

 <p style="text-align: center;">Council Communication Office of the City Manager</p>	Date: April 23, 2018
	Agenda Item No. 45C Roll Call No. <u>18-0712</u> Communication No. <u>18-187</u> Submitted by: Bob Fagen, Finance Director

AGENDA HEADING:

Approving the purchase of 11 replacement refuse truck chassis with specified collection equipment bodies for use by the Sanitation Division of the Department of Public Works.

SYNOPSIS:

Recommend approval of the purchase of 11 purpose built refuse cab over engine (COE) truck chassis with specified solid waste collection equipment installed using the Houston Galveston Area Council (HGAC) purchasing contract as follows:

- Eleven (11) truck chassis from Housby Mack Inc., 4747 NE 14th St, Des Moines, IA 50313, (Kelly Housby, President), in the amount of \$1,481,200. Eleven (11) chassis at \$134,600 each, plus a single contract processing fee of \$600.
- Automated Side Loading refuse collection equipment bodies for the above referenced 11 truck chassis from McNeilus Truck and Manufacturing, 520 Hwy St E, Dodge Center, MN 55927, (Brad Nelson, President), in the amount of \$1,366,156. Eleven (11) automated side loading collection bodies at \$124,196. No contract processing fee.

FISCAL IMPACT:

Amount: \$2,847,356

Funding Source: Solid Waste Enterprise Fund PW250430

ADDITIONAL INFORMATION:

- The City’s current fleet of 36 solid waste collection trucks are equipped with the following four (4) types of collection equipment:
 - Twenty-three (23) automated side loading-scheduled replacement cycle, eight (8) years
 - Six (6) front loading-scheduled replacement cycle, 10 years
 - Six (6) rear loading-scheduled replacement cycle, 10 years
 - One (1) compact semi-automated dual side loading-scheduled replacement cycle, six (6) years
- The 11 units being replaced meet or exceed the established life cycle of eight (8) years as follows:
 - Five (5) units being replaced have been in service for 10 years.
 - Six (6) units being replaced have been in service for eight (8) years.

- On March 18, 2002 Council approved the purchase of one (1) conventional style chassis and 2-cab over engine (COE) style chassis with medium duty (small bore) diesel engines to test and compare operational efficiencies of the two (2) types of chassis configurations in the collection of solid waste. The test units were placed into service in July of 2002 with identical automated side loading refuse equipment and operated under like conditions for the collection of municipal solid waste for a period of nine (9) months. Historical usage data reveals the conventional style chassis was utilized two-thirds of the time compared to the COE style chassis.
- Driver feedback as to the enhanced maneuverability, visibility, and accessibility due to cab configuration led to the COE design being the specified standard for the refuse collection fleet in 2003. All replacement chassis for the 35 automated side loading, front loading, and rear loading equipment have been cab over engine (COE) chassis style since 2004. The single compact semi-automated dual side loading equipment is mounted on a one-ton pickup chassis.

Future use of COE chassis

Chassis for refuse collection trucks utilizing automated side loading, front loading, and rear loading equipment will continue to use cab over engine (COE) chassis designs.

The City of Des Moines is a member of the Houston Galveston Area Council (HGAC). HGAC is a national government-to-government cooperative purchasing program. HGAC establishes purchasing contracts nationwide on behalf of local governments, special districts and private non-profits providing a government service. HGAC’s procurement process includes research, preparation of specifications, prebid and preproposal conferences, legal notice posting and advertising, bid/proposal review and contract execution.

Staff identified multiple HGAC contract holders for both purpose built refuse truck chassis, and the automated side loading collection equipment bodies. The results are in the two (2) tables below.

Purpose Built Refuse Application COE Chassis

<u>HGAC Contract Cost Comparisons, Residual Values, and Net Cost of Ownership</u>				
<u>Purpose built refuse application COE truck chassis</u>				
Manufacturer	Description	HGAC Contract Cost	*Residual Value	Net ownership cost
Mack	Purpose built refuse truck chassis	\$134,600	\$57,750	\$76,850
Peterbilt	Purpose built refuse truck chassis	\$135,888	\$56,725	\$79,163
Autocar	Purpose built refuse truck chassis	\$143,032	\$54,350	\$88,682

*Residual value-based on calculations for “Rough Wholesale” values for 8-year-old (refuse truck life cycle), 2011 model year used trucks from the City’s independent paid subscription services of Black Book-Division of Hearst Business Media Corporation. Black Book provides subscribers with residual values of medium and heavy-duty truck chassis independent from truck manufacturers and dealers. Black Book data is captured from truck dealer transactions, aftermarket sales, and auction results. City staff also utilize the paid subscription services of J. D. Powers Valuation Services as provided in American Truck Dealers (ATD/NADA) commercial truck guides. There was insufficient data of truck dealer transactions for this class of purpose built refuse COE truck chassis for ATD/NADA to publish residual values. Most of the aftermarket transactions for refuse trucks are from municipalities and private waste haulers; therefore, Black Book was the primary source used to calculate residual values.

Fuel Efficiency and Reduced Idling

Purpose built refuse truck chassis are powered by clean burning heavy-duty (big bore) diesel engines, which results in reduced fuel consumption compared to typical medium duty engines. Use of heavy-duty engines results in reduced engine repair costs, and provides a longer life cycle and results in lower life cycle costs when compared to medium duty engine used in municipal operations. The diesel engines can utilize up to 20% biodiesel fuel.

The recommended truck chassis are equipped engine control modules (ECM) that constantly capture and report idle time along with over 100 other engine operating parameters. In addition to measuring idle time, the system allows programming a maximum idle time. If the maximum time is reached the engine shuts off to reduce fuel consumption. Initially, trucks will be programmed for a maximum idle time of 10 minutes.

The recommended award for purpose built refuse application COE truck chassis is to the least cost purchase price and least cost of ownership when applying the projected residual value to the purchase price.

Automated Side Loading Refuse Collection Equipment

HGAC Contract Cost Comparisons Automated Side Loading Refuse Collection Equipment	
Manufacturer	HGAC Contract Cost/Unit
McNeilus	\$124,196.00
New Way	\$123,042.40

Residual values are not published for used refuse collection equipment. The City utilizes contracted auction services for the resale of refuse equipment mounted on truck chassis.

Staff evaluated automated side loading refuse bodies available from the HGAC contract. Two (2) contract holders that provide equipment meeting the minimum requirement of the operation division are compared below. Although the cost of the McNeilus brand equipment is 0.9% higher than the New Way brand equipment there are specific identifiable operational and maintenance advantages of the McNeilus brand ZR model automated sideloader compared to the New Way Sidewinder model quoted. They include:

- 2019 McNeilus ZR models are identical to the previously awarded 11 units now in service for the last five (5) months. No design or production changes were made from the 2018 models.
- McNeilus ZR incorporates an integrated diagnostic system built in the refuse collection control system. This results in reduced repair and downtime of the units.
- Wear to collection toters is reduced due to the shape and configuration of the gripping mechanism. The McNeilus system uses the integrated control system to apply only necessary pressure in gripping toters; therefore, extending toter life.
- Maintenance and operations staff have explicit knowledge and experience with McNeilus automated side loading refuse collection equipment since the initial units were placed into service in 2008.
- Parts inventory is reduced with fleet consistency.
- Gains in operational efficiency are realized from identical collection equipment with like control systems.

There are direct operational and maintenance benefits in selecting the McNeilus brand equipment for replacement units in parts, operation, and repair compatibilities.

- Therefore, the recommended award is made using Municipal Code section 2-726 (d) which provides for a non-competitive procurement of goods and/or services that are of such a nature that they are the only goods and/or services which will fit and comply with the required use, or are an integral part of a total system so as to be uniquely compatible with existing City need, materials or equipment to be cost-effective.

PREVIOUS COUNCIL ACTION(S):

Date: March 20, 2017

Roll Call Number: [17-0500](#)

Action: Bids from the following:

- (D) [Housby](#) Mack Inc. (Kelly Housby, President) for seventeen (17) replacement truck chassis per Houston-Galveston Area Council Contract, \$2,264,388 and McNeilus Truck & Manufacturing (Brad Nelson, President) for seventeen (17) replacement refuse bodies per HGAC Contract, \$1,853,141 for use by the Public Works Department. ([Council Communication No. 17-290](#)) Moved by Hensley to adopt. Motion Carried 7-0.

Date: March 18, 2002

Roll Call Number: 02-715

Action: Bids from Mid-Iowa Solid Waste Equipment Co., (Jeff Firestone, President) for three truck bodies, \$141,000; Freightliner of Des Moines, (Carl Schwab, President, Altoona) for one truck chassis, specification no. 01-02-09A, \$61,808; Peterbilt of Des Moines, (Brad Wilson, President, Altoona) for two truck chassis, specification nos. 01-02-10A and 01-02-11A, \$151,848; for three automated side loading refuse trucks to be used by the Public Works Department at a total cost of \$354,656. (11 bids mailed, 6 received) ([Council Communication No. 02-156](#)) Moved by Brooks to adopt. Motion Carried 7-0.

BOARD/COMMISSION ACTION(S): NONE

ANTICIPATED ACTIONS AND FUTURE COMMITMENTS: NONE

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