



Authorization To Execute Contract With McKinstry Essention, LLC, For Energy Improvements Project Phase Two

Mike Lexvold – Facilities Management Director
Physical Development Committee of the Whole
April 14, 2026

Overview



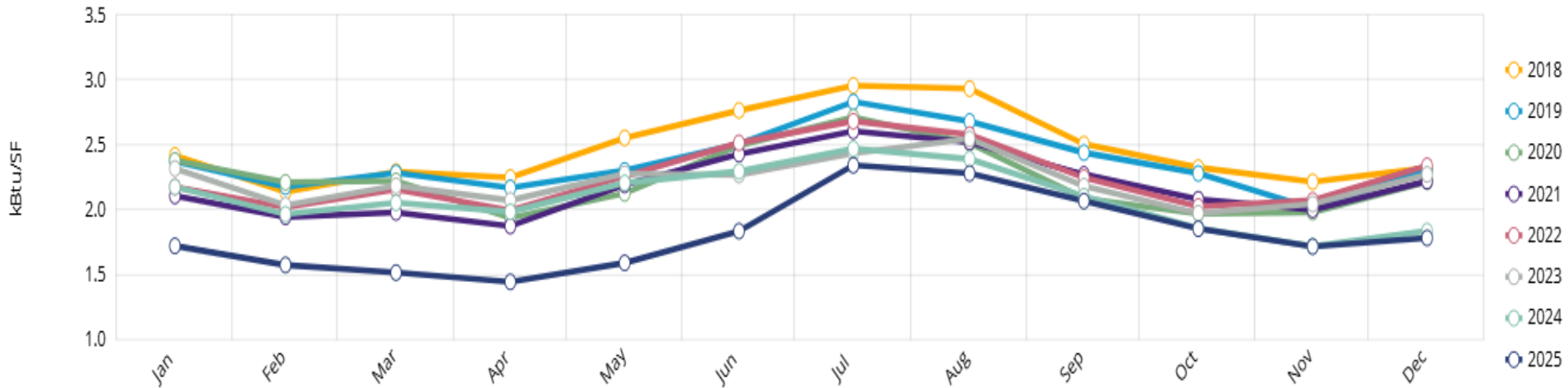
- History of Work with McKinstry
- Investment Grade Audit
- Project Summary
- Requested Action
- Questions and Discussion

Phase One Impact



Buildings Monthly Year over Year Electric Usage

Jan 2018 - Dec 2025



Investment Grade Audit Process



- Investment Grade Audit looked at:
 - Solar at Five Rooftop Locations
 - Farmington Library
 - Juvenile Service Center
 - Kaposia Library
 - Law Enforcement Center
 - Lebanon Hills Maintenance Facility
 - Water Conservation Improvements in 16 Buildings
 - Building Envelope Sealing in 19 Buildings
 - Minor Mechanical Upgrades in 3 Buildings

Investment Grade Audit Outcomes



	Phase 1 \$800k Contribution	Phase 2 - \$3M Project \$250k Contribution	County Accomplishments via Energy Projects
Project Size	\$8.4 Million	\$3.0 Million	Up to \$11.4 Million
Cost Savings	\$338k/ yr	\$ 107k/ yr	\$445k / yr
Avoided energy costs (25 yrs)	\$17.1 Million	\$4.8 Million	\$21.9 Million
Utility cost reduction	25%	6% (10-12%+)*	~31% (35-37%+)*
Solar system	1.1 MW	~0.647 MW	~1.747 MW of solar used on-site
On-Site solar to offset energy costs	4 Solar Sites	5 Solar Sites	9 Solar Sites where energy is used on-site
Near Net Zero Sites	2 Near Net Zero Energy Sites	1 Near Net Zero Energy Site	Drive County closer to Near Net Zero energy performance
IRA benefits	~\$1 Million	~\$692,000	~\$1.7M in Direct Pay - Largest solar benefit for a MN County
Awards	MNSEIA, AMC, NACO	AMC (Energy), NACO, etc.	<u>MNSEIA</u> , AMC, NACO, etc.

* TBD based on 2025 requested utility data.

Investment Grade Audit Outcomes



Facility Assessment	Mechanical	Building Envelope	RT Solar	Water
Administration Center	☒	☒	☐	☒
Burnhaven Library	☐	☒	☐	☐
Kaposia Library	☐	☒	☒	☐
Lawshe Museum	☐	☒	☐	☒
Empire East Maintenance Facility	☐	☒	☐	☒
Empire West Maintenance Facility	☐	☒	☐	☒
Farmington Library	☐	☒	☒	☒
Heritage Library	☐	☒	☐	☒
Inver Glen Library	☐	☒	☐	☐
Judicial Center	☐	☒	☐	☒
Juvenile Services Center	☐	☒	☒	☒
Law Enforcement Center	☐	☐	☒	☒
Lebanon Hills Visitor Center	☐	☒	☐	☒
Northern Service Center	☒	☒	☐	☒
Pleasant Hill Library	☐	☒	☐	☐
Schaars Bluff Gathering Center	☐	☒	☐	☐
SMART Center	☐	☒	☐	☒
Wescott Library	☐	☒	☐	☐
Western Service Center	☒	☒	☐	☒
911 Center	☐	☒	☐	☒
Lebanon Hills Maintenance	☐	☐	☒	☐
Extension Service Center	☐	☐	☐	☒
Robert Trail Library	☐	☐	☐	☒

Investment Grade Audit Outcomes



ENERGY CONSERVATION MEASURE	ANNUAL ELECTRICITY SAVINGS (KWH)	ANNUAL GAS SAVINGS (THERMS)	ANNUAL WATER SAVINGS (KGAL)
SOLAR PV	823,434	--	--
MECHANICAL UPGRADES	20,256	5,522	--
BUILDING ENVELOPE	50,250	17,982	--
WATER CONSERVATION	--	974	1,726
TOTALS	893,940	24,478	1,726

Project Goal Alignment



- Groundwater Plan Strategy 2A2C: Conduct water use/efficiency/conservation audits of all County Facilities
- County Board Resolution No. 22-068: That the Dakota County Board of Commissioners hereby affirms and formally adopts a strategy of investing in energy conservation measures when the payback on those investments is equal to or less than the life expectancy of the investment when County levy funds are the primary source of funding

Solar Arrays

FARMINGTON LIBRARY

92% Energy Use Offset

Solar Size - 131 (kW_{DC})



Solar Arrays

KAPOSIA LIBRARY

54% Energy Use Offset

Solar Size - 94 (kW_{DC})



Solar Arrays

LEBANON HILLS MAINTENANCE FACILITY

42% Energy Use Offset

Solar Size - 101 (kW_{DC})



Solar Arrays

JUVENILE SERVICES

28% Energy Use Offset

Solar Size - 114 (kW_{DC})



Solar Arrays

LAW ENFORCEMENT CENTER

17% Energy Use Offset

Solar Size - 207 (kW_{DC})



Investment Grade Audit Outcomes



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* TBD based on 2025 requested utility data.

Water Conservation



- 16 Countywide Buildings
- Current Total 11.8 million gallons of usage per year
- Reduce water use by 1.554 million gallons per year
- Saves \$16,250 in year one

Building Envelope



- 19 Countywide Buildings
- Reduces Electricity by 45,000 kWh per year
- Reduces Natural Gas by 16,000 therms per year
- Saves \$17,500 in year one

Project Cashflow

Energy Escalation Rate = 4.9%
Interest Rate = 3.9%



Summary of Economics and Cash Flow

Capital Contribution (\$)
\$250,000

Project Cost (\$)
\$3,081,374

Total Benefit (\$)
\$4,541,107

A	B	C	D	E	F	G	H
Year	Project Cost (\$)	Energy + O&M Savings	Incentives and Capital Contribution	Lease Payment	End Balance	Annual Cashflow	Total Cumulative Cash Flow
0	(\$3,081,374)	\$0	\$0	\$3,081,374	\$0	\$0	\$0
1		\$107,686	\$267,486	(\$375,171)	(\$2,826,377)	\$1	\$1
2		\$112,554	\$691,888	(\$804,441)	(\$2,132,165)	\$1	\$2
3		\$117,643	\$0	(\$117,642)	(\$2,097,677)	\$1	\$3
4		\$122,964	\$0	(\$122,963)	(\$2,056,523)	\$1	\$4
5		\$128,527	\$0	(\$128,526)	(\$2,008,201)	\$1	\$5
6		\$134,344	\$0	(\$134,343)	(\$1,952,178)	\$1	\$6
7		\$140,426	\$0	(\$140,425)	(\$1,887,889)	\$1	\$7
8		\$146,784	\$0	(\$146,783)	(\$1,814,733)	\$1	\$8
9		\$153,433	\$0	(\$153,432)	(\$1,732,075)	\$1	\$9
10		\$160,385	\$0	(\$160,384)	(\$1,639,242)	\$1	\$10
11		\$167,654	\$0	(\$167,653)	(\$1,535,520)	\$1	\$11
12		\$175,254	\$0	(\$175,253)	(\$1,420,153)	\$1	\$12
13		\$183,201	\$0	(\$183,200)	(\$1,292,339)	\$1	\$13
14		\$191,511	\$0	(\$191,510)	(\$1,151,231)	\$1	\$14
15		\$200,200	\$0	(\$200,199)	(\$995,930)	\$1	\$15
16		\$209,285	\$0	(\$209,284)	(\$825,487)	\$1	\$16
17		\$218,786	\$0	(\$218,785)	(\$638,896)	\$1	\$17
18		\$228,720	\$0	(\$228,719)	(\$435,094)	\$1	\$18
19		\$239,109	\$0	(\$239,108)	(\$212,955)	\$1	\$19
20		\$249,972	\$0	(\$221,261)	\$0	\$28,711	\$28,730
21		\$261,331	\$0	\$0	\$0	\$261,331	\$290,061
22		\$273,210	\$0	\$0	\$0	\$273,210	\$563,272
23		\$285,632	\$0	\$0	\$0	\$285,632	\$848,904
24		\$298,622	\$0	\$0	\$0	\$298,622	\$1,147,526
25		\$312,207	\$0	\$0	\$0	\$312,207	\$1,459,733
Totals	(\$3,081,374)	\$4,819,439	\$959,374	(\$4,319,080)	\$0	\$1,459,733	

Financial Disclaimer: McKinstry is not engaged in providing legal, tax, or financial advice. The information provided herein is intended only to assist you in your decision-making and is broad in scope. Accordingly, before making any final decisions you should consider obtaining additional information and advice from your accountant or other financial advisers who are fully aware of your specific circumstances.

Energy Savings Summary



Energy Savings Summary

Facility Improvement Measures	Facility	Net Effective Guarantee Multiplier *	Electricity				Therm		Water		Total **
			kW	kW (\$)	Guaranteed kWh Savings	kWh (\$)	Guaranteed Therm Savings	Therm (\$)	kGal	kGal (\$)	(\$)
10.02 Juvenile Services Rooftop Solar PV	Juvenile Services Center	91.3%	287.6	\$3,301	133,419	\$10,046	0	\$0	0	\$0	\$13,347
10.01 Farmington Library Rooftop Solar PV	Farmington Library	92.5%	127.7	\$1,928	154,807	\$9,651	0	\$0	0	\$0	\$11,579
10.04 Law Enforcement Center Rooftop Solar PV	Law Center	92.4%	287.3	\$3,744	240,340	\$17,612	0	\$0	0	\$0	\$21,356
10.03 Kaposia Library Rooftop Solar PV	Kaposia Library	92.3%	110.7	\$1,762	109,438	\$7,857	0	\$0	0	\$0	\$9,619
10.05 Lebanon Hills Maintenance Facility Rooftop Solar PV	Lebanon Hills Maintenance Facility	93.8%	63.8	\$750	122,984	\$8,622	0	\$0	0	\$0	\$9,372
13.0 County Wide Building Envelope	See note below****	90.0%	0.0	\$0	45,224	4,204	16,184	13,381	0	\$0	\$17,585
18.0 County Wide Water Conservation	See note below*****	90.0%	0.0	\$0	0	\$0	876	\$738	1,554	\$15,523	\$16,260
04.01 Administration Center AHU #4 HVAC System Controls	Administration Center	90.0%	0.0	\$0	9,916	\$793	581	\$416	0	\$0	\$1,209
04.03 Northern Service Center 2nd Floor Occupancy HVAC System Controls	Northern Service Center	90.0%	0.0	\$0	6,519	\$521	85	\$70	0	\$0	\$591
25.01 Western Service Center Snow Melt System	Western Service Center	90.0%	0.0	\$0	1,769	\$142	4,305	\$3,126	0	\$0	\$3,268
		Totals ***	877.0	\$11,483	824,416	\$59,449	22,030	\$17,731	1,554	\$15,523	\$104,186

Total Annual Energy Savings = \$104,186 / Year

Project Schedule



- Rooftop Solar: May – December 2026*
- Building Envelope: May – December 2026
- Water Conservation: May – November 2026
- HVAC Work: June – September 2026

* Dependent upon Xcel Energy witness testing completion.

Requested Action



- Authorization To Execute Contract With McKinstry Essention, LLC For Energy Improvements Project Phase Two

Questions

