



## Administration

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### MEMO

TO: County Commission

FROM: Robert W. Wilson

Date: March 14, 2023

Subject: Highway Department Remodel/Addition Project

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The 2023 Building Fund budget includes \$2.97 million for the addition and remodel of the Highway Department building in West Fargo. The County engaged TL Stroh Architects last summer to complete the architectural work on the project and estimate a total project cost. Bids were advertised and opened on March 9, 2023. Eight general contractor bids, five mechanical bids, and five electrical bids were received.

The mechanical and electrical bids include a bid alternate to replace the existing air handling unit's fans. This is a recommendation of the project's mechanical engineer and supported by Terry Stroh and Buildings and Grounds Supervisor Gene Gartner.

The low bids are as follows:

General Contractor – Diversified Contractors	\$1,898,800	330 Days to complete
Electrical Contractor – Vinco	\$220,359	(Base & bid alternate)
Mechanical Contractor – NPM	<u>\$1,057,000</u>	(Base & bid alternate)
<b>Total:</b>	<b>\$3,176,159</b>	

Based on the successful bids, the project cost will be 7% above estimate. For consideration today is to authorize County staff to negotiate agreements with the lowest responsible bidders.

**SUGGESTED MOTION: Authorize County staff to negotiate agreements with the lowest responsible bidders – Diversified Contractors, Vinco, and NPM.**

Cass County Highway Dept Addition & Remodel  
West Fargo, ND

Bid Tab: March 9, 2023  
T.L. Stroh Architects, Ltd

Multiple Prime Bid

<b>General Contractors</b>	AD#1	AD#2	AD#3	<b>Base Bid</b>	<b>Bonds</b>		
TF Powers Construction	x	x	x	\$1,927,000.00	xx		330 days
Meinecke Johnson				No Bid			
Border Construction	x	x	x	\$1,949,000.00	xx		300 days
Gast Construction				No Bid			
Roers Construction	x	x	x	\$2,088,000.00	xx		420 days
Minko Construction	x	x	x	\$1,919,500.00	xx		365 days
Diversified Contractors	x	x	x	\$1,898,800.00	xx		330 days
<b>Mechanical Contractors</b>	AD#1	AD#2	AD#3	<b>Base Bid</b>		<b>Alt M-1 Replace exist supply and return fans at AHU-1</b>	
NPM	x	x	x	\$1,000,000.00	xx	\$57,500.00	
Mech Ins				No Bid			
J-Tech Mech	x	x	x	\$1,043,000.00	xx	\$54,270.00	
Manning Mech	x	x	x	\$980,000.00	xx	\$79,900.00	
Laney's	x	x	x	\$1,103,338.00	xx	\$53,025.00	



**From:** [Kaushagen, Taylor](#)  
**To:** [Kaushagen, Taylor](#)  
**Subject:** FW: Cass Co Hwy - Ex AHU Fan Replacement  
**Date:** Tuesday, March 14, 2023 2:38:51 PM  
**Attachments:** [image001.png](#)  
[image002.png](#)  
[image003.png](#)  
[image004.png](#)  
[image005.png](#)  
[image006.png](#)  
[image007.png](#)

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**From:** Derek Diers <[DerekD@tlstroh.com](mailto:DerekD@tlstroh.com)>  
**Sent:** Tuesday, March 14, 2023 11:24 AM  
**To:** Wilson, Robert <[WilsonRo@casscountynd.gov](mailto:WilsonRo@casscountynd.gov)>  
**Cc:** Terry Stroh <[terrys@tlstroh.com](mailto:terrys@tlstroh.com)>  
**Subject:** FW: Cass Co Hwy - Ex AHU Fan Replacement

**CAUTION:** EXTERNAL EMAIL

Please see below regarding the Alternate for the Cass County Highway Dept. Addition and Remodel.

Thank you,

Derek Diers  
T.L. Stroh Architects

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**From:** Eric Johnson <[eric.johnson@cmta.com](mailto:eric.johnson@cmta.com)>  
**Sent:** Tuesday, March 14, 2023 11:21 AM  
**To:** Derek Diers <[DerekD@tlstroh.com](mailto:DerekD@tlstroh.com)>  
**Cc:** Terry Stroh <[terrys@tlstroh.com](mailto:terrys@tlstroh.com)>  
**Subject:** Cass Co Hwy - Ex AHU Fan Replacement

Hi Derek,

Here is the background concerning the reason for the alternate to replace the existing air handling unit's fans.

During one of my site visits with Gene Gartner, we were inspecting and discussing the existing air handling unit. That unit was originally installed during a project in the mid-90s and serves the existing office area. Due to the remodel/addition we essentially reworking all of the ductwork and VAV boxes served by this unit. Since the unit is going on almost 30 years old, Gene was curious what it would take to replace it. The unit casing is in good condition and a new chilled water coil was installed in 2016. However the existing fans utilize inlet vane dampers to vary the airflow.

In systems that utilize VAV boxes, we vary the airflow up and down depending on the zone cooling or heating demand. Current technology utilizes Variable Frequency Drives (VFDs) to vary the fan speed, depending on the load. This also provides energy savings, as most of the time the fans operate at a reduced speed. Technology in the 1990s utilized inlet vane dampers to vary the airflow, so the

depending on demand, this inlet damper will modulate to vary the airflow, but the fan speed does not change. So there aren't any energy savings associated with inlet vane dampers.

So I told Gene, since the unit is in good condition it would be more cost effective to just replace the fans with new and add VFDs to the system. This way the county would essentially have new equipment and be able to achieve some energy saving associated with this unit. However, since this work wasn't in the original scope of work I told Gene we could call out the work associated with the new fans as an Add Alternate, just so the county could see the associated costs.

In my opinion, since we are providing essentially a new mechanical system (ductwork, piping, boilers, AHU, etc) for the remodel/addition, it made sense that we try to upgrade the existing AHU with new fans, to extend the life of the unit. We just wanted to be transparent with this work since it wasn't in the original budget.

Let me know if there are any questions. Thanks - Eric

**Eric Johnson**, PE  
Mechanical Engineer



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