

Replacement Plan of Fire Safety Equipment

Robert Pace, Fire Captain

May 29, 2014

Scheduled Replacement Plan

- The department has never had a replacement/payment plan for frontline equipment (primary suppression apparatuses including Engine 11, Engine 111, & Tower 11)
- The dollar amount allocated each year for primary equipment would not change. We would continue to reserve \$50,000 each fiscal year for equipment replacement.
- The plan not only covers preparation for replacing the aerial, but a replacement plan for the engines as well - in future years.

* **Engine 111**

- * Some consideration had been given to removing both TW-11 and E-111 from service
- * After further review, (keeping in mind all the repair work conducted on the Engine and some additional factors) the plan would include retaining the Engine as a reserve unit.
- * Repairs and upgrades for Engine 111 are listed as followed:
 - * Extensive body work and the roof structurally reinforced (Celico Paint and Body)
 - * Damaged exhaust pipe replaced (AA Accurate)
 - * Leaking oil from wheel hub repaired (AA Accurate)
 - * Power Steering leak repaired (AA Accurate)
 - * Brakes cleaned and inspected (AA Accurate)
 - * Booster reel repaired, sanded, & primed/painted (In house/ Dave Maddox)
 - * Scene lights repaired (In house/ Dave Maddox)
 - * Faulty pump gauges replaced (In house/ Dave Maddox)
 - * Fire pump completely serviced and inspected (Firetech Testing & Repair)
 - * Faulty hardware and transfer switch replaced on fire pump (Firetech Testing & Repair)
- * Retaining E-111 as a reserve unit means the Engine would be used minimally
- * Documented as an available pumper should improve the City's ISO rating upon the next inspection

Tower 11

- I initially hoped for and discussed the possibility of performing aerial operations from this truck for several more years during last year's budget discussions. I now believe this is unrealistic.
- The Tower passed all required tests last year and is within NFPA compliance; however, the department has incurred several expensive maintenance issues with Tower 11.

<u>Maintenance Issue</u>	<u>Cost of Repair</u>
This year started with hydraulic repairs on the Tower's turnstile transfer box	\$2,500
Tower 11 had maintenance work performed on the ladder, due to listing to the right	\$750
The gas pedal received service for seizing up while a member was driving over the bridge	\$125
Three compartment doors have been riveted in to place, due to falling off the unit	\$200
The driver's door can only be secured from the inside of the cab	\$75
This month the heating core was repaired, due to leaking coolant	\$600
Hydraulic cylinder busted on left, rear outrigger	\$800

There are some future concerns involving continual maintenance in firefighter safety considering the expected work load from this type of apparatus.

1. No warning/safety features to alarm firefighter of improper setup that could result in tipping ladder and/or ladder failure, estimated repair cost \$1,500 - \$2,000.
2. Faulty/ weak hydraulic lines, estimated repair cost \$400 per line.
3. Cradle Alignment light not functioning properly, estimated repair cost \$300 installed.
4. Kill switch not working when the ladder is cradled, estimated repair cost \$1,500.

The Following is a list of features and issues with Tower 11 and the proposed Quint:

Tower 11	Quint 11
2 person platform (2 FF's can work from the platform)	1 person stick (1 FF can work from this device)
95' Ladder	75' Ladder
Double Axle Truck (Not capable of navigating through all city streets)	Single Axle Truck (Capable of maneuvering throughout the city)
200 Gallon water tank	450 gallon water tank
Enclosed cab/ backseats open	Completely enclosed cab (within NFPA guidelines)
High rate of fuel consumption	Much less Fuel consumption (Equipped with green star technology)
Maintenance (Increasing each year)	Maintenance (All components under warranty for five years, ladder: 25 years, frame: life)
Tw-11 was purchased and the Department adapted to its setup	Q-11 would be built to cater to both the needs of the City and the Department
Not equipped with any hearing protection (no insulation)	Equipped with a Fire Comm system (used for both communication and hearing protection/ cab is insulated)
Elevating the ladder is complete manual set up. (Stabilizing plates and outrigger pins are both placed by hand)	Automatic setup when elevating the ladder (Self leveling, early suppression)
Ladder Controls (Stiff/ not completely accurate)	Ladder Controls (Very Precise/ easy to maneuver)
Air Packs (Not installed in cab, Crews must wait until on scene to don packs)	Air Packs (Installed in cab, Crews can don packs while en route)
Tw-11 is 28 years old and only equipped with lap belts	The Quint is equipped with required safety belts including a chest harness (NFPA compliant)

Specific Features on Tower 11 / Quint 11



Rosenbauer Viper

	Sutphen	Pierce	E-One	Rosenbauer	Ferrara
Body	Length - 36' 8" Width - 8' 1" Height - 14' 4"	Length - 36' 4" Width - 8' 1" Height - 11' 3"	Length - 37' 2" Width - 8' 4" Height - 11' 7"	Length - 36' 9" Width - 7' 9" Height - 11' 5"	Length - 37' 6" Width - 8' 5" Height - 11' 6"
Pump	Hale or Waterous 1500 to 2000 gpm. 300 to 500 gallon water tanks.	Waterous, Hale, or Darley Midship (500 to 2000 gpm). 500 gallon water tank.	Hale® or Waterous® pump up to 2,000 gpm. 500 gallon water tank.	Rosenbauer, Darley, Waterous, or Hale pump, 1500 gpm. 400 gallon water tank.	Hale or waterous pump up to 2250 GPM. Up to 500 gallon water tank.
Other Feature's	While flowing up to 1,500 gallons per minute of water, this aerial is rated at a 750-pound tip load, and when dry, the aerial offers an astonishing 1,000- pound rating, by far the highest in the industry. Additionally, set up time is just 20 seconds using one central control, the fastest in the industry.	Low center of gravity, Enclosed areal waterway, Low open hose bed, Low easy access compartments.	16' set up width, Enclosed areal waterway, Low open hose bed, Low easy access compartments.	Low center of gravity, roof crush force of 24,130 pounds, roll over protection. Reduce Fuel Consumption Nationally, 80% of runs are EMS or non- Fire related calls. Chassis diesel engines use up to 1.5 gallons of fuel per hour idling. Save up to 1.25 gallons of fuel using the GREEN Star™ idle reduction technology system.	EZ-Stack with left side full height x 24" full depth compartments, a right side full height, split depth compartment ahead of the rear wheels and a right side EZ- Stack hose bed.
Ladder	75ft ladder. 1,000 lb. dry 750 lb. wet	75ft ladder. 750 lb. dry 500 lb. wet	78 ft. Ladder. 825 lb. tip load dry 575 lb. tip load wet	78 ft ladder. 500 lb. wet and dry	77 ft ladder. 500 lb. wet & dry.

Ladder Frame	#304 Stainless Steel bolted body.	Stainless Steel Frame Rail 13-3/8" Highest frame rail in the industry.	High strength aluminum frame. Heavy duty 12" c-channel reinforced frame.	Aluminum, 12 & 10 Ga. Steel, Composite, or Hot Galvanized.	3/16" Marine grade aluminum.
Cab	Monarch 56", 62", 73" cab options with flat or 10" and 15" half raised roof options.	Cab is 57", doors contoured into the tiller cab give you greater clearance for entering and exiting.	12" cab roof, 58" cab, typhoon x medium cab, split raised rear cab roof, 12" high for use with rear mount aerial.	Cab Length: 60", 70", 78" Cab Roof Heights: Flat, 8", 11", 18", 24" Raised	54" medium cab, 12' 1" (low profile cab 11' 5") compact, easy-to-steer 210" wheelbase
Engine	Engine Options: Cummins ISL 9, 400 or 450HP, or Cummins ISX 11.0 450 or 500HP	Cummins ISL 450hp.	Cummins ISL 450hp.	Cummins ISL 450hp.	Cummins ISL 450hp.
Electrical	LED lights that comply with NFPA standards. Generator options up to 30 kw	LED lights that comply with NFPA standards.	LED lights that comply with NFPA standards.	LED lights that comply with NFPA standards.	LED lights that comply with NFPA standards.
Price	\$725,000-\$750,000	\$600,000-\$650,000	\$600,000-\$650,000	\$510,000-\$600,000	\$575,000 - \$800,000

****All new trucks meet the NFPA Guidelines****

Benefits to Consider with the Purchase of New Quint

- *Maintenance (all components under warranty for five years)
 - *Ladder- 25 years
 - *Frame- Life of Unit
- *Less fuel consumption
- *Automatic setup when elevating the ladder
 - *Self-Leveling
 - *Early Suppression
- *Single Axle
 - *Capable of maneuvering throughout all city streets
- *Equipped with all the latest safety features

* **Why would the Department maintain possession of Engine 111?**

* I originally proposed a plan to Mr. Campbell that would remove both Tower 11 and Engine 111 from service. Considering Engine 111 would be 20 years old in 2016 and Tower 11 is nearly 30 years old, replacing the trucks with a new Quint would significantly reduce maintenance costs. The thought process stills holds true, but removing Engine 111 from service would negatively affect the Departments ISO rating. The Department is requesting the front line apparatus be placed on a ten year schedule. With this plan Engine 111 would be retained as a reserve and used very minimally. The city's ISO rating is expected to improve upon the next inspection.

* **What is the proposed payment plan for the new Quint?**

- Utilize \$200,000 accrued as of October 1, 2014.
- Pay balance of truck cost from Infrastructure Surtax Fund - Avoiding approximately \$ 100,000 in interest cost.
- Continue to accrue \$50,000.

* **Considering there would be a twenty foot loss in ladder height; what percentage of the city's structures (that are 3 stories or higher) would be affected with the purchase of the Quint?**

* The loss for the city would be very minimal, if any at all. All the structures in the city (with the exception of 3) are well within the range of the Quint's capabilities. Two of these exceptions include the Nautilus Condominiums and Ocean View Manor. Tower 11 has the capabilities to reach the bottom deck of the 9th floor; on the SW and NW corners. The 75' Quint could reach the 7th floor on both of these corners. Tower 11 and the Quint can only operate on the west side of the building. All other sides of the building cannot be reached by either truck. The last structure in question would be the Aliko Condominiums. Due to the fact neither truck can operate on top of the parking garage, an aerial is not much use on this structure. At best, either truck may be able to perform "pick-offs" and/or suppression on the third floor. This would only be possible from the east side of the building.

* **Answering Questions**



April 3, 2014

Captain Bobby Pace
Flagler Beach Fire Department

Captain Pace,

Here is a recap of the pricing concerning #7323 demo aerial. The attached document contains the detailed specifications for the unit as built. Attached to the end of the document are the specifications for all the requested modifications. This complete document covers all the details concerning option 1. Option 1 is this demo unit with the highest level of incentives. We are working on option 2 and 3. Option 2 is another demo unit we can access with a planned December 2014 ready date. Option 3 is a completely new order configured with all requested options and a longer delivery time fence.

The base price on the unit at Fire Rescue East this year was \$510,000.00. The factory has offered additional incentives based on your request for modifications to the unit. They are:

- | | |
|---------------------------------------------------------------------------------------|-----------|
| 1. Front bumper trash line and air horns | no charge |
| 2. 110 v light on tip of the ladder with plug | no charge |
| 3. Remove the forward facing seats and add EMS compartment | no charge |
| 4. Honda 5kw Generator on tray in compartment w/breaker box | no charge |
| 5. Add folding ladder to tip and 115' NFPA ground ladders/pike poles | no charge |
| 6. After reviewing your equipment inventory we will need the following shelves/trays: | |
| a. Compt L1 - 2 shelves and a slide out tray | |
| b. Compt L2 - A vertical divider, tool board, and two shelves | |
| c. Compt L3 - A slide out tilt down tray | |
| d. Compt L4 - 2 shelves | |
| e. Add 4 bottle holders to wheel well area | |
| f. Add hose bed divider | |
| g. Compt R1 - Slide out tray - Saws (K12 and Chain) | |
| h. Compt R2 - Slide out tray - generator compt | |
| i. Compt R3 - Slide out tray - extrication tools | |
| | \$6377.00 |

Rosenbauer will contribute \$2,000 toward these items reducing your cost to \$4377.00.

It was requested that a FireCom headset system with radio install and the GreenStar System also be supplied. The FireCom at \$7559.00 and the GreenStar at \$17,352.00 raise the price to a new total of \$539,288.00.

Regards,

Paul Stephenson

Current Quote from Rosenbauer Option 1



April 9, 2014

Captain Bobby Pace
Flagler Beach Fire Department

Captain Pace,

Attached are the specifications for Option 3. This is a completely new order configured with all requested options and a longer delivery time fence. It is based on the unit reviewed at Fire Rescue East and quoted in Option #1.

This pricing is based on the discounted Florida Sheriff's Contract # 11-10-1202 which is valid until 12/31/14.

<u>Specification # 6 – 75' Rear Mount Aerial with Formed Aluminum Body</u>	\$499,929.00
• Add requested options and price increase	\$ 98,910.00

Total Price	<u>\$598,839.00</u>
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The factory is finalizing the configuration of the December Demo unit. This unit can be modified to meet your needs as well. This would provide a faster delivery and should price out between Option 1 and 3. As soon as I get the final details, I will forward the formal quote to you.

In the meantime, I will continue to work on a price and buyer for the platform.

Regards,

Paul Stephenson

Current Quote from Rosenbauer Option 2