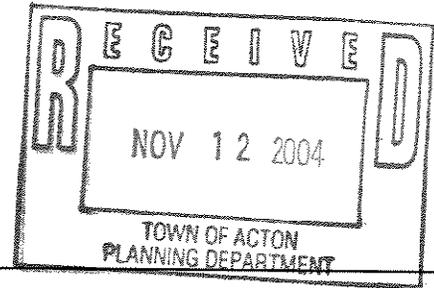




TOWN OF ACTON
Fire Department
256 Central Street
Acton, Massachusetts,
01720
(978) 264-9645
Fax (978) 263-9887



Robert C. Craig
Fire Chief

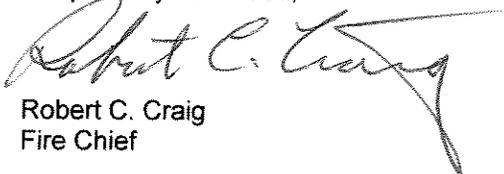
November 11, 2004

Mr. Peter Berry, Chairman
Town of Acton Community Preservation Committee
c/o Planning Department
Acton Town Hall
472 Main Street
Acton, MA 01720

Dear Mr. Berry and the Committee:

It is my pleasure to submit a completed application packet for your consideration for Community Preservation Act funding for 2005. Specifically, this submittal is an application for funding to restore two of the town's vital historic resources (matching 1936 Antique Fire Engines) to serve as educational, historical and commemorative resources for years to come. Your consideration of this application is appreciated. Please feel free to contact me should you have any further questions, desire any additional information or wish to view these pieces of apparatus. Thank you.

Respectfully submitted,



Robert C. Craig
Fire Chief

Attachments

PROJECT APPLICATION FORM

Applicant: **Chief Robert C. Craig**

Date: **November 12, 2004**

Applicant's Address, Phone Number and Email

Purpose:

**Acton Fire Department
256 Central Street
Acton, Massachusetts 01720
(978) 264-9645 rrcraig@acton-ma.gov**

Open Space
Community Housing
 Historic Preservation
Recreation

Town Committee (if applicable):

Project Name: **Antique Fire Apparatus Restoration**

Project Location: **Acton Fire Department, 256 Central Street, Acton**

Amount Requested: **\$ 20,000**

Project Summary: In the space below, provide a brief summary of the project.

This request seeks CPA approval and funding to restore two antique fire engines owned by the Town of Acton. Complete details of the project may be found in the attached application packet.

Estimated Date for Commencement of Project: **Immediately**

Estimated Date for Completion of Project: **Less than five years**

Project Narrative:

This project seeks CPA approval and funding to be utilized to restore two antique fire engines owned by the Town of Acton. These two fire engines are identical and were manufactured sequentially, being one serial number apart. They are 1936 Reo Fire Engines and have an extensive historical background in the Town of Acton. Currently, one of these fire engines is operable and the other fire engine primarily needs to have the gasoline engine rebuilt to be operable. To date any restoration work on these fire engines has been minimal due to funding. It should be noted that the firefighters have done all the work thus far and will continue to do as much work as possible without utilizing outside craftsmen. They have contributed \$6000 of their own funds to the project and there have been indications of additional private donations as well. In terms of the application process, this CPA funding request was first submitted to the Board of Selectmen for their information and approval and that approval has been obtained. They did however suggest that more private donations be solicited and therefore the original funding request of \$25000 has been reduced to a \$20000 request for CPA funding. In addition the Board of Selectmen requested that the project be reviewed as to its applicability for CPA funding and this has been done as well.

As noted this project will primarily consist of reconditioning and/or rebuilding the gasoline engine of one of these trucks. As funding allows, additional work will be completed, although it is difficult to quantify the timing and the complete cost of the reconditioning until various components are removed and examined, parts availability is assessed, and craftsmen to do the work are selected.

As indicated to the Board of Selectmen the fire engine that is operable at this time has been used at parades, functions, weddings and public education programs. The uses of these fire engines will be expanded once these pieces of historical fire apparatus are fully restored. The primary uses will be educational, historical and commemorative in nature and the apparatus will be able to be displayed in one of the fire stations once a new fire station is constructed. These fire engines will be used to demonstrate to children and adults, alike, the history of firefighting as it pertains to the Town of Acton. As you may be aware, currently the one fire

engine that is operable is always on display at the annual fire department open house. These fire engines will also be used in programs at the schools and at the Discovery museum. Both of these fire engines will be operable and able to be driven in parades and town celebrations.

This project will benefit the town primarily in the display of historical significance of these engines as they relate to the history of the Fire Department and the Town. As part of the application I have attached a detailed history of these engines as prepared by Firefighter William Klauer (see attachment). As previously noted, the benefit of the project would not only be of historical significance it would also be educational and cultural in nature for all ages. This project is consistent with the Guidelines for submission in that it would preserve historic resources and would enhance cultural and historical resources. Further this project meets the following criteria as noted for review and recommendation:

- The project is consistent with the goals of the Town of Acton Community Preservation Plan.
- The project is economically or otherwise reasonably feasible to implement. The firefighters involved with this project have already donated significant time and their own funds to this project and have pledged additional time and effort to complete the project. Together with anticipated private funding and CPA funding this project is feasible to implement and complete.
- The project serves multiple needs and populations and/or addresses more than one focus area of the CPA. As noted this project will provide education and community outreach regarding an extensive historical and cultural resource of the Town. Certainly this project will serve towards the preservation of the remaining historical character of the Town.
- The project leverages additional or multiple sources of public and/or private funding. Acton Firefighters have already donated \$6,000 of their own funds. In addition there is the likelihood that additional private funds will be made available.
- The project utilizes, preserves, protects or enhances historic assets currently owned by the Town. This project has been

reviewed and has been determined to be significant in the history of the Town by the Acton Historical Commission (see letter attached).

- The applicant team has successfully implemented projects of similar type and scale, or has demonstrated the ability and competency to implement the project as proposed. The principal individuals involved with this project have completed other restorations and/or have significant mechanical and technical expertise to complete this project.
- The applicant has site control, or the written consent by the property owner to submit an application. These engines have been owned and operated by the Town of Acton since 1936.

Project Scope:

The scope of the project would consist of the following with the listed estimated costs:

• Engine 3, gasoline engine restoration	15,000
• Brakes, transmission front end work, tires	10,000
• Chrome, paint upholstery, detail work	<u>10,000</u>
• Total Project Budget	35,000

Cost Estimate:

As previously noted it is difficult to determine an exact cost estimate on a project of this nature. Costs cannot be adequately determined until such time as various components are disassembled and evaluated and then assessed as to parts availability or the need to duplicate parts. This factor in turn impacts the labor cost of any skilled craftsmen that may be involved in this restoration process. Attached to this application is the one definitive cost estimate that has been obtained at this point. This estimate applies to the reconstruction and restoration of the gasoline engine in Engine 3 and was formulated after actual examination of engine components.

Feasibility:

The feasibility of the project is dependent primarily on those items noted in the cost estimate information above. The project itself is definitely feasible from the standpoint of the talents, abilities, efforts, determination and dedication of the firefighters involved with this project.

Photographs:

Attached are several photographs of these antique fire engines. One photograph shows the two engines together and in addition there is a separate photograph of each engine.



Acton Historical Commission

November 6, 2004

Mr. Peter Berry, Chair
Town of Acton Community Preservation Committee
cpc@acton-ma.gov

Re: Antique Fire Engine Restoration

Dear Mr. Berry and the Committee:

The Historical Commission has recently reviewed the CPA funding application for the antique fire apparatus as supplied by Chief Craig. We were impressed with quality of the two engine set, the thorough provenance that has been prepared by FF/EMT Klauer, and with the fact that these are the only surviving antique engines held by the Town.

The Commission unanimously agreed that this engine set and provenance is an important cultural resource for the town, and we hope the CPC will choose to proceed with this application.

Sincerely,

A handwritten signature in black ink, appearing to read "Peter Grover". The signature is written in a cursive, slightly slanted style.

Peter Grover, Chair
Acton Historical Commission

A Brief History of Engines 2, 3 and 4

In 1924, three Reo chassis were purchased and fitted with chemical extinguishers, ladders, hose and tools that were considered applicable to the control and extinguishment of fires. While this was a big step from the hand drawn apparatus that the Town began purchasing in 1893, and the subsequent conversion of Gertrude Daniel's automobile, the chemical tanks were limited and only the West Acton engine had a small front mounted pump.

In some of the darkest days of the Depression, Chief MacGregor and the Board of Engineers were faced with apparatus that was practically obsolete before it was purchased. The 1924 Reo's were limited as they carried two 40 gallon soda acid extinguishers. While these were state of the art for small incipient fires, anyone who was on the end of a line could not really control the nozzle because of the chemical reaction; therefore, it was 40 or 80 gallons. If you needed a lesser amount, an open window was the logical area to spend the excess. If more water was necessary, the line was extended from the hydrant if in the water district or if out of the district, stand by and offer condolences to the property owners. Such was likely the response when McDonald's Slaughter House burned on the Concord – Acton line. In addition, the Engine in South Acton had loose spokes in the wheels, which meant that the spokes were hydrated with wet towels between responses.

In 1934 the citizens voted to replace the Acton Center engine with a new pumper and the Farrar Company in Woodville built an engine with a front mounted 500 gallon per minute pump and a small rotary gear pump for the booster line. This engine would remain as the first line of defense in Acton Center for the next 21 years.

Two years later, Chief Hanson S. MacGregor and the Board of Engineers realized that more up to date equipment was mandated if the department was going to be able to save property and reduce the insurance rates. On March 9th, 1936, the voters considered the following under Article 22. To see if the town will vote to purchase two new fire trucks for Precincts 2 and 4 or act anything thereon.

Voted: Unanimously that there be appropriated the sum of eight thousand dollars (8,000) for the purchase of two fire trucks for use in Precinct 2 and 3 and to meet the said appropriation there be raised in the tax levy of 1936 the sum of two thousand dollars and that the treasurer with the approval of the selectmen be authorized to borrow the sum of six thousand (6,000), and to issue notes therefore payable in accordance with Chapter 44, General Laws; so that the whole loan shall be paid in not more than four years; that the purchase of said trucks be left to the board of Selectmen and the Fire Engineers of the town, also that the Selectmen be authorized to dispose of any unnecessary equipment.

The Town purchased two engines from the Seagrave Corporation and to finance the purchase took out four \$1,500 notes from Marchants National Bank to be repaid in the next four years. Both vehicles were driven from Columbus, Ohio to Acton and placed in

service July 15th, 1936. The two vehicles were consecutively numbered, Engine 3 is 83,500 and engine 4 is 83,501. Both vehicles were originally identical as they left the factory. Chief MacGregor made the following comment about their purchase.

“I would like to say at this time that these two pieces of apparatus have proven to be way beyond our expectations and I feel satisfied that the town’s money was well spent.”

Little did Chief MacGregor realize but these engines would remain in service longer and see more fires than any successive apparatus the town ever purchased. Beginning about the time the engines arrived, a series of barn fires occurred in South Acton. The first fire occurred in late July at 15 School Street and involved a barn that was attached to a store with apartments above it, other barns included the Campbell’s at 5 High Street, the Ice House on Martin Street, the Hayward barn at Stow and Martin Street, Hanson’s barn at 263 School Street, a barn at Granbergs at the corner of Parker Street, Greenough’s barn behind Exchange Hall, and Merriams’ barn at 36 School Street. In addition, there was Johnson’s Piano stool building and the Barker’s Cider Mill, the South Acton Woolen Mill, Merriam’s Mill, the Boy Scout house, a few structures from the American Powder Company along with several very extensive brush fires, one at the quarry which lasted about a week and a summer of brush fires while Route 2 was being built. Although West Acton and Acton Center which included East and North Acton had their share of fires, they did not have the benefit of an incendiary whose specialty was large abandoned buildings. While these were probably the exception, mixed with chimney and house fires, Engine 3 was first due at any incident in South Acton for at least 26 years. Its successor was Engine 6, a 1961 Farrar, pumper with a 1,000 gallon per minute pump. When Engine 6 arrived, it was housed in West Acton as the new South Acton Station was under construction and the new engine would not fit in the old station; therefore Engine 3 continued to respond first. While Engine 4 had a similar history, West Acton did not have the industrial potential that South Acton did and Engine 4 responded to Boxborough for many of its major fires. The successor to Engine 4 was named Engine 1, a 1957 Farrar with a 750 gallon pump. This placed Engine 4 as a reserve piece when it was 21 years of age and Engine 3 was 27 years of age at the time the station was completed and Engine 6 placed in South Acton.

While the community changed drastically after the Second World War in both population and expectations of the fire department, the engines continued to remain in service until 1973 when they were removed from service by Chief Barry. While Chief Barry was interested in their disposal, there was a great amount of sentiment amongst the members of the department, most of whom had grown up with these sentinels of simpler times and also had known these engines as tools that had stood the test of time and endurance. Chief Barry reconsidered and the engines remained with the Fire Department.

Oddly enough, Engines 3 and 4 were loaded with 4” hose and relegated as hose wagons for a time. One night, Engine 3 and Engine 6 went to Maynard on a drill and Engine 3 was drafting from the Maynard Mill pond and supplying the Maynard’s ladder pipe with water through Engine 3’s four inch hose when something went wrong and the inner strainer got sucked into Engine 6’s pump putting them out of service. Engine 3 was then utilized and the drill continued with a little less water flowing through the ladder pipe.

On another occasion, Chief Barry was advised that for some reason, the water tower became dangerously low with about 12' of water remaining for the use of the town. Arrangements were made with the Town of Concord and Engine 3 began pumping water from a hydrant at the corner of Great Road and Pope Road into an Acton hydrant nearby and pumped continuously throughout the night into the next morning. With the added pressure of the Concord hydrant, the engine pumped close to a half million gallons of water that night. About 3 o'clock that morning, I filled the gasoline tank with from four cans of gasoline that had been left and checked the oil, otherwise, the engine ran the entire duration of about 12 hours without incident.

Both engines were equipped with Reo Gold Crown power engines of six cylinders, 3 1/8" bore and 5" stroke yielding a displacement of 230 cubic inches and a braking horsepower of 70. Each contained a Firemaster pump of 500 gallon per minute capacity and especially made as part of the transmission. The pumps are single stage and constructed of solid bronze mounted on a stainless steel shaft.

The two vehicles appear identical and likely remained that way during most of their duration. At some time, likely about 1962, some changes were made to make them more serviceable for the duration. When they left the factory, they were equipped with booster tanks of 100 gallons, the tanks were replaced with 500 gallon tanks which decreased the space available for hose. Each engine originally 1,400 feet of 2 1/2" hose, and the booster reel had about the bed was subsequently split to carry a half load of 3 inch hose. Engine 4 was converted to sealed beam headlights; however, Engine 3 has the 32 candlepower bulbs. Each engine had a Mars light, these were replaced when the tanks were upgraded. Additional changes included the placement of diamond plate over the wooden running boards and floor of the cab and Engine 4 received new upholstery and 100 amp alternators replaced the generators. Both engines have been repainted and were a darker almost maroon red initially. During their later years, they were used for brush fires as they were small, lighter weight and during the season were loaded with forestry hose and pump cans. While Engines 1, 6 and 7 were newer, they were not off road vehicles and each was much heavier, wider, and taller which limited their ability to be brought into tight areas. Engine 3 was able to cross the bridge at Merriam's mill where Engine 6 was too heavy to cross. Each engine carried one 30 foot extension ladder and one 16 foot roof ladder. The mileage on Engine 4 in 1956 was 7,625 miles, a portion of which was incurred in its maiden run between Columbus and Acton.

While Engine 4 replaced a 1924 Reo with a front end pump, the 1924 remained in service as a back up until replaced by Rescue 6 in 1948. It was sold to Arthur D. Raymond of 180 Nagog Hill Road who had a summer place at Blodgett's Landing on Lake Sunapee where it was used for many years. I learned about it when I went to Raymond's camp and found that it had previously been used in Acton. It is still in existence and owned by a collector in Bristol, Rhode Island. The predecessor to Engine 3, another 1924 Reo was on display in Boston at the Boston Fire Department museum and was lost in a fire. The Acton Center engines were at first a 1924 Reo that was identical with Engines 1 and the one lost in the fire. That vehicle was displaced in 1934 when the second Engine 2 was purchased from Farrar. The second Engine 2 is now in the town of Monson,

Massachusetts and is used as a parade piece. This information will show that Engine 1, 2, 3 and 4 all exist. Engines 2, 3 and 4 are from the second major purchase of apparatus and Engine 1 is the only piece that exists from the 1924 series. I have not been able to learn the fate of the first Engine 2 but it is likely that it was relegated to the Moth Department and equipped with a sprayer. I am aware that the first brush truck was a 1930 Model A with pump and tank and that vehicle was used by the Moth Department after Engine 5 was purchased in 1946. A comparison of costs between the three engines suggests that there may have been something less than the ideal since Engine 2 was purchased from Reo Sales Corporation for \$1,307.00 (chassis), Farrar Body Company was paid \$828 for the body and American Steam Pump was paid \$800 for the pump or pumps. This totaled \$2,935 with an unexpended balance of \$65 and each of the 1936 Reos cost \$4000.

Since Chief Barry became aware of the sentiment of the engines, they remained within the department and have been used as parade pieces at events, served at both weddings and funerals. While they are still registered as Fire Apparatus, the two engines may be the only two identical, consecutively numbered Engines in existence anywhere of this vintage.

J&M MACHINE CO.

40 Mt. Vickery Road, Southborough, MA 01772 • Tel: (508) 460-0733

April 28, 2004

Town of Acton
Re: 1936 Reo Engine quotation

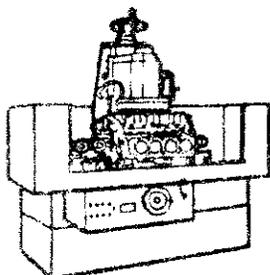
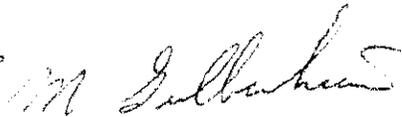
Dear Scott:

Here are the latest price estimates for the rebuilding of this rare engine. Parts are practically none existent and we will have to manufacture most of the parts. Please be advised some line items are not priced at this time, as it will depend on whether or not they can be repaired. The manifold is in very bad shape and badly cracked, if repaired could last years or months. Repair of the head may cost approx. \$250 or so and repair of the spun rod will depend on what process is used to remedy the damage.

Please advise when you would be able to come with your staff to view the engine and damaged parts.

Awaiting your reply.

Sincerely,



First in Machine Shop Service





J & M MACHINE CO.
 "The One Stop Machine Shop"
 40 Mt. Vickers Rd.
 SOUTHBRIDGE, MA 01772

PH: (508) 460-0733
 E-Mail: www.jandm-machine.com

INVOICE

INVOICE NUMBER: 100
 INVOICE DATE: 3/20/04
 ACCOUNT NO: Estimate

SOLD TO: Town Of Acton
 Acton MA

SHIP TO: Town Of Acton
 Acton MA

DATE SHIPPED SHIP VIA TERMS SALESPERSON CUSTOMER P.O. NUMBER

QUANTITY	P/U	DESCRIPTION	UNIT PRICE	CODE	EXTENDED AMOUNT
1		Teardown Engine	500.00		500.00
1		Bake Blast Block	250.00		250.00
1		Magnaflux Block	120.00		120.00
1		Pressure test Block	120.00		120.00
1		Wash And Magnaflux crank	175.00		175.00
4		Remove and Replace Cam Bearings	30.00		120.00
1		Remove and Replace Freeze Plugs	80.00		80.00
4		Remove counterweights	40.00		160.00
4		Re-install Counterweights, Weld Bolts	48.00		192.00
1		Weld #6 Rod Journal	150.00		150.00
1		Grind crank	450.00		450.00
1		Bore and hone Block	350.00		350.00
1		Deck Block	225.00		225.00
12		Machine and install Stellite Valve Seats	20.00		240.00
6		Fabricate Wrist Pin Bushings	15.00		90.00
6		R & R rod Bushings, Fit Pins	15.00		90.00
6		Re-size Conn Rod Big Ends	45.00		270.00
6		Bore rod Bearings To Size	75.00		450.00
7		Re-Babbit Main Shells	225.00		1,575.00
1		Line bore cam Bearings	595.00		595.00
1		Line Bore Main Line	1,750.00		1,750.00
4		Manufacture Cam Bearings	75.00		300.00
6		Manufacture Pistons pin,locks	195.00		1,170.00
12		Resurface lifters	12.35		148.20
22		R & R headstuds	25.00		550.00
1		Resurace Flywheel	60.00		60.00
1		Rebuild water Pump	450.00		450.00
1		Rebuild clutch Assembly	225.00		225.00
1		Resurface Head	100.00		100.00
1		Motor Assembly	850.00		850.00
1		Dynamic Balancing	350.00		350.00
1		Manifold repair			
1		Resurface Manifold	125.00		125.00
1		Clean Oil Pump	75.00		75.00

MESSAGES / NOTES

Warranties, if any, with respect to the products sold herein are those of the manufacturer only and not those of the seller; J and M Machine. The seller disclaims all warranties including liability, Merchantability, or fitness for a particular purpose

SUB-TOTAL 12,355.20
 SHIPPING CHARGES
 SALES TAX 58.50
PLEASE PAY ▶ 12,413.70

THANK YOU
 PRINTED AT THE J&M MACHINE CO.



J & M MACHINE CO.
"The One Stop Machine Shop"
40 Mt. Vickers Rd.
SOUTHBOROUGH, MA 01772

INVOICE

INVOICE NUMBER: 101 INVOICE DATE: 3/20/04 ACCOUNT NO: Estimate

PH: (508) 460-0733
E-Mail: www.jandm-machine.com

SOLO TO: Town Of Acton
Acton MA.

SHIP TO: Town Of Acton
Acton MA

DATE SHIPPED SHIP VIA TERMS SALESPERSON CUSTOMER P.O. NUMBER

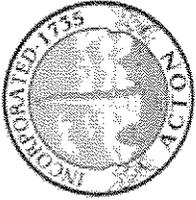
QUANTITY	P/U	DESCRIPTION	UNIT PRICE	CODE	EXTENDED AMOUNT
1		Gasket Set	425.00		425.00
1		Timing chain assemblies	76.98		76.98
6		Rod bearings, Semi	45.00		270.00
6		Intake valve	35.00		210.00
6		Exhaust valve	36.00		216.00
12		Stellite Valve Seats	15.98		191.76
22		Headstuds	3.00		66.00
4		Freeze plug	2.00		8.00
1		Piston ring set	295.00		295.00
12		Valve spring	5.95		71.40
1		Repair head			
1		Repair spun Rod Bore			

MESSAGES / CODES

Warranties, if any, with respect to the products sold herein are those of the manufacturer only and not those of the seller, J and M Machine. The seller disclaims all warranties including liability; Merchantability; or fitness for a particular purpose.

SUBTOTAL	1,830.14
SHIPPING CHARGES	22.35
SALES TAX	91.51
PLEASE PAY	1,944.00

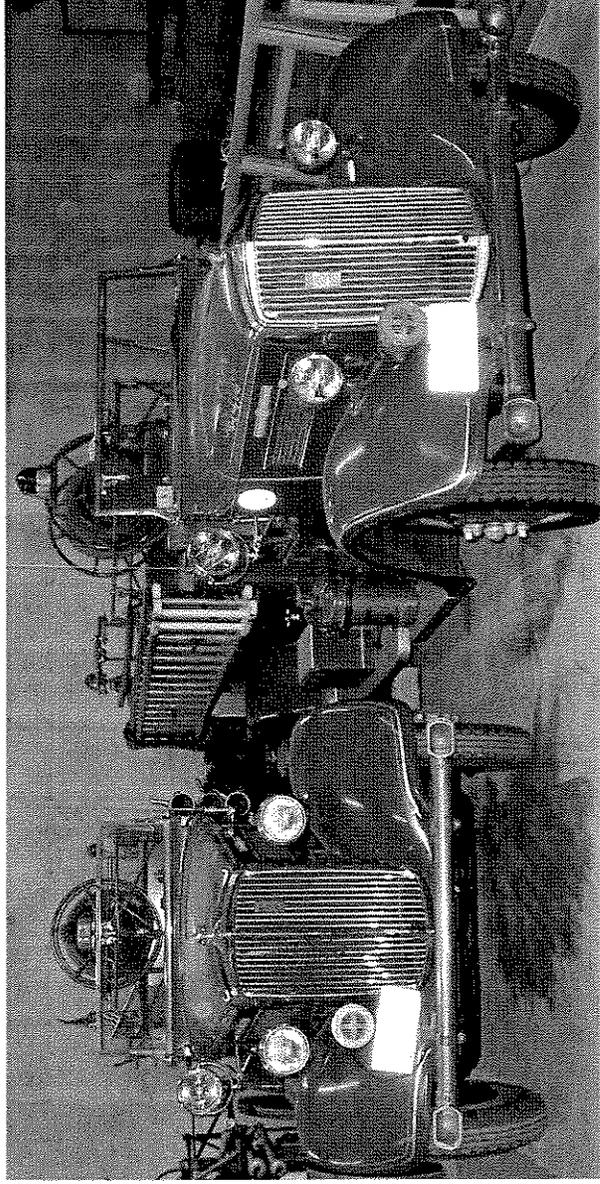
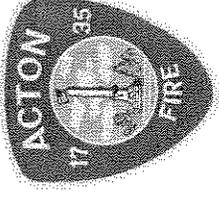
THANK YOU
PRINTED IN MA

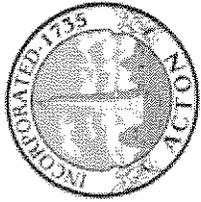


Antique Fire Engine Restoration

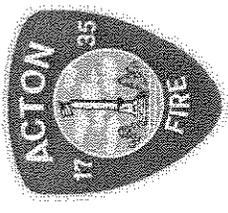
Historical Significance

- 1924 - Town purchases first motorized engines
- 1936 - Town Meeting votes two new engines for districts two and three
- These two engines are the only surviving antique engines we own

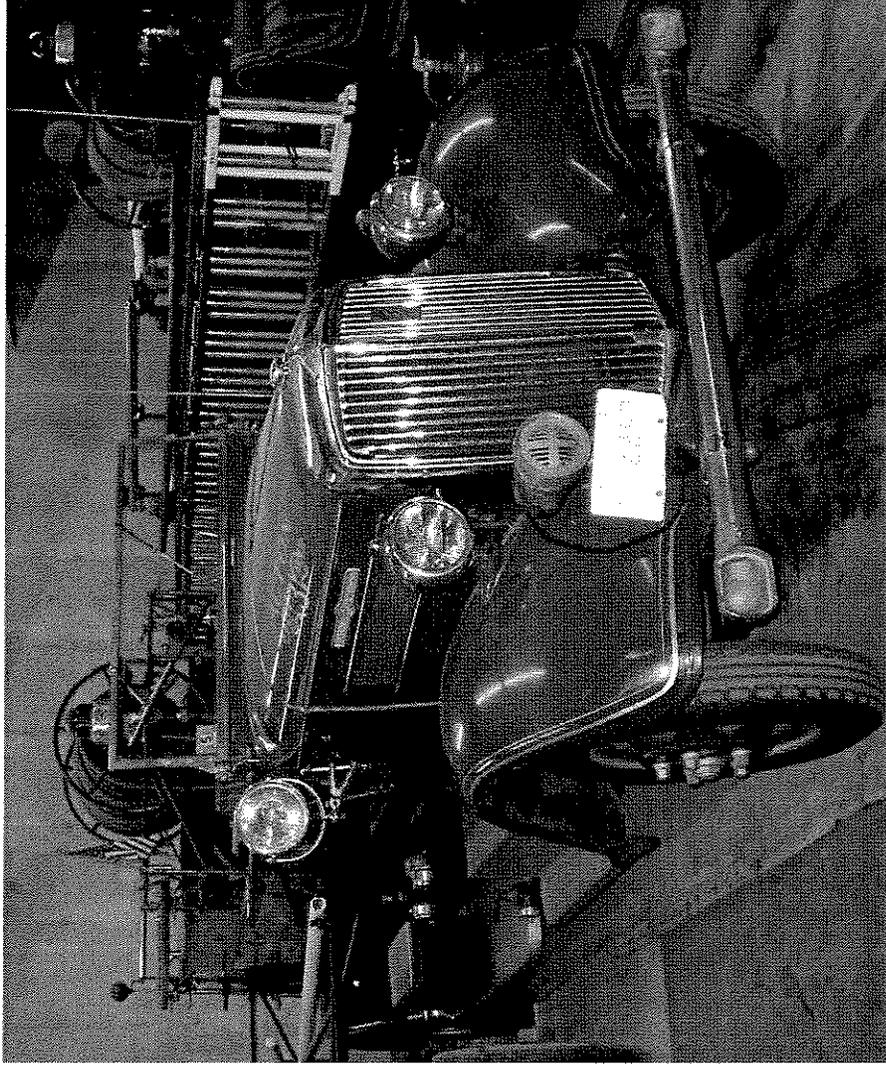


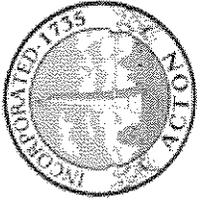


Antique Fire Engine Restoration Project Overview



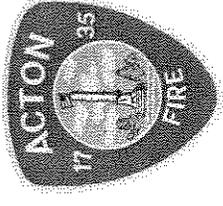
- Restore the two-engine set to near original, matching condition





Antique Fire Engine Restoration

Project Funding



Engine 3, Motor Replacement	\$15,000
Brakes, Transmissions, Front End Work, Tires	\$10,000
Chrome, Paint, Upholstery, Equipment, and Detail Restoration	\$10,000
Total Budget Estimate	<u>\$35,000</u>

Acton Firefighter Donations	\$6,000
Anticipated Private Donations	\$4,000
Requested CPA Funding	<u>\$25,000</u>
Total Funding Estimate	\$35,000

