



301 East Main Street
Lowell, Michigan 49331
Phone (616) 897-8457
Fax (616) 897-4085

CITY OF LOWELL
CITY COUNCIL AGENDA
MONDAY, DECEMBER 7, 2020, 7:00 P.M.

Join Zoom Meeting

<https://us02web.zoom.us/j/85454716779>

Meeting ID: 854 5471 6779

One tap mobile

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Meeting ID: 854 5471 6779

Find your local number: <https://us02web.zoom.us/j/85454716779>

1. CALL TO ORDER; PLEDGE OF ALLEGIANCE; ROLL CALL

2. CONSENT AGENDA

- Approval of the Agenda.
- Approve and place on file the Regular and Closed session meeting minutes of November 16, 2020 and the November 30, 2020 Special meeting.
- Authorize payment of invoices in the amount of \$302,964.42

3. CITIZEN DISCUSSION FOR ITEMS NOT ON THE AGENDA

IF YOU WISH TO ADDRESS AN AGENDA ITEM, PUBLIC COMMENT FOR EACH ITEM WILL OCCUR AFTER THE INITIAL INFORMATION IS SHARED ON THE MATTER AND INITIAL DELIBERATIONS BY THE PUBLIC BODY. PUBLIC COMMENT WILL OCCUR BEFORE A VOTE ON THE AGENDA ITEM OCCURS.

4. OLD BUSINESS.

- a. Audit presentation
- b. Water/Wastewater Plant Expansion Studies – General Overview
- c. Showboat
- d. MERS
- e. COVID – 19
- f. Arbor Board Update

5. NEW BUSINESS

- a. FY 19-20 General Fund additional fund balance
- b. Resolution 24-20 – Waive Penalties Levied Under Subsections
- c. Resolution 26-20 - Asset Level Test
- d. MERS Defined Benefit Bridge
- e. Resolution 25-20 – MERS Defined Contribution Plan

6. BOARD/COMMISSION REPORTS
7. MANAGER'S REPORT
8. APPOINTMENTS
9. COUNCIL COMMENTS
10. ADJOURNMENT

NOTE: Any person who wishes to speak on an item included on the printed meeting agenda may do so. Speakers will be recognized by the Chair; at which time they will be allowed five (5) minutes maximum to address the Council. A speaker representing a subdivision association or group will be allowed ten (10) minutes to address the Council.



301 East Main Street
Lowell, Michigan 49331
Phone (616) 897-8457
Fax (616) 897-4085
www.ci.lowell.mi.us

MEMORANDUM

TO: Lowell City Council

FROM: Michael Burns, City Manager

RE: Council Agenda for Monday, December 7, 2020

1. CALL TO ORDER; PLEDGE OF ALLEGIANCE; ROLL CALL

2. CONSENT AGENDA

- Approval of the Agenda.
- Approve and place on file the Regular and Closed session meeting minutes of November 2, 2020 and the November 30, 2020 Special meeting.
- Authorize payment of invoices in the amount of \$302,964.42.

3. CITIZEN DISCUSSION FOR ITEMS NOT ON THE AGENDA

IF YOU WISH TO ADDRESS AN AGENDA ITEM, PUBLIC COMMENT FOR EACH ITEM WILL OCCUR AFTER THE INITIAL INFORMATION IS SHARED ON THE MATTER AND INITIAL DELIBERATIONS BY THE PUBLIC BODY. PUBLIC COMMENT WILL OCCUR BEFORE A VOTE ON THE AGENDA ITEM OCCURS.

4. OLD BUSINESS

- a. Audit Presentation
- b. Water/Wastewater Plan Expansion Studies – General Overview – City Manager Michael Burns will provide an update.
- c. Showboat – City Manager Michael Burns will provide an update.
- d. MERS – City Manager Michael Burns will provide an update.
- e. COVID – 19 – City Manager Michael Burns will provide an update.
- f. Arbor Board Update – Public Works Director Daniel Czarnecki will provide an update.

5. NEW BUSINESS

- a. FY 19-20 General Fund Additional Fund Balance – Memo is provided by City Manager Michael Burns.

Recommended Motion – That the Lowell City Council utilize the excess FY 2020 revenue over expenditures to address the two expenditures I proposed. I further recommend that in future years all fiscal year revenue amounts over expenditures address continuing unfunded pension liabilities. Administration should have flexibility to make inflationary increases to the current fund balance with excess revenues.

- b. Resolution 24-20 – Waive Penalties Levied Under Subsections. – Memo is provided by City Manager Michael Burns.

Recommended Motion – The Lowell City Council approve Resolution 24-20 waiving this administrative fee.

- c. Resolution 26-20 - Asset Level Test – Memo is provided by City Manager Michael Burns.

Recommended Motion – That the Lowell City Council approve Resolution 26-20 to adopt a current poverty exemption policy and guidelines in accordance with the General Property Tax Act.

- d. MERS Defined Benefit Bridge – Memo is provided by City Manager Michael Burns which includes both “d and e”.
- e. Resolution 25-20 – MERS Defined Contribution Plan

Recommended Motion – That the Lowell City Council approve the bridging down of future pension benefits for participants in the defined benefit program from 2.5% to 2.0%. I also recommend the Lowell City Council approve Resolution 25-20 to establish the defined contribution plan. Furthermore, it is recommended the City Council agree the City will contribute 10% of the employee’s base wage, where by the employee hired after July 1, 2020 shall contribute 6% of their base wage to a defined contribution plan.

- 6. BOARD/COMMISSION REPORT
- 7. MANAGER’S REPORT
- 8. APPOINTMENTS
- 9. COUNCIL COMMENTS
- 10. ADJOURNMENT

**PROCEEDINGS
OF
CITY COUNCIL MEETING
OF THE
CITY OF LOWELL
MONDAY, NOVEMBER 16, 2020, 7:00 P.M.**

1. **CALL TO ORDER; PLEDGE OF ALLEGIANCE; ROLL CALL.**

The Meeting was called to order at 7:00 p.m. by Mayor DeVore and City Clerk Sue Ullery called roll.

Present: Councilmembers Cliff Yankovich, Marty Chambers, Jim Salzwedel and Mayor DeVore.

Absent: None.

Also Present: City Manager Michael Burns, City Clerk Sue Ullery, DPW Director Dan Czarnecki, Chief of Police Chris Hurst and Lowell Light and Power General Managers Steve Donkersloot and Charlie West.

2. **APPROVAL OF THE CONSENT AGENDA.**

- Approval of the Agenda
- Approve and place on file the minutes of the November 2, 2020 City Council Regular meeting.
- Authorize payment of invoices in the amount of \$292,584.96.

IT WAS MOVED BY CHAMBERS and seconded by YANKOVICH to approve the consent agenda as written.

YES: Mayor DeVore, Councilmember Salzwedel, Councilmember Yankovich and Councilmember Chambers.

NO: None.

ABSENT: None.

MOTION CARRIED.

3. **CITIZEN COMMENTS FOR ITEMS NOT ON THE AGENDA.**

There were no comments.

4. **OLD BUSINESS.**

a. **MERS.**

City Manager Michael Burns stated he has an update that he will present soon.

b. **Showboat.**

City Manager Michael Burns stated that City Attorney Jessica Wood said the City can have a non-profit 501C3 formed for the Showboat that can be a separate entity from the City and operate on its own. They would need to form a board for the 501C3 and then the following five things would need to happen. They would need to develop a mission statement, articles of incorporation, establish by laws, have a conflict of interest policy and delve out exactly what the responsibilities are from the non-profit entity. In researching insurance for the Showboat, it's a little bit complicated. If it stays on the City insurance, it will be relatively cheap, but insurance through PAR, would be much more expensive and

also risky because of liability due to the boat is on water. So we are looking at special insurance where there could be some risk but not as much.

c. Lowell Township Water/Sewer.

City Manager Michael Burns said they had their first meeting, Tuesday, November 10, 2020. It was more of an introductory meeting than anything else, but it was a good discussion. They talked about what they would like to see come out of this, stating at the end of the day, we are going to still be working together on this.

d. Revised Oakwood Cemetery Rules & Regulations.

Public Works Director Dan Czarnecki read his memo which stated that the Oakwood Cemetery Rules & Regulations have been reviewed and updated. Some of the updated changes include new language for purchasing and assigning burial rights, transferring of burial rights, defining the layout of the area around markers including where items may be placed, the City's repurchasing burial rights, the number of internments per grave space, and additional charges after regular designated work time. Once approved, the new rules & regulations will be made available at City Hall for anyone requesting a copy, or purchasing a burial site. They will be on the City's webpage and will be sent to local funeral homes and monument companies.

IT WAS MOVED BY SALZWEDEL and seconded by DEVORE to approve the Oakwood Cemetery Rules and Regulations dated November 2020, as presented.

YES: Councilmember Salzwedel, Councilmember Yankovich, Councilmember Chambers, and Mayor DeVore.

NO: None.

ABSENT: None.

MOTION CARRIED.

e. COVID – 19.

City Manager Michael Burns stated he has spent a lot of time on COVID -19. One employee had it, but had obtained it on vacation so it didn't involve quarantining other City employees; that said, it has caused the City to make some changes. Daily screenings of employees will now take place starting Wednesday, November 18, 2020. Gatherings have been reduced to 10 people at a time so all meetings will be held via ZOOM and any changes to COVID-19 orders will be given as changes occur. The City Hall employees may go to an appointment based system so we can still service our residents but do our best to keep the employees safe. Screening people asking for appointments could be an option.

It was a general consensus by all the Council members to begin by appointment only for residents that need services at City Hall. Also, to continue waiving late fees and no water shut offs for water/sewer residents' delinquent with payment. For the Police Department, to start referring all PBT and fingerprinting back to the Sheriffs Dept for the time being. We will continue to leave COIVD – 19 on the agenda until it is over.

f. Council Vacancy.

City Manager Michael Burns stated today was the deadline to submit an application for the City Council vacancy position. We had five applications, all have met requirements to serve. The following are the applicants: Jake Davenport, Michael Gadula, Leah Groves, Tina Dickerman and Katie Rademaker. All are able to do Zoom interviews. Council was not comfortable with ZOOM interviews so Burns will get a legal opinion on whether we can do the interviews in person if we provide Zoom for the public, and we will set up interview appointments next week.

5. NEW BUSINESS.

a. Jane Ellen St. Design Engineering Services.

Public Works Director Daniel Czarnecki stated the City of Lowell has approximately \$300,000 available in the Street Funds that can be used for street work. Jane Ellen Street, in the Valley Vista subdivision is in need of resurfacing. The existing pavement is worn out and falling apart. Recent street sweeping exposed more areas of poor asphalt along the curb line of the street. There is a drainage issue in one location that is contributing to the deterioration of the street surface. We would like to resurface this street and have asked Williams & Works engineers to provide a scope of services for the design portion of the work. The project limits are from Sibley St. to Donna St. The work would consist of removal and replacement of the existing asphalt. If necessary, the gravel base may also be replaced. The drainage problem area is to be addressed and any failed curb and gutter will be replaced. The sidewalk ramps will also be addressed as needed. William & Works has proposed design services that include soil borings to determine the existing base materials, survey work to identify existing features and help set the limits of the work, and design of the street work to be completed. They will also prepare all construction documents and will bid the work for the City of Lowell. For their services, Williams & Works has provided a proposed fee of \$21,900.

IT WAS MOVED BY YANKOVICH and seconded by CHAMBERS to approve the design engineering quote for the Jane Ellen Street Design Engineering Services, as proposed by Williams & Works in their letter dated November 9, 2020 for the amount of \$21,900.

YES: Councilmember Yankovich Councilmember Salzwedel, Mayor DeVore and Councilmember Chambers.

NO: None.

ABSENT: None.

MOTION CARRIED.

b. Lowell Light & Power & The City of Lowell-MERS Addendums.

City Manager Michael Burns read his memo stating prior to 1/1/2021, MERS is requiring members to complete an addendum, for each plan division that has active employees,

for the purpose of confirming the definition of compensation, defining how certain leaves should be handled, indicating which employee classifications should be included in the plan, and reviewing the change in the handling of forfeiture assets. For the time being, all the employees with the exception of the two full time employees hired after July 1, 2020 are in the cities defined benefit plan. The two new hires will be placed in the Cities defined contribution plan once the matter is completely finalized. However, all matters pertaining to these employees regarding retirement are held in abeyance until the final employment agreement is finalized. Burns provided an addendum for the employees in the current defined benefit plan, we will file electronically and currently dictate the activities of the current plan.

IT WAS MOVED BY CHAMBERS and seconded by YANKOVICH that the City Council approve the Lowell Light & Power MERS Defined Benefit, Hybrid and Defined Contributions as presented in the packet.

YES: Councilmember Chambers, Mayor DeVore, Councilmember Salzwedel and Councilmember Yankovich.
NO: None. ABSENT: None MOTION CARRIED.

IT WAS MOVED BY CHAMBERS and seconded by SALZWEDEL that the Lowell City Council approve the MERS addendum to our current Division 01 defined benefit plan.

YES: Mayor DeVore, Councilmembers Salzwedel Councilmember Yankovich, and Councilmember Chambers.
NO: None. ABSENT: None. MOTION CARRIED.

c. Foreman St. MDOT Contract- Resolution 23-20.

Public Works Director Daniel Czarnecki stated the City is receiving funding through the MDOT Surface Transportation Program Small Urban Funds Program for the Foreman Street Sanitary Sewer project. We have the opportunity to receive \$141,500 to put towards the street portion of the project work. The work on this project must follow MDOT procedures for design, bidding and construction oversight and project payment. In order to access the MDOT Small Urban Funds, the City needs to approve and sign the standard agreement contract with MDOT. MDOT also requires the City to authorize an official to sign the document, via a certified resolution.

IT WAS MOVED BY SALZWEDEL and seconded by YANKOVICH that the City Council approve Resolution 23-20 approving the MDOT agreement for the Foreman St. Sanitary Sewer Project, and authorizes Mr. Michael Burns, City Manager, to act on behalf of the City of Lowell to sign the contract documents with MDOT, Contract #20-5404.

YES: Mayor DeVore, Councilmember Salzwedel, Councilmember Yankovich, and Councilmember Chambers.
NO: None. ABSENT: None. MOTION CARRIED.

6. **BOARD/COMMISSION REPORTS.**

Councilmember Chambers stated at the planning commission meeting, we had new marijuana applicants, one was approved and the other applicant did not show up.

Councilmember Salzwedel stated at the Lowell Light & Power meeting exciting updates are happening at the Chatham Distribution Center. Also, LL&P Board will be teaming up with Lowell Rotary Club to have a Holiday Lighting Contest for the 2nd consecutive year. Councilmember Salzwedel asked Steve Donkersloot to give details. Donkersloot gave some highlights of the contest and said more details will come on the LL&P website and Facebook page. Councilmember Salzwedel also stated the LCTV will meet December 3, 2020.

Councilmember Yankovich stated at the LOOK Foundation meeting, funds were granted to the following:

\$12,000 to FROM to establish their brand a little more seismically.

\$7,450 to the Observatory for a new well.

\$2,000 to the Historical Museum towards a book they are creating about the museum.

\$2,000 to Lowell's Open Table for a commercial grade freezer.

\$3,862.25 to Lowell Police Department for three new AED's.

Showboat asked for money but they were a week late applying, so they did not receive a grant. They were directed to re-apply for a LOOK grant in May.

Mayor DeVore stated the Fire Authority met last Monday, 11-2-2020. Contract was approved but changed a little, cost will be less. If one of the Townships approves it tonight, there will be a small swearing in for Shannon Witherell, the new fire chief. County truck process has now begun. AED's that were affected by the recall are being replaced.

Also, DeVore noted he will be attending the Park & Rec meeting, filling in for Greg Canfield.

7. **BUDGET REPORTS.**

City Manager Michael Burns gave an update. We are 1/3 of the way into the budget cycle. In good shape for the most part. A few of the road projects came in less than projected. Money from Cares Act is all credited to this Fiscal Year 2020.

8. **MONTHLY REPORTS.**

There were no comments.

9. **MANAGER'S REPORT.**

- CDBG issue with Kent County is fixed. So we should be good for beginning the Amity Street project on July 1st, 2021.
- Last two weeks was primarily spent on COVID-19 and labor negotiations, which will be discussed in closed session.

10. **APPOINTMENTS.**

No appointments.

11. **COUNCIL COMMENTS**

Councilmember Yankovich expressed again the City's stance on marijuana facilities in the City, the number of those facilities and how the City was directed by legal advice and by the residents that voted.

Councilmember Salzwedel asked Public Works Director Dan Czarnecki about the Arbor Board meeting and have we accomplished anything discussed at the beginning of the year. Czarnecki will look into it and report back.

Councilmember Chambers checked in with the Showboat general contractor and things are moving forward. There were some minor issues but engineers are working that out and all is going well. Also, thanked Dan for getting the trashcans back. FROM is holding a Toy Drive, there are collection containers in several stores around town, so help make some children have a good Christmas.

Mayor DeVore thanked Steve Donkersloot for everything he has done, he has helped with many vital parts of this City, he wishes him well and stated he will be missed.

10. **CLOSED SESSION.**

IT WAS MOVED BY CHAMBERS and seconded by YANCKOVICH to go into closed session at 7:57 p.m.

YES: 4. NO: None. ABSENT: None. MOTION CARRIED.

IT WAS MOVED BY SALZWEDEL and seconded by CHAMBERS to go back into open session at 9:01 p.m.

YES: 4. NO: None. ABSENT: None. MOTION CARRIED.

IT WAS MOVED BY CHAMBERS and seconded by SALZWEDEL to approve the labor agreement with the IEBW.

YES: Councilmembers Salzwedel, Yankovich, Chambers and Mayor DeVore. NO: None.
ABSENT: None MOTION CARRIED.

15. MOTION TO ADJOURN.

IT WAS MOVED BY SALZWEDEL to adjourn at 9:05

YES: 4. NO: None. ABSENT: None. MOTION CARRIED.

DATE:

APPROVED:

Mike DeVore, Mayor

Sue Ullery, Lowell City Clerk

CITY OF LOWELL
RESOLUTION NO. 23-20

A RESOLUTION TO APPROVE THE MDOT FOREMEN ST. CONTRACT AND
AUTHORIZE THE LOWELL CITY MANAGER TO SIGN THE CONTRACT
(CONTRACT #20-5404)

At a regular meeting of the City Council of the City of Lowell, Kent County, Michigan, held in the Lowell City Hall Council Chambers, 301 E. Main St., in said City, on November 16, 2020, at 7:00 pm.

PRESENT:

ABSENT:

The following preamble and resolution were offered by Councilmember SALZWEDEL and supported by Councilmember YANKOVICH.

WHEREAS, the City of Lowell maintains Foreman St. within the City of Lowell as part of their City Major Street system under Public ACT 51.

WHEREAS, the City of Lowell will be performing a sanitary sewer replacement project on Forman St. between Beech St. and N. Hudson St. in the City of Lowell.

WHEREAS, the City of Lowell can receive funding from the Michigan Department of Transportation (MDOT) Surface Transportation Program, Small Urban Funds for a portion of the roadway reconstruction work.

WHEREAS, MDOT requires a formal authorization from the public agency indicating who is authorized to sign the contract.

NOW, THEREFORE, BE IT RESOLVED THAT, the City has approved the MDOT Standard Agreement Contract for the Foreman St. Sanitary Sewer Project, and authorizes Mr. Michael Burns, City Manager, to act as agent on behalf of the City of Lowell to sign the contract documents with MDOT, Contract #20-5404.

PRESENT: Mayor DeVore, Councilmembers Salzwedel, Yankovich, Chambers.

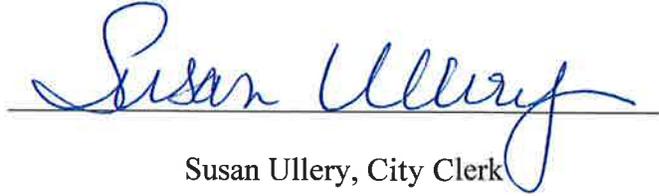
NAYS: None

ABSENT: None

RESOLUTION DECLARED ADOPTED.

CERTIFICATION

I Susan Ullery, Clerk for the City of Lowell, hereby certify that the foregoing is a true and accurate copy of a Resolution adopted by the City Council for the City of Lowell at a regular meeting held on the 16th day of November, 2020, and that said meeting was conducted and public notice of said meeting was given pursuant to and in full compliance with the Open Meetings Act, being Act 267, Public Acts of Michigan, 1976, and that the minutes of said meeting were kept and will be or have been available as required by said Act.

A handwritten signature in blue ink, reading "Susan Ullery", is written over a horizontal line. The signature is cursive and extends slightly below the line.

Susan Ullery, City Clerk

**PROCEEDINGS
OF
CITY COUNCIL
VIRTUAL SPECIAL MEETING
FOR THE VACANT CITY COUNCIL POSITION ON
MONDAY, NOVEMBER 30, 2020, 4:00 P.M.**

1. **CALL TO ORDER; PLEDGE OF ALLEGIANCE; ROLL CALL.**

The Special Meeting was called to order at 4:00 p.m. by Mayor DeVore and City Clerk Susan Ullery called roll.

Present: Councilmembers Chambers, Salzwedel, Yankovich and Mayor DeVore.

Absent: None.

Also Present: City Manager Michael Burns, City Clerk Susan Ullery and DPW Director Dan Czarnecki.

2. **APPROVAL OF THE AGENDA.**

IT WAS MOVED BY SALZWEDEL and seconded by CHAMBERS to approve the agenda as written.

YES: Mayor DeVore, Councilmember Salzwedel, Councilmember Yankovich, and Councilmember Chambers.

NO: None. ABSENT: None. MOTION CARRIED.

3. **CITIZEN COMMENTS FOR ITEMS NOT ON THE AGENDA.**

None.

4. **INTERVIEWS FOR THE VACANT CITY COUNCIL POSITION.**

City Council members interviewed the following candidates for the vacant City Council position.

- Leah Groves
- Katie Rademacher
- Jake Davenport
- Michael Gadula
- Tina Dickerman

After much discussion the following motion was made;

IT WAS MOVED BY YANKOVICH and seconded by SALZWEDEL to appoint Leah Groves for the vacant City Council position.

YES: Mayor DeVore, Councilmembers Salzwedel, Yankovich and Chambers.

NO: None. ABSENT: None. MOTION CARRIED.

5. COUNCIL COMMENTS.

There were no Council comments.

6. ADJOURNMENT.

IT WAS MOVED BY SALZWEDEL to adjourn at 7:13 p.m.

DATE:

APPROVED:

Mike DeVore, Mayor

Susan Ullery, City Clerk

Vendor Code	Vendor Name	Description	Amount
	Invoice		
01513	ADDORIO TECHNOLOGIES, LLC		
	8690	POLICE - COMPUTER WORK	2,185.00
	8695	WTP - COMPUTER WORK	212.50
TOTAL FOR: ADDORIO TECHNOLOGIES, LLC			2,397.50
00015	ALEXANDER CHEMICAL CORP		
	32928	WTP CHLORINE	15.50
TOTAL FOR: ALEXANDER CHEMICAL CORP			15.50
10816	AMAZON CAPITAL SERVICES		
	11W1-GTTF-F3KY	WTP SUPPLIES	190.42
	1JHM-71QD-P66D	WATER DEPT SUPPLIES	27.77
	1XVK-K9HQ-3VDM	DPW R & M	89.76
	1YX9-1VLL-PX9R	WATER DEPT R & M	67.82
TOTAL FOR: AMAZON CAPITAL SERVICES			375.77
10731	APPLIED IMAGING		
	1638811	CITY HALL COPY MACHINE	433.01
TOTAL FOR: APPLIED IMAGING			433.01
10660	ARROW ENERGY, INC.		
	129520	AIRPORT AV GAS	4,771.04
TOTAL FOR: ARROW ENERGY, INC.			4,771.04
10818	AT&T MOBILITY		
	287291108942X1114	CELL PHONE BILL -	907.77
TOTAL FOR: AT&T MOBILITY			907.77
00045	BARTLETT, SANDY		
	11/20/2020	METER READS & MILEAGE NOV 2020	776.87
TOTAL FOR: BARTLETT, SANDY			776.87
10532	BROWN, CASEY		
	12535	DUMPSTER REIMBURSEMENT	295.00
TOTAL FOR: BROWN, CASEY			295.00
REFUND UB	CANFIELD, DEB		
	12/04/2020	UB refund for account: 5-02462-6	67.27
TOTAL FOR: CANFIELD, DEB			67.27
00344	CITY OF LOWELL		
	WTAX 2020	238 HIGH 41-20-02-404-003	520.06
TOTAL FOR: CITY OF LOWELL			520.06
10493	COMCAST CABLE		
	12/6 - 1/5/2021	DPW CABLE	40.34
TOTAL FOR: COMCAST CABLE			40.34
10509	CONSUMERS ENERGY		
	12/3/2020	ACCOUNT STATEMENTS	362.19
	NOVEMBER	ACCOUNT STATEMENTS	3,392.32
TOTAL FOR: CONSUMERS ENERGY			3,754.51
01156	CURTIS CLEANERS		
	B2306A	DRY CLEANING - POLICE	136.95
TOTAL FOR: CURTIS CLEANERS			136.95

Vendor Code	Vendor Name	Description	Amount
00132	D&D TRUCKING ACQUISITION, LLC		
	31648	BATTERY #36	283.86
	31724	R & M #37-7	84.52
TOTAL FOR: D&D TRUCKING ACQUISITION, LLC			368.38
01783	DELL MARKETING L P		
	10431125786	COMPUTER EQUIPMENT	732.04
TOTAL FOR: DELL MARKETING L P			732.04
02035	DIGITAL OFFICE MACHINES, INC.		
	19239	DPW COPY MACHINE	83.94
TOTAL FOR: DIGITAL OFFICE MACHINES, INC.			83.94
02089	DORNBOS SIGN, INC		
	INV48532	DPW - STOP & YEILD SIGNS	1,497.75
TOTAL FOR: DORNBOS SIGN, INC			1,497.75
01955	ENVIRONMENTAL DOOR, INC.		
	69646	DPW R & M	255.50
TOTAL FOR: ENVIRONMENTAL DOOR, INC.			255.50
10670	FAHEY SCHULTZ BURZYCH RHODES PLC		
	56199	COLLECTIVE BARGAINING	1,981.00
	56200	EMPLOYMENT MATTERS	708.50
TOTAL FOR: FAHEY SCHULTZ BURZYCH RHODES PLC			2,689.50
10673	FERGUSON WATERWORKS		
	0115557	WATER METER 1-1/2"	664.36
	0116043	WATER DEPT R & M	30.33
TOTAL FOR: FERGUSON WATERWORKS			694.69
10874	FLOORSTAR FLOOR CARE & BLDG SVCS		
	INV0024	BIO SPRAY NOV 2020	1,040.00
TOTAL FOR: FLOORSTAR FLOOR CARE & BLDG SVCS			1,040.00
00215	GODWIN ADA VILLAGE HARDWARE		
	3734 / 3735	R & M PARTS FOR #67 & #69	103.96
TOTAL FOR: GODWIN ADA VILLAGE HARDWARE			103.96
00225	GRAND RAPIDS COMMUNITY COLLEGE		
	11/1 - 11/15/2020	TAX DISBURSEMENT	20.79
TOTAL FOR: GRAND RAPIDS COMMUNITY COLLEGE			20.79
00232	GRAND VALLEY METRO COUNCIL		
	3391	LOCAL ROADS PASAR RATED 2020	284.13
TOTAL FOR: GRAND VALLEY METRO COUNCIL			284.13
02295	GRAYMONT WESTERN LIME INC.		
	158640	WTP QUICKLIME	6,883.50
TOTAL FOR: GRAYMONT WESTERN LIME INC.			6,883.50
01944	GREATER LOWELL CHAMBER FOUND.		
	102807	LOWELL COMMUNITY CLEANUP DAY	207.00
TOTAL FOR: GREATER LOWELL CHAMBER FOUND.			207.00
01508	GTW		
	231331 / 233974	ACCOUNT STATEMENT	68.80
TOTAL FOR: GTW			68.80

Vendor Code	Vendor Name Invoice	Description	Amount
00234	HACH COMPANY 12179896	WTP SUPPLIES	621.78
TOTAL FOR: HACH COMPANY			<u>621.78</u>
REFUND UB	HALL, DAVID 12/04/2020	UB refund for account: 2-01021-7	63.46
TOTAL FOR: HALL, DAVID			<u>63.46</u>
10406	HOMETOWN DECORATION AND DISPLAY LLC 1721	HOLIDAY DECORATIONS	4,677.00
TOTAL FOR: HOMETOWN DECORATION AND DISPLAY LLC			<u>4,677.00</u>
00248	HOOPER PRINTING 61285	TAX PAPER	88.32
TOTAL FOR: HOOPER PRINTING			<u>88.32</u>
10886	HUBBERT'S HOME IMPROVEMENTS 11/18/2020	AIPORT DEPOSIT FOR BIFOLD DOOR	8,000.00
TOTAL FOR: HUBBERT'S HOME IMPROVEMENTS			<u>8,000.00</u>
02463	HYDROCORP 0059827-IN	CROSS CONNECTION NOVEMBER 2020	937.00
TOTAL FOR: HYDROCORP			<u>937.00</u>
10112	IAAO 21-10155108	MEMBERSHIP - RASHID 10155108	220.00
TOTAL FOR: IAAO			<u>220.00</u>
10609	JXTRUCK CENTER - GRAND RAPIDS 2628250S.02	YEARLY SERVICE #15	240.99
TOTAL FOR: JXTRUCK CENTER - GRAND RAPIDS			<u>240.99</u>
10424	KCTA 12/3/2020	MEMBERSHIP 2021 - SUE OLIN/LORI GERARD	50.00
TOTAL FOR: KCTA			<u>50.00</u>
00300	KENT COUNTY TREASURER 11/1 - 11/15/2020 TAX DISBURSEMENT 12/3/2020 TRAILER FEES NOV 2020		121.66 320.00
TOTAL FOR: KENT COUNTY TREASURER			<u>441.66</u>
00302	KENT INTERMEDIATE SCHOOL DIST. 11/1 - 11/15/2020 TAX DISBURSEMENT		66.26
TOTAL FOR: KENT INTERMEDIATE SCHOOL DIST.			<u>66.26</u>
02209	KERKSTRA PORTABLE, INC. 167982	PORTABLE RESTROOM CEMETERY	90.00
TOTAL FOR: KERKSTRA PORTABLE, INC.			<u>90.00</u>
REFUND UB	LANDMAN, TODD 12/04/2020	UB refund for account: 1-04900-3	7.32
TOTAL FOR: LANDMAN, TODD			<u>7.32</u>
01374	LOWELL AREA HISTORICAL MUSEUM 11/1 - 11/15/2020 TAX DISBURSEMENT		2.77
TOTAL FOR: LOWELL AREA HISTORICAL MUSEUM			<u>2.77</u>

Vendor Code	Vendor Name	Description	Amount
00562	LOWELL AREA SCHOOLS		
	11/1 - 11/15/2020	TAX DISBURSEMENT	47.37
TOTAL FOR: LOWELL AREA SCHOOLS			47.37
00341	LOWELL LIGHT & POWER		
	11/30/2020	ELECTRIC 10/25 - 11/23/2020	17,913.75
	3470	NOV PHONE & MAINT	3,034.31
TOTAL FOR: LOWELL LIGHT & POWER			20,948.06
10251	MAG PLUMBING SERVICE LLC		
	2373	TESTING BACKFLOW PREVENTERS	6,040.22
TOTAL FOR: MAG PLUMBING SERVICE LLC			6,040.22
01078	MAMC		
	11/25/2020	MEMBERSHIP 2021 - ULLERY & BROWN	120.00
TOTAL FOR: MAMC			120.00
10615	MANSZEWSKI LANDSCAPING LLC		
	180	PAYMENT #4 OF 4	10,140.00
TOTAL FOR: MANSZEWSKI LANDSCAPING LLC			10,140.00
REFUND UB	MAYBERRY HOMES		
	12/04/2020	UB refund for account: 6-01391-1	50.09
TOTAL FOR: MAYBERRY HOMES			50.09
10038	MICHIGAN ASSESSOR ASSOCIATION		
	12/3/2020	MEMBERSHIP - JEFFREY RASHID	90.00
TOTAL FOR: MICHIGAN ASSESSOR ASSOCIATION			90.00
10083	MICHIGAN CAT		
	SD11643439	CITY HALL GENERATOR R & M	403.25
TOTAL FOR: MICHIGAN CAT			403.25
10206	MISS DIG SYSTEM, INC.		
	20210608	2021 MEMBERSHIP FEES	1,618.50
TOTAL FOR: MISS DIG SYSTEM, INC.			1,618.50
00426	MODEL COVERALL SERVICE, INC.		
	11/30/2020	LIBRARY RUGS NOV 2020	194.94
TOTAL FOR: MODEL COVERALL SERVICE, INC.			194.94
10838	MORAN IRON WORKS, INC		
	16428	SHOWBOAT GRANT PROGRESS BILLING	150,984.50
TOTAL FOR: MORAN IRON WORKS, INC			150,984.50
02291	PEERLESS MIDWEST INC.		
	521761	WTP WELL #4 R & M	1,623.60
TOTAL FOR: PEERLESS MIDWEST INC.			1,623.60
10103	PITNEY BOWES GLOBAL FIN. SRVS LLC		
	11/10/2020	ACCOUNT STATEMENT	70.97
	3312467389	POSTAGE MACHINE	150.00
TOTAL FOR: PITNEY BOWES GLOBAL FIN. SRVS LLC			220.97
01270	PLUMMERS ENVIRONMENTAL SERVICE		
	20125135	CATCH BASINS, STORM & SANITARY SEWER LINES	1,861.20
	20127025	JETTED MULTIPLE LINES	3,973.30
	20128106	PUMPED BASIN & JETTED LINE	606.90
TOTAL FOR: PLUMMERS ENVIRONMENTAL SERVICE			6,441.40

Vendor Code	Vendor Name Invoice	Description	Amount
00506	POSTMASTER 11/20/2020 11/30/2020	PERMIT #25 RENEWAL TAX BILLS & W/S BILLS	240.00 959.36
TOTAL FOR: POSTMASTER			1,199.36
10130	RASHID, JEFFREY 12/1/2020	NOV 2020 ASSESSING EXPENSE	27.03
TOTAL FOR: RASHID, JEFFREY			27.03
10133	RED CREEK WASTE SERVICES INC. OBR00582	TRASH SERVICE	205.04
TOTAL FOR: RED CREEK WASTE SERVICES INC.			205.04
02248	RIVERSIDE INTEGRATED SYSTEMS INC. 154672	LIBRARY ANNUAL MONITORING FEE	300.00
TOTAL FOR: RIVERSIDE INTEGRATED SYSTEMS INC.			300.00
00827	RS TECHNICAL SERVICES, INC. 21597	WELL 4 SERVICE - WTP	105.00
TOTAL FOR: RS TECHNICAL SERVICES, INC.			105.00
10378	RUESINK, KATHIE 745368/745369	CLEANING SERVICES 11/13 - 11/29/20	480.00
TOTAL FOR: RUESINK, KATHIE			480.00
02575	SELF SERVE LUMBER 12/1/2020	ACCOUNT STATEMENT	53.13
TOTAL FOR: SELF SERVE LUMBER			53.13
02085	SHMG OCCUPATIONAL HEALTH 677086	DOT PHYSICALS BRECKEN, FOSBURG, SOYKA	192.00
TOTAL FOR: SHMG OCCUPATIONAL HEALTH			192.00
10849	SMART BUSINESS SOURCE OE-30780-1 OE-33216-1	OFFICE SUPPLIES OFFICE SUPPLIES	314.15 37.39
TOTAL FOR: SMART BUSINESS SOURCE			351.54
10202	STATE OF MICHIGAN 761-10591036	PUBLIC WATER SUPPLY ANNUAL FEE	1,300.05
TOTAL FOR: STATE OF MICHIGAN			1,300.05
REFUND UB	STRAUTZ, JOSH 12/04/2020	UB refund for account: 7-00100-2	90.42
TOTAL FOR: STRAUTZ, JOSH			90.42
10887	STRYKER SALES CORPORATION 8873911 SO	POLICE - DEFIBRILLATORS	3,860.25
TOTAL FOR: STRYKER SALES CORPORATION			3,860.25
10583	SUEZ WATER ENVIRONMENTAL SVC INC 20200253 202041327	SURCHARGES OCTOBER 2020 WWTP SERVICES NOVEMBER 2020	734.72 38,490.00
TOTAL FOR: SUEZ WATER ENVIRONMENTAL SVC INC			39,224.72
01275	THE VERDIN COMPANY 0101072	DOWNTOWN CLOCK SERVICE AGREEMENT	630.00
TOTAL FOR: THE VERDIN COMPANY			630.00

Vendor Code	Vendor Name Invoice	Description	Amount
00633	TIP TOP GRAVEL CO. 045454	CRUSHED ASPHALT	313.58
TOTAL FOR: TIP TOP GRAVEL CO.			313.58
10459	TRANSUNION RISK AND ALTERNATIVE 181229-202010-1	SALVAGE EXPENSES OCTOBER 2020	200.00
TOTAL FOR: TRANSUNION RISK AND ALTERNATIVE			200.00
00930	TRUCK & TRAILER SPECIALTIES DRO005699 DRO005701	2008 INTERNATIONAL R & M YEARLY SERVICE #15	645.71 552.68
TOTAL FOR: TRUCK & TRAILER SPECIALTIES			1,198.39
10069	TRUGREEN 131620554 132368210	LAWN SERVICE WTP CHAMBER - LAWN CARE	119.88 39.00
TOTAL FOR: TRUGREEN			158.88
REFUND UB	VANENK, CAMERON 12/04/2020	UB refund for account: 3-04026-21	34.83
TOTAL FOR: VANENK, CAMERON			34.83
10484	VERGENNES BROADBAND 5267-20201116-1	INTERNET STATEMENT	309.99
TOTAL FOR: VERGENNES BROADBAND			309.99
00666	VERGENNES TOWNSHIP TREASURER 12/3/2020 12-3-2020	W TAX 41-16-35-100-601 W TAX 41-16-35-426-052	2,501.58 951.52
TOTAL FOR: VERGENNES TOWNSHIP TREASURER			3,453.10
REFUND UB	WALSH, LORI 12/04/2020	UB refund for account: 3-04038-12	200.00
TOTAL FOR: WALSH, LORI			200.00
00692	WILLIAMS & WORKS INC. 91259	WWTP EXPANSION STUDY	2,824.50
TOTAL FOR: WILLIAMS & WORKS INC.			2,824.50
10567	WOLF KUBOTA 11/30/2020 BYR-103685 BYR-103711 BYR-14793	SERVICE INV: 103685-103686-103711 YEARLY SERVICE #52 YEARLY SERVICE #55 #53 R & M	1,200.79 402.83 328.63 469.33
TOTAL FOR: WOLF KUBOTA			2,401.58
TOTAL - ALL VENDORS			302,964.42

GL Number	Invoice Line Desc	Vendor	Invoice Description	Amount	Check #
Fund 101 GENERAL FUND					
Dept 000					
101-000-084.015	DUE FROM FIRE AUTHORITY	MAG PLUMBING SERVICE LLC	TESTING BACKFLOW PREVENTE	76.00	75051
101-000-084.015	DUE FROM FIRE AUTHORITY	VERGENNES BROADBAND	INTERNET STATEMENT	28.57	75063
101-000-085.000	DUE FROM LIGHT & POWER	MAG PLUMBING SERVICE LLC	TESTING BACKFLOW PREVENTE	1,264.52	75051
101-000-085.000	DUE FROM LIGHT & POWER	VERGENNES BROADBAND	INTERNET STATEMENT	58.58	75063
101-000-085.000	DUE FROM LIGHT & POWER	POSTMASTER	PERMIT #25 RENEWAL	120.00	75104
101-000-222.000	DUE TO COUNTY-TRAILER FEE	KENT COUNTY TREASURER	TRAILER FEES NOV 2020	64.00	75091
101-000-225.000	DUE TO SET -TRAILER FEES	KENT COUNTY TREASURER	TRAILER FEES NOV 2020	256.00	75091
Total For Dept 000				1,867.67	
Dept 172 MANAGER					
101-172-801.000	PROFESSIONAL SERVICES	GREATER LOWELL CHAMBER FO	LOWELL COMMUNITY CLEANUP	207.00	75041
101-172-850.000	COMMUNICATIONS	AT&T MOBILITY	CELL PHONE BILL -	45.25	75032
Total For Dept 172 MANAGE				252.25	
Dept 191 ELECTIONS					
101-191-955.000	MISCELLANEOUS EXPENSE	MAMC	MEMBERSHIP 2021 - ULLERY	120.00	75095
Total For Dept 191 ELECTI				120.00	
Dept 209 ASSESSOR					
101-209-740.000	OPERATING SUPPLIES	SMART BUSINESS SOURCE	OFFICE SUPPLIES	13.12	75111
101-209-860.000	TRAVEL EXPENSES	RASHID, JEFFREY	NOV 2020 ASSESSING EXPENS	27.03	75105
101-209-955.000	MISCELLANEOUS EXPENSE	IAAO	MEMBERSHIP - RASHID 10155	220.00	75088
101-209-955.000	MISCELLANEOUS EXPENSE	MICHIGAN ASSESSOR ASSOCIA	MEMBERSHIP - JEFFREY RASH	90.00	75097
Total For Dept 209 ASSESS				350.15	
Dept 210 ATTORNEY					
101-210-802.000	LABOR RELATIONS ATTORNEY	FAHEY SCHULTZ BURZYCH RHO	COLLECTIVE BARGAINING	1,981.00	75079
101-210-802.000	LABOR RELATIONS ATTORNEY	FAHEY SCHULTZ BURZYCH RHO	EMPLOYMENT MATTERS	708.50	75079
Total For Dept 210 ATTORN				2,689.50	
Dept 215 CLERK					
101-215-850.000	COMMUNICATIONS	AT&T MOBILITY	CELL PHONE BILL -	45.25	75032
Total For Dept 215 CLERK				45.25	
Dept 253 TREASURER					
101-253-740.000	OPERATING SUPPLIES	HOOPER PRINTING	TAX PAPER	88.32	75044
101-253-740.000	OPERATING SUPPLIES	POSTMASTER	TAX BILLS & W/S BILLS	524.17	75065
101-253-955.000	MISCELLANEOUS EXPENSE	KCTA	MEMBERSHIP 2021 - SUE OLI	50.00	75090
Total For Dept 253 TREASU				662.49	
Dept 265 CITY HALL					
101-265-727.000	OFFICE SUPPLIES	SMART BUSINESS SOURCE	OFFICE SUPPLIES	17.09	75111
101-265-727.000	OFFICE SUPPLIES	SMART BUSINESS SOURCE	OFFICE SUPPLIES	314.15	75111
101-265-730.000	POSTAGE	PITNEY BOWES GLOBAL FIN.	POSTAGE MACHINE	150.00	75102
101-265-740.000	OPERATING SUPPLIES	PITNEY BOWES GLOBAL FIN.	ACCOUNT STATEMENT	70.97	75055
101-265-802.000	CONTRACTUAL	MAG PLUMBING SERVICE LLC	TESTING BACKFLOW PREVENTE	200.00	75051
101-265-802.000	CONTRACTUAL	RED CREEK WASTE SERVICES	TRASH SERVICE	63.50	75106
101-265-802.000	CONTRACTUAL	RUESINK, KATHIE	CLEANING SERVICES 11/13 -	330.00	75109
101-265-850.000	COMMUNICATIONS	VERGENNES BROADBAND	INTERNET STATEMENT	43.57	75063
101-265-850.000	COMMUNICATIONS	LOWELL LIGHT & POWER	NOV PHONE & MAINT	443.00	75093
101-265-920.000	PUBLIC UTILITIES	CONSUMERS ENERGY	ACCOUNT STATEMENTS	1,270.17	75034
101-265-920.000	PUBLIC UTILITIES	LOWELL LIGHT & POWER	ELECTRIC 10/25 - 11/23/20	2,565.61	75094
101-265-930.000	REPAIR & MAINTENANCE	MAG PLUMBING SERVICE LLC	TESTING BACKFLOW PREVENTE	1,175.50	75051
101-265-930.000	REPAIR & MAINTENANCE	MICHIGAN CAT	CITY HALL GENERATOR R & M	403.25	75098
Total For Dept 265 CITY H				7,046.81	
Dept 276 CEMETERY					
101-276-802.000	CONTRACTUAL	KERKSTRA PORTABLE, INC.	PORTABLE RESTROOM CEMETER	90.00	75048
101-276-802.000	CONTRACTUAL	MAG PLUMBING SERVICE LLC	TESTING BACKFLOW PREVENTE	200.00	75051
101-276-802.000	CONTRACTUAL	RED CREEK WASTE SERVICES	TRASH SERVICE	60.00	75106
101-276-920.000	PUBLIC UTILITIES	LOWELL LIGHT & POWER	ELECTRIC 10/25 - 11/23/20	102.38	75094
101-276-930.000	REPAIR & MAINTENANCE	MAG PLUMBING SERVICE LLC	TESTING BACKFLOW PREVENTE	38.00	75051

GL Number	Invoice Line Desc	Vendor	Invoice Description	Amount	Check #
Fund 101 GENERAL FUND					
Dept 276 CEMETERY					
Total For Dept 276 CEMETE				490.38	
Dept 301 POLICE DEPARTMENT					
101-301-727.000	OFFICE SUPPLIES	SMART BUSINESS SOURCE	OFFICE SUPPLIES	7.18	75111
101-301-744.000	UNIFORMS	CURTIS CLEANERS	DRY CLEANING - POLICE	136.95	75075
101-301-850.000	COMMUNICATIONS	AT&T MOBILITY	CELL PHONE BILL -	489.27	75032
101-301-850.000	COMMUNICATIONS	VERGENNES BROADBAND	INTERNET STATEMENT	43.57	75063
101-301-850.000	COMMUNICATIONS	LOWELL LIGHT & POWER	NOV PHONE & MAINT	86.15	75093
101-301-960.000	SALVAGE EXPENSES	TRANSUNION RISK AND ALTER	SALVAGE EXPENSES OCTOBER	200.00	75060
Total For Dept 301 POLICE				963.12	
Dept 426 EMERGENCY MANAGEMENT					
101-426-740.000	OPERATING SUPPLIES	FLOORSTAR FLOOR CARE & BL	BIO SPRAY NOV 2020	1,040.00	75081
Total For Dept 426 EMERGE				1,040.00	
Dept 441 DEPARTMENT OF PUBLIC WORKS					
101-441-802.000	CONTRACTUAL	MAG PLUMBING SERVICE LLC	TESTING BACKFLOW PREVENTE	100.00	75051
101-441-802.000	CONTRACTUAL	MANSZEWSKI LANDSCAPING LL	PAYMENT #4 OF 4	1,020.00	75053
101-441-802.000	CONTRACTUAL	SHMG OCCUPATIONAL HEALTH	DOT PHYSICALS BRECKEN, FO	192.00	75057
101-441-802.000	CONTRACTUAL	RED CREEK WASTE SERVICES	TRASH SERVICE	4.04	75106
101-441-850.000	COMMUNICATIONS	AT&T MOBILITY	CELL PHONE BILL -	88.52	75032
101-441-850.000	COMMUNICATIONS	VERGENNES BROADBAND	INTERNET STATEMENT	28.57	75063
101-441-850.000	COMMUNICATIONS	COMCAST CABLE	DPW CABLE	40.34	75073
101-441-850.000	COMMUNICATIONS	LOWELL LIGHT & POWER	NOV PHONE & MAINT	27.74	75093
101-441-920.000	PUBLIC UTILITIES	CONSUMERS ENERGY	ACCOUNT STATEMENTS	444.54	75034
101-441-920.000	PUBLIC UTILITIES	LOWELL LIGHT & POWER	ELECTRIC 10/25 - 11/23/20	305.78	75094
101-441-926.000	STREET LIGHTING	LOWELL LIGHT & POWER	ELECTRIC 10/25 - 11/23/20	969.35	75094
101-441-930.000	REPAIR & MAINTENANCE	MAG PLUMBING SERVICE LLC	TESTING BACKFLOW PREVENTE	38.00	75051
101-441-930.000	REPAIR & MAINTENANCE	PLUMMERS ENVIRONMENTAL SE	JETTED MULTIPLE LINES	794.90	75056
101-441-930.000	REPAIR & MAINTENANCE	AMAZON CAPITAL SERVICES	DPW R & M	89.76	75068
101-441-930.000	REPAIR & MAINTENANCE	ENVIRONMENTAL DOOR, INC.	DPW R & M	255.50	75078
101-441-930.000	REPAIR & MAINTENANCE	PLUMMERS ENVIRONMENTAL SE	PUMPED BASIN & JETTED LIN	606.90	75103
Total For Dept 441 DEPART				5,005.94	
Dept 747 CHAMBER/RIVERWALK					
101-747-920.000	CHAMBER UTILITIES	CONSUMERS ENERGY	ACCOUNT STATEMENTS	53.32	75034
101-747-920.000	CHAMBER UTILITIES	LOWELL LIGHT & POWER	ELECTRIC 10/25 - 11/23/20	195.34	75094
Total For Dept 747 CHAMBE				248.66	
Dept 751 PARKS					
101-751-802.000	CONTRACTUAL	MAG PLUMBING SERVICE LLC	TESTING BACKFLOW PREVENTE	300.00	75051
101-751-802.000	CONTRACTUAL	MANSZEWSKI LANDSCAPING LL	PAYMENT #4 OF 4	8,310.00	75053
101-751-850.000	COMMUNICATIONS	AT&T MOBILITY	CELL PHONE BILL -	38.24	75032
101-751-920.000	PUBLIC UTILITIES	LOWELL LIGHT & POWER	ELECTRIC 10/25 - 11/23/20	511.91	75094
101-751-930.000	REPAIR & MAINTENANCE	SELF SERVE LUMBER	ACCOUNT STATEMENT	42.14	75110
Total For Dept 751 PARKS				9,202.29	
Dept 757 SHOWBOAT					
101-757-920.000	SHOWBOAT UTILITIES	LOWELL LIGHT & POWER	ELECTRIC 10/25 - 11/23/20	49.12	75094
Total For Dept 757 SHOWBO				49.12	
Dept 790 LIBRARY					
101-790-802.000	CONTRACTUAL	MAG PLUMBING SERVICE LLC	TESTING BACKFLOW PREVENTE	300.00	75051
101-790-802.000	CONTRACTUAL	MODEL COVERALL SERVICE, I	LIBRARY RUGS NOV 2020	194.94	75100
101-790-802.000	CONTRACTUAL	RED CREEK WASTE SERVICES	TRASH SERVICE	47.50	75106
101-790-802.000	CONTRACTUAL	RIVERSIDE INTEGRATED SYST	LIBRARY ANNUAL MONITORING	300.00	75107
101-790-802.000	CONTRACTUAL	RUESINK, KATHIE	CLEANING SERVICES 11/13 -	150.00	75109
101-790-850.000	COMMUNICATIONS	LOWELL LIGHT & POWER	NOV PHONE & MAINT	112.96	75093
101-790-920.000	PUBLIC UTILITIES	CONSUMERS ENERGY	ACCOUNT STATEMENTS	706.11	75034
101-790-920.000	PUBLIC UTILITIES	LOWELL LIGHT & POWER	ELECTRIC 10/25 - 11/23/20	1,279.87	75094
101-790-930.000	REPAIR & MAINTENANCE	MAG PLUMBING SERVICE LLC	TESTING BACKFLOW PREVENTE	214.90	75051

GL Number	Invoice Line Desc	Vendor	Invoice Description	Amount	Check #
Fund 101 GENERAL FUND					
Dept 790 LIBRARY					
Total For Dept 790 LIBRAR				3,306.28	
Dept 804 MUSEUM					
101-804-887.000	CONTRIBUTIONS & MAINTENAN	MAG PLUMBING SERVICE LLC	TESTING BACKFLOW PREVENTE	276.00	75051
101-804-887.000	CONTRIBUTIONS & MAINTENAN	SELF SERVE LUMBER	ACCOUNT STATEMENT	10.99	75110
101-804-920.000	PUBLIC UTILITIES	CONSUMERS ENERGY	ACCOUNT STATEMENTS	330.78	75034
101-804-920.000	PUBLIC UTILITIES	LOWELL LIGHT & POWER	ELECTRIC 10/25 - 11/23/20	201.24	75094
101-804-955.000	PROPERTY TAX DISTRIBUTION	LOWELL AREA HISTORICAL MU	TAX DISBURSEMENT	2.77	75049
Total For Dept 804 MUSEUM				821.78	
Total For Fund 101 GENERA				34,161.69	
Fund 202 MAJOR STREET FUND					
Dept 463 MAINTENANCE					
202-463-740.000	OPERATING SUPPLIES	PLUMMERS ENVIRONMENTAL SE	CATCH BASINS, STORM & SAN	1,395.90	75056
Total For Dept 463 MAINTEN				1,395.90	
Dept 474 TRAFFIC					
202-474-740.000	OPERATING SUPPLIES	DORNBOS SIGN, INC	DPW - STOP & YEILD SIGNS	748.87	75077
Total For Dept 474 TRAFFI				748.87	
Dept 483 ADMINISTRATION					
202-483-955.000	MISCELLANEOUS EXPENSE	GRAND VALLEY METRO COUNCI	LOCAL ROADS PASAR RATED	142.06	75083
Total For Dept 483 ADMINI				142.06	
Total For Fund 202 MAJOR				2,286.83	
Fund 203 LOCAL STREET FUND					
Dept 474 TRAFFIC					
203-474-740.000	OPERATING SUPPLIES	DORNBOS SIGN, INC	DPW - STOP & YEILD SIGNS	748.88	75077
Total For Dept 474 TRAFFI				748.88	
Dept 483 ADMINISTRATION					
203-483-955.000	MISCELLANEOUS EXPENSE	GRAND VALLEY METRO COUNCI	LOCAL ROADS PASAR RATED	142.07	75083
Total For Dept 483 ADMINI				142.07	
Total For Fund 203 LOCAL				890.95	
Fund 248 DOWNTOWN DEVELOPMENT AUTHORITY					
Dept 463 MAINTENANCE					
248-463-740.000	OPERATING SUPPLIES	MAG PLUMBING SERVICE LLC	TESTING BACKFLOW PREVENTE	152.00	75051
248-463-740.000	OPERATING SUPPLIES	CITY OF LOWELL	238 HIGH 41-20-02-404-003	520.06	75072
248-463-802.000	CONTRACTUAL	MAG PLUMBING SERVICE LLC	TESTING BACKFLOW PREVENTE	737.00	75051
248-463-920.000	PUBLIC UTILITIES	LOWELL LIGHT & POWER	ELECTRIC 10/25 - 11/23/20	1,061.25	75094
248-463-930.000	REPAIR & MAINTENANCE	THE VERDIN COMPANY	DOWNTOWN CLOCK SERVICE AG	630.00	75114
248-463-930.000	REPAIR & MAINTENANCE	TRUGREEN	CHAMBER - LAWN CARE	39.00	75117
Total For Dept 463 MAINTEN				3,139.31	
Dept 740 COMMUNITY PROMOTIONS					
248-740-880.000	COMMUNITY PROMOTION	HOMETOWN DECORATION AND D	HOLIDAY DECORATIONS	4,677.00	75043
Total For Dept 740 COMMUN				4,677.00	
Total For Fund 248 DOWNTO				7,816.31	
Fund 260 DESIGNATED CONTRIBUTIONS					
Dept 301 POLICE DEPARTMENT					
260-301-984.000	EQUIPMENT	STRYKER SALES CORPORATION	POLICE - DEFIBRILLATORS	3,860.25	75113
Total For Dept 301 POLICE				3,860.25	
Dept 751 PARKS					
260-751-970.000	CAPITAL OUTLAY	MORAN IRON WORKS, INC	SHOWBOAT GRANT PROGRESS B	150,984.50	75101
Total For Dept 751 PARKS				150,984.50	
Dept 758 DOG PARK					
260-758-920.000	PUBLIC UTILITIES	LOWELL LIGHT & POWER	ELECTRIC 10/25 - 11/23/20	54.16	75094
Total For Dept 758 DOG PA				54.16	

GL Number	Invoice Line Desc	Vendor	Invoice Description	Amount	Check #
Fund 260 DESIGNATED CONTRIBUTIONS					
			Total For Fund 260 DESIGN	154,898.91	
Fund 581 AIRPORT FUND					
Dept 000					
581-000-740.000	OPERATING SUPPLIES	ARROW ENERGY, INC.	AIRPORT AV GAS	4,771.04	75069
581-000-740.000	OPERATING SUPPLIES	BROWN, CASEY	DUMPSTER REIMBURSEMENT	295.00	75070
581-000-920.000	PUBLIC UTILITIES	CONSUMERS ENERGY	ACCOUNT STATEMENTS	362.19	75074
581-000-955.000	MISCELLANEOUS EXPENSE	VERGENNES BROADBAND	INTERNET STATEMENT	49.99	75063
581-000-955.000	MISCELLANEOUS EXPENSE	VERGENNES TOWNSHIP TREASU	W TAX 41-16-35-100-601	2,501.58	75119
581-000-970.000	CAPITAL OUTLAY	HUBBERT'S HOME IMPROVEMEN	AIPORT DEPOSIT FOR BIFOLD	8,000.00	75045
			Total For Dept 000	15,979.80	
			Total For Fund 581 AIRPOR	15,979.80	
Fund 590 WASTEWATER FUND					
Dept 000					
590-000-043.000	DUE FROM EARTH TECH	MAG PLUMBING SERVICE LLC	TESTING BACKFLOW PREVENTE	280.86	75051
590-000-043.000	DUE FROM EARTH TECH	VERGENNES BROADBAND	INTERNET STATEMENT	28.57	75063
590-000-043.000	DUE FROM EARTH TECH	LOWELL LIGHT & POWER	NOV PHONE & MAINT	140.24	75093
590-000-043.000	DUE FROM EARTH TECH	LOWELL LIGHT & POWER	ELECTRIC 10/25 - 11/23/20	5,033.78	75094
590-000-276.000	Sewer Inside 5/8"	VANENK,CAMERON	UB refund for account: 3-	18.41	75118
			Total For Dept 000	5,501.86	
Dept 550 TREATMENT					
590-550-802.000	CONTRACTUAL	SUEZ WATER ENVIRONMENTAL	SURCHARGES OCTOBER 2020	734.72	75059
590-550-802.000	CONTRACTUAL	SUEZ WATER ENVIRONMENTAL	WWTP SERVICES NOVEMBER 20	38,490.00	75059
590-550-850.000	COMMUNICATIONS	AT&T MOBILITY	CELL PHONE BILL -	38.24	75032
			Total For Dept 550 TREATM	39,262.96	
Dept 551 COLLECTION					
590-551-740.000	OPERATING SUPPLIES	AMAZON CAPITAL SERVICES	WATER DEPT SUPPLIES	13.89	75068
590-551-850.000	COMMUNICATIONS	AT&T MOBILITY	CELL PHONE BILL -	81.50	75032
590-551-930.000	REPAIR & MAINTENANCE	FERGUSON WATERWORKS	WATER DEPT R & M	15.16	75039
590-551-930.000	REPAIR & MAINTENANCE	PLUMMERS ENVIRONMENTAL SE	CATCH BASINS, STORM & SAN	465.30	75056
590-551-930.000	REPAIR & MAINTENANCE	PLUMMERS ENVIRONMENTAL SE	JETTED MULTIPLE LINES	3,178.40	75056
590-551-930.000	REPAIR & MAINTENANCE	FERGUSON WATERWORKS	WATER METER 1-1/2"	332.18	75080
590-551-955.000	MISCELLANEOUS EXPENSE	MISS DIG SYSTEM, INC.	2021 MEMBERSHIP FEES	809.25	75099
			Total For Dept 551 COLLEC	4,895.68	
Dept 552 CUSTOMER ACCOUNTS					
590-552-703.000	SALARIES-METER READS	BARTLETT, SANDY	METER READS & MILEAGE NOV	353.93	75033
590-552-730.000	POSTAGE	POSTMASTER	TAX BILLS & W/S BILLS	217.59	75065
590-552-860.000	TRAVEL EXPENSES	BARTLETT, SANDY	METER READS & MILEAGE NOV	34.50	75033
590-552-955.000	MISCELLANEOUS EXPENSE	POSTMASTER	PERMIT #25 RENEWAL	60.00	75104
			Total For Dept 552 CUSTOM	666.02	
Dept 553 ADMINISTRATION					
590-553-801.000	PROFESSIONAL SERVICES	WILLIAMS & WORKS INC.	WWTP EXPANSION STUDY	2,824.50	75064
			Total For Dept 553 ADMINI	2,824.50	
			Total For Fund 590 WASTEW	53,151.02	
Fund 591 WATER FUND					
Dept 000					
591-000-276.000	Water	CANFIELD, DEB	UB refund for account: 5-	67.27	75071
591-000-276.000	Water	HALL, DAVID	UB refund for account: 2-	63.46	75086
591-000-276.000	Water	LANDMAN, TODD	UB refund for account: 1-	7.32	75092
591-000-276.000	Water	MAYBERRY HOMES	UB refund for account: 6-	50.09	75096
591-000-276.000	Water	STRAUTZ, JOSH	UB refund for account: 7-	90.42	75112
591-000-276.000	FLAT PENALTY	VANENK,CAMERON	UB refund for account: 3-	16.42	75118
591-000-276.000	Deposit Refund	WALSH, LORI	UB refund for account: 3-	200.00	75120
			Total For Dept 000	494.98	
Dept 570 TREATMENT					
591-570-740.000	OPERATING SUPPLIES	HACH COMPANY	WTP SUPPLIES	621.78	75042

GL Number	Invoice Line Desc	Vendor	Invoice Description	Amount	Check #
Fund 591 WATER FUND					
Dept 570 TREATMENT					
591-570-740.000	OPERATING SUPPLIES	AMAZON CAPITAL SERVICES	WTP SUPPLIES	190.42	75068
591-570-743.000	CHEMICALS	ALEXANDER CHEMICAL CORP	WTP CHLORINE	15.50	75067
591-570-743.000	CHEMICALS	GRAYMONT WESTERN LIME INC	WTP QUICKLIME	6,883.50	75084
591-570-802.000	CONTRACTUAL	TRUGREEN	LAWN SERVICE WTP	119.88	75062
591-570-802.000	CONTRACTUAL	RED CREEK WASTE SERVICES	TRASH SERVICE	30.00	75106
591-570-850.000	COMMUNICATIONS	VERGENNES BROADBAND	INTERNET STATEMENT	28.57	75063
591-570-850.000	COMMUNICATIONS	LOWELL LIGHT & POWER	NOV PHONE & MAINT	83.60	75093
591-570-920.000	PUBLIC UTILITIES	CONSUMERS ENERGY	ACCOUNT STATEMENTS	366.61	75034
591-570-920.000	PUBLIC UTILITIES	LOWELL LIGHT & POWER	ELECTRIC 10/25 - 11/23/20	4,531.05	75094
591-570-930.000	REPAIR & MAINTENANCE	MAG PLUMBING SERVICE LLC	TESTING BACKFLOW PREVENTE	114.00	75051
591-570-930.000	REPAIR & MAINTENANCE	PEERLESS MIDWEST INC.	WTP WELL #4 R & M	1,623.60	75054
591-570-930.000	REPAIR & MAINTENANCE	RS TECHNICAL SERVICES, IN	WELL 4 SERVICE - WTP	105.00	75108
591-570-955.000	MISCELLANEOUS EXPENSE	STATE OF MICHIGAN	PUBLICICE WATER SUPPLY ANNU	1,300.05	75058
Total For Dept 570 TREATM				16,013.56	
Dept 571 DISTRIBUTION					
591-571-740.000	OPERATING SUPPLIES	AMAZON CAPITAL SERVICES	WATER DEPT SUPPLIES	13.88	75068
591-571-801.000	CROSS CONNECTIONS	HYDROCORP	CROSS CONNECTION NOVEMBER	937.00	75087
591-571-802.000	CONTRACTUAL	MANSZEWSKI LANDSCAPING LL	PAYMENT #4 OF 4	810.00	75053
591-571-850.000	COMMUNICATIONS	AT&T MOBILITY	CELL PHONE BILL -	81.50	75032
591-571-920.000	PUBLIC UTILITIES	CONSUMERS ENERGY	ACCOUNT STATEMENTS	220.79	75034
591-571-920.000	PUBLIC UTILITIES	LOWELL LIGHT & POWER	ELECTRIC 10/25 - 11/23/20	1,052.91	75094
591-571-930.000	REPAIR & MAINTENANCE	FERGUSON WATERWORKS	WATER DEPT R & M	15.17	75039
591-571-930.000	REPAIR & MAINTENANCE	MAG PLUMBING SERVICE LLC	TESTING BACKFLOW PREVENTE	573.44	75051
591-571-930.000	REPAIR & MAINTENANCE	AMAZON CAPITAL SERVICES	WATER DEPT R & M	67.82	75068
591-571-930.000	REPAIR & MAINTENANCE	TIP TOP GRAVEL CO.	CRUSHED ASPHALT	313.58	75115
591-571-930.000	REPAIR & MAINTENANCE	FERGUSON WATERWORKS	WATER METER 1-1/2"	332.18	75080
591-571-955.000	MISCELLANEOUS EXPENSE	VERGENNES TOWNSHIP TREASU	W TAX 41-16-35-426-052	951.52	75119
591-571-955.000	MISCELLANEOUS EXPENSE	MISS DIG SYSTEM, INC.	2021 MEMBERSHIP FEES	809.25	75099
Total For Dept 571 DISTRI				6,179.04	
Dept 572 CUSTOMER ACCOUNTS					
591-572-703.000	SALARIES-METER READS	BARTLETT, SANDY	METER READS & MILEAGE NOV	353.94	75033
591-572-730.000	POSTAGE	POSTMASTER	TAX BILLS & W/S BILLS	217.60	75065
591-572-860.000	TRAVEL EXPENSES	BARTLETT, SANDY	METER READS & MILEAGE NOV	34.50	75033
Total For Dept 572 CUSTOM				606.04	
Dept 573 ADMINISTRATION					
591-573-955.000	MISCELLANEOUS EXPENSE	POSTMASTER	PERMIT #25 RENEWAL	60.00	75104
Total For Dept 573 ADMINI				60.00	
Total For Fund 591 WATER				23,353.62	
Fund 636 DATA PROCESSING FUND					
Dept 000					
636-000-801.000	PROFESSIONAL SERVICES	ADDORIO TECHNOLOGIES, LLC	WTP - COMPUTER WORK	212.50	75066
636-000-801.000	PROFESSIONAL SERVICES	ADDORIO TECHNOLOGIES, LLC	POLICE - COMPUTER WORK	2,185.00	75066
636-000-802.000	CONTRACTUAL	APPLIED IMAGING	CITY HALL COPY MACHINE	433.01	75031
636-000-802.000	CONTRACTUAL	DIGITAL OFFICE MACHINES,	DPW COPY MACHINE	83.94	75038
636-000-802.000	CONTRACTUAL	LOWELL LIGHT & POWER	NOV PHONE & MAINT	2,140.62	75093
636-000-986.000	COMPUTER DATA PROCESSING	DELL MARKETING L P	COMPUTER EQUIPMENT	732.04	75037
Total For Dept 000				5,787.11	
Total For Fund 636 DATA P				5,787.11	
Fund 661 EQUIPMENT FUND					
Dept 895 FLEET MAINT. & REPLACEMENT					
661-895-930.000	REPAIR & MAINTENANCE	D&D TRUCKING ACQUISITION,	BATTERY #36	283.86	75036
661-895-930.000	REPAIR & MAINTENANCE	TRUCK & TRAILER SPECIALTI	2008 INTERNATIONAL R & M	645.71	75061
661-895-930.000	REPAIR & MAINTENANCE	GODWIN ADA VILLAGE HARDWA	R & M PARTS FOR #67 & #69	103.96	75082
661-895-930.000	REPAIR & MAINTENANCE	GTW	ACCOUNT STATEMENT	68.80	75085

GL Number	Invoice Line Desc	Vendor	Invoice Description	Amount	Check #
Fund 661 EQUIPMENT FUND					
Dept 895 FLEET MAINT. & REPLACEMENT					
661-895-930.000	REPAIR & MAINTENANCE	WOLF KUBOTA	SERVICE INV: 103685-10368	1,200.79	75121
661-895-930.000	REPAIR & MAINTENANCE	D&D TRUCKING ACQUISITION, R & M #37-7		84.52	75076
661-895-930.000	REPAIR & MAINTENANCE	JXTRUCK CENTER - GRAND RA	YEARLY SERVICE #15	240.99	75089
661-895-930.000	REPAIR & MAINTENANCE	TRUCK & TRAILER SPECIALTI	YEARLY SERVICE #15	552.68	75116
661-895-930.000	REPAIR & MAINTENANCE	WOLF KUBOTA	#53 R & M	469.33	75121
661-895-930.000	REPAIR & MAINTENANCE	WOLF KUBOTA	YEARLY SERVICE #52	402.83	75121
661-895-930.000	REPAIR & MAINTENANCE	WOLF KUBOTA	YEARLY SERVICE #55	328.63	75121
Total For Dept 895 FLEET				4,382.10	
Total For Fund 661 EQUIPM				4,382.10	
Fund 703 CURRENT TAX COLLECTION FUND					
Dept 000					
703-000-222.000	DUE TO COUNTY-CURRENT TAX	KENT COUNTY TREASURER	TAX DISBURSEMENT	50.26	75046
703-000-225.000	DUE TO SCHOOLS	LOWELL AREA SCHOOLS	TAX DISBURSEMENT	47.37	75050
703-000-228.009	DUE TO STATE-S.E.T.	KENT COUNTY TREASURER	TAX DISBURSEMENT	71.40	75046
703-000-234.000	DUE TO INTERMED SCH DISTR	KENT INTERMEDIATE SCHOOL	TAX DISBURSEMENT	66.26	75047
703-000-235.000	DUE TO COMMUNITY COLLEGE	GRAND RAPIDS COMMUNITY CO	TAX DISBURSEMENT	20.79	75040
Total For Dept 000				256.08	
Total For Fund 703 CURREN				256.08	

GL Number	Invoice Line Desc	Vendor	Invoice Description	Amount	Check #
Fund Totals:					
			Fund 101 GENERAL FUND	34,161.69	
			Fund 202 MAJOR STREET FUN	2,286.83	
			Fund 203 LOCAL STREET FUN	890.95	
			Fund 248 DOWNTOWN DEVELOP	7,816.31	
			Fund 260 DESIGNATED CONTR	154,898.91	
			Fund 581 AIRPORT FUND	15,979.80	
			Fund 590 WASTEWATER FUND	53,151.02	
			Fund 591 WATER FUND	23,353.62	
			Fund 636 DATA PROCESSING	5,787.11	
			Fund 661 EQUIPMENT FUND	4,382.10	
			Fund 703 CURRENT TAX COLL	256.08	
				302,964.42	



WTP Expansion Study

City of Lowell
Kent County, MI

DRAFT

March 18, 2019
Project No. 218178

williams&works
engineers | surveyors | planners

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I. Executive Summary

The City of Lowell has expressed interest in expanding its water treatment plant from 1.75 MGD capacity to 3.5 MGD capacity. This decision has been prompted by increased water usage in Lowell Charter Township and Vergennes Township and anticipated future development. To encourage further growth in these areas, the city wants to determine the most sustainable option to expand the water treatment system while maintaining current water quality. Currently, Lowell uses a solids contact clarifier and anthracite/sand filters to remove hardness through the addition of lime and alum. Two expansion options were evaluated. Option A considered adding a duplicate system to the existing treatment. This would add a second solids contact clarifier and two anthracite/sand filter beds. Option B looked at the use of nanofiltration membranes to remove hardness from the water. The projected capital costs of both options were comparable, but the annual cost of Option A was projected to be significantly less than that of Option B. The membranes use more electricity and produce a large volume of wastewater. In addition, Option B would require additional training of operators to run new equipment. For these two reasons, it is recommended that Lowell pursue Option A of adding a second solids contact clarifier and anthracite/sand filters to expand its water treatment plant.

II. Introduction

The City of Lowell, MI owns and operates a public water system to supply water to the city and parts of Lowell Charter Township and Vergennes Township. The public water system consists of four wells, one water treatment plant, one distribution network, and two ground storage tanks. The treatment plant provides softening to reduce the hardness in the water as well as chlorination and fluoridation. The city has expressed interest in expanding the capacity of the treatment plant from 1.75 MGD to 3.5 MGD. This report evaluates the alternative options to increase the capacity.

III. Existing Plant

The existing plant is located at 1596 Bowes Rd SE, Lowell, MI. Four wells located approximately 500 feet south of the road provide groundwater to the treatment building. The wells run in pairs of either No. 1 and No. 3 together or No. 2 and No. 4 together and alternate operation weekly. Wells No. 1 and No. 4 have emergency power. All four wells have a pumping capacity of 600 GPM. With one well out of service, the total pumping capacity is 1800 gpm or 2.6 MGD.

Pumped water enters a solids contact clarifier inside the east part of the treatment building. The clarifier has an internal draft tube, reaction well, and settling area. When built, it was sized to handle 1.75 MGD. Though current 10 State Standards would limit its capacity to 0.85 MGD because of the configuration, the MDEQ has expressed it will not require an upgrade at this time. It will continue to be permitted for 1.75 MGD of flow.

Water discharged from the clarifier enters two anthracite/sand filters located on the west side of the building. The current filters (shown in Figure 1) are adequately size to handle 1.75 MGD of flow. The water is drawn down through the anthracite/sand and pumped to an on-site storage reservoir until it is needed by the system. Two pumps each rated at 600 GPM pull the water from the two filters. The reservoir has a capacity of 500,000 gallons.

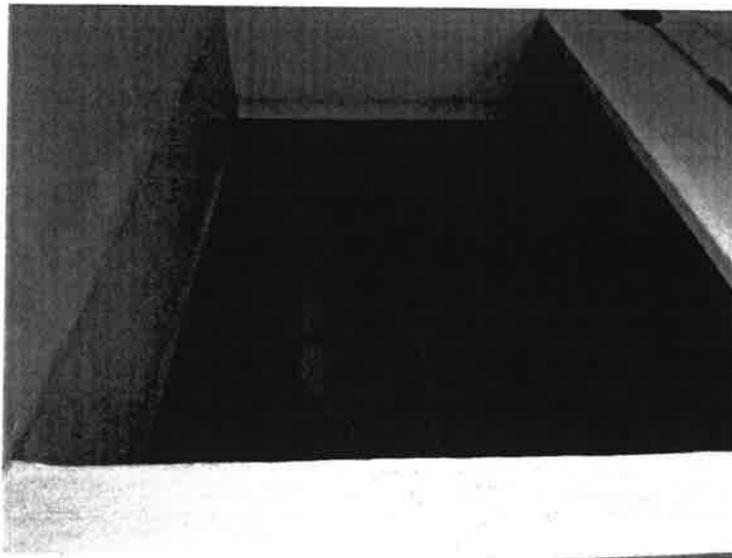


Figure 1: Anthracite/Sand Filter

If needed, the plant can be bypassed to supply water directly from the wells to the storage reservoir. High-service pumps pull water from the reservoir and discharge it into the distribution network. These pumps are rated at 600 GPM each. These pumps are also used to backwash the filters. The high service pumps are typically operated manually, but can be controlled by levels in these tanks.

Chlorine and fluoride are added to the water on the way from the storage reservoir to the distribution network. Two ground storage tanks in the distribution network hold water and provide near constant pressure head for the system. The NE Reservoir has a capacity of 500,000 gallons and the NW Reservoir has a capacity of 800,000 gallons.

The plant is rated by the MDEQ to handle an average day demand of 1.75 MGD.

IV. Need for Project

The Lowell Water Treatment plant treats and distributes about 215 million gallons of water each year. This equates to an average of nearly 575,000 gallons per day. The maximum daily water demand has been close to 1.25 million gallons in recent years. This is above 70% of the 1.75 MGD capacity. Increasing demand from Vergennes and Lowell Charter Townships has motivated the city to look into expanding the water treatment plant before the rest of the capacity is used. In order to provide capacity for expected growth and encourage new growth in the townships, the city would like to increase the capacity by 1.75 MGD to a total of 3.5 MGD.

The city has proposed two alternatives for adding 1.75 MGD of capacity to the plant.

A. Option A

Process System

This option will duplicate the existing solids contact clarifier and filters to double the capacity using a similar system. It includes building one new 30'x30' square clarifier and two 10'x15' gravity filter beds. An induced draft aerator will be added to the system after the filters to remove carbon dioxide and excessive alkalinity from the water. The piping gallery (shown in Figure 8) will be expanded to house more pumps and new electrical equipment, and improve maintenance. Walls and roofs will be added over the proposed filters and clarifier. Figure 2 shows the location of the clarifier expansion and Figure 5 shows the location of the filter and piping gallery expansion.



Figure 2: Southwest Corner of Building for Clarifier Expansion

Two pumps will be needed to pump filtered water into the storage reservoir. Two high service pumps will be needed to supply water to the distribution system and to backwash the filters. One new 640 gpm well will be required to supply water to the treatment plant. In addition, controls and piping will be required to connect and run the equipment.

This option would use additional capacity of the lime feed system. Fortunately, the lime system has surplus capacity, and would not be close to its limit. Chemical use of alum, chlorine, and fluoride would also be increased. This should be proportional to actual flow through the plant. All chemical feed systems are adequately sized to handle the additional flow.

Mechanical System:

Plumbing systems would be extended into the new building areas as required. HVAC equipment would be added to the new areas as required to heat, ventilate and dehumidify the spaces. Figure 3 shows the locations of the building expansions from an aerial view.

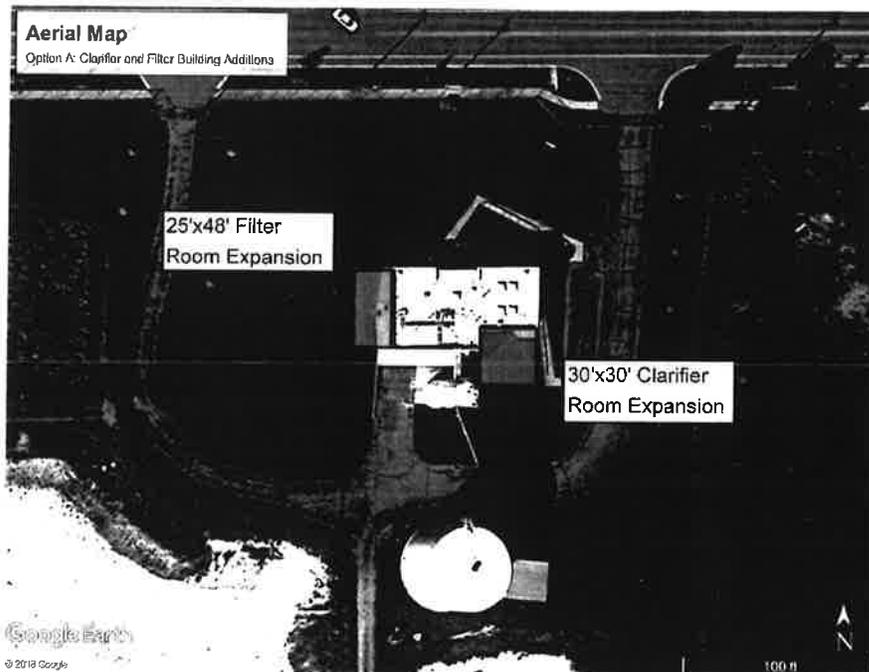


Figure 3: Option A Building Expansions

Electrical System:

The electrical system would be expanded to support the additional electrical load, as the existing electrical distribution system does not have the spare capacity needed. Therefore, additional new service conductors would be brought into the new electrical equipment to be located in the new filter addition. The new electrical distribution equipment would feed the new process equipment, the new HVAC components and the building loads (lighting, etc.) In order to increase overall electrical system reliability, the existing electrical equipment would be back fed by the new electrical equipment.

SCADA system:

The existing SCADA system would be expanded to monitor/control the new equipment. A new filter control panel would control the filters and the backwashing of the filters. A new SCADA I/O panel would be located near the new equipment and would be connected via Ethernet to the existing SCADA system.

B. Option B

Process System

This option proposes using membranes to treat the additional 1.75 MGD of water. The water would be pumped through nanofiltration membranes and be mixed with water from the existing system to achieve a certain level of desirable hardness. The ions removed from the water are discharged from the membranes in a concentrate flow stream. This stream would be 15% to 20% of the total flow through the membranes. This flow would need to be discharged to the wastewater treatment plant.

Two skids of membranes would be provided in order to achieve 50% redundancy in the system. Each skid would hold 147 membrane elements. Also, on the skids would be a 5-micron cartridge filter, a booster pump, chemical feed systems, a control panel, and a clean-in-place system.

A 2-story building addition would be added to the east side of the treatment building to house the membrane skids and new electrical equipment. This would also expand the piping gallery to house new pumps and improve maintenance. Figure 4 shows an aerial image of the size and location of the addition.

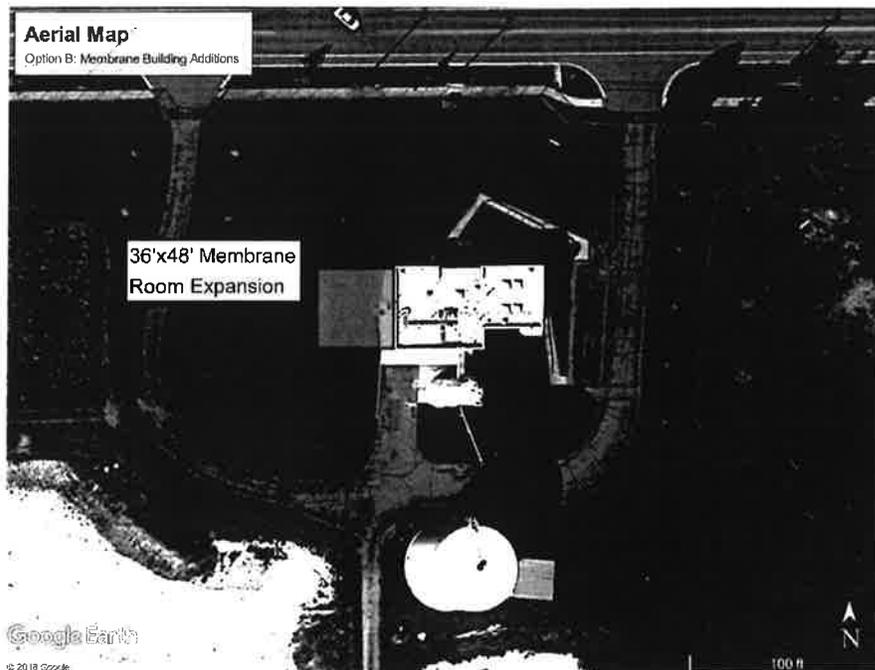


Figure 4: Option B Building Expansion

Two filtered water pumps would be needed to pump treated water to the storage reservoir. Two high service pumps would be needed to pump water to the distribution system. In addition, a new 640 GPM well would still be required to supply the water to the plant. These would be housed in the expanded piping gallery. Figure 5 shows the west side of the building that would be expanded for the membrane room and piping gallery.



Figure 5: West Side of Building for Filter/Membrane/Piping Gallery Expansion

The membrane feed water would need antiscalant added to prevent material buildup on the inside of the membranes. It would also need an acid feed and alkaline feed system to adjust the pH of the water upstream of the membranes. The chemical costs associated with operating the membranes would be comparable to that of operating the existing clarifier and filter system.

Mechanical System:

Plumbing systems would be extended into the new building area as required. HVAC equipment would be added to the new area as required to heat, ventilate and dehumidify the spaces.

Electrical System:

The electrical system would be expanded to support the additional electrical load, as the existing electrical distribution system does not have the spare capacity needed. Therefore, additional service conductors would be brought into the new electrical equipment to be located in the addition. The new electrical distribution equipment would feed the new process equipment, the new HVAC components and the building loads (lighting, etc.) In order to increase overall electrical system reliability, the existing electrical equipment would be back fed by the new electrical equipment.

SCADA system:

The existing SCADA system would be expanded to monitor/control the new equipment. The membrane system controls/control panel would be integrated into the existing plant SCADA system. A new SCADA I/O panel would be located near the new equipment and would be connected via Ethernet to the existing SCADA system.

The membranes would need to be replaced every three years on average. Each membrane would be individually removed and replaced as needed.

V. Operation

A. Option A

A lime softening system works by adding a coagulant to water in order to bind up particles in suspension. The water is rapidly mixed to distribute coagulant then slowly mixed to allow flocculation. Lime is added to raise the pH of the water to at least 9.4 where calcium will precipitate out. The solution is settled in a clarifier. The lime sludge is drawn off the bottom and the clean water flows into effluent launders.

This plant uses alum as the coagulant. Alum is delivered as an aqueous solution to a storage tank in the building. The existing alum tank is large enough to accommodate future flows. Lime is delivered in dry form to a hopper located south of the treatment building. It is fed from the hopper into a slaker where it is mixed with water to create a solution to be fed to the clarifier. The slaker system is also large enough for this expansion.

The sludge drawn from the bottom of the clarifier is deposited into a storage lagoon to be disposed of when needed. This is depicted in Figure 6. The softened water flows to a filtration system. In this case, gravity anthracite/sand filter beds are used. Water is fed by gravity to the top of the filters. It is drawn through about 3.5' of sand, anthracite, and gravel by filtered water pumps and discharged to a storage reservoir located to the south of the treatment building. The types of media used are shown in Figure 7. The filters remove colloidal and suspended particles from the water. At this stage, acid is sometimes added to bring the pH back down to neutral from the lime addition. Lowell does not add acid because the pH is usually within good range after the filters.



Figure 6: Waste Lime Storage Lagoon

The filtered water would then be pumped to the distribution system/ground storage tanks. A disinfectant is added to the water to kill bacterial and prevent growth of

new bacteria in the distribution system. Fluoride can also be added to the water at this point. Lowell adds fluoride and chlorine for disinfectant. High service pumps pump the clean water to the city.



Figure 7: Filter Media

B. Option B

A membrane softening unit works by passing water through small pores that are smaller than calcium and magnesium ions. This requires a nanofiltration membrane with pore sizes near 0.001 microns or 1 nanometer.

Water needs to be provided to the membrane with at least 40 psi of pressure. An alkaline material or acid is added at this point to adjust the pH to the optimum range. An antiscalant is added to prevent scaling and blinding on the inside of the membranes.

The booster pumps on the membrane skid then increase the water pressure to above 70 psi in order to force it through the semi-permeable membrane. Captured materials are retained inside the membranes and discharged in the retentate stream. This is typically 15% to 20% of the total influent. Clean water passes through the membrane and in the case of Lowell would be pumped to the storage reservoir on site.

As in Option A, the treated water can be pumped from the storage reservoir to the system after being treated with chlorine and fluoride.

Membrane systems typically produce water with a very low hardness residual. In order to raise the hardness up to an acceptable level, a certain amount of water

may need to bypass the membrane system and be mixed with the effluent. Mixing Membrane-treated water with lime-softened water may also yield a good result.

VI. Cost Opinions

A. Option A

Capital Costs

The capital costs to expand the plant with a second clarifier and filters broken down as follows. Concrete tanks for the clarifier and filters would cost approximately \$137,600 for the clarifier and \$50,500 for the filters. The walls and roofs overtop would cost about \$152,400 in total. The rest of the 2-story building addition would cost about \$126,000.

The internals to the clarifier would cost \$265,000. The internals to the filters would be about \$295,000 including underdrain, media, troughs, and controls. The draft aerator would cost about \$90,000. An installation cost of 33% of the equipment cost was used to calculate totals.

New pumps will be needed in a new well, for the filtered water, and for additional high service. The well in total will cost around \$65,000 to provide 640 gpm of additional water to the plant. The filtered water and high service pumps will be about \$15,000 and \$20,000, respectively. These two pumps also require a 33% installation cost. The existing piping gallery shown in Figure 8 would be expanded to house the filtered water and high service pumps.



Figure 8: Piping Gallery

The associated piping for this option would add about \$120,000 to the total cost. This would include all building piping for the clarifier, filters, aerator, pumps, intake, and discharge.

The plumbing and HVAC additions would cost approximately \$80,000.

The electrical and SCADA additions would cost approximately \$180,000, not including any additional electrical utility cost/fees for the increased utility service size.

The total capital cost opinion for Option A is summarized in Table 1.

Table 1: Option A Capital Project Cost Opinion

Category	Cost	Unit	Number	Total
Building Exp (Filters/Clarifier)	\$100	sft	1524	\$152,400
Building Exp (Piping Gallery)	\$180	sft	700	\$126,000
Clarifier Tanks	\$725	cyd	190	\$137,600
Filter Tanks	\$725	cyd	70	\$50,500
Draft Aerator	\$119,700	Ea	1	\$119,700
Clarifier Internals	\$352,400	Ea	1	\$352,400
Filter Trough	\$153,000	Ea	1	\$153,000
Filter Underdrain	\$133,000	Ea	1	\$133,000
Filter Controls	\$106,400	Ea	1	\$106,400
Filtered Water Pump	\$19,950	Ea	2	\$39,900
Mechanical Piping	\$120,000	LS	1	\$120,000
Well (640 GPM)	\$65,000	LS	1	\$65,000
High Service Pumps	\$26,600	Ea	2	\$53,200
HVAC\Plumbing	\$80,000	Ea	1	\$80,000
Electrical Equipment	\$180,000	LS	1	\$180,000
Total Construction Cost				\$1,869,000
Contingency			20%	\$374,000
Administration			2%	\$37,000
Design & Construction Engineering			15%	\$280,000
Total Project Cost				\$2,560,000

Annual Costs

On-going costs for the clarifier and filter system include electricity use, chemical use, and wastewater disposal. To estimate electricity use, the four main sources were identified: well pump, clarifier/filter use, filtered water pumps, and high service pumps. The cost associated with the electricity use was estimated using approximate runtime, horsepower, and electricity cost.

Chemical costs for this expansion should be directly proportional to the increase capacity. Thus, the future chemical cost of adding 1.75 MGD would be approximately equal to the current chemical cost with an additional 30% added for the unused plant capacity. This was done for both the softening process and disinfection/fluoridation process.

Wastewater generated by the plant includes both spent lime and filter backwash water. These go to separate holding lagoons. The lime needs to be disposed approximately once every 10 years. The backwash water is fed back through the plant and treated. A cost of \$10,000 per year was added into the annual cost to allow for disposal of wastewater as needed. Table 2 shows the analysis of annual costs.

Table 2: Option A Annual Cost Opinion

Category	Cost
Labor	\$150,000
Well Pump	\$6,500
Equipment Electricity	\$3,300
Filtered Water Pumps	\$13,000
High Service Pumps	\$19,600
Softening Chemical	\$53,900
Chlorine/Fluoride	\$8,400
Wastewater Disposal	\$10,000
Total Annual Cost	\$264,800

Total Present Value

Using the approximated annual and capital costs, a present worth analysis was performed. A cost of capital of 16% and a time of 20 years was used on the analysis. The results showed that the present worth of Option A is \$4,130,000.

B. Option B

Capital Costs

The capital costs for Option B were also evaluated. Only one building expansion will be needed which will cost about \$311,000 for the 2-story addition. The two membrane skids and all associated equipment will cost about \$794,000 plus 33% for installation.

The new pumps needed in the well, for the filtered water, and for additional high service will cost the same as in Option A. General mechanical costs for piping for Option B will be less than that of Option A because of the decreased complexity of the system.

The plumbing and HVAC additions would cost approximately \$50,000.

The electrical and SCADA additions would cost approximately \$285,000, not including any additional electrical utility cost/fees for the increased utility service size.

Table 3 shows the summary of the capital costs for Option B

Table 3: Option B Capital Project Cost Opinion

Category	Cost	Unit	Number	Total
Building Exp (Membranes)	\$180	sft	1728	\$311,000
Filtered Water Pump	\$20,000	Ea	2	\$40,000
Mechanical Piping	\$80,000	LS	1	\$80,000
Nanofiltration Skids	\$1,056,000	LS	1	\$1,056,000
Well (640 GPM)	\$65,000	LS	1	\$65,000
High Service Pumps	\$26,600	Ea	2	\$53,200
HVAC/Plumbing	\$50,000	LS	1	\$50,000
Electrical Equipment	\$285,000	LS	1	\$285,000
Total Construction Cost				\$1,940,000
Contingency			20%	\$388,000
Administration			2%	\$39,000
Engineering			15%	\$291,000
Total Project Cost				\$2,658,000

Annual Costs

The annual costs for Option B are much higher than those of Option A. It includes all the same categories as Option A with the addition of replacement cost. The cost of electricity is much higher for the membrane system. Because of the high operating pressure, the system will require about \$67,400 in electricity costs. In addition to this, the membranes will require electrical usage for well pumps, filtered water pumps, and high service pumps as Option A.

The chemical costs for the membrane system are less than Option A. Because the membranes do not require chemical as the tool for hardness removal, chemical is only added to improve operation and prevent scaling. This should cost about \$39,500 per year. The chlorine and fluoride costs will be the same as for Option A.

When water is pumped through the membranes, 15%-20% of the flow is rejected and discharged from the system. This water contains all the material removed from the water by the membranes, and would have to be sent to a wastewater treatment plant for disposal. The Lowell Wastewater Treatment plant estimated that disposal of this water would cost about \$3.85 per 1000 gallons.

The membranes have an average expected life of 3 years. The city would need to budget money each year to pay for the ongoing replacement of the membrane elements. Since each element costs \$600, this equates to an annual cost of \$58,800. Table 4 shows an analysis of all projected annual costs.

Table 4: Option B Annual Cost Opinion

Category	Cost per Year
Labor	\$150,000
Well Pump	\$6,500
Equipment Elect.	\$67,400
Filtered Water Pumps	\$13,000
High Service Pumps	\$19,600
Membrane Replacement	\$58,800
Chemical	\$39,500
Chorine/Fluoride	\$8,400
Wastewater Disposal	\$351,300
Total Annual Cost	\$714,600

Total Present Value

Using the approximated annual and capital costs, a present worth analysis was performed. A cost of capital of 16% and a time of 20 years was used on the analysis. The results showed that the present worth of Option B is \$6,895,000.

VII. Conclusion

Both lime softening and nanofiltration are proven methods for water softening. Either one will provide a quality product to the city. Because Option A duplicates the existing system, it would require no new training and limited additional operational time. Option B would require operators to be trained to run new equipment. Because of this fact and the difference in annual costs of the two options, we recommend the city pursue Option A of expanding the plant with lime softening. This will be the most cost effective and sustainable solution to add 1.75 MGD of capacity to the plant.



WWTP Expansion Study

City of Lowell
Kent County, MI

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Project No. 219065

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I. Executive Summary

The City of Lowell has expressed interest and need in expanding and improving its wastewater treatment plant (WWTP). The City-owned wastewater treatment plant treats wastewater from the City of Lowell, Lowell Charter Township, and Vergennes Township. There are some large industries in the City that discharge wastewater to the plant through an Industrial Pretreatment Program (IPP) permit. The largest of these is Litehouse Foods. These industries are important to the economy of the area.

The City of Lowell's WWTP currently faces three main challenges. The first is growth in the sanitary sewer service area and ongoing inflow and infiltration (I&I) of storm and flood water has resulted in increased wastewater flow to the plant. The annualized average flow is now near 98% of the average day design treatment capacity of 1.42 million gals per day (MGD). Expansion is needed to support further growth in the area.

The second is I&I during severe rain and/or flood events results in flow to the plant in excess of its 4 MGD design peak flow, requiring plant bypass pumping to the river. Recent influent flows to the plant have been estimated to be over 8.9 MGD.

The third challenge is maintaining a plant originally constructed in the 1960s as a primary treatment plant, and converted in 1987 to a secondary treatment plant. A previous capital improvement plan identified \$2.2M worth of work to repair and upgrade aging components of the plant, independent of expansion costs.

To meet these challenges, this report evaluates options for increasing the average day and peak hydraulic capacities of the plant. Currently, Lowell's WWTP plant consists of a pump station, bar screen, grit chamber, two oxidation ditches, two final clarifiers, two chlorine contact tanks, three sludge digesters, and a sludge storage tank. To improve the current operation and to bring the plant up to the desired treatment capacity for future growth, the following options were evaluated.

Option A: Construct a new headworks building with a larger fine screen, larger grit removal system, a new oxidation ditch, a new larger secondary clarifier, and a sludge storage tank to increase average day plant capacity to 2.13 MGD, and the maximum hydraulic flow to 6 MGD.

Option B: Construct a new headworks building with a larger fine screen, larger grit removal system, a two (2) new oxidation ditches, two (2) new larger secondary clarifiers, and a sludge storage tank to increase average day plant capacity to 2.84 MGD, and the maximum hydraulic flow to 8 MGD.

Option C: Construct a new headworks building with a larger fine screen, larger grit removal system, a larger oxidation ditch, a new larger secondary clarifier, and a sludge storage tank to increase average day plant capacity to 2.42 MGD, and the maximum hydraulic flow to 6 MGD.

Option D: Construct a new headworks building with a larger fine screen, larger grit removal system, two (2) larger oxidation ditches, two (2) new larger secondary clarifiers, and a sludge storage tank to increase the average day plant capacity to 3.42 MGD, and the maximum hydraulic flow to 8 MGD.

Option E: Construct a new headworks building with a larger fine screen, larger grit removal system, an equalization tank, and three secondary treatment tanks to increase the average day plant capacity to 2.84 MGD, and the maximum hydraulic flow to 6 MGD.

Included in each of these options are many of the recommendations from the recent capital improvement plan for the WWTP.

If there are no regulatory changes to the plant effluent limits, it is recommended the City of Lowell pursue Option A, which is the construction of a new headworks building to handle a peak flow of at least 6 MGD, one additional oxidation ditch the same size as the existing ditches, one slightly larger clarifier, and a sludge storage tank to increase the average day plant capacity to 2.13 MGD. Selection of Option A sets up the plant for an additional oxidation ditch and secondary clarifier in the future to increase average day capacity to 2.84 MGD. The total project cost opinion for Option A is \$11,840,000.

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II. Introduction

The City of Lowell owns a wastewater treatment plant located at 300 Bowes St. SE, near the confluence of the Flat River and Grand River. The existing plant treats wastewater from the City of Lowell, Lowell Charter Township and Vergennes Township. Currently, the plant is running at 98% of its average day capacity and large developments are planned in Lowell Township which would add substantial flow to the plant. Environment, Great Lakes and Energy (EGLE) requires publicly owned treatment facilities to begin planning an expansion at 80% capacity. To address this need, the City of Lowell retained Williams & Works to develop options for an expansion of the existing wastewater treatment plant.

Note: This study focuses on options of expanding the plant to handle additional flow from Lowell Charter Township. In addition to continuing to be a customer of the City, the Township has recently investigated the feasibility of building and operating their own wastewater treatment plant in 2-5 years. The Township is currently allocated 18% of the plant's capacity. Even if the Township were to cease to be a customer of the City, the City's existing plant would be running over 80% average design capacity and would need some level of expansion.

III. Existing Plant

The Lowell wastewater treatment plant was originally built in the 1960's as a primary treatment plant. This system included a primary clarifier, chlorine disinfection, a chlorine contact chamber and digesters for the primary sludge. In 1987 a headworks building, oxidation ditches and fine clarifiers were constructed, upgrading the plant to secondary treatment standards. The average day design flow for the existing wastewater treatment plant is 1.42 MGD with a maximum hour (peak) design of 4.0 MGD. Currently, the plant is running at approximately 1.40 MGD on an average day basis or 98% of design capacity. Flow studies have determined that I&I accounts for 0.40 MGD of that average flow. The plant also receives significant I&I during severe rain and/or flood events in excess of its 4.0 MGD design peak flow, resulting in infrequent plant bypass pumping to the river. Recent storm/flood influent flows to the plant have been estimated to be over 8.9 MGD.

The current influent basis of design is BOD5 at 217 mg/L, TSS at 190 mg/L, and Phosphorus at 10 mg/L. Current effluent limits are BOD5 at 25 mg/L, TSS at 30 mg/L, and Phosphorus at 1 mg/L. There is currently no limit for ammonia/nitrogen. Significant changes to the plant's discharge permit are not anticipated with an expansion given the discharge location into the Flat River at the confluence with Grand River.

A flow chart of the existing WWTP is provided in the Appendix. Wastewater first enters the plant through a gravity sewer located at the north side of the facility and discharges into an influent pump station. The pump station contains two submersible pumps each rated for 1,600 gallons per minute (gpm). With two pumps in service, the pumping capacity for the lift station is about 4.4 MGD. There is space for a third pump to increase the flow to approximately 5.2 MGD. These pumps discharge water into the screen channel inside the headworks building. The headworks building houses the bar screen, grit chamber and grit classifier. Wastewater flows through a vertical 1-inch bar screen then into a 10-foot square aerated grit chamber. Both of these have a bypass channel to use during maintenance. The grit from the aerated chamber is pumped by airlift to a grit classifier. From the grit chamber, the water discharges into one of two oxidation ditches from a splitter box. Each ditch has two brush aerators capable of

running at a low or high speed to provide oxygen for the biological treatment process. Influent is measured using probes and an adjustable weir is used to control the immersion of the brushes. The oxidation ditches discharge over the adjustable weir to the secondary clarifiers. The clarifiers are perimeter-feed style with a central effluent trough system.

Sludge scrapers move sludge to a central hopper where it is collected to be returned to the oxidation ditches as return activated sludge (RAS) or wasted. Returned sludge is pumped back up to mix with raw influent water through two inclined screw pumps. Waste sludge is pumped to Digester No. 3, as intermediate sludge storage. When the digester is full, it is mixed and then pumped to the sludge storage tank.

Effluent from the clarifiers flows into one of the two chlorine contact chambers. A second channel is available, but only necessary during high flow events. Chlorine gas is added as a disinfectant. After the contact chamber, water flows down a concrete channel and is discharged into the Flat River. The City and plant operators believe the treatment system has performed well since the addition of secondary treatment.

IV. Wastewater Flow Projections

The current sanitary sewer service area for the Lowell WWTP is approximately 1,724 acres of the 1,984 total acres of the City of Lowell, a portion of the approximately 1,600-acre area of Lowell Charter Township north of the Grand River, east of Parnell Ave. south of Foreman St. and west of Alden Nash, and Lowell High School in Vergennes Township. Wastewater from the service area is currently averaging about 1.4 MGD over the year, when including inflow and infiltration (I&I) into the collection system, and about 1.0 MGD when excluding I&I. Lowell Charter Township currently provides an average of 170,000 gallons per day (gpd) of that total.

The City's flows include some large industries in the City that discharge wastewater to the plant through an IPP permit. The largest of these is Lighthouse Foods.

A future sanitary sewer service area could potentially include 30 acres of vacant R2 zone land within the City of Lowell with an expected ultimate wastewater flow of 30,000 gpd. Areas for residential growth in the City limits is limited. The City is planning to reduce groundwater flow into the collection system by an estimated 0.4 MGD in the upcoming years, reducing ultimate flow by that amount. Lowell Charter Township recently completed a water and sewer feasibility study that identified four additional zones and an expansion in their existing service zone currently served by the Lowell WWTP. They are exploring the possibility of building their own wastewater treatment plant. If they remain in the Lowell WWTP service area, there is the potential for significant increases in wastewater flow to the City from the township over a 30-year planning period. The first of the new zones identified is a nearly 700-acre zone west of the existing zone. The ultimate wastewater flow from the zones north of the Grand River (Zones 1, 2a, and 2b) is 0.95 MGD. Three zones are planned by the I-96 exchange at M-50 (Alden Nash Ave.) that total nearly 872 acres with an ultimate wastewater flow of 0.83 MGD. The study calculates an ultimate wastewater flow of 1.78 MGD from a possible 5,335 Residential Equivalent Units (REU's) from Lowell Charter Township in total by 2050. Vergennes Township has identified Sections 33 and 34 of their township (1,280 acres) as areas for possible future utility expansion. The high school is included in this area, which is currently served by the Lowell WWTP.

If the area were to develop at a residential density of one REU per acre, the ultimate increase in wastewater from this area would be approximately 0.3 MGD.

The total ultimate projected average day wastewater flow from the City of Lowell, Lowell Charter Township, and Vergennes Township is projected to be 3.28 MGD based on the areas identified for growth at this time over the next 30 years.

Projected flow in the next 20 years is considerably less than the ultimate flow. The 20-year time period is common for the purposes of treatment plant construction. The 20-year project average day flow is 2.13 MGD. The 20-year and ultimate wastewater flows are shown in the table below.

Table 1: 2040 Flow Projections for City of Lowell WWTP

Existing Flows			
City of Lowell	0.83		MGD
Lowell Charter Township	0.17		MGD
Inflow / Infiltration (estimated)	0.40		MGD
Total Average Day Flows	1.40		MGD
Projected Future Flows			
	20-Year	Ultimate	
City of Lowell			
<i>Growth</i>	0.030	0.20	MGD
<i>I&I Reduction</i>	(0.40)	(0.40)	MGD
City of Lowell Subtotal	(0.37)	(0.20)	MGD
Lowell Charter Township			
<i>Zone 1: NW Twp. Parcels</i>	0.16	0.35	MGD
<i>Zone 2a: Existing Service District Expansion</i>	0.13	0.14	MGD
<i>Zone 2b: Existing Service District Expansion</i>	0.21	0.46	MGD
<i>Zone 3: W. of M-50 Development</i>	0.07	0.19	MGD
<i>Zone 4: M-50 Developments</i>	0.20	0.20	MGD
<i>Zone 5: Nearby M-50 Parcels</i>	0.20	0.44	MGD
Lowell Charter Township Subtotal	0.97	1.78	MGD
Vergennes Township			
<i>Sections 33 & 34</i>	0.13	0.30	MGD
Vergennes Township Subtotal	0.13	0.30	MGD
Total Project New Flows	0.73	1.88	MGD
Total Project Average Day Flows	2.13	3.28	MGD

V. Need for Project

Environment, Great Lakes and Energy (EGLE) requires publicly owned treatment facilities to begin planning an expansion when flows reach an average of 80% design capacity. As discussed above, the plant is currently running at 98% capacity and approximately 0.73 MGD of additional future flow is projected to the plant in the next 20 years. In order to allow the City of Lowell to address these needs, the plant will need to be expanded. This report presents five options to help the City of Lowell with future decisions concerning the treatment capacity of the plant.

The headworks equipment is at its design capacity. The bar screen lets a lot of material through, such as flushable wipes, and the grit chamber is not designed for the current peak flows seen at the WWTP. Currently, the aerated grit chamber is 10-feet by 10-feet by 12-feet deep. Design peak flow for the plant is 4.0 MGD, but is experiencing flows in excess of 4.4 MGD. According to Ten State Standards, aerated grit chambers should be able to detain 3-5 minutes of peak hourly flow. The detention time for the existing chamber with each design flow can be seen in Table 2. The grit chamber is not capable of adequately treating the projected flows.

Table 2: Grit Chamber Detention Times

	1.42 MGD Design	4.13 MGD Design	2.84 MGD Design
Peak Flow	4.0 MGD	6.0 MGD	8.0 MGD
Detention Time Peak	3.2 min	2.0 min	1.6 min

Oxidation ditches are designed to meet solids retention and hydraulic retention time standards. Solids retention time (SRT) is the amount of time solids are held in the system. Tank volume and influent flow are directly related to SRT and HRT. SRT is found with the Metcalf and Eddy equation below.

$$SRT \text{ (days)} = \frac{\text{Tank Volume (MG)} \times MLSS \left(\frac{mg}{L}\right)}{\text{Influent (MGD)} \times \text{Primary Effluent TSS} \left(\frac{mg}{L}\right)}$$

MLSS stands for mixed liquor suspended solids meaning the concentration of suspended solids in an aeration tank.

Hydraulic retention time (HRT) is the amount of time liquid is held in the system. HRT is calculated with the equation below.

$$HRT \text{ (hours)} = \frac{\text{Tank Volume (Gallons)}}{\text{Influent Flow (GPD)}}$$

If SRT is decreased the bacteria cannot grow fast enough to have the required reactions and will lead to system failure. Standards are set to maintain full nitrification in the system. If HRT is low the water may not be in the system long enough for microorganisms to absorb and remove contaminants. Standards that are in place for design and the current standing for Lowell's oxidation ditches can be seen in Table 3.

Table 3: Metcalf and Eddy, 5th ed. Activated Sludge Standards

	SRT [days]	HRT [hours]
Standards	15-30	15-30
Lowell Today	13.6	24.3

The current SRT is slightly lower than recommendations, but within a reasonable range. SRT will continue to decrease with increased flows. Although HRT of 24.3 hours is sufficient now, it will be insufficient with future expansion.

The secondary clarifiers are another limiting factor on the peak hydraulic capacity of the WWTP. Clarifiers should not see a flow that exceeds 1,000 gpd/sf² of surface area. The two 50-foot diameter clarifiers have a peak capacity of only 3.93 MGD. At least one additional slightly larger clarifier is required to increase the peak hydraulic capacity of the plant to 6 MGD.

Ferrous Chloride is the chemical feed for the plant. The plant currently has two pumps rated at 12 gph. These pumps are adequate for expansion to 2.13 or 2.84 MGD. Total ferrous chloride storage of 10,000 gallons surpasses the standards and is sufficiently sized for this expansion project.

Sludge storage for the plant consists of a 50-foot diameter 33-foot tall sludge storage tank and Digester No. 3, which is the old primary clarifier from the original plant. Together the tanks are capable of storing 731,000 gallons of sludge. For backup storage, Digesters No. 1 & 2 can be used for an additional 73,000 gallons. Not counting the original small digesters, the plant has a total volume of 731,000 gallons for sludge storage. The plant has storage for approximately 160 days of waste solids at a thickness of 4% at the design flow and loading. For a daily average flow of 2.13 MGD, the existing tanks could hold only about 105 days of sludge and for 2.84 MGD, only 80 days, not accounting for decant. Design standards require between 120 and 180 days of sludge storage for facilities that dispose of biosolids on land. The Lowell WWTP is such a facility. Additional storage capacity of 650,000 gallons is recommended for any expansion up to 2.42 MGD. An increase of 900,000 gallons of storage is recommended for any expansion over 2.42 MGD.

VI. Operation of Proposed Treatment Systems

A. Oxidation Ditch

Oxidation ditches are used to decrease the Biochemical Oxygen Demand (BOD) and Total Suspended Solids (TSS) in the wastewater. After wastewater flows through headworks, it is directed to an oxidation ditch. As the wastewater flows through the oxidation ditch, BOD and TSS is decreased. Oxidation ditches work by wastewater and return activated sludge entering the system together. The system has two rotors that house 3-inch wide stainless-steel blades which mix and aerate the wastewater. Mixing ensures that the oxygen and biomass are uniformly distributed through the tank. Dissolved oxygen content is monitored throughout the cycle with probes. When the dissolved oxygen drops the rotors speed up to match the demand of the water. The oxidation ditch is also equipped with an adjustable weir that controls the liquid depth in the channel. Weir height is adjusted to control the rotor blade immersion. With

the adjusted height the operator can control the oxygen input into the reactor to match the demands. A weather cover and splash frame are installed over the rotor to decrease the spray from the rotation. To improve aeration at a modest cost, a Variable Frequency Drive (VFD) could be added on to the brush rotors along with dissolved oxygen meters. This would increase the efficiency of the oxygen system. Alternate methods for oxygen delivery were considered, such as blowers and diffusers, or liquid oxygen, but the cost of the addition would not be justified. The oxidation ditch system can be seen in Figure 1. A portion of the existing oxidation ditch in Lowell can be seen in Figure 2.

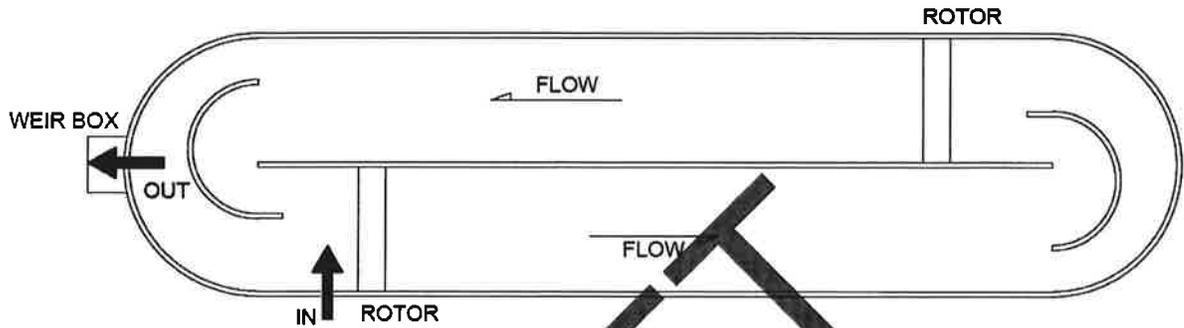


Figure 1: Oxidation Ditch General Schematic



Figure 2: Lowell's Oxidation Ditch

B. Aerobic Granular Sludge Tanks

A newer technology in wastewater treatment uses batch process secondary tanks with aerobic granular sludge (AGS) to improve the wastewater treatment process. The system works similar to sequence batch reactors which have multiple tanks and cycles within each tank. Granules are comprised of an anaerobic, anoxic, and aerobic zones. These zones allow for the BOD and the ammonia removal process to take place simultaneously. Tanks are also used for settling. The settling is extremely effective because of the high settleability of the biomass granules. Less tanks are required for this system resulting in a smaller plant footprint than would be required for equivalent treatment using oxidation ditches and secondary clarifiers.

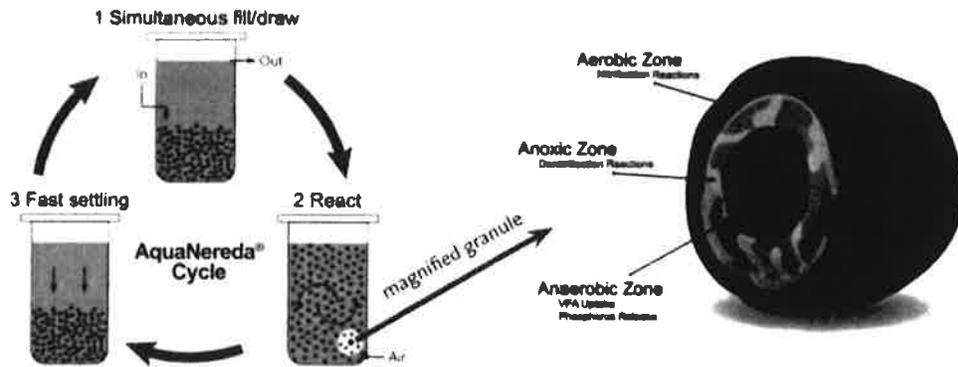


Figure 3: AquaNereda Cycles and Granule

VII. Proposed Projects

Equipment in the headworks building is at its design capacity. The existing bar screen is letting a lot of material through, particularly flushable wipes, and current peak flows are exceeding the design capacity of the grit chamber. Any proposed expansion project would replace the headworks building bar screen, Parshall flume, grit chamber, and grit classifier. The screening performance could be improved with a perforated basket screen. It is also recommended to replace the existing grit chamber with a vortex chamber. All equipment would be designed for higher peak flows. In order to have adequate space for the upgrades, a 40-foot by 50-foot building is recommended on the west side of the headworks building. This building would leave the existing grit and screen room empty and could be used to house the samplers, electrical equipment, and storage.

The site has been well taken care of since the original secondary expansion in 1987, but is in need of some expected improvements and repairs. Listed below are the additional improvements suggested in the 2019 capital improvement plan;

- Concrete repairs on the existing tanks.
- Primary building air monitoring.
- Pump Station for sanitary and scum needs improvements.
- Sludge storage tank mixer needs to be replaced.
- Existing oxidation ditches and RAS pumps need automation and improvements.
- The permanent stationary standby generator needs to be replaced.

It is recommended to update the site with one of the following options as well as upgrade and remedy any deficiencies.

A. Option A

Option A would add another oxidation ditch, a 60-foot diameter clarifier, RAS pumping and additional sludge storage to the system along with a new headworks building. Average day design flow for this system would be 2.13 MGD with a peak of 6.0 MGD. A 10-foot diameter vortex grit chamber and perforated drum rotary screen rated for up to 6.0 MGD would be installed in the new headworks building. The third oxidation ditch

would be a duplicate of the existing oxidation ditches. The clarifier would have a diameter 10' greater than the existing clarifiers. That increases the surface area, and the peak capacity by 44%. The layout of this option can be seen in Figure 4.

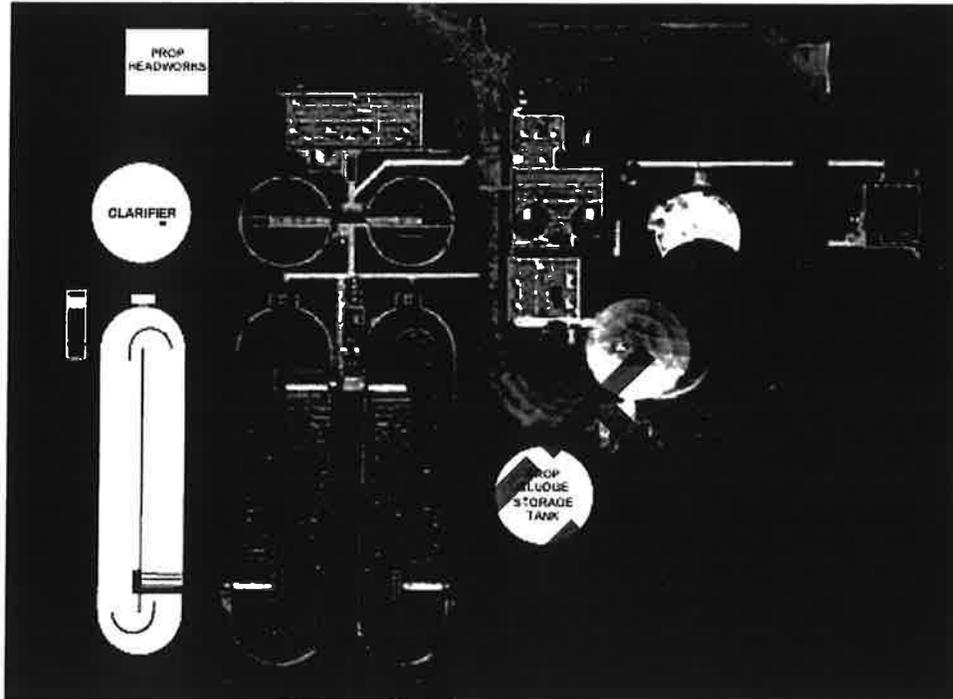


Figure 4: Option A Layout

Currently, the twin oxidation ditch system is able to handle an average daily flow of 1.42 MGD. Increasing average daily flow much beyond that, would cause the oxidation ditch system to not meet acceptable design standards with the current composition or pollutant load of the wastewater. HRT would move to an acceptable range with a third oxidation ditch and clarifier, assuming the BOD and TSS entering the oxidation ditches would be consistent with the existing wastewater composition. The amount of BOD and TSS entering the oxidation ditches is shown in Table 4.

Table 4: BOD and TSS Entering the Oxidation Ditches, Design Flow: 2.13 MGD

	mg/L	lb/day
BOD	217	3801
TSS	180	3153

The addition of a third oxidation ditch and clarifier would raise HRT. A comparison of the existing two oxidation ditch system and the proposed three oxidation ditch system can be seen in Table 5.

Table 5: Effect of an Oxidation Ditch, Design Flow: 2.13 MGD

SRT [days]	HRT [hours]
------------	-------------

Standards	15-30	15-30
Two Oxidation Ditches	9.0	16.2
Three Oxidation Ditches	13.6	24.3

A benefit of Option A is the operator's familiarity with the technology. The operators know how to operate and maintain oxidation ditches and no new training would be required. SRT and HRT would be consistent with current operation. Raising the amount of mixed liquor introduced into the oxidation ditch would slightly improve SRT.

A negative of this, and each option, is the construction must occur in a floodplain. This option does have the second least impact to the floodplain area, and has the smallest impact of the oxidation ditch expansion options.

B. Option B

Option B recommends adding two new oxidation ditches, two slightly larger final clarifiers, two RAS pumps to the system, and additional sludge storage. This option would also add a perforated drum rotary screen and a 12-foot diameter vortex grit system, each rated for 8 MGD. The average day design flow would be 2.84 MGD with a peak flow of 8.0 MGD. Site layout for Option B can be seen in Figure 5.

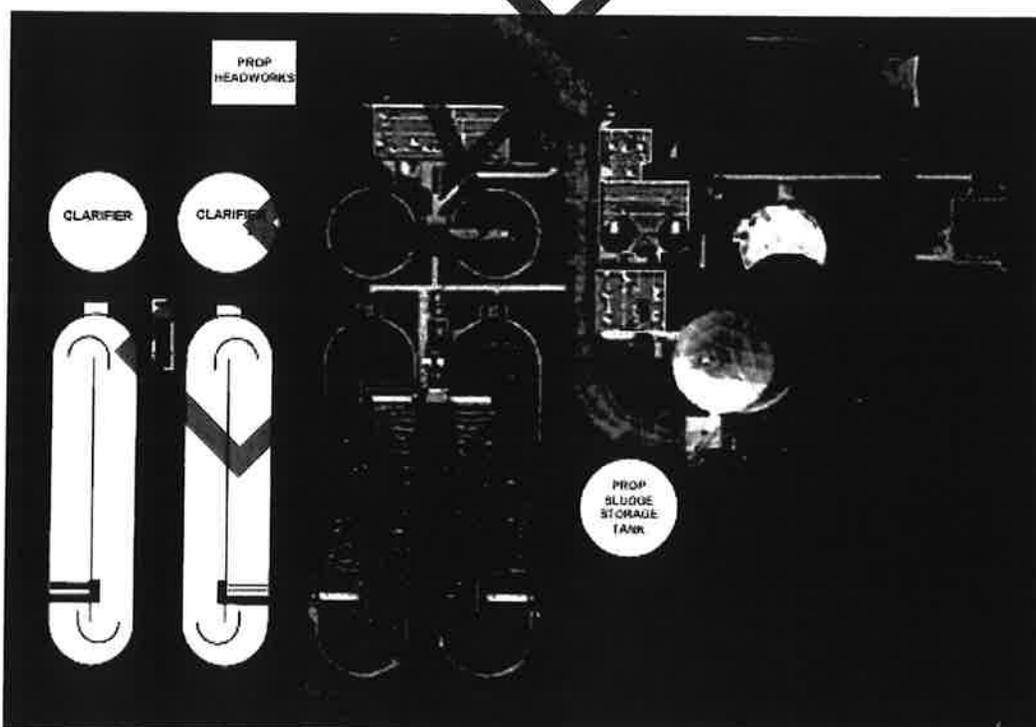


Figure 5: Option B Layout

BOD and TSS entering the oxidation ditches would be similar to the current composition. The amount of BOD and TSS entering the oxidation ditches can be seen in Table 6.

Table 6: BOD and TSS Entering the Oxidation Ditches, Design Flow, 2.84 MGD

	mg/L	lb/day
BOD	217	5067
TSS	180	4203

The two additional oxidation ditches would increase HRT to a maximum level, but the SRT would be below recommended levels. Impacts of adding two oxidation ditches can be seen in Table 7.

Table 7: Effect of Two Oxidation Ditches, Design Flow, 2.84 MGD

	SRT [days]	HRT [hours]
Standards	15-30	15-30
Existing System	6.8	2.1
Four Oxidation Ditches	13.6	24.3

Benefits to adding two oxidation ditches and two 60-foot diameter clarifiers are the raised HRT and the familiarity with the system. SRT would be consistent with current levels and HRT would be increased. The operators would know how to run the equipment and the system would be similar to how it is today.

A drawback with Option B is the footprint of the project. The project would be similar to option A and would be located in a floodplain.

C. Option C

Option C recommends adding a larger oxidation ditch, one slightly larger final clarifier, a RAS pump to the system, and additional sludge storage. This option would also add a perforated drum rotary screen and a 12-foot diameter vortex grit system rated for a peak flow of 8 MGD through the headworks building. The average day design flow would be 2.42 MGD with a peak flow of 6.0 MGD because of their only being three secondary clarifiers. The third oxidation ditch will be larger than the original two and capable of treating 1 MGD. The site layout for Option C can be seen in Figure 6.

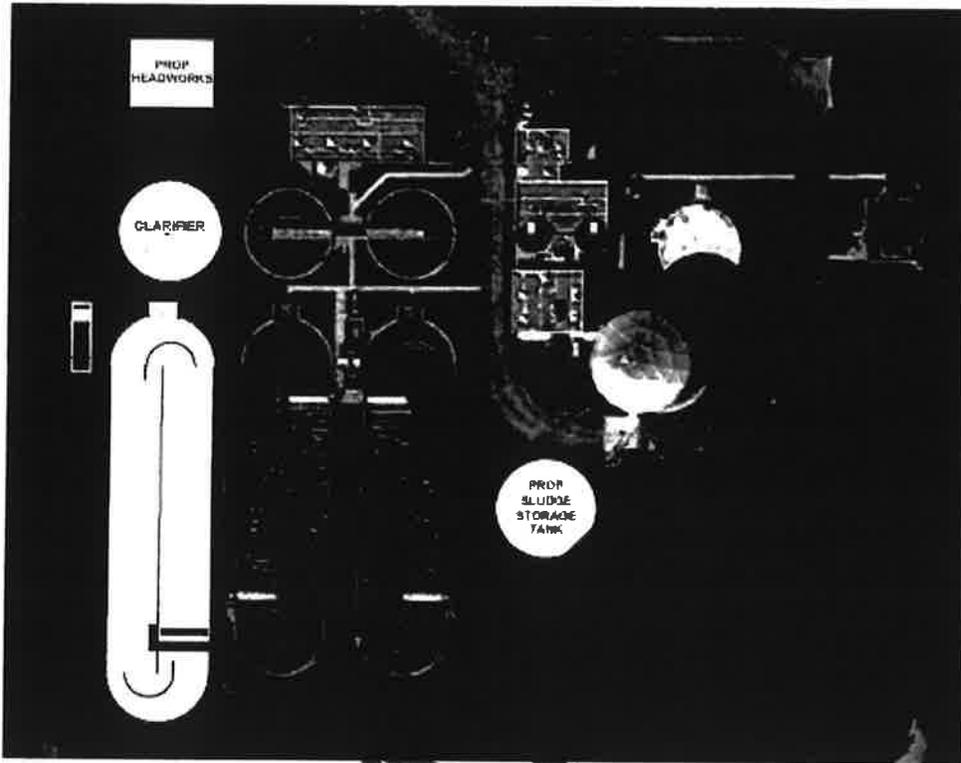


Figure 6: Option C Layout

The addition of a third oxidation ditch and clarifier would raise SRT and HRT. A comparison of the existing two oxidation ditch system and the proposed three oxidation ditch system can be seen in Table 8.

Table 8: Effect of an Oxidation Ditch, Design Flow: 2.42 MGD

	SRT [days]	HRT [hours]
Standards	15-30	15-30
Two Oxidation Ditches	8.0	14.2
Three Oxidation Ditches	13.5	24.2

Benefits of Option C is the operator's familiarity with the technology. The operators know how to operate and maintain oxidation ditches and no new training would be needed. SRT and HRT would be increased with the increased average daily flows. SRT and HRT would be consistent with current levels. The system would also be set up well for expansion of a fourth oxidation ditch.

The disadvantage of Option C is the large area of land needed for the project. Similar to option A, the land required for the project is in a flood plain.

D. Option D

Option D would add two new larger 1.0 MGal oxidation ditches, two 60-foot diameter clarifiers, two RAS pumps, and additional sludge storage to the system along with a headworks building upgrade. Design flow for this system would be 2.84 MGD with a peak of 8.0 MGD. Site layout for Option D can be seen in Figure 7.

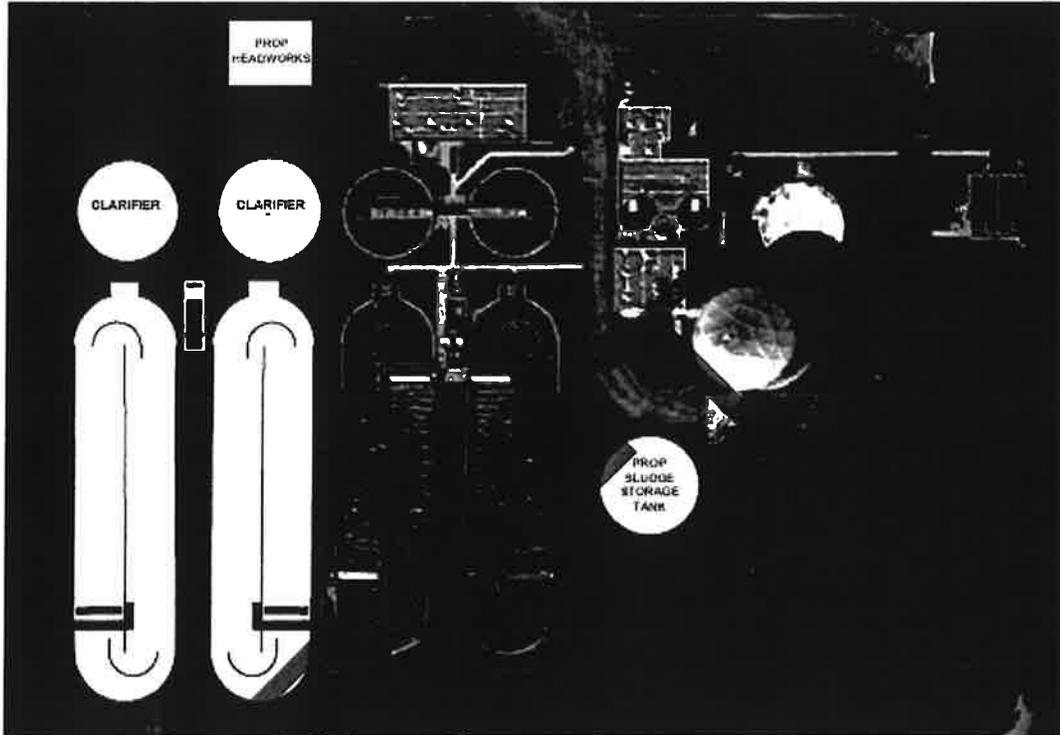


Figure 7: Option D Layout

Adding two oxidation ditches and clarifiers would raise SRT and HRT. A comparison of the existing two oxidation ditch system and the proposed four oxidation ditch system can be seen in Table 9.

Table 9: Effect of two Oxidation Ditches, Design Flow: 3.42 MGD

	SRT [days]	HRT [hours]
Standards	15-30	15-30
Existing System	5.6	10.1
Four Oxidation Ditches	13.5	24.1

Advantages of Option D is the much larger capacity for growth as well as the increase in HRT. Increasing the average daily flow to 3.42 MGD will allow room for growth in the area to the ultimate flow projection past the year 2050. The plant would be able to operate for 30 years without expansion at the current flow projections. SRT and HRT are consistent with the current levels and plant would be expected to run smoothly for many years. The plant operators are familiar with oxidation ditches and no new training would be needed.

Disadvantage of Option D are the high cost, and a significant amount of fill in the floodplain is required for this expansion project because of the large footprint of the tanks.

E. Option E

Option E is replacing the oxidation ditches and clarifiers with a new variation of activated sludge technology to treat wastewater to a superior standard in a smaller foot print than the existing oxidation ditch technology. If the discharge permit limits were to change with an expansion, and a nitrogen limit was added, additional treatment of the wastewater would be required. This system would remove both BOD5 and ammonia. This option would add a headworks building, an equalization tank, and three batch treatment process secondary tanks using aerobic granular sludge (AGS) for an average day design capacity of 2.42 MGD and a peak capacity of 6 MGD. Blowers would be used to provide the oxygen necessary for the biological treatment process. The existing oxidation ditches and clarifiers would be abandoned when the new system is in operation. The space occupied by these existing structures would be reserved for additional AGS batch process tanks to expand treatment capacity in the future. The layout for this option can be seen in Figure 8.

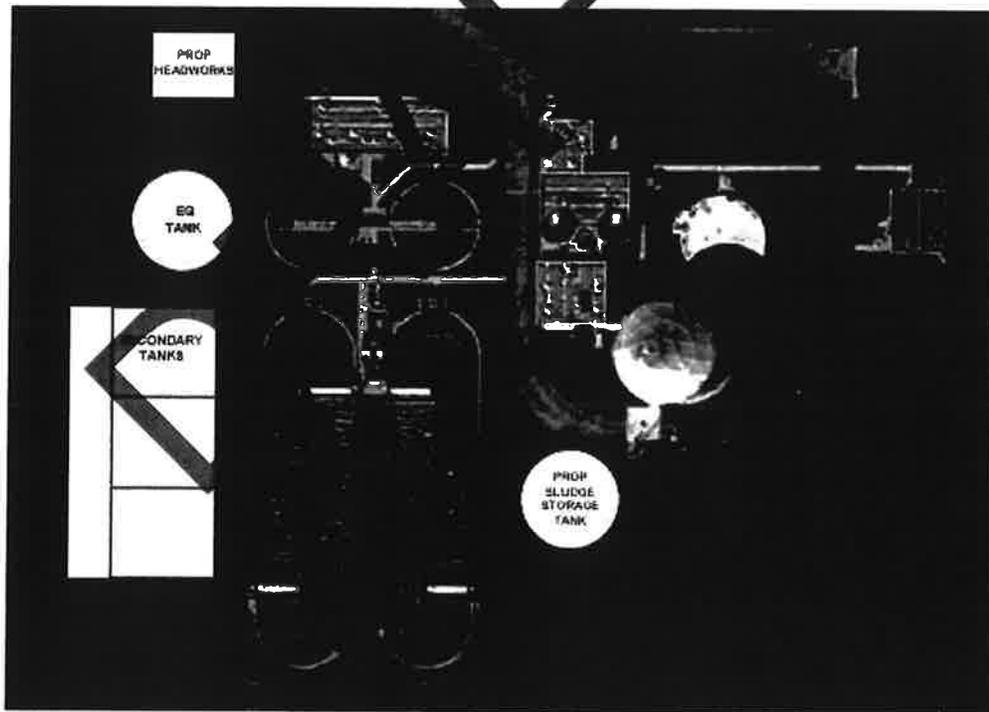


Figure 8: Option E Layout

The system would increase the SRT and HRT in a smaller area with smaller tanks and provide room for expansion in an area out of the floodplain.

Table 10: Effect of a Secondary Treatment Tank, Design Flow: 2.84 MGD

SRT [days]	HRT [hours]
------------	-------------

Standards	15-30	15-30
Secondary Tank	30.1	10.1

Secondary treatment with AGS is a variation on the well-established activated sludge system. The SRT and HRT calculated for the system is acceptable.

Benefits of Option E is the removal of both BOD5 and ammonia, a smaller tank footprint, and the ability to easily add more tanks in the future in the space occupied by the existing system. Three tanks take up less space than one oxidation ditch and can treat much higher volumes of wastewater to a superior standard. Option E also eliminates the need for secondary clarifier tanks. The AGS system operates in a batch process and settling occurs in a different phase in the same tank as the biological treatment.

A negative impact of Option E is the operator's unfamiliarity with the new equipment, and the higher operating cost caused by replacing the brush aerators with blowers. Plant operators would need training on how to operate and maintain the equipment. The tanks would be located in a floodplain.

VIII. Cost Opinions

A. Capital Costs

The cost of each expansion option can be seen in Table 11 below. A more detailed breakdown of each option can be found in the appendix.

Table 11: Construction Cost Options

	Option A 2.25 MGD	Option B 2.84 MGD	Option C 2.42 MGD	Option D 3.42 MGD	Option E 2.84 MGD
Headworks Building	\$2,000,000	\$2,200,000	\$2,000,000	\$2,200,000	\$2,200,000
Equalization Tanks	\$0	\$0	\$0	\$0	\$785,000
Oxidation Ditches	\$1,550,000	\$3,090,000	\$1,920,000	\$3,830,000	\$0
Secondary Tanks	\$0	\$0	\$0	\$0	\$4,550,000
Secondary Clarifiers	\$720,000	\$1,440,000	\$720,000	\$1,440,000	\$0
Sludge Storage	\$800,000	\$1,100,000	\$800,000	\$1,100,000	\$1,100,000
Site Work	\$1,000,000	\$1,200,000	\$1,100,000	\$1,400,000	\$1,200,000
SCADA	\$375,000	\$425,000	\$425,000	\$425,000	\$425,000
CIP Work	\$2,185,000	\$2,185,000	\$2,185,000	\$2,185,000	\$2,185,000
TOTAL	\$8,630,000	\$11,640,000	\$9,150,000	\$12,580,000	\$12,445,000
Contingency 20%	\$1,730,000	\$2,330,000	\$1,830,000	\$2,520,000	\$2,490,000
Administration 2%	\$180,000	\$240,000	\$190,000	\$260,000	\$250,000
Engineering 15%	\$1,300,000	\$1,750,000	\$1,380,000	\$1,890,000	\$1,870,000
Total Project Cost	\$11,840,000	\$15,960,000	\$12,550,000	\$17,250,000	\$17,060,000

B. Annual Costs

The annual operating costs for the current operation of the WWTP, and for the five options in this report have been tabulated. These costs can be seen in Table 12.

Table 12: Annual Operating Costs

Description	Current	Option A	Option B	Option C	Option D	Option E
Labor	\$220,000	\$220,000	\$330,000	\$220,000	\$330,000	\$330,000
Electricity	\$75,000	\$105,000	\$135,000	\$112,500	\$150,000	\$165,000
Sludge Disposal	\$40,000	\$60,000	\$80,000	\$72,000	\$96,000	\$80,000
Chemicals	\$35,000	\$52,500	\$70,000	\$63,000	\$84,000	\$52,500
Office	\$18,000	\$18,000	\$18,000	\$18,000	\$18,000	\$18,000
Maintenance	\$12,000	\$18,000	\$24,000	\$18,000	\$28,800	\$24,000
Permits	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000
Laboratory Costs	\$10,000	\$12,000	\$14,000	\$12,000	\$14,000	\$14,000
Natural Gas	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000
Total Annual Cost	\$423,000	\$498,500	\$684,000	\$528,500	\$733,800	\$696,500

C. Total Present Value

Present value for the different options was calculated from the sum of the capital costs and annual costs. The time line was based on 20 years with an interest rate set at 2%. Present value can be seen in Table 13.

Table 13: 20-Year Net Present Value

	Option A	Option B	Option C	Option D	Option E
20-Year NPV	\$19,920,000	\$27,038,000	\$21,109,000	\$29,140,000	\$28,340,000

IX. Conclusion

The options presented in this report lay out three paths for expanding the average day and peak capacity of the City of Lowell WWTP. Each path will require a new larger headworks building to at least match the capacity of the recently constructed pump station. It is recommended that a headworks building with a peak capacity between 6 and 8 MGD is constructed as part of any expansion.

The selection of Option A would set the City up on a path to eventually double the WWTP secondary capacity by initially constructing one additional oxidation ditch the same size as the existing ditches, one slightly larger secondary clarifier, and additional sludge storage capacity. Option A would increase average day design capacity to 2.13 MGD and peak capacity to 6 MGD. This capacity is very close to the projected 20-year flows from the future sewer service area. This option would also set up the plant for the future addition of a fourth oxidation ditch of the same size and another slightly larger secondary clarifier, and more sludge storage to increase secondary capacity to

2.84 MGD on average. Option B is the full buildout of Option A, with a headworks and secondary clarifiers that can accommodate a peak flow of 8 MGD.

The selection of Option C would set the City up on a path to eventually increase the WWTP secondary capacity to 3.42 MGD by initially constructing one oxidation ditch 40% larger than existing, one larger secondary clarifier, and additional sludge storage. A capacity of 3.42 MGD is more than the ultimate projected flow from the proposed future service area. Option C would increase average day design capacity to 2.42 MGD, peak capacity to 6 MGD, and set up the plant for the future addition of a fourth 40% larger ditch, secondary clarifier, and sludge storage. Option D is the full buildout of Option C.

Option E would completely change the treatment technology in use at the WWTP. The AGS system's ability to simultaneously remove BOD5 and ammonia would be needed if EGLE were to add an ammonia limit to the discharge permit, or if other factors such as the small footprint were to rise in importance. This system would not be recommended in place of the existing oxidation system without a justifiable reason.

The addition of oxidation ditches and clarifiers to the existing system (Options A, B, C, and D) would require no new training and limited additional operational effort. Option E would require operators to be trained to operate a completely new system and equipment.

If there are no regulatory changes to the plant effluent limits, it is recommended the City of Lowell pursue Option A, which is the construction of a new headworks building to handle a peak flow of at least 6 MGD, one additional oxidation ditch the same size as the existing ditches, one slightly larger clarifier, and a sludge storage tank to increase the average day plant capacity to 2.13 MGD. Selection of Option A sets up the plant for an additional oxidation ditch and secondary clarifier in the future to increase average day capacity to 2.84 MGD. The total project cost opinion for Option A is \$11,840,000. That cost includes \$2,200,000 in recommended repairs and improvements unrelated to the expansion.

Appendices

Engineer's Opinion of Cost for Options A, B, C, D, and E
Process Flow Diagram for Existing Plant
Process Flow Diagram for Options A and C
Process Flow Diagram for Options B and D
Process Flow Diagram for Option E

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Option A

Category	Cost	Unit	Number	Total
Headworks Building				
Material	\$175	sft	2000	\$350,000
Labor	\$250	sft	2000	\$500,000
Electrical Equipment	\$100,000	LS	1	\$100,000
HVAC\Process Piping	\$85,000	LS	1	\$85,000
Screens				
Concrete Material	\$400	cyd	8	\$4,000
Concrete Installation	\$600	cyd	8	\$5,000
Screens	\$180,000	ea	1	\$180,000
Installation	\$90,000	ea	1	\$90,000
Electrical Equipment	\$55,000	ea	1	\$55,000
Processing Piping	\$65,000	ea	1	\$65,000
Grit Chamber and Classifier				
Concrete Material	\$400	cyd	14	\$6,000
Concrete Installation	\$600	cyd	14	\$9,000
Vortex Grit	\$180,000	ea	1	\$180,000
Classifier and Pump	\$120,000	ea	1	\$120,000
Installation	\$90,000	ea	1	\$90,000
Electrical Equipment	\$70,000	ea	1	\$70,000
Processing Piping	\$91,000	ea	1	\$91,000
Oxidation Ditch				
Concrete Material	\$350	cyd	900	\$315,000
Concrete Installation	\$525	cyd	900	\$480,000
Rotors with Baffles and Covers	\$125,000	ea	2	\$250,000
RAS Pump	\$110,000	ea	1	\$110,000
Installation	\$100,000	ea	1	\$100,000
Electrical Equipment	\$95,000	ea	1	\$95,000
Processing Piping	\$200,000	ea	1	\$200,000
Clarifier				
Concrete Material	\$350	cyd	300	\$105,000
Concrete Installation	\$525	cyd	300	\$160,000
Equipment	\$130,000	ea	1	\$130,000
Installation	\$65,000	ea	1	\$65,000
Electrical Equipment	\$110,000	ea	1	\$110,000
Processing Piping	\$150,000	ea	1	\$150,000
Sludge Storage Tank				
Sludge Storage Tank	\$800,000	ea	1	\$800,000
Site Work				
Excavation, Backfill, Yard Pipe	\$1,000,000	LS	1	\$1,000,000
SCADA Improvements				
SCADA	\$375,000	LS	1	\$375,000
Capital Improvement Plan Work				
Primary Building Air Monitoring	\$40,000	LS	1	\$40,000
Concrete Repairs	\$50,000	LS	1	\$50,000
Oxidation Ditch Automation	\$370,000	LS	1	\$370,000
RAS Automation and Improvements	\$400,000	LS	1	\$400,000
Sanitary & Scum Pump Station Improvements	\$350,000	LS	1	\$350,000
Sludge Storage Mixer Replacement	\$500,000	LS	1	\$500,000
Control Building Improvements	\$200,000	LS	1	\$200,000
Generator Replacement	\$275,000	LS	1	\$275,000
Total Construction Cost				\$8,630,000
Contingency			20%	\$1,730,000
Administration			2%	\$180,000
Engineering			15%	\$1,300,000
Total Project Cost				\$11,840,000

Option B

Category	Cost	Unit	Number	Total
Headworks Building				
Material	\$175	sft	2000	\$350,000
Labor	\$250	sft	2000	\$500,000
Electrical Equipment	\$100,000	LS	1	\$100,000
HVAC\Process Piping	\$85,000	LS	1	\$85,000
Screens				
Concrete Material	\$400	cyd	8	\$4,000
Concrete Installation	\$600	cyd	8	\$5,000
Screens	\$220,000	ea	1	\$220,000
Installation	\$90,000	ea	1	\$90,000
Electrical Equipment	\$60,000	ea	1	\$60,000
Processing Piping	\$70,000	ea	1	\$70,000
Grit Chamber and Classifier				
Concrete Material	\$400	cyd	14	\$6,000
Concrete Installation	\$600	cyd	14	\$9,000
Vortex Grit	\$240,000	ea	1	\$240,000
Classifier and Pump	\$160,000	ea	1	\$160,000
Installation	\$110,000	ea	1	\$110,000
Electrical Equipment	\$100,000	ea	1	\$100,000
Processing Piping	\$91,000	ea	1	\$91,000
Oxidation Ditch				
Concrete Material	\$350	cyd	1800	\$630,000
Concrete Installation	\$525	cyd	1800	\$950,000
Rotors with Baffles and Covers	\$125,000	ea	4	\$500,000
RAS Pump	\$110,000	ea	2	\$220,000
Installation	\$100,000	ea	2	\$200,000
Electrical Equipment	\$95,000	ea	2	\$190,000
Processing Piping	\$200,000	ea	2	\$400,000
Clarifier				
Concrete Material	\$350	cyd	600	\$210,000
Concrete Installation	\$525	cyd	600	\$320,000
Equipment	\$130,000	ea	2	\$260,000
Installation	\$65,000	ea	2	\$130,000
Electrical Equipment	\$110,000	ea	2	\$220,000
Processing Piping	\$150,000	ea	2	\$300,000
Sludge Storage Tank				
Sludge Storage Tank	\$1,100,000	ea	1	\$1,100,000
Site Work				
Excavation, Backfill, Yard Pipe	\$1,200,000	LS	1	\$1,200,000
SCADA Improvements				
SCADA	\$425,000	LS	1	\$425,000
Capital Improvement Plan Work				
Primary Building Air Monitoring	\$40,000	LS	1	\$40,000
Concrete Repairs	\$50,000	LS	1	\$50,000
Oxidation Ditch Automation	\$370,000	LS	1	\$370,000
RAS Automation and Improvements	\$400,000	LS	1	\$400,000
Sanitary & Scum Pump Station Improvements	\$350,000	LS	1	\$350,000
Sludge Storage Mixer Replacement	\$500,000	LS	1	\$500,000
Control Building Improvements	\$200,000	LS	1	\$200,000
Generator Replacement	\$275,000	LS	1	\$275,000
Total Construction Cost				\$11,640,000
Contingency		20%		\$2,330,000
Administration		2%		\$240,000
Engineering		15%		\$1,750,000
Total Project Cost				\$15,960,000

Option C

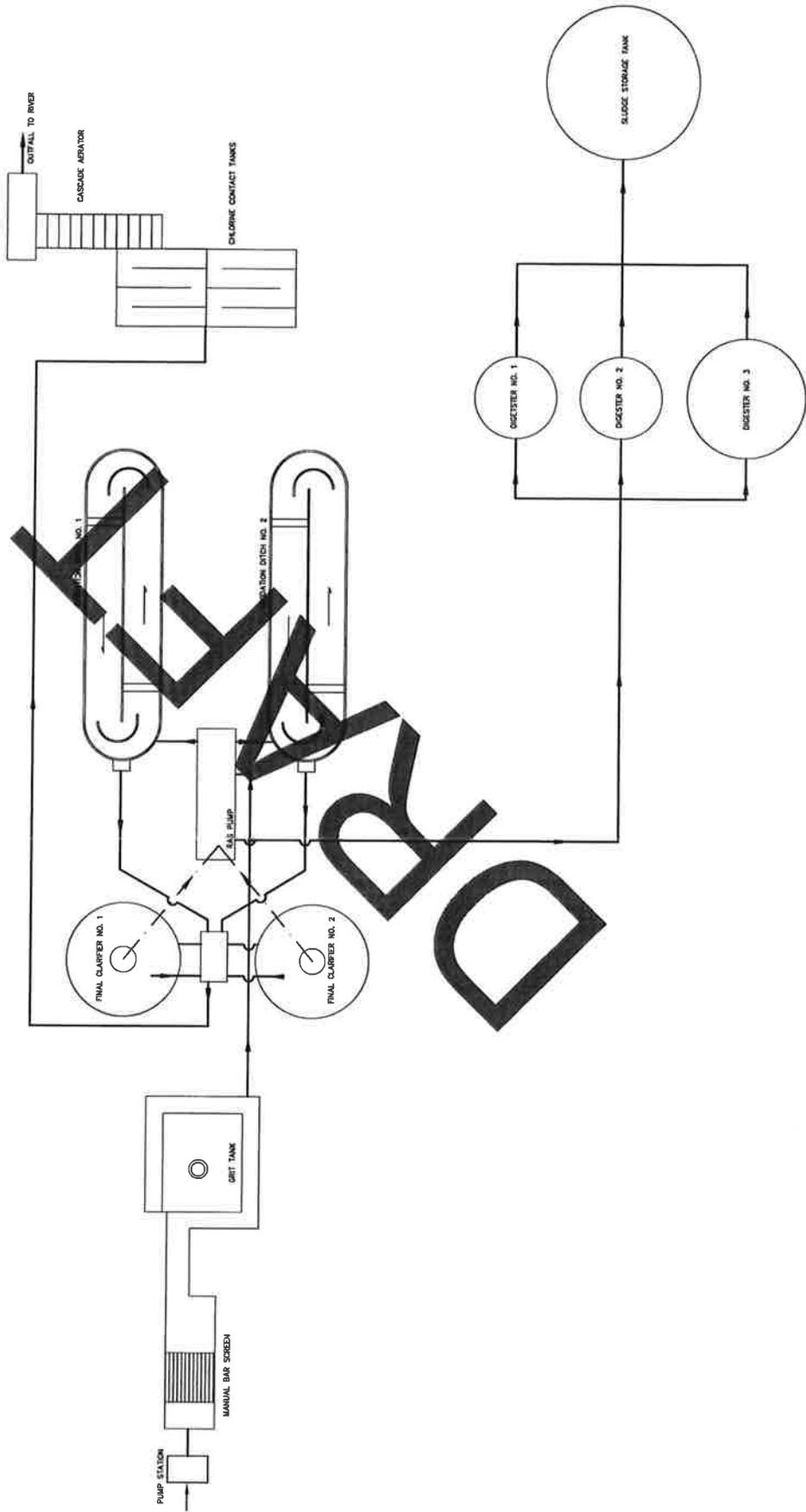
Category	Cost	Unit	Number	Total
Headworks Building				
Material	\$175	sft	2000	\$350,000
Labor	\$250	sft	2000	\$500,000
Electrical Equipment	\$100,000	LS	1	\$100,000
HVAC\Process Piping	\$85,000	LS	1	\$85,000
Screens				
Concrete Material	\$400	cyd	8	\$4,000
Concrete Installation	\$600	cyd	8	\$5,000
Screens	\$180,000	ea	1	\$180,000
Installation	\$90,000	ea	1	\$90,000
Electrical Equipment	\$55,000	ea	1	\$55,000
Processing Piping	\$65,000	ea	1	\$65,000
Grit Chamber and Classifier				
Concrete Material	\$400	cyd	14	\$6,000
Concrete Installation	\$600	cyd	14	\$9,000
Vortex Grit	\$180,000	ea	1	\$180,000
Classifier and Pump	\$120,000	ea	1	\$120,000
Installation	\$90,000	ea	1	\$90,000
Electrical Equipment	\$70,000	ea	1	\$70,000
Processing Piping	\$91,000	ea	1	\$91,000
Oxidation Ditch				
Concrete Material	\$350	cyd	1300	\$455,000
Concrete Installation	\$525	cyd	1300	\$690,000
Rotors with Baffles and Covers	\$135,000	ea	2	\$270,000
RAS Pump	\$110,000	ea	1	\$110,000
Installation	\$100,000	ea	1	\$100,000
Electrical Equipment	\$95,000	ea	1	\$95,000
Processing Piping	\$200,000	ea	1	\$200,000
Clarifier				
Concrete Material	\$350	cyd	300	\$105,000
Concrete Installation	\$525	cyd	300	\$160,000
Equipment	\$130,000	ea	1	\$130,000
Installation	\$65,000	ea	1	\$65,000
Electrical Equipment	\$110,000	ea	1	\$110,000
Processing Piping	\$150,000	ea	1	\$150,000
Sludge Storage Tank				
Sludge Storage Tank	\$800,000	ea	1	\$800,000
Site Work				
Excavation, Backfill, Yard Pipe	\$1,100,000	LS	1	\$1,100,000
SCADA Improvements				
SCADA	\$425,000	LS	1	\$425,000
Capital Improvement Plan Work				
Primary Building Air Monitoring	\$40,000	LS	1	\$40,000
Concrete Repairs	\$50,000	LS	1	\$50,000
Oxidation Ditch Automation	\$370,000	LS	1	\$370,000
RAS Automation and Improvements	\$400,000	LS	1	\$400,000
Sanitary & Scum Pump Station Improvements	\$350,000	LS	1	\$350,000
Sludge Storage Mixer Replacement	\$500,000	LS	1	\$500,000
Control Building Improvements	\$200,000	LS	1	\$200,000
Generator Replacement	\$275,000	LS	1	\$275,000
Total Construction Cost				\$9,150,000
Contingency			20%	\$1,830,000
Administration			2%	\$190,000
Engineering			15%	\$1,380,000
Total Project Cost				\$12,550,000

Option D

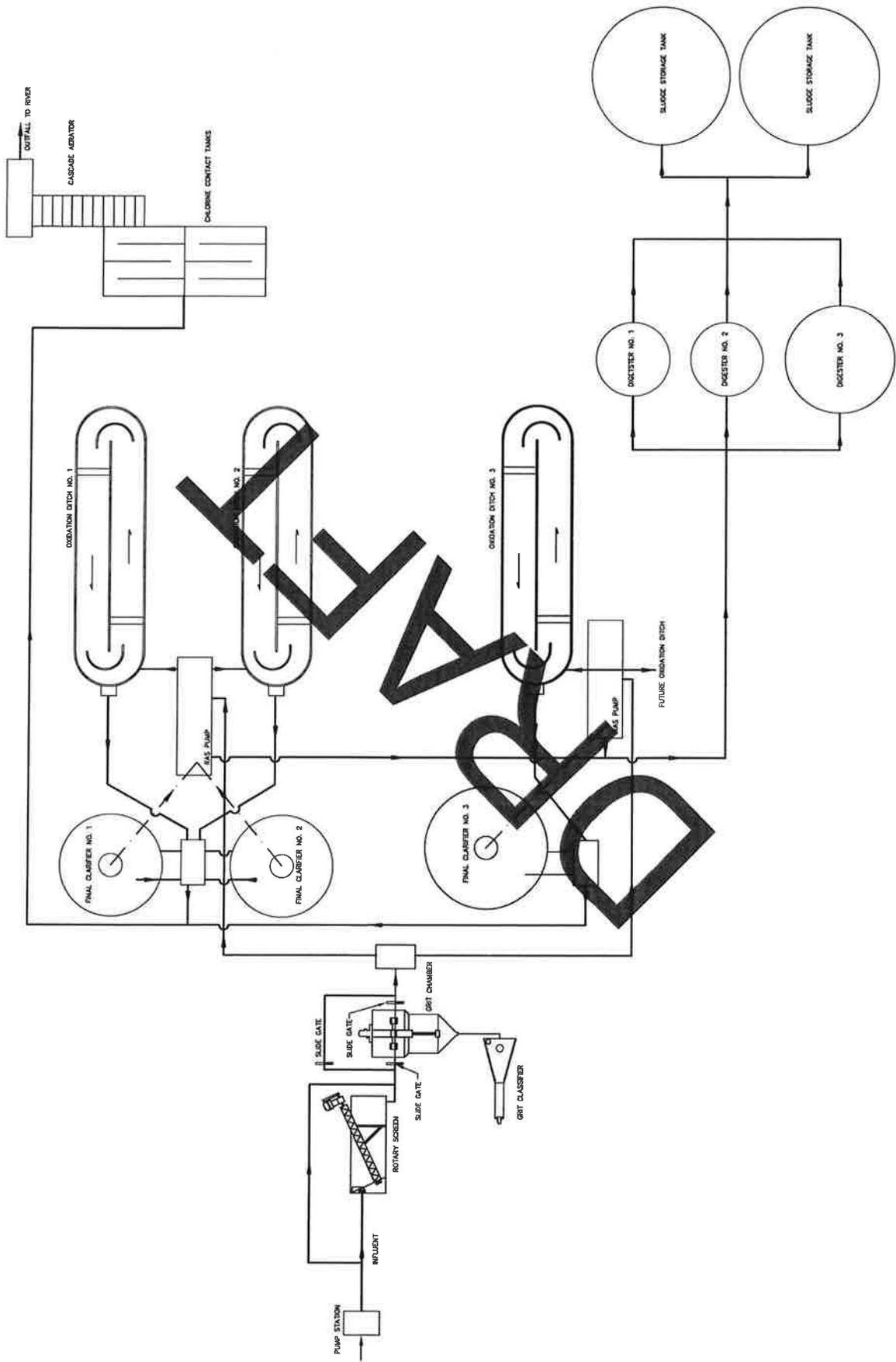
Category	Cost	Unit	Number	Total
Headworks Building				
Material	\$175	sft	2000	\$350,000
Labor	\$250	sft	2000	\$500,000
Electrical Equipment	\$100,000	LS	1	\$100,000
HVAC\Process Piping	\$85,000	LS	1	\$85,000
Screens				
Concrete Material	\$400	cyd	8	\$4,000
Concrete Installation	\$600	cyd	8	\$5,000
Screens	\$220,000	ea	1	\$220,000
Installation	\$90,000	ea	1	\$90,000
Electrical Equipment	\$60,000	ea	1	\$60,000
Processing Piping	\$70,000	ea	1	\$70,000
Grit Chamber and Classifier				
Concrete Material	\$400	cyd	14	\$6,000
Concrete Installation	\$600	cyd	14	\$9,000
Vortex Grit	\$240,000	ea	1	\$240,000
Classifier and Pump	\$160,000	ea	1	\$160,000
Installation	\$110,000	ea	1	\$110,000
Electrical Equipment	\$100,000	ea	1	\$100,000
Processing Piping	\$91,000	ea	1	\$91,000
Oxidation Ditch				
Concrete Material	\$350	cyd	2600	\$910,000
Concrete Installation	\$525	cyd	2600	\$1,370,000
Rotors with Baffles and Covers	\$135,000	ea	4	\$540,000
RAS Pump	\$110,000	ea	2	\$220,000
Installation	\$100,000	ea	2	\$200,000
Electrical Equipment	\$95,000	ea	2	\$190,000
Processing Piping	\$200,000	ea	2	\$400,000
Clarifier				
Concrete Material	\$350	cyd	600	\$210,000
Concrete Installation	\$525	cyd	600	\$320,000
Equipment	\$130,000	ea	2	\$260,000
Installation	\$65,000	ea	2	\$130,000
Electrical Equipment	\$110,000	ea	2	\$220,000
Processing Piping	\$150,000	ea	2	\$300,000
Sludge Storage Tank				
Sludge Storage Tank	\$1,100,000	ea	1	\$1,100,000
Site Work				
Excavation, Backfill, Yard Pipe	\$1,400,000	LS	1	\$1,400,000
SCADA Improvements				
SCADA	\$425,000	LS	1	\$425,000
Capital Improvement Plan Work				
Primary Building Air Monitoring	\$40,000	LS	1	\$40,000
Concrete Repairs	\$50,000	LS	1	\$50,000
Oxidation Ditch Automation	\$370,000	LS	1	\$370,000
RAS Automation and Improvements	\$400,000	LS	1	\$400,000
Sanitary & Scum Pump Station Improvements	\$350,000	LS	1	\$350,000
Sludge Storage Mixer Replacement	\$500,000	LS	1	\$500,000
Control Building Improvements	\$200,000	LS	1	\$200,000
Generator Replacement	\$275,000	LS	1	\$275,000
Total Construction Cost				\$12,580,000
Contingency			20%	\$2,520,000
Administration			2%	\$260,000
Engineering			15%	\$1,890,000
Total Project Cost				\$17,250,000

Option E

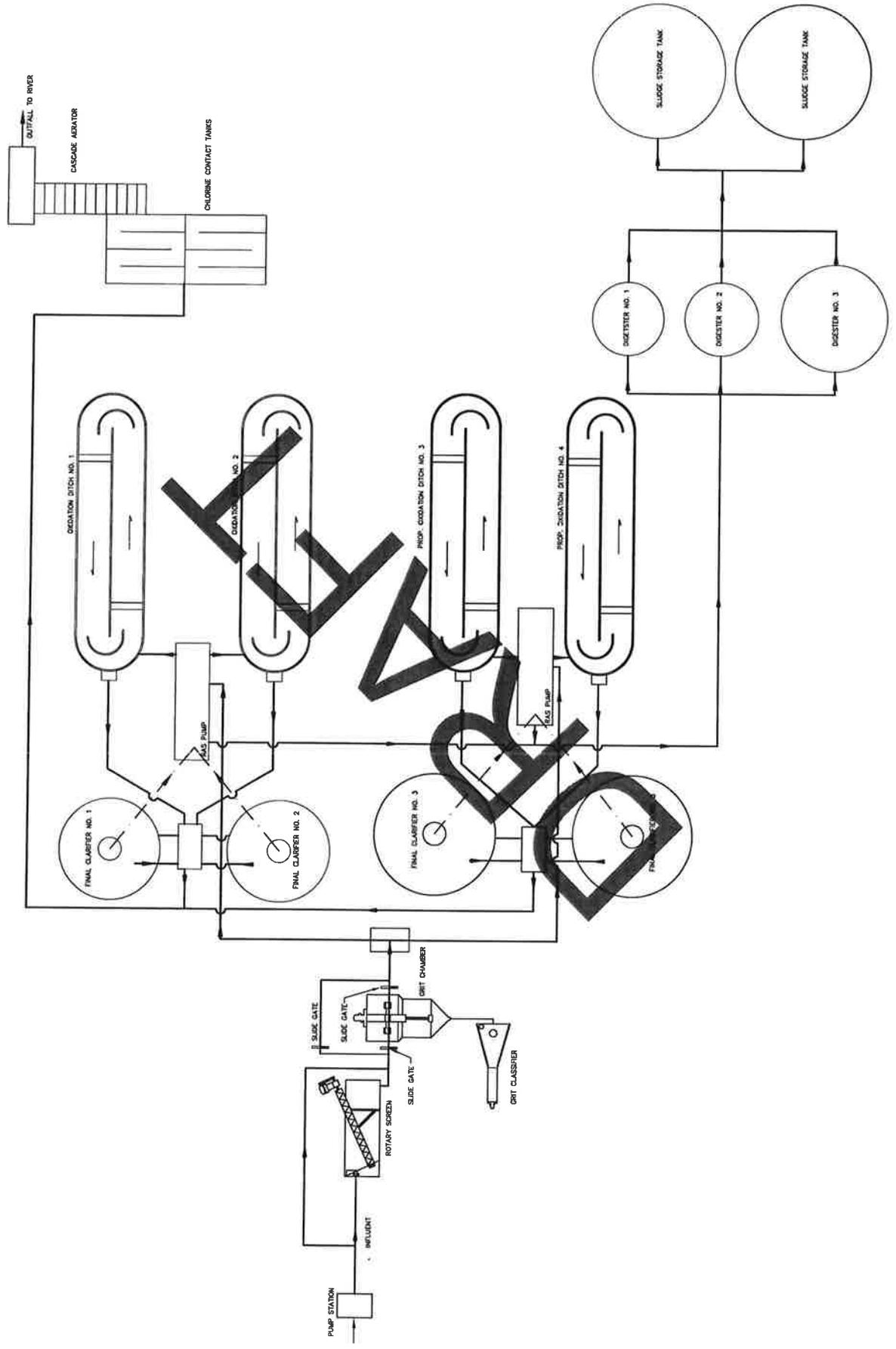
Category	Cost	Unit	Number	Total
Headworks Building				
Material	\$175	sft	2000	\$350,000
Labor	\$250	sft	2000	\$500,000
Electrical Equipment	\$100,000	LS	1	\$100,000
HVAC\Process Piping	\$85,000	LS	1	\$85,000
Screens				
Concrete Material	\$400	cyd	8	\$4,000
Concrete Installation	\$600	cyd	8	\$5,000
Screens	\$220,000	ea	1	\$220,000
Installation	\$90,000	ea	1	\$90,000
Electrical Equipment	\$60,000	ea	1	\$60,000
Processing Piping	\$70,000	ea	1	\$70,000
Grit Chamber and Classifier				
Concrete Material	\$400	cyd	14	\$6,000
Concrete Installation	\$600	cyd	14	\$9,000
Vortex Grit	\$240,000	ea	1	\$240,000
Classifier and Pump	\$160,000	ea	1	\$160,000
Installation	\$110,000	ea	1	\$110,000
Electrical Equipment	\$100,000	ea	1	\$100,000
Processing Piping	\$91,000	ea	1	\$91,000
Secondary Tank				
Concrete Material	\$50	cyd	1500	\$525,000
Concrete Installation	\$525	cyd	1500	\$788,000
Equipment	\$2,387,000	ea	1	\$2,387,000
Installation	\$500,000	ea	1	\$500,000
Electrical Equipment	\$150,000	ea	1	\$150,000
Processing Piping	\$200,000	ea	1	\$200,000
EQ Tank				
Concrete Material	\$350	cyd	600	\$210,000
Concrete Installation	\$525	cyd	600	\$315,000
Electrical Equipment	\$110,000	ea	1	\$110,000
Processing Piping	\$150,000	ea	1	\$150,000
Sludge Storage Tank				
Sludge Storage Tank	\$1,100,000	ea	1	\$1,100,000
Site Work				
Excavation, Backfill, Yard P	\$1,200,000	LS	1	\$1,200,000
SCADA Improvements				
SCADA	\$425,000	LS	1	\$425,000
Capital Improvement Plan Work				
Primary Building Air Monitoring	\$40,000	LS	1	\$40,000
Concrete Repairs	\$50,000	LS	1	\$50,000
Oxidation Ditch Automation	\$370,000	LS	1	\$370,000
RAS Automation and Improvements	\$400,000	LS	1	\$400,000
Sanitary & Scum Pump Station Improvements	\$350,000	LS	1	\$350,000
Sludge Storage Mixer Replacement	\$500,000	LS	1	\$500,000
Control Building Improvements	\$200,000	LS	1	\$200,000
Generator Replacement	\$275,000	LS	1	\$275,000
Total Construction Cost				\$12,450,000
Contingency			20%	\$2,490,000
Administration			2%	\$250,000
Engineering			15%	\$1,870,000
Total Project Cost				\$17,060,000



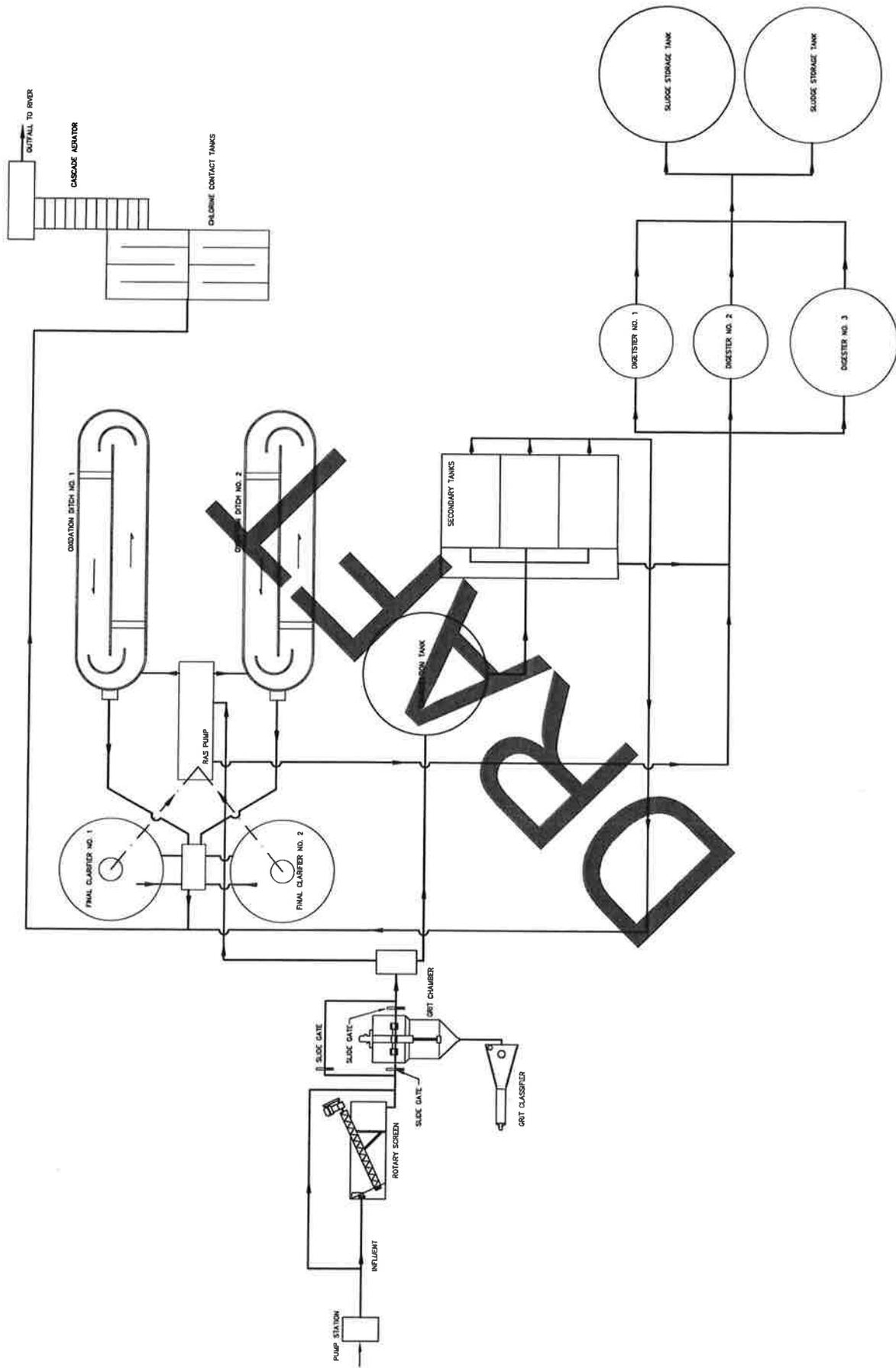
**CURRENT 1.42 MGD
PROCESS FLOW DIAGRAM**



**OPTION A 2.13 MGD AND
OPTION C 2.42 MGD
PROCESS FLOW DIAGRAM**



**OPTION B 2.84 MGD AND
OPTION D 3.42 MGD
PROCESS FLOW DIAGRAM**



**OPTION E 2.8 MGD WITH
SECONDARY TANKS PROCESS
FLOW DIAGRAM**

CONTRACT AMOUNT OUTSTANDING

	<i>paid</i>	<i>outstanding</i>	<i>total</i>
Moran	\$ 1,545,741.80	\$ 3,000.00	\$ 1,548,741.80
Comprehensive	\$ 72,991.42	\$ 11,008.58	\$ 84,000.00
Javo	\$ 7,240.00	\$ 71,160.00	\$ 78,400.00
Lynch	\$ 15,724.00	\$ 10,276.00	\$ 26,000.00
Wolverine	\$ 75,119.40	\$ 1,360,518.60	\$ 1,435,638.00
Hearthstone	\$ 19,961.75	\$ 7,538.25	\$ 27,500.00
Chamberlain	\$ 5,582.24	\$ 23,417.76	\$ 29,000.00
Fence	\$ 4,290.00	\$ 9,360.00	\$ 13,650.00
TOTAL EXP	\$ 1,746,650.61	\$ 1,496,279.19	\$ 3,242,929.80
DEDUCT		\$ 71,160.00	
OUTSTANDING		\$ 1,425,119.19	

PLEDGES/CASH ON HAND OUTSIDE CITY

<u>Description</u>	<u>Amount</u>
Pledges	\$ 93,750.00
Lowell Area Comm Fund	\$ 150,000.00
Chamber	\$ 17,000.00

PLEGGED (Not on Hand)	\$ 93,750.00
MONEY AT CHAMBER or GRFC	\$ 167,000.00
PLEGGED/ON HAND OUTSIDE Acct #260	\$ 260,750.00

FUNDRAISING GIVEN TO CITY

Naming Rights Paid	\$	221,250.00
Bricks Paid	\$	29,595.00
Rotary 2017	\$	131,230.00
Rotary 2019	\$	19,385.00
Rotary 2019	\$	1,620.00

TOTAL GIVEN \$ **403,080.00**

AMOUNT NEEDED TO COMPLETE WOLVERINE

TOTAL OUTSTANDING	\$ 1,425,119.19
CASH ON HAND IN ACCT 260	\$ 1,203,541.75
ON HAND OUTSIDE Acct #260	\$ 167,000.00
NEEDED TO COMPLETE	\$ 54,577.44
PLEDGED	\$ 93,750.00

Memorandum



DATE: December 3, 2020

TO: Michael Burns, City Manager

FROM: Daniel Czarnecki, Public Works Director

RE: Follow-up on Arbor Board Activities

PUBLIC WORKS

An update on activities pertaining to the Arbor Board and the Comprehensive Tree Plan activities was requested at a recent City Council meeting. Because of Covid-19 issues recent Arbor Board meetings have been canceled in lieu of safety. The last meeting of the Arbor Board was on March 9, 2020.

Over the past 8 months the DPW has performed numerous tree and plantings maintenance activities, in addition to all other DPW maintenance activities. These include tree trimming and removals, landscaped beds plantings and seasonal maintenance, and City grounds maintenance. Some of this work can be reviewed on the Comprehensive Tree Plan as follows:

Zone 1 – North / East Side Lowell

- Removal of 3 trees from Oakwood Cemetery.
- Removal of 2 trees from the street parkway.
- Light trimming of several street parkway trees as needed.

Zone 2 – South / East Side Lowell

- Extra irrigation to existing trees during heat of summer.
- Removal of 2 trees from the street parkway.

Zone 3 – Downtown / Riverwalk

- Trim trees along Main St to accommodate pedestrian activities.
- Extra irrigation to existing trees during heat of summer.

Zone 5 – North / West Side Lowell

- Researching tree types/locations for replacement of lost trees at Creekside Park (anticipating Spring planting).

Zone 6 – South / West Side Lowell

- Researching tree types/locations for replacement of lost trees at Recreation Park (anticipating Spring planting.)

Comprehensive Tree Plan Areas by Zone **APRIL 2020**

Zone 1 – North / East Side Lowell

1. Review Cemetery Tree needs.
2. Removal of selected dead trees from street parkways.
3. Maintain and trim trees and remove along ROW and offer replacement trees to be planted on residential properties as budget permits.

Zone 2 – South / East Side Lowell

1. Review/Trim trees at Rogers Field/Moose Property.
2. Maintain and trim trees along ROW when needed.
3. Maintain and trim trees and remove along ROW and offer replacement trees to be planted on residential properties as budget permits.

Zone 3 – Downtown/Riverwalk

1. Develop Tree Plan for Downtown area.
2. It is suggested that the Arbor Board take over the responsibilities of planting from the DDA, allowing the DDA to concentrate on development, and to provide the Arbor Board with coordinating planting activities throughout the community.
3. Assist with landscaping at library as budget allows.
4. Avery Lots – Arborvitaes – Discussion was held about trimming trees – Reagan referred to area around library, Beachum mentioned fence going around it.

Zone 4 – West Main Shopping Area

1. Annual budgeting should include tree planting in this area. Our hope is that we will eventually be allowed by the state and county, to plant within the right-of-way. In the meantime, we should concentrate on planting on private property fronting Main Street.
2. LARA – Tree planting on private property.

Zone 5 – North / West Side of Lowell

1. Replace trees (3) in Creekside Park lost during heavy windstorm Fall 2019.

Zone 6 – South / West Side of Lowell –

1. Replace trees (4) in Recreation Park lost during heavy windstorm Fall 2019.

Implementation Tree Plan for 2020/21

1. It is suggested that the Arbor Board take over the responsibilities of planting from the DDA, allowing the DDA to concentrate on development, and to provide the Arbor Board with coordinating planting activities throughout the community.

LOWELL CITY ADMINISTRATION
INTER OFFICE MEMORANDUM



DATE: December 3, 2020
TO: Mayor DeVore and the Lowell City Council
FROM: Michael T. Burns, City Manager
RE: FY 20 Excess Fund Balance

Since my arrival in 2016, City staff and I have been mindful of our finances and have had been able to continue to build a healthy fund balance in the event of unforeseen expenditures. Each year, we have been able to add at least an additional \$100,000 in fund balance to the General Fund. This is a significant accomplishment, as records reflect we had in the area of \$20,000 to \$35,000 in fund balance between the 2007 and 2009 fiscal years. This is a significantly dangerous level of fund balance. Recommended minimum general fund balance in Michigan is 15% of your total general fund levy.

Today, we have approximately \$1,000,000 in excess general fund balance which is the equivalent to 31% fund balance. I must recognize for the past decade, significant focus on building fund balance to a reasonable level has occurred.

This being said, we have some significant expenditures coming forward in the future. The obvious issue is the unfunded pension liability. Another issue in the near future, which is raising concern for me is the City's share of the next fire truck the Fire Authority will have to purchase in 2022. The worst case scenario is the City will have to contribute \$150,000 for our share of the truck.

This past fiscal year, we have seen revenue/expenditure projections much greater than budgeted. As revenue estimating conferences have shown improvement along with CARES ACT assistance, we are surprisingly in much better shape than projected. This being said, future revenues continue to be a moving target.

The previous fiscal year ending June 30, it was verified through our audit, the City had approximately \$198,000 in revenues over expenditures. If the City decided to bank this revenue, we would have approximately \$1.2 million in fund balance in case of an emergency.

After further review, I recognized as we move forward, that continuing to build the fund balance might not be in the best interest of the City. The more revenue set aside in an emergency, is obviously a good practice. However, if you do this, and ignore other structural issues, this is an issue too. Perfect example, in my former community, a neighboring community (which will remain unnamed) had literally a 98% fund balance but a significant unfunded pension liability. It was to the point they ended up bonding the unfunded liability. While pension bonding has good and bad issues, I always questioned the need to build a 98% fund balance.

I believe the City is in a good position whereby we may want to add a little bit at a time. I think it is a wiser decision to use excess funds to help alleviate problem issues. That said, I would suggest the council consider taking two actions with the \$198,000 excess revenue over expenditures.

The first thing I would recommend is to take \$125,000 of this and make a principal payment towards the unfunded pension liability. I would take the remaining approximate \$73,000 and set aside for the future fire truck payment.

Going forward, I am going to meet with our Fire Chief to evaluate their departments future capital improvement plan and begin subsidizing funds annually to a proposed fund for future fire equipment purchases. I am also pondering some ideas on setting aside funds for future police vehicle purchases.

I anticipate at some point, we will need to make a budget amendment to address the proposal. **I am recommending the Lowell City Council utilize the excess FY 2020 revenue over expenditures to address the two expenditures I proposed. I further recommend that in future years all fiscal year revenue amounts over expenditures address continuing unfunded pension liabilities. Administration should have flexibility to make inflationary increases to the current fund balance with excess revenues.**

LOWELL CITY ADMINISTRATION
INTER OFFICE MEMORANDUM



DATE: December 3, 2020
TO: Mayor Mike DeVore and the Lowell City Council
FROM: Michael T. Burns, City Manager *(MTB)*
RE: Resolution 24-20

Per MCL 211.27b Failure to notify assessing office; adjustment. It allows a waiver of filing fees when there is some sort of property transfer.

The buyer, grantee or other transferee is required to file a Property Transfer Affidavit with the local Assessor within 45 days when property transfers ownership. If not, penalties can be assessed \$5 per day it is overdue and no more than \$200.

Municipalities are permitted to waive State required penalties that commence after 45 days has elapsed as long as the governing body of a local tax collecting unit waives, by resolution, the penalty levied.

After many discussions with Assessor Jeff Rashid, it is my recommendation this fee be waived as this is an issue that doesn't happen often but tends to be more costly to collect than what the actually is. It is my opinion that when it occurs it is easier to waive it.

Attached is Resolution 24-20, in addition with the Michigan statute referring to this matter. **I am recommending approval of Resolution 24-20 waiving this administrative fee.**

THE GENERAL PROPERTY TAX ACT (EXCERPT)
Act 206 of 1893

211.27b Failure to notify assessing office; adjustment.

Sec. 27b. (1) If the buyer, grantee, or other transferee in the immediately preceding transfer of ownership of property does not notify the appropriate assessing office as required by section 27a(10), the property's taxable value shall be adjusted under section 27a(3) and all of the following shall be levied:

(a) Any additional taxes that would have been levied if the transfer of ownership had been recorded as required under this act from the date of transfer.

(b) Interest and penalty from the date the tax would have been originally levied.

(c) For property classified under section 34c as either industrial real property or commercial real property, a penalty in the following amount:

(i) Except as otherwise provided in subparagraph (ii), if the sale price of the property transferred is \$100,000,000.00 or less, \$20.00 per day for each separate failure beginning after the 45 days have elapsed, up to a maximum of \$1,000.00.

(ii) If the sale price of the property transferred is more than \$100,000,000.00, \$20,000.00 after the 45 days have elapsed. However, if the appropriate assessing office determines that the failure to notify the assessing office within 45 days after the property's transfer of ownership was due to reasonable cause and not the willful neglect of the buyer, grantee, or other transferee, the penalty under subparagraph (i) shall be imposed. If the appropriate assessing office makes a determination that the failure to notify the assessing office within 45 days after the property's transfer of ownership was a result of the willful neglect of the buyer, grantee, or other transferee, that assessing office shall promptly send that buyer, grantee, or other transferee written notice, by certified mail, of that determination. A buyer, grantee, or other transferee who is assessed the penalty under this subparagraph may appeal that determination to the Michigan tax tribunal.

(d) For real property other than real property classified under section 34c as industrial real property or commercial real property, a penalty of \$5.00 per day for each separate failure beginning after the 45 days have elapsed, up to a maximum of \$200.00.

(2) The appropriate assessing officer shall certify for collection to the treasurer of the local tax collecting unit if the local tax collecting unit has possession of the tax roll or the county treasurer if the county has possession of the tax roll any additional taxes due under subsection (1)(a) and any penalty due under subsection (1)(c) or (d).

(3) The treasurer of the local tax collecting unit if the local tax collecting unit has possession of the tax roll or the county treasurer if the county has possession of the tax roll shall collect any taxes, interest, and penalty due pursuant to this section, and shall immediately prepare and submit a corrected tax bill for any additional taxes due under subsection (1)(a) and any interest and penalty due under subsection (1)(b). A penalty due under subsection (1)(c) or (d) may be collected with the immediately succeeding regular tax bill.

(4) Any taxes, interest, and penalty collected pursuant to subsection (1)(a) and (b) shall be distributed in the same manner as other delinquent taxes, interest, and penalties are distributed under this act. Any penalty collected under subsection (1)(c) or (d) shall be distributed to the local tax collecting unit.

(5) The governing body of a local tax collecting unit may waive, by resolution, the penalty levied under subsection (1)(c) or (d).

(6) If the taxable value of property is increased under this section, the appropriate assessing officer shall immediately notify by first-class mail the owner of that property of that increase in taxable value. A buyer, grantee, or other transferee may appeal any increase in taxable value or the levy of any additional taxes, interest, and penalties under subsection (1) to the Michigan tax tribunal within 35 days of receiving the notice of the increase in the property's taxable value. An appeal under this subsection is limited to the issues of whether a transfer of ownership has occurred and correcting arithmetic errors. A dispute regarding the valuation of the property is not a basis for appeal under this subsection.

(7) If the taxable value of property is adjusted under subsection (1), the assessing officer making the adjustment shall file an affidavit with all officials responsible for determining assessment figures, rate of taxation, or mathematical calculations for that property within 30 days of the date the adjustment is made. The affidavit shall state the amount of the adjustment and the amount of additional taxes levied. The officials with whom the affidavit is filed shall correct all official records for which they are responsible to reflect the adjustment and levy.

(8) Notification of a transfer of ownership provided as required under section 27a(10) or a levy of additional taxes, interest, and penalty under this section shall not be considered a determination of or evidence of the classification of the property transferred as real or personal property.

History: Add. 1994, Act 415, Imd. Eff. Dec. 29, 1994;—Am. 1996, Act 476, Imd. Eff. Dec. 26, 1996;—Am. 2012, Act 382, Imd. Rendered Thursday, December 3, 2020

**CITY COUNCIL
CITY OF LOWELL
KENT COUNTY, MICHIGAN**

RESOLUTION NO. 24-20

**RESOLUTION TO WAIVE PENALTIES LEVIED UNDER
SUBSECTIONS 27b(1)(c) AND 27b(1)(d) OF THE GENERAL PROPERTY
TAX ACT**

Councilmember _____ supported by Councilmember _____ moved
the adoption of the following resolution:

WHEREAS, Section 27a of the General Property Tax Act, 1893 PA 206, MCL 211.1 *et seq.* (the “GPTA”) requires the buyer, grantee, or other transferee of certain property to file a property transfer affidavit with the appropriate assessing officer in the local unit of government in which the property is located; and

WHEREAS, Subsection 27b(5) of the GPTA permits the governing body of a local tax collecting unit to adopt a resolution waiving the penalties that may be levied under Subsections 27b(1)(c) and 27b(1)(d) related to the failure of a buyer, grantee, or other transferee of certain property to timely file a property transfer affidavit; and

WHEREAS, the City of Lowell has determined that it is in the best interest of the City to waive such penalties, unless the Assessor deems it appropriate to do otherwise.

NOW, THEREFORE, BE IT HEREBY RESOLVED:

1. The penalties levied under Subsections 27b(1)(c) and 27b(1)(d) of the GPTA are waived and shall not be collected unless deemed appropriate by the Assessor to do otherwise.
2. All resolutions and parts of resolutions are, to the extent of any conflict with this resolution, rescinded.

YES: Councilmembers _____

NO: Councilmembers _____

ABSTAIN: Councilmembers _____

ABSENT: Councilmembers _____

RESOLUTION DECLARED ADOPTED.

Dated: December 7, 2020

Susan Ullery, City Clerk

CERTIFICATION

I hereby certify that the foregoing is a true and complete copy of a resolution adopted by the City Council of the City of Lowell at a regular meeting held on December 7, 2020, and that public notice of said meeting was given pursuant to, and in compliance with, Act 267 of the Public Acts of Michigan of 1976, as amended.

Dated: December 7, 2020

Susan Ullery, City Clerk

LOWELL CITY ADMINISTRATION
INTER OFFICE MEMORANDUM



DATE: December 3, 2020
TO: Mayor Mike DeVore and the Lowell City Council
FROM: Michael T. Burns, City Manager *MTB*
RE: Resolution 26-20

The Michigan Department of Treasury requires Communities to establish poverty guidelines for those who are unable to contribute toward the public charges. Those in this situation are deemed a poverty exemption if they meet all of the requirements.

Annually these resolutions must be reviewed and established. I have attached the proposed Poverty Exemption Policy and Guidelines. The Assessor will review with you what these guidelines are.

I have also attached Resolution 26-20 to address this. **I recommend the Lowell City Council approve Resolution 26-20 to adopt a current poverty exemption policy and guidelines in accordance with the General Property Tax Act.**

**CITY COUNCIL
CITY OF LOWELL
KENT COUNTY, MICHIGAN**

RESOLUTION NO. 26-20

**RESOLUTION TO ADOPT A POVERTY EXEMPTION POLICY AND
GUIDELINES IN ACCORDANCE WITH THE GENERAL PROPERTY
TAX ACT**

Councilmember _____ supported by Councilmember _____ moved
the adoption of the following resolution:

WHEREAS, Section 7u of the General Property Tax Act, 1893 PA 206, MCL 211.1 *et seq.* (the "GPTA") permits the City to exempt from taxation, in whole or in part, the principal residence of persons who, by reason of poverty, are unable to contribute toward the public charges; and

WHEREAS, Subsection 7u requires that applicants for the poverty exemption must meet certain requirements as set forth in the GPTA and as set forth in the City's Poverty Exemption Policy and Guidelines in order to be eligible; and

WHEREAS, the City of Lowell has developed its own Poverty Exemption Policy and Guidelines in accordance with the GPTA requirements.

NOW, THEREFORE, BE IT HEREBY RESOLVED:

1. The attached Poverty Exemption Policy and Guidelines are hereby adopted for use in implementation in accordance with Section 7u of the GPTA.
2. All resolutions and parts of resolutions are, to the extent of any conflict with this resolution, rescinded.

YES: Councilmembers _____

NO: Councilmembers _____

ABSTAIN: Councilmembers _____

ABSENT: Councilmembers _____

RESOLUTION DECLARED ADOPTED.

Dated: December 7, 2020

Susan Ullery, City Clerk

CERTIFICATION

I hereby certify that the foregoing is a true and complete copy of a resolution adopted by the City Council of the City of Lowell at a regular meeting held on December 7, 2020, and that public notice of said meeting was given pursuant to, and in compliance with, Act 267 of the Public Acts of Michigan of 1976, as amended.

Dated: December 7, 2020

Susan Ullery, City Clerk

CITY OF LOWELL
POVERTY EXEMPTION POLICY AND GUIDELINES

1. **Purpose.** The principal residence of persons who, in the judgment of the Board of Review, by reason of poverty, are unable to contribute toward the public charges is eligible for exemption in whole or in part from taxation, as further governed by MCL 211.7u. Principal residence is defined as the “principal residence or qualified agricultural property” as those items are defined in MCL 211.7dd(c) and (d).

2. **Eligibility.** To be eligible for the poverty exemption, the applicant must meet **all** of the following requirements:
 - (a) The applicant must be an owner of, and occupy as a principal residence, the property for which the exemption is requested.

 - (b) The applicant’s household income must not exceed the federal poverty level as annually defined by the United States Department of Health and Human Services.

POVERTY INCOME STANDARDS FOR 2020 ASSESSMENTS

<u>Persons in Family/Household</u>	<u>Poverty Guideline</u>
1 Person	\$12,490
2 Persons	\$16,910
3 Persons	\$21,330
4 Persons	\$25,750
5 Persons	\$30,170
6 Persons	\$34,590
7 Persons	\$39,010
8 Persons	\$43,430**

**For families/households with more than 8 Persons, add \$4,420 for each additional person.

POVERTY INCOME STANDARDS FOR 2021 ASSESSMENTS

<u>Persons in Family/Household</u>	<u>Poverty Guideline</u>
1 Person	\$12,760
2 Persons	\$17,240
3 Persons	\$21,720
4 Persons	\$26,200
5 Persons	\$30,680
6 Persons	\$35,160
7 Persons	\$39,640
8 Persons	\$44,120**

**For families/households with more than 8 Persons, add \$4,480 for each additional person.

- (c) The applicant's total assets, *except the principal residence being claimed*, including cash, fixed assets, and other property that could be converted to cash to pay property taxes, should not exceed \$10,000 for the applicant or \$15,000 for the household.

Assets** include, but are not limited to, the following:

- A second home
- Land
- Buildings other than the primary residence
- Motor vehicles
- Recreational vehicles such as campers, motor-homes, boats, and ATVs
- Jewelry, antiques, and artwork
- Equipment
- Other personal property of value
- Bank accounts over \$5,000
- Stocks
- Money received from the sale of property, such as, stocks, bonds, a house or car (unless a person is in the specific business of selling such property)
- Withdrawals of bank deposits and borrowed money
- Gifts, loans, lump-sum inheritances, and one-time insurance payments
- Food or housing received in lieu of wages and the value of food and fuel produced and consumed on farms
- Federal non-cash benefits programs such as Medicare, Medicaid, food stamps and school lunches

Assets **do not include essential household goods (such as furniture, appliances, dishes, and clothing), or term life insurance.

The Board of Review will not reduce the value of the assets by the amount of any indebtedness owed on such assets, or any indebtedness otherwise owned by the applicant.

If the applicant meets these eligibility requirements, the applicant will be entitled to a poverty exemption as long as the applicant complies with the remaining requirements and procedures set forth in this policy and guidelines.

3. **Application.** To apply for the poverty exemption, a person shall do all of the following on an annual basis:

- (a) File a Poverty Exemption Application with the Assessor or Board of Review. Applicants must obtain the Application from the Assessor's Office. Physically challenged or infirmed applicants may call the Assessor's Office to make necessary arrangements for assistance.

- (b) Submit copies of federal and state income tax returns for all persons residing in the principal residence, including any property tax credit returns filed in the immediately preceding year or in the current year.
- (c) Produce a valid driver's license or other forms of identification, if requested.
- (d) Produce a deed, land contract, or other evidence of ownership of the property for which an exemption is requested, if such proof of ownership is requested by the Board of Review.
- (e) Provide evidence of other assets including investments, real property, and retirement accounts, which include but are not limited to W-2 forms, interest income statements, dividend income statements, social security benefit statement, pension benefit statements, SSE benefit statements, workman's compensation benefit statement, public assistance benefit statement, general assistance benefit statements, ADC benefit statements, child support documentation, and alimony documentation.
- (f) Information and documents submitted in support of this application will be kept confidential, to the maximum extent permitted by law.

4. Appearance Before the Board of Review. The applicant, or a representative of the applicant, will be required to appear before the Board of Review to respond to any questions that the Board or Assessor may have concerning the exemption application, unless a written medical excuse provided by his/her doctor at the time the application is submitted.

- (a) An applicant may be called to appear before the Board of Review on short notice.
- (b) An applicant may have to answer questions regarding the applicant's financial affairs, health, or the status of people living in the applicant's home before the Board of Review at a meeting that is open to and will be attended by the public.
- (c) An applicant appearing before the Board of Review may be administered an oath as follows:

“Do you _____ swear and affirm that the evidence and testimony you will give in your own behalf before the Board of Review is the truth, the whole truth, and nothing but the truth, so help you?”

- (d) The Secretary of the Board of Review may tape record and will keep minutes of all proceedings before the Board of Review.
- (e) If called to appear before the Board of Review, physically challenged or infirmed applicants may call the Assessor's Office to make necessary arrangements for assistance.

- (f) The Board of Review may, in its discretion, review poverty exemption applications without the applicant or the applicant's representative being physically present.
5. Evaluation of Application. Applications for poverty exemptions will be evaluated based on information submitted to the Board of Review by the applicant, testimony taken from the applicant, and information gathered by the Board of Review from any source.
- (a) The Board of Review is not required to grant poverty exemption for property owned by multiple owners as long as at least one owner is not eligible for the poverty exemption.
 - (b) The Board of Review may conduct an investigation to verify the information submitted or statements made to the Assessor or Board of Review in regard to the applicant's poverty exemption claim.
 - (c) The Board of Review may not deny a poverty exemption based upon mere speculation regarding the level of an applicant's income or assets.
 - (d) A poverty exemption, if granted, shall remain in effect for one year and an applicant's eligibility for the poverty exemption shall be determined each year.
6. Special Circumstances Warranting Application of the Poverty Exemption. The Board of Review may, in its discretion, grant a poverty exemption to a taxpayer who does not meet the income and asset tests contained in these guidelines where one or more of the following has resulted in hardship to the taxpayer:
- (a) Unforeseen prolonged cessation of income due to circumstances beyond the applicant's control.
 - (b) Trauma or critical illness of the applicant or the applicant's immediate family member which resulted in excessive financial liabilities for which the taxpayer does not receive reimbursement.
 - (c) Catastrophic loss.
 - (d) Other extenuating circumstances which the Assessor and Board of Review agree are legitimate hardships over which the applicant has no control.
7. Deviation from the Guidelines. The Board of Review shall follow the guidelines as approved by the Lowell City Council in granting or denying an exemption unless the Board of Review determines there are substantial and compelling reasons why there should be a deviation from these guidelines and the substantial and compelling reasons are communicated in writing to the applicant.

LOWELL CITY ADMINISTRATION
INTER OFFICE MEMORANDUM



DATE: December 3, 2020
TO: Mayor DeVoe and the Lowell City Council
FROM: Michael T. Burns, City Manager
RE: MERS Pension Plan Modifications

For the past two and a half years, I have been preparing for modifications to our pension system to address serious structural issues for the betterment of this City. As I have said many times, the City currently has approximately a \$3.4 Million unfunded pension liability that quite frankly nobody here created. Unfortunately, it wasn't until my arrival in 2016, it appears that no one attempted to address this. If you recall in 2018, we made a modification to our employee contribution in MERS that allowed us to set aside some additional funds towards the unfunded liability. While I am not going to say that didn't help the situation, after additional research it was apparent this wasn't going to move the needle much towards the problem.

As I have said before, since we are now 60% funded, we are triggered by the State of Michigan to file a Corrective Action Plan to address this problem. Last year, I was able to request a waiver that was granted to file this. This will no longer be the case. However, we should be in a position to file the plan and work our way out of it. The next twenty years for the City are going to be difficult in addressing this. In 2038 and 2039, we are looking at a contribution of roughly a third of today's general fund revenues toward the unfunded pension liability, granted in reality, we make payments out of all funds within the City. That said, the changes we will make may alleviate this for us some during that time. However, we have now created a situation where roughly \$10 Million in overall liability should not reach an \$18 million liability twenty years from now. Additionally, we have the potential fifty years from now to have zero pension liability. While this is not as exciting as the Showboat or new streets or facilities, this is a significant positive change going for the City. Future leaders will be saying "thank you" to everyone assisted with this.

For the past year, I have negotiated with both our Unions to address this along with retirement health care. I recognize this is painful and attempted to do this in a matter that was not so much. I am pleased and thankful with assistance from both Unions, and frankly all employees, that we are going to start to see a light at the end of the tunnel.

With the assistance of the two unions in the City, along with all staff, we are now in a position to make dramatic changes to the future pension liabilities for the city. The two labor unions along with City administration have agreed to the following. Since all full time City employees (union, non union, department director, city manager) are in the same plan, the following is being proposed including, drafted language with MERS to change our plans moving forward.

Beginning on **January 1, 2020**, the Unions and the City have agreed to a change to the pension multiplier and your contribution going forward. If employees were hired before July 1, 2020 their future pension multiplier will be bridged from 2.5% to 2.0%. Employees full final average compensation (FAC - last three years consecutive of your last ten years) will not change. Nor will the years of service required to retire change. The benefit amount for anything accrued going

forward will be reduced. As a result, the employee contribution will reduce from 7% back to 5% of their wages.

In addition, all new hires after July 1, 2020 will be placed in a defined contribution plan. The City will contribute 10% of the employee's base wage and the employee will contribute 6% of their base wages to a retirement account you can select by MERS.

There are three documents which need to be approved. The first is the documentation approving the bridging down of the future pension benefit going forward. The second document is Resolution 25-20, which is creating the defined contribution plan. The third is to approve the administration of said defined contribution plan.

I recommend the Lowell City Council approve the bridging down of future pension benefits for participants in the defined benefit program from 2.5% to 2.0%. I also recommend the Lowell City Council approve Resolution 25-20 to establish the defined contribution plan. Furthermore, it is recommend the City Council agree the City will contribute 10% of the employee's base wage, where by the employee hired after July 1, 2020 shall contribute 6% of their base wage to a defined contribution plan.

Defined Benefit Plan Adoption Agreement



1134 Municipal Way Lansing, MI 48917 | 800.767.MERS (6377) | Fax 517.703.9711

www.mersofmich.com

The Employer, a participating municipality or participating court within the state of Michigan, hereby agrees to adopt and administer the MERS Defined Benefit Plan provided by the Municipal Employees' Retirement System of Michigan, as authorized by 1996 PA 220, in accordance with the MERS Plan Document, as both may be amended, subject to the terms and conditions herein.

I. Employer Name City of Lowell **Municipality #:** 4104

If new to MERS, please provide your municipality's fiscal year: _____ through _____.
Month Month

II. Effective Date

Check one:

A. If this is the **initial** Adoption Agreement for this group, the effective date shall be the first day of _____, 20__.

This municipality or division is new to MERS, so vesting credit prior to the **initial** MERS effective date by each eligible employee shall be credited as follows (choose one):

- All prior service from date of hire
- Prior service proportional to assets transferred; all service used for vesting
- Prior service and vesting service proportional to assets transferred
- No prior service but grant vesting credit
- No prior service or vesting credit

Link this new division to division number _____ for purposes of determining contributions (Unless otherwise specified, the standard transfer/rehire rules apply)

B. If this is an **amendment** of an existing Adoption Agreement (Defined Benefit division number 10), the effective date shall be the first day of January, 2021. *Please note:* You only need to mark **changes** to your plan throughout the remainder of this Agreement.

C. If this is a **temporary benefit** that lasts 2-6 months, the effective dates of this temporary benefit are from ___/01/___ through ___/___/___ for Defined Benefit division number _____.
Last day of month

Please note: You only need to mark **changes** to your plan throughout the remainder of this Agreement.

D. If this is to **separate employees from an existing Defined Benefit division** (existing division number(s) _____) into a new division, the effective date shall be the first day of _____, 20__.

E. If this is to merge division(s) _____ into division(s) _____, the effective date shall be the first of _____, 20__.

Defined Benefit Plan Adoption Agreement

III. Eligible Employees

Only those Employees eligible for MERS membership may participate in the MERS Defined Benefit Plan. A copy of ALL employee enrollment forms must be submitted to MERS. The following groups of employees are eligible to participate:

(Name of Defined Benefit division – e.g. All Full Time Employees, or General after 7/01/13)

Only retirees will be in this division.

These employees are (check one or both):

In a collective bargaining unit (attach cover page, retirement section, signature page)

Subject to the same personnel policy

To receive one month of service credit (check one):

An employee shall work 10 _____ hour days.

An employee shall work _____ hours in a month.

All employees as classified under eligible employees, whether full or part time, who meet this criteria must be reported to MERS. If you change your current day of work definition to be more restrictive, the new definition only applies to employees hired after the effective date.

To further define eligibility, check all that apply:

Probationary Periods are allowed in one-month increments, no longer than 12 months. During this introductory period, the Employer will not report or provide service time for this period, including retroactively. Service will begin after the probationary period has been satisfied.

The probationary period will be _____ month(s).

Temporary employees in a position normally requiring less than a total of 12 whole months of work in the position may be *excluded* from membership. These employees must be notified in writing by the participating municipality that they are excluded from membership within 10 business days of date of hire or execution of this Agreement.

The temporary exclusion period will be _____ month(s).

IV. Provisions

Valuation Date: May 27th, 2020

1. Review the valuation results

It is recommended that your MERS representative presents and explains the valuation results to ~~your municipality before adopting. Please choose one:~~

Our MERS representative presented and explained the valuation results to the

_____ on _____
(Board, Finance Cmte, etc.) (mm/dd/yyyy)

As an authorized representative of this municipality, I Michael Burns

City Manager (Name)
(Title) _____ waive the right for a presentation of the results.

Defined Benefit Plan Adoption Agreement

This Adoption Agreement will be implemented in conjunction with a current actuarial valuation certified by a MERS actuary that sets contribution rates.

Annually, the MERS actuary will conduct an actuarial valuation to determine the employers' contribution rates. Employers are responsible for payment of said contributions at the rate, in the form and at the time that MERS determines.

2. Benefit Multiplier (1%-2.5%, increments of 0.05%) 2.00 % (max 80% for multipliers over 2.25%)

Check here if multiplier will be effective for existing active members' future service only (Bridged Benefit as of effective date on page 1)

If checked, select one below:

Termination Final Average Compensation (calculated over the members entire wage history)

Frozen Final Average Compensation (FAC is calculated twice, once for the timeframe that matches the original multiplier, and once for the new multiplier)

3. Final Average Compensation (Min 3 yr, increments of 1 yr) _____ years
4. Vesting (5 -10 yrs, increments of 1 yr) _____ years
5. Normal Retirement Age will be the later of: _____ (any age from 60-70), or the vesting provision selected above (#4).
6. Required employee contribution (Increments of 0.01%) 5.00 %
7. Compensation for the Defined Benefit Plan means the salary or wages paid to an employee for personal services rendered while a member of MERS. Compensation and any applicable employee contributions must be reported to MERS on a monthly basis.

Employers shall define compensation using the following options (choose one):

- Compensation including all items as allowed in the MERS Plan Document (Section 14).

If anything varies, specify here:

Included: _____

Excluded: _____

- Base wages only.

If any items should be included, specify here:

Included: _____

- Medicare taxable wages as reported on W2.

- Wages plus amounts otherwise not reported as gross compensation, such as elected amounts for Section 125(a) or 457(b) deferrals.

Defined Benefit Plan Adoption Agreement

8. Unreduced Early Retirement/Service Requirements:

<input type="checkbox"/> Age 50 – 54 _____ Service between 25 and 30 years _____
<input type="checkbox"/> Age 55 – 65 _____ Service between 15 and 30 years _____
<input type="checkbox"/> Service only (must be any number from 20 – 30 years accrued service): _____
<input type="checkbox"/> Age + Service Points (total must be from 70 – 90): _____ points

9. Other

- Surviving Spouse will receive _____% of Straight Life benefit without a reduction to the employee's benefit
- Duty death or disability enhancement (add up to additional 10 years of service credit not to exceed 30 years of service)
- Deferred Retirement Option Program (DROP)
- Annuity Withdrawal Program (AWP)
 - Calculation of the actuarial equivalent of the lump sum distribution made under AWP will be done using:
 - Interest rate for employee contributions as determined by the Retirement Board, or
 - MERS' assumed rate of return as of the date of the distribution.

10. Cost-of-Living Adjustment

<input type="checkbox"/> All current retirees as of effective date <input type="checkbox"/> Retirees who retire between _____/01/____ and _____/01/____	<input type="checkbox"/> Future retirees who retire after effective date
Increase of _____% or \$_____ per month	Increase of _____% or \$_____ per month
Select one: <input type="checkbox"/> Annual automatic increase <input type="checkbox"/> One-time increase	<input type="checkbox"/> Annual automatic increase
Select one: <input type="checkbox"/> Compounding <input type="checkbox"/> Non-compounding	Select one: <input type="checkbox"/> Compounding <input type="checkbox"/> Non-compounding
Employees must be retired _____ months (6-12 months, increments of 1 month)	Employees must be retired _____ months (6-12 months, increments of 1 month)

- Check here if the existing COLA will be bridged for active participants as of the effective date selected on this form. Benefits accrued for service after the effective date will have no COLA increase applied.

Defined Benefit Plan Adoption Agreement

11. Service Credit Purchase Estimates are:

- Not permitted
- Permitted

V. Appointing MERS as the Plan Administrator

The Employer hereby agrees to the provisions of this *MERS Defined Benefit Plan Adoption Agreement* and appoints MERS as the Plan Administrator pursuant to the terms and conditions of the Plan. The Employer also agrees that in the event of any conflict between the MERS Plan Document and the MERS Defined Benefit Plan Adoption Agreement, the provisions of the Plan Document control.

VI. Modification Of The Terms Of The Adoption Agreement

If the Employer desires to amend any of its elections contained in this Adoption Agreement, including attachments, the Governing Body or Chief Judge, by resolution or official action accepted by MERS, must adopt a new Adoption Agreement. The amendment of the new Agreement is not effective until approved by MERS.

VII. Enforcement

1. The Employer acknowledges that the Michigan Constitution of 1963, Article 9, Section 24, provides that accrued financial benefits arising under a public Employer's retirement plan are a contractual obligation of the Employer that may not be diminished or impaired, and prohibits the use of the Employer's required current service funding to finance unfunded accrued liabilities.
2. The Employer agrees that, pursuant to the Michigan Constitution, its obligations to pay required contributions are contractual obligations to its employees and to MERS and may be enforced in a court of competent jurisdiction;
3. In accordance with the Constitution and this Agreement, if at any time the balance standing to the Employer's credit in the reserve for employer contributions and benefit payments is insufficient to pay all service benefits due and payable to the entity's retirees and beneficiaries, the Employer agrees and covenants to promptly remit to MERS the amount of such deficiency as determined by the Retirement Board within thirty (30) days notice of such deficiency.
4. The Employer acknowledges that wage and service reports are due monthly, and the employee contributions (if any) and Employer contributions are due and payable monthly, and must be submitted in accordance with the MERS Enforcement Procedure for Prompt Reporting and Payment, the terms of which are incorporated herein by reference.
5. Should the Employer fail to make its required contribution(s) when due, the retirement benefits due and payable by MERS on behalf of the entity to its retirees and beneficiaries may be suspended until the delinquent payment is received by MERS. MERS may implement any applicable interest charges and penalties pursuant to the MERS Enforcement Procedure for Prompt Reporting and Payment and Plan Document Section 79, and take any appropriate legal action, including but not limited to filing a lawsuit and reporting the entity to the Treasurer of the State of Michigan in accordance with MCL 141.1544(d), Section 44 of PA 436 of 2012, as may be amended.
6. The Employer acknowledges that changes to the Employer's MERS Defined Benefit Plan must be made in accordance with the MERS Plan Document and applicable law, and agrees that MERS will not administer any such changes unless the MERS Plan Document and applicable law permit same, and MERS is capable of administering same.

Defined Benefit Plan Adoption Agreement

VIII. Execution

Authorized Designee of Governing Body of Municipality or Chief Judge of Court

The foregoing Adoption Agreement is hereby approved by City of Lowell on
the 7 day of December, 2020. (Name of Approving Employer)

Authorized signature: _____

Title: _____

Received and Approved by the Municipal Employees' Retirement System of Michigan

Dated: _____, 20____ Signature: _____
(Authorized MERS Signatory)

Resolution Adopting the MERS Defined Contribution Plan



1134 Municipal Way Lansing, MI 48917 | 300.767.MERS (6377) | Fax 517.703.9711

www.mersofmich.com

This Resolution is entered into under the provisions of 1996 PA 220 and the Municipal Employees' Retirement System of Michigan ("MERS") Plan Document, as each may be amended.

WHEREAS, the participating entity desires to adopt the MERS Defined Contribution Plan for its designated employees;

WHEREAS, the participating entity has furnished MERS with required data regarding each eligible employee and retiree;

WHEREAS, as a condition of MERS membership, and pursuant to the MERS Retirement Board's power as plan administrator and trustee under Plan Document Section 71 and MCL 38.1536, as each may be amended, it is appropriate and necessary to enter into a binding agreement providing for the administration of the Defined Contribution Plan, the reporting of wages, and the payment of the required contributions of a participating entity and withholding of employee contributions; now, therefore,

IT IS HEREBY RESOLVED:

On behalf of the participating entity, the governing body of
City of Lowell _____ adopts the MERS Defined Contribution Plan in accordance with Plan Section 4 for its eligible employees as described in the MERS Defined Contribution Adoption Agreement, subject to the MERS Plan Document and as authorized by 1996 PA 220, as both may be amended;

I hereby certify that the above is a true copy of the Defined Contribution Resolution adopted at the official meeting held by the governing body of this municipality:

Dated: _____, 20____. _____
(Signature of Authorized Official)

Printed name: _____
(Authorized Official - printed)

This Resolution shall have no legal effect under the MERS Plan Document until a certified copy of this adopting Resolution is filed with MERS, MERS determines that all necessary requirements under the Plan Document, the Adoption Agreement, and this Resolution have been met, and MERS certifies the Resolution below.

Received and Approved by the Municipal Employees' Retirement System of Michigan:

Dated: _____, 20____. _____
(Signature of Authorized MERS Representative)

MERS Defined Contribution Plan Adoption Agreement



1134 Municipal Way Lansing, MI 48917 | 800.767.MERS (6377) | Fax 517.703.9711 www.mersofmich.com

The Employer, a participating municipality or court within the state of Michigan that has adopted MERS coverage, hereby establishes the following Defined Contribution Plan provided by MERS of Michigan, as authorized by 1996 PA 220 in accordance with the MERS Plan Document.

I. Employer Name City of Lowell **Municipality #:** 4104

Division name General after 01/01/2021

Note: This division should reflect how you currently define employees who are eligible to participate, for example, All full-time Employees, New hires after 1/1/2019, etc.

II. Effective Date

Check one:

A. If this is the **initial** Adoption Agreement for this group, the effective date shall be the first day of January, 2021.

This municipality or division is new to MERS, so vesting credit prior to the **initial** MERS effective date by each eligible employee shall be credited as follows (choose one):

Vesting credit from date of hire No vesting credit

This division is for new hires, rehires, and transfers of current Defined Benefit* division # 10 and/or current Hybrid division # n/a

Closing this division will change future invoices to a flat dollar amount instead of a percentage of payroll, as provided in your most recent annual actuarial valuation. (The amount may be adjusted for any benefit modifications that may have taken place since then.)

Current active (defined benefit or hybrid) employees (select one of the following and see Plan Document, Section 64 for more information):

Will have a one-time opportunity to convert the value of their current defined benefit from the existing defined benefit or hybrid plan into the new Defined Contribution Plan as a lump sum, or continue accruing service in the Defined Benefit. (Complete *MERS Defined Contribution Conversion Addendum*.)

Will have a one-time opportunity to cease service accrual in the current plan and transfer to the new Defined Contribution plan for future service accrual, or continue accruing service in the Defined Benefit. The deadline for employees to make their election is: / /

Will be required to cease service accrual in Defined Benefit and will transfer to Defined Contribution for future service accrual.

** By completing the section above, the Employer acknowledges receiving Projection Study results and understands the municipality's obligation to continue funding the liability associated with the closed Defined Benefit division.*

B. If this is an **amendment** of an existing Adoption Agreement (existing division number _____), the effective date shall be the first day of _____, 20____.

Note: You only need to mark **changes** to your plan throughout the remainder of this Agreement.

MERS Defined Contribution Plan Adoption Agreement

- C. If this is to **separate employees** from an existing Defined Contribution division (existing division number(s) _____) into a new division, the effective date shall be the first day of _____, 20____.
- D. If this is to **merge division(s)** _____ into division(s) _____, the effective date shall be the first of _____, 20____.
- E. If this is an amendment to close Defined Benefit division(s) # _____ or Hybrid division(s) _____ with new hires, rehires, and transfers going into existing Defined Contribution division # _____, the effective date shall be _____ (month/year).

Note: Closing this Defined Benefit or Hybrid division(s) will change future invoices to a flat dollar amount instead of a percentage of payroll, as provided in your most recent annual actuarial valuation.

(The amount may be adjusted for any benefit modifications that may have taken place since then).

III. Plan Eligibility

Only those employees eligible for MERS membership may participate in the MERS Defined Contribution Plan. If an employee classification is included in the plan, then employees that meet this definition are required to participate in the plan and earn time toward vesting. All eligible employees must be reported to MERS reported to MERS and earn time toward vesting. Some excluded classifications require additional information below.

This Division includes **public safety employees**: Yes No

To further define eligibility (select all that apply):

Employee Classification	Included	Excluded	Not Employed
Temporary Employees: Those who will work for the municipality fewer than _____ months in total.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Part-Time Employees: Those who regularly work fewer than _____ per _____.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Seasonal Employees: Those who will work for the municipality from _____ to _____ only.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Voter-Elected Officials	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Appointed Officials: An official appointed to a voter-elected office.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Contract Employees	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Other : _____	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Other 2: _____	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

MERS Defined Contribution Plan Adoption Agreement

Probationary Periods (select one):

- Contributions will begin after the probationary period has been satisfied. Probationary periods are allowed in one-month increments, no longer than 12 months. During this probationary period, contributions will not be reported and service toward vesting will begin when probationary period has ended.

The probationary period will be _____ month(s).

Comments:

- Contributions will begin with the employee's date of hire (no Probationary Period). Effective with the date of hire, wages and any associated contributions must be submitted to MERS.

IV. Provisions

1. Leaves of Absence

Regardless of whether an employee is earning a wage while on the following types of leave:

- Third-party wages are not used in determining contributions for periods of leave.
- Vesting under elapsed time continues to accrue even if wages are not earned and contributions are zero.

Note: Employers who determine vesting based on an "hours-reported" method, should report actual worked hours for the month where there was a leave.

Types of leave include:

- Short Term and Long Term Disability
- Workers Compensation
- Unpaid Family Medical Leave Act (FMLA)

Leaves of absence due to military service are governed by the federal *Uniformed Services Employment and Reemployment Rights Act of 1994 (USERRA)*, IRC 414(u), effective January 1, 2007, IRC 401(a) (37). Military reporting requires historical wage and contribution reporting for Defined Contribution as applicable.

MERS Defined Contribution Plan Adoption Agreement

2. Definition of Compensation

The Definition of Compensation is used to determine participant and employer contributions. Wages are strongly recommended to be reported with regular wage/contribution reports to MERS. Contributions cannot exceed IRS limitations.

Select your Definition of Compensation here. If you choose to customize your definition, skip this table and proceed to page 5.

	<input type="radio"/> Base Wages	<input type="radio"/> Box 1 Wages	<input type="radio"/> Gross Wages
Types of Compensation			
Regular Wages Salary or hourly wage X hours PTO used (sick, vacation, personal, bereavement, holiday leave, or unclassified) On-call pay	All Regular Wages included	All Regular Wages included	All Regular Wages included
Other Wages Shift differentials Overtime Severance issued over time (weekly/bi-weekly)	Excluded	All Other Wages included	All Other Wages included
Lump Sum Payments (most common below; list is not inclusive of all types) PTO payouts Longevity Bonuses Merit pay Job certifications Payment for education Moving expenses Sick payouts Hazard pay Severance (if issued as lump sum)	Excluded	All Lump Sum Payments included	All Lump Sum Payments included
Taxable Payments Travel through a non-accountable plan (i.e. mileage not tracked for reimbursement) Prizes, gift cards Personal use of a company car Car allowance	Excluded	All Taxable Payments included	All Taxable Payments included
Reimbursement of Nontaxable Expenses (as defined by the IRS) Gun, tools, equipment, uniform Phone Fitness Mileage reimbursement Travel through an accountable plan (i.e. tracking mileage for reimbursement)	Excluded	Excluded	Excluded
Types of Deferrals			
Elective Deferrals of Employee Premiums/Contributions 457 employee and employer contributions 125 cafeteria plan, FSAs and HSAs IRA contributions	All Elective Deferrals included	Excluded	All Elective Deferrals included
Types of Benefits			
Nontaxable Fringe Benefits of Employees Health plan, dental, vision benefits Workers compensation premiums Short- or Long-term disability premiums Group term or whole life insurance < \$50,000	All Nontaxable Fringe Benefits included	Excluded	All Nontaxable Fringe Benefits included
Mandatory Contributions	All Mandatory Contributions included	Excluded	All Mandatory Contributions included
Taxable Fringe Benefits Clothing reimbursement Stipends for health insurance opt out payments Group term life insurance > \$50,000	Excluded	Excluded	All Taxable Fringe Benefits included
Other Benefits / Lump Sum Payments Workers compensation settlement payments	Excluded	Excluded	All Other Lump Sum Benefits included

MERS Defined Contribution Plan Adoption Agreement

SKIP THIS TABLE if you selected one of the standard definitions of compensation on page 4.

CUSTOM: If you choose this option, you must select boxes in each section you would like to include in your Definition of Compensation. You will be responsible for additional reporting details to track custom definitions.

Types of Compensation	
Regular Wages	
<input type="checkbox"/> Salary or hourly wage X hours	<input type="checkbox"/> On-call pay
<input type="checkbox"/> PTO used (sick, vacation, personal, bereavement, holiday leave, or unclassified)	<input type="checkbox"/> Other: _____
Other Wages apply: YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	
<input type="checkbox"/> Shift differentials	<input type="checkbox"/> Severance issued over time (weekly/bi-weekly)
<input type="checkbox"/> Overtime	<input type="checkbox"/> Other: _____
Lump Sum Payments apply: YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	
<input type="checkbox"/> PTO payouts	<input type="checkbox"/> Payment for education
<input type="checkbox"/> Longevity	<input type="checkbox"/> Moving expenses
<input type="checkbox"/> Bonuses	<input type="checkbox"/> Sick payouts
<input type="checkbox"/> Merit pay	<input type="checkbox"/> Severance (if issued as lump sum)
<input type="checkbox"/> Job certifications	<input type="checkbox"/> Other: _____
Taxable Payments apply: YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	
<input type="checkbox"/> Travel through a non-accountable plan (i.e. mileage not tracked for reimbursement)	<input type="checkbox"/> Car allowance
<input type="checkbox"/> Prizes, gift cards	<input type="checkbox"/> Other: _____
<input type="checkbox"/> Personal use of a company car	
Reimbursement of Nontaxable Expenses (as defined by the IRS) apply: YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	
<input type="checkbox"/> Gun, tools, equipment, uniform	<input type="checkbox"/> Mileage reimbursement
<input type="checkbox"/> Phone	<input type="checkbox"/> Travel through an accountable plan (i.e. tracking mileage for reimbursement)
<input type="checkbox"/> Fitness	<input type="checkbox"/> Other: _____
Types of Deferrals	
Elective Deferrals of Employee Premiums/Contributions apply: YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	
<input type="checkbox"/> 457 employee and employer contributions	<input type="checkbox"/> IRA contributions
<input type="checkbox"/> 125 cafeteria plan, FSAs and HSAs	<input type="checkbox"/> Other: _____
Types of Benefits	
Nontaxable Fringe Benefits of Employees apply: YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	
<input type="checkbox"/> Health plan, dental, vision benefits	<input type="checkbox"/> Group term or whole life insurance < \$50,000
<input type="checkbox"/> Workers compensation premiums	<input type="checkbox"/> Other: _____
<input type="checkbox"/> Short- or Long-term disability premiums	
Mandatory Contributions apply: YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	
Taxable Fringe Benefits apply: YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	
<input type="checkbox"/> Clothing reimbursement	<input type="checkbox"/> Group term life insurance > \$50,000
<input type="checkbox"/> Stipends for health insurance opt out payments	<input type="checkbox"/> Other: _____
Other Benefits / Lump Sum Payments apply: YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>	
<input type="checkbox"/> Workers compensation settlement payments	<input type="checkbox"/> Other: _____

MERS Defined Contribution Plan Adoption Agreement

4. Forfeiture

A forfeiture occurs when a participant separates from employment prior to meeting the associated elapsed time (or hours reported) to receive vesting. The percentage of his/her employer contribution account balance that has not vested as of the date of termination will forfeit after 12 consecutive months following the termination date reported by the employer, or earlier, if the System distributes the participant's vested portion. MERS will utilize any available forfeiture balance as an automatic funding source applied to reported employer contributions at the time of reporting.

5. Vesting

Vesting will be credited using (check one):

- Elapsed time method – Employees will be credited with one vesting year for each 12 months of continuous employment from the date of hire.
- Hours reported method – Employees will be credited with one vesting year for each calendar year in which _____ hours are worked

Vesting schedule will be (check one):

- Immediate
- Cliff Vesting (fully vested after below number years of service)
 - 1 year 2 years 3 years 4 years 5 years
- Graded Vesting (the % of vesting acquired after employment for the designated number of years)
 - _____ % after 1 year of service
 - _____ % after 2 years of service
 - _____ % after 3 years of service (min 25%)
 - _____ % after 4 years of service (min 50%)
 - _____ % after 5 years of service (min 75%)
 - _____ % after 6 years of service (min 100%)

In the event of disability or death, an employee's (or his/her beneficiary's) entire employer contribution account shall be 100% vested, to the extent that the balance of such account has not previously been forfeited.

Normal Retirement Age (presumed to be age 60 unless otherwise specified) _____

If an employee is still employed with the municipality at the age specified here, their entire employer contribution balance will become 100% vested regardless of years of service.

MERS Defined Contribution Plan Adoption Agreement

6. Contributions

- a. Will be remitted according to Employer's payroll withholding which represents the actual period amounts are withheld from employee paychecks, or within the month during which amounts are withheld (check one):
- Weekly
 - Bi-Weekly (every other week)
 - Semi-Monthly (twice each month)
 - Monthly
 - Other (must specify) _____
- b. **Employer Contributions**
Required Employee Contributions and Employer Contributions are outlined using associated *Contribution Addendum for MERS Defined Contribution (MD-073)*.
- c. Post-tax voluntary employee contributions are allowable into a Defined Contribution account subject to Section 415(c) limitations of the Internal Revenue Code.

7. **Loans:** shall be permitted shall not be permitted
If Loans are elected, please refer to the *Defined Contribution & 457 Loan Addendum*.

8. **Rollovers** from qualified plans are permitted and the plan will account separately for pre-tax and post-tax contributions and earnings thereon.

III. Appointing MERS as the Plan Administrator

The Employer hereby agrees to the provisions of this *MERS Defined Contribution Plan Adoption Agreement* and appoints MERS as the Plan Administrator pursuant to the terms and conditions of the Plan. The Employer also agrees that in the event of any conflict between the MERS Plan Document and the MERS Defined Contribution Plan Adoption Agreement, the provisions of the Plan Document control.

IV. Modification of the terms of the Adoption Agreement

If the Employer desires to amend any of its elections contained in this Adoption Agreement, including attachments, the Governing Body or Chief Judge, by resolution or official action accepted by MERS, must adopt a new Adoption Agreement. The amendment of the new Agreement is not effective until approved by MERS.

MERS Defined Contribution Plan Adoption Agreement

V. Enforcement

1. The Employer acknowledges that the Michigan Constitution of 1963, Article 9, Section 24, provides that accrued financial benefits arising under a public Employer's retirement plan are a contractual obligation of the Employer that may not be diminished or impaired.
2. The Employer agrees that, pursuant to the Michigan Constitution, its obligations to pay required contributions are contractual obligations to its employees and to MERS and may be enforced in a court of competent jurisdiction;
3. The Employer acknowledges that employee contributions (if any) and employer contributions must be submitted in accordance with the *MERS Reporting and Contribution Enforcement Policy*, the terms of which are incorporated herein by reference;
4. The Employer acknowledges that late or missed contributions will be required to be made up, including any applicable gains, pursuant to the Internal Revenue Code;
5. Should the Employer fail to make its required contribution(s) when due, MERS may implement any applicable interest charges and penalties pursuant to the *MERS Reporting and Contribution Enforcement Policy* and Plan Document Section 79, and take any appropriate legal action, including but not limited to filing a lawsuit and reporting the entity to the Treasurer of the State of Michigan in accordance with MCL 141.1544(d), Section 44 of PA 436 of 2012, as may be amended.
6. It is expressly agreed and understood as an integral and non-severable part of this Agreement that Section 43 of the Plan Document shall not apply to this Agreement and its administration or interpretation. In the event any alteration of the terms or conditions of this Agreement is made or occurs, under Section 43 or other plan provision or law, MERS and the Retirement Board, as sole trustee and fiduciary of the MERS plan and its trust reserves, and whose authority is non-delegable, shall have no obligation or duty to administer (or to have administered) the MERS Defined Contribution Plan, to authorize the transfer of any defined benefit assets to the MERS Defined Contribution Plan, or to continue administration by MERS or any third-party administrator of the MERS Defined Contribution Plan.

VI. Execution

Authorized Designee of Governing Body of Municipality or Chief Judge of Court

The foregoing Adoption Agreement is hereby approved by City of Lowell on
the 7th day of December, 2020. (Name of Approving Employer)

Authorized signature: _____

Title: _____

Received and Approved by the Municipal Employees' Retirement System of Michigan

Dated: _____, 20____ Signature: _____
(Authorized MERS Signatory)

Contribution Addendum for MERS Defined Contribution



1134 Municipal Way Lansing, MI 48917 | 800.767.2308 | Fax 517.703.9711 www.mersofmich.com

This is an Addendum to the Adoption Agreement completed by City of Lowell Name of Participating Employer
for General after 01/01/2021 Employee Group of 10 Division Code

The Addendum modifies the Adoption Agreement by providing for employer contributions to the Program. Employer contributions may be considered a “match” to the employee’s elected contribution upon enrollment in the plan, or non-matching; regardless of employee contributions. Contributions may not exceed IRS maximums for combined employee and employer contributions.

Required **Employee Contribution** Structure to DC (subject to Internal Revenue Code 415(c) limitations).
Select one:

- Employees are required to contribute per payroll period, the percentage 6 %
OR
flat dollar amount \$ _____
- Employees are required to contribute within the following range for each payroll: Percentage range from _____ % to _____ % OR
dollar amount range \$ _____ to \$ _____
- Direct Required Employee Contributions pre-tax

The Participating Employer will make **matching contributions** into the Defined Contribution Plan based on (CHECK ALL THAT APPLY):

- Each Employee’s election to defer salary under the MERS 457 program (or any other qualified plan outside of MERS).
- Each Employee’s one-time election of required employee contribution for MERS Defined Contribution.

Contribution Addendum for MERS Defined Contribution

The Participating Employer elects to make contributions as follows (check and complete *Matching, Non-Matching*, or both as applicable):

A. **Matching Contributions**

The Employer elects the following matching contribution formula:

- Percentage:** For each payroll period in which Employee contributions described above are made, the Participating Employer will contribute _____% of the Employee contribution amount.

For example, if an Employer elects a 50% match, then for every \$10 the participant defers to the Program, the Employer will contribute \$5 to the Program.

- Flat Dollar:** For each payroll period in which Employee contributions described above are made, the Participating Employer will contribute no more than \$_____ per payroll period.

Employer Cap: The Employer elects to establish a cap on its matching contributions, so that the match amount cannot exceed a certain amount. The Employer elects the following cap on its matching contribution:

- Flat Dollar Cap:** In no event will matching contributions made on behalf of a participant exceed a flat dollar amount equal to \$_____ per _____
(pay period / year / etc.)
- Cap Equal to Percentage of Total Compensation:** In no event will matching contributions made on behalf of a participant exceed _____% of the participant's IRS Section 401(a)(17) includable compensation as defined by the Employers' Adoption Agreement (cannot exceed 100% of participant's income).

B. **Non-Matching Contributions**

The Employer hereby elects to make contributions to the participants' accounts without regard to a participant's contribution amount (check one):

- Annual Contributions:** A one-time annual contribution of \$_____ or _____% of compensation per participant.

- \$_____ or 10% of compensation per participant for each payroll period.

APPOINTMENTS

	Expires
Airport Board	
Vacancy (Jeff Altoft – Currently Serving)	01/01/2021
Vacancy (Jim Myaard – Currently Serving)	01/01/2021
Arbor Board	
Vacancy (Melissa Spino – Currently Serving)	06/30/2020
Board of Review	
Vacancy (Martin McPhee – Currently Serving)	01/01/2021
Vacancy (Leah Vredenburg – Currently Serving)	01/01/2021
Vacancy (Jim Hodges – Currently Serving)	01/01/2021
Vacancy (open - alternate)	01/01/2021
Building Authority	
Vacancy (Mike Burns – Currently Serving)	01/01/2021
Construction Board of Appeals	
Vacancy	01/01/2021
Downtown Development Authority	
Vacancy (Dr. James Reagan – Currently Serving)	01/01/2021
Vacancy (Brian Doyle – Currently Serving)	01/01/2021
Downtown Historic District Commission	
Vacancy (Nancy Wood – Currently Serving)	01/01/2021
Vacancy (Stephen Doyle – Currently Serving)	01/01/2021
Vacancy (Cliff Yankovich – Currently Serving)	01/01/2021
LCTV Endowment Board	
Vacancy (Dennis Kent – Currently Serving)	12/31/2020
Local Officers Compensation Commission	
Vacancy (Roger LaWarre – Currently Serving)	06/30/2020
Lowell Area Fire and Emergency Services Authority	
Vacancy (Dave Pasquale – Currently Serving)	01/01/2020
Parks and Recreation Commission	
Vacancy (Susan Pomper – Currently Serving)	01/01/2021
Vacancy (Theresa Mundt – Currently Serving)	01/01/2021
Planning Commission	
Vacancy (David Cadwallader – Currently Serving)	06/30/2020
Vacancy (Colin Plank – Currently Serving)	06/30/2020