

VALUATION REPORT

CITY OF LOW MOOR (IOWA) WATER AND WASTEWATER SYSTEMS

PREPARED FOR

MR. THOMAS L. GOLDENSOPH

MAYOR, CITY OF LOW MOOR

P.O. Box 130

LOW MOOR, IOWA 52757-0130





Real Estate Appraisers & Consultants
313 N. Chicago Street, Suite 101 Joliet, Illinois 60432
815/726-1455 Fax 815/846-3810



Joseph E. Batis, MAI, AI-GRS, R/W-AC

August 23, 2021

Mr. Thomas L. Goldensoph
Mayor, City of Low Moor
P.O. Box 130
Low Moor, Iowa 52757-0130

Re: **City of Low Moor, Iowa**
Water and Wastewater Assets Appraisal

Dear Mayor Goldensoph:

In accordance with your request, I have made a physical inspection on April 29, 2021 of the facilities and real estate that comprise the City of Low Moor water and wastewater systems, located in Low Moor, Iowa.¹ The water and wastewater systems (referred to herein as "the subject properties") are owned by the City of Low Moor and are located in Clinton County, Iowa. The subject property water system serves 126 customers and the subject property wastewater system serves 128 customers. The purpose of the inspection was to arrive at opinions of market value of the water and wastewater systems, each individually and independent of the other, as of the date of my inspection of the property.

This Appraisal Report is prepared in conformance with Standards Rule 2-2(a) of the 2020-2021 Edition of the *Uniform Standards of Professional Appraisal Practice* (USPAP). In addition to being prepared in compliance with USPAP, this appraisal has been prepared in accordance with the **Code of Ethics** and **Standards of Professional Practice** of the Appraisal Institute.

¹ Throughout the attached appraisal report, any reference to the appraiser's "inspection", "inspection of the subject properties", "inspection of the subject water and wastewater systems", etc., refers to the appraiser's customary task of viewing the subject property for purposes of observing the condition, layout, design, and utility of the real property (land and building), as is typical in the appraisal professional and in the framework of completing the appraisal process. The reference to the term "inspection" in the context of the appraiser's work should not be interpreted to suggest the appraiser has any expertise and/or qualifications in the assessment of the condition and functionality of any mechanical and non-mechanical components of the subject property water and wastewater systems. The appraiser refers the client and intended users of the attached appraisal report to the engineer's report for an assessment of the water and wastewater systems' infrastructure components. The appraiser signing the attached appraisal report is not qualified to independently detect and assess the condition and functionality of the water and wastewater systems' infrastructure components. However, the appraiser signing the attached appraisal report assumes that the water and wastewater systems' components (including the wells, pumps, treatment plants, and all related facilities) are in proper working order and have been maintained adequately to meet all applicable codes and regulatory requirements.

Mayor Goldensoph
City of Low Moor
August 23, 2021
Page 2

In completing my analysis of the subject property water system, I relied on a report prepared by Origin Design, dated July 15, 2021. The Origin Design report is attached to this appraisal report.

Based upon my analysis of the subject property system and taking into consideration the independent report prepared by Origin Design, it is my opinion the market value of the City of Low Moor utility systems is as follows:

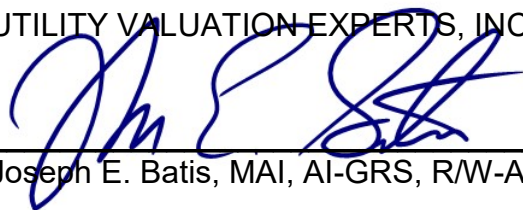
Market Value of Water Delivery System	Market Value of Wastewater Collection System
\$640,000	\$865,000

I certify that I personally have no undisclosed interest, either present or contemplated, in the real estate described herein as the subject property; furthermore, neither the procurement of this appraisal assignment nor the negotiated compensation was contingent upon a predetermined conclusion of value, a value estimate which advocates the client's position, or the occurrence of any subsequent event.

On behalf of UTILITY VALUATION EXPERTS, INC., I appreciate the opportunity to prepare this appraisal report for you and the City of Low Moor. Please feel free to contact the undersigned should you have any questions regarding the assignment.

Sincerely,

UTILITY VALUATION EXPERTS, INC.



Joseph E. Batis, MAI, AI-GRS, R/W-AC

General Certification Lic. #553.000493 (IL; Expires 09/23)
General Certification Lic. #2016044083 (MO; Expires 06/22)
General Certification Lic. #CG03684 (IA; Expires 06/22)
General Certification Lic. #5660 (TN; Expires 06/23)
General Certification Lic. #4001017857 (VA; Expires 06/23)
General Certification Lic. #TX 131049 G (TX; Expires 11/22)
General Certification Lic. #A8416 (NC; Expires 06/22)
General Certification Lic. #CGA-1027103 (AZ ; Expires 07/23)

TABLE OF CONTENTS

Letter of Transmittal

Table of Contents

Summary of Salient Facts	1
Identification of the Subject Property.....	2
Purpose of the Assignment and Type of Value	3
Relevant Assignment Dates	3
Property Rights Appraised	4
Legal Description	4
Exposure Time and Marketing Time.....	4
Intended Use and Intended User of the Appraisal.....	5
History of the Subject Property.....	5
Scope of Work.....	6
Extraordinary Assumptions	7
General Assumptions and Limiting Conditions.....	10
Hypothetical Conditions.....	10
Description of the Area.....	11
Description of the Subject Property	14
Photographs of the Subject Property.....	15
Highest and Best Use Analysis	18
Appraisal Process	19
Cost Approach	22
Sales Comparison Approach.....	25
Income Capitalization Approach.....	35
Final Reconciliation	43
Statement of Certification	44

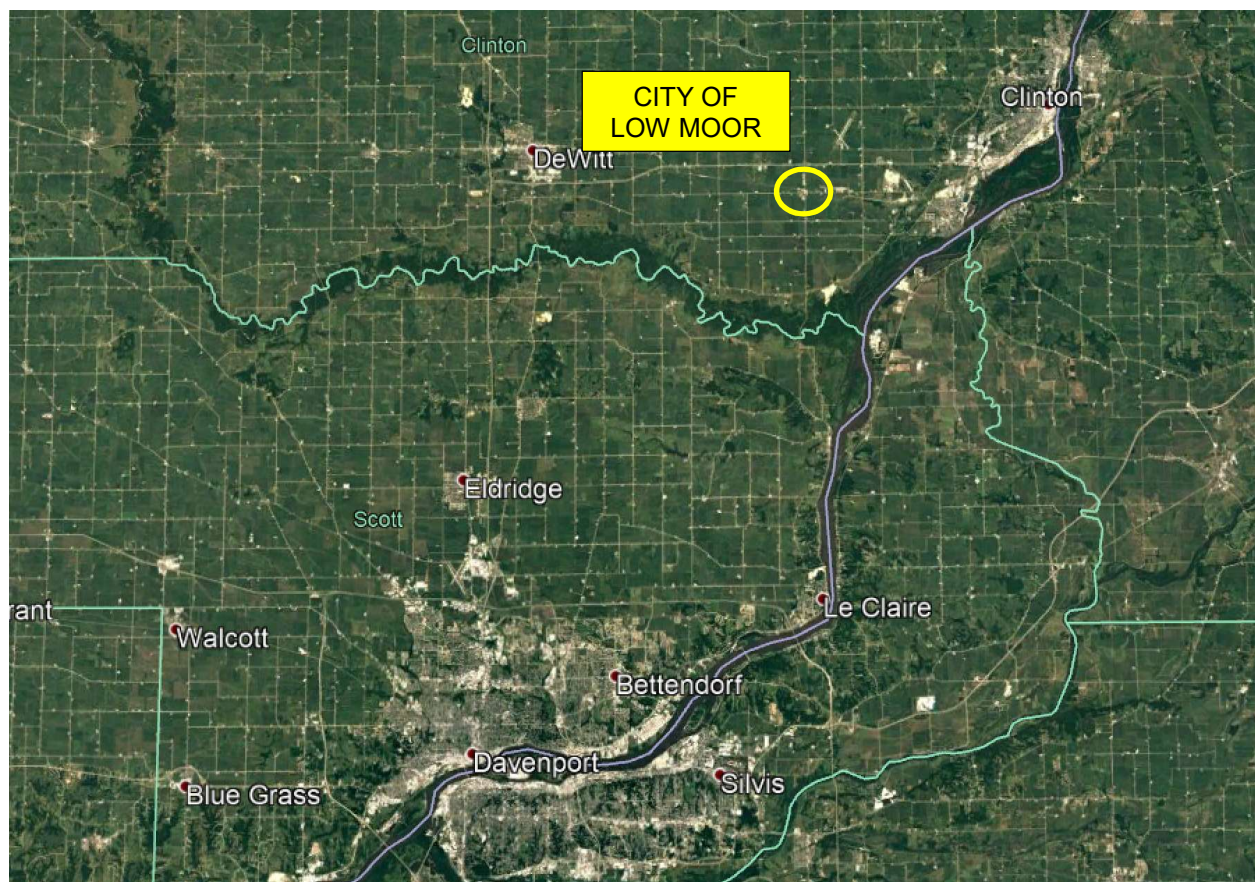
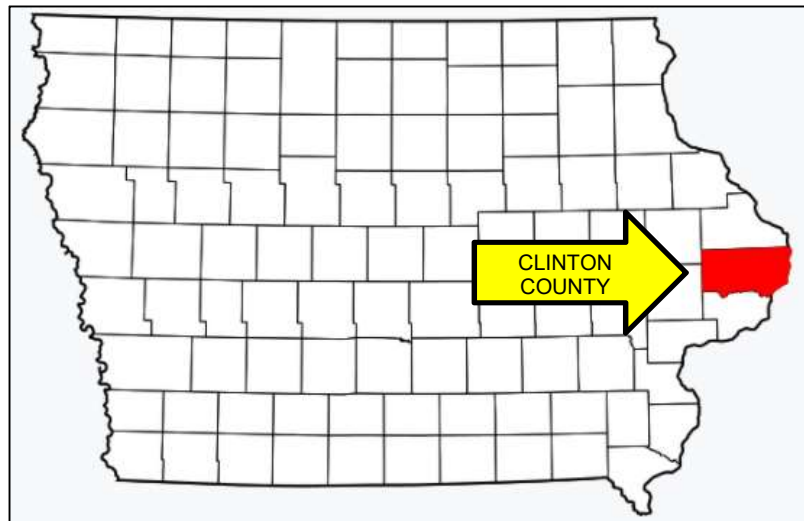
ADDENDA

Summary of Salient Facts

Property Type:	City of Low Moor utility systems Water treatment and delivery system Wastewater collection and treatment system Low Moor, Iowa
Facilities:	A water treatment and delivery system with approximately 126 water customers and a wastewater collection and treatment system with 128 customers. Please refer to the attached report prepared by Origin Design, dated July 15, 2021, for a list of the infrastructure, system assets, and facilities.
Date of Inspection:	April 29, 2021
Date of Value:	April 29, 2021
Date of Report:	August 23, 2021
Type of Value:	Market Value
Property Rights:	Fee Simple Estate
Final Opinions of Market Value:	
Water System:	\$640,000
Wastewater System:	\$865,000

Identification of the Subject Property

The real estate identified herein as the subject property consists of the water and wastewater systems owned and operated by the City of Low Moor (Iowa). The water system serves 126 water customers and the wastewater system includes 128 customers. The location of the subject property water and wastewater system places them in Clinton County which is located in eastern Iowa.



Purpose of the Assignment and Type of Value

The purpose of this appraisal assignment is to arrive at opinions of market value for (1) the City of Low Moor water system, and (2) the City of Low Moor wastewater system. Market value is defined as:

The most probable price, as of a specified date, in cash, or in terms equivalent to cash, or in other precisely revealed terms, for which the specified property rights should sell after reasonable exposure in a competitive market under all conditions requisite to a fair sale, with the buyer and seller each acting prudently, knowledgeably, and for self-interest, and assuming that neither is under undue duress.²

Implicit in this definition is the consummation of a sale as of a specified date and the passing of title from seller to buyer under conditions whereby:

1. Buyer and seller are typically motivated;
2. Both parties are well informed or well advised, and acting in what they consider their best interest;
3. A reasonable time is allowed for exposure in the open market;
4. Payment is made in terms of cash in U.S. dollars or in terms of financial arrangements comparable thereto; and
5. The price represents the normal consideration for the property sold unaffected by special or creative financing or sales concessions granted by anyone associated with the sale.

Relevant Assignment Dates

Date of physical inspection of the property:	April 29, 2021
Effective date of value:	April 29, 2021
Date of report:	August 23, 2021

² *The Appraisal of Real Estate*, 15th Edition, (Chicago, Illinois: Appraisal Institute, 2020), p. 48

Property Rights Appraised

The property rights included in the subject property appraisal report include some easement rights. In order to determine the contributory value of the easement rights, it is necessary to analyze the fee simple estate. The fee simple estate is defined as:

Absolute ownership unencumbered by any other interest or estate subject only to the limitations imposed by the governmental powers of taxation, eminent domain, police power, and escheat.³

A fee simple estate implies absolute ownership unencumbered by any other interest or estate.

Legal Description

Legal descriptions for all of the real property rights was not available for this assignment. The subject property water system was identified by various documents and resources provided by the client.

Exposure Time and Marketing Time

The estimated marketing time of a property implicitly assumes the property would be marketed in a manner typical in the market for that particular type of property, including utilization of the normal channels of exposure; also, implicit is the assumption that the asking price would be reasonably close to the market value of the property; and, the sale terms would conform to the market value definition included herein.

Based upon the conditions which prevailed in the local market effective April 29, 2021, I have concluded a reasonable market time for the subject property water and wastewater systems is 12 to 24 months and the exposure time for the subject property systems is also estimated to be from 12 to 24 months.

³ *The Appraisal of Real Estate*, 15th Edition, (Chicago, Illinois: Appraisal Institute, 2020), p. 60.

Intended Use and Intended User of the Appraisal

The intended use of this appraisal report is to assist the client (City of Low Moor) with the disposition of the City's water and wastewater systems. The intended user of this appraisal report is the client, Iowa American Water, and the Iowa Utilities Board.

History of the Subject Property

Pursuant to Standards Rule 1-5 of USPAP, I am required to "consider and analyze any current Agreement of Sale, option, or listing of the property being appraised". I must further consider and analyze any sales of the subject properties that have occurred within the last three years. To the best of my knowledge, there is not a pending purchase agreement pertaining to the subject property, nor have there been any contracts within the last five years.

Scope of Work

The client requested an opinion of market value for the City of Low Moor water and wastewater systems. After receiving and reviewing numerous pertinent documents from the client pertaining to the subject property water and wastewater systems, I inspected the subject properties and began collecting market data for this assignment.

I applied the cost approach in arriving at an opinion of value for the two subject property systems. I then reviewed limited market data pertaining to sales of other utility systems in order to apply the sales comparison approach.

Finally, I did not apply the income capitalization approach to value. Due to the characteristics of the subject properties and the lack of available market data to support the income, expenses, and rates of capitalization for this type of property, the application of the income capitalization approach would not result in a meaningful or credible opinion.

For purposes of this appraisal report, I am relying, in part, on a report prepared by Origin Design, dated July 15, 2021, in which Origin Design arrives at an opinion of the depreciation cost new of the infrastructure components of the City of Low Moor water and wastewater systems. I have reviewed the Origin Design report and relied on in forming my opinions.

The Origin Design report does not give any value consideration to the land/easement rights that are part of the subject property water and wastewater systems. Therefore, I have arrived at an independent opinion of the market value of the aforementioned easements that comprise the subject property water and wastewater systems.

I prepared this appraisal report in compliance with the applicable standards as set forth in the 2020-2021 Edition of the Uniform Standards of Professional Appraisal Practice (USPAP).

Extraordinary Assumptions

The 2020-2021 Edition of the *Uniform Standards of Professional Appraisal Practice* (USPAP) defines an extraordinary assumption as follows:

An assignment-specific assumption as of the effective date regarding uncertain information used in an analysis which, if found to be false, could alter the appraiser's opinions and conclusions.

This appraisal report is prepared subject to the following Extraordinary Assumptions.

INFORMATION PROVIDED BY THE CLIENT

I have been provided information for this assignment by the client (City of Low Moor). The information is assumed to be correct, accurate, and complete. I reserve the right to revise all opinions and conclusions presented herein upon receiving or becoming aware of any information that is inconsistent with and/or contradicts the information provided by the client.

THE ORIGIN DESIGN ENGINEERING REPORT

This appraisal report is based, in part, on information contained in the Origin Design report (dated July 15, 2021). I reserve the right to revise all opinions and conclusions presented herein upon receiving or becoming aware of any information that is inconsistent with and/or contradicts the information, analysis, opinions, and conclusions pertaining to the depreciated cost data presented in the Origin Design report.

CUSTOMER COUNTS

According to information provided by Low Moor officials for this valuation assignment, the subject property water system has 126 customers and the subject property wastewater system has 128 customers. The customer count information provided is assumed to be correct. I reserve the right to revise all opinions and conclusions presented herein upon receiving or becoming aware of any information that is inconsistent with and/or contradicts the customer count information provided for this assignment.

Extraordinary Assumptions

(Continued)

ASSIGNMENT ASSUMPTIONS REGARDING REAL PROPERTY RIGHTS

This assets that are the subject of this appraisal assignment include the real property rights generally associated with water and wastewater utility assignments. Typically the client or owner deliverables include information with sufficient detail to clearly identify all of the real property rights. The type of information varies from project to project, but might include legal descriptions, plat maps, parcel maps, tax parcel numbers, surveys, etc. In the subject case, there is not an adequate amount of data to accurately identify all of the real property interests.

As an alternative, I have developed an opinion of the contributory value of the land rights (*a combination of presumed fee parcels and permanent easement rights*) based upon the range of contributory values of real property rights for other projects I have appraised and that have sold.

Based upon my analysis of the range of land values typically associated with and contributing to the comparable-utility-system sale prices, it is my opinion the contributory value of the land rights reasonably expected to be included with and part of the proposed conveyance to Iowa American Water is \$100,000 (One Hundred Thousand Dollars). This value opinion is based upon ratio of land values to system prices for other water and wastewater systems that have sold in recent years in various states.

This appraisal assumes the conveyance of the subject property water and wastewater systems will include some parcels in fee and some permanent easements, although most of the mains are assumed to be located in public rights-of-way. The client and intended users of this assignment are advised that if this assumption is found to be false, the assignment results may be affected.

Due to proprietary database issues, licensing restrictions pertaining to data subscription services, privileged information from clients pertaining to other projects, and confidentiality issues in compliance with USPAP, UVE retains the supporting market data in its work file. UVE will make a reasonable effort to accommodate the intended users of this report if additional information, support, or market evidence is requested.

Extraordinary Assumptions

(Continued)

THE TERM "INSPECTION"

Throughout this appraisal report, any reference to the appraiser's "inspection", "subject property inspection", "inspection of the subject property", "inspection of the subject property water and wastewater systems", etc., refers to the appraiser's customary task of viewing the subject property for purposes of observing the condition, layout, design, and utility of the real property (land and building), as is typical in the appraisal professional and in the framework of completing the appraisal process. The reference to the term "inspection" in the context of the appraiser's work should not be interpreted to suggest the appraiser has any expertise and/or qualifications in the assessment of the condition and functionality of any mechanical and non-mechanical components of the subject property water and wastewater systems. The appraiser refers the client and intended/authorized users of this appraisal report to the Origin Design report for an assessment of the systems' components. The real estate appraiser signing this appraisal report is not qualified to independently detect and assess the condition and functionality of the water and wastewater systems' infrastructure components. However, the appraiser signing this appraisal report assumes that the water and wastewater systems' components are in proper working order and have been maintained adequately to meet all applicable codes and regulatory requirements. *The intended users of this appraisal assignment are advised that if this assumption is found to be false, the assignment results could be impacted*

General Assumptions and Limiting Conditions

ENVIRONMENTAL ISSUES

This report has not taken into consideration the possibility of the existence of any environmental hazards or substances, including but not limited to asbestos, PCB transformers, or other toxic, hazardous, or contaminated substances and/or underground storage tanks (hazardous material), or the cost of encapsulation or removal thereof. Should the client have concern over the existence of such substances or any other hazardous items on the subject properties, the appraisers consider it imperative for the client to retain the services of a qualified, independent engineer or contractor to determine the existence and extent of any hazardous materials, as well as the cost associated with any required or desirable treatment or removal thereof. Under such circumstances, the valuation stated herein would be void.

SOILS AND SUBSOILS

This appraisal report gives no consideration to the potential impact on the subject property regarding any archeological findings; in addition, the cost of preparing any archeological studies/reports for the subject property is not incorporated into this valuation. It is assumed for purposes of this appraisal that there are no hidden or unapparent conditions of the property or subsoils that render the subject property more or less valuable. No responsibility is assumed for such conditions or for arranging for engineering studies that may be required to discover them. It is also assumed that there is full compliance with all applicable federal, state, and local environmental regulations and laws unless noncompliance is stated, defined, and considered in the appraisal report.

Hypothetical Conditions

The 2020-2021 Edition of the *Uniform Standards of Professional Appraisal Practice* (USPAP) defines a hypothetical condition as follows:

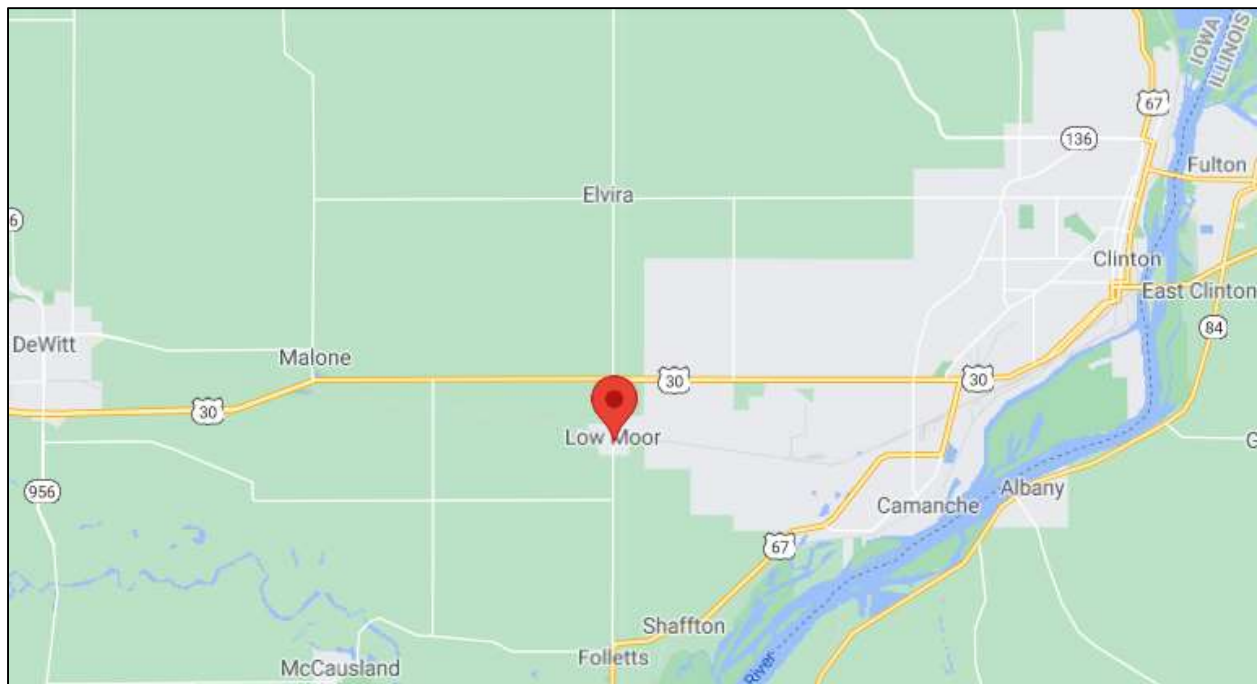
A condition, directly related to a specific assignment, which is contrary to what is known by the appraiser to exist on the effective date of the assignment results, but is used for the purpose of analysis.

This appraisal did not include any hypothetical conditions.

Description of the Area

The City of Low Moor is a relatively small community in Clinton County in the northeast part of Iowa. Clinton County has a population of approximately 47,355 according to the 2021 census. The City of Low Moor is located approximately 10 miles southwest of the City of Clinton, the county seat. The county seat (City of Clinton) has a population of approximately 25,029. Demographic information pertaining to Clinton County is summarized on the following page followed by demographic data for the City of Low Moor.

Crossing the county are U.S. Routes 30, 61, and 67 as well as Iowa Route 136. The surrounding counties include Jackson County to the north, Carroll County (Illinois) to the northeast, Whiteside County (Illinois) to the east, Rock Island County (Illinois) to the east, Scott County to the south, Cedar County to the southwest, and Jones County to the northwest.



Description of the Area

(Continued)

CLINTON COUNTY

POPULATION		HOUSING	
Total Population	47,355 (100%)	Total HU (Housing Units)	22,026 (100%)
Population in Households	46,721 (98.7%)	Owner Occupied HU	14,328 (65.1%)
Population in Families	36,699 (77.5%)	Renter Occupied HU	5,534 (25.1%)
Population in Group Quarters ¹	634 (1.3%)	Vacant Housing Units	2,164 (9.8%)
Population Density	68	Median Home Value	\$133,527
Diversity Index ²	21	Average Home Value	\$167,881
		Housing Affordability Index ³	187
INCOME		HOUSEHOLDS	
Median Household Income	\$52,326	Total Households	19,862
Average Household Income	\$67,305	Average Household Size	2.35
% of Income for Mortgage ⁴	11%	Family Households	12,700
Per Capita Income	\$28,253	Average Family Size	3
Wealth Index ⁵	63		
GROWTH RATE / YEAR		2010-2021	2021-2026
Population		-0.32%	-0.48%
Households		-0.16%	-0.41%
Families		-0.34%	-0.51%
Median Household Income			1.33%
Per Capita Income			1.98%
Owner Occupied HU			-0.04%
Variable Description	Rank	Percentile	
Total Population	# 12	89th	
Population Density	# 17	84th	
Median Household Income	# 81	19th	
Housing Affordability Index	# 28	28th	
Per Capita Income	# 80	20th	
Diversity Index	# 38	62nd	

Description of the Area

(Continued)

CITY OF LOW MOOR

POPULATION		HOUSING	
Total Population	282 (100%)	Total HU (Housing Units)	124 (100%)
Population in Households	282 (100.0%)	Owner Occupied HU	97 (78.2%)
Population in Families	216 (76.6%)	Renter Occupied HU	19 (15.3%)
Population in Group Quarters ¹	0	Vacant Housing Units	8 (6.5%)
Population Density	607	Median Home Value	\$135,135
Diversity Index ²	5	Average Home Value	\$155,729
		Housing Affordability Index ³	249
INCOME		HOUSEHOLDS	
Median Household Income	\$59,457	Total Households	116
Average Household Income	\$67,366	Average Household Size	2.43
% of Income for Mortgage ⁴	10%	Family Households	80
Per Capita Income	\$27,522	Average Family Size	3
Wealth Index ⁵	58		
GROWTH RATE / YEAR		2010-2021	2021-2026
Population		-0.19%	-0.5%
Households		-0.08%	-0.52%
Families		0.34%	-0.51%
Median Household Income			1.65%
Per Capita Income			2.2%
Owner Occupied HU			-0.21%
Variable Description	Rank	Percentile	
Total Population	# 610	40th	
Population Density	# 554	45th	
Median Household Income	# 523	48th	
Housing Affordability Index	# 638	63rd	
Per Capita Income	# 765	24th	
Diversity Index	# 910	10th	

Description of the Subject Property

The subject properties consist of the water and wastewater systems located in Low Moor, Iowa. The systems are owned and operated by the City of Low Moor. The following is a summary of the two systems.

Water System

- Well building (city hall)
- Includes one elevated water storage tank (30k000 gallons)
- Two wells
- Chemical feed system for treatment (at city hall building)
- Approximately 10,000 feet of mains (primarily 4" cast iron)
- 125 meters and services

Wastewater System

- Wastewater property (lagoon for former treatment)
- Pumping station/lift station with a master meter
- 1,304 feet of 12" VCP mains
- 7,084 feet of 8" VCP mains
- 4,785 feet of 4" laterals
- 27 manholes
- The wastewater is pumped to Clinton and treated by Clinton. Prior to 2010, wastewater treatment was done at the lagoon site. The cost to have Clinton handle the treatment of the wastewater is approximately \$2,375 per month. Wastewater mains were installed in 1964.

For addition information, please refer to the report prepared by Origin Design (attached to this report).

Photographs of the Subject Property

City Hall Building



Chemical Feed System



Photographs of the Subject Property
(Continued)

Elevated Water Tank



Photographs of the Subject Property
(Continued)



Highest and Best Use Analysis

The beginning point in the valuation of any real estate is the determination of the property's highest and best use. Highest and Best Use is defined in the 15th Edition of *The Appraisal of Real Estate* as follows:

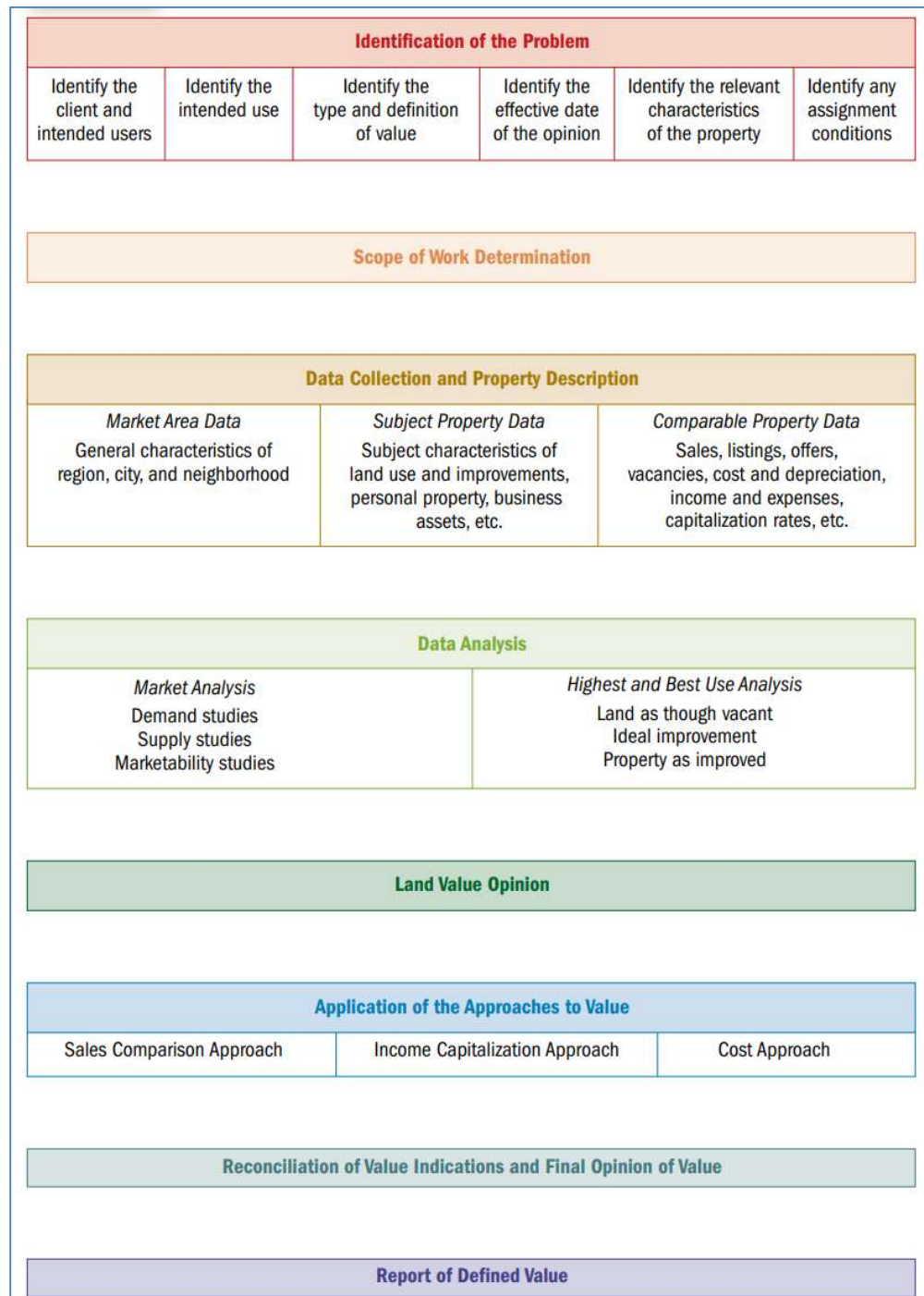
The reasonably probable and legal use of vacant land or an improved property that is physically possible, appropriately supported, and financially feasible and that results in the highest value.

The 15th Edition states that there are four implicit steps as part of the analysis that are applied in the following order: (1) Legally Permissible, (2) Physically Possible, (3) Financially Feasible, and (4) Maximally Productive.

After considering the components of the subject property's infrastructure, and taking into account the analysis and report prepared by Origin Design, it is my opinion the highest and best use of the subject property as of April 29, 2021, is the present use as for the Low Moor water and wastewater systems. Furthermore, it is my opinion the highest and best use of the systems' land, as vacant, is also for its present use as part of a utility infrastructure system.

Appraisal Process

In arriving at opinions of value for the two subject properties, I have followed an orderly set of steps that has led me to a final conclusion of market value. This procedure is known as the "Appraisal Process" and is summarized in the chart below.



Source: The Appraisal of Real Estate, 15th Ed.,
 Published by the *Appraisal Institute*, 2020; P. 31.

Appraisal Process

(Continued)

Normally included within the steps of this process are the three classic approaches to a value estimate: the Cost Approach, the Sales Comparison Approach and the Income Capitalization Approach. Each of these approaches tends to independently serve as a guide to the valuation of the property with varying degrees of validity.

The Cost Approach gives recognition to the fact that buyers have available to them the alternative of constructing a new building when contemplating the purchase of an existing building. Thus, the cost to reproduce the property is utilized as a measure of value. However, most properties experience varying degrees of accrued depreciation which result from physical depreciation, functional obsolescence and external obsolescence. Any of these three types of depreciation (or a combination thereof) from which the property suffers must be deducted from the estimated cost new of the improvements. The difficulty, then, in applying the Cost Approach is the ability of the appraiser to accurately extract or estimate the amount of depreciation the property being appraised suffers.

The Sales Comparison Approach is based upon the theory that the value of a property is determined by the actions of buyers and sellers in the market for comparable types of property. Recognizing no two properties are identical and that properties sell at different times under different market conditions, the application of the Sales Comparison Approach requires the appraiser to consider any differences between a respective sale and the subject property which may affect value. After the relevant differences are adjusted for, an indicated range of value results.

The theory of the Sales Comparison Approach also realizes that buyers and sellers often have motivations that are unknown to the appraiser and difficult to quantify in the adjustment process. Therefore, while this approach has certain strengths and foundation, it must be carefully applied in order to lead the appraiser to a realistic opinion of value.

And lastly, the Income Capitalization Approach is typically given very much consideration in the appraisal process for income-producing properties. The Income Capitalization Approach gives recognition to the subject property's capabilities of producing an income and that investors in the real estate market will pay a specific amount of cash, or its equivalency, to receive that income, as well as the rights of ownership of the property at the end of the income period.

Appraisal Process

(Continued)

The Income Capitalization Approach is applied based upon market-extracted information, most notably the income and expenses that prevail in the market for the type of property being appraised. After an appropriate estimate of income is arrived at, the income is converted to an estimate of value via a capitalization rate. The capitalization rate is also either extracted from the market or may be derived based upon a built-up method.

After the appraiser independently applies each approach to value, the three resultant value estimates are reconciled into an overall estimate of value. In the reconciliation process, the appraiser analyzes each approach with respect to its applicability to the property being appraised. Also considered in the reconciliation process is the strength and weakness of each approach with regards to supporting market data.

Regarding the valuation of the subject property, I have applied the Cost Approach and the Sales Comparison Approach. The Income Capitalization Approach was not applied due to the unavailability of the significant amount of market data pertaining to income and expenses that would be necessary to arrive at a credible conclusion.

Following this section is a more detailed explanation of the three approaches to value.

Cost Approach

The Cost Approach to Value is a technique in the appraisal process which recognizes that a prudent purchaser/investor of real estate may consider constructing a new building as an alternative to buying an existing property.

Although it holds true that a prudent purchaser would not pay more for a building than the cost of buying the land and constructing a new building which would offer similar utility, the estimated cost new of the property must be adjusted for items of depreciation which the property being appraised has suffered. Only then will the Cost Approach yield an indication of value which can be correlated with the other two approaches to arrive at the Market Value of the property.

The beginning point of the typical Cost Approach is to arrive at an estimate of the land value as vacant. The land value is arrived at by applying the Direct Comparison Approach utilizing vacant land sales from the market.

The next step is to estimate the cost new of the building. There are two primary types of cost: the Reproduction Cost and the Replacement Cost.

Reproduction Cost is defined as:

The cost of construction, at current prices, of an exact duplicate, or replica, using the same materials, construction standards, design, layout, and quality of workmanship, and embodying all of the deficiencies, superadequacies, and obsolescence of the subject building. ⁴

Replacement Cost is defined as:

The cost of construction, at current prices, of a building having utility equivalent to the building being appraised but built with modern materials and according to current standards, design, and layout. ⁵

If a property suffers any functional obsolescence, it is necessary to utilize the Reproduction Cost estimate. The measure of loss of value from the functional inadequacy (or superadequacy) would then be deducted as an item of depreciation.

⁴ *The Dictionary of Real Estate Appraisal*, Second Edition, (Chicago, Illinois: American Institute of Real Estate Appraisers, 1989), p. 254.

⁵ Ibid.

Cost Approach

(Continued)

After the cost of the property is estimated, all items of depreciation are measured and deducted from the cost to arrive at an estimate of the depreciated cost new of the improvements. The land value as vacant is then added to arrive at a total estimate of the property via the Cost Approach.

Thus, to accurately estimate the value of the property, the appraiser must:

- 1). Estimate the value of the land as vacant;
- 2). Estimate the cost new of the building;
- 3). Estimate the amount of all items of depreciation, if any;
- 4). Deduct the depreciation estimate from the cost new estimate; and
- 5). Add the estimated land value to the depreciated value of the improvements.

The starting point in the application of the Cost Approach is to arrive at an estimate of the subject property land as vacant. The land value for this assignment includes parcels in fee and the contributory value of the permanent easements for six parcels. The valuation of the fee values and the easement values is based upon the Sales Comparison theory which basically states that no one will pay more for a parcel of land than the cost of acquiring an equally suitable parcel.

Therefore, the real property rights for the land pertaining to the fee sites and permanent easements that are presumed to be affected by permanent easements is arrived at by measuring the actions of buyers and sellers in the market for comparable property. In addition, the contributory value of the presumed easement rights grantee's rights is arrived at based upon an analysis and comparison of rights transferred for other utility systems.

For purposes of this assignment, it is reasonable to assume the permanent easement rights are typical of other systems' easement rights, and that the owners of the underlying fee parcels are not restricted from using their respective parcels in accordance with the highest and best use of each parcel.

Based upon an analysis of other system rights, I have concluded the contributory value of the land rights for the fee values and the permanent easements (presumed for purposes of this appraisal) are a total of \$50,000.

Cost Approach

(Continued)

The Origin Design report concluded a RCNLD (Reproduction Cost New Less Depreciation) estimate for the subject property water and wastewater systems. The estimate by Origin Design included all assets of the respective subject property systems with the exception of the land rights/real property rights. The Origin Design report concluded a RCNLD estimate for the subject property water system of \$680,750 and a RCNLD estimate for the subject property wastewater system of \$932,417.

Adding the contributory value of the real property rights and the depreciated replacement cost estimates from the Origin Design report results in the following indicated value opinions via the Cost Approach:

SUBJECT PROPERTY WATER SYSTEM

Contributory Value of the fee values and easements:	\$ 25,000
Depreciated Value of the System Assets (real estate only):	<u>\$ 680,750</u>
Total:	\$ 705,750
Rounded to:	\$ 705,000

SUBJECT PROPERTY WASTEWATER SYSTEM

Contributory Value of the fee values and easements:	\$ 25,000
Depreciated Value of the System Assets (real estate only):	<u>\$ 932,417</u>
Total:	\$ 957,417
Rounded to:	\$ 960,000

Sales Comparison Approach

The Sales Comparison Approach is an approach to value which measures the actions and activity of buyers and sellers in the market and relates those actions to the property being appraised. Also referred to as the Market Approach, the underlying premise of this approach to value is that no prudent purchaser will pay more for a property than the cost of acquiring an equally suitable parcel. The fundamental concept of the Sales Comparison Approach is the Principle of Substitution, which is defined as:

A valuation principle that states that a prudent purchaser would pay no more for real property than the cost of acquiring an equally desirable substitute on the open market. The Principle of Substitution presumes that the purchaser will consider the alternatives available and will act rationally or prudently on the basis of the information about those alternatives, and that reasonable time is available for the decision. Substitution may assume the form of the purchase of an existing property, with the same utility, or of acquiring an investment which will produce an income stream of the same size with the same risk as that involved in the property in question.⁶

Research of the area, state and national real estate market was completed in order to find sales of water distribution systems that included comparable features to the subject property. There have been several sale properties selected from all available sale transactions for analysis in this approach. The sales data was provided through information from the Illinois Commerce Commission, Aqua America Inc., American Water Company, Utilities Inc., Hartman Consultants LLC and various other engineering firms.

The sales were considered to be the most comparable to the subject property in terms of arms-length sales transactions, location of the system, capital improvements supporting the water and wastewater systems, and number of water and wastewater customer accounts in the entire system. All information of the sale transactions and properties was confirmed by the previously mentioned party or parties to the transaction.

The following pages of this report includes a summary of descriptions of the sale properties and analysis of the transactions for comparison with the subject property, in order to estimate a market value using this approach. The sale transactions were reported to be cash to the seller at closing unless otherwise noted in the specific sale transaction description. There is not adequate income information available for the sale properties to extract income multipliers and overall rates. The best method of comparison for the subject property in this appraisal is the sale price per customer accounts.

⁶ Byrl N. Boyce, Ph. D., SRPA, Real Estate Appraisal Terminology, 2nd ed., (Cambridge, Mass.: Ballinger Publishing Company, 1984), p. 234.

Sales Comparison Approach

(Continued)

Sale 1

**Village of Andalusia Water and Wastewater Utility (Water & Sewer)
Village of Andalusia, Rock Island County, Illinois**

Closed July 20, 2020

Asset Purchase Agreement signed May 7, 2019

Price: \$1,800,000 Water

\$1,500,000 Sewer

Water system with 490 customers (\$3,674 per customer)

Wastewater system with 460 customers (\$3,261 per customer)

Seller: Village of Andalusia, IL

Buyer: Illinois American

ICC Docket #19-0732

This sale included the transfer of a water treatment and distribution system, and sewer system. The water system includes a 310,000 gallon storage tank built in 1980, a chlorination and fluoridation water treatment plant operating in the 60 to 80 psi range, 106 hydrants, a booster pump station, and approximately 55,000 linear feet of water mains. The sewer system includes three lift stations, approximately 6,000 linear feet of force mains, 34,800 linear feet of gravity collection mains, 140 manholes, and a three cell wastewater treatment plant. The sanitary system does not include stormwater and is not a CSO type facility.

Sales Comparison Approach

(Continued)

Sale #2

**Village of Glasford Water & Wastewater Utility (Water & Sewer)
Village of Glasford, Peoria County, Illinois**

Closed September 19, 2019

Asset Purchase Agreement signed August 28, 2018

Water System Price: \$800,000

Water System with 492 Customers (\$1,626 per customer)

Wastewater System Price: \$1,100,000

Wastewater System with 482 Customers (\$2,282 per customer)

Seller: Village of Glasford, IL

Buyer: Illinois American

ICC Docket #18-1498

This sale included the transfer of a water and wastewater system.

The water system is in average condition and includes a water treatment plant with a capacity of 200 gpm or 288,000 gpd with attained capacity of 150 gpm or 216,000 gpd; two active wells and one well not in service; a 125,000 gallon elevated storage tank; a 50,000 gallon ground storage tank; meters; hydrants; approximately 48,000 linear feet of water mains; four parcels of land owned in fee; and permanent easements pertaining to water mains located on private property. Well #1 is 876 feet deep; Well #2 is not in service (radius) and is 1,750 feet deep; Well #3 is 1,000 feet deep with 1,300 linear feet of 4" raw water main.

The wastewater system is in average condition and includes a 0.26 MGD DAF wastewater treatment plant with a MDF of 0.65 MGD with basic secondary treatment with filtration and sludge treatment; one lagoon; one wastewater lift station; and approximately 47,000 linear feet of mains.

Sales Comparison Approach

(Continued)

Sale #3

**Lawson Water and Wastewater Utilities (Water and Sewer)
City of Lawson, Clay and Ray Counties, Missouri**

Sold August 2018 (Letter of Intent signed April 21, 2017)

Price: \$4,000,000

Price breakout per appraisal of this system:

\$2,619,000 for Water System with 970 Customers (\$2,711 per customer)

\$1,356,000 for Sewer System with 904 Customers (\$1,515 per customer)

**\$3,975,000 for both Water and Sewer System, rounded within client
documentation to \$4,000,000**

Seller: City of Lawson, MO

Buyer: Missouri American

This sale included the transfer of a water system sewer system. The sale includes three parcels of land owned in fee and a permanent easement interest in nine additional tracts. The permanent easements pertain to properties that are utilized for lift stations, a water tower, and a pump station.

The water system was built in 1956 and includes two elevated water storage tanks, a pump system, and the water distribution system. The 300,000 gallon tank was constructed in the 1990-1991. The 50,000 gallon tank was constructed in the 1940s or 1950s. The sewer system includes a sewer treatment facility including a four-cell lagoon system, eight lift stations, and the sewer collection system.

An appraisal report dated July 7, 2017 of the Lawson system indicated the following expected expenditures after sale:

According to information from Lawson's current permit (MO-0091031) and the Missouri Department of Natural Resources affordability study, the regulations regarding the sewer system operations will be changing in 2020. The water will be required to be disinfected prior to discharge. In addition, a different chemical will need to be added to offset the disinfectant that was added before it can be released into a stream. This will require either a new system to be built or significant changes will need to be made to the existing facility. The chemical added is to control the ammonia levels and nutrient levels. Also, an in-cell aeration system will be needed to help remove the sludge the 1st and 2nd cells. Cost at this time are not known.

Sales Comparison Approach

(Continued)

Sale #4

**Village of Fisher Water and Sewer System (Water & Sewer)
Fisher, Champaign County, Illinois**

Sold March 2018 (Asset Purchase Agreement Signed July, 2017)

Water System Price: \$3,700,000 with 890 Customers (\$4,157 per customer)

Sewer System Price: \$3,100,000 with 890 Customers (\$3,483 per customer)

Seller: Village of Fisher

Buyer: Illinois American Water

ICC Docket #17-0339

This sale includes a water delivery system that includes a water treatment facility, two elevated water storage tanks and two groundwater supply wells. The water treatment plant includes the treatment process, one 30,000 gallon capacity clearwell, and three pumps rated 167 GPM. The clearwell (underground storage tank) has a capacity of 30,000 gallons. Tank #1 has a capacity of 50,000 gallons and was constructed in 1936. Tank #2 has a capacity of 100,000 gallons and was constructed in 1973. The wells are both 236' deep and rated 125 GPM, drilled in 1936 and 1959. Average daily production is 135,000 per day.

This sale includes a wastewater system that includes a wastewater treatment facility with an average daily flow between 170,000 and 180,000 gallons per day.

Expenditures during the first five years after sale are estimated at \$610,000 for the water utility and \$2,300,000 for the sewer utility.

Sales Comparison Approach

(Continued)

Sale #5

**Village of Wardsville Utility System (Water and Sewer)
Wardsville, Cole County, Missouri**

Sold May, 2017 (Asset Purchase Agreement Signed December 8, 2016)

**Price: \$2,750,000 (\$2,750,003 for both Water and Sewer System, rounded within
client documentation to \$2,750,000)**

\$795,428 for Water System with 480 Customers (\$1,657 per customer)

\$1,954,575 for Sewer System with 407 Customers (\$4,802 per customer)

Seller: Village of Wardsville

Buyer: Missouri American Water

MO Docket #WA-2017-0181

According to a press release on April 11, 2017, from the Board of Trustees of the Village of Wardsville, Wardsville has three sewage treatment plants (Deer Haven, Churchview, and Northwest), none of which reportedly are able to meet the Missouri Department of Natural Resources and the EPA requirements regarding limitations of the amount of ammonia that can be discharged from sewage treatment plants. After a study by an engineering firm, it was determined that the three options to meet the EPA limits ranged from \$4 million to \$12 million. According to Missouri American Water, the expected capital investment after the sale includes \$305,000 for the water system and \$395,000 for the sewer system, all of which is projected to be invested over a five-year period.

Wardsville's water system (MO3010831) produces an average of 90,000 gpd. Water system assets include two (2) wells, 150,000-gallon elevated tank, 250,000-gallon ground storage tank, 300 gpm booster pump, 63 hydrants, 146 valves and over 15 miles of distribution main ranging in size from 2" to 8" in diameter.

The wastewater system includes the following treatment facilities:

Churchview WWTP (NPDES MO-0109118) is a packaged extended aeration system with a design flow of 30,000 gpd and actual flow of 15,000 gpd. It services 102 connections. Deerhaven WWTP (NPDES MO-119326) is a packaged extended aeration system with a design flow of 21,368 gpd and actual flow of 17,000 gpd. It serves 81 connections. Northwest WWTF (NPDES MO-0129658) is an aerated lagoon system with design flow of 151,000 gpd and actual flow of 44,000 gpd. It serves 212 connections.

The collection system includes five (5) pump stations, 38 brick manholes, 238 concrete manholes, approximately 9 miles of gravity sewers and 1.7 miles of force main.

Sales Comparison Approach

(Continued)

Sale #6

**Village of Peotone Water and Sewer System (Water & Sewer)
Village of Peotone, Will County, Illinois**

Sold October 1, 2018 (Asset Purchase Agreement Signed July 2017)

Water Price: \$4,510,000 with 1,498 customers (\$3,011 per customer)

Wastewater Price: \$7,790,000 with 1,489 customers (\$5,232 per customer)

Seller: Village of Peotone

Buyer: Aqua Illinois

ICC Docket #17-0314

This sale includes a water delivery system that includes three water treatment facilities, two elevated water storage tanks and three groundwater supply wells. Tank #1 has a capacity of 250,000 gallons. Tank #2 has a capacity of 150,000 gallons. There are approximately 145,000 linear feet of mains.

This sale includes a wastewater system that includes a wastewater treatment facility with a capacity of 850,000 gallons per day. There are five lift stations. There are approximately 105,000 linear feet of gravity and force mains.

Sales Comparison Approach

(Continued)

Sale #7

City of Farmington Water System (Water)
Farmington, Fulton County, Illinois

Closed April 2018 (Asset Purchase Agreement Signed April, 2017)

Price: \$3,750,000

Water System with 1,063 Customers (\$3,528 per customer)

Seller: City of Farmington

Buyer: Illinois American Water

This sale includes a water delivery system that includes two wells. One was drilled in 1918 and is 1,710' deep. It has a capacity of 350 gallons-per-minute, and was improved with a new submersible pump in 1997. The second well was drilled in 1955 and is 1,743' deep. It has a capacity of 385 gallons-per-minute, and had a new pump installed in 2006. The water treatment plant includes the treatment process, two clearwells, and two high-service pumps. The two clearwells (underground storage tanks) each have a capacity of 125,000 gallons. The system also includes two elevated water storage tanks constructed in 1992 and 1997, respectively. Each has a capacity of 156,000 gallons.

Sales Comparison Approach

(Continued)

Sale #8

**Village of Sidney Water System Sidney
Champaign County, Illinois**

APA signed April 2019

Closed April 2020

Sale Price \$2,300,000 (\$4,212 per customer)

Seller: Village of Sidney

Buyer: Illinois American Water

A water distribution system that serves 546 customers. The system includes a 150,000-gallon elevated water storage tank and approximately 70,000 lineal feet of mains. The cost new estimate for the system was \$5,184,000 and the depreciated cost new less depreciation was \$2,500,000.

Sales Comparison Approach

(Continued)

SUMMARY

Based upon this market data, I have concluded a unit value of \$4,500 per customer for the subject property water system and a unit value of \$6,000 per customer for the subject property wastewater system.

SUMMARY OF WATER SYSTEM VALUATION	
SALES COMPARISON APPROACH	
Number of Water Customers for Low Moor System:	126
Unit Value (value per customer) concluded from Market Data:	\$4,500
Value of Low Moor Water System (rounded):	\$570,000

SUMMARY OF WASTEWATER SYSTEM VALUATION	
SALES COMPARISON APPROACH	
Number of Wastewater Customers for Low Moor System:	128
Unit Value (value per customer) concluded from Market Data:	\$6,000
Value of Low Moor Wastewater System (rounded):	\$770,000

Income Capitalization Approach

The income capitalization approach has its strengths and weaknesses, similar to the inherent weaknesses and strengths that exist in the application of the cost approach and the market approach. The valuation expert's reconciliation of the value(s) indicated by the income approach takes into consideration various factors.

The income capitalization approach is a technique in which the value of assets are arrived at by capitalizing future (anticipated) benefits into a present value. The capitalization process includes one of two methods: (1) direct capitalization or (2) yield capitalization. The distinction between the two capitalization methods pertains to the perspective of the future benefits (cash flows).

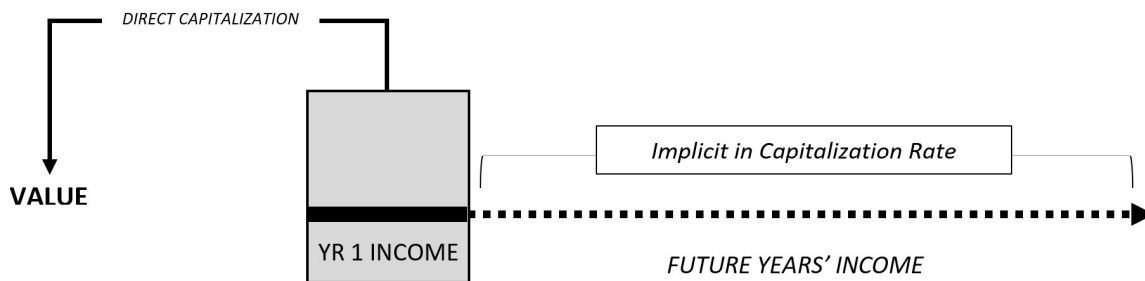
Direct Capitalization

Direct capitalization involves the conversion of a single-year's income (referred to as "first-year income") by applying an overall capitalization rate and using the following formula.

$$\text{VALUE} = \text{INCOME} \div \text{RATE}$$

Where **INCOME** = First Year Income and **RATE** = Capitalization Rate

The capitalization rate may be developed through a market extraction process or by utilizing built-up techniques in which the rates of return (dividend rates) of the respective property components are weighted (for example, debt and equity investment returns, land and building investment returns, etc.). In direct capitalization, change in value (over the investment/holding term) and change in income (over the investment/holding term) are implicit in the capitalization rate.



Income Capitalization Approach

(Continued)

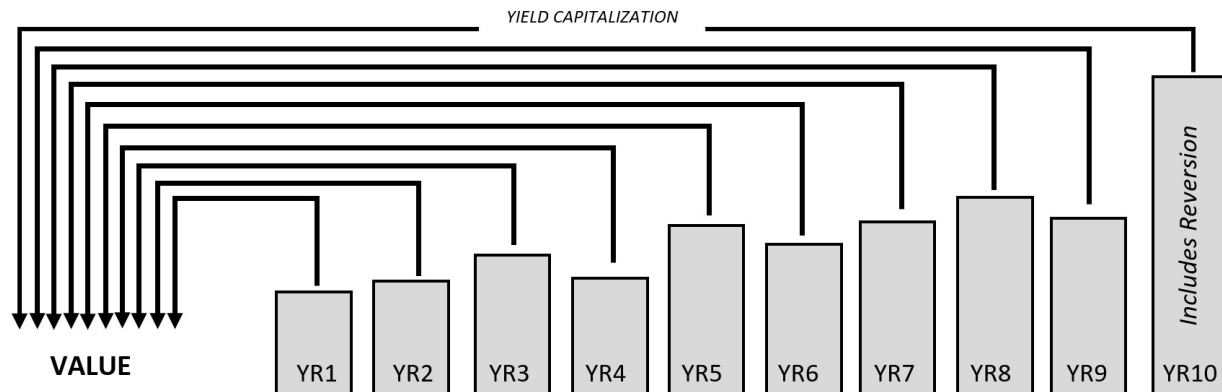
Yield Capitalization

Yield capitalization involves a more detailed analysis of the projected income of the asset. Anticipated changes in (1) income patterns and (2) overall value are explicitly stated. In yield capitalization, the conversion of each anticipated future cash flow (plus the reversion at the end of the income/investment period) is by means of discounting using a discount rate (also referred to as a yield rate). The resultant net present value is the sum of the present value calculations for each individual periodic cash flow plus the present value of the reversion.

Below is the formula for the discounting process followed by an illustration depicting the discounting of each individual periodic cash flow.

$$PV = \frac{P_1}{1+r} + \frac{P_2}{(1+r)^2} + \dots + \frac{P_n}{(1+r)^n}$$

Where P = Income, r = discount rate, and n = term (years)



Income Capitalization Approach

(Continued)

Factors significant to the income capitalization methodology

A proper analysis in the valuation of a utility system will take into account the fact that there are many issues relating to the income capitalization process, whether that process includes direct capitalization or yield capitalization.

The issues that are inherent in the projection of cash flows for the income capitalization process pertaining to the valuation of public utility systems include:

- (1) the fact that revenue (potential income) generated through customer rates is determined based upon the tariff or service area of which the subject system becomes part and impacted by rate cases;
- (2) the changes in revenue resulting from changes in the level of income and expenses for the tariff resulting from, amongst other issues, the management and operational efficiencies of the IOU;
- (3) changes in the rate base of the tariff resulting from acquisitions, mergers, and consolidations, and consequently the revenues that are generated by tariffs tend to experience irregular patterns of change over time;
- (4) the changes in the rate base of the tariff resulting from qualified capital investment projects impacting systems within the tariff;
- (5) the concept of *investment value* (value to a *particular* purchaser based on buyer-specific investment returns and criteria) v. *market value* (value of the system to a *typical* purchaser and not influenced by that particular buyer's specific returns generated by its respective tariffs).

The last factor (6) that impacts yield capitalization (DCF) exclusively goes to the issue of assumptions that are incorporated into the discounting model and how sensitive net present values can be to seemingly subtle variances in the valuation expert's inputs (DCF assumptions).

Additionally, yield capitalization models that use a pre-tax cash flow are not impacted by changes in tax rates and tax codes. However, after-tax DCF models can be affected by changing tax rates, similar to the situation that might occur in the near future based upon the current administration's proposed revisions to the federal tax code.

The following provides additional explanations regarding the issues inherent in the income capitalization approach.

Income Capitalization Approach

(Continued)

(1) Revenue influenced by systems in the tariff and rate cases

Tariffs often include assets from multiple systems, combined for investment, management, operational, and regulatory agency-influenced purposes. In many cases, the applicable customer rates are the same for all customers in the tariff, regardless of the system or service area of which they were part prior to acquisition and placement in the tariff; and, the applicable customer rates for the tariff are impacted by financial and regulatory components for the systems in the tariff collectively. Thus, often there is no tariff revenue (income and expense) data that can be credibly attributed to one particular system that is part of a multiple-system tariff. Additionally, the customer rates (income) and operating expenses for one IOU may vary amongst that IOU's different tariffs, and likewise there may be no correlation between the projected income and expenses of a service area as part of one IOU's holdings as opposed to the projected income and expenses for that same service area that would pertain to a different IOU's tariff in the same general geographical location or market area.

Tariffs are highly regulated and changes in allowed revenues, and ultimately changes in rates, can be granted provided the applicant meets extensive application and regulatory requirements. Rate cases provide mechanisms for the applicants to have allowed revenues and customer rates adjusted by the regulating authority. It is the role of the regulating authority (commission, for example) to review the applicant's request and, assuming the applicant and its operations meet the requirements established by the agency, adjust the revenues and rates, if deemed appropriate by the agency, in an effort to provide the applicant the opportunity to receive a fair and reasonable rate of return on its investment. As part of the rate case process, IOUs are required to validate operating expenses and operational efficiencies, which contribute to the respective commission's decision and determination regarding a rate change. Rate cases can impact all of a tariff's customers -- even though the customers may have come from various independent service areas. Examples of approved rate cases impacting multiple service areas include the 2016 rate case in Illinois involving Illinois American Water⁷ and the 2017 rate case in Illinois involving Aqua Illinois.⁸

⁷ In January 2016, Illinois American Water requested a change in its water and wastewater rates of \$340 million, due to substantial capital investments including a \$76 million investment in its Chicago Metro service area. The Illinois Commerce Commission (ICC) issued an Order in 2016 that allowed Illinois American Water to adjust its rates effective January 1, 2017. The Order provided a decrease in monthly water rates applicable to its customers in Arlington Heights, Bolingbrook, Des Plaines, Elk Grove, Homer Glen, Homer Township, Lemont, Lockport, Mount Prospect, Norwood Park Township, Orland Hills, Orland Park, Prospect Heights, Romeoville, Wheeling, and Woodridge; but, increases (ranging from \$6.51 per month to \$17.70 per month) for wastewater services. For Illinois American Water customers in Carol Stream, Elmhurst, Glen Ellyn, Lisle, Lisle Township, Lombard, Villa Park, Winfield, and Wheaton, the monthly water rates decreased by \$5.57 while wastewater service rates had increases by up to \$17.70 per month on top of the pre-existing rates; and, for its water customers in Glenview and Rolling Meadows, the wastewater rates increased by \$6.57 per month.

⁸ In May 2017, Aqua Illinois, Inc., filed revised tariff sheets with the Illinois Commerce Commission which included the request for increases in water and wastewater service rates affecting numerous service areas throughout Illinois and

Income Capitalization Approach

(Continued)

(2) Operational efficiencies impact income and expenses of the tariff

IOUs generate revenues for services provided by the IOU that are directly impacted by management and operational efficiencies. For example, it is reasonable to expect certain line item expenses to be generally lower for a tariff consisting of multiple utility systems as compared to the sum of the line item expenses for each system if operated and managed independently. The ability of the IOU to spread certain costs among all customers in a tariff and to benefit from economies of scale generally results in a lower expense unit cost (cost per customer) for the individual systems; and, the extent of the benefit tends to be greater for the smaller systems due to the economies of scale.

(3) Changes to the rate base and customer rates are impacted by mergers, acquisitions, and consolidations; revenue streams typically do not remain constant or demonstrate level/patterned increases

The rate base of a tariff is also subject to change if the IOU acquires additional systems that are incorporated into the tariff or by consolidation of two or more tariffs. In the latter, it is reasonable to expect some of the customers may experience increases in rates while others may experience decreases in rates. Also significant is the fact that rate changes often occur within the first few years of the service area's acquisition, demonstrated by the March 2021 consolidation of service areas in Missouri into the Elm Hills tariff.⁹

I have researched this issue in public filings and dockets in several states where IOUs have acquired public utility systems.

a consolidation of multiple service areas into one extensive service area. (Case 17-0259). In its Final Order, filed March 7, 2018, the Commission authorized Aqua to file new tariff sheets for its Consolidated Sewer Division and Consolidated Water Division and further amended the original cost of plant for the water division of more than \$382 million and amended the original cost of the plant for the sewer division of more than \$76 million.

⁹ Four Missouri service areas -- Missouri Utilities, Rainbow Acres, State Park Village, and Twin Oaks -- were acquired between May 2018 and December 2018. In each case, the rate change and consolidation occurred within 3 years of the acquisitions. Substantial rate increases were also realized for the service areas that comprise the Elm Hills tariff. The four service areas had monthly rates from \$3.18 (applies to Twin Oaks/Preserve and is estimated as the customers were not previously individually billed for sewer service) to \$45 per month (State Park Village), and all customer rates were set at \$99.88 per month as a result of the consolidation.

Income Capitalization Approach

(Continued)

Some of the additional relevant recent examples include a Missouri rate case from 2020¹⁰, a pending case in Missouri for establishing a new service area¹¹, and a Missouri consolidation including recent (2021) acquisitions by the consolidated district¹².

(4) Changes to the rate base impacted by capital improvements

Qualifying capital investments can impact the rate base of a tariff that consequently could impact all of the customers within the tariff. For instance, a substantial capital investment program to replace, repair, or add infrastructure to a particular system's assets can, subject to regulatory approval, have a direct influence on all of the customers in the tariff, including those customers from different systems that are not the subject of the capital investment project. Consequently, customer rates for one service area in a tariff are subject to change over time based upon qualifying capital projects necessary for the maintenance and/or improvements to other service areas in the tariff.

¹⁰ On April 7, 2021, the State of Missouri Public Service Commission issued an ORDER APPROVING STIPULATION AND AGREEMENT for the matter of Missouri American Water's 2020 application to implement a general rate increase for water and sewer services in its Missouri service areas. (Case No. WR-2020-0344.) The stipulation, filed on March 5, 2021, provides for an increase in Missouri American Water's revenue requirement of \$30 million over revenues authorized in its last general rate case. The \$30 million increase results in Missouri American Water's annual revenue requirement being increased to \$348 million. The Commission's Order became effective May 7, 2021.

¹¹ An example of a possible change in customer rates is evident in the docket filing by Missouri American Water of its PROPOSAL OFFER TO CITY OF HALLSVILLE dated July 18, 2019. (File No. SA-2021-0017.) On July 20, 2020, Missouri American Water filed its application for a certificate of convenience and necessity (CCN) to essentially operate a wastewater system in and near Hallsville, Missouri. In its offer to Hallsville, Missouri American Water proposed placing the City of Hallsville system in its existing tariff that would result in a 3% reduction in the Hallsville customer rates.

¹² 12 utility service areas located in Missouri that were consolidated in a July 2020 rate case into a tariff known as Confluence Rivers. All 12 service areas that comprise the Confluence Rivers tariff were purchased between April 2019 and June 2019. In each case, consolidation and rate change occurred less than 16 months after the system's acquisition date. The 12 service areas (systems) include the Auburn Lake Service Area, the Calvey Brook Service Area, the City of Eugene Service Area, the Evergreen Lake Subdivision Service Area, the Whispering Pines Subdivision Service Area (formerly Gladlo), the Lake Virginia Service Area, the Majestic Lakes Service Area, the Mill Creek Service Area, the Roy-L Service Area, the Bon-Gor Lake Estates Subdivision Service Area (formerly Smithview H2O), the Villa Ridge Service Area, and Chalet City West Subdivision/Alpine Village Community Service Area (formerly The Willows Utility Company). The rate changes for the service areas that comprise the Confluence Rivers Service Area ranged from increases of approximately 127% (Roy-L) to 807% (The Willows Utility System). Examples of customer rate increases for systems in Confluence Rivers include the Evergreen Lake Subdivision Service Area (water system) in which rates were increased from \$7.71 per month to \$42.20 per month and The Willows Utility Company (water system) in which rates were \$5.23 per month and increased to \$42.20 per month as a result of the consolidation and rate case. On April 29, 2021, the Missouri Public Service Commission approved the acquisition of five additional systems by the Company (Branson Cedars Resort Utility Company, DeGuire Subdivision, Freeman Hills Subdivision, Prairie Heights Water Company, and Terre du Lac.

Income Capitalization Approach

(Continued)

Capital Improvement Projects (CIPs) often can add substantially to the total investment of an IOU in an acquired service area or utility system. In the case of the proposal by Missouri American Water to acquire the City of Hallsville wastewater system, the proposal offer included a \$2 million cash purchase price payable at closing with an additional \$3.3 million committed to a five-year CIP. In this case, the CIP represented 62% of the total anticipated investment.

Another important consideration relating to CIPs and their impact on potential revenue streams over an investment period is that very often the actual investments by the IOU can be considerably higher or lower than the anticipated or projected investments prior to acquisition. For instance, a CIP might require less than anticipated based solely on more efficient management and operations due to IOU ownership after acquisition; or, the CIP might include substantially more investment than projected based upon an acquired system operating at levels that exceed capacity -- which might require substantial upgrades and improvements not contemplated at the time the Asset Purchase Agreement was executed.

(5) Investment Value v. Market Value

Implicit in the definition of market value is the concept that the value conclusion pertains to “typical” purchasers under “typical” circumstances based upon “typical” market forces and influences. Investment value, by contrast, is an opinion of value developed based upon particular investment criteria, returns, or requirements that are unique and/or specific to an investor and not necessarily representative of the market in general. If the objective of the valuation assignment is to develop a market value opinion, discounted cash flow analysis and other yield capitalization models must, by definition, incorporate and be based upon *market* inputs: market income levels, market expense ratios, market returns for the investors, etc.

Utilizing a system’s projected income for a specific purchaser, based upon that purchaser’s anticipated income resulting from that purchaser’s tariff, and using that investor’s projected increases and/or decreases in income and expenses, respectively, during the investment period, and based upon that investor’s allowed rate of return for the investment period, may or may not be consistent with market levels for the same inputs (income, expenses, periodic rates of change, rate of return, etc.). If the investor’s particular income and expense projections are not consistent with or based upon market levels, the resultant value opinion would be *investment* value.

Income Capitalization Approach

(Continued)

(6) Sensitivity inherent in DCF analysis

Discounted cash flow analysis (DCF) is a method of yield capitalization in which anticipated/projected future cash flows, identified for a particular investment period, are discounted to a present value, often referred to as a net present value. The process requires a number of investment assumptions, all of which impact the level of periodic cash flows and the net present value of the investment as a whole.

Seemingly insignificant changes in one input can have a significant impact on the final calculation/opinion; and, changes in multiple assumptions can compound the effect of the change on the conclusions.

Conclusion of DCF analysis

DCF analysis is sensitive to subtle changes in the assumptions. Valuation experts need to exercise caution in selecting inputs (assumptions) as what seemingly are small/insignificant changes in the inputs can have a significant impact on the final conclusion. Credible assignment results for a market value opinion using DCF requires careful analysis of comparable market data to assist in determining appropriate assumptions.

Summary of Income Approach

The Income Capitalization Approach is not considered applicable in the subject property valuation assignment. It is not possible to project accurate and credible cash flows for the subject property system due to the number of variables that are unknown. Projecting future cash flows attributable to the subject property would not be realistic or credible, and could result in assignment results that are misleading.

Final Reconciliation

The purpose of this appraisal report was to arrive at an estimate of market value for the City of Low Moor water and wastewater systems based upon conditions evident in the market as of April 29, 2021. I inspected the subject property systems, reviewed numerous reports and documents provided by the client, conducted research with regard to land values and easement valuation, and reviewed a report prepared by Origin Design.

I completed a Cost Approach (utilizing the services of Origin Design) which resulted in value conclusions of \$705,000 for the subject property water system and \$960,000 for the subject property wastewater system.

I also applied the Sales Comparison Approach which resulted in a value conclusion of \$570,000 for the subject property water system and \$770,000 for the subject property wastewater system.

The Income Capitalization Approach was not applied for the subject property valuation. Therefore, the value indications for the subject property systems are summarized as follows.

	Indicated Value Water System	Indicated Value Wastewater System
<i>Cost Approach</i>	\$705,000	\$960,000
<i>Sales Comparison Approach</i>	\$570,000	\$770,000

In my opinion, equal weight should be given to the value indications resulting from the application of the Sales Comparison Approach and Cost Approach. Therefore, it is my opinion the market value of the subject property systems as of April 29, 2021, was:

Market Value of Water Delivery System	Market Value of Wastewater Collection System
\$640,000	\$865,000

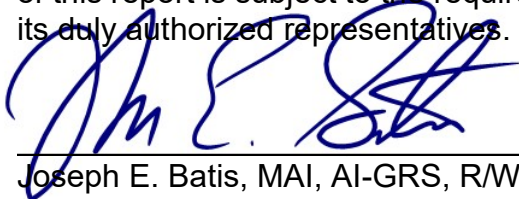
The opinions of market value are based upon the subject property water system and wastewater system each as a whole, as if owned in fee simple title, free and clear of all liens and encumbrances, and subject to the assumptions set forth in this report.

Statement of Certification

I certify that, to the best of my knowledge and belief:

- The statements of fact contained in this report are true and correct.
- The reported analyses, opinions, and conclusions are limited only by the reported assumptions and limiting conditions and are my personal, impartial, and unbiased professional analyses, opinions, and conclusions.
- I have no present or prospective interest in the property that is the subject of this report and no personal interest with respect to the parties involved.
- I have not completed a real estate appraisal of the property that is the subject of this report within the three-year period immediately preceding acceptance of this assignment.
- I have no bias with respect to the property that is the subject of this report or to the parties involved with this assignment.
- My engagement in this assignment was not contingent upon developing or reporting predetermined results.
- My compensation for completing this assignment is not contingent upon the developing or reporting of a predetermined value or direction in value that favors the cause of the client, the amount of the value opinion, the attainment of a stipulated result, or the occurrence of a subsequent event directly related to the intended use of this appraisal.
- My analyses, opinions, and conclusions were developed, and this report has been prepared, in conformity with the *Uniform Standards of Professional Appraisal Practice* and in conformity with the requirements of the *Code of Professional Ethics* and the *Standards of Professional Appraisal Practice* of the Appraisal Institute.
- I have made a personal inspection of the property that is the subject of this report.
- Unless otherwise noted herein, no one provided significant real property professional assistance to the person signing this certification (with the exception of the reliance on the Hartman Consultants report).

As of the date of this report, Joseph E. Batis has completed the requirements of the continuing education program of the Appraisal Institute. Furthermore, I certify that the use of this report is subject to the requirements of the Appraisal Institute relating to review by its duly authorized representatives.



Joseph E. Batis, MAI, AI-GRS, R/W-AC

General Certification Lic. #553.000493 (IL; Expires 09/23)
General Certification Lic. #2016044083 (MO; Expires 06/22)
General Certification Lic. #CG03684 (IA; Expires 06/22)
General Certification Lic. #5660 (TN; Expires 06/23)
General Certification Lic. #4001017857 (VA; Expires 06/23)
General Certification Lic. #TX 131049 G (TX; Expires 11/22)
General Certification Lic. #A8416 (NC; Expires 06/22)
General Certification Lic. #CGA-1027103 (AZ ; Expires 07/23)

August 23, 2021
Date

ADDENDA

Statement of Assumptions and Limiting Conditions

Qualifications of the Appraiser

STATEMENT OF ASSUMPTION AND LIMITING CONDITIONS

The value herein estimated and/or other opinions presented are predicated on the following:

1. No responsibility is assumed for matters of a legal nature concerning the appraised property -- especially those affecting title. It is considered that the title is marketable for purposes of this report. The legal description as used herein is assumed to be correct.
2. The improvement is considered to be within the lot lines (unless otherwise stated); and, except as herein noted, is presumed to be in accordance with local zoning and building ordinances. Any plots, diagrams, and drawings found herein are to facilitate and aid the reader in picturing the subject property and are not meant to be used as references in matters of survey.
3. The appraiser assumes that there are no hidden or unapparent conditions of the property, subsoil or structure which would render it more or less valuable than otherwise comparable properties. The appraiser assumes no responsibility for such conditions or for engineering which might be required to discover such things.
4. Any description herein of the physical condition of improvements including, but not limited to, the heating, plumbing, and electrical systems, is based on visual inspection only, with no demonstration performed, and they are thus assumed to be in normal working condition. No liability is assumed for same, nor for the soundness of structural members for which no engineering tests were made.
5. The appraiser shall not be required to give testimony or appear in court by reason of this appraisal with reference to the property herein described unless prior arrangements have been made.
6. The distribution of total valuation in this report between land and improvements applies only under the existing program of utilization under the conditions stated. This appraisal and the allocations of land and building values should not be used as a reference for any other purpose and are invalid if used so.
7. That this report is to be used in its entirety and only for the purpose for which it was rendered.
8. Information, estimates, and opinions furnished to us and considered in this report were obtained from sources considered reliable and believed to be true and correct; however, no responsibility for guaranteed accuracy can be assumed by the appraiser.
9. The property is appraised as though under responsible ownership and competent management.
10. The report rendered herein is based upon the premise that the property is free and clear of all encumbrances, all mortgage indebtedness, special assessments, and liens--unless specifically set forth in the description of property rights appraised.
11. No part of this report is to be reproduced or published without the consent of its author.
12. The appraisal covers only the property described herein. Neither the figures therein, nor any analysis thereof, nor any unit values thereof derived, are to be construed as applicable to any other property, however similar it may be.
13. Neither all, nor any part, of the contents of this report, or copy thereof, shall be used for any purpose by any but the client without the previous written consent of the appraiser and/or the client; nor shall it be conveyed by any including the client to the public through advertising, public relations, news, sales, or other media, without the written consent and approval of the author--particularly as to value conclusions, the identity of the appraiser or a firm with which he is connected, or any reference to any professional society or institute or any initialed designations conferred upon the appraiser, as stated in his qualifications attached hereto.
14. Any cash flow calculations included in this report are developed from but one of a few alternatives of a possible series and are presented in that context only. Specific tax counsel should be sought from a C.P.A., or attorney, for confirmation that this data is the best alternative. This is advised since a change in value allocation, method or rate of depreciation or financing will have consequences in the taxable income.
15. This appraisal has been made in accordance with the Code of Ethics of the Appraisal Institute.
16. This report has not taken into consideration the possibility of the existence of asbestos, PCB transformers, or other toxic, hazardous or contaminated substances, and/or underground storage tanks (hazardous materials), or the cost of encapsulation or removal thereof. Should client have concern over the existence of such substances on the property, the appraiser considers it imperative for the client to retain the services of a qualified, independent engineer or contractor to determine the existence and extent of any hazardous materials, as well as the cost associated with any required or desirable treatment or removal thereof. The valuation stated herein would therefore be void, and would require further analysis to arrive at a market estimate of value.