



Tracy Slagle
City Administrator

July 8, 2019

City of Bolivar
345 S Main Ave
Bolivar, MO 65613

Subject: Review of Liberty Utilities' Appraisal of the Water and Sewer Systems

Dear Ms. Slagle:

We appreciate the opportunity to serve the City of Bolivar (the City) and provide a review of the Water Delivery and Wastewater Systems Appraisal prepared by Dinan Real Estate Services, Inc. (Dinan) and dated March 25, 2019 (the Appraisal). We are pleased to present our findings in this letter. . Based on our review of the Appraisal, available work papers, and financial data of the City, we believe the Appraisal underestimates the current value of Bolivar's water and sewer systems.

Cost Approach

Dinan's estimate of the cost of the system includes their analysis of the value of land and improvements and an analysis of the value of the water and wastewater systems conducted by Flinn Engineering. We have no reason to believe Dinan's assessment of the value of land and improvements is inaccurate, but we believe Flinn underestimates the value of the system.

When escalating the original cost of systems assets to 2019 replacement value, Flinn used the average increase in CPI-All Urban Consumers¹ as published by the Bureau of Labor Statistics. While this measure is a reasonable indicator of general increases in living expenses, it is less accurate when estimating increases in construction and engineering costs. A better, industry accepted measure is the Construction Cost Index (CCI) published by the Engineering News Record². When applying CCI, the 2019 non-depreciated replacement value of the Bolivar Water and Sewer systems are approximately \$50.4 million compared to Flinn's CPI-based estimate of \$43.0 million. After depreciating each asset on the book schedule, we estimate that the correct value of the assets Flinn analyzed is approximately 7.4% higher.

It is our understanding that there may be a number of significant assets that are not accounted for in the asset list used by Flinn to estimate the value of the system. The asset list is only current as of 12/31/17 and does not include any assets placed in service and capitalized during 2018. Additionally, there are many items used to upgrade and improve system facilities that have not been included. The asset list provided to Raftelis, and matching the list provided to Flinn, notes that five wells, three towers, and nine lift stations are missing. Other documents reference upgrades to facilities that are also not counted. For example, between 1995 and 2013, Bolivar installed backup generators at four out of five wells and rebuilt or replaced pumps and motors at all five, none of which are included in the asset list.

Finally, 55% of Bolivar's water and sewer assets are fully depreciated on the City's books but remain used and useful in providing water and sewer service. Many of these items may have been recapitalized and included elsewhere on the list, but many may still be unimproved and in use. In fact, Flinn's report states that "although some of the assets are fully depreciated, they are still in operation and could continue to stay in operation well beyond the depreciation period." For example, transmission and distribution mains are often

¹ Measure of price changes in all items less food and energy.

² Measures change in price of labor, steel, cement, and lumber.

useful far longer than the 50-year schedule they are currently depreciated on. A scenario in which the water and sewer system is only 3% less depreciated could add nearly \$1 million to its value. As shown in the table below, the impact of all of these items on the value of the system could be significant.

	<u>Original</u> <u>Appraisal</u>	<u>Raftelis CCI</u> <u>Adjustment</u>	<u>Raftelis 3%</u> <u>Adjustment</u>
1 Contributory Value of Land:	\$ 1,325,000	\$ 1,325,000	\$ 1,325,000
2 Contributory Value of Improvements/Structures:	725,000	725,000	725,000
3 System Value:	16,992,729	18,250,866	19,216,442
4 Cost New Less Depreciation:	\$19,042,729	\$ 20,300,866	\$ 21,266,442
5 10% Entrepreneurial Profit:	1,904,273	2,030,087	2,126,644
6 Total:	\$20,947,002	\$ 22,330,952	\$ 23,393,086
7 Rounded to:	\$21,000,000	\$ 22,400,000	\$ 23,400,000

Sales Comparison Approach

When searching for sales of utilities to which we can compare the potential sale of the Bolivar system, it is important to find examples similar in number of customers, levels of service, and facilities. Dinan selected 12 examples of sales of water utilities and 7 examples of sales of sewer utilities, but several of these sales are not comparable to Bolivar.

Size of the utility is an important factor to consider. In recognition of this fact, Dinan narrowed their list of sales to those systems serving greater than 850 and less than 9,000 customers. However, we believe this range inappropriately includes utilities too small to reasonably be considered comparable and propose an alternative lower bound of 1,000 customers. It is important to note that Dinan's inclusion of sales of smaller utilities, which have a lower price per customer, contributes to Dinan's low estimate for Bolivar's system.

Additionally, when evaluating a reasonable price per customer, Dinan selected a value lower than the average of their list of comparable sales. We suggest basing the sales price estimate directly on the mean price per customer of our selected comparable sales.

After conducting a search of sales of similarly sized utilities, we believe that Dinan included many of the most comparable. We suggest removing the smallest sales from the calculation of the mean price per customer used to value Bolivar's system. For sewer, Godfrey, IL and Manteno, IL have a suitable number of customers and each include wastewater treatment facilities. The City of Arnold has only a collection system, but we include this sale as an example of the value of a large sewer system in the state of Missouri. We elected to exclude the Glenview sewer utility since it not only is smaller than the Bolivar system its assets only included wastewater collection and no treatment facilities. None of the other comparable sales listed by Dinan include treatment assets.

There are fewer strong comparable sales of water systems. We include Ozark Shores and Farmington, IL because they are among the largest water utilities recently sold, even though they are smaller than ideal. Glenview, IL is an excellent comparable due to its size and similar facilities. We have also included Lake Station, IN for similar reasons.

Comparable Sewer Utility Sales

Rank	Utility	Year of Sale	Sale Price	Customers	Price/Customer
1	Arnold, MO	2015	\$ 27,200,000	7,500	\$ 3,627
2	Godfrey, IL	2018	13,550,000	6,250	2,168
3	Manteno, IL	2018	25,000,000	4,300	5,814
4	Glenview, IL	2015	3,410,000	2,494	1,367
5	Sundale, IL	2018	500,000	1,410	355
6	Lawson, MO	2018	1,356,000	904	1,500
7	Fisher, IL	2018	3,100,000	890	3,483
Maximum of Top 3 Ranked Sales:					\$ 5,814
Minimum of Top 3 Ranked Sales:					2,168
Mean of Top 3 Ranked Sales:					3,870
Bolivar Sewer Utility Estimate:					17,412,930

Comparable Water Utility Sales

Rank	Utility	Year of Sale	Sale Price	Customers	Price/Customer
1	Glenview, IL	2015	\$ 18,590,000	4,724	\$ 3,935
2	Lake Station, IN	Pending	20,680,000	3,443	6,006
3	Ozark Shores Water Company, MO	2015	5,252,761	1,869	2,810
4	Farmington, IL	2018	3,750,000	1,063	3,528
5	Lawson, MO	2018	2,619,000	970	2,700
6	Fisher, IL	2018	3,700,000	890	4,157
7	Sundale, IL	2018	1,500,000	550	2,727
8	Forest Homes, IL	2017	900,000	525	1,714
9	Glasford, IL	Pending	800,000	492	1,626
10	Wardsville, MO	2017	795,428	480	1,657
11	Sadoris, IL	2017	240,000	384	625
12	Ransom, IL	2016	175,000	170	1,029
13	Woodland Manor, MO	2016	200,000	164	1,220
Maximum of Top 4 Ranked Sales:					\$ 6,006
Minimum of Top 4 Ranked Sales:					2,810
Mean of Top 4 Ranked Sales:					4,070
Bolivar Water Utility Estimate:					18,314,811
Bolivar Water and Sewer Total:					35,727,741
Rounded Total:					35,800,000

Conclusion

Overall, we believe that the Appraisal by Dinan Real Estate Services significantly undervalues the Bolivar water and sewer systems. Their estimate of value under the cost approach underestimates the value of all assets they considered and does not recognize the value of significant assets not included in the City's books. Additionally, the use of unsuitable sales, especially of smaller systems without treatment facilities, results in a lower price than Bolivar should expect under the sales comparison approach. A fair appraisal would correct each of these issues.

	<u>Dinan</u>	<u>Raftelis</u>
	<u>Estimate</u>	<u>Estimate</u>
1 Cost Approach	\$ 21,000,000	\$ 23,400,000
2 Sales Approach	18,900,000	35,800,000
3 Reconciliation	\$ 20,000,000	\$ 29,600,000

When considering the impact of all of the adjustments discussed above and evenly weighting the estimates for the Bolivar system under each approach, we believe a reasonable price could be as high as **\$29.6 million**.

Sincerely,

RAFTELIS FINANCIAL CONSULTANTS, INC.



William G. Stannard, PE
Chairman of the Board