

The Municipal Authority of the Borough of Lemoyne

510 Herman Avenue, Lemoyne, PA 17043

(717) 737-6843

Tuesday December 11, 2018 Municipal Authority Meeting

The Authority met in regular session at 6:00 p.m. at the Wastewater Treatment Plant with board members Will Hesse, John Carroll, Pete Schuntich, Lori Hegedus, and Daniel Green in attendance. Solicitor Henry Coyne and Jonathan Bach of the office of Coyne and Coyne, PC, Lemoyne Borough Manager Cindy Foster, Engineer Mike Knouse, and plant operator, Bob Oakes were in attendance. Councilwoman Sue Yenchko and Bob Huggler were also present.

Minutes from the November meeting were not available.

Lemoyne Borough Manager's Report

- The Derry Township Municipal Authority visited the plant and expressed interest in accepting the LMA's sludge. This could prove to be a significant savings for our disposal costs. The borough will continue discussing this matter with Derry Township.

A motion was made to receive the Borough Manager's report. The motion passed unanimously.

Operator's Report

- There were no effluent violations for the month of October.
- Operator Bob Oakes received his certification as a Sewage Enforcement Officer.
- Flushing for the year is complete.

Engineers Report

- Rettew will prepare the Chapter 94 report for a fee of \$3,500.
- The Borough has noted several discrepancies in the existing overall system map and the LMA should consider updating it.
- Improvements were presented to the LMA for 3rd and Hummel, the Clark Street and Walton Street Pump Stations, the Dewatering Pad, and UV System Feasibility. For further detail, please see the engineer's written report.

Treasurer's Report

The Debt balance as of December 1, 2018 is \$16,538,516.02.

Dan Green made a motion to receive the Treasurer's report. Lori Hegedus seconded the motion. The motion passed unanimously.

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Payment of Bills

Will Hesse presented the following bills for approval.

2018-12 Operating

PennVEST Loan	71398	\$38,858.53
Rettew	Eng. Services 152920	\$139.00
Rettew	Eng. Services 153077	\$978.00
Coyne and Coyne	Solicitor	\$3,180.00
PA DEPT	NPDES Permit	\$1,250.00
Total		\$44,405.53

Will Hesse made the motion to approve the payment of the bills. Dan Green seconded the motion. The motion passed unanimously.

Solicitor's Report

Nothing to report

New Business

2019 Meeting Schedule

A motion was made by John Carroll to keep the 2019 meetings as the second Tuesday of the month at 6:00PM. Dan Green seconded the motion. The motion passed unanimously.

Professional Services Contracts

The LMA received two contracts for professional services in 2019. The Rettew contract is the same with the exception of a slight increase. The Greenawalt contract will be reviewed next month.

Old Business

The Municipal Authority of the Borough of Lemoyne

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2019 Budget Projects

Dan Green made a motion to approve the 2019 Lemoyne Municipal Authority Budget of \$2,558,929.36. Lori Hegedus seconded the motion. The motion passed unanimously. This budget includes the projects of 3rd and Hummel, the Clark and Walton Street pump stations, the Dewatering Pad, and a UV System Feasibility study.

The meeting adjourned at 7:35 P.M.



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We answer to you.

Phone: (800) 738-8395

MEMORANDUM

TO: Lemoyne Municipal Authority
FROM: Mike Knouse, P.E.
COPY: Cindy Foster, Robert Oakes
DATE: December 11, 2018
PROJECT NAME: Lemoyne Municipal Authority **PROJECT NO.:** 112692000
SUBJECT: 2019 Budget

At the November 13, 2018 meeting, the Authority directed RETTEW and the Wastewater Superintendent to prepare budgetary figures for projects occurring in 2019.

Chapter 94 Report:

RETTEW will prepare the annual Chapter 94 Report based upon the operating data for 2018, Borough noted corrections to the previous written report, and requested documentation for the Hydraulic Flow and Organic Loading Capacity of the treatment facility (per PA DEP letter dated August 15, 2018).

Engineering Fee: \$3,500

The Borough has noted several discrepancies in the existing overall system map and the Authority should consider updating it.

3rd & Hummel Sewer Improvements:

In preparation for PennDOT's paving project for 2020, the Borough televised the sanitary sewer lines on 3rd Street and Hummel Ave. The televising revealed several areas requiring repairs from offset joints, sags, longitudinal cracks, to broken pipe. The reports identified 26 locations requiring excavation for correction and a total of 241 defects noted (see Exhibit 1).

RETTEW reviewed the televised reports and prepared a summary based upon length of repairs to be completed (See Exhibit 2). Based upon the number and extent of repairs, full replacement for sanitary runs from MH 144 to MH 145A and MH 98 to MH 98B were considered. Lining, utilizing a cured-in-place liner, was estimated for budgeting purposes to address the remaining defects identified in the televised report. The opinion of probable construction cost (OPCC) for repairs and sewer lining is provided in Exhibit 3 and summarized below:

Repairs by Excavation:	\$367,577.96
Lining:	\$299,656.00
Contingency:	\$ 66,766.04
TOTAL:	\$734,000.00



Based upon the scope of work presented in the OPCC, RETTEW estimated the fee for survey, design, utility coordination with PennDOT*, bidding and contract administration as follows:

Engineering Fee:	\$33,600.00
Part-time Construction Observation**:	\$35,600.00
TOTAL:	\$69,200.00

* Fee anticipates project to be completed under PennDOT utility clearance project as a coordinated project and does not consider obtaining a Highway Occupancy Permit.

** Part time Resident Project Representative (RPR) for construction observation is based upon 16 hours per week for 15 weeks.

Clark Street and Walton Street Pump Station Upgrades:

The existing pump stations at both locations are pneumatic ejector type requiring the procedures for confined space to be followed for operation and maintenance. The Walton Street pump station serves approximately 40 residential properties, while the Clark Street pump station serves approximately 9 residential properties. Based upon Borough records, both stations discharge through a 4" diameter force main.

RETTEW reviewed the requested improvements with Borough staff, obtained budgetary estimates from suppliers based upon potential pumps that would provide the required minimum velocity in a 4" diameter force main, and evaluated other site improvements. For the evaluation, we contacted suppliers for pricing on: Gorman Rupp suction lift pump system; Flygt submersible pump system; and Hydromatic submersible pump system. The opinion of probable construction cost (OPCC) for replacement of the pump stations based upon utilizing the Gorman Rupp pumps is provided in Exhibit 4 and summarized below:

Clark Street Pump Station:

Subtotal:	\$163,400.00
Contingency:	\$ 50,000.00
TOTAL:	\$213,400.00

Walton Street Pump Station:

Subtotal:	\$178,400.00
Contingency:	\$ 54,000.00
TOTAL:	\$232,400.00

Based upon the scope of work presented in the OPCC, RETTEW estimated the fee for survey, design, permitting, bidding and contract administration as follows:

Engineering Fee:	\$ 86,100.00
Part-time Construction Observation*:	\$ 18,850.00
TOTAL:	\$104,950.00

* Part time Resident Project Representative (RPR) for construction observation is based upon 12 hours per week for 12 weeks.

Dewatering Pad:

RETTEW met with the Wastewater Superintendent to review the desired location and available space for construction of a dewatering pad at the WWTP. Based upon the available space, a dewatering pad approximately 22' x 20' wide could be constructed adjacent to the abandoned biofilter at the Headworks Building. The opinion of probable construction cost (OPCC) for construction of the dewatering pad is provided in Exhibit 5 and summarized below:

Subtotal:	\$17,875.00
Contingency:	\$ 1,787.50
TOTAL:	\$19,662.50

Based upon the scope of work presented in the OPCC, RETTEW estimated the fee to prepare a request for proposal, allowing the Authority to obtain three written quotes.

Engineering Fee:	\$ 2,600.00
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UV System Feasibility Study:

RETTEW met with the Wastewater Superintendent to review the desire to upgrade the WWTP to UV disinfection. To assist in determining budget needs for 2020, RETTEW will complete a feasibility study for the retrofit installation of a UV disinfection system. The feasibility study will evaluate existing components of the WWTP and the ability to retrofit; will evaluate the feasibility of types of UV disinfection systems; will include an opinion of probable construction costs; and will determine a life cycle cost analysis in comparison to current chlorine disinfection.

Engineering Fee:	\$ 15,000.00
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Exhibit 1

3rd Street and Hummel Avenue

Summary of Televised Report

Details from September 2018**Sewer Main Televising****By Nazztech**

#	STREET	MH-MH	LENGTH	DIGS	DEFECTS
1	HUMMEL AVE	141-142	374	2	17
2	HUMMEL AVE	142-143	379	2	29
3	HUMMEL AVE	143-144	376	1	11
4	HUMMEL AVE	144-145A	128	1	18
5	HUMMEL AVE	145A-145	272	1	12
6	HUMMEL AVE	145-97	309		24
7	HUMMEL AVE	97-98A	221		11
8	HUMMEL AVE	98A-98	215	4	11
9	HUMMEL AVE	98B-98	214	1	15
10	HUMMEL AVE	101-98B	218	1	2
11	HUMMEL AVE	100A-101	171	2	7
12	HUMMEL AVE	100-100A	213	1	10
13	HUMMEL AVE	99-100	355	4	22
14	HUMMEL AVE	132-133	389	1	17
15	HUMMEL AVE	133-134	405		18
16	THIRD ST	330-130	191	1	3
17	THIRD ST	135-134	258	2	7
18	THIRD ST	111-109	237	1	7
TOTALS:			4,925	26	241
* Defects include roots, cracks, breaks, holes, sags, obstructions, etc...					

Exhibit 2

3rd Street and Hummel Avenue

Summary of Repairs Based on Length

Lemoine Municipal Authority
3rd & Hummel Sanitary Sewer Repairs
112692000
Summary of TV Report

Description	Manhole Depth	Sanitary Sewer Run Length (Ft)	Laterals	Major Repairs	Secondary Repairs	Description	Length	Impacted Laterals	Lateral Length	Previous Replaced Line	
MH 141	5	374	10	0+04	1+41 1+80 2+30 2+63 2+77 3+23 3+42 3+70	Broken pipe at tap-in Longitudinal Crack Longitudinal Crack Longitudinal Crack Broken pipe at joint Longitudinal Crack Longitudinal Crack Crack at Joint	10 10 10 10 5 5 5 3	3	75		
							63			16.8%	
MH 142	13	379			0+03 0+35 0+66 0+86 1+28 1+40 1+46 1+61 1+79 2+02 2+18 2+29 2+30	Cir. Cracks Longitudinal Crack Longitudinal Crack Longitudinal Crack Broken Tap Longitudinal Crack Longitudinal Crack Longitudinal Crack Broken Tap Longitudinal Crack Longitudinal Crack Broken Tap Broken Pipe	5 10 5 3 3 3 10 15 3 3 5 3 15 86	2	50	22.7%	
MH 143	12	376	0+32		0+54 1+59 2+25 3+53 3+71	Longitudinal Crack Longitudinal Crack Longitudinal Crack Longitudinal Crack Longitudinal Crack	5 2 3 5 5 8 28	2	50		7.4%
MH 144	8	128	0+12 0+41 0+91		0+57 0+68 0+75 1+03	Longitudinal Crack/Sag Longitudinal Crack/Sag/Broken Pipe Longitudinal Crack Broken Pipe Longitudinal Crack Broken Pipe Longitudinal Crack	15 10 5 3 5 10 53	1 1 1 1 1 1 25	25	Replace line	41.4%

[illegible]

[illegible]

MH 111

237 5

	0+13	Hole	Lining would not require excavation
0-82			
congratulatory check			

0+05	Longitudinal Crack	3
		

Hole

Longitudinal Crack 10

Longitudinal Crack

Longitudinal Crack 5

Longitudinal Crack 3

Broken pipe and tap	3	1	5
Over-Capacity	3	1	5

Drop Connection

$$\frac{2}{20}$$

29 12.2%

29 12.2%

12.2%

MH 109

Exhibit 3

3rd Street and Hummel Avenue

Opinion of Probable Construction Cost



PROBABLE CONSTRUCTION COST OPINION

Lemoyne Municipal Authority

Project No. 112692000

November 29, 2018

COMPUTED BY: AMF

CHECKED BY: MRK

RETTEW ASSOCIATES, INC.

MECHANICSBURG, PA

MH 111 to MH 109

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST
Repair					
1	Mobilization	LS	1	\$ 31,200.00	\$ 31,200.00
2	Maintenance and protection of traffic	LS	1	\$ 43,400.00	\$ 43,400.00
3	Excavation	CY	2,045	\$ 45.00	\$ 92,043.90
4	Full Depth stone backfill	Ton	3,486	\$ 20.00	\$ 69,714.00
5	4" Dia. PVC Pipe	LF	900	\$ 35.00	\$ 31,500.00
6	8" Dia. PVC Pipe	LF	440	\$ 45.00	\$ 19,800.00
7	PVC Wyes	Ea	36	\$ 65.00	\$ 2,340.00
8	PVC Elbows	Ea	36	\$ 35.00	\$ 1,260.00
9	Connection to existing manhole	Ea	4	\$ 350.00	\$ 1,400.00
10	Connection to existing lateral	Ea	36	\$ 200.00	\$ 7,200.00
11	Superpave HMA Binder Course, 25mm	SY	945	\$ 20.00	\$ 18,900.20
12	Superpave HMA Wearing Course, 9.5m	SY	944	\$ 20.00	\$ 18,889.86
13	Curb replacement	LF	221	\$ 130.00	\$ 28,730.00
14	Root cutting (MH132 to MH 133)	LS	1	\$ 1,200.00	\$ 1,200.00
Lining					
14	Bypass Pumping	LS	1	\$ 41,800.00	\$ 41,800.00
15	Clean existing sewer main	LF	4,496	\$ 2.00	\$ 8,992.00
16	Televiser existing main, post-lining	LF	4,496	\$ 1.50	\$ 6,744.00
17	Line existing sewer main	LF	4,496	\$ 45.00	\$ 202,320.00
18	Reinstate existing lateral	Ea	199	\$ 200.00	\$ 39,800.00

TOTAL: \$ 667,233.96

Contingency (10%) \$ 66,766.04

Grand Total \$ 734,000.00

RETTEW Associates, Inc. is not a construction contractor and therefore probable construction cost opinions are made on the basis of RETTEW's experience and qualifications as an engineer and represent RETTEW's best judgment as an experienced and qualified design professional generally familiar with the industry. This requires RETTEW to make a number of assumptions as to actual conditions which will be encountered on the site; the specific decisions of other design professionals engaged; the means and methods of construction the contractor will employ; contractors' techniques in determining prices and market conditions at the time, and other factors over which RETTEW has no control. Given these assumptions which must be made, RETTEW states that the above probable construction cost opinion is a fair and reasonable estimate for construction costs but cannot and does not guarantee that actual construction cost will not vary from the Probable Construction Cost Opinion prepared by RETTEW.

Exhibit 4

Clark Street & Walton Street Pump Stations

Opinion of Probable Construction Cost

LEMOYNE MUNICIPAL AUTHORITY
CLARK STREET PUMP STATION REPLACEMENT
RETTEW PROJECT NO. 112692002
PRELIMINARY OPINION OF PROBABLE PROJECT COSTS
December 10, 2018

ITEM NO.	DESCRIPTION	UNITS	QUANTITY	UNIT COST	EXTENDED COST
General					
1	Mobilization, Demobilization and General Conditions	LS	1	\$ 10,000.00	\$ 10,000.00
2	Demolition - Pump Station Wet Well & Control Panel	LS	1	\$ 10,000.00	\$ 10,000.00
3	Site Work, Spot Grading, Paving, Restoration	LS	1	\$ 6,000.00	\$ 6,000.00
4	E&S Control	LS	1	\$ 4,000.00	\$ 4,000.00
SUBTOTAL:					\$ 30,000.00
Construction					
5	Bypass Pumping	LS	1	\$ 5,000.00	\$ 5,000.00
6	New wet well	LS	1	\$ 17,000.00	\$ 17,000.00
7	Connect existing incoming gravity main to wet well	LS	1	\$ 3,000.00	\$ 3,000.00
8	Connect Existing force main to new pump station discharge	LS	1	\$ 2,000.00	\$ 2,000.00
SUBTOTAL:					\$ 27,000.00
Equipment					
9	Pumps, Accessories and Control Panel, Installed (6)	LS	1	\$ 61,400.00	\$ 61,400.00
10	Valve Vault and Emergency Pump Connection	LS	1	\$ 22,000.00	\$ 22,000.00
11	Wet Well Piping	LS	1	\$ 7,000.00	\$ 7,000.00
12	Electrical Improvements	LS	1	\$ 16,000.00	\$ 16,000.00
SUBTOTAL:					\$ 106,400.00
GENERAL, BUILDING CONSTRUCTION AND EQUIPMENT SUBTOTAL:					\$ 163,400.00
Construction Contingency				30%	\$ 50,000.00
Total Estimated Construction Cost					\$ 213,400.00
High End Estimated Cost				20%	\$ 257,000.00

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Preliminary OPCC Basis:

1. Existing ejector pump station will be completely removed.
2. A new concrete wet well and valve vault will be installed at approximately the same location as the existing station.
3. No major work needed to reconnect the existing 8" influent gravity line and 4" force main.
4. No major work needed to the electrical power service.
5. Property or easement acquisition cost is not included.

LEMOYNE MUNICIPAL AUTHORITY
WALTON STREET PUMP STATION REPLACEMENT
RETTEW PROJECT NO. 112692002
PRELIMINARY OPINION OF PROBABLE PROJECT COSTS
December 10, 2018

ITEM NO.	DESCRIPTION	UNITS	QUANTITY	UNIT COST	EXTENDED COST
General					
1	Mobilization, Demobilization and General Conditions	LS	1	\$ 10,000.00	\$ 10,000.00
2	Demolition - Pump Station Wet Well & Control Panel	LS	1	\$ 10,000.00	\$ 10,000.00
3	Site Work, Spot Grading, Paving, Restoration	LS	1	\$ 8,000.00	\$ 8,000.00
4	E&S Control	LS	1	\$ 4,000.00	\$ 4,000.00
SUBTOTAL:					\$ 32,000.00
Construction					
5	Bypass Pumping	LS	1	\$ 5,000.00	\$ 5,000.00
6	New wet well	LS	1	\$ 17,000.00	\$ 17,000.00
7	Connect existing incoming gravity main to wet well	LS	1	\$ 3,000.00	\$ 3,000.00
8	Connect Existing force main to new pump station discharge	LS	1	\$ 2,000.00	\$ 2,000.00
9	Fence Repair and Replacement	LS	1	\$ 5,000.00	\$ 5,000.00
SUBTOTAL:					\$ 32,000.00
Equipment					
10	Pumps, Accessories and Control Panel, Installed (6)	LS	1	\$ 61,400.00	\$ 61,400.00
11	Valve Vault and Emergency Pump Connection	LS	1	\$ 22,000.00	\$ 22,000.00
12	Wet Well Piping	LS	1	\$ 7,000.00	\$ 7,000.00
13	Electrical Improvements and Generator Rehabilitation	LS	1	\$ 24,000.00	\$ 24,000.00
SUBTOTAL:					\$ 114,400.00
GENERAL, BUILDING CONSTRUCTION AND EQUIPMENT SUBTOTAL:					\$ 178,400.00
Construction Contingency				30%	\$ 54,000.00
Total Estimated Construction Cost					\$ 232,400.00
High End Estimated Cost				20%	\$ 280,000.00

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Preliminary OPCC Basis:

- Existing ejector pump station will be completely removed.
- A new concrete wet well and valve vault will be installed at approximately the same location as the existing station.
- No major work needed to reconnect the existing 8" influent gravity line and 4" force main.
- No major work needed to the electrical power service.
- Property or easement acquisition cost is not included.
- Pump cost based on Gorman Rupp suction lift pump system; For Flygt submersible pump system, deduct \$22,200; for Hydromatic submersible pump system, deduct \$36,400.

Exhibit 5

Dewatering Pad

Opinion of Probable Construction Cost



PROBABLE CONSTRUCTION COST OPINION

Lemoyne Municipal Authority

Project No. 11269200

November 26, 2018

COMPUTED BY: AMG

CHECKED BY: MRK

RETTEW ASSOCIATES, INC.

MECHANICSBURG, PA

ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTAL COST
1	Mobilization and demobilization	LS	1	\$1,500.00	\$ 1,500.00
2	Excavation - 2' deep	LS	1	\$4,000.00	\$ 4,000.00
3	Stone - 6" deep	SY	60	\$20.00	\$ 1,200.00
4	Concrete Pad - 6" deep	SF	520	\$10.00	\$ 5,200.00
5	Concrete Walls - 8" wide	CY	3.5	\$450.00	\$ 1,575.00
6	Trench Drain	LF	20	\$150.00	\$ 3,000.00
7	4" PVC Pipe	LF	30	\$45.00	\$ 1,350.00
8	Connect to existing manhole	Ea	1	\$350.00	\$ 350.00
9	Gate Valve - 4"	Ea	1	\$1,200.00	\$ 1,200.00
10					\$ -
11					\$ -
12					\$ -
13					\$ -
14					\$ -
15					\$ -
16					\$ -
17					\$ -
18					\$ -

TOTAL: \$ 17,875.00

Contingency (10%) \$ 1,787.50

Grand Total \$ 19,662.50

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