MOU, the Interlocal Agreement will prevail.

9. **Counterparts**. This MOU may be executed in one or more counterparts, each of which shall be deemed an original, but such counterparts, when taken together, shall constitute one agreement. The parties may sign and transmit electronic signatures to this MOU via electronic mail (whether by .pdf or other similar electronic or digital means).

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, this MOU has been executed as of the dates below written to be effective as of the Effective Date.

CVWRF:

CENTRAL VALLEY WATER RECLAMATION FACILITY, a Utah Interlocal Entity

Date:

By:_____
Name: Debra Armstrong
Title: Board Chair

By:_____
Name: Phillip Heck, Ph.D., P.E.
Title: General Manager

Member:

TAYLORSVILLE-BENNION IMPROVEMENT DISTRICT, a governmental entity

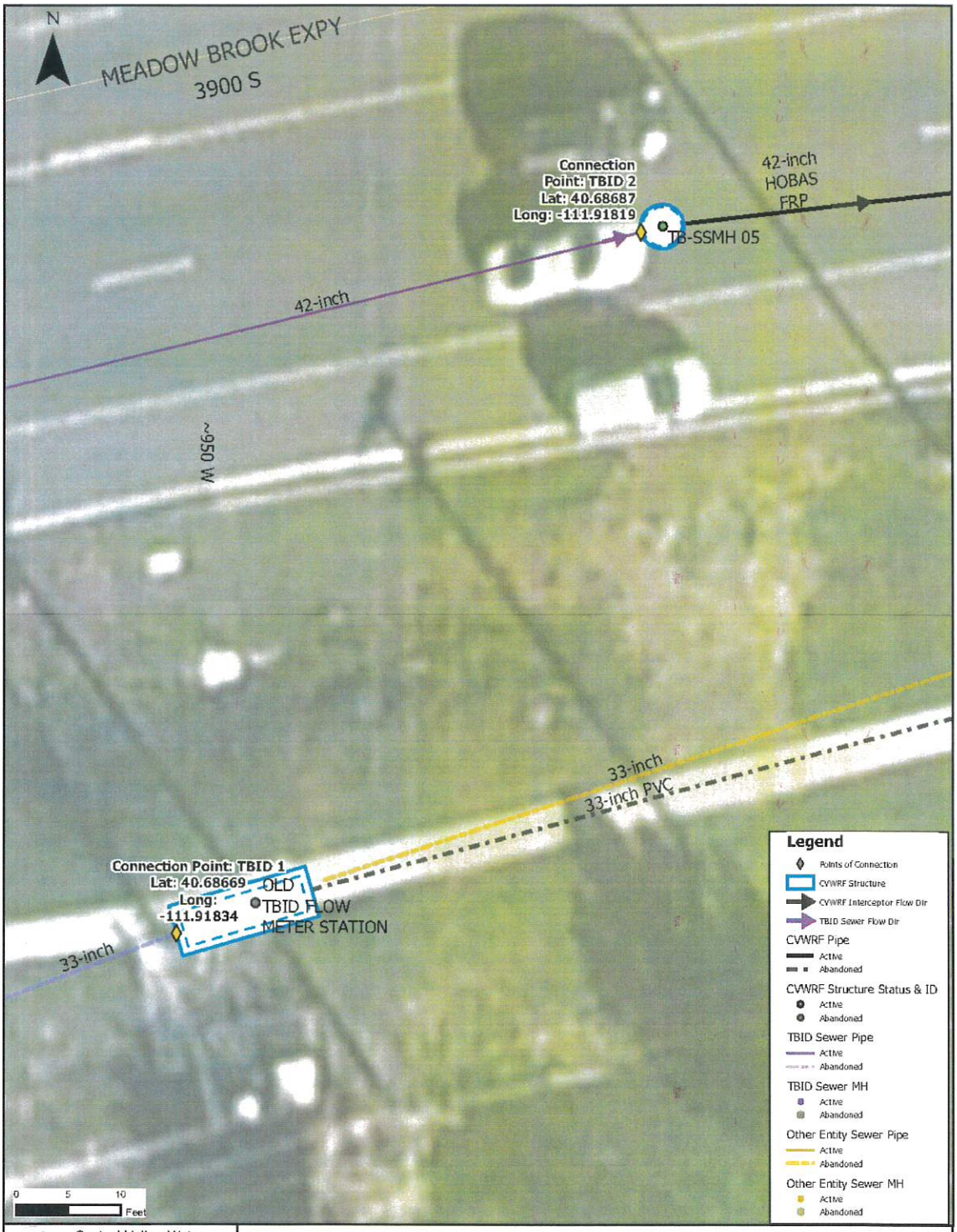
Date: 11/20/24

By: Donald G Russell
Name: Donald G Russell
Title: Board Chair

Exhibit A to MOU
Points of Connection

Points of Connection Summary for CVWRF and TBID

Applicable Figure	Connection Point #	CVWRF Structure (CVWRF ID)	Boundary Description	Responsibility for Structure	Size (Host Pipe) of Entity Pipe Connected to CV Structure or Pipe	Approx. Address	Lat, Long (WGS 1984)
TBID Figure	TBID 1	OLD TBID Flow Meter Station	West outside face of OLD TBID FLOW METER STATION vault where abandoned 33" TBID pipe connects.	CVWRF	33"	950 W 3900 S (south side of road)	40.68669, -111.91834
TBID Figure	TBID 2	TB-SSMH 05	West outside edge of manhole TB-SSMH 05 where 42" TBID pipe connects.	CVWRF	42"	940 W 3900 S (south lanes near shoulder)	40.68687, -111.91819



Central Valley Water Reclamation Facility

TBID Figure

Date Exported: 6/10/2024 1:10 PM by bryanm

Exhibit B to MOU
Form of Amendment to MOU

FIRST AMENDMENT

TO

MEMORANDUM OF UNDERSTANDING

This First Amendment to Memorandum of Understanding ("**Amendment**") is made and entered into as of _____ ____, 2024 (the "Effective Date"), by and between Central Valley Water Reclamation Facility ("CVWRF"), a Utah Interlocal Entity, and Taylorsville-Bennion Improvement District, a governmental entity ("Member").

RECITALS

WHEREAS, CVWRF and Member are parties to that certain Memorandum of Understanding dated _____ ___, 2024 (the "**MOU**"); and

Whereas, the parties desire to amend the MOU to provide for a new Exhibit A to reflect updates to the Points of Connection.

AGREEMENT

NOW, THEREFORE, in consideration of the mutual covenants and agreements contained herein, the parties undertake and agree as follows:

1. Exhibit A to the MOU shall be deleted in its entirety and replaced with the Exhibit "A" attached to this Amendment.

2. **Effect of Amendment.** Capitalized terms that are not defined in this Amendment have the same definitions as used in the MOU. The terms and conditions of the MOU, other than those expressly amended herein, remain in full force and effect.

3. **Counterparts**. The parties may execute this Amendment in any number of counterparts, each of which when executed and delivered will constitute a duplicate original, but all counterparts together, and together with the MOU, will constitute a single agreement.

IN WITNESS WHEREOF, this Amendment has been executed as of the Effective Date.

[SIGNATURE PAGE FOLLOWS]

CVWRF:

CENTRAL VALLEY WATER RECLAMATION FACILITY, a Utah Interlocal Entity

Date:

By:_____
Name: Phillip Heck, Ph.D., P.E.
Title: General Manager

Member:

TAYLORSVILLE-BENNION IMPROVEMENT DISTRICT, a governmental entity

Date:

By: Donald G. Russell
Name: Donald G. Russell
Title: Board Chair

Exhibit A to Amendment

Professional Engineering Consulting Services Pool

Requests for qualifications (RFQ's) were received for engineering consulting services on November 5, 2024. The intent of the RFQ is to select up to 3 firms to enter into contract with the District to perform design and other professional services on selected projects for the next 5 years. (For projects with a fee greater than $200,000 or for projects that are considered specialized, a separate procurement process will occur.)

The eight (8) firms who submitted proposals were:

- AE2S
- Aqua Engineering
- Bowen Collins and Associates
- Hansen Allen Luce
- Horrocks
- Jones and DeMille
- JUB
- Psomas

Mark Chalk, Bruce Hicken, and Tammy North reviewed the proposals. After review, the selection committee scored the firms based on things such as experience, work history, references past projects, key personnel, expertise and qualifications. Based on the scoring of the selection committee, the top three firms were:

- Bowen Collins and Associates
- Horrocks Engineers
- Jones and DeMille

It is recommended that the District enter into contracts with the top 3 firms for engineering consultant services.

2024 Standard Details and Specifications Update

November 20, 2024

An update to the District's Standard Details and Specifications has been completed in an effort to provide the most consistent and reliable infrastructure possible. The standard details and specifications are reviewed every year to make sure that they are still applicable to the work that is being done. This update includes modifications to existing details at the request of the inspector, water and sewer supervisors, operations, and water quality department. We believe these changes will provide clarity and reduce confusion between contractors and the District as well as allow for parts that are more readily available.

The following are some of the more significant changes made to the Standard Details:

- Changes to the 1-1/2" and 2" water lateral connections to eliminate a connector part that has not been readily available. Water crews will not be tapping larger holes to accommodate this change.
- Eliminating Valve Box Extensions and District specific pipe stand/jack.
- Separating larger meter standards to show more detail- updates and changes based on the new meter installation project (new meters, eliminate strainers, change boxes, etc)
- Misc. clarifications and additional details (allow for traffic rated meter boxes on a case by case basis in traffic areas, meter location and relocations requirements, etc.)

The following changes were made to the Standard Specifications:

1. Modifications to support all the changes in the Standard Detail updates
2. Cleanup of outdated references and other clarifications
3. Changes to allowable suppliers and parts (for example AC connections, wax tape, double-seated butterfly valves, split- sleeve tapping tees)

Upon approval from the Board, these new Standard Details and Specifications will be added the website for easy access by builders, engineers, and contractors.

STANDARD DETAILS

NOVEMBER 2024

TAYLORSVILLE-BENNION IMPROVEMENT DISTRICT

WATER DETAILS

STANDARD WATER DETAILS		
TB-201	--	TYPICAL WATER TRENCH
TB-202	--	THRUST BLOCKING DETAIL
TB-203	--	3/4" AND 1" WATER SERVICE CONNECTION
TB-204	--	1-1/2" WATER SERVICE CONNECTION
TB-205	--	2" WATER SERVICE CONNECTION
TB-206	--	TYPICAL VALVE BOX
TB-207	--	BOLLARDS DETAIL
TB-208	--	FIRE HYDRANT CONNECTION
TB-209	--	PREFABRICATED STEEL LOOP
TB-210	--	3" & 4" METER VAULT
TB-211	--	6" & 8" METER VAULT
TB-212	--	AIR AND VACUUM VALVE
TB-213	--	STAND PIPE

UPDATED NOV 2024

TYPICAL WATER TRENCH:

1. BLUE STAKES SHALL BE CONTACTED 48 HOURS BEFORE ANY EXCAVATION IS COMMENCED.

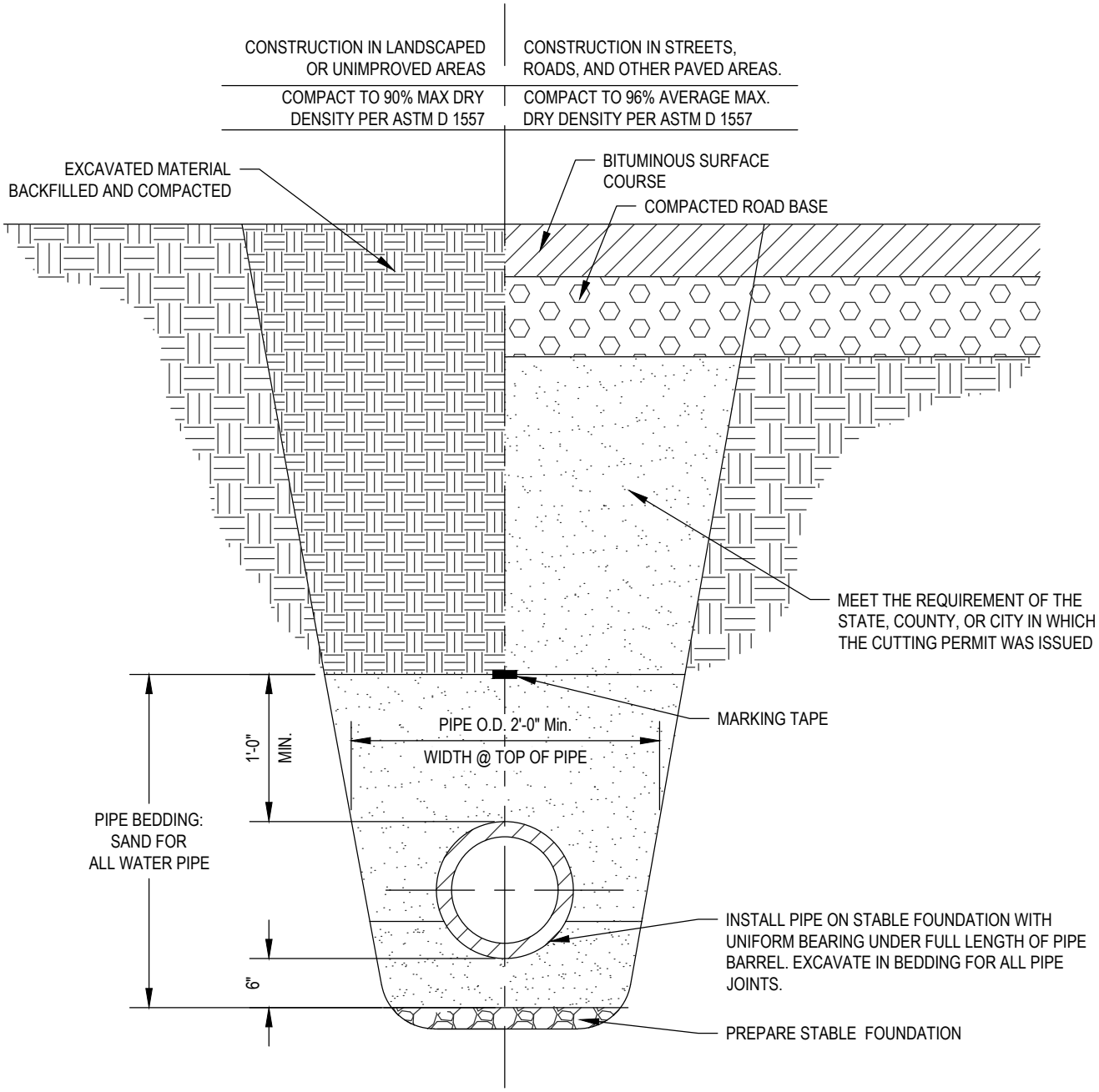
2. BACKFILL, ROAD BASE, AND PAVEMENT CONSTRUCTION SHALL CONFORM TO REQUIREMENTS, STANDARDS, AND REGULATIONS OF THE ROADWAY JURISDICTION.

3. TBID RECOMMENDS THE CONTRACTOR MEET ALL TRENCH SAFETY REQUIREMENTS ESTABLISHED BY OSHA & UOSHA.

4. THE DISTRICT INSPECTOR MAY REQUIRED UNSUITABLE MATERIALS BENEATH THE PIPE ZONE TO BE OVER-EXCAVATED, BACKFILLED, AND COMPACTED TO 95% MAX DENSITY.

5. EXCAVATE AT PIPE BELLS TO ENSURE PIPE IS SUPPORTED PROPERLY ALONG ITS ENTIRE LENGTH

6. PERMITS SHALL BE OBTAINED AND PAID FOR BY THE CONTRACTOR.



UPDATED NOV 2024

TYPICAL WATER TRENCH SECTION

NOT TO SCALE

TB-201

THRUST BLOCKING DETAIL NOTES:

1. 8 MIL-BLACK POLYETHYLENE ENCASEMENT OR WAX TAPE SHALL BE PROVIDED FOR ALL FITTINGS, VALVES, FIRE HYDRANTS, AND COUPLINGS IN ACCORDANCE WITH AWWA C105.

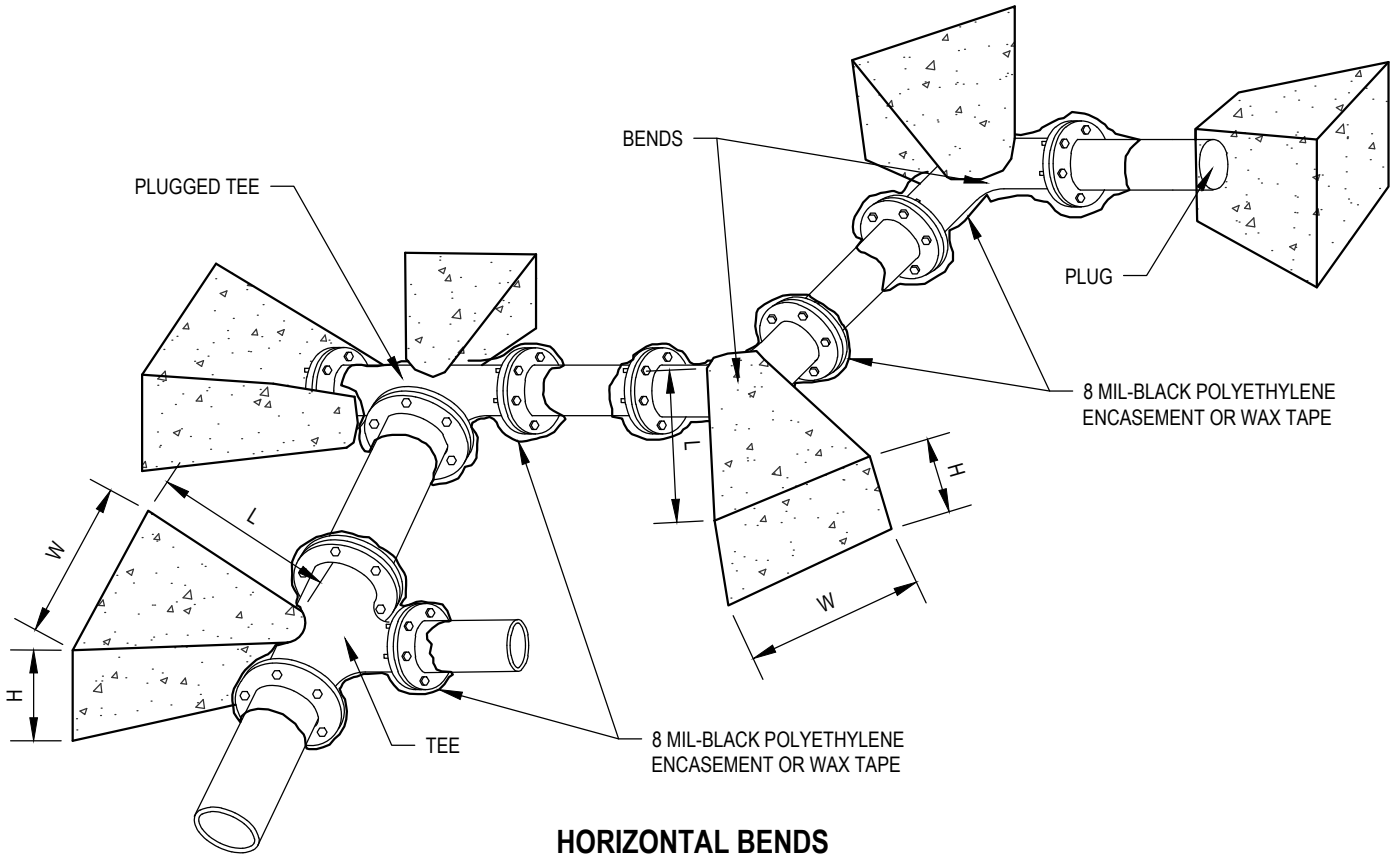
2. FM GREASE OR WAX TAPE REQUIRED ON ALL BOLTS.

3. SIZE BLOCKS BASED UPON 200 PSI LINE PRESSURE AND SPECIFIC SOIL BEARING VALUE OF CONSTRUCTION SITE.

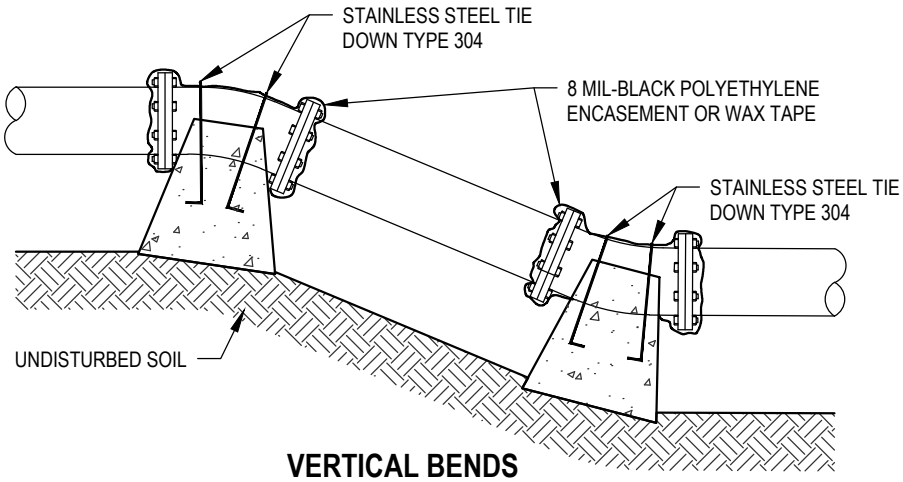
4. ALL THRUST BLOCK BEARING FACES SHALL BE POURED AGAINST UNDISTURBED SOIL OR AN APPROVED, COMPACTED BACKFILL.

5. THRUST BLOCK SIZES SHOWN IN THE TABLE BELOW ARE FOR HORIZONTAL BENDS BASED ON 200PSI OPERATING PRESSURE AND 1500 LBS/SQ FT SOIL BEARING PRESSURE. THRUST BLOCK SIZES MAY NEED TO BE ADJUSTED TO CONFORM WITH PROJECT SPECIFIC CONDITIONS. THRUST BLOCKS FOR VERTICAL BENDS TO BE DESIGNED BY ENGINEER.

	11.25° BEND			22.5° BEND			45° BEND			90° BEND			TEE			DEAD END		
	L	W	H	L	W	H	L	W	H	L	W	H	L	W	H	L	W	H
6-INCH	0.8'	1.0'	1.0'	1.2'	1.3'	1.3'	1.6'	1.9'	1.9'	2.2'	2.5'	2.5'	1.8'	2.1'	2.1'	1.8'	2.1'	2.1'
8-INCH	1.1'	1.3'	1.3'	1.5'	1.8'	1.8'	2.1'	2.5'	2.5'	2.9'	3.3'	3.3'	2.4'	2.8'	2.8'	2.4'	2.8'	2.8'
10-INCH	1.4'	1.6'	1.6'	1.9'	2.2'	2.2'	2.6'	3.0'	3.0'	3.6'	4.1'	4.1'	3.0'	3.5'	3.5'	3.0'	3.5'	3.5'
12-INCH	1.6'	1.9'	1.9'	2.3'	2.6'	2.6'	3.1'	3.6'	3.6'	4.3'	4.9'	4.9'	3.6'	4.1'	4.1'	3.6'	4.1'	4.1'



HORIZONTAL BENDS



VERTICAL BENDS

UPDATED NOV 2024

THRUST BLOCKING

NOT TO SCALE

TB-202

3/4" AND 1" WATER SERVICE CONNECTION NOTES:

1. TBID WILL PERFORM ALL SERVICE CONNECTION TAPS AND INSTALL THE CORP STOP. CONTACT DISTRICT INSPECTOR TO SCHEDULE TAPS. DEVELOPER/OWNER IS RESPONSIBLE FOR THE EXCAVATION, BACKFILL, COMPACTION, TRAFFIC CONTROL, PERMITS, AND RESTORATION ASSOCIATED WITH TAPPING THE WATER MAIN.

2. TBID WILL SUPPLY & INSTALL 3/4" - 2" WATER METERS AS PART OF THE CONNECTION FEE.

3. DEVELOPER IS RESPONSIBLE FOR COMPACTION IN THE WATER LATERAL TRENCH.

4. METER BOX SHALL BE INSTALLED IN THE PARK STRIP WHERE POSSIBLE. SET METER BOX SUCH THAT THE TOP OF THE LID IS EQUAL TO THE SIDEWALK ELEVATION. CONCRETE COLLARS ARE REQUIRED IF METER IS PLACED IN ASPHALT PAVEMENT.

5. WATER SERVICE IS PRIVATE BEHIND THE METER.

6. TRAFFIC-RATED 24" CONCRETE METER BOXES PERMITTED IN DRIVEWAYS/ASPHALT WHERE APPROVED BY THE DISTRICT. LIDS SHALL BE TRAFFIC RATED W/ 2" HOLE.

7. METER TO BE LOCATED STRAIGHT FROM THE WATER MAIN TAP. IF METER IS TO BE RELOCATED, A NEW TAP AND SERVICE MUST BE INSTALLED.

EXAMPLE PARTS LIST:

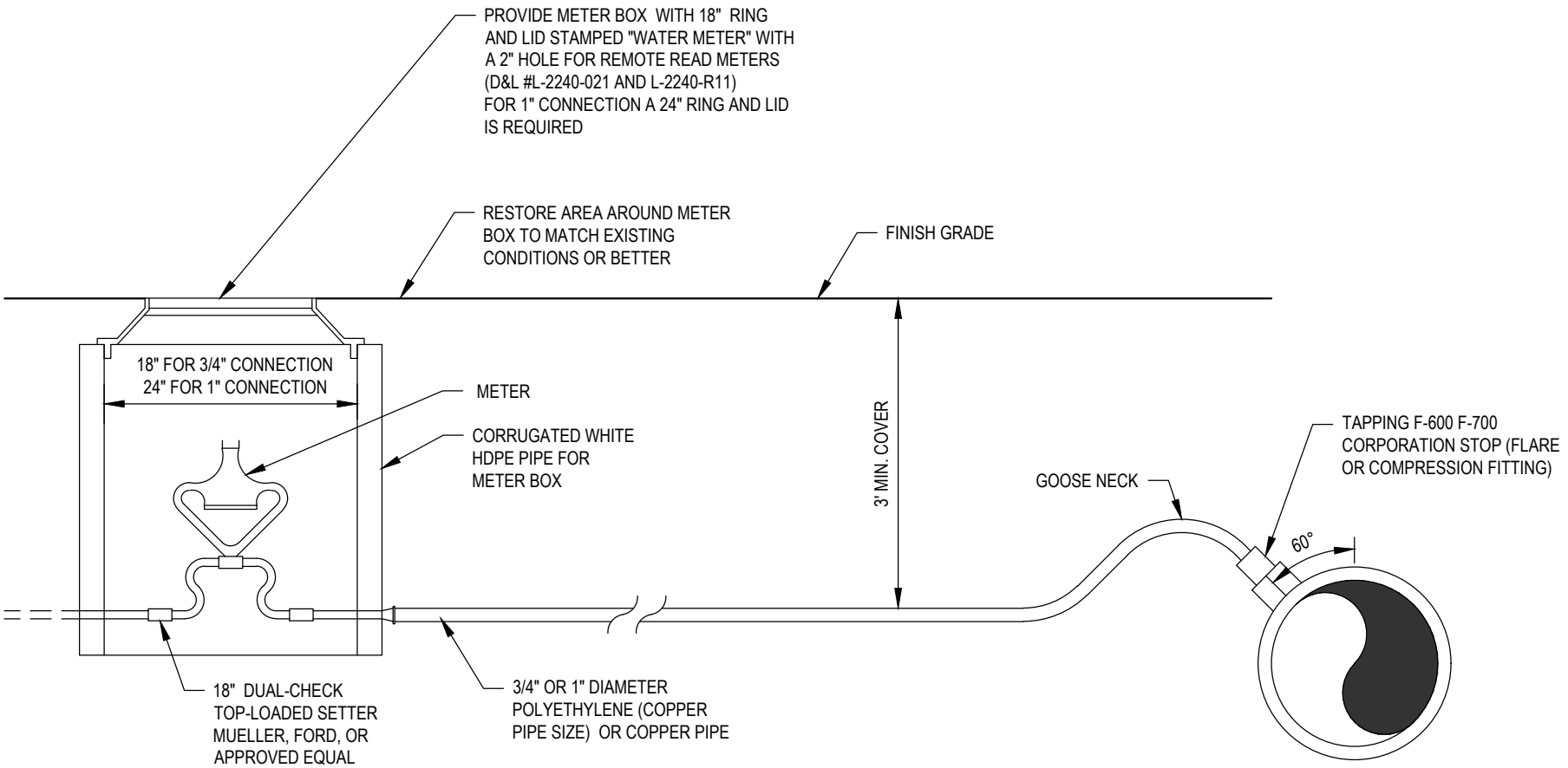
3/4" CONNECTIONS

- 3/4"CORP STOP- 3/4" CC X CTS COMP BALL CORP (FERGUSON, PART# FFB10003QNL)
- 3/4" SETTER - 18” SETTER WITH BALL VALVE AND CHECK VALVE (FERGUSON, PART# FVBHC7218W1133NL)
- RING - 18” METER LID RING (FERGUSON, PART# DL224002I)
- LID - WATER COVER 2” RECESSED HOLE (FERGUSON, PART# DL224002I)
- BOX - 18” N12 SLD HDPE PIPE (FERGUSON, PART# A18050020)

1" CONNECTIONS

- 1” CORP - 1” CC X CTS COMP BALL CORP (FERGUSON, PART# MB25008NG)
- 1” SETTER - 18” SETTER WITH BALL VALVE AND CHECK VALVE (HYDRO SPECIALTIES, PART # 720-418WDDD44)
- RING - 24” METER LID RING (FERGUSON, PART# DB5024R1I)
- LID - WATER COVER 2” RECESSED HOLE (FERGUSON, PART# DB502UNVI)
- BOX - 24” N12 SLD HDPE PIPE (FERGUSON, PART# A2405ABH)

UPDATED NOV 2024



UPDATED NOV 2024

3/4" AND 1" WATER SERVICE CONNECTION

NOT TO SCALE

TB-203

1-1/2" WATER SERVICE CONNECTION NOTES:

1. TBID WILL PERFORM ALL SERVICE CONNECTION TAPS AND INSTALL THE CORP STOP. CONTACT DISTRICT INSPECTOR TO SCHEDULE TAPS. DEVELOPER/OWNER IS RESPONSIBLE FOR THE EXCAVATION, BACKFILL, COMPACTION, TRAFFIC CONTROL, PERMITS, AND RESTORATION ASSOCIATED WITH TAPPING THE WATER MAIN.

2. TBID WILL SUPPLY & INSTALL 3/4" - 2" WATER METERS AS PART OF THE CONNECTION FEE.

3. DEVELOPER IS RESPONSIBLE FOR COMPACTION IN THE WATER LATERAL TRENCH.

4. METER BOX SHALL BE INSTALLED IN THE PARK STRIP WHERE POSSIBLE. SET METER BOX SUCH THAT THE TOP OF THE LID IS EQUAL TO THE SIDEWALK ELEVATION. CONCRETE COLLARS ARE REQUIRED IF METER IS PLACED IN ASPHALT PAVEMENT.

5. WATER SERVICE IS PRIVATE BEHIND THE METER.

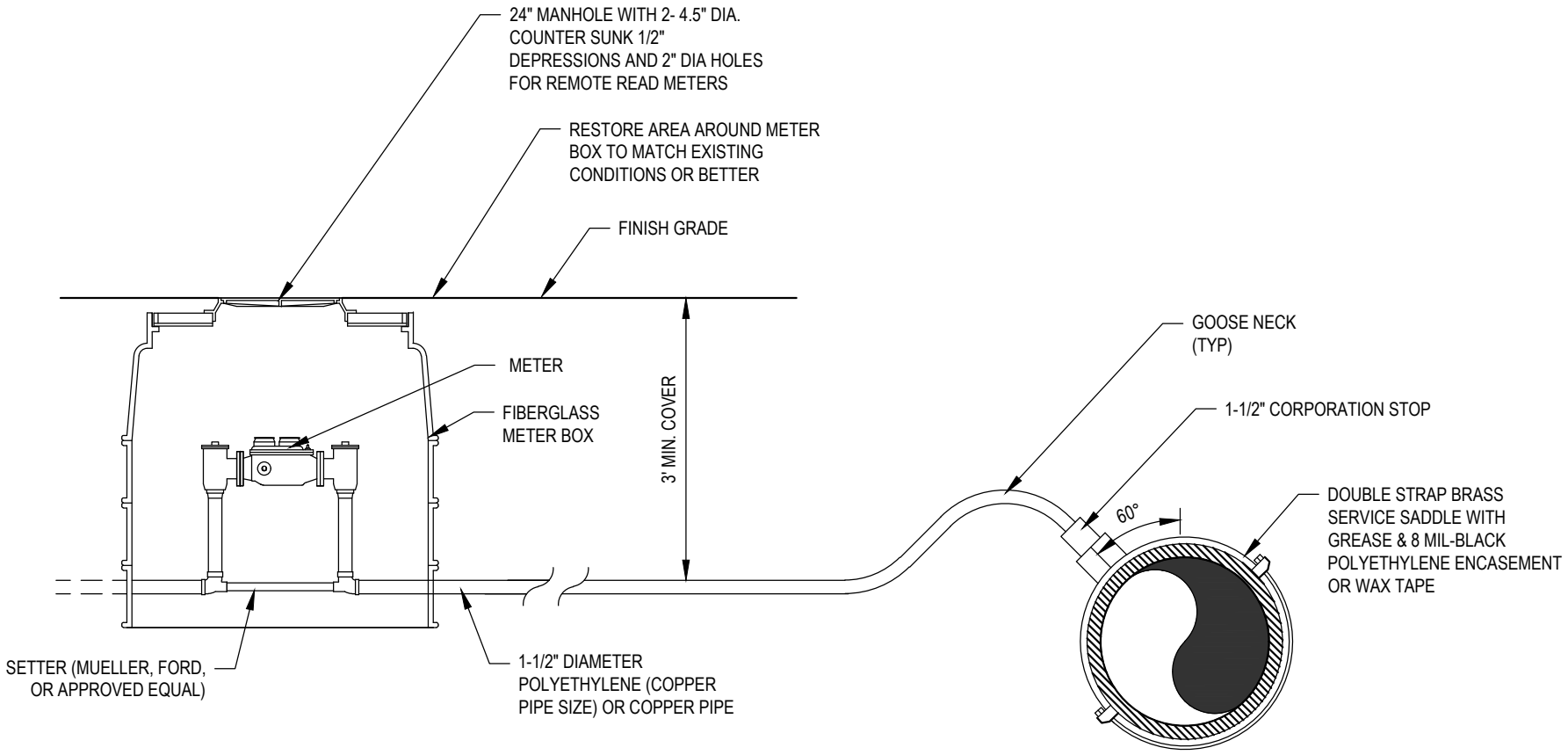
6. TRAFFIC-RATED 24" CONCRETE METER BOXES PERMITTED IN DRIVEWAYS/ASPHALT WHERE APPROVED BY THE DISTRICT. LIDS SHALL BE TRAFFIC RATED W/ 2" HOLE.

7. METER TO BE LOCATED STRAIGHT FROM THE WATER MAIN TAP. IF METER IS TO BE RELOCATED, A NEW TAP AND SERVICE MUST BE INSTALLED.

EXAMPLE PARTS LIST:

1-1/2" CONNECTIONS

- 1 1/2" DOUBLE STRAP BRASS SADDLE AND CORP STOP
- 1 1/2” SETTER- 18” SETTER WITH BALL VALVE AND CHECK VALVE, NO BYPASS (HYDRO SPECIALTIES, PART# 720-618WDFF660)
- LID - FIBRELYTE FL36 COVER (A) FOR COMPOUND METER, (C) FOR T10 (FERGUSON, PART# C02001525)
- BOX- FIBRELYTE FL36 BOX 18” (FERGUSON, PART# C02006095)
- BOX EXTENSION - (2) FIBRELYTE FL36 EXTENSION 8” (FERGUSON, PART# C02001165)



UPDATED NOV 2024

1-1/2" WATER SERVICE CONNECTION

NOT TO SCALE

TB-204

2" WATER SERVICE CONNECTION NOTES:

1. TBID WILL PERFORM ALL SERVICE CONNECTION TAPS AND INSTALL THE CORP STOP. CONTACT DISTRICT INSPECTOR TO SCHEDULE TAPS. DEVELOPER/OWNER IS RESPONSIBLE FOR THE EXCAVATION, BACKFILL, COMPACTION, TRAFFIC CONTROL, PERMITS, AND RESTORATION ASSOCIATED WITH TAPPING THE WATER MAIN.

2. TBID WILL SUPPLY & INSTALL 3/4" - 2" WATER METERS AS PART OF THE CONNECTION FEE.

3. DEVELOPER IS RESPONSIBLE FOR COMPACTION IN THE WATER LATERAL TRENCH.

4. METER BOX SHALL BE INSTALLED IN THE PARK STRIP WHERE POSSIBLE. SET METER BOX SUCH THAT THE TOP OF THE LID IS EQUAL TO THE SIDEWALK ELEVATION. CONCRETE COLLARS ARE REQUIRED IF METER IS PLACED IN ASPHALT PAVEMENT.

5. WATER SERVICE IS PRIVATE BEHIND THE METER.

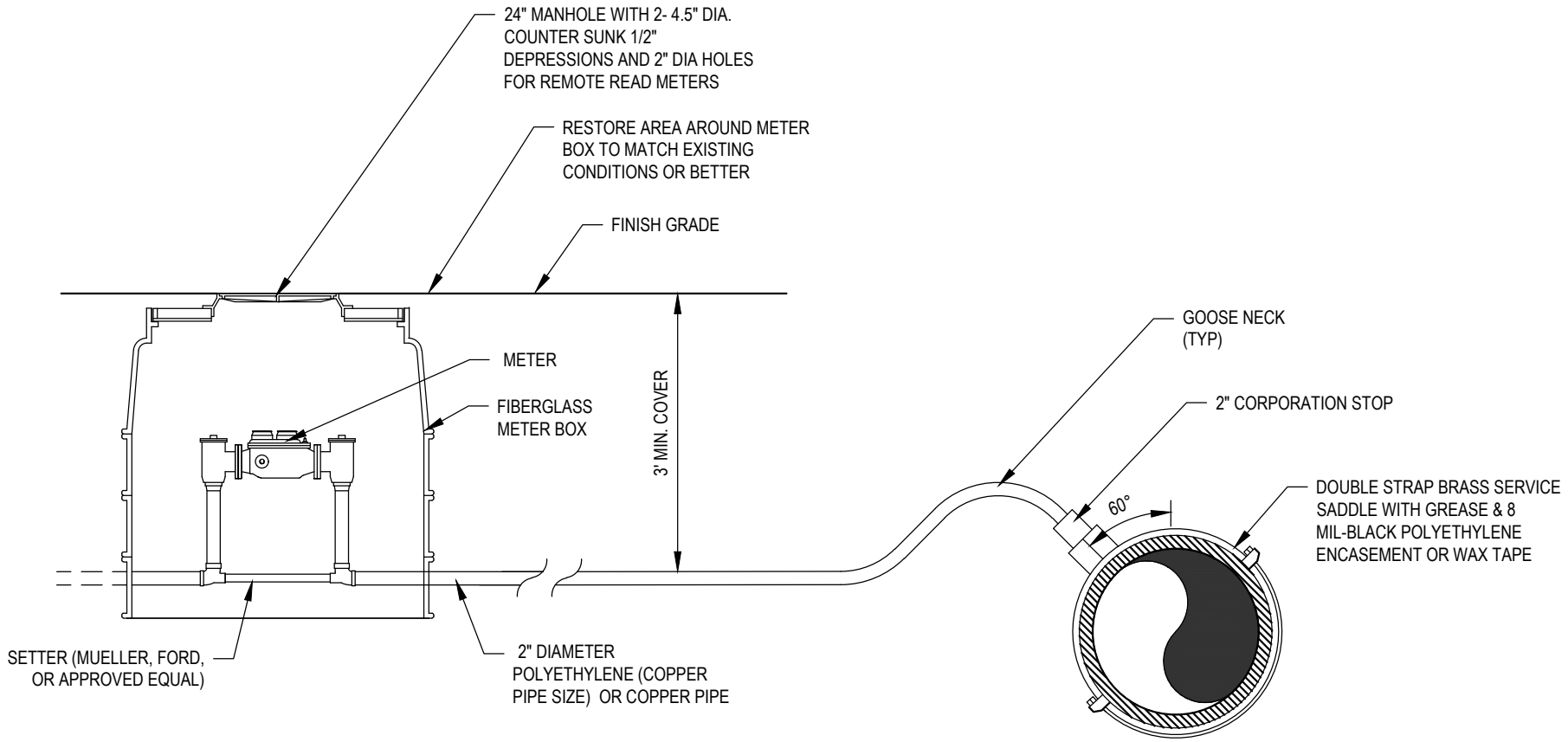
6. TRAFFIC-RATED 24" CONCRETE METER BOXES PERMITTED IN DRIVEWAYS/ASPHALT WHERE APPROVED BY THE DISTRICT. LIDS SHALL BE TRAFFIC RATED W/ 2" HOLE.

7. METER TO BE LOCATED STRAIGHT FROM THE WATER MAIN TAP. IF METER IS TO BE RELOCATED, A NEW TAP AND SERVICE MUST BE INSTALLED.

EXAMPLE PARTS LIST:

2" CONNECTIONS

- 2" DOUBLE STRAP BRASS SADDLE AND CORP STOP
- 2” SETTER- 18” SETTER WITH BALL VALVE AND CHECK VALVE, NO BYPASS (HYDRO SPECIALTIES, PART# 720-718WDFF770)
- LID - FIBRELYTE FL36 COVER (A) FOR COMPOUND METER, (C) FOR T10 (FERGUSON, PART# C02001525)
- BOX - FIBRELYTE FL36 BOX 18” (FERGUSON, PART# C02006095)
- BOX EXTENSION - (2) FIBRELYTE FL36 EXTENSION 8” (FERGUSON, PART# C02001165)



UPDATED NOV 2024

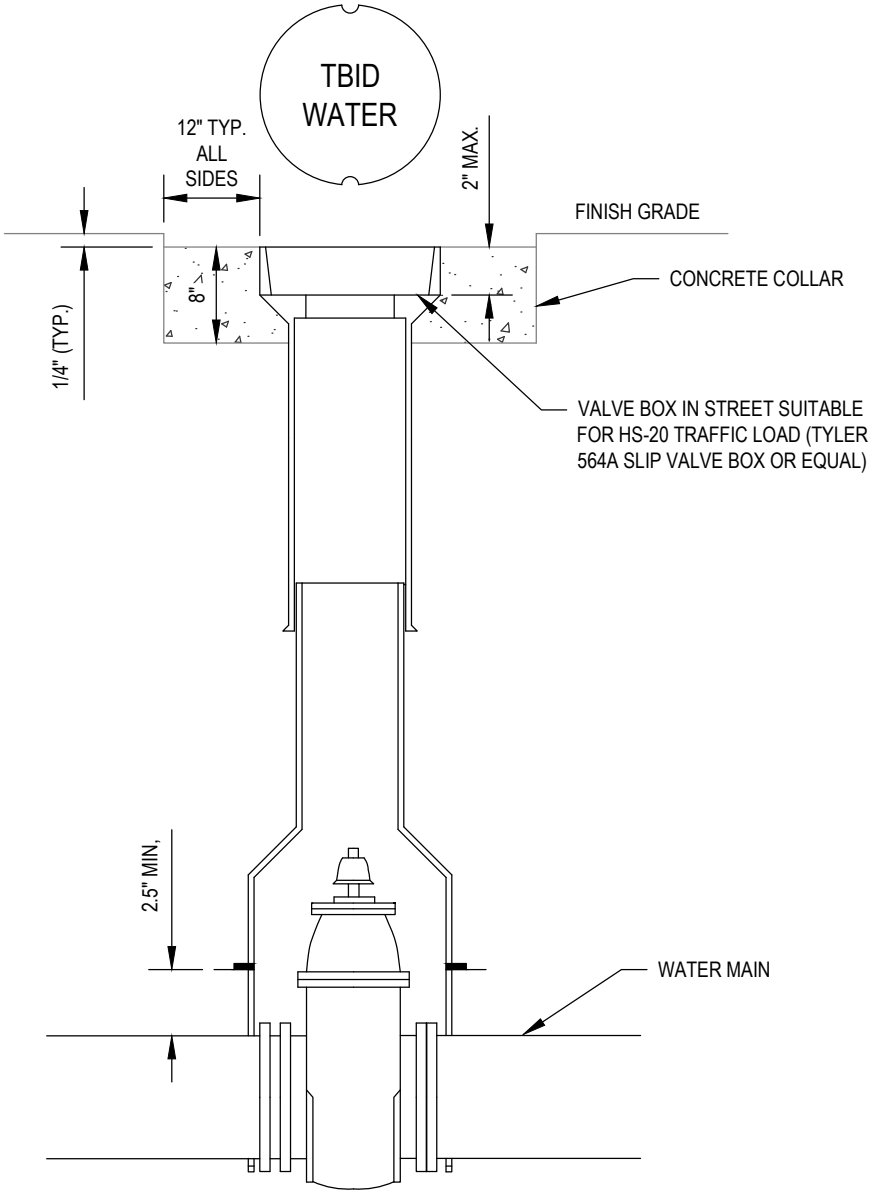
2" WATER SERVICE CONNECTION DETAIL

NOT TO SCALE

TB-205

TYPICAL VALVE BOX NOTES:

1. LEVEL AND ADJUST LID AND FRAME TO FINISH SURFACE (¼" MAX. BELOW SURFACE)
2. APPLY FM GREASE ON ALL BOLTS. WRAP WITH 8 MIL POLYETHYLENE OR WAX TAPE
3. VALVE BOX MUST BE VERTICAL TO ALLOW FOR VALVE KEY ACCESS.
4. INSTALL VALVE STEM EXTENSIONS FOR VALVES DEEPER THAN 4 FEET. SEE TB-207.
5. CONCRETE COLLARS REQUIRED IN ALL PAVED AREAS PER JURISDICTIONAL AUTHORITY.



UPDATED NOV 2024

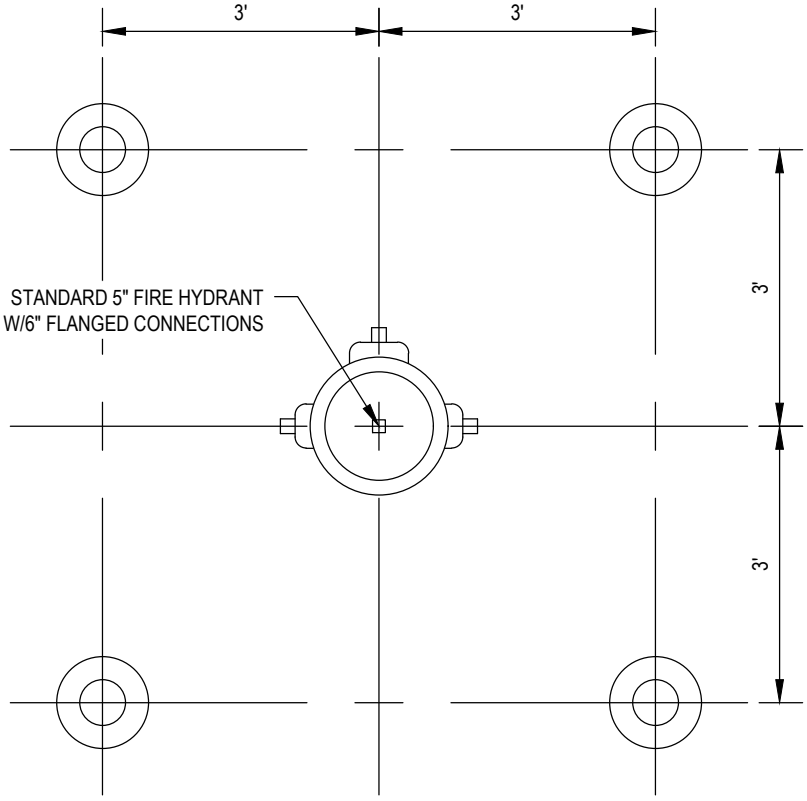
TYPICAL VALVE BOX

NOT TO SCALE

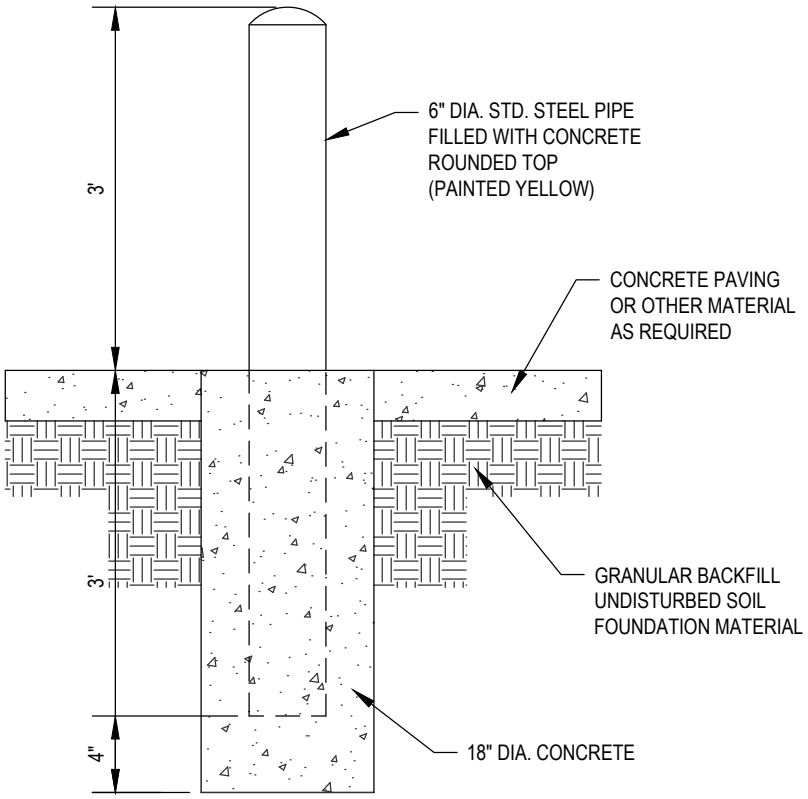
TB-206

BOLLARDS DETAIL NOTES:

1. BOLLARDS ARE REQUIRED AROUND HYDRANTS WHERE NEEDED FOR PROTECTION AS DETERMINED BY TBID.



PLACEMENT



SECTION

UPDATED NOV 2024

FIRE HYDRANT BOLLARDS

NOT TO SCALE

TB-207

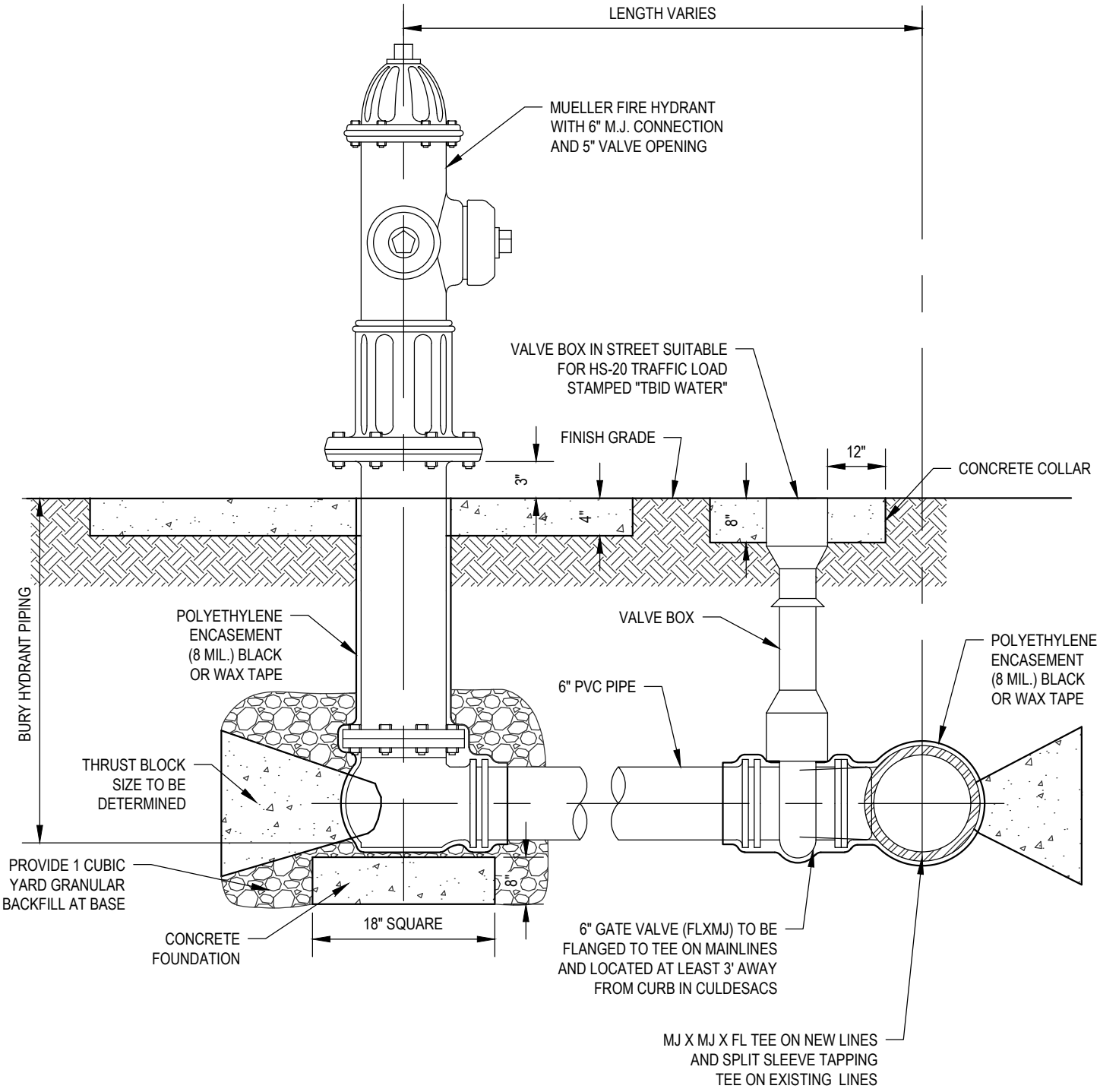
FIRE HYDRANT CONNECTION NOTES:

1. CONCRETE SHALL BE INSTALLED AS FOLLOWS: IN PARKSTRIP A SQUARE WITH SIDE DIMENSIONS EQUAL THE WIDTH OF THE PARKSTRIP. OUTSIDE PARKSTRIP - 5' SQUARE.

2. LEVEL & ADJUST LID & FRAME TO FINISH SURFACE (1/4" MAX BELOW SURFACE).

3. FM GREASE REQUIRED ON BOLTS. WRAP FITTINGS WITH 8 MIL POLYETHYLENE WRAP OR WAX TAPE.

4. BOLLARDS ARE REQUIRED AROUND HYDRANTS WHERE NEEDED FOR PROTECTION AS DETERMINED BY TBID.



UPDATED NOV 2024

FIRE HYDRANT CONNECTION

NOT TO SCALE

TB-208

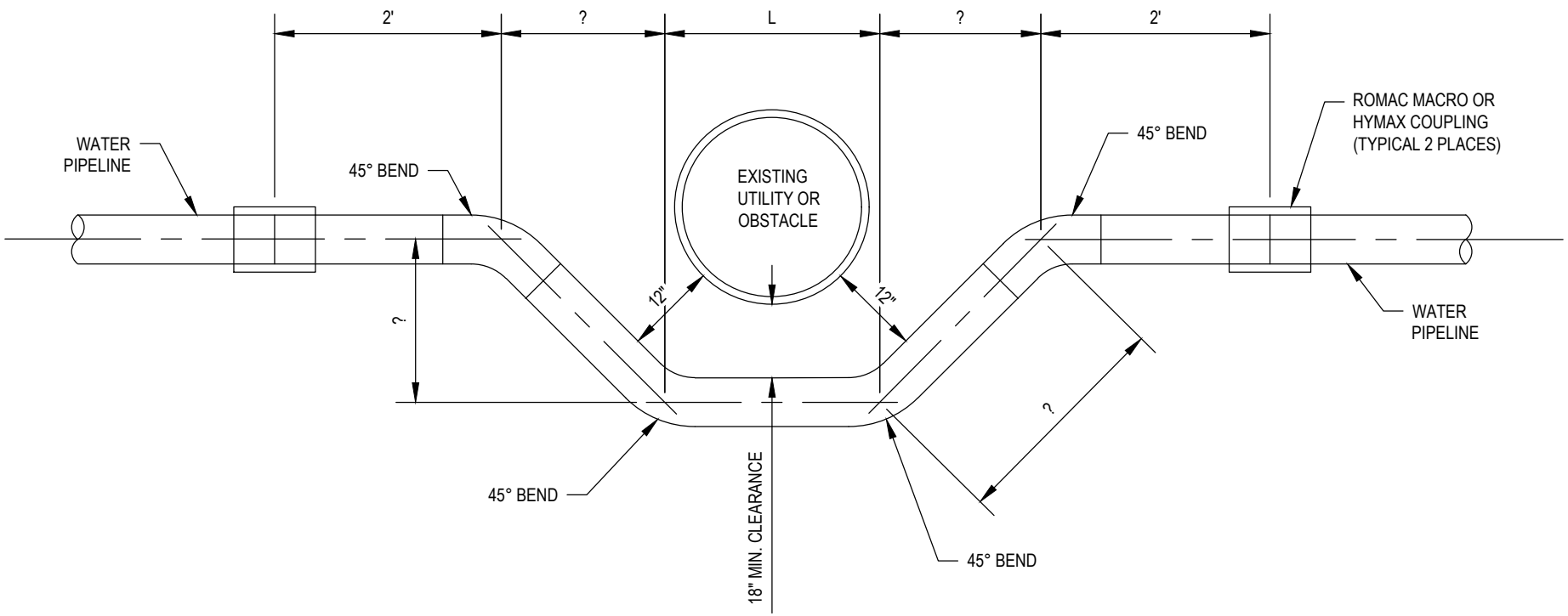
PREFABRICATED STEEL LOOP NOTES:

1. PREFABRICATED STEEL LOOPS REQUIRED FOR ALL UTILITY CONFLICTS. FITTING LOOPS ARE NOT PERMITTED.

2. O.D. OF STEEL LOOP TO MATCH O.D. OF CONNECTING WATER LINE WHERE IT CONNECTS TO THE PIPE. O.D MUST MATCH EXISTING WATER LINE FOR MINIMUM OF 12" LENGTH.

3. ALL STEEL LOOPS WITH A "L" DIMENSION OF 10' OR GREATER SHALL REQUIRE UPLIFT AND DOWN THRUST BLOCKS.

4. SEE TBID SPECIFICATIONS FOR EPOXY COATING REQUIREMENTS.



UPDATED NOV 2024

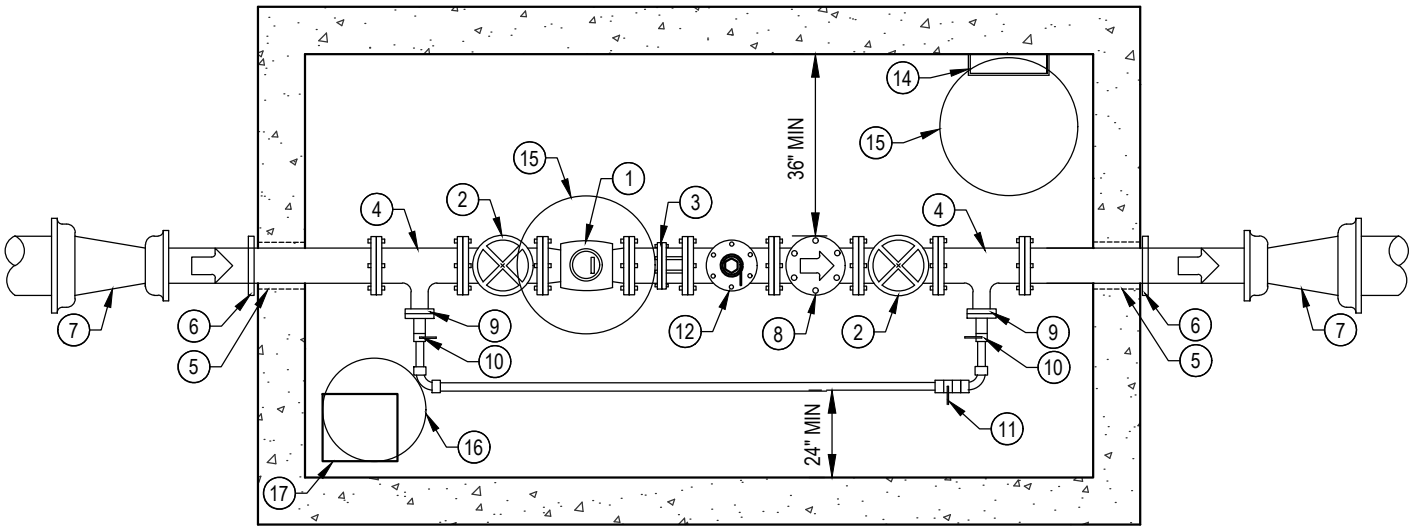
PREFABRICATED STEEL LOOP

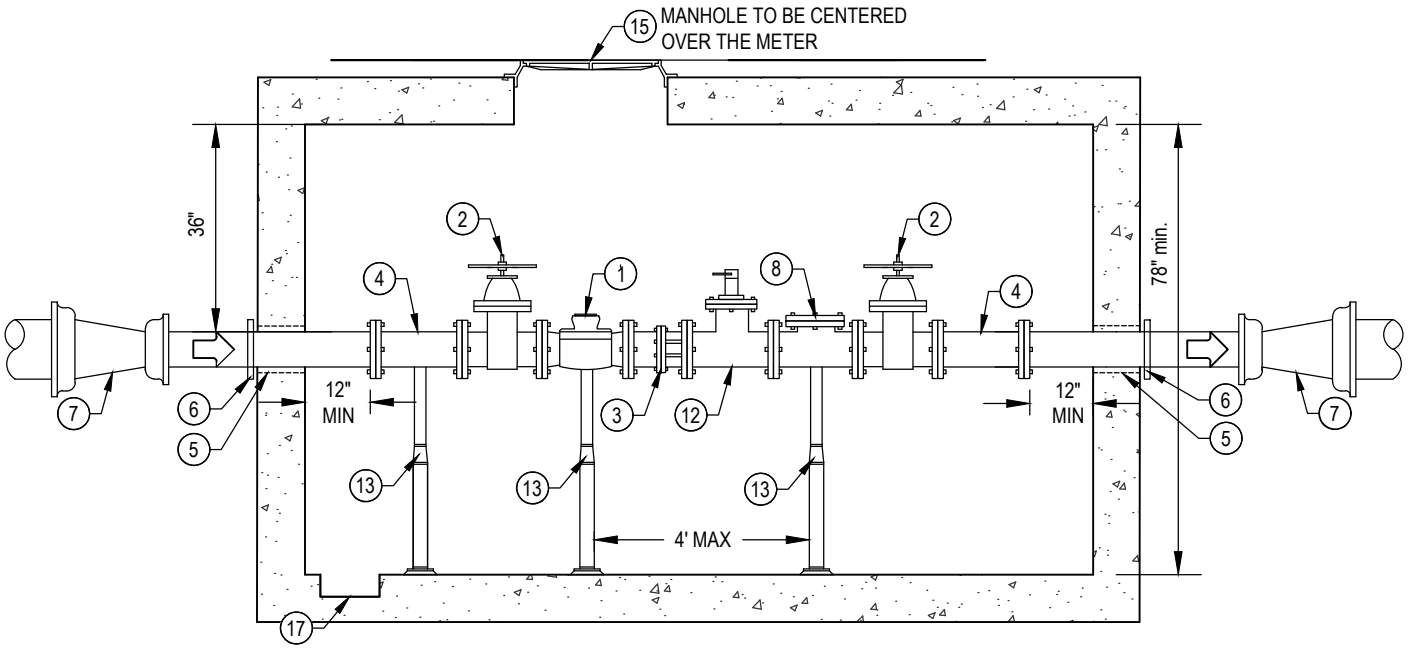
NOT TO SCALE

TB-209

3" & 4" METER BOX NOTES:

1. BOX SHALL BE DESIGNED AND CONSTRUCTED TO HS-20 LOADING CAPACITY.
2. STRAINER NOT REQUIRED WITH USE OF AN ULTRASONIC METER.
3. DISMANTLING FLANGE TO BE EXTENDED WHEN INSTALLED.
4. ALL BALL VALVES TO BE FULLY STAINLESS STEEL.





1. NEPTUNE MACH 10 ULTRASONIC METER W/CELLULAR ENDPOINTS
2. GATE VALVE (FLxFL)
3. DISMANTLING FLANGE
4. TEE (FLxFLxFL)
5. HIGH STRENGTH CONCRETE GROUT
6. PIPE RESTRAINT
7. REDUCER - AS REQUIRED
8. VALMATIC SWING CHECK VALVE
9. BLIND FLANGE WITH 2" TAP
10. FNW 2" STAINLESS BALL VALVE (#FNW260AK)
11. 2" POLY BYPASS LINE W/ 3-WAY STAINLESS BALL VALVE (OR TEE WITH BALL VALVE)
12. TEE (FLxFLxFL) W/ 2" THREADED BLIND FLANGE & 2" STAINLESS BALL VALVE
13. PIPE SUPPORT (STANDON OR EQUIVALENT)
14. STEPS
15. 24" MANHOLE RING AND COVER
16. 18" RING AND WATER METER LID WITH 4.5" DIA. COUNTER SUNK 1/2" DEPRESSION AND 2" DIA HOLE FOR REMOTE READ METERS
17. 12" SQUARE x 4" DEEP SUMP

UPDATED NOV 2024

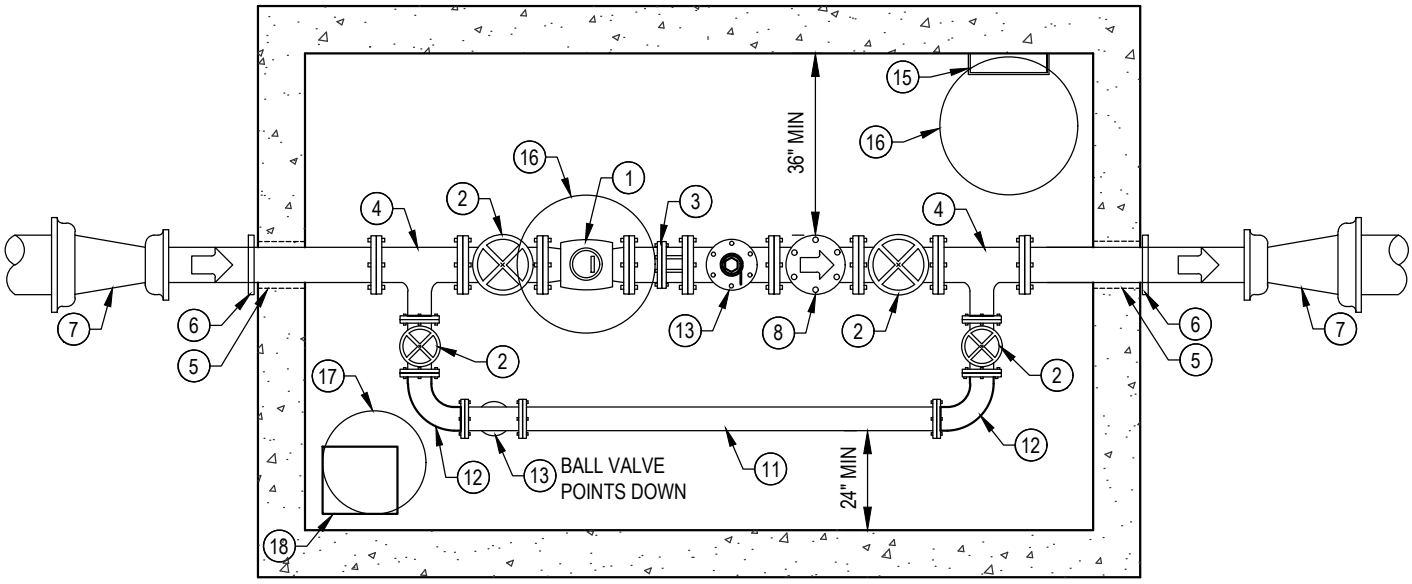
3" & 4" METER VAULT

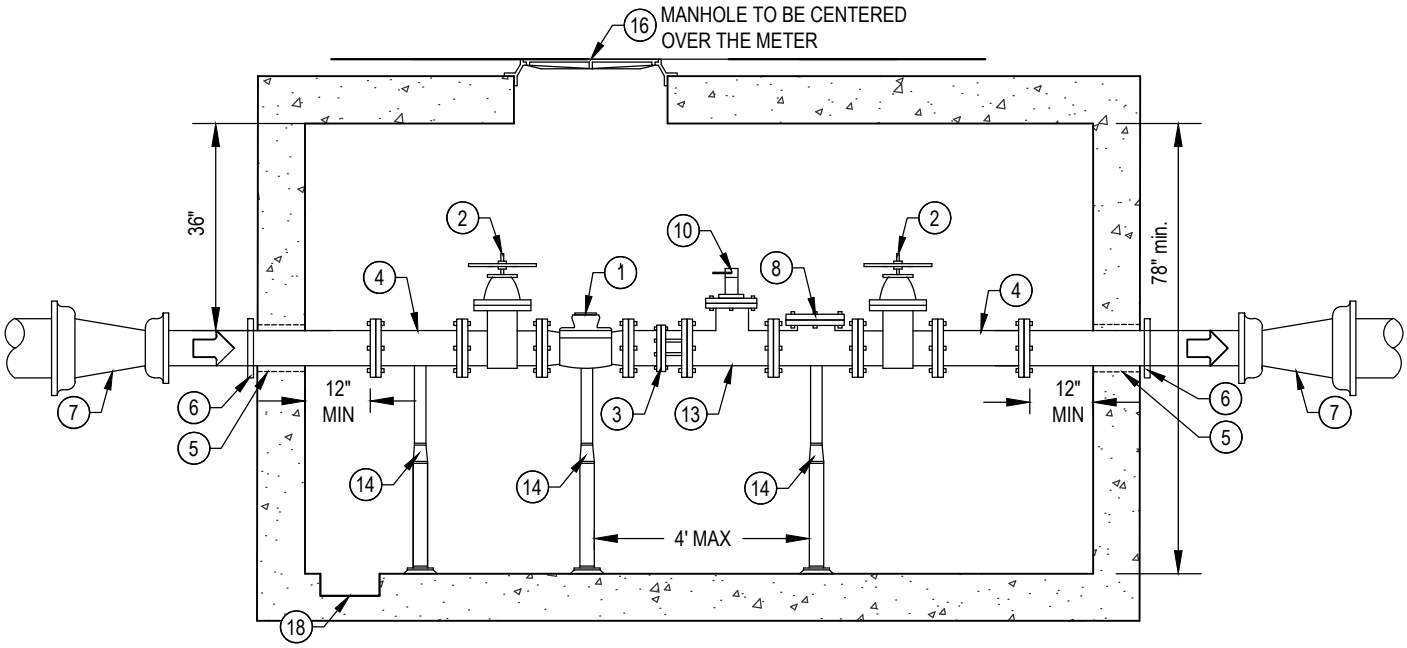
NOT TO SCALE

TB-210

6" & 8" METER BOX NOTES:

1. BOX SHALL BE DESIGNED AND CONSTRUCTED TO HS-20 LOADING CAPACITY.
2. STRAINER NOT REQUIRED WITH USE OF AN ULTRASONIC METER.
3. DISMANTLING FLANGE TO BE EXTENDED WHEN INSTALLED.
4. ALL BALL VALVES TO BE FULLY STAINLESS STEEL.
5. THE BY-PASS LINE SHALL BE 4" FOR 6" METERS AND 6" FOR 8" METERS.
6. BY-PASS LINE SHALL BE FLANGED TOGETHER WITH FLANGE FITTINGS AND FLANGE SPOOL PIECES.





1. NEPTUNE MACH 10 ULTRASONIC METER W/CELLULAR ENDPOINTS
2. GATE VALVE (FLxFL)
3. DISMANTLING FLANGE
4. TEE (FLxFLxFL)
5. HIGH STRENGTH CONCRETE GROUT
6. PIPE RESTRAINT
7. REDUCER - AS REQUIRED
8. VALMATIC SWING CHECK VALVE
9. BLIND FLANGE WITH 2" TAP
10. FNW 2" STAINLESS BALL VALVE (#FNW260AK)
11. 4" BYPASS (6" METER) OR 6" BYPASS (8" METER)
12. 90° BEND (FLxFL)
13. TEE (FLxFLxFL) W/ 2" THREADED BLIND FLANGE & 2" STAINLESS BALL VALVE
14. PIPE SUPPORT (STANDON OR EQUIVALENT)
15. STEPS
16. 24" MANHOLE RING AND COVER
17. 18" RING AND WATER METER LID WITH 4.5" DIA. COUNTER SUNK 1/2" DEPRESSION AND 2" DIA HOLE FOR REMOTE READ METERS
18. 12" SQUARE x 4" DEEP SUMP

UPDATED NOV 2024

6" & 8" METER VAULT

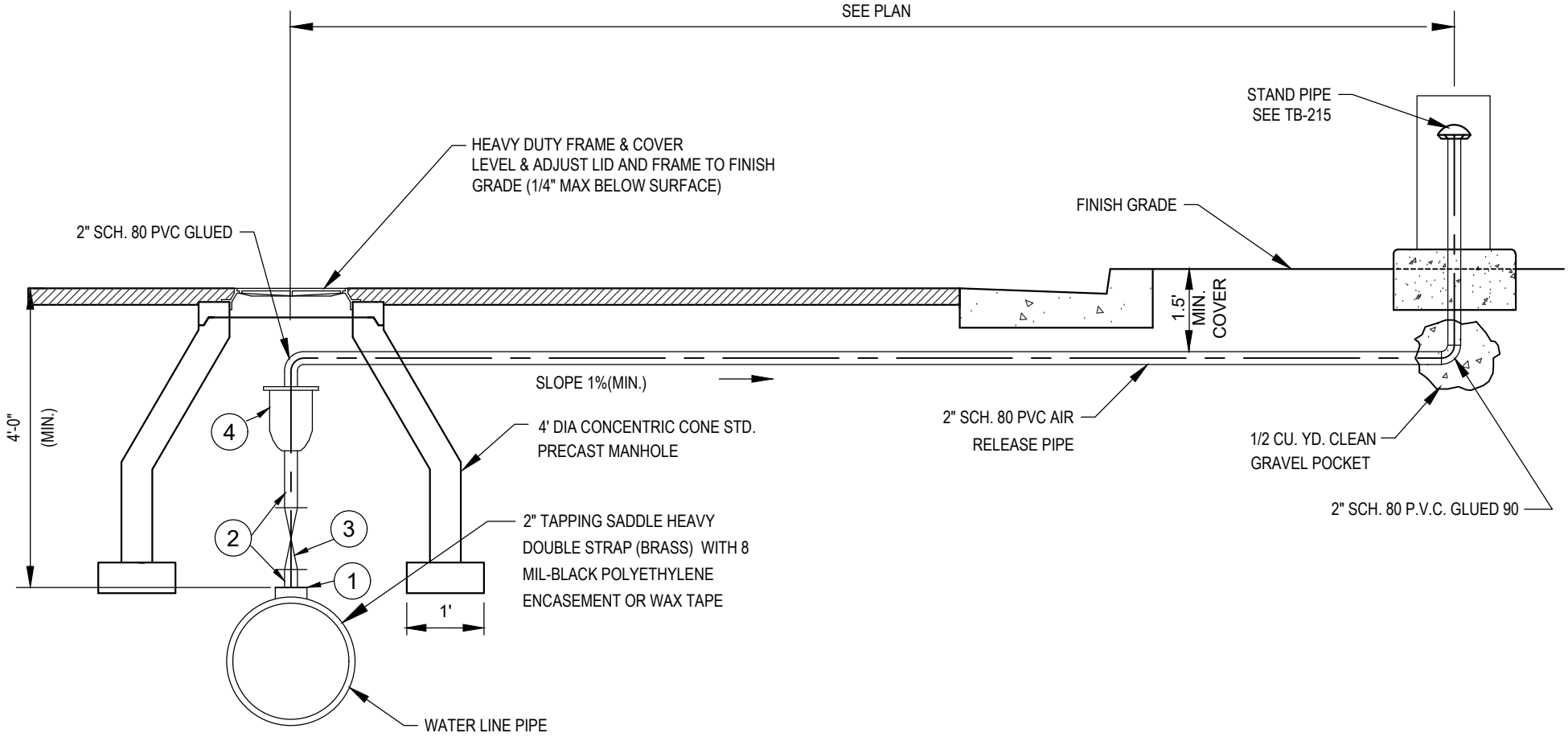
NOT TO SCALE

TB-211

AIR & VACUUM VALVE NOTES:

1. AIR VAC VALVES TO BE INSTALLED AT ALL HIGH POINTS OF PIPE.

1. REDUCING FLANGE W/2" THREADED HOLE (INSULATING FLANGE KIT)
2. SCH. 80 BRASS NIPPLE
3. 2" THREADED BRASS BALL VALVE
4. 2" THREADED AIR & VACUUM VALVE EQUAL TO APCO MODEL 145C



UPDATED NOV 2024

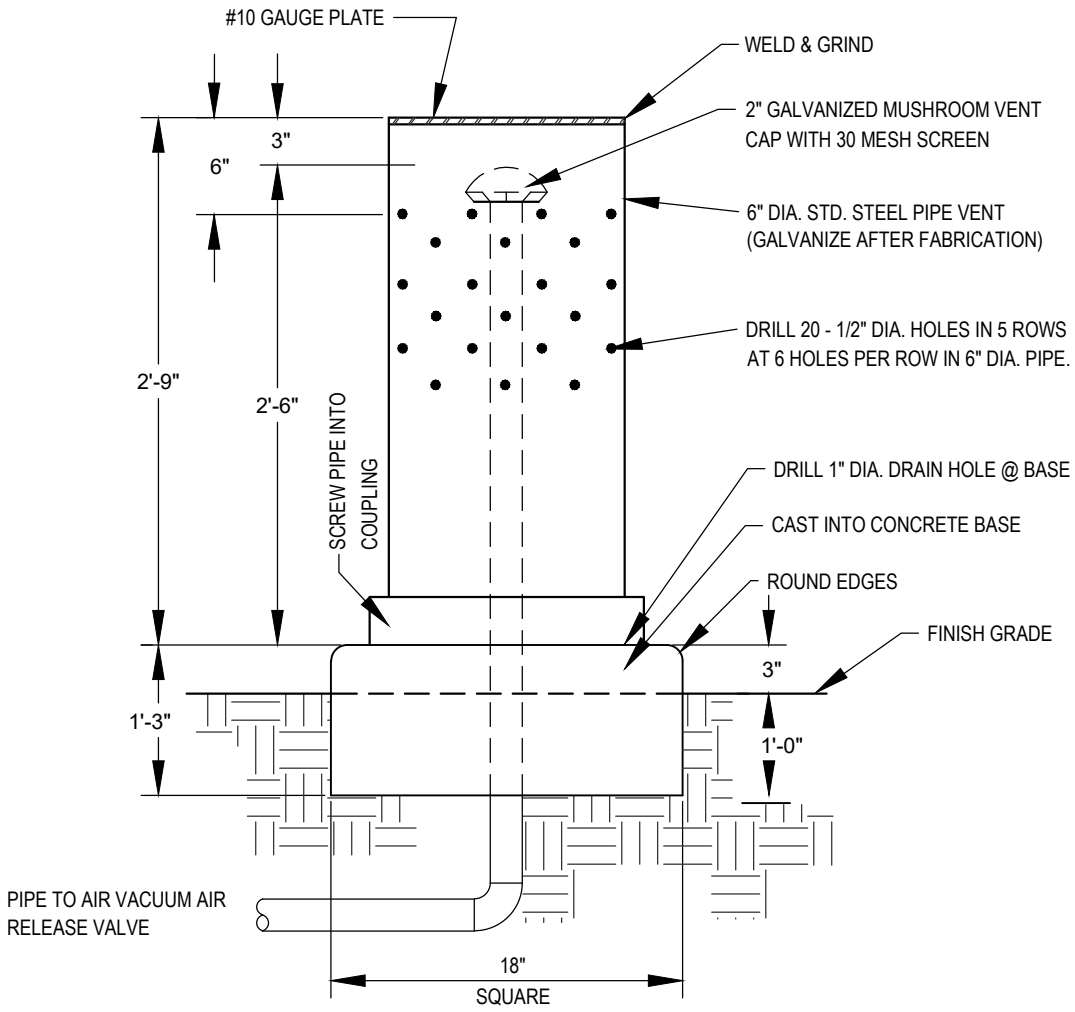
AIR & VACUUM VALVE

NOT TO SCALE

TB-212

STAND PIPE DETAIL NOTES:

UPDATED NOV 2024



UPDATED NOV 2024

STAND PIPE

NOT TO SCALE

TB-213

PAGE 2 OF 2

TAYLORSVILLE-BENNION IMPROVEMENT DISTRICT

SEWER DETAILS

STANDARD SEWER DETAILS		
TB-101	--	TYPICAL SEWER TRENCH
TB-102	--	PROFILE OF TYPICAL SEWER LATERAL
TB-103	--	NOSE-ON DETAIL
TB-104	--	TYPICAL PRECAST MANHOLE
TB-105	--	TYPICAL MANHOLE SECTION
TB-106	--	MANHOLE RING AND COVER
TB-107	--	PLAN-NEW CAST IN PLACE MANHOLE ON EXISTING SEWER
TB-108	--	SECTION-NEW CAST IN PLACE MANHOLE ON EXISTING SEWER
TB-109	--	TYPICAL DROP MANHOLE
TB-110	--	SAMPLING MANHOLE/GREASE INTERCEPTOR

UPDATED NOV 2024

TYPICAL SEWER TRENCH NOTES:

1. BLUE STAKES SHALL BE CONTACTED 48 HOURS BEFORE ANY EXCAVATION IS COMMENCED.

2. BACKFILL, ROAD BASE, AND PAVEMENT CONSTRUCTION SHALL CONFORM TO REQUIREMENTS, STANDARDS, AND REGULATIONS OF THE ROADWAY JURISDICTION.

3. TBID RECOMMENDS THE CONTRACTOR MEET ALL TRENCH SAFETY REQUIREMENTS ESTABLISHED BY OSHA & UOSHA.

4. THE DISTRICT INSPECTOR MAY REQUIRE UNSUITABLE MATERIALS BENEATH THE PIPE ZONE TO BE OVER-EXCAVATED, BACKFILLED, AND COMPACTED TO 95% MAX DENSITY.

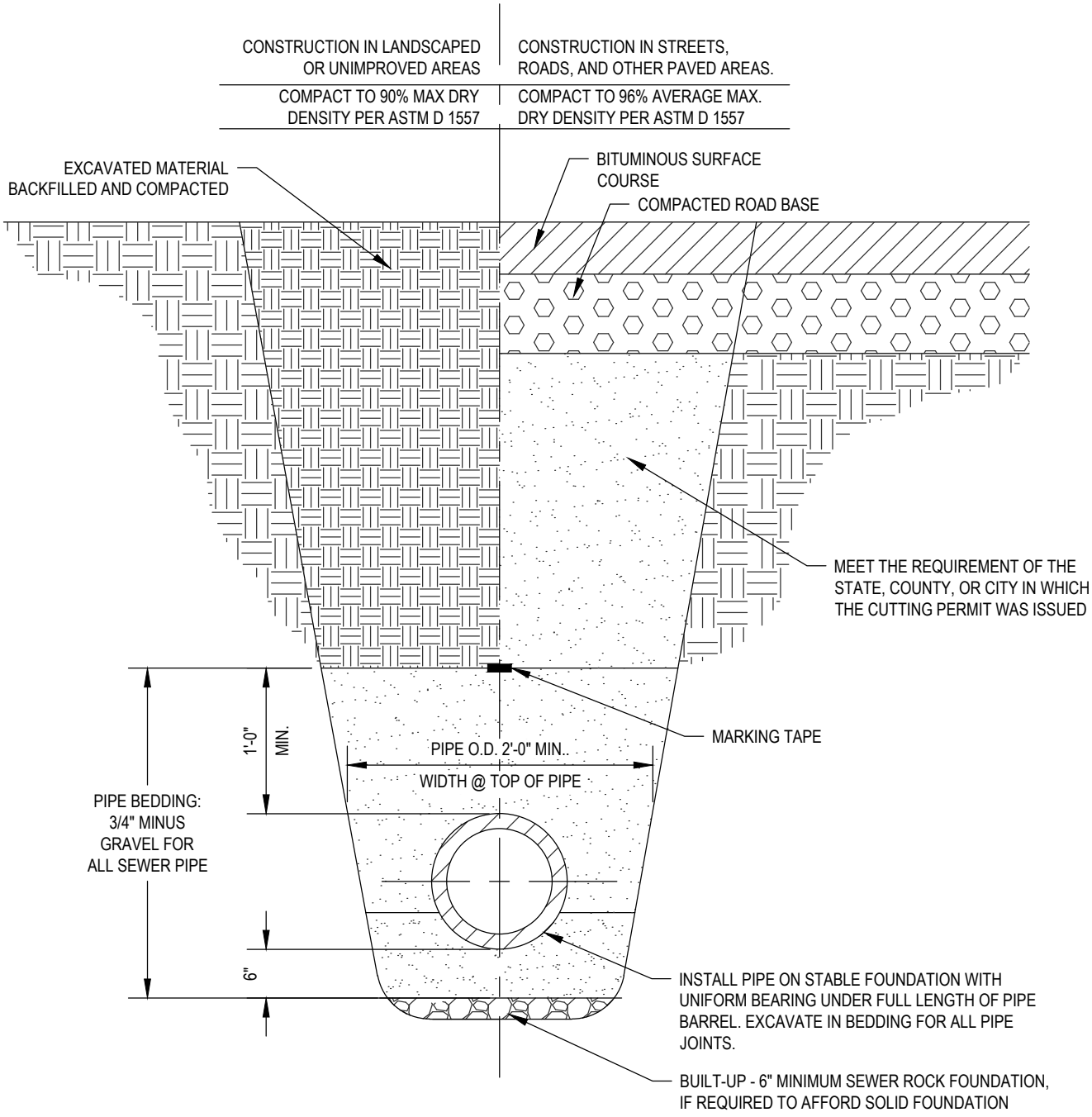
5. EXCAVATE AT PIPE BELLS TO ENSURE PIPE IS SUPPORTED PROPERLY ALONG ITS ENTIRE LENGTH.

6. PERMITS SHALL BE OBTAINED AND PAID FOR BY THE CONTRACTOR.

7. SEWER LINES SHALL BE PVC SDR35 PIPE. MINIMUM SEWER MAIN SIZE SHALL BE 8".

8. PIPE LAYING OPERATIONS SHALL PROCEED IN AN UPHILL DIRECTION WITH ALL BELLS FACING UPHILL.

9. PIPE PLUGS SHALL BE INSTALLED DURING CONSTRUCTION AT THE END OF EACH LENGTH OF PIPE TO PREVENT DEBRIS FROM ENTERING PIPE.



UPDATED NOV 2024

TYPICAL SEWER TRENCH

NOT TO SCALE

TB-101

TYPICAL SEWER LATERAL NOTES:

1. INSTALL PER TYPICAL SEWER TRENCH TB-101.

2. ALL FITTINGS AND PIPE SHALL BE PVC SDR 35.

3. MINIMUM 2' REQUIRED BETWEEN ALL BENDS ON SEWER LATERAL. 90 DEGREE BENDS ARE NOT PERMITTED.

4. PIPE LAYING OPERATIONS SHALL PROCEED IN AN UPHILL DIRECTION WITH ALL BELLS FACING UPHILL.

5. PROVIDE APPROVED "SHIELDED FERNCO" FITTINGS FOR CONNECTIONS TO EXISTING SERVICES WHERE REQUIRED.

6. COMPACT TO 96% MAX DENSITY UNDER PAVEMENTS AND IMPROVED AREAS. COMPACT TO 90% MAX DENSITY IN UNIMPROVED AREAS.

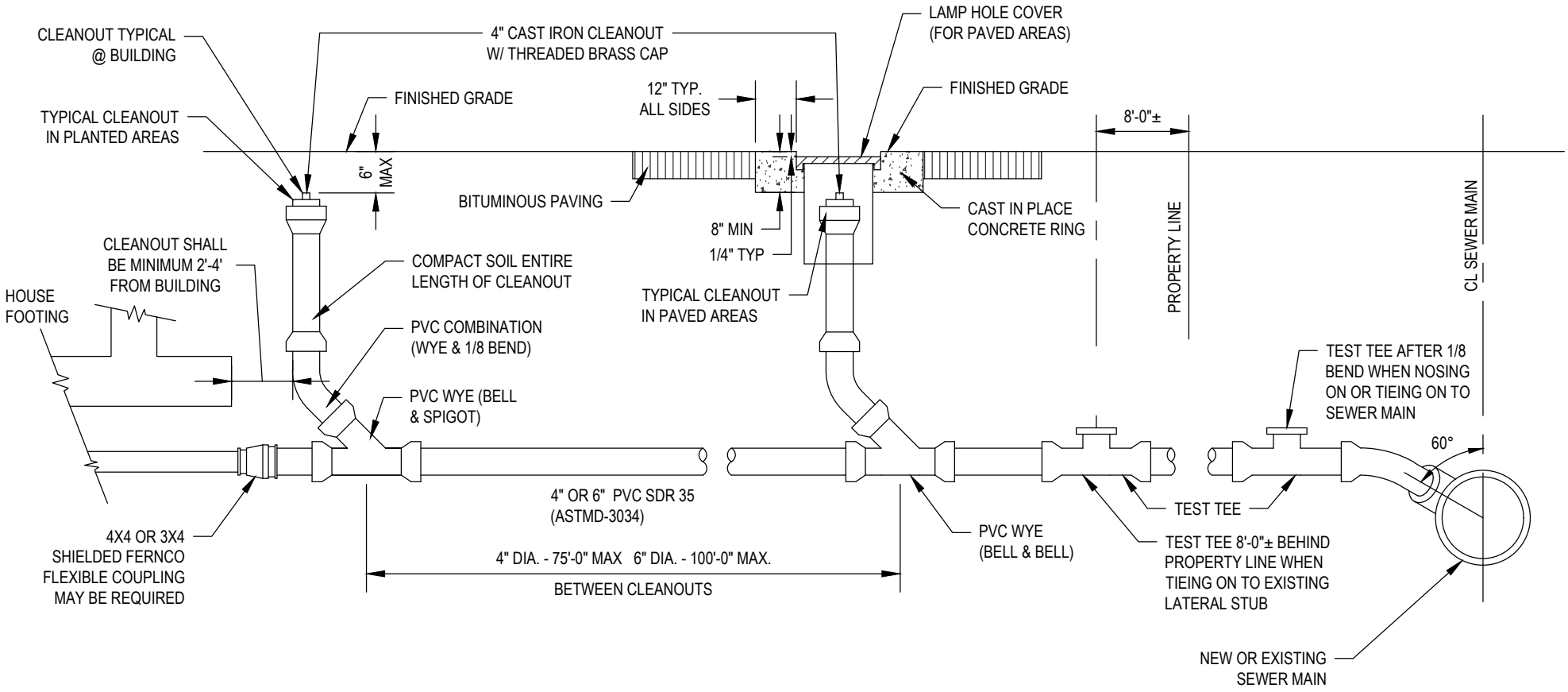
7. MINIMUM GRADE FOR 4" SEWER LATERAL IS 2%.

8. MINIMUM GRADE FOR 6" SEWER LATERAL IS 1%.

9. DISTRICT TO INSPECT ALL LATERALS.

10. ALL SEWER LATERALS ARE PRIVATELY OWNED AND MAINTAINED.

11. SEE TB-103 FOR NOSE-ON DETAIL TO EXISTING SEWER.



UPDATED NOV 2024

TYPICAL SEWER LATERAL

NOT TO SCALE

TB-102

NOSE-ON DETAIL NOTES:

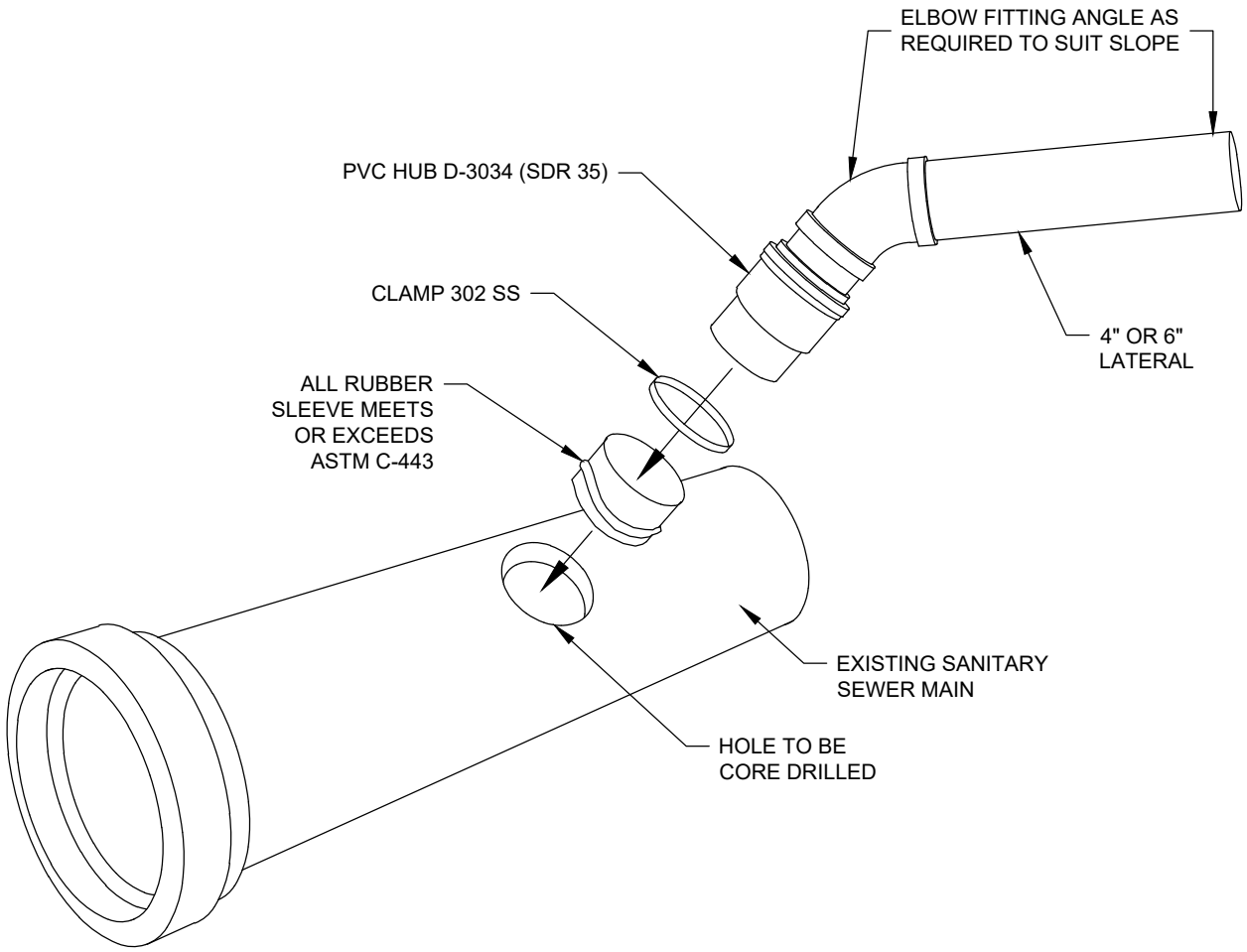
1. USE INSERTA TEE OR APPROVED EQUAL PRODUCT. SPECIFY MAINLINE MATERIAL WHEN ORDERING.

2. IF EXISTING SEWER MAIN IS CIPP LINED, EXTRA DEPTH INSERTA TEE WILL BE REQUIRED.

3. PVC SDR 35 REQUIRED ON ALL FITTINGS.

4. SEWER NOSE-ON SHALL BE ABOVE THE SEWER MAIN SPRING LINE.

5. EXISTING SEWER MAIN SHALL BE DRILLED BY AN EXPERIENCED TAPPER AS APPROVED BY THE DISTRICT.



UPDATED NOV 2024

SEWER NOSE-ON

NOT TO SCALE

TB-103

PAGE 2 OF 2

TYPICAL PRECAST MANHOLE NOTES:

1. CONCENTRIC OR ECCENTRIC MANHOLE CONES ARE ACCEPTABLE .

2. NO STEPS IN CONE OR ON MANHOLE WALL IN CONCENTRIC MANHOLES. STEPS SHALL BE ALIGNED OVER THE SHELF OF ECCENTRIC MANHOLES

3. MANHOLES SHALL BE OF WATERTIGHT CONSTRUCTION, UTILIZING EITHER BITUMASTIC SEALANT OR RUBBER GASKET BETWEEN ADJACENT MANHOLE SECTIONS.

4. MANHOLE SHALL BE AT LEAST 5'-0" Ø IF SEWER MAIN IS GREATER THAN 10" Ø, OR IF THREE OR MORE SEWER MAIN PIPES CONNECT TO MANHOLE, OR OTHERWISE SPECIFIED ON DRAWINGS.

10. ALL MANHOLES WILL BE VACUUM TESTED. SEE SECTION 33 31 00 OF TBID STANDARD SPECIFICATIONS FOR MANHOLE TESTING REQUIREMENTS

11. LEVEL & ADJUST LID & FRAME TO FINISH GRADE (1/4" MAX BELOW SURFACE).

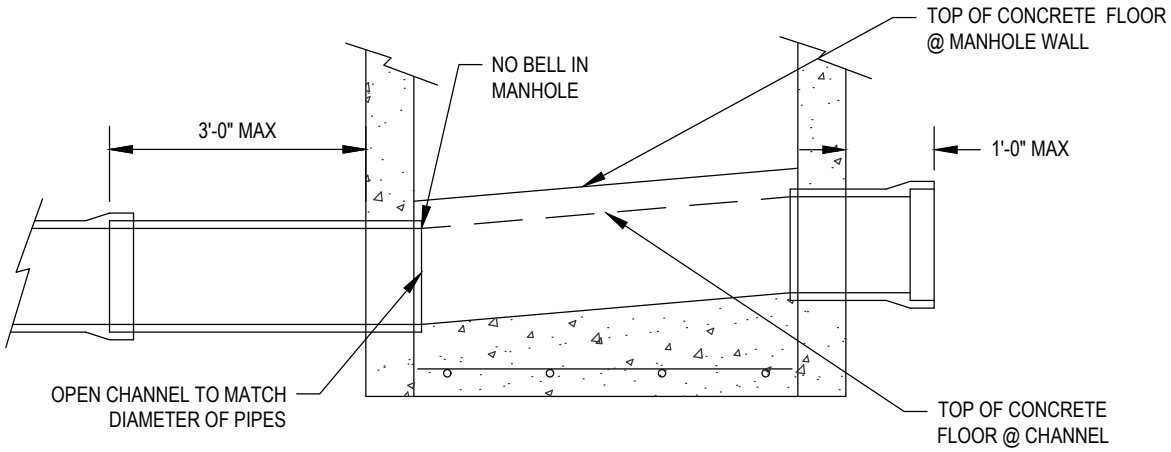
12. CONCRETE COLLARS REQUIRED IN PAVED AREAS.

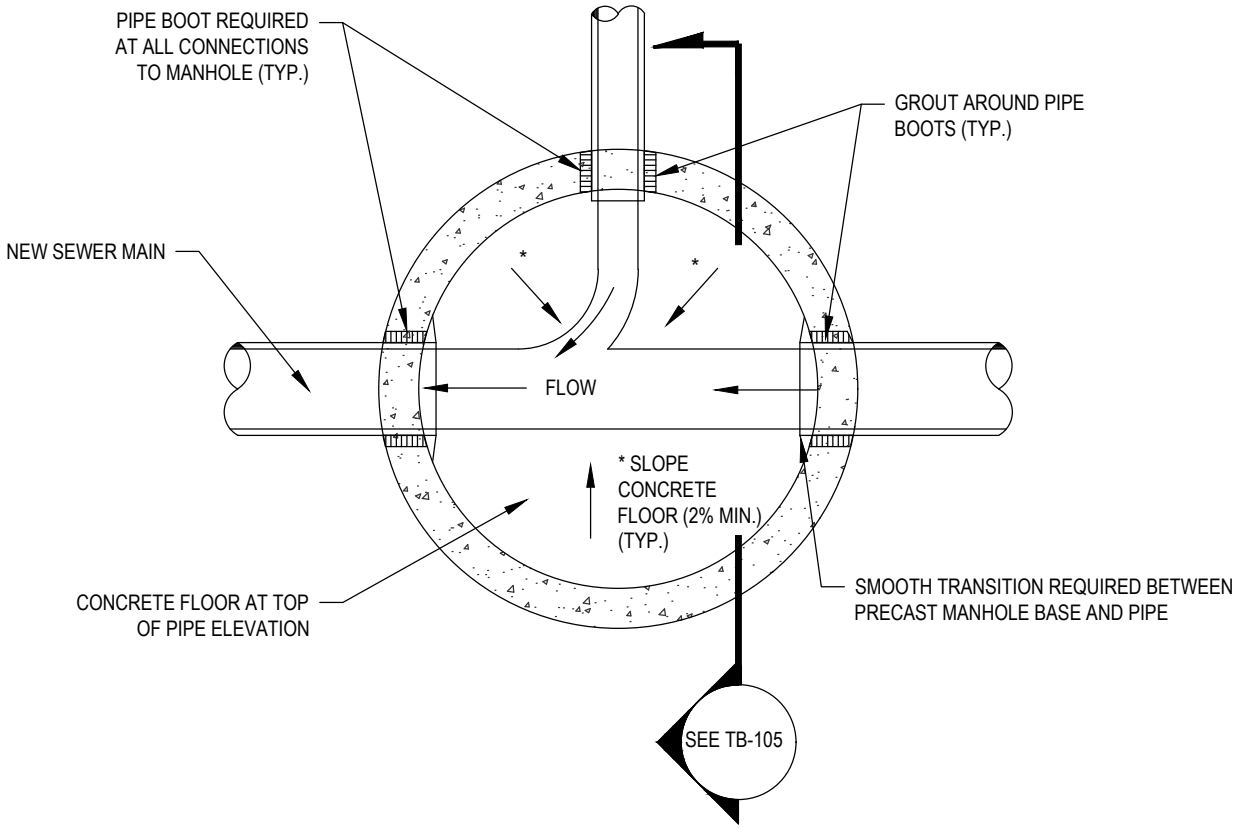
13. MANHOLE REQUIRED ON ALL SEWER MAIN STUB ENDS.

14. THERE IS TO BE A 0.2' DROP THROUGH EVERY MANHOLE.

15. INSTALL SUITABLE BARRIERS OR COVERS DURING CONSTRUCTION TO PREVENT DEBRIS FROM ENTERING SEWER MAIN PIPING VIA MANHOLES.

16. SEE TB-105 FOR ADDITIONAL INFORMATION.





UPDATED NOV 2024

TYPICAL PRECAST MANHOLE

NOT TO SCALE

TB-104

PAGE 2 OF 2

TYPICAL MANHOLE SECTION NOTES:

1. CONCENTRIC OR ECCENTRIC MANHOLE CONES ARE ACCEPTABLE .

2. NO STEPS IN CONE OR ON MANHOLE WALL IN CONCENTRIC MANHOLES.STEPS SHALL BE ALIGNED OVER THE SHELF OF ECCENTRIC MANHOLES

3. MANHOLES SHALL BE OF WATERTIGHT CONSTRUCTION, UTILIZING EITHER BITUMASTIC SEALANT OR RUBBER GASKET BETWEEN ADJACENT MANHOLE SECTIONS.

4. MANHOLE SHALL BE AT LEAST 5'-0" Ø IF SEWER MAIN IS GREATER THAN 10" Ø, OR IF THREE OR MORE SEWER MAIN PIPES CONNECT TO MANHOLE, OR IF OTHERWISE SPECIFIED ON DRAWINGS.

10. ALL MANHOLES WILL BE VACUUM TESTED. SEE SECTION 33 31 00 OF TBID STANDARD SPECIFICATIONS FOR MANHOLE TESTING REQUIREMENTS

11. LEVEL & ADJUST LID & FRAME TO FINISH GRADE (1/4" MAX BELOW SURFACE).

12. CONCRETE COLLARS REQUIRED IN PAVED AREAS.

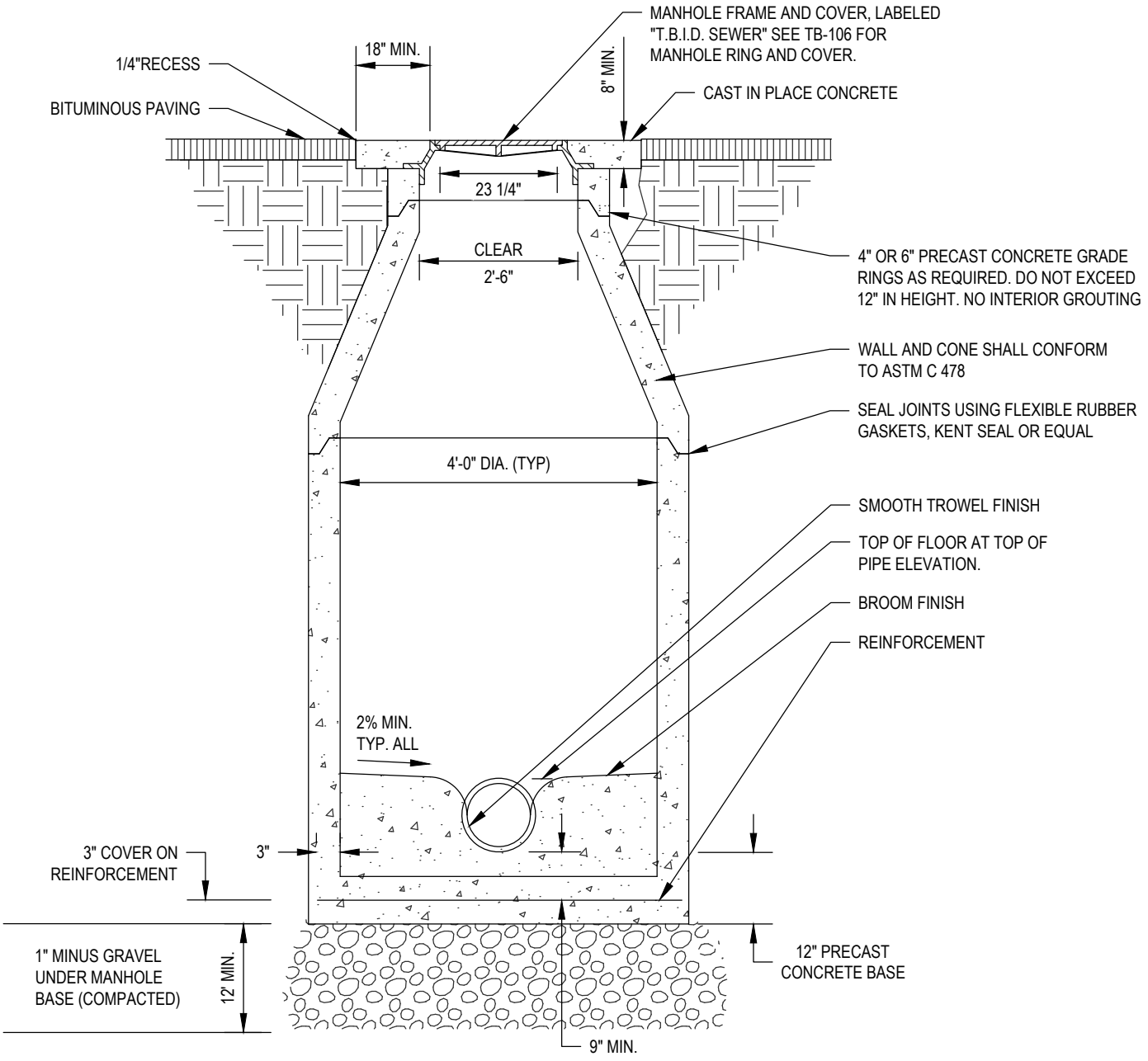
13. MANHOLE REQUIRED ON ALL SEWER MAIN STUB ENDS.

14. THERE IS TO BE A 0.2' DROP THROUGH EVERY MANHOLE.

15. INSTALL SUITABLE BARRIERS OR COVERS DURING CONSTRUCTION TO PREVENT DEBRIS FROM ENTERING SEWER MAIN PIPING VIA MANHOLES.

16. COMPACT TO 96% MAX DENSITY UNDER PAVEMENTS AND IMPROVED AREAS. COMPACT TO 90% MAX DENSITY IN UNIMPROVED AREAS.

17. SEE TB-104 FOR ADDITIONAL INFORMATION.



UPDATED NOV 2024

TYPICAL MANHOLE SECTION

NOT TO SCALE

TB-105

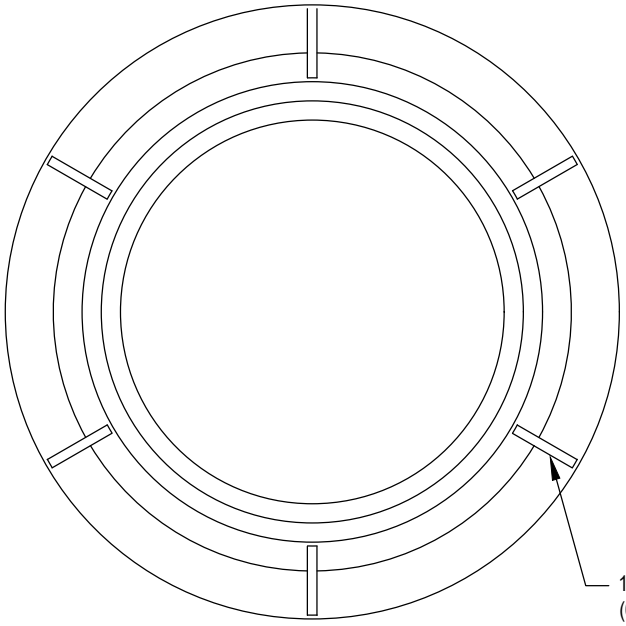
PAGE 2 OF 2

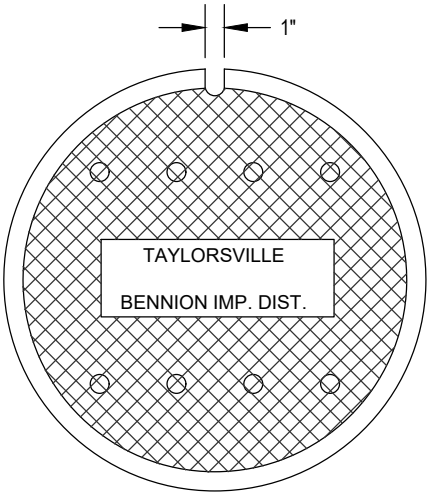
MANHOLE RING AND COVER NOTES:

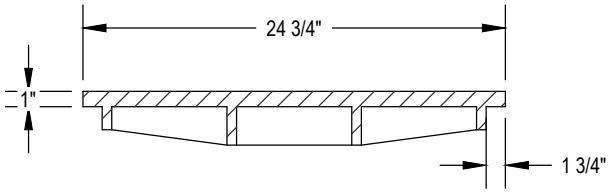
1. T.B.I.D. MANHOLE COVERS AVAILABLE AT D&L SUPPLY, NEENAH FOUNDRY, AND WESTAR SUPPLY.

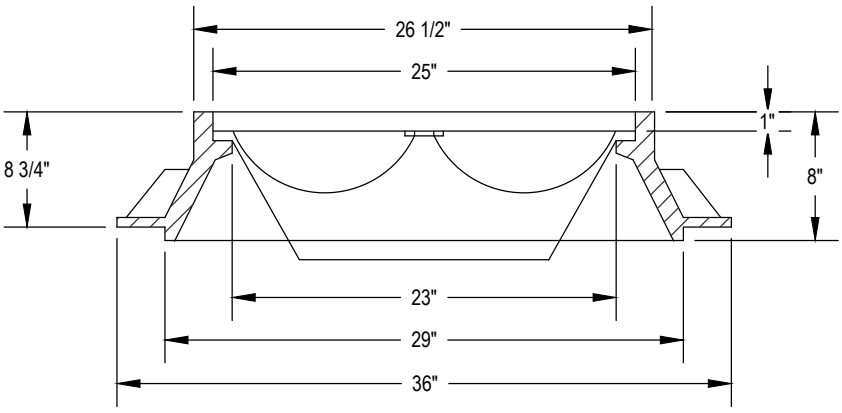
2. MANHOLES TO BE SUITABLE FOR HS-20 LOADINGS.

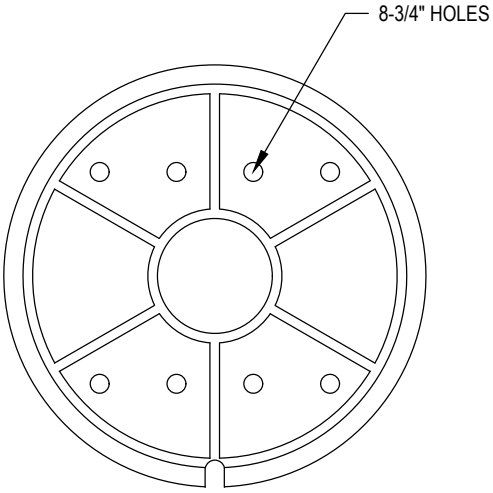
UPDATED NOV 2024











UPDATED NOV 2024

MANHOLE RING AND COVER

NOT TO SCALE

TB-106

PAGE 2 OF 2

NEW CAST IN PLACE MANHOLE ON EXISTING SEWER NOTES:

1. CONCENTRIC OR ECCENTRIC MANHOLE CONES ARE ACCEPTABLE.

2. NO STEPS IN CONE OR MANHOLE WALL OF CONCENTRIC MANHOLES. STEPS SHALL BE ALIGNED OVER THE SHELF IN ECCENTRIC MANHOLES.

3. MANHOLES SHALL BE OF WATERTIGHT CONSTRUCTION, UTILIZING EITHER BITUMASTIC SEALANT OR RUBBER GASKET BETWEEN ADJACENT MANHOLE SECTIONS.

4. MANHOLE SHALL BE AT LEAST 5'-0" Ø IF SEWER MAIN IS GREATER THAN 10" Ø, OR IF THREE OR MORE SEWER MAIN PIPES CONNECT TO MANHOLE, OR IF OTHERWISE SPECIFIED ON DRAWINGS.

5. CAST-IN-PLACE MANHOLES SHALL BE CAST WITH AT LEAST 80% OF THE FULL PIPE DIAMETER BELOW THE SKIRT/SHELF.

6. PROVIDE TEMPORARY SUPPORT FOR EXISTING SEWER DURING CONSTRUCTION.

7. INSTALL SUITABLE BARRIERS OR COVERS DURING CONSTRUCTION TO PREVENT DEBRIS FROM ENTERING SEWER MAIN PIPING VIA MANHOLES.

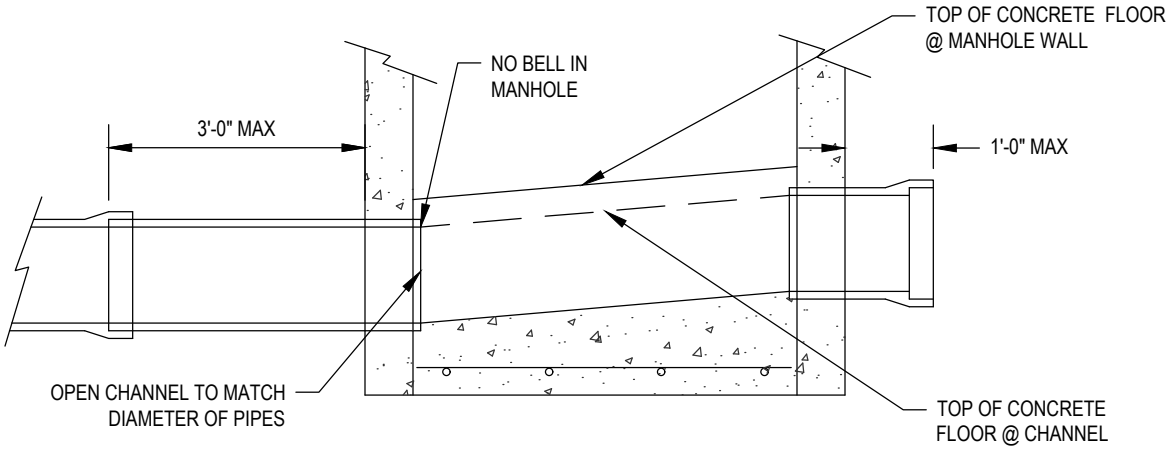
8. LEVEL & ADJUST LID & FRAME TO FINISH GRADE (1/4" MAX BELOW SURFACE).

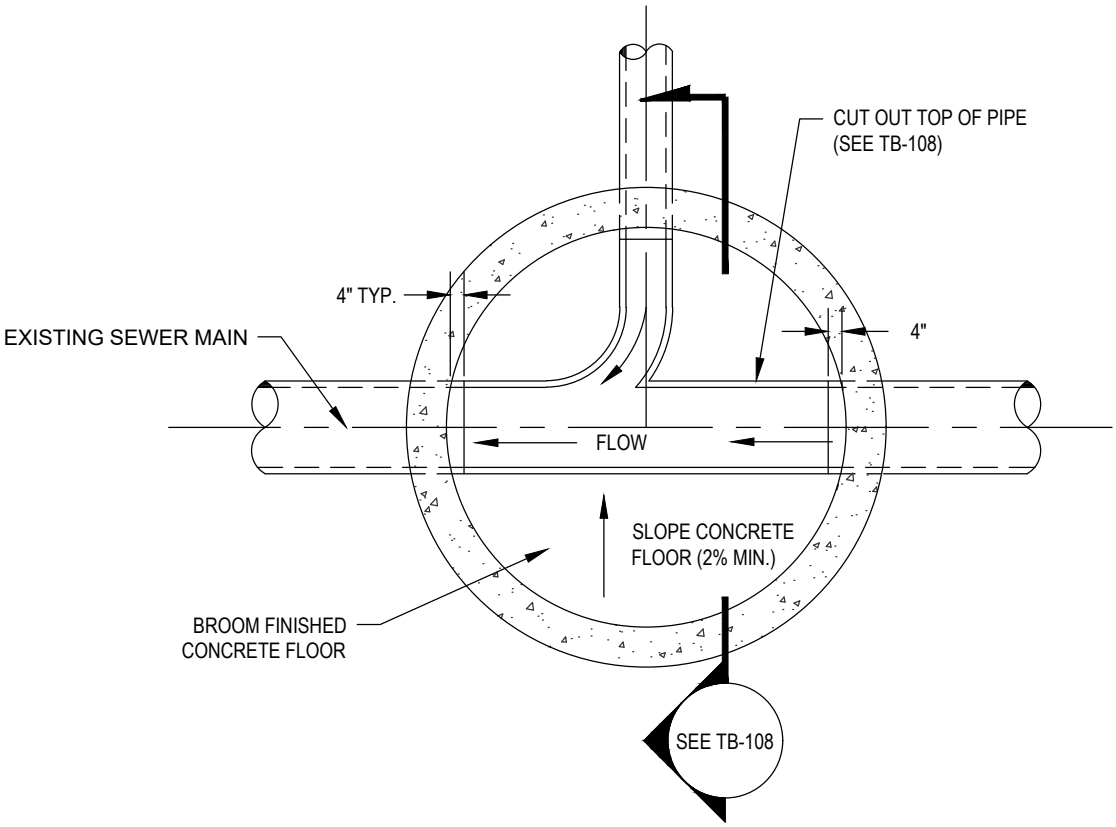
9. THE BASE RISER SECTION OF A POURED IN PLACE MANHOLE SHALL BE A MINIMUM OF 2 FEET HIGH.

10. MAINTAIN PIPE SLOPE THROUGH TROUGH OF THE MANHOLE.

11. COMPACT TO 96% MAX DENSITY UNDER PAVEMENTS AND IMPROVED AREAS. COMPACT TO 90% MAX DENSITY IN UNIMPROVED AREAS.

12. SEE TB-108 FOR ADDITIONAL INFORMATION.





UPDATED NOV 2024

PLAN - NEW CAST IN PLACE MANHOLE ON EXISTING SEWER

NOT TO SCALE

TB-107

PAGE 2 OF 2

NEW CAST IN PLACE MANHOLE ON EXISTING SEWER:

1. CONCENTRIC OR ECCENTRIC MANHOLE CONES ARE ACCEPTABLE.

2. NO STEPS IN CONE OR MANHOLE WALL OF CONCENTRIC MANHOLES. STEPS SHALL BE ALIGNED OVER THE SHELF IN ECCENTRIC MANHOLES.

3. MANHOLES SHALL BE OF WATERTIGHT CONSTRUCTION, UTILIZING EITHER BITUMASTIC SEALANT OR RUBBER GASKET BETWEEN ADJACENT MANHOLE SECTIONS.

4. MANHOLE SHALL BE AT LEAST 5'-0" Ø IF SEWER MAIN IS GREATER THAN 10" Ø, OR IF THREE OR MORE SEWER MAIN PIPES CONNECT TO MANHOLE, OR IF OTHERWISE SPECIFIED ON DRAWINGS.

5. CAST-IN-PLACE MANHOLES SHALL BE CAST WITH AT LEAST 80% OF THE FULL PIPE DIAMETER BELOW THE SKIRT/SHELF.

6. "DOGHOUSE" MANHOLE BASE SHALL BE USED FOR CAST-IN-PLACE MANHOLES.

7. PROVIDE TEMPORARY SUPPORT FOR EXISTING SEWER DURING CONSTRUCTION.

8. INSTALL SUITABLE BARRIERS OR COVERS DURING CONSTRUCTION TO PREVENT DEBRIS FROM ENTERING SEWER MAIN PIPING VIA MANHOLES.

9. LEVEL & ADJUST LID & FRAME TO FINISH GRADE (1/4" MAX BELOW SURFACE).

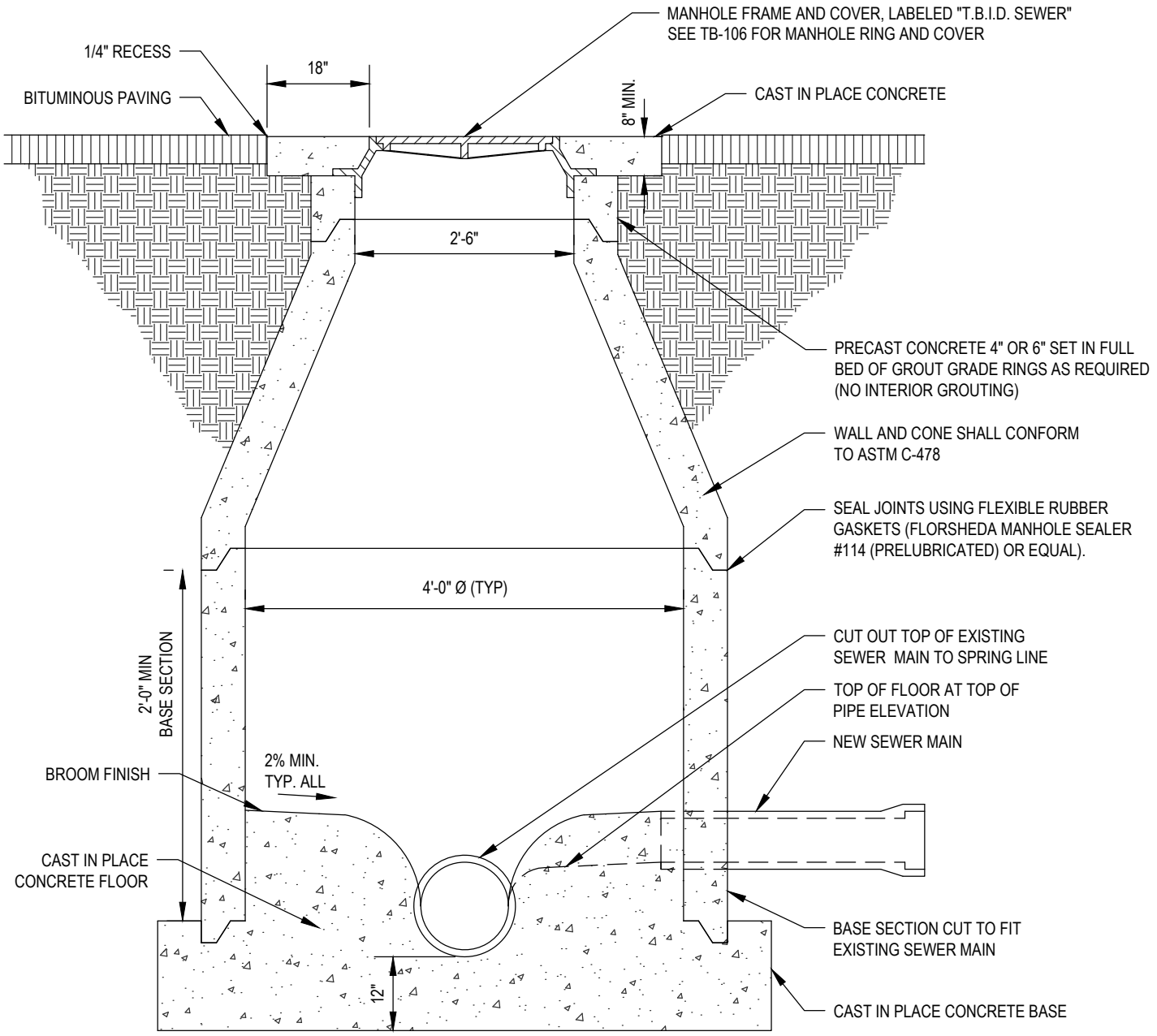
10. CONCRETE COLLARS REQUIRED IN PAVED AREAS.

11. THE BASE RISER SECTION OF A POURED IN PLACE MANHOLE SHALL BE A MINIMUM OF 2 FEET HIGH.

12. MAINTAIN PIPE SLOPE THROUGH TROUGH OF THE MANHOLE.

13. COMPACT TO 96% MAX DENSITY UNDER PAVEMENTS AND IMPROVED AREAS. COMPACT TO 90% MAX DENSITY IN UNIMPROVED AREAS.

14. SEE TB-107 FOR ADDITIONAL INFORMATION.



UPDATED NOV 2024

SECTION - NEW CAST IN PLACE MANHOLE ON EXISTING SEWER

NOT TO SCALE

TB-108

TYPICAL DROP MANHOLE NOTES:

1. ALL DROP MANHOLES TO BE APPROVED BY THE DISTRICT.

2. CONCENTRIC OR ECCENTRIC MANHOLE CONES ARE ACCEPTABLE .

3. NO STEPS IN CONE OR ON MANHOLE WALL IN CONCENTRIC MANHOLES.STEPS SHALL BE ALIGNED OVER THE SHELF OF ECCENTRIC MANHOLES

4. MANHOLES SHALL BE OF WATERTIGHT CONSTRUCTION, UTILIZING EITHER BITUMASTIC SEALANT OR RUBBER GASKET BETWEEN ADJACENT MANHOLE SECTIONS.

5. MANHOLE SHALL BE AT LEAST 5'-0" Ø IF SEWER MAIN IS GREATER THAN 10" Ø, OR IF THREE OR MORE SEWER MAIN PIPES CONNECT TO MANHOLE, OR IF OTHERWISE SPECIFIED ON DRAWINGS.

10. ALL MANHOLES WILL BE VACUUM TESTED. SEE SECTION 33 31 00 OF TBID STANDARD SPECIFICATIONS FOR MANHOLE TESTING REQUIREMENTS

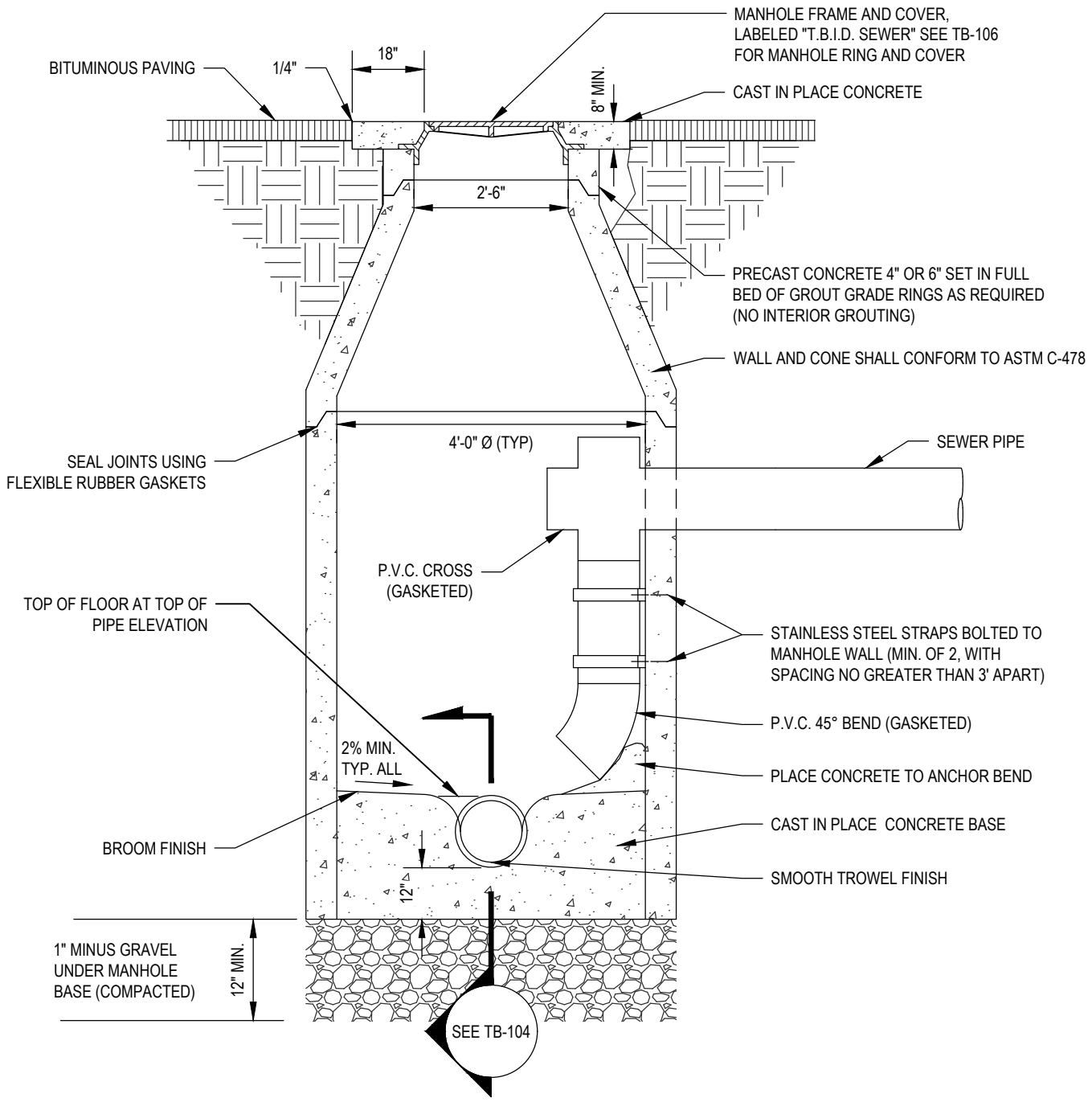
11. LEVEL & ADJUST LID & FRAME TO FINISH GRADE (1/4" MAX BELOW SURFACE).

12. CONCRETE COLLARS REQUIRED IN PAVED AREAS.

13. MANHOLE REQUIRED ON ALL SEWER MAIN STUB ENDS.

14. THERE IS TO BE A 0.2' DROP THROUGH EVERY MANHOLE.

15. INSTALL SUITABLE BARRIERS OR COVERS DURING CONSTRUCTION TO PREVENT DEBRIS FROM ENTERING SEWER MAIN PIPING VIA MANHOLES



UPDATED NOV 2024

TYPICAL DROP MANHOLE SECTION

NOT TO SCALE

TB-109

SAMPLING MANHOLE/GREASE INTERCEPTOR NOTES:

1. SAMPLING MANHOLE AND GREASE INTERCEPTOR ARE PRIVATELY OWNED AND MAINTAINED BY THE PROPERTY OWNER.

2. SAMPLING MANHOLE AND GREASE INTERCEPTOR TO BE DESIGNED FOR HS-20 LOAD.

3. ALL PIPE AND FITTINGS TO BE SDR-35. ALL FITTINGS TO BE GASKETED .

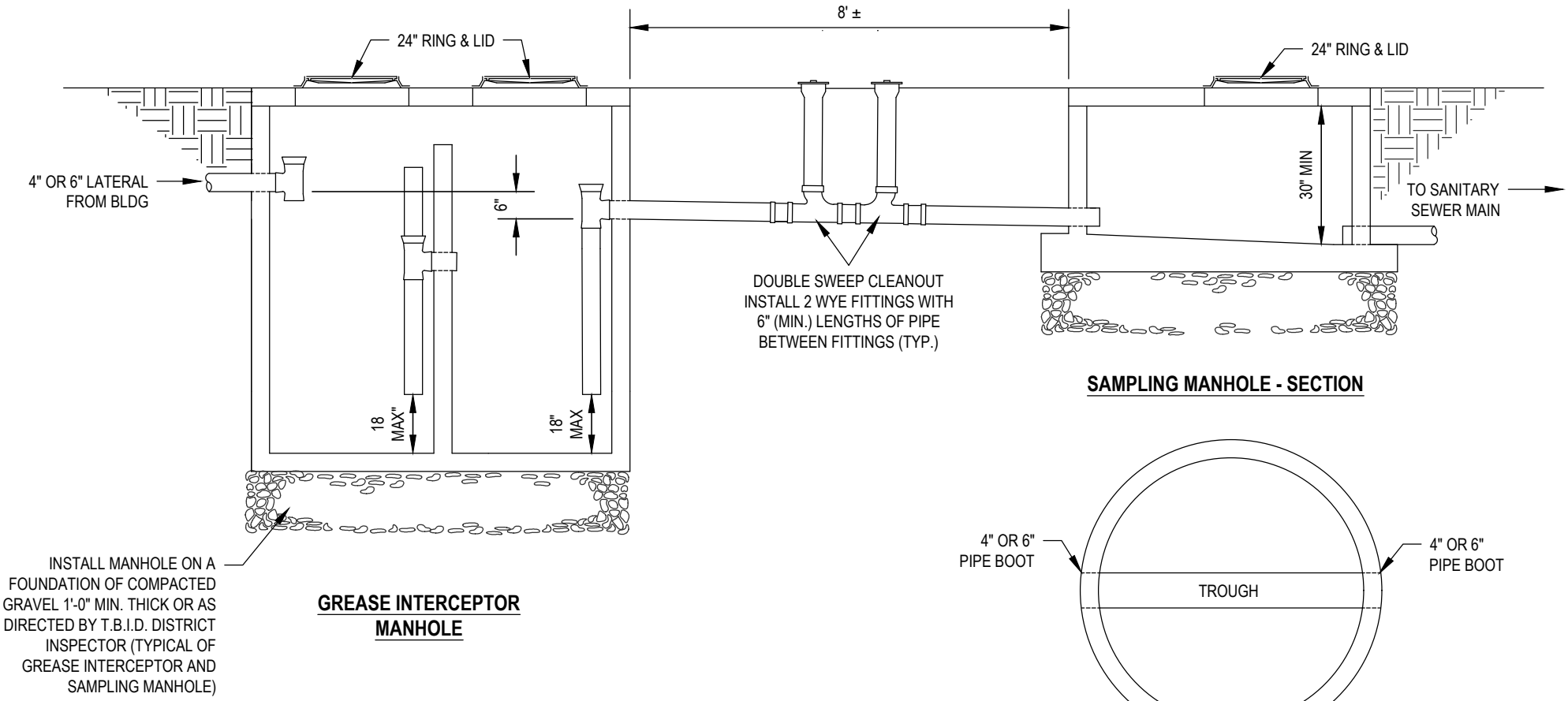
4. PIPE BOOTS AND WATER TIGHT GROUT REQUIRED AT ALL PIPE CONNECTIONS TO MANHOLES.

5. SAMPLING MANHOLE AND GREASE INTERCEPTOR MUST BE ACCESSIBLE AND MUST NOT BE PLACED IN PARKING STALLS.

6. THE SIZE AND CAPACITY OF GREASE INTERCEPTORS SHALL BE DETERMINED BY A CERTIFIED PROFESSIONAL.

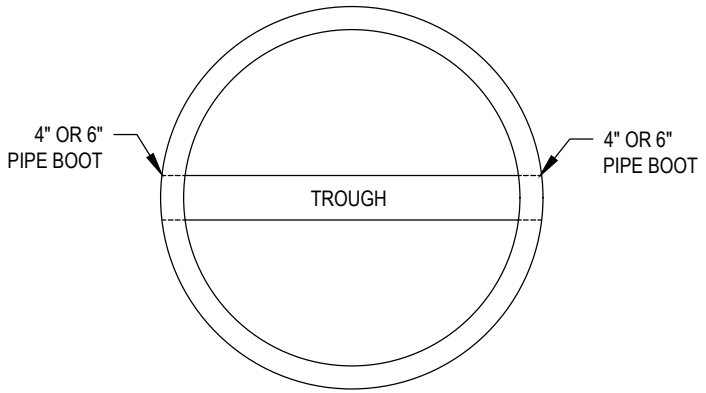
7. GREASE INTERCEPTORS SHALL BE CONCRETE. SCHIER MOLDED POLYETHYLENE GREASE INTERCEPTORS ARE PERMITTED AS APPROVED BY THE DISTRICT ON A CASE BY CASE BASIS.

8. SEE TB-102 FOR ADDITIONAL SEWER LATERAL REQUIREMENTS AND INFORMATION.



GREASE INTERCEPTOR MANHOLE

SAMPLING MANHOLE - SECTION



SAMPLING MANHOLE - PLAN

UPDATED NOV 2024

SAMPLING MANHOLE/GREASE INTERCEPTOR

NOT TO SCALE

TB-110

DOCUMENT 00 00 30
TABLE OF CONTENTS

SECTION 01 00 50
ADMINISTRATIVE PROVISIONS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. This section includes reference standards, work schedule, contractor use of premises, Taylorsville-Bennion Improvement District ("District") occupancy, District furnished services, coordination and field engineering.

1.2 RELATED WORK

A. Section 01 33 00 – Submittals

B. Section 01 45 00 – Quality Control

C. Section 01 57 00 – Construction Facilities and Temporary Controls

D. Section 01 78 00 – Closeout Procedures

1.3 REFERENCES

A. For products specified by association or trade standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.

B. The date of the standard is that in effect as of the Bid date, or date of Owner-Contractor Agreement when there are no bids, except when a specific date is specified.

C. Obtain copies of standards when required by individual specifications section. Maintain copy at jobsite during progress of the specific work.

D. Schedule of reference standards:

AASHTO - American Association of State Highway
and Transportation Officials
444 North Capitol Street, N.W.
Washington, DC 20001

ACI - American Concrete Institute
Box 19150
Redford Station
Detroit, MI 48219

ANSI - American National Standards Institute
1430 Broadway
New York, NY 10018

APWA- American Public Works Association
1275 K Street, NW, Suite 750
Washington, DC 20005

ASTM - American Society for Testing and Materials
100 Barr Harbor Drive
Conshohocken, PA 19428-2959

AWWA- American Water Works Association
6666 W. Quincy Ave
Denver, CO 80235

DIPRA- Ductile Iron Pipe Research Association
PO Box 190306
Birmingham, AL 35219

OSHA- Occupational Safety and Health Administration
200 Constitution Ave NW
Washington, DC 20210

UL - Underwriters' Laboratories, Inc.
333 Pfingston Road
Northbrook, IL 60062

Uni-Bell PVC Pipe Association
2711 Lyndon B Johnson Fwy #1000
Dallas, TX 75234

1.4 WORK SEQUENCE

A. Provide and coordinate construction schedule and operations with District.

1.5 CONTRACTOR USE OF PREMISES

A. Notify the District at least 48 hours prior to commencing any work.

B. Limit use of premises for work and for construction operations; limit construction operations to areas within the construction limits or easement or developer property.

C. Limit access to site from public roads or other construction easements as shown.

D. Coordinate use of premises with the District.

1.6 COORDINATION

A. Coordinate work of the various sections of specifications to assure efficient and orderly sequence of installation of construction elements, with provisions for accommodating items installed later.

B. Coordinate with the District regarding construction schedule and progress such that

they may survey new construction such as waterlines, valves, sewer lines, manholes, and appurtenances prior to permanently backfilling or concealing work.

1.7 FIELD ENGINEERING

A. Verify locations of all existing underground utilities and facilities and other items affecting the work and coordinate work with the owner of those utilities and other facilities. Call Blue Stakes Location Service at least 48 hours before digging.

B. Provide field engineering services as required to establish grades, lines, and levels from construction stakes and cut sheets in order to complete the work in accordance with these drawings and specifications.

C. The locations of existing underground utilities depicted on the drawings are shown in an approximate way only. Determine the exact location of all existing utilities, whether or not shown on the drawings, before commencing work. Contractor agrees to be fully responsible for any and all damages which might be occasioned by his failure to exactly locate and preserve any and all underground utilities. If damaged or removed, the existing utility shall be restored or replaced by Contractor.

D. Locate and protect survey reference lines, bench marks and monuments

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION

SECTION 01 33 00
SUBMITTALS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. This section includes general procedures and requirements for submittals during the course of construction.

1.2 RELATED WORK

A. Section 03 10 00 – Cast-In-Place Concrete

B. Section 31 23 00 – Excavation, Backfilling and Compaction

C. Section 33 05 23 – Cured-In-Place Pipe (CIPP)

D. Section 33 11 00 – Water Distribution and Transmission

E. Section 33 13 00 – Disinfection of Water Distribution Systems

F. Section 33 31 00 – Sanitary Sewer Systems

G. Section 33 31 20- Temporary Sewer Bypass Pumping

PROCEDURES

A. Transmit each submittal to the District with Contractor's standard submittal form.

B. Sequentially number the transmittal forms. Resubmittals to have original number with an alphabetic suffix.

C. Identify Project, Contractor, subcontractor or supplier; pertinent drawing sheet and detail number(s), and specification Section number, as appropriate.

D. Sign or initial each submittal certifying that review, verification of products required, field dimensions, adjacent construction Work, and coordination of information, is in accordance with the requirements of the Work and Contract Documents.

E. Schedule submittals to expedite the Project, and deliver to District at business address. Coordinate submission of related items.

F. Identify variations from Contract Documents and product or system limitations which may be detrimental to successful performance of the completed Work.

G. Revise and resubmit submittals as required, identify all changes made since previous submittal.

H. Distribute reviewed submittals to concerned parties. Instruct parties to promptly

report any inability to comply with provisions.

I. Required Contractor submittals for this project include but are not limited to those indicated in the sections listed in “Related Work” above.

1.3 SCHEDULE

A. Submit construction schedule within 15 days after date of Notice to Proceed.

B. Revise and resubmit as required.

1.4 PROPOSED PRODUCTS LIST

A. Within 15 days after date of Notice to Proceed, submit complete list of major products proposed for use, with name of manufacturer, trade name, and model number of each product.

B. For products specified only by reference standards, give manufacturer, trade name, model or catalog designation, and reference standards.

1.5 SHOP DRAWINGS

A. Submit the number of copies which Contractor requires, plus one (1) copy which will be retained by the District.

B. After review, produce copies in accordance with procedures established in this section and for record documents as described in Section 01 78 50 – Closeout Procedures.

1.6 PRODUCT DATA

A. Mark each copy to identify applicable products, models, options, and other data; supplement manufacturers' standard data to provide information unique to the Work.

B. Submit the number of copies which Contractor requires, plus one (1) copy which will be retained by the District.

1.7 MANUFACTURER'S INSTRUCTIONS

A. When required in individual specification section, submit manufacturer's printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, in quantities specified for product data.

1.8 MANUFACTURER'S CERTIFICATES

A. Provide certificates of compliance with specifications as requested by the District

or individual specifications sections.

1.9 SAMPLES

A. Provide samples of materials as required by individual specification sections.

B. Include identification on each sample, giving full information.

C. Submit the number specified in respective specification section; one will be retained by the District.

D. Provide field samples of finishes at project as required by individual specification section.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION

SECTION 01 45 00
QUALITY CONTROL

PART 1 GENERAL

1.1 SECTION INCLUDES

A. This section includes general quality control, workmanship, manufacturer's instructions and certificates, and testing services.

1.2 RELATED WORK

A. Section 01 00 50 - Administrative Provisions

B. Section 01 33 00 – Submittals

C. Section 01 57 00 – Construction Facilities and Temporary Controls

D. Section 01 78 50 – Closeout Procedures

E. Section 03 10 00 – Cast-In-Place Concrete

F. Section 31 23 00 – Excavation, Backfilling and Compaction

G. Section 33 05 23 – Cured-In-Place Pipe (CIPP)

H. Section 33 11 00 – Water Distribution and Transmission

I. Section 33 13 00 – Disinfection of Water Distribution Systems

J. Section 33 31 00 – Sanitary Sewer Systems

K. Section 33 31 20– Temporary Sewer Bypass Pumping

1.3 SUBMITTALS

A. Before construction, identify testing agency including name, address, telephone number, licensed professional for testing agency who is to review services, names and levels of certification and years of experience of testing agency's laboratory and field technicians.

B. During construction, submittal quality control test data requested by District to demonstrate that the work performed complies with the contract documents.

1.4 QUALITY CONTROL - GENERAL

A. Maintain quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce work of specified quality.

1.5 WORKMANSHIP

A. Comply with industry standards except when more restrictive tolerances or specified

requirements indicate more rigid standards or more precise workmanship.

B. Perform work by persons qualified to produce workmanship of specified quality.

1.6 MANUFACTURERS' INSTRUCTIONS

A. Comply with instructions in full detail, including each step in sequence. Should instructions conflict with District specifications, request clarification from District before proceeding.

1.7 MANUFACTURERS' CERTIFICATES

A. When required by individual Specifications Section, submit manufacturer’s certificate, in duplicate, that products meet or exceed specified requirements.

1.8 TESTING LABORATORY SERVICES

A. Contractor shall employ and pay for services of an Independent Testing Laboratory to perform inspections, tests, and other services required by individual Specification Sections.

B. Services will be performed in accordance with requirements of local jurisdiction having authority and with specified standards.

C. Reports will be submitted to District in duplicate giving observations and results of tests, indicating compliance or noncompliance with specified standards and with Contract Documents.

D. Contractor shall cooperate with Testing Laboratory personnel; furnish tools, samples of materials, mix design, equipment, storage and assistance as requested.

1. Notify District and Testing Laboratory 24 hours prior to expected time for operations requiring testing services.
2. Make arrangements with Testing Laboratory and pay for additional samples and tests for Contractor's convenience.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION

SECTION 01 57 00
CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Requirements for controlling surface and subsurface environmental conditions at a construction site, and related areas under the Contractor's responsibility.

B. Requirements for traffic control.

1.2 RELATED WORK

A. Section 01 00 50 - Administrative Provisions.

B. Section 01 70 00 - Contract Closeout

1.3 SUBMITTALS

A. Fugitive Dust Permit, as required by Utah DEQ Division of Air Quality

B. Storm Water Pollution Prevention Permit, as required by Utah DEQ Division of Water Quality

C. Layout of fences, barriers and enclosures

D. Traffic control plan, approved by the proper local or state authorities

E. Excavation & Road Cut Permits as required by local or state authorities

1.4 TEMPORARY UTILITIES

A. Field Office: contractor's choice.

B. Utilities: provide power, telephone, water, storm and sanitary facilities, and all other temporary utilities required.

C. Security and protection: construct and maintain temporary fencing for the protection of materials, tools and equipment. Obtain prior approval for all fence locations.

D. Construction and support: set up and maintain in a neat and orderly manner temporary roads and paving, dewatering facilities, enclosures, identification signs and bulletin boards, waste disposal and temporary heat. Provide and maintain temporary all weather pedestrian walkways and road detours.

E. Electricity, Lighting: provide service required for construction operations, with branch wiring and distribution boxes located to allow service and lighting by means of construction-type power cords. Provide lighting for construction operations.

1.5 SANITARY FACILITIES

A. Provide and maintain required facilities and enclosures.

B. Existing restroom facilities shall not be used.

1.6 BARRIERS AND ENCLOSURES

A. Provide barriers and enclosures as required to prevent public entry to construction areas while allowing for District's use of site, and to protect existing facilities and adjacent properties from damage from construction operations.

B. Provide 6 foot high fence around construction site and equip with vehicular and pedestrian gates with locks. Construction: contractor's option.

C. Provide barricades and covered walkways as required by governing authorities for public rights-of-way and for public access to existing building.

D. Provide barriers around trees and plants designated to remain. Protect against vehicular traffic, stored materials, dumping, chemically injurious materials, and puddling or continuous running water.

E. Use local standards and codes for erection of adequate fences and barricades. Maintain all signing, barricades, fencing, drainage and other items as required to protect public and private property from damage caused by construction operations.

1.7 PROTECTION OF INSTALLED WORK

A. Provide temporary protection for installed products. Control traffic in immediate area to minimize damage. Repair or replace at the District's option any installed work damaged by traffic, the public, or Work operations.

B. Prohibit traffic on restored lawn and landscaped areas.

1.8 DUST, WATER AND NOISE CONTROL

A. Surface Water, Erosion and Sediment Control:

1. Surface water shall be controlled so that the construction area is not allowed to become wet from runoff from adjacent areas. Surface water shall be directed away from these areas but not directed toward adjacent property, buildings, or any improvement that may be damaged by water. Surface water shall not be allowed to enter sanitary sewers.
2. Prevent erosion and sedimentation.
3. Provide temporary measures such as berms, dikes, and drains, to prevent water flow.

B. Dust Control:

1. Provide suitable equipment to control dust or air pollution caused by construction operations to all work areas, storage areas, haul and access

roads, or other areas affected by construction.

2. All work shall be in compliance with the Federal, State, and local air pollution standards, and not cause a hazard or nuisance to personnel and the public in the vicinity of the work.
3. Execute work by methods to minimize raising dust from construction operations.

C. Noise Control:

1. Use equipment that is equipped with noise attenuation devices. Comply with local laws and regulations.
2. Control construction noise in residential areas as specified by Salt Lake County Health Department.

1.9 CONSTRUCTION CLEANING

A. All public and private areas used as haul roads shall be continuously maintained and cleaned of all construction caused debris such as mud, sand, gravel, soils, pavement fragments, sod, etc. Care shall be taken to prevent spillage on haul routes. Any such spillage shall be removed immediately and the area cleaned.

B. Public roads shall be maintained in accordance with applicable ordinances and regulations.

C. Throughout all phases of construction, including suspension of work, and until final acceptance of the project, the Contractor shall keep the work site clean and shall remove daily all refuse, dirt, damaged materials, unusable materials, and all other trash or debris that he has created from his construction activities.

D. Materials and equipment shall be removed from the site as soon as they are no longer necessary; and upon completion of the work and before final inspection, the entire worksite shall be cleared of equipment, unused materials, and rubbish so as to present a satisfactory clean and neat appearance. All cleanup costs shall be included in the Contractor's Bid.

1.10 TRAFFIC REGULATION

A. Follow local and state requirements regarding traffic control.

B. Where local jurisdictions have no requirements, construct and erect according to "Manual on Uniform Traffic Control Devices for Streets and Highways" (MUTCD).

1.11 BY-PASS PUMPING

Provide for the flow of sewage around the section or sections of pipe designated for rehabilitation. Bypass pumping operations shall not interfere with traffic flow on streets or cross railroad tracks without prior written consent from the appropriate agencies or jurisdictions. The pumps and bypass lines shall be of adequate capacity and size to handle the flow and will be equipped with sound attenuating devices. A 100% capacity standby pumping system shall be available on site at all times to be used in the event of bypass pump failure. The bypass plan is to be submitted 2

weeks prior for approval. Bypass pumping of private lateral connections is required.

1.12 GROUND WATER CONTROL

A. Provide a dewatering system sufficient to maintain excavations and foundations dry and free of water on a 24 hour basis.

B. Remove all dewatering facilities when no longer required.

C. Dispose of water in a manner that will not cause damage to adjacent or downstream areas or facilities.

1.13 POLLUTION CONTROL

A. Soil: prevent contamination of soil from discharge of noxious substances (including engine oils, fuels, lubricants, etc.). Excavate and legally dispose of any such contaminated soil off-site, and replace with acceptable compacted fill and topsoil.

B. Water: prevent disposal of wastes, effluent, chemicals, or other such substances adjacent to or into streams, waterways, sanitary sewers, storm drains or public waterways. Perform any emergency measures required to contain any spillage.

C. Air: Control atmospheric pollutants.

1.14 REMOVAL

A. Remove temporary materials, equipment, services, and construction prior to Substantial Completion inspection.

B. Clean and repair damage caused by installation or use of temporary facilities. Remove underground installations to a depth of 2 feet; grade site as indicated. Restore existing facilities used during construction to specified, or to original, condition.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION

SECTION 01 78 50
CLOSEOUT PROCEDURES

PART 1 GENERAL

1.1 SECTION INCLUDES

A. This section includes closeout procedures, final cleaning, project record documents, and operation and maintenance data.

1.2 RELATED WORK

A. Section 01 00 50 – Administrative Provisions

B. Section 01 33 00 – Submittals

C. Section 01 45 00 – Quality Control

D. Section 01 57 00 – Construction Facilities and Temporary Controls

1.3 SUBMITTALS

A. All survey data, survey information showing dimensions, location angles and elevations of construction on contract Record Drawings.

B. Operation and maintenance data

C. Final summary report of contractor's testing agency.

1.4 CLOSEOUT PROCEDURES

A. When Contractor considers Work has reached final completion, submit written certification that the work is complete in accordance with the drawings and specifications and ready for the District's review.

B. Provide submittals required by governing authorities.

C. After receipt of Contractor's certification of work completion, the District will make a final inspection to determine status of completion.

D. Should Work not be complete, remedy deficiencies and resubmit a written notice.

1.5 FINAL CLEANING

A. Execute prior to final inspection.

B. Clean and flush drainage systems.

C. Clean site; sweep paved areas, rake clean other surfaces.

D. Remove waste and surplus materials, rubbish, and construction facilities from the

Project and from the site after final acceptance.

1.6 PROJECT RECORD DOCUMENTS

A. Store record documents separate from those used for construction.

B. Keep documents current; do not permanently conceal any work until required information has been recorded.

C. At Contract closeout, submit documents including construction redlines for producing “Record Drawings” with transmittal letter containing date, Project title, Contractor's name and address, list of documents, and signature of Contractor.

D. For each Specification Division, give names, addresses, and telephone numbers of subcontractors and suppliers list:

1. Shop Drawings and Product Data
2. Warranties

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION

SECTION 31 23 00
EXCAVATION, BACKFILLING AND COMPACTION

PART 1 GENERAL

1.1 SECTION INCLUDES

A. This section includes preparation, excavation, backfilling, compaction, dewatering and/or runoff control measures, trench shoring, restoration of existing facilities damaged or displaced as a result of the work of the project, clean up, protection and maintenance.

1.2 RELATED WORK

A. Section 33 11 00 - Water Distribution and Transmission

B. Section 33 31 00 - Sanitary Sewer Systems

1.3 REFERENCES

A. The applicable provisions of the latest editions of the References listed below shall govern the Work covered under this Section, unless there is a conflict between said References and the requirements of this Section. In the case of such a conflict, the requirements of this Section shall apply.

B. Utah Occupational Safety and Health Division (UOSHD).

C. American Association of State Highway and Transportation Officials (AASHTO):

D. American Society for Testing and Materials (ASTM)

E. American Public Works Association (APWA)

1.4 SUBMITTALS

A. Submit evidence of materials conformance with applicable requirements as well as these specifications.

1.5 QUALITY ASSURANCE

A. Comply with federal, state, and local codes and regulations.

B. All working conditions shall be in accordance with the "Utah Occupational Safety and Health Division", Safe Practices for Excavation & Trenching Operations, latest edition, or other Laws or Regulations which apply.

C. Utah Department of Transportation requirements shall govern for all work in U.D.O.T. highway right-of-ways.

1. All work shall conform to the applicable standards, regulations, and requirements of Utah Department of Transportation, including the

Speculations for Excavation on State Highways.

2. Permits shall be obtained and paid for by the Contractor.
3. License and Permit Bond, without cancellation clause, in an amount and form prescribed by Utah Department of Transportation, shall be provided by the Contractor in connection with his excavations in U.D.O.T. right-of-ways.

D. Taylorsville City requirements shall govern for all work in Taylorsville City road right-of-ways:

1. All work shall conform to the applicable standards, regulations, and requirements of Taylorsville City.
2. Permits shall be obtained and paid for by the Contractor.
3. License and Permit Bond, without cancellation clause, in an amount and form prescribed by Taylorsville City, shall be provided by the Contractor in connection with his excavations in Taylorsville City right-of-ways.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Materials suppliers shall provide, upon request, verification of a consistent record of meeting or exceeding materials or performance standards as specified herein.

2.2 FOUNDATION MATERIALS

A. All foundation materials shall be free from alkali, salt, and petroleum products, roots, sod, limbs, and other vegetative matter, slag, cinders, ashes and rubbish, or other material that in the opinion of the District may be objectionable or deleterious.

B. Undisturbed soil foundation material:

1. Shall be natural trench bottom soil unless unable to adequately support pipe or structures.
2. Shall not be lumpy or frozen.

C. Sewer Rock:

1. Shall be hard, durable, broken, angular, crushed stone or high quality mineral or combination thereof.
2. Shall be graded as follows:

Sewer Rock Gradation

Sieve Size	*% Passing*
2”	100
1.5”	90-100
1”	20-55
¾”	0-15
3/8”	0-5

2.3 BEDDING MATERIALS

A. Sand Bedding for Water Pipes:

1. Shall be free from alkali, salt, and petroleum products, roots, sod, limbs, and other vegetative matter, slag, cinders, ashes and rubbish, or other material that in the opinion of the District may be objectionable or deleterious.

2. Graded within the following limits:

Sand Bedding Gradation

Sieve Size	*% Passing*
¾”	100
No. 4	80-100
No. 10	30-50
No. 40	10-30
No. 200	0-15

B. Gravel Bedding for Sewer Pipes:

1. Shall be hard, durable, broken, angular, crushed stone or high quality mineral or combination thereof.
2. Shall be graded as follows:

Gravel Bedding Gradation

Sieve Size	*% Passing*
1-1/2”	100
1”	95-100
½”	25-60
No. 4	0-10
No. 8	0-5

2.4 BACKFILL MATERIALS

A. Granular backfill:

1. Shall be readily compactable and shall be free from alkali, salt, and petroleum products, roots, sod, limbs, and other vegetative matter, slag, cinders, ashes and rubbish, or other material that in the opinion of the District may be objectionable or deleterious.
2. Graded within the following limits:

Granular Backfill Gradation

Sieve Size	*% Passing*
3”	100
No. 10	50 max
No. 40	30 max
No. 200	15 max

3. May be select material from excavation if it will meet all requirements of granular backfill, including compaction requirements as specified for type of surface improvement above trench.

B. Excavated Soil Backfill Material:

1. Shall be free from alkali, salt, and petroleum products, roots, sod, limbs, and other vegetative matter, slag, cinders, ashes and rubbish, or other material that in the opinion of the District may be objectionable or deleterious.
2. Shall be select material from excavation, with no particle larger than 4 inches in diameter.
3. Use on-site materials only if specified compaction requirements can be met.

PART 3 EXECUTION

3.1 EXAMINATION

A. It shall be the Contractor's sole responsibility to locate all (whether or not shown on the Drawings) existing water, sanitary sewer, storm drain, and gas lines, electrical and telephone conduit and other underground utilities with their existing house service connections, and all other underground structures in order that no damage or loss of service will result from interference with existing lines.

B. Review all available drawings, notes, and information on the location of these underground lines and structures in determining the location of the existing facilities.

C. Blue Stakes Location Center shall be contacted 48 hours before any excavation is commenced.

D. Mark with paint any existing cracks on concrete along which work will take place, in order to determine after the construction is completed whether such damage was caused by the operations of the Contractor or had occurred previously. Any concrete showing unmarked cracks upon completion of construction will be evidence of damage by the Contractor's forces, and shall be replaced or repaired to the satisfaction of the owner of the damaged concrete, at the Contractor’s own expense.

E. All fences removed for excavation shall be returned to their original condition except that damaged portions will be replaced with new fencing at the Contractor's expense.

F. Obtain all required permits.

3.2 METHODS AND PROCEDURES

A. General Requirements

1. All gas, sanitary sewer, storm drain, water and other pipelines, flumes and ditches of metal, wood or concrete, underground electrical conduits and telephone cable, and all walks, curbs, and other improvements encountered in excavating trenches carefully shall be supported, maintained and protected from injury or interruption of service until backfill is complete and settlement has taken place.

2. If any existing facility is damaged or interrupted, promptly after becoming aware thereof and before performing any Work affected thereby except in an emergency, identify the owner of such existing facility, and give written notice thereof to that owner and the District. Indemnify the District and Engineer from any and all damages resulting from damaged facilities.
3. All damage, injury or loss resulting from lack of adequate sheeting, bracing, and shoring shall be the responsibility of the Contractor; and the Contractor shall effect all necessary repairs or reconstruction resulting from such damage.
4. The trenches shall not be backfilled until the utilities systems as installed conform to the requirements of the Drawings and Specifications. Where, in the opinion of the District, damage is likely to result from withdrawing sheeting, the sheeting shall be left in place.
5. Trenches shall be backfilled to the proper surface with material as shown or specified. Trenches improperly backfilled shall be reopened to the depth required for correction, then refilled and compacted as specified, or the condition shall be otherwise corrected as approved.
6. Care shall be exercised so that when backfilling is complete and settlement has taken place, all existing pipes, flumes, ditches, conduits, cables, walks, curbs, and other improvements will be on the same alignment and grade as they were before work commenced.
7. Compaction shall be the responsibility of the Contractor. He shall select the methods to be used and carefully perform the work of backfilling and compaction so as to prevent damage to new or existing piping. Any new or existing piping damaged during the Contractor's work shall be replaced as directed by the District with new piping.

3.3 INSTALLATION

A. Excavation

1. Excavation for pipe lines, concrete valve boxes, manholes, vaults and appurtenant structures shall include the work of removing all earth, sand, gravel, quicksand, stone, loose rock, solid rock, clay, shale, cement, hardpan, boulders, and all other materials necessary to be moved in excavating the trench for the pipe; maintaining the excavation by shoring, bracing, and sheeting or well pointing to prevent the sides of the trench from caving in while pipe laying is in progress; and removing sheeting from the trench after pipe has been laid.
2. Trench support system shall be suitable for the soil structure, depth of cut, water content of soil, weather conditions, superimposed loads, vibration. Contractor may select one of the following methods of ensuring the safety of workers in the trench, as approved by the Utah State Industrial Commission or its safety inspectors:

    a. Sloping sides of trench to the angle of repose at which the soil will remain safely at rest.

    b. Shoring trench sides by placing sheeting, timber shores, trench jacks,

bracing, piles, or other materials to resist pressures surrounding the excavation.

c. Using a movable trench box built-up of steel plates and a heavy steel frame of sufficient strength to resist the pressures surrounding the excavation.

Trenches shall be of the necessary width for proper laying of pipe. Care shall be taken not to over-excavate. The bottom of the trenches shall be accurately graded to provide uniform bearing and support for each section of the pipe along the entire length of the barrel of the pipe.

3. Trenches shall be excavated to the depths shown on the Drawings, including any required allowances for the sewer rock foundation, when required, and for other pipe bedding requirements.
4. Minimum cover over the top of the pipe, including any paving, shall be as follows:

   a. Water supply piping: 3.5 feet minimum from finish grade.

   b. Sanitary sewer: as indicated on the plans.

5. Grading of trenches shall be performed to avoid interference of water and sewer lines with other underground utilities and structures:

   a. Water supply piping: Unless otherwise indicated, trenches shall be graded to avoid high points with the necessity of placing vacuum and relief valves in the water lines.

6. The width of trench, measured at the top of the pipe, shall be as narrow as possible, but not wider than 15 inches on each side of sewer or water pipe.
7. Excavation for manholes, concrete valve boxes, and similar structures shall be sufficient to leave at least 12 inches in the clear between the outer surfaces and the embankment or timber that may be used to hold and protect the banks.
8. Excess materials shall be hauled away from the construction site or otherwise disposed of by the Contractor as approved by the District.

B. Backfilling

1. Materials for trench backfill shall be as shown on the Drawings.
2. Pipe bedding:

   a. Consists of preparing an acceptable pipe foundation, excavating the pipe groove in the prepared foundation and backfilling from the foundation to 12 inches above the top of the pipe. All piping shall be protected from lateral displacement and possible damage resulting from impact or unbalanced loading during backfilling operations by being adequately bedded.

   b. Pipe foundation: Shall consist of natural soil in the bottom of the trench, or a built-up foundation if conditions so warrant. Wherever the trench

subgrade material does not afford a sufficiently solid foundation to support the pipe and superimposed load, and where groundwater must be drained, the trench shall be excavated below the bottom of the pipe to such depth as may be necessary, and this additional excavation filled with clean, compacted sewer rock.

c. Install pipe bedding materials from pipe foundation to 12 inches above top of pipe: Materials shall be deposited and compacted in layers not to exceed 8 inches in uncompacted depth. Deposition and compaction of bedding materials shall be done simultaneously and uniformly on both sides of the pipe. All bedding materials shall be placed in the trench with hand tools or other approved method in such a manner that they will be scattered alongside the pipe and not dropped into the trench in compact masses. Materials used shall be as shown in the Typical Trench Section in the Drawings and as specified in Part 2.

d. A pipe groove shall be excavated in the pipe foundation to receive the bottom quadrant of the pipe so that the installed pipe will be true to line and grade. Bell holes shall be dug after the trench bottom has been graded. Bell holes shall be excavated so that only the barrel of the pipe bears on the pipe foundation.

3. Each lift shall be evenly spread and moistened or dried by disk harrowing or other means so that the required density will be produced.

4. Backfill around valves, vaults and appurtenances with granular backfill material.

C. Compaction

1. Backfill Compaction Requirements:

a. Under pavements or other surface improvements, the minimum density shall be 96% of laboratory maximum density as determined by ASTM D-1557 or meet the local jurisdictional standard, whichever is greater.

b. In shoulders and other unimproved areas, the minimum density shall be 90% of laboratory maximum density as determined by ASTM D-1557 or meet the local jurisdictional standard, whichever is greater.

2. Compaction shall be performed in strict accordance with the manufacturer's recommendations for each type of pipe.

3. Mechanical compaction: Shall be accomplished by the use of a sheep-foot roller, pneumatic tire roller, vibrating roller, or other mechanical tampers of a size and type necessary to achieve the required degree of compaction.

D. Dewatering

1. The Contractor shall do all pumping, build all drains and do all the work necessary to keep the trench and pipes free from water during the progress of the work.

2. In wet trenches, a channel shall be kept open along the side of the pipe for conducting the water to a sump hole, from which it shall be pumped out of the

trench. No water shall be allowed to enter the pipe.

3.4 PROTECTION

A. Provide barricades and restrict access as appropriate to prevent damage to Work in place.

B. Contractor shall be responsible for protection of Work in place against displacement, damage, or loss until District's acceptance. Any work and subsequently damaged, lost or displaced work shall be repaired or replaced to the District's satisfaction at no additional cost.

3.5 CLEANING

A. Thoroughly clean, rake, wash, flush or sweep as required to clean adjacent improvements of materials covered as part of this Work prior to submitting for District's acceptance.

B. Contractor shall provide all labor, equipment, materials and other items as required to perform clean up as required by the District, adjacent property owners and other jurisdictions.

C. Finish grading of areas affected by this Work shall be required as part of clean up.

D. The roadway including shoulders, slopes, ditches, and borrow pits shall be smoothly trimmed, and shaped by machinery, or other satisfactory methods, to the lines, grades and cross-sections, as established, and shall be so maintained until accepted. Any surplus material not suitable for spreading along the road to widen the existing shoulder or raise the grade shall be disposed of as specified above.

3.6 TESTING

A. The Contractor shall employ a testing laboratory to perform field and laboratory density tests. The Contractor shall make such additional tests, at his expense, to assure that the work of compaction is performed properly and determine any adjustments in compacting equipment, thickness of layers, moisture content and compactive effort or other means necessary to obtain the specified minimum relative density. Provide access to the work and all men and machinery necessary to aid the testing laboratory personnel in performing field density tests or taking samples for laboratory tests. In general, tests and samples shall be made as the work proceeds.

B. Have testing laboratory perform maximum density tests on materials to be compacted from samples submitted by Contractor taken from locations selected by the District.

C. Have testing laboratory perform field density tests of compacted backfill materials. The approximate location and number of such tests shall be as shown on the drawings or as selected by the District. Field density tests shall be taken as follows:

1. In planted or unimproved areas:

    a. 18" above the top of the pipe

b. Finished grade

2. In streets, roads, parking lots or other paved areas:

   a. 18" above the top of the pipe

   b. 24" to 36" below the gravel road base

   c. Gravel road base subgrade

   d. Top of gravel road base

   e. Top of bituminous surface course

D. Copies of test results prepared by the testing laboratory shall be transmitted to the Contractor at the same time they are transmitted to the District.

E. Successful performance of compaction at the location of the field density test shall not relieve the Contractor of his responsibility to meet the specified density requirements for the complete project.

END OF SECTION

SECTION 33 05 23
CURED-IN-PLACE PIPE (CIPP)

PART 1 GENERAL

1.1 SECTION INCLUDES

A. This section includes materials, equipment and installation of a flexible resin filled pipe line in an existing gravity sewer pipeline. After installation, the liner is cured with steam or hot water, or by UV. The pipeline and the cured pipe liner become a continuous rigid composite pipe.

1.2 RELATED WORK

A. Section 01 33 00 – Submittals

B. Section 01 45 00 – Quality Control

C. Section 33 31 20- Temporary Sewer Bypass Pumping

1.3 REFERENCES

A. ASTM Standards:

1. D 790 - Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials
2. D 5813 – Cured-in-Place Thermosetting Resin Sewer Pipe
3. F 1216 – Rehabilitation of Existing Pipelines and Conduits by Inversion and Curing of Resin-Impregnated Tube
4. F 1743 – Rehabilitation of Existing Pipelines and conduits by Pulled-in-Place Installation of a Cured-in-Place Thermosetting Resin Pipe

1.4 SUBMITTALS

A. Tube and resin manufacturer’s product data, equipment and material specifications.

B. Contractor shall submit design calculations signed and sealed by a registered civil engineer that establish the ability of the liner to meet the required structural requirements prior to initiating liner fabrication. Information included in the submittal:

1. Thickness of each proposed segment
2. Liner thickness allowances for creep and stretching during installation
3. Compare the strength of the liner to the requirements for H-20 and E-80 loading.

C. Submit approved traffic control plan and permits from municipal or UDOT Traffic Engineer and construction offices as applicable. Provide letter of Noise Permit approval from Salt Lake Valley Health Dept.

D. Submit sewer bypass control plan for review and approval. Indicate sequence of

diversion operations, temporary plugs, silenced bypass pumping systems, temporary vehicle and pedestrian bypass, and site reinstatement after diversion.

E. Company safety plan describing employee and public protection and addressing safety issues, problems and resolution related to this project. All work is to be conducted in accordance with OSHA requirements.

F. Copy of written notice to neighborhood.

G. Pre- and post-installation video.

1.5 PERFORMANCE REQUIREMENTS

A. General:

1. All portions of existing pipe are to be provided with a new composite pipe.
2. After installation, there shall be completely water tight seals at and through each manhole.
3. All service connections shall be re-established with a water tight seal that eliminates infiltration and is acceptable to the District.

B. Corrosion Resistance Requirements:

1. The finished CIPP shall be fabricated from materials which when cured will be chemically resistant to withstand internal exposure to raw domestic sewage.

C. Structural Requirements:

1. Installed CIPP shall be designed as a stand-alone pipe. No structural support for hydrostatic, live or earth loading shall be assumed to come from the existing sewer pipe.

D. Hydraulic Capacity:

1. Overall, the hydraulic profile shall be maintained as large as possible. The CIPP shall have a minimum of the full flow capacity of the original pipe before rehabilitation. Calculated capacities may be derived using a commonly accepted roughness coefficient for the existing pipe material taking into consideration its age and condition.

1.6 NOTICE TO PUBLIC

A. The Contractor is to distribute the approved written notification and verbally communicate and coordinate with customers, property owners and businesses within the project area and areas affected by the project. Commercial businesses, multi resident buildings, hospitals, retirement centers, etc. will require 7 days minimum prior notification, coordination and communication. Single family residential units will require three days minimum prior notification and coordination. Additional notifications and verbal communication are to be provided by the contractor to all residents and businesses 24 hours prior to beginning the scheduled work.

B. The notice shall include:

1. A description of the work
2. Beginning date and time of the work
3. Work duration
4. Expected pipeline use restrictions
5. Address filling floor drains, sink and bathtub traps with water, open windows if odors and smells are present
6. Provide all residents and businesses 24 hour-emergency contact names and phone numbers of onsite superintendent and foreman.

1.7 QUALIFICATION REQUIREMENTS

A. Since sewer products are intended to have a 50-year design life, and in order to minimize the District's risk, only proven products with substantial successful long term track records will be approved. All trench-less rehabilitation products and installers must be pre-approved prior to receiving bid documents.

PART 2 PRODUCTS

2.1 RESIN

A. The resin shall be composed of polyester resin and catalyst, epoxy resin and hardener or vinyl ester resin and catalyst. When properly cured, the resin shall meet the requirements of ASTM D 5813, ASTM F 1216, or ASTM F 1743.

B. The resin shall produce CIPP which comply with the structural and chemical resistance requirements of this specification.

2.2 TUBE

A. The tube shall be composed of a flexible, absorbent woven or non-woven felt fabric with the outer layer (before inversion) coated with a translucent, impermeable, flexible plastic membrane.

B. The wet out tube shall have a uniform thickness that when compressed at installation pressures will meet or exceed the design thickness.

C. The tube shall be sewn to a size that when installed will tightly fit the internal circumference and length of the original pipe. Allowance should be made for circumferential stretching during inversion. Overlapped layers of felt in longitudinal seams that cause lumps in the final product shall not be utilized.

D. The membrane shall not be subject to delamination after curing of the composite pipe.

E. The tube shall be sewn or spot-welded, having sufficient strength to bridge missing segments in the host pipe, stretch to fit irregular host pipe cross-sections and have measurement marks at regular intervals (not to exceed 5 feet) along the flexible

plastic membrane.

F. The wall color of the interior pipe surface of CIPP after installation shall be a light reflective color so that a clear detailed examination with closed circuit television inspection equipment may be made.

G. Seams in the tube shall be stronger than the non-seamed felt.

2.3 STRUCTURAL DESIGN

A. The CIPP shall be designed as per ASTM F1216-07a, Appendix X1. The CIPP design shall assume no bonding to the original pipe wall. The lining calculations shall assume a fully deteriorated pipe condition having ground water loading condition measured from the pipe flow line to the ground surface. Provide lining calculations for each project location and submit to the District for approval prior to purchasing materials or beginning work. Pipe deflections used in liner design calculations shall be based upon actual pipe deflection and or pipe damage and corrosion observed in pipe inspection videos but in no case less than as required in the Design Parameter Table within this specification. Any existing noticeable pipe deflection, structural damage, pipe ovality or pipe deterioration will require the contractor to prove the adequacy of submitted liner thicknesses. Additional loading requirements may be necessary in specific situations.

B. The layers of the cured CIPP shall be uniformly bonded. It shall not be possible to separate any two layers with a probe or point of a knife blade so that the layers separate cleanly or the probe or knife blade moves freely between the layers; nor shall separation of the layers occur during testing performed under the requirements of this specification.

C. The Contractor must have performed long-term testing for flexural creep of the CIPP pipe material installed. Such testing results are to be used to determine the long term, time dependent flexural modulus to be utilized in the product design. This is a performance test of the materials (tube and resin) and general workmanship of the installation and curing as defined within the relevant ASTM standard. A percentage of the instantaneous flexural modulus value (as measured by ASTM D790 testing) will be used in design calculations for external buckling. The percentage, or the long-term creep retention value utilized, will be verified by this testing. The materials utilized for the contracted project shall be of a quality equal to or better than the materials used in the long-term test with respect to the initial flexural modulus used in the CIPP design.

D. The cured pipe material (CIPP) shall conform to the minimum structural standards as listed below and incorporate the following minimum values into the liner calculations submitted for approval:

Design Parameter Table	
Design safety factor	2.0
Ovality (calculated from ASTM F 1216) Where no pipe corrosion, structural damage, deflection or excessive pipe	2% to 5% measured ovality - design for 5% 5% to 10% measured ovality - design for 10%

loading conditions exist, 2% design ovality is acceptable in accordance with ASTM F 1216)	Greater than 10% measured ovality – provide repair or as approved by District
Soil modulus	1,000 psi
Groundwater depth (above invert of existing pipe)	Ground surface
Soil depth (above crown of existing pipe)	As indicated on the as-built plans
Live load	E-80 and HS-20
Soil load	120 pcf
Minimum service life	50 years
Cured pipe flexural stress ASTM D-790	4,500 psi
Cured pipe modulus of elasticity ASTM D-790	400,000 psi
Retention factor for long-term flexural modulus – creep retention	50%
Pipe condition	Fully deteriorated

PART 3 EXECUTION

3.1 EXAMINATION AND PREPARATION

A. Installation Responsibilities for Incidental Items

1. It shall be the responsibility of the District to locate and designate all manhole access points. The Contractor shall be responsible for obtaining any permits required to access these points including traffic control, excavation and noise permits. The District shall also designate which manholes are to be abandoned in-place (if any). If a street must be closed to traffic because of the orientation of the sewer, the Contractor shall institute the actions necessary to do this for the mutually agreed time period. The Contractor shall also obtain access to water hydrants for cleaning, installation and other work items requiring water. The contractor shall obtain a fire hydrant meter from TBID and pay a refundable five hundred dollar ($500.00) deposit, barring no damage. There shall be no charge for water used through the fire hydrant meter for District CIPP projects.
2. Cleaning of Sewer Lines - The Contractor shall remove and dispose of all internal debris, wye intrusions, grout and other deposits out of the sewer line prior to the lining installation. All cleaning techniques employed shall be physical in nature (i.e. high pressure wash, pigging, root and deposit cutters, lumber jack cleaning, and removal equipment). No chemicals shall be used without the written consent of the District. Any hazardous waste material encountered during this project will be considered as a changed condition.
3. Mechanical Pipe Cleaning: Mechanical pipe cleaning, in addition to and instead of normal high pressure cleaning as required, shall be provided with

approved equipment and accessories driven by power winching devices. The manufacturer's operational manual and guidelines shall be strictly followed. All equipment and devices shall be operated by experienced operators so that they do not damage the pipe in the process of cleaning. Scrapers, porcupines, heavy duty brushes, and other debris-removing equipment/accessories shall be used as appropriate and necessary in the field, in conjunction with product manufacturer approved power equipment. The use of cleaning devices such as rods, porcupines, scrapers, root saws, snakes, and other miscellaneous approved equipment, in conjunction with hand winching device, and/or gas, electric rod propelled devices, shall be considered normal cleaning equipment. The Contractor may be required to demonstrate the performance capabilities of the cleaning equipment proposed for use on the project. If the results obtained by the proposed sanitary sewer cleaning equipment are not satisfactory, the Contractor shall use different equipment and/or attachments, as required, to meet specifications. More than one type of equipment/attachments may be required at a location. When hydraulic or high velocity cleaning equipment is used, a suitable sand trap, weir, dam, or suction shall be constructed in the downstream manhole in such a manner that all the solids and debris are trapped for removal.

4. Bypassing Sewage - The Contractor shall provide for the flow of sewage around the section or sections of pipe designated for rehabilitation. The bypass shall be made by plugging the line at an existing upstream manhole and pumping the flow into a downstream manhole or an adjacent system manhole as approved by TBID. Bypass pumping operations shall not interfere with traffic flow on streets or cross railroad tracks without prior written consent from the appropriate agencies or jurisdictions. The pumps and bypass lines shall be of adequate capacity and size to handle the flow and will be equipped with sound attenuating devices. A 100% capacity standby pumping system shall be available on site at all times to be used in the event of bypass pump failure. The District requires a detailed bypass plan to be submitted 2 weeks prior to initiating rehabilitation or pumping operations. Bypass pumping of private lateral connections is required where excessive lateral flow, head pressure and/or sewage pumps may interferes with the proper installation of the CIPP liner. Bypassing of sewage will be maintained until after the final video inspection of the rehabilitated pipe is complete.

5. Inspection of Pipelines - Inspection of pipelines shall be performed by experienced personnel trained in locating breaks, obstacles and service connections by close circuit television. The interior of the pipeline shall be carefully inspected to determine the location of any conditions which may prevent proper installation of CIPP into the pipelines, and it shall be noted so that these conditions can be corrected. A digital video recording in MPEG 1 (NTSC) format with 352x240 / 320x240 x30 fps resolution and audio bit rate of 256 Kbps, suitable and compatible digital log file of the pre and post lining installation work in PDF .DOC or .XLS format is to be provided on DVD disk or external drive for review of the CIPP installation, lateral restorations, and for future reference. Videos and Log files are to reference project numbers, street names and address, manhole ID’s and stations as indicated on the plans. In addition, a video of the pre and post lining work is to be immediately provided to the District for review after each individual project segment has

been cleaned and lined. Project payments will not be made until the completed video and digital log files have been reviewed, accepted and field quantities of completed lining installations have been surveyed and installed lengths verified. It shall be the contractor's responsibility to field verify all quantities and pipeline diameters before ordering any materials. Lengths and sizes shown on plans are approximate and calculated from the best available information.

6. Line Obstructions - It shall be the responsibility of the Contractor to clear the lines of obstructions such as solids, roots, intrusions, grout, debris and deposits. If pre-installation inspection reveals an obstruction such as intruding service connection, dropped joint, or a collapse that will prevent the installation process, and it cannot be removed by conventional sewer cleaning equipment, cutters and lumber jack work, then the Contractor shall make a point repair excavation to uncover and remove or repair the obstruction. Such excavation shall be approved in writing by the District's representative prior to the commencement of the work and shall be considered as a separate pay item.

3.2 INSTALLATION

A. CIPP installation shall be in accordance with ASTM F1216, Section 7, with the following additional requirements:

1. Resin Impregnation - The quantity of resin used for tube impregnation shall be sufficient to fill the volume of air voids in the tube with additional allowances for polymerization shrinkage and the loss of resin through cracks and irregularities in the original pipe wall. A vacuum impregnation process shall be used. A roller system shall be used to uniformly distribute the resin throughout the tube. The Contractor shall designate an offsite factory location where the tube will be vacuum impregnated prior to installation. The Contractor shall allow the District or District's representative to inspect the materials and the "wet-out" procedure.
2. After the liner is in place, the Contractor shall supply a suitable heat source and recirculation equipment to uniformly raise the temperature of the resin impregnated tube to a level required to effectively cure the resin. Boiler temperatures required to cure the resin and duration of time curing temperatures shall be maintained as recommended by the resin manufacturer. This may require continuous recirculation of the heat sources (water or steam). Temperature gauges shall be placed to determine the temperature of the incoming and outgoing water or steam from the heat source. Another such gauge shall be placed inside the tube at the remote end to determine the temperature at that location during the cure cycle. Boilers are to be equipped with sound attenuating devices.
3. Initial cure shall be decreed complete when inspection of the exposed portions of the tube appear to be hard and sound and the temperature sensors indicate that the temperature is of a magnitude to realize an exotherm.
4. Cool down - The Contractor shall cool the hardened CIPP to a temperature below 100^{o} F before relieving pressure in the new pipe.

5. Finish - The new pipe shall be cut off and feathered to match the existing manhole flow line. The liner should be expanded and locked into the manhole walls in the upstream and downstream manholes. A chemical resin mixture seal compatible with the CIPP lining is to be provided in accordance with the manufacturers specifications. It is required that the seal at the manhole walls and pipe flow line provide a smooth, watertight transition. Sikadur 51 NS solvent free flexible epoxy adhesive may be used for general grouting of liner and manhole. The finished product shall be continuous over the length of pipe reconstructed and be free from dry spots, delaminating, wrinkling, bubbles and lifts. It shall also meet the leakage requirements specified in the latest version of ASTM F1216.

3.3 RESTORATION OF PIPE CONNECTIONS

A. It is the intent of these specifications that lateral connections to buildings, drop manhole connections and intersecting mainline connections be reopened without excavation, utilizing a remotely controlled cutting device, monitored by a video TV camera. The Contractor shall certify he has a minimum of 2 complete working units plus spare key components on the site before each inversion. Compressors and equipment used for lateral cutting equipment will be equipped with sound attenuating devices. No additional payment will be made for excavations for the purpose of reopening connections and the Contractor will be responsible for all costs and liability associated with such excavation and restoration work. The Contractor shall provide a full-diameter hole, free from burrs or projections and finished with a smooth, brushed and buffed crack-free edge. The hole shall match the original intersecting pipe connection diameter and location.

3.4 TESTING AND INSPECTION

A. After installation of the CIPP liner, samples shall be prepared by the contractor and tested according to Section 01 45 00 – Quality Control. Contractor shall provide certification to the District that the samples meet the specifications. The samples will be tested in accordance with ASTM F1216, Section 8.1 using either method proposed.

B. Leakage testing of the CIPP shall be accomplished during cure while under a positive head. CIPP products in which the pipe wall is cured while not in direct contact with the pressurizing fluid (e.g., a removable bladder) must be tested by an alternative method approved by the District.

C. Visual inspection of the CIPP shall be in accordance with ASTM F1216, Section 8.4 and this specification. Sewage bypass is to be provided during final video inspection of the rehabilitated sewer.

3.5 CLEAN-UP

A. Upon acceptance of the installation work and testing, the Contractor shall reinstate and restore all areas disturbed by the construction operations.

END OF SECTION

SECTION 03 10 00
CAST-IN-PLACE CONCRETE

PART 1 GENERAL

1.1 SECTION INCLUDES

A. This section covers cast-in-place concrete, including formwork, reinforcement, concrete mixtures and handling, placing and constructing for flatwork, manhole collars and bases, and thrust blocks.

1.2 RELATED WORK

A. Section 31 23 00 – Excavation, Backfilling and Compaction

B. Section 33 11 00 – Water Distribution and Transmission

1.3 REFERENCES

A. For concrete street improvements such as curb and gutter, sidewalk, drive approaches, etc. refer to the proper municipal or state standards

B. ACI 301 – Structural Concrete (latest revision)

C. ACI 306 – Cold Weather Concreting (latest revision)

D. NSF 61 – Drinking Water System Components (latest revision)

E. ACI 305 – Hot Weather Concreting (latest revision)

F. ACI 201.2R-01 – Guide to Durable Concrete (latest revision)

1.4 SUBMITTALS

A. Concrete mixtures

1. Mixture proportions and characteristics.
2. Method and test data used to establish mixture proportions.
3. Information on types, classes, producers' names and plant locations for cementitious materials; types, pit or quarry locations, producers' names, grading and properties required by ASTM C 33 for aggregates; types, brand names, and producer's names for admixtures.

B. Reinforcement and reinforcement supports

1. Certified test reports on materials.
2. Placing drawings showing fabrication dimensions and locations for placement of reinforcement and supports.
3. Copy of plant certifications.
4. When Contractor finds it necessary to move reinforcement from locations

specified to avoid interference with other reinforcement, submit the revised reinforcement arrangement.

C. Formwork and formwork accessories

1. Plan and procedures for installation and removal of reshoring and back shoring.
2. Data on formwork release agent or formwork liners.
3. Shop drawings for formwork.

D. Handling, placing and constructing

1. The District must be notified 24 hours in advance of placement of concrete.
2. When applicable or requested by the District, hot weather or cold weather precautions must be submitted.
3. Proposed location and treatment of construction joints not shown on the project drawings.
4. Proposed methods of curing.
5. Specification and data and methods of use for any proposed repair material.

E. Repair

1. Proposed repair methods, materials, and modifications to the Work.
2. Description of repair work performed to bring strength-deficient concrete into compliance with the Contract Documents.
3. Description of repair performed to being potentially nondurable concrete into compliance with the Contract Documents.

1.5 QUALITY STANDARD

A. Work shall conform to all requirements of ACI 301-05 published by the American Concrete Institute, Farmington Hills, Michigan, except as modified by these Contract Documents.

1.6 TESTING

A. Testing of concrete materials shall be in accordance with ACI 301.

B. Payment for testing shall be in accordance with the General Conditions.

1.7 NOTICE TO PUBLIC

A. Follow laws and regulations concerning when and to whom notices are to be given at least two days before work starts.

B. Indicate when concrete work will take place and when driveway approach can be used.

C. Warn of potential vehicle tow away and other construction issues affecting

neighborhood

D. Should work not occur on specified day, send a new notice.

PART 2 PRODUCTS

2.1 FORMWORK AND FORMWORK ACCESSORIES

A. Form materials shall be faced with material which will produce smooth and uniform texture on concrete, unless indicated otherwise. Do not used material with raised grain, patches, or other defects which will impair the texture of the concrete surface.

B. Arrange facing material in a symmetrical manner, keeping number of seams to a minimum.

C. Form ties:

1. Use ties constructed so end fasteners can be removed without spalling concrete faces.
2. After end fasteners of ties have been removed, embedded portion of ties are to terminate not less than two times the diameter or thickness of the fasteners from formed faces of concrete, but in no case greater than ¾ inch.
3. When formed face on concrete is not exposed, form ties may be cut off flush with formed surfaces. Use ties with ¾ inch diameter cones on both ends or approved equal for water retaining structures.

D. Form release agents shall be a colorless material which will not stain concrete, absorb moisture, impair natural bonding or color characteristics of concrete.

2.2 REINFORCEMENT AND REINFORCEMENT SUPPORTS

A. Reinforcing steel shall conform to ASTM A 615/A 615M, 60 ksi yield grade.

B. Coated reinforcing bars shall be required as shown in the Project Drawings.

1. Epoxy-coated bars shall conform to ASTM A 775/A 775M.

C. Reinforcing steel shall be of the size specified in the Project Drawings.

D. Reinforcement supports shall be plastic.

E. Tie wire shall be minimum 16 gage annealed type or an acceptable patented system.

2.3 CONCRETE MIXTURES

A. All materials shall be in accordance with NSF Standard 61.

B. Concrete admixtures shall conform to ASTM C494 or C261.

C. Portland cement shall meet ASTM C150, Type II or V, ASTM C1157, MH or ASTM C595.

D. Fine aggregate shall conform to ASTM C33 with a fineness modulus greater or equal to 2.6.

E. Fly ash shall meet ASTM C618, Class F or N.

F. Silica fume shall conform to ASTM C1240.

G. Slag cement shall conform to C989.

H. The nominal maximum size of coarse aggregate shall be 1 inch and conform to ASTM C33.

I. Minimum performance of concrete for various portions of the work shall be as shown in the following table:

Class	Use	Max. W/CM Ratio	Average 7-Day Comp. Strength (psi)	Minimum 28-Day Comp. Strength (psi)
2000	Thrust blocks	-	1,675	2,500
4000	Manhole bases Manhole collars Flatwork	0.45	2,680	4,000

J. Concrete shall meet the following performances requirements:

1. Mixture shall have total alkalis less than 0.40% or meet the equivalent requirements of ASTM C441.
2. Mixture shall conform to a value of less than 1500 coulombs when tested according to ASTM C1202 at or before 56 days.
3. The shrinkage of the concrete mixtures shall be less than 500 me after 28 days when tested according to ASTM C157.

K. Concrete shall be air entrained to withstand severe exposure as described in ACI 301-05.

L. The ready-mix concrete production facility shall demonstrate that it meets the requirements of National Ready Mixed Concrete Association (NRMCA) certification.

2.4 HANDLING, PLACING AND CONSTRUCTING

A. Concrete curing compound shall bestyrene-acrulic, styrene butadiene, or alpha-methylstyrene conforming to ASTM C 1315, Type II Class A or B (white pigmented) or Type ID Class A (clear with fugitive dye). Comply with local, state

and federal requirements for volatile organic compounds (VOCs).

PART 3 EXECUTION

3.1 FORMWORK AND FORMWORK ACCESSORIES

A. Keyway depths shall be as shown on the Project Drawings.

B. Chamfers and bevels on corners or edges of formed concrete shall be as shown on the Project Drawings.

C. Construction joints shall be as shown on the Project Drawings.

D. When removal of formwork or reshoring is based on concrete reaching a specified strength, it shall be assumed that concrete has reached this strength when either of the following conditions have been met:

1. When test cylinders, field-cured along with the concrete they represent, have reached the specified strength.
2. When concrete has been cured for the same maturity as the field-cured cylinders which reached specified strength as determined by the maturity method in ASTM C1074.

3.2 REINFORCEMENT AND REINFORCEMENT SUPPORTS

A. Maintain minimum concrete cover around reinforcing as described in the Project Drawings, or if it is not specified, maintain minimum cover as described in ACI 301-05.

B. Splicing:

1. Furnish all reinforcement in the full lengths indicated unless otherwise permitted. Splicing of bars, except where indicated, is not permitted without written approval.
2. Lap splice length shall be in accordance with ACI 318-05 and the International Building Code (IBC). Located reinforcing splices not indicated on Drawings at points of minimum stress. Indicate location of splices on shop drawings. Stagger splices where possible.
3. Unless indicated otherwise, overlap reinforcing bars a minimum of 30 diameters to make the splice. In lapped splices, place the bars and wire to maintain the minimum distance for clear spacing to the surface of the concrete.
4. Do not use lap splices on bars greater in diameter than no. 11 unless otherwise approved.
5. Weld reinforcing steel only if indicated or if authorized in writing. Weld in conformance to AWS D1.4.
6. Do not bend reinforcement after embedding in hardened concrete.
7. Do not permit reinforcement or other embedded metal items bonded to the

concrete, to extend continuously through any expansion joint, except dowels in floors bonded on only one side of joints.

C. All reinforcement to be free of loose mill scale, loose or thick rust, dirt, paint, oil or grease.

D. Place all reinforcement in the exact position indicated. With tie wire, tie bars together at all intersections except where spacing is less than 12 inches in each direction, in which case tie alternate intersections.

E. Maintain the distance from vertical forms and between layers of reinforcement by means of prefabricated chairs, ties, hangers or other approved devices. Placing and fastening of reinforcement in each section of the Work must be approved before concrete is placed.

F. Overlap sheets of metal mesh one square plus 6 inches to maintain a uniform strength. Securely fasten at the ends, edges, and supports to maintain clearances.

G. Flat slab work:

1. Support reinforcing steel of formed flat slabs with metal chairs, precast concrete blocks or other slab bolsters.
2. Size chairs or bolsters to position the steel in the exact location indicated.
3. Space chairs for supporting the top steel and bolsters for supporting the bottom steel not more than 5 feet on centers in each direction.
4. Plastic or epoxy coat the portion of the metal in contact with the forms to prevent rust.
5. Tie down deck steel to beams or forms at regular intervals of not more than 5 feet on centers along the beams or forms to prevent movement of the steel during concrete placement.

3.3 CONCRETE MIXTURES

A. Slump and air content shall be determined at the point of placement. Once slump and air loss during pumping can be determined, acceptance or rejection of concrete based on slump can then be determined at the delivery point.

B. Slump adjustment by addition of water at the site is not permitted without the consent of the District.

3.4 HANDLING, PLACING AND CONSTRUCTING

A. The subgrade for slabs-on-ground shall be constructed of the material and compacted to the density shown on the Project Drawings or as specified in Section 31 23 00 – Excavation, Backfilling and Compaction.

B. In cold weather, as defined in ACI 301-05, concrete shall be placed in accordance with ACI 306. Similarly, in hot weather, as defined in ACI 301-5, concrete shall be placed in accordance with ACI 305.

C. Do not place concrete slabs or other flatwork if wind is greater than 5 mph unless a wind break is provided.

D. The finish of formed portions of concrete work shall have a uniform surface appearance in color and texture. All formed work shall have a smooth form finish as defined in ACI 301.

E. All flatwork shall have a float with broom finish as defined by ACI 301.

F. Where pipes, castings or conduits are to pass through structures, the Contractor shall place such pipes or castings in the forms before placing the concrete. Additional reinforcement shall be provided around large openings as shown in the Project Drawings.

END OF SECTION

SECTION 33 11 00
WATER DISTRIBUTION AND TRANSMISSION

PART 1 GENERAL

1.1 SECTION INCLUDES

A. This section includes water system transmission or distribution piping, valves, fittings and accessories, hydrants, thrust blocking, corrosion protection, installation, protection, cleaning, and hydrostatic and leakage testing for potable waters systems.

1.2 RELATED WORK

A. Section 31 23 00 Excavation, Backfilling and Compaction.
   1. Excavation of trenches, pipe bedding and backfill, compaction of backfill

B. Section 33 13 00 - Disinfection of Water Distribution Systems

C. Section 03 10 00 - Cast-in-Place Concrete
   1. Thrust blocks, vaults and other structures associated with water systems.

1.3 REFERENCES

A. The applicable provisions of the latest editions of the References listed below shall govern the Work covered under this section, unless there is a conflict between said References and the requirements of this Section. In the case of such a conflict, the requirements of this section shall apply.

B. American Water Works Association (AWWA)

C. American Society for Testing and Materials (ASTM)

D. American National Standards Institute (ANSI)

E. American Association of State Highway and Transportation Officials (AASHTO)
   1. Standard Specifications for Highway Bridges

F. Ductile Iron Pipe Research Association (DIPRA)

G. Uni-Bell PVC Pipe Association

H. American Public works Association (APWA)

1.4 SUBMITTALS

A. Submit shop drawings, manufacturer’s literature, certifications, and other product data in accordance with Section 01 33 00 - Submittals.

B. Required submittals include, but are not limited to:
   1. Evidence of materials conformance with these specifications.

2. Manufacturer's recommended transportation, unloading and storage requirements. Manufacturer's installation guides and instructions.
3. Dimensional information for pipe, valves, fittings, castings, and structures.

C. Contractor shall maintain accurate construction record drawings of all as-built valve, fitting, and line locations, manhole locations, pipe lengths, and other relevant data and shall submit these records to the District for approval prior to application for final completion in accordance with Section 01 78 50 – Closeout Procedures.

1.5 QUALITY ASSURANCE

A. Transportation, handling, storage and installation practices shall be in accordance with manufacturer's recommended practice for materials provided as part of this Work.

B. Contractor's personnel shall be experienced in the installation of materials provided as part of the Work, and shall comply with manufacturer's recommended practices during handling, placement and installation of such materials.

C. Pipe, valve and appurtenant materials and Workmanship shall be in accordance with ANSI/NSF 61 and AWWA Standards as applicable.

1.6 DELIVERY, STORAGE AND HANDLING

A. Contractor shall be responsible for proper transportation, unloading, handling, storage and security of all equipment and materials to be provided as part of this specification in accordance with manufacturer's recommendations.

B. Materials shall be stored in such a manner as to prevent damage or degradation. Any materials damaged prior to installation shall be removed from the project and replaced with new materials at no additional cost. Lost or stolen materials shall be replaced at no additional cost.

C. Load and unload pipe, fittings, specials, valves and accessories by lifting with hoists or skidding so as to avoid shock or damage. Do not skid or roll pipe on skidways against pipe already on the ground.

D. Each length of pipe shall be unloaded opposite or near the place where it is to be laid in the trench.

E. Polyvinyl Chloride (PVC) piping, fittings, and materials shall be protected during storage from ultraviolet and ozone degradation. Noticeably faded materials shall not be installed and shall be promptly removed from project site.

F. At times when pipe laying is not in progress, the open end(s) of pipe in the trench shall be closed by a watertight plug.

1.7 PERFORMANCE REQUIREMENTS

A. Depth of Cover

1. Minimum cover shall be 3-½' from top of pipe to ground surface
2. Where vertical conflicts exist with the waterline, a pre-fab steel loop will be required to be installed.

B. Layout

1. Comply with Utah administrative rules R309-550. As a minimum, locate potable water pipe at least 18 inches vertical and 10 feet horizontal edge to edge between water and sewer lines. Place water lines above sewer line.
2. When a water crosses over a sewer force main, a casing shall be provided for the sewer line within 10 feet of the crossing.
3. Where minimum separation standards cannot be met, alternative design may be required. Submit alternative design to the District for approval and to the Division of Drinking Water for an exception to rule.
4. Do not put potable water lines in the same trench with sewer lines, storm drains or electrical wires.

C. Minimum Water Main Size

1. The minimum water main size shall be 8-inches.

PART 2 PRODUCTS

2.1 MANUFACTURERS AND FABRICATION

A. Manufacturers providing materials or equipment as part of this specification shall have a minimum of five (5) years in the design, manufacture, and testing of such materials.

B. Manufacturers shall provide, upon request, verification of a consistent record of meeting or exceeding materials or performance standards as specified herein.

C. Allowable Manufacturers - Subject to compliance with specified requirements, manufacturers offering products that may be incorporated in the Work include the following:

1. Water System Piping

a. Ductile Iron (DIP)
(i) Pacific States Cast Iron Pipe Company, Provo, Utah
(ii) United States Pipe and Foundry Company, Birmingham, Alabama
(iii) Tyler Pipe, Tyler, Texas (Fittings Only)

b. Polyvinyl Chloride (PVC)

(i) J M Eagle, Livingston, New Jersey
(ii) Diamond Plastics, Grand Island, Nebraska
(iii) Westlake Pipe & Fittings

2. Water Valves

   a. Gate Valves
      (i) Mueller Company, Decatur, Illinois
      (ii) Clow/McWane, Oskaloosa, Iowa

   b. Butterfly Valves
      (i) Mueller Company, Decatur, Illinois
      (ii) Clow/McWane Incorporated, Birmingham, Alabama
      (iii) AV-TEK Valves, Logan, Utah

   c. Check Valves
      (i) Val-Matic Swing Check, Elmhurst, Illinois

3. Air Relief/Vacuum Valves
      (i) Crispin Multiplex Manufacturing Company, Berwick, Pennsylvania
      (ii) APCO Willamette Valve and Primer Corporation, San Clemente, California

4. Pressure Reducing Valves
      (i) CLA-VAL Company, Newport Beach, California
      (ii) Singer Valve, Surrey, BC

5. Mechanical Couplings

   a. Connections to AC Pipe (outside diameter transition coupling)
      (i) Romac Industries, Goodyear, Arizona
      (ii) Hymax (a Mueller Brand), Ocala, Florida

   b. Connections to DIP and PVC Pipe
      (i) Romac Industries, Goodyear, Arizona
      (ii) Hymax (a Mueller Brand), Ocala, Florida

6. Fire Hydrants

   a. Dry Barrel Fire Hydrants
      (i) Mueller Company, Decatur, Illinois

7. Fittings

   a. Mechanical Joint
      (i) Tyler Union, Tyler, Texas
      (ii) Star Pipe Products, Houston, Texas
      (iii) Sigma, Ontario, California

b. Flanged Joint
   (i) Tyler Union, Tyler, Texas
   (ii) Star Pipe Products, Houston, Texas
   (iii) Sigma, Ontario, California

c. Joint Restraints
   (i) EBAA Iron, Inc. (Mega Lug), Eastland, Texas
   (ii) Star Pipe Products, Houston, Texas
   (iii) Sigma One-Lok, Ontario, California

8. Tapping Sleeve
   (i) Mueller Company, Decatur, Illinois
   (ii) JCM Industries, Nash, Texas

9. Pre-fabricated Steel Loops
   (i) Utility Coatings and Fabrication, West Jordan, Utah
   (ii) All Pipe Works, Riverton, Utah

2.2 POTABLE WATER SYSTEM PIPING

A. Water system piping shall be of the size, type, and class indicated on the drawings and as specified herein.

B. Ductile Iron Pipe and Fittings

1. Ductile Iron pipe shall be pressure class 350.
2. Ductile iron pipe shall be designed and manufactured in accordance with the following requirements:

   a. AWWA/ANSI C150/A21.50 - American National Standard for the Thickness Design of Ductile Iron Pipe.

   b. AWWA/ANSI C151/A21.51 - American National Standard for Ductile Iron Pipe, Centrifugally Cast, for Water and Other Liquids.

3. Ductile iron fittings shall comply with the requirements of the following:

   a. AWWA/ANSI C110/A21.10 - American National Standard for Ductile Iron and Grey Iron Fittings, 3 in. through 48 in., for Water and Other Liquids.

   b. AWWA/ANSI C153/A21.53 - American National Standard for Ductile Iron Compact Fittings, 3 in. through 24 in. and 54 in. through 64 in. for Water Service.

4. Ductile iron pipe and fittings shall be cement mortar lined and shall have a bituminous seal coat in accordance with the requirements of AWWA/ANSI C104/A21.4 - American National Standard for Cement-Mortar Lining for Ductile Iron Pipe and Fittings for Water.
5. Joints and gaskets shall be in accordance with AWWA/ANSI C111/A21.11 American National Standard for Rubber Gasketed Joints for Ductile Iron Pressure Pipe and Fittings.

6. Flanged pipe shall be in accordance with AWWA/ANSI C115/A21.15 - American National Standard for Flanged Ductile Iron Pipe with Ductile Iron or Grey Iron Threaded Flanges.

C. Polyvinyl Chloride Pipe

1. PVC Pipe shall be DR-18
2. PVC pipe shall be manufactured from virgin Class 12454A or 12454B materials as defined by ASTM D1784 .
3. PVC pipe shall be designed and manufactured in accordance with the following requirements:

    a. AWWA C900 - Polyvinyl Chloride (PVC) Pressure Pipe, 4 in. Through 12 in., for Water Distribution.

    b. AWWA C905 - Polyvinyl Chloride (PVC) Water Transmission Pipe, Nominal Diameters 14 in. Through 36 in.

D. Prefabricated Steel Loops

1. Steel water loops shall be fabricated using steel pipe A53 Grade B ERW.
2. Steel Pipe fittings shall conform to ASTM A234.
3. All welding shall be full penetration butt welds per ASTM C200
4. Lining and Coating Specifications;

    a. All fabricated steel pipe shall be sandblasted to “near white” (SSPC-SP10). Each section of pipe and or fittings shall be primed by the spraying method with Tnemec Series FC-20 Pota Pox (fast cure) Epoxy - Polyamide 20-1255 beige primer. This shall be 7 mils wet and 4 mils after drying. The minimum drying time shall be 3 hours at 77° F or 12 hours at 50° F before intermediate coats are applied. Proper curing will not occur under 35° F.

    b. Intermediate and topcoat shall be Tnemec Series FC-20 Pota Pox (Fast Cure) epoxy Polyamide 20-AA83 Tank White applied by the spraying method. Each coat shall be 9.0 mils wet and 5.0 mils dry per coat. The minimum dry time shall be 3 hours at 77° F. or 12 hours at 50° F. before finish coat is applied. Proper curing will not occur under 35° F.

    c. Total Dry Film Thickness shall be 14.0 mils (minimum).

    d. All welded joints or other repairs shall be made in the same manner as listed above.

    e. All underground loops, spools, and fabricated piping shall be double tape wrapped after the above coatings, with Polyken 934-35 Pipe Wrap or equal

    f. All Tnemec products listed above are listed by the State of Utah, Board of Health, NSF and conforms to AWWA 1DO1 Inside System No. 1.

2.3 CORROSION PROTECTION

A. Bolts: Apply grease to all exposed surfaces of bolts and to all bolt threads after installation of piping, fittings, valves, and couplings.

B. Polyethylene encasement, if required, shall conform to AWWA/ANSI C105/A21.5 - American National Standard for Polyethylene Encasement for Ductile Iron Piping for Water and Other Liquids.

C. Buried metal fittings, valves, saddles, specialties shall be covered in grease and 8 mil vinyl wrap plastic. Trenton Wax-Tape may be used instead of vinyl wrap.

2.4 VALVES

A. Gate valves:

1. Shall be ductile-iron body resilient seat, non-rising bronze stem with mechanical joint ends, except as otherwise specified or shown on the Drawings.
2. Gate valves shall conform to the following requirements:
    a. AWWA C515 – Reduced-Wall, Resilient-Seated Gate Valves for Water Supply Service.
3. All valves shall be provided with a 2" square operating nut for key operation from ground surface and open to the left, unless hand wheels are indicated.
4. Valve body and gates shall be rated to a design working pressure of 200 psig for valves up to 12", and 150 psig for valves of 16" or greater. All valves shall be factory tested to twice the rated working pressure.
5. Gate valves for potable water service shall be epoxy lined in accordance with AWWA/ANSI C550 - Protective Epoxy Interior Coatings for Valves and Hydrants.
6. Gate valves shall be similar and equivalent to that produced by the following manufacturers:
    a. Mueller Series 2300
    b. Clow Cat. Model No. 2639
7. Isolation valves shall be placed at all intersection and at no more than 500 foot intervals in residential areas and no more than 800 foot intervals in commercial areas.

B. Tapping valves and sleeves:

1. Tapping valves shall have large diameter seat rings to permit entry of tapping machine cutters. Inlet shall be flanged. Outlet shall suit branch piping and shall include the required flange for tapping machine adapter connection. Tapping valves shall conform to the applicable requirements for gate valves

as specified herein.

2. Tapping sleeves shall be suitable for assembly around the existing main. Body shall be high strength ribbed construction. End gaskets shall be sized to suit the existing main.
3. Tapping valves and sleeves shall be similar and equivalent to those produced by the following manufacturers:

    a. Mueller split tapping sleeve, model H-615 (CI, DI and PVC pipe), model H-619 (AC pipe)

    b. JCM model 414 custom fabricated mechanical joint steel tapping sleeve

4. The water pipe to be tapped shall be measured in the field prior to ordering parts
5. Tapping tees shall be epoxy coated.

C. Butterfly Valves

1. Butterfly valves shall conform to the requirements of AWWA/ANSI C504 - Rubber Seated Butterfly Valves.
2. Butterfly valves for potable water service shall be epoxy lined in accordance with AWWA/ANSI C550 - Protective Epoxy Interior Coatings for Valves and Hydrants.
3. Butterfly valves shall comply with the following requirements:

    a. Valve bodies shall be ductile iron conforming to ASTM A126, Class B.

    b. Discs shall be streamlined and shall have a continuous 360E seating surface of 18-8 stainless steel.

    c. Shafts shall be 18-8 stainless steel of stub construction with at least 1-1/2 shaft diameter engagement into the disc and shall be fastened to the disc with upset pins.

    d. Seats shall be Buna-N material and shall be bonded to the valve body. Seats shall provide tight shutoff

    e. Mueller Lineseal III Series

    f. Clow Style 4500

    g. AV-Tek Double Eccentric Butterfly Valve

D. Check Valves

1. Check valves shall conform to the requirements of AWWA/ANSI C508 - Swing Check Valves for Waterworks Service - 2 in. through 24 in. NPS.

2. Check valves for potable water service shall be epoxy lined in accordance with AWWA/ANSI C550 - Protective Epoxy Interior Coatings for Valves and Hydrants.
3. Check valves shall be weighted swing arm type unless otherwise noted, similar and equivalent to those produced by the following manufacturers:
    a. Mueller Cat. No. A-2600 Series
    b. Clow Cat. No. F-5300 Series
    c. ValMatic Series 7800

E. Air Relief/Vacuum Valves
1. Air relief/vacuum valves shall conform to the requirements of AWWA/ANSI C512 - Air-Release, Air/Vacuum, and Combination Air Valves for Waterworks Service.
2. Air and Vacuum Valves shall vent air from lines being filled and shall allow entry of air upon draining of lines. Design of valves shall be such that velocity of air passing through the valve will not blow float shut at design volumes.
    a. Valve body shall be cast iron conforming to ASTM A126, Class B.
    b. Float, and guide rod shall be stainless steel conforming to ASTM A240 and A582, respectively.
    c. Valves shall be designed to withstand hydrostatic pressures of 300 psig.
    d. Valve seat shall be BUNA-N Rubber.
    e. Valve inlet shall be ANSI Class 125 or Class 250 flanged, or NPT as indicated.
    f. Valve shall be of the size indicated and shall include vent piping of the size, type and configuration indicated.
    g. Air and Vacuum Valves shall be similar and equivalent to Crispin AL Series as manufactured by Multiplex Manufacturing Co.
3. Air Relief Valves shall vent air from high points in lines under pressure.
    a. Valve body shall be cast iron conforming to ASTM A126, Class B.
    b. Float, float lever and operating linkages shall be stainless steel conforming to ASTM A240 or A582, bronze conforming to ASTM B62, or brass conforming to ASTM B16.
    c. Valves shall be designed to withstand hydrostatic pressures of 300 psig.
    d. Valve seat shall be PVC or stainless steel conforming to ASTM A276.
    e. Valve inlet shall be ANSI Class 125 or Class 250 flanged, or NPT as

indicated.

f. Valve shall be of the size indicated and shall include vent piping of the size, type and configuration indicated.

g. Pressure Air Relief Valves shall be similar and equivalent to Crispin P Series as manufactured by Multiplex Manufacturing Co.

4. Combination or Universal Air Relief Valves shall allow air to be vented from lines being filled, shall allow entry of air when lines are being drained, and shall allow venting of air from lines under pressure. Valve shall be a single unit (universal type) or dual unit (combination type) assembly as indicated.

a. Universal Air Relief Valves shall be similar and equivalent to Crispin UL Series as manufactured by Multiplex Manufacturing Co.

b. Combination Air Relief Valves shall consist of an Air and Vacuum Valve and a Pressure Air Release Valve and shall be similar and equivalent to Crispin C Series as manufactured by Multiplex Manufacturing Co.

F. Pressure Reducing Valves (PRV)

1. Pressure reducing valves shall be hydraulically operated, pilot controlled diaphragm operated, globe pattern regulating valves with the following function features.

a. Reduce variable inlet pressure to constant downstream pressure regardless of flow rate.

b. Include pressure sustaining feature to maintain inlet pressure above a predetermined minimum.

c. Rate of opening/closing adjustment.

2. PRV unit shall consist of valve body, pilot controls, related piping and all other items required to provide a complete, operational installation. PRV unit shall be constructed of the following materials:

a. Valve body and cover shall be of ductile iron meeting the requirements of ASTM A536.

b. Trim shall be bronze meeting the requirements of ASTM B62.

c. Stem, nut and spring shall be of Type 304 stainless steel.

d. Disk shall be Buna-N rubber.

e. Diaphragm shall be of nylon reinforced Buna-N rubber.

f. Pilot assemblies shall consist of bronze (ASTM B62) pilot control, Type 303 stainless steel trim, and Buna-N synthetic rubber parts. Control assembly shall be provided with a strainer.

g. Control valves and piping shall be of bronze, copper, stainless steel or other non-corrosive metals.

3. Working pressure shall be 150 psi at maximum water temperature of 180° F.
4. Valve size, inlet/outlet pressures, and screwed/flanged designation shall be as indicated on the drawings.
5. Pressure reducing valves shall be similar and equivalent to the following:

   a. CLA-VAL Model 92-01
6. Isolation valves shall be installed on both sides of the pressure reducing valve.
7. A low flow bypass PRV line shall be considered.

2.5 VALVE BOXES

A. Shall be suitable for HS-20 (AASHTO) traffic loading.

B. Shall be furnished and installed over each line valve and over each auxiliary hydrant valve. All buried valves shall be installed complete with two-piece, cast iron, slip type, 5-1/4 inch shaft valve box.

2.6 HYDRANTS

A. Hydrants shall be dry barrel type, of cast or ductile iron construction, with bronze glands, bushings, stems, stem nuts, valve seats, and nozzles.

B. Hydrants shall conform to the requirements of AWWA/ANSI C502 - Dry Barrel Fire Hydrants.

   1. Hydrant rated working pressure shall be 200 psig.

C. Hydrant features shall conform to the following requirements:

   1. Main valve opening shall be a minimum of 5-1/4".
   2. Pumper and hose nozzles shall be threaded in accordance with National Standard hose coupling thread specifications.

      a. Provide one (1) pumper nozzle, 4-1/2" nom. ID., 7.5 threads per inch

      b. Provide two (2) hose nozzles, 2-1/2" nom. ID., 6 threads per inch.
   3. Operating nut shall be National Standard, 1-1/2" pentagon, opening counter-clockwise.
   4. Hydrants shall be warranted for ten (10) years against defects in materials and workmanship and shall be similar and equivalent to those produced by the following manufacturers:

      a. Mueller Super Centurion Series

D. Hydrant appearance and paint scheme shall be in accordance with the requirements of the local jurisdiction.

E. Fire hydrants shall be located in accordance with the local fire code official and as required for maintenance- such as for a blow off at the end of dead end lines.

E. Supervisory Switches: SPDT designed to signal valve in other than full open position.

2.7 MECHANICAL JOINT SLEEVES / COUPLINGS

A. AC pipe transition coupling to DI or PVC
    1. PowerSeal, PowerMax Coupling
    2. Mueller, Hymax Coupling
    3. Romac, Macro Coupling

B. Mechanical Joint Long Sleeve
    1. Tyler, MJ “Long” Sleeve
    2. Mueller DI Sleeve

2.8 MECHANICAL JOINT RESTRAINTS

A. EBAA IRON Megalugs® Series 1100 mechanical joint restraint for ductile iron pipe, 3” - 12”.

B. EBAA IRON Megalug® Series 2000PV for restraining plain end PVC pipe at mechanical fittings and appurtenances, 3” - 36”.

C. Sigma One-Lok™

D. Stargrip

2.9 REPAIR CLAMPS

A. Clamps shall provide a gasketed seal around the full circumference of the pipe. Bolts shall be high strength carbon steel.

B. Gasket dimensions shall suit existing and new pipe, as required.

C. Quality standard: Mueller series 540 (150 psig).

2.10 BOLTS

A. Bolts shall be core 10 Ductile bolt, conforming to ASTM A193 B8 and the nut shall be Grade 8. Install with an anti-seize lubricant. Torque in accordance with the pipe manufacturer’s criteria so as to not crush the pipe. Grease and wrap or use Wax Tape.

B. Steel studs shall conform to ASTM A 193 B7 and the nut shall conform to ASTM A194 2H. The studs and nuts shall be treated with trivalent blue type 2 zinc coating. Grease and wrap or Wax Tape is required.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that Work covered under other sections of these specifications is complete to the point that Work covered under this section may properly commence without hindering or damaging Work of other trades. Do not proceed with construction until unsatisfactory conditions have been corrected.

B. Carefully examine all pipe fittings, valves and other appurtenances for damage and other defects immediately before installation.

C. Mark and hold defective materials for inspection by District, who may prescribe corrective repairs or reject the materials. Used materials are not allowed.

D. Prior to installation, inspect valves for direction of opening, freedom of operation, tightness of pressure resisting bolts, cleanliness of valve ports and seating surfaces, handling damage and cracks. Hold defective valves for inspection by District.

E. Verify installation or connection requirements prior to construction by potholing as necessary.

3.2 METHODS AND PROCEDURES

A. General

1. Prior to pipe installation, prepare trench in accordance with the plans and Section 31 23 00 - Excavation, Backfilling and Compaction.
2. Proper implements, tools, and facilities shall be provided and used for the safe and convenient performance of the Work. All pipe, fittings, and valves shall be lowered carefully into the trench by means of a derrick, ropes, or other suitable tools or equipment, in such a manner as to prevent damage to materials, protective coatings and linings. Under no circumstances shall water system materials be dropped or dumped into the trench.
3. Manufacturers' Installation Manual recommendations for handling and laying pipe, fittings and related materials shall be strictly adhered to. In no case shall these materials be dropped or dumped during transport, unloading, or handling.

B. Special Design Considerations

1. Site specific geologic factors and soil conditions shall be considered in the design of the waterline.

2. Waterline installation shall be avoided in areas of contamination. Where this is not possible, special design shall be required.

3. Where a waterline crosses a water body greater than 15 feet wide it shall at a minimum:

a. have a minimum cover of 2 feet
b. be constructed of a jointless pipe or a pipe with restrained joints
c. have isolation valves on either side of the crossing
d. have a means to sample the pipeline upstream and downstream of the crossing
e. have a means to be pressure tested.

3.3 INSTALLATION

A. Water Pipe Installation

1. Water pipe installation shall be in accordance with the applicable requirements of the following documents:

   a. AWWA/ANSI C600 - Installation of Ductile Iron Water Mains and their Appurtenances.

   b. AWWA C605 - Underground Installation of Polyvinyl Chloride (PVC) Pressure Pipe and Fittings for Water.

   c. AWWA/ANSI C105/A21.5 - Standard for Polyethylene Encasement for Ductile Iron Piping for Water and Other Liquids.

   d. DIPRA - The Guide for the Installation of Ductile Iron Pipe

   e. UNI-B-3-92 - Recommended Practice for the Installation of Polyvinyl Chloride (PVC) Pressure Pipe (Nominal Diameters 4-36 Inch).

2. All lumps, blisters, and excess coating shall be removed from the bell and spigot ends of each pipe, and the outside of the spigot and the inside of the bell shall be wiped clean and dry so as to be free from dirt, sand, grit, or any foreign material before the pipe is laid. Bevel and file spigot of pipe to prevent gasket damage during joint assembly.
3. The water pipe shall be laid and maintained to lines and grades established by the Drawings and Specifications with fittings and valves at the required locations unless otherwise approved by District.
4. When crossing existing pipelines or other structures, alignment and grade shall be adjusted as necessary, with the approval of District to provide clearance as required by federal, state, or local regulations or as deemed necessary by District to prevent future damage or contamination of either structure.
5. Lay all water lines on a continuous grade to avoid high points except as shown on the Drawings.
6. Prevent foreign material from entering the pipe while it is being placed in the trench. During laying operations, no soil, debris, tools, clothing, or other materials shall be placed in, or allowed to enter the pipe.
7. Assemble joints in accordance with manufacturer's recommendations.

8. The pipe shall be brought to correct line and grade, and shall be secured in place with approved backfill material in accordance with Section 31 23 00 Excavation, Backfilling and Compaction.
9. Wherever it is necessary to deflect pipe from a straight line, either in the vertical or horizontal plane, to avoid obstructions or where long-radius curves are permitted, the amount of deflection allowed shall not exceed that recommended by pipe manufacturer.
10. At times when pipe laying is not in progress, the open ends of pipe shall be closed by a watertight plug or other means approved by the District. When practical, the plug shall remain in place until the trench is pumped completely dry. Care must be taken to prevent pipe flotation should the trench fill with water.
11. Where necessary, cut pipe perpendicular to the pipe centerline. Grind cut ends and rough edges smooth. For push on joint connections, the cut end shall be beveled.
12. Fire hydrants shall be set plumb at proper finish grade as indicated on the drawings (see typical hydrant detail).

B. Valve Installation

1. Locate valves as shown on drawings.
2. Orient valve operating stems in a manner that will allow proper operation.
3. A valve box shall be provided for every valve that has no gearing or operating mechanism or in which the gearing or operating mechanism is fully protected with a gear case. The valve box shall not transmit shock or stress to the valve and shall be centered over the operating nut of the valve. Set box cover at grade shown on Drawings.
4. In no case shall valves be used to bring misaligned pipe into alignment during installation. Support pipe in such a manner as to prevent stress on the valve.

C. Restraints and Thrust Block Installation

1. Megalug restraints are required on all fittings.
2. Provide thrust blocks at reducers, valves, tees, hydrants, plugs and caps, and at bends deflecting 11-1/4 degrees or more.
3. Place thrust block between solid ground and the component to be shored; the area of bearing on the pipe and on the ground in each instance shall be that shown on Drawings. Unless otherwise shown or directed, locate block so as to contain the resultant thrust force and so that the pipe and fitting joints will be accessible for repair.
4. Concrete for thrust blocks shall have a compressive strength of not less than 2500 psi at 28 days. Concrete mixes shall be provided in accordance with Section 03 10 00 –Cast-In-Place Concrete of these specifications.
5. Verify that concrete has achieved 70% of specified compressive strength prior to charging line.

3.4 PROTECTION

A. Provide barricades and restrict access as appropriate to prevent damage to Work in place.

B. Contractor shall be responsible for protection of Work in place against displacement, damage, loss, or theft until District's acceptance. Any Work installed and subsequently damaged, lost, or displaced shall be repaired or replaced to the District's satisfaction at no additional cost.

3.5 CLEANING

A. Thoroughly clean all pipe lengths or units of all debris immediately after laying.

B. Thoroughly clean by flushing and remove all debris from water mains and appurtenances. Inspect and verify lines are clean prior to submitting facilities for District's acceptance.

3.6 TESTING

A. Temporary connections for pressure testing shall be made by Contractor at his expense and removed by Contractor after satisfactory completion of the testing Work.

B. Testing procedures shall as a minimum be in accordance with the most recent update of the following specifications and regulations.

1. AWWA C600 - Pressure and Leak Testing

C. Hydrostatic Pressure Test:

1. After completion of the installation of the system, or any reasonable length thereof, after backfilling and after thorough flushing of the portion to be tested, pressure tests shall be made. The system to be tested shall be subjected to a hydrostatic pressure of 200 pounds per square inch, unless otherwise noted on the Drawings, for a period of not less than 2 hours duration.
2. The portion to be tested shall be filled with water slowly and the specified test pressure shall be applied by means of a pump connected to the pipe in a manner satisfactory to the District. The Contractor shall make the temporary connection for pressure testing.
3. Before applying the specified test pressure, air shall be expelled completely from the pipe, valves, and hydrants. If permanent air vents are not located at all high points, the Contractor shall install corporation stops at such points so that the air can be expelled as the line is filled with water. After all the air has been expelled, the corporation cocks shall be closed and the test pressure applied.
4. All exposed pipe, fittings, valves, hydrants, and joints shall be examined carefully during the test. Any damage or defective pipe, fittings, valves, or hydrants that are discovered following the pressure test shall be repaired or replaced with sound material and the test shall be repeated until it is

satisfactory to the District.

D. Leakage Test:

1. A leakage test shall be conducted concurrently with the pressure test.
2. Leakage shall be defined as the quantity of water that must be supplied into the newly laid pipe, or any valved section thereof, to maintain pressure within 5 psi of the specified test pressure after the air in the pipeline has been expelled and the pipe has been filled with water.
3. No leakage shall be allowed.
4. All visible leaks, other than a minor amount of sweating, shall require immediate stoppage of the test and tightening of the joints so that, when pressure is again put on the system, there will be no leakage.

END OF SECTION

SECTION 33 13 00
DISINFECTION OF WATER DISTRIBUTION SYSTEMS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. This section includes flushing of water distribution system and supply lines, chlorine disinfection and final flushing.

1.2 RELATED WORK

A. Section 33 11 00 - Water Distribution and Transmission

1. Construction and installation of water distribution and transmission piping, hydrostatic testing, cleaning and flushing requirements.

1.3 REFERENCES

A. AWWA B300: AWWA Standard for Hypochlorites

B. AWWA B301: AWWA Standard for Liquid Chlorine

C. AWWA C651: AWWA Standard for Disinfecting Water Mains

D. Rules governing public drinking water systems as found in R309 of the Utah Administrative Code.

1.4 SUBMITTALS

A. Submit manufacturer's literature, certifications, and other product data in accordance with Section 01 33 00 - Submittals.

B. Submit bacteriological laboratory's evidence of certification

C. Submittals required after testing as a condition for final acceptance include but are not limited to the following:

1. Results of chlorine residual tests.
2. Results of bacteriologic quality tests.

1.5 QUALITY ASSURANCE

A. All disinfection and testing procedures shall be in accordance with applicable Federal, State, and local standards.

1.6 DELIVERY AND HANDLING

A. Contractor shall be responsible for proper transportation, unloading, handling, storage and security of all equipment and materials provided as part of this specification in accordance with manufacturer's recommendations.

B. Materials shall be stored in such a manner as to prevent damage or degradation. Any materials damaged or degraded prior to installation shall be removed from the project and replaced with new materials at no additional cost. Lost or stolen materials shall be replaced at no additional cost.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers providing materials as part of this specification shall have a minimum of five (5) years' experience in the manufacture and testing of such materials.

B. Manufacturers shall provide, upon request, verification of a consistent record of meeting or exceeding materials or performance standards as specified herein.

2.2 CHLORINE

A. Dry shall conform to AWWA B300 - Standard for Hypochlorite's.

B. Liquid shall conform to AWWA B301 - Standard for Liquid Chlorine.

C. Store in a cool, dark, and dry environment to minimize deterioration.

PART 3 EXECUTION

3.1 EXAMINATION

A. Examine water facilities to verify they have been properly cleaned, flushed, and hydrostatically tested, as appropriate prior to performing disinfection Work. Verify that other Work will not contaminate or disturb disinfected facilities.

B. Notify District at least 72 hours prior to any flushing and disinfecting.

3.2 METHODS AND PROCEDURES

A. General

1. Disinfection procedures shall as a minimum be in accordance with the following specifications and regulations.

    a. AWWA C651 - Disinfecting Water Mains

    b. AWWA C652 - Disinfection of Water Storage Facilities

B. Chlorination of Water Distribution and Supply System

1. Use one of the methods defined under AWWA C651 that is acceptable to the District. Fill the pipe line to the required residuals.

C. Flushing of Water Distribution and Supply System

1. After the applicable retention period, the chlorinated disinfection water shall be flushed from the line.Flush the chlorinated water from the main through

hydrants or if a hydrant is not available, install a tap of sufficient size to provide a flushing velocity of 2.5 feet per second.

2. Chlorine residual determination shall be made to ascertain that the heavily chlorinated water has been removed from the line. The line shall be flushed until the residual chlorine concentration is less than 1 mg/l.
3. The disinfection water shall be legal disposed of.
4. The discharge of highly chlorinated disinfection water to the environment is not allowed. The Contractor shall follow methods for de-chlorinating the disinfection water as found in AWWA C651.

D. Bacteriological Sampling and Testing

1. Sampling and testing shall be conducted in accordance with AWWA Manual M12 - Simplified Procedures for Water Examination.
2. After the main has sat for a minimum of 48 hours without water use following flushing, and before the water line is placed in service, samples shall be collected from the water line, and tested for coliform. Two samples shall be taken, from each location, at least 15minutes apart.
3. If the initial disinfection fails to produce satisfactory samples, disinfection shall be repeated until satisfactory samples have been obtained.

3.3 PROTECTION

A. Contractor shall be responsible for maintaining disinfected facilities from contamination until acceptance by the District. Should facilities be contaminated prior to acceptance, Contractor shall re-disinfect and retest at no additional cost.

END OF SECTION

SECTION 33 31 00
SANITARY SEWER SYSTEMS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. This section includes the following:

1. Sewer piping, manholes, and service laterals.
2. Connections with existing sewerage facilities.
3. Cleaning, flushing, and testing sewerage facilities.

1.2 RELATED WORK

A. Section 31 23 00 - Excavation, Backfilling, and Compaction

1. Trench excavation, over-excavation of unsuitable materials, backfill placement and compaction associated with installation of items specified as part of this Work.

B. Section 03 10 00 - Cast-In-Place Concrete

1. Construction of concrete structures associated with or required as part of this Work.

1.3 REFERENCES

A. The applicable provisions of the latest editions of the References listed below shall govern the Work covered under this Section, unless there is a conflict between said References and the requirements of this Section. In the case of such a conflict, the requirements of this Section shall apply.

B. American Society for Testing and Materials (ASTM)

C. American National Standards Institute (ANSI)

D. Uni-Bell PVC Pipe Association - Handbook of PVC Pipe

E. Ductile Iron Pipe Research Institute (DIPRA)

F. American Association of Safety and Highway Transportation Officials (AASHTO)

G. Utah Department of Transportation Construction Standards (UDOT)

H. American Public Works Association (APWA) - Standard Specifications

1.4 SUBMITTALS

A. Submit shop drawings, manufacturer's literature, certifications, and other product data in accordance with Section 01 33 00 - Submittals

B. Submittal data shall include, but not necessarily be limited to the following:

1. Manufacturer's recommended transportation, unloading and storage requirements. Manufacturer's installation guides and instructions.
2. Evidence of conformance with the requirements of these specifications.
3. Dimensional information for structures, castings, and fittings.

C. Contractor shall maintain accurate construction record drawings of all as-built invert elevations, manhole locations, pipe lengths, and wye locations and shall submit these records to the District for approval prior to application for final completion.

1.5 QUALITY ASSURANCE

A. Transportation, handling, storage and installation practices shall be in accordance with manufacturer's recommended practice for materials provided as part of this Work.

B. Contractor's personnel shall be experienced in the installation of materials provided as part of the Work, and shall comply with manufacturer's recommended practices during handling, placement and installation of such materials.

1.6 DELIVERY AND HANDLING

A. Contractor shall be responsible for proper transportation, unloading, handling, storage and security of all equipment and materials to be provided as part of this specification in accordance with manufacturer's recommendations.

B. Materials shall be stored in such a manner as to prevent damage or degradation. Any materials damaged prior to installation shall be removed from the project and replaced with new materials at no additional cost. Lost or stolen materials shall be replaced at no additional cost.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers providing materials or equipment as part of this specification shall have a minimum of five (5) years' experience in the manufacture, testing, and installation of such materials and equipment.

B. Manufacturers shall provide, upon request, verification of a consistent record of meeting or exceeding materials or performance standards as specified herein.

C. Allowable Manufacturers - Subject to compliance with specified requirements, manufacturers offering products that may be incorporated in the Work include, but are not limited to the following:

1. Sanitary Sewer Piping

a. Polyvinyl Chloride (PVC)

(i) JM Eagle, Los Angeles, California
(ii) Westlake Pipe and Fittings, Houston, TX

b. Concrete (CP)
(i) Amcor Precast, Ogden, Utah
(ii) Geneva Pipe, Orem Utah

2. Sanitary Sewer Manholes (Precast)
(i) Amcor Precast, Ogden, Utah
(ii) Geneva Pipe, Orem, Utah

3. Sewer Laterals and Fittings
(i) Pipe and fittings shall be of same manufacturer as main piping.
(ii) Adaptors shall be Fernco or Romac.
(iii) Nose-on lateral connection to main line sewer shall be “inserta tee”

2.2 SANITARY SEWER PIPING

A. Sanitary sewer piping shall be of the size, type, and class specified on the drawings and as specified herein.

B. Polyvinyl Chloride (PVC) Pipe

1. Unless otherwise indicated, PVC pipe shall be SDR 35 designed and manufactured in accordance with ASTM D-3034 .
2. Pipe shall be bell and spigot type consisting of integral bell section, factory beveled spigot ends, and securely attached rubber sealing ring conforming to the requirements of ASTM D-3212.
3. Piping shall be green pigmented.
4. Fittings shall conform to the requirements of ASTM D-3034 (4" to 15") and shall be provided with joints conforming to ASTM D-3212.
5. Fabricated SDR 35 and SDR 26 PVC Gasketed Fittings meeting ASTM D 1784, ASTM D3034, ASTM F679, ASTM F 1366, and ASTM F477 for sizes 18” - 27”.

2.3 SANITARY SEWER MANHOLES

A. Manholes shall be either cast in place or precast units of the size, depth and configuration indicated on the drawings.

1. Line manholes shall be a minimum of 48-inch diameter.
2. Manholes servicing 3 or more intersecting sewer lines shall be at least 60-inch diameter.
3. Manholes with sewer lines 12 inches in diameter and larger shall be at least 60-inch diameter

B. Precast concrete manhole sections shall be designed and manufactured in accordance with the requirements of ASTM C 478.

C. Concentric and Eccentric cone sections shall conforming to ASTM C 478. .

D. Manholes with Eccentric cones shall have steps aligned over the shelf that have been cast into the manhole.

E. Manhole rings and flat top sections shall be designed and manufactured in accordance with the requirements of ASTM C 478 and AASHTO HS-20 loading.

F. Manholes shall be of watertight construction, utilizing kent seal between adjacent manhole sections.

G. Cement for manholes shall be Portland Cement, Type V, or Type II-A complying with ASTM C 150.

H. All required openings in manhole sections shall be performed during the casting process at proper locations required for indicated installation. Each opening shall be provided with a watertight rubber boot equipped with stainless steel bands to secure boot to both manhole and pipe connection.

I. Manhole ring and cover shall be manufactured of grey iron castings conforming to ASTM A 48, Class 30, with non rocking, machined bearing surfaces between cover and frame.

1. Cover shall be vented and shall bear the lettering "Taylorsville-Bennion Imp. Dist.".
2. Ring and cover shall be HS 20 traffic rated

J. Pipe to Manhole Connectors shall be resilient, flexible watertight seals meeting the requirements of ASTM C 923.

1. Grout pipe connections to manhole.

K. Cast-in-place manholes shall be poured

2.4 SEWER LATERAL STUBS

A. Sewer laterals, unless otherwise noted, shall consist of service wye, lateral pipe, plug, and cleanouts as indicated on the drawings.

B. Service laterals shall consist of 45° wye, bends, tees and other fittings conforming to ASTM D 3034 and D 3212, and PVC lateral piping conforming to ASTM D 3034.

C. Provide approved ‘Fernco’ or other fittings for connections to existing services where required.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify installation or connection requirements prior to construction by potholing as necessary.

B. Verify that Work covered under other sections of these specifications is complete to the point that Work covered under this section may properly commence without hindering or damaging Work of other trades. Do not proceed with construction until unsatisfactory conditions have been corrected.

3.2 METHODS AND PROCEDURES

A. Install materials and equipment included in the Work in accordance with materials/equipment manufacturer's recommended methods and procedures.

B. Pipe grades shall be established and checked by use of laser grade control. Pipe grade shall be checked as often as necessary to assure pipe is installed at proper grade, but in no case shall grades be checked less frequently that 50 foot intervals.

C. Pipe which has not been installed at proper grade shall be corrected immediately at no additional cost to the District.

D. Tie-ins to existing manholes shall be performed by core drilling the existing manhole (or other structure) and installing a flexible rubber boot connection.

3.3 INSTALLATION

A. General

1. Install sewer piping to the lines, grades, and elevations indicated on the drawings. Install service wyes at the locations indicate or as otherwise required to provide service connections to existing services.

B. Bedding:

1. Bedding shall be prepared in accordance with Section 31 23 00 of these specifications and as indicated on the drawings.
2. Over-excavate as necessary and install approved material to provide firm, stable foundation for sewer piping installation. Over-excavation shall be approved by the District.
3. Prepare bedding to ensure trench bottom is free of large stones, debris, frozen, organic or other deleterious materials.
4. Excavate at pipe bells to ensure pipe is supported properly along its entire length.

C. Pipe Laying Procedures

1. Dewater trench as necessary to prevent the accumulation of groundwater or other unacceptable water in trench.
2. Pipe laying operations shall proceed in an uphill direction with all bells facing uphill unless otherwise specifically approved by the District.
3. Contractor shall follow pipe manufacturer's recommended practice for lowering, assembling, and installing sewer pipe.
4. During pipe installation, verify that no foreign material is inside pipe. Clean interior of each pipe joint prior to installation.

5. Sewer pipe shall be laid to uniform line and grade between manholes unless otherwise approved by the District.
6. Plug open end of installed sewer piping and close trench at the end of each day's work. Open trenches may not be left overnight without specific permission from the District.

D. Water main crossing requirements:
   1. Maintain 18" vertical separation
   2. Sewer mains shall be installed beneath water mains.
   3. If vertical separation or installation beneath water main requirement cannot be met, Alternative design shall be submitted to the District for approval and to the Division of Drinking water for an exception to rule.

E. Horizontal separation requirements.
   1. Maintain a minimum 10' horizontal separation between sewer main and existing water mains wherever possible.
   2. Advise the District of horizontal separation less that 10' and receive approval of corrective measures prior to proceeding with sewer main installation. Apply with the Division of Drinking Water for an exception to rule.

F. Backfilling
   1. Install backfill and compact in strict accordance with the manufacturer's recommendations for each type of pipe. In general, compact in layers not to exceed 8 inches in uncompacted depth.
   2. Backfill material shall be free of large rocks, organic or frozen material.

G. Manholes
   1. Excavation, bedding and backfill for manhole installation shall be in accordance with Section 31 23 00 of these specifications and as indicated on the drawings.
   2. Install manholes at locations and to grades indicated on the drawings.
   3. Set manhole lid flush with finished surface unless otherwise noted on the drawings.
   4. Cast-in-place base and floor shall conform to requirements of standard details for layout and configuration. Cast-in-place manhole base shall be a minimum 2' high and of a "doghouse" variety.
   5. Provide 0.2 feet of drop through the manhole
   6. All lifting holes shall be grouted watertight.
   7. Prevent debris from entering installed sewer main piping via manholes by providing suitable barriers or covers.
   8. Pipe transition into manhole must be smooth and free of any pockets or indentations. Any such inconsistencies shall be filled with non-shrink grout to form a smooth surface.

H. Laterals

1. Existing sewer main shall be drilled by an experience tapper as approved by the District for lateral service.

3.4 PROTECTION

A. Provide barricades and restrict access as appropriate to prevent damage to Work in place.

B. Contractor shall be responsible for protection of Work in place against displacement, damage, loss or theft until acceptance by the District. Any Work installed and subsequently damaged, lost, or displaced shall be repaired or replaced to the District's satisfaction at no additional cost.

3.5 CLEANING

A. Thoroughly clean all pipe lengths or units of all debris immediately after laying.

B. Thoroughly clean by flushing and remove all debris from sewer mains and manholes. Inspect and clean all lines as specified herein. Sewerage facilities shall be thoroughly cleaned prior to turning over to the District.

3.6 TESTING

A. Contractor shall provide all materials, equipment, and labor to perform testing of installed sewer main piping, services, and manholes as required for acceptance.

B. The District shall be notified no less than two full working days prior to any proposed testing.

C. The sewer main shall be tested after placement of pipe zone material but before final backfill and surfacing.

D. Testing of sewer mains shall consist of the following

1. The District shall visually inspect each run of piping by lamping to verify consistent line and grade.
2. Mandrel testing

a. Mandrel (deflection testing) shall be conducted after backfill and compaction.

b. Mandrel shall be manufactured to provide proofing ring and minimum 9-point bearing with an outside diameter of 95% of the average inside diameter of line to be tested. Contractor shall provide certifications that mandrel meets these requirements prior to testing.

c. Mandrel shall be pulled by hand in the presence of the District and shall pass freely through the line being tested.

d. In the event the mandrel cannot pass freely through the line, pipe shall be

excavated, re-bedded and backfilled to reduce pipe deflection below 5%. All costs for excavation, re-bedding, and repair of deflected pipe shall be borne by Contractor.

e. Contractor shall re-perform mandrel test and make repairs until acceptable deflection results.

3. Low pressure air testing.

   a. Plug each end of pipe to be tested with suitable test plugs and brace each plug securely. Plugs shall be equipped with pressure release devices set to a maximum of 6 psi.

   b. Locate all gauges, manifolds and valves on outside of manhole. No personnel shall be allowed to enter manhole during testing procedure.

   c. Slowly increase pressure in line to be tested to 4.0 psi above external hydrostatic pressure on piping.

   d. Allow internal pressure to stabilize for two (2) minutes, adding air as necessary to maintain 4.0 psi.

   e. Disconnect air supply and allow line pressure to drop to 3.5 psi, where upon test interval is started.

   f. Determine time interval from beginning of test until line pressure drops to 2.5 psi.

   g. Allowable air test holding time shall conform to Table 1 below. If the time interval exceeds the minimum allowable time, then the line segment shall be considered as passing the low pressure air test.

4. Video Inspection of the pipe

   a. CCTV Inspection of all sewer mains and laterals is required. Water shall be run through the pipe prior to video inspection to more easily identify any bellies in the pipe.

Table 1 - TIME HOLDING TABLE FOR SEWER MAIN AIR TEST

Time in Seconds Required for Pressure Drop from 3.5 to 2.5 psig
Dry Pipe Test Standard (Based on 0.005 cfm/sf and 2.0 cfm)
Pipe Diameter in Inches

Length (ft.)	4"	6"	8"	10"	12"	15"	18"	21"	24"	27"	30"	33"	36"
25	3	6	10	16	23	36	51	73	95	120	149	179	214
50	5	12	20	32	46	71	102	146	190	241	297	359	428
75	8	17	30	47	69	106	153	218	285	361	446	539	612
100	10	23	41	64	91	142	204	291	383	459	511	561	
125	13	29	51	79	114	177	255	357	408				
150	15	34	61	95	137	212	306						
175	18	40	71	111	160	255							
200	20	46	81	127	188								
225	23	51	91	143	204								
250	25	57	102	159									
275	28	63	112	174									
300	31	69	122										
350	36	81	142										
400													
450	46	103											
500	51												
550	56												
600	61	103	142	174	204	255	306	357	408	459	511	561	612

E. In the event that line fails testing, Contractor shall make all required repairs, replacements, or other measures necessary to pass required acceptance tests. All costs for repair, replacement, and retesting to verify acceptability of installed work shall be borne by the Contractor at no additional cost to the District.

F. If the above minimum specifications cannot be met after all sources of air leakage have been corrected, a water exfiltration test may be conducted with the District's approval to determine the acceptability of the test section.

1. Exfiltration Tests: The length of pipe tested shall be limited so that the pressure on the invert of the lower end of the section tested shall not exceed 16 feet of water column, and in no case shall the length of the section tested be greater than 400 feet or the distance between manholes, whichever is

less.

2. Allowable Leakage: The measured rate of leakage during the test shall not exceed 100 gallons per inch of pipe diameter per mile of pipe per 24 hours, with a 4 foot head at the crown at the upper end of the test section.

G. Exfiltration Tests for Laterals

1. Tests shall be performed on laterals between building or structure served and test tees, or between the building served and the manhole if the lateral connects directly to the manhole.
2. All tests shall be performed in the presence of the District.
3. Test Procedure;

   a. Install a temporary plug at the test tee or manhole.

   b. Install a standpipe extending five (5) feet above the finished grade at the end of the lateral and a temporary water connection to the water supply to fill the lateral.

   c. Fill the lateral, including cleanout branches and temporary standpipe with water to produce a water level in the standpipe approximately 4 feet above finished grade.

   d. Remove plugs on cleanout branches to permit air escape. Replace the plugs when all air is expelled.

   e. Repair any visible leaks and request approval of District before proceeding with leakage test.

   f. After water level has stabilized, refill standpipe to 4 feet above finished grade. Maintain water level at 4 feet for duration of test period. Keep record of water added during test period. Determine leakage rate in gallons per inch diameter per mile per day.

      Example: If a 300 foot test section of 6 inch lateral required a total of 5 gallons to maintain the 4 foot level in the standpipe for 6 hours, what is the leakage rate?

      (5 gal) / [(6 hours) x (6 inch) x (300 feet)] x (24 hr/day) x (5280 feet/mi) = 58.7 gallons/inch/mile/day.

   g. Allowable leakage in seconds per length of pipe size is given in Table 2 below.

Table 2 - TIME HOLDING CHART FOR WATER TEST OF LATERAL

Time in Seconds Required for Pressure Drop from 3.5 to 2.5 psig
Wet Pipe Test Standard (Based on 0.003 cfm per sq. ft. and 2.0 cfm)
Pipe Diameter in Inches

Length (ft.)	4"	6"	8"	10"	12"	15"	18"	21"	24"	27"	30"	33"	36"
25	4	10	18	28	40	62	89	121	158	200	248	299	356
50	9	20	35	55	79	124	178	243	317	401	495	599	713
75	13	30	53	83	119	186	267	364	475	601	743	898	1020
100	18	40	71	110	158	248	356	485	639	765	851	935	
125	22	50	88	138	198	309	446	595	680				
150	26	59	106	165	238	371	510						
175	31	69	123	193	277	425							
200	35	79	141	220	317								
225	40	89	158	248	340								
250	44	99	176	275									
275	48	109	194	283									
300	53	119	211										
350	62	139	227										
400	70	158											
450	79	170											
500	88												
550	97												
600	106												
650	113	170	227	283	340	425	510	595	680	765	851	935	1020

H. Manhole Testing:

1. Sewer manholes shall be tested in accordance with ASTM C 1244-Standard Test Method for Concrete Sewer Manholes by the Negative Air pressure (Vacuum) test.
2. Contractor shall provide suitable test head, pipe plugs and related equipment as required for testing.
3. Procedure:

    a. Place test head on manhole top in accordance with test head

manufacturer's recommendations.

b. Apply vacuum to 10 in. mercury. Close vacuum pump. Shut off vacuum.

c. Determine time required for vacuum reading to drop from 10 in. to 9 in. Manhole shall pass if time required meets or exceeds values indicated in the following table.

Table 3 – MANHOLE VACUUM TEST REQUIREMENTS

Depth (ft)	36" Diameter	48" Diameter	60" Diameter	72" Diameter
8	14 sec.	20 sec.	26 sec.	33 sec
10	18 sec.	25 sec.	33 sec.	41 sec.
12	21 sec.	30 sec.	39 sec.	49 sec.
14	25 sec	35 sec	46 sec.	57 sec.
16	29 sec.	40 sec.	52 sec	57 sec.
18	32 sec.	45 sec.	59 sec.	67 sec.

END OF SECTION

SECTION 33 31 20
TEMPORARY SEWER BYPASS PUMPING

PART 1 GENERAL

1.1 SECTION INCLUDES

A. This section includes the design, installation and operation of the temporary bypass sewers required by the work to maintain continuous and reliable wastewater flow. Various phases of the Work that shall require the implementation of temporary bypass sewers include, but are not limited to, connections of new sewers to existing sewers, trenchless rehabilitation of existing sewers, and pipeline inspection.

1.2 RELATED WORK

A. Section 33 05 23 – Cured-In-Place Pipe (CIPP)

B. Section 33 31 00 – Sanitary Sewer Systems

1.3 REFERENCES

A. Utah Code R317-003 Paragraph 1.11

1.4 SUBMITTALS

A. Bypass Pumping Plan. Prepare a specific, detailed description of the proposed pumping system (Bypass Pumping Plan). The Bypass Pumping Plan shall be submitted and approved prior to the mobilization of any of the equipment included in the Bypass Pumping Plan. The Bypass Pumping Plan shall outline all provisions and precautions to be taken by the Contractor regarding handling of existing wastewater flows. This Bypass Pumping Plan must be specific and complete, including such items as schedules, locations, elevations, capacities of equipment, materials, and all other incidental items necessary and/or required to ensure proper protection of the facilities, including protection of the access and bypass pumping locations from damage due to the discharge flows, and compliance with the requirements and permit conditions specified herein. No Construction shall begin until all provisions and requirements have been reviewed and accepted by the Engineer and Owner. The plan shall include but not limited to the following details:

1. Nominal and peak wastewater flow rates (as measured by Contractor)
2. Staging areas for pumps.
3. Sewer plugging method and types of plugs.

4. Size and location of manholes or access points for suction and discharge hose or piping.
5. Size of pipeline or conveyance system to be bypassed, including calculations for selection of bypass pumping pipe size.
6. Number, size, material, location and method of installation of suction piping.
7. Number, size, material, location and method of installation of discharge piping.
8. Bypass pump sizes, capacities, and number of each size to be provided onsite including all primary, secondary, and spare pumping units. Provide 100% redundancy on-site.
9. Calculations of static lift, friction losses, and flow velocity (pump curves showing pump, operating range, and suction head required shall be submitted).
10. Downstream discharge plan.
11. Method of protecting discharge manholes or structures from erosion and damage.
12. Thrust and restraint block sizes, locations, and any temporary pipe supports and anchoring requirements. Provide the details necessary to demonstrate the integrity of all suction and discharge piping including piping and fittings associated with all primary and secondary pumping units.
13. Sections showing suction and discharge pipe depth, embedment, select fill and special backfill.
14. Indicate maximum elevation of sewer flows during pumping and show that pumping at this level will not cause backups or any adverse conditions in the upstream sewer system.
15. Method of noise control for each pump and any additional equipment that is included in the Bypass Pumping Plan.
16. Access plans to all bypass pumping locations indicated on the drawings.
17. Schedule for installation of and maintenance of bypass pumping lines.
18. Plan indicating location of bypass pumping pipe locations.
19. Emergency plan for adverse weather and flooding for various phases of the Work. Include spill containment provisions.
20. Contractors plan for providing continuous monitoring of the bypass pumping operation as well as the monitoring persons' qualifications.

1.5 QUALIFICATIONS AND REQUIREMENTS OF BYPASS PUMPING PERSONNEL

A. Pump operators shall have a minimum of two years of experience and shall have experience bypassing flow rates of 5,000 gpm or greater.

B. The on-site bypass pumping supervisor is required to attend the pre-construction meeting and construction progress meetings.

PART 2 PRODUCTS

2.1 BYPASS PUMPING PIPING

A. Bypass pumping shall be HDPE and conform to the following requirements:

1. All polyethylene (HDPE) pipes shall meet the requirements of ASTM F714. DR rating of the pipe shall be sufficient to withstand the pressure and leakage test outlined below.

2. HDPE Pipe shall be furnished in standard laying lengths not exceeding 50 feet.

3. Joining system: The HDPE pipe shall be joined with butt, heat fusion joints. All joints shall be made in strict compliance with the manufacturer's recommendations and ASTM 2657. Where required, flange connections, mechanical joint connections and butt connections using bolted mechanical couplers shall be provided from a pipe stub with a polyethylene and steel stiffener. Flanged connections shall be provided from a pipe stub and a steel back-up flange. Back flanges shall be primed and painted in corrosion protected paint. Quick connect couplings will not be permitted on HDPE bypass piping.

4. HDPE fittings shall be fully pressure rated to match the pipe DR pressure rating. All fittings shall be molded or fabricated by the same manufacturer as the pipe. HDPE fittings shall be joined using butt, heat fusion and/or electrofusion. Adhesives and solvent cements shall not be permitted

B. The Contractor may request permission from the Engineer to use a limited amount of alternate pipe material and/or an alternate joining system, such as quick connect couplings, in situations where traffic control requirements or other parameters make the use of fused HDPE impractical. Such requests must be made in writing and include the followings:

1. Product information on the alternate pipe materials and/or joining system
2. Show where the alternate materials will be used in the bypass pumping schematic
3. Explain why use of the alternate materials is necessary to successfully execute the Work.

PART 3 EXECUTION

3.1 EXAMINATION AND PREPARATION

A. Supply pumps, conduits, power and other equipment to divert the flow of sewage around the section in which Work is to be performed. It is the intent of these Specification to require adequate bypass pumping as required regardless of the flow condition.

B. Gather sewer system information such as flow rates, elevations and layout of the sewer system. This information may be requested from the Owner if it is available. Supplement and/or verify all Owner -provided information with survey, flow monitoring or other means.

C. It shall be the Contractor's responsibility to monitor flows at key locations over a period of at least one week to determine the peak flow rate when that peak occurs.

D. Establish adequate bypass pumping sufficient to meet the conditions above while anticipating severe weather conditions and increases in peak flows during rain events.

3.2 TESTING

A. Perform leakage and pressure tests of the bypass pumping discharge piping using clean water prior to the actual operation. The pressure and leakage test shall be conducted at one-and-a-half times the maximum pressure the system will experience based on the approved Bypass Pumping Plan for a period of two hours. No leakage is permitted during this test.

B. When traffic control or other project requirements will allow, perform a pump test prior to performing any work on the sewer lines that are being bypassed. Demonstrate during the test that the pumping system is in good working order and is sufficiently sized to successfully handle the required flows. The pump test shall include pumping through a weekly peak event. Adequate personnel shall be on hand during this test, such as pump monitors and others stationed at key locations so that they may assess whether the pumping system is working properly and adequately sized to handle the flows. Be prepared to remove the plug and allow flows to pass through the bypassed sewer lines if the bypass system is found to be inadequate.

C. The Engineer will be given 24 hours notice prior to testing

D. In situations where the above testing requirements are not feasible due to traffic control requirements or other parameters, the Contractor may request permission to deviate from these testing requirements and to propose alternative testing that would better suit the requirements of the Project. Such a request much be made in writing to the Engineer, complete with explanation of why the required testing is not feasible and the alternate testing methods that are proposed.

3.3 METHODS AND PROCEDURES

A. Each bypass pumping operation shall include the components and systems to accomplish the bypass in accordance with these Specifications and the special Project Conditions.

B. Provide on-site manual oversight of all bypass pumping operations 24 hours per day, 7 days per week when the bypass pumping system is in operation.

C. Flows from private, commercial, and industrial users shall be handled during the Work without interruption.

D. A maximum surcharge level of 1’ above the top of the pipe will be allowed. Mark suction pipes to indicate the allowable surcharge level and monitor the surcharge level on at least an hourly basis and more frequently during peak flow events.

E. The 24-hour monitoring person shall be properly trained, experienced, and mechanically qualified such that they can quickly and effectively address any potential emergency and non-emergency situations associated with the pumps and bypass pumping system that must remain in operation for an extended period.

F. Portions of the Work may require that upstream pump stations be placed out of service for prolonged periods. In these instances, construct a temporary bypass sewer that shall discharge into either the original piping DOWNSTREAM of the affected area, or into an adjacent gravity sewer identified that flows to an unaffected pump station.

G. Construct and maintain all temporary bypass sewers and be responsible for all bypass pumping of sewage that may be required to prevent backing up of sewage and allow appropriate conditions for proper inspection, rehabilitation, testing or drainage during force main rehabilitation, replacement of reconnections to existing sewers. Immediately remove and properly dispose of all offensive matter spilled during the bypass pumping at his own expense. The Contractor shall also be responsible for paying any fines imposed as a result of spills or overflows that occur as a result of the bypass pumping operations.

H. Provide a redundant bypass pump, intake and discharge conduit, and other equipment necessary to provide continuous wastewater flow and prevent the backing up of sewage in the case of emergencies at all times. This redundant system shall be plumbed into the suction manhole. A 100% redundant capacity system shall be available on site at all times to be used in the event of a bypass pump failure.

I. Bypass pumping operations shall not interfere with traffic flow on streets or cross railroad tracks without prior written consent from the appropriate agencies or jurisdictions.

J. Primary bypass pumps shall be critically silenced when used in residential settings or areas where excessive noise levels would create a disturbance. Redundant bypass pumping does not have to be critically silenced.

K. Driveway ramps may only be used when the following precautions are taken:

1. Place pressure gages on the discharge line before and after the first road ramp downstream of the pumps. Check and record the pressure every 30 minutes during bypass pumping. Should pressures change, indicating that clogging has commenced, then flush the system, remove and clean the inlet side of the road ramp, and retest the system when the current bypass pumping operation has completed.
2. Flush the ramps out with water at least every three days to clean the ramp of debris, including removal and cleaning of the inlet side of the road ramp to be free from accumulated debris.

3.4 CLEANING AND PROTECTION

A. Repair at Contractor's own expense, any damage to public or private property caused by his operations.

B. Should damage of any kind occur to the existing sewers and appurtenances, the Contractor shall, at his own expense make repairs to the satisfaction of the Engineer and the Owner.

C. Immediately notify the jurisdictional authority should a sanitary sewer overflow (SSO) occur and take the necessary action to clean up and disinfect the spillage to the satisfaction of the jurisdictional authority and/or other governmental agency. If sewage spilled onto public or private property, the Contractor shall wash down, clean up, and disinfect the spillage to the satisfaction of the property owner, jurisdictional authority, and/or other governmental agency.

D. Do not permit to overflow, bypass, pump or by any other means convey drainage to any land, street, storm drain or water course.

E. Take care to prevent damage to existing structures. Discharge piping to gravity sewer systems shall be designed in such a manner as to prevent discharge from contacting manhole walls or benching and full discharge shall go into downstream pipe so as to minimize turbulence. Contractor is responsible for any damage to manholes.

F. Cease bypass pumping operations and return floes to the new and/or existing sewer when directed by the Owner. Turning bypass pumping, no wastewater shall be leaked, dumped, or spilled in or onto any area outside the existing wastewater system. When bypass pumping operations are complete, all bypass piping shall be flushed with fresh water and drained into the wastewater system prior to disassembly.

END OF SECTION

TENTATIVE BUDGET SUMMARY – 2025

November 15, 2024

SUMMARY OF THE 2025 BUDGET

DIFFERENCES FROM THE PRELIMINARY BUDGET

The cost estimate for the storage building came in at $4.25 Million. This has been reflected in the 2025 Tentative Capital Budget.

The 2025 Operating Budget has been adjusted for the potential 3% pay adjustment discussed in the October board meeting. The line items 'Salaries & Overtime' and 'Employee Benefits' were revised by $106,900 and $28,200 respectively. No other changes were made from the Preliminary Budget.

Revenues. Increased revenues are budgeted for next year according to the rate study that has been performed by Bowen Collins for years 2023 through 2027. The recommendation from the rate study is a 3% increase in our water and sewer rates for 2025. The preliminary budgeted revenues are $23,910,000, up $780,000 from 2024.

Expenses. The proposed budget for Operations and Maintenance will have an increase from the previous budget by $1,036,900 or 5.1%. Significant changes include the following:

- The Water Operations and Maintenance Expense budget includes $300,000 to abandon water lines that are no longer in service. This is a one-time expense that is new for 2025.
- Depreciation rises when we complete large capital projects. It is also a non-cash expense. The 2025 TBID depreciation budget increased by $480,000, but that ultimately has no impact on our cash position as the capital projects have already been paid for and are being depreciated over the next 10 to 50 years.
- The water purchases budget is $119,000 higher than 2024 due to expected increases from Jordan Valley Water Conservancy District.
- The Reservoir Repairs Expense budget includes $60,000 to have several of our tanks cleaned. This is a carryover item that was planned for completion in 2024, but the contractor is unlikely to do the work in 2024, so we have planned for it in spring, 2025.
- We have experienced significant savings related to replacing the lift station with a siphon. The District flows to CVWRF have decreased significantly which results in lower costs being allocated to TBID. The 2025 Sewer Treatment budget reflects a decrease of $329,500 because of the reduced flows.

If the costs of abandoning the waterlines, depreciation, and the tank cleaning are eliminated to 'normalize' the budget, the increase would be 1.0% rather than 5.1%. The 1.0% compares very well to the CPI increase of 2.6% for the past 12 months.

Jordan Valley Water Conservancy District. Jordan Valley has approved a 5.5% rate increase for 2025. We have included a $119,000 increase in our budget. This budget line item also allows us an additional water source in the event we have a well go down during peak season. We have been able to achieve the lowest cost increases of any Member Agency over the last five years because of the exceptional ability to manage the system and maintain a minimum peaking factor.

Central Valley Water Reclamation Facility. The preliminary budget shows a total of $4,881,000 for CVWRF. In 2025, TBID has an obligation to pay our share of costs incurred by CVWRF including the following:

	TBID Share
Operations	$ 2,867,782
$ 65.1M 2020 Bonds	369,159
$ 220M 2021 Bonds	1,081,201
$ 90M 2024 Bonds (New)	562,858
Total	$ 4,881,000

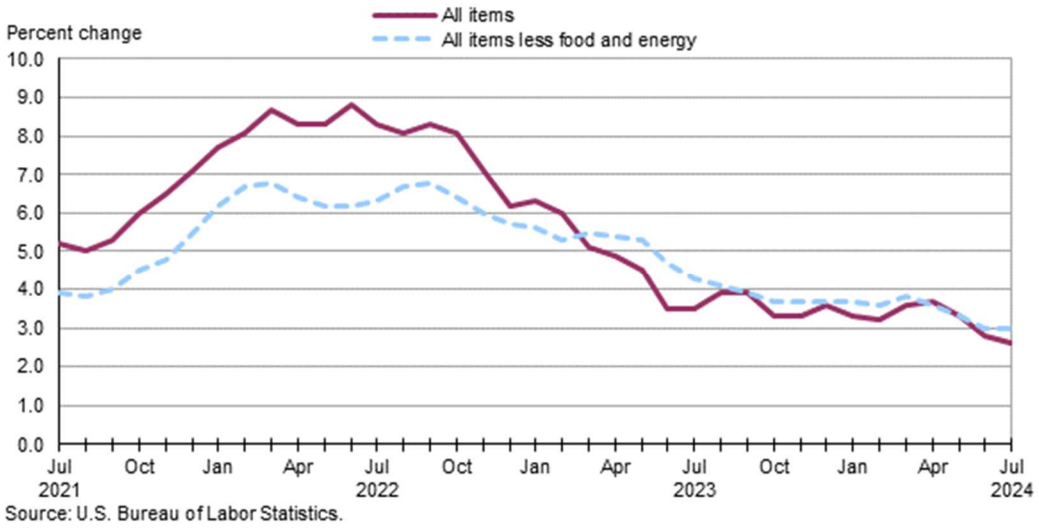
Consumer Price Index, West Region — July 2024

Area prices were down 0.1 percent over the past month, up 2.6 percent from a year ago

Prices in the West Region, as measured by the Consumer Price Index for All Urban Consumers (CPI-U), edged down 0.1 percent in July, the U.S. Bureau of Labor Statistics reported today. (See table A.) The July decrease was influenced by lower prices for energy. (Data in this report are not seasonally adjusted. Accordingly, month-to-month changes may reflect seasonal influences.)

Over the last 12 months, the CPI-U rose 2.6 percent. (See chart 1 and table A.) Food prices rose 2.5 percent. Energy prices fell 2.8 percent, largely the result of a decrease in the price of gasoline. The index for all items less food and energy increased 3.0 percent over the year. (See table 1.)

Chart 1. Over-the-year percent change in CPI-U, West region, July 2021–July 2024



Source: U.S. Bureau of Labor Statistics.

Salaries and Wages. The changes to salaries are budgeted to be a 2.6% COLA, based on the Bureau of Labor Statistics Western Region figure for July, with a merit increase of 0 - 3.0% for annual merit increases, and a potential 3% salary adjustment due to inflation. The total number of employees is planned to increase from 35 to 36 by the end of 2025 as a result of an open GIS position. There will be 10 Operators eligible to take the operator exams and thereby receive up to an additional $60,000 and 10 grade

promotions which could result in additional compensation of $22,000. Including all of the above, salaries and wages are budgeted to increase $291,100, or 8.3%.

Employee Insurance Benefits. Medical premiums are scheduled to increase 4.6% and Dental premiums are scheduled to decrease 5.6%. Long Term Disability insurance has no rate increase. The overall cost increase over 2024 is $35,915.

Trustee Election. Since there is a possibility of having a trustee election in 2025, the budget has been increased by $50,000 to contract with the County for a potential election.

Contingency. The contingency line remains the same as 2024 at $300,000. It is not anticipated that this amount will need to be used in 2024.

Bond Payment. Bond payment 5 of 20 for the Series 2021 Bond will be made in 2025. The payment will be $1,159,000 in December, 2025.

Grant Funding. Grant funding in the amount of $1,600,000 is anticipated to be received in 2025 and has been included in the 2025 budget. These grant proceeds would help offset the cost of the Meadowbrook Waterline Replacement project.

Capital projects. The preliminary budget includes the following high priority projects:

1130 West Water Line Replacement	$11,000,000
Building	$ 4,250,000
Barker Replacement Well	$ 2,800,000
Meadowbrook Waterline Replacement	$ 2,000,000 (partially grant-funded)
Middle Zone Line Engineering	$ 750,000
Central Valley Plant Upgrades	$ 750,000
CIPP Sewer Lining	$ 567,000
Manhole Upgrades	$ 500,000
Auto Purchase (7 Vehicles)	$ 481,000
Sale of Surplus Vehicles	$ (422,000)

District Savings. Savings related to the 2025 District budget include the following:

One Time:

- $1,600,000 - Grant Funding – Meadowbrook Waterline
- $1,500,000 - Large Meter Replacement – In-house / No Contractor
- $600,000 - Redwood Road Waterline Replacement - Partnering with UDOT to Avoid Mobilization, Traffic Control, and Restoration Costs
- $368,000 – Accelerated Portion of 4700 South Waterline Replacement – KID Paid $168k to TBID and Existing Contractor Bid $200,000 Less Due to Less Mobilization
- $90,000 - Tank cleaning – Initial bid for 16 Tanks $150,000 - $286,000 – 2025 Budget $60,000
- $52,000 – Completing 40 Year Water Rights Plan and Conservation Plan In-house
- $??? – Lead on Copper Rule Compliance - In-house / No Contractor or Consultant

Total - $4,227,000 Plus

Annually Recurring:

- $580,000 Annually - Siphon - Operating $492,000; Capital $89,000
- $440,000 Annually - Bond - Interest Savings of $8.8M over 20 years 1.61% (historical average 4.5%)
- $440,000 – Meter Replacement - Recovery of Lost Revenue
- $433,000 – Flushing (49 miles annually) - In-house / No Contractor ($186k YTD – 21 Miles)
- $315,000 - Jordan Valley Water Rates
- $7,500 – Valve Repair Kit – Reduces Labor, Excavation & Material Expenses (5 annually)

Total - $2,215,500

Taylorsville-Bennion Improvement District
2025 District Budget

Account	2023 Actual	2024 Final Budget	2024 Projected Actuals	2025 Preliminary Budget	Change	2025 Tentative Budget	Difference	% Difference
Operating Revenue								
Water Sales	10,753,426	11,233,000	12,318,800	11,605,000	-	11,605,000	372,000	3.3%
Sewer Service Charges	11,435,835	11,762,000	11,888,400	12,156,000	-	12,156,000	394,000	3.3%
Other Income	143,461	135,000	164,400	149,000	-	149,000	14,000	10.4%
Total Operating Revenue	**22,332,722**	**23,130,000**	**24,371,600**	**23,910,000**	**-**	**23,910,000**	**780,000**	**3.4%**
Operating Expenses								
Salaries & Overtime	3,170,915	3,525,600	3,395,600	3,709,800	106,900	3,816,700	291,100	8.3%
Employee Benefits	2,068,544	2,262,900	2,261,300	2,376,400	28,200	2,404,600	141,700	6.3%
Sewer Treatment	4,090,169	5,210,500	5,169,800	4,881,000	-	4,881,000	(329,500)	-6.3%
Water Purchases	1,974,827	2,152,000	2,023,300	2,271,000	-	2,271,000	119,000	5.5%
Rocky Mtn Pwr & Dominion	536,826	834,000	769,300	834,000	-	834,000	-	0.0%
O&M	423,917	496,300	507,900	811,400	-	811,400	315,100	63.5%
Landscaping	171,061	194,000	157,100	189,000	-	189,000	(5,000)	-2.6%
Credit Card, Postage & Bank Charges	297,986	302,000	334,100	358,000	-	358,000	56,000	18.5%
Insurance Premiums & Claims	232,506	367,000	270,700	392,000	-	392,000	25,000	6.8%
Professional Services / Election	113,641	168,100	97,800	143,400	-	143,400	(24,700)	-14.7%
Vehicle & Equipment Expense	76,099	124,700	88,200	130,300	-	130,300	5,600	4.5%
Computer Supplies, Copiers, Software	73,594	214,400	110,600	224,200	-	224,200	9,800	4.6%
Wells-Repairs / Expense	23,458	60,400	63,100	57,300	-	57,300	(3,100)	-5.1%
Office Supplies	55,553	63,100	62,000	64,000	-	64,000	900	1.4%
Water Treatment Expense	68,530	86,700	72,400	102,200	-	102,200	15,500	17.9%
Gas, Oil & Diesel	57,992	136,000	82,400	96,000	-	96,000	(40,000)	-29.4%
Sick Pay	144,568	84,000	81,200	115,500	-	115,500	31,500	37.5%
Training & Travel	79,868	120,000	81,700	120,000	-	120,000	-	0.0%
Boosters-Repairs / Expense	10,186	42,200	34,000	43,500	-	43,500	1,300	3.1%
Lift Stations - Repairs / Expense	3,975	11,500	12,900	11,500	-	11,500	-	0.0%
Telephone	38,822	55,600	46,100	61,600	-	61,600	6,000	10.8%
Water Analysis & Samples	24,715	35,700	30,300	42,000	-	42,000	6,300	17.6%
Professional Organization Fees	27,556	26,000	24,800	27,500	-	27,500	1,500	5.8%
Pre-Treat Waste Samples	8,105	15,000	14,900	17,000	-	17,000	2,000	13.3%
Safety & Service Awards	23,861	19,600	20,200	20,000	-	20,000	400	2.0%
Meter Testing & Repair	3,125	10,000	5,200	10,000	-	10,000	-	0.0%
Uniform Cleaning	11,608	9,400	7,600	9,200	-	9,200	(200)	-2.1%
Safety, Emergency & Public Education	10,057	35,500	26,800	40,700	-	40,700	5,200	14.6%
Telemetry	11,993	28,900	26,600	29,500	-	29,500	600	2.1%
Reservoir - Repairs / Expense	561	4,000	4,900	64,000	-	64,000	60,000	1500.0%
Bad Debts	120	1,000	500	1,000	-	1,000	-	0.0%
Contingency	-	300,000	75,000	300,000	-	300,000	-	0.0%
Depreciation Expense	3,262,828	3,420,000	3,588,500	3,900,000	-	3,900,000	480,000	14.0%
Total Operating Expenses	**17,097,564**	**20,416,100**	**19,546,800**	**21,453,000**	**135,100**	**21,588,100**	**1,172,000**	**5.7%**
Net Operating Revenue	**5,235,158**	**2,713,900**	**4,824,800**	**2,457,000**	**(135,100)**	**2,321,900**	**(392,000)**	**-14.4%**
Non-Operating Revenue								
Non-Operating Revenue	4,468,203	3,077,794	3,510,100	3,663,500	-	3,663,500	585,706	19.0%
Total Non-Operating Revenue	**4,468,203**	**3,077,794**	**3,510,100**	**3,663,500**	**-**	**3,663,500**	**585,706**	**19.0%**
Non-Operating Expenses								
Non-Operating Expenses	54,537	1,848,000	1,839,000	1,341,000	-	1,341,000	(507,000)	-27.4%
Total Non-Operating Expenses	**54,537**	**1,848,000**	**1,839,000**	**1,341,000**	**-**	**1,341,000**	**(507,000)**	**-27.4%**
Net Non-Operating Revenue	**4,413,666**	**1,229,794**	**1,671,100**	**2,322,500**	**-**	**2,322,500**	**1,092,706**	**88.9%**
Net Income	**9,648,824**	**3,943,694**	**6,495,900**	**4,779,500**	**(135,100)**	**4,644,400**	**700,706**	**17.8%**

Taylorsville-Bennion Improvement District
2025 District Budget

12/31/2023

Number	Account	2023 Actual	2024 Final Budget	2024 Projected Actuals	2025 Preliminary Budget	Change	2025 Tentative Budget	Difference From 2024 Final Budget	% Difference
Operating Revenue									
2-3110	Water Sales - Metered	10,712,433	11,178,000	12,264,000	11,570,000	-	11,570,000	392,000	3.5%
2-3120	Water Sales - Other	26,792	25,000	36,600	25,000	-	25,000	-	0.0%
2-3180	Water Meter Charge Fees	14,201	30,000	18,200	10,000	-	10,000	(20,000)	-66.7%
3-3130	Sewer Service Charges	11,256,506	11,613,000	11,652,300	11,948,000	-	11,948,000	335,000	2.9%
3-3140	Pre-Treat Surcharge	155,929	139,000	197,600	168,000	-	168,000	29,000	20.9%
3-3170	Pre-Treat Sample Charge	23,400	10,000	38,500	40,000	-	40,000	30,000	300.0%
4-4105	Military Service Credit	(150)	(1,000)	(1,000)	(1,000)	-	(1,000)	-	0.0%
4-4110	Penalties	47,361	38,000	50,600	45,000	-	45,000	7,000	18.4%
4-4130	Returned Check Charges	4,637	3,000	5,500	5,000	-	5,000	2,000	66.7%
4-4140	Eng Fee & Deposit Contribution	21,511	30,000	27,000	30,000	-	30,000	-	0.0%
4-4150	Miscellaneous	18,041	25,000	27,400	25,000	-	25,000	-	0.0%
4-4160	Certification & Collect Fees	52,061	40,000	54,900	45,000	-	45,000	5,000	12.5%
Total Operating Revenue		**22,332,722**	**23,130,000**	**24,371,600**	**23,910,000**	**-**	**23,910,000**	**780,000**	**3.4%**
Operating Expenses									
2-5025	Sick Pay	40,350	29,000	29,000	28,500	-	28,500	(500)	-1.7%
2-5030	Safety & Service Awards	9,258	7,900	8,100	8,100	-	8,100	200	2.5%
2-5040	Maintenance Salaries	1,018,391	1,148,700	1,143,300	1,264,000	35,600	1,299,600	150,900	13.1%
2-5045	Overtime/On-Call	29,916	31,000	24,000	31,000	-	31,000	-	0.0%
2-5140	Telemeter	11,993	28,500	26,200	28,500	-	28,500	-	0.0%
2-5280	Gas & Oil Purchase	22,976	40,800	38,600	40,800	-	40,800	-	0.0%
2-5285	Diesel	11,938	41,000	10,000	17,000	-	17,000	(24,000)	-58.5%
2-5310	Workers Comp	8,212	11,400	20,000	16,100	400	16,500	5,100	44.7%
2-5315	Employees - Health & Dis	285,484	321,000	322,600	393,400	100	393,500	72,500	22.6%
2-5410	Payroll Taxes	81,513	91,000	85,900	103,600	2,900	106,500	15,500	17.0%
2-5415	Employees Retirement	198,529	211,800	210,500	224,900	6,200	231,100	19,300	9.1%
2-5425	Rocky Mtn Pwr & Dominion	519,111	770,000	733,300	770,000	-	770,000	-	0.0%
2-5435	Uniform Cleaning	6,934	5,100	4,300	4,800	-	4,800	(300)	-5.9%
2-5445	J.V.W.C. District	1,974,827	2,152,000	2,023,300	2,271,000	-	2,271,000	119,000	5.5%
2-5450	Water Analysis (Wells)	5,770	17,800	13,400	15,900	-	15,900	(1,900)	-10.7%
2-5455	Water Samples (System)	18,945	17,300	16,900	25,100	-	25,100	7,800	45.1%
2-5460	Water Samples (Subdiv)	-	600	-	1,000	-	1,000	400	66.7%
2-5485	O&M - Water	190,035	221,700	220,700	524,800	-	524,800	303,100	136.7%
2-5495	Large Meter Cal, Test & Repair	3,125	10,000	5,200	10,000	-	10,000	-	0.0%
2-5505	Landscape Wells & Resv	171,061	189,000	157,100	189,000	-	189,000	-	0.0%
2-5510	Water Treatment	36,693	44,700	47,800	50,200	-	50,200	5,500	12.3%
2-5606	Chemical Treatment Stations	31,837	42,000	24,600	52,000	-	52,000	10,000	23.8%
2-5607	Wells-Repairs/Expense	3,520	50,000	5,600	50,000	-	50,000	-	0.0%
2-5610	High Zone West Well	1,000	-	-	-	-	-	-	0.0%
2-5615	White Well 2	-	-	-	-	-	-	-	0.0%
2-5620	Meadowbrook North	-	-	-	-	-	-	-	0.0%
2-5625	Kearns Well	-	-	-	500	-	500	500	0.0%
2-5630	Pioneer Well	3,342	-	-	500	-	500	500	0.0%
2-5635	Taylorsville East Well	1,212	-	700	500	-	500	500	0.0%
2-5640	Barker West Well	-	-	100	600	-	600	600	0.0%
2-5655	Finlayson Well	1,980	-	-	-	-	-	-	0.0%
2-5665	Swensen Well	-	1,700	-	1,700	-	1,700	-	0.0%
2-5670	Taylorsville West Well	2,800	1,400	100	1,900	-	1,900	500	35.7%
2-5680	Barker East Well	679	-	-	-	-	-	-	0.0%
2-5685	Valley Well	3,693	6,600	51,200	1,600	-	1,600	(5,000)	-75.8%
2-5690	Fairway Well	4,393	-	-	-	-	-	-	0.0%
2-5695	Swaw Well	-	-	-	-	-	-	-	0.0%
2-5705	Rawson Well	468	-	-	-	-	-	-	0.0%
2-5710	Atherton East Well	-	-	4,000	-	-	-	-	0.0%
2-5715	Atherton West Well	371	700	1,400	-	-	-	(700)	-100.0%
2-5725	Boosters Repair & Maintenance	-	30,000	23,700	30,000	-	30,000	-	0.0%
2-5730	LZ North Boosters	-	2,000	200	2,000	-	2,000	-	0.0%
2-5735	LZ South Boosters	4,537	3,400	9,300	4,100	-	4,100	700	20.6%
2-5740	5200 West Booster	706	3,400	-	3,400	-	3,400	-	0.0%
2-5750	Kearns Booster	4,944	3,400	800	4,000	-	4,000	600	17.6%
2-5765	Low Zone North Reservoir	20	-	-	-	-	-	-	0.0%
2-5766	Low Zone South Reservoir	147	-	-	60,000	-	60,000	60,000	0.0%
2-5770	Middle Zone Reservoir	64	2,000	4,500	2,000	-	2,000	-	0.0%
2-5775	High Zone Reservoir	330	2,000	400	2,000	-	2,000	-	0.0%
2-5815	Backhoe & Skidsteer	1,555	9,000	10,200	3,000	-	3,000	(6,000)	-66.7%
2-5820	Small Engine Equipment	871	1,800	1,600	3,100	-	3,100	1,300	72.2%
2-5840	Trucks-Light Duty	12,873	8,600	15,100	17,700	-	17,700	9,100	105.8%
2-5841	Trucks-Heavy Duty	14,747	20,900	16,800	21,500	-	21,500	600	2.9%
2-5851	Vactor-Water	11,535	23,000	10,900	30,100	-	30,100	7,100	30.9%
2-5955	Water Depreciation Expense	2,409,041	2,520,000	2,656,700	2,880,000	-	2,880,000	360,000	14.3%

Taylorsville-Bennion Improvement District
2025 District Budget

12/31/2023

Number	Account	2023 Actual	2024 Final Budget	2024 Projected Actuals	2025 Preliminary Budget	Change	2025 Tentative Budget	Difference From 2024 Final Budget	% Difference
3-5025	Sick Pay	17,310	14,000	11,200	21,000	-	21,000	7,000	50.0%
3-5030	Safety & Service Awards	6,107	4,500	5,000	3,900	-	3,900	(600)	-13.3%
3-5040	Maintenance Salaries	551,575	592,900	571,100	597,200	16,400	613,600	20,700	3.5%
3-5045	Overtime/On-Call	5,204	8,000	4,400	8,000	-	8,000	-	0.0%
3-5055	CV Pretreatment Field	10,649	14,700	12,500	15,000	-	15,000	300	2.0%
3-5060	CV O & M Lab	110,616	150,800	128,100	140,000	-	140,000	(10,800)	-7.2%
3-5065	CV Interceptor Monitoring	-	-	-	-	-	-	-	0.0%
3-5140	Telemeter	-	400	400	1,000	-	1,000	600	150.0%
3-5280	Gas & Oil Purchase	15,120	27,200	27,100	27,200	-	27,200	-	0.0%
3-5285	Diesel	7,959	27,000	6,700	11,000	-	11,000	(16,000)	-59.3%
3-5310	Workers Comp	10,155	10,300	18,200	14,400	400	14,800	4,500	43.7%
3-5315	Employees - Health & Dis	173,811	177,200	175,600	180,900	-	180,900	3,700	2.1%
3-5410	Payroll Taxes	42,553	46,700	44,000	48,500	1,300	49,800	3,100	6.6%
3-5415	Employees Retirement	107,519	111,100	155,500	108,800	2,700	111,500	400	0.4%
3-5420	Sewage Treatment	3,968,904	5,045,000	5,029,200	4,726,000	-	4,726,000	(319,000)	-6.3%
3-5425	Rocky Mtn Pwr & Dominion	(9,548)	31,000	16,000	31,000	-	31,000	-	0.0%
3-5435	Uniform Cleaning	2,585	2,400	1,900	2,200	-	2,200	(200)	-8.3%
3-5470	O&M - Sewer	165,535	173,000	192,100	182,500	-	182,500	9,500	5.5%
3-5475	Repr & Maint Swer Lift 39th	3,193	-	1,200	-	-	-	-	0.0%
3-5478	Repr & Maint Swer Lift Brrgtn	781	11,500	11,700	11,500	-	11,500	-	0.0%
3-5480	Pre-Treat Waste Samples	8,105	15,000	14,900	17,000	-	17,000	2,000	13.3%
3-5505	Landscape Wells & Resv	-	-	-	-	-	-	-	0.0%
3-5805	Vactor-Sewer	12,692	27,000	13,300	28,400	-	28,400	1,400	5.2%
3-5810	T.V. Trucks	21,379	32,500	13,300	24,600	-	24,600	(7,900)	-24.3%
3-5840	Trucks-Light Duty	446	1,900	7,000	1,900	-	1,900	-	0.0%
3-5955	Sewer Depreciation Expense	853,787	900,000	931,800	1,020,000	-	1,020,000	120,000	13.3%
3-5960	Depreciation CVWRF	-	-	-	-	-	-	-	0.0%
4-5010	Trustees Salaries	15,000	15,000	15,000	15,000	-	15,000	-	0.0%
4-5015	Administrative Salaries	776,907	827,600	828,100	857,000	24,700	881,700	54,100	6.5%
4-5020	Office Salaries	766,427	894,200	802,300	929,400	30,200	959,600	65,400	7.3%
4-5025	Sick Pay	86,908	41,000	41,000	66,000	-	66,000	25,000	61.0%
4-5030	Safety & Service Awards	8,495	7,200	7,100	8,000	-	8,000	800	11.1%
4-5035	Car Allowance	7,200	7,200	7,200	7,200	-	7,200	-	0.0%
4-5045	Overtime	295	1,000	200	1,000	-	1,000	-	0.0%
4-5070	Retirement Early Incentive	150,600	120,000	141,900	100,000	-	100,000	(20,000)	-16.7%
4-5080	Janitorial	15,604	16,700	15,200	15,600	-	15,600	(1,100)	-6.6%
4-5110	Office Supplies	55,578	63,100	62,000	64,000	-	64,000	900	1.4%
4-5115	Bond Expense	2,000	3,500	2,500	3,500	-	3,500	-	0.0%
4-5120	Training & Travel	79,868	120,000	81,700	120,000	-	120,000	-	0.0%
4-5125	Professional Organization Fees	27,556	26,000	24,800	27,500	-	27,500	1,500	5.8%
4-5130	Postage & Bank Charge	105,143	114,000	114,500	120,000	-	120,000	6,000	5.3%
4-5135	Credit Card Charges	192,844	188,000	219,600	238,000	-	238,000	50,000	26.6%
4-5145	Telephone	38,822	55,600	46,100	61,600	-	61,600	6,000	10.8%
4-5155	Legal - District	20,095	45,000	23,000	45,000	-	45,000	-	0.0%
4-5160	Professional Services	17,402	17,400	12,800	12,200	-	12,200	(5,200)	-29.9%
4-5165	Auditing Services	10,490	12,000	10,500	14,500	-	14,500	2,500	20.8%
4-5175	Trustee Election	42,744	-	-	50,000	-	50,000	50,000	0.0%
4-5210	Computer	5,402	6,100	2,000	6,100	-	6,100	-	0.0%
4-5215	Copiers & Printers	2,918	5,600	4,400	5,000	-	5,000	(600)	-10.7%
4-5220	Computer Programing	61,473	197,100	100,600	209,500	-	209,500	12,400	6.3%
4-5230	Fire Protection	5,306	3,500	3,500	2,600	-	2,600	(900)	-25.7%
4-5240	Postage Machine & Scales	1,785	800	2,400	800	-	800	-	0.0%
4-5310	Workers Comp	3,476	2,400	8,000	2,900	100	3,000	600	25.0%
4-5315	Employees - Health & Dis	329,781	381,500	322,300	413,900	100	414,000	32,500	8.5%
4-5320	Liability Premium	225,142	267,000	270,700	292,000	-	292,000	25,000	9.4%
4-5325	Damage Claims	7,364	100,000	-	100,000	-	100,000	-	0.0%
4-5405	Unemployment Claims	-	5,000	-	5,000	-	5,000	-	0.0%
4-5410	Payroll Taxes	118,345	133,000	123,500	142,000	4,000	146,000	13,000	9.8%
4-5415	Employees Retirement	296,940	310,500	303,300	322,000	10,000	332,000	21,500	6.9%
4-5416	Retirement Yrs Purchase	261,626	330,000	330,000	300,000	-	300,000	(30,000)	-9.1%
4-5425	Rocky Mtn Pwr & Dominion	27,263	33,000	20,000	33,000	-	33,000	-	0.0%
4-5430	Shop & Maintenance Supplies	68,516	98,900	93,700	101,200	-	101,200	2,300	2.3%
4-5435	Uniform Cleaning	2,088	1,900	1,400	2,200	-	2,200	300	15.8%
4-5490	Garbage Dumping & Recycle	(170)	1,800	1,400	2,000	-	2,000	200	11.1%
4-5505	Landscape Wells & Resv	-	5,000	-	-	-	-	(5,000)	-100.0%
4-5515	Public Education	5,492	23,000	10,800	23,000	-	23,000	-	0.0%
4-5520	Emergency Preparedness	188	1,000	-	1,000	-	1,000	-	0.0%
4-5525	Safety Training & Equipment	4,377	11,500	16,000	16,700	-	16,700	5,200	45.2%
4-5526	Professional Studies / Services	-	70,000	30,300	-	-	-	(70,000)	-100.0%
4-5850	Graffitti Removal	-	900	-	900	-	900	-	0.0%
4-5915	Resident Engineering	-	-	-	-	-	-	-	0.0%
4-5920	Misc Eng & Audit	-	-	-	-	-	-	-	0.0%
4-5930	GPS Software & Maintenance	2,014	4,800	1,200	2,800	-	2,800	(2,000)	-41.7%
4-5950	Bad Debts	120	1,000	500	1,000	-	1,000	-	0.0%
4-5951	Contingency	-	300,000	75,000	300,000	-	300,000	-	0.0%
4-5955	Depreciation Expense	-	-	-	-	-	-	-	0.0%
4-5965	Miscellaneous Expense	(25)	-	-	-	-	-	-	0.0%
Total Operating Expenses		**17,097,564**	**20,416,100**	**19,546,800**	**21,453,000**	**135,100**	**21,588,100**	**1,172,000**	**5.7%**
Net Operating Revenue		**5,235,158**	**2,713,900**	**4,824,800**	**2,457,000**	**(135,100)**	**2,321,900**	**(392,000)**	**-14.4%**

Taylorsville-Bennion Improvement District
2025 District Budget

12/31/2023

Number	Account	2023 Actual	2024 Final Budget	2024 Projected Actuals	2025 Preliminary Budget	Change	2025 Tentative Budget	Difference From 2024 Final Budget	% Difference
Non-Operating Revenue									
2-7500	Res. Water Impact Fees	56,088	57,600	26,200	57,600	-	57,600	-	0.0%
2-7550	Comm. Water Impact Fees	35,740	25,000	1,047,800	25,000	-	25,000	-	0.0%
2-7610	Contr-Builders & Subdivision	34,300	-	-	-	-	-	-	0.0%
3-6030	Int. & Misc. Inc. CVWRF	-	-	-	-	-	-	-	0.0%
3-7350	Res. Sewer Impact Fee	391,070	31,000	65,800	31,300	-	31,300	300	1.0%
3-7400	Comm. Sewer Impact Fee	6,701	20,100	51,400	20,100	-	20,100	-	0.0%
3-7610	Comm. Sewer Impact Fee	33,200	-	-	-	-	-	-	0.0%
4-6010	Interest Earned - Invest	1,646,739	813,500	1,582,800	1,379,000	-	1,379,000	565,500	69.5%
4-6020	Miscellaneous Income	36,753	1,600,000	100	1,600,000	-	1,600,000	-	0.0%
4-6025	Change In Unrealized Gain/Loss	188,941	-	201,100	-	-	-	-	0.0%
4-6040	Gain On Sle Fixed Assets	273,040	-	19,000	-	-	-	-	0.0%
4-6050	Gain on CVWRF	1,245,539	-	-	-	-	-	-	0.0%
4-6110	Property Tax - Current Yr	462,863	451,094	460,000	453,000	-	453,000	1,906	0.4%
4-6120	Fee-In-Lieu Of Taxes	23,881	24,000	19,200	24,000	-	24,000	-	0.0%
4-6130	Redemption Taxes-Prev Yrs	6,000	5,500	4,900	5,500	-	5,500	-	0.0%
4-6135	Property Tax - RDA	-	15,000	-	20,000	-	20,000	5,000	33.3%
4-6150	Federal Credit 2010 Bab	-	-	-	-	-	-	-	0.0%
4-6200	Rental Income	27,348	35,000	31,800	48,000	-	48,000	13,000	37.1%
Total Non-Operating Revenue		**4,468,203**	**3,077,794**	**3,510,100**	**3,663,500**	**-**	**3,663,500**	**585,706**	**19.0%**
Non-Operating Expenses									
4-6520	Bond Interest Expense	334,783	327,000	326,100	317,000	-	317,000	(10,000)	-3.1%
4-6540	Investment In CVWRF	-	1,500,000	1,500,000	1,000,000	-	1,000,000	(500,000)	-33.3%
4-6560	Bond Discount Amortization	-	-	-	-	-	-	-	0.0%
4-6600	Rental Expense	6,512	6,000	12,900	4,000	-	4,000	(2,000)	-33.3%
4-6620	Property Tax - RDA Expense		15,000		20,000	-	20,000	5,000	33.3%
4-6650	URS Pension Expense	252,546	-	-	-	-	-	-	0.0%
4-6660	URS Benefit Expense	(539,304)	-	-	-	-	-	-	0.0%
Total Non-Operating Expenses		**54,537**	**1,848,000**	**1,839,000**	**1,341,000**	**-**	**1,341,000**	**(507,000)**	**-27.4%**
Net Non-Operating Revenue		**4,413,666**	**1,229,794**	**1,671,100**	**2,322,500**	**-**	**2,322,500**	**1,092,706**	**88.9%**
Net Income		**9,648,824**	**3,943,694**	**6,495,900**	**4,779,500**	**(135,100)**	**4,644,400**	**700,706**	**17.8%**

Taylorsville-Bennion Improvement District
2025 Capital Budget

Number	Account	Preliminary	Change	Tentative
Capital Projects				
5-7800	Sale Of Fixed Assets	(422,000)	-	(422,000)
5-8025	Land	600,000	-	600,000
5-8035	Auto Purchase	481,000	-	481,000
5-8040	T V Truck, Camera, Vactor	450,000	-	450,000
5-8045	Office Furnishings	3,000	-	3,000
5-8050	Maintenance Equipment	12,000	-	12,000
5-8055	Computer	26,500	-	26,500
5-8075	Security	120,000	-	120,000
5-8080	Office Building & Premises	3,873,000	808,000	4,681,000
5-8095	Tractors / Skid Steer / Backhoe	310,000	-	310,000
5-8205	Pretreatment Equipment	7,500	-	7,500
5-8305	Sewer Line Easement	11,000	-	11,000
5-8310	Sewer Line Rehab/Misc	1,170,000	-	1,170,000
5-8315	Sewer Master Plan Projects	450,000	-	450,000
5-8420	Water Line Easements	11,000	-	11,000
5-8440	Water Line Projects	14,230,000	-	14,230,000
5-8470	City Projects	22,000	-	22,000
Wells - Capital				
5-8520	TayEast	55,000	-	55,000
5-8547	Barker	2,800,000	-	2,800,000
Wells - Mechanical				
5-8680	Treatment Stations	80,000	-	80,000
5-8687	Barker (New)	10,000	-	10,000
5-8695	TayWest	300,000	-	300,000
5-8720	Pioneer	10,000	-	10,000
5-8730	Valley	113,000	-	113,000
5-8760	Atherton West	34,000	-	34,000
5-8811	Low Zone South Boosters	65,000	-	65,000
5-8825	Low Zone North Reservoir	10,000	-	10,000
5-8826	Low Zone South Reservoir	10,000	-	10,000
5-8830	Middle Zone Reservoir	10,000	-	10,000
5-8835	High Zone Reservoir	10,000	-	10,000
5-8850	Water Meters	61,700	-	61,700
5-8855	Pipe Fittings & Accessor	305,000	-	305,000
5-8875	CV Capital Projects	750,000	-	750,000
5-8950	Payments - Bond Principal	1,159,000	-	1,159,000
Total Capital Projects		**27,137,700**	**808,000**	**27,945,700**

RATE AND FEE SCHEDULE
JANUARY 1, 2025

DESCRIPTION	Proposed
BILLING RATES	
Water Rate-Residential Accounts	
Block 1, 0 - 7,000 gallons (per 1,000 gal)	$~~1.72~~ 1.77
Block 2, 7,001 – 25,000 gallons (per 1,000 gal)	$~~2.16~~ 2.22
Block 3, 25,001 – 45,000 gallons (per 1,000 gal)	$~~2.76~~ 2.84
Block 4, over 45,000 gallons (per 1,000 gal)	$~~3.88~~ 4.00
Water Availability-Residential Charge (for 1st Unit)	$~~13.26~~ 13.65
Of Single Unit and Multi-Unit accounts	
+Charge per each additional unit (per month)	$~~11.15~~ 11.48
Water Availability-Residential Charge (for 1st Unit)	$~~12.75~~ 13.13
Of Privately Maintained Infrastructure accounts	
+Charge per each additional unit (per month)	$~~10.64~~ 10.96
Water Availability-Residential Charge (for 1st Unit)	$~~11.17~~ 11.51
Of Mobile Home accounts	
+Charge per each additional unit (per month)	$~~9.06~~ 9.33
Water Rate-Non-Residential Accounts	
Volume rate (per 1,000 gal)	$~~2.19~~ 2.26
Water Availability-Non-Residential Charge (for 1st Unit)	$~~13.26~~ 13.65
+Charge per each additional unit (per month)	$~~11.15~~ 11.48
Water Rate – Wholesale Accounts	
Volume rate (per 1,000 gal)	$~~2.60~~ 2.68
Monthly base rate	Actual Cost
Sewer Rate-All User Accounts	
Volume rate (per 1,000 gal)	$~~2.66~~ 2.74
Sewer Availability-Residential Charge (for 1st Unit)	$~~13.44~~ 13.84
Of Single Unit and Multi-Unit accounts	
+Charge per each additional unit (per month)	$~~12.23~~ 12.60
Sewer Availability-Residential Charge (for 1st Unit)	$~~13.16~~ 13.55
Of Privately Maintained Infrastructure accounts	
+Charge per each additional unit (per month)	$~~11.97~~ 12.33
Sewer Availability-Residential Charge (for 1st Unit)	$~~12.32~~ 12.69
Of Mobile Home accounts	
+Charge per each additional unit (per month)	$~~11.11~~ 11.44
Sewer Availability-Residential Charge (per month)	
Of Small Unit accounts	$~~10.33~~ 10.64
+Charge per each additional unit (per month)	$~~9.12~~ 9.40
Central Valley Assessment Per ERU (per month)	$12.00
Central Valley Assessment Per ERU – small unit (per month)	$8.95

RATE AND FEE SCHEDULE
JANUARY 1, 2025

DESCRIPTION	Proposed

OFFICE FEES

Administrative Fee (actual not-to-exceed)	$1,000.00
After Hours Call	$75.00
Certification Fee	$20.00
Collection fee	Actual Cost
Copy costs	Actual Cost
EFT Return items, Other (actual not to exceed)	$25.00
Interest on Unpaid Balance (per month)	1.5%
Meter test charge	$50.00
Military Credit (per month actual not-to-exceed)	$50.00
Refund Requests (per check)	$25.00
Return Check Charge-Dishonored Payment	$20.00
Telephone Calls	Actual Costs
Tenant Account Set-Up Fee (per occurrence)	$35.00
Multiple Trip Fee (Multiple visits to same location in same year of 3+)	$25.00
Turn-On/Off Fee (Daytime-Special Request)	$25.00
Unauthorized Meter Turn On/Off Fee (per occurrence)	$75.00
Statement Fee-Additional (per statement)	$1.00
Service Outside District Boundary Fee	Actual Difference
Tampering or Destruction of District Equipment	Actual+Adm fee

PRETREATMENT AND SAMPLING FEES

Sampling Fee (Pretreatment)	$150.00
Sampling Manhole Noncompliance Fee	$150.00
Sewer Surcharge	Based on the different strengths of the discharge and the associated costs

HYDRANT USE FEES

Hydrant Deposit (per hydrant)	$500.00
Hydrant Flow Test Permit (per test)	$100.00
Hydrant Meter Relocation Fee (per move)	$50.00
Hydrant Permit (Initial 2 weeks)	$175.00
Hydrant Permit (Per Week After Initial 2 Weeks)	$50.00
Hydrant Water (per 1,000 gallons)	$~~2.50~~ 2.84

RATE AND FEE SCHEDULE
JANUARY 1, 2025

DESCRIPTION	Proposed

DEVELOPMENT DEPOSITS

Fire Hydrant Deposit (per hydrant)	$200.00
Manhole Deposit (per manhole)	$300.00
Valve Deposit (per valve)	$100.00
Trench Deposit For Sewer Mainline (per 100 lf)	$100.00
Trench Deposit For Water Mainline (per 400 lf)	$100.00
Trench Deposit For Laterals (per lateral)	$50.00

DEVELOPMENT FEES

New Development Application Fee (Main line Ext)	$250.00
As-built Drawings (per sheet)	$300.00
Bacteriologic Sampling Fee	
First sample	$~~92.00~~ 115.00
Additional samples (same trip)	$~~52.00~~ 68.00
Sewer Lateral Inspection (new connection)	$200.00
Inspection Fees (per hour)	$~~93.00~~ 95.00
Preconstruction Meeting	$200.00
Prints (per sheet)	$20.00
Review Fees (per sheet) (Up to 3 Reviews)	$300.00
Easement Review Fee	$200.00
Easement Surveying and Review Fee	Actual Cost
TV Truck Line Inspection (per linear foot)	$~~0.50~~ 0.51
Plat approval, Board of Health Letter (No Main line Ext)	$50.00
Water Connection Fees	See Exhibit B

IMPACT FEES

Sewer Impact Fees	See Exhibit A
Water Impact Fees	See Exhibit A

RATE AND FEE SCHEDULE
JANUARY 1, 2025

DESCRIPTION	Proposed

LABOR, EQUIPMENT AND MATERIALS USAGE CHARGES

Vactor Truck w/1 operator (per hour)	~~$225.00~~ 245.00
Truck – Unit #6 (per hour)	$40.00
Truck – Dump w/1 operator (per hour)	~~$85.00~~ 115.00
Truck – Pickup (per hour)	$20.00
Backhoe / Mini Excavator w/1 operator (per hour)	~~$85.00~~ 140.00
Compressor (per hour)	$50.00
Pump – 2" (per hour)	$30.00
Jumping Jack (per hour)	$15.00
Viber Plate (per hour)	$15.00
Saw cut machine (per hour)	$25.00
Cut off saw (per hour)	$25.00
Crane Truck (per hour)	$50.00
Valve Truck (per hour)	$50.00
TV Truck (per hour	$140.00
Employee – Reg time rate (per hour)	~~$60.00~~ 62.00
Employee – Overtime rate (per hour)	~~$79.00~~ 81.00
Sewer Lateral Inspection Fee (existing customers)	~~$100.00~~ 150.00
Materials	Actual+Adm Fee
Water Loss (Estimated by Supervisor-Block 4 rate)	Actual+Adm Fee

DROUGHT CONTINGENCY RATES

Moderate Drought Rates

Residential Accounts	Tier 1	Tier 2	Tier 3	Tier 4
Change to Existing Volume Rate	0%	0%	+50%	+100%
Tier Definition (per 1,000 gal)	0-7	7-25	25-45	45+

Non-Residential Accounts	+10%
Wholesale Accounts	+10%

Extreme Drought Rates

Residential Accounts	Tier 1	Tier 2	Tier 3	Tier 4
Change to Existing Volume Rate	0%	+25%	+100%	+150%
Tier Definition (per 1,000 gal)	0-7	7-25	25-45	45+

Non-Residential Accounts	+20%
Wholesale Accounts	+20%

EXHIBIT A

Effective January 1, 2025

2025 WATER IMPACT FEE

Meter Size*	Operating Flow (gpm)	Equivalency Ratios	Proposed Impact Fee
Ultrasonic Meters			
Single Family Residential Equivalent 5/8"	20	1.00	$ 5,102.22
0.75"	30	1.50	$ 7,653.34
1"	50	2.50	$ 12,755.56
1.5"	100	5.00	$ 25,511.12
2"	160	8.00	$ 40,817.79
3"	500	25.00	$ 127,555.59
4"	880	44.00	$ 224,497.84
6"	1,400	70.00	$ 357,155.66
8”	2,800	140.00	$ 714,311.31
10”	4,400	220.00	$ 1,122,489.21

* Capacities for meters equal to or less than 6 inches in size are based on ultrasonic meters, and capacities for meters greater than 6 inches in size are based on fire service meters.

The total calculated impact fee is summarized as $ 4,467.46 per ERC. From this value per ERC, the exhibit converts the overall fee to different meter sizes based on American Water Works Association (AWWA) meter capacity ratios.

2025 SEWER IMPACT FEE

Units of Measure	Wastewater Impact Fee
Per Equivalent Residential Connection	$~~2,630.14~~ 2,697.73
Per Equivalent Multi-Unit Connection	$~~2,500.38~~ 2,554.66
Per Fixture Units (26 Units per ERC)	$~~108.71~~ 111.07

EXHIBIT B:
WATER METER CHARGES & CONNECTION FEES
EFFECTIVE JANUARY 1, 2025

Line Tap & Meter Set Only

(The District will perform the line tap (up to 2") for the service connection and set the meter. The material for the line tap and the meter will be paid for by the District.)

METER SIZE

- 3/4" $~~268~~ 273 + Actual Meter Cost
- 1" $~~291~~ 297 + Actual Meter Cost
- 1 ½" $~~391~~ 197 + Actual Meter Cost
- 2" $~~491~~ 197 + Actual Meter Cost

TAYLORSVILLE-BENNION IMPROVEMENT DISTRICT

2025 Rates & Fees

1

2025 Recommended Rates and Fees

Rates That are Fiscally Responsible

Use Public Funds as Effectively and Efficiently as Possible

Maintain Fiscal Sustainability

Allow Consistent and Reliable Service to our Customers Both in the Short Term and the Long Term

2

Review of Current and Future Rates

Current Rate Adjustment

- 2025 – 3%

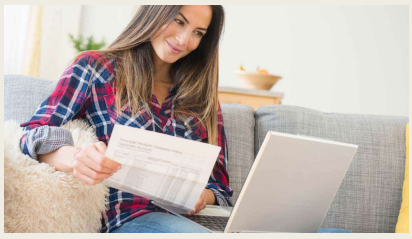
Recommended Future Rate Adjustments

- 2026 – 3%
- 2027 – 3%

3

	Current	Proposed	% Change
Water Tier Usage	$ 29.32	$ 30.15	3%
Water Availability	$ 13.26	$ 13.65	3%
Sewer - Flow	$ 15.96	$ 16.44	3%
Sewer Availability	$ 13.44	$ 13.84	3%
Central Valley Assessment	$ 12.00	$ 12.00	0%
Total	**$ 83.98**	**$ 86.08**	**2.50%**
Increase:		$ 2.10	2.50%

*Based on 15,000 Gallons of Water Usage



AVERAGE CUSTOMER BILL IMPACT

4

Actions Taken to Minimize Impact on our Customers

One Time:

- $1,600,000 - Grant Funding – Meadowbrook Waterline
- $1,500,000 - Large Meter Replacement – In-house / No Contractor
- $600,000 - Redwood Road Waterline Replacement - Partnering with UDOT to Avoid Mobilization, Traffic Control, and Restoration Costs
- $368,000 – Accelerated Portion of 4700 South Waterline Replacement – KID Paid $168k to TBID and Existing Contractor Bid $200,000 Less Due to Less Mobilization
- $90,000 - Tank cleaning – Initial bid for 16 Tanks $150,000 - $286,000 – 2025 Budget $60,000
- $52,000 – Completing 40 Year Water Rights Plan and Conservation Plan In-house
- $??? – Lead on Copper Rule Compliance - In-house / No Contractor or Consultant

Total - $4,227,000 Plus

5

Actions Taken to Minimize Impact on our Customers

Annually Recurring:

- $580,000 Annually - Siphon - Operating $492,000; Capital $89,000
- $440,000 Annually - Bond - Interest Savings of $8.8M over 20 years 1.61% (historical average 4.5%)
- $440,000 – Meter Replacement - Recovery of Lost Revenue
- $433,000 – Flushing (49 miles annually) - In-house / No Contractor ($186k YTD – 21 Miles)
- $315,000 – Jordan Valley Water Rates
- $7,500 – Valve Repair Kit – Reduces Labor, Excavation & Material Expenses (5 annually)

Total - $2,215,500

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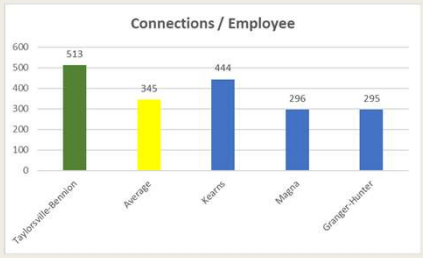
34% Less Expense Per Connection



49% More Connections Than Average

Benchmarking

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2025 Rates & Fees

- Complete Rate & Fee Schedule Available

8

2025 Proposed Rate Schedule

Water Rate-Residential Accounts	
Block 1, 0 - 7,000 gallons (per 1,000 gal)	~~$1.72~~ 1.77
Block 2, 7,001 – 25,000 gallons (per 1,000 gal)	~~$2.16~~ 2.22
Block 3, 25,001 – 45,000 gallons (per 1,000 gal)	~~$2.76~~ 2.84
Block 4, over 45,000 gallons (per 1,000 gal)	~~$3.88~~ 4.00
Water Availability-Residential Charge (for 1st Unit)	~~$13.26~~ 13.65
Of Single Unit and Multi-Unit accounts	
+Charge per each additional unit (per month)	~~$11.15~~ 11.48
Water Availability-Residential Charge (for 1st Unit)	~~$12.75~~ 13.13
Of Privately Maintained Infrastructure accounts	
+Charge per each additional unit (per month)	~~$10.64~~ 10.96
Water Availability-Residential Charge (for 1st Unit)	~~$11.17~~ 11.51
Of Mobile Home accounts	
+Charge per each additional unit (per month)	~~$9.06~~ 9.33
Water Rate-Non-Residential Accounts	
Volume rate (per 1,000 gal)	~~$2.19~~ 2.26
Water Availability-Non-Residential Charge (for 1st Unit)	~~$13.26~~ 13.65
+Charge per each additional unit (per month)	~~$11.15~~ 11.48
Water Rate – Wholesale Accounts	
Volume rate (per 1,000 gal)	~~$2.60~~ 2.68
Monthly base rate	Actual Cost

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2025 Proposed Rate Schedule

Sewer Rate-All User Accounts	
Volume rate (per 1,000 gal)	~~$2.66~~ 2.74
Sewer Availability-Residential Charge (for 1st Unit)	~~$13.44~~ 13.84
Of Single Unit and Multi-Unit accounts	
+Charge per each additional unit (per month)	~~$12.23~~ 12.60
Sewer Availability-Residential Charge (for 1st Unit)	~~$13.16~~ 13.55
Of Privately Maintained Infrastructure accounts	
+Charge per each additional unit (per month)	~~$11.97~~ 12.33
Sewer Availability-Residential Charge (for 1st Unit)	~~$12.32~~ 12.69
Of Mobile Home accounts	
+Charge per each additional unit (per month)	~~$11.11~~ 11.44
Sewer Availability-Residential Charge (per month)	
Of Small Unit accounts	~~$10.33~~ 10.64
+Charge per each additional unit (per month)	~~$9.12~~ 9.40
Central Valley Assessment Per ERU (per month)	$12.00
Central Valley Assessment Per ERU – small unit (per month)	$8.95

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2025 Proposed Rate Schedule

OFFICE FEES

Administrative Fee (actual not-to-exceed)	$1,000.00
After Hours Call	$75.00
Certification Fee	$20.00
Collection fee	Actual Cost
Copy costs	Actual Cost
EFT Return items, Other (actual not to exceed)	$25.00
Interest on Unpaid Balance (per month)	1.5%
Meter test charge	$50.00
Military Credit (per month actual not-to-exceed)	$50.00
Refund Requests (per check)	$25.00
Return Check Charge-Dishonored Payment	$20.00
Telephone Calls	Actual Costs
Tenant Account Set-Up Fee (per occurrence)	$35.00
Multiple Trip Fee (Multiple visits to same location in same year of 3+)	$25.00
Turn-On/Off Fee (Daytime-Special Request)	$25.00
Unauthorized Meter Turn On/Off Fee (per occurrence)	$75.00
Statement Fee-Additional (per statement)	$1.00
Service Outside District Boundary Fee	Actual Difference
Tampering or Destruction of District Equipment	Actual+Adm fee

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2025 Proposed Rate Schedule

PRETREATMENT AND SAMPLING FEES

Sampling Fee (Pretreatment)	$150.00
Sampling Manhole Noncompliance Fee	$150.00
Sewer Surcharge	Based on the different strengths of the discharge and the associated costs

HYDRANT USE FEES

Hydrant Deposit (per hydrant)	$500.00
Hydrant Flow Test Permit (per test)	$100.00
Hydrant Meter Relocation Fee (per move)	$50.00
Hydrant Permit (Initial 2 weeks)	$175.00
Hydrant Permit (Per Week After Initial 2 Weeks)	$50.00
Hydrant Water (per 1,000 gallons)	~~$2.50~~ 2.84

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2025 Proposed Rate Schedule

DEVELOPMENT DEPOSITS

Fire Hydrant Deposit (per hydrant)	$200.00
Manhole Deposit (per manhole)	$300.00
Valve Deposit (per valve)	$100.00
Trench Deposit For Sewer Mainline (per 100 lf)	$100.00
Trench Deposit For Water Mainline (per 400 lf)	$100.00
Trench Deposit For Laterals (per lateral)	$50.00

DEVELOPMENT FEES

New Development Application Fee (Main line Ext)	$250.00
As-built Drawings (per sheet)	$300.00
Bacteriologic Sampling Fee	
First sample	~~$92.00~~ 115.00
Additional samples (same trip)	~~$52.00~~ 68.00
Sewer Lateral Inspection (new connection)	$200.00
Inspection Fees (per hour)	~~$93.00~~ 95.00
Preconstruction Meeting	$200.00
Prints (per sheet)	$20.00
Review Fees (per sheet) (Up to 3 Reviews)	$300.00
Easement Review Fee	$200.00
Easement Surveying and Review Fee	Actual Cost
TV Truck Line Inspection (per linear foot)	~~$0.50~~ 0.51
Plat approval, Board of Health Letter (No Main line Ext)	$50.00
Water Connection Fees	See Exhibit B

IMPACT FEES

Sewer Impact Fees	See Exhibit A
Water Impact Fees	See Exhibit A

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2025 Proposed Rate Schedule

LABOR, EQUIPMENT AND MATERIALS USAGE CHARGES

Vactor Truck w/1 operator (per hour)	~~$225.00~~ 245.00
Truck – Unit #6 (per hour)	$40.00
Truck – Dump w/1 operator (per hour)	~~$85.00~~ 115.00
Truck – Pickup (per hour)	$20.00
Backhoe / Mini Excavator w/1 operator (per hour)	~~$85.00~~ 140.00
Compressor (per hour)	$50.00
Pump – 2" (per hour)	$30.00
Jumping Jack (per hour)	$15.00
Viber Plate (per hour)	$15.00
Saw cut machine (per hour)	$25.00
Cut off saw (per hour)	$25.00
Crane Truck (per hour)	$50.00
Valve Truck (per hour)	$50.00
TV Truck (per hour	$140.00
Employee – Reg time rate (per hour)	~~$60.00~~ 62.00
Employee – Overtime rate (per hour)	~~$79.00~~ 81.00
Sewer Lateral Inspection Fee (existing customers)	~~$100.00~~ 150.00
Materials	Actual+Adm Fee
Water Loss (Estimated by Supervisor-Block 4 rate)	Actual+Adm Fee

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2025 Proposed Rate Schedule

DROUGHT CONTINGENCY RATES

Moderate Drought Rates

Residential Accounts	Tier 1	Tier 2	Tier 3	Tier 4
Change to Existing Volume Rate	0%	0%	+50%	+100%
Tier Definition (per 1,000 gal)	0-7	7-25	25-45	45+

Non-Residential Accounts	+10%
Wholesale Accounts	+10%

Extreme Drought Rates

Residential Accounts	Tier 1	Tier 2	Tier 3	Tier 4
Change to Existing Volume Rate	0%	+25%	+100%	+150%
Tier Definition (per 1,000 gal)	0-7	7-25	25-45	45+

Non-Residential Accounts	+20%
Wholesale Accounts	+20%

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2025 Proposed Rate Schedule

EXHIBIT A

Effective January 1, 2025

2025 WATER IMPACT FEE

Meter Size*	Operating Flow (gpm)	Equivalency Ratios	Proposed Impact Fee
Ultrasonic Meters			
Single Family Residential Equivalent 5/8"	20	1.00	$ 5,102.22
0.75"	30	1.50	$ 7,653.34
1"	50	2.50	$ 12,755.56
1.5"	100	5.00	$ 25,511.12
2"	160	8.00	$ 40,817.79
3"	500	25.00	$ 127,555.59
4"	880	44.00	$ 224,497.84
6"	1,400	70.00	$ 357,155.66
8"	2,800	140.00	$ 714,311.31
10"	4,400	220.00	$ 1,122,489.21

* Capacities for meters equal to or less than 6 inches in size are based on ultrasonic meters, and capacities for meters greater than 6 inches in size are based on fire service meters.

The total calculated impact fee is summarized as $ 4,467.46 per ERC. From this value per ERC, the exhibit converts the overall fee to different meter sizes based on American Water Works Association (AWWA) meter capacity ratios.

2025 SEWER IMPACT FEE

Units of Measure	Wastewater Impact Fee
Per Equivalent Residential Connection	~~$2,630.14~~ 2,697.73
Per Equivalent Multi-Unit Connection	~~$2,500.38~~ 2,554.66
Per Fixture Units (26 Units per ERC)	~~$108.71~~ 111.07

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2025 Proposed Rate Schedule

EXHIBIT B:
WATER METER CHARGES & CONNECTION FEES
EFFECTIVE JANUARY 1, 2025

Line Tap & Meter Set Only
(The District will perform the line tap (up to 2") for the service connection and set the meter. The material for the line tap and the meter will be paid for by the District.)

METER SIZE	
- 3/4"	$~~268~~ 273 + Actual Meter Cost
- 1"	$~~291~~ 297 + Actual Meter Cost
- 1 ½"	$~~391~~ 197 + Actual Meter Cost
- 2"	$~~491~~ 197 + Actual Meter Cost

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2025 Rates & Fees

Public Notices

- *Public Notice Website*
- *TBID Website*
- *Billing Message on Statement (November); Including Paperless Customers*
- *Posted Notice in Lobby*
- *Facebook / X*

Customer Feedback

- Comments from the public regarding rates / rate hearing (As of 11/14/2024 @ 1:00 p.m.)
  - *0 Letters*
  - *0 Phone call*
  - *0 Emails*
  - *0 Social Media*

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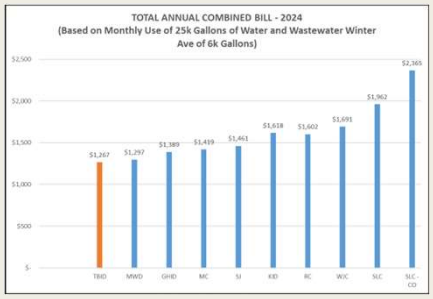

30% Less Than Average

RATES & FEE COMPARISON

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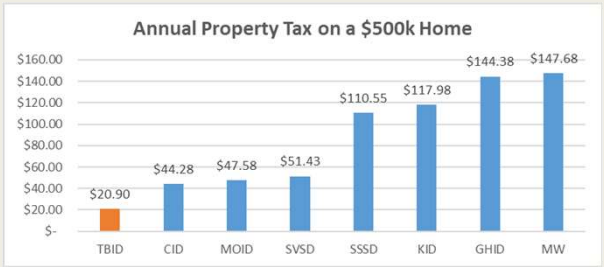
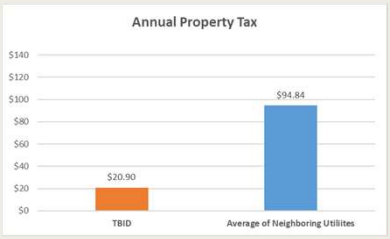
2025 Rates & Fees





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2025 Rates & Fees

- Recommend Rate and Fee Approval as Discussed

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TAYLORSVILLE-BENNION IMPROVEMENT DISTRICT
WATER CONSERVATION PLAN UPDATE 2024

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LIST OF FIGURES

October 2024
Water Conservation Plan Update
Taylorsville-Bennion Improvement District

1.0 INTRODUCTION

1.1 Purpose of the Plan

The State of Utah continues to be one of the most rapidly growing states in the country. While Taylorsville-Bennion Improvement District (the District) is nearly built out, this pattern of growth has impacted the District. The District continues to experience growth and is significantly impacted by both growth and weather patterns. Droughts have significant impacts on the District's water supplies and its ability to meet the water demands of its customers. The District's water conservation efforts are directly related to the sustainability of the District's water supplies.

The State has indicated a water conservation goal to reduce water use 25% by 2025. This goal would be measured in terms of per capita water use reduction beginning with year 2000 as the base year. Water use in 2000 was calculated to be 244.5 gallons per capita per day (gpcd), therefore, district-wide water use will need to be reduced to 188 gpcd by 2025. In order to meet this goal, the District has been working with Jordan Valley Water Conservancy District (JVWCD) to implement water conservation programs, educate the public, reduce the demand for water, and to delay costly water infrastructure development projects.

The 2024 Water Conservation Plan (the Plan) includes compliance requirements as indicated in Utah Code 73-10-32 with the effective date 5/3/2023 and is an update of the 2004, 2009, 2014, and 2019 provided to the State. The 2024 plan outlines the water conservation activities and measures of the District.

2.0 Water Conservation Plan – Utah Code Requirements

2.1 Overall water conservation goal

The District water conservation goal is to be at a five year average of 171 gpcd in 2029, below the 2029 Regional Water Conservation Goal – Salt Lake at 186.

2.2 Water conservation indicators

2.2.1 Advanced Metering Infrastructure (AMI)

AMI meter installation in 2023 and 2024 has made this water conservation tool available to customers. The District will promote the use of this tool to the customers helping to improve efficiency and to provide timely information so customers adjust their usage.

Timeline: 2025 through 2029
Actions:

1. New Accounts Set-up: Encourage new customers to sign-up to access the AMI portal
2. Annually send AMI portal sign-up information to existing customers
3. During customer usage inquiries: Customer Service Team to communicate availability of AMI and its water conservation capabilities

Goal: Show a 1 % increase per year in customers enrolled to access the AMI portal

2.2.2 Utah Water Savers Customer Participation

Taylorsville-Bennion Improvement District participates in Utah Water Savers with customers having access to its Landscape Incentive, Smart Controller, and Toilet replacement programs.

Timeline: 2025 through 2029
Actions:

1. Annually provide Utah Water Savers Program information to customers by mailing insert with bills
2. Web site access to Utah Water Saver water conservation programs via tbid.gov
3. During customer usage inquiries: Customer Service Team to communicate availability of Programs and its water conservation capabilities

Goal: Complete all actions annually to promote participation in Utah water savers and track annual participation in each of the programs

2.2.3 *Water* Conservation Best Management Practices

Taylorsville-Bennion Improvement District is an advocate for water conservation and actively applies Water Conservation Best Management Practices

Timeline: 2025 through 2029
Actions:

1. Continue detailed practices outlined in Section 3 of this plan

Goal: District Executive Team to annually review Best Management Practices to determine effectiveness in relation to the Districts goal of 171 gallons per capita per day and make adjustments as needed to achieve the goal

The District will continue to monitor the annual reporting of GPCD as an indication of the effectiveness of the ongoing best management practices as outlined in this Plan to meet the 2029 goal as shown in Figure 5.

2.3 *Public Notification*

The District intends to notify the public, including Taylorsville City, the media, and all other interested parties, by posting a notice of the public hearing where the Plan will be reviewed, explained, and adopted. This notice can be found in 5.2 of the finalized Plan. The District will also promote the Plan on its social media accounts as well as create a link to the Plan on the Utah Public Notice Website which will direct them to the District's website where the Plan can be found.

2.4 *Public Meeting Minutes*

District meeting minutes regarding the Plan are found in 5.3 and 5.4 of the finalized Plan.

2.5 *Rate Structure*

The District rate structure is found in Table 4 of this Plan.

3.0 WATER SYSTEM PROFILE

3.1 *Water System ID*

The 5-digit water system Identification Number assigned by the Division of Environmental Quality (DEQ) for the District is 18021.

3.2 *Description of the District*

2.2.1 Location: The District was formed in 1957 and is located in the Central Western portion of Salt Lake County, which lies along the Wasatch Front in Northern Utah. The District's service area consists of West Valley City's southern boundary (about 4100 South) to the north, West Jordan City to the south (at about 6500 South), and Murray City to the east closely following the Jordan River. The western boundary roughly aligns with 4800 West. Currently, the District is about 98% built-out. Figure 1 depicts the current service area of the District.

2.2.2 Population and household projections The District's population primarily consists of Taylorsville City and portions of West Valley City, West Jordan City, and Kearns Township residents. The District's population is estimated by using Taylorsville City's reported population and adding 10,000 to account for the District's residents living in portions of West Valley City, West Jordan City, and Kearns Township.

The Wasatch Front Regional Council (WFRC) has produced Population Projections and Household Size by Area.

Using WFRC projections Taylorsville-Bennion Improvement District expects 1-2% variance in population, apart from a few areas in the District that may be developed as Multi-Residential, increasing the population.

Table 1 District and City Population Projections

Year 2030-2050

Geography	2030	2040	2050
Taylorsville city	57,759	57,418	60,362
District	67,759	67,418	70,362

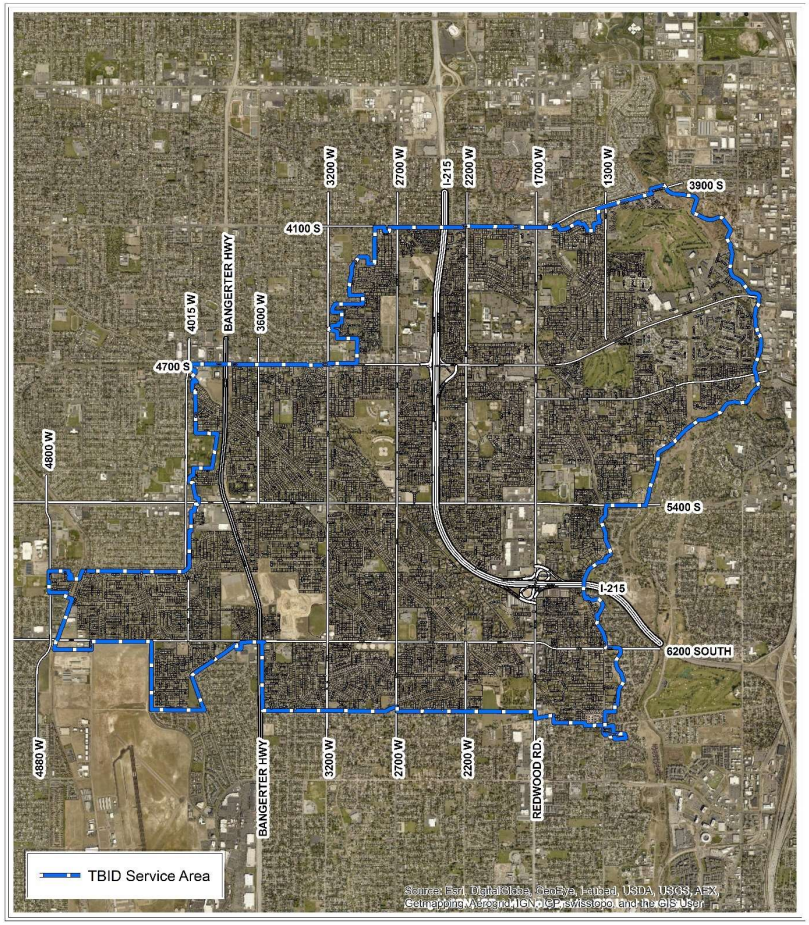
2.3 *District Connections*

The District had 17,464 active accounts at the end of 2023. Table 3 shows the number of connections by the type of customers we serve.

Table 2 Current water connections by Customer Type

Year	Commercial	Residential	Manufacturing	Institutional	Total
2023	522	16,705	5	232	17,464

Figure 1 District Service Area

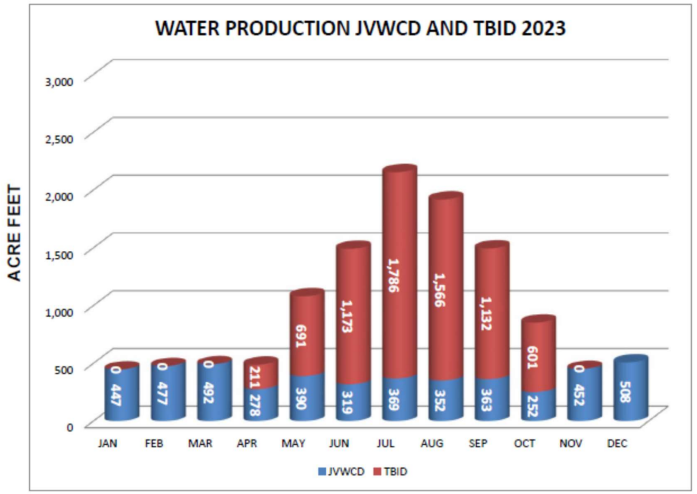


2.4 Water Supply

2.4.1 Water Production

The District's water production consists of water pumped from 9 active wells with 13 inactive wells at the end of 2023 and the availability to receive contracted water from JVWCD. Water purchased from JVWCD is treated surface water primarily from Deer Creek and Jordanelle Reservoirs.

Figure 2 Water Production



2.4.2 Storage Capacity

The District's total existing water storage is 55.5 million gallons within three pressure zones: Low Zone - 26 million gallons, Middle Zone - 19.5 Million gallons, and High Zone - 10 Million gallons.

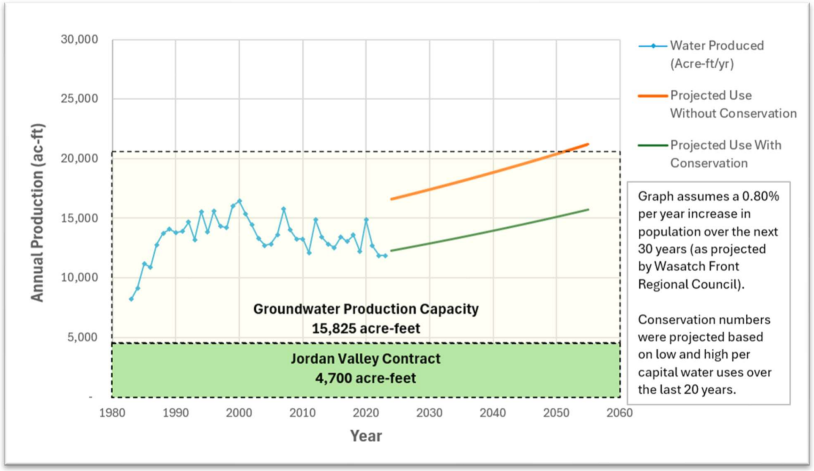
2.4.3 Water Use

Table 1 shows the recorded water produced by the District for 2000 – 2023. Currently only Salt Lake Community College uses irrigation water and no agricultural water use exists in the District.

Table 3 Yearly Demand on Taylorsville Bennion Improvement District Water System (2000-2023)

Year	Water Produced (Acre-ft/year)
2000	16,445.11
2001	15,350.32
2002	14,447.00
2003	13,305.99
2004	12,709.31
2005	12,840.64
2006	13,626.66
2007	15,781.58
2008	14,032.75
2009	13,259.89
2010	13,263.68
2011	12,120.88
2012	14,864.75
2013	13,406.88
2014	12,842.51
2015	12,534.31
2016	13,435.67
2017	13,050.42
2018	13,586.38
2019	12,189.84
2020	14,847.77
2021	12,688.90
2022	11,853.32
2023	11,863.25

Figure 3 Supply Data



2.4.4 New Sources

The District has an active well rehabilitation program to prolong the useful life of its wells. Two replacement wells have been identified and are tentatively scheduled with costs projected in the 20-year plan: The Barker replacement well 2025/2026 and the Atherton replacement well 2035/2036, both at an estimated $3.5 million in today's dollars.

Jordan Valley Water Conservancy District is contracted to provide 4,700 acre/ft per year with no additional supply capacity requested or anticipated from the District.

2.5 Water Measurement and Billing

2.5.1 Water Measurement

The District sells water by the metered thousands of gallons. Tiered rates were implemented in March 2018.

Table 4 District Tiered Rates 2018-2027

TIERED VOLUME RATE ($/kgal)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Single Family, Multifamily, and Mobile Home										
Tier 1 < 7,000 gals (6k prior to 2023)	$1.43	$1.43	$1.43	$1.43	$1.43	$1.67	$1.72	$1.77	$1.83	$1.88
Tier 2 7,001- 25,000 gals	$1.87	$1.87	$1.87	$1.87	$1.87	$2.09	$2.16	$2.22	$2.29	$2.36
Tier 3 25,001- 45,000 gals	$2.06	$2.06	$2.06	$2.06	$2.06	$2.68	$2.76	$2.84	$2.93	$3.02
Tier 4 > 45,000 gals	$2.38	$2.38	$2.38	$2.38	$2.38	$3.77	$3.88	$4.00	$4.12	$4.24
Non-Residential										
All Use	$1.82	$1.82	$1.82	$1.82	$1.82	$2.13	$2.19	$2.26	$2.33	$2.40

2.5.2 Water Loss and Prevention Program

The District actively works to keep water loss to a minimum by performing annual water audits, having an active leak detection program, and by improving meter accuracy.

The District employees are on-call 24 hours a day and 7 days a week to respond to water main line breaks, helping to reduce the amount of loss with most repairs being made within a few hours of the initial report.

Annual water audits are performed and create a reporting structure to identify the amount of water loss.

The District has an active leak detection program which systematically uses Leak Loggers to locate probable water loss.

Pipeline replacement is part of a 20-year capital replacement plan that identifies problematic pipelines for replacement, reducing the risk of main line breaks and water loss.

Customers are notified through their monthly bill that there may be a leak in their water system when the water meter detects a continuous flow of water at their residence or business.

2.6 Water Use

Based on yearly water production in 2000 and 2018 (Figure 2), the reduction of per capita water use was from 244.69 gpcd in 2000 to 173.29 gpcd in 2018. This is a 29% reduction in water use. This reduction can be attributed to water conservation efforts. The State's goal is to reduce water use to 183.375 gpcd by 2025. Based on this number, the District has already exceeded its water conservation goals. While conservation efforts are working, the District will continue to work to improve conservation within its boundaries.

Table 5 Gallons per Capita per Day

Year	GPCD
2000	244.69
2001	228.40
2002	214.96
2003	171.54
2004	163.25
2005	166.14
2006	176.31
2007	203.74
2008	180.77
2009	170.45
2010	170.50
2011	156.14
2012	191.35
2013	172.21
2014	164.54
2015	159.48
2016	170.10
2017	164.99
2018	173.29
2019	155.04
2020	189.89
2021	160.80
2022	152.83
2023	156.03

*The numbers shown in 2003 were skewed because of a shift in population calculation methods. The numbers shown are calculated based on an average of 2002 and 2004.

Figure 4 - Gallons per Day per Capita State Water Conservation Goal 25% by 2025

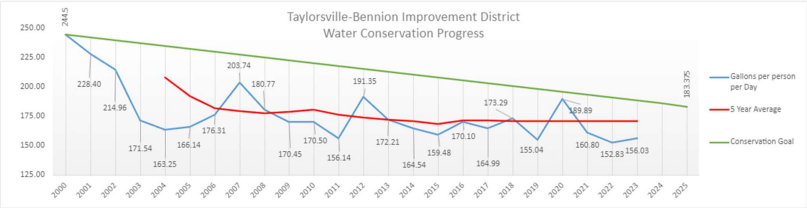


Figure 5 – District Goal of 171 Gallons per Day per Capita and Salt Lake Regional Water Conservation Goal 19% by 2065

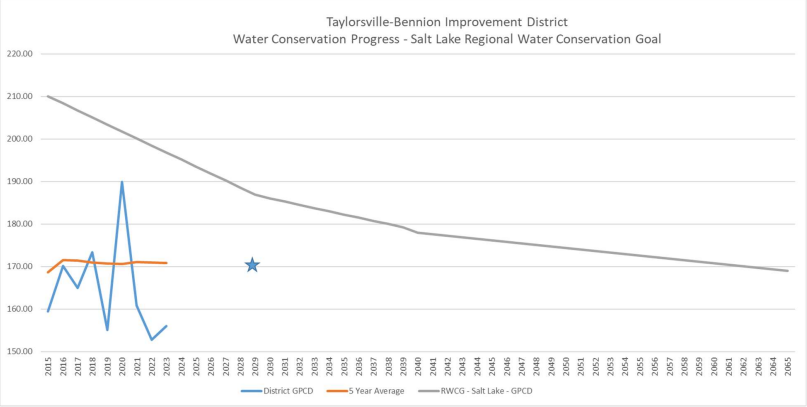


Table 6 GPCD by Type and Use

	Indoor (Winter Use-January 2023)	Potable (Outdoor-July 2023)	Non-Potable (Secondary)	Total
Residential	54	150	N/A	204
Commercial	6	11	N/A	17
Manufacturing	1	1	N/A	2
Institutional	2	37	N/A	39
Total	63	199		262

Table 7 Metering Information 2023

Culinary Water Use Category	Annual Quantity (Thousands of Gallons)	Number of Active Connections	Percent of metered Connections by Type	Reading Frequency	Calibration Schedule
Residential	2,693,641	16705	100.00%	Monthly	*
Commercial	286,498	522	100.00%	Monthly	**
Institutional	398,161	232	100.00%	Monthly	**
Manufacturing	25,737	208	100.00%	Monthly	**
Total	3,404,037	17,667			

*The District has an active residential meter testing program. 100 random 5/8th meters are tested annually.

**District meters larger than 2 inches are scheduled for tested on an annual basis.

3.0 CONSERVATION BEST MANAGEMENT PRACTICES (BMP's)

The District continues to make efforts in water conservation by following the Division of Water Resources' best management practices for past 5 years as presented below:

3.1 Water Conservation Coordinator, Committee or Team

a) Hire or designate a Water Conservation Coordinator (WCC).

District status: The District has a designated Water Conservation Coordinator responsible for the preparation and implementation of the WCP.

Dan McDougal
1800 West 4700 South

P.O. Box 18579-0579
Taylorsville, UT 84118

Office phone: 801-968-9081

b) Create a committee/team/board with a chair that includes a combination of the following participants; WCC, Public Works Director, City Council Member, and/or applicable local advocacy group member to help research, coordinate, create and implement public information campaign(s), water conservation programs and incentives.

District status: The District's WCC works with the District's executive management and JVWCD's Conservation Action Committee to coordinate and to create and implement public information campaign(s), water conservation programs and incentives.

3.2 Water Conservation Plan (WCP)

a) Develop a WCP. More information at www.conservewater.utah.gov/wcp.html.

District status: A WCP has been produced for the District every five years since 1999.

b) Provide contact information, system profile, water use history and detail specific ongoing and new conservation programs.

District status: Section 2 of this WCP provides provide contact information, system profile, water use history with detail specific ongoing and new conservation programs outlined in Section 3 and 4.

3.3 Public Awareness/PR

a) Develop or utilize existing messaging from Utah Water Savers, Slow the Flow, DWRe Conserve Utah, QWEL and/or WaterSense.

District status: The District promotes Localscapes, Conservation Garden Park, and DWRe messaging.

b) Display educational materials & resources on agency website, social media & bills.

District status: The District utilizes its social media postings and website to display educational materials.

c) Offer agency materials and resources to community partners for distribution.

District status: The District has provided Taylorsville City planning department with educational materials for distribution.

d) Hold or collaborate events, programs and/or presentations.

District status: The District has participated in Taylorsville City Parade, Taylorsville Dayzz, YMCA, and Water week open houses and events.

3.4 Education/Training

a) Provide adult efficient water use education and training.

District status: The District promotes and encourages its customers to participate in Localscapes.

b) Provide or support youth education programs for elementary school students.

District status: Elementary school children from the District service area visit the Conservation Garden Park.

c) Provide or recommend a water-wise demonstration garden.

District status: The Conservation Garden Park is highly recommended and promoted by the District.

d) Educate customers about new water saving technology. Example: weather based smart timers.

District status: The District educates our customers about new AMI water meter saving technology.

e) Provide new homeowner landscape information.

District status: New homeowners have landscape information available to them as they sign up for service.

f) Participate and promote large efficient landscape training and programs: - https://www.qwelutah.com/training/

District status: The District promotes Landscape Leadership Grants and QWEL workshops for landscape professionals.

g) Create and/or distribute "how to video's". Example: switching to drip.

District status: "How to video's" are promoted by the District being offered through Localscapes.

3.5 Outreach Services

a) Offer or collaborate on landscape consultation programs.

District status: A District representative participates with Localscapes consultation professionals when a consultation involves a District resident.

b) Offer residential water budgeting program.

District status: Equal pay is offered to District residents helping residents budget for summer water expenses.

c) Offer indoor and outdoor retrofit kits.

District status: The District works with Utah Water Savers Toilet Replacement and Smart Controller Rebates.

d) Perform outdoor high-water use inquiries and resolution techniques.

District status: The District customer receives a continuous flow notice on their bill or by email indicating possible high-water use.

e) Perform and address water waste investigations.

District status: When notified by customers or DWRe shame report, District employees will investigate and communicate the results of the investigation.

f) Identify structures built before 1992 and organize low efficiency fixture replacements.

District status: The toilet replacement facilitated by Utah Water Savers.

3.6 Rebates/ Incentives/ Rewards

a) Offer or collaborate on rebates for high efficiency appliances, fixtures, irrigation smart timers, drip irrigation, nozzles, shut off hose valves, and landscape conversions.

District status: The District offers rebates and rewards participation through Utah Water Savers.

b) Promote rebates offered in your service area.

District status: The District utilizes the local Taylorsville Journal, District website, brochures, and messages on customer bills.

3.8 Water Pricing

a) Utah S.B.28 requires water rates rise for higher tiers of consumption.

District status: The District implemented tiered rates in March 2018.

b) Charge for secondary water based on individual use.

District status: The District does not supply secondary water.

c) High water use notification.

District status: Notification of a continuous flow of water through their meter is noted to the customer on their monthly bill.

3.8.1 Physical System

(a) Install & maintain efficient irrigation, utilize water-wise landscaping & smart controller technology at agency facilities.

District status: The District has made significate water wise landscaping improvements at its reservoir sites including the use of smart controllers.

(b) Perform agency water system audit

District status: The District performs an annual water audit.

(c) Implement leak detection program.

District status: The District has an active leak detection program.

(d) Meter all connections (UT SCR 1), repair and replacement program, read meters on a regular basis.

District status: All service connections in the District are metered. Meters are repaired or replaced monthly with a District wide replacement program in place. The District reads all meters monthly.

(e) Consider water re-use.

District status: The District has worked with Central Valley Water Reclamation Facility to explore additional options.

5.0 APPENDIX

5.1 Resolution Adopting the Plan Update

.

5.2 Notices of Public Hearing

In accordance with Utah Code 17B-1-643, notice of the public hearing to receive public comment regarding the District's Intent to increase Rates and Fees as well as to update the District's Water Conservation Plan was published in the Deseret News on November 1st and November 8th. The agenda was also posted on the Utah Public Notice website. In addition, the District posted notice of this hearing on its Facebook page and attempted to notify the public by including a message on their November bill. The District has met all legal noticing requirements for this public hearing.

5.3 *Public Hearing Agenda*

. Water Conservation Plan Update 2024 Summary – Public Hearing power point

.

5.4 Public Hearing Minutes

(Applicable pages)

October 2024
Water Conservation Plan Update
Taylorsville-Bennion Improvement District

October 2024
Water Conservation Plan Update
Taylorsville-Bennion Improvement District

5.5 Plan acceptance by Division of Water Resources

TAYLORSVILLE-BENNION IMPROVMENT DISTRICT
Final Project Completion Report

Project Name: District Fuel Tank Replacement Project

Description: This project consists of removal of one 8,000-gallon gasoline, one 1,000 gallon diesel, and one 560 used oil underground storage tank. The installation of one 20,000-gallon underground storage tank, 10,000 gasoline/ 10,000 Diesel, with fuel dispensing and monitoring system. Fueling system meets all compliance with regulatory requirements.

The design was done internally.

Construction Contract:

Contractor: Spackman Enterprises	Construction Status: 100%
Original construction contract amount:	$ 408,647.00
Change Orders:	$ 11,100.00
Total Cost	$ 419,747.00

Total change orders as a percentage of original contract 2.7%

Summary of Work and Changes: Extra work associated with additional rebar application and road base requested by the District.


1
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UNLEADED
DIESEL

TAYLORSVILLE-BENNION IMPROVMENT DISTRICT
Final Project Completion Report

Project Name: District Landscaping Improvement Project

Description: This project consists of removal of District office park strip turf along 4700 South and Low Zone South Reservoir site erosion control and soil stabilization.

Design Services:

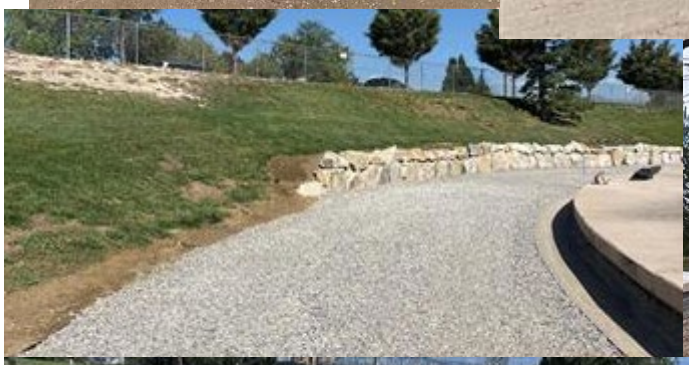
Design: Bowen Collins and Associates	Design Status: 100%
Design Contract Amount:	$39,781.00
Billed:	$26,699.50

Construction Contract:

Contractor: TerraWorks	Construction Status: 100%
Original construction contract amount:	$ 255,755.00
Change Orders:	$ (3,905.00)
Total Cost	$ 251,850.00

Total change orders as a percentage of original contract -1.5%

Summary of Work and Changes: Efficiencies were implemented in Construction Survey, Clearing/Grubbing/Hauling, and Irrigation.



2025 Conference and Meeting Schedule

Mode of Travel	Qualifies for Overnight Stay	Preapproved for Board Members	Conference	Brief Description	Dates	Location	Staff Attending
✈	🛏	🔨	AWWA/WEF Utility Management Conference (UMC)	Water & Sewer	2/11 - 2/14	Dallas, TX	Mark, Bruce, Shawn, Dan
🚗	🛏	🔨	Rural Water Association of Utah	Water	2/24 - 2/28	St George, UT	Brian, Dan, Shawn, Lance
🚗	🛏	🔨	Utah Water Users	Water, Water Law	3/17 - 3/19	St George, UT	Mark, Jacob, Tammy
🚗	🛏		UGFOA	Accounting	4/1 - 4/3	St George, UT	Bruce, Mark
🚗			Caselle	Billing Software	8/26 - 8/27	SLC, UT	Dora
🚗	🛏	🔨	WEAU	Sewer	4/22-4/25	St George, UT	Tom
✈	🛏	🔨	AWWA National (ACE)	Water	6/8-6/11	Denver, CO	Marshall, Mark
🚗	🛏		UGIC	GIS	Spring	Logan, UT	Joe
✈	🛏	🔨	AWWA Water Infrastructure Conference (WIC)	Water & Sewer	09/14-09/17	Orlando, FL	Mark, Karl, Dan, Tammy
✈	🛏	🔨	Water Environment Federation (WEFTEC)	Sewer	09/27-10/01	Chicago, IL	Shawn
🚗	🛏	🔨	AWWA-Intermountain Section (AWWA IMS)	Water	9/29 - 10/1	Vernal, UT	Mark, Tammy, Bruce, Dan
🚗	🛏	🔨	Utah Association of Special Districts (UASD)	Management, Board Training, Law	11/5 - 11/7	Layton, UT	Mark, Bruce
✈	🛏	🔨	AWWA North American Water Loss (NAWL)	Water	December		Bruce, Tammy

Taylorsville-Bennion Improvement District
P. O. Box 18579
1800 West 4700 South
Taylorsville, Utah 84118
Telephone (801) 968-9081 Fax (801) 963-3199

2025 Proposed Board Meeting Schedule

Wednesday, January 15 at 2:00 pm

Friday, February 21 at 2:00 pm

Tuesday, March 25 at 2:00 pm

Wednesday, April 16 at 2:00 pm

Wednesday, May 21 at 2:00 pm

Wednesday, June 18 at 2:00 pm

Wednesday, July 16 at 2:00 pm

Wednesday, August 20 at 2:00 pm

Friday, September 12 at 2:00 pm

Budget and Strategic Planning Session
Friday, October 3 at 8:00 am

Tuesday, October 21 at 2:00 pm

Wednesday, November 19
Board Meeting at 4:00 pm
Public Hearing at 6:00 pm

Wednesday, December 17
Board meeting at 2:00 pm
Budget and Public Hearing 3:00 pm

JORDAN VALLEY WATER CONSERVANCY DISTRICT

2025 Board Meeting Schedule

Conservation Committee Meetings Monday 3:00 p.m. (unless otherwise noted)	**Executive Committee Meetings Monday 3:30 p.m. (or immediately following CCM unless otherwise noted)**	**Board Meetings Wednesday 3:00 p.m. (unless otherwise noted)**
Monday, January 6	Monday, January 6	Wednesday, January 8
Monday, February 10	Monday, February 10	Wednesday, February 12
Monday, March 10	Monday, March 10	Wednesday, March 12
Monday, April 7	Monday, April 7	Wednesday, April 9 *(approve tentative budget)*
Monday, May 12	Monday, May 12	Wednesday, May 14 Board/Public Hearing 6:00 p.m. *(for financial plan, budget, and water rates)*
Monday, June 2	Monday, June 2	Wednesday, June 4 *(approve final budget)* *(one week early due to ACE25)*
Monday, July 7	Monday, July 7	Wednesday, July 9
Monday, August 11	Monday, August 11	Wednesday, August 13 (p*ossible Board/Public Hearing for property tax levy and final budget adoption)*
Monday, September 8	Monday, September 8	Wednesday, September 10
Monday, October 6	Monday, October 6	Wednesday, October 8
Monday, November 10	Monday, November 10	Wednesday, November 12
Monday, December 8	Monday, December 8	Wednesday, December 10

JORDAN VALLEY WATER CONSERVANCY DISTRICT

DISCUSS DISTRICT DIVISION BOUNDARIES AND REPRESENTATION

November 2024

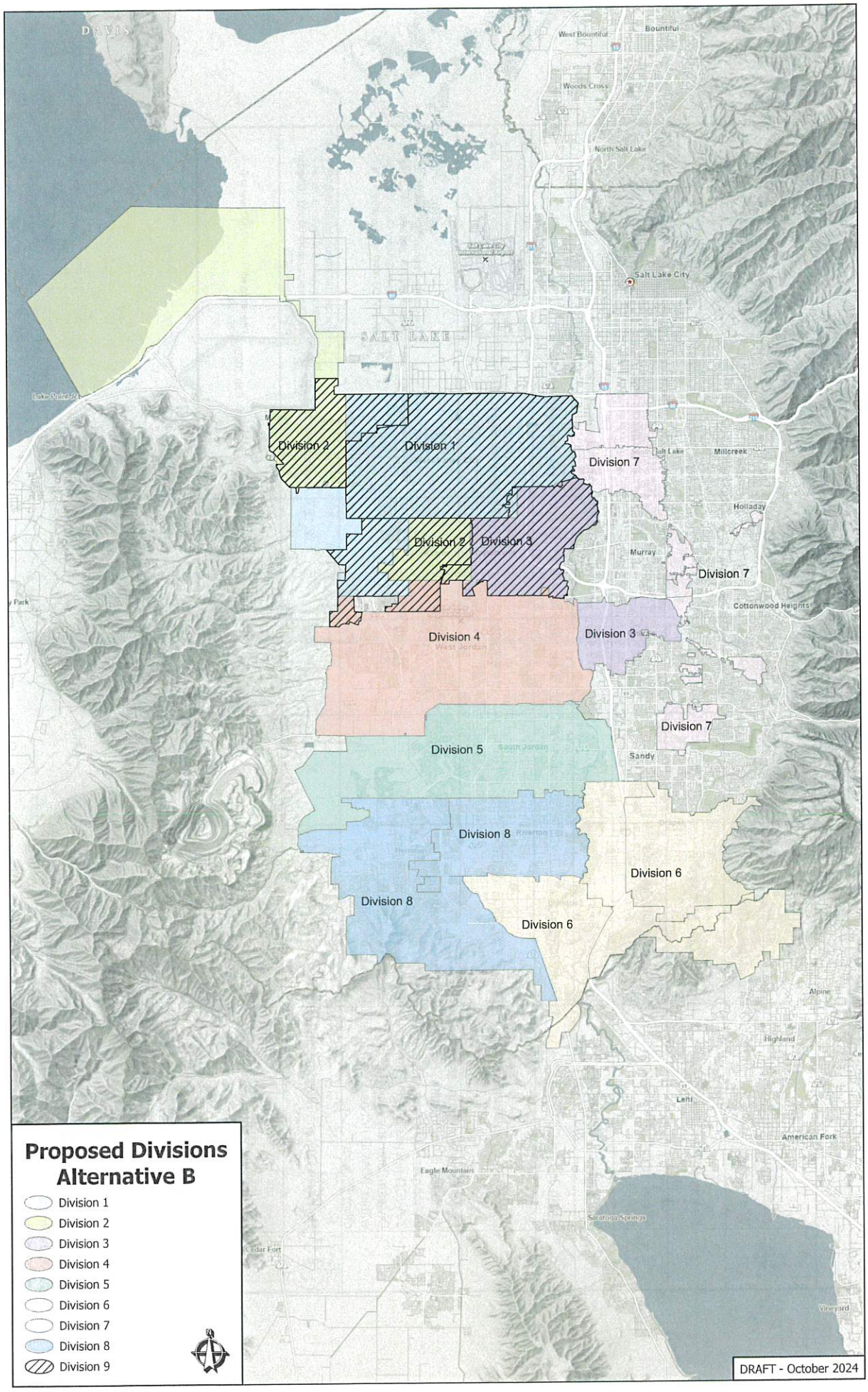
Alternative B Proposed New Boundaries and Representation							
Division	Geographic Area Represented	Nominating Entities	Trustee Representation	Population(a)	Nominating Entitiy Current Contract (AF)	Trustee & Term Expiration Date	Notes
1	West Valley City	West Valley City	1	139,390	N/A	Karen Lang - Feb 2026	Recommend adjusting this term so it is offset from Division 9 nominating cycle
2	Kearns City and Magna City	Kearns City, Magna City	1	70,107	N/A	Mick Sudbury - Feb 2026	Kearns population=36,005. Magna population=34,102.
3	City of Taylorsville and Midvale City	Taylorsville City, Midvale City	1	95,956	3,085	John Taylor - Feb 2026	The identified contract amount is for Midvale City. Taylorsville population=59,275. Midvale population=36,681.
4	City of West Jordan	City of West Jordan	1	119,400	20,000	Zach Jacob - Feb 2026	
5	South Jordan City	South Jordan City	1	86,635	18,000	Dawn Ramsey - Feb 2028	
6	Draper City(b) and Bluffdale City	Draper City, Bluffdale City	1	69,300	8,898	John Richardson - Feb 2028	The contract amount includes 3,800 AF for Draper, 950 AF for WaterPro, 548 AF for DFCM, and 3,600 AF for Bluffdale. Draper population=49,818. Bluffdale population=19,482.
7	Retail service area not assigned to any other Division, all unincorporated areas within JVWCD not assigned to any other Division, and any other lands within JVWCD not assigned to any other Division	Salt Lake County (after required annexation of unincorporated islands, this division will be entirely within municipalities)	1	72,960	~8,820	Barbara Townsend - Feb 2026	The contract amount includes 1,020 AF for South Salt Lake, and assumes 300 AF for Willow Creek Country Club, and 7,500 AF for JVWCD retail service area.
8	Herriman City and Riverton City	Herriman City, Riverton City	1	104,531	12,167	Andy Pierucci - Feb 2028	The contract amount includes 8,167 AF for Herriman and 4,000 AF for Riverton. Herriman population=60,062. Riverton population=44,469.
9	Lands within GHID, TBID, MWD, KID	West Valley City, Kearns City, Magna City, Taylorsville City, West Jordan City	1	N/A	30,970(c)	Corey Rushton - Feb 2028	Population within GHID, KID, and MID ~287,368

a) 2023 population of municipalities per Kem C. Gardner Institute

b) Would also include representation of DIC and UDFCM

c) 30,970 AF total contract amounts of GHID (17,000), KID (7,750), Magna (800), TBID (4,700), and Hexcel (720). Although not strictly the "nominating entities" it is recommended that the municipal nominating entities give deference to the improvement districts recommended candidates for Trustee nominations.

DIC - Draper Irrigation Company (WaterPro)
GHID - Granger-Hunter Improvement District
JVWCD - Jordan Valley Water Conservancy District
KID - Kearns Improvement District
MWD - Magna Water District
SSL - South Salt Lake
TBID - Taylorsville-Bennion Improvement District
UDFCM - Utah Division of Facilities and Construction Management


DAVIS
SALT LAKE
West Bountiful
Bountiful
Woods Cross
North Salt Lake
Salt Lake City
Millcreek
Holladay
Murray
Cottonwood Heights
West Jordan
South Jordan
Sandy
Riverton
Herriman
Alpine
Highland
Lehi
American Fork
Eagle Mountain
Saratoga Springs
Cedar Fort
Vineyard
Division 1
Division 2
Division 3
Division 4
Division 5
Division 6
Division 7
Division 8
Division 9
Proposed Divisions
Alternative B
DRAFT - October 2024

PUBLIC HEARING
OF THE BOARD OF TRUSTEES
Agenda

1. **Welcome and Introduction**
   The public hearing meeting of the Board of Trustees of the Taylorsville-Bennion Improvement District, held at the District offices located at 1800 West 4700 South, Taylorsville, UT, November 20, 2024, at 6:00 pm for the purpose of hearing comments from the public regarding the proposed rate and fee increases as well as the update to our Water Conservation Plan.

   In attendance are: Don Russell, Board Chair, and trustees Matt Swensen and Kelton Kleinman as well as staff from the District. We thank you for coming this evening.

   Each of you should have received the rules for the public hearing. We have placed a time limit of 2 minutes for each speaker. At the end of your 2 minutes, I will let you know that your time has expired.

   Those that wish to comment during the Public Comment portion of the meeting, please be sure that you have signed in and indicated your intention to comment. We will call you up to the podium when it is time for you to comment. We ask that you speak into the microphone as this meeting is being recorded.

2. **Verification of legal requirements** – Dora

3. **Motion to Open Public Hearing**

4. **Presentations**
   a. Presentation on the proposed Rate and Fee Schedule – Bruce Hicken, Director of Finance & Information
   b. Presentation on the proposed update to the Water Conservation Plan – Dan McDougal, Director of Risk & Asset Management

5. **Questions or comments from Trustees**

6. **Invitation for Public Comment**
   We will call up those that have indicated their desire to comment. We remind you that we have placed a time limit of 2 minutes for each speaker. Please state your name, address and if you are representing someone else before beginning your comments. *Is there anyone else that desires to comment?*

7. **Motion to close public comment session**

8. **Trustee and Staff response and summary**

9. **Motion to close public hearing**

2024 Projects

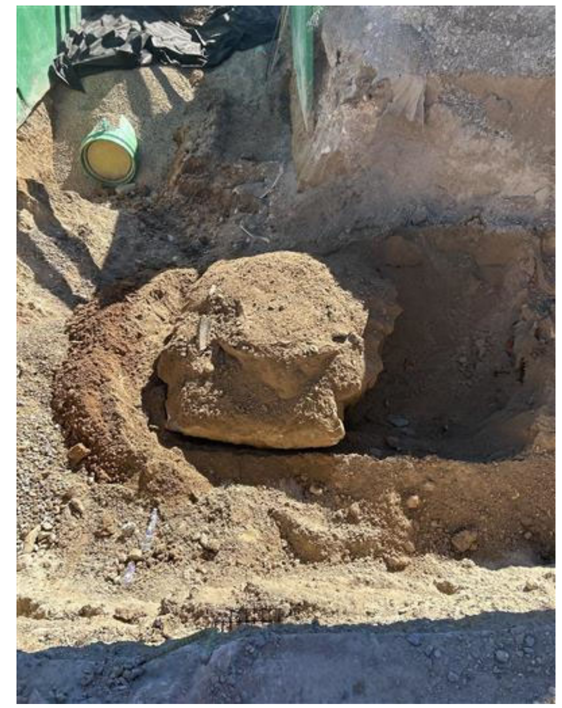
2024

	January					February				March				April					May				June				July					August				September					October				November				December				
	1	8	15	22	29	5	12	19	26	4	11	18	25	1	8	15	22	29	6	13	20	27	3	10	17	24	1	8	15	22	29	5	12	19	26	2	9	16	23	30	7	14	21	28	4	11	18	25	2	9	16	23	30
24" Line replacement along 1130 West																																																					
UDOT Redwood Road- waterline Replacement																																																					
Purchase Future well property	Moved to next year																																																				
Meadowbrook Golf Course Waterline Replacement	Moved to next year																																																				
PMI Sewer Manhole Project	Moved to next year																																																				

- Design
- Review
- Bidding
- Construction
- Due/Completion

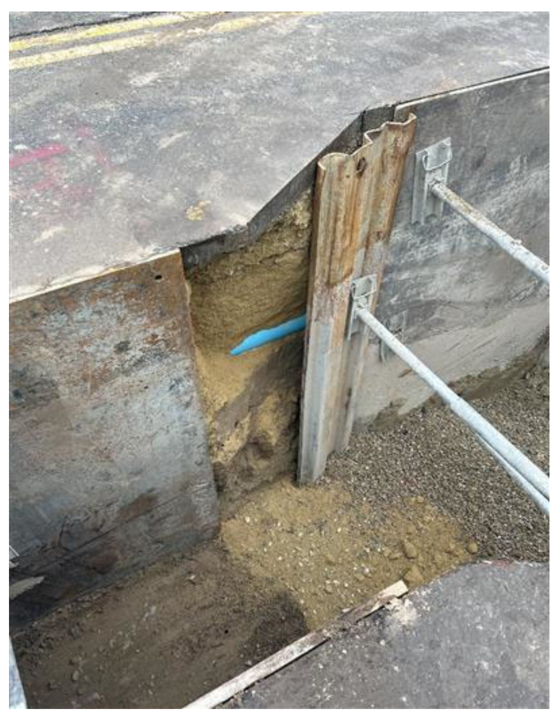
Developer Projects

Project	Location	# of Units	Status
Volta (formerly West Point)	5400 South Bangerter Hwy	650	Proposed
River boat Road Commercial	4202 Riverboat Road	3 (buildings)	proposed
SLCC Student Housing	Bruin Blvd Redwood Road	unknown	Proposed
Cypress Cove	3560 West 4700 South	10	Sewer main complete- working on laterals
Summit Vista	3390 W Signal Peak Dr.		Phase 1- underconstruction Phase 2-proposed
Wasatch Canyons	5770 South 1500 West	1 (building/hospital)	installing sewer and water main
Atherton Place	4700 South Atherton Drive	450 (<45 units/acre)	proposed
Cousin's Subdivision	1950 Jordan Canal Road	7 lots	proposed
Legacy Plaza	5400 South Redwood Rd	5 commercial units	under construction
Kessimakis	4156 South Riverboar Road	1 (building)	under construction
State Fleet Building	4315 South 2700 West	1 (building)	under construction



4700 South Bangerter



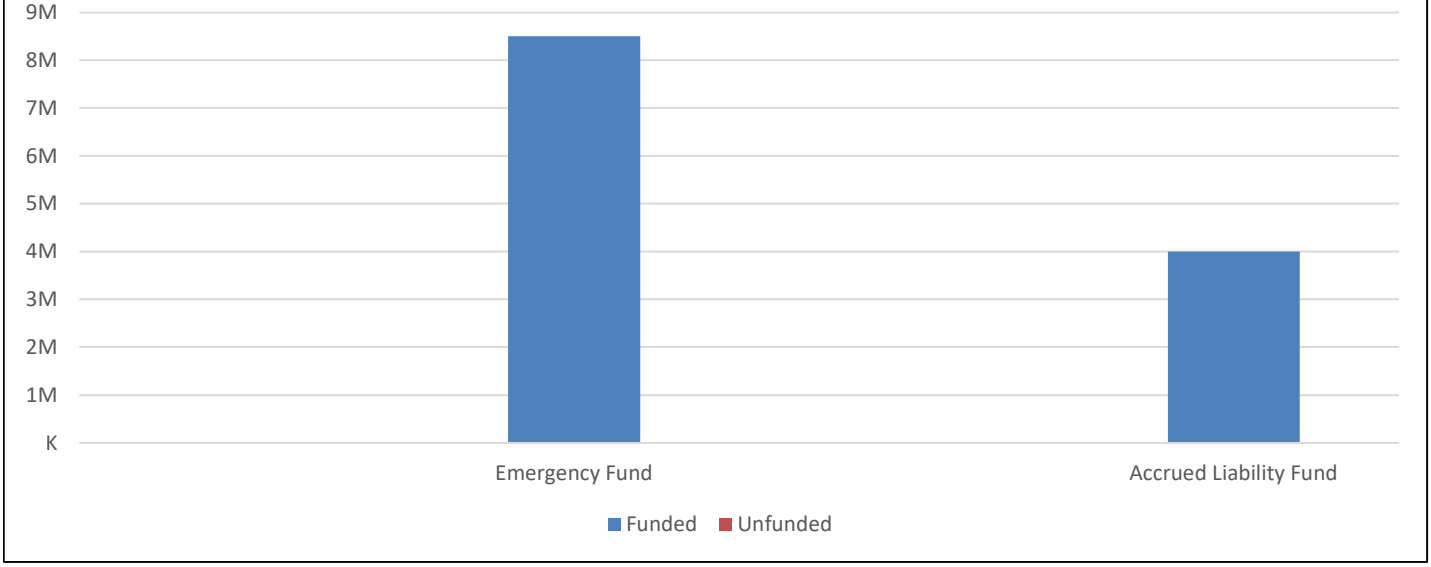



Miscellaneous Work

TAYLORSVILLE-BENNION IMPROVEMENT DISTRICT
INVESTMENT / CASH RESERVES REPORT
OCTOBER 31, 2024

Bank / Fund	Account	Rate	Date	Amount
Mountain America	Checking / Sweep	5.38%	10/31/2024	25,363,218
State Treasurer	PTIF	5.04%	10/31/2024	1,207,997
Moreton Asset Management	Investment Account	4.33%	10/31/2024	12,760,300
Total Cash on Hand				39,331,514

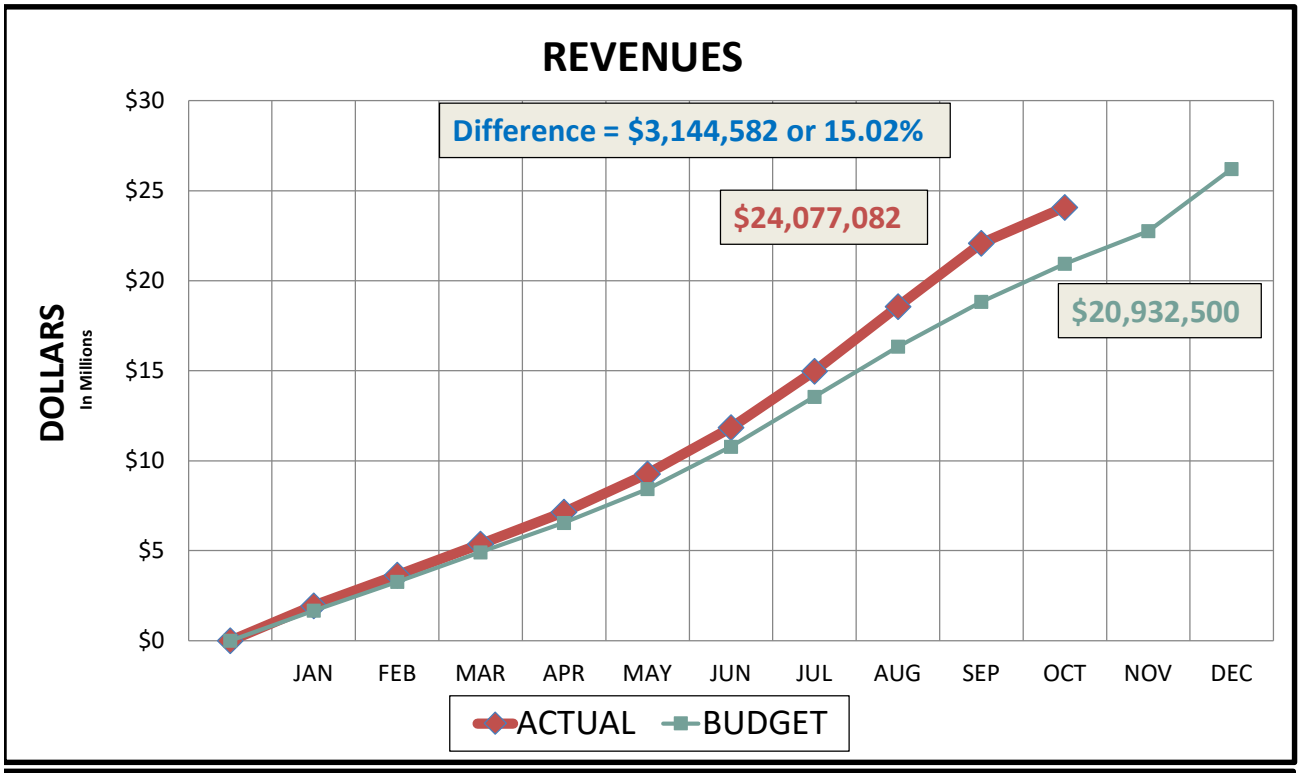
Reserve Funds	**9/30/2024**	**10/31/2024**	**Goal**	**% Complete**
Emergency Fund*	8,500,000	8,500,000	8,500,000	100.0%
Deferred Liability Fund*	4,000,000	4,000,000	4,000,000	100.0%
Cash Available For Operations	26,819,348	26,831,514		
Less: Outstanding Capital Cash Projects	(19,258,357)	(19,224,001)		
Net Cash Available	7,560,990	7,607,514	$4 - $8M	95.1%
Total Funds	20,060,990	20,107,514		95.8%

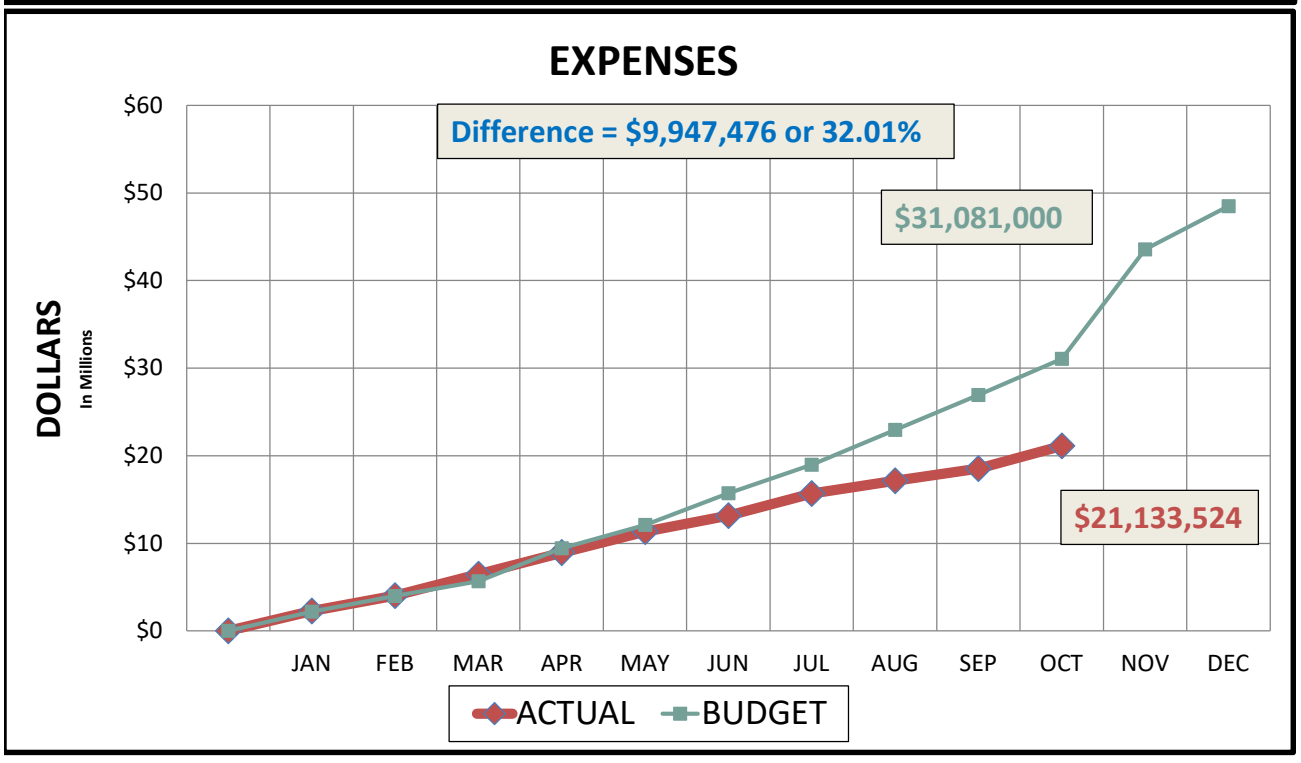


TAYLORSVILLE-BENNION IMPROVEMENT DISTRICT

FINANCIAL OVERVIEW

OCTOBER 31, 2024

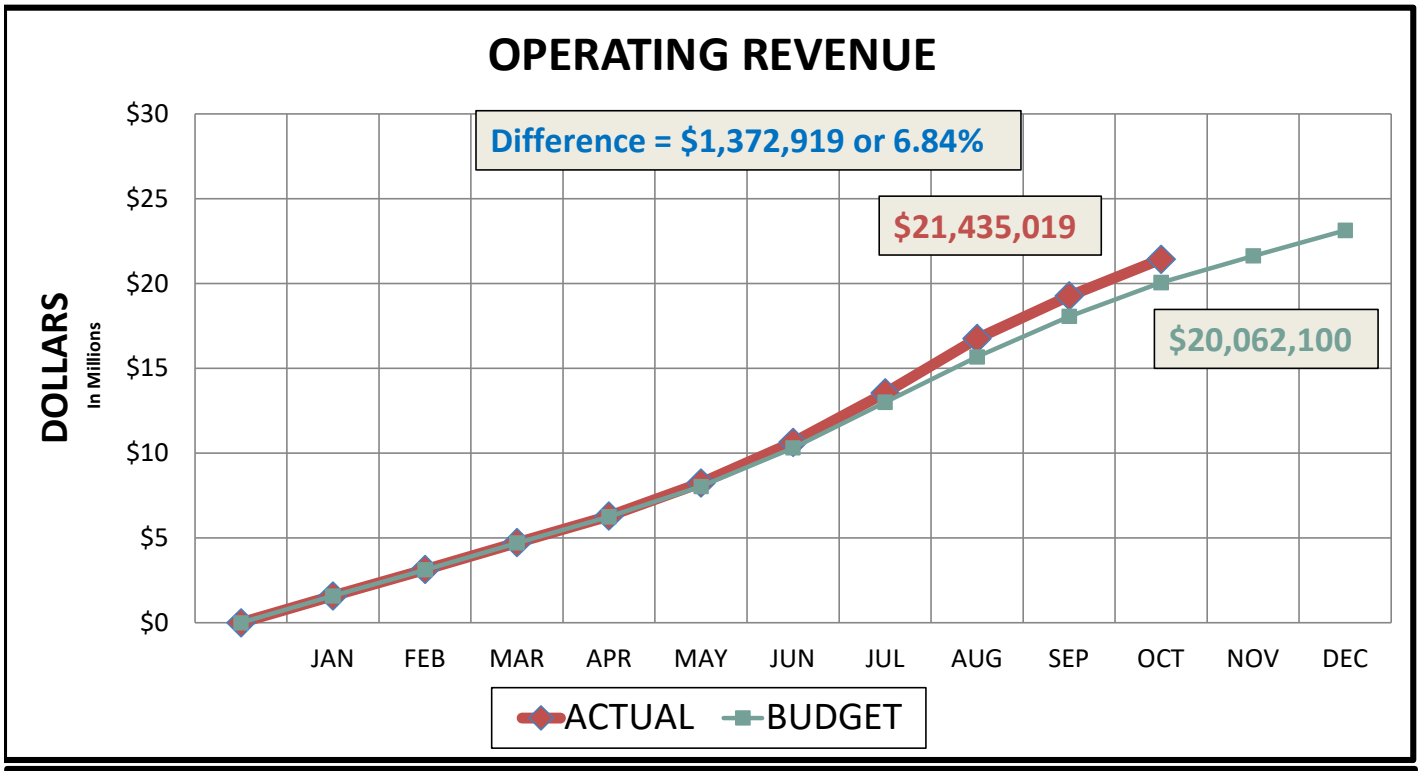


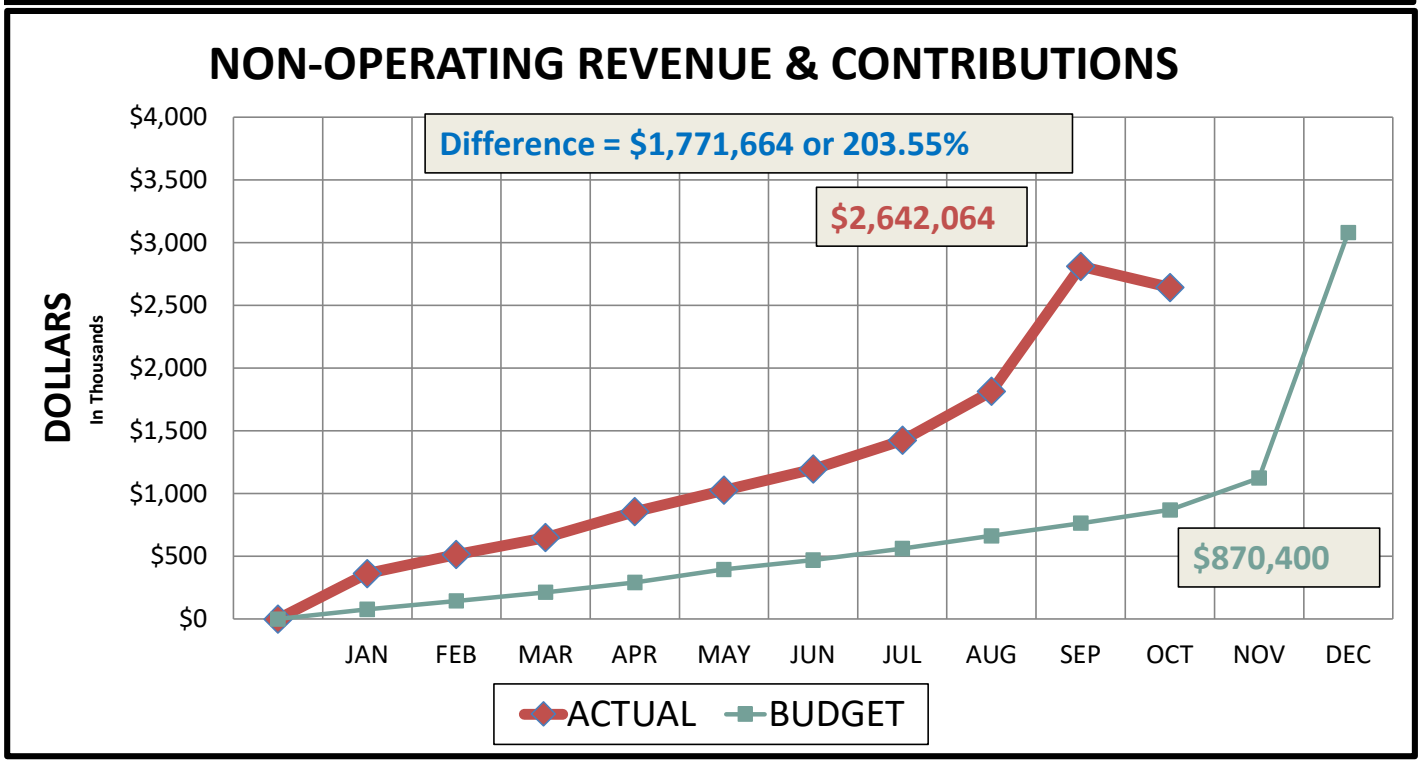


TAYLORSVILLE-BENNION IMPROVEMENT DISTRICT

REVENUES

OCTOBER 31, 2024

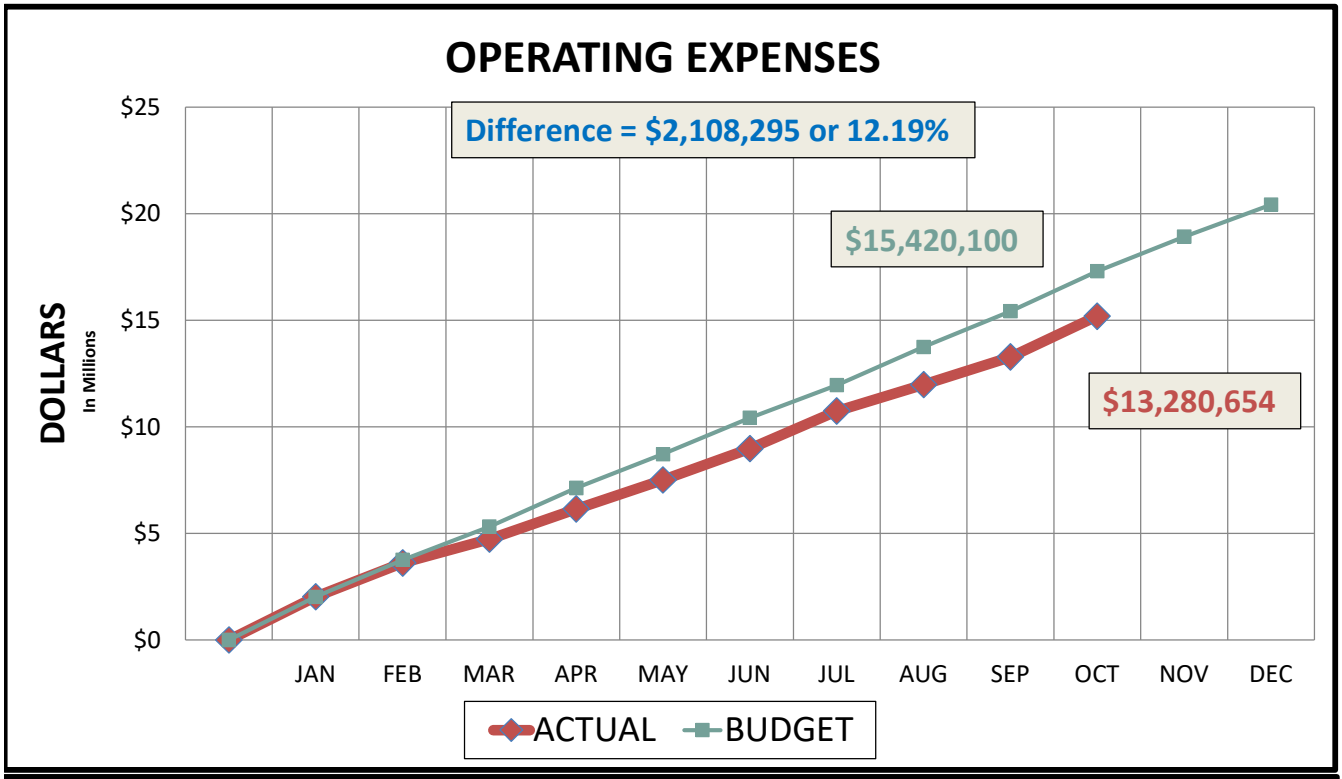


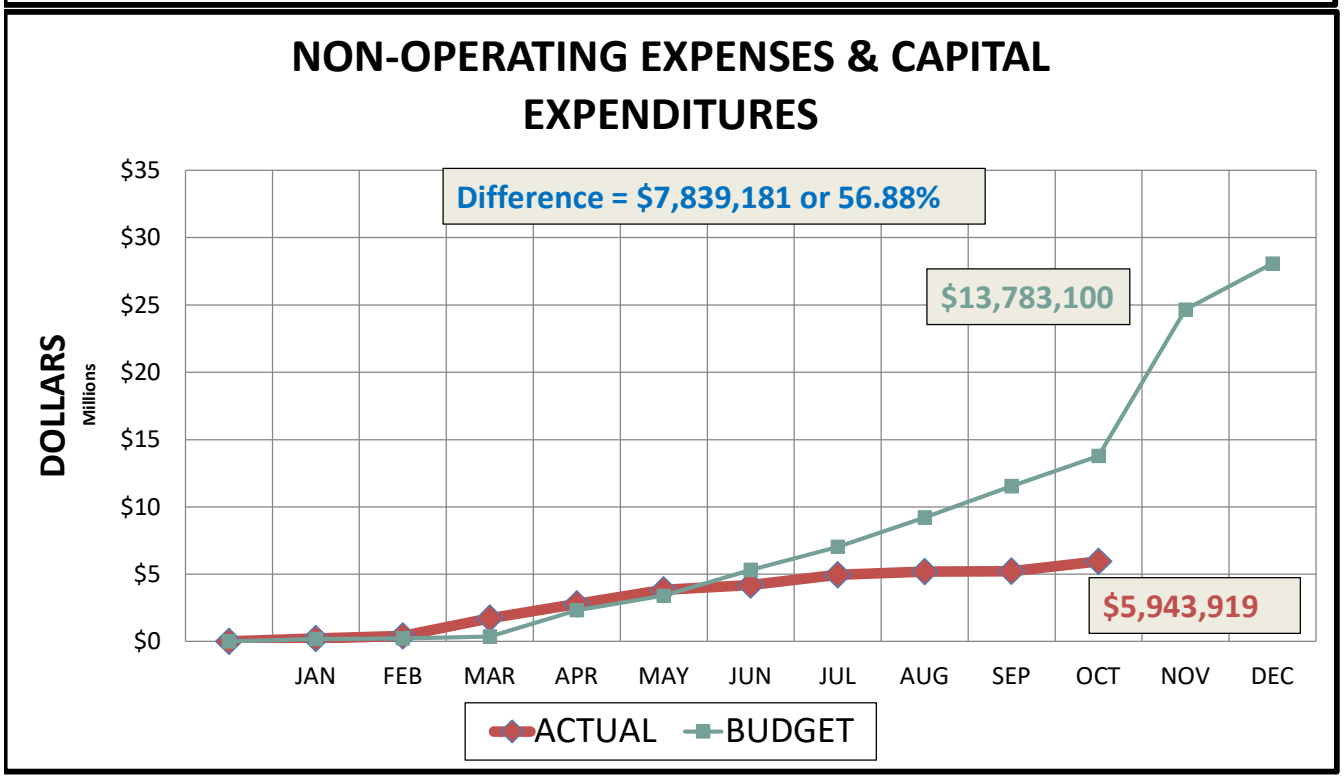


TAYLORSVILLE-BENNION IMPROVEMENT DISTRICT

EXPENSES

OCTOBER 31, 2024





Statement of Revenues and Expenses

Taylorsville-Bennion Improvement District
Statement of Revenues & Expenses

Account	10/1/2024 10/31/2024 Actual	10/1/2024 10/31/2024 Budget	Difference
Operating Revenue			
Water Sales	1,156,307	1,008,000	148,307
Sewer Service Fees	996,592	982,000	14,592
Other Income	15,981	13,700	2,281
Total Operating Revenue	**2,168,880**	**2,003,700**	**165,180**
Operating Expenses			
Salaries & Wages	280,942	290,500	9,558
Central Valley Sewer Expenses	346,865	586,800	239,935
Water Purchases	110,957	152,000	41,043
Benefits Expense	178,156	185,700	7,544
Utilities	458,658	135,700	(322,958)
Repairs & Maintenance	45,447	28,800	(16,647)
Postage, Bank & Merchant Fees	36,113	31,200	(4,913)
Reservoir Repairs & Maintenance	-	-	-
Landscaping	12,992	18,300	5,308
Well Repairs & Maintenance	1,074	600	(474)
Professional Services	2,597	22,700	20,103
Insurance & Damage Claims	-	-	-
Water Analysis, Sampling & Treatment	4,512	4,200	(312)
Vehicle Repairs & Maintenance	13,659	8,100	(5,559)
Miscellaneous Expense	(71)	-	71
Fuel	50,684	6,800	(43,884)
Supplies	7,774	11,900	4,126
Training Expense	8,594	11,000	2,406
Computer Expense, Maintenance & Software	1,903	6,600	4,697
Office Supplies	3,467	3,200	(267)
Telephone - Admin	9,580	4,600	(4,980)
Legal Fees	420	4,800	4,380
Dues & Subscriptions	-	-	-
Pretreatment Samples	1,125	2,500	1,375
Booster Repairs & Maintenance	4,170	1,800	(2,370)
Emergency Prep / Safety / Public Education	-	-	-
Contingency	-	75,000	75,000
Depreciation	329,333	285,000	(44,333)
Total Operating Expenses	**1,908,950**	**1,877,800**	**(31,150)**
Net Operating Revenue	**259,929**	**125,900**	**134,029**
Non-Operating Revenue			
Water Impact Fees	(313,383)	-	(313,383)
Sewer Impact Fees	-	10,800	(10,800)
Property Tax Revenue	4,061	4,000	61
Interest Income	136,279	87,400	48,879
Miscellaneous Income	4,634	4,400	234
Total Non-Operating Revenue	**(168,410)**	**106,600**	**(275,010)**
Non-Operating Expenses			
Interest on Revenue Bonds	-	-	-
Miscellaneous Expense	-	2,700	2,700
Property Taxes - RDA	-	-	-
Investment in CVWRF	-	-	-
Pension Expense (Non Cash)	-	-	-
Total Non-Operating Expenses	**-**	**2,700**	**2,700**
Net Non-Operating Revenue	**(168,410)**	**103,900**	**(277,710)**
Net Income	**91,519**	**229,800**	**(143,681)**

Taylorsville-Bennion Improvement District
Statement of Revenues & Expenses

Account	1/1/2024 10/31/2024 Actual	1/1/2024 10/31/2024 Budget	Difference	Final 2024 Budget
Operating Revenue				
Water Sales	11,383,060	10,142,000	1,241,060	11,233,000
Sewer Service Fees	9,912,055	9,807,000	105,055	11,762,000
Other Income	139,903	113,100	26,803	135,000
Total Operating Revenue	**21,435,019**	**20,062,100**	**1,372,919**	**23,130,000**
Operating Expenses				
Salaries & Wages	2,782,318	2,925,100	142,782	3,602,400
Central Valley Sewer Expenses	3,150,845	4,331,700	1,180,855	5,210,500
Water Purchases	1,590,112	1,834,900	244,788	2,152,000
Benefits Expense	1,943,855	1,946,400	2,545	2,289,700
Utilities	709,653	777,100	67,447	835,800
Repairs & Maintenance	344,111	275,300	(68,811)	445,100
Postage, Bank & Merchant Fees	288,012	249,600	(38,412)	302,800
Reservoir Repairs & Maintenance	4,843	4,000	(843)	4,000
Landscaping	135,132	177,400	42,268	194,000
Well Repairs & Maintenance	64,512	47,500	(17,012)	60,400
Professional Services	55,094	126,400	71,306	133,400
Insurance & Damage Claims	268,174	364,500	96,326	367,000
Water Analysis, Sampling & Treatment	94,787	114,300	19,513	122,400
Vehicle Repairs & Maintenance	76,549	107,800	31,251	124,700
Miscellaneous Expense	(57)	-	57	1,000
Fuel	82,105	136,000	53,895	136,000
Supplies	69,138	78,500	9,362	98,900
Training Expense	74,873	114,800	39,927	120,000
Computer Expense, Maintenance & Software	91,382	201,600	110,218	213,600
Office Supplies	51,293	39,800	(11,493)	63,100
Telephone - Admin	41,707	46,300	4,593	55,600
Legal Fees	11,230	37,700	26,470	45,000
Dues & Subscriptions	23,281	24,500	1,219	26,000
Pretreatment Samples	13,550	12,300	(1,250)	15,000
Booster Repairs & Maintenance	36,044	42,100	6,056	42,200
Emergency Prep / Safety / Public Education	24,342	32,300	7,958	35,500
Contingency	-	300,000	300,000	300,000
Depreciation	3,162,720	2,950,000	(212,720)	3,420,000
Total Operating Expenses	**15,189,605**	**17,297,900**	**2,108,295**	**20,416,100**
Net Operating Revenue	**6,245,414**	**2,764,200**	**3,481,214**	**2,713,900**
Non-Operating Revenue				
Water Impact Fees	738,702	60,800	677,902	82,600
Sewer Impact Fees	103,267	48,100	55,167	51,100
Property Tax Revenue	63,319	59,900	3,419	495,594
Interest Income	1,666,803	647,600	1,019,203	2,413,500
Miscellaneous Income	69,973	54,000	15,973	35,000
Total Non-Operating Revenue	**2,642,064**	**870,400**	**1,771,664**	**3,077,794**
Non-Operating Expenses				
Interest on Revenue Bonds	162,752	163,700	949	327,000
Miscellaneous Expense	7,617	3,500	(4,117)	6,000
Property Taxes - RDA	-	-	-	15,000
Investment in CVWRF	-	-	-	1,500,000
Pension Expense (Non Cash)	-	-	-	-
Total Non-Operating Expenses	**170,368**	**167,200**	**(3,168)**	**1,848,000**
Net Non-Operating Revenue	**2,471,695**	**703,200**	**1,768,495**	**1,229,794**
Net Income	**8,717,109**	**3,467,400**	**5,249,709**	**3,943,694**

Summary of Capital Projects

Taylorsville-Bennion Improvement District
Capital Projects

Account	1/1/2024 10/31/2024 Actual	1/1/2024 10/31/2024 Budget	Difference	Final 2024 Budget
Capital Projects				
SALE OF FIXED ASSETS	(19,000)	(480,000)	(461,000)	(480,000)
LAND	-	53,100	53,100	637,000
AUTO PURCHASE	668,566	622,800	(45,766)	650,000
T V TRUCK, CAMERA, VACTOR	-	-	-	-
OFFICE FURNISHINGS	-	100	100	3,000
MAINTENANCE EQUIPMENT	3,352	31,000	27,648	31,300
COMPUTER	102,574	132,700	30,126	132,800
TELEMETRY	-	14,900	14,900	15,000
SAFETY EQUIPMENT	-	4,200	4,200	5,000
SECURITY	26,032	18,600	(7,432)	25,000
OFFICE BUILDING AND PREMISES	582,860	7,200	(575,660)	3,847,000
DUMP TRUCK	147,931	-	(147,931)	-
TRACTOR SKID-STEER	23,325	47,000	23,675	47,000
PRETREATMENT EQUIPMENT	-	-	-	-
EASEMENTS	-	11,000	11,000	11,000
SEWER LINE REHAB/MISC	-	-	-	-
SEWER MASTER PLAN PROJECTS	-	287,500	287,500	500,000
3900 SOUTH - REHAB	2,595	-	(2,595)	-
EASEMENTS	-	11,000	11,000	11,000
WATER LINE PROJECTS	384,000	6,625,300	6,241,301	12,935,000
CITY PROJECTS	-	21,900	21,900	22,000
TAY-EAST (4800)	-	54,900	54,900	55,000
BARKER WEST	-	-	-	-
Barker	-	-	-	-
SWENSEN	8,401	-	(8,401)	-
RAWSON WELL	-	6,900	6,900	7,000
ATHERTON WEST	-	-	-	-
TAY EAST (4800)	-	-	-	-
TREATMENT STATIONS	9,062	78,300	69,238	96,000
TAYLORSVILLE WEST	112,262	320,000	207,738	320,000
PIONEER	-	-	-	-
VALLEY	35,286	31,000	(4,286)	31,000
ATHERTON WEST	-	-	-	-
SWENSEN	-	-	-	-
LOW ZONE NORTH BOOSTERS	-	-	-	-
LOW ZONE SOUTH BOOSTERS	127,826	113,000	(14,826)	113,000
KEARNS BOOSTER	27,157	-	(27,157)	-
LOW ZONE NORTH RES	8,890	10,000	1,110	10,000
LOW ZONE SOUTH RES	8,890	10,000	1,110	10,000
MIDDLE ZONE	8,890	500	(8,390)	10,000
HIGH ZONE	8,890	10,000	1,110	10,000
WATER METERS	3,019,090	4,989,000	1,969,910	5,056,000
PIPE FITTINGS & ACCESSOR	41,907	150,600	108,693	150,600
CV CAPITAL PROJECTS	434,766	433,400	(1,366)	810,000
PAYMENTS ON 2021 REVENUE BOND	-	-	-	1,149,000
Total Capital Projects	**5,773,551**	**13,615,900**	**7,842,349**	**26,219,700**

Balance Sheet

Taylorsville-Bennion Improvement District
Statement of Net Position (Balance Sheet)
Consolidated Summary

Account	10/31/2024	10/31/2023	Difference
Assets			
Current Assets			
Cash in Bank	25,363,218	19,605,013	5,758,205
State Treasurer	1,207,997	2,722,014	(1,514,017)
Moreton Asset Investment	12,760,300	11,940,296	820,003
Bond Escrow Accounts	1,097,186	1,372,300	(275,113)
Receivables	3,364,248	2,898,156	466,092
Inventory	475,431	441,573	33,858
Prepaid Expenses	-	-	-
Total Current Assets	**44,268,380**	**38,979,353**	**5,289,027**
Noncurrent Assets			
Investment in Central Valley	19,209,795	17,047,043	2,162,752
Pension & Lease Assets	2,224,855	3,205,366	(980,510)
Total Noncurrent Assets	**21,434,650**	**20,252,409**	**1,182,242**
Capital Assets			
Capital Assets	150,524,277	144,605,991	5,918,287
Less: Accumulated Depreciation	(73,296,243)	(69,720,616)	(3,575,627)
Total Capital Assets	**77,228,035**	**74,885,375**	**2,342,660**
Total Assets	**$ 142,931,065**	**$ 134,117,136**	**$ 8,813,928**
Liabilities & Equity			
Current Liabilities			
Accounts Payable	487,588	701,919	(214,331)
Engineering Deposits	65,922	69,672	(3,750)
CP of Long Term Debt	1,149,000	1,149,000	-
Current Liabilities	**1,702,510**	**1,920,591**	**(218,081)**
Long Term Liabilities			
Accrued Retirement Benefits	5,179,730	4,943,559	236,171
Accrued Leave Pay - LT	703,469	617,941	85,528
Notes and Bonds Payable	20,392,000	21,531,000	(1,139,000)
Pension & Lease Liabilities	1,612,959	2,880,228	(1,267,268)
Total Long Term Liabilities	**27,888,158**	**29,972,728**	**(2,084,569)**
Total Liabilities	**29,590,669**	**31,893,319**	**(2,302,650)**
Equity			
Prior Years' Earnings	104,623,286	94,974,462	9,648,824
Current Year Net Income (Loss)	8,717,109	7,249,355	1,467,754
Total Equity	**113,340,396**	**102,223,817**	**11,116,579**
Total Liabilities & Equity	**$ 142,931,065**	**$ 134,117,136**	**$ 8,813,928**

Dashboard of Attributes for an Effectively-Managed District

October 2024 District Performance Indicators

1. Product Quality

- Meet or Exceed Federal and State Regulation (% of Compliance)
- Meet District Expectations of Aesthetic Quality
- Waste Water Collection Proficiency

2. Financial Viability

- Operational Cash Ratio
- Debt Service Coverage Ratio
- Cash Reserve: Central Valley
- Cash Reserve: Number of Days

3. Infrastructure Strategy and Performance

- Number of Water Line Leaks
- Non-Revenue Water
- 5/8" Meter Performance
- Surveying the Wastewater System
- Wastewater System Condition
- Wastewater Line Replacement
- Lift Station Operation

4. Resource Adequacy

- State Conservation Mandate
- Water Resource Adequacy
- Well Replacement Plan

5. Customer Satisfaction

- Customer Service Complaints
- Customer Technical Complaints
- Customer Survey

6. Employee and Leadership Development

- Employee Survey
- Employee Retention

7. Operational Optimization

- Efficient Use of Electricity
- Peak Factor Ratio
- Water Cost Minimization
- Wastewater Cost Minimization

8. Enterprise Resiliency

- Lost Time Injuries or Illnesses
- EMOD
- Vehicle and Equipment Accidents
- Emergency Preparedness

9. Stakeholder Understanding and Support

- Grama Requests
- Public Outreach
- State Reporting Compliance
- Governing Body Understanding

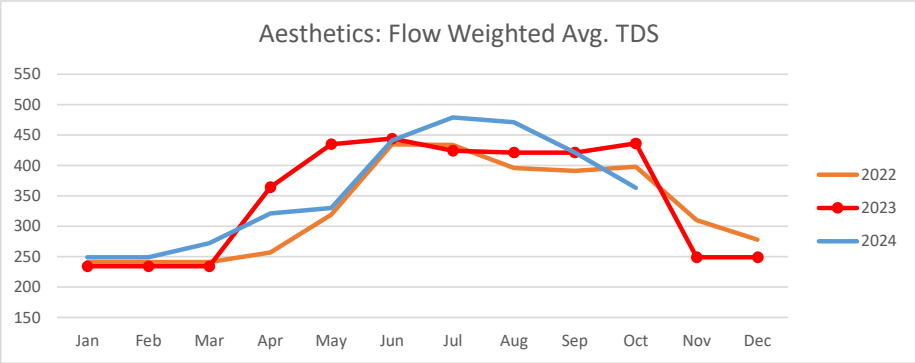
10. Community Sustainability

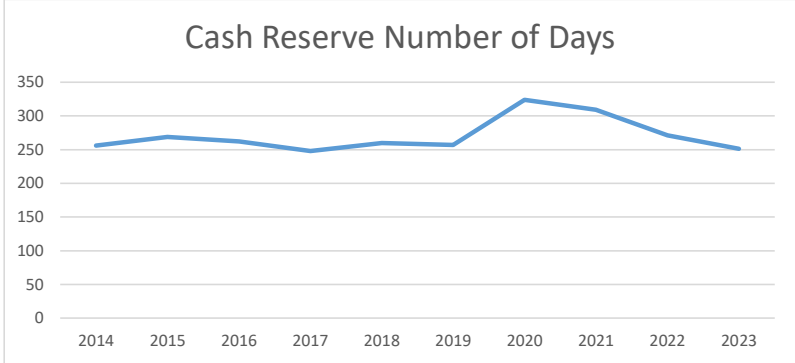
- Rate Comparison
- Property Tax Comparison
- Collaboration with Local Partners

Legend

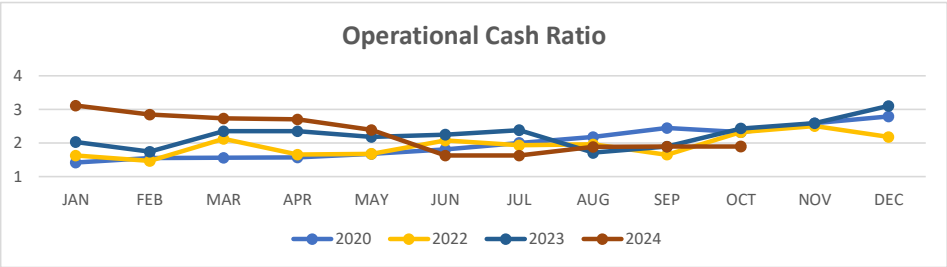
- Outstanding
- Acceptable
- Needs Improvement

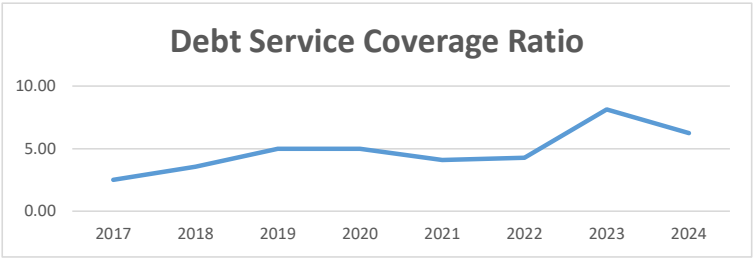
	ATTRIBUTES	CHARACTERISTICS	FACTORS	Outstanding	Acceptable	Needs Improvement	CRITERIA
1	Product Quality	Water Quality	Meet or Exceed Federal and State Regulation (% of Compliance)	**100%**			% of sampling results in compliance with Federal and State Regulations
				100%	99-96%	Less than 96%	
			Meet District Expectations of Aesthetic Quality	**363**			Amount of TDS found in system using a flow weighted average
				500 mg/l or less	500 - 800 mg/l	800+ mg/l	
		Wastewater Collection	Wastewater Collection Proficiency		**1**		Number of wastewater main line back-ups preventable by TBID (12 month rolling total)
				0	0.1 - 1.9	2.0+	





	ATTRIBUTES	CHARACTERISTICS	FACTORS	Outstanding	Acceptable	Needs Improvement	CRITERIA
2	Financial Viability	Fiscal Responsibility	Operational Cash Ratio	**1.90**			Unrestricted Cash Balance / District's minimum cash balance limit
				> 1.5	1.49 - 1	Less than 1	
			Debt Service Coverage Ratio	**8.14**			Change in Net Position + Interest Expense + Depreciation / Total Debt Service (Principal + Interest Payments) expense
				2.4+	2.3 - 1.1	Less than 1.1	
			Reserve: Central Valley		**83.9%**		Total Central Valley Cash Balance / Calculated Maximum Cash Balance
				90%+	89.9 to 65%	less than 65%	
			Reserve: Number of Days		**251**		Total amount in District Reserves / (Total Annual Operating Expenses / 365 Days)
				415+	414-231	less than 231	





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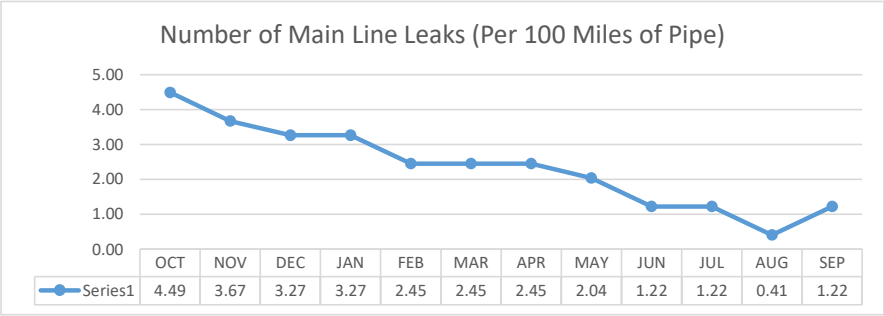
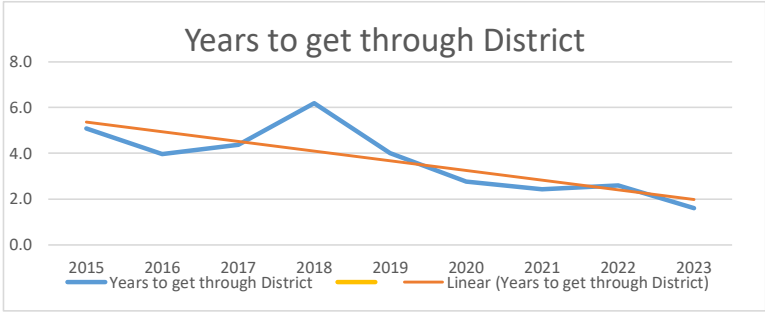
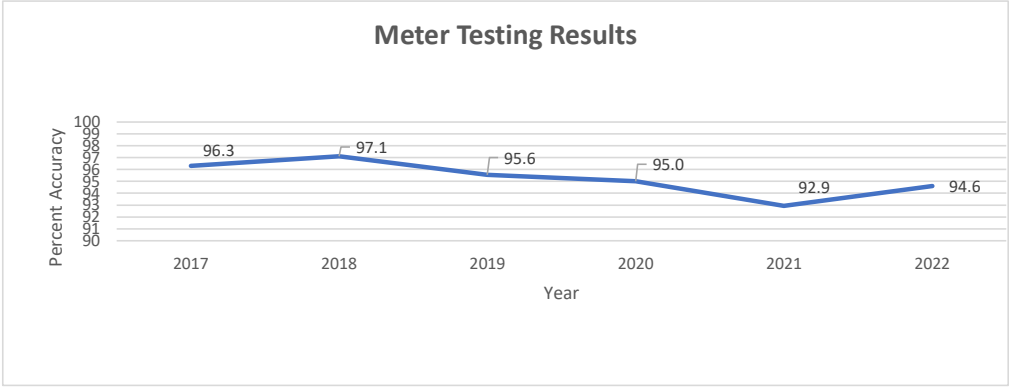
Infrastructure Strategy and Performance	Water Distribution System	Number of Main Line Leaks	**1.22**			Number of main line repairs per 100 miles (12 month rolling total) Miles of water pipe in the District = 233 miles
			5 or less	5.1 - 13	13.1+	
		Non Revenue Water Management		**11.90**		Percent of Non-Revenue Water -water produced but not sold
			10% or less	11%-16%	17% or above	
		5/8" Meter Performance		**N/A**		Average accuracy of 170 random 5/8" meters in the District
			97%+	97%-95%	94.9% or less	
	Wastewater Collection System	Surveying the Wastewater System (# of years)	**1.6**			Number of years to survey all of the sewer mains in the District
			4 or less	4.1-4.5	4.5+	
		Wastewater System Condition	**99.32%**			Percent of pipe that is not in need of extra maintenance or repair (Rated 3 or higher)
			100 - 95%	95% - 90%	less than 90%	
		Wastewater Line Replacement			**6782**	Feet of wastewater pipe that is in need of being replaced or lined (rated 3 or higher)
			Less than 2,500	2,500 - 5,279	5,280 +	
		Lift Stations Operation	**0**			Number of Lift station failures causing the system to go out of primary operating mode in to stand-by mode during the month
			All pumps operable	Stand-by mode occurred	Failure of standby functions	

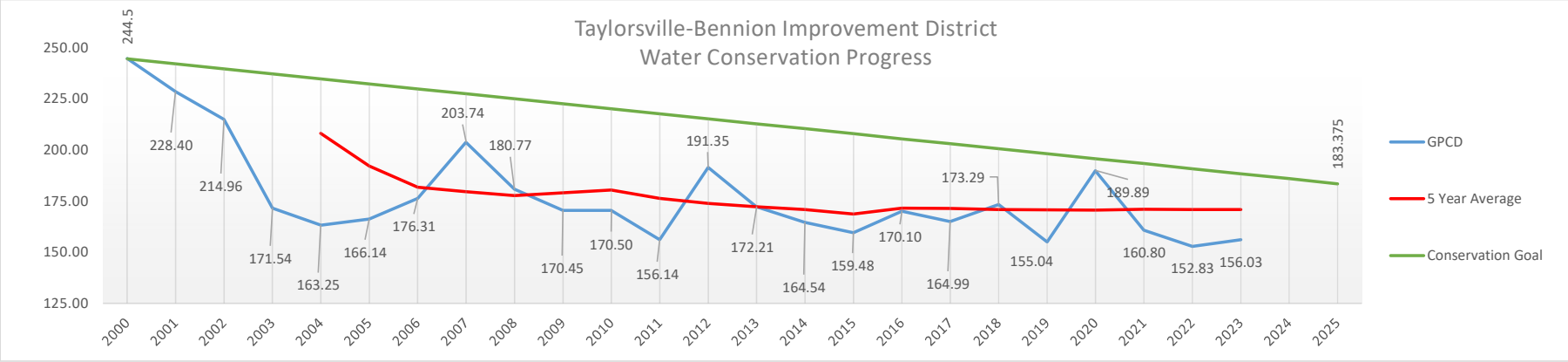






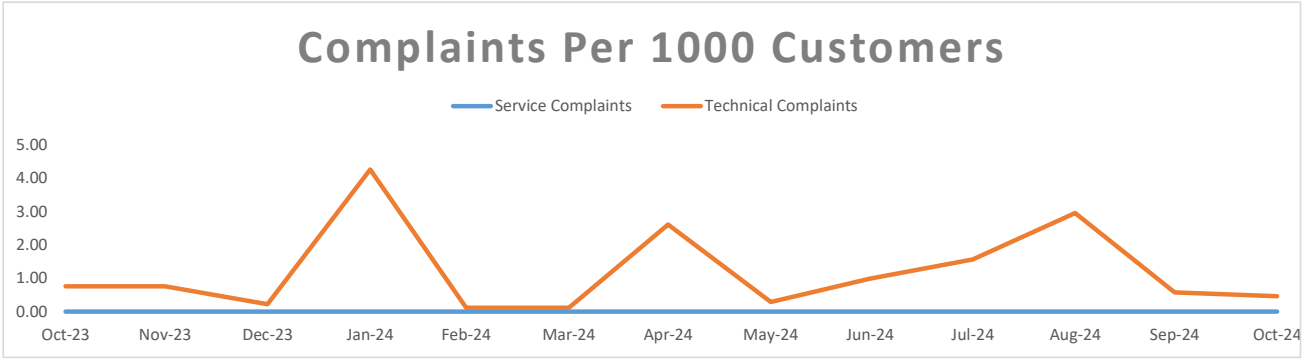
4

Resource Adequacy	Conservation	State Conservation Mandate	**100%**			Percent of the mandated 25% reduction by 2025 that has been achieved
			100 - 95%	95 - 90%	Less than 90%	
	Water Supply	Water Resource Adequacy	**1.2**			Max Water Production Capacity / Average of the Highest Water Peak Day Demand over the last 5 years
			.98+	.98 - .92	less than .92	
		Well Replacement Plan		**2**		Number of future wells planned (including site selection, property acquisition, and budgeted for)
			3	2	1 or Less	

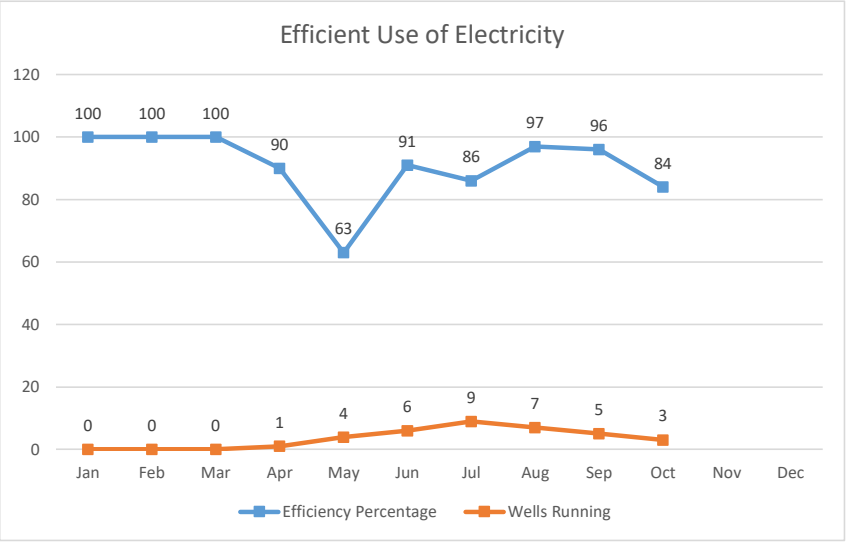


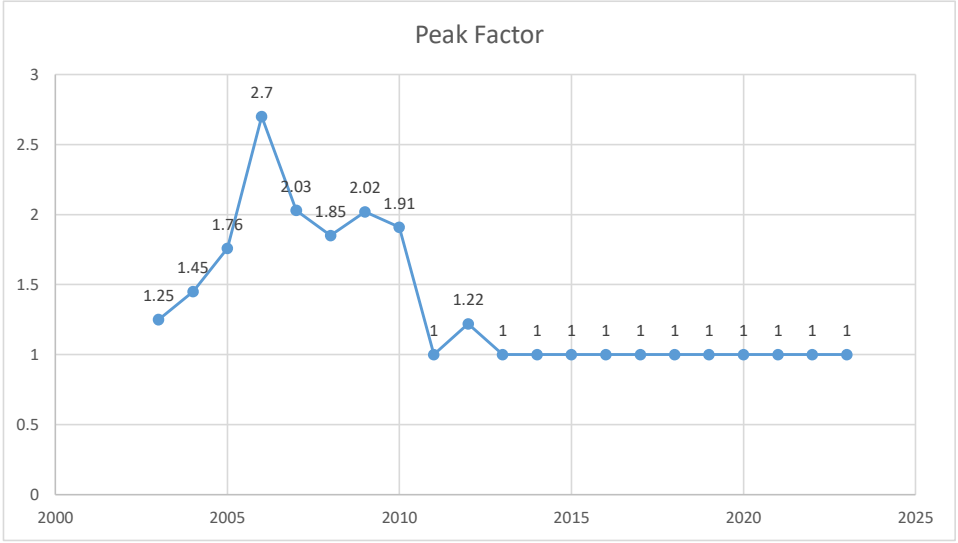
5

Customer Satisfaction	Service Quality, Efficiency, and Costs	Customer Service Complaints	**0**			Total number of customer service complaints per month per 1000 active accounts (Total Number of Customer Complaints per month / (Total Number of Active Accounts / 1000))
			.5 or less	0.6 - 1.9	2+	
		Technical Service Complaints	**0.46**			Total number of technical service complaints per month per 1000 active accounts (Total Number of Customer Complaints per month / (Total Number of Active Accounts / 1000))
			2 or less	2.1 - 6.6	6.7+	
		Customer Survey	**96.1%**			Percent of customers that reported they were adequate, satisfied or very satisfied with the District's services on our most recent Customer Survey (2021, 4.3% reponse rate)
			90%+	89.9% - 80%	79.9% or less	



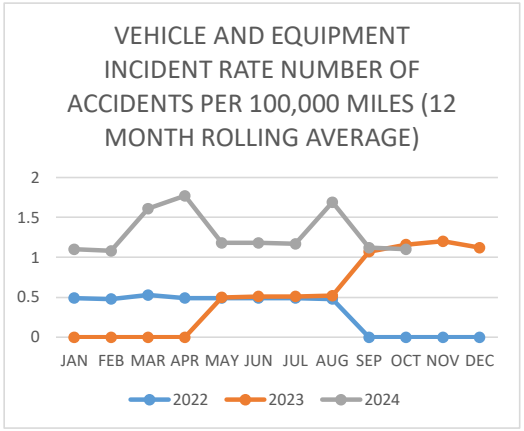
6	Employee & Leadership Development	Employee Satisfaction	Employee Survey	**100.0%**			Survey of employees measuring overall satisfaction with the District (2022 - Survey is administered every 3 years)
				90%+	90% - 80%	80% or less	
			Employee Retention	**5.84%**			3 year employee turnover rate. Employees that have left employment with the District voluntarily, excluding retirement.
				Less than 10%	10% - 19%	19%+	
7	Operational Optimization	Utility Efficiency	Efficient Use of Electricity		**84%**		Average run cycle of all wells each month
				90% + Run Cycle	89% - 70%	69% or less	
			Peak Factor Ratio	**1**			JVWCD annual Peak Factor
				1 or less	1 - 1.25	1.26+	
		Monetary Efficiency	Water Cost Minimization	**1.9**			Total annual water O&M expense (less Depreciation) / 100 miles of water pipe line in the District
				$2.01M or less	$2.01M - $3.13M	$3.13M+	
			Wastewater Cost Minimization	**1.5**			Total annual wastewater O&M expense (less Depreciation) / 100 miles of wastewater pipe line in the District
				$2.16M or less	$2.16M - $2.91M	$2.91M+	

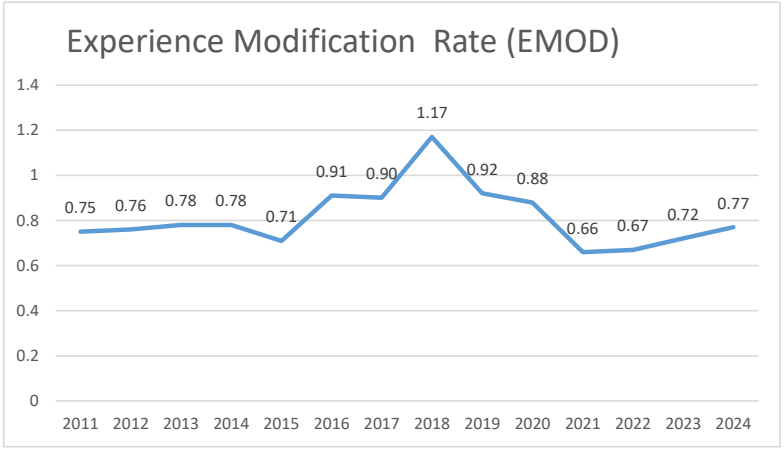


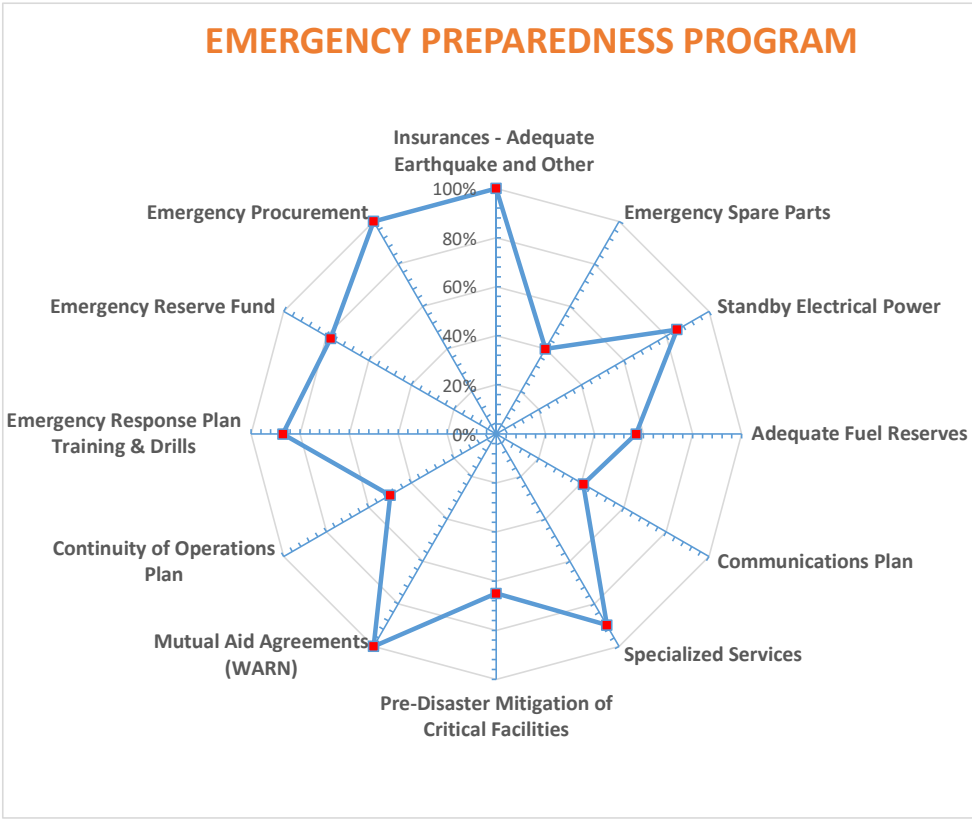


8

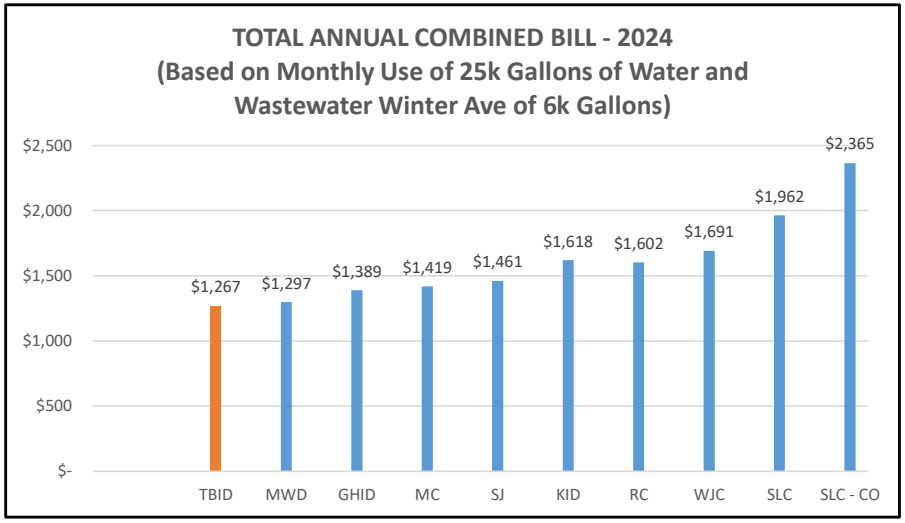
Enterprise Resiliency	Workforce Resiliency	Lost time Injuries or Illnesses	**0**			Number of lost time reportable employee injuries or illnesses during the last 12 months
			0	1	2+	
		EMOD	**0.77**			Workers Compensation Fund EMOD Rate
			.80 or less	.81 - 1.0	1.1+	
	Equipment resiliency	Vehicle and Equipment Accidents	**1.10**			Number of accidents per 100,000 miles driven (12 month rolling average)
			2 or Less	2.1 - 4	4+	
		Emergency Preparedness		**76%**		Average percentage of completion of the subcategories of the emergency response program
			90% or more	89% - 75%	74% or less	

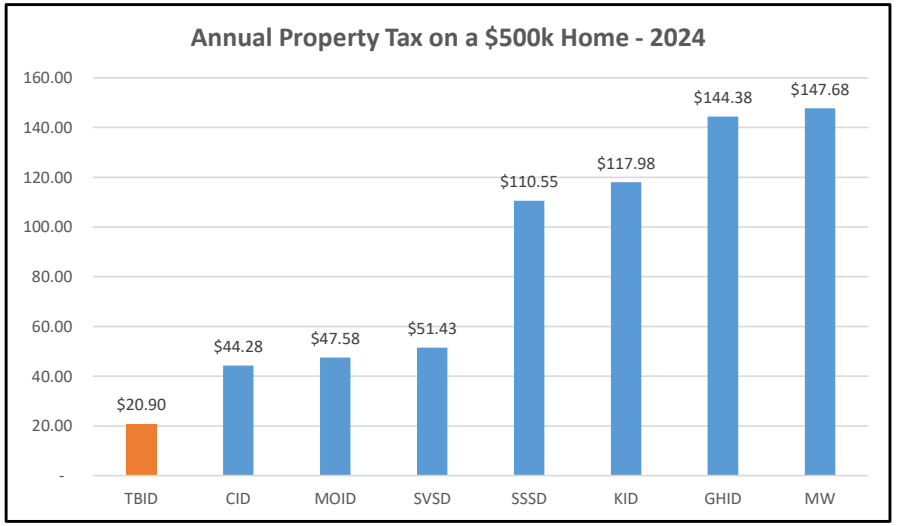


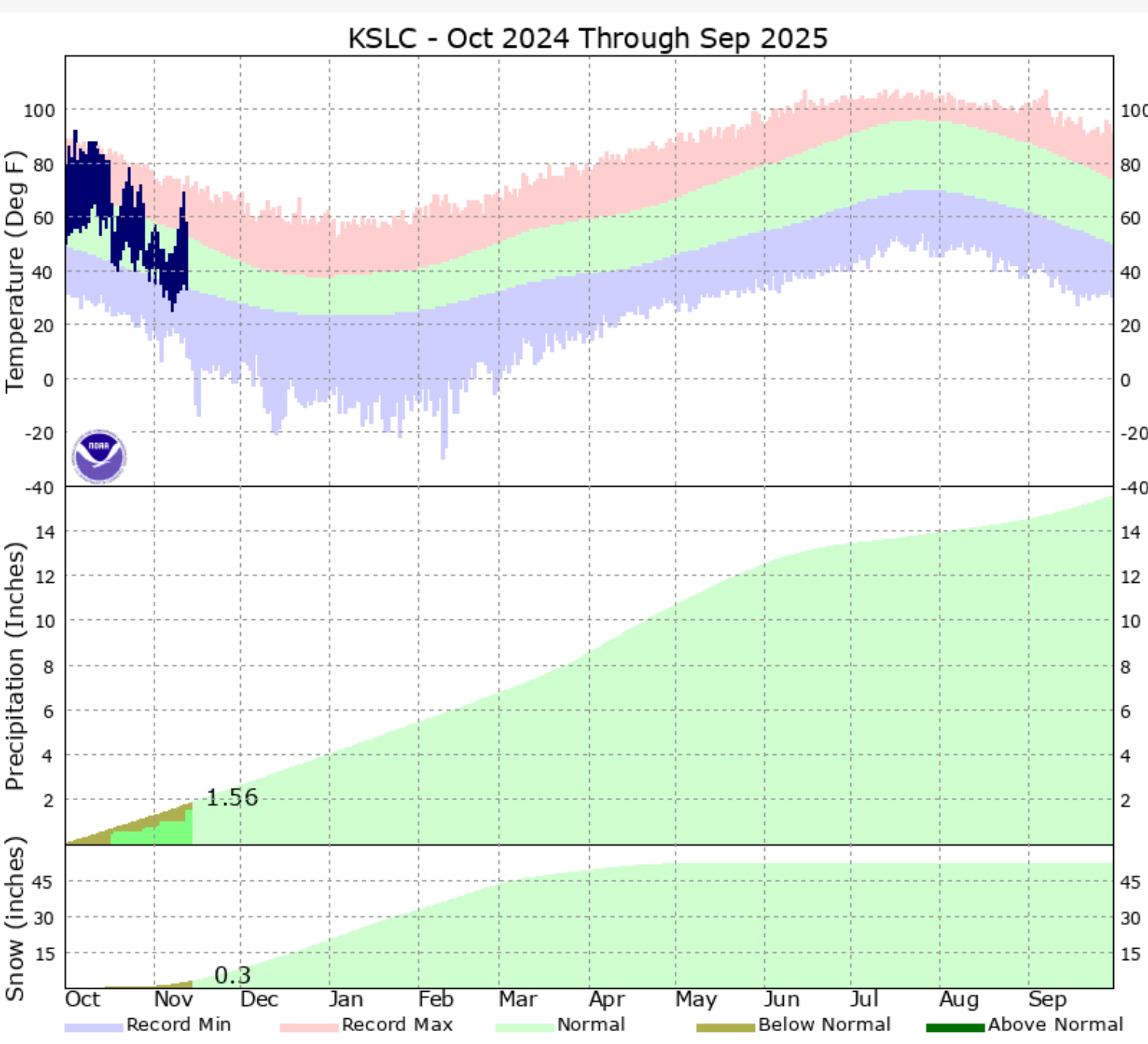


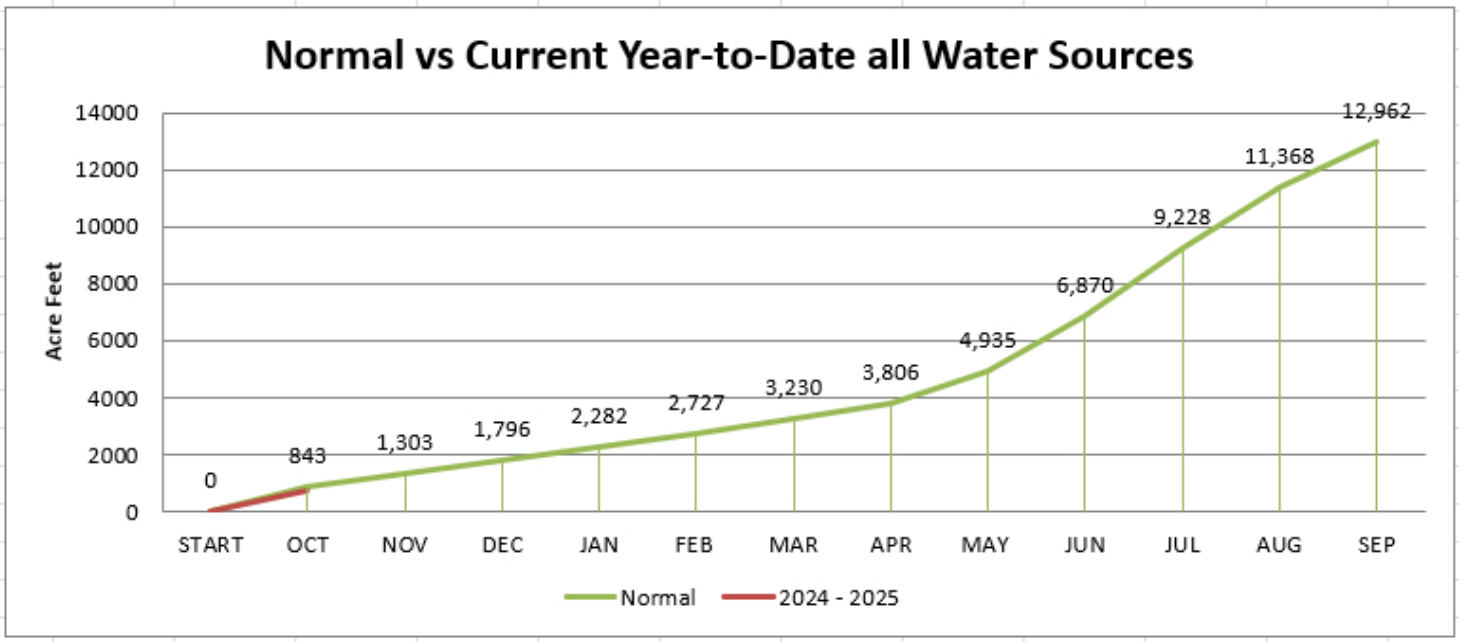


9	Stakeholder Understanding & Support	Transparency	Grama Requests	**YES**			All grama requests have been responded to as required by law
				Yes		No	
			Public Outreach	**YES**			Stake Holder outreach index - Measure of District's Outreach Activites such as customer satisfaction surveys, involvement in outreach programs, and use of stakeholder feedback to develop action plans.
				Yes		No	
			State Reporting Compliance	**YES**			State Transparency Website updated accurately and timely
				Yes		No	
		Education	Governing Body Understanding	**YES**			Annual Strategic Planning Meeting held and mandated annual board member training completed
				Yes		No	
10	Community Sustainability	Affordability	Rate Comparison	**1**			Ranking compared to 10 closest like entities including water, wastewater, and taxes (1 being the lowest rates and 10 the highest)
				1 - 3	4 - 6	7 - 10	
			Property Tax Comparison	**1**			Ranking compared to 10 closest like entities taxes (1 being the lowest rates and 10 the highest)
				1 - 3	4 - 6	7 - 10	
		Community Involvement	Collaboration with Local Partners	**6**			AWWA, City, UASD, Conservation Action Committee, local committees, etc.
				3+	2	0	







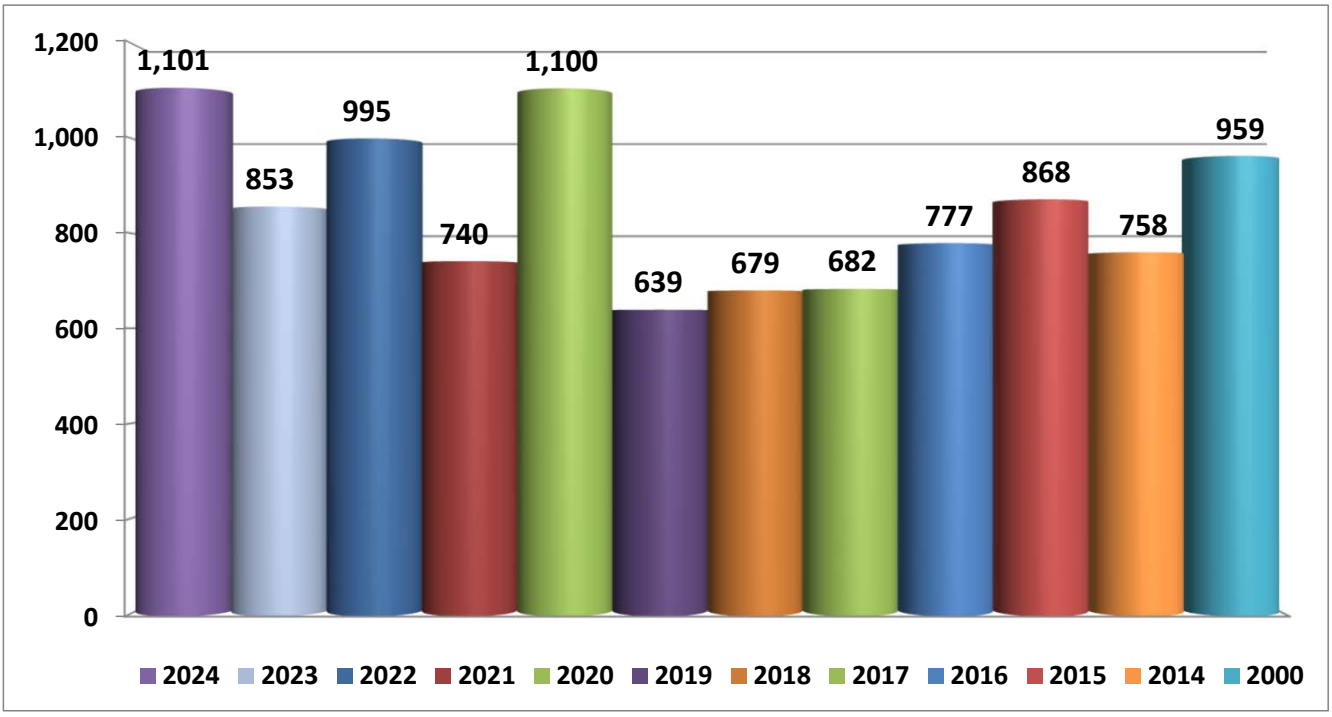


Normal = 10 Year Average

Taylorsville-Bennion Improvement District

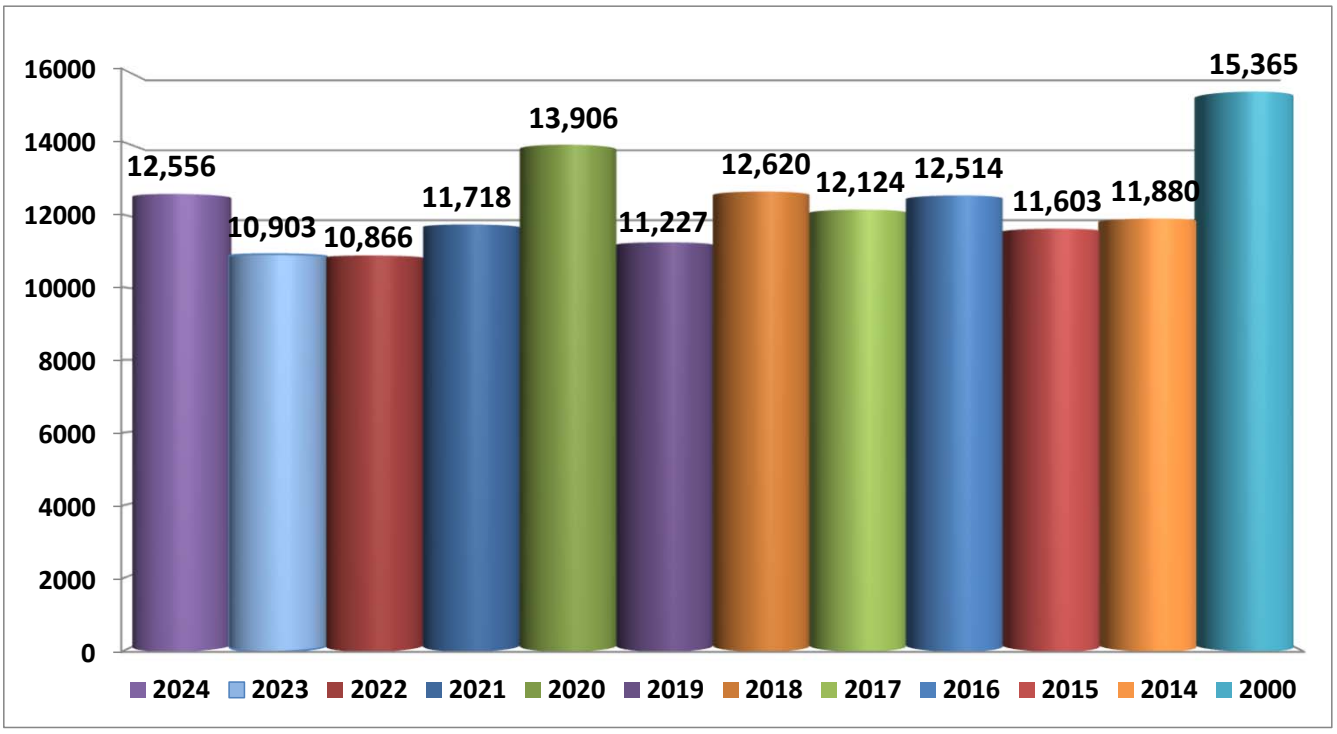
OCTOBER 2024

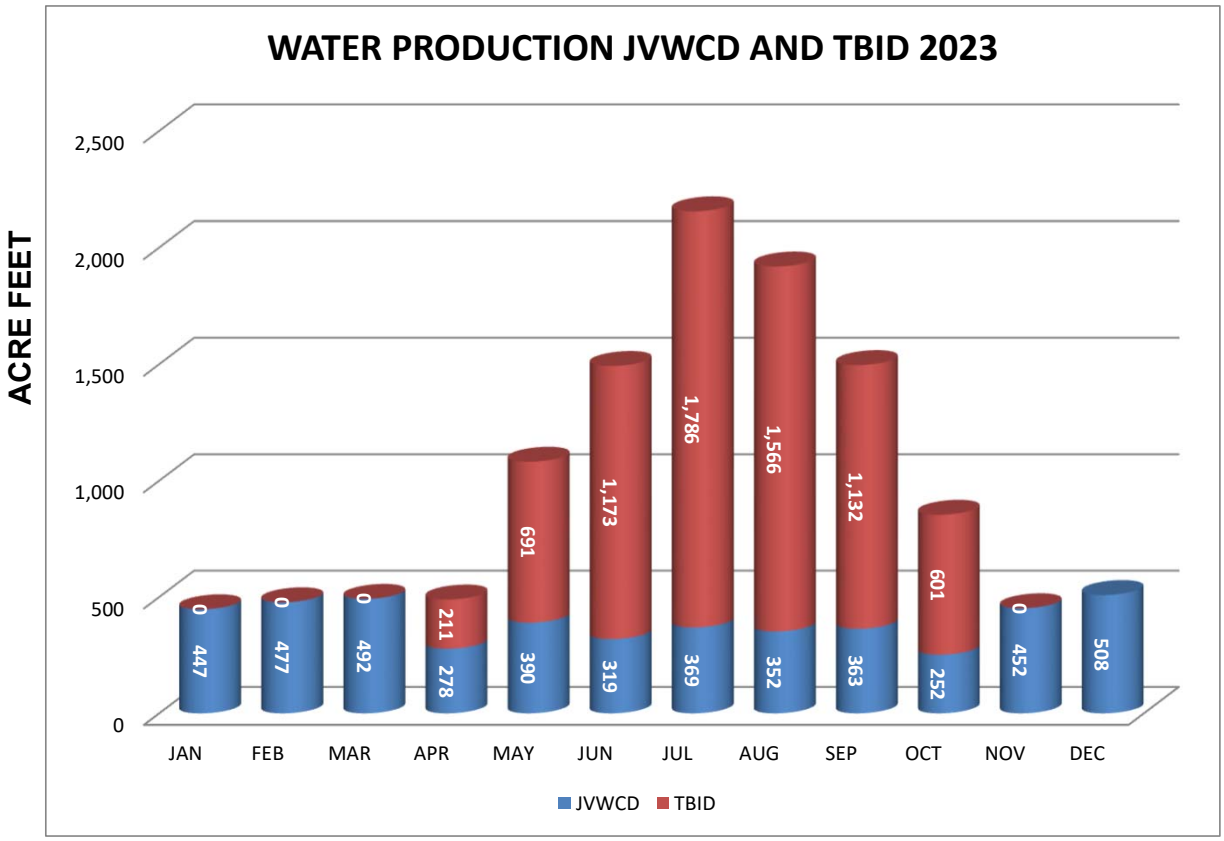
Water Pumped and Purchased

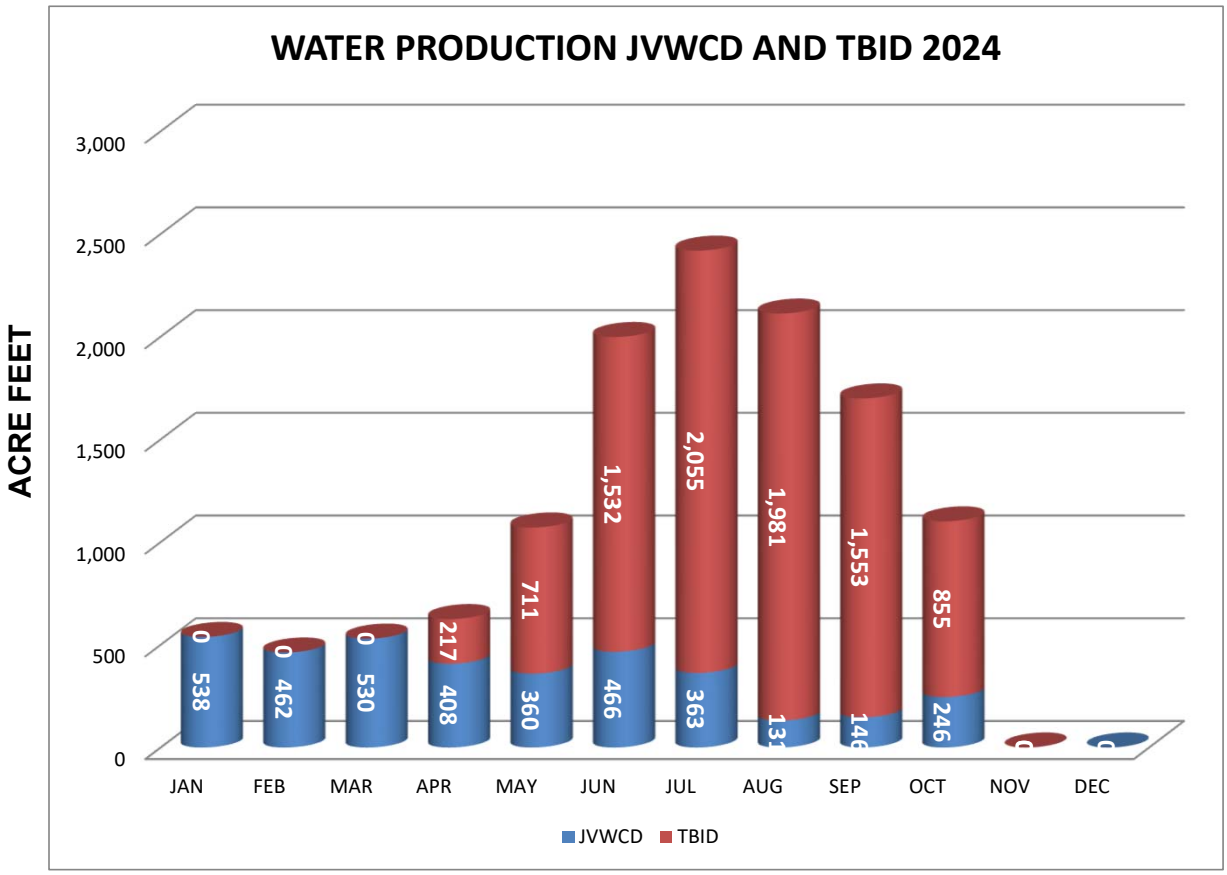


YEAR-TO-DATE

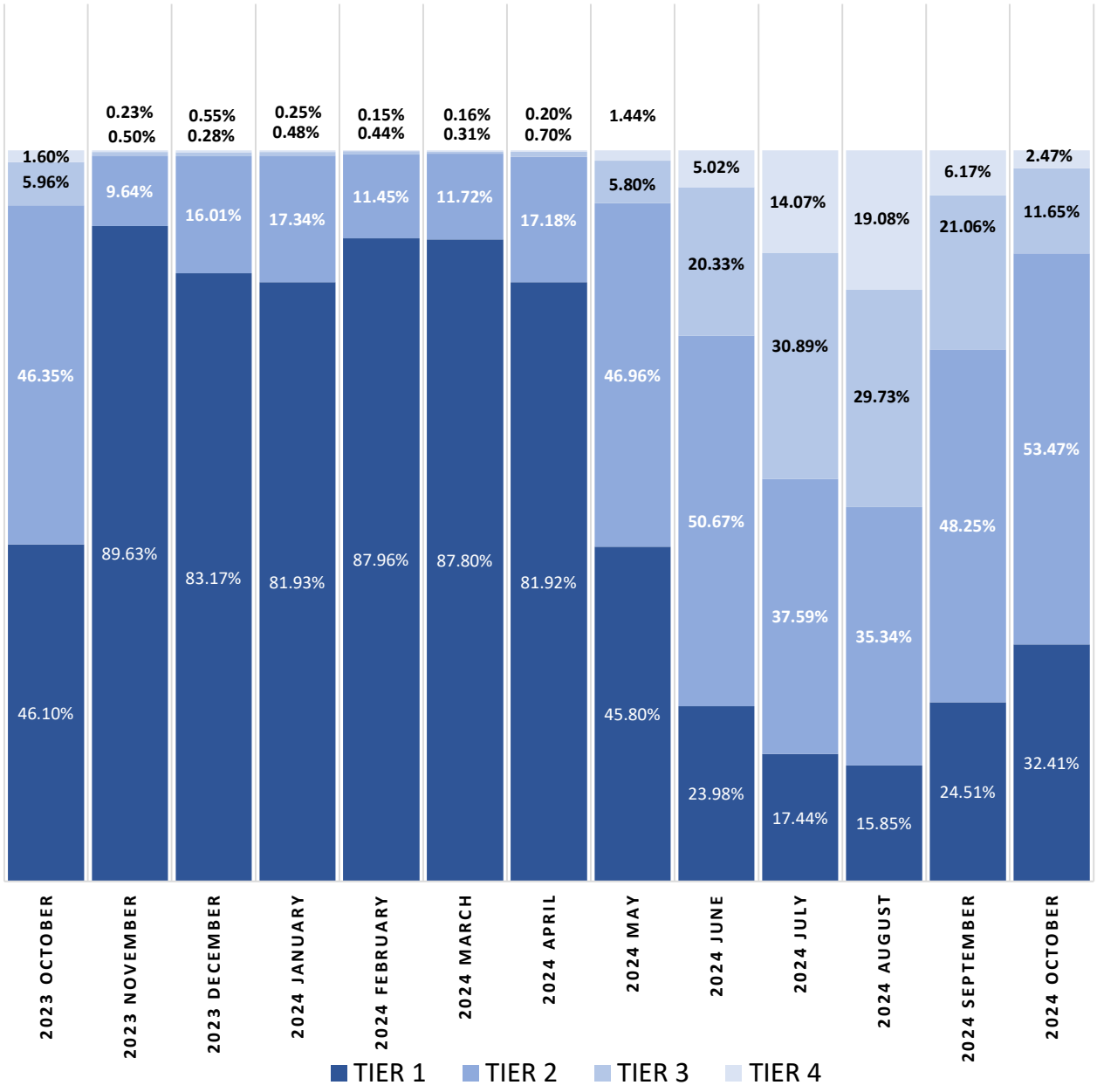
TOTAL WATER SOURCES

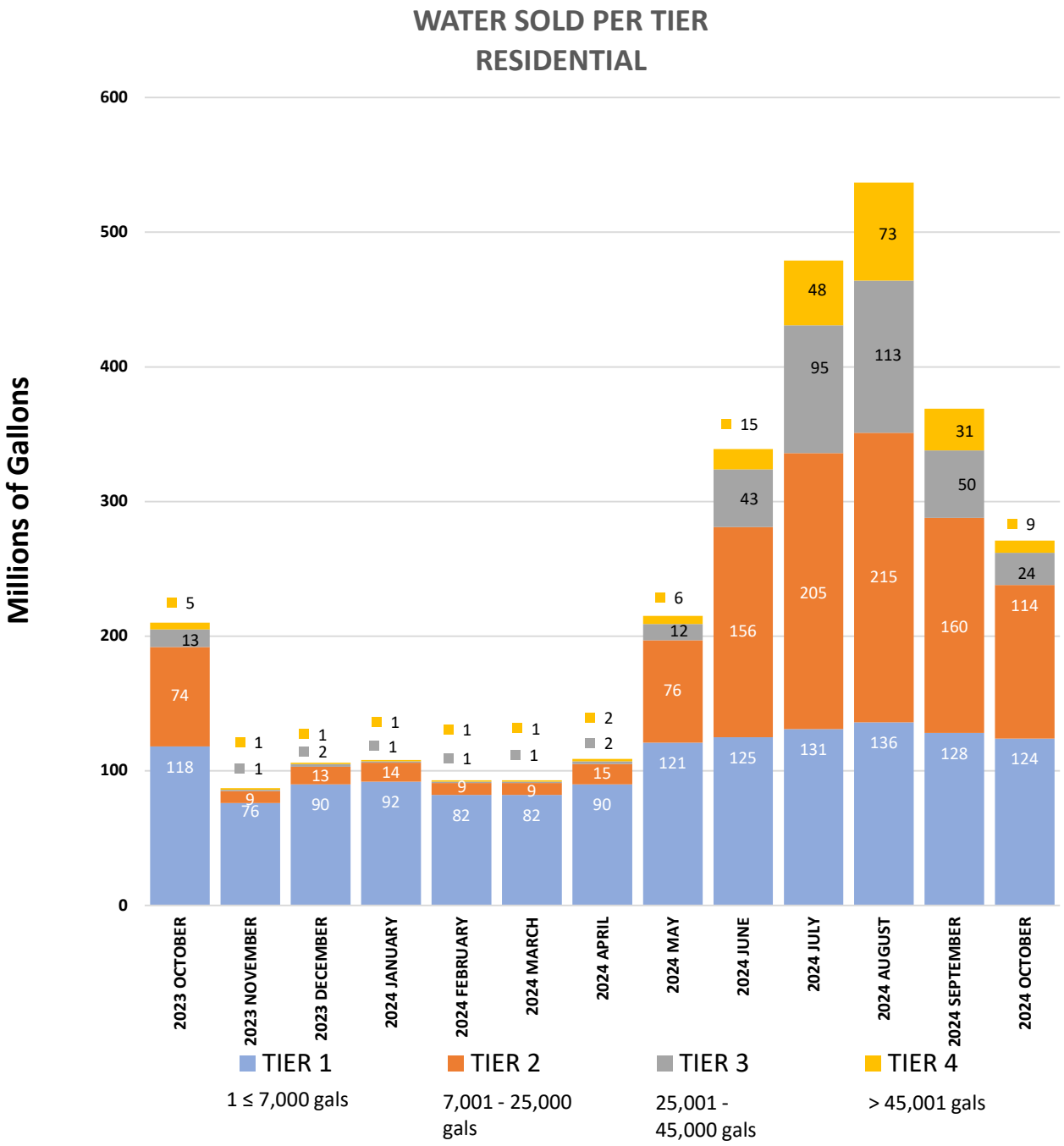



WATER PRODUCTION JVWCD AND TBID 2023
ACRE FEET
2,500
2,000
1,500
1,000
500
0
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
0
447
0
477
0
492
211
278
691
390
1,173
319
1,786
369
1,566
352
1,132
363
601
252
0
452
508
JVWCD
TBID


WATER PRODUCTION JVWCD AND TBID 2024
ACRE FEET
3,000
2,500
2,000
1,500
1,000
500
0
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC
0
538
0
462
0
530
217
408
711
360
1,532
466
2,055
363
1,981
131
1,553
855
246
JVWCD
TBID

PERCENTAGE OF ACCOUNTS PER TIER RESIDENTIAL




WATER SOLD PER TIER
RESIDENTIAL
Millions of Gallons
600
500
400
300
200
100
0
2023 OCTOBER
2023 NOVEMBER
2023 DECEMBER
2024 JANUARY
2024 FEBRUARY
2024 MARCH
2024 APRIL
2024 MAY
2024 JUNE
2024 JULY
2024 AUGUST
2024 SEPTEMBER
2024 OCTOBER
118
74
13
5
76
9
1
1
90
13
2
1
92
14
1
1
82
9
1
1
82
9
1
1
90
15
2
2
121
76
12
6
125
156
43
15
131
205
95
48
136
215
113
73
128
160
50
31
124
114
24
9
TIER 1
1 ≤ 7,000 gals
TIER 2
7,001 - 25,000 gals
TIER 3
25,001 - 45,000 gals
TIER 4
> 45,001 gals

CLOSED MEETING AFFIDAVIT

STATE OF UTAH)
:ss
COUNTY OF SALT LAKE)

Having first been duly sworn, comes now _____, who deposes, states and affirms as follows:

1. I am a duly elected or appointed member of the Taylorsville-Bennion Improvement District (the District)

2. A meeting of the District Board was held on November 20, 2024

3. I presided over the District Board meeting

4. During the course of the meeting, upon the affirmative vote of at least two-thirds of the Trustees, a quorum being present, the meeting was closed for the sole purpose of discussing:

(Please check the appropriate box(es))

☐ The character, professional competence, or physical or mental health of one or more individuals; or

☐ The deployment of security personnel, devices or systems.

Further Affiant sayeth not.

_____
Signature

SUBSCRIBED AND SWORN to before me this _____ day of _____, 2024.

_____
Notary Public

Resolution of the Board of Trustees

RESOLUTION # 24-14

ADOPTION OF THE RATE AND FEE SCHEDULE FOR 2025

WHEREAS, the District has held a public hearing on November 20, 2024, after reasonable and advance notice, for purposes of inviting and encouraging discussion and public comment on the proposed changes to the District's Rate and Fee Schedule;

NOW THEREFORE, BE IT RESOLVED, by the Board of Trustees:

1. The Rate and Fee Schedule, as attached, is formally adopted and approved.
2. The approved rates and fees shall take effect January 1, 2025.

PASSED, APPROVED AND ADOPTED this 20th day of Nov., 2024.

Don Russell, Board Chair

Mark Chalk, District Clerk

Resolution of the Board of Trustees

RESOLUTION # 24-15

WATER CONSERVATION PLAN UPDATE

WHEREAS, pursuant to §73-10-32, UCA (the "Act"), Taylorsville-Bennion Improvement District (the District) prepared a Water Conservation Plan in 1999, prepared updates to its plan every five years as required, and has now prepared an update to its Water Conservation Plan; and

WHEREAS, the District has established in its Water Conservation Plan a conservation goal to reduce water use within its service area by 25% by 2025; and

WHEREAS, the District has established in its Water Conservation Plan a new conservation goal to obtain a 5-year running average of water consumption of 171 gpcd or less by the year 2029; and

WHEREAS, the Water Conservation Plan identifies existing and proposed water conservation measures and programs needed to continue making progress towards achieving these goals; and

WHEREAS, pursuant to the Act, the District has held a public hearing, after reasonable and advance notice, for purposes of inviting and encouraging discussion and public comment on the Water Conservation Plan.

NOW THEREFORE, BE IT RESOLVED, by the Board of Trustees:

1. The update to the District's Water Conservation Plan is formally approved.
2. Taylorsville-Bennion has met the requirements of the Act in its preparation and update of the Water Conservation Plan.
3. The General Manager is authorized and directed to cause a copy of the Water Conservation Plan to be filed with the Utah Division of Water Resources and with all other persons or entities deemed appropriate.

PASSED, APPROVED AND ADOPTED this 20th day of Nov., 2024.

Don Russell

Don Russell, Board Chair

Mark Chalk

Mark Chalk, District Clerk