LEAGUE CITY
EST. 1893

# MEMORANDUM

To: Jody Hooks, Director of Public Works
From: Wesley Baker, Interim Fleet Manager
Date: 9/17/2024
Re: Fleet Capital Replacement Criteria

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The following guidelines are used to administer and account for the city of League City's fleet replacement. Determining the optimal life cycle of an asset is a key goal for fleet management. The life cycle comprises everything from acquisition to disposal, maintenance, operations, training, and improvements. The aim of life cycle costing is to minimize the total cost of ownership.

The objective is to ensure sufficient funding for replacement of worn out or obsolete fleet equipment, minimize costs and provide effective, dependable equipment properly designed to furnish required services.

Step 1 – Establish Fleet Unit Scores using FASTER 15-Point Scale Replacement Measures

With the acquisition of FASTER, a web fleet management system, the capital replacement schedule has implemented the 15-point replacement tracking replacement system. This 15-point system was originally developed for Collier County, Florida using the American Public Works Association Managing Public Equipment, Special Report 55 as a guide.

While this rating system may seem simple, it matched the standard curve chart used for replacement 95% of the time in the initial analysis. Additional data was analyzed again one year later with the same results.

There are three factors that make up total points:

- Maintenance Cost Life-To-Date (LTD):

  Maintenance Cost LTD is weighed double on a scale of 0-10 and hit its highest level (10) when the maintenance cost LTD equals the original purchase price. The points are determined by the percentage of the current LTD maintenance divided by the original purchase price. The points for this factor are double to identify "lemons" or high maintenance equipment.

- Life-to-Date Mileage or Hours:

  LTD meters are rated on a scale of 0-5. The points are determined by the percentage of the current LTD meter divided by the expected meter life.

- Expended Life In Months:

  Life in months is rated on a scale of 0-5. The points are determined by the percentage of the current life in months divided by the useful life in months.

| Sr. No. | Parameter/ Field name | Details |
|---|---|---|
| **Point Scale** | | |
| 1 | Service Date In | If, the value of *Service Date In* is provided,<br>then, use the given value of *Service Date In*<br><br>If, the value of Service Date In is not provided<br>then, use the value of *Acquire Date* as *Service Date In*<br><br>If, the value of both *Service Date In* and *Acquire Date* are not provided<br>then, use 1st January of the Model Year as a *Service Date In* |
| 2 | Useful Life (Months) | If, the value of U*seful Life* is either 0 or not provided<br>then, use the value of *Useful Life* as 1<br><br>If, the value of *Useful Life* is provided<br>then, use the provided value of the *Useful Life* |
| 3 | Current Life in Months | If the value of Disposal Date is not provided<br>then, the value of Current Life in Months is total number of months between *Service Date In* and Today's Date in whole months<br><br>If, *Disposal Date* is provided<br>then, the value of *Current Life in Months* is total number of months between *Service Date In* and *Disposal Date* in whole months |
| 4 | Salvage Value | Calculated as, *(Capitalized Cost) * (Salvage Rate)* |
| 5 | Condition Factor | Static value is used to adjust the *Point Scale* manually by +/- 2 points |

| | | |
|---|---|---|
| 6 | Point Scale Used | If, 15 *Point Scale Meter* is either 0 or not provided<br>then, the value is 10.0<br>else, the value is 15.0 |
| 7 | Age | Calculated as, (*Current Life in Months*) / (*Useful Life in Months*)) * 5.0<br>**Note**: Maximum value of Age is 5.00 |
| 8 | Replacement Meter | The highest points from the calculation of each meter ([*Current Meter Reading*] / (*Expected Life In Meter*(*s*))) * 5.0<br>**Note**: Maximum value of *Replacement Meter* is 5.0 |
| 9 | Maintenance | Calculated as,<br>((Maint. $ LTD) / (*Capitalized Cost*)) * 10.0<br>**Note**: Maximum value of *Maintenance* is 10.0 |
| 10 | Total Points | When *Point Scale* = 15.0<br>If, *Age* + *Replacement Meter* + *Maintenance* +Condition Factor > 15.0<br>then, the *Total Points* value is 15.0<br>else, *Age* + *Replacement Meter* + *Maintenance* + Condition Factor<br><br>When *Point Scale* = 10.0<br>If, *Age* + Replacement Meter + *Maintenance* + Condition Factor > 10.0<br>then, the *Total Points* value is 10.0<br>else, *Age* + *Replacement Meter* + *Maintenance* + Condition Factor |
| 11 | Remaining Life | Calculated as,<br>(*Useful Life In Months*) – (*Current Life In Months*)<br>**Note**: This value can be negative. |
| 12 | Replacement Date | The *Replacement Date* is a *Useful Life In Months* added to *Service Date In* |

| | | |
|---|---|---|
| 13 | Replacement Cost | Calculate as,<br>*Capitalized Cost* * (1 + (*Inflation Rate* / 12))<br>^ *Useful Life in Months* |
| 14 | Replacement Balance | Calculated as,<br>((*Original Replacement Cost*) - (*Acquire Capitalized Cost* * *Salvage Rate*)) - (*Recovery Collected*) |
| 15 | Monthly Replacement | If, O*riginal Remaining Life* > 0<br>then, (*Original Replacement Balance* / *Original Remaining Life*)<br>else, (*Original Replacement Balance*) |
| 16 | Useful Life Monthly Replacement | Calculated as,<br>(((*Original Replacement Balance*) - (*Acquire Capitalized Cost* * *Salvage Rate*)) / *Useful Life*) |
| 17 | Remaining Life Monthly Replacement | If, *Original Remaining Life* > 0<br>then, (*Original Replacement Balance* / *Original Remaining Life*)<br>else, (*Original Replacement Balance*) |

POINT RANGES FOR REPLACEMENT CONSIDERATION

| Score | Condition |
|---|---|
| 1 – 9 points | Continue in service |
| 10 - 14 points | Qualifies for replacement review |
| 15 points | Needs immediate review |

Step Two – Calculate Maintenance Cost versus Depreciation

Vehicles and equipment meeting the required scoring conditions above shall then have the following calculated:

1. Anticipated service life years versus actual service life
2. Total mileage or hours
3. Purchase cost of existing and new equipment
4. Return on investment - auction sale estimated proceeds

5. Net cost of new unit
6. Depreciation schedule of new vehicle
7. Average maintenance costs of unit for the preceding three (3) years

The funding break will indicate if the unit is costing the city more money than depreciating a new vehicle.

Step Three – Review and Test Drive

After the completion of the maintenance and depreciation schedule, the list is then sent to the Director of Public Works for review.

Over the past few years, the director has chosen to test drive some of the units that might be on the cusp of funding break amounts.

Step Four – Department Head and Director's Approval

The final inventory replacement list for each department was submitted to department heads and directors to approve and submit necessary specifications for replacement units.

The original capital replacement list for vehicles and equipment after scoring were both reduced after further evaluating:

| | Original | Reduced |
|---|---|---|
| Vehicles | 27 | 20 |
| Equipment | 3 | 1 |

Step Five – Budget Approval

The approved FY2025 budget includes funding in the amount of $ 4,192,700 for the replacement of vehicles and equipment.