COUNCIL WORK SESSION MINUTES

March 7, 2022 – 4:00 p.m.
4th Floor Conference Room– City Hall

A Council work session was held to discuss the following issues: 1) Schneider Electric project at the Water Protection Facility; and 2) Upcoming proposed Zoning Code modifications.

Attending: Mayor Bill McMurray and Councilmembers Brenda Blessing, Madison Davis, Russell Moore, Brian Myers and Marty Novak.

Bryan Carter, City Manager; Ted Elo and Jason Soper, Asst City Attorneys; Laurie Tietjen, Finance Director; Kenny Cordonnier, Fire Chief; Chris Connally, Police Chief; Clint Thompson, Planning & Community Development Director; Brady McKinley, Asst. Public Works & Transportation Director; Jake Fisher, Interim City Engineer; Eddie Leaverton, Water Protection Division Superintendent; Katie Bruegge, Technical Services Manager; Zack Martin, City Planner; Mary Robertson, Asst. to City Manager/Communications & Public Relations Manager; and Paula Heyde, City Clerk.

Mayor Bill McMurray called the meeting to order.

Agenda Item #1 – Schneider Electric project at the Water Protection Facility. Peter Hinkle and Janel Junkersfeld, Schneider Electric representatives, went through a power point presentation on "Phase III: Wastewater Treatment Plant Project Review and Construction Contract" (copy attached).

Agenda Item #2 – Upcoming proposed Zoning Code modifications. Bryan Carter, City Manager, said Zack Martin, City Planner, has been working on updates to the Zoning Code to ease use of the Zoning Code and he will go over some of those changes that will be coming to the City Council in the coming weeks.

Mr. Martin said they are working to update the Zoning Code to make it more user friendly and eliminate inconsistencies, redundancy and outdated terminology. He briefly reviewed the changes being proposed. He said these proposed changes have recently gone through the Planning Commission with a recommendation of approval and will be coming to the Council.

The meeting adjourned at 4:50 p.m.

Paula Heyde

Minutes transcribed by Paula Heyde, CMC, City Clerk.

Phase III: Wastewater Treatment Plant

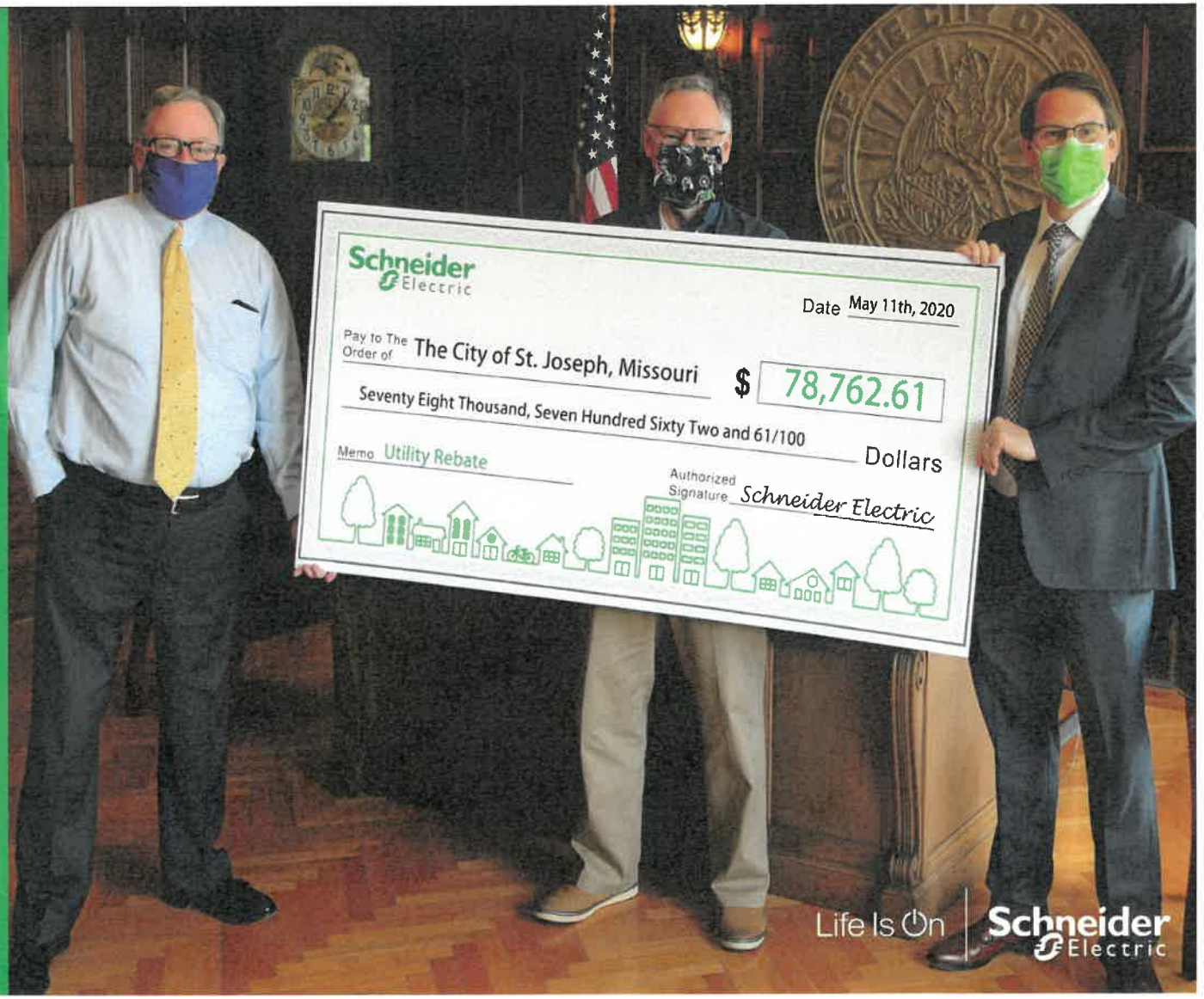
Project Review & Construction Contract

Peter Hinkle, Midwest Team Leader, Schneider Electric
Janel Junkersfeld, Project Development Manager
Quent Mather, Wastewater Solutions Architect
Darrell DeMoss, Director of Operatoins

Life Is On Schneider Electric

Continued Partnership

- **Project Background & Funding**
- **Scope Review**
- **Savings & Cost**
- **Next Steps / Contract Approval**



Project Background

Developing a focused effort to improve operations, reduce costs, and more efficient treatment

Total Project Scope

ECM 1: Aeration & Blower Modifications

ECM 2: Improved Mixing Technology

ECM 3: Biogas Use Optimization

ECM 4: Facility Mechanical Improvements

Leveraging SRF Program

- Green Grant: $1,000,000
- Low Interest Loan: 70% Buy-down
- Interest Rate: 1.25% - 1.5%
- Additional Opportunity for ARPA Funding

Project Background: Creating Two Phases

Phase III-A: Biogas (ECM 2 & 3)

- Replace digester mixing equipment in Digesters 5 and 3
- Connect biogas piping to thermal dryer and Digester 5 boilers
- Replace existing biogas booster and aftercooler equipment
- Replace and relocate biogas flare
- Replace pressure relief valves on operational digesters

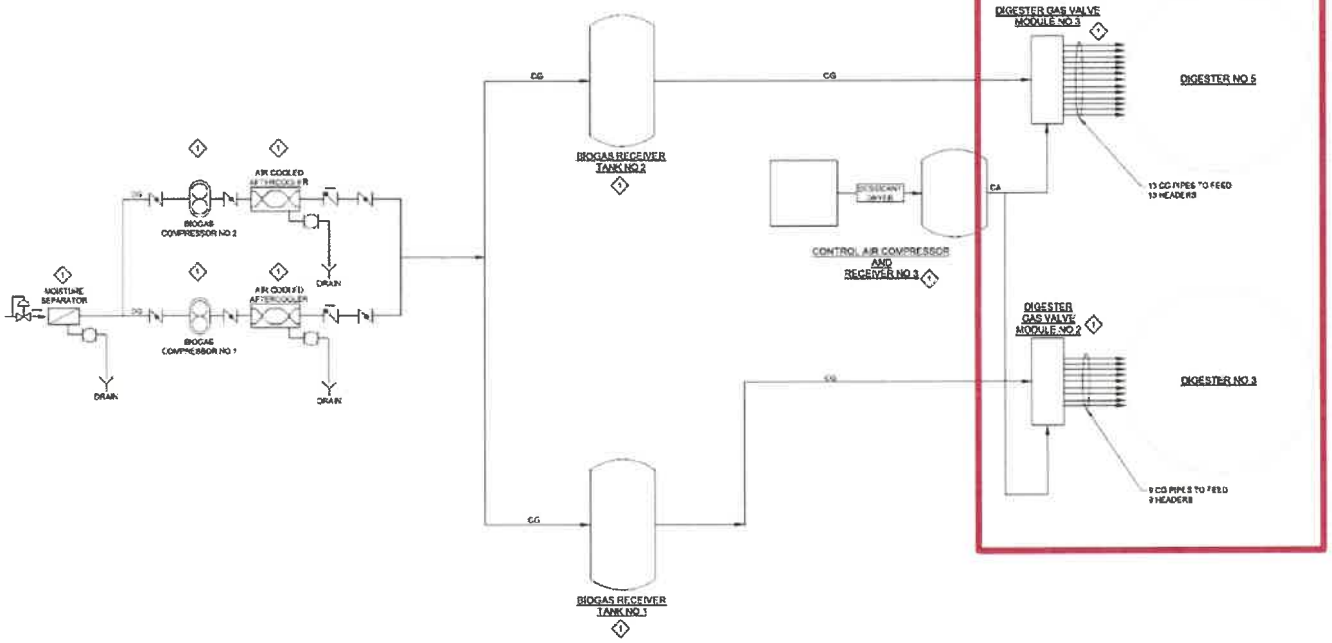
Phase III-B: Aeration & Mechanical (ECM 1 & 4)

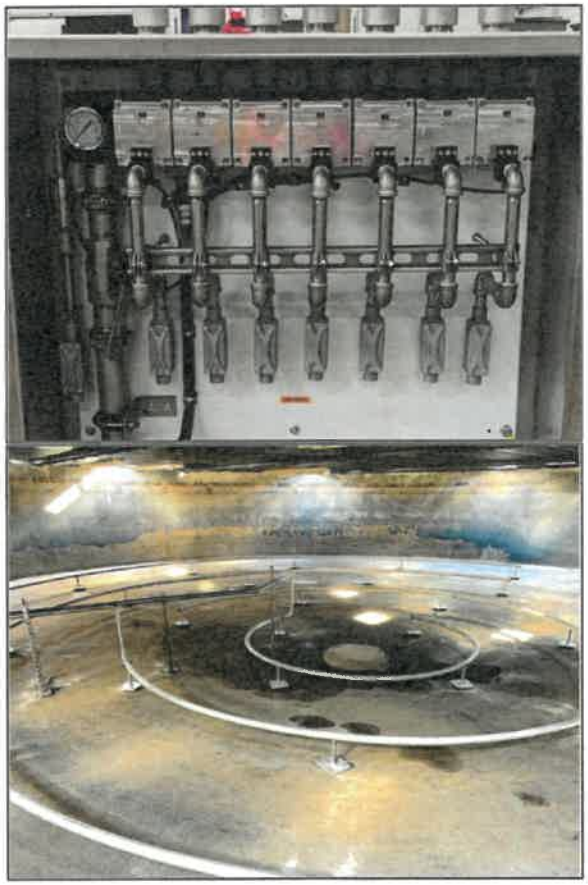
- Install new HST blowers for Domestic Aeration Basins
- Install activated sludge control system (N, DN, and SRT)
- Replace existing DO probes and airflow meters in Industrial and Domestic Aeration Basins
- Replace select HVAC equipment due to age/operational issues
- Expand & integrate existing BAS across multiple facilities

Phase III-A: Scope of Work

ECM 2: Improved Mixing Technology

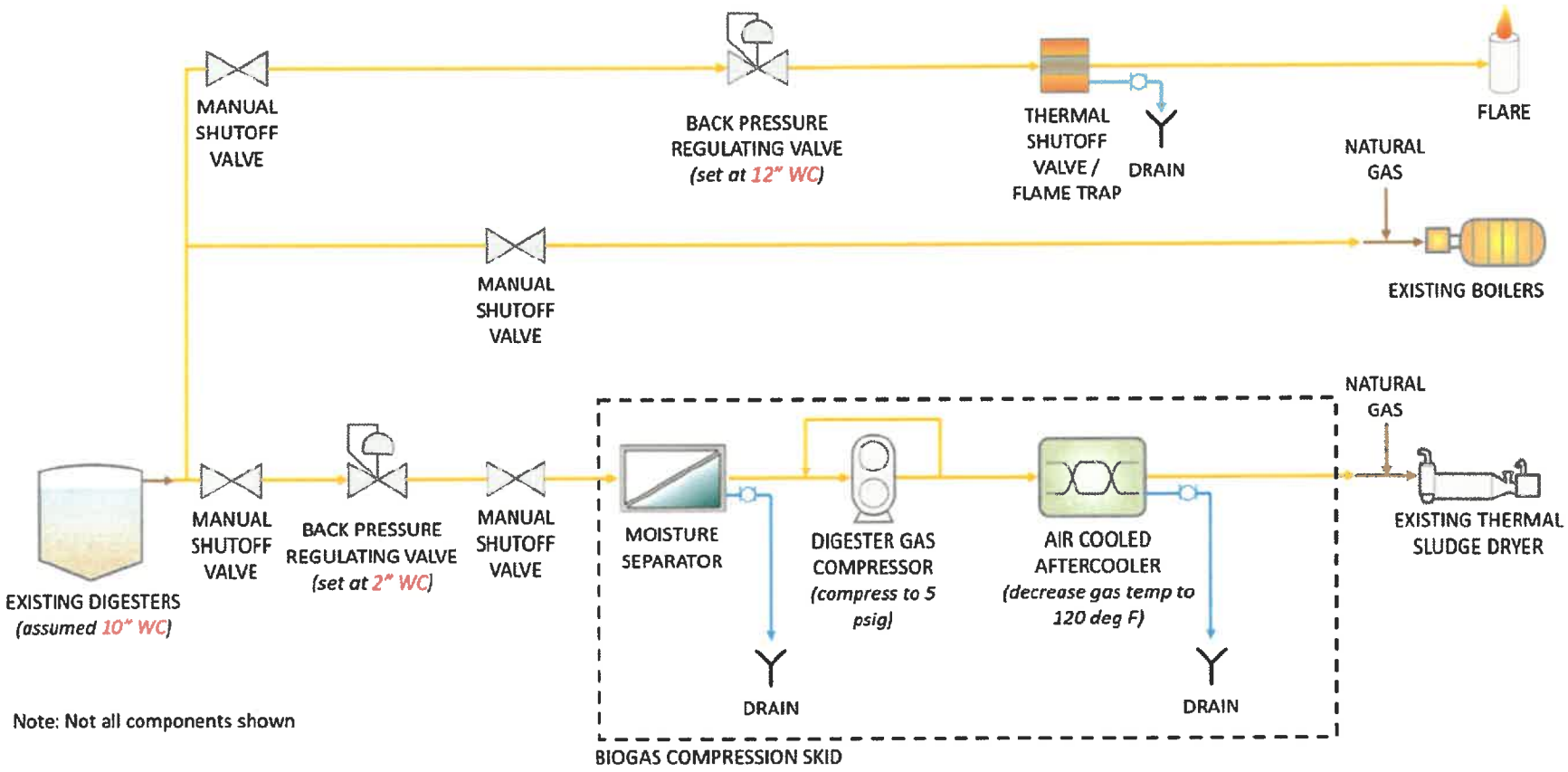
Leveraging new mixing technology to improve gas production and volatile solids destruction





ECM 3: Biogas Optimization

Process Flow Diagram for biogas collection and reuse system



Phase III-A: Savings and Cost

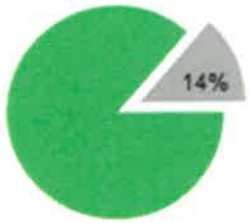
Savings Detail

Baselines are different per savings option, but future operations would be the same

Cost Savings Approach

- Energy Savings: **$206,020**
- Volatile Solids Destruction: **$70,049**
- O&M / Capital Cost Avoidance: **$363,111**
- Improved mixing increases biogas production
- Dewatering and dryer solids loading decreases due to increased solids destruction via new mixers
- Using biogas to reduce dryer and boiler natural gas use and expense
- Dryer will use a 50/50 blend of natural gas and biogas during operation
- Waste gas burner will flare any excess biogas

Energy Cost Savings



Energy Indicies	Energy kWh/MG	Cost $/MG
Baseline	2,059	$195.67
Post Project	1,796	$169.02
% Savings	12.8%	13.6%

Project Summary by ECM Category

Project Phase	Electricity Costs $	Fossil Fuels Costs $	Total Costs $
Baseline	$1,207,820	$273,886	$1,481,706
Dig Mixer BL ADJ	*$31,126*		
Adj Baseline	$1,238,946	$273,886	$1,512,832
Biogas	$9,833	$153,780	$163,613
Mixing	$42,408	$0	$42,408
Post Project	$1,186,705	$120,106	$1,306,811
Savings	$52,241	$153,780	$206,020
Percent Savings	4.2%	56.1%	13.6%

Project Overview: Biogas Enhancement

Scope Description	Energy & Disposal Savings	O&M & Capital Cost Avoidance	Savings Over 20-years (SRF Term)	Price
ECM 2 - Improved Mixing Technology	$112,457	$148,766	$7,019,151	$6,295,455
ECM 3 - Biogas Use Optimization	$163,613	$214,345	$10,155,882	$9,070,652
Totals:	**$276,070**	**$363,111**	**$17,175,033**	**$15,366,107**

ECM 2: Improved Mixing Technology

- EnviroMix System – Biogas mixing within digesters
- Increased gas productions and volatile solids destruction

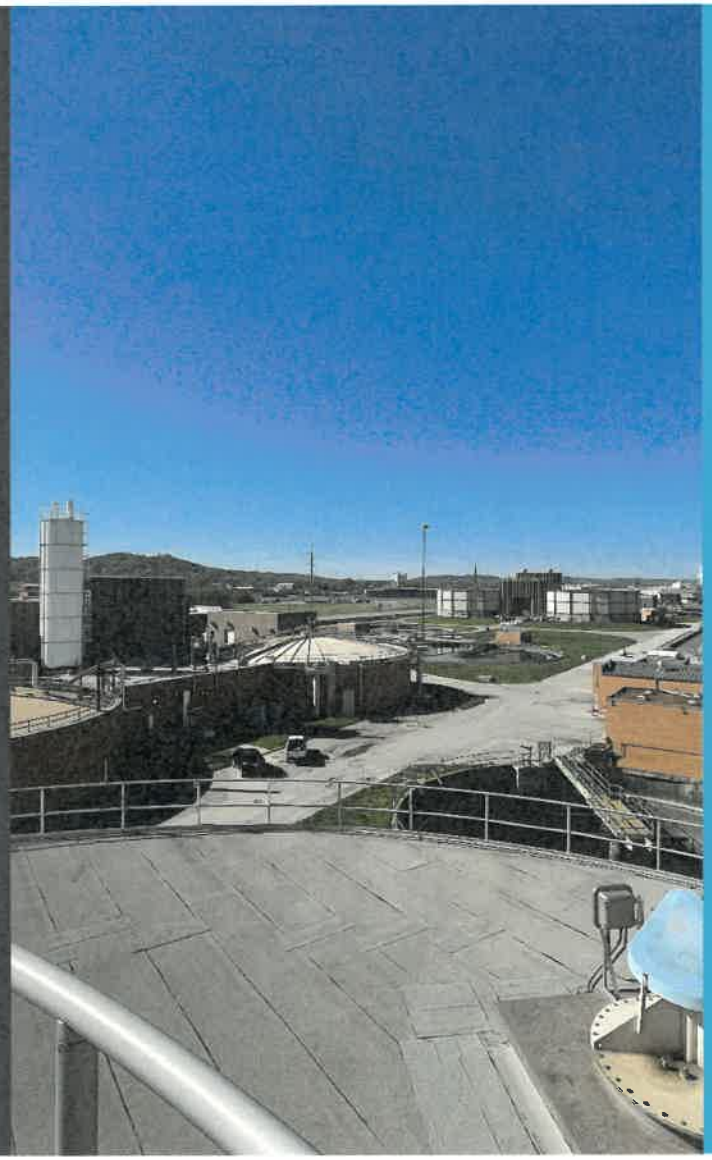
ECM 3: Biogas Optimization

- Biogas reuse at dryer and digester boilers
- Flare improvements and replacement

Year	Energy & Disposal Savings	Operations & Maintenance / Capital Cost Avoidance	Total Annual Cost Savings
1	$276,070	$363,111	$639,181
2	$284,352	$374,004	$658,356
3	$292,883	$385,224	$678,107
4	$301,669	$396,781	$698,450
5	$310,719	$408,685	$719,404
6	$320,041	$420,945	$740,986
7	$329,642	$433,574	$763,216
8	$339,531	$446,581	$786,112
9	$349,717	$459,978	$809,695
10	$360,209	$473,777	$833,986
11	$371,015	$487,991	$859,006
12	$382,145	$502,631	$884,776
13	$393,610	$517,709	$911,319
14	$405,418	$533,241	$938,659
15	$417,581	$549,238	$966,819
Totals:	**$5,134,602**	**$6,753,470**	**$11,888,072**
16	$430,108	$565,715	$995,823
17	$443,011	$582,687	$1,025,698
18	$456,302	$600,167	$1,056,469
19	$469,991	$618,172	$1,088,163
20	$484,090	$636,717	$1,120,808
SRF 20-yr TermTotals:	**$7,418,104**	**$9,756,929**	**$17,175,033**

Next Steps

- Approve Construction Contract by City Council April 4th
- Finalize design, order equipment, and develop final construction schedule
- Provide needed documentation to DNR for financing of project
- Continue development of Phase III-B



Improve Operations & Reduce Energy Spend

Reinvest Into Needed Infrastructure & Process

Enhance Biogas Production & Reuse

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