



City of Green, Division of Fire Replacement of Green Rescue 1

Prepared for:
City of Green Council Members

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MISSION STATEMENT

The City of Green Fire Division is committed to be a premiere leader in public safety service. We are dedicated to protecting life and property while enhancing the safety of our community.

History of Green Rescue 1

The Chief and Officers annually evaluate the overall condition of the fire department and the services we provide. Included in the evaluation is the condition of our apparatus and equipment. It was mutually agreed upon at our meeting that our number one priority is to find the means to replace our 1992 converted Heavy Rescue. This fire apparatus was originally built as a Pirsch Open-Cab Ladder Truck in 1957. The aerial device was then re-mounted on a 1992 Ford F800 cab and chassis due to the open cab safety issue, later to be removed and a 20-foot Rescue box attached to it to be yet again converted into our current Heavy Rescue. Problematic issues stem from the fact that the vehicle was not originally built as a Heavy Rescue. Currently, Green Rescue 1 is limited in emergency response due to the Compressed Air Foam System (CAFS) experiencing a catastrophic failure in 2018 that is non-repairable. This has left the truck as a disadvantage as it no longer has an onboard fire suppression system to utilize. Some of the other issues currently associated with Green Rescue are as follows:

- This vehicle was originally (63) years old and has been refurbished so many times that sometimes we forget how old the original parts were.
- The seatbelts in the man cab are only a lap belt restraint system
- No safety airbag system for passenger protection.
- Severely underpowered – Max speed 60 (if we are lucky) but takes a long time to get to the speed needed
- Not originally designed as a true Rescue Truck– difficult to maneuver in tight spots; very wide turning radius making it difficult on our city streets
- Emergency lights do not meet current NFPA 1901 standard, nor do they meet the 1992 edition
- The On-Board Cascade System does not have a proper explosive barrier.
- Per NFPA 1901 Annex D, apparatus older than (15) years of age should be removed from service due to not having the proper safety features. Our vehicle is twice that age and should have been removed (13) years ago according to these standards.

- SPECIFIC DISCREPANCY ACCORDING NFPA 1901:
 - 4.11.1 - No Vehicle Data Recorder
 - 4.13 – Does not have electronic stability control
 - 4.14 – Grossly underpowered and creates a hazard when operating on highways
 - 13.8.11 – does not meet current flash (Emergency Light) rate requirements
 - 13.10.3 – No walkway lighting on the top dunnage of vehicle
 - 13.10.5 – Compartment lighting not adequate
 - 14.1.3 – No Seatbelt Warning System – not originally manufactured with seatbelts
 - 14.1.9 – SCBA brackets do not meet current standards
 - 24.9 – Fill station does not meet current safety requirements for containment.

Replacement Project

The operations of the Fire Division have evolved since its inception back in 1939. As the City grows, so do the departments within. The Fire Division has been working diligently to keep up with growth of the community, new strategies / tactics of mitigating emergencies, and improving our risk reduction by continually performing studies on community needs. As a part to this, Command Officers have recognized the need to bolster our response apparatus with the replacement of the current Rescue with a dual-purpose Rescue/Pumper. Plans to replace the Heavy Rescue started back in 2016 when the decision was made to enter this as a Capital Improvement Project.

An initial truck build committee was established with a recommendation of building a truck that would be able to continue what the current operations of the Rescue along with adding a fire pump and water tank to assist in fire suppression. The specifications from 2016 continued up to the recreation of a Rescue truck build committee (established 2022) due to the foreseen rapid inflation costs projected. This committee has met on several occasions with slight alterations to the previous plan based on department operational changes and anticipated changes projected in the future.

Current Truck Specification versus Previous

The 2022 Rescue truck committee has reviewed the previous truck committee (2016) with making the recommendation to change the following:

- Currently Rescue 1 has an onboard Self-Contained Breathing Apparatus (SCBA) filling system (Cascade System). This cascade system encompasses a very large footprint limiting compartment space for tools. The new specification has removed this system based on the number of spare SCBA bottles that are available to firefighters at the scene of an emergency. The new specification includes the ability to carry additional spare bottles (more than current fire apparatus) which creates the ability to supply members for the duration of a majority of our alarms. The current Rescue 1 cascade system has seen a drastic decrease in need over its lifespan. This removal creates the ability to create more compartment space and lessen the gross vehicle weight.

- As previously stated, the onboard CAFS fire suppression system experienced a catastrophic event rendering it out of service. The previous plans to outfit this vital fire apparatus with a fire suppression pump and water tank continues but has decided to decrease the gallons of the water tank from 750gal to 500gals. This decision again creates more compartment space and lessens the overall operating weight (by approximately 550lbs).
- The 20kw generator was the final alteration in the previous requested specifications based on worldwide acceptance of battery power equipment and improved battery technology within the fire service. This decision again creates more compartment space and lessens the overall gross vehicle weight.

These alterations allow for the proposed Rescue/Pumper to drop the gross vehicle weight to safely design it with a single rear axle. A single rear axle creates the ability for a tighter turning radius, shorter braking distance, and less wear and tear on the fire apparatus increasing its longevity.

Specifications for the construction of the Rescue/Pumper also include the Pierce Impel chassis which mirrors our 2018 Tanker and our 2022 Tower. This logistical decision aids in uniformity towards our fleet apparatus maintenance on parts and service.

Capital Improvement Project

The project to replace the current Green Rescue 1 has been on the radar for several years. In fact, this request was originally placed as a Capital Improvement Project on 06/28/2016 (ID # 3300/00/16) and is still a requested project. The CIP project was submitted with the amount to cover the cost of the required 10% match of the awarded Assistance to Firefighters Grant (AFG) request. As mentioned in the replacement project section of this report, the project justification of the CIP project does not accurately reflect the new truck specification request. The Division of Fire believes this is a vital need and will continue placing this project on the annual CIP requests.

Nexus

Nexus pipeline construction prompted numerous conversations concerning safety of the community. A settlement was agreed upon by community leaders with a monetary amount earmarked for the safety of the residents. This settlement has shown great additions to the Fire Division with the creation of satellite Station 3, the assistance in the purchase of a new aerial fire truck, and the backing to land procurement / construction of a satellite Station 4. The addition of Green Rescue/Pumper 1 would play an integral part in safety of our residents that still hold concern with the pipeline. This piece of fire apparatus would respond if the unimaginable would occur with the pipeline. It would be a dual force of power with the ability to suppress potential fires, safely removing citizens from harm's way with low angle rope rescues, providing gas metering for locating gas vapor releases, and providing structural

stabilization to blast compromised structures. This addition to the fire apparatus fleet would also allow the ability to position a fire engine at the proposed Station 4. The use of the Nexus settlement funding would be warranted for this needed apparatus.

Assistance to Firefighters Grant (AFG) History

The City of Green, Division of Fire promotes being good stewards regarding the operational budget. With that in mind, the utilization of grant writers has been our go to avenue on the pursuit of large ticket item requests. Green Fire submitted for a Rescue Truck replacement grant starting in 2017 and continued each consecutive year to 2021. Deciding factors to us not receiving the grant early on was based on the mileage and call volume of the Rescue. The Rescue Truck was considered at an early time as a specialty truck that had limited response to daily alarms. Backtracking 15-years ago, the department implemented a policy that at all roadway emergencies required a blocking fire apparatus for the safety of on scene personnel. The mileage and call volume did not start growing until then which kept us at a lower number versus competing fire departments submitting for the same grant. Grant selection considerations have now evolved to the overall call volume of the department. The current size of our department places us in a bracket to where our call volume is on a lower average than other competing departments.

Ambulance Billing

The fire department ambulance billing account, which is earmarked for Fire Division needs, will also be considered a potential revenue source to assist in the purchase of the requested Rescue / Pumper. Currently the account holds roughly 1.1 million as of September 30th of 2022. The predicted ambulance billing collection for 2022 was estimated to be roughly \$675,000. Current account figures suggest a significant increase from the anticipated 2022 calendar year collection.

Delays and Price Increases

The purchase of the new Ambulance (Medic at Station 3) and our new Aerial Fire Truck has exhibited some major allocation and purchasing issues. Construction periods are extending far past the previous vehicle builds due to potential supply and demand issues experienced everywhere. The fire apparatus vender (Pierce Manufacturing) has emphasized that if we are to place an order for this request, current build to completion times is anticipated to be around 30 to 36 months. The other significant issue is the projected price increases. There has already been a large financial increase in the purchase of these vehicles. The Aerial Fire Truck purchase price was roughly 1.3 million and a current price on an order placed today with the same exact specifications would place it at 1.8 million. Securing

a November 1st, 2022, order for the requested Rescue/Pumper will negate a scheduled price increase of 6.5% with an addition projected 5% increase in February of 2023.

Summary

Green Fire continues to strive to successfully represent our Mission Statement. Please view this report as a justification to meet our intended goals in providing safety services for the community that we are sworn to protect. We are asking for Green City Council Members to consider this vital needed resource request Legislation 2022-R55 (A RESOLUTION AUTHORIZING THE CITY OF GREEN TO PURCHASE A PIERCE VELOCITY HDR PUMPER (HEAVY RESCUE), MAKING AN APPROPRIATION, AND DECLARING AN EMERGENCY).

Respectfully Submitted by
City of Green, Division of Fire

References

NFPA. (N.D.). RETRIEVED FROM [HTTPS://WWW.NFPA.ORG/](https://www.nfpa.org/)