

CITY OF ROCHESTER HILLS - DPS

Fleet Services
Division

Bruce Halliday, Fleet Manager

DATE: April 27, 2005

TO: Roger Rouse

RE: 2005 Replacement - Equipment

Due to local road funding issues and budgetary constraints, purchase of replacement vehicles and equipment is under increased scrutiny by city council.

Reduced staffing in the roads division has resulted in lower overall vehicle and equipment utilization negatively affecting Fleet Services Division's revenue. Therefore, we are reviewing our equipment inventory and replacement schedules and evaluating our customers current equipment needs.

Replacement light trucks for 2005 that have been approved by council and purchased through the Oakland County Cooperative purchase program are now being delivered.

Remaining DPS vehicles and equipment budgeted for replacement in 2005:

City ID#	Description	Replacement Cycle	\$ Budgeted
39-100	1993 Badger wheeled excavator	7 Yrs.	\$211,560.00*
39-121	1987 tractor mounted roadside mower.	10 Yrs.	\$ 62,500.00
39-35	1992 Case wheel loader.	10 Yrs.	\$ 86,370.00
39-60	1997 GMC water tap crew truck	8-10 Yrs.	\$ 78,550.00

* Purchase postponed indefinitely by city council.

We have determined that a significant increase in utilization can be recognized by combining the replacement of 2 of the vehicles listed above with 1 vehicle.

39--35 wheel loader (our oldest) is mainly utilized in the winter months for snow and ice control. 39-121 tractor flail mower is used for roadside vegetation control during the summer months. We propose to combine the accrued replacement funds for both of these vehicles (\$148,870.00) and purchase an integrated tool carrier (IT), estimated purchase price \$140,000.00. An IT is a wheel loader equipped with a quick-change tool attachment. Numerous quick-attach tools such as a boom mower, material forks and clam bucket would be purchased with the IT which would provide a multi-use vehicle that would be utilized year-round. An IT could be utilized by DPS staff for other tasks as well as snow and ice control and roadside mowing.

Additionally, due to the latest financial concerns and atmosphere, I would like to confirm that Fleet Services staff should continue to move forward (research, prepare/develop, solicit, review and deliver to Council) the remaining fleet 2005 capital vehicle and equipment purchases.



VEHICLE# 39-121 1987 FORD MID-MOUNT FLAIL MOWER

1,387 HOURS

DUE FOR REPLACEMENT: 1997

PROBLEMS WITH UNIT AND POTENTIAL CONSEQUENCES FROM DEFERRING REPLACEMENT OF 39-121:

SAFETY:

- Mid-mount mower requires operator to look 90 degrees to the right of the machine while mowing. Operator cannot safely monitor what is in front of the machine while in motion.
- Open design does not sufficiently protect operator from:
 - Impact from vehicles on roadway.
 - Flying debris from the mower head.
 - Respiratory concerns from dust and other airborne debris.
 - Hot hydraulic oil from broken or leaking oil lines.

OPERATOR FATIGUE:

- Excessive heat generated from hydraulic oil tank which is in close proximity to the operator's position.
- Operator gets a sore neck from looking 90 degrees right all day.
- Vibration & noise from mower.
- Stress from having to see both in front of and to the right of the unit simultaneously.

DEPENDABILITY:

- 39-121 is 18 years old and has had many major repairs. Recently, some repair parts have become unavailable requiring us to fabricate parts or have an outside vendor manufacture them which is extremely expensive and results in excessive machine downtime.
- Equipment of this type has a very narrow market limited mainly to State, County and Municipal government operations. Mowing contractors typically do not include these machines in their inventory. If the city's machine is down for an extended period, a contractor with this type of equipment may not be found.

UTILIZATION:

- 39-121 is used in the summer months for mowing operations and sits idle all winter.
- 39--35 is primarily used for winter snow and ice control operations and sees minimal use during the warmer months.
- Fleet Services Division generates revenue from DPS equipment only when it is utilized. Equipment sitting idle has a negative effect on reliability and lifecycle cost.

BENEFITS OF COMBINING REPLACEMENT OF 39-121 & 39-35:

- Eliminate 2 low utilization pieces of equipment with one machine which will be better utilized.
- Will provide a safer, more reliable and productive machine.
- Increased utilization provides a more stable revenue source for Fleet Services Division.
- Demonstrates that we are constantly thinking about how we can "DO MORE WITH LESS".





VEHICLE# 39--35 1992 CASE 621 WHEEL LOADER

3,150 HOURS

DUE FOR REPLACEMENT: 2002

IT14G Integrated Toolcarrier



The IT14G is the ideal platform for the Little Industries Brushcutter. Greater visibility to the mower, better sight line, versatility, weight of the machine and hystat transmission result in increased operator confidence and productivity.

The IT14G Hystat Power Train features a high-pressure closed-loop hydrostatic transmission. This transmission provides a broader range of power and performance to the ground, with less operator input than conventional converter-driven transmissions.

Cat® Hystat Power Train features:

- ability to infinitely vary ground speed
- simple and smooth operation
- creeper function allows variable control of travel speeds through entire speed range
- direct change of speed and direction
- stepless speed variation without loss of power
- HIGH/LOW speed switch for roading or working transmission modes—full rimpull available in either mode
- inching function allows momentary travel speeds as low as zero with full engine rpm for precise control

Bucket capacities	1.2-1.4 m ³	1.6-1.8 yd ³
Operating weight	8450 kg	18,632 lb
Operating weight w/mower	9958 kg	21,932 lb
ROPS certification	11 000 kg	24,255 lb
Cat® 3054T Engine		
Gross Power	73 kW	98 hp
Flywheel Power	67 kW	90 hp
*Dump height	2886 mm	9' 6"

* configured with 1.4 m³/1.8 yd³ bucket

Quick Coupler and Work Tools

The Quick Coupler is an integral part of the Caterpillar® Integrated Toolcarrier. Tool changes are quick and easy. A switch in the operator compartment activates a hydraulic cylinder for positive tool retention or disengagement.

- commonality with Cat Work Tools for Small Wheel Loaders and Backhoe Loaders
- ability to demount or mount mower in one hour

A wide selection of Cat Work Tools are available from your local Caterpillar dealer for rental or purchase.