Marshalltown Municipal Transit Service Analysis

January, 2008

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Introduction.

Marshalltown Municipal Transit (MMT) operates a fixed route system in Marshalltown, Iowa which carried 90,353 passengers in FY 07. Tripper service is provided to area schools and also to several social service agencies. ADA complementary para-transit service is provided by Peoplerides, which is also headquartered in Marshalltown. Ridership has been declining in recent years and MMT has responded by making service reductions. Saturday service was eliminated and the four route system was replaced by a two route system in 2004.

The City of Marshalltown retained Bourne Transit Consulting, LLC of Ames, IA in September, 2007 to examine the services provided by MMT and make recommendations for service changes.

The tasks of the contract are:

- Measure customer satisfaction
- Analyze current services provided
- Analyze current fee structure
- Examine funding sources
- Analyze staff functions
- Analyze vehicle maintenance
- Interview transportation stakeholders
- Develop a business plan and estimate costs for change
- Establish a timeline for change

Overview
Marshalltown Municipal Transit is successful in several aspects of a good transit system. The drivers are well liked by the passengers; there is a good, cooperative, and respectful relationship between the transit administrator and his employees; there is an entrepreneurial approach to finding transit markets; buses have been maintained well beyond their design life; and, MMT was the first fixed route system in Iowa to have all low floor, accessible buses.

However, there are several areas that need attention to stabilize the current system and prepare for future growth. MMT does not have adequate management staff to meet normal transit practice for good management for its current system size. The current service is inadequate in terms of hours of service to meet the needs of a significant portion of potential passengers. The system has focused on specific market segments, but is not meeting the needs of citizens that are not a client or customer of the specific market segments that are supported by a variety of public and private organizations. It is necessary to stabilize the system before planning for any significant future growth. Stabilization will require additional local taxpayer support if there is no increase in state or federal funding.

TASK A: CUSTOMER SATISFACTION.

Passenger Surveys
As part of Task A, the consultant rode and observed the fixed routes, school trippers, and social service trippers. Formal interviews were conducted with a variety of stake holders, some of whom were directly related to the passengers who use the social service trippers. Informal discussions with passengers and MMT employees were also part of the information gathering process. On-board surveys were also distributed and collected in October, 2007. 46 usable surveys were returned.

The results of the on-board surveys indicated that passengers are generally satisfied with the service provided by MMT. Survey results also indicate that the majority of passengers have limited transportation options.

Highlights of the survey are:

- 86.7% of passengers do not have a car or do not know how to drive
- 80.0% of passengers were traveling to or from work or school
- 26.1% of passengers rode MMT seven to ten times in the previous week
- 88.9% walked two blocks or less to the bus stop
- 53.3% rode MMT for the first time in 2006 or 2007
- 26.7% have been riding since 1999 or earlier
- 42.2% feel the fare level is too expensive

Trip purposes were somewhat unusual for a small community. 44.4% of the passengers were traveling to or from work and 35.6% were traveling to or from school. In many small communities, there are high percentages of medical trips or shopping trips. In Marshalltown, only 11.1% were for these purposes. There were no social purpose trips such as visiting friends or relatives.

Usage of the system in the previous week was typical of small community profiles. 26.1% of the respondents used MMT 7 to 10 times in the previous week. 47.8% rode three to six times and 13.0% rode one or two times.

Typical of all small urban bus systems, passengers do not walk long distances to access the nearest bus stop. Over half of the respondents (55.6%) walked less than one block to the nearest bus stop. Only 2.2% walked more than four blocks. 91.1% of respondents found the walking distance to be acceptable.

There is a high turnover of passengers on MMT. More than half of the passengers have only been riding less than two years. 28.9% first rode MMT in 2007 and 24.4% in 2006. A similar percentage (26.7%) includes long term riders who have used MMT for more than eight years. This indicates that there is a core of loyal passengers who rely on MMT for many of their transportation needs.

People in general are satisfied with the service and 95.3% would recommend the service to a friend. However, 42.2% are dissatisfied with the fare level and consider it too high.

In the comment section of the survey, passengers are generally satisfied with the fixed route services provided by MMT, although there was a theme of concern for the high price of bus fare. There were also several comments requesting Saturday service and weekday evening service.

All of the passenger comments are included in Appendix A.

Importance Versus Satisfaction

Passengers were also asked to rate their satisfaction with a variety of characteristics of the MMT service. They also rated how important each characteristic was to them. From this analysis, management can determine areas that are important to customers and where the service needs improvement because they are dissatisfied with an important characteristic. It can also be used to determine those areas that are of low importance to the customers, whether they are satisfied or not with the performance. In this manner, management can direct resources to areas that are important, but where performance is low. A five point scale was used for this survey.

The results of this survey did not provide a strong differential in the service characteristics in either importance or satisfaction. The highest differential was only 0.3 for reliable service and that is not significant enough to recommend any improvements.

The narrow variation in results may indicate that Marshalltown Municipal Transit is providing a consistent service and allocates resources evenly to the aspects of service that were evaluated by passengers.

Table A-1: Importance Vesus Satisfaction Comparison.

Importance Versus Satisfaction		
	Importance	Satisfaction
Characteristic	Rating	Rating
Cleanliness	4.2	4.3
Temperature on bus	4.2	4.2
Appearance	4.0	4.3
Friendly drivers	4.3	4.3
Reliable service	4.5	4.2
Safe	4.4	4.3
Buses not crowded	4.1	4.3
Buses easy to enter	4.2	4.1
Hours of service	4.3	4.2
Cost	4.3	4.2
Time on bus to reach destination	4.1	4.1
Easy to obtain information	4.2	4.2
Stops close to origin/destination	4.3	4.3

TASK B: ANALYZE CURRENT SERVICES PROVIDED.

The current service level in Marshalltown should be compared to other cities for a perspective on the service level that is provided. Five cities were chosen which have similar characteristics as shown in Table B-1.

Table B-1: Peer Group Comparison.

Peer Comparison					
				Stevens	
	MMT	Galesburg	Quincy	Point	Clinton
Population	27,000	33,706	40,366	27,000	27,000
Buses	9	6	12	7	11
Routes	2	3	4	8	6
Weekdays		700am-600pm	600am-600pm	645am-1015pm	600am-600pm
Saturdays	no service	700am-600pm	600am-600pm	1015am-615pm	800am-400pm
Sundays	no service	no service	745am-545am	no service	no service
Passengers	90,353	137,717	412,095	190,000	391,702
Opns Budget	$434,626	$926,437	$2,099,171	$1,300,000	$1,195,900
Cost/Passenger	$4.81	$6.73	$5.09	$6.84	$3.05
Adult Fare	$1.50	$0.60	$0.50	$1.00	$1.00
E/D Fare	$1.50	$0.40	$0.25	$0.50	$0.75
Miles/year	102,728	222,298	504,004	260,000	324,776

MMT has higher fares and lower ridership than most of the peer cities. It also has the lowest cost per passenger indicating that it is a cost efficient system, but provides less service.

Description of Services

Marshalltown Municipal Transit provides a variety of services in a cost effective manner. Two buses are used for the fixed route service with one bus on the North Route and one bus on the South Route. Two 35 foot buses are used in school tripper service and one bus is used for social service trippers. A tripper is a specific route that operates only once or twice per day and usually has a common origin or destination for all passengers. Trippers are open to the general public, but usually operate at times that benefit specific client groups.

On the first trips of the morning in the fixed routes and trippers, buses are generally close to capacity. There are also some afternoon trips that are near capacity for some of the services. At other times, the fixed route service carries few passengers on each trip. Table B-1 shows the average passengers per trip for each service

Table B-2: Ridership by Fixed Route and Tripper Services.

Ridership by Service				
FY 07				
	Average	**Average**	**Average**	**Peak**
	Daily Pass.	**Pass/Trip**	**Peak Trip**	**Single Trip**
North Route	98.9	8.2	29.6	43
South Route	111.0	9.3	20.5	25
School 1	41.0	20.5	32.0	52
School 2	94.0	47.0	49.0	76
Social Service	85.0	8.5	18.0	32

Fixed Routes

The peak period for travel on the North route is the first trip in the morning which averages 29.6 passengers per trip. 42% of the daily ridership total on the North Route is carried on the 7:10 am and 3:50pm trips and the remaining 58% of the daily ridership is spread over the other ten trips per day.

The South Route has a similar profile, but has three peak trips. The busiest trip is the 1:20pm trip with an average of 20.5 passengers per day. The 7:30am, 1:20pm, and 2:10pm trips combined average 57 passengers per day. The other nine trips average 54 passengers per day.

Trippers

The trippers have a higher average number of passengers per trip than the fixed route service. The high average per trip on the school trippers and the social service trippers indicate that MMT has custom tailored the trippers to meet specific market demands. Buses for these services are only scheduled when there are a significant number of passengers who need transportation. Services are open to the public, but information regarding the services is targeted at specific travel markets. With no marketing budget, the high ridership numbers are surprising on the trippers.

Social Service Trippers

The social service trippers average 8.5 passengers per trip, but several of them require less time than the 50 minutes on the fixed route schedule for each trip which makes them more cost effective. Social service trippers provide transportation to people traveling to and from Mid Iowa Workshop; Career Development Center; MGMC Dialysis; Special Focus; and Fisher Controls. A grocery shopping tripper also operates from Fareway to Odd Fellows. The social service tripper bus operates from 7:20am to 10:00am and from 11:20am to 5:15pm and is combined with School #1 in the afternoon. A second bus operates from 7:15am to 9:00am and also is combined with School #2 in the morning.

School Trippers

The school trippers are the most efficient and cost effective service provided by MMT. School 2, which serves Miller Middle School, is more efficient than School 1. There is variation by season with more passengers in colder weather using the service. The $1.00 fare covers 61.7% of the cost of the operation of the school trippers.

The two school routes are successful because the Marshalltown Community School District is not required to provide transportation to students in grades 5-8 who live less than two miles from school. MMT fills this transportation need with two buses in the morning and afternoon. These routes are the most productive in the MMT system and their cost of operation is supported by farebox revenues, Federal Transit Administration Section 5311, and Iowa DOT State Transit Assistance.

Productivity

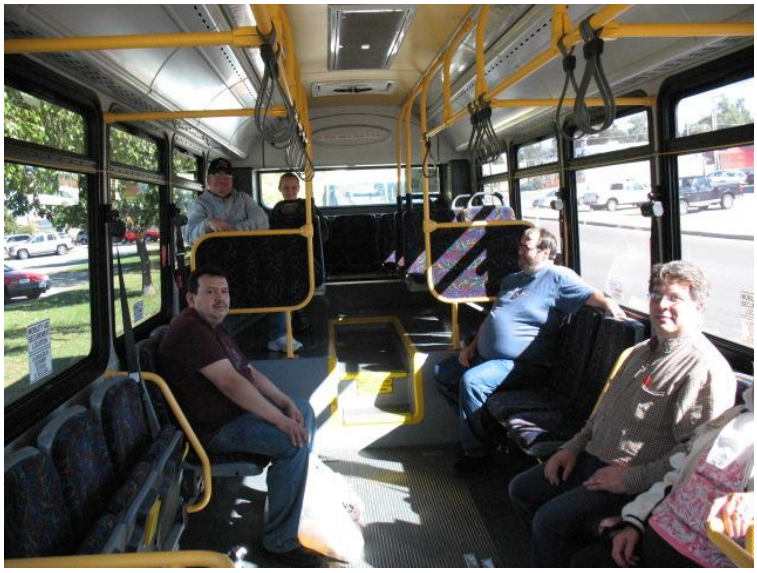
Average mileage for all trippers was reported to the IDOT as 30,311 revenue miles and they carried 36,442 passengers in FY07 for an average of 1.20 passengers per mile. The two fixed routes carried 51,886 passengers and operated 71,798 miles for an average of 0.72 passengers per mile. Paratransit service provided by Peoplerides carried 2,025 passengers and operated 8,472 revenue miles for an average of 0.24 passenger per mile.

The MMT system average was 0.82 passengers per mile based on statistics provided to the Iowa DOT. MMT was very close to the statewide average for cities of less than 50,000 population which was 0.87 passengers per mile in FY07.

Rich Stone, Transit Administrator, with Lillian Mikealson on the South Route on her way home to Grant St. Apartments.

Kathy Siebring with passengers on the Career Development Center tripper.

School children on School 1 at Lenahan



Five passengers on midday South Route at the Community Center.

Route Analysis and Recommendations:

Social Service Trippers

The social service trippers are efficient and effective. They meet the needs of the clients and the agencies that support them. No changes are necessary with the current services. Frequent communication with the social service agencies is required to maintain the efficiency and effectiveness of the existing services. A good marketing program would seek to expand the social service tripper concept to other agencies in the City which could result in increased ridership for this segment of MMT service

School Trippers

The school trippers are also cost efficient and effective. They are adjusted yearly to provide the best level of service possible. There is no tripper service to the high school and this is a potential marketing opportunity. There may also be an opportunity to increase the ridership on the two existing trippers.

It is necessary to comply with FTA regulations and give them route numbers and publish their operating schedule. This can be accomplished with a school specific brochure which would show the trippers and fixed route services available to each school. The routings and times should also be published on the City web site. The web site should be made more user friendly for school passengers with an easy to read map prominently showing school locations and scheduled bus times.

Fixed Routes

The current fixed route system is cumbersome. It has some efficiency in two or three trips per day; but, in general, the service attempts to cover too much area with the two buses assigned to the service. With the large loop design, travel times can be excessive for some customers. A passenger boarding a bus at IVH at 8:47am will arrive at Wal-Mart at 9:33am, a total of 46 minutes of travel time. The return trip from Wal-Mart to IVH is scheduled to take 54 minutes. Some other trips may take up to one hour of travel time in each direction. This is not conducive to attracting time sensitive trips, such as the journey to or from work.

There is also an inconsistency in bus stop locations. Not all stops are marked which makes it difficult for new passengers to know where to wait for a bus. The lack of passenger information available by telephone also makes it difficult for potential passengers to obtain information about the system. The City web site is difficult to use to obtain route map information with the need to use a plug-in to get a system map. Most websites have a button for the route map and many have maps for individual routes showing major traffic generators on the map.

There are also concerns about adequate time to safely secure passengers in wheelchairs. With the low floor design, boarding and alighting time is minimized. However, the tie down system is antiquated. Newer tie down systems that are more efficient and require less time should be specified in future bus orders. It is difficult to schedule for wheelchair securement as it does not occur on every trip. Therefore, some extra time needs to be added to the schedule for the times that wheelchair loading occurs.

Counts of passengers boarding and alighting were conducted in October and November, 2007. There are several areas where there are few passengers getting on or off buses. The most concentrated passenger activity was at several businesses, mostly along the Center St. corridor.

Primary Traffic Generators

In designing bus routes, it is important to connect primary traffic generators with residential areas. The primary traffic generators in a ten day period in October and November, 2007 for Marshalltown Municipal Transit are:

- Court House stop (downtown) – 83
- Wal-Mart – 80
- Iowa Veteran's Home – 72
- Marshalltown Community College – 50
- Community Center – 42
- K-Mart – 40
- Hy-Vee – 38
- 12th and Lincoln Way (CIRSI group home) – 37
- Marshalltown Town Center – 35

Low Ridership Segments

Certain segments of the current system could be eliminated to improve travel times and provide a more direct routing. In some segments, the new route will be within two blocks of the existing route and it is assumed that passengers will walk this distance to the new route location. Route segments, with ten day ridership counts, that could be eliminated and are more than two blocks from a new route are:

- North 3rd from Summit to Center – 0
- N. Center from N. 3rd to Riverside – 0
- Woodbury from N. 5th to N. 8th – 0
- 12th and Anson – 3
- 12th and Industrial – 4
- 1st and Riverside – 7

There are also three segments that have higher ridership numbers in the ten day survey and they can be served by a route deviation only at the times that passengers ride, generally one trip in the morning and one in the afternoon.

- Lincoln Towers – 15
- 2nd and Glenda - 16
- 12th and Lincoln Way (CIRSI group home) - 37

It is possible to design a fixed route system that is less circuitous and reduces passenger travel time while maintaining service to most of the existing areas where there is consistent ridership. Service should be eliminated to those areas where there is less than one passenger per day.

Recommended Fixed Route System

The recommended system will consist of four routes, each requiring less than 30 minutes to complete the route cycle as shown on the map in Appendix B. One bus will be assigned to each route pair. The northwest route will be paired with the southwest route and the northeast route will be paired with the southeast route. This structure meets current usage patterns and provides for future growth of the system. If one area of the community uses the new service more frequently than the other, then additional service can be provided on that segment, instead of the entire system. Transfers between the routes will continue to be made at the current transfer location.

Service to Marshalltown Community College will be reduced from its current level. It will be provided by the tripper buses, either before or after their scheduled school and social service trips. Currently there are approximately 10 passenger trips made to and from MCC on an average day. The new structure will provide six vehicle trips per day to MCC from Wal-Mart and they will be coordinated with either the west routes or the east routes to minimize waiting time at Wal-Mart. With some marketing effort to determine passenger origination data, these trippers could be scheduled from other parts of town, similar to the school trippers, to minimize travel time for MCC students and employees. Service to MCC will only be provided on school days during the fall and spring semesters.

Risk Involved in Changing Fixed Routes

There is some risk in changing the routes. Some current passengers will be required to walk longer distances to the new routes. Some people may be upset by the changes in times and they may have to travel earlier or later than they do on the current system. A few passengers will have very long walking distances to the new routes. With the changes, they may choose to find other modes of transportation.

However, with more direct routing it is expected that many passengers will walk the extra distance or adjust their travel times. Their overall travel time may be shorter with the new system. The survey did not ask for home locations, so it is possible that some passengers may have a shorter walk distance to a bus stop. The faster travel times may also compensate for the extra walking time.

For planning purposes, it will be assumed that passengers whose bus stop is moved up to two blocks will continue to ride MMT. It will also be assumed that all of the passenger trips listed on the low ridership segment analysis above will be lost to other modes of transportation or the trips will not be made. There were 14 trips made in the two week period of the survey. If this assumption is correct, there will be a loss of seven trips per week, or an average of 1.4 trips per day. This would be a decrease in yearly ridership of 350 or 0.4% of total yearly ridership.

Reward Potential for Changing Fixed Routes

The more direct routing and easily remembered intervals will probably offset the change in routings in terms of rider loyalty. Passengers will spend less time traveling to one destination which will save them time. They will have more time to make multiple trips or engage in trip chaining (traveling to more than one location before returning home).

There are no planning models that can predict the potential increase in ridership by making the recommended changes. The number of passengers is too small to have a meaningful predictive model for increased ridership.

It is predicted that there will be an increase in ridership, but it is difficult to quantify. It is reasonably safe to assume that there could be a five to ten percent increase in the current fixed route ridership. Revenue is also difficult to quantify. Much of the increase will be by monthly pass holders which will not generate additional farebox revenue. However, more passengers will have a positive effect on state and federal funding formulas.

Service Hours

There were several requests from passengers and representatives of social service agencies to expand the hours of service. Earlier morning service so that passengers can arrive at work by 7:00am is common in most city transit systems. Further study would be needed to determine if there is a market for earlier service. The first trips on the two fixed routes are usually the busiest of the day and any additional early trips need to be carefully designed to maximize ridership potential.

The end of the day for the fixed routes is too early. The last trips leave the Community Center at 4:40pm. There are several potential market segments that could benefit from later service, including people who finish work at 5:00pm; middle school and high school students who have after school activities; and people who work a partial day and need time for shopping or other trips after their work day. Service to approximately 6:15pm, with the last departures from the Community Center at approximately 5:15 to 5:30pm, would be appropriate.

Similarly, Saturday service would also benefit a wide range of potential customers. Many passengers with limited transportation options use MMT to travel to work during the weekday hours of service. They have difficulty completing shopping tasks within the limited service hours. Adding Saturday service will improve mobility for this group of passengers. It will also open opportunities for work trips for new passengers or allow existing passengers to add hours to their work week or change their work days.

For the first year, it would be appropriate to experiment with the two west routes for ten hours on each Saturday. This would require one bus for this service and it would operate at hourly intervals.

Recommendations:

- **Change the current two route, two bus system to a four route, two bus system that reduces travel time.**
- **Provide service to Marshalltown Community College with tripper buses.**
- **Modify the schedules to insure that there is adequate time for the drivers to serve all passengers and complete their trips in a safe manner.**
- **Add weekday fixed route service to approximately 6:15pm.**
- **Add Saturday service.**

TASK C: ANALYZE CURRENT FEE SCHEDULE.

The current fare structure inhibits passenger ridership. A large portion of MMT fixed route passengers are low income or have a disability that prevents them from driving. Typically, low and moderate income people have an informal budget for transportation. When they have spent their transportation money for the month, they typically make fewer trips.

The high fare inhibits mobility for low and moderate income residents of Marshalltown. Lowering the fare would provide greater mobility, but would not increase overall revenues to MMT. Typical travel behavior of people in this demographic group is to make more trips, but not spend more money on transit.

ADA Requirements

The Americans with Disabilities Act requires a half fare discount for people with disabilities, but this law applies only to cities with a population of 50,000 or greater. The current fare structure does not offer half fare. While the current fare structure increases farebox revenue, it minimizes mobility for people with low and moderate incomes, the elderly, and people with disabilities. There are no federal or state regulations that apply to fare level in Marshalltown. It is completely a local decision.

Social Service Tripper Fares

Passengers on the social service trippers receive a premium level of service. In general they are picked up within one block of their residence and delivered to the social service facility. The general public usually does not ride on the social service trippers. On the return trip, the clients usually have a reasonably direct ride from the social service agency to their home. The $1.50 fare is appropriate given the premium nature of the service.

School Tripper Fares

The school trippers operate to and from Lenahan and Miller schools along a fixed route at fixed times. While the morning delivery and afternoon pickup are at the school, passengers may have to walk up to several blocks to use this service from the bus stop to their home. A lower fare of $1.00 is currently charged for this service when the students purchase a multiple ride ticket. The two school trippers are the most productive in the MMT system and the $1.00 fare is not a significant deterrent to using these services, although it is perceived as high by some passengers. The $1.00 fare should be continued on the school trippers.

Fixed Route Fares

The fixed route fares are among the highest in Iowa and are very high for a small urban system. Marshalltown has the highest fares for senior citizens and people with disabilities in Iowa.

The farebox constitutes a large portion of operating expenses, providing 27.9% of the total. Table C-1 compares the proportion of operating costs covered by fares and the fare levels at other systems in Iowa and the Midwest. Monthly passes also comprise a high proportion of fixed route fares.

Table C-1: Farebox Comparison.

Farebox Percentage and Fare Levels			
	Farebox	**Adult**	**Elderly**
City	**Percentage**	**Fare**	**Fare**
St. Louis	21%	$1.75	$0.85
Minneapolis	30%	$1.50	$0.50
Sioux City	29%	$1.50	$0.75
Marshalltown	**28%**	**$1.50**	**$1.50**
Waterloo	22%	$1.50	$0.75
Des Moines	36%	$1.25	$0.60
Ottumwa	NA	$1.25	$1.25
Kansas City	14%	$1.25	$0.60
Clinton	NA	$1.00	$0.75
Dubuque	14%	$1.00	$0.50
Cedar Rapids	13%	$1.00	$0.50
Rock Island	9%	$0.80	$0.40
Coralville	26%	$0.75	Free
Iowa City	21%	$0.75	$0.35
Davenport	9%	$0.75	$0.35

There are three options on fare levels. One option is to offer a reduction in fare for targeted markets, such as elderly and/or disabled passengers. Typically, this would be a one half fare discount. However, the remaining passengers who use the system at the highest fare level would then be mostly low or moderate income passengers.

The second option is to keep the fares the same and institute a marketing program to attract more passengers. This option would not be very successful, give the current level of service and fare level.

A third option is to lower the fare for all fixed route passengers to $1.00 for one year to see what the effects of the lower fare are on farebox revenue and other revenue sources. Lower farebox revenue may affect state and federal revenues, but may be offset by increasing ridership, which also affects the formula for state and federal revenues. Lower fares will provide greater mobility for all passengers, allow them to meet more of their travel needs independently, and have a positive social benefit. There is a financial risk in lowering fares, but the current high fare level has created a fixed route system with light utilization. This option has the greatest benefit to bus passengers and is the recommended option.

The monthly pass rate is also tied to the fixed route fare. Currently it is $40 per month and the breakeven point is 26.7 rides per month. People who use the bus twice per day will typically make about 44 trips per month. Lowering the monthly fare to $35 raises the breakeven point, but there will be more service available to the passengers with later afternoon service and Saturday service. Additional survey work during the test period will determine the best monthly fare.

After the fixed route fare is lowered for one year, additional survey data should be compiled to determine if people are making more trips on MMT. Ridership is expected to increase, but there may be some reduction in total farebox revenues. The fixed route fares constitute 41.3% ($47,165) of the total farebox revenue. The other fares will not change. The worst possible loss of farebox revenue would be a 1/3 decline of this portion of the farebox revenue. **There would be a maximum loss of $15,721 if there is no increase in ridership as a result of the lower fare.** It is expected that revenue will decrease initially, but then return to current levels as more trips are made on the new route structure.

Recommendations:

- **Retain the social service tripper fare of $1.50.**
- **Retain the student fare of $1.00.**
- **Lower the fixed route fare to $1.00 for one year.**
- **Lower the monthly pass to $35.00 per month for one year.**

TASK D: FUNDING SOURCES.

Federal Funding

Federal funding for Marshalltown Municipal Transit comes from the Federal Transit Administration (FTA) Section 5311 Rural Transit Program. The federal funds are distributed to the states, and each state can distribute them for operations and capital programs. In Iowa, the Iowa DOT is the recipient of the funds and they have a formula that distributes the funds based on locally derived income (LDI), passengers, and miles operated. Locally derived income includes passenger fares, local tax support, and other revenues, such as advertising. These funds are distributed to seven small urban (less than 50,000 population) and sixteen rural bus systems.

The funds are proportional to MMT's share of the eligible systems total LDI, passengers, and miles operated. As MMT has reduced services and reduced passengers and mileage, its share of the total has decreased. Even with an increasing federal contribution to Iowa, it is possible to receive less money based on the formula distribution. Changes in MMT performance do affect the percentage, but changes in other bus systems in Iowa in the same funding program also affect the percentage.

State Funding

State Transit Assistance (STA) comes from 1/20 of the use tax on motor vehicle parts collected through the first four cents of the state sales tax. These funds are also distributed through a competitive process based on the similar factors to the federal formula. However, the formula is slightly different because all transit systems in the state are eligible for STA, unlike the FTA 5311 program which can only fund cities with less than 50,000 population. The City of Marshalltown competes with the other eighteen urban bus systems for the urban portion of the STA formula. Rural STA is in a separate funding section of the state program.

Similar to the federal program distribution, STA can decrease when a bus system reduces its local support, passengers, or mileage, depending on overall state funding levels and the performance of the other bus systems in Iowa.

Table D-1: State and Federal Funding for MMT.

State and Federal Funding Trends								
Year	**FY02**	**FY03**	**FY04**	**FY05**	**FY06**	**FY07**	**FY08**	**FY09**
Passengers	134,785	131,807	127,139	114,628	112,885	90,353		
LDI	$265,371	$284,970	$229,731	$141,044	$157,275	$193,418		
Opns Exp	$441,060	$465,289	$412,679	$356,372	$381,623	$434,626		
Rev. Miles	134,446	141,955	119,012	94,147	97,218	102,728		
STA	$124,772	$121,037	$101,689	$129,100	$142,832	$136,087	*$131,288*	*$113,452*
STA %	1.255%	1.308%	1.242%	1.284%	1.368%	1.354%	1.280%	1.139%
Federal	$50,917	$59,282	$81,259	$86,228	$79,274	$100,272	*$129,085*	*$121,256*
Federal %	1.425%	1.423%	2.077%	2.179%	2.057%	1.751%	1.691%	1.504%
						Italicized numbers are estimates		

The performance numbers in blue in FY02 determine the STA and FTA percentages in FY04. Actual funds received depend on the total funds available for distribution. Similarly, the FY 05 performance numbers determine the FY 07 distribution. The FY07 performance in pink determines the FY09 distribution. Exact funding levels have not been determined but MMT's percentage share of STA and FTA are indicated in pink in the FY09 column. The dollar estimates are based on the Iowa DOT's estimate of total FTA and STA revenues for next year.

Federal funding increased from $59,282 in FY03 to $100,272 in FY07, a 69% increase in four years. Some of the increase was due to Ames moving out of this federal program and also due to increases in overall FTA Section 5311 revenues to Iowa. FTA funding is expected to increase to approximately $121,000 in FY09.

Comparing the FY04 FTA funds to the estimate for FY09 shows an increase in federal funding but a decrease in the share of statewide receipts from 2.077% to 1.504%, approximately a 28% decrease. If MMT percentage share had remained constant from FY04 to FY07, there would be a 28% increase in federal funding or approximately $40,000 in additional funds.

The performance basis for that change is the comparison of FY02 to FY07. Ridership declined 32.7%; LDI declined 27.1%; Operations expense declined 1.4%; and Revenue miles declined 23.6%.

The MMT percentage of federal funds decreased due to MMT service reductions and declining performance or increases in other small urban and rural transit systems in the state. If ridership, LDI, and Operating Expenses had remained constant, there would have been a larger increase in federal funding than the 69% increase in revenue received.

Similarly, State Transit Assistance was also affected by the service reductions. The percentage of statewide funds decreased from 1.242% in FY04 to 1.139% for FY09. The State Transit Assistance funds are not growing like the FTA funds. MMT will see a decrease in actual STA funds received in FY09 compared to the current year and close to $30,000 less compared to the peak year in FY06.

The other primary source of operating revenue is the farebox contribution from passengers as discussed in Task C. In recent years, with the fare increase to $1.50, it has increased to as much as 1/3 of all operating revenues. The 28.6% share in FY07 is high compared to most Iowa bus systems and to many larger Midwestern systems as shown in Table C-3.

Table D-2: Primary Revenue Sources.

Federal, State, and Farebox Share of Operating Expenses						
Year	**FY02**	**FY03**	**FY04**	**FY05**	**FY06**	**FY07**
% Farebox	18.6%	18.9%	24.8%	34.4%	33.5%	28.6%
% STA	28.3%	26.0%	24.6%	37.0%	39.2%	32.0%
% FTA	11.5%	12.7%	19.7%	24.7%	21.7%	23.6%
Sum % Opns	**58.5%**	**57.7%**	**69.1%**	**96.0%**	**94.4%**	**84.2%**

Property taxes are the fourth source of revenue and will be examined in detail in the Task H, the Business Plan.

The FTA Section 5311 program and the State Transit Assistance program are the primary external funding sources for bus service in Iowa. There are several other programs which provide lesser amounts of money; have specific requirements and target populations; have more difficult application procedures; are competitive; and have more extensive reporting and management requirements.

Other Federal Transportation Programs

The FTA Section 5309 Discretionary Capital Grant Program allows transit systems to purchase buses or other capital equipment. The Iowa DOT receives funds each year and distributes these funds through a formula basis for bus purchases, facility improvements, and expansion capital programs. The Public Transit Management System (PTMS) is a process that the Iowa DOT uses to distribute the funds. Bus replacement is on a competitive basis with years of service and mileage as the criteria for replacement. MMT received a grant for one new 30 foot bus through this process in November, 2007.

The 5309 program is open to all transit systems in the country and the awards are made through the earmark process. MMT can apply for new buses and receive grants for 83% of the cost of each bus. This is a political process and MMT and elected officials of the City of Marshalltown would communicate their needs to Senators Grassley and Harkin and Representative Latham. MMT would be competing with other Iowa cities that use this process for capital needs that exceed the Iowa DOT distribution of 5309 funds. **This program would be the most beneficial program to replace buses in a timely manner.** It has been used successfully in several cities in Iowa. Efforts should be made to secure two new buses through this program.

The **FTA Section 5310 Special Needs Transportation Program** is also administered by the Iowa DOT and has specific eligibility requirements. The Iowa DOT has streamlined the 5310 program in accordance with acceptable federal regulations and distributes the funds as part of the 5311 program. While MMT does not receive these funds, it benefits when other systems receive 5310 funds.

The **FTA Section 5316 Job Access and Reverse Commute Program** (JARC) provides funds for job access and reverse commute projects. MMT would be eligible for these funds to provide service to specific job locations. As an example, MMT does not start service early in the morning to allow workers at Swift to use transit. An earlier morning trip that served the day shift at Swift would be an eligible project. 50% of the operating cost would be paid through this program and MMT would need to provide 50% of the cost as matching funds. This could be a good program for expanded hours of service on the fixed routes or for tripper service similar to the Fisher Controls tripper. The application would be part of the planning process in the MMT PTDP prepared by Region V Planning Council.

The **FTA Section 5317 New Freedoms Program** provides funds for service that exceed the minimum standards required by the Americans with Disabilities Act and are new programs. It would be difficult for MMT to receive these funds because they are competitive and several other cities have submitted and received grants from this program.

The **Rural Technical Assistance Program** (RTAP) is a federal program that distributes funds to each state. These funds can be used for technical assistance and the Iowa DOT distributes these funds for transit related training. The Transit Administrator, mechanic, and drivers can have 80% of their training costs, including travel and lodging, paid through this program. MMT has not used this program extensively. The application process is easy and almost all applications are awarded. The management section of this document suggests additional training and the RTAP program should be used for this purpose.

Surface Transportation Program (STP) funds can be used for capital or planning projects. These funds support highway programs in Region VI, but can also be used for transit purposes. Several bus systems have received these funds, which are usually left over funds from highway capital projects, to purchase minibuses. MMT and the City would work with Region VI to determine if any of these funds would be available for eligible transit purposes.

It may be necessary to seek some STP funding to complete the purchase of one new bus if FTA funding is not adequate for current bus prices. It is estimated that this will be less than $10,000. MMT has received $12,000 in STP funds FY05 for Associated Capital Maintenance to purchase spare parts for buses.

The **Iowa Clean Air Attainment Act** (ICAAP) is another source of capital and operating funds. This is a competitive program with funds distributed to highway and transit projects. There is not a high probability that MMT could produce a viable project that meets the requirements of this program.

The State **Public Transit Infrastructure** grant program can be used for vertical construction projects. There is a low chance of success in applying for this program because MMT has a new facility that meets many of the needs for storing and maintaining buses.

There are many grant programs available to Marshalltown Municipal Transit. Many of them are competitive and have a narrow focus, but with careful selection and targeted efforts, pursuing some of these can result in benefits to MMT. The FTA Section 5309 program is one of these and a grant for two new 30 foot heavy duty buses would have the most benefit to MMT in the next two years.

Recommendations:

- **Pursue FTA Section 5309 Grant for two new 30 foot heavy duty buses.**
- **Use RTAP funding for staff training.**
- **Seek STP funds if the new bus price exceeds IDOT grant limits.**

TASK E: MANAGEMENT AND STAFF FUNCTIONS.

MMT Staff consists of nine drivers, one mechanic, and the Transit Administrator. There are several management concerns as well as logistical concerns with this structure. While there are no obvious violations of FTA regulations or IDOT regulations, there are concerns about the ability of the MMT staff to provide high quality transit service because of its unusually small staff. **MMT does not meet normal transit industry minimal management staffing levels.**

The lack of supervisory and support staff limit the ability of MMT to provide basic information to the public and to ensure that all bus operators are performing their duties in a safe and efficient manner. The manager of a transit system has many functions to perform. A brief sample of some of the functions shows that **MMT does not have adequate managerial staff to perform all functions well.**

The goal of Rich Stone, MMT Transit Administrator.

In the Iowa DOT Transit Manager's Handbook several transit management tasks are included in IDOT requirements. Each transit manager is responsible for accurately complying with the variety of federal and state requirements. These include the functional areas of:

- Funding Programs
- Planning
- Reporting Requirements
- Contracting Regulations
- Procurement
- Capital Management
- Vehicle Operations
- Training
- Civil Rights
- Drug and Alcohol Programs
- General Operations

These are typical areas which the local transit manager is required to comply with federal and state regulations. When local policies are added to the duties, it is apparent that the workload of the local transit manager is complex and demanding. Other activities, such as marketing, developing relationships with local social service agencies, and working with local businesses also add to the workload. While some of the duties listed above can be performed by other agencies, a good transit manager will be involved in all of them.

A sample of observations of some of the functions as they are performed at MMT indicates that they are not being performed as well as should be expected for a small urban transit system because of a lack of staff.

Office Function

Most transit systems have the ability to answer the telephone to provide basic route and schedule information. People who have not used the transit service will call for information, and people who do use the system may call for schedule times. With a 50 minute interval between buses, it is not easy for passengers to remember exact times and this increases the demand for information regarding the next bus time.

MMT does not have the capability to answer the telephone consistently. With no office staff, the Transit Administrator is the only person who will answer inquiries from the public. With no support staff, he is often required to drive or assist the mechanic in vehicle repair. With his administrative duties, he is often out of the office. During his absences from the office to perform a variety of tasks, the phone is not answered. A general bus information phone number that is answered during the business day should be provided and it may be required that another department add this function to their duties.

The administrator acts as his own secretary and clerk. With e-mail and other technology, it is no longer necessary to have a full time secretary in many offices. However, performing these duties does require a certain amount of time for administration.

Management Function

There are several concerns about good management practices within the Transit Department. The Federal Transit Administration has a range of administrative and operating regulations that are complex. Common industry practice is to have a supervisory employee trained in FTA Drug and Alcohol regulations to check in each driver when they come to work. Drivers who exhibit behaviors associated with drug or alcohol usage are not allowed to drive a bus until a reasonable suspicion test is performed. The standards for alcohol usage are much stricter than drunk driving with a .02 reading a cause for action on the part of management.

MMT does not always check in drivers. Drivers report to work, punch the time clock, and take their buses to begin their day's work. If a driver is sick and does not call in, or a driver is late for work, then the first trip of the day is late until the Transit Administrator arrives to fill in as a driver.

At the other times of the day when new drivers report to work, there is no check in procedure. The lead driver has been trained in drug and alcohol testing policies, but may not always be present when employees are reporting to work.

Marketing Function

Another important function of the Transit Administrator is to market the system, both to institutional customers as well as the general public. This important management function requires time to meet with the various social service agencies. Under the current system, the Administrator has limited time to discuss transit services with potential customers. While he has an excellent reputation among the various social service agencies that use MMT, he does not have adequate time to approach other agencies which may assist him in creating a larger customer base.

One example is the Iowa Veteran's Home (IVH) which operates its own transit system. Given the opportunity, MMT may be able to alter services to meet some of the needs of IVH residents at lower cost to IVH and greater revenue to MMT. With the Director's time consumed by driving and maintenance and IDOT required reporting, he has been forced to make marketing a lower priority.

A good marketing program requires periodic scheduling of customer surveys. The Importance Versus Satisfaction survey conducted as part of this document should be completed every six months. On and off counts along route segments should be done on a regular basis to determine changes in ridership patterns. Trip purpose surveys are also important. Each of these surveys requires time for distribution and analysis.

Maintenance Function

The Transit Mechanic reports directly to the Transit Administrator and the administrator is intimately involved with the maintenance of the vehicles. At times, he is required to help the mechanic on some projects. Transit vehicle maintenance is evolving with new technology for analysis of problems and new products becoming available. Changes in maintenance intervals have allowed significant savings at some transit systems. The Transit Administrator must devote some time to become current on emerging maintenance trends.

With a very old fleet of buses, he must also be aware of each individual bus in the fleet so that he can make good decisions to prolong the life of each bus, or to sell them when they become more expensive than purchasing other used buses. In a small system, maintenance can consume a significant portion of the Transit Administrator's time.

Operations Supervision

The supervision of bus drivers requires a significant amount of time. Unlike departments where everyone works in the same area, transit service requires a good manager to ride buses in service to converse with passengers and drivers. MMT is fortunate that there is a good relationship between management and the drivers and they are cooperative in solving operating problems. They are attentive to many of the small details of operations, such as changes in passenger's behaviors, road conditions, and the myriad other aspects of bus operations.

The Transit Administrator spends a large amount of time with operations. It is a relationship type of management without a comprehensive set of written procedures. A good operating culture takes time to develop and nurture and MMT is successful in this regard. However, the lack of written procedures can be a source of problems if policies are challenged by employees.

Safety and Training Function

There is no formalized training, evaluation, or retraining program for drivers. New drivers learn through an apprentice type program where they ride with other drivers for a while; then, after an undetermined amount of time, they are allowed to drive on their own.

Standard Operating Procedures for safe driving are nonexistent. There are no evaluation criteria or documentation of driving performance. Drivers who train new drivers have not been taught how to teach new drivers and have not been taught consistent operating procedures. With the current workload, the Transit Administrator does not have time to establish a high quality training program.

Professional Development

MMT has been isolated from good transit practices. The Transit Administrator has not been able to attend IPTA meetings and does not benefit from membership in any national organizations. He has not had the time to network with other operators of small bus systems in Iowa.

The Iowa Public Transit Association (IPTA) provides statewide training and networking. MMT is a member this year and should continue its membership. IDOT policy changes are presented at the two annual conferences and these are important events to stay current with IDOT policy changes. Changes in the PTMS mileage requirements were presented at one of these meetings and MMT did not participate in this meeting. The result was that several old buses were assigned to 10,000 miles per year assignments and incurred extra maintenance costs.

Community Transportation Association of America (CTAA) is a national organization with very reasonable dues structures ($400 per year) that provides training and information to small rural and urban bus systems. 80% of training costs can be paid through the IDOT RTAP program. MMT should pursue membership in CTAA.

The transit industry has become complex with a myriad of state and federal regulations and an expectation to perform like a business and attract customers to the service. In order to perform the required duties of the Transit Administrator position and to operate like a business that retains current customers and attracts new customers, an additional management person is needed. It is recommended that the position of Transit Operations Assistant should be created.

The Transit Operations Assistant position would perform a variety of duties. Some are routine such as check in drivers before shifts start, fill in as a driver when needed, and answer the telephone. Other duties are more complex such as establish and maintain a driver training program, work on a variety of marketing opportunities, and assist the administrator in grant administration, as well as a variety of other similar duties. This position would also act as the administrator when he is on vacation, at training, or unavailable.

Recommendations:

- **Participate in IPTA activities.**
- **Attend one national training session per year with RTAP funding.**
- **Join CTAA.**
- **Hire a Transit Operations Assistant to help the Transit Administrator.**

TASK F: VEHICLE MAINTENANCE.

MMT has been criticized for its vehicle maintenance program. During the summer of 2007, KCCI TV aired two segments regarding the lack of working air conditioners on the buses. This focused some attention on the maintenance practices of MMT.

The fleet consists of nine active buses and the peak vehicle requirement is five buses. In general MMT is performing routine maintenance in a timely manner. **The maintenance problem is caused by the advanced age and condition of the buses.** Seven of the buses are Orion I or Orion II buses which are no longer made and there are less than 500 in operation in the United States. It is difficult to make the "best" decision on what items should be replaced on aged equipment. Parts availability is becoming a problem for these buses nationwide.

Public Transit Management System

The Public Transit Management System (PTMS) is a process that the IDOT uses to allocate capital funds to replace old buses. It is a competitive system where buses receive points for mileage and age. There are more than 1,400 vehicles in Iowa that are eligible for replacement through this process. At zero points, a vehicle is considered to have finished its "useful life" if it was purchased new. In most states, vehicles are replaced soon after they have positive points. In Iowa a bus was required to have 84 points in the November, 2007 distribution to acquire a replacement bus. This means that buses usually operate for approximately 50% longer than their design life. Excellent maintenance procedures are required to make buses last that length of time.

Table F-1: Fleet Summary.

MMT Fleet Summary			July, 2007				
			Year	Acquired	Mileage	Previous	PTMS
Bus	Model	Size	Bulit	MMT	7/1/07	Owner	Points
105	Opus	27 ft.	2005	Dec-05	28,271	NEW	-193
114	Eldorado	Light Duty	1998	Sep-07	239,700	Region VI	leased
821	Orion I	35 ft.	1982	May-04	464,537	Ames	-80
850	Orion II	27 ft.	1986	Feb-86	375,517	NEW	Out of Service
889	Orion I	35 ft.	1985	May-06	645,439	Ames	-106
911	Orion II	27 ft.	1991	Nov-99	494,807	CoachCrafters	18
922	Orion II	27 ft.	1992	Jul-07	194,862	Cedar Rapids	6
931	Orion II	27 ft.	1993	Oct-96	372,903	W.Va. DOT	114
962	Orion II	27 ft.	1996	Jun-01	232,048	Orion Demo	-9
971	Orion II	27 ft.	1997	Dec-97	252,811	NEW	-32

In Iowa, buses must have 84 points and this point total varies from year to year and is generally increasing. New buses must operate twelve years and 350,000 miles to reach zero points. It will typically take an extra five to six years or approximately 150% of design life to reach the 84 point threshold. Used buses typically must last 200% to 250% of their design life to be replaced in Iowa.

Fleet Replacement Estimates

Table F-2 shows the estimated fleet replacement dates through the PTMS process. Each bus receives 12 points for age each year and one point for every 3,500 miles it operates. A bus that operates 3,500 miles will receive 13 points per year. Unfortunately, the threshold for replacement is increasing each year as the state wide fleet ages and inadequate federal money is received to replace old buses. The threshold increases about five points per year.

Table F-2: Estimated Fleet Replacement Dates.

Vehicle Replacement Estimates				
		2007	Net	Estimated
	PTMS	Points	PTMS	Replacement
Bus	Points	Needed	Points	Year
105	-193	84	15	2026
114	Leased	84	None	Leased
821	-80	84	8	2028
889	-106	84	8	2031
911	18	84	13	2013
922	0	84	8	2018
931	114	84	Replaced	2007
962	-9	84	8	2019
971	-32	84	8	2022

MMT Bus #931 was replaced through the PTMS program. It had originally been inadvertently skipped by the IDOT in the July, 2007 compilation of reports from transit systems. Review by the Transit Administrator and Consultant allowed the IDOT to include the bus in the distribution process and MMT was awarded a replacement grant in November, 2007.

The yearly mileage requirements were misunderstood by MMT. The Transit Administrator had assumed that there was a 10,000 minimum mileage requirement on each bus. That requirement had been changed in 2005 and there is now only a 3,000 minimum mileage required each year on buses that had exceeded their original useful life.

For MMT, this means that bus #105 is the only bus that is required to be used a minimum of 10,000 miles. All other buses in the fleet are used and have exceeded their useful life. MMT was rotating several of the used buses to exceed the 10,000 mile yearly requirement and this has increased the maintenance costs on those buses. In October, 2007 MMT changed its mileage policy and now maximizes the mileage on Bus #105.

Bus #931 will be replaced by a new bus within the next 12 months because it had 114 points. It was acquired as a used bus and was required to operate six years and 175,000 miles. It operated for eleven years and was an expensive bus to maintain in the last three years. Bus #850 was an original purchase and operated over 20 years in Marshalltown, well beyond its ten year design life. It did not acquire enough PTMS points for replacement before it became unserviceable and it was replaced with #922, a used bus from Cedar Rapids. In the last ten years, MMT has only purchased three new buses. MMT has relied on used buses and demonstrator buses to replace other worn out, used buses.

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The other buses have been bought used from a variety of sources. The inadequate capital funding is a statewide crisis and the Iowa DOT has limited funds to distribute for new equipment. This crisis has existed for more than a decade and MMT is one example of how the lack of timely capital purchases has required the bus system to rely on used and antiquated equipment. Old buses are expensive to operate and maintain.

It is safe to assume that some MMT buses will never acquire enough points to be replaced. Buses #821 and #889 are operated only about 4,000 to 5,000 miles per year. At that rate, they would acquire about 13 or 14 points per year. However, the threshold is increasing approximately five points per year and these buses will only have a net increase of about eight points per year.

Bus #821

This used CyRide bus was built in 1982 and acquired by MMT in May, 2004. It currently has 464,000 miles on it. Under IDOT replacement policy, it needs to acquire six years of service and 175,000 miles. With its current use as a tripper bus, it will only average about 4,000 to 5,000 miles per year. It is used only during the school year and it is not necessary to maintain the air conditioning.

Bus #821 will reach zero points in about six years when it is 31 years old. In approximately 2028, it would be eligible for replacement if the historical average of replacement remains unchanged. The bus would then be 46 years old and would have about 560,000 miles. It would have to remain in service another year while the replacement bus is ordered. It would probably be the oldest bus in the USA in continuous service. It is doubtful that the body on this bus would last another 21 to 22 years.

This bus should be replaced when another good used bus becomes available through the IDOT policy of selling used buses to other systems. CyRide will be the most likely location to have a good used bus available in the future.

Bus #889
This bus was also purchased used from CyRide in May, 2006. It is 22 years old and has over 634,000 miles on it. With its current usage and IDOT replacement policy, it is estimated that this bus will be eligible for replacement in 2031 when it is 46 years old and will have about 730,000 miles. Like #821, it should be replaced with another used bus when a good one becomes available. It also does not need working air conditioning.

Bus #911
#911 is a 16 year old bus that was purchased used in 1999 and has close to a half million miles on it. It will be eligible for replacement in about six years and should one of the primary fixed route buses until the new bus is delivered. Then it should be the social service tripper bus. It should be maintained in very good condition and have working air conditioning at all times during the cooling season.

Bus #922
This bus was purchased used from Cedar Rapids in the summer of 2007. It should be operated for 3,000 miles per year and then stored in serviceable condition for the remainder of the year. If one of the primary buses is out of service for an extended period of time, it can be placed in service on short notice. Air conditioning should be maintained only if it will be used in the summer. It is recommended that this bus should be replaced by an earmark bus through the FTA Section 5309 grant program.

Bus #931
This bus was replaced as part of a grant awarded by the Iowa DOT in November, 2007. The executed grant agreement will be received in April or May, 2008. This bus is in good condition with several rebuilt components. These components should be traded with worn out components in # 962 and #971. Mileage should be minimized on this bus and maximized on the other ones.

A replacement bus should be ordered in the spring of 2008 before the actual grant agreement is received and it is recommended that MMT use the FTA piggyback procedures to order a bus as quickly as possible.

Bus #962
This bus is a 1996 model that was used as a factory demonstrator for five years. Like #922, it should be operated for 3,000 miles and then stored for the remainder of the year in serviceable condition. Air conditioning, as on #922, should only be maintained if it will be used in the summer. This bus will not be replaced until 2019 through the PTMS process and it will be difficult and expensive to maintain it for the next twelve years. It is recommended that this bus should be replaced by an earmark bus through the FTA Section 5309 grant program.

Bus #971
This bus was purchased new in December, 1997 and is approaching the end of its design life. It should be used on the social service tripper now and then as a spare bus when the new bus is delivered. It should also have its air conditioning maintained and will be a primary bus for operations with #911. This bus must be maintained for 15 additional years if it will be replaced by the PTMS process. It will be difficult and expensive to maintain this bus for another 15 years and it should be considered for replacement in the FTA Section 5309 program in two years.

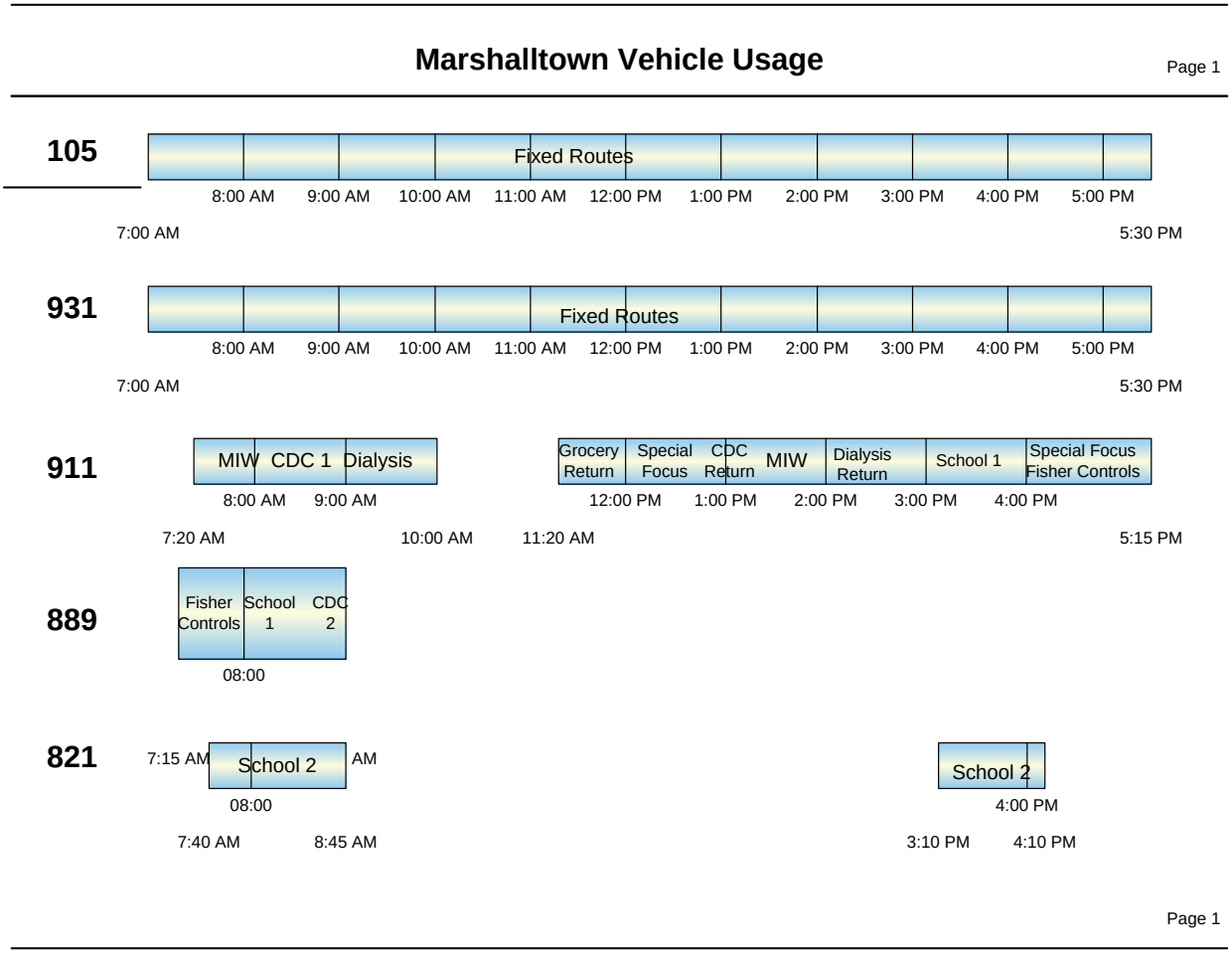
Bus #105
This is the newest bus in the fleet and mileage on it should be maximized. It is a heavy duty bus by definition, but not as rugged in design as other heavy duty buses. It should be able to acquire approximately 30,000 miles per year and will reach zero PTMS points in about 10 years. It should eligible for replacement in approximately 2026. Maintenance decisions, such as motor and transmission replacement, rust removal, and body repair in future years should be made to keep this bus running with that long time horizon to replacement. Often, this style of bus becomes expensive to maintain after 12 to 15 years due to decisions made in the early years of its operation. It will be difficult to keep this bus operating until 2026.

Bus #114
This is a minibus that is not owned by MMT. It is too small for several of the morning trips, but can be used as a spare bus later in the day. It should be used sparingly as it is well beyond its design life and is a high mileage vehicle. Miles put on this vehicle do not benefit MMT.

Used Minibus Purchase
The Orion II fleet (911, 922, 931, 962, and 971) is worn out and has been kept in operation at a significant cost. Some of the repairs, such as motors, air systems, suspensions, and differentials, are very expensive on old buses. When one of these buses incurs an expense greater than the cost of acquiring a used mini bus, it should not be repaired. Used mini buses, such at #114, are available, often for less than $2,000. When a major component fails on one of the Orion II buses, it should be parked and stripped of useable parts to keep the other buses running.

A minibus does not have the capacity for the busy trips on the fixed route. However, it can be used with #114 and two buses can operate on the scheduled busy trips on those days when there are not enough large buses to meet the schedule requirements. This technique should be used sparingly as it does require a second driver and vehicle and increases operating costs for that day. Driving the second bus could be one of the duties of the Transit Operations Assistant.

Current vehicle assignments are shown on the chart below.



Bus Assignments

With the possible delivery of one new 30 foot heavy duty bus in December, 2008, MMT will have two good buses for the fixed routes. Mileage on each bus will be slightly more than 30,000 miles per year. Until that time the four active Orion II buses (911, 922, 962, and 971) should be rotated through the fixed route and social service tripper service with each compiling the minimum 3,000 miles per year. #911 and #922 should be given the highest mileage priority after the minimums are compiled as these buses are the closest to replacement in the PTMS system.

35 foot used heavy duty buses are required for the high passenger numbers on the school trippers. With the limited mileage each year and the careful attention that these buses receive, they should be able to last for many years, but, they will never reach mileage thresholds for replacement by the IDOT PTMS program. These buses will be replaced by used buses from other systems. The driving factor will be a motor or transmission failure or the inability to secure parts for component replacement. Used buses through the PTMS system are generally available for about $5,000 and typically require about another $5,000 to $10,000 to make them serviceable.

Recommendations:

- **Order one new 30 foot heavy duty bus.**
- **Move new/rebuilt components from bus #931 to bus #911 and #971.**
- **Replace #821 and #889 with used 35 foot heavy duty buses.**
- **Program #922 and #962 for replacement in the TIP and secure an FTA Section 5309 grant in the next year.**
- **Purchase one used minibus.**

TASK G: TRANSPORTATION STAKEHOLDERS.

Stakeholder Interviews

Interviews were conducted with a variety of people who have an interest in the success of Marshalltown Municipal Transit. Mayor Gene Beach and Council members Bethany Wirin and Bill Backoff provided perspective from elected officials.

Other stakeholders that represented specific client groups included Rich Byers, MIW; Marty Wymore, Region VI Planning Commission and Peoplerides; Mike Wagner, Mary Greeley Medical Center Dialysis; Paula Graham, CIRSI; Jeff Vance, CIRSI; Marge Good, Career Development Center; Jill Eaton, Marshall County Central Point of Coordination; and Starla Elsberry, Workforce Development Center.

The elected officials were generally supportive of the bus service and felt that it should be improved with more service if financially possible. They also had concerns about the perception of empty buses, overall costs, lack of marketing, lack of evening and Saturday service and the high fare level. They also expressed concern about the overall image of the City of Marshalltown and how the bus service can enhance or detract from that image.

The other stakeholders who benefit directly from MMT tripper service were generally satisfied. They indicated that Rich Stone, the Transit Administrator, was easy to work with and was very responsive to their needs. Buses are scheduled to meet their specific travel patterns and the service is reliable with courteous and sensitive drivers.

They had a variety of concerns including lack of evening service, lack of late afternoon service, lack of Saturday service, high fare levels, crowded morning buses requiring some clients to stand, and heating and air conditioning complaints from clients. The lack of late afternoon and evening service prevents many of their clients from independent activities such as shopping, socialization, or finding other work opportunities.

All stakeholders felt that the bus service should continue and should be improved. They were aware of the positive aspects of the bus service and the difference that it makes in people's lives and their ability to travel throughout Marshalltown. They were also aware of MMT's shortcomings and there was a consistent theme that the bus service should be improved.

They are also aware of the anti-tax sentiment that exists in Marshalltown. They felt that there is an active and vocal group of people who are opposed to raising taxes for MMT. However, they also thought that small and moderate increases in taxes for specific purposes may be possible.

Employee SWOT

Another set of stakeholders in MMT is the MMT staff. They were asked to list the Strengths, Weaknesses, Opportunities, and Threats that face Marshalltown Municipal Transit. Employees were asked during the first week of October to perform a SWOT analysis regarding transit service in Marshalltown. Eight employees responded with written comments, all of which are included below.

Strengths

Rich Stone
Children get to school
Sick people get to doctors
Patients get to dialysis
Good drivers
The drivers and their dedication
Customer service
Rich Stone and our mechanic, Steve
5 buses have air condition
We have a great and knowledgeable administrator
We have very experienced bus drivers
Smooth operation
Experience drivers
Friendly staff
Good administrator
Reliable staff
Attendance
Administrator listens to drivers when suggestions made
Drivers allowed to make adjustments during driving to accommodate customers
?
Good customer base
Longevity of the drivers
Experienced management

Weaknesses

Not able to get repair parts in a timely fashion
The buses do break down and everyone does their best, but we do need more dependable equipment
Old buses
Expensive to keep running
Poor middle managers
Not funded properly
Old buses
Lack of support from City Administrator and other City officials

Lack of ridership
Lack of communication between boss and drivers
Deviating
Switching assignments without letting effected driver know -- which results in a driver not coming in for that assignment
Not a reliable system
No structure to the training of drivers (who does it, consistent program)
Not always easy to call 801 and talk with him on the radio when we are driving
Buses not working properly
Routes too long time wise
Poor routing especially on North end of town to keep South route times properly
Communication boards for driver are 1st) too many of them, 2nd)not organized to keep track of messages for each individual driver
Probably more but went brain dead
Worn out buses that other cities have discarded
Age and condition of buses
Too many changes in routes over the years, confusing to riders
Routes are too long in time

Opportunities

Get newer and more dependable buses
To serve more people
Keep growing
Future looks bright for Marshalltown
More people soon
Will need a good transit system
Mr. Stone needs a dispatcher now, at least 6 hours
Branch out and service more org. for transport needs other than the ones we already serve
Get more updated buses
None
Saturday route renewal
'Specials' on slow days like Senior day/Vet's day
Contracted trips again (weddings, drunk bus, etc)
With summer swimmers free (I call training) rides to pool or reduced fare
Nil
Saturday service

Threats

Public view
Budget, parts we can't afford to cut corners, the people of Marshalltown deserve more
Losing jobs
Less funding to continue
Not enough help for large town that Marshalltown will be soon
City fathers are not looking to the future
Funding
Old equipment

TASK H: BUSINESS PLAN AND COST OF SERVICE CHANGES.

A sound business plan for MMT recognizes the realities of transit funding at the state level and the federal level, and anticipates a reasonable expectation of revenues from passengers and Marshalltown citizens and businesses.

The special services that MMT has developed include three buses that are used for social service trippers and two school routes. These specialty services pay for their marginal costs through farebox, STA, and FTA revenues. The fixed route system is the most expensive part of the MMT operation and it requires the largest part of the local subsidy. Overhead and administrative salaries generate no direct farebox, STA, or FTA revenues, but are necessary to support the overall operation.

The business plan recognizes that portions of the MMT operation will generate revenue and portions will not. Minimal staffing levels are required to support the operation and the cost of vehicle storage, utilities, and other support costs will not generate additional revenue and must be supported through property taxes.

The recent history of state and federal funding is shown in table D-1 and illustrates the increase in FTA funds due to the increase in federal funding for the state of Iowa. STA funding fluctuates widely and will be approximately $11,000 less in FY09 compared to FY02.

Federal Funding

FTA funding should increase in future years as the transit authorization section has increased over the life of SAFETEA-LU. Yearly appropriations have been consistent with the authorized amounts. SAFETEA-LU expires in 2009, but it is a reasonable assumption that federal funding for rural areas will increase in the reauthorization process. Funding at the federal level comes from a combination of federal gas taxes and the general fund and there is concern about the lack of growth of the federal gas tax revenues. The growth in the future will not be as significant as in the last four years.

For planning purposes, it can be assumed that **federal funding will grow at 6% per year.** This assumes that the route and fare decisions that are recommended in this document be implemented. This will stabilize the current downward trend in the percentage of federal funds and it is assumed the federal funding base will increase. The risk of decreased federal funding exists, but it is a relatively low risk.

State Funding

State funding is also assumed to grow at a modest rate through stabilization of the fundamental factors used in state funding and a modest increase in the funding base**. A 3% yearly growth rate is assumed.** State funding has the greatest chance of decreasing in any subsequent year and it can fluctuate from year to year. It can also fluctuate during a fiscal year if state tax receipts that fund the STA program decrease.

Farebox

As discussed in other sections, farebox revenue is an unusually high percentage of operating costs in Marshalltown and may be an impediment to higher ridership numbers. Ridership numbers have an impact on the federal and state funding levels. It is assumed that the **farebox revenue will decrease in the first year of the changed routes, but then will recover to current levels.** This would be consistent with travel behaviors of low and moderate income people.

Miscellaneous Funding

Most of the miscellaneous funding for MMT comes from advertising revenues and interest payments on the fund balance. This is **expected to be stable** over the next five years with fluctuations due to the change in fund balance and resulting interest receipts.

Table H-1: State, Federal, Farebox, and Miscellaneous Projections.

State, Federal, Farebox, Miscellaneous Projections								
Year	**FY06**	**FY07**	**FY08**	**FY09**	**FY10**	**FY11**	**FY12**	**FY13**
STA	$142,832	$136,087	$131,288	$113,452	$116,856	$120,361	$123,972	$127,691
FTA	$79,274	$100,272	$129,085	$121,256	$128,531	$136,243	$144,418	$153,083
Farebox	$122,235	$121,319	$122,000	$110,000	$115,000	$125,000	$125,000	$125,000
Misc. Rev.	$7,600	$965	$7,000	$10,000	$12,000	$7,000	$7,000	$7,000
Total Rev.	**$351,941**	**$358,643**	**$389,373**	**$354,708**	**$372,387**	**$388,604**	**$400,390**	**$412,774**

With the recommended additions of a Transit Operations Assistant; the Marshalltown Community College tripper; additional service on weekdays; and one bus operating on Saturdays, the cost will increase as shown in Table H-2. **Existing service cost is estimated to increase by 3% per year.**

Table H-2: Cost of Operations.

Cost of Operations with New Services						
	FY08	**FY09**	**FY 10**	**FY11**	**FY12**	**FY13**
Basic Service	$407,013	$419,223	$431,800	$444,754	$458,097	$471,840
Opns Asst	$0	$40,000	$41,200	$42,436	$43,709	$45,020
MCC tripper	$0	$11,204	$11,540	$11,886	$12,243	$12,610
Wkdy to 600pm	$0	$11,136	$11,470	$11,814	$12,169	$12,534
Saturday	$0	$15,137	$15,591	$16,059	$16,541	$17,037
Total Cost		$496,700	$511,601	$526,949	$542,758	$559,041

Enterprise Fund

MMT is an Enterprise Fund and not part of the City of Marshalltown General Fund. It receives revenues from federal, state, and local sources. The primary local sources are the farebox and the transit levy. For FY 09, the transit levy is proposed to be $0.22124 per $1,000 of assessed value and it will generate $155,281.

Because MMT is an Enterprise Fund, the Transit Administrator has an incentive to raise additional revenue or control expenses. At the end of each fiscal year, any excess revenues remain in the fund for the following year. Conversely, if MMT has a bad year with either lower revenue or unexpected expenses, the fund will accommodate those fluctuations and the fund balance will decline. Establishment of a targeted fund balance for the end of each year will give the Transit Administrator a financial goal. The Transit Administrator needs additional training and information on how an Enterprise Fund functions.

Similarly, the Enterprise Fund can have a capital fund within it that will have a fluctuating fund balance to meet the local share of federal capital projects. The one new bus that will be purchased in 2008 requires a 17% match or approximately $52,700. A yearly contribution of $25,000 to this fund for the next five years will provide funds for other bus purchases. This will include the local share for new buses and the full cost for used buses that will replace #821 and #889.

The City has been prudent in establishing the yearly levy rate to support transit. With many uncertainties regarding maintenance costs, the tax rate was established at a constant rate of $0.22124 per $1,000 of assessed value for three years. This has provided a good cash balance in the Transit Enterprise Fund.

With the recommendations in this document, the City can establish the transit levy rates in the future that will provide adequate funding for the service improvements and adequate funding for capital match for federal funds. Other capital needs that will not be funded by federal assistance will be funded from the capital portion of the transit levy.

Table H-3 projects local funds needed for capital needs for the next five years. The program calls for three new buses, one in FY09 and two in FY11. A used mini bus will be purchased in FY09 and used large buses will be purchased in FY10 and FY13. In order to decrease the impact of the local cost of the two new buses ($116,000), it is recommended to take a loan and pay it over four years. The Iowa DOT has an interest free loan program for this purpose and payments can be spread over five years if necessary.

If Associated Capital Maintenance is available, $2,000 should be budgeted each year to match $8,000 in federal funds. New bus stop signs are programmed for FY10 and bus shelters are also programmed after new buses have been obtained and new ridership patterns established.

If capital expenses could be evenly programmed each year for the next five years, the yearly expense would be $35,540. **Capital expenses would require approximately $.05 per $1,000 in transit levy revenues each year.**

Table H-3: Local Capital Revenues.

Local Capital Revenues						
Project	**FY09**	**FY10**	**FY11**	**FY12**	**FY13**	**FY14**
One new 30 ft. bus	$52,700					
Two new 30 ft buses			$29,000	$29,000	$29,000	$29,000
Used Minibus	$2,000					
Used 35 ft. bus		$10,000			$10,000	
Bus Stop Signs		$2,000				
Associated Cap Maint.	$2,000	$2,000	$2,000	$2,000	$2,000	
Shelters				$2,000	$2,000	
Total Transit Levy Capital	$56,700	$14,000	$31,000	$33,000	$43,000	$29,000

Table H-4 shows the history of the Transit Fund balances at the end of each year and its proportion to operating expenses. The levy rate and revenue is also shown. For planning purposes, it is assumed that the **levy revenue will increase 3.5% per year.** The tax rate cannot be projected because it will depend on the assessed value of the community.

The Operations Expense in the fourth line assumes that the service improvements recommended in this document are implemented as presented in Table H-2. The fifth line is the levy support required for capital expenses as presented in Table H-3.

Table H-4: Fund Balance History and Projection.

Fund Balance History and Projection			3.5% Annual Increase							
Year	**FY04**	**FY05**	**FY06**	**FY07**	**FY08**	**FY09**	**FY10**	**FY11**	**FY12**	**FY13**
Open Balance	$0	$0	$111,393	$199,928	$296,521	$224,900	$183,489	$190,990	$187,986	$184,781
End Balance	$0	$111,993	$199,928	$296,521	$224,900	$183,489	$190,990	$187,986	$184,781	$173,703
Ratio End/Opns	0.0%	31.4%	52.4%	68.2%	55.3%	36.9%	37.3%	35.7%	34.0%	31.1%
Opns Expense	$412,679	$356,372	$381,623	$434,626	$407,013	$496,700	$511,601	$526,949	$542,758	$559,041
Local Cap Exp						$54,700	$14,000	$31,000	$33,000	$43,000
Total Local Exp						**$551,400**	**$525,601**	**$557,949**	**$575,758**	**$602,041**
STA/Fed/Fare/Misc						$354,708	$372,387	$388,604	$400,390	$412,774
Levy Revenues	$103,490	$102,254	$147,254	$147,254	$151,108	$155,281	$160,716	$166,341	$172,163	$178,189
Total Revenues						**$509,989**	**$533,103**	**$554,945**	**$572,553**	**$590,963**
Transit Levy	0.17500	0.17500	0.24172	0.22124	0.22124	0.22124				

With the service improvements, 3% yearly growth in existing operations expenses, a strong capital program, 3% growth in STA, 6% growth in FTA revenues, and farebox adjustments, the growth of the transit levy is estimated to be 3.5% per year.

Fund Balance Recommendation

There are several factors that could create a need for additional funds during any fiscal year. Unpredictable variation is usually caused by an unforeseen crisis. This could be an increase in expenses or a decrease in external revenues. The most likely causes of a midyear crisis and the potential financial impact are:

- $50,000 Fuel prices increase $2.00 per gallon.
- $20,000 Insurance increase.
- $30,000 1.5 times the largest yearly decrease in STA.
- $10,000 1.5 times the largest yearly decrease in Federal funding.
- $15,000 Unexpected maintenance cost.
- $10,000 Unexpected increase in paratransit cost.

Wage and benefit costs are usually predictable and there is no contingency for an unexpected increase in labor and benefit costs. Health insurance tends to be the most volatile benefit cost, but can usually be accommodated in the normal budget process. MMT has a good history of predictable labor costs and increases in wages and benefits are be budgeted each year. Similarly, a natural disaster, such as a tornado, is not budgeted. A major disaster would probably create FEMA reimbursements. No funds are set aside for a FEMA match.

The sum of the above estimates of crisis costs is $135,000. It is unlikely, but possible, that all of the events could occur in one year. With the current operating estimate of $407,013 the recommended fund balance would be 33.2% of operations. The estimate for FY09, with new services is $496,700. A 27% fund balance would provide the $135,000 fund balance. **The minimum recommended fund balance to operations ratio is recommended to be 30%.**

Line 3 in Table H-4 shows the fund balance to operations ratio for the next five years. In order to keep the fund balance at 30% or greater, the transit levy revenue increases 3.5% per year.

Recommendation:

- **Use IDOT capital loan program to spread capital cost of new buses over four years.**
- **Establish a minimum fund balance goal of 30% of operating costs.**

Task I: Establish TimeLine for Change.

The service changes should be implemented during the summer of 2008. Ordering a new bus should be done as soon as possible, and the initiation of steps to acquire two additional new buses should begin in the spring.

- January, 2008: Order one heavy duty 30 foot bus.
- February, 2008: Purchase one used minibus, implement recommendations from Task F.
- March, 2008: Pursue FTA Section 5309 grant for two new buses.
- May 2008: Hire Transit Operations Assistant.
- June 2008: Change route structure to two bus, four route system.
- July 2008: Add Saturday service.
- September 2008: Add MCC tripper buses (school days only).

SUMMARY OF RECOMMENDATIONS:

1) **Change the current two route, two bus system to a four route, two bus system that reduces travel time.**
2) **Provide service to Marshalltown Community College with tripper buses.**
3) **Modify the schedules to insure that there is adequate time for the drivers to serve all passengers and complete their trips in a safe manner.**
4) **Add weekday fixed route service to approximately 6:15pm.**
5) **Add Saturday service.**
6) **Retain the social service tripper fare of $1.50.**
7) **Retain the student fare of $1.00.**
8) **Lower the fixed route fare to $1.00 for one year.**
9) **Lower the monthly pass to $35.00 per month for one year.**
10) **Pursue FTA Section 5309 Grant for two new 30 foot heavy duty buses.**
11) **Use RTAP funding for staff training.**
12) **Seek STP funds if the new bus price exceeds IDOT grant limits.**
13) **Participate in IPTA activities.**
14) **Attend one national training session per year with RTAP funding.**
15) **Join CTAA.**
16) **Hire a Transit Operations Assistant to help the Transit Administrator.**
17) **Order one new 30 foot heavy duty bus.**
18) **Move new/rebuilt components from bus #931 to bus #911 and #971.**
19) **Replace #821 and #889 with used 35 foot heavy duty buses.**
20) **Program #922 and #962 for replacement in the TIP and secure an FTA Section 5309 grant in the next year.**
21) **Purchase one used minibus.**
22) **Use IDOT capital loan program to spread capital cost of new buses over four years.**
23) **Establish a minimum fund balance goal of 30% of operating costs.**

The recommendations in this report will result in a better bus service for the City of Marshalltown with reduced travel times, additional weekday service, new Saturday service, and a better management structure that will enable staff to be more proactive and responsive to customer's needs. Financial stability and appropriate transit levy revenues and rates will allow improved capital purchases and stable operations. Marshalltown Municipal Transit will be positioned for continued growth as gas prices rise and the environmental benefits of good transit service are realized.

APPENDIX A:

Other Reason for Riding

It is less expensive than taking a cab
I get to meet new people
Easy to get around town
Mom makes me
Can't get school bus
My dad goes to work at 6:00am and my mom is not alive
Because my mom don't want me to cross Center St.
My parent has to work on certain days
Because I don't have anyone to take me to school
Lost my driver's license

If you change one thing

Drive, don't talk, IVH is 1/3 of riders. I did my time.
7 days per week, 5 a.m. to 12 a.m.
Run more often and until 600pm
Riding on bus long time to get home
Closer bus stops
Cost less
First bus in morning 15 minutes earlier or Saturday service
I work at Dollar Tree and I would alter the route slightly to drop me off in front of building
Change the bus timing a bit
Start earlier hours
Stare time earlier
Service to be provided on weekends
Nothing much, all's fine
The girl bus drivers
Lower the cost
Nothing
No opinion
Nothing, I think MMT is great
Have a bigger bus at 3:45pm after school
Play music
Play music, low cost
Seat belts, and too expensive
Play music
Saturday service
One that ran say every two hours start at 7pm, 9pm, and stop at 11pm from Courthouse to S. R. Mall, North-South on Center St.
Lower monthly price for low income people
Not crossing busy streets
Air conditioner that works
Nothing
Lower prices on monthly tickets

APPENDIX B: