

**SPECIAL TOWN COUNCIL MEETING**  
**AGENDA**  
**August 14, 2017**  
**6:00 PM**

---

Councilors: Council Chair; George Edwards \_\_\_\_\_, Councilors; Stephen Clay \_\_\_\_\_, Jeffery Gifford \_\_\_\_\_, Sheldon Hanington \_\_\_\_\_, Marscella Ireland \_\_\_\_\_, Sharon Sibley \_\_\_\_\_, and John Trask \_\_\_\_\_.

**1a. Call to Order**

**1b. Pledge**

**2. Presentation- New Fire Engine Purchase**

**3a. Public Hearing- New Fire Engine Purchase (0100 & 0304)**

**SUGGESTED MOTION:** Move to open a public hearing for the purpose of hearing oral and written comments on the proposed purchase of a new fire engine.

MOTION: \_\_\_\_\_ SECOND: \_\_\_\_\_ VOTE: \_\_\_\_\_

TIME STARTED: \_\_\_\_\_ TIME CLOSED: \_\_\_\_\_

**3b. Approve Referendum Vote- New Fire Engine Purchase-(0100 & 0304)**

**SUGGESTED MOTION:** Move to continue forward with the purchase of the HME Fire Apparatus from Lakes Region Fire Apparatus of West Ossipee, NH at a referendum vote in November; at the amended cost not to exceed \$350,000.

MOTION: \_\_\_\_\_ SECOND: \_\_\_\_\_ VOTE: \_\_\_\_\_

**4. Adjourn**

**SUGGESTED MOTION:** Move to adjourn meeting at \_\_\_\_\_ pm

MOTION: \_\_\_\_\_ SECOND: \_\_\_\_\_ VOTE: \_\_\_\_\_

**TOWN COUNCIL**  
**AGENDA REQUEST**

**\* Please note Public Notices need a 7-14 day advance notice in the paper depending on subject.**

Council Meeting Date: August 14, 2017

Today's Date: July 31, 2017

Department: Manager

Department #: 0100

**Request:**

Frank Hammond is requesting to update the Council on the new fire engine proposal. The Council voted in December to move forward with a referendum vote to authorize the purchase of a new fire engine from HME Fire Apparatus. All manufacturers are predicting a 3 percent price increase by the end of January 2017. The amended amount will reflect that increase.

Frank has a presentation for the council and will answer any questions.

**Funding Sources:**

\$ 202,500 Reserves for Fire Engine Purchase

\$ 75,000 2017-18 Capital Budget for Fire Engine

\$ 277,500 Total reserved for Fire Engine Purchase to date

Options for remaining amount include: 2018-19 Capital Account, Unassigned Funds, Bond Delivery time is approximately 270 days. If truck is ordered in December arrival should be around August.

**Action Needed From Council: Move to purchase of the HME Fire Apparatus and move forward to a referendum vote in November at an amended cost not to exceed \$ 350,000 from Lakes Region Fire Apparatus from West Ossipee New Hampshire.**

Is This Item Budgeted:

Was This A Bid Process:

Lowest Bid:

Is Public Hearing Required: Yes Beginning at 6 P.M.

If So What Dates:

Peggy mentioned that it is the oldest in the fleet and the cost of maintaining the vehicle keeps increasing.

Sheldon suggested we hire a F/T mechanic to work on our vehicles.

Motion made by Stephen Clay and seconded by Marscella Ireland.

VOTE: 3-4

**16.\* Appointment to the Planning Board-3 Year Term (0106)**

Motion made by Jeff Gifford and seconded by John Trask to appoint a regular voting member to the Planning board, Carlos L. Lopez, for a three-year term.

VOTE: 7-0

**17.\* Appointment to the Airport Advisory Committee- 3 Year Term (0706)**

Motion made by Jeff Gifford and seconded by John Trask to appoint a regular voting member to the Airport Advisory Committee, Carlos L. Lopez, for a three-year term.

VOTE: 7-0

**18. Award Tax Acquired Property Bid. (0104)**

Motion made by Sheldon Hanington and seconded by Stephen Clay to award and sign the Municipal Quit Claim Deed issuing 747 Mohawk Road to Danny Ireland for the amount of \$8,000. (Minimum Bid Required- \$7,450)

VOTE: 7-0

**19. Approval of the job description for the Fire Departments Fire Chaplain (0304)**

Motion made by John Trask and seconded by Stephen Clay to approve the job description for the Fire Departments Fire Chaplain as written.

VOTE: 7-0

**20. Approval to have a referendum vote to authorize the purchase of an HME Fire Apparatus. (0304)**

Motion made by Stephen Clay and seconded by Marscella Ireland to authorize the Town to hold a referendum vote to authorize the purchase of an HME Fire Apparatus at an approximate cost of \$324,000 from Lakes Region Fire Apparatus of West Ossipee, NH.

VOTE: 5-2

John Trask and Jeff Gifford Opposed

**21. Acceptance of proposal by Gray's Custom Builders. (0406)**



2017

Apparatus Testing / Maintenance Review

Frank H. Hammond, Jr.

Deputy Fire Chief

08 August 2017

## TABLE OF CONTENTS

Introduction	...3
Identification, Specification and Use of Current Apparatus	...4
Summary of Maintenance Needed – Fire Systems	...5
Summary of Maintenance Needed – Chassis Systems	...9
Summary of Maintenance Needed – Operator Level	...12
Summary	...13

## **Introduction**

During the week of July 10, 2017, annual fire apparatus preventative maintenance and annual mobile fire pump service testing activities were conducted as a continuation of formal fire suppression system preventative maintenance. The results of this maintenance, inspection and testing are again and still far-reaching, from simple operator-level addressable items to potentially major repairs needed to ensure serviceability and safety of the apparatus, firefighters, and the public.

Maintenance and testing operations performed was a four day period of focused, maintenance and repairs to our mobile firefighting infrastructure that enables annual required performance testing of our mobile fire pumps, and the identification of further repairs and/or adjustments that must be made to our current fire protection fleet in order to continue to meet fire protection delivery for the citizens of Lincoln, Chester, Enfield, and to our mutual fire aid partners.

Below, you will find a summary of needed / required repairs and updates for our fire protection and rescue apparatus. These needs are broken down into three sections, based upon where / how the repairs or updates must be performed. It is critical that these issues are addressed, and addressed with an air of urgency, as currently our fire protection and rescue fleet continues to be borderline-prepared to support the Lincoln Fire Department in the mitigation of fire or rescue events.

**Identification, Specification and Use of Current Apparatus**

Lincoln Fire Identification	PRCC Identifier	Year of Manufacture	Pump Capacity	Tank Capacity	Primary Use(s)
Engine 1 (Formerly Engine 4)	531	1992 (26 years)	1000 gpm	2500 Gal	Water Supply, Mutual Aid: Fire
Engine 2	532	1997 (21 years)	1250 gpm	1000 Gal	Initial Fire Attack All Fire Response <b>(CURRENTLY OOS)</b>
Engine 3	533	2002 (16 years)	1500 gpm	1000 Gal	Water Supply, Rescue (vehicle, water, confined space) <b>(CURRENTLY SERVING AS INITIAL ATTACK)</b>
Ladder 1 (100' Tower Ladder)	535	1990 (28 years)	1500 gpm	0 Gal	Rescue Access, Ventilation, Rescue (water, confined space, elevated areas) (back- up Jaws of Life),
Tanker 1	534	1996 (22 years)	500 gpm	2000 Gal	Water Supply, Wildland Fires <b>(CURRENTLY OOS)</b>

### **Summary of Maintenance Needed – Fire Systems**

In this section, repairs / maintenance needed to be performed by certified fire pump technicians either at our station or at an emergency vehicle maintenance center will be illustrated.

#### **Engine 1:**

- Pressure relief system not functioning properly / leaks / missing drains / needs rebuild of system, as pump will currently not pull draft
- Relief valve drain stuck closed (needs replacement)
- Primer Control Valve pulls hard / sticks (needs rebuild)
- Discharge #3 leaks by (needs rebuild)
- #2 Crosslay Gauge reads 10PSI at rest (needs replacement)
- Pump Panel Engine Gauges intermittent at best (need further diagnosis)
- Engine RPM slowly declined during pump testing
- Pump Panel Tachometer inoperative



**Engine 2:**

- **\*\*\* Pump Test Unable to be fully performed\*\*\***; Engine operation speed exceeded 20% over rated engine rpm and still did not achieve required pump pressures / capacity<sup>i</sup>
- Master Pump Drain is seized, bracket is bent (needs replacement, bracket rebuild)
- Pump Packings are out of adjustment (none left), packing glands are against pump housing (pump shaft is NOT being cooled and is drawing air around the pump shaft due to wear and condition (needs complete packing replacement)
- Pump Chain Case oil is contaminated by water due to present packing and seal conditions
- Pressure Relief Valve is slow to react (needs rebuild)
- Tank to Pump and Tank Fill valves leak by
- Left Rear Discharge drain valve is cracked (needs replacing)
- Relief Valve drain is cracked
- #2 Discharge Drain is cracked
- Master Pump Drain leaks by
- #4 Discharge Gauge reads 50psi at rest (needs replacing)
- Driver Side Intake Valve does not fully close (needs rebuild or replace)

**Engine 3:**

- Front and Rear Pump Input Shaft Seals leaking (need replacement)
- #3 Discharge valve leaks under pressure (needs rebuild or replace)
- RPM fluctuates during testing (could be pump, engine, transmission, or electrical)

**Ladder 1:**

- #1 Discharge will not fully close (needs rebuild)
- 'Larger than normal / expected' metal shavings found in gear case oil (needs monitoring)
- Master Pump Drain leaks (needs rebuilding)
- Primer Control valve pulls hard and sticks (needs rebuild)
- Discharge #4 gauge is low on liquid (needs replacing)

**Tanker 1:**

- Tank to pump valve inoperative (needs replacing)
- ALL pump pressure gauges are inoperative (need replacing)
- Tank fill valve needs to be rebuilt
- Pump packing leaks excessively (needs repacking)
- Pump Intake Screens / Diodes corroded & broken (need replacing)
- Pre-connect Discharge valve leaks by (needs rebuild or replace)
- Tank to Pump piping rusted through – needs replacing / rebuilding
- Primer control valve sticks – needs to be rebuilt
- Main Pump Drain leaks – needs to be replaced
- Pump Throttle difficult to operate / marginally useable – needs replacement
- All lower level warning lights are inoperative – need to be repaired or replaced
- Suction/Drafting Hoses are cracked & leak – need to be replaced
- No pressure relief system present on pump
- Pump failed dry prime test (packings, seals)

### **Summary of Maintenance Needed – Chassis Systems**

In this section, repairs / maintenance needed to be performed by certified chassis technicians either at our station or at an appropriate vehicle maintenance center will be illustrated.

#### **Engine 1:**

- Driver Side Hood Tie-Down Strap is Broken
- Engine drive belts are cracked, dry
- Air Filter dirty, clogged
- Passenger side step light is out / lens is melted
- Passenger Side Pump Panel Light (forward discharge) is out

#### **Engine 2:**

- Engine drive belts replaced prior to testing
- Air Filter replaced prior to testing
- Exhaust components replaced prior to testing
- Rear Spring Shackles are corroded to the point of near-failure
- Rear Brake Drums are warped and severely cracked
- Back-Up Alarm is inoperative
- All grease points are dry
- Passenger Side rear spotlight is inoperative

**Engine 3:**

- Frame C-Channels are heavily rusted, channels are spreading
- Rear springs are bending backwards
- Front brakes are at the end of service life (need replacement)
- Rear brakes are wearing unevenly on both sides (need replacement)
- Rear tires at end of service life (need replacement)
- Full chassis service needed; old filters and dry grease joints
- Battery are 7 years old and connections are corroded – need to be cleaned, protected and the batteries replaced
- Rear tires are cupped / worn, should be replaced

**Ladder 1:**

- Small hydraulic oil leak found on the plumbing of driver side discharges. Leak is coming from the top of the truck, but could not be isolated at time of maintenance / testing. (Monitor for changes)
- Inside of front tires have minor rubbing damage (a result of the tie rod ends failing last year). Further, the ball joints have approximately 1/8" clearance from the inside of the front tires (monitor for changes)

**Tanker 1:**

- Transmission has **major** oil leak – needs investigation and repair
- Chassis wiring at rear of truck is exposed / corroded connections that need to be cleaned / protected
- Chassis air dryer system has been bypassed – system needs to be updated / repaired and put back in service
- Air tanks are wet with oily/watery sludge
- Oil Pressure and Engine Temperature gauges do not match between pump panel and cab dash
- Cab dash tachometer operates sporadically / intermittently at best
- “ABS” and “Wheel Spin” warning lights are illuminated on dash

### **Summary of Maintenance Needed – Operator Level**

In this section, repairs / maintenance that can be performed by our on-duty staff at our station will be illustrated.

#### **Engine 1:**

- Passenger side step light bulb and lense can be replaced
- Passenger Side Pump Panel Light (forward discharge) can be replaced

#### **Engine 2:**

- Pump Panel light bulbs need replacing
- Rear Compartment light bulb needs replacing
- Side step ground lights (both sides) are out
- Pump Panel Lights dim (grounding issue)
- Battery Terminals dirty (need cleaning / protecting)

#### **Engine 3:**

- Passenger and Driver side ground light bulbs need to be replaced

#### **Ladder 1:**

- Minor corrosion on passenger side battery tie down (needs cleaning / protecting)
- Right Rear compartment light out (needs replacing)
- Passenger side forward and most forward compartment lights out (need replacement)

**Tanker 1:**

- No issues noted

**Final Summary**

Overall, we have a fleet that needs some serious attention and consideration.

While our oldest pumping unit, Engine 1, a pumper-tanker, had some notable and expensive repairs that needed to be made, it is next on the agenda for replacement after Engine 2. The good news can be found in the great possibility of having some “trade-in” value, or equity, when we prepare to move on to the next pumper-tanker for the department. Until then, with proper all-level maintenance, it should serve us well for the next 2-3 years (barring any major mechanical, electrical, or fire service system issues that may occur).

Engine 2, our ‘fire attack’ engine, is definitely and significantly beyond the point of needing replacement as soon as possible. We have asked and expected a lot from this unit – it supported firefighters directly in the control and mitigation of fires in Lincoln and Chester. Purchased new as a ‘band aid’ replacement for a much older and unserviceable pumper, Engine 2 now has itself become the epitome of the vehicle it replaced 21 years ago, and then some. This vehicle is currently out-of-service due to a myriad of pump, brake, drivetrain and body condition issues. Despite the significant negative impact on service delivery we are experiencing by not having it in service, I neither foresee nor recommend investing more resources into this vehicle.

Engine 3 is currently working “extra duty” as our lead fire attack engine while still carrying our Jaws-of-Life and other rescue tools. Now over 15 years old, this engine is starting to show some very typical “15 year old firetruck” concerns. Most notably, the discovery of rusting / separation of the frame c-channel. Rear tires and a total brake system component inspection /



replacement are also needed. Once these and other pump-related repairs are made to this unit, and the commitment to a regular, annual service schedule is continued, Engine 3 could serve Lincoln for another 3 – 6 years AND provide some relatively decent 'trade-in value' when it is time for replacing this unit.

Ladder 1 is our mobile 'tool box', carrying ladders and a multitude of firefighting and rescue equipment for water and confined space operations, not to mention a workhorse in taking us to where the fire is above ground level. Although already over 25 years old, Ladder 1 should be able to meet mission needs well into the future as long as we continue to follow routine and preventative maintenance programs. To suggest another 10 years of service for this unit is not completely outside of the realm of possibility – a lot depends on the actual aerial device passing annual certification testing. Time will tell, however this type of unit has been known to serve other communities for relatively long, long periods of time.

Tanker 1 continues to have issues. Many, many issues. It is essentially out of service as this is being written. A serious discussion needs to be had, and that discussion should include replacing this unit with an actual off-road capable wild land fire response / utility vehicle in the very near future.

It should be clearly stated that repairs to our fire protection fleet need to be continually addressed at all levels of performance and all levels of management from our firefighters up to and including the Town Council. Working together, we can bring our current fleet back to safe, serviceable and ready status while working to create a feasible plan that prevents us from falling behind in the future.

---

<sup>1</sup> This is clearly becoming a pump, engine performance, and drivetrain issue – a complete test was not attainable, due to extremely high engine RPM and rapidly rising engine temperature.