SUBJECT: Procurement and Standardization of Ambulance Fleet purchases for 2008-2010 (FCS08035/HES08008) (City Wide)

RECOMMENDATION:

(a) That the purchase of ambulance vehicles be standardized and single sourced to Demers Ambulance for 2008, 2009 and 2010.

(b) That Staff be authorized to negotiate a “house account” for the supply of any replacement parts with the original equipment manufacturers of the approved standardized product.
EXECUTIVE SUMMARY:

As per the corporate Purchasing Policy, Section 4.14, “Policy for Standardization”, it is proposed that Hamilton Emergency Services – Emergency Medical Services (HES-EMS) standardize the purchase of stock ambulances from Demers Ambulance during the period 2008, 2009 and 2010, and then re-evaluate the market for subsequent years. During this period, if EMS has cause to purchase one (1) or more special purpose ambulances for large patients, the Division may purchase such a unit from another vendor in the event that Demers does not have a suitable product, and would be procured in accordance with the City Of Hamilton (City) Purchasing Policy.

Currently Demers Ambulance and Crestline Coach Ltd. are the only two (2) manufacturers and vendors of record certified by the Ministry of Health and Long-Term Care (MOHLTC) to manufacture ambulances for use in Ontario by municipal land ambulance services. In previous years, both vendors produced vehicles similar in base design, options. The basic cost and price for options were fixed for each vendor through a vendor of record process conducted by the MOHLTC. Therefore, the award of previous purchases has primarily been with Crestline as they were the lower cost option available. The balance of the fleet is Demers.

As of the first quarter of 2008, there are still only two (2) vendors of record that can manufacture ambulances for use in Ontario. However, these vendors now have different features in their respective base models, expanded options, and the MOHLTC is allowing municipalities to negotiate their prices with these vendors.

The EMS staff has been assessing the match of the basic ambulance offered by both manufacturers to the intended use and the safety requirements specific to Hamilton. Based on that analysis, staff is recommending that EMS standardizes to the Demers ambulance given the extensive list of standard safety, security, electrical system innovations, and patient comfort and care delivery features that are provided in the basic model and not available with the Crestline ambulance as noted in Table 1.

Applying recently quoted prices of each vendor’s basic model (to the extent that they can be compared) with the features that EMS would order, staff expect that the Demers Ambulance will cost approximately $106,000 and the Crestline unit $104,000. The Demers ambulance is 2% more; however, the basic Demers unit has numerous valued added features noted above, and as a basic feature an upgraded LED light system that is an option with the Crestline unit for an additional $1,700, almost negating the difference in the cost of the two (2) vendors for the basic unit.

Although circumstances can change, as a proxy of expected delivery time, staff has confirmed that if the 2008 order is placed in the next one to two (1-2) weeks, Demers Ambulance expected delivery date is approximately 12 weeks, and Crestline, 18 weeks. Given the specialization of these vehicles, prompt delivery is an important feature in the event of an unexpected event that an ambulance needs immediate replacement.
Table 1  Distinct Standard Features offered by Demers Ambulance

<table>
<thead>
<tr>
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<th>Description</th>
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<tbody>
<tr>
<td>1</td>
<td>The basic Demers model will immediately resolve many on-going safety issues including a specifically designed storage space for paramedic personal safety gear and lunches</td>
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<tr>
<td>2</td>
<td>More head room in the patient area</td>
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<tr>
<td>3</td>
<td>Intersection clear/Red LED lights with turning priority</td>
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<tr>
<td>4</td>
<td>Four corner emergency lights activate when the vehicle is reversing</td>
</tr>
<tr>
<td>5</td>
<td>High mount rear LED brake light for better visibility</td>
</tr>
<tr>
<td>6</td>
<td>Two electric door lock/unlock switch located near side/rear right door</td>
</tr>
<tr>
<td>7</td>
<td>Zero to 15 minute programmable timer on LCD display for halogen dome lights</td>
</tr>
<tr>
<td>8</td>
<td>Two recessed radio speakers in patient compartment reducing protruding objects</td>
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<tr>
<td>9</td>
<td>Flip up window frame on medical cabinet that allows for more thorough cleaning of the cabinets and ease restocking</td>
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<td>10</td>
<td>Improved lighting in the patient compartment to better assess the patient’s overall condition</td>
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<tr>
<td>11</td>
<td>Rear air conditioning/heating speed and temperature control with automatic mode</td>
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<tr>
<td>12</td>
<td>Innovative electrical system that will improve the speed and accuracy of mechanics diagnosing vehicle electrical problems</td>
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<tr>
<td>13</td>
<td>Digital chassis voltmeter, radio voltmeter, conversion amp meter and voltmeter</td>
</tr>
<tr>
<td>14</td>
<td>Parts and warranty services are located within 45 minutes of Hamilton - crucial for EMS operations (Crestline is located in Saskatoon)</td>
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**BACKGROUND:**

EMS is purchasing six (6) replacement ambulances in 2008 and has capital budget approval for these acquisitions some of which are beyond their expected life cycle. In 2009 and 2010, EMS expects to replace an additional six (6) standard ambulances each year.

When purchasing ambulances and paramedic response units for use in Ontario by a municipal land ambulance program, they must be designed and built to the MOHLTC Ontario Provincial Land Ambulance and Emergency Response Vehicle Standard Version 3.1.

The current version of the standard describes the minimum requirements for Ambulances to be used in the Province of Ontario. Compliance requirements for the standard are accomplished through a series of 22 performance tests. Ambulance vendors are required to submit these test results to the MOHLTC, Emergency Health Services (EHS) branch for certification approval to provide Ambulances to Emergency Medical Service operators in Ontario.

Currently there are two (2) ambulance conversion contractors certified to provide Ambulances in the Province of Ontario, Crestline Ambulance operating out of
Saskatoon, Saskatchewan and Demers Ambulance, operating out of Beloeil Quebec. There are no ambulance manufacturers currently in Ontario.

In prior years both Demers and Crestline vehicles were built similar in nature. Both use the same chassis (Ford E350) and provided options at a similar cost. The design of the patient care compartment was also similar in keeping with the standards. The cost of the Ambulances from these two (2) vendors was also competitive, usually within $1K-$2,000 of each other and based on a vendor of record process with the MOHLTC their prices were listed and non-negotiable with each municipality.

In recent months, the MOHLTC vendor of record process has seen changed whereby now the two (2) ambulance manufacturers are now offering different basic models and they are allowed to negotiate their list price on the basic unit and on available options. Although the market continues to be restricted to the two (2) vendors; the competitive process has resulted in a variation of options available to the municipality when purchasing ambulances.

In response to these conditions, Demers Ambulance has redesigned their basic ambulance to incorporate several safety features and enhancements that improve the operating reliability of the vehicle and ease of delivering patient care. Many of these features will address current safety concerns that Hamilton EMS is actively attempting to resolve with the paramedics and the Ministry of Labour. At this time Crestline Ambulance does not have a comparable basic ambulance and most of the features required are not available as a standard and nor can they be purchased as options. EMS staff have concluded that in their assessment, the benefits of the Demers vehicle outweigh the potential 2% greater cost (Demers estimate $106,000 vs. Crestline $104,000). Based on the staff analysis, EMS is seeking to standardize the Demers ambulance for the 2008, 2009 and 2010 ambulance purchases, and then reassess the market conditions at the end of that term. Not only will this ensure that EMS is purchasing the vehicle that currently best meets its needs, but it will also reduce the work demands for EMS and Purchasing in issuing Request for Tenders for ambulances.

**Key Features of Benefit of the Demers Ambulance**

**Electrical System Safety and Efficiency Innovation**

One of the new features included in the basic Demers ambulance is an electrical Multiplex power distribution and control system which is not currently available from Crestline. In the past the ambulances supplied by both vendors have had complicated wiring systems, which consumes a great deal of the HES mechanics’ time to trouble shoot when there is a failure. With the Multiplex system, the issue with complicated wiring systems is virtually eliminated. The mechanic is able to trouble shoot vehicle systems using a computer and with the aid of a satellite hook-up the mechanic could, in some cases, make minor electrical repairs remotely. Not only does this system add to the reliability of the emergency vehicle but the HES Chief Mechanical Officer anticipates that this feature will reduce the staff time diagnosing electrical problems in the Ambulances and avoid unwarranted repairs. One of the 2008 ambulance purchases is for an immediate replacement after the vehicle was destroyed by an electrical fire highlighting the utility of this feature. In addition the Demers ambulance has features
that will better equip the paramedic to assess the operating status of the vehicle i.e. digital chassis voltmeter, radio voltmeter, conversion amp meter and voltmeter.

**Paramedic Storage Space of Personal Issue and Safety Gear**
Paramedics typically spend a large portion of their shift in the ambulance and moving across the city where needed; and, by necessity they have to bring their personal issue safety gear, personal items and any food they have with them in the vehicle. Storage space for these items has been identified as a Health and Safety concern by the paramedics’ Joint Health and Safety Committee worker representatives. While the management team has identified ad hoc solutions, this issue is not unique to Hamilton and as a result Demers Ambulance has responded to this need by adding two (2) 12-cubic foot personal lockers with separate access for the paramedics. This addition immediately addresses this health and safety concern.

**Other safety and patient care and comfort features**
Demers ambulance has also made the following adjustments to their vehicles intended to enhance the relative safety and comfort of the patient and the paramedic as follows;

- Increased headroom in the patient compartment making this area more ergonomically friendly.
- ABS plastic material within the patient care compartment which is prone to retain contamination has been replaced with powder coated Aluminium which is easier to clean providing more of a contaminant free area.
- To improve visibility in the patient care area Demers is using a type of fluorescent lighting developed by NASA that has high and low intensity lighting that allows the paramedics to accurately determine patients' skin tone.
- Intersection clear/Red LED lights with turning priority.
- Four corner emergency lights activate when the vehicle is reversing and a high mount rear LED brake light for better visibility.
- Two (2) electric door lock/unlock switch located near side/rear right door.
- Zero-15 minute programmable timer on LCD display for halogen dome lights.
- Two recessed radio speakers in patient compartment reducing protruding objects.
- Flip-up window frame on medical cabinet that allow for more thorough cleaning of the cabinets and easy restocking.
- Improved lighting in the patient compartment to better assess the patient's overall condition.
- Rear air conditioning/heating speed and temperature control with automatic mode.

The Demers vehicle more closely matches the current needs of Hamilton EMS and staff anticipates a reduction in time to maintain and repair the ambulance electrical systems.

**Warranty Repairs and Vehicle Supplies**
Demers Ambulance is based in Quebec with a full repair facility in Toronto serving the Ontario customers whereas Crestline Ambulance parts come from their Saskatoon location. Having parts and conversion warranty service available within 45 minutes of
Hamilton is an important consideration as downtime for vehicle repairs in EMS can be a substantive public safety issue and must be kept to a minimum.

**ANALYSIS/RATIONALE:**

The rationale to standardize to the ambulances manufactured by Demers Ambulance during the period of 2008 and 2009 is based on the following:

a) The design and function of this vehicle meets the immediate needs of EMS in relation to health and safety concerns of staff including a Ministry of Labour investigation into a complaint in regards to storage of personal bags, lunches, etc. In particular the addition of personal storage lockers within the Ambulance addresses this concern.

b) A new electrical Multiplex system included on the Demers Vehicle will assist Mechanics to quickly diagnose problems and reduce the time and cost to repair these vehicles.

c) Parts and warranty services are located within 45 minutes of Hamilton which is crucial for EMS Operations

d) The added value benefits of the Demers Ambulance outweigh the minimal cost difference ($1,916) between the two (2) vendors certified to sell Ambulances for use in Ontario.

e) Demers Ambulance time to deliver is shorter than Crestline using the current circumstances as proxy.

**ALTERNATIVES FOR CONSIDERATION:**

The alternative to standardizing to the Demers Ambulance is to continue purchasing ambulances from either Crestline or Demers Ambulance following the Purchasing Policy and using a tender process. This alternative is not recommended until Crestline Ambulance is able to provide the basic safety features that address the core needs of the EMS Division that are now available by Demers, or until the MOHLTC authorizes other vendors to supply ambulances for use in Ontario.

**FINANCIAL/STAFFING/LEGAL IMPLICATIONS:**

**Financial**

The funding for the 2008 vehicles is available from the approved Capital Budgets. EMS expects to purchase six (6) ambulances each year including 2008, 2009 and 2010 or a total of 18 ambulances over three (3) years with an estimated cost of $106,000 each (applying 2008 estimated costs) for a total estimate expenditure of $1,908K.
During this period, EMS may need to interpose the purchase of up to four (4) special purpose ambulances for large patients instead of the standard ambulance. If this is the case and Demers is unable to supply such a vehicle, the Division will purchase such a unit from another vendor in accordance with the City Of Hamilton Purchasing Policies. These special purpose vehicles may increase the cost of each of the four (4) units by approximately 10%.

**Staffing**
The standardization process is expected to reduce staff time for the EMS Division and the Purchasing Section in 2008, 2009 and 2010 in procuring ambulances and allow adequate time to assess the viability of future standardization between the two (2) existing approved vendors. It is expected that this initiative will also reduce or at minimum contain some of the paramedic health and safety concerns.

**Legal**
With Demers Ambulance being a vendor of record with the MOHLTC, the Municipality will be assured it complies with MOHLTC regulations and standards pertaining to Ambulance conversions.

**Policies Affecting Proposal:**
The City’s Purchasing Policy, Section 4.14 - the Policy of Standardization applies. The recommendation contained within Report FCS08035/HES08008 is keeping to the intent of this provision.

**Relevant Consultation:**
Corporate Services Department, Financial Services Division, Purchasing Section

Purchasing staff have advised to utilize the Council approved Policy for Standardization. Both Finance and Purchasing staff recommend a Council resolution to authorize the General Manager of Emergency Services and the Manager of Purchasing or their designates to negotiate purchases with Demers Ambulance of Beloit Quebec and apply Purchasing Policy, Section 4.14 – Policy for Standardization.

**City Strategic Commitment:**
By evaluating the “Triple Bottom Line”, (community, environment, and economic implications) we can make choices that create value across all three bottom lines, moving us closer to our vision for a sustainable community, and Provincial interests.

Community Well-Being is enhanced. ☑ Yes ☐ No
Public services and programs are delivered in an equitable manner, coordinated, efficient, effective and easily accessible to all citizens.
Environmental Well-Being is enhanced. ☐ Yes ☐ No
Human health and safety are protected.

Economic Well-Being is enhanced. ☐ Yes ☐ No
Investment in Hamilton is enhanced and supported

Does the option you are recommending create value across all three bottom lines?
☐ Yes ☐ No

Do the options you are recommending make Hamilton a City of choice for high performance public servants?
☐ Yes ☐ No
The creation of a respectful, desirable and supportive workplace.