City of La Porte
Water Study 2022 / 2023

39 North Conservancy District

Prepared by the La Porte Water Department and NIES Engineering, Inc.

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1. Executive Summary

1.1. Objective

The objective of this report is to detail the characteristics of the 39 North (39N) Conservancy District's water system, highlight various challenges facing the 39N water system, and identify preliminary design concepts for proposed improvements.

1.2. Conclusions

The existing 39N water system has sufficient capacity to supply water to current 39N customers for average day demands and maximum day demands. Fire flow capacity for residential fire scenarios is acceptable, but likely limited to a single fire hydrant. Fire flow capacity for a large industrial fire appears to be inadequate and a series of improvements have been identified for resolving this inadequacy.

Proposed infrastructure improvements intended to resolve these issues include the following:

i Elevated tank at north end of 39N water system (near Indiana Toll Road)

ii New booster station and elevated tank at south end of 39N water system (near Severs Road)

iii 16" water main supply along Severs Road between Genesis Drive and State Road 39

2. 39N Water System Overview and Challenges

2.1. 39N Water System Overview

The 39 North Conservancy District (39N) was established in 1997 to provide water and wastewater utilities to an area along State Road 39 between Severs Road and the Indiana Toll Road, as shown in Figure 2-1.

Construction was completed in 1999 and the system became operational that year.

The 39N water system has a booster station that draws from the City of La Porte's water system and pumps though approximately 11,000' of 12" water main along State Road 39, terminating near the Indiana Toll Road Interchange. A 6" water main extension northward to County Road 450N was added in 2016.

A contract between the City of La Porte and 39N was executed in 1997 (Appendix 1). This original agreement covered a duration of 20 years, with the option for either party to terminate thereafter with two-year notice.

The original agreement set the following limits of water delivery:

Average Daily Use (not to exceed)	1,000,000 gallons (694 GPM)
Instantaneous Maximum Use (not to exceed)	1,728,000 gallons per day (1,200 GPM)
Booster Station Suction Side Pressure (minimum to maintain)	35 psi

The contract was amended in 2005 (Appendix 2) to increase the instantaneous maximum flow rate from 1,200 GPM to 1,500 GPM. This was intended to allow for water passing through the 39N booster station to be brought back into the City of La Porte system through a separate meter to supply Legacy Hills and Critchfield School at a higher pressure.

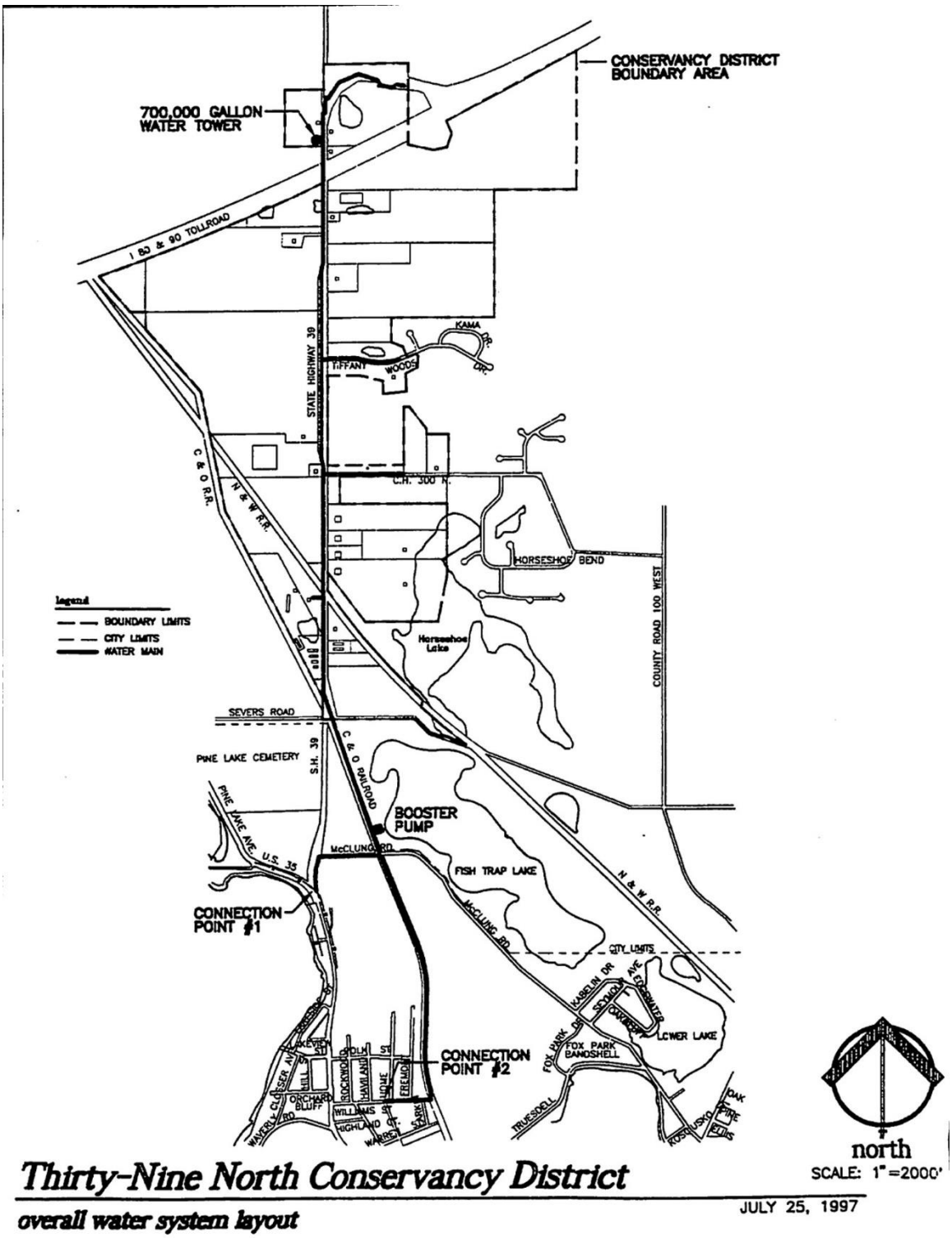


Figure 2-1 - 39N Conservancy District Map

2.2. Operational Characteristics of the City of La Porte and 39N Water Systems

Operational data for both the City of La Porte and 39N water systems are logged hourly at the City's Lake Street Treatment Plant. Figures 2-2 and 2-3 depict daily volumes during 2022.

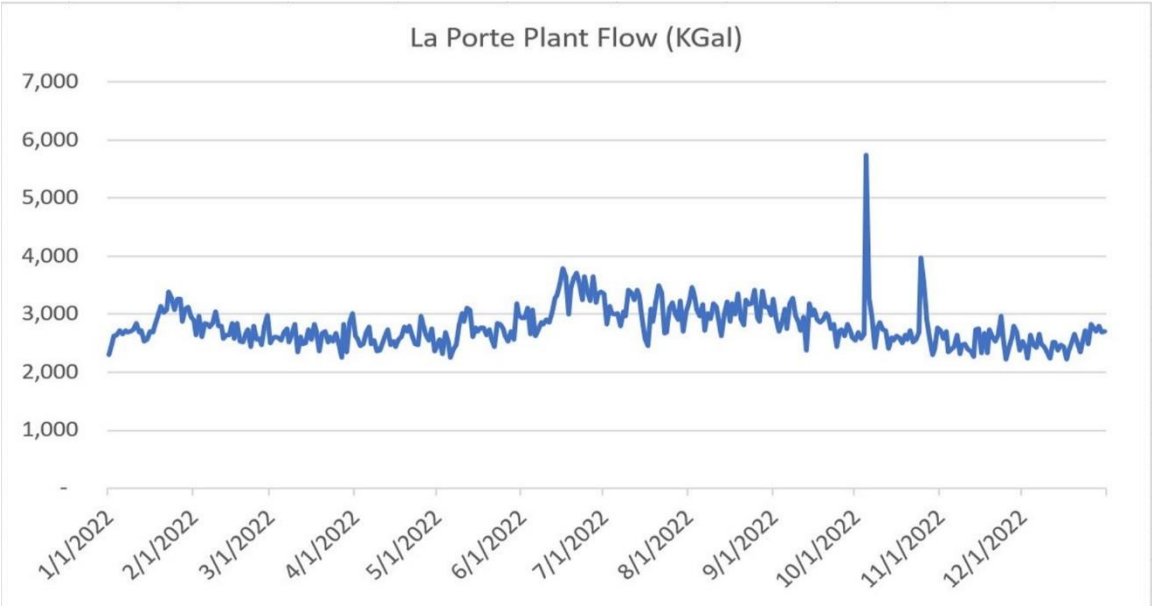


Figure 2-2 - La Porte Plant Flow 2022

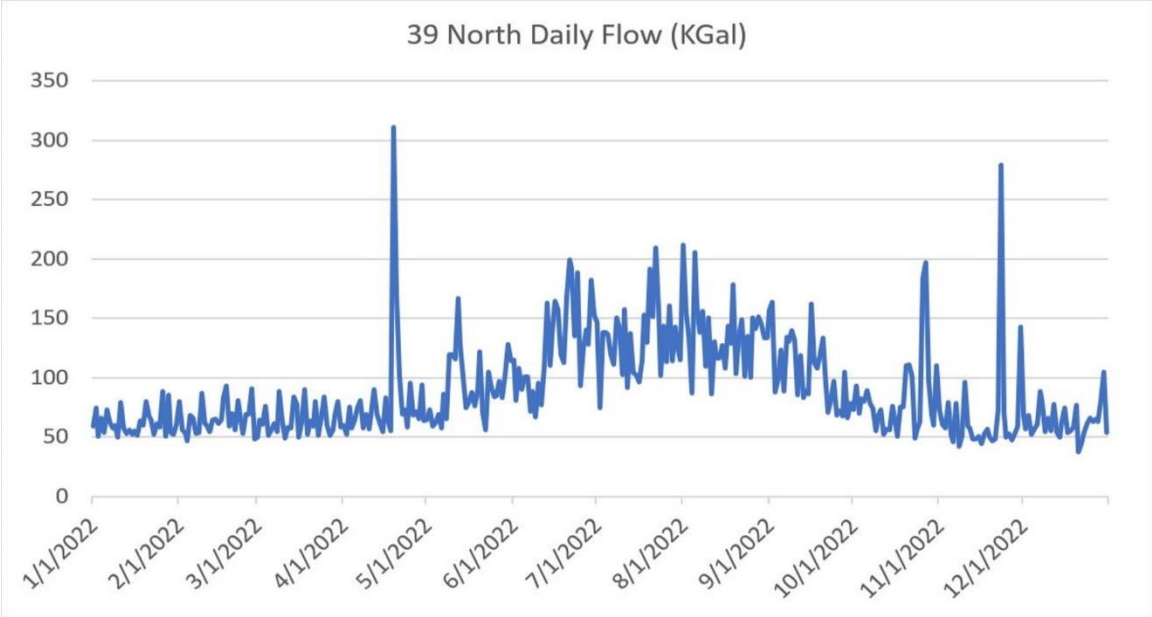


Figure 2-3 - 39N Daily Flow 2022

Typical daily discharge volume from the City's two treatment plants combined ranges from 2,500 thousand gallons (KGal) during the winter months to 3,500 KGal in the summer. The extremely high daily volume of almost 6,000 KGal in October 2022 was the result of a major fire incident in the City.

Typical daily usage volumes in the 39N water system range from 50 KGal in the winter to 200 KGal in the summer. Fire flow testing has caused much higher daily volumes on certain days.

2.3. Operational Challenges

2.3.1. Water Pressure and Flow Rate Sensitivity (Topography and Booster Station Configuration)

Figures 2-4 and 2-5 show the route and profile of the 12” transmission main along State Road 39.

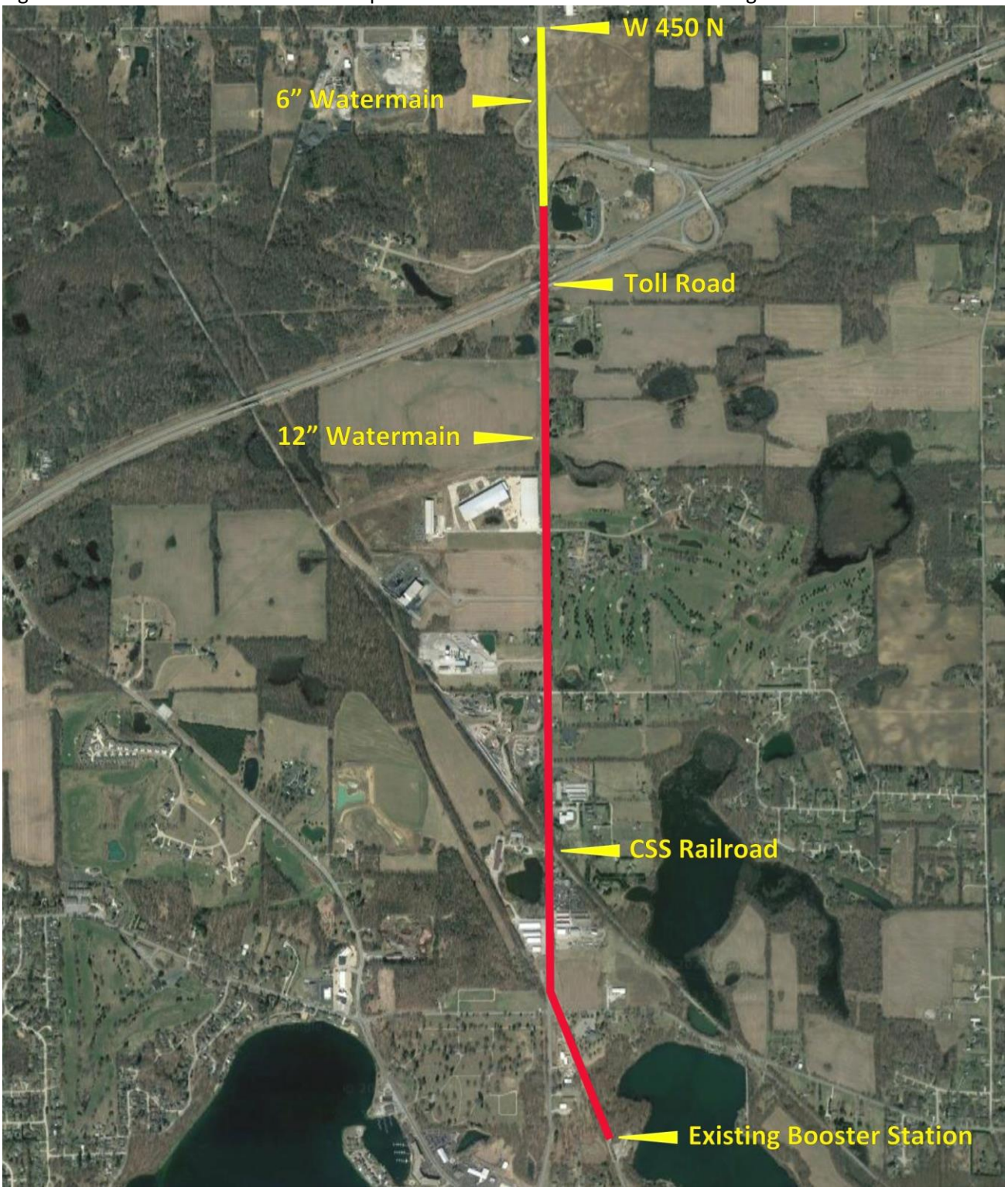


Figure 2-4 - 39N Transmission Main Route

Figure 2-5 - 39N Transmission Main Profile

The area at the north end of the 12" transmission main (near the Indiana Toll Road) is approximately 60' higher in elevation than the booster station. Since there is a 1 psi reduction for every 2.31' of elevation gain, the water pressure at the north end of the 39N water system is always at least 26 psi lower than the water pressure at the booster station due to change in elevation alone. It is even lower when hydraulic losses are taken into account, especially as the flow rate in the 12" transmission main increases. This is the primary reason that the booster station is required in the first place, as the difference between typical pressure in the City system (50 psi) and the pressure loss due to elevation change (26 psi) would allow only 4 psi of head loss due to flow in order to maintain the minimum 20 psi required in all parts of the water system. Based on the 11,000' length of the 12" transmission main, less than 600 GPM would be allowable as the peak daily customer demand, including fire flow, to limit losses to 4 psi. Water system pressures below 20 psi require a boil order notice to be issued to all customers.

With the current configuration of the booster station drawing water directly from the City's 12" water main, low water pressure challenges can occur to both the City's system and the 39N system during periods of peak demand. The booster station has a low flow pump that can match typical average day flows, intermediate pumps and a fire flow pump that can deliver approximately 1,700 GPM (which is above the contractual capacity). When the booster station is operated at peak capacity, the higher velocity in the single 12" feed line can stir up sediment/deposits and cause numerous customer complaints in the City, as has been the case during times fire flow testing has been conducted in the 39N water system. In addition, operating the booster station at peak capacity can cause the suction side pressure (City side) to fall below 25 psi, at which time the station would automatically shut down to prevent the City system from falling below 20 psi. However, in the event the booster station becomes unavailable, the water pressure at the north end of the 39N water system would immediately fall below 20 psi.

Water pressure and flow rate sensitivity is the first challenge facing the 39N water system.

2.3.2. Insufficient Fire Flow Availability (Industrial Growth and Physical Capacities)

Between 1997 and the current time, the 39N Conservancy District's service area has experienced the addition of several industrial users near the center of the service area, as shown in the aerial photos on Figures 2-6 and 2-7.

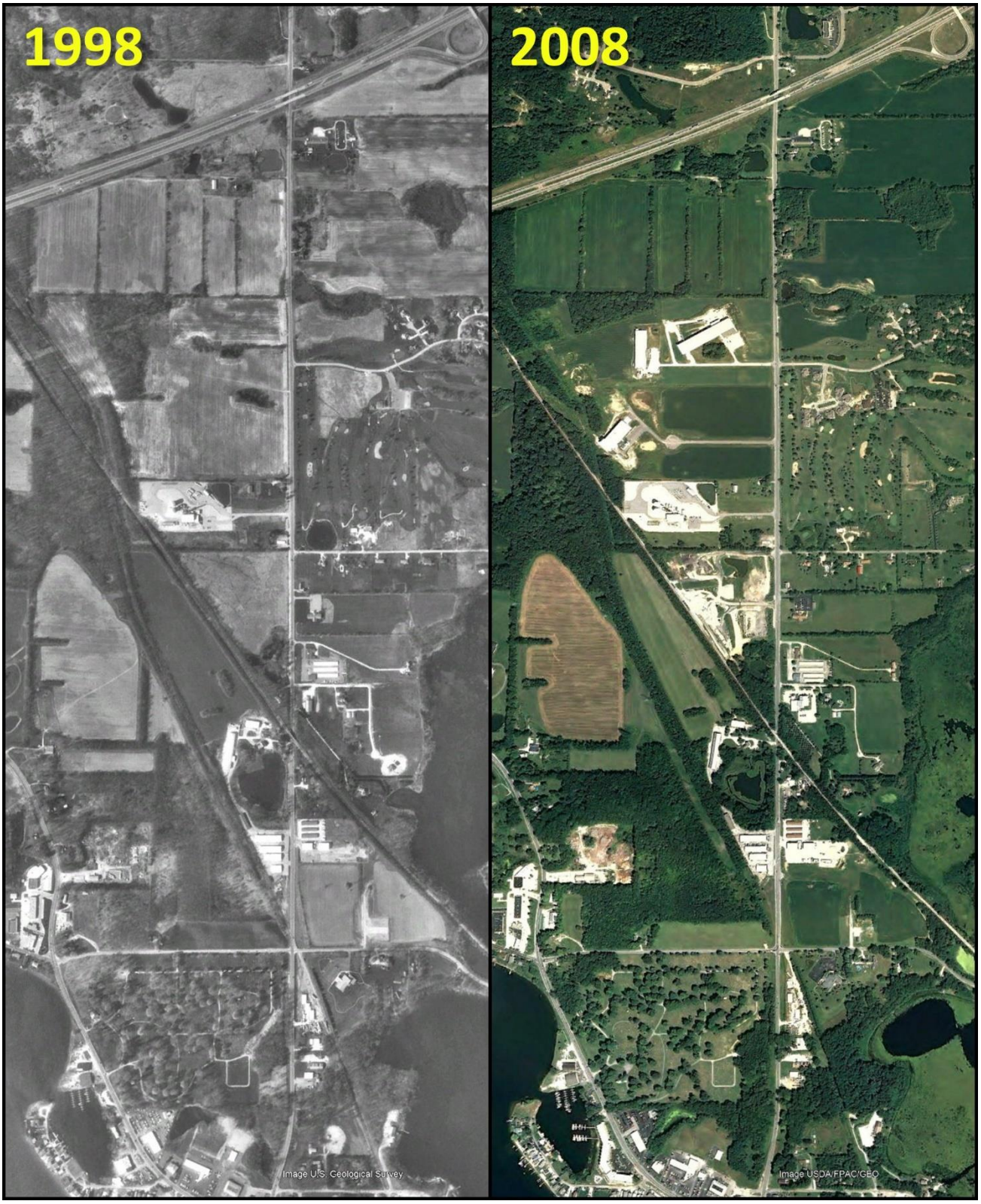


Figure 2-6 - 39N Growth 1998 – 2008

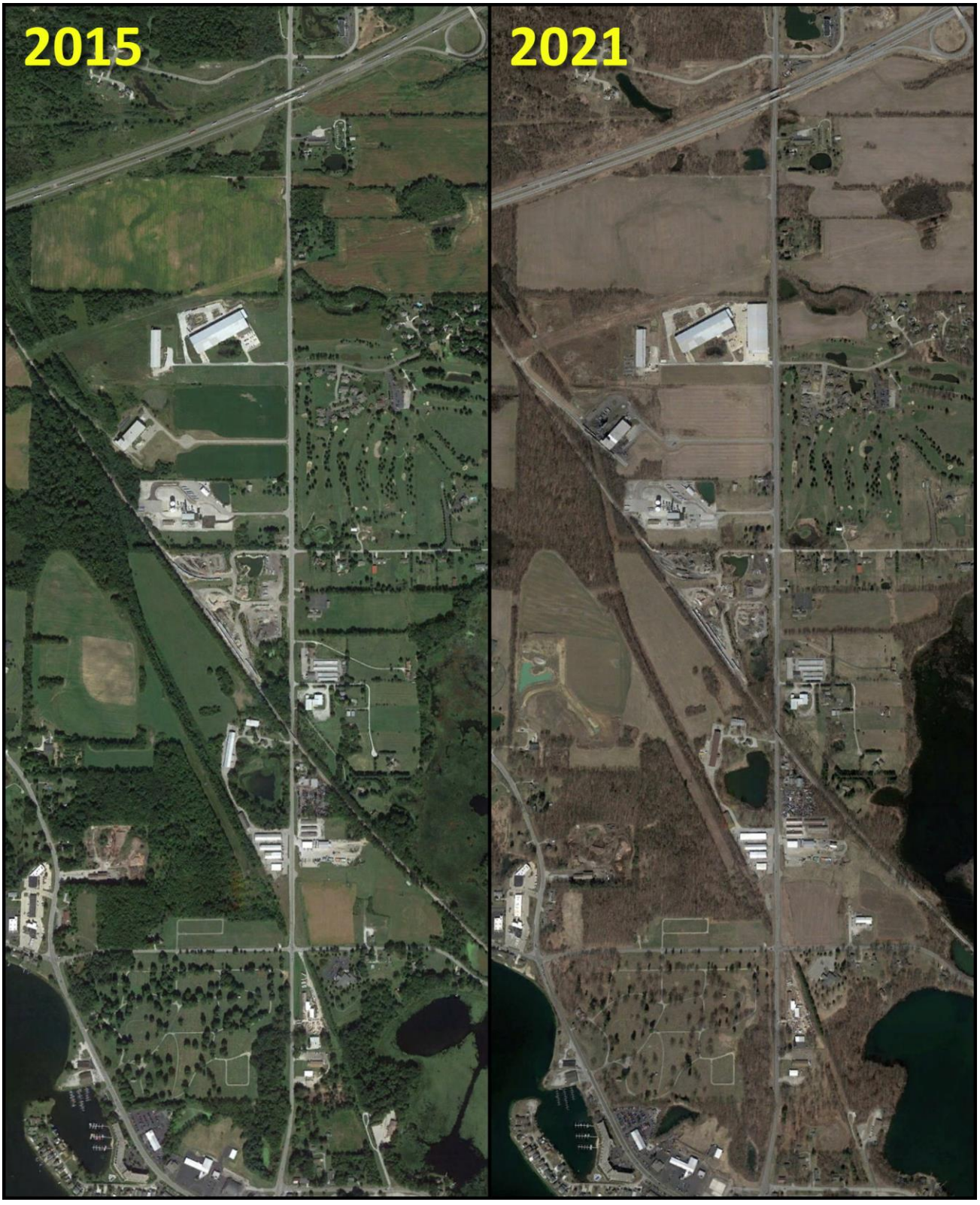


Figure 2-7 - 39N Growth 2015 – 2021

While the average day flow has not increased dramatically, the required fire flow has increased well beyond the capacity of the system currently in place. Using the method typically adopted by the Insurance Services Office (ISO), the required fire flow for a building can be calculated as follows[1]:

$$NNF = 18FO\sqrt{A}$$

Where:	NNF	Needed Fire Flow
	F	Construction Type Factor
	O	Occupancy Factor
	A	Building Area

Using a best-case approximation (based on construction type and occupancy factor) for a 100,000 square foot industrial building, the required fire flow for such a building could be estimated as low as 2,500 GPM:

- Effective Area 100,000 SQ F
- Construction Type Class 6 Fire Resistive 0.60
- Occupancy Factor C-1 Noncombustible 0.75

$$18 \times 0.6 \times 0.75 \times \sqrt{100{,}000} = 2{,}500 \text{ GPM}$$

Using a conservative approximation (based on construction type and occupancy factor) for a 100,000 square foot industrial building, the required fire flow for such a building could be estimated as high as 4,000 GPM:

- Effective Area 100,000 SQ F
- Construction Type Class 3 Non Combustible 0.80
- Occupancy Factor C-2 Limited Combustibility 0.85

$$18 \times 0.8 \times 0.85 \times \sqrt{100{,}000} = 4{,}000 \text{ GPM}$$

In the situation where a building has a fire suppression sprinkler system, the required fire flow (for a nearby fire hydrant in the water system) can be reduced to 50%: 1,250-2,000 GPM in these examples. This creates a secondary problem because the operation of the fire suppression sprinkler system creates water demand in addition to the 1,250 – 2,000 GPM required for the fire hydrant. If operated simultaneously, even the best-case scenario could exceed the District's contractual capacity of 1,500 GPM and even the booster station's physical capacity of 1,700 GPM. Moreover, one current building in the 39N system is known to have a pump-operated sprinkler system that draws water from the 39N water system at a rate of 2,400 GPM, which by itself exceeds both capacities. Lastly, operation of two fire hydrants simultaneously without a fire suppression system in operation could also exceed the capacity of the booster station and cause it to shut down. In the event that a fire requires a second hydrant to be open, great care would be needed to prevent the total flow from both hydrants exceeding the capacity of the booster station and causing it to shut down. In each of the scenarios considered, there is insufficient fire flow available.

Insufficient fire flow availability is the second challenge facing the 39N water system.

[1] GUIDE FOR DETERMINATION OF NEEDED FIRE FLOW, Insurance Services Office

2.3.3. Regulatory Compliance

The 39N Conservancy District water system has typically been considered an extension of the City of La Porte water system, sharing the same Public Water Supply Identification Number (PWSID) 5246017. Maintenance has been undertaken by City employees and the only licensed operators for the 39N water system are City of La Porte employees. City employees read the meters and the City provides billing services for the Conservancy District.

Water loss audits conducted in 2020 and 2022, as required by the State of Indiana, opened this arrangement up to some discussion with the State. At the time, the conclusion was that for the purpose of the water loss audits, it was acceptable to consider both systems as a single entity. However, given that the City of La Porte essentially exports water to the Conservancy District water system, a more ideal situation would be for the 39N water system to have its own PWSID and dedicated licensed operators.

In early 2023, the State of Indiana contacted the 39N Conservancy District indicating the State's intention to consider the 39N water system as a separate water system. However, the 39N water system does not currently have any licensed operators under contract and does not directly provide its own monitoring, maintenance or billing operations.

The potential burden of regulatory compliance is the third challenge facing the 39N water system.

3. Proposed Improvements

3.1. Elevated Tank at North End of 39N System (Near Indiana Toll Road)

3.1.1. Benefits

An elevated tank at the north end of the 39N water system would allow large water demands to be fed from two directions, allowing for greater flow rates with less pressure loss. The primary flow direction would be from the booster station at the south end. The secondary flow direction would be from this elevated tank at the north end. This would improve fire flow capability by allowing for multiple fire flow feeds, such as a fire suppression sprinkler system and a fire hydrant operating simultaneously.

In addition, the open water surface of the elevated tank would reduce potential hydraulic hammer events to which the existing closed system is susceptible.

A final benefit is minimizing the potential for low pressure events at the north end of the system. Although the north end of the system will still have at least 26 psi lower pressure than the south end due to topography, the elevated tank would allow the 39N water system to maintain pressure above 20 psi in the event of a temporary outage or disruption to the booster station.

3.1.2. Limitations

An elevated tank at the north end of the 39N water system would not solve every issue. The booster station at the south end of the system would still be limited by the suction side pressure of the supply network. A large fire may require significant fire flow for 3 or more hours. If the booster station were to shut down due to low suction side pressure during an extended fire, the elevated tank at the north end of the 39N water system could be exhausted within three hours.

There also may be challenges to chlorine residual by low water turnover in the elevated tank during periods of low water demand. Chlorine residual levels would need to be closely monitored and operational procedures put in place to ensure adequate water mixing and turnover in the tank.

3.2. New Booster Station and Elevated Tank at South End of 39N System (Near Severs Road)

3.2.1. Benefits

The existing booster station is more than 20 years old and nearing the end of its useful life. A new booster station at Severs Road would allow for pump sizing to better match current demand scenarios that were not anticipated when the original booster station was built. A range of pumps with variable frequency drives (VFDs) would allow for greater flexibility in flow rates and increased maximum fire flow.

A new elevated tank adjacent to the new booster station would allow for greater stability on the suction side of the booster station. This would allow the booster station to pump at a higher rate directly from the tank instead of drawing water at high velocity through the City's existing water mains. This reduction in water main peak velocity would reduce the occurrence of low pressure and water quality complaints in the City along the booster station feed line. In addition, the close proximity of the tank would allow the booster station to quickly ramp up to maximum fire flow without requiring the City's water plants to immediately start high service pumps.

The higher elevation of the area near State Road 39 and Severs Road would allow the elevated tank to be approximately 44 feet shorter than City's Brighton and Webber Tanks and still provide an open water surface.

3.2.2. Limitations

Similar to the proposed elevated tank at the north end of the 39N water system, the tank at the south end of the 39N water system could be exhausted in the event of a major fire event if fed only by the current single 12" water main. An additional water main supply from the City's water plants to this area would be required to sustain a high flow rate at the proposed booster station.

3.3. 16" Water Main Supply Along Severs Road Between Genesis Drive and State Road 39

3.3.1. Benefits

A new 16" water main along Severs Road between Genesis Drive and State Road 39 would provide a strong connection to the East Side Water Plant (Plant 2) via the 16" water main around the Thomas Rose Industrial zone. This would provide sufficient water to the suction side of this booster station such that flow into the 39N water system would be limited only by the capacity of the 39N water system's own 12" water main running north on State Road 39. This would allow for extended periods of high flow should a major fire event occur.

3.3.2. Limitations

There are few operational limitations with this water main extension.

3.4. Summary of Improvements

With all three of these improvements, the 39N water system could be able to sustain robust growth in average day and maximum day water demands as well as be able to withstand a major fire event lasting more than three hours.

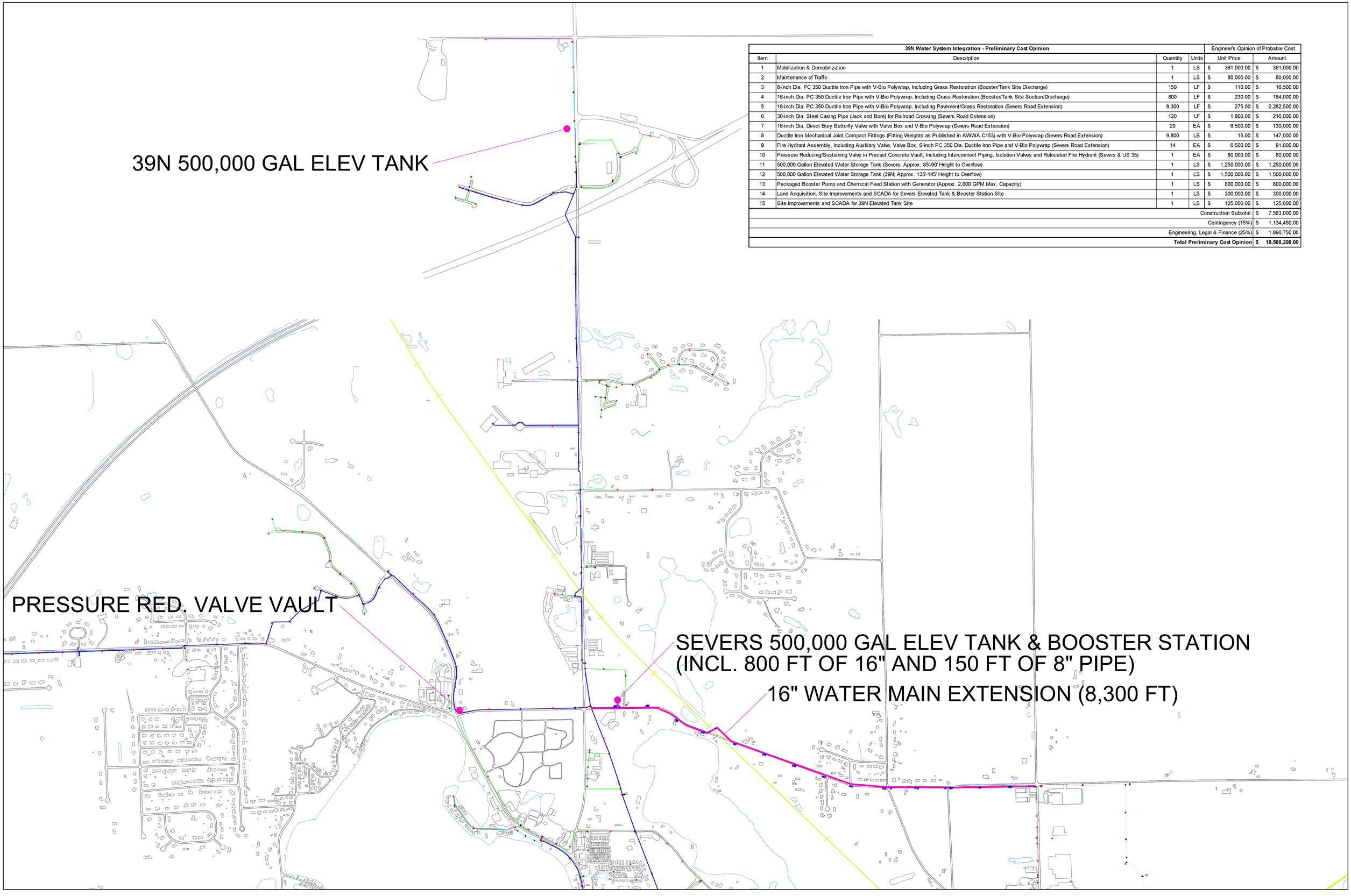
The cost opinion, calculated in 2022, for these improvements is **$10,588,200.**

3.5. Regulatory Compliance Options for the 39N Water System

Detailed consideration of potential options to achieve regulatory compliance for the 39N water system as a separate public water supply system falls outside the scope of this engineering study. However, it would seem likely that the service agreement between District and the City would need substantial revision, or the District could consider annexation and avoid becoming a separate system.

4. Conceptual Plan & Cost Opinion of Improvements

The attached conceptual plan and cost opinion was developed in 2022.



39N Water System Integration - Preliminary Cost Opinion				Engineer's Opinion of Probable Cost	
Item	Description	Quantity	Units	Unit Price	Amount
1	Mobilization & Demobilization	1	LS	$ 361,000.00	$ 361,000.00
2	Maintenance of Traffic	1	LS	$ 80,000.00	$ 80,000.00
3	8-inch Dia. PC 350 Ductile Iron Pipe with V-Bio Polywrap, Including Grass Restoration (Booster/Tank Site Discharge)	150	LF	$ 110.00	$ 16,500.00
4	16-inch Dia. PC 350 Ductile Iron Pipe with V-Bio Polywrap, Including Grass Restoration (Booster/Tank Site Suction/Discharge)	800	LF	$ 230.00	$ 184,000.00
5	16-inch Dia. PC 350 Ductile Iron Pipe with V-Bio Polywrap, Including Pavement/Grass Restoration (Severs Road Extension)	8,300	LF	$ 275.00	$ 2,282,500.00
6	30-inch Dia. Steel Casing Pipe (Jack and Bore) for Railroad Crossing (Severs Road Extension)	120	LF	$ 1,800.00	$ 216,000.00
7	16-inch Dia. Direct Bury Butterfly Valve with Valve Box and V-Bio Polywrap (Severs Road Extension)	20	EA	$ 6,500.00	$ 130,000.00
8	Ductile Iron Mechanical Joint Compact Fittings (Fitting Weights as Published in AWWA C153) with V-Bio Polywrap (Severs Road Extension)	9,800	LB	$ 15.00	$ 147,000.00
9	Fire Hydrant Assembly, Including Auxiliary Valve, Valve Box, 6-inch PC 350 Dia. Ductile Iron Pipe and V-Bio Polywrap (Severs Road Extension)	14	EA	$ 6,500.00	$ 91,000.00
10	Pressure Reducing/Sustaining Valve in Precast Concrete Vault, Including Interconnect Piping, Isolation Valves and Relocated Fire Hydrant (Severs & US 35)	1	EA	$ 80,000.00	$ 80,000.00
11	500,000 Gallon Elevated Water Storage Tank (Severs; Approx. 85'-90' Height to Overflow)	1	LS	$ 1,250,000.00	$ 1,250,000.00
12	500,000 Gallon Elevated Water Storage Tank (39N; Approx. 135'-145' Height to Overflow)	1	LS	$ 1,500,000.00	$ 1,500,000.00
13	Packaged Booster Pump and Chemical Feed Station with Generator (Approx. 2,000 GPM Max. Capacity)	1	LS	$ 800,000.00	$ 800,000.00
14	Land Acquisition, Site Improvements and SCADA for Severs Elevated Tank & Booster Station Site	1	LS	$ 300,000.00	$ 300,000.00
15	Site Improvements and SCADA for 39N Elevated Tank Site	1	LS	$ 125,000.00	$ 125,000.00
				Construction Subtotal	$ 7,563,000.00
				Contingency (15%)	$ 1,134,450.00
				Engineering, Legal & Finance (25%)	$ 1,890,750.00
				Total Preliminary Cost Opinion	**$ 10,588,200.00**

5. Appendix 1

5.1. Original Contract – 1997

Water Supply and Distribution System Agreement

Thirty-Nine North C.D. and City of La Porte

La Porte County, Indiana

Prepared by:

McMahon Associates, Inc.

ENGINEERS ARCHITECTS SCIENTISTS SURVEYORS

Sept.15, 1997

MCM

TAT

Identification of Project

- **Sanitary Sewer System**
  - ✧ Agreement with La Porte
  - ✧ La Porte Connection (Park and Koomler)
  - ✧ Project Cost = 3 Million Dollars
  - ✧ Serves 700 acres + Future 200 acres
  - ✧ Contractor: Civil Construction
    - Start Construction = September 29, 1997
- **Intersections**
  - ✧ Six Proposed Intersections
  - ✧ Project Cost = $900,000
  - ✧ INDOT Funded
  - ✧ Contractor: Rieth-Riley Construction
    - Start Construction = March, 1998
- **Water System**
  - ✧ La Porte Two Connections
    - U.S. Highway 35 and 39
    - Williams and Home Street
  - ✧ Project Cost = 2 Million
  - ✧ Serves same Area as Sanitary Sewer
  - ✧ Contractor: Civil Construction
    - Start Construction = February, 1998 (Pending Agreement)

Agreement Summary

- **Terms of Agreement**
  - With Two Years Notice

- **Supply of Water**
  - To Booster Pump
    - -City of La Porte to Own
    - -Thirty-Nine North to Install
  - Booster to Servers - Thirty Nine North C.D.
    - - Own and Operate

- **Volume and Pressure**
  - City of La Porte to supply 1,000,000 gal/day
  - Thirty-Nine North C.D. to Maintain minimum pressure of 35 psi

- **Measure of Volume**
  - Master Flow Meter - Both parties to read
  - Individual Flow Meters
    - - Meter Reading done by City of La Porte
    - - Installing and Maintaining done by Thirty Nine North C.D.

Agreement Summary

- **Storage**
  - 700,000 Gallon Tank, in Future, at Thirty-Nine and Toll Road Exit
  - When Daily Volume Exceeds 360,000 Gallons
  - Cost Entirely Thirty-Nine North C.D.

- **Rate**
  - City of La Porte to Charge Same Rate As Existing Customers Pay
  - Does Not Provide Maintenance to the Thirty-Nine North C.D. System

- **Billing Done by City of La Porte**

- **Collection Done by Thirty-Nine North C.D.**

- **Service Area**
  - Future Area - Written Approval City of La Porte

WATER SUPPLY AND DISTRIBUTION SYSTEM AGREEMENT BETWEEN THE CITY OF LAPORTE, INDIANA AND THE THIRTY-NINE NORTH CONSERVANCY DISTRICT

Prepared by:
McMahon Associates, Inc.
September 10, 1997
McM No. 2004-55142

WATER SUPPLY
AND
DISTRIBUTION SYSTEM AGREEMENT
BETWEEN
THE CITY OF LAPORTE, INDIANA
AND
THE THIRTY-NINE NORTH CONSERVANCY DISTRICT

THIS AGREEMENT (hereinafter referred to as "Agreement") entered into this ___ day of _____, 1997, by and between the CITY OF LAPORTE, INDIANA, a municipal corporation of the State of Indiana (hereinafter referred to as "Contractor" or "City") and the Thirty-Nine North Conservancy District located in LaPorte County, Indiana, a unit of local government established under the laws of the State of Indiana (hereinafter referred to as "Contractee" or "District").

WITNESSETH THAT:

WHEREAS, Contractee shall install a water supply and distribution system in and around the CITY OF LAPORTE in the County of LaPorte (hereinafter referred to as the "Thirty-Nine North System"); and

WHEREAS, Contractor has water supply facilities which presently have capacity available for the supply of water; and

WHEREAS, Contractee does not have a water supply that can adequately supply water to its service areas; and

WHEREAS, Contractor has heretofore adopted, (and may hereafter from time to time adopt amendments to an ordinance and regulations pertaining to) the supply of water and distribution; and

WHEREAS, Contractee is desirous of receiving water from the Contractor's system subject to full compliance by itself and all of its customers with the terms and provisions of said existing ordinance and regulations of Contractor, as well as all amendments thereto as Contractor may adopt, or make hereafter; provided, however that the terms and provisions of such existing ordinance and regulations of Contractor as well as amendments thereto as Contractor may adopt, or make hereafter shall be the same for the Contractee and its customers as those imposed upon like Contractees and their customers;

WHEREAS, Contractor is agreeable to contracting the Contractee, supplying such water only and subject to Contractee's and each of its customers full compliance with the terms and provisions of said ordinance, regulations, and amendments provided, however, that such compliance shall be the same for the Contractees and their customers as that imposed upon Contractors, their Contractees, and their respective customers.

NOW THEREFORE, Contractor agrees to provide Contractee with water supply through Contractee's connection with the LaPorte water system for water supply pursuant to the following terms and conditions:

1. **Effective Date**. It is understood and agreed between the parties that this contract shall become effective after its execution and approval by the Board of Public Works of the city of LaPorte and by the board of Directors of the Thirty-Nine North Conservancy District. It is also understood and agreed that this Agreement may be subject to the approval of the Indiana Department of Environmental Management (IDEM); and any other regulatory agency as may be legally required.

Both parties understand that the rate structure charged by LaPorte to the Thirty-Nine North Conservancy District shall be subject to the approval of the Common Council of the City of LaPorte.

2. **Term of Agreement/Amendments**. This Agreement shall continue in full force and effect for twenty (20) consecutive years from the effective date.

Thereafter, this Agreement may be terminated by either party by said terminating party giving two (2) year advance notice to the other party to this Contract.

The Contractor shall schedule an annual meeting to discuss contract matters and issues between the parties, and the Contractor shall notify the Contractee in writing at least thirty (30) days prior to the meeting of the time and place for the annual meeting.

This Agreement is also subject to amendment at any time upon the written agreement of the parties, or at the sole discretion of the Contractor if required in order to meet the requirements of any governmental agency with jurisdiction or permit conditions, and in such an instance the Contractor shall supply the Contractee with such amendment in writing.

3. **Interconnection.** Contractee shall connect the water supply lines which are presently a part of LaPorte's water system at the points located as shown on attached Exhibit "A".

It is expressly understood and agreed between the parties that all costs of the interconnection, including the planning, inspection and connection of any water line to said interconnection points shall be borne exclusively by Contractee.

4. **Supply of Water.**

A. **Responsibility.** Contractee shall be solely responsible to construct the water system and the booster pump station. The booster pump station is located as shown on Exhibit "A". Said water shall be delivered from the Contractor's water line system to the booster pump station and shall be the responsibility of the Contractor. Thereafter, Contractee shall be responsible for delivering to its water supply customers.

B. **Treatment.** Contractor shall be solely responsible for the proper treatment of the water supplied to the Contractee in accordance with the requirements and standards of any governmental agency with jurisdiction and permit conditions. Except that contractee shall provide capability to rechlorinate water at the Booster Pump Station in sufficient quantities to maintain a chlorine residual throughout the "Thirty-Nine North System".

C. **Volume and Pressure.** The Contractor (City of LaPorte) agrees to supply water at a rate not to exceed annual average day water used of 1,000,000 gallons per day. The maximum instantaneous peak flow rate through the booster pump station shall not exceed 1,728,000 gallons per day (1200 gallons per minute) at any time. Additionally, if suction pressure at the booster station falls below 35 psi at any time, the contractee will automatically reduce pumping rate until the suction pressure returns to 35 psi or greater.

D. **Cost of Supply.**

(1) **Rate.** Contractee agrees to pay to Contractor if contractees customers do not pay for the treatment, supply and billing of water received at the metering points in respect of the volume of such flows as set out in the contract rate attached hereto as Exhibit "B". As provided in said rate schedule, as approved by all legislative and regulatory bodies having jurisdiction thereof, Contractee agrees to pay, when applicable, any zone surcharge, or flat charge so provided.

It is understood by the parties the rates set forth in Exhibit "B" will be adjusted to correspond to the rates charged to the users within the City, whenever the City user's rates are adjusted.

(2) **Measure of Volume**. Contractee shall install proper and adequate metering devices for the purpose of measuring the volume of water supplied to the metering point on Exhibit "A". The design of the meter, at this metering point, shall be approved by Contractor according to Contractor's standards for such devices.

(a) Master Flow Meter

Said master flow meter shall be constructed in a manner and in a place acceptable to Contractor. This device shall be subject to the inspection, testing, and approval of each party at all times. For these purposes, and for the purposes of reading and recording data from said meter, each party shall at all times have complete and free access to said metering point and devices.

(b) Individual Flow Meters

Each building shall have a flow meter installed and installation shall be approved by the District and Contractor. The meters are to be read monthly by contractor.

The cost of planning, designing, building, and installing metering point or points and devices, including acquisition of real estate, shall be borne exclusively by Contractee. Water meters, including them for each user shall be required and shall be operated, tested, calibrated (not less frequently than annually for master meter),maintained, and replaces as necessary by the Contractee.

Contractee shall adopt and enforce ordinances providing for rates, rules, and regulations and use of its water system which are in conformity with the reasonable requirements adopted and enforced by the Contractor and other regulatory agencies. Contractee may be awarded grants from the State of Indiana and from EPA and other governmental agencies and regulation must conform to their regulations.

E. **Billing**. Contractor will be responsible for reading the metering device at master meter and individual meters. Billing the Contractee and its customers in accordance with rate schedules in effect shall be done by the contractor.

F. **Start of Supply.** Except to provide water for filling and testing of water mains it is agreed that the contractor will not be required to supply water until all proposed water mains and pumping facilities in the current plan are properly installed, tested and inspected.

5. **Connection.** The City of LaPorte requires that the Thirty-Nine North Conservancy District connect to the city's water system at two (2) locations, one near the intersection of U.S. Highway 35 and State Road 39, and the other near the intersection of Williams Street and Home Street. Both connections are to be made onto the existing water mains at or near the connection locations. All water main between the booster pump station and the connection points will be turned over to the City.

6. **Litigation.** The cost of any litigation now, in the past or future, with customers within Contractee's customer service area required to be initiated by Contractor shall be borne solely by Contractee. Contractee agrees and undertakes to hold harmless and indemnify Contractor from any damage arising from Contractee's operation of its water system.

7. **Compliance with Rules, Regulations, Standards, and Laws.** The parties of this Agreement shall comply with all state and federal regulations, standards and laws regarding the distribution and treatment of water and the operation of their respective systems.

8. **Service Area.** During the term of this Agreement, Contractee shall not expand its water system outside of their original service area, nor annex or otherwise extend any service area outside of Contractee's service area as identified on Exhibit "C" attached hereto, without the express written approval of Contractor. However, such approval shall not be withheld except for good cause shown. It shall be understood by both parties that although the potential service area is designated in Exhibit C, the contractor may not be able to supply water in sufficient quantities to serve all customers in a completely developed service area. Supply volumes shall be limited to those identified in paragraph 4.C above.

9. **Additional Tap-In Points.** Should it become necessary or convenient for the parties hereto to tap into the Contractor's water system at more than one point in order to permit adequate service, then the location of such tap-in point shall be negotiated between the parties. Contractee shall pay all costs for evaluating the hydraulic capabilities of alternate tap-in locations. All of the terms and conditions of this Agreement shall pertain to extension of this Agreement.

10. **Remedies in the Event of Default**. In the event that Contractee shall default hereunder and said default is not cured within thirty (30) days of written notice of same, or, in the event said default is not of a type which can be cured within thirty (30) days, or if Contractee is not proceeding with due diligence to cure said default within thirty (30) days of written notice of same, or if Contractee shall fail to make any payment hereunder within thirty (30) days after said payment is due to the City of LaPorte (no notice being necessary in the event of non-payment), the City of LaPorte may pursue any remedy to which it may be entitled, either at law or in equity, including (but not by way of limitation) the right to apply to any court for the appointment of a receiver to administer all of Contractee's water supply systems in the place or the stead of Contractee and to fix, charge and collect rates for such services.

Contractee now consents and agrees to the appointment of such a receiver in the event of default and specifically acknowledged receipt of sufficient consideration for such consent and agreement, and now waives any future recourse to said appointment. Collections from such an arrangement shall be paid out as follows:

First, to the payment of any delinquent water supply charges to the City of LaPorte;

Second, to payment of expenses of operation, repair and maintenance of the Contractee's system;

Third, to payment of any revenue bond obligations, or matured long-term debt;

Further, to payment of any other obligations hereunder.

Contractee will enact an ordinance adopting local limits which are at least as stringent as the City's local limits and shall also ensure that it has the legal authority to enforce said limits. Further, Contractee shall include, as a part of its Water Use Ordinance and each agreement or contract which it has with each commercial and industrial user, relevant enforcement terms and provisions of the code, all amendments thereof and all applicable rules and regulations of the City in order to impose said terms and provisions on its users, if necessary.

Contractee shall have its water use ordinance approved by the city within one hundred and twenty (120) days from the date hereof or prior to interconnection.

The Contractee agrees to provide the City with access to all records copied as part of Contractee's Pretreatment Program activities.

The Contractee shall employ a permitting system substantially similar to that used by the Contractor. Further, the City shall have the right of final approval for all permits issued by the Contractee.

11. **Notices** Any notices required or desired to be given under this Agreement may be served personally or by mail. Any notice given by mail shall be deemed to have been served upon certified mailing, return receipt requested, postage prepaid, addressed to the party to be served at the last address filed by such party with the other party. At the date of the execution of this Agreement, Contractor's address is Attention of the Director of City Utilities, c/o Office of the Mayor, City Hall, 801 Michigan Avenue, LaPorte, Indiana 46350; and the Contractor's Office address is:

Thirty-Nine North Conservancy District
c/o Attorney Shaw Friedman
Friedman and Associates
705 Lincolnway
LaPorte, IN 46350

12. **Benefit**. All of the provisions of this Agreement shall inure to the benefit of, and shall be binding upon, the successors and assigns of this Agreement.

13. **Fire Protection Storage**. Contractee agrees to commence construction of a minimum 700,000 gallon storage tank near Interstate 80/90 when water use exceeds either an annual average day flow of .36 MGD or a maximum day flow of .72 MGD.

CITY OF LAPORTE, INDIANA

Mayor

BOARD OF PUBLIC WORKS

By:_____

By:_____

By:_____

APPROVED as to form and legality:

By:_____
City Attorney

THIRTY-NINE NORTH CONSERVANCY DISTRICT

Chairman

Board Member

Board Member

Board Member

Board Member

By:_____
Shaw R. Friedman, #8482-46
Attorney for Conservancy District

ACKNOWLEDGMENT

STATE OF INDIANA]
]SS:
COUNTY OF LAPORTE]

Before me, the undersigned, a Notary Public in and for said County and State, this ___ day of _____, 1997, personally appeared _____, _____, _____, and _____, the above-named Mayor and Members and Clerk of the Board of Public Works of the City of LaPorte, who acknowledged the execution of the foregoing Agreement and that the same is their free act and deed.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my Notarial Seal, this ___ day of _____, 1997.

My Commission Expires:

Notary Public and Resident of
_____ County, Indiana

_____

STATE OF INDIANA]
]SS:
COUNTY OF LAPORTE]

Before me, the undersigned, a Notary Public in and for said Contractee and State this____ day of _____, 1997, personally appeared _____, President of LaPorte City Council; _____, Council Member and_____, Clerk, the above-named individuals in their official capacity for the City of LaPorte, Indiana, who acknowledged the execution of the foregoing Agreement and that the same is their free act and deed.

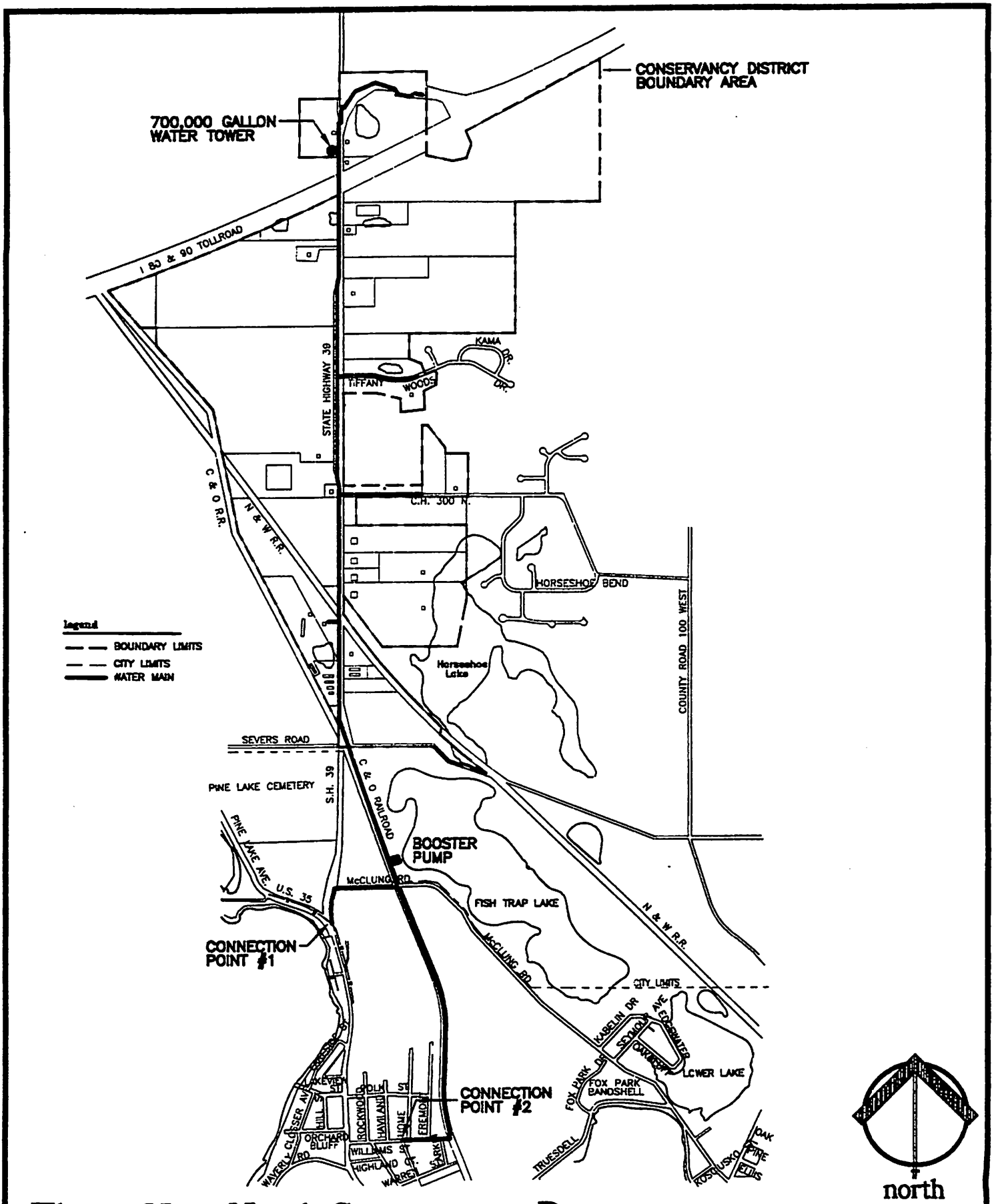
IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my Notarial Seal, this _____ day of _____, 1997.

My Commission Expires:

Notary Public and Resident of
_____ County, Indiana

_____

Instrument prepared by:
Shaw R. Friedman, Friedman & Associates.
705 Lincolnway
LaPorte, IN 46350
(219) 326-1264



Thirty-Nine North Conservancy District

overall water system layout

SCALE: 1"=2000'

JULY 25, 1997

EXHIBIT "B"

To be supplied by the City of LaPorte, Indiana

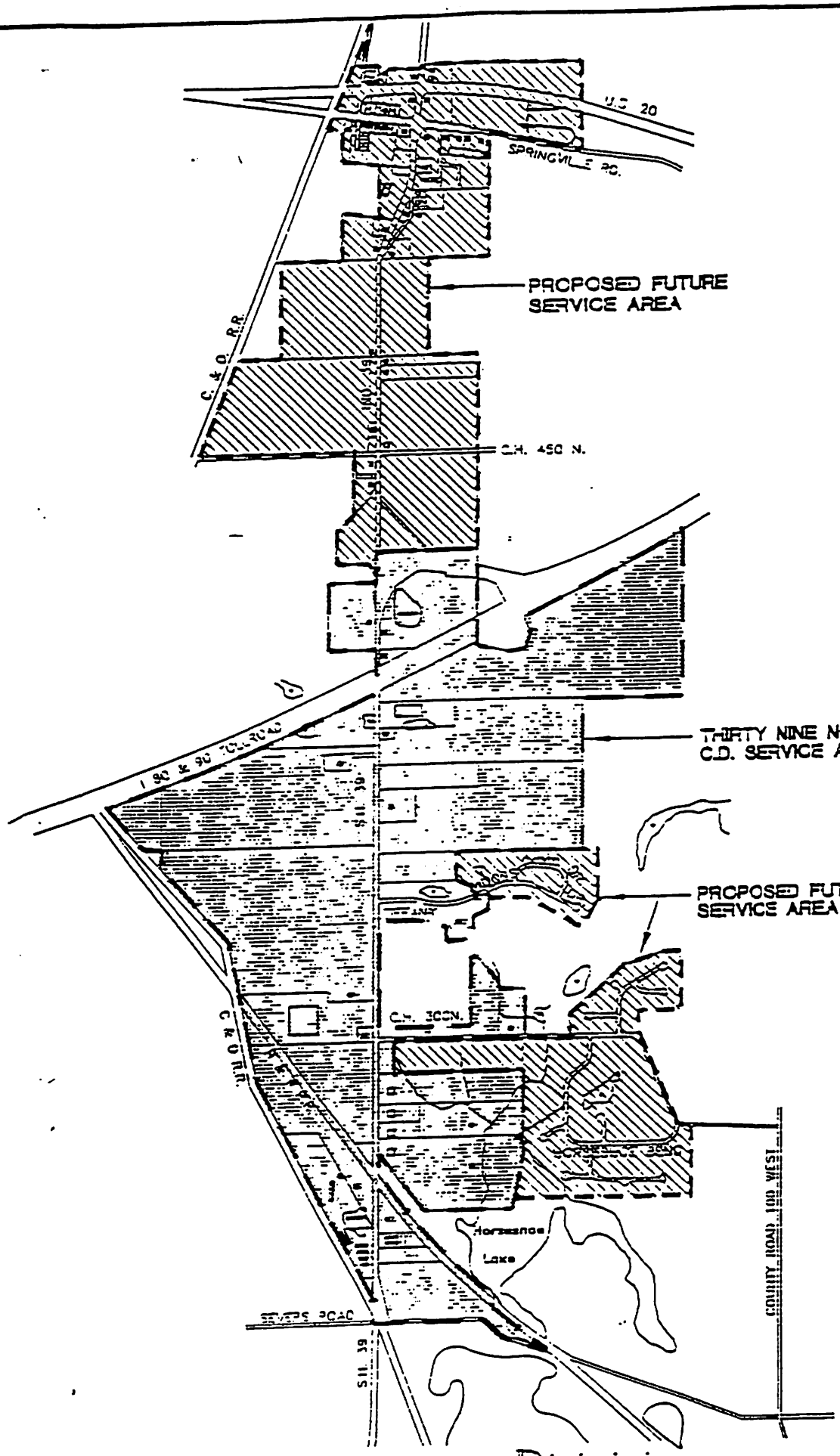


Exhibit "C"

8 OCTOBER 1996

McM

McMAHON ASSOCIATES, INC.

• ENGINEERS • ARCHITECTS • SCIENTISTS • SURVEYORS

Thirty-Nine North Conservancy District

current and future service area

6. Appendix 2

6.1. Amended Contract – 2005

AGREEMENT MODIFYING WATER SUPPLY AND DISTRIBUTION SYSTEM AGREEMENT BETWEEN THE CITY OF LAPORTE, INDIANA, AND THE THIRTY-NINE NORTH CONSERVANCY DISTRICT

THIS AGREEMENT made this 4th day of May, 2005, by and between the City of LaPorte, Indiana, and the Thirty-nine North Conservancy District, of LaPorte County, Indiana, WITNESSETH:

WHEREAS, the parties to this agreement entered into a water supply and distribution agreement on September 10, 1997, providing for the transmission of water from water supply facilities owned by the City of LaPorte to the Conservancy District; and,

WHEREAS, pursuant to the terms of the agreement of September 10, 1997, the Conservancy District installed a booster pump station at a location near the intersection of McClung Road and the abandoned right-of-way of the Chesapeake and Ohio Railroad, which station marked the point to which the City agreed to deliver water to the Conservancy District=s water system; and,

WHEREAS, the 1997 agreement provided that the City agreed to supply water at a rate not to exceed 1,000,000 gallons per day and that the maximum instantaneous peak flow rate through the booster pump station should not exceed 1,200 gallons per minute at any time; and,

WHEREAS, the City of LaPorte desires to expand water service to another area north of the City and to connect such water line extension to the booster pump station installed by the Conservancy District as described above; and

WHEREAS, the parties have reached an agreement for the amendment of the agreement of September 10, 1997, to accommodate these changes.

IT IS THEREFORE AGREED NOW, in consideration of the mutual agreements herein exchanged, that the agreement of September 10, 1997, is hereby amended in the following respects:

1. The District hereby grants to the City a permanent license to the use of the booster pump station owned by the District located near the intersection of McClung Road and the abandoned right-of-way of the Chesapeake and Ohio Railroad Company, in LaPorte County, Indiana, to serve as a connection point to provide water services to properties owned by the LaPorte Community School Corporation, Beacon Hills Golf Club, Inc., and Priests of Holy Cross, Indiana, Province, Inc., and any other properties which may hereafter be connected to the water system serving such properties, and to transmit water through said booster pump station to the new areas to be served.

2. The City agrees as follows:

(a) To modify the booster pump station, at no cost to the District, to increase the maximum available flow capacity of the booster station from 1,200 gallons per minute to 1,500 gallons per minute.

(b) To contribute the sum of $300.00 monthly to the cost of furnishing electricity for the operation of the booster pump station, subject to an annual adjustment to be effective January 1 of each calendar year based upon the percentage of change, if any, in electric rates charged to the District by Northern Indiana Public Service Company, or any successor power company.

(c) To construct a metering station on the water main leading to the new service area to meter the water flow being furnished to the new service area described above and to deduct the amount of charges attributable to water passing through said meter from charges billable to the district under the water supply and distribution system agreement of September 10, 1997.

(d) To make available to the District a supply of water at a rate of not less than 500,000 gallons per day.

3. Paragraph 4 C. of the agreement of September 10, 1997, is hereby amended to provide that the maximum instantaneous peak flow rate through the booster pump station shall not exceed 1,500 gallons per minute at any time.

4. During the first year of operation of the modified booster pump, the City shall bear 50% of the cost of repairs and maintenance necessary to keep the booster pump in good operating condition. Thereafter, the cost of maintaining the booster pump shall be pro-rated between the City and the District on the following basis: The City shall bear that share of total maintenance costs that is equivalent to the percentage of total water flowing through the booster pump to users other than customers of the conservancy district, as determined by meter readings.

5. The agreement of September 10, 1997, shall be extended for an additional term of twenty (20) years from the effective date of this amendment. Thereafter, this agreement may be terminated by either party upon the expiration of three years following service on the other party of written notice of termination.

6. In all other respects, the agreement of September 10, 1997, shall remain in full force and effect.

IN WITNESS WHEREOF the parties have executed this agreement on the date indicated in each signature block.

DATE: May 4, 2005

BOARD OF PUBLIC WORKS AND SAFETY
CITY OF LAPORTE, INDIANA

Leigh E. Morris, Mayor

Richard J. Schmitt

Marilyn Poag

DATE: May 4, 2005

THIRTY-NINE NORTH CONSERVANCY DISTRICT