



MEMORANDUM

To: City Manager, Heather Ussery

From: Fire Chief, Cal Wyman

Subject: Ambulance fleet replacement

Date: 03/23/2022

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We have reached a critical point with our ambulance fleet. We have one ambulance that we know needs replaced and have approved \$190,000 for that replacement. We also have another ambulance that is starting to have repair issues. It broke down on a call last night with turbo issues, as well, while transporting a ventilated patient to DSM. We were lucky that ambulance 936 was close by on their return from DSM. They were able to transfer the patient from 938 to 936 to continue the transfer. We now only have one Knoxville ambulance available for our community. We are using a loaner ambulance, that when talking to the company is only a short-term option of typically less than thirty days. We have also borrowed an ambulance from Pleasantville allowing us to continue normal operations. While we are still able to operate, I have to question if we are able to provide the level of service that our community has come to expect, and if we are providing the best service to our community.

While this is an inherited problem, the facts are ambulances 937 and 938 are going to continue to rack up significant repair cost and downtime until we make a change. One thing we know for sure is we are not going to see a decrease in call volumes. We understand its expensive to get ahead of this problem, but do nothing or not enough and it will be worse a year from now. We need to create a paradigm shift that will allow us to fix this ambulance fleet issue. We are in a hole now that we have the potential to dig out of, but if we don't start digging, we may not be able to later. We continually evaluate the needs of equipment to be more effective and efficient, all while still being responsible stewards of the community's tax dollars.

This is not only an issue of not having ambulances available for calls, but it's also affecting the morale of our staff. No one wants to be the medic that is stranded on the side of the road with a critical patient in transport. For example, last night when we were transporting a vented patient and the ambulance broke down. This put our paramedic in a bad situation. Had we not had another ambulance in close proximity



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returning to Knoxville from a transport to DSM and able to respond, it is the responsibility of the paramedic to maintain that patient until another unit can arrive. Last night could have had a significantly negative outcome, not only in the result of the patient dying but the emotional long-term effect that it could have had on the paramedic. By not having properly functioning rigs where there is a higher risk of potential negative outcomes, recruiting and retention will ultimately suffer.

It is my recommendation that now is the time to add a fourth ambulance to our fleet, and to purchase the right ambulance for the job that it is being asked to do. It would be my recommendation to have two ambulances dedicated 911 response, both being truck style chassis with 4-wheel drive. We would then have two dedicated to transfers, which would be the van style chassis, offering a better ride and fuel economy. If implemented as recommended, we would also change the rotation cycle, as we all know the current rotation cycle of replacing an ambulance every ten years is not working. It would be my recommendation to replace the 911 ambulances every six years, as they are the higher dollar ambulances. Replacement of the transfer ambulances every four years, as they are the least expensive ambulance but will have the most miles put on them. Since we continue to use the third-out ambulance multiple times a week, adding the fourth ambulance would cut down on mileage and maintenance cost on all ambulances across the fleet. This would still allow us to have enough ambulances that we can operate at full capacity and provide the service that has become expected of us, even in the event that an ambulance is down for maintenance. We have demonstrated over the last year that we continually use our third-out "reserve" ambulance more than it is in reserve status.

Here is what I keep asking myself as it relates to buying the fourth now versus waiting:

- 1) What is going to change that will allow us to put in place an improved maintenance program? We are currently unable to improve the maintenance program due to the frequency of the break downs of the existing rigs. Routine maintenance of rigs has been delayed when any of three rigs breaks down.
 - a. Is the call volume magically going to decrease? Hasn't decreased in 4 years, every year we see an increase
 - b. Will we see a drastic reduction in patient transfers to other facilities? Highly unlikely with an aging population and increased mutual aid calls.
 - c. Are we going to start repairing the ambulances with parts that will never fail or wear out? Impossible
 - d. Is 938 going to cost less to operate when 937 is replaced? I wouldn't expect a rig that is a year older to cost less despite those changes.
 - e. Is it foreseeable that without a fourth ambulance, that one year from now we could be experiencing the same type of issues? Thus, it is more expensive to wait on the fourth because we will end up running the wheels off of the new 937 prematurely due to other rigs being down.



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Similar to what has happened to 936 since it was put into service.
Certainly, yes in my opinion. 936 is just over a year old and has almost 40,000 miles on it.

- 2) Will buying a fourth now and having devoted rigs for transfers and for 911 reduce costs? Yes. Fuel costs as well as maintenance costs.
- 3) Will an improved maintenance program decrease liability? Yes.
- 4) Will having the crews switching between 911 and transfer rigs be inconvenient? Yes, however it reduces costs overall and can be set up for their intended use providing more effective and efficient patient care. Also hopefully decreasing the stress to the provider.
- 5) Closing the gap that exists between actual costs we incur on a patient transport and what is reimbursed, will be improved by running rigs that are more economical in fuel consumption and wear and tear. Four-wheel drive drivetrains have more rotating/wearable parts than two-wheel drive. Four-wheel drive chassis are heavier; thus, suspension parts are heavier and more expensive. Tire wear is greater on a four-wheel drive. Brake systems on a 20,000(+) pound vehicle are heavier and more expensive than those of a 15,000-pound vehicle. If a lighter ambulance realizes five miles per gallon increase over the existing rigs, that represents a savings of \$12,960/year and \$129,600 over ten years. (Based on a vehicle that gets five MPG {86.4 cents/mile} versus another that gets ten MPG {43.2 cents/mile}).

Ambulance 936 (Transfer) replaced in 2021 with a replacement date of 2025

Ambulance 937 (Transfer) will be replaced in 2022 with a replacement date of 2026

Ambulance 938 (911) was replaced in 2017 with a replacement date of 2023

Ambulance 939 (911) purchased in 2022 with a replacement date of 2028

I have looked at our VEF budget and have made some changes to how our department uses the amount that is deposited into our VEF account. These changes take into account how the VEF account can support the purchase of a fourth ambulance and necessary equipment with minimal impact. Our current VEF yearly contribution is \$209,318 for a total contribution of \$2,890,148. With the restructuring our yearly VEF contributions to \$327,508 for a total contribution of \$3,286,395. While the overall contribution is higher, our yearly contributions from LOST is \$118,190 difference. This would provide our community and citizens four fully functional ALS ambulances to respond to their needs, and help us ensure there is always a reliable ambulance available to respond when someone calls 911.

Description	Yearly Contribution	Years	Total Contributions
Engine Replacement 313	39,333	15	590,000
Ambulance replacement transfer 936	45,000	4	180,000
Ambulance Replacement transfer 937	45,000	4	180,000



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Ambulance replacement 911 938	41,666	6	250,000
Ambulance replacement 911 939	41,666	6	250,000
Cardiac Monitors	12,000	10	120,000
Lucas Devices	4,600	10	46,000
Turnout Gear	3,500	10	35,000
Rescue Replacement 317	10,000	20	200,000
SCBA Compressor	1,350	20	27,000
SCBA Replacement	9,893	15	148,395
Command Car 300	6,000	10	60,000
Mini-Pumper 312	30,000	15	450,000
Ladder Truck 314	37,500	20	750,000
Totals	327,508		3,286,395

I have said we are not ready for a fourth ambulance due to being out of room, and that remains true. However, we have figured out a way to put the fourth ambulance inside and move another apparatus to allow us the room we need. Staffing-wise, as we currently don't have the staff on duty to run a consistent staffed third ambulance, there are very few times we ask for help from a surrounding community because we don't have staff to come in and take a call it is normally because we have all of our ambulances out on other calls. As we have mentioned before there will be a point and time when we will need to add more staff on shift, but now is not that time, and that is not the issue we are trying to solve at this point.

We followed the recommendations of a couple council members and we did some research on the Dodge chassis, we have found several departments in Iowa that run the Dodge chassis, and the consensus was they have less problems than the Ford truck chassis, they have less cost of maintenance than the Ford truck chassis. None of them report any major mechanical issues, most department have had them several years and still report no major issues other than normal maintenance cost, and normal wear and tear. Several departments that have the Dodge chassis have multiples of them or have recently ordered a new ambulance on the Dodge chassis, and for those who haven't ordered one they all said they would order a Dodge for their next ambulance. Our Battalion Chief of EMS is from Colfax, and they have a Dodge that is their primary ambulance and he took a few members to look at it, and they all reported it seemed like a better chassis than the Ford truck chassis. We had Arrow measure the actual truck as well, to make sure the dimensions were correct, and it measures the same size as the Ford truck chassis that we currently have, and would be replacing it with.

It would be my recommendation to council to approve the purchase of the 2022 Dodge Ambulance from Arrow, as well as continue with the build and purchase of the 2022 Ford E450 ambulance from Arrow. \$190,000 was approved to replace 937. To purchase both ambulances we would ask council to approve an additional \$297,295 to purchase both ambulances. I would then ask that we would be allowed to use what we currently have in



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our VERN account to purchase a cardiac monitor and Lucas Device, an estimated cost of \$50,000. Most the items we have in stock or we could purchase at a minimal cost. This is going to have some cost up front, but we can still get better trade in values on our ambulances if they are not being driven into the ground. We also continue to have the remount option that can have significant savings. My initial thoughts would be to remount the box once, and then replace the complete ambulance the next time, as the box would be eight to twelve years old. With the transfer ambulances, we may be able to get a second remount so our boxes would never be more than twelve years old, saving 20-30% of a new build. Usually when dealing with ambulances, the boxes are not where issues arise, it is the chassis where there are significant repair costs.

With the purchase of both these ambulances we are able to create a paradigm shift that will change the ambulance fleet's consistency, allowing for a more reliable financially responsible fleet. We understand that this will be an expensive undertaking for the city, but if we don't act now, we are looking at a more significant price tag in the years to come, with the cost of inflation on ambulances each year, continued repairs on our current fleet, and the potential for backfilling staff turnover.