EXTENDING VEHICLE SERVICE LIFE INCREASES OPERATING COSTS

Prepared by City of Rochester Hills DPS Fleet Services Division

Background

The Fleet Equipment Fund was created in 1988 in order to provide a responsible program for the practical maintenance and replacement of the city's vehicles and construction equipment. The following table illustrates the replacement interval guideline.

4x4 Pickup with plow	6 years
4x4 Pickup with plow - compact for bike path maintenance	4 years
Cars, pickup trucks, vans	7 years
Dump trucks with plows and salt spreaders	10 Years
Heavy construction equipment	7 - 10 years
Portable equipment - chainsaws, string trimmers, hand tools	5 years or less
Specialty vehicles	8 - 10 years

The above replacement intervals are used only as a guideline. Years of service and or odometer/hour meter readings cannot be the only criteria used to determine individual vehicle and equipment replacement intervals. Increasing repair costs, overall vehicle condition, safety and dependability are important considerations of determining a vehicle's lifecycle.

City vehicles and equipment are routinely exposed to extreme conditions such as major and local road snow plowing and de-icing operations, road repair and maintenance, and underground water and sewer main repairs. One of Fleet Services Division's written goals is to "Maintain the fleet in a safe, useful condition through proactive maintenance and scheduled replacement".

Lifecycle Costing

Lifecycle costing is used to determine the most economical service life of a vehicle. When an old vehicle costs more to own and operate than a new vehicle, it is time to replace it.

Elements considered for lifecycle costing are:

- Maintenance costs - parts and labor
- Fuel and oil consumption
- Availability- time the vehicle is out of service for repairs or maintenance
- Depreciation
- Utilization
- Resale value - market worth

The city purchases vehicles and equipment through the sealed bid process with bid packages advertised on MITN (Michigan Intergovernmental Trade Network) and through the Oakland County Cooperative Purchase Program, and the State of Michigan extended purchase program. Purchasing vehicles and equipment utilizing these programs offers the city significant cost savings over retail.

Surplus vehicles that have been replaced are disposed of at local public auctions. Auctioneers indicate that municipal vehicles are sought after by buyers because it is well known that municipalities normally adhere to strict preventive maintenance programs, bringing top dollar for the vehicles and equipment.

Purchasing vehicles at a discount, and selling them at auction for top dollar results in a relatively low life cost to the city.

Fleet services division consults with management from the user department and reviews vehicle condition and operating cost to evaluate each vehicle or piece of equipment at the end of it's scheduled lifecycle to determine if it is in the best interest of the city to replace it or defer replacement and re-evaluate the following year. The majority of a vehicles repair costs are incurred in the last third of its lifecycle and steadily increase thereafter.

Extending vehicle service life has a cumulative impact on fleet operating expense and total lifecycle cost.

If the vehicle is retained past its optimum life cycle:

- Repair frequency and costs increase.
- Availability is decreased.
- Vehicle downtime is increased creating a loss in productivity.
- Operator safety may be compromised.
- Salvage value at auction will decrease.
- In certain situations such as snowplowing and de-icing operations, water main breaks, and sanitary & storm sewer back-ups, the city may face increased liability because of equipment downtime.
- Significant technical improvements on new vehicles that can increase productivity and operator safety and comfort will not be recognized.
- Equipment replacement capital accounts will accrue a large fund balance.

Conclusion

Fleet Services Division continually reviews operating cost data to determine the most economical lifecycle for city vehicles and equipment. Our goal is to provide safe, productive, reliable vehicles and equipment that meet our customer's needs at the lowest possible cost. Extending vehicle lifecycles will ultimately drive up overall operating cost, reduce productivity, and may even expose the city to increased liability.