

Jefferson City Transit Development Plan Bus Replacement Program

The timely replacement of vehicles in the fleet is one of the fundamental programs necessary for a successful transit system. Buses are a transit system's most valuable asset because good customer service is dependant on the condition of the fleet. The total cost of the fleet is usually the most expensive asset, even more so than the facilities that house the operation. A fleet that is aging presents a poor image to the system's customers and the general public. Vehicle maintenance expenses usually increase as the age of a bus advances.

However, the cost of replacing buses is high, and requires large outlays of cash. Most transit systems take advantage of federal funding through FTA's capital grant programs to help finance bus replacement. FTA funding can be used to finance up to 80% of the total purchase price. The use of FTA funding requires advance planning and coordination with other agencies to ensure the project is eligible and the funds are available, and received in a timely manner.

FTA rates vehicles for replacement purposes based on the vehicles expected useful life. These policies are meant to ensure that buses purchased or leased with Federal funds are maintained and remain in transit use for a minimum normal service life. Minimum normal service lives for buses and vans are shown below.

- Large, heavy-duty transit buses (approximately 35'-40', and articulated buses): at least 12 years of service or an accumulation of at least 500,000 miles.
- Medium-size, heavy-duty transit buses (approximately 30'): 10 years or 350,000 miles.
- Medium-size, medium-duty transit buses (approximately 30'): 7 years or 200,000 miles.
- Medium-size, light-duty transit buses (approximately 25- 35'): 5 years or 150,000 miles.
- Other light-duty vehicles such as small buses and regular and specialized vans: 4 years or 100,000 miles.

JEFFTRAN has a revenue fleet of 26 vehicles as shown in Table 1.

Table 1
JEFFTRAN Revenue Vehicle Fleet Summary

	Operating	Spares	Total
Fixed Route	7	2	9
Trippers	3	1	4
Shuttles	4	1	5
Total	14	4	18
Paratransit	6	2	8
TOTAL	20	6	26

Currently JEFFTRAN has a mixed fleet with several different manufacturers and models. The fixed route fleet (including commuter school trippers and shuttles) includes new transit coaches purchased in 2005 and medium-duty buses purchased in 1999, 2003 and 2004.

In 2005 JEFFTRAN acquired five new heavy-duty transit coaches manufactured by the Gillig Corporation. These new buses are the first heavy-duty buses purchased in Jefferson City in decades, and feature low floor technology. Low floor buses are popular with the public because

of the one-step entry into the bus interior and the wheelchair access via a ramp rather than a lift device. The new buses have been well received in Jefferson City.

Figure 2 on the following pages shows detail on the JEFFTRAN vehicle fleet.

JEFFTRAN expects to replace the three 1999 Internationals in 2006. These buses are beyond their rated useful life of seven years. These lighter duty buses will be replaced with heavy duty transit coaches rated as 12 year buses. The JEFFTRAN manager would like to replace the remaining medium-duty fixed route buses with heavy-duty transit coaches when their useful life allows replacement. There are advantages to JEFFTRAN using all heavy-duty coaches for the fixed route, tripper and shuttle operation:

- The heavy-duty buses with low floor technology provide superior customer service.
- Heavy-duty buses usually require less maintenance than lighter duty buses.
- Having a standard fleet of buses reduces parts inventory and simplifies maintenance.
- Having a standard fleet of buses makes it easier to rotate buses to equalize mileage.

The service operated by JEFFTRAN warrants heavy-duty transit coaches from the standpoint of passenger loadings and volumes and operating conditions. The heavy-duty buses have a higher purchase price, thus available funding may be a determining factor.

In 2007, JEFFTRAN will need to add one heavy duty bus for the new downtown shuttle (Downtown Circulator #1) route.

Paratransit vehicles operated for the Handi Wheels service would continue to be light duty buses with a five year rated life.

Table 3 shows the bus replacement schedule and estimated costs assuming that the fixed route and shuttle vehicles are replaced with heavy-duty transit coaches. Besides the new bus for the Downtown Circulator #1 route, other buses shown in the table are for replacement of buses used to provide existing service.

Table 3
JEFFTRAN Revenue Vehicle Replacement Program

Year	Units	Type	Total Cost	FTA Share	Local
2006	3	Transit Coaches	\$885,000	\$708,000	\$177,000
	4	Paratransit Vehicle	<u>\$224,000</u>	<u>\$179,200</u>	<u>\$44,800</u>
			\$1,109,000	\$887,200	\$221,800
2007	1	Paratransit Vehicle	\$58,000	\$46,400	\$11,600
	1	Transit Coach	<u>\$307,000</u>	<u>\$245,600</u>	<u>\$61,400</u>
			\$365,000	\$292,000	\$73,000
2009	2	Transit Coach	\$664,000	\$531,200	\$132,800
	1	Paratransit Vehicle	<u>\$64,000</u>	<u>\$51,200</u>	<u>\$12,800</u>
			\$728,000	\$582,400	\$145,600
2010	3	Transit Coaches	\$1,038,000	\$830,400	\$207,600
	2	Paratransit Vehicle	<u>\$132,000</u>	<u>\$105,600</u>	<u>\$26,400</u>
			\$1,170,000	\$936,000	\$234,000
2011	5	Transit Coaches	\$1,770,000	\$1,416,000	\$354,000
	4	Paratransit Vehicle	<u>\$272,000</u>	<u>\$217,600</u>	<u>\$54,400</u>
			\$2,042,000	\$1,633,600	\$408,400

Table 2
JEFFTRAN Revenue Vehicle Fleet Roster

Year of Vehicle	# of Pass.	Manufacturer	Vehicle Type	Service	Lic #	Purchase Date	Age
1999	29	International	Transit Coach	FR	607	6/25/1999	8
1999	29	International	Transit Coach	FR	608	6/25/1999	8
1999	29	International	Transit Coach	FR	609	7/16/1999	8
2003	29	Freightliner	Transit Coach	FR	611	7/15/2003	2
2003	29	Freightliner	Transit Coach	FR	612	7/15/2003	2
2003	29	Freightliner	Transit Coach	FR	614	7/15/2003	2
2005	32	Gillig	Transit Coach	FR	630	7/5/2005	0
2005	32	Gillig	Transit Coach	FR	634	7/6/2005	0
2005	32	Gillig	Transit Coach	FR	631	7/7/2005	0
2005	32	Gillig	Transit Coach	FR	632	7/8/2005	0
2005	32	Gillig	Transit Coach	FR	633	7/8/2005	0
2002	29	International	Transit Coach	SH	610	4/26/2003	3
2002	29	International	Transit Coach	SH	613	4/26/2003	3
2004	23	Freightliner	Transit Coach	SH	619	11/2/2004	1
2004	23	Freightliner	Transit Coach	SH	618	11/2/2004	1
2004	23	Freightliner	Transit Coach	SH	617	11/2/2004	1
2004	23	Freightliner	Transit Coach	SH	616	11/2/2004	1
2004	23	Freightliner	Transit Coach	SH	615	11/2/2004	1
1998	20	Ford Eldorado	Van /Mini Bus	HW	620	10/26/1998	7
1999	20	Ford / Diamond	Van /Mini Bus	HW	626	9/29/1999	6
1999	20	Ford / Diamond	Van /Mini Bus	HW	621	1/21/2004	6
2001	20	Ford / Diamond	Van /Mini Bus	HW	624	1/16/2001	4
2002	20	Ford / Glaval	Van /Mini Bus	HW	625	7/18/2002	3
2004	20	Ford / Goshen	Van /Mini Bus	HW	623	12/30/2004	1
2005	20	Ford / Goshen	Van /Mini Bus	HW	622	5/6/2005	0
2005	20	Ford / Goshen	Van /Mini Bus	HW	627	5/7/2005	0